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金石之堅 · 百煉之鋼  
Golden Stone Proven Steel



#### 來自頂尖，超越頂尖

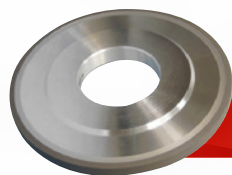
聯成鑽石工業有限公司，源自於業界頂尖，秉持著創新與研發的精神，努力為客戶設計與開發，並以多年的經驗，提升產品品質，給予客戶更優質的技術服務，聯合相關產業協力，共創美好未來。

#### From the top beyond the top

Liancheng Diamond Industry Co., Ltd. originates from the top of the industry, upholds the spirit of innovation and R&D, strives to design and develop for customers, and with years of experience, improves product quality, provides customers with better technical services, and cooperates with related industries. For a better future.



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Liancheng — Liancheng Elite



Diamond & CBN Grinding Wheels

鑽石與氮化硼砂輪

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# Diamond & CBN Grinding Wheels

鑽石與氮化硼砂輪





# Diamond & CBN Grinding Wheels

## 鑽石與氮化硼砂輪

訂購砂輪時請指明下列事項 / When ordering, please specify

- |                           |                                                  |
|---------------------------|--------------------------------------------------|
| 1. 砂輪之形狀及各部尺寸：如 1A1、14A1。 | 1. Shape & dimensions of wheel : Ex. 1A1, 14A1.  |
| 2. 磨料種類：鑽石或氮化硼。           | 2. Abrasive : Diamond or CBN.                    |
| 3. 粒度：例如：#150。            | 3. Grit size : Ex. #150.                         |
| 4. 集中度：例如：C-75。           | 4. Concentration : Ex. C-75.                     |
| 5. 結合劑：例如：樹脂結合劑或金屬結合劑。    | 5. Bond of wheel : Ex. Resin bond or Metal bond. |
| 6. 冷卻方式：乾磨或濕磨。            | 6. Coolant : Dry or wet grinding.                |
| 7. 數量及交期：                 | 7. Quantity & Delivery date :                    |
| 8. 轉速及加工條件：               | 8. Spindle speed & grinding conditions :         |
| 9. 多數製造商都會在砂輪上標示以下資訊：     | 9. Most of makers marked following information : |

| SDC<br>磨料種類<br>Abrasive                            | 150<br>粒度<br>Grit Size | N<br>結合度<br>Grade | 75<br>集中度<br>Concentration | R<br>結合劑<br>Bond       | 3.0<br>磨料層厚度<br>Rim Thickness |
|----------------------------------------------------|------------------------|-------------------|----------------------------|------------------------|-------------------------------|
| D：天然鑽石<br>Natural diamond                          | #60                    | J 軟 / Soft        | 25                         | R：樹脂結合<br>Resin bond   | 1.0mm                         |
| SD：人造鑽石<br>Synthetic diamond                       | #80                    | L                 | 50                         | M：金屬結合<br>Metal bond   | 1.5mm                         |
| SDC：人造金屬披覆鑽石<br>Synthetic metal coating<br>diamond | #100                   | N                 | 75                         | P：電鑄法<br>Electroplated | 2.0mm                         |
|                                                    | #150                   | P                 | 100                        | V：陶瓷法<br>Vitrified     | 3.0mm                         |
|                                                    | #200                   | R 硬 / Hard        | 125                        |                        | 5.0mm                         |
|                                                    | #270                   |                   | 150                        |                        | 10.0mm                        |
| B：氮化硼<br>Cubic boron nitride (CBN)                 | #325                   |                   |                            |                        | .                             |
|                                                    | #400                   |                   |                            |                        | .                             |
| BC：金屬披覆氮化硼<br>CBN with metal coating               | #600                   |                   |                            |                        | .                             |

# Diamond & CBN Grinding Wheels

## 鑽石與氮化硼砂輪

### 鑽石與氮化硼應用 / Applications

#### 鑽石 (Diamond) 主要應用

1. 碳化鎢、半燒結碳化鎢。
2. 氧化鐵。
3. 石材、瓷器、耐火材料。
4. 陶瓷、寶石、藍寶石、玻璃、石英。
5. 矽、鍺、鋁碳化矽 (鈹)。
6. 磁磚、瀝青、混凝土、石棉。
7. 加強塑料 (F.R.P)、泡棉、塑膠。
8. 碳纖維與玻璃纖維、克維拉等複合材料。
9. 耐磨耗及止滑應用。

#### 氮化硼 (CBN) 主要應用

1. SK、SKS、SKH 等切削工具及另件。
2. SKD、Stellite 等耐磨工具鋼材。
3. SCM、SNCM、SCr、SUJ 等構造用鋼材。
4. SUS (不鏽鋼) 之耐蝕金屬。
5. SUH 鈦合金等耐熱金屬。
6. 鑄鐵。
7. 其他熱處理後之鋼材。

#### Diamond Grinding Wheels

1. Tungsten carbide, semi-sintered tungsten carbide.
2. Iron oxide.
3. Stone, porcelain, refractory materials.
4. Ceramics, gems, sapphires, glass, quartz.
5. Silicon, germanium, aluminum silicon carbide.
6. Tiles, asbestos, asphalt, concrete.
7. Reinforced plastic (F.R.P), foam, plastic.
8. Carbon fiber, glass fiber, Kevlar and other composite materials.
9. Wear resistance and anti-slip applications.

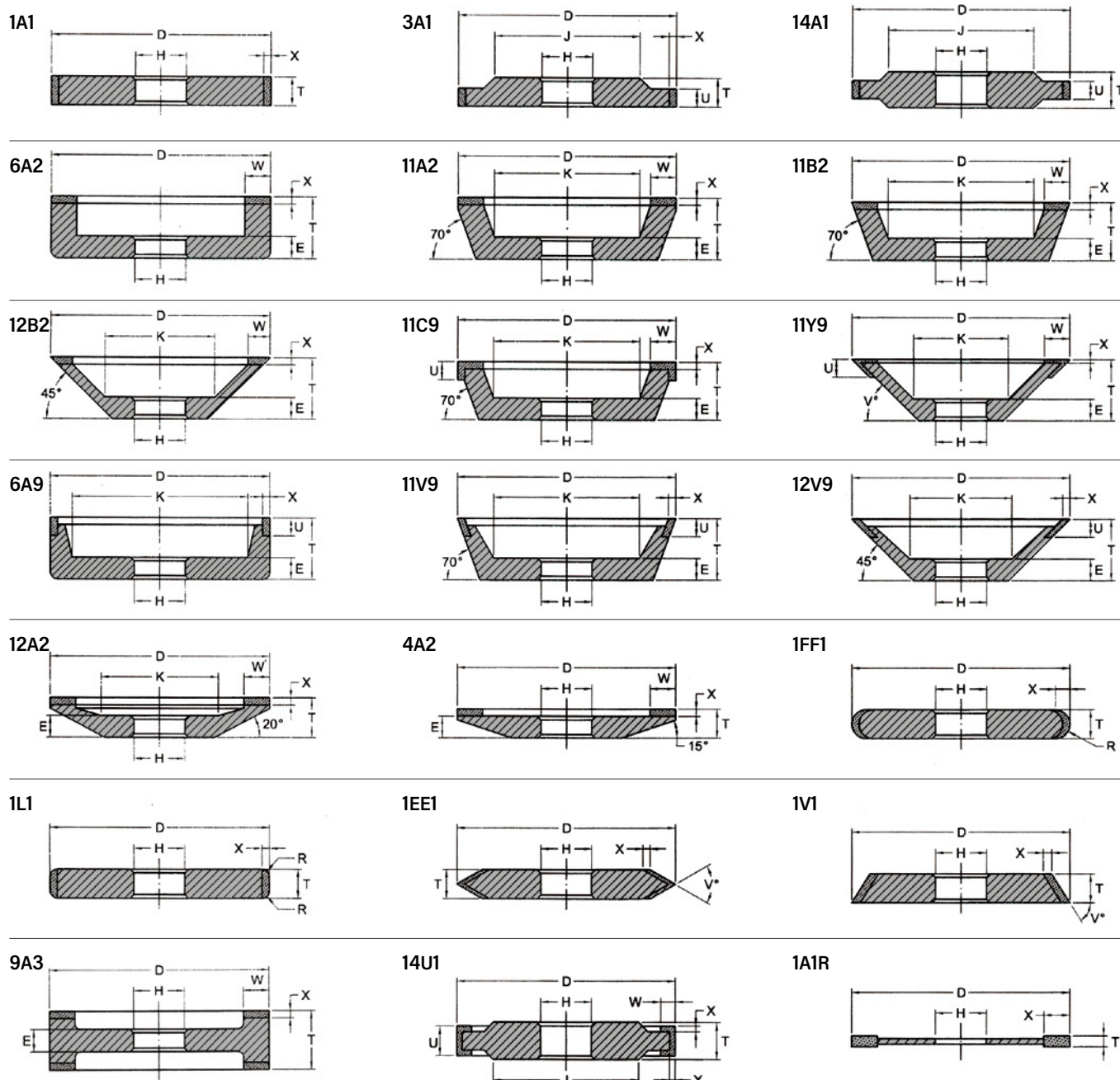
#### CBN Grinding Wheels

1. High alloy steels.
2. High speed tool steels.
3. Hot & cold working steels.
4. Tempering steels, Spring steel.
5. Ball bearing steel.
6. Cast iron.
7. Other steel after heat treatment.



# Shape & Dimensions of Wheels

## 砂輪形狀及尺寸標示



### 砂輪訂製方法 / How to order a wheel?

若是重覆訂製，請告知工作單編號即可。

若需我們為您設計砂輪，則請告知：

- a) 工件名稱，材質，硬度。
- b) 機器名稱，型式，轉速及馬力。
- c) 加工條件及加工精度。

若自行設計砂輪，則告知如下例：

14A1, 350D-10U-5X-25T-250J-127H, SDC 150N75R5.0, 溼磨。

For repeated order, just tell us the manufacturing number.

If you require us to design the wheels for you, please specify :

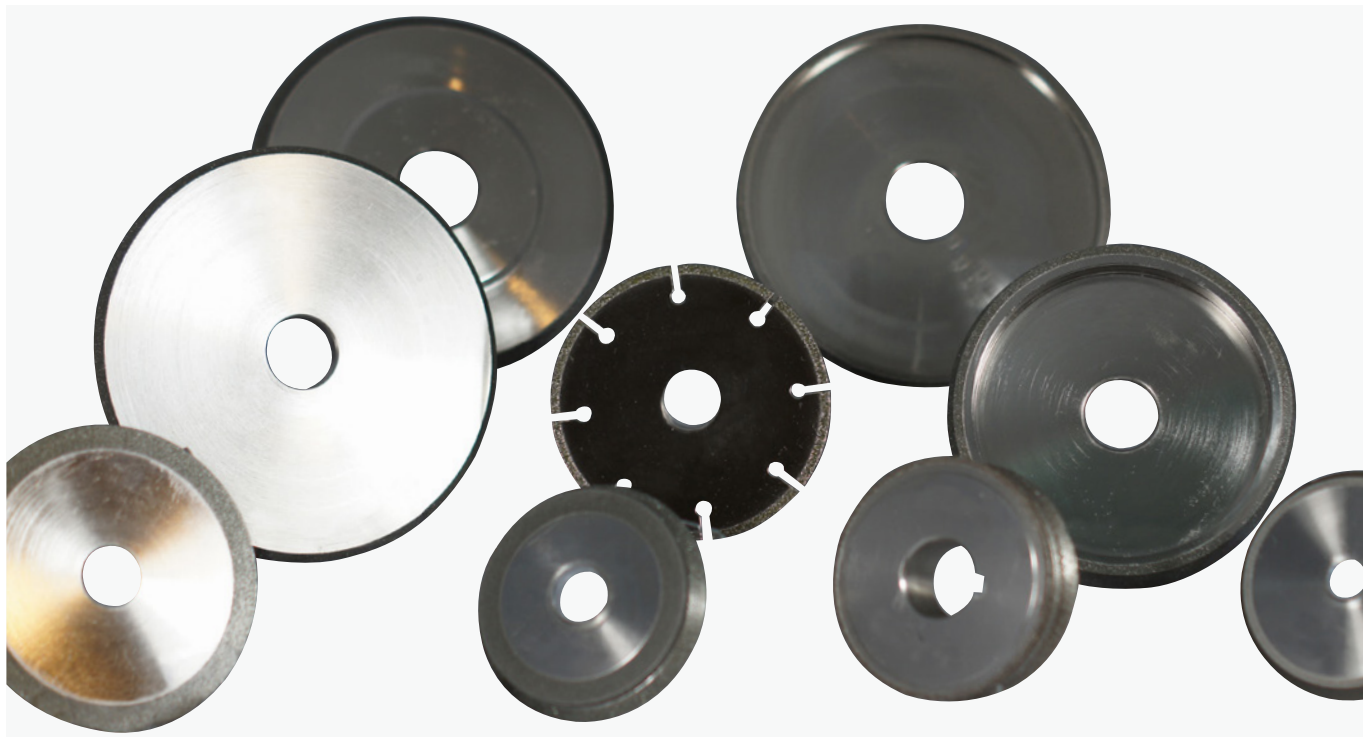
- a) Name, materials, hardness of work-piece.
- b) Name, type, horse power, spindle speed of machine.
- c) Grinding conditions.

If you have your own design, please order as below :  
14A1, 350D-10U-5X-25T-250J-127H, SDC 150N75R5.0, Wet grinding.



# Electroplated Diamond & CBN Wheels

## 電鑄法鑽石與氮化硼砂輪



### 特性 / Characteristic

1. 良好的切削力。
2. 良好的排屑性。
3. 良好的原形保持力。

1. Good cutting force.
2. Good chip removal.
3. Good shape retention.

### 應用 / Application

內孔研磨、外圓研磨、平面及成型研磨、工具研磨、溝研段差研磨等。

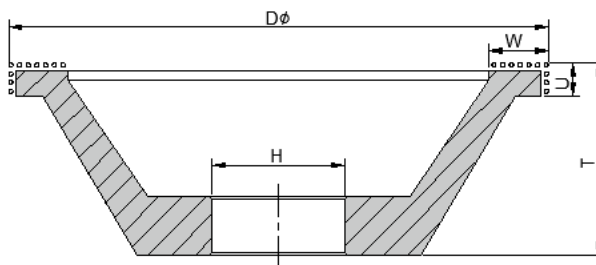
Inner hole grinding, cylindrical grinding, plane and forming grinding, tool grinding, groove grinding, step grinding, etc.

### 電鑄法砂輪常用標準品規格 / Specifications for Electroforming Grinding Wheels

#### 11C9 碗型砂輪

\* 適合鎢鋼工具之研磨，成型用。

\* Ideal for carbide tool's grinding, forming and sharpening.



| 編號<br>Order No. | D   | T  | W  | U | H     | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|----|----|---|-------|-----------------|---------------|
| WC-1005A        | 100 | 22 | 10 | 5 | 20    | #100*           |               |
| WC-1005B        | 100 | 35 | 10 | 5 | 20    | #100*           |               |
| WC-1005C        | 100 | 35 | 10 | 5 | 19.05 | #100*           |               |
| WC-1605A        | 100 | 35 | 16 | 5 | 20    | #200*           |               |
| WC-2005A        | 100 | 35 | 20 | 5 | 20    | #200*           |               |

● 說明：其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

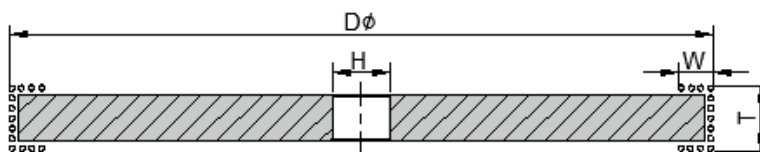
# Specifications for Electroplated Diamond & CBN Wheels

## 電鑄法砂輪常用標準品規格

### 1A1U

\* 適合鎢鋼工具之研磨，成型用。

\* Ideal for carbide tool's grinding, forming and sharpening.

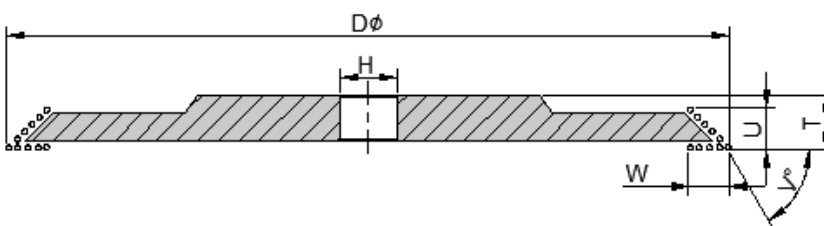


| 編號<br>Order No. | D   | T  | W | H     | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|----|---|-------|-----------------|---------------|
| WS-6105A        | 150 | 10 | 5 | 31.75 | #200*           |               |
| WS-6105B        | 150 | 10 | 5 | 12.70 | #200*           |               |
| WS-6105C        | 150 | 10 | 5 | 15.88 | #200*           |               |

### 3Y1

\* 適合鎢鋼工具之研磨，成型用。

\* Ideal for carbide tool's grinding, forming and sharpening.

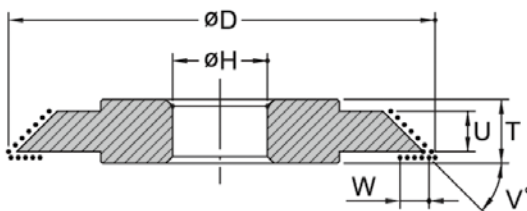


| 編號<br>Order No. | D   | T  | W | U | V° | H     | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|----|---|---|----|-------|-----------------|---------------|
| WV-6645A        | 150 | 10 | 5 | 6 | 45 | 12.7  | #200*           |               |
| WV-6645B        | 150 | 10 | 5 | 6 | 45 | 15.88 | #200*           |               |
| WV-6660A        | 150 | 10 | 5 | 6 | 60 | 12.70 | #200*           |               |
| WV-6660B        | 150 | 10 | 5 | 6 | 60 | 15.88 | #200*           |               |

### 14Y1

\* 適合鎢鋼工具之研磨，成型用。

\* Ideal for carbide tool's grinding, forming and sharpening.

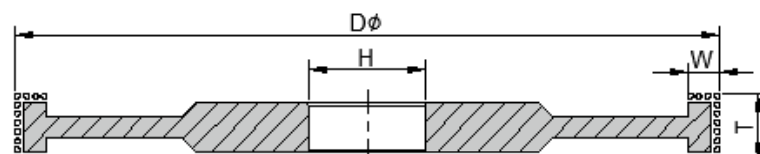


| 編號<br>Order No. | D   | U | T | W  | V°  | H     | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|---|---|----|-----|-------|-----------------|---------------|
| WV-6645A        | 150 | 6 | 6 | 10 | 45° | 12.70 | #200*           |               |
| WV-6645B        | 150 | 6 | 6 | 10 | 45° | 15.88 | #200*           |               |
| WV-6660A        | 150 | 6 | 6 | 10 | 60° | 12.70 | #200*           |               |
| WV-6660B        | 150 | 6 | 6 | 10 | 60° | 15.88 | #200*           |               |

### 14A1、14A1U

\* 適合寶石、半寶石、石材研磨，成型用。

\* Ideal for carbide gem stone and stones grinding.



| 編號<br>Order No. | D   | T  | W | H    | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|----|---|------|-----------------|---------------|
| WS-0625A        | 150 | 25 | - | 25.4 | #60*            |               |
| WS-0625B        | 150 | 25 | 5 | 25.4 | #60*            |               |

● 說明：其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

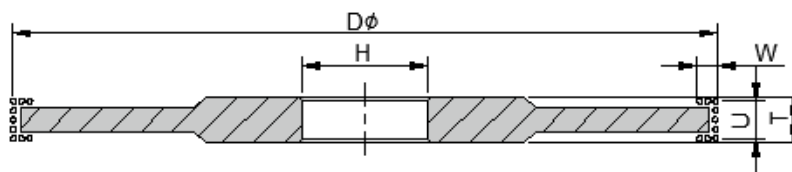
# Specifications for Electroplated Diamond & CBN Wheels

## 電鑄法砂輪常用標準品規格

### 14A1U

\* 適合鐵粉心之研磨，成型用。

\* Ideal for ferrite core grinding.

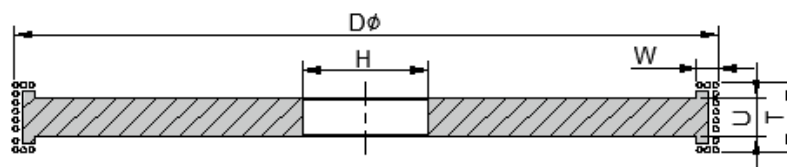


| 編號<br>Order No. | D   | T  | W | U | H     | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|----|---|---|-------|-----------------|---------------|
| WS-7063A        | 175 | 10 | 3 | 6 | 31.75 | #200*           |               |
| WS-7073A        | 175 | 10 | 3 | 7 | 31.75 | #200*           |               |
| WS-7083A        | 175 | 10 | 3 | 8 | 31.75 | #200*           |               |
| WS-7093A        | 175 | 10 | 3 | 9 | 31.75 | #200*           |               |

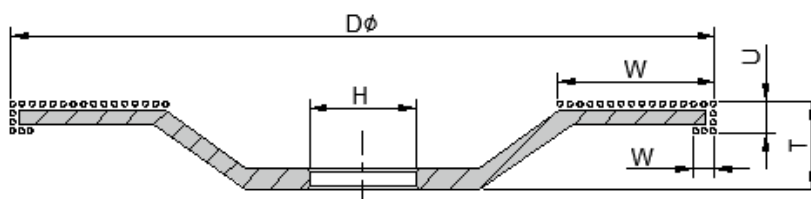
### 9A1U

\* 適合鐵粉心之研磨，成型用。

\* Ideal for ferrite core grinding.



| 編號<br>Order No. | D   | T  | W | E   | H     | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|----|---|-----|-------|-----------------|---------------|
| WS-7103A        | 175 | 10 | 3 | 9.8 | 31.75 | #200*           |               |
| WS-7113A        | 175 | 11 | 3 | 10  | 31.75 | #200*           |               |
| WS-7123A        | 175 | 12 | 3 | 10  | 31.75 | #200*           |               |
| WS-7133A        | 175 | 13 | 3 | 10  | 31.75 | #200*           |               |
| WS-7143A        | 175 | 14 | 3 | 10  | 31.75 | #200*           |               |
| WS-7153A        | 175 | 15 | 3 | 10  | 31.75 | #200*           |               |
| WS-7163A        | 175 | 16 | 3 | 10  | 31.75 | #200*           |               |



| 編號<br>Order No. | D  | T    | W   | U     | H    | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|----|------|-----|-------|------|-----------------|---------------|
| 103             | 12 | 22/2 | 2.5 | 16+3孔 | #60* |                 |               |

● 說明: " \* " 標準粒度，其餘規格粒度請指明訂購或附上詳細圖面。 / Note: " \* " standard granularity, please specify the order or attach detailed drawings for other granularity.

# Resinoid Diamond & CBN Wheels

## 樹脂法鑽石與氮化硼砂輪



### 特性 \ Characteristic

- |                                                                                                          |                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. 良好的加工精度。</li> <li>2. 良好的表面粗糙度。</li> <li>3. 良好的砂輪壽命。</li> </ol> | <ol style="list-style-type: none"> <li>1. Good machining accuracy.</li> <li>2. Good surface roughness.</li> <li>3. Good wheel life.</li> </ol> |
|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|

### 應用 \ Application

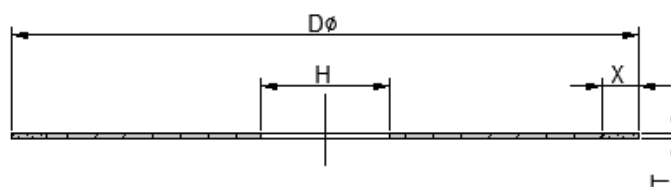
|                                             |                                                                                                                                           |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <p>內孔研磨、外圓研磨、平面及成型研磨、工具研磨、溝<br/>研段差研磨等。</p> | <p>Inner hole grinding, cylindrical grinding, plane and<br/>forming grinding, tool grinding, groove grinding, step<br/>grinding, etc.</p> |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|

### 樹脂法砂輪常用標準品規格 \ Specifications for resinoid diamond & CBN wheels

#### 1A1 R

\* 適用於平面磨床 (ø31.75孔) 或  
沖頭切斷機 (ø19.05孔)，用於  
切斷鎢鋼，陶瓷 (SDC) 或硬化  
鋼材 (BC)。

\* Apply on surface grinding  
machine or cutting machine, to  
cut the carbide, ceramics (SDC)  
or hardened steels (BC).



| 編號<br>Order No. | D   | T   | X | H     | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|-----|---|-------|-----------------|---------------|
| RD-06017A       | 150 | 1.0 | 7 | 31.75 | D120*           |               |
| RB-06017A       | 150 | 1.0 | 7 | 31.75 | B120*           |               |
| RD-06017B       | 150 | 1.0 | 7 | 19.05 | D120*           |               |
|                 | 150 | 1.0 | 7 | 19.05 | B120*           |               |
|                 | 200 | 1.0 | 7 | 19.05 | D120*           |               |
|                 | 200 | 1.0 | 7 | 31.75 | D120*           |               |



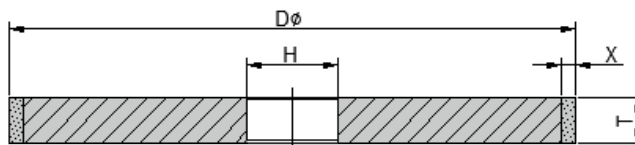
# Specifications for Resinoid Diamond & CBN Wheels

## 樹脂法砂輪常用標準品規格

### 1A1

\* 適用於平面磨床、研磨鎢鋼、陶瓷 (SDC) 或硬化鋼材 (BC)。

\* Apply on surface grinding machine, to grind carbide(SDC) or hardened steels(BC).

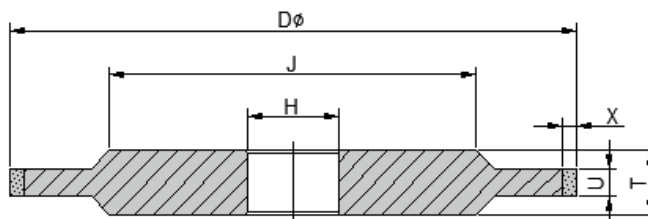


| 編號<br>Order No. | D   | T  | X | U | H     | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|----|---|---|-------|-----------------|---------------|
| RD-06103A       | 150 | 10 | 3 | - | 31.75 | D150*           |               |
| RB-06103A       | 150 | 10 | 3 | - | 31.75 | B150*           |               |
| RD-07103A       | 175 | 10 | 3 | - | 31.75 | D150*           |               |
| RB-07103A       | 175 | 10 | 3 | - | 31.75 | B150*           |               |
| RB-07133A       | 175 | 13 | 3 | - | 31.75 | B150*           |               |
|                 | 180 | 10 | 3 | - | 31.75 | D150*           |               |
|                 | 180 | 10 | 3 | - | 31.75 | B150*           |               |
|                 | 180 | 10 | 5 | - | 31.75 | D150*           |               |
|                 | 180 | 10 | 5 | - | 31.75 | B150*           |               |
|                 | 180 | 13 | 3 | - | 31.75 | D150*           |               |
|                 | 180 | 13 | 3 | - | 31.75 | B150*           |               |
|                 | 180 | 13 | 5 | - | 31.75 | D150*           |               |
|                 | 180 | 13 | 5 | - | 31.75 | B150*           |               |

### 14A1

\* 適用於平面磨床、研磨鎢鋼、陶瓷 (SDC) 或硬化鋼材 (BC)。

\* Apply on surface grinding machine, to grind carbide(SDC) or hardened steels(BC).



| 編號<br>Order No. | D   | T  | X  | U  | H     | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|----|----|----|-------|-----------------|---------------|
| RD-06033A       | 150 | 10 | 3  | 3  | 31.75 | D150*           |               |
| RB-06033A       | 150 | 10 | 3  | 3  | 31.75 | B150*           |               |
| RD-06063A       | 150 | 10 | 3  | 6  | 31.75 | D150*           |               |
| RB-06063A       | 150 | 10 | 3  | 6  | 31.75 | B150*           |               |
| RD-06083A       | 150 | 10 | 3  | 8  | 31.75 | D150*           |               |
| RD-07063A       | 175 | 10 | 3  | 6  | 31.75 | D150*           |               |
|                 | 300 | 32 | 5  | 15 | 101.6 | D150*           |               |
|                 | 300 | 32 | 5  | 15 | 101.6 | B150*           |               |
|                 | 300 | 32 | 5  | 15 | 101.6 | D150*           |               |
|                 | 300 | 32 | 5  | 15 | 101.6 | B150*           |               |
|                 | 350 | 32 | 5  | 15 | 127   | D150*           |               |
|                 | 350 | 32 | 5  | 15 | 127   | B150*           |               |
|                 | 350 | 32 | 10 | 20 | 127   | D150*           |               |
|                 | 350 | 32 | 10 | 20 | 127   | B150*           |               |
|                 | 350 | 32 | 10 | 15 | 127   | D150*           |               |
|                 | 350 | 32 | 10 | 15 | 127   | B150*           |               |

● 說明: " \* " 標準粒度, 其餘規格粒度請指明訂購或附上詳細圖面。 / Note: " \* " standard granularity, please specify the order or attach detailed drawings for other granularity.

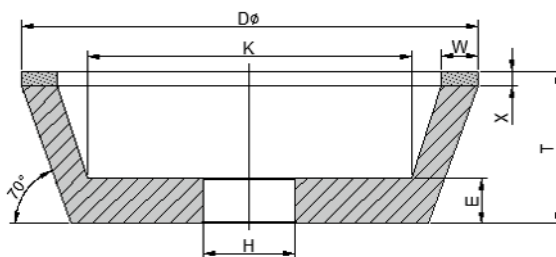
# Specifications for Resinoid Diamond & CBN Wheels

## 樹脂法砂輪常用標準品規格

### 11A2

\* 適用於工具磨床，鎢鋼刀具研磨及成型用。

\* Apply on tool grinding machine, to grind or form the carbide tools.

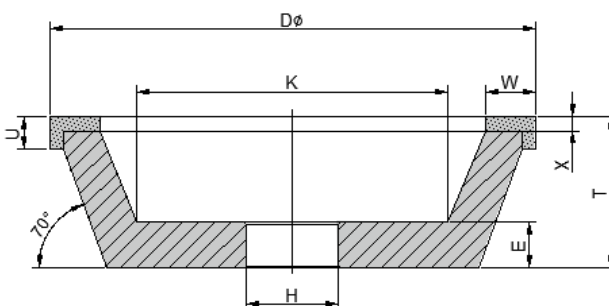


| 編號<br>Order No. | D   | T  | W  | X | H     | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|----|----|---|-------|-----------------|---------------|
| RD-04082A       | 100 | 40 | 8  | 2 | 20    | D150*           |               |
| RD-04103A       | 100 | 30 | 10 | 3 | 20    | D200*           |               |
| RD-04103C       | 100 | 30 | 10 | 3 | 19.05 | D200*           |               |

### 11C9

\* 適用於工具磨床，鎢鋼刀具研磨及成型用。

\* Apply on tool grinding machine, to grind or form the carbide tools.

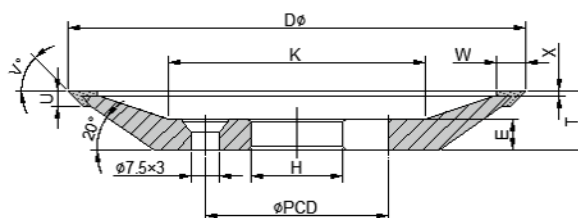


| 編號<br>Order No.g | D   | T  | W | X | U | H  | 粒度<br>Grit Size | 備註<br>Remarks |
|------------------|-----|----|---|---|---|----|-----------------|---------------|
| RD-04815A        | 100 | 40 | 8 | 1 | 5 | 20 | D150*           |               |

### 12Y9C

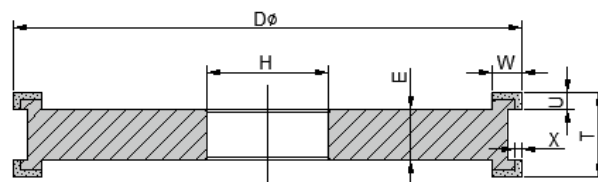
\* 適用於自動車床刀具研磨機、鎢鋼車刀研磨。

\* For tool grinding machine, to sharpen the carbide turning tools.



| 編號<br>Order No. | D   | T  | W | X | U | V°  | H  | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|----|---|---|---|-----|----|-----------------|---------------|
| RD-05815A       | 125 | 16 | 8 | 1 | - | -   | 25 | D400*           | 12A2C         |
| RD-05815B       | 125 | 16 | 8 | 1 | 5 | 60° | 25 | D600*           |               |
| RD-05815C       | 125 | 16 | 8 | 1 | 5 | 45° | 25 | D400*           |               |

### 9C3



| 編號<br>Order No. | D   | T  | W | X | U | H  | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|----|---|---|---|----|-----------------|---------------|
|                 | 150 | 25 | 8 | 2 | 5 | 36 | D200*           |               |
|                 | 150 | 25 | 8 | 2 | 5 | 36 | D400*           |               |
|                 | 150 | 25 | 8 | 2 | 5 | 36 | D600*           |               |

● 說明: " \* " 標準粒度，其餘規格粒度請指明訂購或附上詳細圖面。 / Note: " \* " standard granularity, please specify the order or attach detailed drawings for other granularity.detailed drawings for other granularity.

# Super Hybrid Diamond/CBN Grinding Wheel

KKDIA  
聯成鑽石

## 超級複合式鑽石與 CBN 砂輪



在本公司研發人員努力下，我們開發出新一代的樹脂結合劑配方，這一系列全新的鑽石與 CBN 砂輪，擁有更長的加工壽命，更快的研磨效率，並降低砂輪的修整頻率，提供給您的是更高性價比的產品。

With the efforts of our R&D personnel, we have developed a new generation of resin bond formulations. This series of brand new diamond and CBN grinding wheels have longer processing life, faster grinding efficiency, and reduce the frequency of grinding wheels. What you get is a more cost-effective product.

### 特性 \ Characteristic

1. 使用特殊的複合式結合劑，以 600° C 超高燒結溫度製作而成 ( 市面上的燒結溫度為 180~240° C )。
2. 超級複合式砂輪可以承受更高的研磨熱度，不會因高溫脆化而降低對磨料的抓著力。
3. 砂輪壽命方面，比一般樹脂結合劑高出 3~6 倍。
4. 砂輪切削力比一般樹脂結合劑提升 2~4 倍的移除量。
5. 形狀保持力以及加工光潔度也大幅提升。

1. Using a special composite bond, it is made at an ultra-high sintering temperature of 600° C (the sintering temperature on the market is 180~240° C).
2. The super hybrid diamond/CBN grinding wheel can withstand higher grinding heat, and will not reduce the grip on the abrasive due to high temperature embrittlement.
3. The life of the grinding wheel is 3~6 times longer than the general resin bond.
4. The cutting force of the grinding wheel is increased by 2~4 times the removal amount than the general resin bond.
5. Shape retention and processing finish are also greatly improved.

### 應用 \ Application

非常適用於 CNC 工具磨床的加工使用，尤其是銑刀，鑽頭，以及鎢鋼成型研磨。

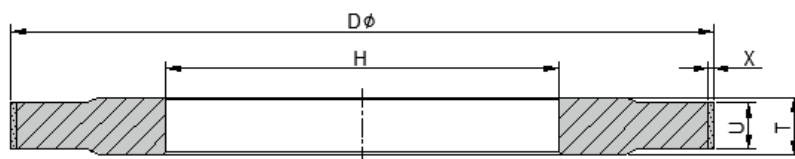
It is very suitable for the processing and use of CNC tool grinders, especially milling cutters, drill bits, and tungsten steel forming grinding.

# Vitrified Grinding Wheels

## 陶瓷法砂輪常用型式規格

\* 適用於汽機車凸軸輪研磨。

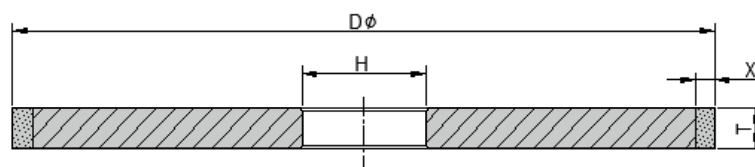
\* Suitable for automatic lathe tool grinding machine, tungsten steel turning tool grinding.



| 編號<br>Order No. | D  | T | X  | U     | H    | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|----|---|----|-------|------|-----------------|---------------|
| 610             | 40 | 8 | 25 | 304.8 | B150 |                 |               |

\* 適用於一般平面精密研磨。

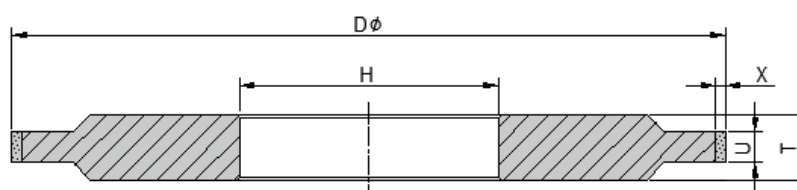
\* Suitable for general plane precision grinding.



| 編號<br>Order No. | D  | T | X | U     | H    | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|----|---|---|-------|------|-----------------|---------------|
| 180             | 10 | 5 | - | 31.75 | D150 |                 |               |
| 180             | 10 | 5 | - | 31.75 | B150 |                 |               |
| 180             | 10 | 5 | - | 31.75 | D400 |                 |               |
| 180             | 10 | 5 | - | 31.75 | B400 |                 |               |

\* 適用於一般平面精密研磨。

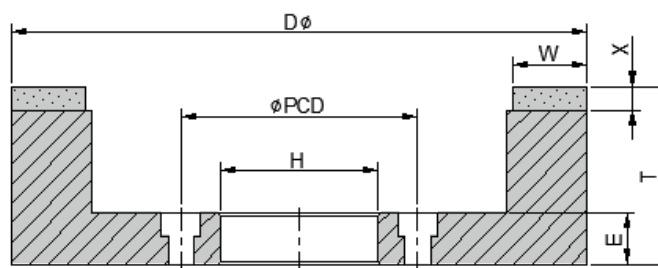
\* Suitable for general plane precision grinding.



| 編號<br>Order No. | D  | T | X  | U   | H    | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|----|---|----|-----|------|-----------------|---------------|
| 350             | 32 | 5 | 15 | 127 | D150 |                 |               |
| 350             | 32 | 5 | 15 | 127 | B150 |                 |               |
| 350             | 32 | 5 | 15 | 127 | D400 |                 |               |
| 350             | 32 | 5 | 15 | 127 | B400 |                 |               |

## PCB、PCBN 等鑽石刀具研磨用砂輪 / PCB, PCBN & Other Diamond Tool Grinding Wheels

6A2



| 編號<br>Order No. | D  | T  | W  | X      | H      | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|----|----|----|--------|--------|-----------------|---------------|
| 150             | 45 | 5  | 6  | 40+4 孔 | VD600  |                 |               |
| 150             | 45 | 10 | 10 | 40+4 孔 | VD1500 |                 |               |
| 150             | 45 | 20 | 10 | 40+4 孔 | VD3000 |                 |               |
|                 |    |    |    |        | VD5000 |                 |               |

● 說明: 其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

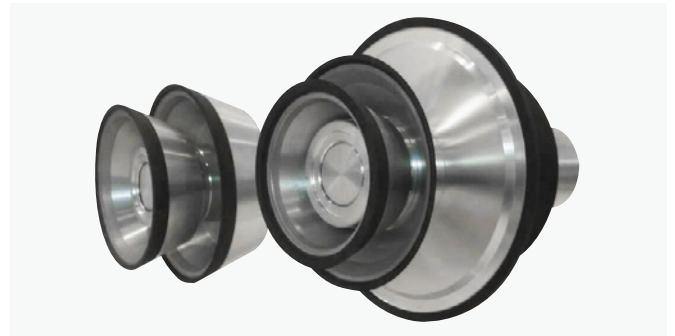


# Super Hard Tool Grinding Series Grinding Wheel

## 超硬刀具研磨系列砂輪

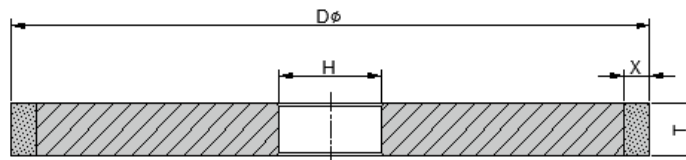
本公司針對 CNC 五軸工具研磨機生產高效能 HD 鑽石砂輪，通用於各大 CNC 五軸工具研磨機，研磨端銑刀、球型銑刀等各式刀具之開溝 (flute)、刀刃口 (relief)、屑槽 (gash) 等研磨。

The company produces high-performance HD diamond grinding wheels for CNC five-axis tool grinders, which are commonly used in major CNC five-axis tool grinders, grinding end mills, ball milling cutters and other tools such as flutes and cutting edges (Relief, Gash, etc. grinding).



