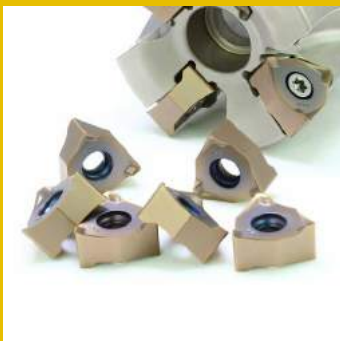
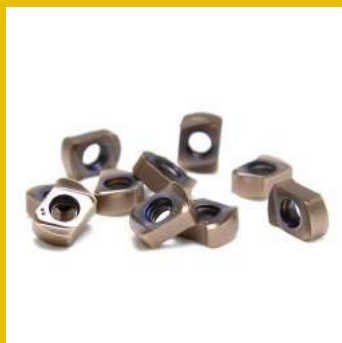




ISO 9001



# **CARBIDEX** *Indexable Milling & Turning* **2017~2018 Catalogue**



**Winstar Cutting Technologies Corp.** Is a Taiwanese company that started operations in the year 2008 by Tim Chen following a dream and personal interest in developing solid tools. We are a professional manufacturer of Cutting Tools and Inserts. Since WINSTAR started it has specialized in the Design and Manufacture of High-Quality Cutting Tools. Having more than 4,400 different kinds of items and huge stocks. We are able to meet customer's needs. 90% of our products provide our own brand tools and 10% to do OEM project for world-class cutting group. WINSTAR has become one of the most successful companies in Taiwan. We base our company's success on our long-standing commitment to satisfy our customers' needs. By Utilizing the Finest Raw Materials and introducing Innovative Cutting Tools.

#### **Why Winstar?**

Your order will receive personal attention from our sales staff. We offer full technical support for our products and are always just a phone call away. Your satisfaction is very important to us. We stock our shelves to support our full product line. This means we probably have what you need ready to ship today.

#### **Taiwanese made Quality**

Your satisfaction is 100% guaranteed! Our complete line of end mills, drills, holders, and insert will stand-up-to or out-perform any premium cutting tool brand on the market.

#### **Privacy and Security**

We aggressively protect your privacy rights. All transactions are conducted via our secure, encrypted online system. Your customer information will never be sold, reproduced, or distributed.

#### **Optimized Carbide Grades**

Maximum cutting performance is only achieved when the carbide grade characteristics ideally fit the specific application needs.

#### **Superior Grinding Quality**

Research on better surface quality remains an area of continuous technological advancement. Since the cutting edge quality determines the tool life and cutting action, a superior grinding quality is critical. WINSTAR provides the latest Swiss and German grinding Technology to get a superior surface finish.

#### **Highly Innovative Tool Geometries**

Highest cutting action cannot be accomplished by using only the standard geometries of universal tools. Efficient chip forming and evacuation is critical for optimal cutting performance. Such geometries are designed to manage a broad range of cutting forces and provide the highest cutting action for aerospace applications. As a recognized provider for "special" tools, WINSTAR possesses the engineering know-how to design highly innovative tool geometries for maximum cutting.

#### **Advanced Tool Coating Technology**

We are committed to provide our Customers with Crafted precision and Excellence. Longest tool life and maximum application performance require the utilization of advanced coating technology. As this highly innovative field continues to rapidly change.

#### **Winstar Friends and Family**

In WINSTAR CUTTING TECHNOLOGIES Corp. We believe in partnership and understands that the best way to grow is together. That is the reason Winstar works as a team, to provide the customer with a better efficient service. We also have partnerships around the globe. With this special friends we work just the same way we work together in WINSTAR. To make bigger and better alliances so we can grow together as a big family.

## **Welcome to WINSTAR Family**



# CARBIDEX *Indexable Milling & Turning*

## *Milling*

銑 削

### **Milling Inserts** 銑刀片

|                                                  |      |
|--------------------------------------------------|------|
| Designations For Milling Inserts (銑刀片型號編碼) ..... | B000 |
| Milling Insert Grade (銑刀片材質等級) .....             | B001 |
| Milling Insert Geometries (銑刀片刀口幾何) .....        | B002 |
| Milling Inserts (銑刀片規格總覽) .....                  | B003 |

### **Milling Cutters** 銑刀桿

|                                                |      |
|------------------------------------------------|------|
| Cutter Types (刀桿種類) .....                      | B014 |
| Shoulder Milling Cutters (方肩銑削) .....          | B017 |
| Face Milling Cutters (平面銑削) .....              | B062 |
| Copy Milling Cutters (仿形銑削) .....              | B072 |
| High Feed Face Milling Cutters (高進給平面銑削) ..... | B085 |
| Helical Milling Cutters (玉米銑削) .....           | B097 |
| Disc Milling Cutters (三面刃銑削) .....             | B098 |
| Chamfer Milling Cutters (倒角銑削) .....           | B102 |

### **Tooling System & Accessories** 配件

|                                    |      |
|------------------------------------|------|
| Carbide Adapter (鑄鋼鎖牙式延長桿) .....   | B105 |
| BT Tool Holder (BT 刀把) .....       | B107 |
| Milling Accessories (銑削相關配件) ..... | B109 |

### **Additional information** 相關資訊

|                                                           |      |
|-----------------------------------------------------------|------|
| Milling Inserts Grade Comparison Chart (銑刀片材質等級比較表) ..... | B110 |
|-----------------------------------------------------------|------|

## *Turning*

車 削

### **Turning & Parting Inserts** 車刀片 & 切斷刀片

|                                                  |      |
|--------------------------------------------------|------|
| Designations For Turning Inserts (車刀片型號編碼) ..... | B112 |
| Turning Insert Grade (車刀片材質等級) .....             | B113 |
| Positive Turning Inserts (正角車刀片規格總覽) .....       | B115 |
| Negative Turning Inserts (負角車刀片規格總覽) .....       | B123 |
| Parting Inserts (切斷刀片規格總覽) .....                 | B130 |

### **Turning & Parting Tools** 車刀桿 & 切斷刀桿

|                                                |      |
|------------------------------------------------|------|
| Designations For Turning Tools (車刀桿型號編碼) ..... | B132 |
| Internal Turning Tools (內徑車刀桿) .....           | B134 |
| External Turning Tools (外徑車刀桿) .....           | B135 |
| Toolholders (切斷刀桿) .....                       | B181 |

### **Additional information** 相關資訊

|                                                           |      |
|-----------------------------------------------------------|------|
| Turning Inserts Grade Comparison Chart (車刀片材質等級比較表) ..... | B185 |
| Recommended Cutting Conditions (推薦切削參數) .....             | B186 |



## **CXXN Shoulder Milling**

CXXN 方肩銑系列

**Optimize end-milling solution in various applications!!!**

- XNMX with economy of 6 cutting edges.
- Low cutting resistance .
- True 90 degree square shoulder range.
- 經濟型的 6 個切削角
- 低切削阻力
- 正 90 度端銑



## **CXSX Face Milling**

CXSX 面銑系列

**Unique "Type Z" geometry minimizes chatter and vibration!!!**

- SNMX with economical 8 cutting edges.
- Guarantees lowest cutting loads and longest tool life.
- High performance machining on various working material.
- 8 個切削角更顯經濟
- 保證刀具的低抗阻和壽命
- 泛用於各種材料的高性能加工



## **CXBN High Feed Face Milling**

CXBN 高進給面銑系列

**High Feed Milling Offers Increased Productivity!!!**

- BNMX with economical 4 cutting edges.
- Lowest cutting force to insure maximum productivity!
- Optimal insert geometries, wide range cutting applications.
- 4 個切削角
- 確保生產率的最大化
- 多種幾何，適用於廣泛的切削應用



## **CXWN High Feed Face Milling**

CXWN 高進給面銑系列

**New Economical Solution for High Feed Milling Applications!!!**

- WNMX with economical 6 cutting edges.
- Double sided & negative geometry has been designed for rigidity of cutting edge.
- Designed for multifunctional machining ability.
- 6 個切削角
- 雙面負角的設計，增加刀口剛性
- 多功能加工專用





## Negative Types

負角車刀片

- 50+ types to choose from.
- > 10  $\mu$  thick coating layer structure for various applications.
- Longitudinal, profile and face turning machining.
- Usable range cover from medium to roughing.
- 超過 50 種幾何可供選擇
- 針對多樣化加工提供厚塗層對應
- 適合端面，輪廓及外徑加工應用
- 加工範圍包含蓋中加工至粗加工



## Positive Types

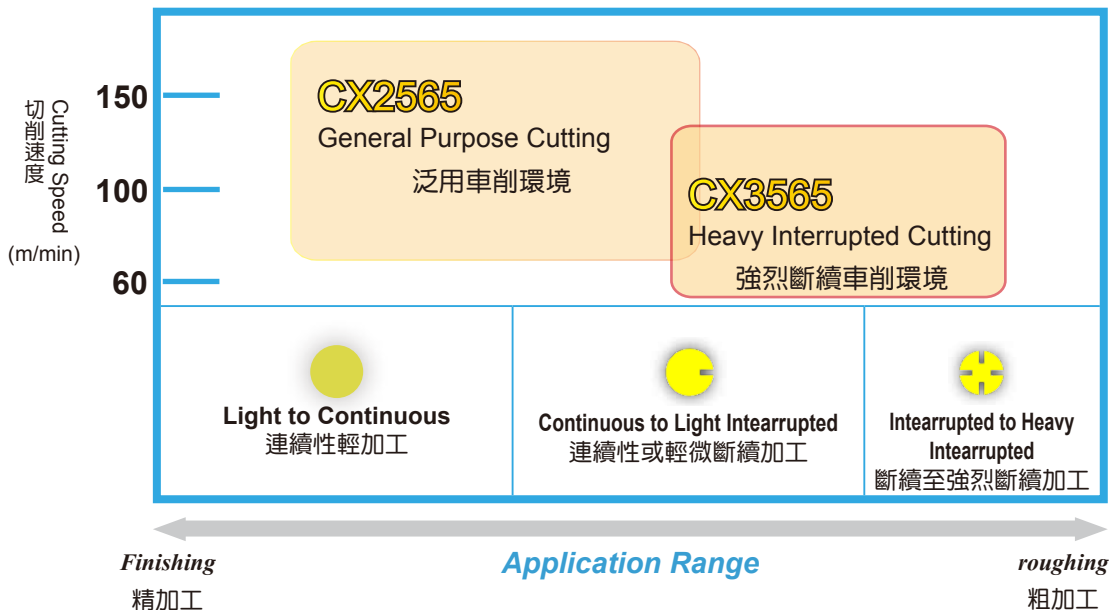
正角車刀片

- 25+ types to choose from.
- Thick or normal coating layer structure for different applications.
- Internal turning, profiling and boring machining.
- Usable range cover from semi-finishing to roughing.
- 超過 25 種幾何可供選擇
- 針對不同加工應用面提供不同塗層對應
- 適合內孔，輪廓及鏜孔加工應用
- 加工範圍包含半精加工至粗加工

**NEW**

## CX2565 / CX3565

2017 New Turning Grades for General Purpose  
2017 年全新泛用車刀片新材料



### Features:

- Excellent heat resistance and wear resistance.
- Improve the adhesion resistance ability.
- Corner visibility with a unique color.
- Extend tool life and thereby reduces tools costs in a wide range of machining applications.

### 特性：

- 優異的耐磨耗及耐溫性。
- 高抗粘附能力。
- 輕易辨識已使用角。
- 延長刀具壽命，從而在廣泛的加工應用中降低成本。

Designations For Milling Insert

刀片型號編碼

|   |   |   |   |    |    |    |    |    |      |
|---|---|---|---|----|----|----|----|----|------|
| A | P | M | T | 16 | 04 | PD | ER | 08 | - MG |
| ① | ② | ③ | ④ | ⑤  | ⑥  | ⑦  | ⑧  | ⑨  | ⑩    |

① Insert Shape

② Relief Angle

③ Tolerance

| Tolerance |           |           |           |
|-----------|-----------|-----------|-----------|
|           | d±        | m±        | s±        |
| A         | 0.025     | 0.005     | 0.025     |
| C         | 0.025     | 0.013     | 0.025     |
| E         | 0.025     | 0.025     | 0.025     |
| F         | 0.013     | 0.005     | 0.025     |
| G         | 0.025     | 0.025     | 0.05~0.13 |
| H         | 0.013     | 0.013     | 0.025     |
| J         | 0.05~0.15 | 0.005     | 0.025     |
| K         | 0.05~0.15 | 0.013     | 0.025     |
| L         | 0.05~0.15 | 0.025     | 0.025     |
| M         | 0.05~0.15 | 0.08~0.2  | 0.05~0.13 |
| N         | 0.05~0.15 | 0.08~0.2  | 0.025     |
| U         | 0.08~0.25 | 0.13~0.38 | 0.13      |

④ Insert Features

|   |               |  |
|---|---------------|--|
| A |               |  |
| C |               |  |
| F |               |  |
| G |               |  |
| H |               |  |
| J |               |  |
| M |               |  |
| N |               |  |
| Q |               |  |
| R |               |  |
| T |               |  |
| U |               |  |
| W |               |  |
| X | Special shape |  |

⑤ Edge Length

⑧ Cutting Edge

|         |       |          |                      |
|---------|-------|----------|----------------------|
| E       | F     | T        | S                    |
| Rounded | Sharp | Chamferd | Chamferd and rounded |

⑥ Thickness

| Index | 01   | T1   | 02   | 03   | T3   | 04   | 05   | 06   | 07   | 09   |
|-------|------|------|------|------|------|------|------|------|------|------|
| S(mm) | 1.59 | 1.98 | 2.38 | 3.18 | 3.97 | 4.76 | 5.56 | 6.35 | 7.94 | 9.52 |

⑨ Cutting Direction

⑦ Corner Radius

|  |     |     |     |     |     |       |     |    |     |       |
|--|-----|-----|-----|-----|-----|-------|-----|----|-----|-------|
|  | A   | D   | E   | F   | P   | Z     |     |    |     |       |
|  | 45° | 60° | 75° | 85° | 90° | other |     |    |     |       |
|  | A   | B   | C   | D   | E   | F     | G   | N  | P   | Z     |
|  | 3°  | 5°  | 7°  | 15° | 20° | 25°   | 30° | 0° | 11° | other |

⑩ Manufacture's Type Designation

Chip breaker design

SG, MG, RG, HG

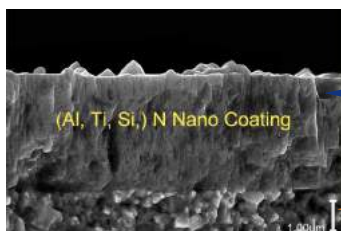
B000

Winstar  
Cutting Technologies



### “∞” Infinity Nano Coating:

- ✓ High adhesion strength to the substrate improves stable cutting performance and achieves longer tool life.
- ✓ Provide excellent heat resistance and oxidation resistance.
- ✓ Maintain highest performance in wet cutting, dry cutting, even harden material cutting.



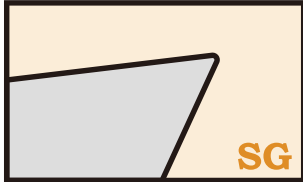
Smooth surface prevents chip adhesion.  
Multi-layered structure prevents crack expansion which causes chipping and fracture.

Newly development substrate with better resistance and strength

| Grade Type                                                                                                                                                                                                                                                                                                                                                                                     | Substrate (HRA) | Coating Type | Thickness | Coolant    |            | Suitable Condition |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------|-----------|------------|------------|--------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                |                 |              |           | Dry        | Wet        |                    |
| CX21NS                                                                                                                                                                                                                                                                                                                                                                                         | 92              | Al.Ti.Si.X.N | 3~4       | ★ ★<br>★ ★ | ★ ★<br>★ ★ | ●                  |
| <ul style="list-style-type: none"> <li>First choice for <b>mold steel</b>, <b>hardened steel</b> and <b>Ni-base superalloys</b>.</li> <li>High-performance premium grade with a high level of shock and heat resistance.</li> <li>Specially designed to operate at medium to high cutting speeds and is capable of retaining a secure cutting edge at high metal removal condition.</li> </ul> |                 |              |           |            |            |                    |
| CX31NS                                                                                                                                                                                                                                                                                                                                                                                         | 91.8            | Ti.Si.X.N    | 3~4       | ★ ★<br>★ ★ | ★ ★<br>★ ★ | ☉                  |
| CX31NA                                                                                                                                                                                                                                                                                                                                                                                         | 91.7            | Al.Ti.X.N    | 3~4       | ★ ★<br>★ ★ | ★ ★<br>★ ★ | ☉                  |
| <ul style="list-style-type: none"> <li><b>General</b> machining application. (P,K)</li> <li>Both wear resistance and impact resistance are well-balanced.</li> <li>Priority grade for medium cutting.</li> </ul>                                                                                                                                                                               |                 |              |           |            |            |                    |
| CX41NS                                                                                                                                                                                                                                                                                                                                                                                         | 90.2            | Ti.Si.X.N    | 3~4       | ★ ★<br>★ ★ | ★ ★<br>★ ★ | ☼                  |
| CX41NA                                                                                                                                                                                                                                                                                                                                                                                         | 90.3            | Al.Ti.X.N    | 3~4       | ★ ★<br>★ ★ | ★ ★<br>★ ★ | ☼                  |
| <ul style="list-style-type: none"> <li><b>Stainless material</b> machining is recommended.</li> <li>Priority grade for roughing purpose &amp; interrupted machining, for P, M, K.</li> <li>Excellent shock resistance ability.</li> </ul>                                                                                                                                                      |                 |              |           |            |            |                    |

\* Milling Grade Comparison Chart.....Page B110

*Examples of different insert geometries for a specific insert type chart.*



**SG** - Positive and small rounded cutting edge.

Excellent surface for finishing purpose.

精加工及優良的表面光潔度



**MG** - Positive and rounded cutting edge.

Low cutting force and chattering reduction for light cutting when low forces / power are required.

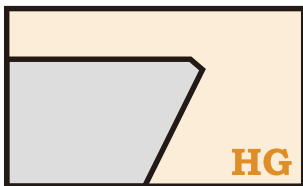
中加工刀口設計，適合低阻力及低功率的機台使用



**RG** - Negative and chamfering cutting edge.

First recommendation for general machining in mixed production.

一般中粗加工及泛用材料的首選



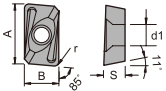
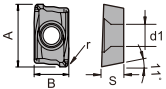
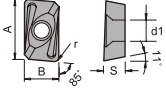
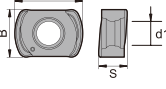
**HG** - Negative and big chamfering cutting edge.

Strong edge strength for rough operations, forging, cast skin and vibrations.