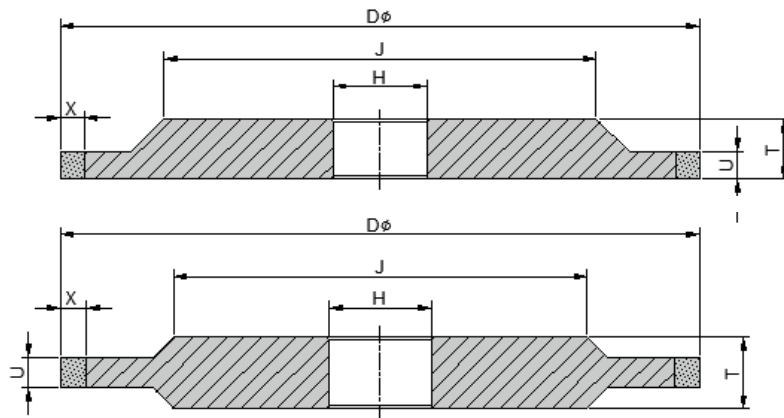
### 鑽石與氮化硼砂輪常用標準品規格 \ Diamond and CBN Grinding Wheel standard product specifications

#### 1A1



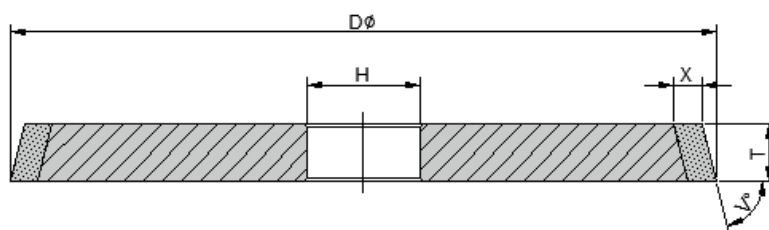
| 編號<br>Order No. | D    | T   | X     | H | 備註<br>Remarks |
|-----------------|------|-----|-------|---|---------------|
| 125             | 8~12 | 5、6 | 依客戶指定 |   |               |
| 150             | 8~12 | 5、6 | 依客戶指定 |   |               |

#### 3A1、14A1



| 編號<br>Order No. | D    | T   | X    | U     | H | 備註<br>Remarks |
|-----------------|------|-----|------|-------|---|---------------|
| 125             | 8~12 | 3、5 | 1~3  | 依客戶指定 |   |               |
| 150             | 8~12 | 5、6 | 4~10 | 依客戶指定 |   |               |

#### 1V1



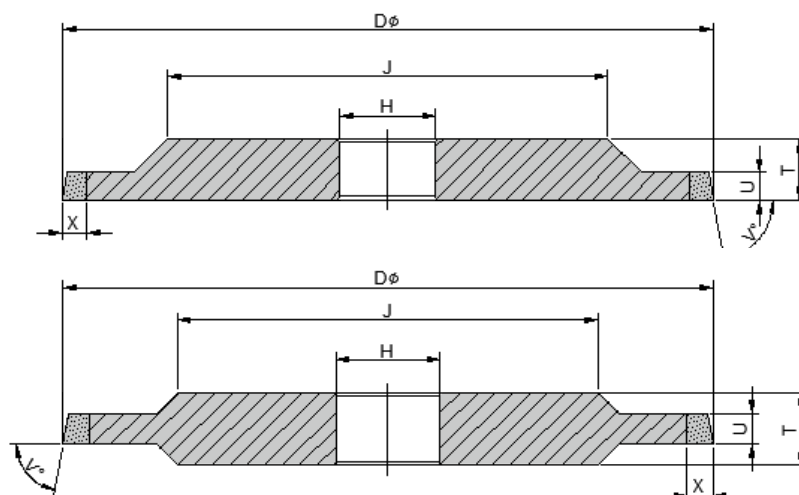
| 編號<br>Order No. | D    | T   | X       | V°    | H | 備註<br>Remarks |
|-----------------|------|-----|---------|-------|---|---------------|
| 125             | 8~12 | 5、6 | 10°~45° | 依客戶指定 |   |               |
| 150             | 8~12 | 5、6 | 10°~45° | 依客戶指定 |   |               |

●說明：其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

# Specifications for Diamond & Boron Nitride Grinding Wheels

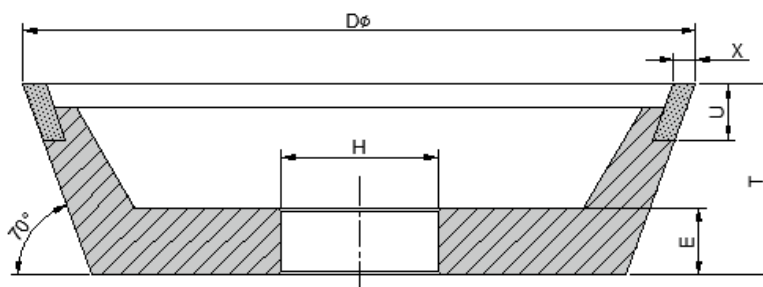
## 鑽石與氮化硼砂輪常用型式規格

### 3V1、14V1



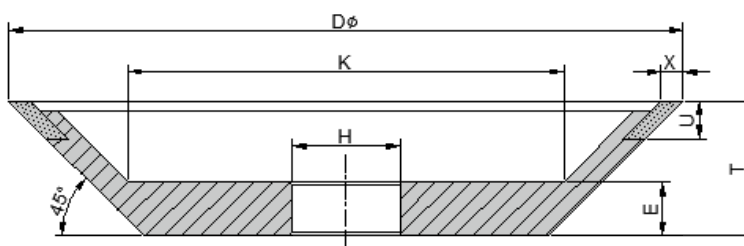
| 編號<br>Order No. | D   | T    | X   | V°      | U    | H     | 備註<br>Remarks |
|-----------------|-----|------|-----|---------|------|-------|---------------|
|                 | 125 | 8~12 | 3、6 | 10°~45° | 1~3  | 依客戶指定 |               |
|                 | 150 | 8~12 | 5、6 | 10°~45° | 4~10 | 依客戶指定 |               |

### 11V9



| 編號<br>Order No. | D   | S   | T     | X | U      | H     | 備註<br>Remarks |
|-----------------|-----|-----|-------|---|--------|-------|---------------|
|                 | 75  | 70° | 30、35 | 3 | 6、8、10 | 依客戶指定 |               |
|                 | 85  | 70° | 30、35 | 3 | 6、8、10 | 依客戶指定 |               |
|                 | 90  | 70° | 30、35 | 3 | 6、8、10 | 依客戶指定 |               |
|                 | 100 | 70° | 30、35 | 3 | 6、8、10 | 依客戶指定 |               |
|                 | 125 | 70° | 30、35 | 3 | 6、8、10 | 依客戶指定 |               |

### 12V9



| 編號<br>Order No. | D   | S   | T     | X | U      | H     | 備註<br>Remarks |
|-----------------|-----|-----|-------|---|--------|-------|---------------|
|                 | 100 | 45° | 25、30 | 3 | 6、8、10 | 依客戶指定 |               |
|                 | 110 | 45° | 25、30 | 3 | 6、8、10 | 依客戶指定 |               |
|                 | 125 | 45° | 25、30 | 3 | 6、8、10 | 依客戶指定 |               |

●說明:其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

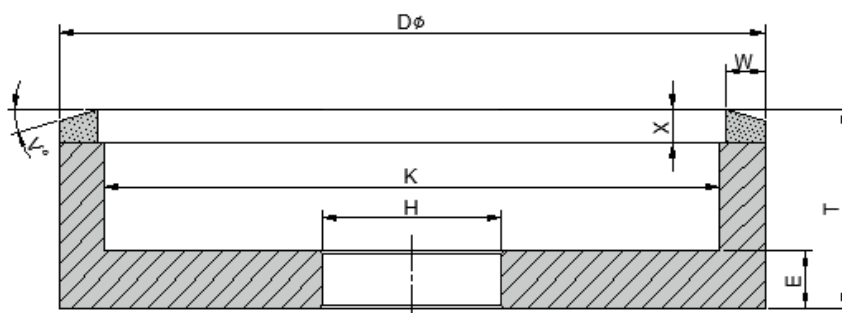
# Grinding Wheel for Forming & Grinding The End Face of Ball Milling Cutter

用於球型銑刀端面成型研磨之砂輪



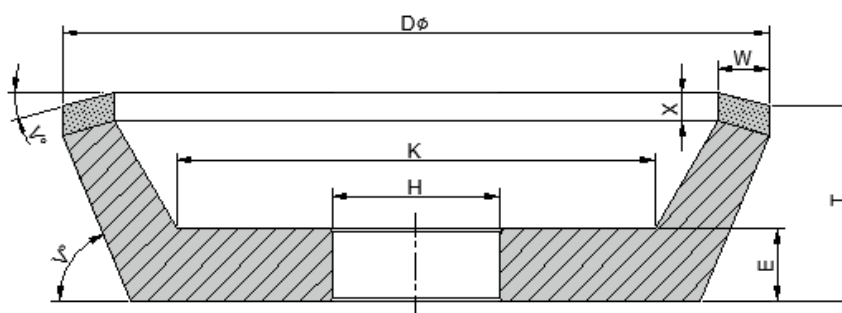
複合式鑽石與氮化硼砂輪 / Hybrid Diamond/CBN grinding wheels

鑽石與氮化硼砂輪常用標準品規格 \ Diamond and CBN Grinding Wheel standard product specifications



6V5

| 編號<br>Order No. | D | W     | X    | V°         | 粒度<br>Grit Size |                      | 備註<br>Remarks |
|-----------------|---|-------|------|------------|-----------------|----------------------|---------------|
| 75              |   | 6~10  | 3~10 | 30°<br>45° | D200            | B170<br>B400<br>B600 |               |
| 100             |   | 6~12  | 3~10 |            | D250            |                      |               |
| 125             |   | 6~12  | 6~10 |            | D400            |                      |               |
| 150             |   | 8~12  | 6~15 |            | D600            |                      |               |
| 200             |   | 10~20 | 6~15 |            | D800            |                      |               |



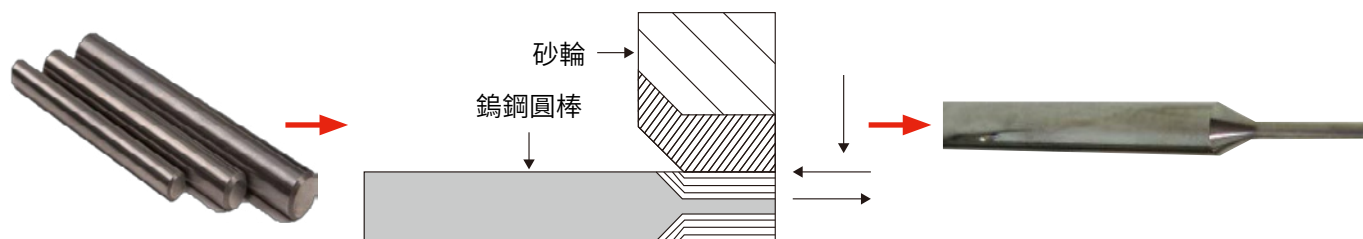
12V5

| 編號<br>Order No. | D | W     | X    | V°         | 粒度<br>Grit Size |                      | 備註<br>Remarks |
|-----------------|---|-------|------|------------|-----------------|----------------------|---------------|
| 75              |   | 6~10  | 3~10 | 30°<br>45° | D200            | B170<br>B400<br>B600 |               |
| 100             |   | 6~12  | 3~10 |            | D250            |                      |               |
| 125             |   | 6~12  | 6~10 |            | D400            |                      |               |
| 150             |   | 8~12  | 6~15 |            | D600            |                      |               |
| 200             |   | 10~20 | 6~15 |            | D800            |                      |               |

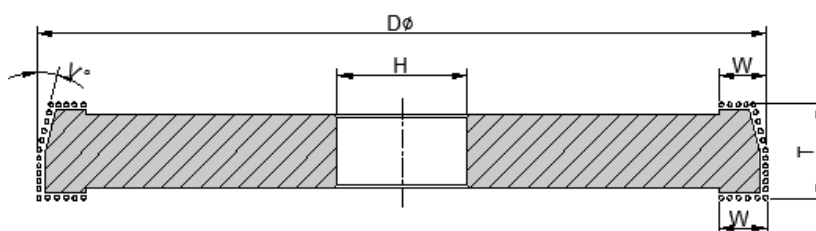
● 說明:其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

# Special Grinding Wheel for Tungsten Steel Round Bar Breakage Grinding

## 鎢鋼圓棒斷差研磨專用砂輪

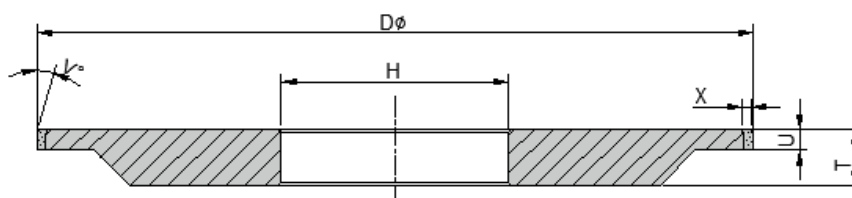


### 電鑄砂輪常用規格 \ Common specifications of electroforming grinding wheel

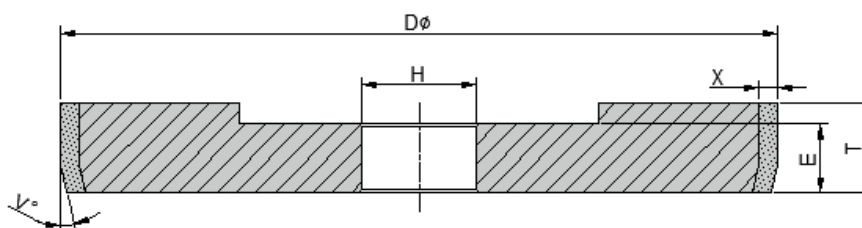


| 編號<br>Order No. | D   | T  | W  | V° | H     | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|----|----|----|-------|-----------------|---------------|
|                 | 175 | 20 | 10 | 15 | 31.75 | #200            |               |

### 樹脂砂輪常用規格 \ Common specifications of resin grinding wheels



| 編號<br>Order No. | D   | T  | U  | X | V° | H   | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|----|----|---|----|-----|-----------------|---------------|
|                 | 400 | 32 | 12 | 5 | 15 | 127 | #150            |               |
|                 | 400 | 32 | 12 | 5 | 15 | 127 | #200            |               |
|                 | 400 | 32 | 12 | 5 | 45 | 127 | #150            |               |
|                 | 400 | 32 | 12 | 5 | 45 | 127 | #800            |               |



| 編號<br>Order No. | D   | T  | X | V° | H     | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|----|---|----|-------|-----------------|---------------|
|                 | 200 | 25 | 5 | 12 | 31.75 | #150            |               |
|                 | 200 | 25 | 5 | 12 | 31.75 | #200            |               |

● 說明:其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

# Centerless Grinding of Diamonds & CBN Wheels

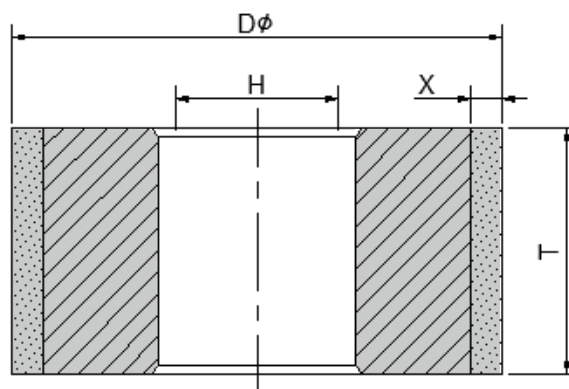
## 無心研磨鑽石與 CBN 砂輪



本公司生產高效能之無心研磨用鑽石與 CBN 砂輪，主要用於鎢鋼圓棒、陶瓷、玻璃、石英、矽棒及 H.S.S 圓棒之研磨加工。

The company produces high-performance centerless grinding diamond and CBN grinding wheels, which are mainly used for tungsten steel rods, ceramics, glass, quartz, silicon rods and Grinding of H.S.S round bars.

### 砂輪形式及規格 \ Grinding wheel form and specification



1A

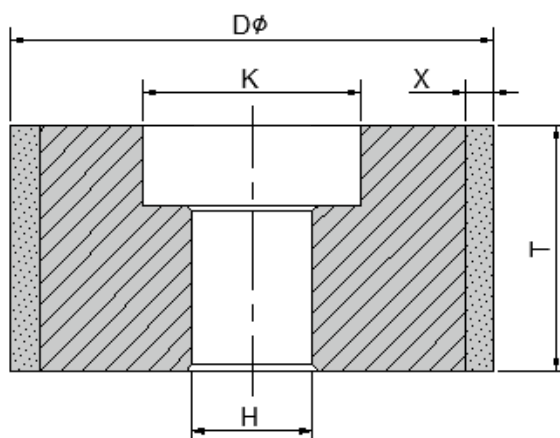
| 編號<br>Order No. | D   | T       | X | H     | 備註<br>Remarks |
|-----------------|-----|---------|---|-------|---------------|
|                 | 300 | 50~150  | 5 | 120   |               |
|                 | 350 | 75~150  | 5 | 127   |               |
|                 | 400 | 75~205  | 5 | 203.2 |               |
|                 | 450 | 75~205  | 5 | 208.6 |               |
|                 | 510 | 100~305 | 5 | 228.6 |               |
|                 | 610 | 100~300 | 5 | 304.8 |               |

● 說明：其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.



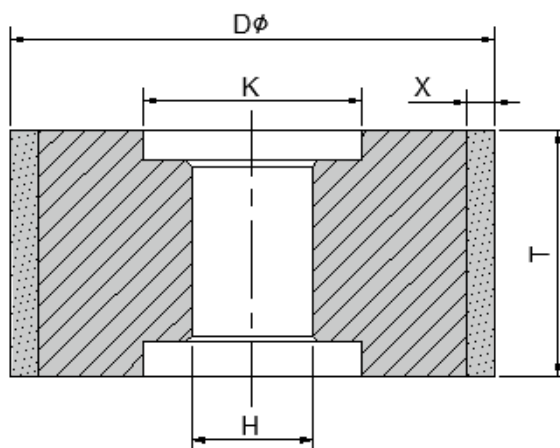
# Centerless Grinding of Diamonds & CBN Wheels

## 無心研磨鑽石與氮化硼砂輪



5A

| 編號<br>Order No. | D   | T       | X | H     | 備註<br>Remarks |
|-----------------|-----|---------|---|-------|---------------|
|                 | 300 | 50~150  | 5 | 120   |               |
|                 | 350 | 75~150  | 5 | 127   |               |
|                 | 400 | 75~205  | 5 | 203.2 |               |
|                 | 450 | 75~205  | 5 | 208.6 |               |
|                 | 510 | 100~305 | 5 | 228.6 |               |
|                 | 610 | 100~300 | 5 | 304.8 |               |



7A

| 編號<br>Order No. | D   | T       | X | H     | 備註<br>Remarks |
|-----------------|-----|---------|---|-------|---------------|
|                 | 300 | 50~150  | 5 | 120   |               |
|                 | 350 | 75~150  | 5 | 127   |               |
|                 | 400 | 75~205  | 5 | 203.2 |               |
|                 | 450 | 75~205  | 5 | 208.6 |               |
|                 | 510 | 100~305 | 5 | 228.6 |               |
|                 | 610 | 100~300 | 5 | 304.8 |               |

●說明：其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

# Diamond & Boron Nitride Cutting Wheels

## 鑽石與氮化硼切斷砂輪

本公司生產鎢鋼專用切斷砂輪，及 H.S.S 專用切斷砂輪，主要用於鎢鋼及 H.S.S 圓棒之裁切使用，效率高、壽命佳。

Our company produces special cutting wheels for tungsten steel and H.S.S special cutting wheels, which are mainly used for cutting tungsten steel and H.S.S round bars, with high efficiency and long life.

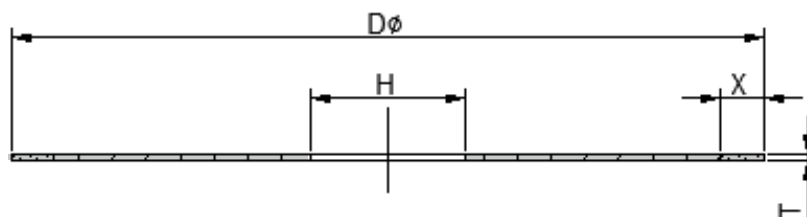


### 鑽石與氮化硼切斷砂輪常用標準品規格 \ Specifications for diamond and boron nitride cutting wheels

#### 1A1 R

\* 適用於平面磨床 (31.75 孔) 或沖頭切斷機 (19.05 孔)，用於切斷鎢鋼、陶瓷 (SDC) 或硬化鋼材 (BC)。

\* Suitable for surface grinder (31.75 hole) or punch cutter (19.05 hole), used to cut tungsten steel, ceramic (SDC) or hardened steel (BC).

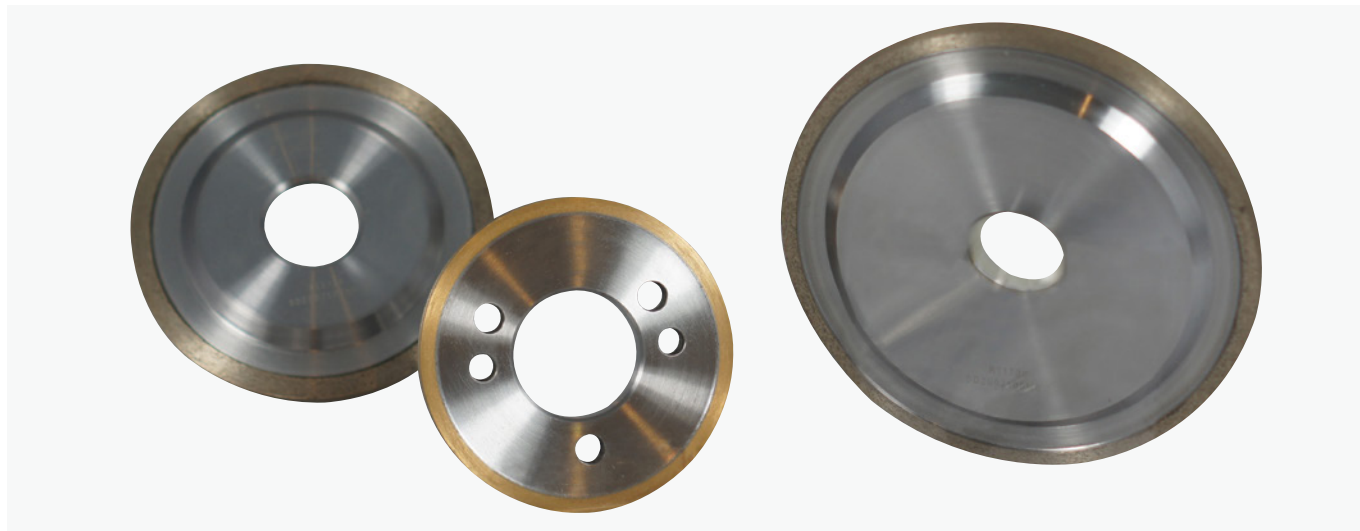


| 編號<br>Order No. | D   | T   | X | H     | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|-----|---|-------|-----------------|---------------|
| RD-06017A       | 150 | 1.0 | 7 | 31.75 | D120            |               |
| RB-06017A       | 150 | 1.0 | 7 | 31.75 | B120            |               |
| RD-06017B       | 150 | 1.0 | 7 | 19.05 | D120            |               |
|                 | 150 | 1.0 | 7 | 19.05 | B120            |               |
|                 | 200 | 1.0 | 7 | 19.05 | D120            |               |
|                 | 200 | 1.0 | 7 | 31.75 | D120            |               |

● 說明：其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

# Metal Bond Diamond & Boron Nitride Grinding Wheel

## 金屬法鑽石與氮化硼砂輪



### 特性 \ Characteristic

1. 良好的耐磨特性。
2. 良好的磨利保持力。

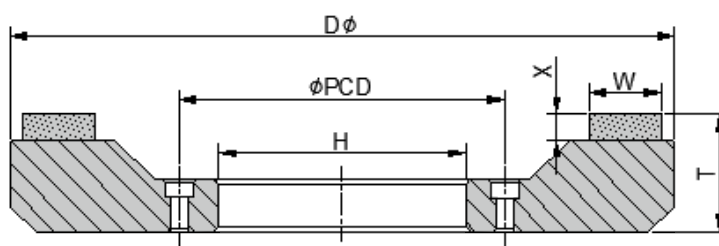
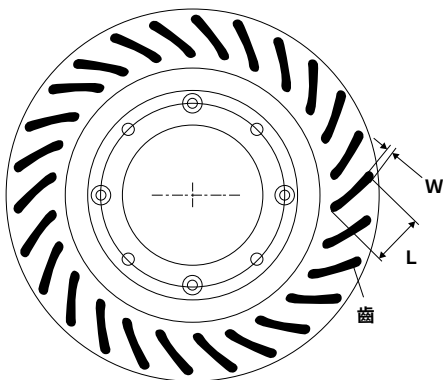
1. Good wear characteristics.
2. Good grinding retention.

### 應用 \ Application

齒輪研磨、工具研磨、超硬合金的研磨、電解研磨、仿孔研磨、精密加工、要求保持砂輪形狀不變的成形加工、輪廓加工、LED、陶瓷、玻璃、石英、半導體等硬脆材料研磨加工等。

Gear grinding, tool grinding, cemented carbide grinding, electrolytic grinding, hole-like grinding, precision processing, forming processing that requires the shape of the grinding wheel to remain unchanged, contour processing, LED, ceramic, glass, quartz, semiconductor and other hard and brittle materials grinding processing Wait.

### 晶圓背磨、LED、藍寶石加工專用研磨砂輪 / Special Grinding Wheels for Wafer Back Grinding, LED, Sapphire Processing



| 編號<br>Order No. | D              | S | H        | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|----------------|---|----------|-----------------|---------------|
| 150             | 26(3W×10X×35L) | 6 | D325/400 |                 |               |

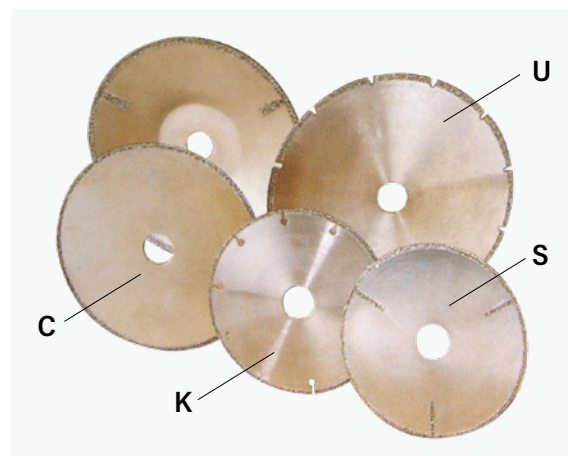
●說明：其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

# Electroplated Diamond Cutters

## 電鑄鑽石鋸片

此系列產品主要使用於大理石、磁磚、FRP、碳纖或石墨等之切割。

Electroplated Diamond Cutters are used for cutting marble, tile, FRP, carbon or graphics.

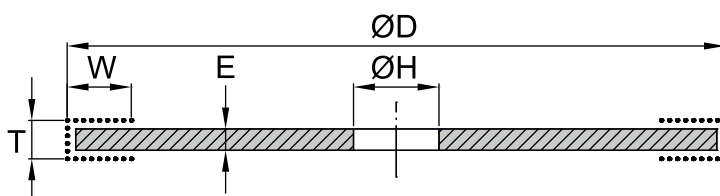


C: 連續式 / Continuous rim type

S: 幅條式 / Spoke type

U: U 溝式 / U-slot type

K: 水滴溝式 / Key hole slot type



單位 / Unit : mm

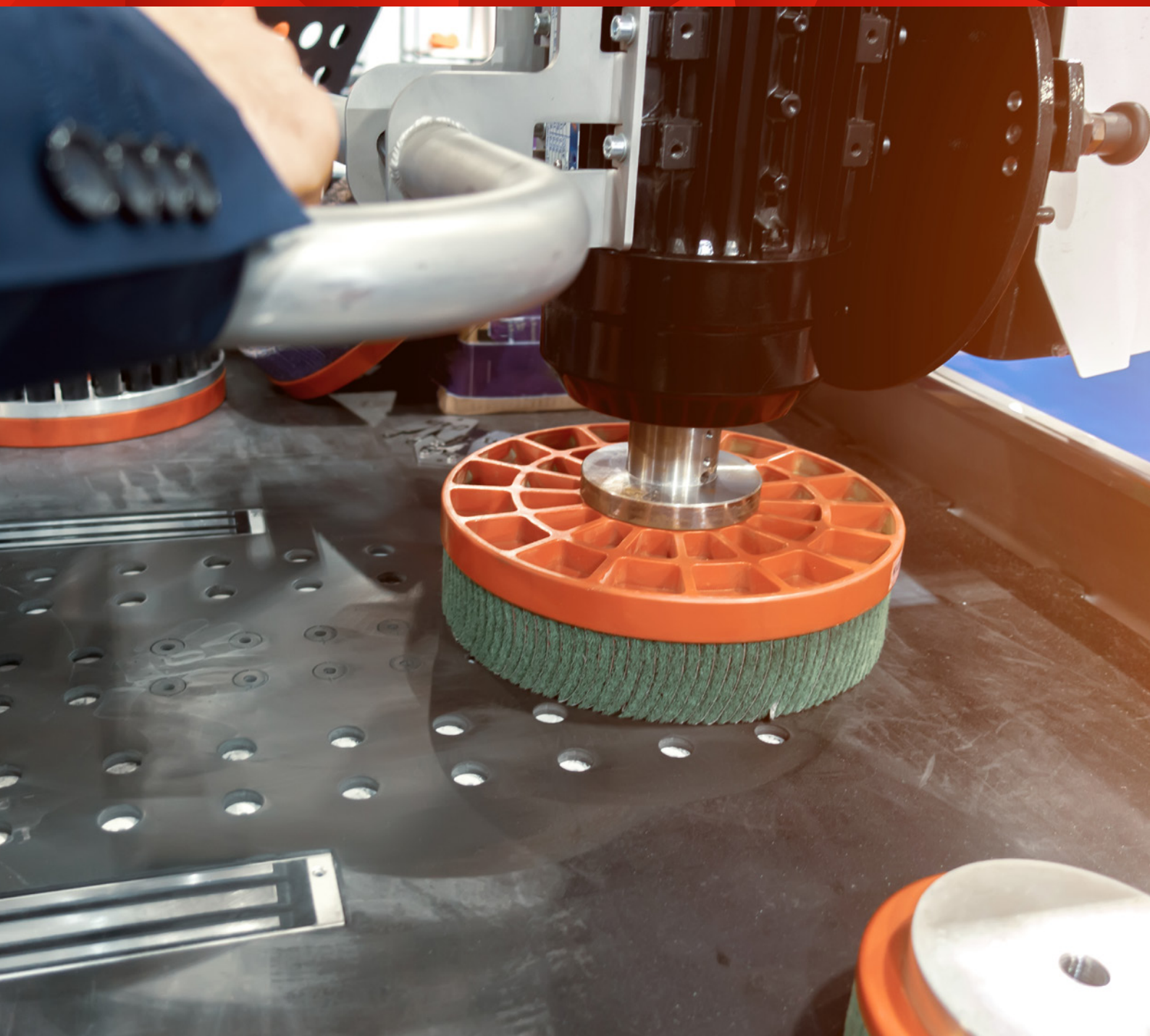
| 編號<br>Order No. | øD  | E   | T   | W   | 型式<br>Type | 粒度<br>Grit Size | øH                                   |
|-----------------|-----|-----|-----|-----|------------|-----------------|--------------------------------------|
| SP-05008        | 50  | 0.8 | 1.8 | 2~3 | C,S,U      | #40             | 訂購時，敬請指明。<br>Depend on your request. |
| SP-06308        | 63  | 0.8 | 1.8 | 2~3 | C,S,U      | #40             |                                      |
| SP-10008        | 100 | 0.8 | 1.8 | 2~3 | C,S,U      | #40             |                                      |
| SP-11508        | 115 | 0.8 | 1.8 | 2~3 | C,S,U      | #40             |                                      |
| SP-11510K       | 115 | 1.0 | 2.0 | 2~3 | K          | #40             |                                      |
| SP-12508        | 125 | 0.8 | 1.8 | 2~3 | C,S,U      | #40             |                                      |
| SP-15008        | 150 | 0.8 | 1.8 | 2~3 | C,S,U      | #40             |                                      |
| SP-15012        | 150 | 1.2 | 2.2 | 2~3 | C,S,U      | #40             |                                      |
| SP-17512        | 175 | 1.2 | 2.2 | 2~3 | C,S,U      | #40             |                                      |
| SP-20012        | 200 | 1.2 | 2.2 | 2~3 | C,S,U      | #40             |                                      |
| SP-25012        | 250 | 1.2 | 2.2 | 2~3 | C,S,U      | #40             |                                      |
| SP-30012        | 300 | 1.2 | 2.2 | 2~3 | C,S,U      | #40             |                                      |

●標準粒度外，其他粒度請指明訂購。 / Grit size in the above table is standard for that item, others are available upon request.



# Diamond Brush Handle Ceramic Fiber Abrasive Brush

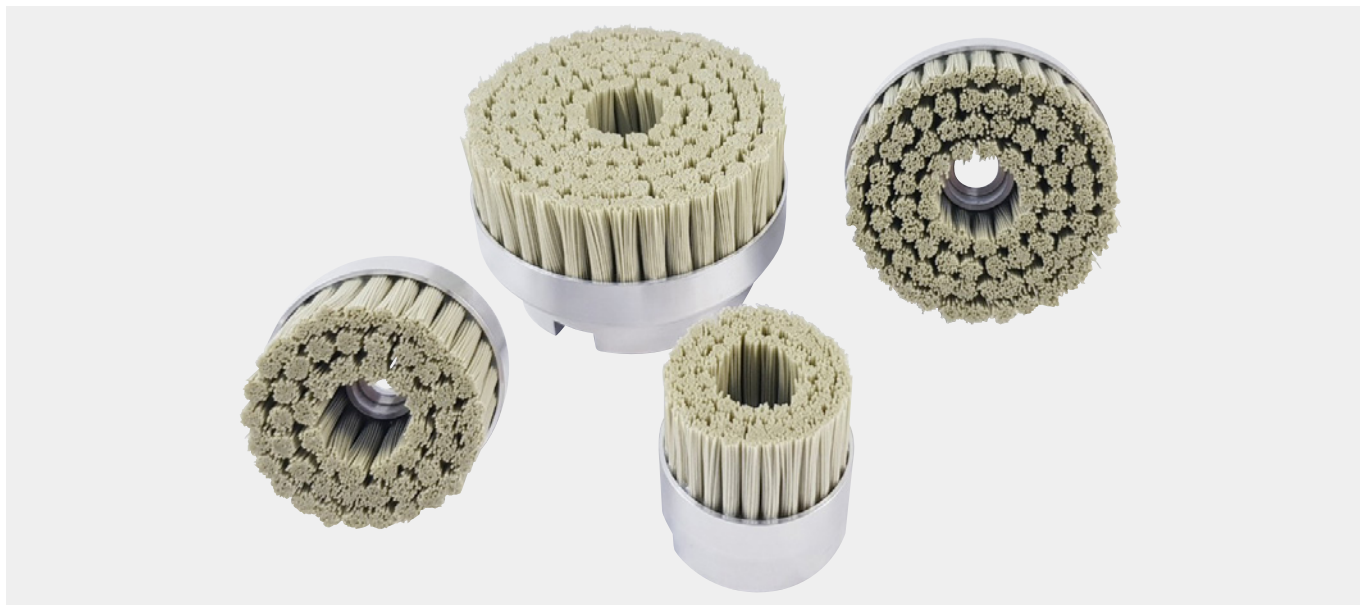
鑽石毛刷及陶瓷纖維毛刷





# Diamond Brush

## 鑽石毛刷

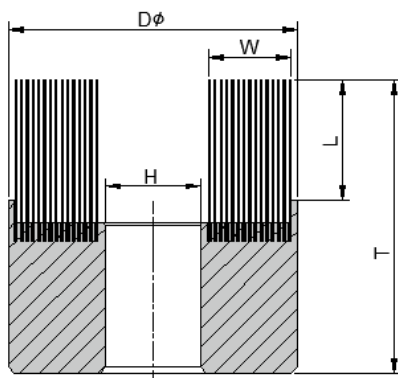


### 應用 \ Application

- |                  |                                                   |
|------------------|---------------------------------------------------|
| 1. 刀具鈍化。         | 1. Tool passivation.                              |
| 2. 去除所有物件加工後之毛邊。 | 2. Remove all burrs after processing.             |
| 3. 平面、曲面或異形處拋光。  | 3. Polishing of flat, curved or irregular places. |

### 毛刷常用標準品規格 / Common Standard Specifications of Brushes

#### 毛刷輪 Brush wheel 6A2



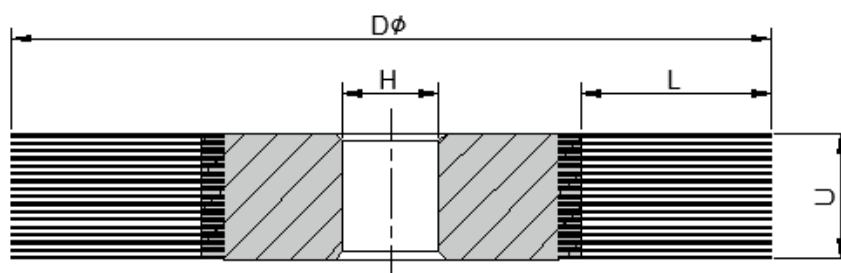
| 編號<br>Order No. | 線徑<br>Wire Diameter | W | L | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|---------------------|---|---|-----------------|---------------|
|                 | 0.2                 |   |   | #1000           |               |
|                 | 0.2                 |   |   | #3000           |               |
|                 | 0.2                 |   |   | #5000           |               |
|                 | 0.5                 |   |   | #200            |               |
|                 | 0.5                 |   |   | #400            |               |
|                 | 0.5                 |   |   | #600            |               |
|                 | 0.5                 |   |   | #800            |               |
|                 | 0.5                 |   |   | #1000           |               |
|                 | 0.7                 |   |   | #200            |               |
|                 | 0.7                 |   |   | #400            |               |

● 說明：其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

# Common Standard Specifications of Brushes

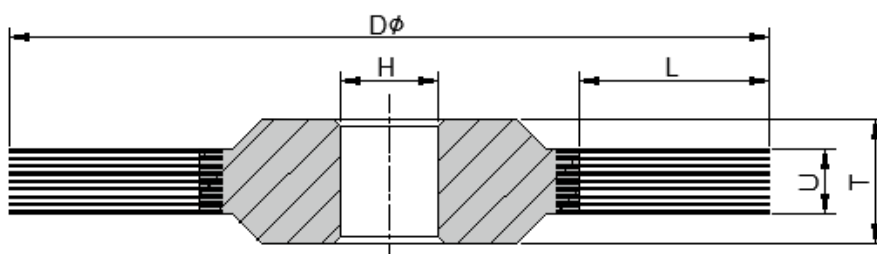
## 毛刷常用型式規格

毛刷輪  
Brush wheel  
1A1



| 編號<br>Order No. | 線徑<br>Wire Diameter | U | L | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|---------------------|---|---|-----------------|---------------|
|                 | 0.2                 |   |   | #1000           |               |
|                 | 0.2                 |   |   | #3000           |               |
|                 | 0.2                 |   |   | #5000           |               |
|                 | 0.5                 |   |   | #200            |               |
|                 | 0.5                 |   |   | #400            |               |
|                 | 0.5                 |   |   | #600            |               |
|                 | 0.5                 |   |   | #800            |               |
|                 | 0.5                 |   |   | #1000           |               |
|                 | 0.7                 |   |   | #200            |               |
|                 | 0.7                 |   |   | #400            |               |

毛刷輪  
Brush wheel  
14A1



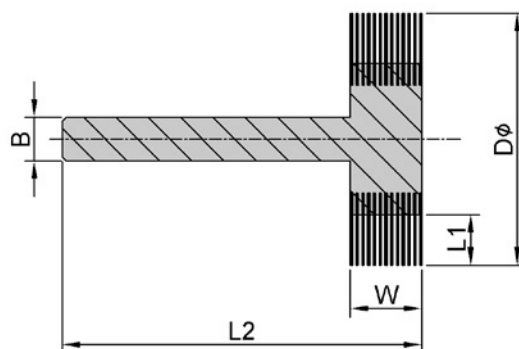
| 編號<br>Order No. | 線徑<br>Wire Diameter | U | L | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|---------------------|---|---|-----------------|---------------|
|                 | 0.2                 |   |   | #1000           |               |
|                 | 0.2                 |   |   | #3000           |               |
|                 | 0.2                 |   |   | #5000           |               |
|                 | 0.5                 |   |   | #200            |               |
|                 | 0.5                 |   |   | #400            |               |
|                 | 0.5                 |   |   | #600            |               |
|                 | 0.5                 |   |   | #800            |               |
|                 | 0.5                 |   |   | #1000           |               |
|                 | 0.7                 |   |   | #200            |               |
|                 | 0.7                 |   |   | #400            |               |

● 說明：其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

# Common Standard Specifications of Brushes

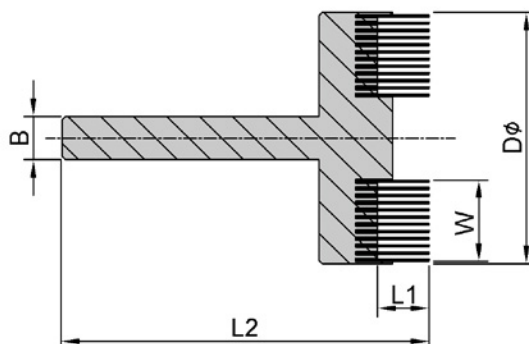
## 毛刷常用型式規格

帶柄式  
With handle  
TYPE A



| 編號<br>Order No. | 線徑<br>Wire Diameter | W | L1/L2 | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|---------------------|---|-------|-----------------|---------------|
|                 | 0.2                 |   |       | #1000           |               |
|                 | 0.2                 |   |       | #3000           |               |
|                 | 0.2                 |   |       | #5000           |               |
|                 | 0.5                 |   |       | #200            |               |
|                 | 0.5                 |   |       | #400            |               |
|                 | 0.5                 |   |       | #600            |               |
|                 | 0.5                 |   |       | #800            |               |
|                 | 0.5                 |   |       | #1000           |               |
|                 | 0.7                 |   |       | #200            |               |
|                 | 0.7                 |   |       | #400            |               |

帶柄式  
With handle  
TYPE B



| 編號<br>Order No. | 線徑<br>Wire Diameter | W | L1/L2 | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|---------------------|---|-------|-----------------|---------------|
|                 | 0.2                 |   |       | #1000           |               |
|                 | 0.2                 |   |       | #3000           |               |
|                 | 0.2                 |   |       | #5000           |               |
|                 | 0.5                 |   |       | #200            |               |
|                 | 0.5                 |   |       | #400            |               |
|                 | 0.5                 |   |       | #600            |               |
|                 | 0.5                 |   |       | #800            |               |
|                 | 0.5                 |   |       | #1000           |               |
|                 | 0.7                 |   |       | #200            |               |
|                 | 0.7                 |   |       | #400            |               |

● 說明：其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

## 貝斯迪亞® 帶柄陶瓷纖維研磨刷



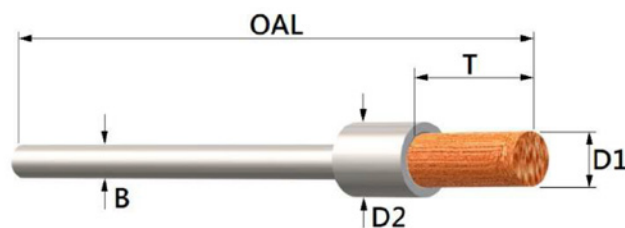
採用精選陶瓷纖維製作而成的纖維刷，適用於金屬、不銹鋼、鋁合金、鎂合金、部分石材…等，材質的研磨拋光。

**用途：**表面研磨及拋光、去除機械加工刀痕、去除毛刺、內孔研磨以及去除內交叉孔之毛刺…等。

**優點：**研磨效率高，加工面十分均勻。



請配戴護目鏡  
Use eye protector



The fiber brush made of selected ceramic fibers is suitable for grinding and polishing materials such as metal, stainless steel, aluminum alloy, magnesium alloy, and some stone materials.

**Uses :** Surface grinding and polishing, removing machining tool marks, removing burrs, grinding internal holes, and removing burrs from internal cross holes... etc.

**Advantages :** high grinding efficiency and uniform processing surface.

## 粒度與顏色 / Grit Size &amp; Color Code

| 粒度<br>Grit size  | #180          | #250         | #320       | #400       | #700         | #1000       |
|------------------|---------------|--------------|------------|------------|--------------|-------------|
| 顏色<br>Color code | 咖啡色<br>Coffee | 橙色<br>Orange | 灰色<br>Grey | 藍色<br>Blue | 黃色<br>Yellow | 白色<br>White |

## 規格 / Specifications

單位 / Unit : mm

| 型號<br>Model No. | 外徑 |    | 刷毛長<br>T | 柄徑<br>B | 總長<br>OAL | 建議轉速<br>r.p.m | 最高轉速<br>MAX r.p.m | 應用<br>Application |
|-----------------|----|----|----------|---------|-----------|---------------|-------------------|-------------------|
|                 | D1 | D2 |          |         |           |               |                   |                   |
| BS020030-30     | 2  | 3  |          |         |           |               |                   |                   |
| BS030030-30     | 3  | 4  | 30       | 3       | 65        | 7,000rpm      | 10,000rpm         | 內孔研磨              |
| BS050030-30     | 5  | 6  |          |         |           |               |                   |                   |
| BS020020-30     | 2  | 3  |          |         |           |               |                   |                   |
| BS030020-30     | 3  | 4  | 20       | 3       | 55        | 10,000rpm     | 16,000rpm         | 內孔研磨              |
| BS050020-30     | 5  | 6  |          |         |           |               |                   |                   |
| BS020015-30     | 2  | 3  |          |         |           |               |                   |                   |
| BS030015-30     | 3  | 4  | 15       | 3       | 50        | 16,000rpm     | 22,000rpm         | 平面研磨<br>內孔研磨      |
| BS050015-30     | 5  | 6  |          |         |           |               |                   |                   |
| BS050010-30     | 5  | 6  | 10       | 3       | 50        | 30,000rpm     | 40,000rpm         | 平面研磨<br>內孔研磨      |

● 訂購請註明型號與粒度。 / Please specify model and size when ordering.

# BESDIA® Handle Ceramic Fiber Abrasive Brush

KKDia  
聯成鑽石

## 貝斯迪亞® 帶柄陶瓷纖維研磨刷

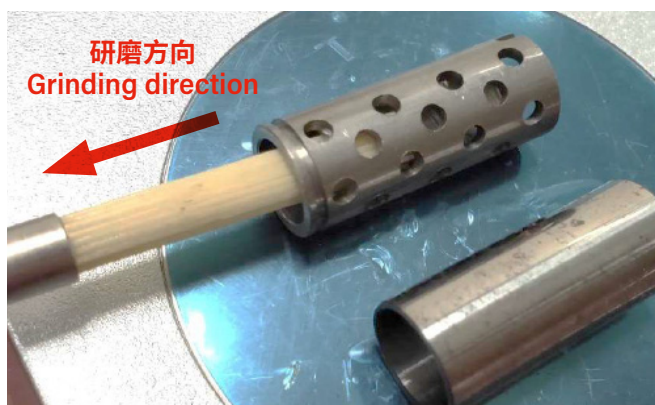
### 使用建議 / Recommendations

1. 此纖維刷請搭配可調速的電動手機進行操作。
  2. 請按照上表的建議轉速進行使用。若超過建議轉速，將使纖維刷因離心力過大而斷裂。
  3. 使用時，請佩戴護目鏡保護眼睛，以免在使用過程中受傷。
1. Please operate this fiber brush with an adjustable speed electric mobile phone.
  2. Please follow the recommended speed in the above table for use. If the speed exceeds the recommended speed, the fiber brush will be broken due to excessive centrifugal force.
  3. When using, please wear goggles to protect your eyes to avoid injury during use.

### 應用 / Application



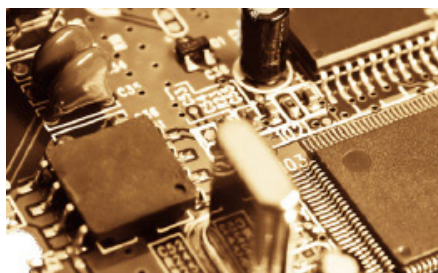
平面研磨、拋光  
Plane grinding and polishing



內孔研磨、去毛邊（內孔研磨方向注意）  
Inner hole grinding, deburring  
(Pay attention to the direction of inner hole grinding)

### 產業別 / Industry

#### 電子業 Electronics industry



#### 模具業 Mold industry



#### 寶石加工 Gem processing

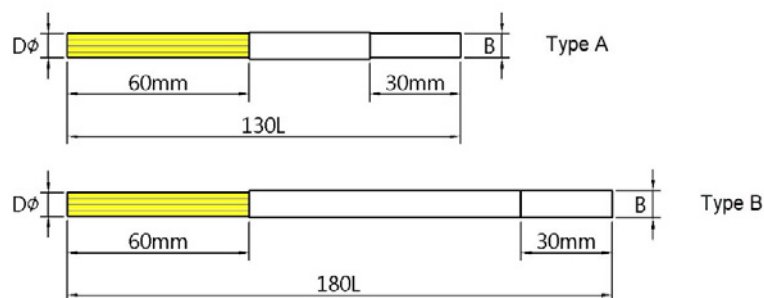




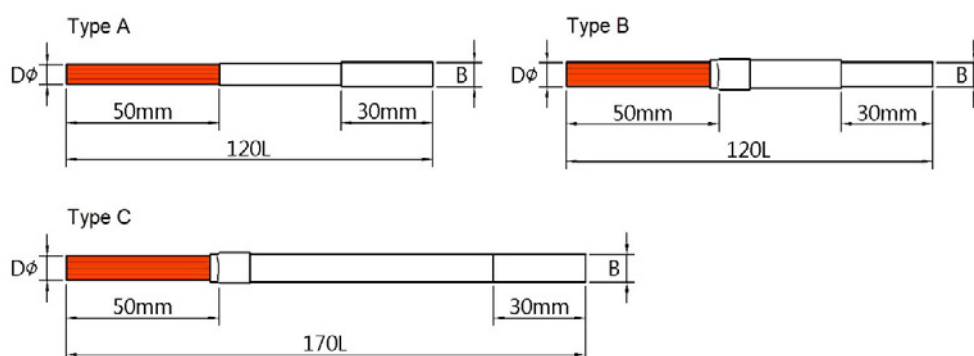
# 陶瓷纖維刷

## 應用 \ Application

去除孔內加工後毛邊及刀痕，尤其內孔之側孔加工產生的毛邊，  
以及內孔研磨與孔底(盲孔)之研磨加工首選。  
配合 CNC 銑床及其他工具等，提高工作效率。



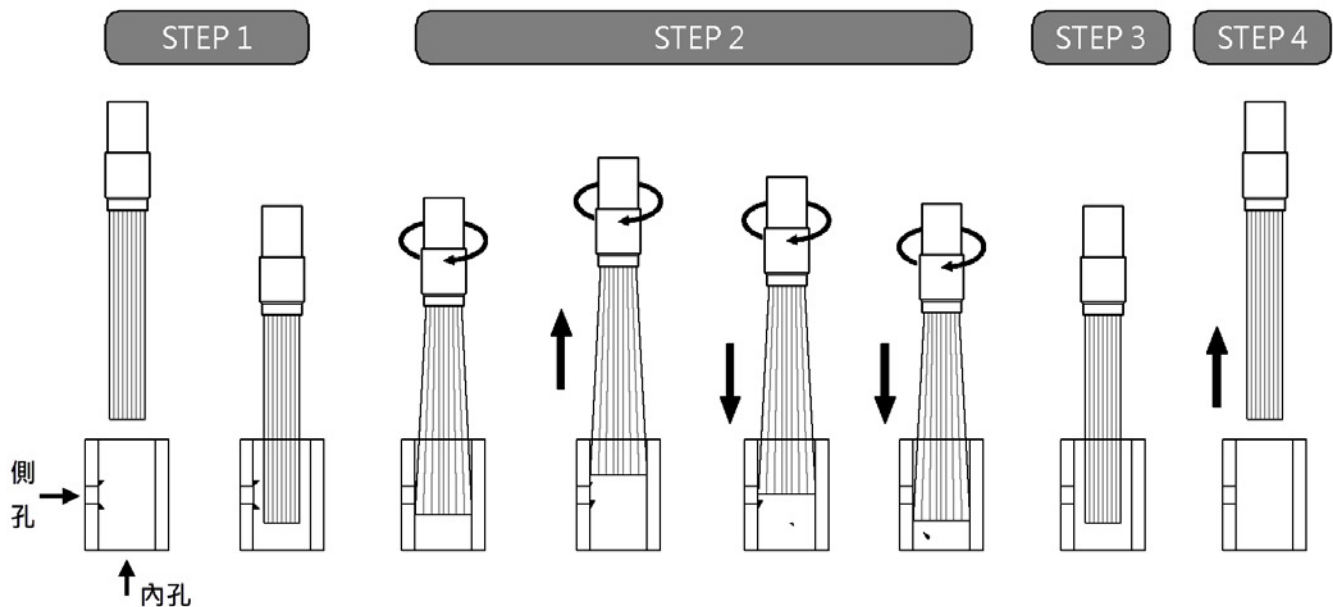
| 型號         | 規格                                          | 加工尺寸              | 建議轉速        | 最高轉速   |
|------------|---------------------------------------------|-------------------|-------------|--------|
| BS0360-3A  | $\phi 3 \times 60T \times 3d \times 130L$   | $\phi 5 \sim 8$   | 7,500~9,000 | 14,000 |
| BS0360-4B  | $\phi 3 \times 60T \times 4d \times 180L$   | $\phi 5 \sim 8$   |             | 12,000 |
| BS0560-6A  | $\phi 5 \times 60T \times 6d \times 130L$   | $\phi 8 \sim 10$  | 7,500~9,000 | 14,000 |
| BS0560-6B  | $\phi 5 \times 60T \times 6d \times 180L$   | $\phi 8 \sim 10$  |             | 12,000 |
| BS0760-6A  | $\phi 7 \times 60T \times 6d \times 130L$   | $\phi 10 \sim 14$ | 6,500~8,000 | 14,000 |
| BS0760-8B  | $\phi 7 \times 60T \times 8d \times 180L$   | $\phi 10 \sim 14$ |             | 12,000 |
| BS1160-12A | $\phi 11 \times 60T \times 12d \times 130L$ | $\phi 14 \sim 20$ |             | 14,000 |
| BS1160-12B | $\phi 11 \times 60T \times 12d \times 180L$ | $\phi 14 \sim 20$ |             | 12,000 |



| 型號         | 規格                                          | 加工尺寸              | 建議轉速         | 最高轉速   |
|------------|---------------------------------------------|-------------------|--------------|--------|
| BS01550-3A | $\phi 1.5 \times 50T \times 3d \times 120L$ | $\phi 3.5 \sim 5$ | 9,000~11,000 | 20,000 |
| BS0350-3B  | $\phi 3 \times 50T \times 3d \times 120L$   | $\phi 5 \sim 8$   | 7,000~10,000 | 14,000 |
| BS0350-4C  | $\phi 3 \times 50T \times 4d \times 170L$   | $\phi 5 \sim 8$   |              | 12,000 |
| BS0550-6B  | $\phi 5 \times 50T \times 6d \times 120L$   | $\phi 8 \sim 10$  | 8,000~10,000 | 14,000 |
| BS0550-6C  | $\phi 5 \times 50T \times 6d \times 170L$   | $\phi 8 \sim 10$  |              | 12,000 |
| BS0750-6B  | $\phi 7 \times 50T \times 6d \times 120L$   | $\phi 10 \sim 20$ | 7,000~10,000 | 14,000 |
| BS0750-8C  | $\phi 7 \times 50T \times 8d \times 170L$   | $\phi 10 \sim 20$ |              | 12,000 |
| BS1150-12B | $\phi 11 \times 50T \times 12d \times 120L$ | $\phi 14 \sim 20$ | 6,500~7,500  | 14,000 |
| BS1150-12C | $\phi 11 \times 50T \times 12d \times 170L$ | $\phi 14 \sim 20$ |              | 12,000 |

陶瓷纖維刷

使用方式



1. 在靜止狀態下將毛刷伸入內孔中。  
※請勿讓刷子在孔外空轉，避免刷子斷裂噴飛※
2. 伸入側孔以下的深度，再啟動主軸運轉並上下移動刷子，即開始作動。
3. 待毛邊去除，停止旋轉刷子。
4. 在毛刷完全停止轉動才能將其移出。
5. 進給速度：300mm/min
6. 旋轉方向：正、反方向加工均可，皆可以使工件更均勻的去除毛邊。

註：陶瓷纖維刷若塞目，會影響使用效果，可修整後再使用，歡迎洽詢。

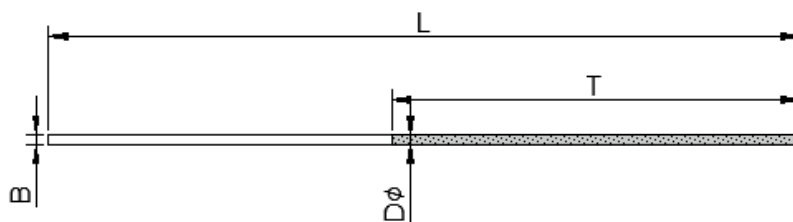
# Diamond & CBN Internal Points Diamond Files

鑽石磨棒及銼刀

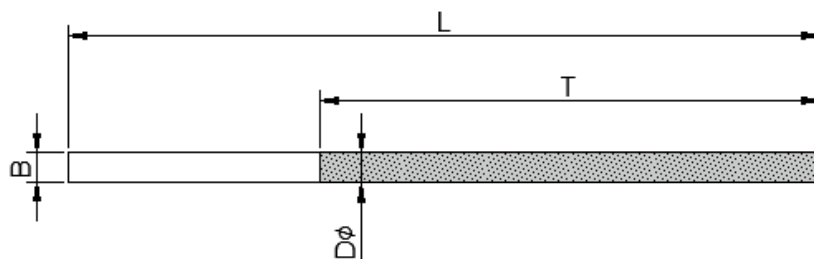


# Tungsten Steel Mold Through Hole Strip

## 鎢鋼模具通孔條



| 編號<br>Order No. | øD  | T   | B   | L   | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|-----|-----|-----|-----------------|---------------|
|                 | 1.4 | 115 | 1.4 | 200 | D100            |               |
|                 | 1.6 | 115 | 1.6 | 200 | D100            |               |
|                 | 1.8 | 115 | 1.8 | 200 | D100            |               |
|                 | 2   | 115 | 2   | 200 | D100            |               |
|                 | 2.2 | 115 | 2.2 | 200 | D100            |               |
|                 | 2.4 | 115 | 2.4 | 200 | D100            |               |
|                 | 2.6 | 115 | 2.6 | 200 | D100            |               |
|                 | 2.8 | 115 | 2.8 | 200 | D100            |               |
|                 | 3   | 115 | 3   | 200 | D100            |               |
|                 | 3.2 | 115 | 3.2 | 200 | D100            |               |
|                 | 3.4 | 115 | 3.4 | 200 | D100            |               |
|                 | 3.6 | 115 | 3.6 | 200 | D100            |               |
|                 | 3.8 | 115 | 3.8 | 200 | D100            |               |
|                 | 4   | 115 | 4   | 200 | D100            |               |
|                 | 4.2 | 115 | 4.2 | 200 | D100            |               |
|                 | 4.4 | 115 | 4.4 | 200 | D100            |               |
|                 | 4.6 | 115 | 4.6 | 200 | D100            |               |
|                 | 4.8 | 115 | 4.8 | 200 | D100            |               |
|                 | 5   | 115 | 5   | 200 | D100            |               |
|                 | 5.2 | 115 | 5.2 | 200 | D100            |               |
|                 | 5.4 | 115 | 5.4 | 200 | D100            |               |
|                 | 5.6 | 115 | 5.6 | 200 | D100            |               |
|                 | 5.8 | 115 | 5.8 | 200 | D100            |               |
|                 | 6   | 115 | 6   | 200 | D100            |               |
|                 | 6.2 | 115 | 6.2 | 200 | D100            |               |

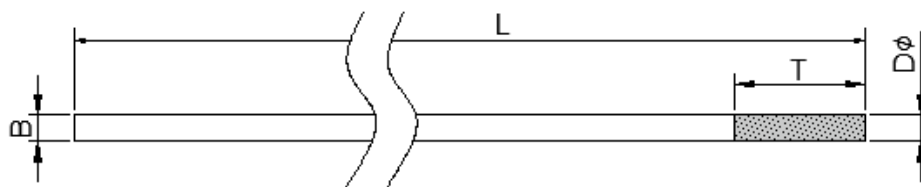


| 編號<br>Order No. | øD   | T  | B    | L   | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|------|----|------|-----|-----------------|---------------|
|                 | 4.86 | 80 | 4.86 | 120 | D400            |               |

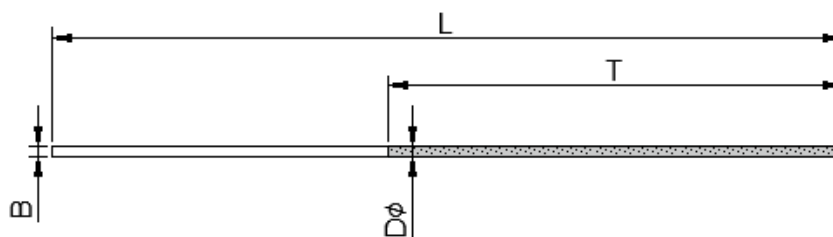
●說明:其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

# Tungsten Steel Mold Through Hole Strip

## 鎢鋼模具通孔條



| 編號<br>Order No. | øD  | T  | B   | L   | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|----|-----|-----|-----------------|---------------|
|                 | 1.5 | 5  | 1.5 | 150 | D80             |               |
|                 | 1.5 | 5  | 1.5 | 150 | D80             |               |
|                 | 2   | 15 | 2   | 250 | D100            |               |
|                 | 2   | 15 | 2   | 250 | D200            |               |
|                 | 3   | 15 | 3   | 250 | D100            |               |
|                 | 3   | 15 | 3   | 250 | D200            |               |
|                 | 3   | 30 | 3   | 250 | D80             |               |
|                 | 3   | 30 | 3   | 250 | D100            |               |
|                 | 4   | 30 | 4   | 250 | D80             |               |
|                 | 4   | 30 | 4   | 250 | D100            |               |
|                 | 5   | 30 | 5   | 250 | D80             |               |
|                 | 5   | 30 | 5   | 250 | D100            |               |



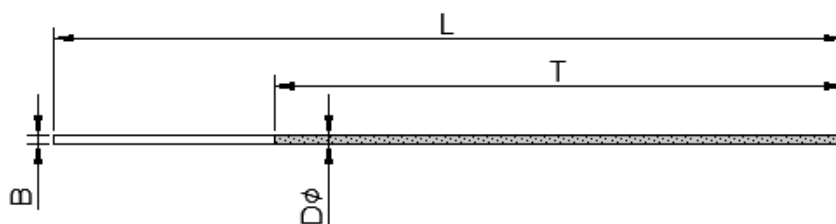
| 編號<br>Order No. | øD  | T   | B    | L   | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|-----|------|-----|-----------------|---------------|
|                 | 1.6 | 120 | 1.8  | 200 | D100            |               |
|                 | 1.7 | 120 | 1.9  | 200 | D100            |               |
|                 | 1.8 | 120 | 2.0  | 200 | D100            |               |
|                 | 1.9 | 120 | 2.1  | 200 | D100            |               |
|                 | 2.0 | 120 | 2.2  | 200 | D100            |               |
|                 | 2.1 | 120 | 2.3  | 200 | D100            |               |
|                 | 2.2 | 120 | 2.4  | 200 | D100            |               |
|                 | 2.2 | 160 | 2.35 | 200 | D100            |               |
|                 | 2.3 | 160 | 2.45 | 200 | D100            |               |
|                 | 2.4 | 160 | 2.55 | 200 | D100            |               |
|                 | 2.5 | 160 | 2.65 | 200 | D100            |               |
|                 | 2.6 | 160 | 2.75 | 200 | D100            |               |
|                 | 2.7 | 160 | 2.85 | 200 | D100            |               |

●說明:其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.



# Tungsten Steel Mold Through Hole Strip

## 鎢鋼模具通孔條

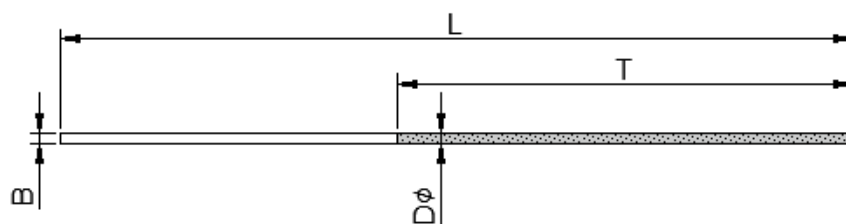


| 編號<br>Order No. | øD   | T   | B    | L   | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|------|-----|------|-----|-----------------|---------------|
|                 | 2.45 | 180 | 2.09 | 250 | D100            |               |
|                 | 2.65 | 180 | 2.29 | 250 | D100            |               |
|                 | 2.75 | 180 | 2.39 | 250 | D100            |               |
|                 | 2.85 | 180 | 2.49 | 250 | D100            |               |
|                 | 2.95 | 180 | 2.59 | 250 | D100            |               |
|                 | 3.05 | 180 | 2.69 | 250 | D100            |               |
|                 | 3.15 | 180 | 2.79 | 250 | D100            |               |
|                 | 3.25 | 180 | 2.89 | 250 | D100            |               |
|                 | 3.35 | 180 | 2.99 | 250 | D100            |               |
|                 | 3.45 | 180 | 3.09 | 250 | D100            |               |
|                 | 3.55 | 180 | 3.19 | 250 | D100            |               |
|                 | 3.85 | 180 | 3.49 | 250 | D100            |               |
|                 | 5.95 | 180 | 5.59 | 250 | D100            |               |
|                 | 6.05 | 180 | 5.69 | 250 | D100            |               |
|                 | 6.15 | 180 | 5.79 | 250 | D100            |               |
|                 | 6.25 | 180 | 5.89 | 250 | D100            |               |
|                 | 6.35 | 180 | 5.99 | 250 | D100            |               |
|                 | 6.45 | 180 | 6.09 | 250 | D100            |               |
|                 | 6.55 | 180 | 6.19 | 250 | D100            |               |
|                 | 6.65 | 180 | 6.29 | 250 | D100            |               |
|                 | 6.75 | 180 | 6.39 | 250 | D100            |               |
|                 | 6.85 | 180 | 6.49 | 250 | D100            |               |

●說明:其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

# Tungsten Steel Mold Through Hole Strip

## 鎢鋼模具通孔條

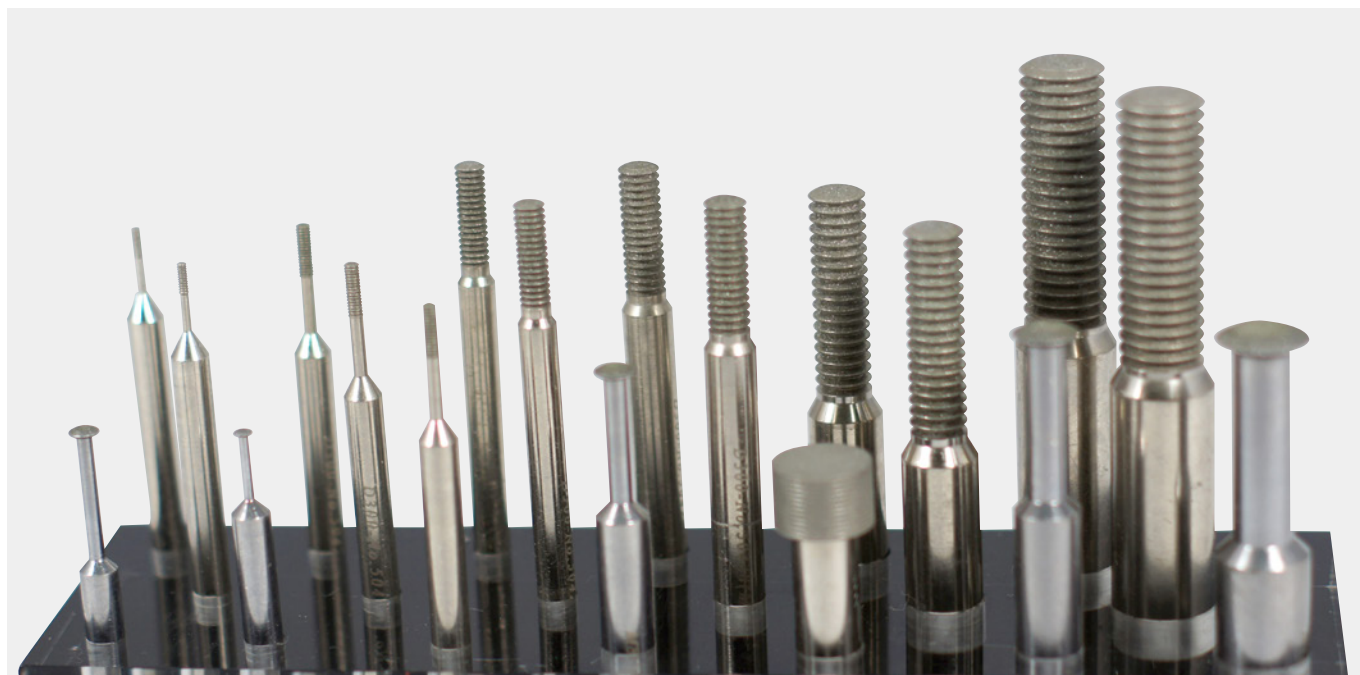


| 編號<br>Order No. | øD   | T   | B    | L   | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|------|-----|------|-----|-----------------|---------------|
|                 | 3.3  | 150 | 3.3  | 200 | D100            |               |
|                 | 3.4  | 150 | 3.4  | 200 | D100            |               |
|                 | 3.5  | 150 | 3.5  | 200 | D100            |               |
|                 | 3.7  | 150 | 3.7  | 200 | D100            |               |
|                 | 3.8  | 150 | 3.8  | 200 | D100            |               |
|                 | 3.9  | 150 | 3.9  | 200 | D100            |               |
|                 | 4.0  | 150 | 4.0  | 200 | D100            |               |
|                 | 4.1  | 150 | 4.1  | 200 | D100            |               |
|                 | 4.2  | 150 | 4.2  | 200 | D100            |               |
|                 | 4.3  | 150 | 4.3  | 200 | D100            |               |
|                 | 4.4  | 150 | 4.4  | 200 | D100            |               |
|                 | 4.5  | 150 | 4.5  | 200 | D100            |               |
|                 | 2.0  | 180 | 2.0  | 250 | D100            |               |
|                 | 2.1  | 180 | 2.1  | 250 | D100            |               |
|                 | 2.2  | 180 | 2.2  | 250 | D100            |               |
|                 | 2.3  | 180 | 2.3  | 250 | D100            |               |
|                 | 2.4  | 180 | 2.4  | 250 | D100            |               |
|                 | 2.5  | 180 | 2.5  | 250 | D100            |               |
|                 | 3.19 | 180 | 3.19 | 250 | D100            |               |
|                 | 3.55 | 180 | 3.55 | 250 | D100            |               |
|                 | 3.6  | 180 | 3.6  | 250 | D100            |               |
|                 | 3.7  | 180 | 3.7  | 250 | D100            |               |

● 說明：其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

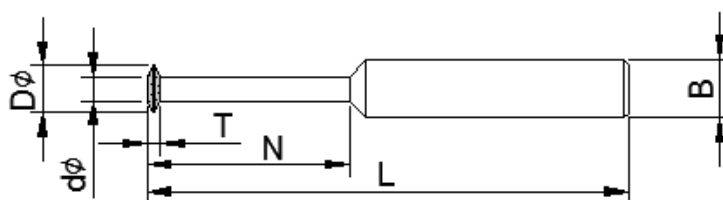
# Tapping Rod

## 攻牙磨棒



產品說明 - 電鑄法鑽石攻牙磨棒應用在精密陶瓷、碳化鎢、石英等硬脆材料之鑽孔後之牙型研磨。

Product Description-Electroforming diamond tapping grinding rods are used for tooth grinding after drilling of precision ceramics, tungsten carbide, quartz and other hard and brittle materials.



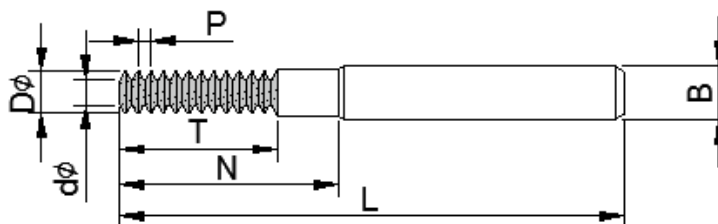
### TYPE A

| 型號<br>Model | øD   | ød   | P | T    | N  | B     | L  | 粒度<br>Grit Size | 備註<br>Remarks |
|-------------|------|------|---|------|----|-------|----|-----------------|---------------|
| M2-         | 1.5  | 0.81 | - | 0.4  | 13 | 6     | 50 | #200            |               |
| M3-         | 2.35 | 1.48 | - | 0.5  | 13 | 6     | 50 | #200            |               |
| M4-         | 3.1  | 1.89 | - | 0.7  | 13 | 6     | 50 | #200            |               |
| M5-         | 4    | 2.61 | - | 0.8  | 13 | 6     | 50 | #200            |               |
| M6-         | 4.8  | 3.07 | - | 1    | 20 | 6     | 50 | #200            |               |
| M8-         | 6.5  | 4.33 | - | 1.25 | 20 | 8(6)  | 80 | #200            |               |
| M10-        | 8    | 5.4  | - | 1.5  | 30 | 10(6) | 80 | #200            |               |
| M12-        | 9    | 5.97 | - | 1.75 | 30 | 12(6) | 80 | #200            |               |
| M14-        | 11.3 | 7.84 | - | 2    | 40 | 12(6) | 80 | #200            |               |
| M16-        | 13   | 9.54 | - | 2    | 40 | 16(6) | 80 | #200            |               |

●說明:其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

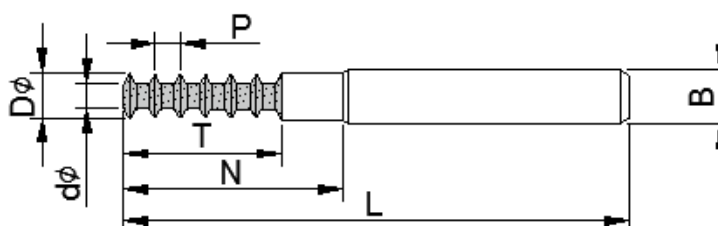
# Tapping Rod

## 攻牙磨棒



TYPE B

| 型號<br>Model | øD   | ød    | P    | T    | N    | B     | L   | 粒度<br>Grit Size | 備註<br>Remarks |
|-------------|------|-------|------|------|------|-------|-----|-----------------|---------------|
| M2.6-0250   | 2.05 | 1.27  | 0.45 | 6.3  | 12.3 | 6     | 100 | #270            |               |
| M3-0235     | 2.35 | 1.48  | 0.5  | 8    | 18   | 6     | 100 | #270            |               |
| M4-0310     | 3.1  | 1.89  | 0.7  | 10.5 | 20.5 | 6     | 100 | #270            |               |
| M5-0400     | 4    | 2.61  | 0.8  | 12.8 | 12.8 | 6     | 100 | #230            |               |
| M6-0480     | 4.8  | 3.07  | 1    | 16   | 16   | 6     | 100 | #230            |               |
| M8-0650     | 6.5  | 4.33  | 1.25 | 20   | 20   | 8(6)  | 100 | #230            |               |
| M10-0800    | 8    | 5.4   | 1.5  | 25.5 | 25.5 | 10(6) | 100 | #230            |               |
| M12-0900    | 9    | 5.97  | 1.75 | 31.5 | 31.5 | 12(6) | 100 | #230            |               |
| M14-1120    | 11.2 | 7.74  | 2    | 36   | 36   | 12(6) | 100 | #200            |               |
| M16-1300    | 13   | 9.54  | 2    | 40   | 40   | 16(6) | 100 | #200            |               |
| M18-1450    | 14.5 | 10.17 | 2.5  | 45   | 45   | 16(6) | 100 | #200            |               |
| M20-1630    | 16.3 | 11.97 | 2.5  | 45   | 45   | 16(6) | 100 | #200            |               |
| M2.6H-0207  | 2.7  | 1.92  | 0.45 | 6.3  | 16.3 | 6     | 100 | #270            |               |
| M3H-0290    | 2.9  | 2.03  | 0.5  | 8    | 18   | 6     | 100 | #270            |               |
| M4H-0400    | 4    | 2.79  | 0.7  | 10.5 | 10.5 | 6     | 100 | #270            |               |
| M5H-0500    | 5    | 3.61  | 0.8  | 12.8 | 12.8 | 6     | 100 | #230            |               |
| M6H-0600    | 6    | 4.27  | 1    | 16   | 16   | 8(6)  | 100 | #230            |               |
| M8H-0800    | 8    | 5.83  | 1.25 | 20   | 20   | 8(6)  | 100 | #230            |               |
| M10H-0990   | 9.9  | 7.3   | 1.5  | 25.5 | 25.5 | 10(6) | 100 | #230            |               |
| M12H-1190   | 11.9 | 8.87  | 1.75 | 31.5 | 31.5 | 12(6) | 100 | #230            |               |
| M14H-1390   | 13.9 | 10.44 | 2    | 36   | 36   | 16(6) | 100 | #200            |               |
| M16H-1570   | 15.7 | 12.24 | 2    | 40   | 40   | 16(6) | 100 | #200            |               |
| M18H-1780   | 17.8 | 13.47 | 2.5  | 45   | 45   | 20(6) | 100 | #200            |               |
| M20H-1960   | 19.6 | 15.27 | 2.5  | 50   | 50   | 20(6) | 100 | #200            |               |



TYPE C

| 型號<br>Model | D   | d    | P   | T   | N    | B | L   | 粒度<br>Grit Size | 備註<br>Remarks |
|-------------|-----|------|-----|-----|------|---|-----|-----------------|---------------|
| M2-0150     | 1.5 | 0.81 | 0.8 | 4.8 | 10.8 | 6 | 100 | #270            |               |
| M2H-0200    | 2   | 1.31 | 0.8 | 4.8 | 10.8 | 6 | 100 | #270            |               |

●說明:其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

# Diamond & CBN Internal Points

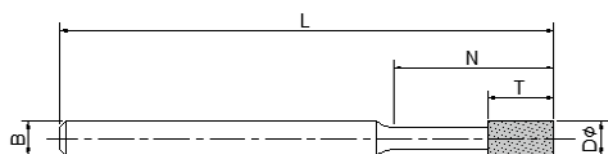
## 鑽石、氮化硼內孔磨棒

本系列產品主要使用於各種內孔研磨、治具研磨或小孔徑之精密研磨。

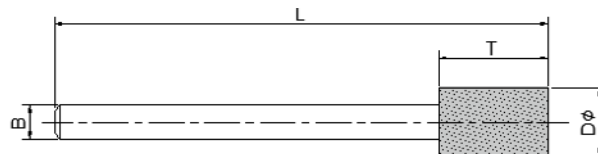
鑽石適用於研磨鋁鋼、陶瓷、藍寶石、玻璃…等。氮化硼適用於研磨熱處理硬化後之各種合金鋼材。

Diamond internal points are used for jig, internal grinding, and precision grinding of small holes in carbide, ceramics, sapphire, glass etc.

CBN internal points are used similarly on tough, high carbon, high chrome harden steels.