粗加工及鑄件專用的強力刀口

|                                                                                    | P                                     | Steel           | ◎      | ◎      | ◎      | ○      | ○               | ◎ 1st choice    ○ 2st choice |      |     |     |    |                                                                                       |             |
|------------------------------------------------------------------------------------|---------------------------------------|-----------------|--------|--------|--------|--------|-----------------|------------------------------|------|-----|-----|----|---------------------------------------------------------------------------------------|-------------|
|                                                                                    | M                                     | Stainless steel | ○      | ○      | ○      | ◎      | ◎               |                              |      |     |     |    |                                                                                       |             |
|                                                                                    | K                                     | Cast iron       | ◎      | ○      | ○      | ○      | ○               |                              |      |     |     |    |                                                                                       |             |
| Inserts                                                                            | Designation                           | Grade           |        |        |        |        | Dimensions (mm) |                              |      |     |     |    | Drawing                                                                               | Cutter Page |
|                                                                                    |                                       | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | A               | B                            | S    | r   | d1  | t1 |                                                                                       |             |
|    | <b>3PMX 100408-MG</b><br><i>T</i>     | ✓               |        | ✓      | ✓      |        | 6.9             | -                            | 4    | 0.8 | 3   | -  |    | B023 ~ B026 |
|    | <b>APKT 100304PDER-MG</b><br><i>I</i> | ✓               | ✓      | ✓      |        |        | 10.5            | 6.7                          | 3.5  | 0.4 | 2.8 | -  |    | B039 ~ B040 |
|    | <b>APKT 100308PDER-MG</b><br><i>I</i> | ✓               | ✓      | ✓      |        |        | 10.5            | 6.7                          | 3.5  | 0.8 | 2.8 | -  |                                                                                       |             |
|    | <b>APKT 100304PDER-RG</b><br><i>I</i> | ✓               | ✓      | ✓      |        |        | 10.5            | 6.7                          | 3.5  | 0.4 | 2.8 | -  |                                                                                       |             |
|   | <b>APKT 160408PDER-MG</b><br><i>I</i> |                 | ✓      | ✓      | ✓      | ✓      | 16.3            | 9.525                        | 5.25 | 0.8 | 4.5 | -  |  | B041 ~ B044 |
|  | <b>APKT 160408PDER-RG</b><br><i>I</i> |                 | ✓      | ✓      | ✓      | ✓      | 16.3            | 9.525                        | 5.25 | 0.8 | 4.5 | -  |                                                                                       |             |
|  | <b>APMT 103508PDER-RG</b><br><i>S</i> |                 | ✓      | ✓      | ✓      | ✓      | 10.64           | 6.5                          | 3.5  | 0.8 | 3   | -  |  | B030 ~ B031 |
|  | <b>APMT 113508PDER-MG</b><br><i>M</i> | ✓               | ✓      | ✓      | ✓      | ✓      | 11.0            | 6.35                         | 3.5  | 0.8 | 2.8 | -  |  | B032 ~ B034 |
|  | <b>APMT 113508PDER-RG</b><br><i>M</i> | ✓               | ✓      | ✓      | ✓      | ✓      | 11.0            | 6.35                         | 3.5  | 0.8 | 2.8 | -  |                                                                                       |             |
|  | <b>APMT 113508PDER-HG</b><br><i>D</i> |                 | ✓      | ✓      | ✓      | ✓      | 11.0            | 6.35                         | 3.5  | 0.8 | 2.8 | -  |                                                                                       |             |

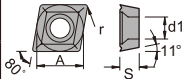
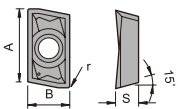
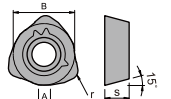
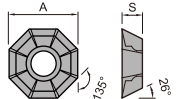
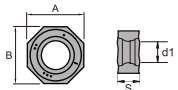
\*Customize geometries and grades available

|                                                                                    | P                                                      | Steel           | ◎      | ◎      | ◎      | ○      | ○               |       | ◎ 1st choice    ○ 2nd choice |     |     |    |                                                                                       |                   |
|------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------|--------|--------|--------|--------|-----------------|-------|------------------------------|-----|-----|----|---------------------------------------------------------------------------------------|-------------------|
|                                                                                    | M                                                      | Stainless steel | ○      | ○      | ○      | ◎      | ◎               |       |                              |     |     |    |                                                                                       |                   |
|                                                                                    | K                                                      | Cast iron       | ◎      | ○      | ○      | ○      | ○               |       |                              |     |     |    |                                                                                       |                   |
| Inserts                                                                            | Designation                                            | Grade           |        |        |        |        | Dimensions (mm) |       |                              |     |     |    | Drawing                                                                               | Cutter Page       |
|                                                                                    |                                                        | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | A               | B     | S                            | r   | d1  | t1 |                                                                                       |                   |
|    | <b>APMT 160408PDER-MG</b><br><i>M</i>                  | ✓               | ✓      | ✓      | ✓      | ✓      | 16.5            | 9.525 | 4.76                         | 0.8 | 4.4 | -  |    | B035<br>~<br>B038 |
|    | <b>APMT 160408PDER-RG</b><br><i>M</i>                  | ✓               | ✓      | ✓      | ✓      | ✓      | 16.5            | 9.525 | 4.76                         | 0.8 | 4.4 | -  |                                                                                       |                   |
|    | <b>APMT 160408PDER-HG</b><br><i>D</i>                  |                 | ✓      | ✓      | ✓      | ✓      | 16.5            | 9.525 | 4.76                         | 0.8 | 4.4 | -  |                                                                                       |                   |
|    | <b>AXMT 123508PEER-RG</b><br><i>S</i>                  | ✓               | ✓      | ✓      |        |        | 12.18           | 6.93  | 3.58                         | 0.8 | 3.4 | -  |    | B045<br>~<br>B046 |
|   | <b>AXMT 170508PEER-RG</b><br><i>S</i>                  |                 | ✓      | ✓      | ✓      | ✓      | 17.50           | 10.2  | 5.56                         | 0.8 | 4.6 | -  |  | B047<br>~<br>B049 |
|  | <b>AXMT 170516PEER-RG</b><br><i>S</i>                  |                 | ✓      | ✓      | ✓      | ✓      | 17.50           | 10.2  | 5.56                         | 1.6 | 4.6 | -  |                                                                                       |                   |
|  | <i>Double Sided</i><br><b>BNMX 0603-SG</b><br><i>T</i> | ✓               |        | ✓      | ✓      |        | 9.0             | 6.38  | 3.75                         | -   | 3.2 | -  |  | B085<br>~<br>B088 |
|  | <i>Double Sided</i><br><b>BNMX 0603-MG</b><br><i>T</i> | ✓               |        | ✓      | ✓      |        | 9.0             | 6.38  | 3.75                         | -   | 3.2 | -  |                                                                                       |                   |
|  | <i>Double Sided</i><br><b>BNMX 0603-RG</b><br><i>T</i> | ✓               |        | ✓      | ✓      |        | 9.0             | 6.38  | 3.75                         | -   | 3.2 | -  |                                                                                       |                   |

\*Customize geometries and grades available

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|                                                                                    | P                              | Steel           | ◎      | ◎      | ◎      | ○      | ○               |      | ◎ 1st choice    ○ 2st choice |     |      |    |                                                                                       |                   |
|------------------------------------------------------------------------------------|--------------------------------|-----------------|--------|--------|--------|--------|-----------------|------|------------------------------|-----|------|----|---------------------------------------------------------------------------------------|-------------------|
|                                                                                    | M                              | Stainless steel | ○      | ○      | ○      | ◎      | ◎               |      |                              |     |      |    |                                                                                       |                   |
|                                                                                    | K                              | Cast iron       | ◎      | ○      | ○      | ○      | ○               |      |                              |     |      |    |                                                                                       |                   |
| Inserts                                                                            | Designation                    | Grade           |        |        |        |        | Dimensions (mm) |      |                              |     |      |    | Drawing                                                                               | Cutter Page       |
|                                                                                    |                                | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | A               | B    | S                            | r   | d1   | t1 |                                                                                       |                   |
|    | CPMT 090308-MG<br><i>H</i>     |                 | ✓      | ✓      |        |        | 9.525           | -    | 3.18                         | 0.8 | 4.4  | -  |    | -                 |
|    | CPMT 120408-MG<br><i>H</i>     |                 | ✓      | ✓      |        |        | 12.7            | -    | 4.76                         | 0.8 | 5.5  | -  |                                                                                       | -                 |
|    | JDMT 150508R-MG<br><i>H</i>    |                 | ✓      | ✓      |        |        | 15.1            | 9.12 | 5.0                          | 0.8 | 4.5  | -  |    | B050<br>~<br>B051 |
|    | JDMW 120420ZDSR-RG<br><i>M</i> |                 | ✓      | ✓      | ✓      | ✓      | 2.5             | 12.0 | 4.76                         | 2.0 | 4.75 | -  |    | B095<br>~<br>B096 |
|   | OFMT 05T3TN-MG<br><i>T</i>     |                 | ✓      | ✓      |        |        | 12.7            | -    | 3.8                          | 0.6 | 4.6  | -  |  | B068<br>~<br>B069 |
|  | OFMT 05T3TN-RG<br><i>T</i>     |                 | ✓      | ✓      |        |        | 12.7            | -    | 3.8                          | 0.6 | 4.6  | -  |                                                                                       |                   |
|  | ONMX 0505-RG<br><i>S</i>       | ✓               |        | ✓      | ✓      |        | 12.7            | 12.7 | 6.4                          | -   | 6    | -  |  | B064<br>~<br>B065 |

\*Customize geometries and grades available

Milling Inserts & Tools

|                                                                                     | P                 | Steel           | ◎      | ◎      | ◎      | ○      | ○ |                 |   | ◎ 1st choice    ○ 2st choice |   |      |    |                                                                                                                                                                             |             |
|-------------------------------------------------------------------------------------|-------------------|-----------------|--------|--------|--------|--------|---|-----------------|---|------------------------------|---|------|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|                                                                                     | M                 | Stainless steel | ○      | ○      | ○      | ◎      | ◎ |                 |   |                              |   |      |    |                                                                                                                                                                             |             |
|                                                                                     | K                 | Cast iron       | ◎      | ○      | ○      | ○      | ○ |                 |   |                              |   |      |    |                                                                                                                                                                             |             |
| Inserts                                                                             | Designation       | Grade           |        |        |        |        |   | Dimensions (mm) |   |                              |   |      |    | Drawing                                                                                                                                                                     | Cutter Page |
|                                                                                     |                   | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA |   | A               | B | S                            | r | d1   | t1 |                                                                                                                                                                             |             |
|    | RDKW 0501MOE<br>S |                 | ✓      | ✓      |        |        |   | 5               | - | 1.59                         | - | 2.2  | -  |       | B072 ~ B078 |
|    | RDKW 0702MO<br>S  |                 | ✓      | ✓      |        |        |   | 7               | - | 2.38                         | - | 2.8  | -  |                                                                                                                                                                             |             |
|    | RDKW 0702MOE<br>S | ✓               | ✓      | ✓      | ✓      | ✓      |   | 7               | - | 2.38                         | - | 2.8  | -  |                                                                                                                                                                             |             |
|    | RDKW 0702MOT<br>S | ✓               | ✓      | ✓      | ✓      | ✓      |   | 7               | - | 2.38                         | - | 2.8  | -  |                                                                                                                                                                             |             |
|    | RDMT 1003MOE<br>T |                 | ✓      | ✓      |        |        |   | 10              | - | 3.18                         | - | 3.9  | -  |   | B072 ~ B078 |
|   | RDMT 1003MOT<br>T | ✓               | ✓      | ✓      |        |        |   | 10              | - | 3.18                         | - | 3.9  | -  |                                                                                                                                                                             |             |
|  | RDMX 1003MOE<br>K | ✓               | ✓      | ✓      | ✓      |        |   | 10              | - | 3.18                         | - | 4.15 | -  |                                                                                                                                                                             |             |
|  | RDMX 1003MOT<br>K | ✓               | ✓      | ✓      | ✓      |        |   | 10              | - | 3.18                         | - | 4.15 | -  |                                                                                                                                                                             |             |
|   | RDMT 10T3MOE<br>H |                 | ✓      | ✓      |        |        |   | 10              | - | 3.97                         | - | 4.5  | -  |   | B072 ~ B078 |
|   | RDMT 10T3MOT<br>H | ✓               | ✓      | ✓      | ✓      |        |   | 10              | - | 3.97                         | - | 4.5  | -  |                                                                                                                                                                             |             |
|  | RDMW 10T3MOE<br>H |                 | ✓      | ✓      |        |        |   | 10              | - | 3.97                         | - | 4.5  | -  |                                                                                                                                                                             |             |

\*Customize geometries and grades available

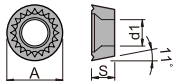
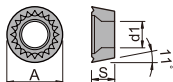
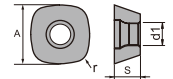
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|                                                                                    | P                        | Steel           | ◎      | ◎      | ◎      | ○      | ○               |   | ◎ 1st choice    ○ 2nd choice |   |     |    |                                                                                       |                   |
|------------------------------------------------------------------------------------|--------------------------|-----------------|--------|--------|--------|--------|-----------------|---|------------------------------|---|-----|----|---------------------------------------------------------------------------------------|-------------------|
|                                                                                    | M                        | Stainless steel | ○      | ○      | ○      | ◎      | ◎               |   |                              |   |     |    |                                                                                       |                   |
|                                                                                    | K                        | Cast iron       | ◎      | ○      | ○      | ○      | ○               |   |                              |   |     |    |                                                                                       |                   |
| Inserts                                                                            | Designation              | Grade           |        |        |        |        | Dimensions (mm) |   |                              |   |     |    | Drawing                                                                               | Cutter Page       |
|                                                                                    |                          | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | A               | B | S                            | r | d1  | t1 |                                                                                       |                   |
|    | RDMX 12T3MOS<br><i>T</i> |                 | ✓      | ✓      | ✓      | ✓      | 12              | - | 3.97                         | - | 4.1 | -  |    | -                 |
|    | RDMX 12T3MOE<br><i>L</i> |                 | ✓      | ✓      | ✓      | ✓      | 12              | - | 3.97                         | - | 4.1 | -  |                                                                                       |                   |
|    | RDMX 12T3MOT<br><i>L</i> | ✓               | ✓      | ✓      | ✓      | ✓      | 12              | - | 3.97                         | - | 4.1 | -  |                                                                                       |                   |
|    | RDMT 1204MOT<br><i>H</i> |                 | ✓      | ✓      | ✓      | ✓      | 12              | - | 4.76                         | - | 4.4 | -  |    | B072<br>~<br>B078 |
|   | RDMW 1204MOT<br><i>W</i> |                 | ✓      | ✓      | ✓      | ✓      | 12              | - | 4.76                         | - | 4.4 | -  |                                                                                       |                   |
|  | RDMT 1604MOT<br><i>H</i> |                 | ✓      | ✓      | ✓      | ✓      | 16              | - | 4.76                         | - | 5.5 | -  |  | B072<br>~<br>B078 |
|  | RDMW 1604MOT<br><i>H</i> |                 | ✓      | ✓      | ✓      | ✓      | 16              | - | 4.76                         | - | 5.5 | -  |                                                                                       |                   |
|  | RPMT 08T2MOE<br><i>M</i> |                 | ✓      | ✓      |        |        | 8               | - | 2.78                         | - | 3.2 | -  |  | B079<br>~<br>B082 |
|  | RPMT 08T2MOT<br><i>M</i> |                 | ✓      | ✓      |        |        | 8               | - | 2.78                         | - | 3.2 | -  |                                                                                       |                   |
|  | RPMW 1003MOE<br><i>M</i> |                 | ✓      | ✓      |        |        | 10              | - | 3.18                         | - | 4.6 | -  |  | B079<br>~<br>B082 |
|  | RPMW 1003MOT<br><i>M</i> | ✓               | ✓      | ✓      |        |        | 10              | - | 3.18                         | - | 4.6 | -  |                                                                                       |                   |

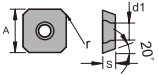
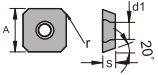
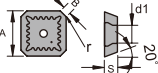
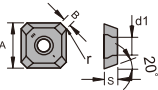
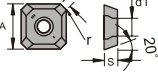
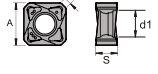
\*Customize geometries and grades available

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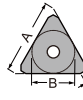
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|                                                                                     | P                            | Steel           | ◎      | ◎      | ◎      | ○      | ○               |   | ◎ 1st choice    ○ 2st choice |    |     |    |                                                                                       |                   |
|-------------------------------------------------------------------------------------|------------------------------|-----------------|--------|--------|--------|--------|-----------------|---|------------------------------|----|-----|----|---------------------------------------------------------------------------------------|-------------------|
|                                                                                     | M                            | Stainless steel | ○      | ○      | ○      | ◎      | ◎               |   |                              |    |     |    |                                                                                       |                   |
|                                                                                     | K                            | Cast iron       | ◎      | ○      | ○      | ○      | ○               |   |                              |    |     |    |                                                                                       |                   |
| Inserts                                                                             | Designation                  | Grade           |        |        |        |        | Dimensions (mm) |   |                              |    |     |    | Drawing                                                                               | Cutter Page       |
|                                                                                     |                              | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | A               | B | S                            | r  | d1  | t1 |                                                                                       |                   |
|    | RPMT 10T3MOE<br><i>M</i>     |                 | ✓      | ✓      | ✓      | ✓      | 10              | - | 3.97                         | -  | 4.5 | -  |    | B079<br>~<br>B082 |
|    | RPMT 10T3MOT<br><i>M</i>     |                 | ✓      | ✓      |        |        | 10              | - | 3.97                         | -  | 4.3 | -  |                                                                                       |                   |
|    | RPMT 1204MOE<br><i>M</i>     |                 | ✓      | ✓      | ✓      | ✓      | 12              | - | 4.76                         | -  | 4.3 | -  |    | B079<br>~<br>B082 |
|    | RPMT 1204MOT<br><i>M</i>     |                 | ✓      | ✓      | ✓      | ✓      | 12              | - | 4.76                         | -  | 4.3 | -  |                                                                                       |                   |
|   | RPMW 1204MOE<br><i>M</i>     |                 | ✓      | ✓      | ✓      | ✓      | 12              | - | 4.76                         | -  | 4.3 | -  |                                                                                       |                   |
|  | RPMW 1204MOT<br><i>M</i>     |                 | ✓      | ✓      | ✓      | ✓      | 12              | - | 4.76                         | -  | 4.3 | -  |                                                                                       |                   |
|  | SDMT 1205ZDTN-MG<br><i>H</i> |                 | ✓      | ✓      |        |        | 12.7            | - | 5.56                         | 15 | 4.6 | -  |  | B093<br>~<br>B094 |
|  | SDMT 1205ZDTN-RG<br><i>H</i> |                 | ✓      | ✓      |        |        | 12.7            | - | 5.56                         | 15 | 4.6 | -  |                                                                                       |                   |
|  | SDNW 1205ZDTN-RG<br><i>H</i> |                 | ✓      | ✓      | ✓      | ✓      | 12.7            | - | 5.56                         | 15 | 4.6 | -  |                                                                                       |                   |

\*Customize geometries and grades available

|                                                                                    | P                                                      | Steel           | ◎      | ◎      | ◎      | ○      | ○    | ◎ 1st choice    ○ 2st choice |     |      |     |     |    |                                                                                       |                   |
|------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------|--------|--------|--------|--------|------|------------------------------|-----|------|-----|-----|----|---------------------------------------------------------------------------------------|-------------------|
|                                                                                    | M                                                      | Stainless steel | ○      | ○      | ○      | ◎      | ◎    |                              |     |      |     |     |    |                                                                                       |                   |
|                                                                                    | K                                                      | Cast iron       | ◎      | ○      | ○      | ○      | ○    |                              |     |      |     |     |    |                                                                                       |                   |
| Inserts                                                                            | Designation                                            | Grade           |        |        |        |        |      | Dimensions (mm)              |     |      |     |     |    | Drawing                                                                               | Cutter Page       |
|                                                                                    |                                                        | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | CX03 | A                            | B   | S    | r   | d1  | t1 |                                                                                       |                   |
|    | <b>SEKT 1204AFTN-RG</b><br><i>L</i>                    |                 | ✓      | ✓      | ✓      | ✓      |      | 12                           | -   | 4.76 | 0.8 | 5.5 | -  |    | B070<br>~<br>B071 |
|    | <b>SEKW 1204AFEN</b><br><i>K</i>                       |                 | ✓      | ✓      | ✓      | ✓      |      | 12                           | -   | 4.76 | 0.8 | 5.5 | -  |    |                   |
|    | <b>SEMR 1203AFSN-RG</b><br><i>T</i>                    |                 | ✓      | ✓      |        |        |      | 12.7                         | 1.6 | 3.18 | 1   | 2   | -  |    | -                 |
|    | <b>SEMT 13T3AGEN</b><br><i>M</i>                       |                 | ✓      | ✓      | ✓      | ✓      |      | 13.4                         | 1.9 | 3.97 | 1.5 | 4.2 | -  |  | B066<br>~<br>B067 |
|   | <b>SEMT 13T3AGSN-MG</b><br><i>M</i>                    |                 | ✓      | ✓      | ✓      | ✓      |      | 13.4                         | 1.9 | 3.97 | 1.5 | 4.2 | -  |                                                                                       |                   |
|  | <b>SEMT 13T3AGSN-RG</b><br><i>M</i>                    |                 | ✓      | ✓      | ✓      | ✓      |      | 13.4                         | 1.9 | 3.97 | 1.5 | 4.2 | -  |                                                                                       |                   |
|  | <b>SEMT 13T3AGSN-HG</b><br><i>S</i>                    |                 | ✓      | ✓      | ✓      | ✓      |      | 13.4                         | 1.9 | 3.97 | 1.5 | 4.2 | -  |                                                                                       |                   |
|  | <b>SEET 13T3AGFN-AL</b><br><i>M</i>                    |                 |        |        |        |        | ✓    | 13.4                         | 1.9 | 3.97 | 1.5 | 4.2 | -  |  | B066<br>~<br>B067 |
|  | <i>Double Sided</i><br><b>SNMX 1205-RG</b><br><i>W</i> | ✓               |        | ✓      | ✓      |        |      | 12.7                         | 1.5 | 6.4  | -   | 6   | -  |  | B064<br>~<br>B065 |
|  | <i>Double Sided</i><br><b>SNMX 1205-MG</b><br><i>W</i> | ✓               |        | ✓      | ✓      |        |      | 12.7                         | 1.5 | 6.4  | -   | 6   | -  |                                                                                       |                   |