TYPE A



TYPE B

| 編號<br>Order No. |            | Type | øD  | T  | N  | B   | L  | 粒度<br>Grit Size |
|-----------------|------------|------|-----|----|----|-----|----|-----------------|
| 鑽石<br>Diamond   | 氮化硼<br>CBN |      |     |    |    |     |    |                 |
| ID-3003         | IB-3003    | A    | 0.3 | 2  | 4  | 3.0 | 35 | #600            |
| ID-3004         | IB-3004    | A    | 0.4 | 2  | 5  | 3.0 | 35 | #400            |
| ID-3005         | IB-3005    | A    | 0.5 | 2  | 5  | 3.0 | 35 | #400            |
| ID-3006         | IB-3006    | A    | 0.6 | 3  | 5  | 3.0 | 40 | #200            |
| ID-3007         | IB-3007    | A    | 0.7 | 3  | 8  | 3.0 | 40 | #200            |
| ID-3008         | IB-3008    | A    | 0.8 | 3  | 8  | 3.0 | 40 | #200            |
| ID-3009         | IB-3009    | A    | 0.9 | 4  | 8  | 3.0 | 40 | #200            |
| ID-3010         | IB-3010    | A    | 1.0 | 5  | 8  | 3.0 | 40 | #200            |
| ID-3015         | IB-3015    | A    | 1.5 | 5  | 8  | 3.0 | 45 | #150            |
| ID-3020         | IB-3020    | A    | 2.0 | 5  | 12 | 3.0 | 45 | #150            |
| ID-3025         | IB-3025    | A    | 2.5 | 5  | 15 | 3.0 | 45 | #150            |
| ID-3030         | IB-3030    | A    | 3.0 | 5  | 15 | 3.0 | 45 | #150            |
| ID-6040         | IB-6040    | A    | 4.0 | 10 | 22 | 6.0 | 80 | #100            |
| ID-6050         | IB-6050    | A    | 5.0 | 10 | 22 | 6.0 | 80 | #100            |
| ID-6060         | IB-6060    | A    | 6.0 | 10 | 22 | 6.0 | 80 | #100            |
| ID-3040         | IB-3040    | B    | 4.0 | 5  | -  | 3.0 | 50 | #150            |
| ID-3050         | IB-3050    | B    | 5.0 | 8  | -  | 3.0 | 50 | #150            |
| ID-3060         | IB-3060    | B    | 6.0 | 8  | -  | 3.0 | 50 | #150            |
| ID-6070         | IB-6070    | B    | 7.0 | 10 | -  | 6.0 | 80 | #100            |
| ID-6080         | IB-6080    | B    | 8.0 | 10 | -  | 6.0 | 80 | #100            |
| ID-6090         | IB-6090    | B    | 9.0 | 10 | -  | 6.0 | 80 | #100            |
| ID-6100         | IB-6100    | B    | 10  | 10 | -  | 6.0 | 80 | #100            |
| ID-6120         | IB-6120    | B    | 12  | 10 | -  | 6.0 | 80 | #100            |
| ID-6140         | IB-6140    | B    | 14  | 10 | -  | 6.0 | 80 | #100            |
| ID-6160         | IB-6160    | B    | 16  | 10 | -  | 6.0 | 80 | #100            |
| ID-6180         | IB-6180    | B    | 18  | 10 | -  | 6.0 | 80 | #100            |
| ID-6200         | IB-6200    | B    | 20  | 10 | -  | 6.0 | 80 | #100            |

●說明：其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

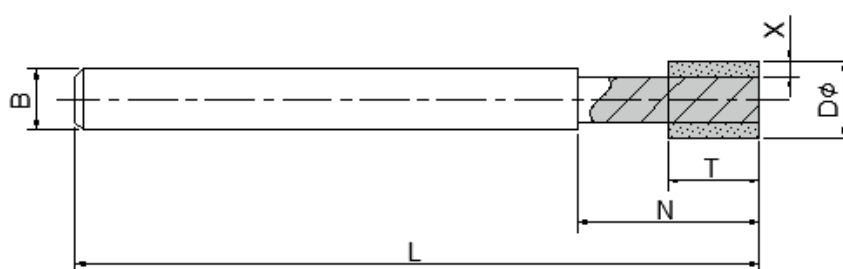
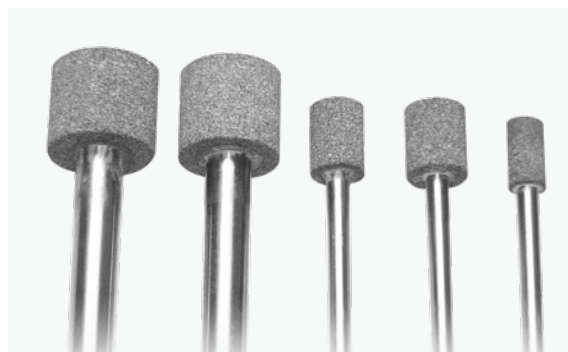


# Vitrified CBN Internal Points

## 陶瓷法 CBN 內孔磨棒

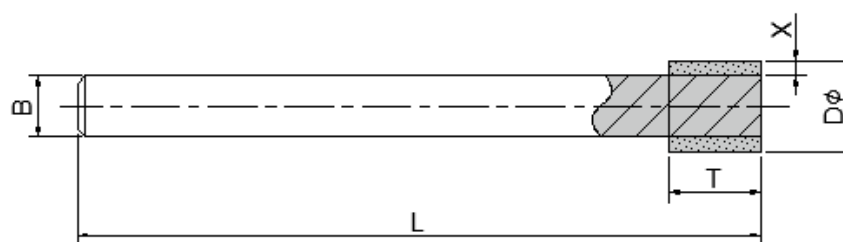
陶瓷法 CBN 內孔磨棒主要使用於內孔研磨及治具研磨。氮化硼 (CBN) 適用於研磨高速鋼及各種熱處理硬化後之合金鋼材 (濕磨)。

Vitrified CBN internal points are used for internal grinding and jig grinding of high speed steel and hardened alloy steel. (Wet Grinding)



**TYPE A**

| 編號<br>Order No. | øD  | T | X   | N  | B | L  | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|---|-----|----|---|----|-----------------|---------------|
| VIB-3040        | 4.0 | 6 | 1.0 | 12 | 3 | 60 | #200            |               |
| VIB-3050        | 5.0 | 6 | 1.5 | 12 | 3 | 60 | #200            |               |
| VIB-3060        | 6.0 | 6 | 2.0 | 12 | 3 | 60 | #200            |               |
| VIB-3080        | 8.0 | 8 | 3.0 | 12 | 3 | 60 | #200            |               |



**TYPE B**

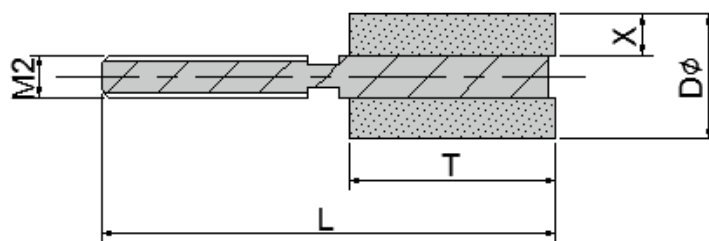
| 編號<br>Order No. | øD   | T  | X   | B | L  | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|------|----|-----|---|----|-----------------|---------------|
| VIB-6100        | 10.0 | 8  | 2.0 | 6 | 80 | #200            |               |
| VIB-6120        | 12.0 | 10 | 3.0 | 6 | 80 | #200            |               |
| VIB-8140        | 14.0 | 12 | 3.0 | 8 | 80 | #200            |               |
| VIB-6140        | 14.0 | 12 | 4.0 | 6 | 80 | #200            |               |
| VIB-8160        | 16.0 | 12 | 4.0 | 8 | 80 | #200            |               |
| VIB-6160        | 16.0 | 12 | 5.0 | 6 | 80 | #200            |               |
| VIB-8180        | 18.0 | 12 | 5.0 | 8 | 80 | #200            |               |
| VIB-6180        | 18.0 | 12 | 6.0 | 6 | 80 | #200            |               |

● 標準粒度外，其他粒度請指明訂購。 / Grit size in the above table is standard for that item, others are available upon request.

# Vitrified CBN Internal Points

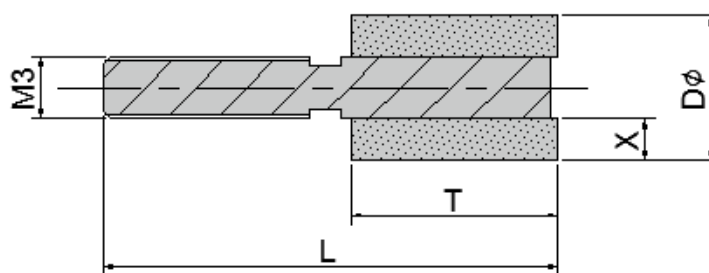
## 陶瓷法 CBN 內孔磨棒

牙柄 \ Tooth handle



M2

| 編號<br>Order No. | øD | T | X   | L  | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|----|---|-----|----|-----------------|---------------|
| 4               | 8  | 8 | 1   | 20 | VB200           |               |
| 5               | 8  | 8 | 1.5 | 20 | VB200           |               |
| 6               | 8  | 8 | 2   | 20 | VB200           |               |



M3

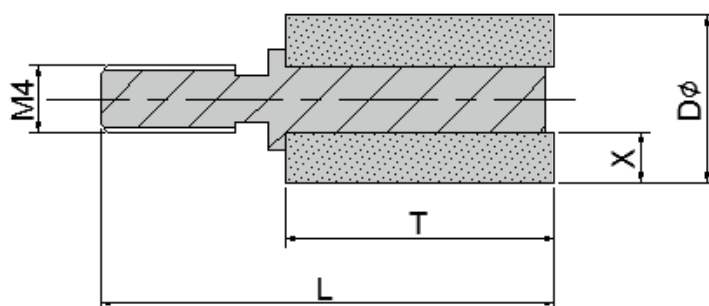
| 編號<br>Order No. | øD | T  | X | L  | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|----|----|---|----|-----------------|---------------|
| 6               | 12 | 12 | 2 | 24 | VB200           |               |
| 7               | 12 | 12 | 2 | 24 | VB200           |               |
| 7               | 15 | 15 | 2 | 27 | VB200           |               |
| 8               | 12 | 12 | 2 | 24 | VB200           |               |
| 8               | 15 | 15 | 2 | 27 | VB200           |               |
| 9               | 15 | 15 | 3 | 27 | VB200           |               |

● 說明: 其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

# Vitrified CBN Internal Points

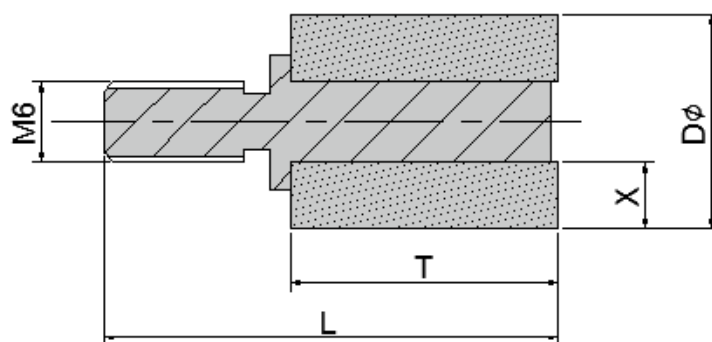
## 陶瓷法 CBN 內孔磨棒

牙柄 \ Tooth handle



M4

| 編號<br>Order No. | øD | T  | X   | L  | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|----|----|-----|----|-----------------|---------------|
| 9               |    | 15 | 3   | 27 | VB200           |               |
| 10              |    | 16 | 3   | 28 | VB200           |               |
| 11              |    | 16 | 3.5 | 28 | VB200           |               |
| 12              |    | 16 | 4   | 28 | VB200           |               |
| 13              |    | 16 | 4.5 | 28 | VB200           |               |
| 14              |    | 16 | 5   | 28 | VB200           |               |
| 15              |    | 16 | 5.5 | 28 | VB200           |               |



M6

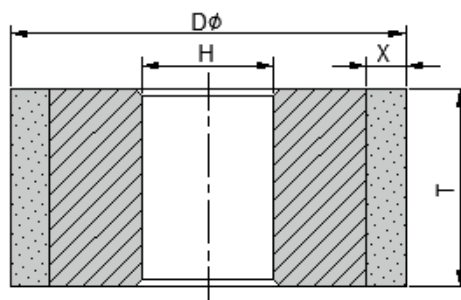
| 編號<br>Order No. | øD | T  | X | L  | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|----|----|---|----|-----------------|---------------|
| 16              |    | 20 | 5 | 32 | VB200           |               |
| 16              |    | 25 | 5 | 37 | VB200           |               |
| 18              |    | 20 | 6 | 32 | VB200           |               |
| 18              |    | 25 | 6 | 37 | VB200           |               |
| 20              |    | 20 | 7 | 32 | VB200           |               |
| 20              |    | 25 | 7 | 37 | VB200           |               |

● 說明: 其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

# Vitrified CBN Inner Hole Grinding Wheel Specifications

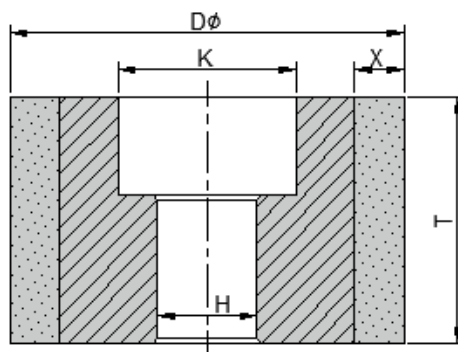
## 陶瓷法 CBN 內孔研磨專用砂輪規格

1A



| 編號<br>Order No. | øD | T  | X | H | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|----|----|---|---|-----------------|---------------|
|                 | 16 | 20 | 3 | 6 | VB150           |               |
|                 | 18 | 20 | 3 | 6 | VB150           |               |
|                 | 20 | 20 | 3 | 6 | VB150           |               |

5A



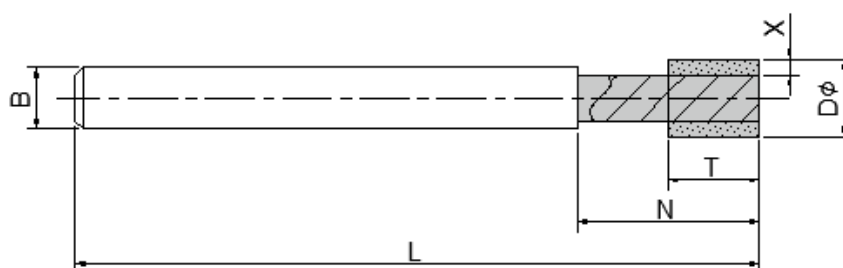
| 編號<br>Order No. | øD | T  | X | H | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|----|----|---|---|-----------------|---------------|
|                 | 20 | 25 | 3 | 6 | VB150           |               |
|                 | 25 | 25 | 3 | 6 | VB150           |               |
|                 | 25 | 25 | 3 | 8 | VB150           |               |
|                 | 30 | 25 | 5 | 6 | VB150           |               |
|                 | 30 | 25 | 5 | 8 | VB150           |               |
|                 | 35 | 25 | 5 | 6 | VB150           |               |
|                 | 35 | 25 | 5 | 8 | VB150           |               |
|                 | 35 | 30 | 5 | 6 | VB150           |               |
|                 | 35 | 30 | 5 | 8 | VB150           |               |
|                 | 40 | 30 | 5 | 8 | VB150           |               |

# Resinoid CBN Internal Points

## 樹脂法 CBN 內孔磨棒

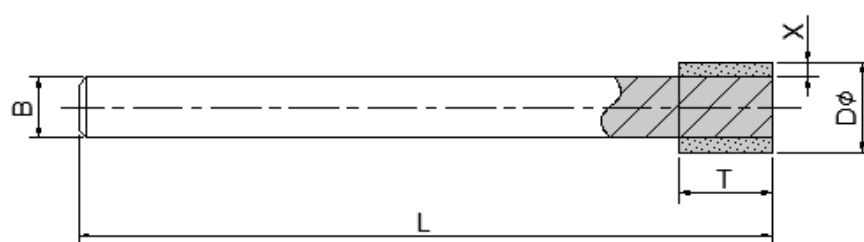
樹脂法 CBN 內孔磨棒主要使用於內孔研磨及治具研磨。氮化硼 (CBN) 適用於研磨高速鋼及各種熱處理硬化後之合金鋼材。

Resinoid CBN internal points are used for internal grinding and jig grinding of high speed steel and hardened alloy steel.



TYPE A

| 編號<br>Order No. | øD   | T  | X    | N  | B | L  | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|------|----|------|----|---|----|-----------------|---------------|
| RIB-3040        | 4.0  | 5  | 1.0  | 12 | 3 | 45 | #200            |               |
| RIB-3045        | 4.5  | 6  | 1.25 | 12 | 3 | 45 | #200            |               |
| RIB-3050        | 5.0  | 6  | 1.5  | 12 | 3 | 45 | #200            |               |
| RIB-6060        | 6.0  | 6  | 2.0  | 15 | 6 | 80 | #150            |               |
| RIB-6070        | 7.0  | 8  | 2.5  | 15 | 6 | 80 | #150            |               |
| RIB-6080        | 8.0  | 8  | 3.0  | 20 | 6 | 80 | #150            |               |
| RIB-6100        | 10.0 | 10 | 2.0  | 20 | 6 | 80 | #150            |               |



TYPE B

| 編號<br>Order No. | øD   | T  | X   | B | L  | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|------|----|-----|---|----|-----------------|---------------|
| RIB-6120        | 12.0 | 10 | 3.0 | 6 | 80 | #150            |               |
| RIB-6140        | 14.0 | 10 | 4.0 | 6 | 80 | #150            |               |
| RIB-6160        | 16.0 | 10 | 4.0 | 6 | 80 | #150            |               |
| RIB-6180        | 18.0 | 10 | 5.0 | 6 | 80 | #150            |               |
| RIB-6200        | 20.0 | 10 | 6.0 | 6 | 80 | #150            |               |

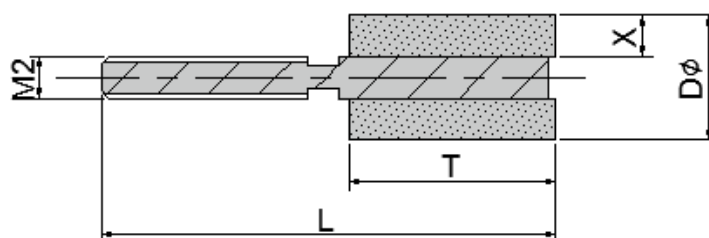
●說明:其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.



# Resinoid CBN Internal Points

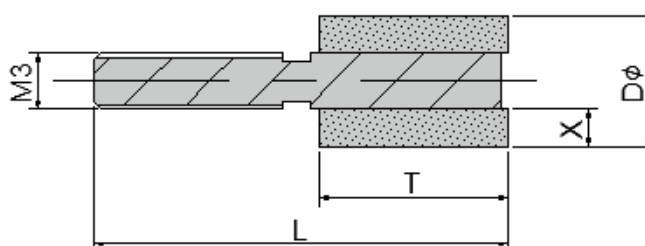
## 樹脂法 CBN 內孔磨棒

牙柄 \ Tooth handle



M2

| 編號<br>Order No. | øD | T | X   | L  | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|----|---|-----|----|-----------------|---------------|
| 4               |    | 8 | 1   | 20 | B200            |               |
| 5               |    | 8 | 1.5 | 20 | B200            |               |
| 6               |    | 8 | 2   | 20 | B200            |               |



M3

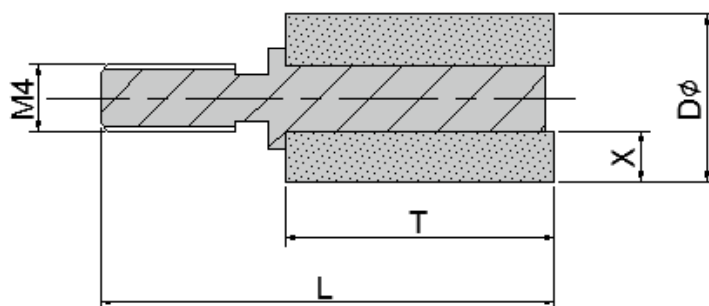
| 編號<br>Order No. | øD | T  | X | L  | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|----|----|---|----|-----------------|---------------|
| 6               |    | 12 | 2 | 24 | B200            |               |
| 7               |    | 12 | 2 | 24 | B200            |               |
| 7               |    | 15 | 2 | 27 | B200            |               |
| 8               |    | 12 | 2 | 24 | B200            |               |
| 8               |    | 15 | 2 | 27 | B200            |               |
| 9               |    | 15 | 3 | 27 | B200            |               |

● 說明: 其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

# Resinoid CBN Internal Points

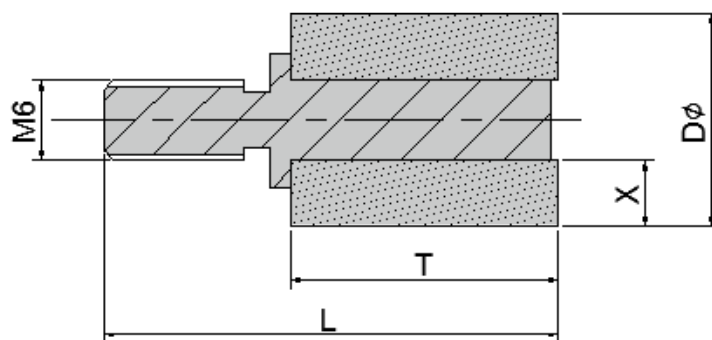
## 樹脂法 CBN 內孔磨棒

牙柄 \ Tooth handle



M4

| 編號<br>Order No. | øD | T  | X   | L  | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|----|----|-----|----|-----------------|---------------|
| 9               |    | 15 | 3   | 27 | B200            |               |
| 10              |    | 16 | 3   | 28 | B200            |               |
| 11              |    | 16 | 3.5 | 28 | B200            |               |
| 12              |    | 16 | 4   | 28 | B200            |               |
| 13              |    | 16 | 4.5 | 28 | B200            |               |
| 14              |    | 16 | 5   | 28 | B200            |               |
| 15              |    | 16 | 5.5 | 28 | B200            |               |



M6

| 編號<br>Order No. | øD | T  | X | L  | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|----|----|---|----|-----------------|---------------|
| 16              |    | 20 | 5 | 32 | B200            |               |
| 16              |    | 25 | 5 | 37 | B200            |               |
| 18              |    | 20 | 6 | 32 | B200            |               |
| 18              |    | 25 | 6 | 37 | B200            |               |
| 20              |    | 20 | 7 | 32 | B200            |               |
| 20              |    | 25 | 7 | 37 | B200            |               |

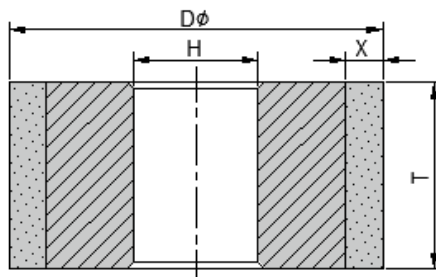
● 說明: 其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

# Resinoid CBN Inner Hole Grinding Wheel Specifications

## 樹脂法 CBN 內孔研磨專用砂輪規格

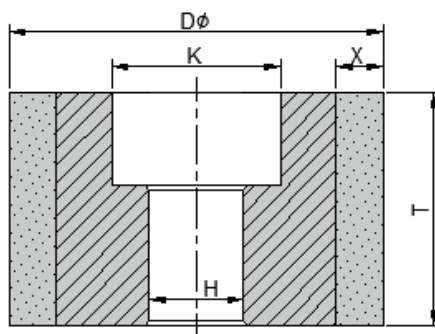
### 內孔研磨砂輪 \ Inner hole grinding wheel

1A



| 編號<br>Order No. | øD | T  | X | H | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|----|----|---|---|-----------------|---------------|
|                 | 16 | 20 | 3 | 6 | B150            |               |
|                 | 18 | 20 | 3 | 6 | B150            |               |
|                 | 20 | 20 | 3 | 6 | B150            |               |

5A

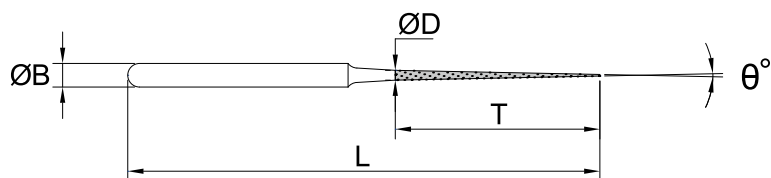


| 編號<br>Order No. | øD  | T  | X | H     | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-----|----|---|-------|-----------------|---------------|
|                 | 20  | 25 | 3 | 6     | B150            |               |
|                 | 25  | 25 | 3 | 6     | B150            |               |
|                 | 25  | 25 | 3 | 8     | B150            |               |
|                 | 30  | 25 | 5 | 6     | B150            |               |
|                 | 30  | 25 | 5 | 8     | B150            |               |
|                 | 35  | 25 | 5 | 6     | B150            |               |
|                 | 35  | 25 | 5 | 8     | B150            |               |
|                 | 35  | 30 | 5 | 6     | B150            |               |
|                 | 35  | 30 | 5 | 8     | B150            |               |
|                 | 40  | 30 | 5 | 8     | B150            |               |
|                 | 40  | 30 | 5 | 10    | B150            |               |
|                 | 45  | 30 | 5 | 10    | B150            |               |
|                 | 50  | 30 | 5 | 10    | B150            |               |
|                 | 55  | 30 | 5 | 10    | B150            |               |
|                 | 60  | 30 | 5 | 10    | B150            |               |
|                 | 70  | 30 | 5 | 10    | B150            |               |
|                 | 80  | 30 | 5 | 10    | B150            |               |
|                 | 85  | 35 | 5 | 10    | B150            |               |
|                 | 90  | 40 | 5 | 12    | B150            |               |
|                 | 100 | 40 | 5 | 12    | B150            |               |
|                 | 125 | 40 | 5 | 31.75 | B150            |               |
|                 | 150 | 40 | 5 | 31.75 | B150            |               |

● 說明:其餘規格粒度請指明訂購或附上詳細圖面。 / Note: For other specifications, please indicate the order or attach a detailed drawing.

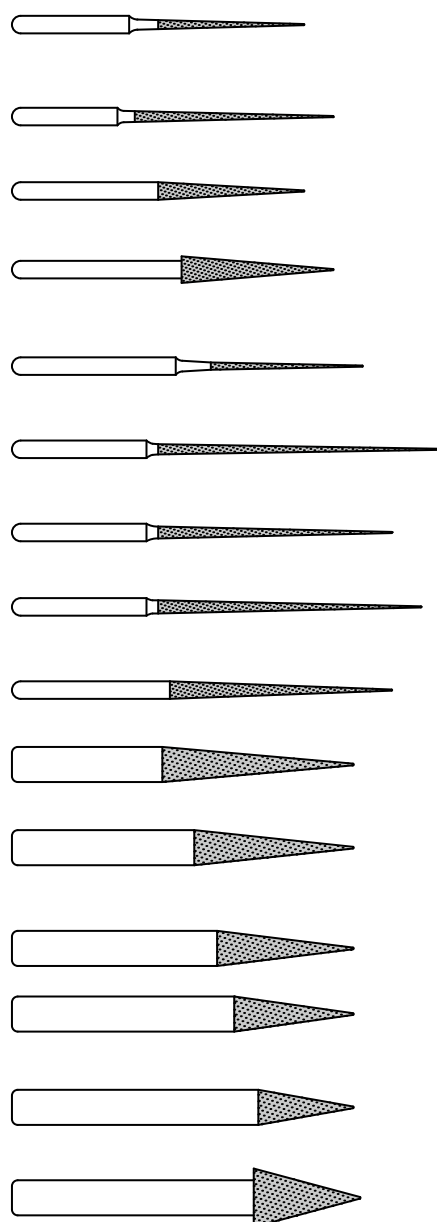
# Diamond Taper Points

## 鑽石磨棒



### 規格 / Specifications

單位 / Unit : mm



| 編號<br>Order No. | ØD    | T  | θ°  | ØB   | L  | 粒度<br>Grit Size |
|-----------------|-------|----|-----|------|----|-----------------|
| 18PL            | ø1.8  | 25 | 3.1 | ø3.0 | 50 | #150            |
| 21PXL           | ø2.1  | 34 | 2.8 | ø3.0 | 55 | #150            |
| 30PL            | ø3.0  | 25 | 6.4 | ø3.0 | 60 | #150            |
| 48PL            | ø4.8  | 26 | 9.6 | ø3.0 | 55 | #150            |
| 15PL            | ø1.5  | 26 | 2.3 | ø3.0 | 60 | #150            |
| 20PXL           | ø2.0  | 48 | 1.9 | ø3.0 | 70 | #150            |
| 23PXL           | ø2.3  | 40 | 2.7 | ø3.0 | 65 | #150            |
| 25PXL           | ø2.5  | 45 | 2.6 | ø3.0 | 70 | #150            |
| 30PXL           | ø3.0  | 38 | 4.2 | ø3.0 | 70 | #150            |
| 60P10           | ø6.0  | 33 | 10  | ø6.0 | 60 | #120            |
| 60P12           | ø6.0  | 28 | 12  | ø6.0 | 60 | #120            |
| 60P14           | ø6.0  | 23 | 14  | ø6.0 | 60 | #120            |
| 60P16           | ø6.0  | 21 | 16  | ø6.0 | 60 | #120            |
| 60P20           | ø6.0  | 17 | 20  | ø6.0 | 60 | #120            |
| 100P30          | ø10.0 | 19 | 30  | ø6.0 | 60 | #120            |

# Diamond Mounted Points

## 鑽石磨棒

### BC Series - $\phi 6.0$ mm shank

粒度：#40、#60、#100 為標準粒度，訂購時請指明。

例如：BC-65A, #40

柄徑： $\phi 6.0$ mm

全長：60~65mm

Grit size available in #40, #60 and #100, When ordering, please specify.

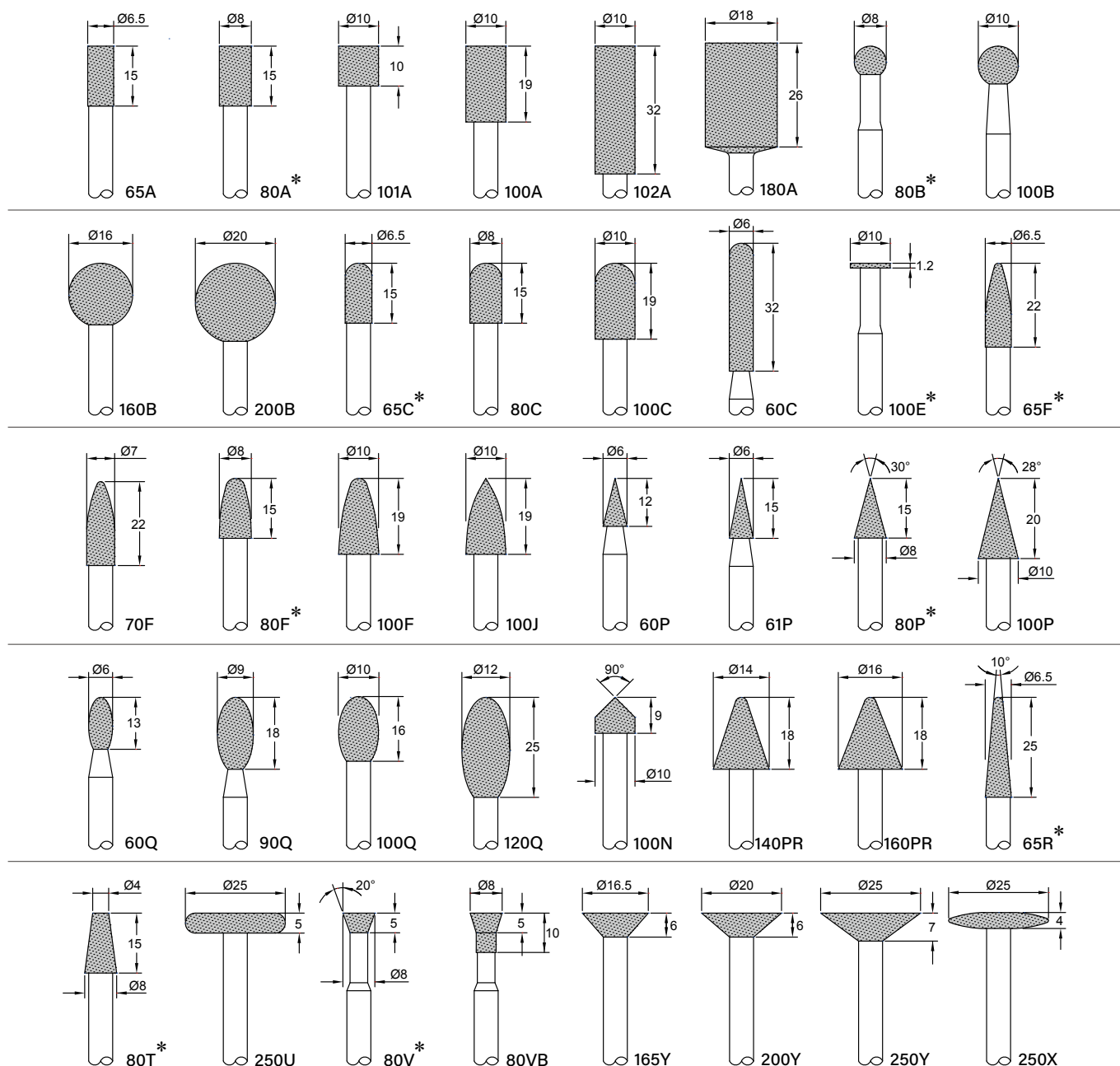
Ordering example : BC-65A, #40

Shank diameter :  $\phi 6.0$ mm

Total length : 60~65mm



單位 / Unit : mm



● **BC-10**：套裝 10 支組，含標示\*號之磨棒各一支。訂購時請指明粒度，例如：BC-10, #60。 / BC-10 : 10 pcs. Assortment set, contains one each of above points, which denoted by \*。 Ordering example : BC-10, #60.

# Diamond Mounted Points

## 鑽石磨棒

### BM Series - $\phi 3.0$ mm shank



單位 / Unit : mm

|                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 編號<br>Order No. | 10A  | 15A  | 20A  | 25A  | 30A  | 35A  | 40A  | 50A  | 60A  | 10C  | 15C  | 20C  | 25C  | 30C  |
| $\phi D$        | 1    | 1.5  | 2    | 2.5  | 3    | 3.5  | 4    | 5    | 6    | 1    | 1.5  | 2    | 2.5  | 3    |
| T               | 8    | 8    | 8    | 8    | 10   | 10   | 10   | 10   | 10   | 8    | 8    | 8    | 8    | 10   |
| 粒度<br>Grit Size | #150 | #150 | #120 | #120 | #120 | #120 | #120 | #100 | #100 | #150 | #150 | #120 | #120 | #120 |

|                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 編號<br>Order No. | 35C  | 40C  | 50C  | 60C  | 20T  | 30T  | 30V  | 13R  | 14R  | 15R  | 20R  | 30R  | 20P  | 30P  |
| $\phi D$        | 3.5  | 4    | 5    | 6    | 2    | 3    | 3    | 1.2  | 1.5  | 1.5  | 2    | 3    | 2    | 3    |
| T               | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 16   | 13   | 10   | 12   | 14   | 12   | 15   |
| 粒度<br>Grit Size | #120 | #120 | #100 | #100 | #120 | #120 | #120 | #150 | #150 | #150 | #150 | #120 | #150 | #150 |

|                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 編號<br>Order No. | 40P  | 50P  | 60P  | 20F  | 30F  | 40F  | 50F  | 60F  | 30J  | 40J  | 50J  | 60J  | 10B  | 15B  |
| $\phi D$        | 4    | 5    | 6    | 2    | 3    | 4    | 5    | 6    | 3    | 4    | 5    | 6    | 1    | 1.5  |
| T               | 15   | 15   | 13   | 10   | 12   | 10   | 10   | 12   | 14   | 9    | 10   | 13   | -    | -    |
| 粒度<br>Grit Size | #150 | #150 | #150 | #120 | #120 | #120 | #100 | #100 | #120 | #120 | #120 | #100 | #200 | #150 |

|                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 編號<br>Order No. | 20B  | 25B  | 30B  | 40B  | 50B  | 60B  | 80B  | 30Q  | 40Q  | 50Q  | 60Q  | 20S  | 30S  | 40S  |
| $\phi D$        | 2    | 2.5  | 3    | 4    | 5    | 6    | 8    | 3    | 4    | 5    | 6    | 2    | 3    | 4    |
| T               | -    | -    | -    | -    | -    | -    | -    | 5    | 7    | 9    | 10   | 4    | 6    | 8    |
| 粒度<br>Grit Size | #150 | #120 | #120 | #120 | #100 | #100 | #100 | #120 | #120 | #100 | #100 | #120 | #120 | #120 |

- **BMA-30** : 30 支綜合組, 含以上有標示\*記號磨棒各 1 支。 / 30 pieces assortment set, contains one each point which denoted by \*.
- **BMA-20** : 20 支綜合組, 組裝內容如下 / 20 pieces set, contains one each of below : BM-10A, 15A, 20A, 25A, 30A, 35A, 15C, 20C, 25C, 30C, 20P, 30P, 15R, 20R, 30R, 20B, 30B, 20F, 30F, 20T.
- The tools with  $\phi 1/8$ " shank or with CBN abrasive are available upon your request.



# Assortment Set

## 綜合組裝

### BMA-30 : 30 支組 / 30pcs.set

#### 組裝內容如下：

BM - 10A、15A、20A、25A、30A、35A、40A、50A、  
20B、30B、50B、15C、20C、25C、30C、  
35C、40C、50C、20P、30P、15R、20R、  
30R、30S、20F、30F、50F、20T、30T、30V (各  
一支)。

#### Contains one each of below :

BM - 10A, 15A, 20A, 25A, 30A, 35A, 40A, 50A, 20B,  
30B, 50B, 15C, 20C, 25C, 30C, 35C, 40C, 50C,  
20P, 30P, 15R, 20R, 30R, 30S, 20F, 30F, 50F, 20T,  
30T, 30V(One for each).



### BMA-20 : 20 支組 / 20pcs.set

#### 組裝內容如下：

BM - 10A、15A、20A、25A、30A、35A、15C、20C、  
25C、30C、20P、30P、15R、20R、30R、20B、  
30B、20F、30F、20T (各一支)。

#### Contains one each of below :

BM - 10A, 15A, 20A, 25A, 30A, 35A, 15C, 20C, 25C, 30C,  
20P, 30P, 15R, 20R, 30R, 20B, 30B, 20F, 30F, 20T.  
(One for each).



### BL 系列 : $\phi 1/8$ " 柄 / BL Series : $\phi 1/8$ " Shank

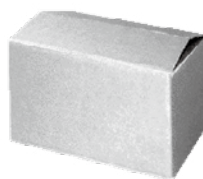
所有 BM 系列磨棒均可以改成  $\phi 1/8$ " 柄，請指明訂購。

BLS-30 及 BLS-20 為標準庫存品之  $\phi 1/8$ " 柄磨棒，其內  
容物與 BMA-30 及 BMA-20 相同，只有柄徑不同。

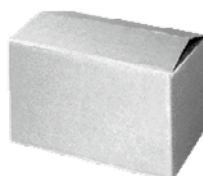
**Shank measure  $\phi 1/8$ " in diameter is available upon  
request.**

**BL series are  $\phi 1/8$ " shank with all shapes and sizes  
the same as BM series.**

BLS-30 and BLS-20 are standard assortment set stock  
available for  $\phi 1/8$ " shank, contains the same type of  
points as BMA-30 and BMA-20.



**BLS-30 : 30 支組**  
**BLS-30 : 30 pcs.set**



**BLS-20 : 20 支組**  
**BLS-20 : 20 pcs.set**

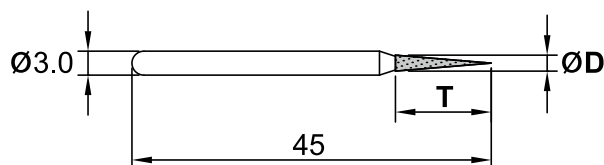
# Diamond Mounted Points

## 鑽石磨棒

### BM Series - $\phi 3.0$ mm shank

粒度：外徑  $\phi 6.0$ mm 以上：#100,  $\phi 2.0 \sim 5.0$ mm：#120,  
 $\phi 1.5$ mm 以下：#150

Grit size： $\phi D$  over 6.0mm：#100,  $\phi 2.0 \sim 5.0$ mm：#120,  
 $\phi 1.5$ mm & under：#150



單位 / Unit : mm

|                 |          |            |          |            |          |            |          |          |          |          |            |          |            |          |            |          |          |          |
|-----------------|----------|------------|----------|------------|----------|------------|----------|----------|----------|----------|------------|----------|------------|----------|------------|----------|----------|----------|
|                 |          |            |          |            |          |            |          |          |          |          |            |          |            |          |            |          |          |          |
| 編號<br>Order No. | 10A      | 15A        | 20A      | 25A        | 30A      | 35A        | 40A      | 50A      | 60A      | 10C      | 15C        | 20C      | 25C        | 30C      | 35C        | 40C      | 50C      | 60C      |
| $\phi D$        | $\phi 1$ | $\phi 1.5$ | $\phi 2$ | $\phi 2.5$ | $\phi 3$ | $\phi 3.5$ | $\phi 4$ | $\phi 5$ | $\phi 6$ | $\phi 1$ | $\phi 1.5$ | $\phi 2$ | $\phi 2.5$ | $\phi 3$ | $\phi 3.5$ | $\phi 4$ | $\phi 5$ | $\phi 6$ |
| T               | 8        | 8          | 8        | 8          | 10       | 10         | 10       | 10       | 10       | 8        | 8          | 8        | 8          | 10       | 10         | 10       | 10       | 10       |

|                 |          |          |          |            |            |            |          |          |            |            |          |          |          |          |          |          |          |            |
|-----------------|----------|----------|----------|------------|------------|------------|----------|----------|------------|------------|----------|----------|----------|----------|----------|----------|----------|------------|
|                 |          |          |          |            |            |            |          |          |            |            |          |          |          |          |          |          |          |            |
| 編號<br>Order No. | 20T      | 30T      | 30V      | 13R        | 14R        | 15R        | 20R      | 30R      | 31R        | 32R        | 20P      | 30P      | 40P      | 50P      | 60P      | 20F      | 30F      | 33F        |
| $\phi D$        | $\phi 2$ | $\phi 3$ | $\phi 3$ | $\phi 1.2$ | $\phi 1.5$ | $\phi 1.5$ | $\phi 2$ | $\phi 3$ | $\phi 3.3$ | $\phi 3.3$ | $\phi 2$ | $\phi 3$ | $\phi 4$ | $\phi 5$ | $\phi 6$ | $\phi 2$ | $\phi 3$ | $\phi 3.3$ |
| T               | 10       | 10       | 10       | 16         | 13         | 10         | 12       | 14       | 15         | 10         | 12       | 15       | 15       | 15       | 13       | 10       | 10       | 15         |

|                 |          |          |          |          |          |          |          |          |          |          |          |            |          |            |          |          |          |          |
|-----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|----------|------------|----------|----------|----------|----------|
|                 |          |          |          |          |          |          |          |          |          |          |          |            |          |            |          |          |          |          |
| 編號<br>Order No. | 40F      | 50F      | 60F      | 61F      | 20J      | 30J      | 40J      | 50J      | 51J      | 60J      | 10B      | 15B        | 20B      | 25B        | 30B      | 40B      | 50B      | 60B      |
| $\phi D$        | $\phi 4$ | $\phi 5$ | $\phi 6$ | $\phi 6$ | $\phi 2$ | $\phi 3$ | $\phi 4$ | $\phi 5$ | $\phi 5$ | $\phi 6$ | $\phi 1$ | $\phi 1.5$ | $\phi 2$ | $\phi 2.5$ | $\phi 3$ | $\phi 4$ | $\phi 5$ | $\phi 6$ |
| T               | 10       | 10       | 12       | 10       | 6        | 14       | 9        | 10       | 13       | 13       | -        | -          | -        | -          | -        | -        | -        | -        |

|                 |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|-----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
|                 |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 編號<br>Order No. | 80B      | 30Q      | 40Q      | 50Q      | 51Q      | 60Q      | 61Q      | 20S      | 30S      | 31S      | 32S      | 33S      | 34S      | 35S      | 36S      | 40S      | 50S      | 60S      |
| $\phi D$        | $\phi 8$ | $\phi 3$ | $\phi 4$ | $\phi 5$ | $\phi 5$ | $\phi 6$ | $\phi 6$ | $\phi 2$ | $\phi 3$ | $\phi 3$ | $\phi 3$ | $\phi 3$ | $\phi 3$ | $\phi 3$ | $\phi 3$ | $\phi 4$ | $\phi 5$ | $\phi 6$ |
| T               | -        | 5        | 7        | 9        | 12       | 10       | 12       | 4        | 6        | 5.5      | 6        | 6        | 6        | 6        | 5        | 8        | 10       | 12       |

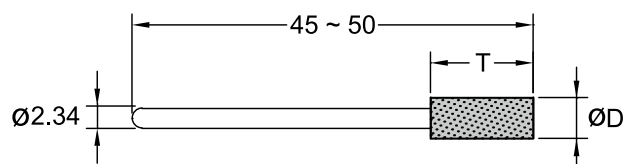
|                 |           |           |           |           |           |           |           |           |           |           |           |
|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                 |           |           |           |           |           |           |           |           |           |           |           |
| 編號<br>Order No. | 1310U     | 1315U     | 1320U     | 1325U     | 1330U     | 1335U     | 1340U     | 100Y      | 120X      | 130X      | 1310E     |
| $\phi D$        | $\phi 13$ | $\phi 13$ | $\phi 13$ | $\phi 13$ | $\phi 13$ | $\phi 13$ | $\phi 13$ | $\phi 10$ | $\phi 12$ | $\phi 13$ | $\phi 13$ |
| T               | 1         | 1.5       | 2         | 2.5       | 3         | 3.5       | 4         | 4         | 2         | 2         | 1         |

|                 |           |           |           |           |           |           |          |          |           |          |          |           |
|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|-----------|----------|----------|-----------|
|                 |           |           |           |           |           |           |          |          |           |          |          |           |
| 編號<br>Order No. | 1315E     | 1320E     | 1325E     | 1330E     | 1335E     | 1340E     | 60W      | 80W      | 130W      | 60M      | 80M      | 130M      |
| $\phi D$        | $\phi 13$ | $\phi 13$ | $\phi 13$ | $\phi 13$ | $\phi 13$ | $\phi 13$ | $\phi 6$ | $\phi 8$ | $\phi 13$ | $\phi 6$ | $\phi 8$ | $\phi 13$ |
| T               | 1.5       | 2         | 2.5       | 3         | 3.5       | 4         | 3.5      | 4.5      | 3.4       | 3.5      | 4.5      | 3.4       |

# Diamond Mounted Points

## 鑽石磨棒

### BH Series - $\phi 2.34$ mm shank



單位 / Unit : mm

| 編號<br>Order No. | BH160E | BH60Q | BH60R | BH30A | BH25K | BH25J | BH25F | BH30V | BH15P | BH20B |
|-----------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| øD              | 16     | 6.0   | 6.0   | 3.0   | 2.5   | 2.5   | 2.5   | 3.0   | 1.5   | 2.0   |
| T               | 0.5    | 10    | 14    | 15    | 10    | 10    | 6     | (45°) | 10    | -     |
| 粒度<br>Grit Size | #200   | #100  | #100  | #120  | #150  | #150  | #120  | #200  | #200  | #150  |

● **BHS-10** : 套裝 10 支組，含以上 10 種磨棒各 1 支。 / 10 pcs. set, contains one each of all above points.

| 編號<br>Order No. | BH11A | BH14A | BH19A | BH24A | BH27A | BH32A | BH39A | BH49A | BH14R | BH24R |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| øD              | 1.1   | 1.4   | 1.9   | 2.4   | 2.7   | 3.2   | 3.9   | 4.9   | 1.4   | 2.4   |
| T               | 7     | 7     | 7     | 7     | 7     | 7     | 10    | 10    | 10    | 13    |
| 粒度<br>Grit Size | #150  | #150  | #120  | #120  | #120  | #120  | #120  | #120  | #150  | #150  |

| 編號<br>Order No. | BH20B | BH24B | BH30B | BH35B | BH39B | BH14C | BH19C | BH29C | BH39C | BH49C |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| øD              | 2.0   | 2.4   | 3.0   | 3.5   | 3.9   | 1.4   | 1.9   | 2.9   | 3.9   | 4.9   |
| T               | -     | -     | -     | -     | -     | 7     | 7     | 7     | 10    | 10    |
| 粒度<br>Grit Size | #150  | #120  | #120  | #120  | #120  | #150  | #120  | #120  | #120  | #120  |

| 編號<br>Order No. | BH18P | BH24P | BH29P | BH42P | BH14T | BH19T | BH26T | BH30S | BH30Y | BH17J |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| øD              | 1.8   | 2.4   | 2.9   | 4.2   | 1.4   | 1.9   | 2.6   | 3.0   | 3.0   | 1.7   |
| T               | 10    | 12    | 14    | 6     | 7     | 7     | 7     | 6     | -     | 10    |
| 粒度<br>Grit Size | #150  | #150  | #150  | #150  | #120  | #120  | #120  | #120  | #150  | #150  |

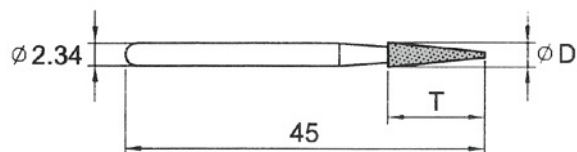
● **BHS-30** : 套裝 30 支組，含以上 30 種磨棒各 1 支。 / 30 pcs. set, contains one each of all above points.

● **BHS-20** : 套裝 20 支組，含以上有 \* 標示之磨棒各 1 支。 / 20 pcs. set, contains one each of points which denoted by \* .

# Diamond Mounted Points

## 鑽石雕刻針

BH Series -  $\phi 2.34$ mm shank



單位 / Unit : mm

|                 |    |    |    |    |     |     |     |     |     |    |    |     |     |     |     |     |
|-----------------|----|----|----|----|-----|-----|-----|-----|-----|----|----|-----|-----|-----|-----|-----|
|                 |    |    |    |    |     |     |     |     |     |    |    |     |     |     |     |     |
| 編號<br>Order No. | D1 | D2 | D3 | D4 | A11 | A12 | A13 | A21 | A30 | 7A | 8A | C3  | C13 | C23 | TR  | 1R  |
| $\phi D$        | 1  | 2  | 3  | 4  | 1   | 1.5 | 1.5 | 2.5 | 3   | 7  | 8  | 0.9 | 1.5 | 2   | 1.5 | 1.5 |
| T               | -  | -  | -  | -  | 5   | 5   | 7   | 7   | 7   | 6  | 10 | 4   | 10  | 10  | 8   | 10  |

|                 |     |     |    |     |    |    |    |    |    |    |     |    |      |      |      |      |
|-----------------|-----|-----|----|-----|----|----|----|----|----|----|-----|----|------|------|------|------|
|                 |     |     |    |     |    |    |    |    |    |    |     |    |      |      |      |      |
| 編號<br>Order No. | KS  | 1LR | 2R | 2LR | 3R | 5R | 6R | 7R | 8R | K6 | K10 | KA | 12BA | 14BA | 16BA | 19BA |
| $\phi D$        | 3.5 | 1.5 | 2  | 2.5 | 3  | 4  | 5  | 7  | 8  | 2  | 2.5 | 7  | 4    | 6    | 10   | 12   |
| T               | 6   | 10  | 12 | 12  | 12 | 12 | 12 | 12 | 12 | 5  | 7   | 12 | -    | -    | -    | -    |

|                 |     |     |     |     |    |     |     |    |    |    |    |     |     |     |     |     |
|-----------------|-----|-----|-----|-----|----|-----|-----|----|----|----|----|-----|-----|-----|-----|-----|
|                 |     |     |     |     |    |     |     |    |    |    |    |     |     |     |     |     |
| 編號<br>Order No. | T11 | T12 | T13 | T30 | 1A | 2A  | 2LA | 3A | 5A | 6A | RZ | 2LB | A14 | Kr5 | Kr8 | Kr9 |
| $\phi D$        | 1   | 1.5 | 2   | 3   | 2  | 2.5 | 2.5 | 3  | 4  | 5  | 4  | 2.5 | 2.5 | 6   | 8   | 8   |
| T               | 4   | 4   | 4   | 4   | 8  | 12  | 10  | 10 | 10 | 10 | 6  | 12  | 7   | 1.5 | 2   | 3   |

|                 |     |     |     |     |     |     |     |      |      |      |      |      |      |
|-----------------|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|
|                 |     |     |     |     |     |     |     |      |      |      |      |      |      |
| 編號<br>Order No. | A20 | A31 | 10B | 12B | 13B | 14B | 16B | 16BB | 16BC | 13nk | 13mB | 16mC | 16mB |
| $\phi D$        | 2.5 | 3   | 2.7 | 4   | 5   | 6   | 10  | 10   | 10   | 5    | 13   | 16   | 16   |
| T               | 7   | 7   | -   | -   | -   | -   | -   | -    | -    | -    | 2.5  | 2.5  | 3.5  |

|                 |    |     |     |     |     |     |      |      |      |      |      |      |     |     |
|-----------------|----|-----|-----|-----|-----|-----|------|------|------|------|------|------|-----|-----|
|                 |    |     |     |     |     |     |      |      |      |      |      |      |     |     |
| 編號<br>Order No. | RT | 20X | 17X | 18X | 19X | 23X | 10BN | 12BN | 13BN | 10mA | 13mA | 16mA | K25 | K30 |
| $\phi D$        | 5  | 1.8 | 4   | 6   | 10  | 16  | 2.5  | 4    | 5    | 10   | 13   | 16   | 4   | 5   |
| T               | 7  | 0.5 | 0.8 | 1   | 1.6 | 2   | -    | -    | -    | 2.5  | 3.5  | 3.5  | 0.4 | 0.6 |

|                 |     |     |     |     |     |      |      |      |      |
|-----------------|-----|-----|-----|-----|-----|------|------|------|------|
|                 |     |     |     |     |     |      |      |      |      |
| 編號<br>Order No. | K35 | K45 | K50 | K55 | K60 | 20mA | 88D  | 88C  | 88A  |
| $\phi D$        | 6   | 10  | 10  | 12  | 12  | 20   | 22   | 22   | 22   |
| T               | 0.5 | 0.5 | 1   | 0.6 | 1   | 3.5  | 0.45 | 0.35 | 0.45 |

# Diamond Needle Files

## 精密組鑽石銼刀

### PF-10

全長 : 140mm / 柄徑 :  $\phi 3.0$ mm / 鑽石長 : 50mm

Total length : 140mm

Tool shank :  $\phi 3.0$ mm

Diamond coating length : 50mm

單位 / Unit : mm



| 形狀與尺寸<br>Shape & Size |                                                                                   |           | 編號<br>Order No. |         |         |
|-----------------------|-----------------------------------------------------------------------------------|-----------|-----------------|---------|---------|
|                       |                                                                                   |           | #120            | #200    | #400    |
| 1.                    |  | 5.5 x 1.5 | PF-101          | PF-101F | PF-101V |
| 2.                    |  | 5 x 2     | PF-102          | PF-102F | PF-102V |
| 3.                    |  | $\phi 3$  | PF-103          | PF-103F | PF-103V |
| 4.                    |  | 2.5       | PF-104          | PF-104F | PF-104V |
| 5.                    |  | 3.5       | PF-105          | PF-105F | PF-105V |
| 套裝 5 支組 / 5 pcs. set  |                                                                                   |           | PF-100          | PF-100F | PF-100V |

### PF-10L

全長 : 140mm / 柄徑 :  $\phi 3.0$ mm / 鑽石長 : 70mm

Total length : 140mm

Tool shank :  $\phi 3.0$ mm

Diamond coating length : 70mm

單位 / Unit : mm



| 形狀與尺寸<br>Shape & Size  |                                                                                     |           | 編號<br>Order No. |          |          |
|------------------------|-------------------------------------------------------------------------------------|-----------|-----------------|----------|----------|
|                        |                                                                                     |           | #120            | #200     | #400     |
| 1.                     |  | 5.5 x 1.5 | PF-101L         | PF-101LF | PF-101LV |
| 2.                     |  | 5 x 2     | PF-102L         | PF-102LF | PF-102LV |
| 3.                     |  | $\phi 3$  | PF-103L         | PF-103LF | PF-103LV |
| 4.                     |  | 2.5       | PF-104L         | PF-104LF | PF-104LV |
| 5.                     |  | 3.5       | PF-105L         | PF-105LF | PF-105LV |
| 6.                     |  | 5.4 x 1.5 | PF-106L         | PF-106LF | PF-106LV |
| 7.                     |  | 1.7 x 6   | PF-107L         | PF-107LF | PF-107LV |
| 8.                     |  | 6 x 2     | PF-108L         | PF-108LF | PF-108LV |
| 9.                     |  | 5 x 2     | PF-109L         | PF-109LF | PF-109LV |
| 10.                    |  | 6 x 1.5   | PF-110L         | PF-110LF | PF-110LV |
| 套裝 10 支組 / 10 pcs. set |                                                                                     |           | PF-100L         | PF-100LF | PF-100LV |

### PF-70 超薄平銼 Thin flat type

此系列薄銼適用於窄縫加工。

全長 : 140mm / 柄徑 :  $\phi 3.0$ mm / 鑽石長 : 40~50mm

This thin flat type files with 0.5 ~ 1.0mm thickness, it is suitable for filing some narrow gap.

Total length : 140mm

Tool shank :  $\phi 3.0$ mm

Diamond coating length : 40~50mm

單位 / Unit : mm



| 形狀與尺寸<br>Shape & Size |                                                                                     |           | 編號<br>Order No. |         |         |
|-----------------------|-------------------------------------------------------------------------------------|-----------|-----------------|---------|---------|
|                       |                                                                                     |           | #150            | #200    | #400    |
| 1.                    |  | 5.5 x 0.5 | PF-705          | PF-705F | PF-705V |
| 2.                    |  | 5.5 x 0.8 | PF-708          | PF-708F | PF-708V |
| 3.                    |  | 5.5 x 1.0 | PF-710          | PF-710F | PF-710V |



# Diamond Needle Files

## 精密組鑽石銼刀

### PFL-10

全長 : 180mm / 柄徑 :  $\phi 3.0$ mm 套膠柄 / 鑽石長 : 25~50mm

單位 / Unit : mm

Total length : 180mm

Tool shank :  $\phi 3.0$ mm cover with PVC vinyl

Diamond coating length : 25~50mm



| 形狀與尺寸<br>Shape & Size  |                                                                                   |           | 編號<br>Order No. |          |          |
|------------------------|-----------------------------------------------------------------------------------|-----------|-----------------|----------|----------|
|                        |                                                                                   |           | #200            | #150     | #400     |
| 1.                     |  | 5.5 x 1.5 | PFL-101         | PFL-101J | PFL-101V |
| 2.                     |  | 5 x 2     | PFL-102         | PFL-102J | PFL-102V |
| 3.                     |  | $\phi 3$  | PFL-103         | PFL-103J | PFL-103V |
| 4.                     |  | 2.5       | PFL-104         | PFL-104J | PFL-104V |
| 5.                     |  | 3.5       | PFL-105         | PFL-105J | PFL-105V |
| 6.                     |  | 5.5 x 1   | PFL-106         | PFL-106J | PFL-106V |
| 7.                     |  | 5.5 x 0.5 | PFL-705         | PFL-705J | PFL-705V |
| 8.                     |  | 5.5 x 0.8 | PFL-708         | PFL-708J | PFL-708V |
| 9.                     |  | $\phi 2$  | PFL-03          | PFL-03J  | PFL-03V  |
| 10.                    |  | 5.5 x 1.5 | PFL-01          | PFL-01J  | PFL-01V  |
| 套裝 10 支組 / 10 pcs. set |                                                                                   |           | PFL-100         | PFL-100J | PFL-100V |

### PF-20

全長 : 200mm / 柄徑 :  $\phi 4.0$ mm / 鑽石長 : 70mm

單位 / Unit : mm

Total length : 200mm

Tool shank :  $\phi 4.0$ mm

Diamond coating length : 70mm



| 形狀與尺寸<br>Shape & Size |                                                                                     |           | 編號<br>Order No. |         |         |
|-----------------------|-------------------------------------------------------------------------------------|-----------|-----------------|---------|---------|
|                       |                                                                                     |           | #120            | #200    | #400    |
| 1.                    |  | 8.5 x 1.6 | PF-201          | PF-201F | PF-201V |
| 2.                    |  | 7 x 2.5   | PF-202          | PF-202F | PF-202V |
| 3.                    |  | $\phi 4$  | PF-203          | PF-203F | PF-203V |
| 4.                    |  | 3.5       | PF-204          | PF-204F | PF-204V |
| 5.                    |  | 4.5       | PF-205          | PF-205F | PF-205V |
| 套裝 5 支組 / 5 pcs. set  |                                                                                     |           | PF-200          | PF-200F | PF-200V |

### PF-30

全長 : 180mm / 柄徑 :  $\phi 3.4$ mm / 鑽石長 : 60mm

單位 / Unit : mm

Total length : 180mm

Tool shank :  $\phi 3.4$ mm

Diamond coating length : 60mm



| 形狀與尺寸<br>Shape & Size |                                                                                     |            | 編號<br>Order No. |         |         |
|-----------------------|-------------------------------------------------------------------------------------|------------|-----------------|---------|---------|
|                       |                                                                                     |            | #120            | #200    | #400    |
| 1.                    |  | 7.5 x 1.5  | PF-301          | PF-301F | PF-301V |
| 2.                    |  | 6 x 2.1    | PF-302          | PF-302F | PF-302V |
| 3.                    |  | $\phi 3.5$ | PF-303          | PF-303F | PF-303V |
| 4.                    |  | 3          | PF-304          | PF-304F | PF-304V |
| 5.                    |  | 4          | PF-305          | PF-305F | PF-305V |
| 套裝 5 支組 / 5 pcs. set  |                                                                                     |            | PF-300          | PF-300F | PF-300V |



# Diamond Bent Files

## 鑽石異形銼刀

### BF-60

全長 : 140mm / 柄徑 :  $\phi 3.0\text{mm}$  / 鑽石長 : 30mm

Total length : 140mm

Tool shank :  $\phi 3.0\text{mm}$

Diamond coating length : 30mm



單位 / Unit : mm

| 形狀與尺寸<br>Shape & Size                                                                          | 編號<br>Order No. |         |         |
|------------------------------------------------------------------------------------------------|-----------------|---------|---------|
|                                                                                                | #150            | #200    | #400    |
| 1.  5.5 x 1.2 | BF-601          | BF-601F | BF-601V |
| 2.  5 x 2     | BF-602          | BF-602F | BF-602V |
| 3.  $\phi 3$  | BF-603          | BF-603F | BF-603V |
| 4.  2.5       | BF-604          | BF-604F | BF-604V |
| 5.  3.5       | BF-605          | BF-605F | BF-605V |
| 套裝 5 支組 / 5 pcs. set                                                                           | BF-600          | BF-600F | BF-600V |

### BF-80

全長 : 155mm / 柄徑 : 3.0mm 方柄 / 鑽石長 : 20~30mm (雙頭)

Total length : 155mm

Tool shank : 3.0mm square shank

Diamond coating length : 20~30mm (Double head)



單位 / Unit : mm

| 形狀與尺寸<br>Shape & Size                                                                           | 編號<br>Order No. |         |         |
|-------------------------------------------------------------------------------------------------|-----------------|---------|---------|
|                                                                                                 | #200            | #150    | #400    |
| 1.  3 x 2    | BF-801          | BF-801J | BF-801V |
| 2.  $\phi 2$ | BF-802          | BF-802J | BF-802V |
| 3.  $\phi 3$ | BF-803          | BF-803J | BF-803V |
| 4.  $\phi 3$ | BF-804          | BF-804J | BF-804V |
| 5.  3        | BF-805          | BF-805J | BF-805V |
| 6.  3        | BF-806          | BF-806J | BF-806V |
| 套裝 6 支組 / 6 pcs. set                                                                            | BF-800          | BF-800J | BF-800V |

### BF-90

全長 : 140mm / 柄徑 :  $\phi 3.0\text{mm}$  / 鑽石長 : 20mm

Total length : 140mm

Tool shank :  $\phi 3.0\text{mm}$

Diamond coating length : 20mm



單位 / Unit : mm

| 形狀與尺寸<br>Shape & Size                                                                              | 編號<br>Order No. |         |         |
|----------------------------------------------------------------------------------------------------|-----------------|---------|---------|
|                                                                                                    | #150            | #200    | #400    |
| 1.  6 x 1.3     | BF-901          | BF-901F | BF-901V |
| 2.  2.5         | BF-902          | BF-902F | BF-902V |
| 3.  3.5 x 1.5   | BF-903          | BF-903F | BF-903V |
| 4.  3.5         | BF-904          | BF-904F | BF-904V |
| 5.  5 x 2       | BF-905          | BF-905F | BF-905V |
| 6.  3.5 x 1.5   | BF-906          | BF-906F | BF-906V |
| 7.  3.5 x 2     | BF-907          | BF-907F | BF-907V |
| 8.  $\phi 3$    | BF-908          | BF-908F | BF-908V |
| 9.  5 x 1.5     | BF-909          | BF-909F | BF-909V |
| 10.  $\phi 2.3$ | BF-910          | BF-910F | BF-910V |
| 套裝 10 支組 / 10 pcs. set                                                                             | BF-900          | BF-900F | BF-900V |

# Diamond Tapered Hand Files

## 鑽石平斜銼刀



PTF-100



CF-400

### PTF-100

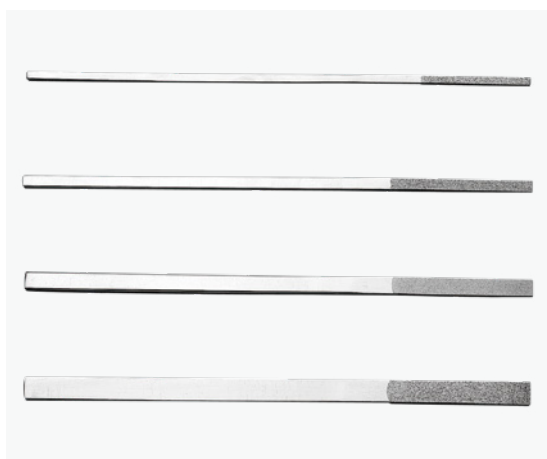
單位 / Unit : mm



| 編號<br>Order No. | 全長<br>Total Length                                                      | 鑽石長<br>Dia. Length | 形狀<br>Cross-Section | 粒度<br>Grit Size |
|-----------------|-------------------------------------------------------------------------|--------------------|---------------------|-----------------|
| PTF-12F         | 130                                                                     | 30                 |                     | #200            |
| PTF-12V         |                                                                         |                    |                     | #400            |
| PTF-12X         |                                                                         |                    |                     | #600            |
| PTF-14F         | 130                                                                     | 30                 |                     | #200            |
| PTF-14V         |                                                                         |                    |                     | #400            |
| PTF-14X         |                                                                         |                    |                     | #600            |
| PTF-16F         | 130                                                                     | 30                 |                     | #200            |
| PTF-16V         |                                                                         |                    |                     | #400            |
| PTF-16X         |                                                                         |                    |                     | #600            |
| PF-103X         | 140                                                                     | 50                 |                     | #600            |
| PTF-100         | 10 支套裝 / 10 pcs. set in pvc pouch, contains one each of all above files |                    |                     |                 |

### CF-400

單位 / Unit : mm



| 編號<br>Order No. | 全長<br>Total Length                                                      | 鑽石長<br>Dia. Length | 形狀<br>Cross-Section | 粒度<br>Grit Size |
|-----------------|-------------------------------------------------------------------------|--------------------|---------------------|-----------------|
| CF-402J         | 180                                                                     | 40                 |                     | #150            |
| CF-402F         |                                                                         |                    |                     | #200            |
| CF-402V         |                                                                         |                    |                     | #400            |
| CF-404J         | 180                                                                     | 50                 |                     | #150            |
| CF-404F         |                                                                         |                    |                     | #200            |
| CF-404V         |                                                                         |                    |                     | #400            |
| CF-406J         | 180                                                                     | 50                 |                     | #150            |
| CF-406F         |                                                                         |                    |                     | #200            |
| CF-406V         |                                                                         |                    |                     | #400            |
| CF-408J         | 180                                                                     | 50                 |                     | #150            |
| CF-408F         |                                                                         |                    |                     | #200            |
| CF-408V         |                                                                         |                    |                     | #400            |
| CF-400          | 12 支套裝 / 12 pcs. set in pvc pouch, contains one each of all above files |                    |                     |                 |

# Diamond Hand Files

## 鐵工用鑽石銼刀

### IF-50 鐵工用鑽石銼刀 / Diamond Hand Files

粒度：#100

Grit size：#100



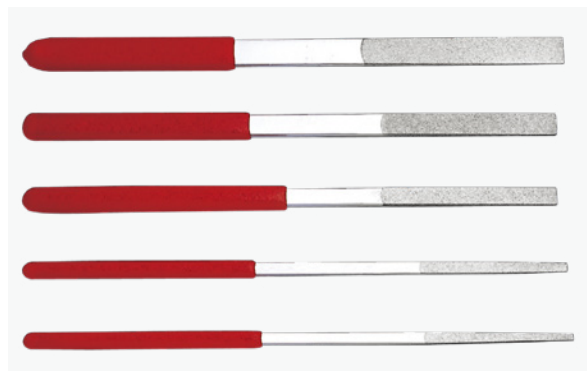
單位 / Unit：mm

| 編號<br>Order No. | 全長<br>Total Length | 鑽石長<br>Dia. Length | 形狀<br>Cross-Section |
|-----------------|--------------------|--------------------|---------------------|
| IF-501          | 215                | 80                 |                     |
| IF-502          | 215                | 80                 |                     |
| IF-503          | 215                | 80                 |                     |
| IF-504          | 215                | 80                 |                     |
| IF-505          | 215                | 80                 |                     |

### CF-50 鑽石平斜銼刀 / Diamond Hand Tapered Files

粒度：#150, #200

Grit size：#150, #200



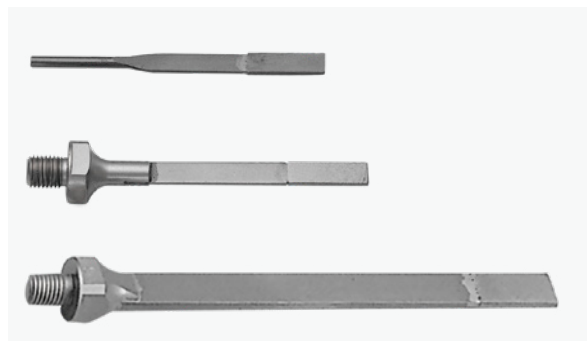
單位 / Unit：mm

| 編號<br>Order No. | 全長<br>Total Length                 | 鑽石長<br>Dia. Length | 形狀<br>Cross-Section |
|-----------------|------------------------------------|--------------------|---------------------|
| CF-501          | 180                                | 70                 |                     |
| CF-502          | 180                                | 60                 |                     |
| CF-503          | 180                                | 60                 |                     |
| CF-504          | 180                                | 50                 |                     |
| CF-505          | 180                                | 50                 |                     |
| CF-500          | 木盒裝 5 支組 / 5pcs. set / wooden case |                    |                     |

### 金屬結合鑽石銼刀 / Sintered Diamond Files

電動及氣動超音波研磨機專用。

Special design for pneumatic or ultrasonic lapping machine.

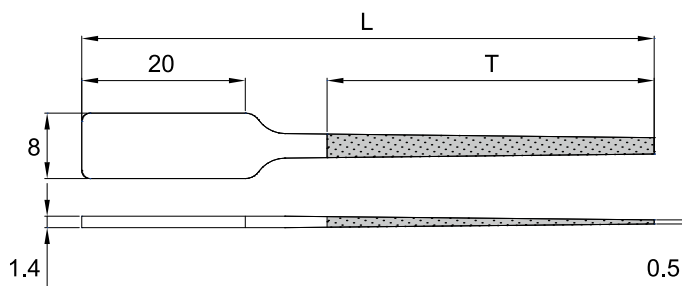
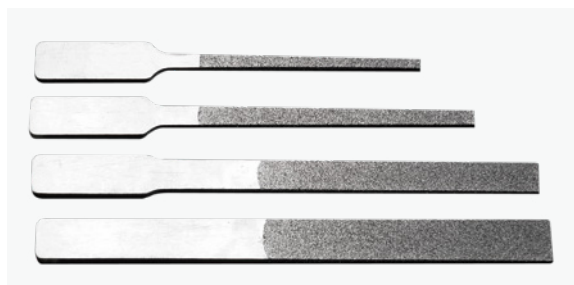


單位 / Unit：mm

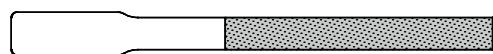
| 編號<br>Order No. | 全長<br>Total Length | 鑽石長<br>Dia. Length | 形狀<br>Cross-Section | 粒度<br>Grit Size |
|-----------------|--------------------|--------------------|---------------------|-----------------|
| MMF-615F        | 54                 | 20                 |                     | #200            |
| MMF-615V        |                    |                    |                     | #400            |
| MMF-615X        |                    |                    |                     | #600            |
| MDT-02F         | 72                 | 20                 |                     | #200            |
| MDT-02V         |                    |                    |                     | #400            |
| MDT-02X         |                    |                    |                     | #600            |
| MDT-03F         | 105                | 20                 |                     | #200            |
| MDT-03V         |                    |                    |                     | #400            |
| MDT-03X         |                    |                    |                     | #600            |

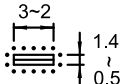
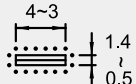
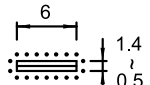
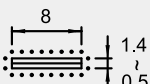
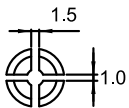
# Diamond Tip Files

## 鑽石銼刀片



單位 / Unit : mm



| 編號<br>Order No. | L                                                                                                                                                                    | T  | 形狀<br>Shape                                                                           | 粒度<br>Grit Size |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|---------------------------------------------------------------------------------------|-----------------|
| FA-632J         | 70                                                                                                                                                                   | 40 |    | #150            |
| * FA-632F       |                                                                                                                                                                      |    |                                                                                       | #200            |
| * FA-632V       |                                                                                                                                                                      |    |                                                                                       | #400            |
| * FA-632X       |                                                                                                                                                                      |    |                                                                                       | #600            |
| * FA-643J       | 80                                                                                                                                                                   | 50 |   | #150            |
| * FA-643F       |                                                                                                                                                                      |    |                                                                                       | #200            |
| * FA-643V       |                                                                                                                                                                      |    |                                                                                       | #400            |
| FA-643X         |                                                                                                                                                                      |    |                                                                                       | #600            |
| * FA-666J       | 90                                                                                                                                                                   | 50 |  | #150            |
| * FA-666F       |                                                                                                                                                                      |    |                                                                                       | #200            |
| FA-666V         |                                                                                                                                                                      |    |                                                                                       | #400            |
| FA-666X         |                                                                                                                                                                      |    |                                                                                       | #600            |
| * FA-688J       | 90                                                                                                                                                                   | 50 |  | #150            |
| * FA-688F       |                                                                                                                                                                      |    |                                                                                       | #200            |
| FA-688V         |                                                                                                                                                                      |    |                                                                                       | #400            |
| FA-688X         |                                                                                                                                                                      |    |                                                                                       | #600            |
| XH-32           | (122)                                                                                                                                                                |    |  |                 |
| FAS-600         | 10 支綜合組裝包含上表有<br>* 標示之銼刀各一支。(銼刀夾柄另購) /<br>10pcs. assortment set / pvc pouch, containing<br>one each of file which denoted by asterisk. (Tool<br>holder is optional.) |    |                                                                                       |                 |

## 特點 \ Features

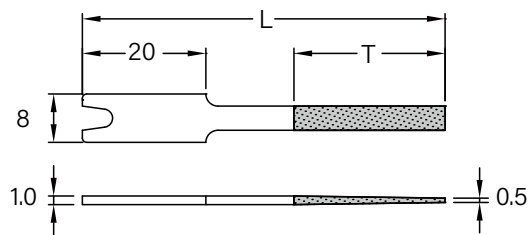
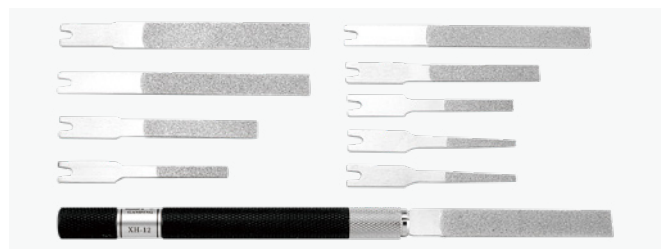
1. 節省材料。
2. 配合夾柄 (XH-32) 使用，手感更好。
3. 全新製程，切削力及壽命更好。
4. 可手持操作，亦可夾於機器上使用。
5. 銼刀形狀設計更合乎人體工學。
6. 可取代一般鑽石平斜銼刀。

1. Less material usage.
2. The usage of holder (XH-32) makes it feel much better when operating.
3. Brand-new manufacturing process provides a better cutting ability and also prolongs the tool life.
4. Both suitable for hand-held and machine-mounted operations.
5. The designation is complied with the ergonomic.
6. Be able to replace the general diamond tapered hand files.

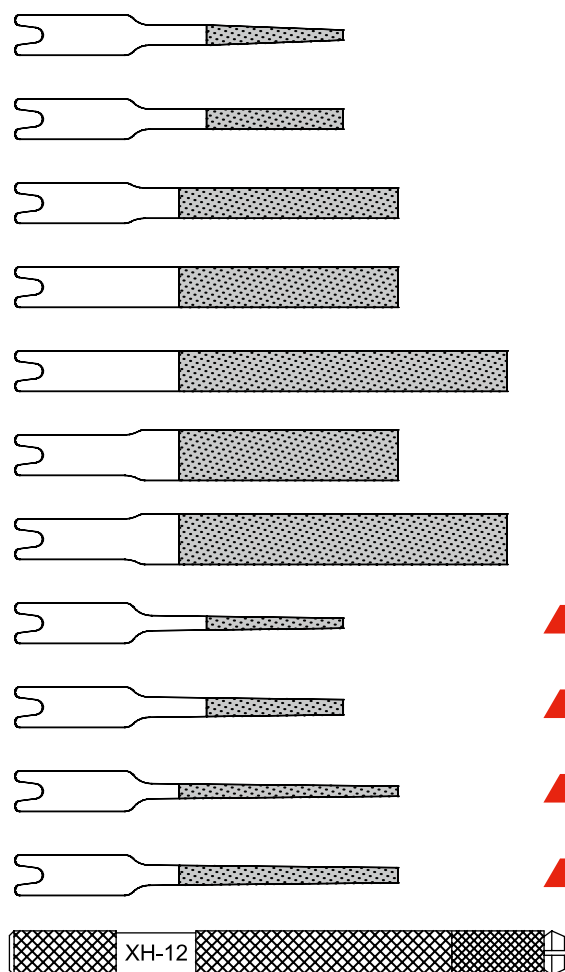


# Diamond Tip Files

## 鑽石銼刀片



單位 / Unit : mm



| 編號<br>Order No. | L     | T  | 形狀<br>Shape | 粒度<br>Grit Size |
|-----------------|-------|----|-------------|-----------------|
| *FA-426J        | 60    | 25 | 4~2         | #150            |
| *FA-426F        |       |    | 1.0         | #200            |
| FA-426V         |       |    | 0.5         | #400            |
| *FA-446J        | 60    | 25 | 4           | #150            |
| *FA-446F        |       |    | 1.0         | #200            |
| FA-446V         |       |    | 0.5         | #400            |
| *FA-667J        | 70    | 40 | 6           | #150            |
| *FA-667F        |       |    | 1.0         | #200            |
| FA-667V         |       |    | 0.5         | #400            |
| FA-887J         | 70    | 40 | 8           | #150            |
| FA-887F         |       |    | 1.0         | #200            |
| FA-887V         |       |    | 0.5         | #400            |
| *FA-889J        | 90    | 60 | 8           | #150            |
| *FA-889F        |       |    | 1.0         | #200            |
| FA-889V         |       |    | 0.5         | #400            |
| FA-107J         | 70    | 40 | 10          | #150            |
| FA-107F         |       |    | 1.0         | #200            |
| FA-107V         |       |    | 0.5         | #400            |
| *FA-109J        | 90    | 60 | 10          | #150            |
| *FA-109F        |       |    | 1.0         | #200            |
| FA-109V         |       |    | 0.5         | #400            |
| FA-326F         | 60    | 25 | 3~2         | #200            |
| FA-326V         |       |    | 1.0         | #400            |
| FA-326X         |       |    | 0.5         | #600            |
| FA-436F         | 60    | 25 | 4~3         | #200            |
| FA-436V         |       |    | 1.0         | #400            |
| FA-436X         |       |    | 0.5         | #600            |
| FA-327F         | 70    | 40 | 3~2         | #200            |
| FA-327V         |       |    | 1.0         | #400            |
| FA-327X         |       |    | 0.5         | #600            |
| FA-437F         | 70    | 40 | 4~3         | #200            |
| FA-437V         |       |    | 1.0         | #400            |
| FA-437X         |       |    | 0.5         | #600            |
| XH-12           | (122) |    | 1.0         |                 |

NEW

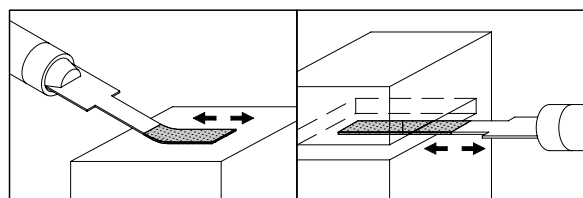
NEW

NEW

NEW

## 特點 \ Features

1. 富彈性，可彎曲研磨。
2. 厚度只有 1mm，適合夾縫研磨。
3. 適合用於各種銼磨機及手持加工。



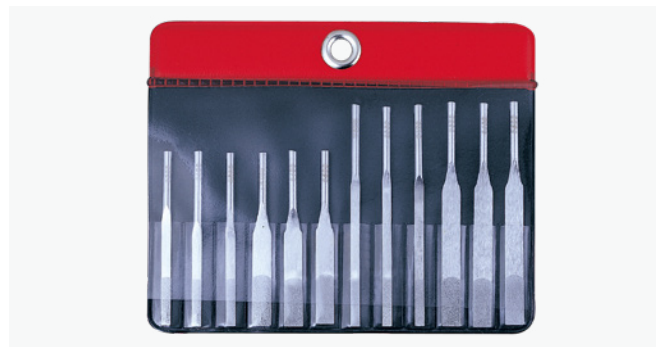
1. With the maximum thickness of 1mm only, the files are suitable for narrow and deep gap processing. Contoured to make difficult-to-reach areas readily accessible.
2. They are tapered in thickness to make possible perfectly flat filing and flexible for bending while still maintaining their hardness.
3. Both suitable for hand-held and machine-mounted operations.