\*Customize geometries and grades available

|                                                                                     | P                                  | Steel           | ◎      | ◎      | ◎      | ○      | ○               | ◎ 1st choice    ○ 2nd choice |      |     |      |       |                                                                                       |                                            |
|-------------------------------------------------------------------------------------|------------------------------------|-----------------|--------|--------|--------|--------|-----------------|------------------------------|------|-----|------|-------|---------------------------------------------------------------------------------------|--------------------------------------------|
|                                                                                     | M                                  | Stainless steel | ○      | ○      | ○      | ◎      | ◎               |                              |      |     |      |       |                                                                                       |                                            |
|                                                                                     | K                                  | Cast iron       | ◎      | ○      | ○      | ○      | ○               |                              |      |     |      |       |                                                                                       |                                            |
| Inserts                                                                             | Designation                        | Grade           |        |        |        |        | Dimensions (mm) |                              |      |     |      |       | Drawing                                                                               | Cutter Page                                |
|                                                                                     |                                    | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | A               | B                            | S    | r   | d1   | t1    |                                                                                       |                                            |
|    | <b>SPMG 050204-MG</b><br><i>T</i>  |                 | ✓      | ✓      |        |        | 5.00            | -                            | 2.38 | 0.4 | 2.30 | -     |    | B059<br>~<br>B061<br><br>B097<br>~<br>B104 |
|    | <b>SPMG 060204-MG</b><br><i>T</i>  |                 | ✓      | ✓      |        |        | 6.00            | -                            | 2.38 | 0.4 | 2.65 | -     |                                                                                       |                                            |
|    | <b>SPMG 07T308-MG</b><br><i>T</i>  |                 | ✓      | ✓      | ✓      | ✓      | 7.94            | -                            | 3.97 | 0.8 | 2.85 | -     |                                                                                       |                                            |
|    | <b>SPMG 090408-MG</b><br><i>T</i>  |                 | ✓      | ✓      | ✓      | ✓      | 9.80            | -                            | 4.3  | 0.8 | 4.05 | -     |                                                                                       |                                            |
|   | <b>SPMG 110408-MG</b><br><i>T</i>  |                 | ✓      | ✓      | ✓      | ✓      | 11.50           | -                            | 4.8  | 0.8 | 4.45 | -     |                                                                                       |                                            |
|  | <b>SPMN 120308</b>                 |                 | ✓      | ✓      |        |        | 12.7            | -                            | 3.18 | 0.8 | 2    | -     |  | -                                          |
|  | <b>TPKR 1603PPR-RG</b><br><i>I</i> |                 | ✓      | ✓      | ✓      | ✓      | 16.5            | 9.525                        | 3.1  | -   | 2.2  | 1.423 |  | -                                          |
|  | <b>W390 11T308-MG</b><br><i>S</i>  | ✓               | ✓      | ✓      |        |        | 11              | 6.9                          | 3.59 | 0.8 | 2.8  | -     |  | B052<br>~<br>B055                          |

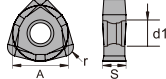
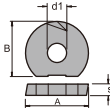
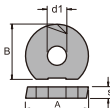
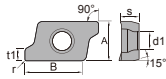
\*Customize geometries and grades available

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|                                                                                    | P                   | Steel           | ◎      | ◎      | ◎      | ○      | ○               |      | ◎ 1st choice    ○ 2st choice |     |     |    |                                                                                       |             |
|------------------------------------------------------------------------------------|---------------------|-----------------|--------|--------|--------|--------|-----------------|------|------------------------------|-----|-----|----|---------------------------------------------------------------------------------------|-------------|
|                                                                                    | M                   | Stainless steel | ○      | ○      | ○      | ◎      | ◎               |      |                              |     |     |    |                                                                                       |             |
|                                                                                    | K                   | Cast iron       | ◎      | ○      | ○      | ○      | ○               |      |                              |     |     |    |                                                                                       |             |
| Inserts                                                                            | Designation         | Grade           |        |        |        |        | Dimensions (mm) |      |                              |     |     |    | Drawing                                                                               | Cutter Page |
|                                                                                    |                     | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | A               | B    | S                            | r   | d1  | t1 |                                                                                       |             |
|    | WCMT 030208-MM<br>C |                 | ✓      | ✓      |        |        | 3.8             | 5.56 | 2.38                         | 0.8 | 2.8 | -  |    | -           |
|    | WCMT 040208-MM<br>C |                 | ✓      | ✓      |        |        | 4.3             | 6.35 | 2.38                         | 0.8 | 3.0 | -  |                                                                                       | -           |
|    | WCMT 050308-MM<br>C |                 | ✓      | ✓      |        |        | 5.4             | 7.94 | 3.18                         | 0.8 | 3.4 | -  |                                                                                       | -           |
|    | WCMT 06T308-MM<br>C |                 | ✓      | ✓      | ✓      | ✓      | 6.5             | 9.53 | 3.97                         | 0.8 | 4.0 | -  |                                                                                       | -           |
|   | WCMT 080412-MM<br>C |                 | ✓      | ✓      | ✓      | ✓      | 8.7             | 12.7 | 4.76                         | 1.2 | 4.3 | -  |                                                                                       | -           |
|  | WCMT 030208-MG<br>S |                 |        | ✓      | ✓      |        | 3.8             | 5.56 | 2.38                         | 0.8 | 2.8 | -  |  | -           |
|  | WCMT 040208-MG<br>S |                 |        | ✓      | ✓      |        | 4.3             | 6.35 | 2.38                         | 0.8 | 3.0 | -  |                                                                                       | -           |
|  | WCMT 050308-MG<br>S |                 |        | ✓      | ✓      |        | 5.4             | 7.94 | 3.18                         | 0.8 | 3.4 | -  |                                                                                       | -           |
|  | WCMT 06T308-MG<br>S |                 |        | ✓      | ✓      |        | 6.5             | 9.53 | 3.97                         | 0.8 | 4.0 | -  |                                                                                       | -           |
|  | WCMT 080412-MG<br>S |                 |        | ✓      | ✓      |        | 8.7             | 12.7 | 4.76                         | 1.2 | 4.3 | -  |                                                                                       | -           |

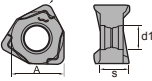
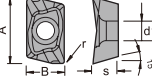
\*Customize geometries and grades available

|                                                                                    | P                                                 | Steel           | ◎      | ◎      | ◎      | ○      | ○      | ○               | ◎    | ◎ 1st choice    ○ 2st choice |     |     |     |                                                                                       |                   |
|------------------------------------------------------------------------------------|---------------------------------------------------|-----------------|--------|--------|--------|--------|--------|-----------------|------|------------------------------|-----|-----|-----|---------------------------------------------------------------------------------------|-------------------|
|                                                                                    | M                                                 | Stainless steel | ○      | ○      | ○      | ◎      | ◎      | ◎               |      |                              |     |     |     |                                                                                       |                   |
|                                                                                    | K                                                 | Cast iron       | ◎      | ○      | ○      | ○      | ○      | ◎               |      |                              |     |     |     |                                                                                       |                   |
| Inserts                                                                            | Designation                                       | Grade           |        |        |        |        |        | Dimensions (mm) |      |                              |     |     |     | Drawing                                                                               | Cutter Page       |
|                                                                                    |                                                   | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | CX11NS | A               | B    | S                            | r   | d1  | t1  |                                                                                       |                   |
|    | <i>Double Sided</i><br><b>WNTM 09T316-RG</b><br>K | ✓               |        | ✓      | ✓      |        |        | 9.525           | -    | 3.97                         | 1.6 | 3.6 | -   |    | B090<br>~<br>B092 |
|    | <b>WP32 16-RG</b><br>W                            |                 |        |        |        |        | ✓      | 16              | 14.0 | 3                            | -   | 5   | -   |    | B083<br>~<br>B084 |
|    | <b>WP32 20-RG</b><br>W                            |                 |        |        |        |        | ✓      | 20              | 16.0 | 3                            | -   | 5   | -   |                                                                                       |                   |
|    | <b>WP32 25-RG</b><br>W                            |                 |        |        |        |        | ✓      | 25              | 21.5 | 4                            | -   | 6   | -   |                                                                                       |                   |
|    | <b>WP32 16-SG</b><br>W                            |                 |        |        |        |        | ✓      | 16              | 14.0 | 3                            | -   | 5   | -   |  | B083<br>~<br>B084 |
|  | <b>WP32 20-SG</b><br>W                            |                 |        |        |        |        | ✓      | 20              | 16.0 | 3                            | -   | 5   | -   |                                                                                       |                   |
|  | <b>WP32 25-SG</b><br>W                            |                 |        |        |        |        | ✓      | 25              | 21.5 | 4                            | -   | 6   | -   |                                                                                       |                   |
|  | <b>WRT 070204-RG</b><br>S                         | ✓               | ✓      | ✓      |        |        |        | 4.30            | 6.4  | 2.38                         | 0.4 | 2.2 | 1.3 |  | B056              |
|  | <b>WRT 100308-RG</b><br>S                         | ✓               | ✓      | ✓      |        |        |        | 6.35            | 9.3  | 3.4                          | 0.8 | 2.9 | 1.8 |                                                                                       | B057<br>~<br>B058 |

\*Customize geometries and grades available

Index

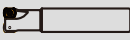
銑刀片規格總覽

|                                                                                   | P                                          | Steel           | ◎      | ◎      | ◎      | ○      | ○      | ◎               |      | ◎ 1st choice    ○ 2st choice |     |      |    |                                                                                     |              |
|-----------------------------------------------------------------------------------|--------------------------------------------|-----------------|--------|--------|--------|--------|--------|-----------------|------|------------------------------|-----|------|----|-------------------------------------------------------------------------------------|--------------|
|                                                                                   | M                                          | Stainless steel | ○      | ○      | ○      | ◎      | ◎      | ◎               |      |                              |     |      |    |                                                                                     |              |
|                                                                                   | K                                          | Cast iron       | ◎      | ○      | ○      | ○      | ○      | ◎               |      |                              |     |      |    |                                                                                     |              |
| Inserts                                                                           | Designation                                | Grade           |        |        |        |        |        | Dimensions (mm) |      |                              |     |      |    | Drawing                                                                             | Cutter Page  |
|                                                                                   |                                            | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | CX11NS | A               | B    | S                            | r   | d1   | t1 |                                                                                     |              |
|   | Double Sided<br><b>XNMX 040308-MG</b><br>S | ✓               |        | ✓      |        |        |        | 6.7             | -    | 3.285                        | 0.8 | 3.15 | -  |  | B018<br>B021 |
|   | Double Sided<br><b>XNMX 040308-RG</b><br>S | ✓               |        | ✓      |        |        |        | 6.7             | -    | 3.285                        | 0.8 | 3.15 | -  |                                                                                     | B020<br>B021 |
|   | Double Sided<br><b>XNMX 080608-MG</b><br>S | ✓               |        | ✓      | ✓      |        |        | 12.53           | -    | 6.5                          | 0.8 | 4.5  | -  |                                                                                     |              |
|   | <b>XOMT 060204-MG</b><br>S                 | ✓               | ✓      | ✓      |        |        |        | 7               | 4.09 | 2.45                         | 0.4 | 2    | -  |  | B028<br>B029 |
|  | <b>XOMT 060208-MG</b><br>S                 | ✓               | ✓      | ✓      |        |        |        | 7               | 4.09 | 2.45                         | 0.8 | 2    | -  |                                                                                     |              |

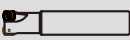
\*Customize geometries and grades available

Milling Inserts & Tools

### Shoulder Milling 方肩銑削

| Cutter Series | Cutter Range                                                                      |                                                                                   |                                                                                   | Inserts               | Page     |
|---------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------|----------|
|               |  |  |  |                       |          |
| <b>CXXN</b>   | Ø20 ~ Ø32                                                                         | Ø50 ~ Ø63                                                                         | Ø20 ~ Ø26                                                                         | XNMX0403 (DoubleSide) | B018~019 |
|               | -                                                                                 | Ø50 ~ Ø160                                                                        | -                                                                                 | XNMX0806 (DoubleSide) | B020     |
| <b>3P10</b>   | Ø20 ~ Ø26                                                                         | Ø50 ~ Ø63                                                                         | Ø21 ~ Ø33                                                                         | 3PMX1004              | B024~025 |
| <b>XO06</b>   | Ø10 ~ Ø17                                                                         | -                                                                                 | -                                                                                 | XOMT0602              | B028     |
| <b>AP10</b>   | Ø16 ~ Ø40                                                                         | Ø50 ~ Ø63                                                                         | -                                                                                 | APMT1035              | B030     |
| <b>BAP3</b>   | Ø16 ~ Ø50                                                                         | Ø40 ~ Ø100                                                                        | Ø16 ~ Ø33                                                                         | APMT1135              | B032~034 |
| <b>BAP4</b>   | Ø25 ~ Ø40                                                                         | Ø40 ~ Ø160                                                                        | Ø25 ~ Ø35                                                                         | APMT1604              | B035~037 |
| <b>APK3</b>   | Ø16 ~ Ø21                                                                         | Ø50 ~ Ø80                                                                         | Ø16 ~ Ø40                                                                         | APKT1003              | B039~040 |
| <b>APK4</b>   | Ø25 ~ Ø40                                                                         | Ø100 ~ Ø160                                                                       | Ø25 ~ Ø40                                                                         | APKT1604              | B041~043 |
| <b>WEX2</b>   | Ø16 ~ Ø35                                                                         | Ø50 ~ Ø100                                                                        | -                                                                                 | AXMT1235              | B045~046 |
| <b>WEX7</b>   | Ø25 ~ Ø40                                                                         | Ø50 ~ Ø160                                                                        | -                                                                                 | AXMT1705              | B047~48  |
| <b>JD15</b>   | Ø25 ~ Ø32                                                                         | -                                                                                 | -                                                                                 | JDMT1505              | B050     |
| <b>R390</b>   | Ø16 ~ Ø40                                                                         | Ø50 ~ Ø100                                                                        | Ø16 ~ Ø40                                                                         | W39011T3              | B052~54  |
| <b>RT07</b>   | Ø11 ~ Ø13                                                                         | -                                                                                 | Ø10 ~ Ø13                                                                         | WRT0702               | B056     |
| <b>RT10</b>   | Ø17 ~ Ø35                                                                         | -                                                                                 | Ø17 ~ Ø35                                                                         | WRT1003               | B057     |
| <b>SPE</b>    | Ø12 ~ Ø40                                                                         | -                                                                                 | -                                                                                 | SPMG...               | B059     |
| <b>SPF</b>    | -                                                                                 | Ø40 ~ Ø100                                                                        | -                                                                                 | SPMG...               | B060     |

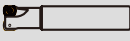
### Face Milling 平面銑削

| Cutter Series | Cutter Range                                                                        |                                                                                     |                                                                                     | Inserts               | Page |
|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------|------|
|               |  |  |  |                       |      |
| <b>CXSN</b>   | -                                                                                   | Ø50 ~ Ø200                                                                          | -                                                                                   | SNMX1205 (DoubleSide) | B064 |
| <b>CXON</b>   | -                                                                                   | Ø52.9 ~ Ø102.9                                                                      | -                                                                                   | ONMX0505 (DoubleSide) | B064 |
| <b>ASX3</b>   | -                                                                                   | Ø50 ~ Ø315                                                                          | -                                                                                   | SEMT13T3              | B066 |
| <b>OF05</b>   | -                                                                                   | Ø50 ~ Ø125                                                                          | -                                                                                   | OFMT05T3              | B068 |
| <b>SE45</b>   | Ø32 ~ Ø63                                                                           | Ø50 ~ Ø250                                                                          | -                                                                                   | SEKT1204              | B070 |
|               |                                                                                     |                                                                                     |                                                                                     | SEKW1204              |      |

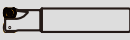
Copy Milling 仿形銑削

| Cutter Series | Cutter Range                                                                      |                                                                                   |                                                                                   | Inserts  | Page     |
|---------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------|----------|
|               |  |  |  |          |          |
| ARD           | Ø10 ~ Ø16                                                                         | -                                                                                 | Ø12 ~ Ø16                                                                         | RDKW0501 | B072~074 |
|               | Ø16 ~ Ø25                                                                         | -                                                                                 | Ø16 ~ Ø25                                                                         | RDKW0702 | B072~074 |
|               | Ø25 ~ Ø32                                                                         | Ø50 ~ Ø63                                                                         | Ø25 ~ Ø42                                                                         | RDMT10T3 | B072~074 |
|               | Ø25 ~ Ø32                                                                         | Ø50 ~ Ø63                                                                         | Ø25 ~ Ø42                                                                         | RDMW10T3 | B072~074 |
|               | Ø32 ~ Ø40                                                                         | Ø50 ~ Ø100                                                                        | -                                                                                 | RDMT1204 | B072~073 |
|               | Ø32 ~ Ø40                                                                         | Ø50 ~ Ø100                                                                        | -                                                                                 | RDMW1204 | B072~073 |
|               | -                                                                                 | Ø63 ~ Ø125                                                                        | -                                                                                 | RDMT1604 | B073     |
|               | -                                                                                 | Ø63 ~ Ø125                                                                        | -                                                                                 | RDMW1604 | B073     |
| FRD           | Ø20 ~ Ø35                                                                         | Ø50 ~ Ø60                                                                         | Ø20 ~ Ø35                                                                         | RDMT1003 | B075~076 |
|               | Ø20 ~ Ø35                                                                         | Ø50 ~ Ø60                                                                         | Ø20 ~ Ø35                                                                         | RDMX1003 | B075~076 |
| BRP           | Ø12 ~ Ø20                                                                         | Ø40 ~ Ø50                                                                         | -                                                                                 | RPMT08T2 | B079~080 |
|               | Ø25 ~ Ø35                                                                         | Ø40 ~ Ø50                                                                         | -                                                                                 | RPMT10T3 | B079~080 |
|               | Ø32 ~ Ø50                                                                         | Ø50 ~ Ø80                                                                         | -                                                                                 | RPMT1204 | B079~080 |
|               | Ø32 ~ Ø50                                                                         | Ø50 ~ Ø80                                                                         | -                                                                                 | RPMW1204 | B079~080 |
| WF21          | Ø16                                                                               | -                                                                                 | Ø16                                                                               | WP3216   | B083     |
|               | Ø20                                                                               | -                                                                                 | Ø20                                                                               | WP3220   | B083     |
|               | Ø25                                                                               | -                                                                                 | Ø25                                                                               | WP3225   | B083     |

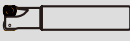
High Feed Face Milling 高進給平面銑削

| Cutter Series | Cutter Range                                                                        |                                                                                     |                                                                                     | Inserts              | Page     |
|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------|----------|
|               |  |  |  |                      |          |
| CXBN          | Ø15 ~ Ø32                                                                           | Ø40 ~ Ø63                                                                           | Ø16 ~ Ø35                                                                           | BNMX0603(DoubleSide) | B086~087 |
| CXWN          | Ø25 ~ Ø40                                                                           | Ø50 ~ Ø80                                                                           | Ø25                                                                                 | WNMX09T3(DoubleSide) | B090~091 |
| ASRF          | -                                                                                   | Ø50 ~ Ø80                                                                           | -                                                                                   | SDNW1205             | B093     |
|               |                                                                                     |                                                                                     |                                                                                     | SDMT1205             |          |
| AJX12         | Ø30 ~ Ø50                                                                           | Ø50 ~ Ø80                                                                           | -                                                                                   | JDMW1204             | B095     |

### Helical Milling 玉米銑削

| Cutter Series | Cutter Range                                                                      |                                                                                   |                                                                                   | Inserts | Page |
|---------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------|------|
|               |  |  |  |         |      |
| <b>SPH</b>    | Ø16 ~ Ø40                                                                         | -                                                                                 | -                                                                                 | SPMG... | B097 |

### Disc Milling 三面刃銑削

| Cutter Series | Cutter Range                                                                      |                                                                                   |                                                                                   | Inserts | Page |
|---------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------|------|
|               |  |  |  |         |      |
| <b>SPT</b>    | Ø19 ~ Ø95                                                                         | -                                                                                 | -                                                                                 | SPMG... | B98  |
| <b>SPDM</b>   | -                                                                                 | Ø80 ~ Ø200                                                                        | -                                                                                 | SPMG... | B99  |
| <b>SPDI</b>   | -                                                                                 | Ø80 ~ Ø160                                                                        | -                                                                                 | SPMG... | B100 |
| <b>SPD</b>    | -                                                                                 | Ø80 ~ Ø200                                                                        | -                                                                                 | SPMG... | B101 |

### Chamfer Milling 倒角銑削

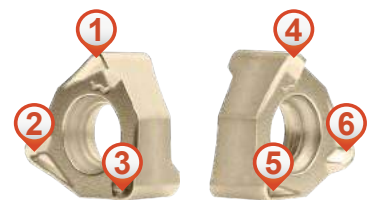
| Cutter Series | Cutter Range                                                                        |                                                                                     |                                                                                     | Inserts | Page |
|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------|------|
|               |  |  |  |         |      |
| <b>SPC</b>    | Ø11 ~ Ø50                                                                           | -                                                                                   | -                                                                                   | SPMG... | B102 |



## Economical solution in various end-milling applications!!!

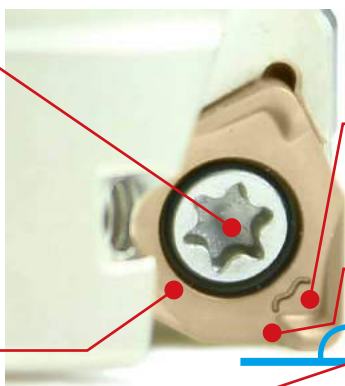
## 經濟多元的端銑解決方案

- CXXN is the best solution with the economy of six cutting edges while providing the highest performance.
- Available in multiple mounting configurations: Endmill, shank and face mill type.
- Especially suited for small and medium sized milling machines.



**6 cutting edges**

- Single center lock screw for easy and strong clamping force.



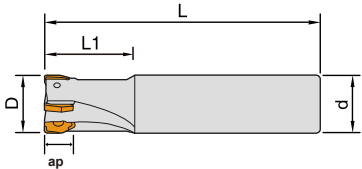
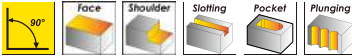
- Suitable for different materials by optimized geometries.

- Chip evacuation improvement design.
- Reduction of cutting load during machining.
- Special flat design for surface roughness improvement.
- Decreasing cutting force during high feed machining.

- True 90° square shoulder angle, one milling operation without mismatch on machining walls.

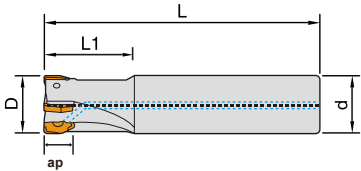
- ◆ Great performance ensured at large depth of cutting operations due to strong cutting edge and low cutting resistance.
- ◆ Innovative curve cutting edge design ensure ideal 90 degree cutting.
- ◆ SKD11 tool steel is used for best rigidity and performance.
- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.