# Diamond Tapered Machine Files

## 鑽石機械平斜銼刀



MTP-120

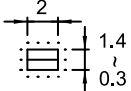
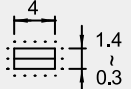
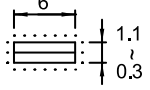


MTF-100

### MTP Series

單位 / Unit : mm

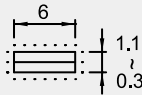
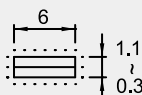


| 編號<br>Order No. | 全長<br>Total Length                 | 鑽石長<br>Dia. Length | 形狀<br>Cross-Section                                                                   | 粒度<br>Grit Size |
|-----------------|------------------------------------|--------------------|---------------------------------------------------------------------------------------|-----------------|
| MTP-12J         | 72                                 | 25                 |   | #150            |
| MTP-12F         |                                    |                    |                                                                                       | #200            |
| MTP-12H         |                                    |                    |                                                                                       | #300            |
| MTP-12V         |                                    |                    |                                                                                       | #400            |
| MTP-14J         | 72                                 | 25                 |  | #150            |
| MTP-14F         |                                    |                    |                                                                                       | #200            |
| MTP-14H         |                                    |                    |                                                                                       | #300            |
| MTP-14V         |                                    |                    |                                                                                       | #400            |
| MTP-16J         | 72                                 | 25                 |  | #150            |
| MTP-16F         |                                    |                    |                                                                                       | #200            |
| MTP-16H         |                                    |                    |                                                                                       | #300            |
| MTP-16V         |                                    |                    |                                                                                       | #400            |
| MTP-120         | 12 支套裝 / 12 pcs. set in pvc pouch. |                    |                                                                                       |                 |

### MTF Series

單位 / Unit : mm



| 編號<br>Order No. | 全長<br>Total Length                 | 鑽石長<br>Dia. Length | 形狀<br>Cross-Section                                                                   | 粒度<br>Grit Size |
|-----------------|------------------------------------|--------------------|---------------------------------------------------------------------------------------|-----------------|
| MTF-13F         | 72                                 | 15                 |  | #200            |
| MTF-13V         |                                    |                    |                                                                                       | #400            |
| MTF-13X         |                                    |                    |                                                                                       | #600            |
| MTF-16F         | 72                                 | 15                 |  | #200            |
| MTF-16V         |                                    |                    |                                                                                       | #400            |
| MTF-16X         |                                    |                    |                                                                                       | #600            |
| MTF-23F         | 56                                 | 15                 |  | #200            |
| MTF-23V         |                                    |                    |                                                                                       | #400            |
| MTF-23X         |                                    |                    |                                                                                       | #600            |
| MTF-26F         | 56                                 | 15                 |  | #200            |
| MTF-26V         |                                    |                    |                                                                                       | #400            |
| MTF-26X         |                                    |                    |                                                                                       | #600            |
| MTF-100         | 12 支套裝 / 12 pcs. set in pvc pouch. |                    |                                                                                       |                 |



# Diamond Machine Files

## 鑽石機械銼刀

### MPF-10

全長 : 90mm / 柄徑 :  $\phi 3.0\text{mm}$  / 鑽石長 : 45mm

Total length : 90mm

Tool shank :  $\phi 3.0\text{mm}$

Diamond coating length : 45mm



單位 / Unit : mm

| 形狀與尺寸<br>Shape & Size                                                                         | 編號<br>Order No. |          |          |
|-----------------------------------------------------------------------------------------------|-----------------|----------|----------|
|                                                                                               | #150            | #200     | #400     |
| 1.  4 X 1.2  | MPF-101         | MPF-101F | MPF-101V |
| 2.  5 X 2    | MPF-102         | MPF-102F | MPF-102V |
| 3.  $\phi 3$ | MFF-103         | MPF-103F | MPF-103V |
| 4.  2.5      | MPF-104         | MPF-104F | MPF-104V |
| 5.  5 X 2    | MPF-109         | MPF-109F | MPF-109V |
| 套裝 5 支組 / 5 pcs. set                                                                          | MPF-100         | MPF-100F | MPF-100V |

### MBF-60

全長 : 85mm / 柄徑 :  $\phi 3.0\text{mm}$  / 鑽石長 : 30mm

Total length : 85mm

Tool shank :  $\phi 3.0\text{mm}$

Diamond coating length : 30mm



單位 / Unit : mm

| 形狀與尺寸<br>Shape & Size                                                                            | 編號<br>Order No. |          |          |
|--------------------------------------------------------------------------------------------------|-----------------|----------|----------|
|                                                                                                  | #150            | #200     | #400     |
| 1.  5.5 X 1.2 | MBF-601         | MBF-601F | MBF-601V |
| 2.  5 X 2     | MBF-602         | MBF-602F | MBF-602V |
| 3.  $\phi 3$  | MBF-603         | MBF-603F | MBF-603V |
| 4.  2.5       | MBF-604         | MBF-604F | MBF-604V |
| 5.  3.5       | MBF-605         | MBF-605F | MBF-605V |
| 套裝 5 支組 / 5 pcs. set                                                                             | MBF-600         | MBF-600F | MBF-600V |

### MBF-90

全長 : 65mm / 柄徑 :  $\phi 3.0\text{mm}$  / 鑽石長 : 20~30mm

Total length : 65mm

Tool shank :  $\phi 3.0\text{mm}$

Diamond coating length : 20~30mm



單位 / Unit : mm

| 形狀與尺寸<br>Shape & Size                                                                            | 編號<br>Order No. |          |          |
|--------------------------------------------------------------------------------------------------|-----------------|----------|----------|
|                                                                                                  | #150            | #200     | #400     |
| 1.  5.8 X 1.2 | MBF-901         | MBF-901F | MBF-901V |
| 2.  3.2 X 1.4 | MBF-902         | MBF-902F | MBF-902V |
| 3.  5 X 2     | MBF-903         | MBF-903F | MBF-903V |
| 4.  3.2 X 1.4 | MBF-904         | MBF-904F | MBF-904V |
| 5.  $\phi 3$  | MBF-905         | MBF-905F | MBF-905V |
| 6.  $\phi 3$  | MBF-906         | MBF-906F | MBF-906V |
| 7.  2.5       | MBF-907         | MBF-907F | MBF-907V |
| 8.  3.2 X 1.4 | MBF-908         | MBF-908F | MBF-908V |
| 9.  3.2 X 1.4 | MBF-909         | MBF-909F | MBF-909V |
| 10.  3.5 X 2  | MBF-910         | MBF-910F | MBF-910V |
| 套裝 10 支組 / 10 pcs. set                                                                           | MBF-900         | MBF-900F | MBF-900V |

# Plated Diamond Disc

## 鑽石切片

鑽石切片適用於切溝、切斷，研磨下列材質：玻璃、鋁鋼、陶瓷、石材、硬橡膠、FRP、碳纖維、石墨以及複合材料，…等。

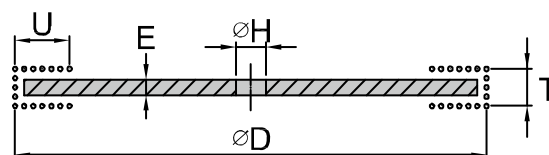
Diamond disc use for grooving, cutting, & grinding the following materials : glass, tungsten carbide, ceramic, stone, hard rubber, FRP, composite materials and graphite...etc.



TYPE A



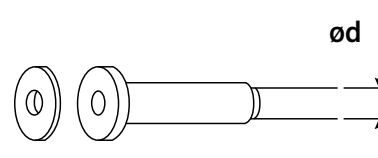
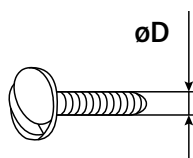
TYPE E



單位 / Unit : mm

| 編號<br>Order No. | Type | ØD | T   | U  | E   | ØH  | 粒度<br>Grit Size | 軸柄<br>Mandrel |
|-----------------|------|----|-----|----|-----|-----|-----------------|---------------|
| BM-190E         | E    | 19 | 0.4 | 2  | 0.2 | 1.7 | #200            | A,B,C         |
| BM-190A         | A    | 19 | 0.4 | 6  | 0.2 | 1.7 | #200            | A,B,C         |
| BM-220E         | E    | 22 | 0.4 | 2  | 0.2 | 1.7 | #200            | A,B,C         |
| BM-220A         | A    | 22 | 0.4 | 8  | 0.2 | 1.7 | #200            | A,B,C         |
| BM-250E         | E    | 25 | 0.4 | 2  | 0.2 | 1.7 | #200            | A,B,C         |
| BM-250A         | A    | 25 | 0.5 | 8  | 0.2 | 1.7 | #150            | A,B,C         |
| BM-300E         | E    | 30 | 0.4 | 2  | 0.2 | 1.7 | #200            | A,B,C         |
| BM-300A         | A    | 30 | 0.5 | 8  | 0.2 | 1.7 | #150            | A,B,C         |
| BM-221E         | E    | 22 | 0.4 | 2  | 0.2 | 3.0 | #200            | D,E,F         |
| BM-221A         | A    | 22 | 0.4 | 8  | 0.2 | 3.0 | #200            | D,E,F         |
| BM-251E         | E    | 25 | 0.4 | 2  | 0.2 | 3.0 | #200            | D,E,F         |
| BM-251A         | A    | 25 | 0.5 | 8  | 0.2 | 3.0 | #150            | D,E,F         |
| BM-301E         | E    | 30 | 0.4 | 2  | 0.2 | 3.0 | #200            | D,E,F         |
| BM-301A         | A    | 30 | 0.5 | 10 | 0.2 | 3.0 | #150            | D,E,F         |

## 軸柄 / Mandrel



單位 / Unit : mm

| 編號<br>Order No. | ØD    | ød  |
|-----------------|-------|-----|
| A. AK234        | 2.34  | 1.7 |
| B. AK300        | 3.0   | 1.7 |
| C. AK318        | 3.175 | 1.7 |
| D. MK234        | 2.34  | 3.0 |
| E. MK300        | 3.0   | 3.0 |
| F. MK318        | 3.175 | 3.0 |

# Diamond Dressing Tools PCD & PCBN Turning Tools

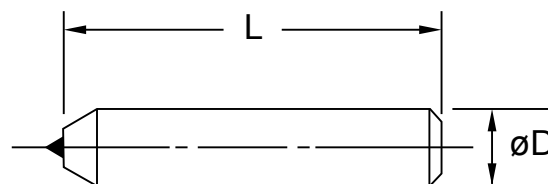
鑽石修刀及鑽石車刀



# Diamond Dressing Tools

## 鑽石修刀

### 單石修刀 / Single Point Diamond Dressers

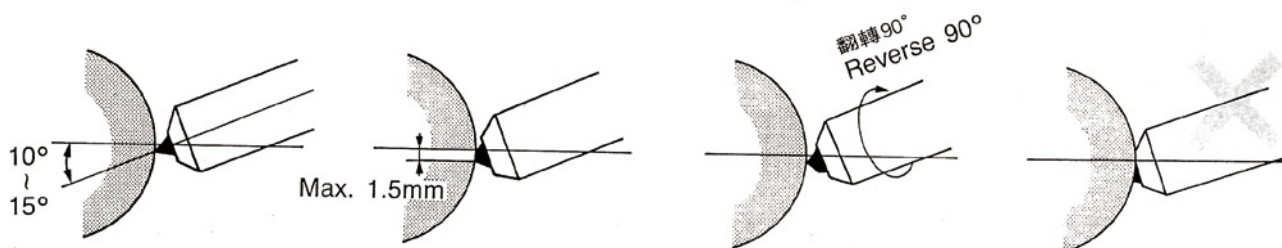


單位 / Unit : mm

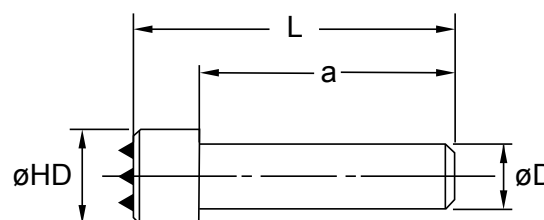
| 編號<br>Order No. | 鑽石番號<br>Dia. wt. Code | 大約重量 ( 克拉 )<br>Approx. wt.(cts.) | 適用砂輪<br>Grinding Wheels Size |
|-----------------|-----------------------|----------------------------------|------------------------------|
| DS005           | #5                    | 0.18                             | Ø150 x 25 以下 / or smaller.   |
| DS010           | #10                   | 0.20                             |                              |
| DS015           | #15                   | 0.25                             |                              |
| DS020           | #20                   | 0.35                             | Ø150 ~ Ø300 x 25             |
| DS025           | #25                   | 0.50                             |                              |
| DS033           | #33                   | 0.75                             |                              |
| DS050           | #50                   | 1.0                              | Ø300 ~ Ø450 x 25 ~ 40        |
| DS075           | #75                   | 1.5                              | Ø450 ~ Ø600 x 50 ~ 100       |
| DS100           | #100                  | 2.0                              | Ø600 以上 / or larger.         |

● 訂購時請說明編號及鐵柄尺寸或提供詳細圖面。 / When ordering, please specify order no. & shank size or detail drawing.

### 正確安裝及使用 / Installation and operation



### 多石修刀 / Multi Point Diamond Dressers



單位 / Unit : mm

| 編號<br>Order No. | 總鑽石重量<br>Total Stone Weight | 鑽石顆數<br>Nos. of Stone | 鑽石層數<br>Nos. of Stone Layer |
|-----------------|-----------------------------|-----------------------|-----------------------------|
| DM03201         | 1.0 Carat                   | 3                     | 1                           |
| DM05101         | 1.0 Carat                   | 5                     | 1                           |
| DM06101         | 1.0 Carat                   | 6                     | 1                           |
| DM07101         | 1.4 Carat                   | 7                     | 1                           |
| DM03101         | 0.6 Carat                   | 3                     | 1                           |

● 訂購時請說明編號及鐵柄尺寸或提供詳細圖面。 / When ordering, please specify order no. & shank size or detail drawing.

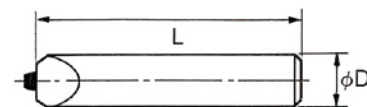
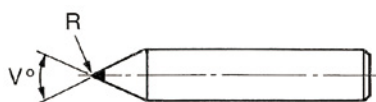


# Diamond Forming Dressers

## 成型修刀

### 成型修刀 / Chisel Type Diamond Dressers

成型修刀用於砂輪之成形修整，或內、外弧之成形修整。 / For forming accurate radii and forms on grinding wheels.



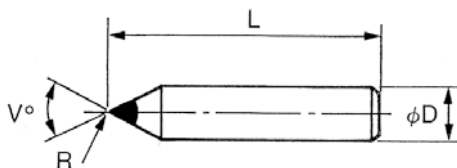
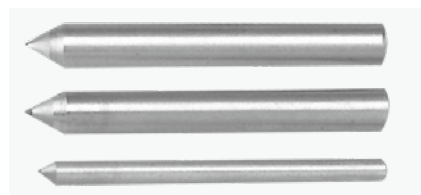
單位 / Unit : mm

| 編號<br>Order No. | 鑽石角度<br>(V°) | 鑽石端弧度<br>(R) | 鑽石原料<br>Diamond Material |
|-----------------|--------------|--------------|--------------------------|
| DF0255          | 55°          | 0.2 R        | 天然鑽石 Nature Diamond      |
| DF0560          | 60°          | 0.5 R        | 天然鑽石 Nature Diamond      |
| DF0255F         | 55°          | 0.2 R        | 人造鑽石 Synthetic Diamond   |
| DF0560F         | 60°          | 0.5 R        | 人造鑽石 Synthetic Diamond   |

● 訂購時請說明編號及鐵柄尺寸或提供詳細圖面。 / When ordering, please specify order no. & shank size or detail drawing.

### 圓錐修刀 / Coned Diamond Dressers

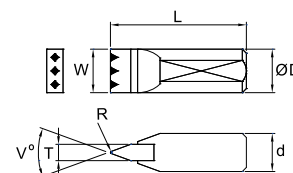
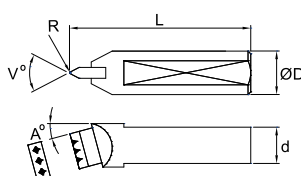
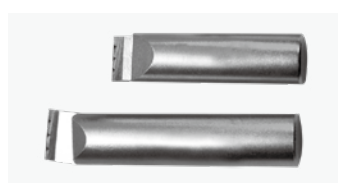
圓錐修刀用於砂輪之成形修整，或內、外弧之成形修整。 / For forming accurate radii and forms on grinding wheels.



單位 / Unit : mm

| 編號<br>Order No. | 鑽石角度<br>(V°) | 鑽石端弧度<br>(R) | 鑽石原料<br>Diamond Material |
|-----------------|--------------|--------------|--------------------------|
| DC600           | 60°          | 0.02~0.03R   | Ø1/8" x 1" L             |
| DC601           | 60°          | 0.02~0.03R   | Ø1/8" x 2" L             |
| DC602           | 60°          | 0.02~0.03R   | Ø1/4" x 2" L             |
| DC603           | 60°          | 0.02~0.03R   | Ø3/8" x 2" L             |
| DC604           | 60°          | 0.02~0.03R   | Ø10 x 50L(mm)            |

### CVD 成型修刀 / CVD Forming Dressers



單位 / Unit : mm

| 編號<br>Order No. | V° | A° | W  | R   | ϕD | d    | L  | 鑽石顆數<br>Stone Nos. |
|-----------------|----|----|----|-----|----|------|----|--------------------|
| CVD-F0240-1     | 40 | -  | 8  | 0.2 | 8  | -    | 25 | 3                  |
| CVD-F0255-1     | 55 | -  | 10 | 0.2 | 12 | 11   | 40 | 3                  |
| CVD-F02550-T1   | 55 | 15 | 10 | 0.2 | 12 | 10   | 50 | 3                  |
| CVD-F02550-T2   | 55 | 6  | 10 | 0.2 | 12 | 11.5 | 50 | 3                  |

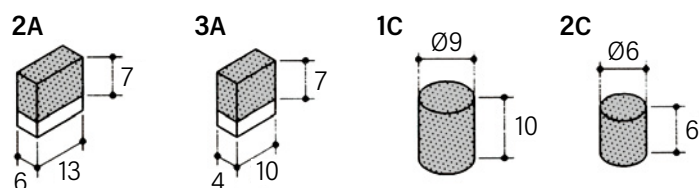
● 其他規格請提供詳細圖面訂購。 / Other size, please offer detail drawing to order.

# Impregnated Diamond Dressers

## 結合修刀



鑽石齒塊尺寸 / The dimensions of diamond tips

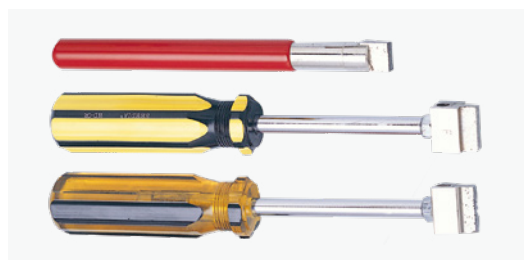


單位 / Unit : mm

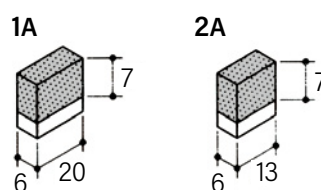
| 鐵柄形狀<br>Type of Shank | 編號<br>Order No. | 鑽石齒塊<br>Diamond Tips | 粒度<br>Grit Size | 鐵柄尺寸<br>Size of Shank | 適用範圍<br>Applications                                                                                                     |
|-----------------------|-----------------|----------------------|-----------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------|
|                       | DI-2AFC         | 2A                   | F               | Ø12 x 100L            | 無心研磨，圓筒研磨，平面研磨砂輪尺寸 Ø300x25 到 Ø500x63。<br>For centerless, cylindrical, surface grinding. Wheel size : Ø300x25 to Ø500x63. |
|                       | DI-2AMC         | 2A                   | M               | Ø12 x 50L             |                                                                                                                          |
|                       | DI-2ARC         | 2A                   | R               | Ø11 x 30L             |                                                                                                                          |
|                       | DI-2AFD         | 2A                   | F               | Ø12 x 50L             |                                                                                                                          |
|                       | DI-2AMD         | 2A                   | M               | Ø12 x 50L             |                                                                                                                          |
|                       | DI-2ARD         | 2A                   | R               | Ø11 x 30L             |                                                                                                                          |
|                       | DI-1CFG         | 1C                   | F               | Ø12 x 50L             | 一般用途之研磨砂輪尺寸 Ø300 或以下。<br>For general purpose grinding. Wheel size: Ø300 and smaller.                                     |
|                       | DI-1CMG         | 1C                   | M               | Ø12 x 50L             |                                                                                                                          |
|                       | DI-1CRG         | 1C                   | R               | Ø11 x 30L             |                                                                                                                          |

● 粒度 / Grit size : F - 細目 / Fine 、 M - 中目 / Medium 、 R - 粗目 / Coarse

## 手持式鑽石修刀 / Hand Diamond Dressers



鑽石齒塊尺寸 / The dimensions of diamond tips



單位 / Unit : mm

| 形式<br>Form                                                                                           | 編號<br>Order No. | 鑽石齒塊<br>Diamond Tips | 粒度<br>Grit Size |
|------------------------------------------------------------------------------------------------------|-----------------|----------------------|-----------------|
| <b>Type 01</b><br>總長 / Total length : 160mm<br>                                                      | HD-01R          |                      | R: 粗目 / Coarse  |
|                                                                                                      | HD-01F          |                      | F: 細目 / Fine    |
| <b>Type 02</b><br>總長 / Total length : 200mm<br><br>方向 1 Direction 1      或者 or      方向 2 Direction 2 | HD-02R          |                      | R: 粗目 / Coarse  |
|                                                                                                      | HD-02F          |                      | F: 細目 / Fine    |

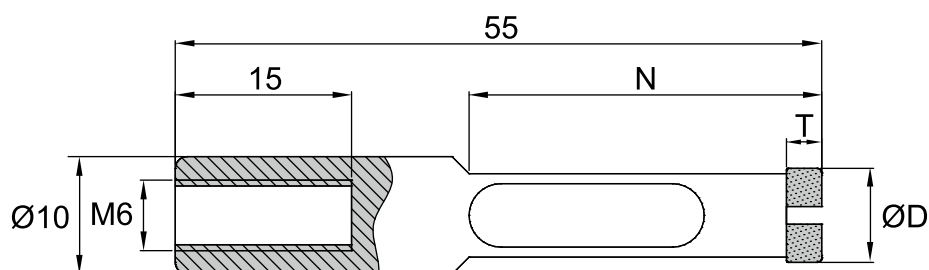


# Electroplated Diamond Core Drills

## 電鑄鑽石鑽管

此系列產品主要使用於 FRP、超硬磁磚、人造花崗岩、花崗岩、拋光石英磚、瓷器、大理石、陶器、赤土陶器、玻璃、石墨、石材等材料之鑽孔。

Electroplated Diamond Core Drills are used for drilling FRP, hard tiles, artificial granite, granite, quartz, porcelain, marble, ceramic, terra cotta ceramic, glass, graphite & stone.



單位 / Unit : mm

| 編號<br>Order No. | øD    |       | T  | N  | 粒度<br>Grit Size | 備註<br>Remarks |
|-----------------|-------|-------|----|----|-----------------|---------------|
|                 | mm    | inch  |    |    |                 |               |
| ESD-032         | 3.2   | 1/8"  | 10 | 25 | #60             | Solid Drills  |
| ECD-050         | 5.0   | 3/16" | 3  | 30 | #60             | Core Drills   |
| ECD-065         | 6.5   | 1/4"  | 3  | 30 | #60             | Core Drills   |
| ECD-080         | 8     | 5/16" | 3  | 30 | #60             | Core Drills   |
| ECD-100         | 10    | 3/8"  | 3  | 30 | #60             | Core Drills   |
| ECD-130         | 13    | 1/2"  | 3  | 30 | #60             | Core Drills   |
| ECD-160         | 16    | 5/8"  | 3  | 35 | #60             | Core Drills   |
| ECD-191         | 19.05 | 3/4"  | 3  | 35 | #60             | Core Drills   |
| ECD-254         | 25.4  | 1"    | 3  | 35 | #60             | Core Drills   |

● 標準粒度外，其他粒度請指明訂購。 / Grit size in the above table is standard for that item, others are available upon request.

# PCD & PCBN Turning Tools

## 聚晶鑽石、氮化硼車刀

聚晶鑽石和聚晶氮化硼車刀與其他切削刀具比較，具有較高之硬度及耐磨耗性，其優點如下：有較長之刀具壽命，提高工件加工精度及表面光製度，降低工件加工成本以及提高機器生產力。

PCD & PCBN have higher hardness & abrasion resistance than other cutting tools. The advantages of these features are : improving tool's life, providing better control over part size and surface finishes, reducing tool cost per machined part and improving machine productivity.



### 應用 \ Application

#### 聚晶鑽石 (PCD)

1. 銅合金、鋁合金。
2. 燒結碳化鎢及陶瓷。
3. 預燒結碳化鎢及陶瓷。
4. 高矽鋁合金。
5. F.R.P、硬橡膠、石墨。

#### 聚晶氮化硼 (PCBN)

1. 硬化鋼材 (HRC 45 ~ 68)。
2. 耐熱鋼 (SUS)。
3. 超耐熱鋼：鎳基合金，鈷基合金。
4. 鑄鐵：冷激鑄鐵、接種鑄鐵。
5. 燒結合金鋼：鉻鉬鋼、鎳鉻鉬鋼。

#### Polycrystalline Diamond (PCD)

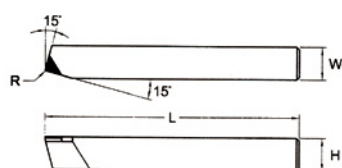
1. Aluminum alloys、copper alloys、manganese alloys.
2. Sintered carbide & ceramics.
3. Green or semi-sintered carbide & ceramics.
4. High-silicon aluminum alloys.
5. Reinforced plastic、hard rubber、carbon、graphite.

#### Polycrystalline Cubic Boron Nitride (PCBN)

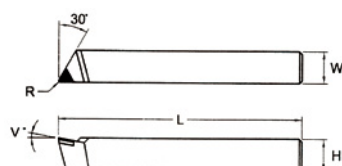
1. Hardened steels (HRC 45 ~ 68).
2. Tempering steels.
3. Super alloys : Cobalt and nickel base super alloys.
4. Cast iron : Chilled iron, Meehanite iron.
5. Sintered ferrous alloys : SCM, SNCM.

單位 / Unit : mm

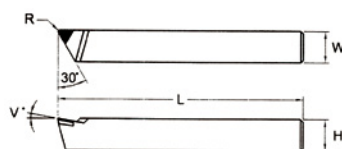
#### 31型



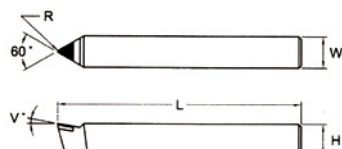
#### 33型



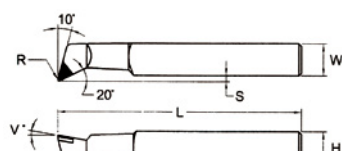
#### 34型



#### 35型



#### 37型



| 編號<br>Order No. | 刀片材質<br>Tip Material | W  | H  | L   | R   | V° | S |
|-----------------|----------------------|----|----|-----|-----|----|---|
| B4612-4G        | PCBN                 | 16 | 16 | 120 | 0.4 | 0  | 0 |
| B4613-4G        | PCBN                 | 19 | 19 | 140 | 0.4 | 0  | 0 |
| D6732-5A        | PCD                  | 16 | 16 | 120 | 0.5 | 0  | 0 |
| D6733-5A        | PCD                  | 19 | 19 | 140 | 0.5 | 0  | 0 |
| B6630-4G        | PCBN                 | 10 | 10 | 80  | 0.4 | 0  | 0 |
| B6631-4G        | PCBN                 | 13 | 13 | 100 | 0.4 | 0  | 0 |
| B6632-4G        | PCBN                 | 16 | 16 | 120 | 0.4 | 0  | 0 |
| D6530-3F        | PCD                  | 10 | 10 | 80  | 0.3 | 10 | 0 |
| D6531-3F        | PCD                  | 13 | 13 | 100 | 0.3 | 10 | 0 |
| D6532-3F        | PCD                  | 16 | 16 | 120 | 0.3 | 10 | 0 |
| D6540-3F        | PCD                  | 10 | 10 | 80  | 0.3 | 10 | 0 |
| D6541-3F        | PCD                  | 13 | 13 | 100 | 0.3 | 10 | 0 |
| D6542-3F        | PCD                  | 16 | 16 | 120 | 0.3 | 10 | 0 |
| D6752-5A        | PCD                  | 16 | 16 | 120 | 0.5 | 0  | 0 |
| D6753-5A        | PCD                  | 19 | 19 | 140 | 0.5 | 0  | 0 |
| B6650-4G        | PCBN                 | 10 | 10 | 80  | 0.4 | 0  | 0 |
| B6651-4G        | PCBN                 | 13 | 13 | 100 | 0.4 | 0  | 0 |
| B6652-4G        | PCBN                 | 16 | 16 | 120 | 0.4 | 0  | 0 |
| D6550-3F        | PCD                  | 10 | 10 | 80  | 0.3 | 10 | 0 |
| D6551-3F        | PCD                  | 13 | 13 | 100 | 0.3 | 10 | 0 |
| D6552-3F        | PCD                  | 16 | 16 | 120 | 0.3 | 10 | 0 |
| D6772-5A        | PCD                  | 16 | 16 | 120 | 0.5 | 0  | 2 |
| D6773-5A        | PCD                  | 19 | 19 | 140 | 0.5 | 0  | 2 |
| B6672-4G        | PCBN                 | 16 | 16 | 120 | 0.4 | 0  | 2 |
| B6673-4G        | PCBN                 | 19 | 19 | 140 | 0.4 | 0  | 2 |
| D6571-3F        | PCD                  | 13 | 13 | 100 | 0.3 | 10 | 2 |
| D6572-3F        | PCD                  | 16 | 16 | 120 | 0.3 | 10 | 2 |

● 其他規格之車刀，請提供詳細圖面訂購。 / The turning tools with other specification, please offer detail drawing when ordering.

# Ultrasonic Lapping Machine Air Grinders

超音波與氣動研磨機





# Ultrasonic Lapping Machine

## 超音波振動研磨機

超音波振動研磨機，以每秒兩萬多次的超高頻微細振動，可輕鬆地解決各種模具的複雜或細微部位之加工。以前難以加工的溝槽、肋骨、角落或複雜及微細等部位，現在使用超音波振動研磨機，將可有效地且省時地完成各種模具之研磨及拋光工作。

Ultrasonic Lapping Machine with micro vibration stroke and extra-high frequency (22,000 times per second), which can easily handle most intricate jobs for various molds and dies.

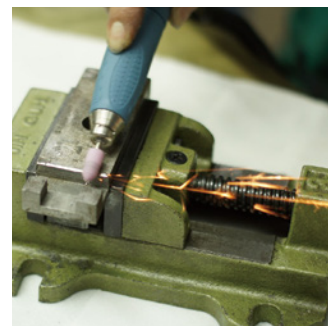
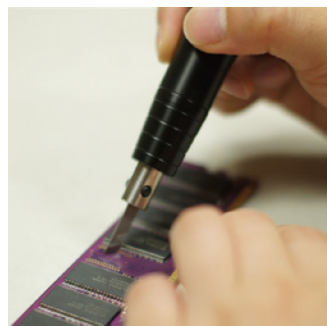
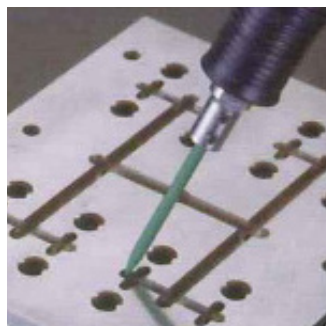
The difficult traditional process of slots, ribs, detail corners, intricate areas becomes so easy with time saving, and efficiently reach a quality result of polishing and finishing Process.



### 應用 \ Application

1. 各種磨具之研磨及拋光。
2. 塑膠製品複雜、精細部位之切斷或去毛邊。
3. 印刷電路板 (PCB) 電子迴路修改。
4. 石頭、玻璃、寶石等之精細雕刻或拋光。
5. 布、橡膠薄膜等之切斷。

1. For polish and grinding of the mold & die.
2. For cutting and deburning of plastics on intricate area.
3. For correction of PCB patterns.
4. For fine engraving or polishing of stone, glass and jewelry.
5. For cutting of rubber film, clothe, etc.



### 特長 \ Features

- 1. 強勁的輸出功率：**  
最大 45 瓦的輸出功率，提供有效且快速之加工作業。
- 2. 自動追尾迴路：**  
機器會根據各種不同工具，自動檢測並選擇最佳之輸出振頻以發揮各種工具之最佳性能。
- 3. 電子穩壓變壓器：**  
電子變壓器兼具穩壓效果，即使在電源不穩定之情況下，依然可維持機器良好的操作性能，且可保護機器不致受損。
- 4. 空振檢知迴路設計：**  
當手機未與工件接觸時，機器會自動降低輸出功率，以延長手機壽命，並可防止工具因空振導致發燙或燒毀。

- 1. Powerful output :**  
Max.45 watts of output power enables you to achieve any polishing task at the best performance.
- 2. Auto feedback system :**  
Machine itself will automatically adjust frequency according to different tools to get the best performance.
- 3. Electronic transformer with regulation :**  
To maintain the machine in good performance and protect it from damage even at an unstable supply of electric voltage.
- 4. Detecting circuit of suspending :**  
When handpiece is not in used, the unit will automatically reduce the output power. It does not only prolong the life of the handpiece transducer but also keep the tools from heating up.

# Ultrasonic Lapping Machine

## 超音波振動研磨機

### AR-800 旗艦多功能型 / Multi-function Flagship Type

#### 旗艦主打 / Flagship



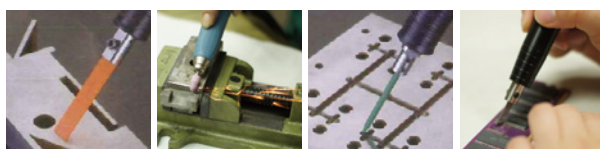
全新設計旗艦型機種，擁有最先進的多功能設計，結合超音波，有刷及無刷直流等三種輸出。

- 無刷直流輸出最大 250 瓦，有刷直流輸出最大 150 瓦，提供各種手機有更高的扭力，發揮其最佳的研磨效果。
- 先進的高效率微處理器，使超音波的拋光效果更加穩定，更有效率。
- 在使用無刷手機時，LED 轉速顯示，讓您可依據各種不同的工具，調整最合適轉速，以達到最有效率且安全的研磨效果。
- 每次啟動機器，系統會自動地將轉速歸“零”，避免因手機高速啟動而造成危險。
- 本機之標準配備含有超音波手機 (GS-H26) 及無刷旋轉手機 (U-Lap60) 各一支。

With the most advanced design that provides the multi-function of Ultrasonic, Brush DC (direct-current) and Brushless DC output.

- All new design with high-efficiency microprocessor that give the machine with perfect performance.
- The brushless DC with max. 300 watts and brush DC with max. 150 watts output power that gives your handpiece with high torque and high speed running.
- The LED speed display shows you the running speed of brushless handpiece. You can select the best and safe speed according to various tools and diameter.
- Once turn on the machine, the system will automatically adjust the speed to “Zero”, that keep you away from the damage caused by high speed running of handpiece.
- This machine includes one each of ultrasonic and brushless handpiece.

#### 基礎應用實例 / Applications



模具精修  
Mold & Die  
Polish

研磨加工  
Grinding

細縫 & 溝槽  
微加工  
Correction of  
Intricate area

PCB  
板迴路修改  
Correction of  
PCB patterns

#### 標準規格 / Specifications

| 電源控制器 / Power Controller                        |                                                                                       |                                 |
|-------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| 電源 / Main supply                                | AC-90V ~ 250V, 50/60Hz                                                                |                                 |
| 超音波輸出 / Ultrasonic output                       | 45 watts                                                                              |                                 |
| 振頻 / Vibration frequency                        | 18 ~ 26 kHz                                                                           |                                 |
| 振幅 / Stroke amplitude                           | 3 ~ 40 μm                                                                             |                                 |
| 振頻調整 / Frequency adjustment                     | 自動追尋 / auto-tracing                                                                   |                                 |
| 消耗功率 / Power consumption                        | 300 watts                                                                             |                                 |
| 保險絲 / Fuse                                      | 3A time-lag type                                                                      |                                 |
| 直流馬達輸出 / Output of DC motor                     | 5 ~ 32V                                                                               |                                 |
| 有刷輸出功率 / Power of DC brush                      | Max. 150 watts                                                                        |                                 |
| 無刷輸出功率 / Power of DC brushless                  | Max. 300 watts                                                                        |                                 |
| 尺寸 / Dimensions                                 | 170 x 260 x 140mm                                                                     |                                 |
| 重量 / Weight                                     | 2.72kg                                                                                |                                 |
| 手機 / Handpiece                                  |                                                                                       |                                 |
| 超音波手機 / Ultrasonic handpiece                    | ✱ GS-H26                                                                              |                                 |
| 尺寸 / Dimensions                                 | Ø27 x 125mm                                                                           |                                 |
| 重量 / Weight                                     | 150g                                                                                  |                                 |
| 旋轉手機 / Rotary Handpiece                         |                                                                                       |                                 |
| 有刷手機 Brush handpiece                            | ◎                                                                                     |                                 |
| 無刷手機 Brushless handpiece                        | U-Lap 60                                                                              |                                 |
| AR-800 整組實際內容物 ( 標準組 ) / Set Include (Standard) |                                                                                       |                                 |
| 超音波手機<br>Ultrasonic handpiece                   |  | (GS-H26)<br>Ø27 x 125mm         |
| 無刷手機<br>Brushless handpiece                     |  | (U-Lap60)<br>Ø29 x 161mm        |
| 電源線<br>Power cord                               |  | 18AWG x 3C x 180cm              |
| 手機線<br>Handpiece cord                           |  | 3C x 150cm                      |
| 六角板手<br>Wrench (HEX)                            |  | HEX (62mm)                      |
| 手機座<br>Handpiece rest                           |  | 110 x 50 x 35mm                 |
| 夾頭拆卸架<br>Tool Changing rack                     |  | For 10mm holder                 |
| 板手<br>Wrench                                    |  | 140mm (10/12)                   |
| 轉接頭 (M6)<br>Adapter (M6)                        |  | For M6 shank tool               |
| 夾頭 (Ø3.0mm)<br>Holder (Ø3.0mm)                  |  | For Ø3mm shank tool             |
| 夾頭 (3.0mm)<br>Holder (3.0mm)                    |  | For oil stone (3mm)             |
| 夾頭 (1.0mm)<br>Holder (1.0mm)                    |  | For ceramic fiber stone (1.0mm) |
| 腳踏開關<br>Foot switch                             |  | Cord length 150cm               |

● 註 / Note : \* 亦可選用 GS-H04 手機。 / GS-H04 could be selected. instead of the model.

◎ 選購配備。 / Optional accessory.

# Ultrasonic Lapping Machine

## 超音波振動研磨機

### AR-108 單功能型 / Single Function Practical Type

#### 熱銷商品 / Top Sale

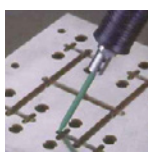


- 超音波研磨單功能輸出。
- 具有可信賴的品質及良好的操作性能。
- 最大 40 瓦輸出，滿足各種加工需求。
- 除了模具拋光外，亦可用於電路板 (PCB) 之電子迴路修改。
- 平易近人的價格，打破超音波研磨機都很昂貴的迷思。
- Ultrasonic lapping function only.
- The machine provides reliable quality and good performance.
- Max.40 watts output that satisfy various of polishing works.
- It is not only effective for lapping task, but also good for correction of PCB patterns.
- Attractive price would absolutely change your image of an expensive ultrasonic unit.

#### 基礎應用實例 / Applications



模具精修  
Mold & Die  
Polish



細縫 & 溝槽  
微加工  
Correction of  
Intricate area



PCB  
板迴路修改  
Correction of  
PCB patterns

#### 標準規格 / Specifications

| 電源控制器 / Power Controller                        |                                                                                       |                                    |
|-------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------|
| 電源 / Main supply                                | AC-90V ~ 250V, 50/60Hz                                                                |                                    |
| 超音波輸出 / Ultrasonic output                       | 40 watts                                                                              |                                    |
| 振頻 / Vibration frequency                        | 18 ~ 25 kHz                                                                           |                                    |
| 振幅 / Stroke amplitude                           | 10 ~ 35 μm                                                                            |                                    |
| 振頻調整 / Frequency adjustment                     | 自動追尋 / auto-tracing                                                                   |                                    |
| 消耗功率 / Power consumption                        | 46 watts                                                                              |                                    |
| 保險絲 / Fuse                                      | 2A time-lag type                                                                      |                                    |
| 直流馬達輸出 / Output of DC motor                     | 無 / None                                                                              |                                    |
| 有刷輸出功率 / Power of DC brush                      | 無 / None                                                                              |                                    |
| 無刷輸出功率 / Power of DC brushless                  | 無 / None                                                                              |                                    |
| 尺寸 / Dimensions                                 | 192 x 156 x 96mm                                                                      |                                    |
| 重量 / Weight                                     | 0.7kg                                                                                 |                                    |
| 手機 / Handpiece                                  |                                                                                       |                                    |
| 超音波手機 / Ultrasonic handpiece                    | GS-H06                                                                                |                                    |
| 尺寸 / Dimensions                                 | Ø30x130mm                                                                             |                                    |
| 重量 / Weight                                     | 175g                                                                                  |                                    |
| AR-108 整組實際內容物 ( 標準組 ) / Set Include (Standard) |                                                                                       |                                    |
| 超音波手機<br>Ultrasonic handpiece                   |  | (GS-H06)<br>Ø30 x 130mm            |
| 電源線<br>Power cord                               |  | 18AWG x 3C x 180cm                 |
| 手機線<br>Handpiece cord                           |  | 3C x 150cm                         |
| 六角板手<br>Wrench (HEX)                            |  | HEX (62mm)                         |
| 手機座<br>Handpiece rest                           |  | 110 x 50 x 35mm                    |
| 夾頭拆卸架<br>Tool changing rack                     |  | For 11mm holder                    |
| 板手<br>Wrench                                    |  | 140mm (10/11)                      |
| 夾頭 (Ø3.0mm)<br>Holder (Ø3.0mm)                  |  | For Ø3mm shank tool                |
| 夾頭 (1.0mm)<br>Holder (1.0mm)                    |  | For ceramic fiber stone<br>(1.0mm) |
| 腳踏開關<br>Foot switch                             |  | Cord length 150cm                  |



# Ultrasonic Lapping Machine

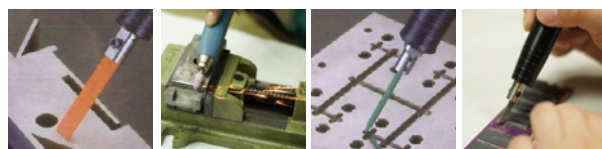
## 超音波振動研磨機

### AR-600(E) 雙功能強力型 / Dual-function Powerful Type



- AR-600(E) 為 AR-208，AR-303 之升級版。全新的設計，採用高效率微處理器使操作性能更穩定且提升拋光效率。
- 超音波及 DC 馬達雙輸出，提供您雙重功能之各種研磨及拋光作業。
- 最大 45 瓦之超音波輸出，使拋光效率更加提升。
- 有刷 DC 馬達輸出電壓為 5~30 伏特，輸出功率為 60 瓦。
- AR-600(E) is the upgrade model of AR-208 and AR-303. All new design with high-efficiency microprocessor that gives the machine with more steady and effective performance.
- This dual-function machine provides you the versatility of both Ultrasonic and mechanical polishing.
- Max.40 watts output that satisfy various of polishing works.
- Max. 45 watts Ultrasonic output makes polishing job more effective.
- Brush DC motor output is 5~30 volt and output power is 60 watts.