 **CXXNE**



| Order No.        | D  | L1 | L   | d  | T | ap | Inserts  |  Screw |  Wrench |
|------------------|----|----|-----|----|---|----|----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| ICXXNE03-0200150 | 20 | 40 | 150 | 20 | 3 | 4  | XNMX0403 | TS2512                                                                                    | TK08                                                                                       |
| ICXXNE04-0250150 | 25 | 40 | 150 | 25 | 4 | 4  |          |                                                                                           |                                                                                            |
| ICXXNE05-0320200 | 32 | 45 | 200 | 32 | 5 | 4  |          |                                                                                           |                                                                                            |

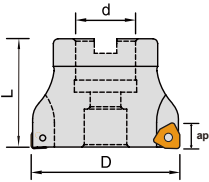
 **CXXNE (with Coolant Hole)**



| Order No.        | D  | L1 | L   | d  | T | ap | Inserts  |  Screw |  Wrench |
|------------------|----|----|-----|----|---|----|----------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| ICXXNE03W0200110 | 20 | 28 | 110 | 20 | 3 | 4  | XNMX0403 | MS2506E                                                                                     | TK08                                                                                         |
| ICXXNE03W0200150 | 20 | 28 | 150 | 20 | 3 | 4  |          |                                                                                             |                                                                                              |
| ICXXNE04W0250120 | 25 | 28 | 120 | 25 | 4 | 4  |          |                                                                                             |                                                                                              |
| ICXXNE04W0250170 | 25 | 28 | 170 | 25 | 4 | 4  |          |                                                                                             |                                                                                              |
| ICXXNE05W0320130 | 32 | 30 | 130 | 30 | 5 | 4  |          |                                                                                             |                                                                                              |
| ICXXNE05W0320195 | 32 | 30 | 195 | 30 | 5 | 4  |          |                                                                                             |                                                                                              |

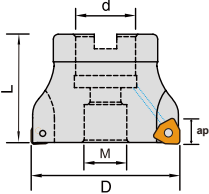
Customize available.

**CXXNF**



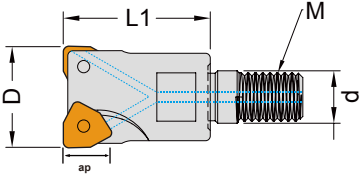
| Order No.        | D  | L  | d    | T | ap | Inserts  | Screw  | Wrench |
|------------------|----|----|------|---|----|----------|--------|--------|
| ICXXNF06-0500220 | 50 | 50 | 22   | 6 | 4  | XNMX0403 | TS2512 | TK08   |
| ICXXNF07-0630220 | 63 | 50 | 22   | 7 | 4  |          |        |        |
| ICXXNF07-0630254 | 63 | 50 | 25.4 | 7 | 4  |          |        |        |

**CXNMF (with Coolant Hole)**



| Order No.        | D  | L  | d  | M   | T | ap | Inserts  | Screw  | Wrench |
|------------------|----|----|----|-----|---|----|----------|--------|--------|
| ICXXNF07W0400160 | 40 | 40 | 16 | 8.5 | 7 | 4  | XNMX0403 | TS2515 | TK08   |
| ICXXNF09W0500220 | 50 | 40 | 22 | 11  | 9 | 4  |          |        |        |

**CXXNM (with Coolant Hole)**

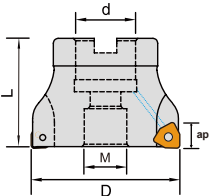


| Order No.        | D  | L1 | d    | M   | T | ap | Inserts  | Screw  | Wrench |
|------------------|----|----|------|-----|---|----|----------|--------|--------|
| ICXXNM03W0200100 | 20 | 28 | 10.5 | M10 | 3 | 4  | XNMX0403 | TS2512 | TK08   |
| ICXXNM03W0210100 | 21 | 44 | 10.5 | M10 | 3 | 4  |          |        |        |
| ICXXNM04W0250120 | 25 | 30 | 12.5 | M12 | 4 | 4  |          |        |        |
| ICXXNM04W0260120 | 26 | 49 | 12.5 | M12 | 4 | 4  |          |        |        |

Customize available.

 **CXXNF** (with Coolant Hole)





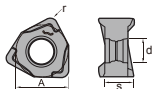
| Order No.        | D   | L  | d  | M  | T  | ap | Inserts  |  Screw |  Wrench |
|------------------|-----|----|----|----|----|----|----------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| ICXX8F04W0500220 | 50  | 40 | 22 | 11 | 4  | 7  | XNMX0806 | TS4006                                                                                   | TK15                                                                                       |
| ICXX8F05W0500220 | 50  | 40 | 22 | 11 | 5  | 7  |          |                                                                                          |                                                                                            |
| ICXX8F06W0630220 | 63  | 40 | 22 | 11 | 6  | 7  |          |                                                                                          |                                                                                            |
| ICXX8F07W0630220 | 63  | 40 | 22 | 11 | 7  | 7  |          |                                                                                          |                                                                                            |
| ICXX8F07W0800270 | 80  | 50 | 27 | 13 | 7  | 7  |          |                                                                                          |                                                                                            |
| ICXX8F09W0800270 | 80  | 50 | 27 | 13 | 9  | 7  |          |                                                                                          |                                                                                            |
| ICXX8F08W1000320 | 100 | 50 | 32 | 45 | 8  | 7  |          |                                                                                          |                                                                                            |
| ICXX8F11W1000320 | 100 | 50 | 32 | 45 | 11 | 7  |          |                                                                                          |                                                                                            |
| ICXX8F11W1250400 | 125 | 63 | 40 | 53 | 11 | 7  |          |                                                                                          |                                                                                            |
| ICXX8F12W1600400 | 160 | 63 | 40 | 55 | 12 | 7  |          |                                                                                          |                                                                                            |

Customize available.



- ◆ Double sided design, total 6 cutting corners.
- ◆ Suitable for different materials by optimized geometries.
- ◆ True 90° square shoulder angle, one milling operation without mismatch on machining walls.

Specification

|                                                                                   | P              | Steel           | ◎      | ◎      | ◎      | ○      | ○ |                 | ◎ 1st choice    ○ 2st choice |       |     |      |    |                                                                                     |  |
|-----------------------------------------------------------------------------------|----------------|-----------------|--------|--------|--------|--------|---|-----------------|------------------------------|-------|-----|------|----|-------------------------------------------------------------------------------------|--|
|                                                                                   | M              | Stainless steel | ○      | ○      | ○      | ◎      | ◎ |                 |                              |       |     |      |    |                                                                                     |  |
|                                                                                   | K              | Cast iron       | ◎      | ○      | ○      | ○      | ○ |                 |                              |       |     |      |    |                                                                                     |  |
| Inserts                                                                           | Designation    | Grade           |        |        |        |        |   | Dimensions (mm) |                              |       |     |      |    | Drawing                                                                             |  |
|                                                                                   |                | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA |   | A               | B                            | S     | r   | d1   | t1 |                                                                                     |  |
|  | XNMX 040308-MG | ✓               |        | ✓      |        |        |   | 6.7             | -                            | 3.285 | 0.8 | 3.15 | -  |  |  |
|  | XNMX 040308-RG | ✓               |        | ✓      |        |        |   | 6.7             | -                            | 3.285 | 0.8 | 3.15 | -  |                                                                                     |  |
|  | XNMX 080608-MG | ✓               |        | ✓      | ✓      |        |   | 12.53           | -                            | 6.5   | 0.8 | 4.5  | -  |                                                                                     |  |

Recommended Cutting Conditions

for XNMX0403

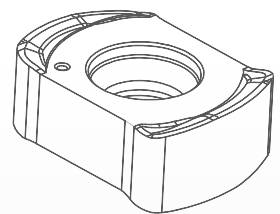
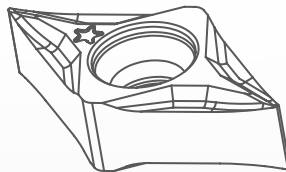
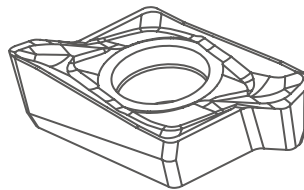
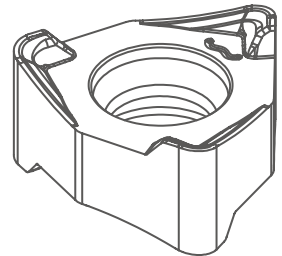
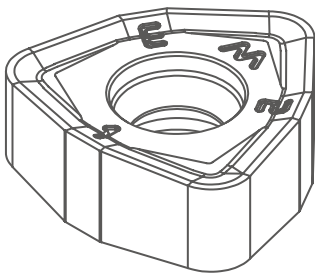
| Working Material        | Vc       | fz          | ap    |
|-------------------------|----------|-------------|-------|
| Carbon Steel (HB85-225) | 80 ~ 220 | 0.10 ~ 0.16 | ~ 3.0 |
| Stainless 300 Series    | 50 ~ 130 | 0.08 ~ 0.12 | ~ 1.6 |
| Cast Iron (HB140-220)   | 80 ~ 200 | 0.10 ~ 0.16 | ~ 3.0 |

for XNMX0806

| Working Material        | Vc       | fz          | ap    |
|-------------------------|----------|-------------|-------|
| Carbon Steel (HB85-225) | 80 ~ 220 | 0.13 ~ 0.25 | ~ 7.0 |
| Stainless 300 Series    | 50 ~ 130 | 0.10 ~ 0.20 | ~ 4.5 |
| Cast Iron (HB140-220)   | 80 ~ 200 | 0.13 ~ 0.25 | ~ 7.0 |



Endmills · Inserts · Drills

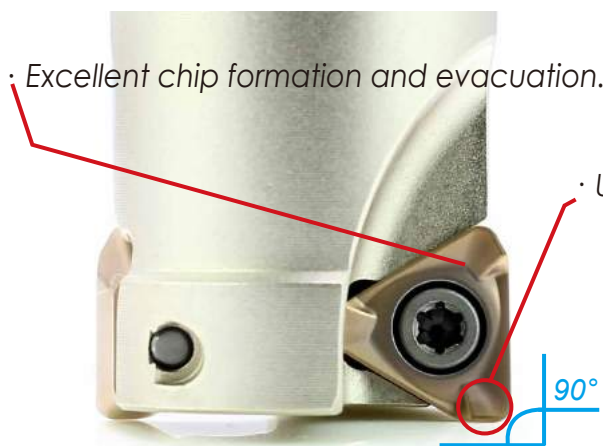


# *Economical Shoulder Milling Cutter*



## *Innovative shoulder milling series with 3 helical cutting edges!!* 創新的三個加工角設計帶來更大的經濟效益

- Ensures productive milling of true 90° shoulders.
- Provide an improved low cost per cutting edge for various milling applications.
- Low cutting force and excellent chip evacuation.



- Excellent chip formation and evacuation.

- Unique geometry design for superb surface finish.



- True 90° square shoulder angle.

- Low cutting force due to large rake angle.

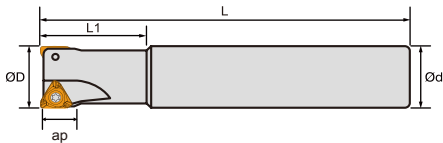
3P10 / 3PMX1004

方肩銑削

- ◆ Economical 3 cutting edges insert.
- ◆ Low cutting force due to large rake angle.
- ◆ Unique geometry design for superb surface finish.
- ◆ SKD11 tool steel is used for best rigidity and performance.
- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.

 **3P10E**



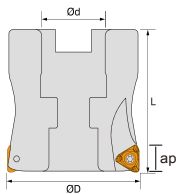


| Order No.        | D  | L1 | L   | d  | T | ap | Inserts     |  Screw |  Wrench |
|------------------|----|----|-----|----|---|----|-------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| I3P10E02-0200130 | 20 | 50 | 130 | 20 | 2 | 7  | 3PMX1004... | TS2517                                                                                    | TK09                                                                                       |
| I3P10E02-0210130 | 21 | 30 | 130 | 20 | 2 | 7  |             |                                                                                           |                                                                                            |
| I3P10E02-0250250 | 25 | 30 | 250 | 25 | 2 | 7  |             |                                                                                           |                                                                                            |
| I3P10E03-0250150 | 25 | 55 | 150 | 25 | 3 | 7  |             |                                                                                           |                                                                                            |
| I3P10E03-0260150 | 26 | 35 | 150 | 25 | 3 | 7  |             |                                                                                           |                                                                                            |

Customize available.

 **3P10F**



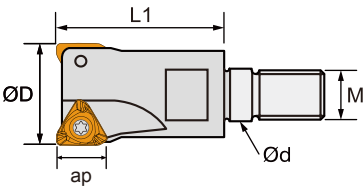


| Order No.        | D  | L  | d  | T | ap | Inserts     |  Screw |  Wrench |
|------------------|----|----|----|---|----|-------------|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| I3P10F07-0500220 | 50 | 50 | 22 | 7 | 7  | 3PMX1004... | TS2517                                                                                     | TK09                                                                                         |
| I3P10F09-0630220 | 63 | 50 | 22 | 9 | 7  |             |                                                                                            |                                                                                              |

Customize available.

 **3P10M**





| Order No.        | D  | L1 | d  | M   | T | ap | Inserts     |  Screw |  Wrench |
|------------------|----|----|----|-----|---|----|-------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| I3P10M02-0210100 | 21 | 35 | 18 | M10 | 2 | 7  | 3PMX1004... | TS3004                                                                                    | TK09                                                                                       |
| I3P10M03-0260120 | 26 | 35 | 21 | M12 | 3 | 7  |             |                                                                                           |                                                                                            |
| I3P10M05-0330160 | 33 | 43 | 29 | M16 | 5 | 7  |             |                                                                                           |                                                                                            |

Customize available.



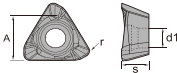
Milling Inserts & Tools

## 3PMX1004

方肩銑削刀片

- ◆ Economical 3 cutting edges insert.
- ◆ Suitable for most materials by one optimized geometry.
- ◆ True 90° square shoulder angle.

### Specification

|                                                                                  | P              | Steel           | ◎      | ◎      | ◎      | ○      | ○               |   | ◎ 1st choice    ○ 2st choice |     |    |    |                                                                                     |  |
|----------------------------------------------------------------------------------|----------------|-----------------|--------|--------|--------|--------|-----------------|---|------------------------------|-----|----|----|-------------------------------------------------------------------------------------|--|
|                                                                                  | M              | Stainless steel | ○      | ○      | ○      | ◎      | ◎               |   |                              |     |    |    |                                                                                     |  |
|                                                                                  | K              | Cast iron       | ◎      | ○      | ○      | ○      | ○               |   |                              |     |    |    |                                                                                     |  |
| Inserts                                                                          | Designation    | Grade           |        |        |        |        | Dimensions (mm) |   |                              |     |    |    | Drawing                                                                             |  |
|                                                                                  |                | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | A               | B | S                            | r   | d1 | t1 |                                                                                     |  |
|  | 3PMX 100408-MG | ✓               |        | ✓      | ✓      |        | 6.9             | - | 4                            | 0.8 | 3  | -  |  |  |

### Recommended Cutting Conditions

| Working Material        | Vc       | fz          | ap    |
|-------------------------|----------|-------------|-------|
| Carbon Steel (HB85-225) | 80 ~ 200 | 0.08 ~ 0.20 | ~ 5.0 |
| Stainless 300 Series    | 50 ~ 110 | 0.05 ~ 0.15 | ~ 3.0 |
| Cast Iron (HB140-220)   | 80 ~ 180 | 0.08 ~ 0.20 | ~ 5.0 |



***Size Does Matter***

Milling Inserts & Tools

## ***Mini Size Cutter In Widely Flexible Applications !!***

### **廣泛靈活的小徑多刃加工**

- *Offering excellent tool life and precision on small to medium work piece.*
- *Optimizes milling properties to reduce heat generation and cutting forces.*
- *Flexibility insures increasing your productivity.*



| Teeth No. |   |
|-----------|---|
| Ø10       | 2 |
| Ø12       | 3 |
| Ø16       | 4 |
| Ø20       | 5 |

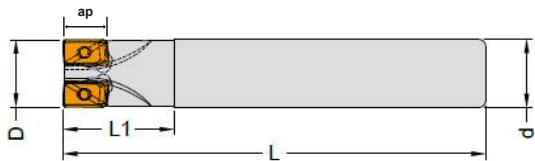
#### ***Advantages:***

- *Low cutting Force.*
- *Low vibration forces.*
- *High performance.*

- ◆ Low Cutting Force – even possible to use by low power and compact machines such as BT30.
- ◆ High Performance – multi blades design achieve higher feed without creating more vibration.
- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.

 **XO06E**





| Order No.        | D  | L1 | L   | d  | T | ap | Inserts    |  Screw |  Wrench |
|------------------|----|----|-----|----|---|----|------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IXO06E02-0100100 | 10 | 20 | 100 | 10 | 2 | 5  | XOMT0602.. | TS1801                                                                                    | TK06                                                                                       |
| IXO06E02-0110100 | 11 | 20 | 100 | 10 | 2 | 5  |            |                                                                                           |                                                                                            |
| IXO06E02-0120100 | 12 | 20 | 100 | 12 | 2 | 5  |            |                                                                                           |                                                                                            |
| IXO06E03-0120100 | 12 | 20 | 100 | 12 | 3 | 5  |            |                                                                                           |                                                                                            |
| IXO06E02-0130100 | 13 | 20 | 100 | 12 | 2 | 5  |            |                                                                                           |                                                                                            |
| IXO06E03-0130100 | 13 | 20 | 100 | 12 | 3 | 5  |            |                                                                                           |                                                                                            |
| IXO06E03-0160100 | 16 | 20 | 100 | 16 | 3 | 5  |            |                                                                                           |                                                                                            |
| IXO06E04-0170120 | 17 | 30 | 120 | 16 | 4 | 5  |            |                                                                                           |                                                                                            |

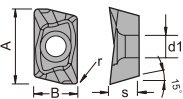
Customize available.

XOMT0602

方肩銑削刀片

- ◆ Multiple blades specification, Ø10/2t, Ø12/3t, Ø16/4t.
- ◆ Low cutting force.
- ◆ Excellent way to replace endmill in roughing situation.
- ◆ Achieve higher feed and performance without creating more vibration.

Specification

|                                                                                  | P              | Steel           | ◎      | ◎      | ◎      | ○      | ○      | ◎               |   | ◎ 1st choice    ○ 2st choice |      |     |    |         |                                                                                     |  |
|----------------------------------------------------------------------------------|----------------|-----------------|--------|--------|--------|--------|--------|-----------------|---|------------------------------|------|-----|----|---------|-------------------------------------------------------------------------------------|--|
|                                                                                  | M              | Stainless steel | ○      | ○      | ○      | ◎      | ◎      | ◎               |   |                              |      |     |    |         |                                                                                     |  |
|                                                                                  | K              | Cast iron       | ◎      | ○      | ○      | ○      | ○      | ◎               |   |                              |      |     |    |         |                                                                                     |  |
| Inserts                                                                          | Designation    | Grade           |        |        |        |        |        | Dimensions (mm) |   |                              |      |     |    | Drawing |                                                                                     |  |
|                                                                                  |                | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | CX11NS | A               | B | S                            | r    | d1  | t1 |         |                                                                                     |  |
|  | XOMT 060204-MG | ✓               | ✓      | ✓      |        |        |        |                 | 7 | 4.09                         | 2.45 | 0.4 | 2  | -       |  |  |
|  | XOMT 060208-MG | ✓               | ✓      | ✓      |        |        |        |                 | 7 | 4.09                         | 2.45 | 0.8 | 2  | -       |                                                                                     |  |

Recommended Cutting Conditions

| Working Material        | Vc       | fz          | ap    |
|-------------------------|----------|-------------|-------|
| Carbon Steel (HB85-225) | 80 ~ 200 | 0.05 ~ 0.13 | ~ 3.0 |
| Stainless 300 Series    | 50 ~ 110 | 0.05 ~ 0.10 | ~ 2.5 |
| Cast Iron (HB140-220)   | 80 ~ 180 | 0.05 ~ 0.13 | ~ 3.0 |

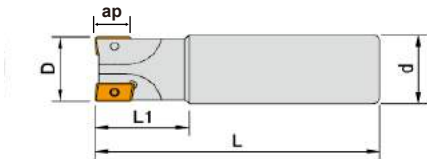
AP10 / APMT1035

方肩銑削

- ◆ Great performance ensured at large depth of cutting operations due to strong cutting edge and low cutting resistance.
- ◆ Innovative curve cutting edge design ensure ideal 90 degree cutting.
- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.

AP10E



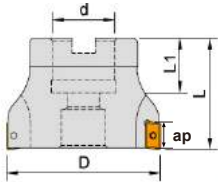


| Order No.        | D  | L1 | L   | d  | T | ap | Inserts  | <br>Screw | <br>Wrench |
|------------------|----|----|-----|----|---|----|----------|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| IAP10E02-0160120 | 16 | 25 | 120 | 16 | 2 | 10 | APMT1035 | TS2502                                                                                       | TK08                                                                                          |
| IAP10E03-0200120 | 20 | 30 | 120 | 20 | 3 | 10 |          |                                                                                              |                                                                                               |
| IAP10E04-0250150 | 25 | 35 | 150 | 25 | 4 | 10 |          | TS2507                                                                                       |                                                                                               |
| IAP10E05-0320150 | 32 | 45 | 150 | 32 | 5 | 10 |          |                                                                                              |                                                                                               |
| IAP10E06-0400135 | 40 | 45 | 135 | 32 | 6 | 10 |          |                                                                                              |                                                                                               |

Customize available.

AP10F



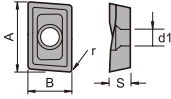


| Order No.        | D  | L  | L1 | d    | T | ap | Inserts  |  Screw |  Wrench |
|------------------|----|----|----|------|---|----|----------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| IAP10F06-0500220 | 50 | 45 | 20 | 22   | 6 | 10 | APMT1035 | TS2507                                                                                      | TK08                                                                                         |
| IAP10F06-0500254 | 50 | 45 | 20 | 25.4 | 6 | 10 |          |                                                                                             |                                                                                              |
| IAP10F06-0630220 | 63 | 45 | 20 | 22   | 6 | 10 |          |                                                                                             |                                                                                              |
| IAP10F06-0630254 | 63 | 45 | 20 | 25.4 | 6 | 10 |          |                                                                                             |                                                                                              |

Customize available.

- ◆ Strong high rake inserts provide smooth cutting action.
- ◆ Lower cutting force.
- ◆ Good chip evacuation.

 **Specification**

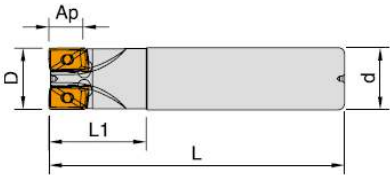
|                                                                                  | P                  | Steel           | ◎      | ◎      | ◎      | ○      | ○               |     | ◎ 1st choice    ○ 2st choice |     |    |    |                                                                                     |  |
|----------------------------------------------------------------------------------|--------------------|-----------------|--------|--------|--------|--------|-----------------|-----|------------------------------|-----|----|----|-------------------------------------------------------------------------------------|--|
|                                                                                  | M                  | Stainless steel | ○      | ○      | ○      | ◎      | ◎               |     |                              |     |    |    |                                                                                     |  |
|                                                                                  | K                  | Cast iron       | ◎      | ○      | ○      | ○      | ○               |     |                              |     |    |    |                                                                                     |  |
| Inserts                                                                          | Designation        | Grade           |        |        |        |        | Dimensions (mm) |     |                              |     |    |    | Drawing                                                                             |  |
|                                                                                  |                    | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | A               | B   | S                            | r   | d1 | t1 |                                                                                     |  |
|  | APMT 103508PDER-RG |                 | ✓      | ✓      | ✓      | ✓      | 10.64           | 6.5 | 3.5                          | 0.8 | 3  | -  |  |  |

 **Recommended Cutting Conditions**

| Working Material        | Vc       | fz          | ap    |
|-------------------------|----------|-------------|-------|
| Carbon Steel (HB85-225) | 80 ~ 200 | 0.08 ~ 0.20 | ~ 7.0 |
| Stainless 300 Series    | 50 ~ 110 | 0.05 ~ 0.15 | ~ 4.0 |
| Cast Iron (HB140-220)   | 80 ~ 180 | 0.08 ~ 0.20 | ~ 7.0 |

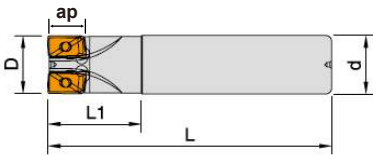
- ◆ Great performance ensured at large depth of cutting operations due to strong cutting edge and low cutting resistance.
- ◆ Innovative curve cutting edge design ensure ideal 90 degree cutting.
- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.

 **BAP3E**



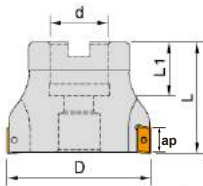
| Order No.        | D  | L1 | L   | d  | T | ap | Inserts   |  Screw |  Wrench |
|------------------|----|----|-----|----|---|----|-----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IBAP3E02-0160100 | 16 | 25 | 100 | 16 | 2 | 11 | AP...1135 | TS2507                                                                                    | TK08                                                                                       |
| IBAP3E02-0170100 | 17 | 30 | 100 | 16 | 2 | 11 |           |                                                                                           |                                                                                            |
| IBAP3E02-0190100 | 19 | 30 | 100 | 16 | 2 | 11 |           |                                                                                           |                                                                                            |
| IBAP3E03-0200100 | 20 | 30 | 100 | 20 | 3 | 11 |           |                                                                                           |                                                                                            |
| IBAP3E03-0210100 | 21 | 30 | 100 | 20 | 3 | 11 |           |                                                                                           |                                                                                            |
| IBAP3E03-0220100 | 22 | 35 | 100 | 20 | 3 | 11 |           |                                                                                           |                                                                                            |
| IBAP3E03-0230100 | 23 | 35 | 100 | 20 | 3 | 11 |           |                                                                                           |                                                                                            |
| IBAP3E03-0240100 | 24 | 35 | 100 | 20 | 3 | 11 |           |                                                                                           |                                                                                            |
| IBAP3E04-0250100 | 25 | 35 | 100 | 25 | 4 | 11 |           |                                                                                           |                                                                                            |
| IBAP3E04-0260120 | 26 | 35 | 120 | 25 | 4 | 11 |           |                                                                                           |                                                                                            |
| IBAP3E04-0270120 | 27 | 40 | 120 | 25 | 4 | 11 |           |                                                                                           |                                                                                            |
| IBAP3E04-0280120 | 28 | 40 | 120 | 25 | 4 | 11 |           |                                                                                           |                                                                                            |
| IBAP3E04-0290120 | 29 | 40 | 120 | 25 | 4 | 11 |           |                                                                                           |                                                                                            |
| IBAP3E04-0300120 | 30 | 40 | 120 | 25 | 4 | 11 |           |                                                                                           |                                                                                            |
| IBAP3E04-0310120 | 31 | 40 | 120 | 25 | 4 | 11 |           |                                                                                           |                                                                                            |
| IBAP3E05-0320120 | 32 | 40 | 120 | 32 | 5 | 11 |           |                                                                                           |                                                                                            |
| IBAP3E05-0330120 | 33 | 40 | 120 | 32 | 5 | 11 |           |                                                                                           |                                                                                            |
| IBAP3E05-0340120 | 34 | 40 | 120 | 32 | 5 | 11 |           |                                                                                           |                                                                                            |
| IBAP3E05-0350120 | 35 | 40 | 120 | 32 | 5 | 11 |           |                                                                                           |                                                                                            |

BAP3E



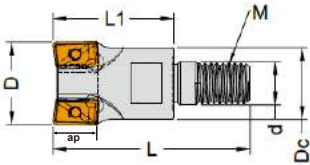
| Order No.        | D  | L1 | L   | d  | T | ap | Inserts   | Screw  | Wrench |
|------------------|----|----|-----|----|---|----|-----------|--------|--------|
| IBAP3E02-0160120 | 16 | 35 | 120 | 16 | 2 | 11 | AP...1135 | TS2507 | TK08   |
| IBAP3E02-0170120 | 17 | 35 | 120 | 16 | 2 | 11 |           |        |        |
| IBAP3E02-0200150 | 20 | 35 | 150 | 20 | 2 | 11 |           |        |        |
| IBAP3E03-0200150 | 20 | 35 | 150 | 20 | 3 | 11 |           |        |        |
| IBAP3E03-0210150 | 21 | 35 | 150 | 20 | 3 | 11 |           |        |        |
| IBAP3E02-0160160 | 16 | 45 | 160 | 16 | 2 | 11 |           |        |        |
| IBAP3E02-0170160 | 17 | 45 | 160 | 16 | 2 | 11 |           |        |        |
| IBAP3E02-0200200 | 20 | 50 | 200 | 20 | 2 | 11 |           |        |        |
| IBAP3E02-0210200 | 21 | 50 | 200 | 20 | 2 | 11 |           |        |        |

BAP3F



| Order No.        | D   | L  | L1    | d     | T  | ap | Inserts   | Screw  | Wrench |
|------------------|-----|----|-------|-------|----|----|-----------|--------|--------|
| IBAP3F05-0400160 | 40  | 40 | 18    | 16    | 5  | 11 | AP...1135 | TS2507 | TK08   |
| IBAP3F06-0500254 | 50  | 45 | 18    | 25.4  | 6  | 11 |           |        |        |
| IBAP3F07-0630220 | 63  | 45 | 22    | 22    | 7  | 11 |           |        |        |
| IBAP3F07-0630254 | 63  | 45 | 22    | 25.4  | 7  | 11 |           |        |        |
| IBAP3F08-0800270 | 80  | 50 | 26    | 27    | 8  | 11 |           |        |        |
| IBAP3F08-0800254 | 80  | 50 | 26    | 25.4  | 8  | 11 |           |        |        |
| IBAP3F10-1000320 | 100 | 50 | 32    | 32    | 10 | 11 |           |        |        |
| IBAP3F10-1000317 | 100 | 50 | 31.75 | 31.75 | 10 | 11 |           |        |        |

 **BAP3M**

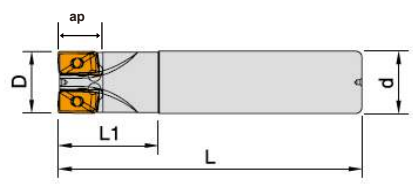


| Order No.        | D  | Dc | L  | L1 | M   | T | ap | Inserts   |  Screw |  Wrench |
|------------------|----|----|----|----|-----|---|----|-----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IBAP3M02-0160080 | 16 | 15 | 43 | 26 | M8  | 2 | 11 | AP...1135 | TS2507                                                                                    | TK08                                                                                       |
| IBAP3M02-0170080 | 17 | 15 | 43 | 26 | M8  | 2 | 11 |           |                                                                                           |                                                                                            |
| IBAP3M02-0200100 | 20 | 18 | 49 | 30 | M10 | 2 | 11 |           |                                                                                           |                                                                                            |
| IBAP3M03-0200100 | 20 | 18 | 49 | 30 | M10 | 3 | 11 |           |                                                                                           |                                                                                            |
| IBAP3M02-0210100 | 21 | 18 | 49 | 30 | M10 | 2 | 11 |           |                                                                                           |                                                                                            |
| IBAP3M03-0210100 | 21 | 18 | 49 | 30 | M10 | 3 | 11 |           |                                                                                           |                                                                                            |
| IBAP3M02-0250120 | 25 | 23 | 57 | 35 | M12 | 2 | 11 |           |                                                                                           |                                                                                            |
| IBAP3M04-0250120 | 25 | 23 | 57 | 35 | M12 | 4 | 11 |           |                                                                                           |                                                                                            |
| IBAP3M02-0260120 | 26 | 23 | 57 | 35 | M12 | 2 | 11 |           |                                                                                           |                                                                                            |
| IBAP3M04-0260120 | 26 | 23 | 57 | 35 | M12 | 4 | 11 |           |                                                                                           |                                                                                            |
| IBAP3M03-0320160 | 32 | 30 | 63 | 40 | M16 | 3 | 11 |           |                                                                                           |                                                                                            |
| IBAP3M05-0320160 | 32 | 30 | 63 | 40 | M16 | 5 | 11 |           |                                                                                           |                                                                                            |
| IBAP3M03-0330160 | 33 | 30 | 63 | 40 | M16 | 3 | 11 |           |                                                                                           |                                                                                            |
| IBAP3M05-0330160 | 33 | 30 | 63 | 40 | M16 | 5 | 11 |           |                                                                                           |                                                                                            |



 **BAP4E**



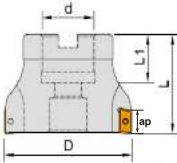


| Order No.        | D  | L1 | L   | d  | T | ap | Inserts   |  Screw |  Wrench |
|------------------|----|----|-----|----|---|----|-----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IBAP4E02-0250150 | 25 | 40 | 150 | 25 | 2 | 16 | AP...1604 | TS4023                                                                                    | TK15                                                                                       |
| IBAP4E02-0260150 | 26 | 40 | 150 | 25 | 2 | 16 |           |                                                                                           |                                                                                            |
| IBAP4E02-0300150 | 30 | 40 | 150 | 25 | 2 | 16 |           |                                                                                           |                                                                                            |
| IBAP4E03-0320150 | 32 | 45 | 150 | 32 | 3 | 16 |           |                                                                                           |                                                                                            |
| IBAP4E03-0350150 | 35 | 45 | 150 | 32 | 3 | 16 |           |                                                                                           |                                                                                            |
| IBAP4E04-0400170 | 40 | 45 | 170 | 32 | 4 | 16 |           |                                                                                           |                                                                                            |
| IBAP4E02-0250200 | 25 | 70 | 200 | 25 | 2 | 16 |           |                                                                                           |                                                                                            |
| IBAP4E02-0250250 | 25 | 70 | 250 | 25 | 2 | 16 |           |                                                                                           |                                                                                            |
| IBAP4E02-0260200 | 26 | 50 | 200 | 25 | 2 | 16 |           |                                                                                           |                                                                                            |
| IBAP4E02-0300200 | 30 | 50 | 200 | 25 | 2 | 16 |           |                                                                                           |                                                                                            |
| IBAP4E03-0320200 | 32 | 80 | 200 | 32 | 3 | 16 |           |                                                                                           |                                                                                            |
| IBAP4E03-0320250 | 32 | 80 | 250 | 32 | 3 | 16 |           |                                                                                           |                                                                                            |
| IBAP4E03-0320300 | 32 | 80 | 300 | 32 | 3 | 16 |           |                                                                                           |                                                                                            |
| IBAP4E03-0350200 | 35 | 50 | 200 | 32 | 3 | 16 |           |                                                                                           |                                                                                            |
| IBAP4E03-0350250 | 35 | 50 | 250 | 32 | 3 | 16 |           |                                                                                           |                                                                                            |
| IBAP4E03-0350300 | 35 | 50 | 300 | 32 | 3 | 16 |           |                                                                                           |                                                                                            |
| IBAP4E04-0400200 | 40 | 50 | 200 | 32 | 4 | 16 |           |                                                                                           |                                                                                            |
| IBAP4E04-0400300 | 40 | 50 | 300 | 32 | 4 | 16 |           |                                                                                           |                                                                                            |

Milling Inserts & Tools

 **BAP4F**

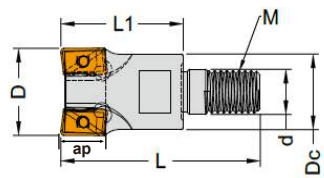




| Order No.        | D   | L  | L1 | d     | T  | ap | Inserts   |  Screw |  Wrench |
|------------------|-----|----|----|-------|----|----|-----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IBAP4F04-0400160 | 40  | 40 | 18 | 16    | 4  | 16 | AP...1604 | TS4004                                                                                    | TK15                                                                                       |
| IBAP4F05-0500220 | 50  | 45 | 22 | 22    | 5  | 16 |           |                                                                                           |                                                                                            |
| IBAP4F05-0500254 | 50  | 45 | 18 | 25.4  | 5  | 16 |           |                                                                                           |                                                                                            |
| IBAP4F06-0630220 | 63  | 45 | 22 | 22    | 6  | 16 |           |                                                                                           |                                                                                            |
| IBAP4F06-0630254 | 63  | 45 | 22 | 25.4  | 6  | 16 |           |                                                                                           |                                                                                            |
| IBAP4F07-0800270 | 80  | 50 | 26 | 27    | 7  | 16 |           |                                                                                           |                                                                                            |
| IBAP4F07-0800254 | 80  | 50 | 26 | 25.4  | 7  | 16 |           |                                                                                           |                                                                                            |
| IBAP4F08-1000320 | 100 | 50 | 32 | 32    | 8  | 16 |           |                                                                                           |                                                                                            |
| IBAP4F08-1000317 | 100 | 50 | 32 | 31.75 | 8  | 16 |           |                                                                                           |                                                                                            |
| IBAP4F09-1250400 | 125 | 55 | 36 | 40    | 9  | 16 |           |                                                                                           |                                                                                            |
| IBAP4F09-1250381 | 125 | 55 | 36 | 38.1  | 9  | 16 |           |                                                                                           |                                                                                            |
| IBAP4F10-1600400 | 160 | 63 | 36 | 40    | 10 | 16 |           |                                                                                           |                                                                                            |
| IBAP4F10-1600508 | 160 | 63 | 36 | 50.8  | 10 | 16 |           |                                                                                           |                                                                                            |

 **BAP4M**



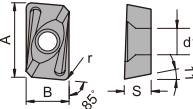
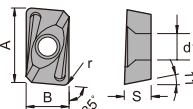


| Order No.        | D  | Dc | L1 | L  | M   | T | ap | Inserts   |  Screw |  Wrench |
|------------------|----|----|----|----|-----|---|----|-----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IBAP4M02-0250120 | 25 | 23 | 35 | 57 | M12 | 2 | 16 | AP...1604 | TS4004                                                                                    | TK08                                                                                       |
| IBAP4M02-0260120 | 26 | 23 | 35 | 57 | M12 | 2 | 16 |           |                                                                                           |                                                                                            |
| IBAP4M03-0320160 | 32 | 30 | 40 | 63 | M16 | 3 | 16 |           |                                                                                           |                                                                                            |
| IBAP4M03-0330160 | 33 | 30 | 40 | 63 | M16 | 3 | 16 |           |                                                                                           |                                                                                            |
| IBAP4M03-0350160 | 35 | 30 | 40 | 63 | M16 | 3 | 16 |           |                                                                                           |                                                                                            |



- ◆ Various shapes and cutting edge designs for different working purpose.
- ◆ Strong high rake inserts provide smooth cutting action.
- ◆ Lower cutting force.
- ◆ Good chip evacuation.

### Specification

|                                                                                    | P                  | Steel           | ⊙      | ⊙      | ⊙      | ○      | ○               |      | ⊙ 1st choice    ○ 2st choice |      |     |     |         |                                                                                       |  |
|------------------------------------------------------------------------------------|--------------------|-----------------|--------|--------|--------|--------|-----------------|------|------------------------------|------|-----|-----|---------|---------------------------------------------------------------------------------------|--|
|                                                                                    | M                  | Stainless steel | ○      | ○      | ○      | ⊙      | ⊙               |      |                              |      |     |     |         |                                                                                       |  |
|                                                                                    | K                  | Cast iron       | ⊙      | ○      | ○      | ○      | ○               |      |                              |      |     |     |         |                                                                                       |  |
| Inserts                                                                            | Designation        | Grade           |        |        |        |        | Dimensions (mm) |      |                              |      |     |     | Drawing |                                                                                       |  |
|                                                                                    |                    | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA |                 | A    | B                            | S    | r   | d1  |         | t1                                                                                    |  |
|    | APMT 113508PDER-MG | ✓               | ✓      | ✓      | ✓      | ✓      |                 | 11.0 | 6.35                         | 3.5  | 0.8 | 2.8 | -       |    |  |
|    | APMT 113508PDER-RG | ✓               | ✓      | ✓      | ✓      | ✓      |                 | 11.0 | 6.35                         | 3.5  | 0.8 | 2.8 | -       |                                                                                       |  |
|    | APMT 113508PDER-HG |                 | ✓      | ✓      | ✓      | ✓      |                 | 11.0 | 6.35                         | 3.5  | 0.8 | 2.8 | -       |                                                                                       |  |
|   | APMT 160408PDER-MG | ✓               | ✓      | ✓      | ✓      | ✓      |                 | 16.5 | 9.525                        | 4.76 | 0.8 | 4.4 | -       |  |  |
|  | APMT 160408PDER-RG | ✓               | ✓      | ✓      | ✓      | ✓      |                 | 16.5 | 9.525                        | 4.76 | 0.8 | 4.4 | -       |                                                                                       |  |
|  | APMT 160408PDER-HG |                 | ✓      | ✓      | ✓      | ✓      |                 | 16.5 | 9.525                        | 4.76 | 0.8 | 4.4 | -       |                                                                                       |  |

### Recommended Cutting Conditions

for APMT1135

| Working Material        | Vc       | fz          | ap    |
|-------------------------|----------|-------------|-------|
| Carbon Steel (HB85-225) | 80 ~ 200 | 0.08 ~ 0.20 | ~ 8.0 |
| Stainless 300 Series    | 50 ~ 110 | 0.05 ~ 0.15 | ~ 5.0 |
| Cast Iron (HB140-220)   | 80 ~ 180 | 0.08 ~ 0.20 | ~ 7.0 |

for APMT1604

| Working Material        | Vc       | fz          | ap     |
|-------------------------|----------|-------------|--------|
| Carbon Steel (HB85-225) | 80 ~ 200 | 0.12 ~ 0.28 | ~ 11.0 |
| Stainless 300 Series    | 50 ~ 110 | 0.10 ~ 0.22 | ~ 7.0  |
| Cast Iron (HB140-220)   | 80 ~ 180 | 0.12 ~ 0.28 | ~ 10.0 |

APK3 / APKT1003

方肩銑削

- ◆ Great performance ensured at large depth of cutting operations due to strong cutting edge and low cutting resistance.
- ◆ Innovative curve cutting edge design ensure ideal 90 degree cutting.
- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.