### 基礎應用實例 / Applications



模具精修  
Mold & Die  
Polish

研磨加工  
Grinding

細縫 & 溝槽  
微加工  
Correction of  
Intricate area

PCB  
板迴路修改  
Correction of  
PCB patterns

### 標準規格 / Specifications

| 電源控制器 / Power Controller                         |                                                                                       |                                    |
|--------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------|
| 電源 / Main supply                                 | AC-90V ~ 250V, 50/60Hz                                                                |                                    |
| 超音波輸出 / Ultrasonic output                        | 45 watts                                                                              |                                    |
| 振頻 / Vibration frequency                         | 18 ~ 26 kHz                                                                           |                                    |
| 振幅 / Stroke amplitude                            | 3 ~ 40 μm                                                                             |                                    |
| 振頻調整 / Frequency adjustment                      | 自動追尋 / auto-tracing                                                                   |                                    |
| 消耗功率 / Power consumption                         | 80 watts                                                                              |                                    |
| 保險絲 / Fuse                                       | 2A time-lag type                                                                      |                                    |
| 直流馬達輸出 / Output of DC motor                      | 5 ~ 30V                                                                               |                                    |
| 有刷輸出功率 / Power of DC brush                       | Max. 60 watts                                                                         |                                    |
| 無刷輸出功率 / Power of DC brushless                   | 無 / None                                                                              |                                    |
| 尺寸 / Dimensions                                  | 170 x 260 x 140mm                                                                     |                                    |
| 重量 / Weight                                      | 2.0kg                                                                                 |                                    |
| 手機 / Handpiece                                   |                                                                                       |                                    |
| 超音波手機 / Ultrasonic handpiece                     | GS-H04                                                                                |                                    |
| 尺寸 / Dimensions                                  | Ø33x146mm                                                                             |                                    |
| 重量 / Weight                                      | 254g                                                                                  |                                    |
| 旋轉手機 / Rotary Handpiece                          |                                                                                       |                                    |
| 有刷手機 Brush handpiece                             | ◎                                                                                     |                                    |
| AR-600E 整組實際內容物 ( 標準組 ) / Set Include (Standard) |                                                                                       |                                    |
| 超音波手機<br>Ultrasonic handpiece                    |  | (GS-H04)<br>Ø33 x 146mm            |
| 電源線<br>Power cord                                |  | 18AWG x 3C x 180cm                 |
| 手機線<br>Handpiece cord                            |  | 3C x 150cm                         |
| 六角板手<br>Wrench (HEX)                             |  | HEX (62mm)                         |
| 手機座<br>Handpiece rest                            |  | 110 x 50 x 35mm                    |
| 夾頭拆卸架<br>Tool changing rack                      |  | For 12mm holder                    |
| 板手<br>Wrench                                     |  | 140mm (10/12)                      |
| 夾頭 (Ø3.0mm)<br>Holder (Ø3.0mm)                   |  | For Ø3mm shank tool<br>(2pcs)      |
| 夾頭 (3.0mm)<br>Holder (3.0mm)                     |  | For oil stone (3mm)                |
| 夾頭 (1.0mm)<br>Holder (1.0mm)                     |  | For ceramic fiber stone<br>(1.0mm) |
| 腳踏開關<br>Foot switch                              |  | Cord length 150cm                  |

● 註：◎ 選購配備。 / Note：Optional accessory.

# Ultrasonic Lapping Machine

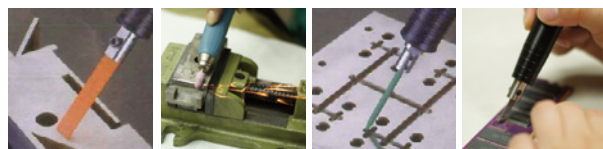
## 超音波振動研磨機

### AR-600 三功能實用型 / Triple Function Practical Type



- AR-600 採用高效率微處理器設計，使操作性能更穩定且提升拋光效率。
- 結合超音波，有刷直流及無刷直流三種輸出，滿足更多功能手機使用。
- 無刷直流輸出功率最大 100 瓦，有刷輸出為 60 瓦。
- 無刷手機的優點為：高轉速、高扭力、壽命長、低噪音，不必更換碳刷且無碳刷產生的粉塵。
- AR-600 with high-efficiency microprocessor design that gives the machine with more steady and effective performance.
- Combine the Ultrasonic, brush DC and brushless DC output in one package, you can adapt most of the handpiece for your polishing work.
- Brushless DC output power is 100 watts and brush DC output power is 60 watts.
- The advantage of Brushless handpiece are : high speed, high torque, longer tool life, and low noise, no need to change carbon brush and no dust cause by carbon brush worn out.

### 基礎應用實例 / Applications



模具精修  
Mold & Die  
Polish

研磨加工  
Grinding

細縫 & 溝槽  
微加工  
Correction of  
Intricate area

PCB  
板迴路修改  
Correction of  
PCB patterns

### 標準規格 / Specifications

| 電源控制器 / Power Controller                      |                                                                                       |                                 |
|-----------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| 電源 / Main supply                              | AC-90V ~ 250V, 50/60Hz                                                                |                                 |
| 超音波輸出 / Ultrasonic output                     | 45 watts                                                                              |                                 |
| 振頻 / Vibration frequency                      | 18 ~ 26 kHz                                                                           |                                 |
| 振幅 / Stroke amplitude                         | 3 ~ 40 μm                                                                             |                                 |
| 振頻調整 / Frequency adjustment                   | 自動追尋 / auto-tracing                                                                   |                                 |
| 消耗功率 / Power consumption                      | 100 watts                                                                             |                                 |
| 保險絲 / Fuse                                    | 2A time-lag type                                                                      |                                 |
| 直流馬達輸出 / Output of DC motor                   | 5 ~ 30V                                                                               |                                 |
| 有刷輸出功率 / Power of DC brush                    | Max. 60 watts                                                                         |                                 |
| 無刷輸出功率 / Power of DC brushless                | Max. 100 watts                                                                        |                                 |
| 尺寸 / Dimensions                               | 170 x 260 x 140mm                                                                     |                                 |
| 重量 / Weight                                   | 2.0kg                                                                                 |                                 |
| 手機 / Handpiece                                |                                                                                       |                                 |
| 超音波手機 / Ultrasonic handpiece                  | GS-H04                                                                                |                                 |
| 尺寸 / Dimensions                               | Ø33 x 146mm                                                                           |                                 |
| 重量 / Weight                                   | 254g                                                                                  |                                 |
| 旋轉手機 / Rotary Handpiece                       |                                                                                       |                                 |
| 有刷手機 Brush handpiece                          | U-Lap 35                                                                              |                                 |
| 無刷手機 Brushless handpiece                      | ◎                                                                                     |                                 |
| AR-600 整組實際內容物 (標準組) / Set Include (Standard) |                                                                                       |                                 |
| 超音波手機<br>Ultrasonic handpiece                 |  | (GS-H04)<br>Ø33 x 146mm         |
| 有刷手機<br>Brush handpiece                       |  | (U-Lap 35)<br>Ø29 x 152mm       |
| 電源線<br>Power cord                             |  | 18AWG x 3C x 180cm              |
| 手機線<br>Handpiece cord                         |  | 3C x 150cm                      |
| 六角板手<br>Wrench (HEX)                          |  | HEX (62mm)                      |
| 手機座<br>Handpiece rest                         |  | 110 x 50 x 35mm                 |
| 夾頭拆卸架<br>Tool changing rack                   |  | For 12mm holder                 |
| 板手<br>Wrench                                  |  | 140mm (10/12)                   |
| 夾頭 (Ø3.0mm)<br>Holder (Ø3.0mm)                |  | For Ø3mm shank tool             |
| 夾頭 (3.0mm)<br>Holder (3.0mm)                  |  | For oil stone (3mm)             |
| 夾頭 (1.0mm)<br>Holder (1.0mm)                  |  | For ceramic fiber stone (1.0mm) |
| 腳踏開關<br>Foot switch                           |  | Cord length 150cm               |

● 註：◎ 選購配備。 / Note : Optional accessory.

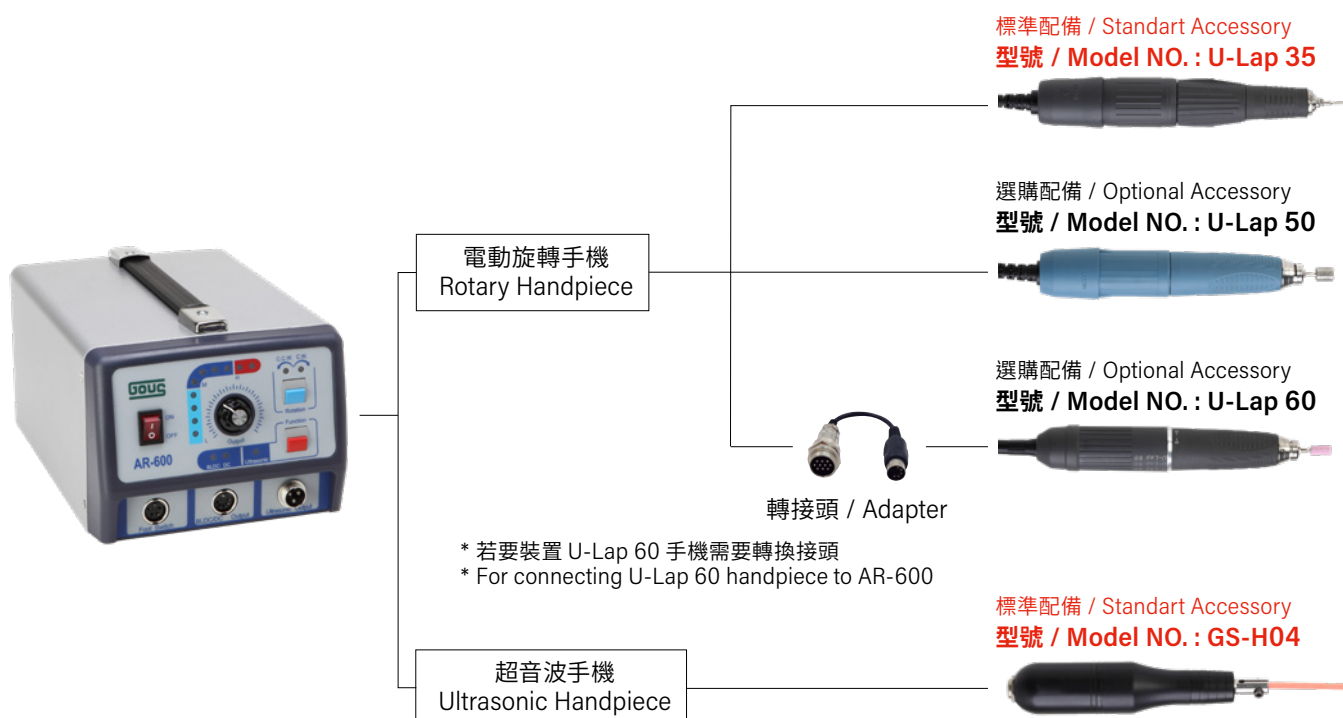
# Ultrasonic Lapping Machine

## 超音波振動研磨機

### AR-800 可搭配手機一覽表 / Attachment Handpiece for AR-800



### AR-600 可搭配手機一覽表 / Attachment Handpiece for AR-600



● 標準配備用紅色顯示，其餘皆為選購商品。 / Standard Accessory that marking in RED, other Handpiece are Optional Accessory.

# Ultrasonic Lapping Machine

## 超音波振動研磨機

### AR-600 (E) 可搭配手機一覽表 / Attachment Handpiece for AR-600 (E)



電動旋轉手機  
Rotary Handpiece

選購配備 / Optional Accessory

型號 / Model NO. : U-Lap 35



選購配備 / Optional Accessory

型號 / Model NO. : U-Lap 50



超音波手機  
Ultrasonic Handpiece

標準配備 / Standart Accessory

型號 / Model NO. : GS-H04



### AR-108 可搭配手機一覽表 / Attachment Handpiece for AR-108



超音波手機  
Ultrasonic Handpiece

標準配備 / Standart Accessory

型號 / Model NO. : GS-H06



● 標準配備用紅色顯示，其餘皆為選購商品。 / Standard Accessory that marking in RED, other Handpiece are Optional Accessory.

### 超音波手機 / Ultrasonic Handpiece

型號 / Model No. : GS-H04

最大輸出 / Max. output : 45Watts

尺寸 / Size : Ø33 x 146mm

重量 / Weight : 254g



型號 / Model No. : GS-H06

最大輸出 / Max. output : 40Watts

尺寸 / Size : Ø30 x 130mm

重量 / Weight : 175g



型號 / Model No. : GS-H26

最大輸出 / Max. output : 40Watts

尺寸 / Size : Ø27 x 125mm

重量 / Weight : 150g





# Rotary Micromotor Controller

## 旋轉式電動工具 - 電源控制器

全新的設計，具有強力的輸出以及精確的控制，擁有多樣化的機種適合每種不同的研磨需求。各種的安全設計避免人員及設備損傷的風險。

貼心的功能設計，搭配上精準的轉速控制，讓工作更輕鬆。主機設計以及產地都是台灣製造，兼顧了品質與價格優勢。拋光、研磨、雕刻都能輕鬆應付，初學者也能輕鬆上手。

Brand-new design, with its powerful output & precise controlling function, we provide various models for different grinding needs. Our (brand-new) design mainly focus on all kinds of safety function and avoid any risk of injury while operating the products. With its friendly design and accurate rotational speed control, our products will make your job much easier and efficient. All of our models are made in TAIWAN so the quality and price advantage are both included. It would be much easier to handle polishing, grinding and engraving task, even the beginner can operate it without any difficulties. While using our products.



### 應用 / Application

1. 各種模具之研磨及拋光。
  2. 需要精準控制轉速的加工。
  3. 雕刻硬脆材料，或其他需要高轉速的加工。
  4. 石頭、玻璃、寶石等之精細研磨或拋光。
  5. 只需要接上電源就可使用，方便簡單！
  6. 工作環境需安靜的場合最為適合。
1. For polishing & Grinding of the mold & die.
  2. Require precise speed control while processing (the work-piece).
  3. For carving hard & brittle materials or work-piece requiring high-speed procession.
  4. For fine engraving or polishing of stone, glass and jewelry.
  5. You can immediately operate the machine by plugging in the power supply. It is highly recommended if the working environment requires serenity.

### 特長 / Features

1. **強勁的輸出功率：**  
無刷機型最大 250 瓦的輸出功率，有刷機型最大 150 瓦的輸出功率，提供有效且快速之加工作業。
  2. **可接受廣域的輸入電壓：**  
所有機型可接受的電源皆為 AC90 ~ 250V, 50/60HZ, 不用再為了電源不符合而煩惱，且安全有保障。
  3. **過載保護裝置：**  
當手機處於過載時系統會自動斷電，以保護機器以及手機不至於受損。
  4. **系統自動偵測：**  
先進的高效率微處理器可以隨時偵測手機狀況，精確地控制各種手機之輸出，保護迴路及扭力補償及穩定轉速，以發揮手機之最佳操作性能。
1. **Powerful output：**  
Max.250 watts of output power for our brushless models, Max.150 watts of output power for brush models enables you to achieve any polishing task at the best performance.
  2. **Wide ranges of input voltage are acceptable：**  
Power AC60~250V, 50/60Hz are all acceptable for our models. No need to worry about the inconsistent power supply.
  3. **Overload protection prevents：**  
Build in overload protection prevents the hand piece from damage during an overloading.
  4. **High-Efficiency microprocessor：**  
Advanced High-Efficiency microprocessor will automatically detects the operation of hand-piece anytime, precisely controlling the output power, circuit protection, torque compensation and maintain the machine in good performance.



# Rotary Micromotor Controller

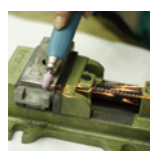
## 旋轉式電動工具 - 電源控制器

### AR-800 (P) 雙功能輸出電源供應器 / Dual-Function Micromotor Controller

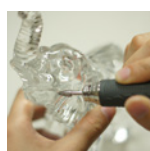


- 全新設計旗艦型機種，採用先進的高效率微處理器設計，結合有刷及無刷馬達雙輸出。
- 有刷馬達輸出最大 150 瓦，無刷馬達輸出最大 250 瓦，使各種手機有更高的扭力，發揮其最佳的研磨效率。
- LED 轉速顯示，使用無刷手機時，讓您可依據各種不同的工具及外徑，調整最合適的轉速，以達到最有效率且安全的研磨效果。
- 使用有刷手機時，LED 數字顯示輸出電壓，一樣可以換算手機轉速，做最有效率且安全的研磨作業。
- 先進的高效率微處理器可以隨時偵測手機操作狀況，精準地控制各種手機之輸出，保護迴路及扭力補償及穩定轉速，以發揮手機之最佳操作性能。
- High Performance micro processor design. Compatible for both brush and brushless motor hand piece.
- Maximum power for hand piece with brush is 150watt and 250watt for brushless motor hand piece, providing high torque and optimal polishing performance.
- LED RPM display. The display can be adjusted to suit different tools and sizes to reflect the appropriate RPM information. A safe and efficient polishing is guaranteed.
- During the use of hand piece with brush, the LED will display voltage, but it can also be converted to display RPM to promote safe and optimal performance operation.
- Advanced high performance micro processor can passively detect the working condition of the hand piece during usage, precisely adjusting various hand piece output, RPM and torque compensation accordingly and monitor to maintain the performance at maximum. The protection circuit is also monitored to provide best protection.

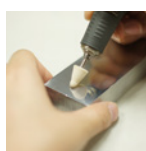
### 基礎應用實例 / Applications



修整毛邊  
Deburring



雕刻  
Carving



拋光  
Polishing

### 標準規格 / Specifications

| 電源控制器 / Power Controller            |                            |
|-------------------------------------|----------------------------|
| 電源 / Main supply                    | AC-90V~250V, 50/60Hz       |
| 無刷輸出功率 / Power of DC brushless      | 250 watt                   |
| 無刷轉速 / Speed of DC brushless        | 1,000 ~ 50,000 rpm         |
| 有刷輸出功率 / Power of DC brush          | 150 watt (VA)              |
| 有刷輸出電壓 / Voltage output of DC brush | 5~32V                      |
| 保險絲 / Fuse                          | 3.15A                      |
| 尺寸 / Dimension                      | 170 x 260 x 140mm (2.56kg) |

### 內含配件 / Include (Standard)

|                                                                                     |                     |
|-------------------------------------------------------------------------------------|---------------------|
|   | 腳踏開關<br>Foot switch |
|  | 電源線<br>Power cord   |

### 專業工具 - 選購 / Professional Tools ※Optional

|                                                                                      |                                |
|--------------------------------------------------------------------------------------|--------------------------------|
|  | 鑽石磨棒<br>Diamond mounted points |
|  | 帶柄砂輪<br>Mounted points         |

### AR-800 (P) 可選配手機 / Handpiece ※Optional

| 型號<br>Model No.                                                                                                     | 規格<br>Specifications                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <br><b>U-Lap60</b><br>旋轉手機 / 無刷型 | Rotary handpiece (DC brushless type)<br>轉速 / Speed : 50,000 rpm<br>扭力 / Torque : 7.8 Ncm<br>尺寸 / Dimension : Ø29 x 161mm<br>重量 / Weight : 250g |
| <br><b>U-Lap50</b><br>旋轉手機 / 有刷型 | Rotary handpiece (DC brushless type)<br>轉速 / Speed : 40,000 rpm<br>扭力 / Torque : 4.5 Ncm<br>尺寸 / Dimension : Ø29 x 153mm<br>重量 / Weight : 260g |
| <br><b>U-Lap35</b><br>旋轉手機 / 有刷型 | Rotary handpiece (DC brushless type)<br>轉速 / Speed : 35,000 rpm<br>扭力 / Torque : 2.9 Ncm<br>尺寸 / Dimension : Ø29 x 152mm<br>重量 / Weight : 230g |

- 全部手機皆為選配商品，AR-800 (P) 內未包含，下單時請注意！  
All handpiece are Optional accessory, did not include in AR-800(P).

# Rotary Micromotor Controller

## 旋轉式電動工具 - 電源控制器

### AP-200 有刷型多功能電源控制器 / Multiple Funtional Brush Rotary Power Controller

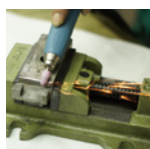


- AP-200 為先進設計的電源控制器，此電源供應器提供了三功能輸出選擇：正常功能、緩啟動功能及扭力自動補償功能。
- 過負載保護裝置：當電動手機處於過載時系統會自動斷電，以保護機器及手機不至於受損。
- 可以選購一般開關型或可調速型腳踏開關。
- AP-200 is a more advanced Power Controller for hand piece with brush. That provide there different output functions : Normal, slow-start, and self torque compensation.
- Overload Protection : The system will be shut down when an overload occurs to protect the controller and hand piece from damage.
- Conventional On-Off pedal switch and Adjustable pedal switch are optional.

### 標準規格 / Specifications

| 電源控制器 / Power Controller                 |                          |
|------------------------------------------|--------------------------|
| 電源 / Main supply                         | AC-90V~250V, 50/60Hz     |
| 有刷輸出功率 / Power of DC brush               | 70 watt                  |
| 有刷輸出電壓 / Voltage output of DC brush      | 5~32V                    |
| 最大過載保護 / Max overload current protection | 3A                       |
| 保險絲 / Fuse                               | 2A                       |
| 尺寸 / Dimension                           | 192 x 156 x 98mm (800kg) |

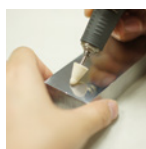
### 基礎應用實例 / Applications



修整毛邊  
Deburring



雕刻  
Carving



拋光  
Polishing

- **正常功能輸出 ( N )** : 當一般操作時使用，此時系統依一般功能輸出。  
**Normal Output ( N )** : For use during typical operation.
- **緩啟動功能 ( S )** : 當您切換至此功能時，即使將輸出調到最高轉速，系統仍然控制手機於最低轉速，但接觸工件開始研磨時，系統會自動地將轉速提升到最高轉速。這個功能主要運用於避免高速運轉時不小心去磨到不想磨到或不能磨到的部位，您可以很精確地控制想加工的地方。此外，對於工件表面凹凸不平處這個功能也能減少研磨時之跳動。  
**Slow Start ( S )** : When switched to this mode, the system will control the RPM to the lowest speed when the hand piece is at idle and when the hand piece detect any object, the RPM will rise to the set speed. The main purpose of this function is to reduce the risk offhaving accident from happening during high RPM application. We canpoint at the work area more easily and precisely. This will reduce the chance of accidentally touching wrong spot. When working on subjects with uneven surfaces under this mode, can keep the hand piece at stable position more easily.
- **扭力自動補償功能 ( IR )** : 當您使用一些直徑較大 ( 如 Ø20mm 砂布輪 ) 或不能高速使用的工具 ( 如髮刷輪 ) 時，由於研磨壓力使轉速下降或較低轉速時扭力較低，當切換至此功能時系統會自動補償扭力穩定轉速。一般研磨工具建議使用正常功能輸出。  
**Automatic torque Compensation ( IR )** : When using any large diameter tools or low RPM tools, the RPM will be slowed down due to the friction. When IR mode is turned on, The system will compensate for the loss of speed to stabilize the RPM. When using normal tools, normal function is recommended.

#### 內含配件 / Include (Standard)



電源線  
Power Cord

#### 專業工具 - 選購 / Professional Tools ※Optional



鑽石磨棒 ( 錐形 )  
Diamond Taper Points



彈性帶柄砂輪  
Elastic Mounted Points

#### AP-200 可選配手機 / Handpiece ※Optional

型號  
Model No.

規格  
Specifications



**U-Lap50**  
旋轉手機 /  
有刷型

Rotary Handpiece  
( DC Brushless Type )  
轉速 / Speed : 40,000 rpm  
扭力 / Torque : 4.5 Ncm  
尺寸 / Dimension : Ø29 x 153mm  
重量 / Weight : 260g



**U-Lap35**  
旋轉手機 /  
有刷型

Rotary Handpiece  
( DC Brushless Type )  
轉速 / Speed : 35,000 rpm  
扭力 / Torque : 2.9 Ncm  
尺寸 / Dimension : Ø29 x 152mm  
重量 / Weight : 230g

- 全部手機皆為選配商品，AP-200 內未包含，下單時請注意！  
All handpiece are Optional accessory, did not include in AP-200.

# Rotary Handpiece

## 電動旋轉手機

### U-Lap 60 無刷旋轉手機 / 高扭力高轉速型 / Rotary Handpiece (Brushless Type) / High Torque & Speed Type



可對應之電源  
供應器  
Optional Power  
Controller



AR-800(P)



AP-300

型號 / Order No.: **U-Lap 60**

轉速 / Speed: **50,000 rpm**

扭力 / Torque: **7.8 Ncm**

重量 / Weight: **250g**

內容物 / Include :



### U-Lap 50 有刷旋轉手機 / 高轉速型 / Rotary Handpiece (Brush Type) / High Speed Type



可對應之電源  
供應器  
Optional Power  
Controller



AR-800(P)



AP-200

型號 / Order No.: **U-Lap 50**

轉速 / Speed: **40,000 rpm**

扭力 / Torque: **4.5 Ncm**

重量 / Weight: **260g**

內容物 / Include :



### U-Lap 35 有刷旋轉手機 / 經濟型 / Rotary Handpiece (Brush Type) / Economic Type



可對應之電源  
供應器  
Optional Power  
Controller



AR-800(P)



AP-200

型號 / Order No.: **U-Lap 35**

轉速 / Speed: **35,000 rpm**

扭力 / Torque: **2.9 Ncm**

重量 / Weight: **230g**

內容物 / Include :



- 可更換式夾頭：標準夾頭 Ø3mm，亦可選購 Ø2.34mm 或 Ø3.175mm 夾頭。  
Replaceable collet chuck : Ø3.0mm is standard, the Ø2.34mm and Ø3.175mm collet are optional.



# Air Grinders

## 氣動旋轉刻磨機

### UG-500 標準型 / Standard type

- 高扭力、低噪音、精密型刻磨機。
- 適用於精密研磨及修整作業。
- 可更換式夾頭：標準夾頭為  $\varnothing 3.0\text{mm}$ ，亦可選購  $\varnothing 2.34$  或  $\varnothing 3.175\text{mm}$  為夾頭。
- High-torque, quiet-running and well balance.
- Ideal for precision grinding and finishing works.
- Replaceable collet chuck :  $\varnothing 3.0\text{mm}$  is standard, the  $\varnothing 2.34$  and  $\varnothing 3.175\text{mm}$  collet are optional.



60,000 rpm



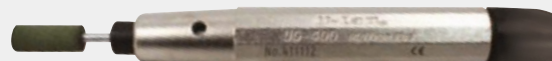
| 進氣壓力<br>Air Pressure           | 重量<br>Weight | 尺寸<br>Dimension |
|--------------------------------|--------------|-----------------|
| 90psi (6.2kg/cm <sup>2</sup> ) | 110g         | Ø20x160L (mm)   |

### UG-400 經濟型 / Economic type

- 經濟型，適用於精密研磨及修整作業。
- 夾頭不可更換：標準品為  $\varnothing 3.0\text{mm}$  夾頭，若須  $\varnothing 2.34$  或  $\varnothing 3.175\text{mm}$  夾頭請指明選購。
- 低耗風量，高扭力，品質佳。
- Reliable quality and competitive price.
- Fixed type collet chuck :  $\varnothing 3.0\text{mm}$  is standard, the tool with  $\varnothing 2.34$  and  $\varnothing 3.175\text{mm}$  collet are optional.



50,000 rpm



| 進氣壓力<br>Air Pressure           | 重量<br>Weight | 尺寸<br>Dimension |
|--------------------------------|--------------|-----------------|
| 90psi (6.2kg/cm <sup>2</sup> ) | 130g         | Ø17x159L (mm)   |

### GP-260 精密型 / Precision type

- 精密型，適用於精密研磨及修整作業。
- 夾頭不可更換，標準品為  $\varnothing 3.0\text{mm}$  夾頭。
- $\varnothing 2.34$  或  $\varnothing 3.175\text{mm}$  請指名選購。
- High-torque, quiet-running and well balance.
- Ideal for precision grinding and finishing works.
- Fixed type collet chuck :  $\varnothing 3.0\text{mm}$  is standard, the tools with  $\varnothing 2.34\text{mm}$  or  $\varnothing 3.175\text{mm}$  collet are optional.



60,000 rpm



| 進氣壓力<br>Air Pressure           | 重量<br>Weight | 尺寸<br>Dimension |
|--------------------------------|--------------|-----------------|
| 90psi (6.2kg/cm <sup>2</sup> ) | 180g         | Ø17.5x142L (mm) |

### GP-380 高速型 / High speed type

- 高轉速、精密型刻磨機。
- 適用於精密研磨及雕刻作業。
- 可更換式夾頭：標準夾頭為  $\varnothing 3.0\text{mm}$ ，亦可選購  $\varnothing 2.34$  或  $\varnothing 3.175\text{mm}$  為夾頭。
- High speed, quiet-running and well balance.
- Ideal for precision grinding and finishing works.
- Replaceable collet chuck :  $\varnothing 3.0\text{mm}$  is standard, the  $\varnothing 2.34$  and  $\varnothing 3.175\text{mm}$  collet are option.

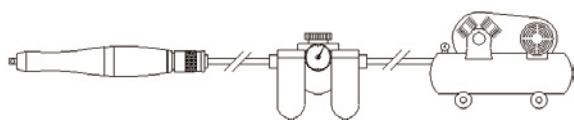


80,000 rpm



| 進氣壓力<br>Air Pressure           | 重量<br>Weight | 尺寸<br>Dimension |
|--------------------------------|--------------|-----------------|
| 90psi (6.2kg/cm <sup>2</sup> ) | 160g         | Ø20.3x143L (mm) |

### 連接三點組合 / 3-in-1 Units



潤滑，濾水，控制壓力 / Filter, Regulator, Lubricator



使用需潤滑  
(Need lubricator oil)



請配戴耳罩  
(Use ear plug)



請配戴護目鏡  
(Use eye protector)

# Air Grinders

## 氣動旋轉刻磨機

### UG-300 雙夾頭型 / Dual-Collet type

- 重負荷、高扭力，泛用型適於清除毛邊倒角、鎢鋼刀銑磨及焊接面磨除等。
- 雙夾頭兩用型：標準夾頭為  $\phi 3.0/\phi 6.0\text{mm}$  夾頭，亦可選購  $\phi 3.175$  或  $\phi 6.35\text{mm}$  為夾頭。
- High torque, heavy-duty, general-purpose applicable on deburring, chamfering, milling and finishing the welded surfaces...etc.
- Dual collet chuck :  $\phi 3.0 / \phi 6.0\text{mm}$  is standard, the collet of  $\phi 3.175 / \phi 6.35\text{mm}$  is optional.

35,000 rpm



| 進氣壓力<br>Air Pressure           | 重量<br>Weight | 尺寸<br>Dimension |
|--------------------------------|--------------|-----------------|
| 90psi (6.2kg/cm <sup>2</sup> ) | 170g         | Ø22x180L (mm)   |

### GP-522 平面研磨機 / Angle Surface grinder

- 120 度彎頭研磨機。
- 夾頭：M7 螺桿，可鎖接碗型砂輪或砂布片。
- 適用於平面研磨，倒角及焊接面之修整。
- 120 degree angle surface grinder.
- Collet chuck : M7 screw shaft for mounting abrasive cup sheets and abrasive paper disc.
- Ideal for surface grinding, chamfering, deburring and finishing the welded surfaces...etc.

22,000 rpm



| 進氣壓力<br>Air Pressure           | 重量<br>Weight | 尺寸<br>Dimension |
|--------------------------------|--------------|-----------------|
| 90psi (6.2kg/cm <sup>2</sup> ) | 200g         | Ø16.5x136L (mm) |

### AG-45 平面研磨機 / Angle Surface grinder

- 45 度彎頭平面研磨機，適用於平面研磨，倒角及焊接面之修整。
- 夾頭：M7 螺桿，可鎖接碗形輪或砂布片。
- 45 degree angle surface grinder.
- Collet chuck : M7 screw shaft for mounting abrasive cup wheels and abrasive paper disc.
- Ideal for surface grinding, chamfering, deburring and finishing the welded surfaces...etc.

23,500 rpm



| 進氣壓力<br>Air Pressure           | 重量<br>Weight | 尺寸<br>Dimension   |
|--------------------------------|--------------|-------------------|
| 90psi (6.2kg/cm <sup>2</sup> ) | 180g         | Ø17x153Lx50H (mm) |

### AG-90 平面研磨機 / Angle Surface grinder

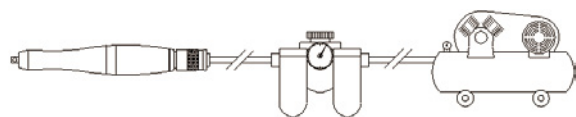
- 90 度彎頭平面研磨機，適用於平面研磨，倒角及焊接面之修整。
- 夾頭：M7 螺桿，可鎖接碗形輪或砂布片。
- 90degree angle surface grinder.
- Collet chuck : M7 screw shaft for mounting abrasive cup wheels and abrasive paper disc.
- Ideal for surface grinding, chamfering, deburring and finishing the welded surfaces...etc.

23,500 rpm



| 進氣壓力<br>Air Pressure           | 重量<br>Weight | 尺寸<br>Dimension   |
|--------------------------------|--------------|-------------------|
| 90psi (6.2kg/cm <sup>2</sup> ) | 170g         | Ø17x140Lx39H (mm) |

### 連接三點組合 / 3-in-1 Units



潤滑，濾水，控制壓力 / Filter, Regulator, Lubricator



使用需潤滑  
(Need lubricator oil)



請配戴耳罩  
(Use ear plug)



請配戴護目鏡  
(Use eye protector)



# Pneumatic Reciprocating Lappers

## 氣動銼磨機

### 微行程渦輪式氣動超音波 / UTR-20 Micro Stroke Turbo Air Lappers

- 超高速、微動行程 (0.15mm) 機種，最適於微細部位及邊角部位之研磨。
- 超低振動，加工角落時沒有撞擊感。
- High speed, micro stroke(0.15mm) and low vibration.
- It suits for details and corner area's lapping.

45,000 spm



| 行程<br>Stock | 進氣壓力<br>Air Pressure          | 重量<br>Weight | 尺寸<br>Dimension |
|-------------|-------------------------------|--------------|-----------------|
| 0.15mm      | 90psi(6.2kg/cm <sup>2</sup> ) | 190g         | Ø28x200L(mm)    |

### 渦輪式氣動超音波 / UTR-30 Turbo Air Lappers

- 使用氣動渦輪馬達，維修容易。
- 低噪音、低振動、壽命長。
- UTR-30 適合模具細微部分之加工。
- Driven by turbine air motor.
- Low noise, low vibration and durable tool life.
- UTR-30 suits for detail area's lapping.

40,000 spm



| 行程<br>Stock | 進氣壓力<br>Air Pressure          | 重量<br>Weight | 尺寸<br>Dimension |
|-------------|-------------------------------|--------------|-----------------|
| 0.3mm       | 90psi(6.2kg/cm <sup>2</sup> ) | 220g         | Ø28x200L(mm)    |

### 渦輪式氣動超音波 / UTR-70 Turbo Air Lappers

- 使用氣動渦輪馬達，維修容易。
- 低噪音、低振動、壽命長。
- UTR-70 適用於高效率及較大面積之研磨。
- Driven by turbine air motor.
- Low noise, low vibration and durable tool life.
- UTR-70 suits for general purpose polishing and finishing process of mold and die.

35,000 spm



| 行程<br>Stock | 進氣壓力<br>Air Pressure          | 重量<br>Weight | 尺寸<br>Dimension |
|-------------|-------------------------------|--------------|-----------------|
| 0.7mm       | 90psi(6.2kg/cm <sup>2</sup> ) | 220g         | Ø28x200L(mm)    |

### 超高速往復式氣動銼磨機 / UR-50 Ultra Air Lappers

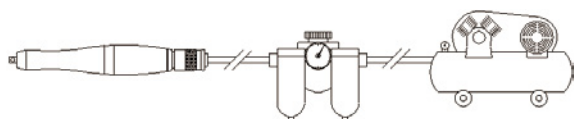
- 超高速、高扭力機種。
- UR-50 適用於高效率之研磨及清除毛邊或倒角。
- Extra High speed, high torque.
- UR-50 features in efficiency polishing and deburring or chamfering work.

45,000 spm



| 行程<br>Stock | 進氣壓力<br>Air Pressure          | 重量<br>Weight | 尺寸<br>Dimension |
|-------------|-------------------------------|--------------|-----------------|
| 0.5mm       | 90psi(6.2kg/cm <sup>2</sup> ) | 220g         | Ø23x185L(mm)    |

### 連接三點組合 / 3-in-1 Units



潤滑，濾水，控制壓力 / Filter, Regulator, Lubricator



使用需潤滑  
(Need lubricator oil)



請配戴耳罩  
(Use ear plug)



請配戴護目鏡  
(Use eye protector)

# Pneumatic Reciprocating Lappers

## 氣動銼磨機

### 往復式氣動銼磨機 / UR-120, UR-300 Recipro Air Lappers

- 高扭力、低噪音、低振動。
- 較長行程適合大面積之研磨，並適合各種鑄件或零件之清除毛邊及倒角。
- High-torque, quiet-running and low vibration.
- Long reciprocating stroke suits for lapping big surfaces, and excellent for deburring or chamfering works of die casting parts.

**UR-120**  
12,000 spm

**UR-300**  
10,000 spm



| UR-120<br>行程 / Stock | UR-300<br>行程 / Stock | 進氣壓力 / Air Pressure           | 重量 / Weight | 尺寸 / Dimension |
|----------------------|----------------------|-------------------------------|-------------|----------------|
| 1.2mm                | 3.0mm                | 90psi(6.2kg/cm <sup>2</sup> ) | 370g        | Ø30x208L(mm)   |

### 左右橫擺式氣動銼磨機 / US-70, US-100 Swing Air Lappers

- 特殊設計使主要磨耗零件十分容易更換。
- 氣動左右橫擺行程。
- 適合模具淺溝、深肋及公母模接合面等之研磨，防止研磨時工具滑落而傷及模具之銳角。
- Side to side stocke.
- Special design enable the easiest method of changing the consuming or worn out parts.
- Ideal for filing lapping and polishing shallow surfaces, deep ribs and parting lines.

**US-70**  
15,000 spm

**US-100**  
14,000 spm



| US-70<br>行程 / Stock | US-100<br>行程 / Stock | 進氣壓力 / Air Pressure           | 重量 / Weight | 尺寸 / Dimension |
|---------------------|----------------------|-------------------------------|-------------|----------------|
| 0.7mm               | 1.0mm                | 90psi(6.2kg/cm <sup>2</sup> ) | 305g        | Ø28x205L(mm)   |

### 左右橫擺式氣動銼磨機 / US-200 Swing Air Lappers

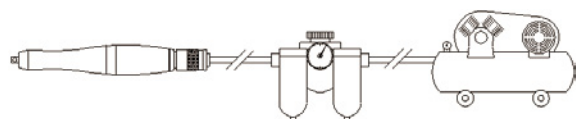
- 氣動左右橫擺行程。
- 較大行程，適於較大面積之研磨，並適合各種鑄件或零件之清除毛邊及倒角。
- Side to side stocke.
- Bigger swing stroke suit for lapping bigger surface and excellent for deburring or chamfering works for die casting parts.