 **APK3E**

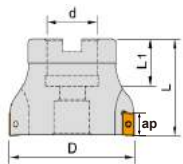




| Order No.        | D  | L  | L1 | L   | d  | T | ap | Inserts  |  Screw |  Wrench |
|------------------|----|----|----|-----|----|---|----|----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IAPK3E02-0160120 | 16 | 25 | 25 | 120 | 16 | 2 | 10 | APKT1003 | TS2507                                                                                    | TK08                                                                                       |
| IAPK3E02-0160160 | 16 | 25 | 25 | 160 | 16 | 2 | 10 |          |                                                                                           |                                                                                            |
| IAPK3E02-0170120 | 17 | 25 | 25 | 120 | 16 | 2 | 10 |          |                                                                                           |                                                                                            |
| IAPK3E02-0170160 | 17 | 25 | 25 | 160 | 16 | 2 | 10 |          |                                                                                           |                                                                                            |
| IAPK3E02-0200120 | 20 | 30 | 30 | 120 | 20 | 2 | 10 |          |                                                                                           |                                                                                            |
| IAPK3E02-0200150 | 20 | 30 | 30 | 150 | 20 | 2 | 10 |          |                                                                                           |                                                                                            |
| IAPK3E02-0200200 | 20 | 30 | 30 | 200 | 20 | 2 | 10 |          |                                                                                           |                                                                                            |
| IAPK3E02-0210150 | 21 | 30 | 30 | 150 | 20 | 2 | 10 |          |                                                                                           |                                                                                            |
| IAPK3E02-0210200 | 21 | 30 | 30 | 200 | 20 | 2 | 10 |          |                                                                                           |                                                                                            |

 **APK3F**

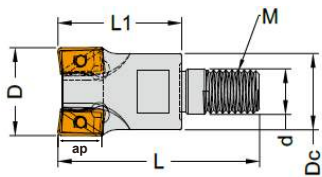




| Order No.        | D  | L  | L1 | d  | T | ap | Inserts  |  Screw |  Wrench |
|------------------|----|----|----|----|---|----|----------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| IAPK3F06-0500220 | 50 | 40 | 20 | 22 | 6 | 10 | APKT1003 | TS2507                                                                                      | TK08                                                                                         |
| IAPK3F06-0630220 | 63 | 45 | 21 | 22 | 6 | 10 |          |                                                                                             |                                                                                              |
| IAPK3F07-0800270 | 80 | 50 | 23 | 27 | 7 | 10 |          |                                                                                             |                                                                                              |

 **APK3M**





| Order No.        | D  | Dc | L  | L1 | M   | d    | T | ap | Inserts  |  Screw |  Wrench |
|------------------|----|----|----|----|-----|------|---|----|----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IAPK3M02-0160080 | 16 | 15 | 43 | 26 | M8  | 8.5  | 2 | 10 | APKT1003 | TS2504                                                                                    | TK08                                                                                       |
| IAPK3M02-0170080 | 17 | 15 | 43 | 26 | M8  | 8.5  | 2 | 10 |          |                                                                                           |                                                                                            |
| IAPK3M02-0200100 | 20 | 18 | 50 | 32 | M10 | 10.5 | 2 | 10 |          |                                                                                           |                                                                                            |
| IAPK3M03-0200100 | 20 | 18 | 50 | 32 | M10 | 10.5 | 3 | 10 |          |                                                                                           |                                                                                            |
| IAPK3M02-0210100 | 21 | 18 | 50 | 32 | M10 | 10.5 | 2 | 10 |          |                                                                                           |                                                                                            |
| IAPK3M03-0210100 | 21 | 18 | 50 | 32 | M10 | 10.5 | 3 | 10 |          |                                                                                           |                                                                                            |
| IAPK3M02-0250120 | 25 | 23 | 50 | 38 | M12 | 12.5 | 2 | 10 |          |                                                                                           |                                                                                            |
| IAPK3M04-0250120 | 25 | 23 | 60 | 38 | M12 | 12.5 | 4 | 10 |          |                                                                                           |                                                                                            |
| IAPK3M02-0260120 | 26 | 23 | 60 | 38 | M12 | 12.5 | 2 | 10 |          |                                                                                           |                                                                                            |
| IAPK3M04-0260120 | 26 | 23 | 60 | 38 | M12 | 12.5 | 4 | 10 |          |                                                                                           |                                                                                            |
| IAPK3M05-0320120 | 32 | 30 | 63 | 41 | M12 | 17   | 5 | 10 |          |                                                                                           |                                                                                            |
| IAPK3M05-0330160 | 33 | 30 | 63 | 41 | M16 | 17   | 5 | 10 |          |                                                                                           |                                                                                            |
| IAPK3M06-0400160 | 40 | 32 | 65 | 43 | M16 | 17   | 6 | 10 |          |                                                                                           |                                                                                            |

 **APK4E**



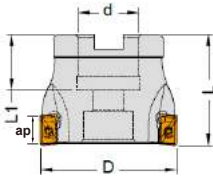


| Order No.        | D  | L   | L1 | d  | T | ap | Inserts  |  Screw |  Wrench |
|------------------|----|-----|----|----|---|----|----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IAPK4E02-0250150 | 25 | 150 | 40 | 25 | 2 | 16 | APKT1604 | TS4005                                                                                    | TK15                                                                                       |
| IAPK4E02-0250220 | 25 | 220 | 40 | 25 | 2 | 16 |          |                                                                                           |                                                                                            |
| IAPK4E02-0260150 | 26 | 150 | 40 | 25 | 2 | 16 |          |                                                                                           |                                                                                            |
| IAPK4E02-0260220 | 26 | 220 | 40 | 25 | 2 | 16 |          |                                                                                           |                                                                                            |
| IAPK4E02-0320150 | 32 | 150 | 45 | 32 | 2 | 16 |          |                                                                                           |                                                                                            |
| IAPK4E02-0320250 | 32 | 250 | 45 | 32 | 2 | 16 |          |                                                                                           |                                                                                            |
| IAPK4E02-0330150 | 33 | 150 | 45 | 32 | 2 | 16 |          |                                                                                           |                                                                                            |
| IAPK4E03-0350150 | 35 | 150 | 45 | 32 | 3 | 16 |          |                                                                                           |                                                                                            |
| IAPK4E04-0400150 | 40 | 150 | 45 | 32 | 4 | 16 |          |                                                                                           |                                                                                            |

Milling Inserts & Tools

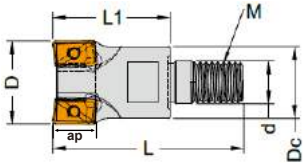
 **APK4F**





| Order No.        | D   | L  | L1 | d     | T  | ap | Inserts  |  Screw |  Wrench |
|------------------|-----|----|----|-------|----|----|----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IAPK4F09-1000320 | 100 | 55 | 26 | 32    | 9  | 16 | APKT1604 | TS4005                                                                                    | TK15                                                                                       |
| IAPK4F04-0500220 | 50  | 50 | 23 | 22    | 4  | 16 |          |                                                                                           |                                                                                            |
| IAPK4F05-0630220 | 63  | 50 | 23 | 22    | 5  | 16 |          |                                                                                           |                                                                                            |
| IAPK4F05-0630254 | 63  | 50 | 23 | 25.4  | 5  | 16 |          |                                                                                           |                                                                                            |
| IAPK4F06-0800270 | 80  | 55 | 32 | 27    | 6  | 16 |          |                                                                                           |                                                                                            |
| IAPK4F06-0800254 | 80  | 55 | 32 | 25.4  | 6  | 16 |          |                                                                                           |                                                                                            |
| IAPK4F08-1000320 | 100 | 55 | 32 | 32    | 8  | 16 |          |                                                                                           |                                                                                            |
| IAPK4F08-1000317 | 100 | 55 | 32 | 31.75 | 8  | 16 |          |                                                                                           |                                                                                            |
| IAPK4F08-1250400 | 125 | 63 | 38 | 40    | 8  | 16 |          |                                                                                           |                                                                                            |
| IAPK4F08-1250381 | 125 | 63 | 38 | 38.1  | 8  | 16 |          |                                                                                           |                                                                                            |
| IAPK4F10-1600400 | 160 | 63 | 38 | 40    | 10 | 16 |          |                                                                                           |                                                                                            |
| IAPK4F10-1600508 | 160 | 63 | 38 | 50.8  | 10 | 16 |          |                                                                                           |                                                                                            |

 **APK4M**



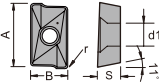
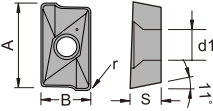
| Order No.        | D  | Dc | L  | L1 | M   | d    | T | ap | Inserts  |  Screw |  Wrench |
|------------------|----|----|----|----|-----|------|---|----|----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IAPK4M02-0250120 | 25 | 23 | 60 | 38 | M12 | 12.5 | 2 | 16 | APKT1604 | TS4004                                                                                    | TK15                                                                                       |
| IAPK4M02-0260160 | 26 | 23 | 60 | 38 | M16 | 17   | 2 | 16 |          |                                                                                           |                                                                                            |
| IAPK4M02-0320160 | 32 | 30 | 63 | 41 | M16 | 17   | 2 | 16 |          |                                                                                           |                                                                                            |
| IAPK4M03-0320160 | 32 | 30 | 63 | 41 | M16 | 17   | 3 | 16 |          |                                                                                           |                                                                                            |
| IAPK4M02-0330160 | 33 | 30 | 63 | 41 | M16 | 17   | 2 | 16 |          |                                                                                           |                                                                                            |
| IAPK4M03-0330160 | 33 | 30 | 63 | 41 | M16 | 17   | 3 | 16 |          |                                                                                           |                                                                                            |
| IAPK4M04-0400160 | 40 | 32 | 65 | 43 | M16 | 17   | 4 | 16 |          |                                                                                           |                                                                                            |



Milling Inserts & Tools

- ◆ Innovative strong cutting edge and chip-breaker design.
- ◆ Excellent chip evacuation.
- ◆ Large depth of cutting operations.
- ◆ Lower cutting resistance.

### Specification

|                                                                                    | P                  | Steel           | ⊙      | ⊙      | ⊙      | ○      | ○               | ◎ 1st choice    ○ 2st choice |      |     |     |    |                                                                                       |
|------------------------------------------------------------------------------------|--------------------|-----------------|--------|--------|--------|--------|-----------------|------------------------------|------|-----|-----|----|---------------------------------------------------------------------------------------|
|                                                                                    | M                  | Stainless steel | ○      | ○      | ○      | ◎      | ◎               |                              |      |     |     |    |                                                                                       |
|                                                                                    | K                  | Cast iron       | ◎      | ○      | ○      | ○      | ○               |                              |      |     |     |    |                                                                                       |
| Inserts                                                                            | Designation        | Grade           |        |        |        |        | Dimensions (mm) |                              |      |     |     |    | Drawing                                                                               |
|                                                                                    |                    | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | A               | B                            | S    | r   | d1  | t1 |                                                                                       |
|   | APKT 100304PDER-MG | ✓               | ✓      | ✓      |        |        | 10.5            | 6.7                          | 3.5  | 0.4 | 2.8 | -  |    |
|   | APKT 100308PDER-MG | ✓               | ✓      | ✓      |        |        | 10.5            | 6.7                          | 3.5  | 0.8 | 2.8 | -  |                                                                                       |
|   | APKT 100304PDER-RG | ✓               | ✓      | ✓      |        |        | 10.5            | 6.7                          | 3.5  | 0.4 | 2.8 | -  |                                                                                       |
|  | APKT 160408PDER-MG |                 | ✓      | ✓      | ✓      | ✓      | 16.3            | 9.525                        | 5.25 | 0.8 | 4.5 | -  |  |
|  | APKT 160408PDER-RG |                 | ✓      | ✓      | ✓      | ✓      | 16.3            | 9.525                        | 5.25 | 0.8 | 4.5 | -  |                                                                                       |

### Recommended Cutting Conditions

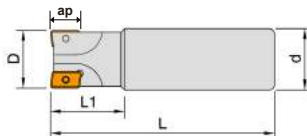
for APKT1003

| Working Material        | Vc       | fz          | ap    |
|-------------------------|----------|-------------|-------|
| Carbon Steel (HB85-225) | 80 ~ 200 | 0.08 ~ 0.20 | ~ 7.0 |
| Stainless 300 Series    | 50 ~ 110 | 0.05 ~ 0.15 | ~ 4.0 |
| Cast Iron (HB140-220)   | 80 ~ 180 | 0.08 ~ 0.20 | ~ 6.0 |

for APKT1604

| Working Material        | Vc       | fz          | ap     |
|-------------------------|----------|-------------|--------|
| Carbon Steel (HB85-225) | 80 ~ 200 | 0.12 ~ 0.28 | ~ 11.0 |
| Stainless 300 Series    | 50 ~ 110 | 0.10 ~ 0.22 | ~ 7.0  |
| Cast Iron (HB140-220)   | 80 ~ 180 | 0.12 ~ 0.28 | ~ 10.0 |

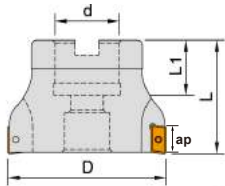
- ◆ With strong cutting edges, 90 shoulder endmill for high feed rate capabilities
- ◆ High efficiency machining can be achieved due to optimize cutting edge geometry and highly rigid body.
- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.



| Order No.        | D  | L1 | L   | d  | T | ap | Inserts  | Screw  | Wrench |
|------------------|----|----|-----|----|---|----|----------|--------|--------|
| IWEX2E02-0160120 | 16 | 35 | 120 | 16 | 2 | 12 | AXMT1235 | TS3002 | TK09   |
| IWEX2E02-0170120 | 17 | 35 | 120 | 16 | 2 | 12 |          |        |        |
| IWEX2E02-0180120 | 18 | 35 | 120 | 16 | 2 | 12 |          |        |        |
| IWEX2E02-0190120 | 19 | 35 | 120 | 16 | 2 | 12 |          |        |        |
| IWEX2E03-0200120 | 20 | 40 | 120 | 20 | 3 | 12 |          |        |        |
| IWEX2E03-0210120 | 21 | 40 | 120 | 20 | 3 | 12 |          |        |        |
| IWEX2E03-0220120 | 22 | 40 | 120 | 20 | 3 | 12 |          |        |        |
| IWEX2E03-0230150 | 23 | 40 | 150 | 25 | 3 | 12 |          |        |        |
| IWEX2E03-0240150 | 24 | 40 | 150 | 25 | 3 | 12 |          |        |        |
| IWEX2E03-0250150 | 25 | 40 | 150 | 25 | 3 | 12 |          |        |        |
| IWEX2E03-0260150 | 26 | 40 | 150 | 25 | 3 | 12 |          |        |        |
| IWEX2E04-0250150 | 25 | 45 | 150 | 25 | 4 | 12 |          |        |        |
| IWEX2E04-0260150 | 26 | 45 | 150 | 25 | 4 | 12 |          |        |        |
| IWEX2E04-0270150 | 27 | 45 | 150 | 25 | 4 | 12 |          |        |        |
| IWEX2E04-0280150 | 28 | 45 | 150 | 25 | 4 | 12 |          |        |        |
| IWEX2E04-0290150 | 29 | 45 | 150 | 25 | 4 | 12 |          |        |        |
| IWEX2E04-0300150 | 30 | 45 | 150 | 25 | 4 | 12 |          |        |        |
| IWEX2E04-0310150 | 31 | 45 | 150 | 32 | 4 | 12 |          |        |        |
| IWEX2E04-0320150 | 32 | 45 | 150 | 32 | 4 | 12 |          |        |        |
| IWEX2E04-0330150 | 33 | 45 | 150 | 32 | 4 | 12 |          |        |        |
| IWEX2E04-0340150 | 34 | 45 | 150 | 32 | 4 | 12 |          |        |        |
| IWEX2E04-0350150 | 35 | 45 | 150 | 32 | 4 | 12 |          |        |        |
| IWEX2E02-0160175 | 16 | 50 | 175 | 16 | 2 | 12 |          |        |        |
| IWEX2E02-0170175 | 17 | 35 | 175 | 16 | 2 | 12 |          |        |        |
| IWEX2E02-0200185 | 20 | 60 | 185 | 20 | 2 | 12 |          |        |        |
| IWEX2E02-0210185 | 21 | 40 | 185 | 20 | 2 | 12 |          |        |        |
| IWEX2E03-0250200 | 25 | 70 | 200 | 25 | 3 | 12 |          |        |        |
| IWEX2E03-0260200 | 26 | 45 | 200 | 25 | 3 | 12 |          |        |        |
| IWEX2E04-0250200 | 25 | 70 | 200 | 25 | 4 | 12 |          |        |        |
| IWEX2E04-0260200 | 26 | 50 | 200 | 25 | 4 | 12 |          |        |        |
| IWEX2E04-0320250 | 32 | 80 | 250 | 32 | 4 | 12 |          |        |        |
| IWEX2E04-0330250 | 33 | 50 | 250 | 32 | 4 | 12 |          |        |        |
| IWEX2E04-0350250 | 35 | 50 | 250 | 32 | 4 | 12 |          |        |        |

 **WEX2F**

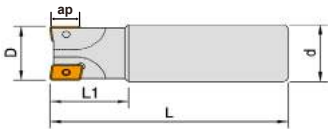




| Order No.        | D   | L  | L1 | d     | T  | ap | Inserts  |  Screw |  Wrench |
|------------------|-----|----|----|-------|----|----|----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IWEX2F06-0500220 | 50  | 45 | 20 | 22    | 6  | 12 | AXMT1235 | TS3002                                                                                    | TK09                                                                                       |
| IWEX2F07-0630220 | 63  | 45 | 20 | 22    | 7  | 12 |          |                                                                                           |                                                                                            |
| IWEX2F07-0630254 | 63  | 45 | 20 | 25.4  | 7  | 12 |          |                                                                                           |                                                                                            |
| IWEX2F08-0800270 | 80  | 50 | 26 | 27    | 8  | 12 |          |                                                                                           |                                                                                            |
| IWEX2F08-0800254 | 80  | 50 | 26 | 25.4  | 8  | 12 |          |                                                                                           |                                                                                            |
| IWEX2F10-1000320 | 100 | 50 | 26 | 32    | 10 | 12 |          |                                                                                           |                                                                                            |
| IWEX2F10-1000317 | 100 | 50 | 26 | 31.75 | 10 | 12 |          |                                                                                           |                                                                                            |



 **WEX7E**

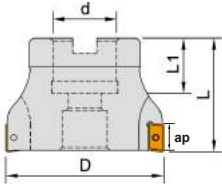


| Order No.        | D  | L   | L1 | d  | T | ap | Inserts  |  Screw |  Wrench |
|------------------|----|-----|----|----|---|----|----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IWEX7E02-0250150 | 25 | 150 | 40 | 25 | 2 | 17 | AXMT1705 | TS4004                                                                                    | TK15                                                                                       |
| IWEX7E02-0260150 | 26 | 150 | 40 | 25 | 2 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E02-0270150 | 27 | 150 | 40 | 25 | 2 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E02-0280150 | 28 | 150 | 40 | 25 | 2 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E02-0290150 | 29 | 150 | 40 | 25 | 2 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E02-0300150 | 30 | 150 | 40 | 25 | 2 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E02-0310150 | 31 | 150 | 40 | 25 | 2 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E03-0320150 | 32 | 150 | 45 | 32 | 3 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E03-0330150 | 33 | 150 | 45 | 32 | 3 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E03-0340150 | 34 | 150 | 45 | 32 | 3 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E03-0350150 | 35 | 150 | 45 | 32 | 3 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E03-0360150 | 36 | 150 | 45 | 32 | 3 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E03-0400150 | 40 | 150 | 45 | 32 | 3 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E02-0250200 | 25 | 200 | 70 | 25 | 2 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E02-0260200 | 26 | 200 | 45 | 25 | 2 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E02-0270200 | 27 | 200 | 45 | 25 | 2 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E02-0280200 | 28 | 200 | 45 | 25 | 2 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E02-0290200 | 29 | 200 | 45 | 25 | 2 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E02-0300200 | 30 | 200 | 45 | 25 | 2 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E02-0310250 | 31 | 250 | 70 | 32 | 2 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E02-0320250 | 32 | 250 | 70 | 32 | 2 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E02-0330250 | 33 | 250 | 50 | 32 | 2 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E02-0340250 | 34 | 250 | 50 | 32 | 2 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E02-0350250 | 35 | 250 | 50 | 32 | 2 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E02-0360250 | 36 | 250 | 50 | 32 | 2 | 17 |          |                                                                                           |                                                                                            |
| IWEX7E04-0400250 | 40 | 250 | 50 | 32 | 4 | 17 |          |                                                                                           |                                                                                            |

Milling Inserts & Tools

 **WEX7F**





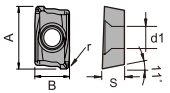
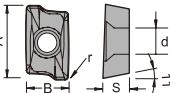
| Order No.        | D   | L  | L1 | d     | T  | ap | Inserts  |  Screw |  Wrench |
|------------------|-----|----|----|-------|----|----|----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IWEX7F04-0500220 | 50  | 45 | 20 | 22    | 4  | 17 | AXMT1705 | TS4004                                                                                    | TK15                                                                                       |
| IWEX7F05-0630220 | 63  | 45 | 20 | 22    | 5  | 17 |          |                                                                                           |                                                                                            |
| IWEX7F05-0630254 | 63  | 45 | 20 | 25.4  | 5  | 17 |          |                                                                                           |                                                                                            |
| IWEX7F06-0800270 | 80  | 50 | 26 | 27    | 6  | 17 |          |                                                                                           |                                                                                            |
| IWEX7F06-0800254 | 80  | 50 | 26 | 25.4  | 6  | 17 |          |                                                                                           |                                                                                            |
| IWEX7F07-1000320 | 100 | 50 | 26 | 32    | 7  | 17 |          |                                                                                           |                                                                                            |
| IWEX7F07-1000317 | 100 | 50 | 26 | 31.75 | 7  | 17 |          |                                                                                           |                                                                                            |
| IWEX7F08-1250400 | 125 | 63 | 38 | 40    | 8  | 17 |          |                                                                                           |                                                                                            |
| IWEX7F08-1250381 | 125 | 63 | 38 | 38.1  | 8  | 17 |          |                                                                                           |                                                                                            |
| IWEX7F10-1600400 | 160 | 63 | 38 | 40    | 10 | 17 |          |                                                                                           |                                                                                            |
| IWEX7F10-1600508 | 160 | 63 | 38 | 50.8  | 10 | 17 |          |                                                                                           |                                                                                            |

AXMT1235 / AXMT1705

方肩銑削刀片

- ◆ 90° shoulder milling with high feed rate.
- ◆ Unique shape and strength cutting edge design.
- ◆ Generates high quality surface finishes.

 **Specification**

|                                                                                  | P                  | Steel           |  |  |  |  |  |                 |  1st choice  2nd choice |      |     |     |    |                                                                                     |  |
|----------------------------------------------------------------------------------|--------------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|----|-------------------------------------------------------------------------------------|--|
|                                                                                  | M                  | Stainless steel |  |  |  |  |  |                 |                                                                                                                                                                                             |      |     |     |    |                                                                                     |  |
|                                                                                  | K                  | Cast iron       |  |  |  |  |  |                 |                                                                                                                                                                                             |      |     |     |    |                                                                                     |  |
| Inserts                                                                          | Designation        | Grade           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Dimensions (mm) |                                                                                                                                                                                             |      |     |     |    | Drawing                                                                             |  |
|                                                                                  |                    | CX21NS          | CX31NA                                                                            | CX31NS                                                                            | CX41NS                                                                            | CX41NA                                                                            |                                                                                   | A               | B                                                                                                                                                                                           | S    | r   | d1  | t1 |                                                                                     |  |
|  | AXMT 123508PEER-RG | ✓               | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |                                                                                   | 12.18           | 6.93                                                                                                                                                                                        | 3.58 | 0.8 | 3.4 | -  |  |  |
|  | AXMT 170508PEER-RG |                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |                                                                                   | 17.50           | 10.2                                                                                                                                                                                        | 5.56 | 0.8 | 4.6 | -  |  |  |
|  | AXMT 170516PEER-RG |                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |                                                                                   | 17.50           | 10.2                                                                                                                                                                                        | 5.56 | 1.6 | 4.6 | -  |                                                                                     |  |

 **Recommended Cutting Conditions**

for AXMT1235

| Working Material        | Vc       | fz          | ap    |
|-------------------------|----------|-------------|-------|
| Carbon Steel (HB85-225) | 80 ~ 200 | 0.08 ~ 0.20 | ~ 9.0 |
| Stainless 300 Series    | 50 ~ 110 | 0.05 ~ 0.15 | ~ 5.0 |
| Cast Iron (HB140-220)   | 80 ~ 180 | 0.08 ~ 0.20 | ~ 8.0 |

for AXMT1705

| Working Material        | Vc       | fz          | ap     |
|-------------------------|----------|-------------|--------|
| Carbon Steel (HB85-225) | 80 ~ 200 | 0.12 ~ 0.30 | ~ 12.0 |
| Stainless 300 Series    | 50 ~ 110 | 0.10 ~ 0.25 | ~ 8.0  |
| Cast Iron (HB140-220)   | 80 ~ 180 | 0.12 ~ 0.30 | ~ 11.0 |

- ◆ Shoulder milling with great cutting performance and low cutting force.
- ◆ Multifunction application with strong cutting edge and great chip evacuation.
- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.

 **JD15E**



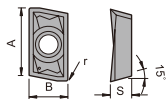


| Order No.        | D  | L1 | L   | d  | T | ap | Inserts  |  Screw |  Wrench |
|------------------|----|----|-----|----|---|----|----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IJD15E02-0250125 | 25 | 40 | 125 | 40 | 2 | 14 | JDMT1505 | TS4005                                                                                    | TK15                                                                                       |
| IJD15E02-0250180 | 25 | 75 | 180 | 75 | 2 | 14 |          |                                                                                           |                                                                                            |
| IJD15E03-0320140 | 32 | 45 | 140 | 45 | 3 | 14 |          |                                                                                           |                                                                                            |
| IJD15E03-0320200 | 32 | 90 | 200 | 90 | 3 | 14 |          |                                                                                           |                                                                                            |



- ◆ Good cutting performance and cutting edge strength.
- ◆ Lower cutting force.
- ◆ Good chip evacuation.

 **Specification**

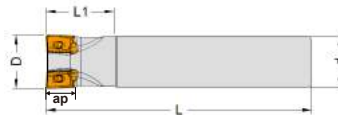
|                                                                                  | P               | Steel           | ◎      | ◎      | ◎      | ○      | ○ |                 | ◎ 1st choice    ○ 2st choice |     |     |     |    |                                                                                     |
|----------------------------------------------------------------------------------|-----------------|-----------------|--------|--------|--------|--------|---|-----------------|------------------------------|-----|-----|-----|----|-------------------------------------------------------------------------------------|
|                                                                                  | M               | Stainless steel | ○      | ○      | ○      | ◎      | ◎ |                 |                              |     |     |     |    |                                                                                     |
|                                                                                  | K               | Cast iron       | ◎      | ○      | ○      | ○      | ○ |                 |                              |     |     |     |    |                                                                                     |
| Inserts                                                                          | Designation     | Grade           |        |        |        |        |   | Dimensions (mm) |                              |     |     |     |    | Drawing                                                                             |
|                                                                                  |                 | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA |   | A               | B                            | S   | r   | d1  | t1 |                                                                                     |
|  | JDMT 150508R-MG |                 | ✓      | ✓      |        |        |   | 15.1            | 9.12                         | 5.0 | 0.8 | 4.5 | -  |  |

 **Recommended Cutting Conditions**

| Working Material        | Vc       | fz          | ap     |
|-------------------------|----------|-------------|--------|
| Carbon Steel (HB85-225) | 80 ~ 200 | 0.12 ~ 0.30 | ~ 12.0 |
| Stainless 300 Series    | 50 ~ 110 | 0.10 ~ 0.25 | ~ 7.0  |
| Cast Iron (HB140-220)   | 80 ~ 180 | 0.12 ~ 0.30 | ~ 11.0 |

- ◆ Finishing and roughing capability in one optimized tool, specially designed for high speed machining.
- ◆ High removal rates can be achieved even at smaller low powered machines.
- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.

## **R390E**

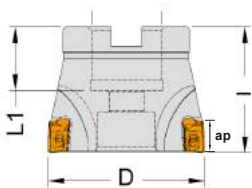


| Order No.          | D  | L1 | L   | d  | T | ap | Inserts   | Screw  | Wrench |
|--------------------|----|----|-----|----|---|----|-----------|--------|--------|
| IR390E02 - 0160150 | 16 | 30 | 150 | 16 | 2 | 11 | W390 11T3 | TS2507 | TK08   |
| IR390E02 - 0170150 | 17 | 30 | 150 | 16 | 2 | 11 |           |        |        |
| IR390E02 - 0180150 | 18 | 30 | 150 | 16 | 2 | 11 |           |        |        |
| ★ IR390E02W0200150 | 20 | 30 | 150 | 20 | 2 | 11 |           |        |        |
| IR390E03 - 0200150 | 20 | 30 | 150 | 20 | 3 | 11 |           |        |        |
| IR390E02 - 0210150 | 21 | 30 | 150 | 20 | 2 | 11 |           |        |        |
| IR390E03 - 0220150 | 22 | 30 | 150 | 20 | 3 | 11 |           |        |        |
| IR390E02 - 0250150 | 25 | 30 | 150 | 25 | 2 | 11 |           |        |        |
| IR390E03 - 0250150 | 25 | 30 | 150 | 25 | 3 | 11 |           |        |        |
| IR390E03 - 0300150 | 30 | 30 | 150 | 25 | 3 | 11 |           |        |        |
| IR390E03 - 0320150 | 32 | 35 | 150 | 32 | 3 | 11 |           |        |        |
| IR390E05 - 0320150 | 32 | 35 | 150 | 32 | 5 | 11 |           |        |        |
| IR390E03 - 0330150 | 33 | 35 | 150 | 32 | 3 | 11 |           |        |        |
| IR390E05 - 0330150 | 33 | 35 | 150 | 32 | 5 | 11 |           |        |        |
| IR390E03 - 0350150 | 35 | 35 | 150 | 32 | 3 | 11 |           |        |        |
| IR390E05 - 0350150 | 35 | 35 | 150 | 32 | 5 | 11 |           |        |        |
| IR390E04 - 0400150 | 40 | 35 | 150 | 32 | 4 | 11 |           |        |        |
| IR390E05 - 0400150 | 40 | 35 | 150 | 32 | 5 | 11 |           |        |        |
| IR390E06 - 0400150 | 40 | 35 | 150 | 32 | 6 | 11 |           |        |        |

★ with Coolant Hole

 **R390F**



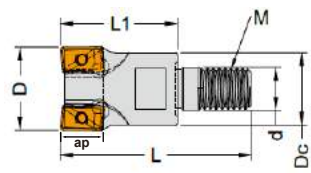


| Order No.        | D   | L  | L1 | d  | Dc | T  | ap | Inserts   |  Screw |  Wrench |
|------------------|-----|----|----|----|----|----|----|-----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IR390F04-0500220 | 50  | 40 | 21 | 22 | 42 | 4  | 11 | W390 11T3 | TS2503-8                                                                                  | TK08                                                                                       |
| IR390F05-0500220 | 50  | 40 | 21 | 22 | 42 | 5  | 11 |           |                                                                                           |                                                                                            |
| IR390F05-0630220 | 63  | 40 | 21 | 22 | 50 | 5  | 11 |           |                                                                                           |                                                                                            |
| IR390F06-0630220 | 63  | 40 | 21 | 22 | 50 | 6  | 11 |           |                                                                                           |                                                                                            |
| IR390F06-0800270 | 80  | 50 | 23 | 27 | 60 | 6  | 11 |           |                                                                                           |                                                                                            |
| IR390F08-0800270 | 80  | 50 | 23 | 27 | 60 | 8  | 11 |           |                                                                                           |                                                                                            |
| IR390F07-0100320 | 100 | 50 | 23 | 32 | 70 | 7  | 11 |           |                                                                                           |                                                                                            |
| IR390F10-0100320 | 100 | 50 | 23 | 32 | 70 | 10 | 11 |           |                                                                                           |                                                                                            |



 **R390M**





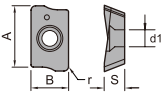
| Order No.        | D  | Dc | L  | L1 | M   | d    | T | ap | Inserts   |  Screw |  Wrench |
|------------------|----|----|----|----|-----|------|---|----|-----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IR390M02-0160080 | 16 | 15 | 43 | 26 | M8  | 6.5  | 2 | 11 | W390 11T3 | TS2503-8                                                                                  | TK08                                                                                       |
| IR390M02-0170080 | 17 | 15 | 43 | 26 | M8  | 8.5  | 2 | 11 |           |                                                                                           |                                                                                            |
| IR390M02-0180080 | 18 | 15 | 43 | 32 | M8  | 8.5  | 2 | 11 |           |                                                                                           |                                                                                            |
| IR390M02-0200010 | 20 | 18 | 50 | 32 | M10 | 10.5 | 2 | 11 |           |                                                                                           |                                                                                            |
| IR390M03-0200010 | 20 | 18 | 50 | 32 | M10 | 10.5 | 3 | 11 |           |                                                                                           |                                                                                            |
| IR390M02-0210010 | 21 | 18 | 50 | 32 | M10 | 10.5 | 2 | 11 |           |                                                                                           |                                                                                            |
| IR390M03-0220010 | 22 | 18 | 50 | 32 | M10 | 10.5 | 3 | 11 |           |                                                                                           |                                                                                            |
| IR390M02-0250012 | 25 | 23 | 60 | 38 | M12 | 12.5 | 2 | 11 |           |                                                                                           |                                                                                            |
| IR390M03-0250012 | 25 | 23 | 60 | 38 | M12 | 12.5 | 3 | 11 |           |                                                                                           |                                                                                            |
| IR390M03-0300012 | 30 | 23 | 60 | 41 | M12 | 12.5 | 3 | 11 |           |                                                                                           |                                                                                            |
| IR390M03-0320016 | 32 | 29 | 63 | 41 | M16 | 17   | 3 | 11 |           |                                                                                           |                                                                                            |
| IR390M05-0320016 | 32 | 29 | 63 | 41 | M16 | 17   | 5 | 11 |           |                                                                                           |                                                                                            |
| IR390M03-0330016 | 33 | 29 | 63 | 41 | M16 | 17   | 3 | 11 |           |                                                                                           |                                                                                            |
| IR390M05-0330016 | 33 | 29 | 63 | 41 | M16 | 17   | 5 | 11 |           |                                                                                           |                                                                                            |
| IR390M03-0350016 | 35 | 32 | 63 | 41 | M16 | 17   | 3 | 11 |           |                                                                                           |                                                                                            |
| IR390M05-0350016 | 35 | 32 | 63 | 41 | M16 | 17   | 5 | 11 |           |                                                                                           |                                                                                            |
| IR390M04-0400016 | 40 | 32 | 65 | 43 | M16 | 17   | 4 | 11 |           |                                                                                           |                                                                                            |
| IR390M06-0400016 | 40 | 32 | 65 | 43 | M16 | 17   | 6 | 11 |           |                                                                                           |                                                                                            |

W39011T3

方肩銑削刀片

- ◆ Large depths of cut and wide feed range.
- ◆ Designed for high speed machining.
- ◆ Finishing and roughing capability.

 **Specification**

|                                                                                  | P              | Steel           |  |  |  |  |  |  1st choice  2st choice |      |     |     |    |                                                                                     |
|----------------------------------------------------------------------------------|----------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|----|-------------------------------------------------------------------------------------|
|                                                                                  | M              | Stainless steel |  |  |  |  |  |                                                                                                                                                                                             |      |     |     |    |                                                                                     |
|                                                                                  | K              | Cast iron       |  |  |  |  |  |                                                                                                                                                                                             |      |     |     |    |                                                                                     |
| Inserts                                                                          | Designation    | Grade           |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Dimensions (mm)                                                                   |                                                                                                                                                                                             |      |     |     |    | Drawing                                                                             |
|                                                                                  |                | CX21NS          | CX31NA                                                                            | CX31NS                                                                            | CX41NS                                                                            | CX41NA                                                                            | A                                                                                 | B                                                                                                                                                                                           | S    | r   | d1  | t1 |                                                                                     |
|  | W390 11T308-MG | ✓               | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   | 11                                                                                | 6.9                                                                                                                                                                                         | 3.59 | 0.8 | 2.8 | -  |  |

 **Recommended Cutting Conditions**

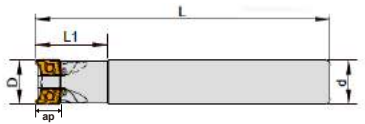
| Working Material        | Vc       | fz          | ap    |
|-------------------------|----------|-------------|-------|
| Carbon Steel (HB85-225) | 80 ~ 200 | 0.08 ~ 0.20 | ~ 8.0 |
| Stainless 300 Series    | 50 ~ 110 | 0.05 ~ 0.15 | ~ 4.0 |
| Cast Iron (HB140-220)   | 80 ~ 180 | 0.08 ~ 0.20 | ~ 7.0 |

RT07 / WRT0702

方肩銑削

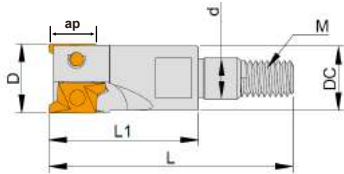
- ◆ Strong Pocket design with excellent chip evacuation.
- ◆ Extreme well ramping and slotting capabilities.
- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.

 **RT07E**



| Order No.        | D  | L1 | L   | d  | T | ap | Inserts |  Screw |  Wrench |
|------------------|----|----|-----|----|---|----|---------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IRT07E02-0110100 | 11 | 18 | 100 | 10 | 2 | 6  | WRT0702 | TS2003                                                                                    | TK06                                                                                       |
| IRT07E02-0130100 | 13 | 20 | 100 | 12 | 2 | 6  |         |                                                                                           |                                                                                            |

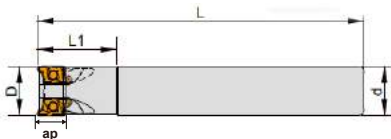
 **RT07M**



| Order No.        | D  | L  | L1 | M  | d   | T | ap | Inserts |  Screw |  Wrench |
|------------------|----|----|----|----|-----|---|----|---------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| IRT07M02-0100050 | 10 | 31 | 18 | M5 | 5.5 | 2 | 6  | WRT0702 | TS2003                                                                                      | TK06                                                                                         |
| IRT07M02-0110050 | 11 | 31 | 18 | M5 | 5.5 | 2 | 6  |         |                                                                                             |                                                                                              |
| IRT07M02-0120060 | 12 | 34 | 20 | M5 | 6.5 | 2 | 6  |         |                                                                                             |                                                                                              |
| IRT07M02-0130060 | 13 | 34 | 20 | M5 | 6.5 | 2 | 6  |         |                                                                                             |                                                                                              |

 **RT10E**

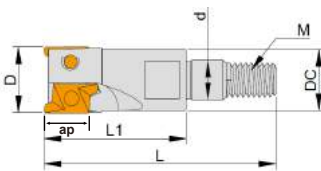




| Order No.        | D  | L1 | L   | d  | T | ap | Inserts |  Screw |  Wrench |
|------------------|----|----|-----|----|---|----|---------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IRT10E02-0170150 | 17 | 30 | 150 | 16 | 2 | 9  | WRT1003 | TS2515                                                                                    | TK08                                                                                       |
| IRT10E03-0210150 | 21 | 30 | 150 | 20 | 3 | 9  |         |                                                                                           |                                                                                            |
| IRT10E03-0260150 | 26 | 40 | 150 | 25 | 3 | 9  |         |                                                                                           |                                                                                            |
| IRT10E04-0330150 | 33 | 40 | 150 | 32 | 4 | 9  |         |                                                                                           |                                                                                            |
| IRT10E04-0350150 | 35 | 40 | 150 | 32 | 4 | 9  |         |                                                                                           |                                                                                            |

 **RT10M**

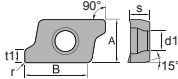
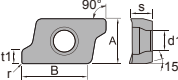




| Order No.        | D  | L   | L1 | M   | d  | T | ap | Inserts |  Screw |  Wrench |
|------------------|----|-----|----|-----|----|---|----|---------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| IRT10M02-0170080 | 17 | 47  | 30 | M8  | 25 | 2 | 9  | WRT1003 | TS2515                                                                                      | TK08                                                                                         |
| IRT10M03-0210100 | 21 | 49  | 32 | M10 | 32 | 3 | 9  |         |                                                                                             |                                                                                              |
| IRT10M03-0260120 | 26 | 110 | 40 | M12 | 20 | 3 | 9  |         |                                                                                             |                                                                                              |
| IRT10M04-0330160 | 33 | 110 | 40 | M16 | 25 | 4 | 9  |         |                                                                                             |                                                                                              |
| IRT10M04-0350160 | 35 | 115 | 40 | M16 | 32 | 4 | 9  |         |                                                                                             |                                                                                              |

- ◆ Suitable for mold and 3D machining industry.
- ◆ Achieve higher performance in high speed condition.
- ◆ Unique cutting edge designed for low cutting force.

### Specification

|                                                                                   | P                | Steel           | ◎      | ◎      | ◎      | ○      | ○               |     | ◎ 1st choice    ○ 2st choice |     |     |     |                                                                                     |  |
|-----------------------------------------------------------------------------------|------------------|-----------------|--------|--------|--------|--------|-----------------|-----|------------------------------|-----|-----|-----|-------------------------------------------------------------------------------------|--|
|                                                                                   | M                | Stainless steel | ○      | ○      | ○      | ◎      | ◎               |     |                              |     |     |     |                                                                                     |  |
|                                                                                   | K                | Cast iron       | ◎      | ○      | ○      | ○      | ○               |     |                              |     |     |     |                                                                                     |  |
| Inserts                                                                           | Designation      | Grade           |        |        |        |        | Dimensions (mm) |     |                              |     |     |     | Drawing                                                                             |  |
|                                                                                   |                  | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | A               | B   | S                            | r   | d1  | t1  |                                                                                     |  |
|  | WRT    070204-RG | ✓               | ✓      | ✓      |        |        | 4.30            | 6.4 | 2.38                         | 0.4 | 2.2 | 1.3 |  |  |
|  | WRT    100308-RG | ✓               | ✓      | ✓      |        |        | 6.35            | 9.3 | 3.4                          | 0.8 | 2.9 | 1.8 |  |  |

### Recommended Cutting Conditions

for WRT0702

| Working Material        | Vc       | fz          | ap    |
|-------------------------|----------|-------------|-------|
| Carbon Steel (HB85-225) | 80 ~ 200 | 0.08 ~ 0.20 | ~ 5.0 |
| Stainless 300 Series    | 50 ~ 110 | 0.05 ~ 0.15 | ~ 3.0 |
| Cast Iron (HB140-220)   | 80 ~ 180 | 0.08 ~ 0.20 | ~ 4.0 |

for WRT1003

| Working Material        | Vc       | fz          | ap    |
|-------------------------|----------|-------------|-------|
| Carbon Steel (HB85-225) | 80 ~ 200 | 0.10 ~ 0.22 | ~ 7.0 |
| Stainless 300 Series    | 50 ~ 110 | 0.08 ~ 0.18 | ~ 4.0 |
| Cast Iron (HB140-220)   | 80 ~ 180 | 0.10 ~ 0.22 | ~ 6.0 |

- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.