**US-200**  
10,000 spm



| 行程 / Stock | 進氣壓力 / Air Pressure           | 重量 / Weight | 尺寸 / Dimension |
|------------|-------------------------------|-------------|----------------|
| 2.0mm      | 90psi(6.2kg/cm <sup>2</sup> ) | 520g        | Ø34x205L(mm)   |

### 連接三點組合 / 3-in-1 Units



潤滑，濾水，控制壓力 / Filter, Regulator, Lubricator



使用需潤滑  
(Need lubricator oil)



請配戴耳罩  
(Use ear plug)



請配戴護目鏡  
(Use eye protector)

# Other Polishing Tools

其他拋磨工具





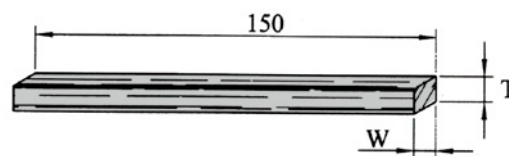
# Wood Bobs & Brush

## 棕刷及木條

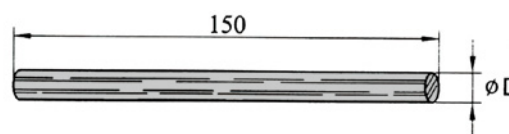
### 木條 / Lapping Wood



單位 / Unit : mm



| 編號<br>Order No. | AFW-05H   | AFW-06H   | AFW-07H   | AFW-08H    |
|-----------------|-----------|-----------|-----------|------------|
| T x W           | 6.4 x 6.4 | 3.2 x 6.4 | 6.4 x 9.5 | 6.4 x 12.7 |

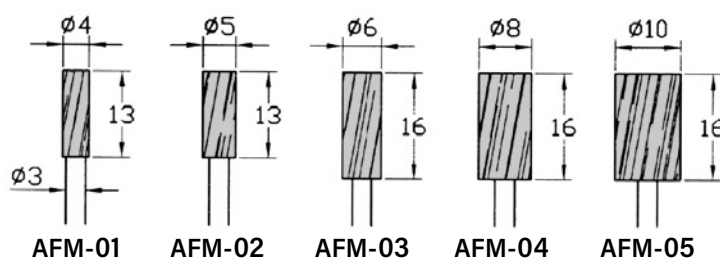


| 編號<br>Order No. | AFW-01H | AFW-02H | AFW-03H | AFW-04H |
|-----------------|---------|---------|---------|---------|
| ØD              | Ø3.2    | Ø4.7    | Ø6.4    | Ø9.5    |

### 木棒 / Wood Bobs



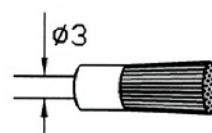
單位 / Unit : mm



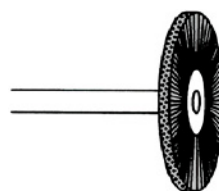
### 棕刷 / Brush



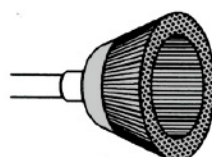
單位 / Unit : mm



| 編號<br>Order No. | AFB-01 | AFB-02 |
|-----------------|--------|--------|
| ØD              | Ø4.8   | Ø6.4   |



| AFB-03 | AFB-04 |
|--------|--------|
| Ø19    | Ø25.4  |

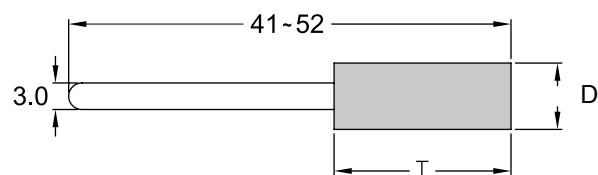


| AFB-05 | AFB-06 |
|--------|--------|
| Ø9/16" | Ø1"    |

# Felt Bobs

## 羊毛輪

### 羊毛輪 / Felt Bobs - $\phi 3.0\text{mm}$ Shank



單位 / Unit : mm

|                 |          |          |          |          |          |          |          |
|-----------------|----------|----------|----------|----------|----------|----------|----------|
|                 |          |          |          |          |          |          |          |
| 編號<br>Order No. | AB-0410A | AB-0509A | AB-0610A | AB-0810A | AB-1014A | AB-1220A | AB-1520A |
| $\phi D$        | 4        | 5        | 6        | 8        | 10       | 12       | 15       |
| T               | 10       | 9        | 10       | 10       | 14       | 20       | 20       |

|                 |          |          |          |          |          |          |          |
|-----------------|----------|----------|----------|----------|----------|----------|----------|
|                 |          |          |          |          |          |          |          |
| 編號<br>Order No. | AB-2020A | AB-0408C | AB-0509C | AB-0610C | AB-0810C | AB-1013C | AB-1214C |
| $\phi D$        | 20       | 4        | 5        | 6        | 8        | 10       | 12       |
| T               | 20       | 8        | 9        | 10       | 10       | 13       | 14       |

|                 |          |          |          |          |          |          |          |
|-----------------|----------|----------|----------|----------|----------|----------|----------|
|                 |          |          |          |          |          |          |          |
| 編號<br>Order No. | AB-1220C | AB-0410J | AB-0512J | AB-0616J | AB-0817J | AB-1014J | AB-1020J |
| $\phi D$        | 12       | 4        | 5        | 6        | 8        | 10       | 10       |
| T               | 20       | 10       | 12       | 16       | 17       | 14       | 20       |

|                 |          |          |        |        |        |        |          |
|-----------------|----------|----------|--------|--------|--------|--------|----------|
|                 |          |          |        |        |        |        |          |
| 編號<br>Order No. | AB-1220J | AB-1225J | AB-08B | AB-10B | AB-12B | AB-18B | AB-1014R |
| $\phi D$        | 12       | 12       | 8      | 10     | 12     | 18     | 10       |
| T               | 20       | 25       | -      | -      | -      | -      | 14       |

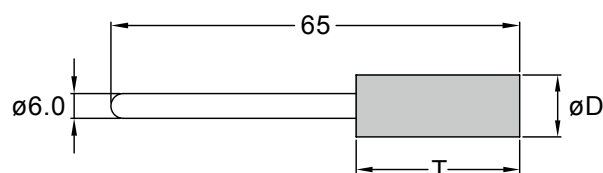
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|-----------------|----------|----------|----------|----------|----------|----------|----------|
|                 |          |          |          |          |          |          |          |
| 編號<br>Order No. | AB-1225R | AB-1218T | AB-1218H | AB-0610K | AB-0814K | AB-1014K | AB-1220K |
| $\phi D$        | 12       | 12       | 12       | 6        | 8        | 10       | 12       |
| T               | 25       | 18       | 18       | 10       | 14       | 14       | 20       |



# Felt Bobs

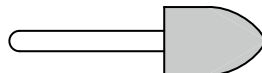
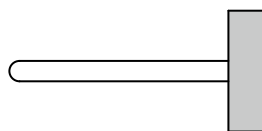
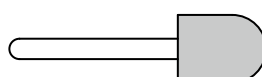
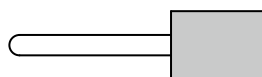
## 羊毛輪

### 羊毛輪 / Felt Bobs - $\phi 6.0$ mm Shank



單位 / Unit : mm

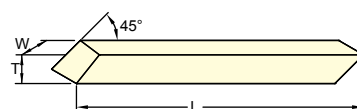
| 編號<br>Order No. | $\phi D$ | T   |
|-----------------|----------|-----|
| AC-1225A        | 12       | 25  |
| AC-1525A        | 15       | 25  |
| AC-2025A        | 20       | 25  |
| AC-2530A        | 25       | 30  |
| AC-1520C        | 15       | 20  |
| AC-2025C        | 20       | 25  |
| AC-2530C        | 25       | 30  |
| AC-3208E        | 32       | 8   |
| AC-4010E        | 40       | 9.6 |
| AC-1525K        | 15       | 25  |
| AC-2025K        | 20       | 25  |
| AC-2530K        | 25       | 30  |



### 其他羊毛製品 / Other Felt Products



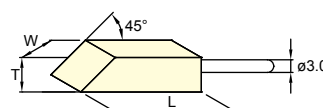
### 羊毛條 / Felt Stick



單位 / Unit : mm

| 編號<br>Order No. | AB-S06      | AB-S10        |
|-----------------|-------------|---------------|
| WxTxL           | 6x6x100x45° | 10x10x100x45° |

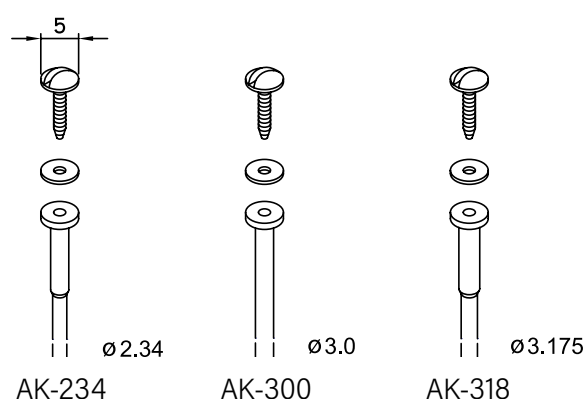
### 帶柄羊毛條 / Mounted Felt Stick



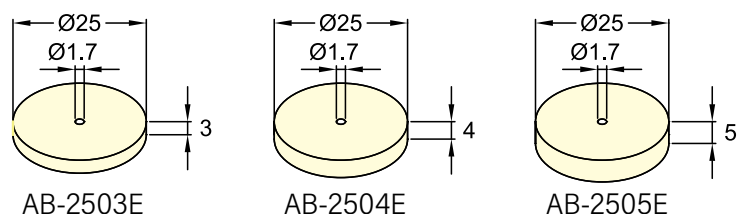
單位 / Unit : mm

| 編號<br>Order No. | AB-R06 | AB-R10   | AB-R12   |
|-----------------|--------|----------|----------|
| WxTxL           | 6x6x25 | 10x10x35 | 12x12x45 |

### 軸柄 / Mandrel For Felt Disc



### 羊毛片 / Felt Disc



# BESDIA® Ceramic Fiber Stones

貝斯迪亞® 纖維油石



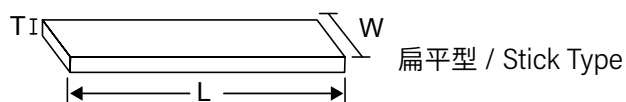
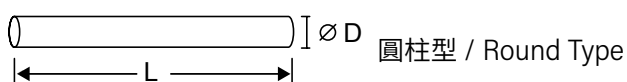
全新的貝斯迪亞® 纖維油石，採用精選陶瓷纖維以獨特的結合材料及製造方法，比以前我們銷售的產品，有下列優點：

1. 有更好的抗折強度，使纖維油石更不易折斷。
2. 在相同的工作條件下，增加 10~20% 以上的研磨率。
3. 在絕大多數的工作條件下，增加 10~30% 以上的研磨比（工具壽命更長）。

All New BESDIA® Ceramic Fiber Stone use the special ceramic fibers combined with the unique bonding material and manufacturing process. Compare to the previous one we sold :

1. Our improvements in production processes give better tensile strength to the stones, hence fewer breakages.
2. A polishing efficiency increase of 10% to 20% has been achieved.
3. Durability under the same working conditions has been increased by 10% to 30%.

## 規格 / Specifications



## 粒度與顏色 / Grit Size & Color Code

| 粒度<br>Grit size  | #180          | #250         | #320       | #400       | #700         | #1000       | #1200             |
|------------------|---------------|--------------|------------|------------|--------------|-------------|-------------------|
| 顏色<br>Color code | 咖啡色<br>Coffee | 橙色<br>Orange | 灰色<br>Grey | 藍色<br>Blue | 黃色<br>Yellow | 白色<br>White | 橘紅色<br>Red Orange |
| 代號 / Code        | C             | O            | G          | B          | Y            | W           | R                 |

## 粒度與編號 / Grit Size & Order No.

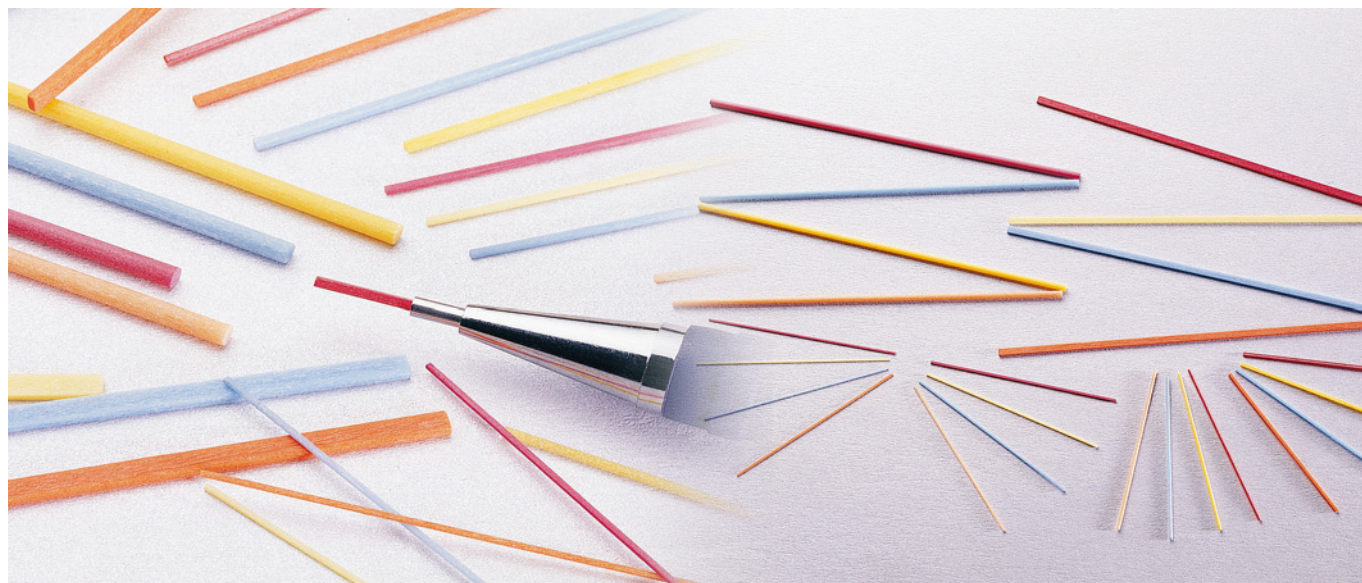
單位 / Unit : mm

| TxWxL(ØDxL)  | 粒度與編號 / Grit Size & Order No. |          |          |          |          |          |          |
|--------------|-------------------------------|----------|----------|----------|----------|----------|----------|
|              | #180                          | #250     | #320     | #400     | #700     | #1000    | #1200    |
| 1 x 4 x 100  | BSC-1004                      | BSO-1004 | BSG-1004 | BSB-1004 | BSY-1004 | BSW-1004 | BSR-1004 |
| 1 x 6 x 100  | BSC-1006                      | BSO-1006 | BSG-1006 | BSB-1006 | BSY-1006 | BSW-1006 | BSR-1006 |
| 1 x 10 x 100 | BSC-1010                      | BSO-1010 | BSG-1010 | BSB-1010 | BSY-1010 | BSW-1010 | BSR-1010 |
| Ø3.0 x 100   | BGC-30                        | BGO-30   | BGG-30   | BGB-30   | BGY-30   | BGW-30   | BGR-30   |

● 說明：#320 灰色可取代舊有的 #280 黑色及 #360 海軍藍。 / Note: #320 Grey instead of #280 Black and #360 Navy Blue of old stones.

# Mini Ceramic Fiber Stones

## 迷你纖維油石



**迷你纖維油石**是將纖維油石切成微細尺寸，從 0.5 x 0.5mm 到 1x2mm。專門使用於各種模具之細微部位或是其他類似之加工。由於陶瓷纖維具有高抗折強度，可解決一般油石或紅寶石易斷的困擾。

**Mini Ceramic Fiber Stones** are cut by ceramic fiber stone, their size from 0.5x0.5mm to 1x2mm. Ideal for various mold and dies lapping.

**Traditional oil stone** and ruby stones in such a small sizes are very easy to break, while mini ceramic stone provide high strength and high elasticity. Due to its hard to break, they resolve the problem of using these stones.

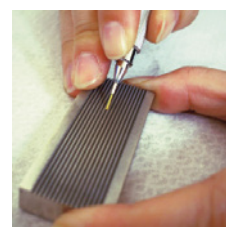
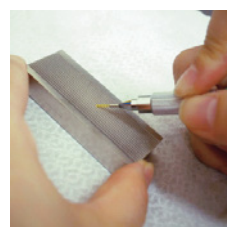
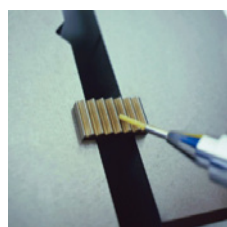
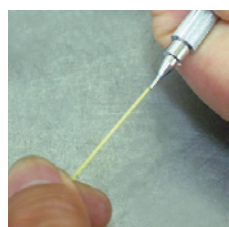
### 應用 / Application

迷你纖維油石可適用於各種模具之研磨及各種零件之精細拋光尤其是雕刻部位之加工，微小肋部，模具角部精細拋磨，以及各種細微或複雜部位之加工。

It is good for all type of molds and dies fine and super fine finishing. Especially for engraving parts, slight ribs, R ribs, corners, complicated area and details.

Besides, all other tool parts that needs details lapping, Our mini ceramic fiber stone will be the wonderful tools.

### 應用實例 / Application Example



### 規格 / Specifications

單位 / Unit : mm

| 尺寸<br>Dimensions | 粒度與編號<br>Grit Size & Order No. |         |         |         | 使用夾頭<br>Holder |
|------------------|--------------------------------|---------|---------|---------|----------------|
|                  | #250                           | #400    | #700    | #1200   |                |
| 0.5 x 0.5 x 50L  | MOS-055                        | MBS-055 | MYS-055 | MRS-055 | XH-107         |
| 0.7 x 0.7 x 50L  | MOS-075                        | MBS-075 | MYS-075 | MRS-075 | XH-009         |
| 0.9 x 0.9x 50L   | MOS-095                        | MBS-095 | MYS-095 | MRS-095 | XH-013         |
| 1.0 x 2.0 x 100L | MOS-121                        | MBS-121 | MYS-121 | MRS-121 | XH-200         |
| ø0.9 x 50L       | MOG-105                        | MBG-105 | MYG-105 | MRG-105 | XH-009         |
| ø2.0 x 100L      | MOG-201                        | MBG-201 | MYG-201 | MRG-201 | XH-200         |



# Tool Holders

## 油石夾柄

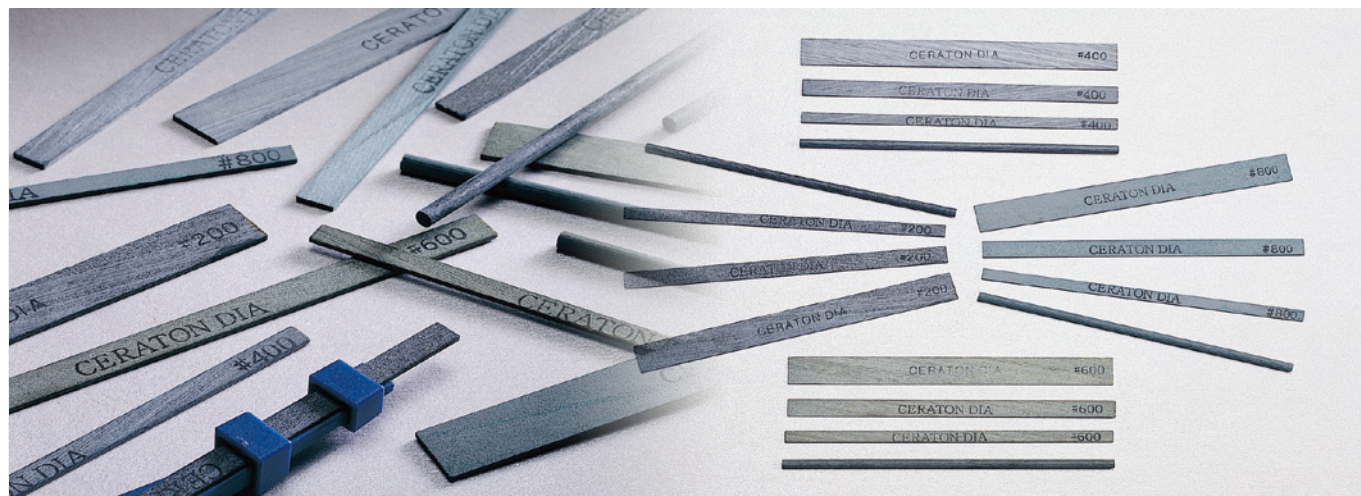


單位 / Unit : mm

| 編號<br>Order No. | 可挾持尺寸<br>Holding Capacity          | 運用<br>Applications          |
|-----------------|------------------------------------|-----------------------------|
| XH-007          | Square 0.5x0.5 or Round $\phi$ 0.7 | 迷你纖維油石 For Mini Fiber Stone |
| XH-009          | Square 0.7x0.7 or Round $\phi$ 0.9 | 迷你纖維油石 For Mini Fiber Stone |
| XH-200          | Flat 2x1 or Round $\phi$ 2.0       | 迷你纖維油石 For Mini Fiber Stone |
| XH-013          | Square 0.9x0.9 or Round $\phi$ 1.3 | 迷你纖維油石 For Mini Fiber Stone |
| XH-22           | Round $\phi$ 3.0                   | 纖維油石 For Fiber Stone        |
| XH-041          | 平形 / Flat 4x1                      | 纖維油石 For Fiber Stone        |
| XH-061          | 平形 / Flat 6x1                      | 纖維油石 For Fiber Stone        |
| XH-101          | 平形 / Flat 10x1                     | 纖維油石 For Fiber Stone        |
| XH-062          | 平形 / Flat 6x2~6x3                  | 一般油石 For Oil Stone          |
| XH-133          | 平形 / Flat 13x3                     | 一般油石 For Oil Stone          |
| XH-136          | 平形 / Flat 13x6.3                   | 一般油石 For Oil Stone          |

# Ceramic Diamond Stones

## 鑽石纖維油石



鑽石纖維油石是將鑽石磨料與陶瓷纖維以熱固型樹脂結合而成。由於鑽石優越的切削效果加上陶瓷纖維的高抗折強度，結合成一個完美的拋磨工具。鑽石磨料均勻地分布在陶瓷纖維上，使超級鑽石油石任何面均可研削且加工面很均勻，如此可以減少後續的加工作業時間。

**Ceramic diamond stones** are made of diamond abrasives and ceramic fibers bonded together with thermosetting resin.

**Thanks diamond** for its outstanding cutting performance in combination with the superior tensile strength of ceramic fiber, generates ceramic diamond stone, a perfect lapping tool.

**Diamond particles** are sprayed on ceramic fibers for excellent uniform cutting action on every angle and therefore reduce after processing work.

### 特長 / Features

1. 一般纖維油石只能用端面研削，而鑽石纖維油石任何面均有研磨效果。
2. 與樹脂鑽石油石比較，鑽石纖維油石有較佳的切削能力、不易塞目及不易折斷等優點。
3. 一些用一般纖維油石不易加工的材料，現在用鑽石纖維油石可以有有效的切削。
4. 鑽石纖維油石適合使用於加工所有熱處理後的鋼材、碳化鎢、陶瓷及玻璃等。

1. The ordinary ceramic fiber stone is efficient only to lap its end side or edge, while the ceramic diamond stone works well with any sides.
2. In comparison to the resinous diamond stones, ceramic diamond stone is more aggressive in cutting rate, resist loading, and hardly broken.
3. Materials those are difficult to be ground by ordinary ceramic stone, now the ceramic diamond stone can provide a much better cut.
4. Ceramic diamond stone is ideal for lapping all kinds of harden steels, EDM surface, tungsten carbide, ceramics and glasses efficiently.

### 規格 / Specifications

單位 / Unit : mm

|              | #200     | #400     | #600     | #800     |
|--------------|----------|----------|----------|----------|
| 1 x 4 x 100  | SDS-1042 | SDS-1044 | SDS-1046 | SDS-1048 |
| 1 x 6 x 100  | SDS-1062 | SDS-1064 | SDS-1066 | SDS-1068 |
| 1 x 10 x 100 | SDS-1102 | SDS-1104 | SDS-1106 | SDS-1106 |
| ø 3 x 100    | SDG-302  | SDG-304  | SDG-306  | SDG-308  |

- 其他粒度及尺寸亦可訂製。在某些特殊的用途，氮化硼纖維油石亦可訂製，敬請指名訂購。 / In some special applications, ceramic CBN stones are also available, depend on your request.

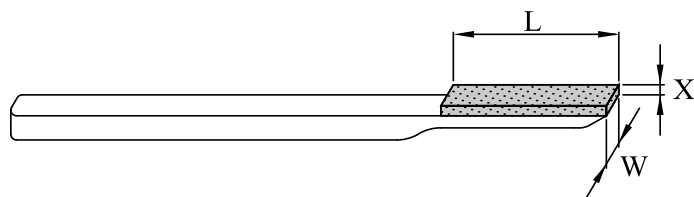


# Diamond Stones

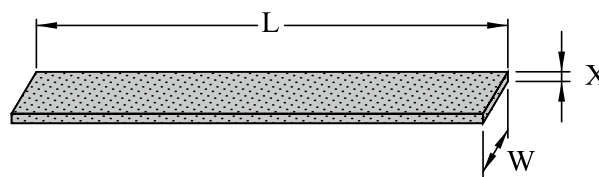
## 鑽石油石

鑽石油石主要使用於各種刀具研磨後之刃部修磨，以延長刀具之壽命及提高加工物之表面光製度。此外，亦適用於鎢鋼、陶瓷及硬化後鋼料之表面研磨。

Diamond Stone is considered as final finish for cutting tools. It is used to refine a surface by removing scratch lines and other surface imperfections. Therefore prolong the tool's life and smooth a surface finish. Also apply to lap the tungsten, ceramics and hardened steels.



附柄型 / With shank



實心 ( 無柄 ) 型 / Solid (without shank)

單位 / Unit : mm

### 規格 / Specifications

| 尺寸<br>Dimensions<br>W-(R)-X-L | 柄部材質<br>Shank material | 編號 Order No. |
|-------------------------------|------------------------|--------------|
| 10-2-40                       | 塑膠柄<br>Plastic shank   | RSH-01       |
| 5-2-40                        | 鐵柄<br>Steel shank      | RSH-02       |
| 5-2.5R-4-40                   | 鐵柄<br>Steel shank      | RSH-03       |
| 10-2-30                       | 鋁柄<br>Aluminum shank   | RSH-04       |
| 10-3-120                      | -                      | RS-04        |
| 6-3-100                       | -                      | RS-05        |
| 4-4-100                       | -                      | RS-06        |
| 6-2-100                       | -                      | RS-08        |

#### ● 說明 / Remark :

- 標準粒度 : #200, #400, #600, #800, #1000, #1200, #1800, #2000, #3000, #5000。 / Grit size available : #200, #400, #600, #800, #1000, #1200, #1800, #2000, #3000, #5000.
- 訂購時，敬請指名產品編號與所需粒度。 / When ordering, please specify order no. & grit size.



# Diamond Compounds

## Diamond Micron Powders

### 鑽石膏、鑽石微粉

#### 鑽石膏 / Diamond Compounds



| 編號<br>Order No. | 顆粒尺寸<br>Micron range<br>(μm) | 相等篩目<br>Mesh size<br>(approx.) | 標示顏色<br>Color code |
|-----------------|------------------------------|--------------------------------|--------------------|
| PDR-280         | 0.5 (0-1)                    | #28,000                        | 白 / White          |
| PDR-140         | 1 (0-2)                      | #14,000                        | 白 / White          |
| PDR-080         | 3 (2-4)                      | #8,000                         | 黃 / Yellow         |
| PDR-050         | 4.5 (3-6)                    | #5,000                         | 淺棕 / Light brown   |
| PDR-030         | 6 (4-8)                      | #3,000                         | 橙 / Orange         |
| PDR-020         | 8 (6-10)                     | #2,000                         | 淺紫 / Lilac         |
| PDR-018         | 9 (6-12)                     | #1,800                         | 綠 / Green          |
| PDR-015         | 13 (10-16)                   | #1,500                         | 粉紅 / Pink          |
| PDR-012         | 15 (10-20)                   | #1,200                         | 藍 / Blue           |
| PDR-010         | 17.5 (15-20)                 | #1,000                         | 深綠 / Dark green    |
| PDR-008         | 25 (20-30)                   | #800                           | 咖啡 / Brown         |
| PDR-006         | 35 (30-40)                   | #600                           | 紅 / Red            |
| PDR-004         | 50 (40-60)                   | #400                           | 紫 / Purple         |
| PDR-002         | 90 (80-100)                  | #200                           | 黑 / Black          |

#### ●說明 / Remark :

- 標準規格品為油性，若需水溶性鑽石膏，請指明訂購。 / Oil soluble is standard carries, other carries depend on your request.
- 標準容量為 5 公克，其他容量：10 公克或 18 公克裝，亦可指訂。 / Containers : Plastic syringes, 5 grams per syringe. Others (10 or 18 grams) depend on your request.
- 若需稀釋使用，本公司亦提供稀釋油。 / We also supply thinners for your special applications.
- 高濃度系列亦可依需求而提供。 / High concentrations diamond compounds is also available, depend on your requirement.

#### 鑽石微粉 / Diamond Micron Powders



| 編號 / Order No. |          | 顆粒尺寸<br>Micron range<br>(μm) | 相等篩目<br>Mesh size<br>(approx.) |
|----------------|----------|------------------------------|--------------------------------|
| 10 Carat       | 50 Carat |                              |                                |
| DR-1280        | DR-5280  | 0.5 (0-1)                    | #28,000                        |
| DR-1140        | DR-5140  | 1 (0-2)                      | #14,000                        |
| DR-1080        | DR-5080  | 3 (2-4)                      | #8,000                         |
| DR-1050        | DR-5050  | 4.5 (3-6)                    | #5,000                         |
| DR-1030        | DR-5030  | 6 (4-8)                      | #3,000                         |
| DR-1018        | DR-5018  | 9 (6-12)                     | #1,800                         |
| DR-1012        | DR-5012  | 15 (10-20)                   | #1,200                         |
| DR-1008        | DR-5008  | 25 (20-30)                   | #800                           |
| DR-1006        | DR-5006  | 35 (30-40)                   | #600                           |
| DR-1004        | DR-5004  | 50 (40-60)                   | #400                           |
| DR-1002        | DR-5002  | 90 (80-100)                  | #200                           |

#### ●說明 / Remark :

- 一品牌鑽石微粉乃經過精密設備嚴格篩選，粒度精確顆粒結晶形狀劃一。它適用於各種鋼模、超硬合金、陶瓷、寶石、半寶石等之精密拋光或鏡面拋光。 / Our micron powders are precision graded from virgin material and especially designed for lapping and polishing operations. Particularly, those requiring the strictest dimensions accuracy and the finest surface finish.
- 對於某些需求更精密或更均勻表面拋光之要求，請購時特別指明，本公司將提供更精密顆粒尺寸之微粉供選用。 / For works that require ultra high finish, we also supply powders with closer tolerance of the micron range upon your request.

# Diamond Foils

## 鑽石砂布

鑽石砂布是以銅箔為基材，電著上一層鑽石粉，鑽石磨料佈滿整個銅箔表面。其特色為有較長之工具壽命，可以用刀片自由裁剪成所需尺寸及形狀，然後黏貼在各種工具上，成為您所需的自製工具。其優異的切削效果及多種粒度可供選擇，適合各種模具、鎢鋼、硬陶瓷、石材、玻璃等之研磨及拋光。另一種運用為將之黏在機器零件上增加耐磨耗及防止打滑。

Diamond powders are fully sprayed on the surface of copper foil, this features in longer tool life. The diamond foils can be cut to any shape & size easily, and stick on to your own tools, thus allowing for a whole range of tailored tools.

Aggressive cutting action and wide range of grit sizes produce fast cutting or polishing on hard steels of any hardness, tungsten carbides, stones, glass and hard ceramics...etc.

Other application of diamond foils is to stick on parts of machine to increase the wear resistant and avoid the sliding.



| 尺寸<br>Dimensions | 粒度與編號<br>Grit size & Order No. |         |         |         |         |         |         |         |         |
|------------------|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
|                  | #120                           | #150    | #200    | #300    | #400    | #600    | #800    | #1200   | #1800   |
| 10 x 100mm       | XF-1012                        | XF-1015 | XF-1020 | XF-1030 | XF-1040 | XF-1060 | XF-1080 | XF-1120 | XF-1180 |
| 50 x 100mm       | XF-2012                        | XF-2015 | XF-2020 | XF-2030 | XF-2040 | XF-2060 | XF-2080 | XF-2120 | XF-2180 |
| 100 x 100mm      | XF-3012                        | XF-3015 | XF-3020 | XF-3030 | XF-3040 | XF-3060 | XF-3080 | XF-3120 | XF-3180 |
| 200 x 200mm      | XF-4012                        | XF-4015 | XF-4020 | XF-4030 | XF-4040 | XF-4060 | XF-4080 | XF-4120 | XF-4180 |

- 說明：標準品全部將砂布背膠，只要撕下保護層即可使用。若特殊用途可指定無背膠砂布，自行用其他方式將砂布固著於所需之工具或零件上。 / Remark : All standard foils come with PSA backing, when using, please remove the backing paper. The foils without PSA backing are also available on demand. For special applications, the users may use his own method to stick the foil on to the tools or parts.

## 鑽石砂布、網狀鑽石布之運用例 / Application Example of Diamond Foils & Diamond Cloth



# Diamond Cloth

## 鑽石布



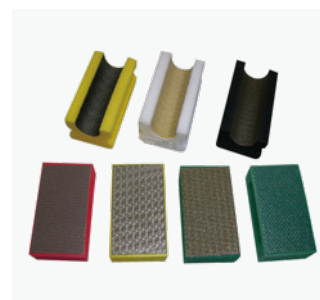
片狀 / Sheet type



片狀 / Sheet type



環狀 / Belt type



附墊型 / Pad type

鑽石布是將鑽石粉以電著法或樹脂結合法固著於帆布上，以前這種產品只有傳統砂布而已。

不同於傳統砂布的是；它有極佳的切削力，且在磨料與磨料間留有空隙作為研磨時逃屑用，因此研磨時不易塞目，且研磨後之工件表面非常均勻。

鑽石布可以用刀片或剪刀輕易地剪裁成所需要之尺寸，做成所需之工具。

鑽石布的粒度均以不同之顏色標示以資區別。它可為片狀亦可將之背膠作成環帶狀。

The application of diamond power on a flexible cloth has allowed the development of a new generation of diamond tools.

This tools perform a more aggressive cutting action than any other abrasive tool, thanks to its flexibility and to the spacing between islands, the diamond cloth can be easily cut with scissors, thus allowing for a whole range of traditional abrasives only.

All diamond cloth products are color coded for easy identification of mesh and these series products can be in sheet, discs self-adhesive or velcro backing, or in belt type.

## 應用 / Application

鑽石布的運用很廣泛，例如：大理石，花崗石..等石材加工。任何硬度之硬質鋼材，碳化鎢，硬陶瓷披覆鋼材，硬陶瓷...等研磨，玻璃之倒角及磨邊，各種模具之研磨及拋光。

The applications of diamond cloth are:

Wet grinding (lapping) harden steel of any hardness, tungsten carbide, hard ceramic coated steels, glass, hard ceramic, marble, granite and stone...etc, or for the lapping of mold and die.

## 規格 / Specifications

單位 / Unit : mm

| 粒度<br>Grit size | 標示顏色<br>Color | 結合劑<br>Bond Material | 尺寸與編號<br>Dimensions & Order No. |          |           |          |
|-----------------|---------------|----------------------|---------------------------------|----------|-----------|----------|
|                 |               |                      | 50x100                          | 100x100  | 1.170x295 | 690x295  |
| #60             | 綠色 / Green    | 鎳 / Ni bond          | XZ-1006N                        | XZ-2006N | XZ-5006N  | -        |
| #120            | 黑色 / Black    | 鎳 / Ni bond          | XZ-1012N                        | XZ-2012N | XZ-5012N  | -        |
| #200            | 紅色 / Red      | 鎳 / Ni bond          | XZ-1020N                        | XZ-2020N | XZ-5020N  | -        |
| #400            | 黃色 / Yellow   | 鎳 / Ni bond          | XZ-1040N                        | XZ-2040N | XZ-5040N  | -        |
| #600            | 白色 / White    | 鎳 / Ni bond          | XZ-1060N                        | XZ-2060N | XZ-5060N  | -        |
| #1000           | 藍色 / Blue     | 鎳 / Ni bond          | XZ-1100N                        | XZ-2100N | XZ-5100N  | -        |
| #500            | 白色 / White    | 樹脂 / Resin Bond      | XZ-1050R                        | XZ-2050R | -         | XZ-6050R |
| #1000           | 藍色 / Blue     | 樹脂 / Resin Bond      | XZ-1100R                        | XZ-2100R | -         | XZ-6100R |
| #8000           | 橙色 / Orange   | 樹脂 / Resin Bond      | XZ-1800R                        | XZ-2800R | -         | XZ-6800R |

### ●說明 / Remark :

- 標準尺寸 50x100mm 及 100x100mm 均有背膠，若不背膠請指明。/ Standard 50x100mm and 100x100mm come with PSA backing, others come without PSA backing, please specify.
- 其他尺寸或形狀之鑽石布，請與我們業務人員聯絡。/ Other size or type (shape), depend on your request.

# Mounted Points

## 帶柄砂輪



### 規格 / Specifications

單位 / Unit : mm

|                 |        |        |      |      |      |      |        |       |       |
|-----------------|--------|--------|------|------|------|------|--------|-------|-------|
| 編號<br>Order No. | 256A   | 308A   | 410A | 510A | 612A | 816A | 1016A* | 30B   | 40B   |
| 編號<br>Order No. | 50B    | 60B    | 80B  | 100B | 120B | 308T | 310T   | 412T  | 710T  |
| 編號<br>Order No. | 813R   | 1224R* | 609S | 412J | 616J | 816J | 1016J  | 612P  | 815P  |
| 編號<br>Order No. | 1018P* | 306K   | 412K | 515K | 816K | 132E | 133E   | 162E* | 163E* |

### ●說明 / Remark :

- 標準柄徑為  $\varnothing 3.0\text{mm}$ ，其他柄徑為  $\varnothing 2.34\text{mm}$  或  $\varnothing 3.175$ ，請指明訂購。 /  $\varnothing 3.0\text{mm}$  shank is standard, others ( $\varnothing 2.34$  or  $\varnothing 3.175\text{mm}$ ) depend on request.
- 有 " \* " 之尺寸，無法提供  $\varnothing 2.34\text{mm}$  柄。 / The tools with " \* " marked, just available for  $\varnothing 3.0$  &  $\varnothing 3.175$  shank.



# Oil Polishing Stones

## 油石

### EDM 系列油石

主要用來去除各種模具 EDM 加工後之硬化表層。

### DF 系列油石

主要使用於一般模具機械加工之痕跡去除及拋光作業。

**EDM series stones** are specially for removing the hard scale generated by the EDM process on all type of mold and die steels.

**DF series stones** are suitable for removing the machined surface scratch and general lapping & polishing all mold and die steels.



### 形狀 . 尺寸 . 粒度 / Shape, Dimension, Grit Size

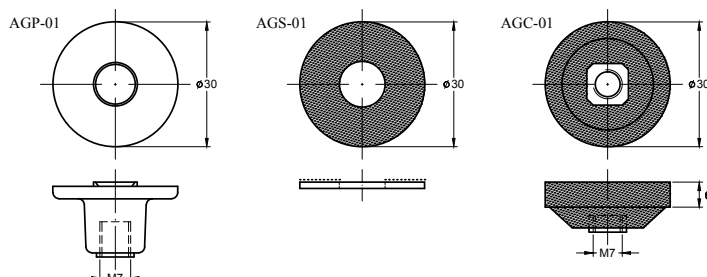
| 形狀<br>Shape                  | 尺寸<br>Dimension                                                                                                                                                                                                                                                                                         | 粒度<br>Grit Size                                                      |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| <p>長方形 / Rectangle</p>       | 6x3x150mm(1/4" x1/8" x6")<br>6x6x150mm(1/4" x1/4" x6")<br>13x1.5x150mm(1/2" x1/16" x6")<br>13x3x150mm(1/2" x1/8" x6")<br>13x6x150mm(1/2" x1/4" x6")<br>13x13x150mm(1/2" x1/2" x6")<br>25x13x150mm(1" x1/8" x6")<br>25x6x150mm(1" x1/4" x6")<br>25x13x150mm(1" x1/2" x6")<br>10x10x150mm(3/8" x3/8" x6") | #120 , #180 , #220 , #320 ,<br>#400 , #600 , #800 , #1000 ,<br>#1200 |
| <p>圓形 / Round Type</p>       | 6mm 圓 x 150mm (1/4" 圓 x6")<br>6mm Round x 150mm                                                                                                                                                                                                                                                         | #120 , #180 , #220 , #320 ,<br>#400 , #600 , #800 , #1000 ,<br>#1200 |
| <p>半圓形 / Half Round Type</p> | 6mm 半圓 x 150mm (1/4" 半圓 x6")<br>6mm Half Round x 150mm                                                                                                                                                                                                                                                  | #120 , #180 , #220 , #320 ,<br>#400 , #600 , #800 , #1000 ,<br>#1200 |
| <p>三角形 / Triangle Type</p>   | 6mm 三角 x 150mm (1/4" 三角 x6")<br>6mm Triangle x 150mm                                                                                                                                                                                                                                                    | #120 , #180 , #220 , #320 ,<br>#400 , #600 , #800 , #1000 ,<br>#1200 |

● 以上規格以及粒度為標準品，若您有特別需要的規格或粒度，請與我們聯絡。  
Above specifications are standards, Customization Available.

# Rubber Pad, Paper Disc, Cup Wheels, Elastic Mounted Points

## 橡膠皿、砂布片、碗型砂輪、彈性帶柄砂輪

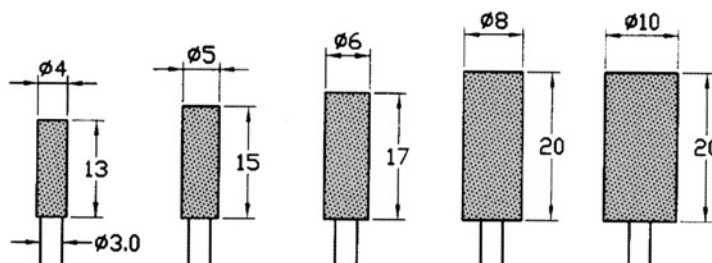
### 橡膠皿、砂布片、碗型砂輪 / Rubber Pad, Paper Disc, Cup Wheels



| 型號<br>Order No. | 規格<br>Description | 粒度<br>Grit Size                       | 包裝單位<br>Unit      |
|-----------------|-------------------|---------------------------------------|-------------------|
| AGP-01          | 橡膠皿 / Rubber Pad  | -                                     | 1 piece           |
| AGS-01          | 砂布片 / Paper Disc  | #60、#100、#150、#240<br>、#320、#400、#600 | 150 pcs./box (盒裝) |
| AGC-01          | 碗型砂輪 / Cup Wheels | #60、#100、#150                         | 48 pcs./box (盒裝)  |

●備註：適用機型 GP-522, AG-45, AG-90。 / Note: Standard accessory tools of GP-522, AG-45, AG-90.

### 彈性帶柄砂輪 / Elastic Mounted Points



| 產品名稱<br>Products                  | 粒度<br>Grit Size | 編號<br>Order No. |      |      |      |       |
|-----------------------------------|-----------------|-----------------|------|------|------|-------|
| 牛皮帶柄砂輪<br>Resinoid Mounted Point  | #120            | N413            | N515 | N617 | N820 | N1020 |
| 海綿帶柄砂輪<br>Rubberize Mounted Point | #120            | R413            | R515 | R617 | R820 | R1020 |
| 陶瓷帶柄砂輪<br>Ceramic Mounted Point   | #120、#220、#320  | C413            | C515 | C617 | C820 | C1020 |

●包裝單位：100 支 / 盒。 / Unit: 100pcs/Box.



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