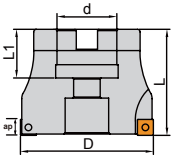
 **SPE05E/06E/07E**      



| Order No.        | D  | L1 | L   | d  | T | ap | Inserts  |  Screw |  Wrench |
|------------------|----|----|-----|----|---|----|----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| ISP05E02-0120100 | 12 | 20 | 100 | 12 | 2 | 5  | SPMG0502 | TS2003                                                                                    | TK06                                                                                       |
| ISP05E02-0130100 | 13 | 20 | 100 | 12 | 2 | 5  |          |                                                                                           |                                                                                            |
| ISP05E02-0140100 | 14 | 20 | 100 | 12 | 2 | 5  |          |                                                                                           |                                                                                            |
| ISP05E02-0150100 | 15 | 20 | 100 | 12 | 2 | 5  |          |                                                                                           |                                                                                            |
| ISP06E02-0160120 | 16 | 25 | 120 | 16 | 2 | 6  | SPMG0602 | TS2205                                                                                    | TK06                                                                                       |
| ISP06E02-0170120 | 17 | 25 | 120 | 16 | 2 | 6  |          |                                                                                           |                                                                                            |
| ISP06E02-0180120 | 18 | 25 | 120 | 16 | 2 | 6  |          |                                                                                           |                                                                                            |
| ISP06E02-0190120 | 19 | 25 | 120 | 16 | 2 | 6  |          |                                                                                           |                                                                                            |
| ISP06E03-0200120 | 20 | 30 | 120 | 20 | 3 | 6  |          |                                                                                           |                                                                                            |
| ISP06E03-0210120 | 21 | 30 | 120 | 20 | 3 | 6  |          |                                                                                           |                                                                                            |
| ISP06E03-0220120 | 22 | 30 | 120 | 20 | 3 | 6  |          |                                                                                           |                                                                                            |
| ISP06E03-0230120 | 23 | 30 | 120 | 20 | 3 | 6  |          |                                                                                           |                                                                                            |
| ISP06E03-0240120 | 24 | 30 | 120 | 20 | 3 | 6  |          |                                                                                           |                                                                                            |
| ISP06E03-0250120 | 25 | 30 | 120 | 25 | 3 | 6  |          |                                                                                           |                                                                                            |
| ISP06E03-0260120 | 26 | 30 | 120 | 25 | 3 | 6  |          |                                                                                           |                                                                                            |
| ISP06E04-0270120 | 27 | 30 | 120 | 25 | 4 | 6  |          |                                                                                           |                                                                                            |
| ISP06E04-0280120 | 28 | 30 | 120 | 25 | 4 | 6  |          |                                                                                           |                                                                                            |
| ISP06E04-0290120 | 29 | 30 | 120 | 25 | 4 | 6  |          |                                                                                           |                                                                                            |
| ISP06E04-0300120 | 30 | 30 | 120 | 25 | 4 | 6  |          |                                                                                           |                                                                                            |
| ISP06E04-0310120 | 31 | 30 | 120 | 25 | 4 | 6  |          |                                                                                           |                                                                                            |
| ISP06E05-0320120 | 32 | 30 | 120 | 25 | 5 | 6  |          |                                                                                           |                                                                                            |
| ISP06E05-0330120 | 33 | 30 | 120 | 25 | 5 | 6  |          |                                                                                           |                                                                                            |
| ISP06E05-0340120 | 34 | 30 | 120 | 25 | 5 | 6  |          |                                                                                           |                                                                                            |
| ISP06E05-0350120 | 35 | 30 | 120 | 25 | 5 | 6  |          |                                                                                           |                                                                                            |
| ISP07E03-0250150 | 25 | 35 | 150 | 25 | 3 | 7  | SPMG07   | TS3504                                                                                    | TK15                                                                                       |
| ISP07E03-0260150 | 26 | 35 | 150 | 25 | 3 | 7  |          |                                                                                           |                                                                                            |
| ISP07E03-0300150 | 30 | 35 | 150 | 25 | 3 | 7  |          |                                                                                           |                                                                                            |
| ISP07E04-0300150 | 30 | 40 | 150 | 32 | 4 | 7  |          |                                                                                           |                                                                                            |
| ISP09E04-0320150 | 32 | 40 | 150 | 32 | 4 | 7  |          |                                                                                           |                                                                                            |
| ISP07E04-0330150 | 33 | 40 | 150 | 32 | 4 | 7  |          |                                                                                           |                                                                                            |
| ISP07E04-0350150 | 35 | 40 | 150 | 32 | 4 | 7  |          |                                                                                           |                                                                                            |
| ISP07E04-0400150 | 40 | 40 | 150 | 32 | 4 | 7  |          |                                                                                           |                                                                                            |

Milling Inserts & Tools

 **SPF06F/09F**



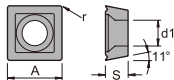
| Order No.        | D   | L1 | L  | d     | T  | ap | Inserts  |  Screw |  Wrench |
|------------------|-----|----|----|-------|----|----|----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| ISP06F06-0400160 | 40  | 18 | 40 | 16    | 6  | 6  | SPMG0602 | TS2205                                                                                    | TK06                                                                                       |
| ISP06F07-0500220 | 50  | 20 | 45 | 22    | 7  | 6  |          |                                                                                           |                                                                                            |
| ISP06F07-0500254 | 50  | 20 | 45 | 25.4  | 7  | 6  |          |                                                                                           |                                                                                            |
| ISP06F09-0630220 | 63  | 20 | 45 | 22    | 9  | 6  |          |                                                                                           |                                                                                            |
| ISP06F09-0630254 | 63  | 20 | 45 | 25.4  | 9  | 6  |          |                                                                                           |                                                                                            |
| ISP06F11-0800270 | 80  | 23 | 50 | 27    | 11 | 6  |          |                                                                                           |                                                                                            |
| ISP06F11-0800254 | 80  | 23 | 50 | 25.4  | 11 | 6  |          |                                                                                           |                                                                                            |
| ISP09F04-0400160 | 40  | 18 | 40 | 16    | 4  | 9  | SPMG0904 | TS3504                                                                                    | TK15                                                                                       |
| ISP09F05-0500220 | 50  | 20 | 45 | 22    | 5  | 9  |          |                                                                                           |                                                                                            |
| ISP09F05-0500254 | 50  | 20 | 45 | 25.4  | 5  | 9  |          |                                                                                           |                                                                                            |
| ISP09F06-0630220 | 63  | 20 | 45 | 22    | 6  | 9  |          |                                                                                           |                                                                                            |
| ISP09F06-0630254 | 63  | 20 | 45 | 25.4  | 6  | 9  |          |                                                                                           |                                                                                            |
| ISP09F07-0800270 | 80  | 23 | 50 | 27    | 7  | 9  |          |                                                                                           |                                                                                            |
| ISP09F07-0800254 | 80  | 23 | 50 | 25.4  | 7  | 9  |          |                                                                                           |                                                                                            |
| ISP09F09-1000320 | 100 | 23 | 50 | 32    | 9  | 9  |          |                                                                                           |                                                                                            |
| ISP09F09-1000317 | 100 | 23 | 50 | 31.75 | 9  | 9  |          |                                                                                           |                                                                                            |

SPMG Inserts

方肩銑削刀片

- ◆ Economical 4 cutting edges insert.
- ◆ Suitable for most materials by one optimized geometry.
- ◆ True 90° square shoulder angle.

 **Specification**

|                                                                                   | P              | Steel           | ◎      | ◎      | ◎      | ○      | ○      |                 | ◎ 1st choice    ○ 2st choice |      |     |      |    |                                                                                     |
|-----------------------------------------------------------------------------------|----------------|-----------------|--------|--------|--------|--------|--------|-----------------|------------------------------|------|-----|------|----|-------------------------------------------------------------------------------------|
|                                                                                   | M              | Stainless steel | ○      | ○      | ○      | ◎      | ◎      |                 |                              |      |     |      |    |                                                                                     |
|                                                                                   | K              | Cast iron       | ◎      | ○      | ○      | ○      | ○      |                 |                              |      |     |      |    |                                                                                     |
| Inserts                                                                           | Designation    |                 | Grade  |        |        |        |        | Dimensions (mm) |                              |      |     |      |    | Drawing                                                                             |
|                                                                                   |                |                 | CX21NS | CX31NA | CX31NS | CX41NS | CX41NA | A               | B                            | S    | r   | d1   | t1 |                                                                                     |
|   | SPMG 050204-MG |                 |        | ✓      | ✓      |        |        | 5.00            | -                            | 2.38 | 0.4 | 2.30 | -  |  |
|   | SPMG 060204-MG |                 |        | ✓      | ✓      |        |        | 6.00            | -                            | 2.38 | 0.4 | 2.65 | -  |                                                                                     |
|   | SPMG 07T308-MG |                 |        | ✓      | ✓      | ✓      | ✓      | 7.94            | -                            | 3.97 | 0.8 | 2.85 | -  |                                                                                     |
|  | SPMG 090408-MG |                 |        | ✓      | ✓      | ✓      | ✓      | 9.80            | -                            | 4.3  | 0.8 | 4.05 | -  |                                                                                     |

 **Recommended Cutting Conditions**

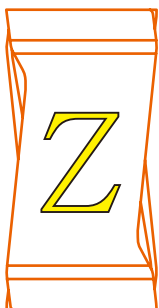
| Working Material        | Vc       | fz          |
|-------------------------|----------|-------------|
| Carbon Steel (HB85-225) | 80 ~ 200 | 0.08 ~ 0.20 |
| Stainless 300 Series    | 50 ~ 110 | 0.05 ~ 0.15 |
| Cast Iron (HB140-220)   | 80 ~ 180 | 0.08 ~ 0.20 |



**Unique "Type Z" geometry minimizes chatter and vibration!!!**

獨特的刀口幾何設計將平面銑削的震動頻率最小化

- CXSN Face Mill Series is one of innovations that provides more available cutting edges by double sided insert and longer tool life for our customers.
- Unique "Type Z" design and special cutting edge guarantees lowest cutting loads and longest tool life.
- Negative inserts makes it even stronger and higher performance while machining various working material.



## Type Z features

- Sharper cutting edge.
- Low cutting resistance.
- Positive land and rake angle.
- Excellent chip evacuation.



## SNMX1205 Inserts features

- Double sided.
- Total 8 cutting edges.
- Less interference and contact with the unused corner.



*Brings a top performance in face milling operation*



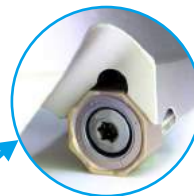
*Economical machining achieved with Octagonal or Square shaped insert!!*

以八角與四角型刀片達成最經濟的面銑加工效益 !!

- 2 types of double sided inserts fit in the same pocket. (Octagonal & Square shaped)
- Single center lock screw for easy and rigid clamping ability.
- High cutting edges strength and high efficiency machining for general purpose application.

· Octagonal insert

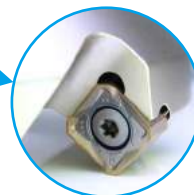
**ONMX0505 ( Total 16 cutting edges )**



RG

· Square insert

**SNMX1205 ( Total 8 cutting edges )**



MG

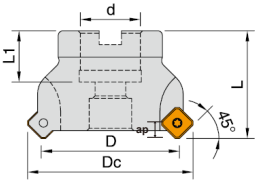


RG



- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.

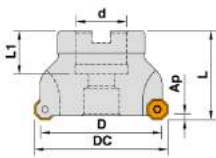
CXSNF



| Order No.       | D   | L  | d      | T  | ap | Inserts  | Screw  | Wrench |
|-----------------|-----|----|--------|----|----|----------|--------|--------|
| ICXSNF04-050220 | 50  | 40 | 22     | 4  | 6  | SNMX1205 | TS4015 | TK15   |
| ICXSNF05-063220 | 63  | 40 | 22     | 5  | 6  |          |        |        |
| ICXSNF05-063254 | 63  | 40 | 25.4   | 5  | 6  |          |        |        |
| ICXSNF06-080270 | 80  | 50 | 27     | 6  | 6  |          |        |        |
| ICXSNF06-080254 | 80  | 50 | 25.4   | 6  | 6  |          |        |        |
| ICXSNF07-100320 | 100 | 50 | 32     | 8  | 6  |          |        |        |
| ICXSNF07-100317 | 100 | 50 | 31.75  | 8  | 6  |          |        |        |
| ICXSNF08-125400 | 125 | 63 | 40     | 10 | 6  |          |        |        |
| ICXSNF08-125381 | 125 | 63 | 38.1   | 10 | 6  |          |        |        |
| ICXSNF10-160400 | 160 | 63 | 40     | 12 | 6  |          |        |        |
| ICXSNF10-160508 | 160 | 63 | 50.8   | 12 | 6  |          |        |        |
| ICXSNF14-200476 | 200 | 63 | 47.625 | 14 | 6  |          |        |        |
| ICXSNF14-200600 | 200 | 63 | 60     | 14 | 6  |          |        |        |

Customize available.

CXONF



| Order No.       | D     |      | L  | d     | T | ap | Inserts              | Screw  | Wrench |
|-----------------|-------|------|----|-------|---|----|----------------------|--------|--------|
|                 | ON05  | SN12 |    |       |   |    |                      |        |        |
| ICXONF04-050220 | 52.9  | 50   | 40 | 22    | 4 | 3  | ONMX0505<br>SNMX1205 | TS4015 | TK15   |
| ICXSOF05-063220 | 65.9  | 63   | 40 | 22    | 5 | 3  |                      |        |        |
| ICXSOF06-080270 | 82.9  | 80   | 50 | 27    | 6 | 3  |                      |        |        |
| ICXSOF08-100320 | 102.9 | 100  | 50 | 32    | 8 | 3  |                      |        |        |
| ICXSOF07-100317 | 102.9 | 100  | 50 | 31.75 | 7 | 3  |                      |        |        |

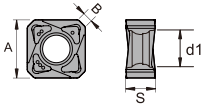
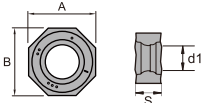
\*ONMX0505and SNMX1205 insert can be used interchangeably on the CXON body. Cutter will have different diameter, height and ap. Customize available.

SNMX1205 ,ONMX0505

平面銑削刀片

- ◆ Total 8 cutting edges per insert. (SNMX 1205)
- ◆ Total 16 cutting edges per insert. (ONMX 0505)
- ◆ Low cost effective and high efficiency for general purpose face milling.
- ◆ Low cutting force action due to the extremely positive geometry.
- ◆ Wide wiper flat for better surface finish.

Specification

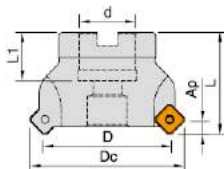
|                                                                                    | P            | Steel           | ⊙      | ⊙      | ⊙      | ○      | ○               |      | ⊙ 1st choice    ○ 2st choice |   |    |    |                                                                                       |  |
|------------------------------------------------------------------------------------|--------------|-----------------|--------|--------|--------|--------|-----------------|------|------------------------------|---|----|----|---------------------------------------------------------------------------------------|--|
|                                                                                    | M            | Stainless steel | ○      | ○      | ○      | ⊙      | ⊙               |      |                              |   |    |    |                                                                                       |  |
|                                                                                    | K            | Cast iron       | ⊙      | ○      | ○      | ○      | ○               |      |                              |   |    |    |                                                                                       |  |
| Inserts                                                                            | Designation  | Grade           |        |        |        |        | Dimensions (mm) |      |                              |   |    |    | Drawing                                                                               |  |
|                                                                                    |              | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | A               | B    | S                            | r | d1 | t1 |                                                                                       |  |
|    | SNMX 1205-MG | ✓               |        | ✓      | ✓      |        | 12.7            | 1.5  | 6.4                          | - | 6  | -  |    |  |
|    | SNMX 1205-RG | ✓               |        | ✓      | ✓      |        | 12.7            | 1.5  | 6.4                          | - | 6  | -  |                                                                                       |  |
|  | ONMX 0505-RG | ✓               |        | ✓      | ✓      |        | 12.7            | 12.7 | 6.4                          | - | 6  | -  |  |  |

Recommended Cutting Conditions

| Working Material        | Vc       | fz          | ap       |          |
|-------------------------|----------|-------------|----------|----------|
|                         |          |             | SNMX1205 | ONMX0505 |
| Carbon Steel (HB85-225) | 80 ~ 200 | 0.10 ~ 0.30 | ~ 6.0    | ~ 2.0    |
| Stainless 300 Series    | 50 ~ 110 | 0.08 ~ 0.25 | ~ 3.6    | ~ 1.5    |
| Cast Iron (HB140-220)   | 80 ~ 180 | 0.10 ~ 0.30 | ~ 6.0    | ~ 2.0    |

- ◆ Great performance ensured at large depth of cutting operations due to strong cutting edge and low cutting resistance.
- ◆ Innovative curve cutting edge design ensure ideal 45 degree cutting.
- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.

### ASX3F



| Order No.        | D   | L  | L1 | d      | Dc    | T  | ap  | Inserts      |
|------------------|-----|----|----|--------|-------|----|-----|--------------|
| IASX3F04-0500220 | 50  | 40 | 20 | 22     | 63    | 4  | 5.5 | SEMT13T3AGSN |
| IASX3F05-0630220 | 63  | 40 | 20 | 22     | 75.9  | 5  | 5.5 |              |
| IASX3F05-0630254 | 63  | 40 | 20 | 25.4   | 75.9  | 5  | 5.5 |              |
| IASX3F06-0800270 | 80  | 50 | 26 | 27     | 93.2  | 6  | 5.5 |              |
| IASX3F06-0800254 | 80  | 50 | 26 | 25.4   | 93.2  | 6  | 5.5 |              |
| IASX3F07-1000320 | 100 | 50 | 32 | 32     | 113.2 | 7  | 5.5 |              |
| IASX3F07-1000317 | 100 | 50 | 32 | 31.75  | 113.2 | 7  | 5.5 |              |
| IASX3F08-1250410 | 125 | 63 | 38 | 41     | 138   | 8  | 5.5 |              |
| IASX3F08-1250381 | 125 | 63 | 38 | 38.1   | 138   | 8  | 5.5 |              |
| IASX3F10-1600400 | 160 | 63 | 38 | 40     | 173   | 10 | 5.5 |              |
| IASX3F10-1600508 | 160 | 63 | 38 | 50.8   | 173   | 10 | 5.5 |              |
| IASX3F12-2000600 | 200 | 63 | 38 | 60     | 212.9 | 12 | 5.5 |              |
| IASX3F12-2000476 | 200 | 63 | 38 | 47.625 | 212.9 | 12 | 5.5 |              |
| IASX3F14-2500600 | 250 | 63 | 38 | 60     | 262.9 | 14 | 5.5 |              |
| IASX3F14-2500476 | 250 | 63 | 38 | 47.625 | 262.9 | 14 | 5.5 |              |
| IASX3F14-3150476 | 315 | 63 | 40 | 47.625 | 327.9 | 14 | 5.5 |              |

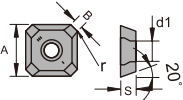
|        |       |        |        |        |
|--------|-------|--------|--------|--------|
|        |       |        |        |        |
| Shim   | Screw | Screw  | Wrench | Wrench |
| AS445N | PS35T | TS3505 | TK15   | TY3.5  |

SEMT13T3

平面銑削刀片

- ◆ Suitable for high speed machining.
- ◆ Various shapes and cutting edge designs for different working purpose.
- ◆ Improves metal removal rates, flatness, dimensional accuracy, and surface finish.

 Specification

|                                                                                    | P                | Steel           | ◎      | ◎      | ◎      | ○      | ○    |                 | ◎ 1st choice    ○ 2st choice |      |     |     |    |                                                                                     |
|------------------------------------------------------------------------------------|------------------|-----------------|--------|--------|--------|--------|------|-----------------|------------------------------|------|-----|-----|----|-------------------------------------------------------------------------------------|
|                                                                                    | M                | Stainless steel | ○      | ○      | ○      | ◎      | ◎    |                 |                              |      |     |     |    |                                                                                     |
|                                                                                    | K                | Cast iron       | ◎      | ○      | ○      | ○      | ○    |                 |                              |      |     |     |    |                                                                                     |
| Inserts                                                                            | Designation      | Grade           |        |        |        |        |      | Dimensions (mm) |                              |      |     |     |    | Drawing                                                                             |
|                                                                                    |                  | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | CX03 | A               | B                            | S    | r   | d1  | t1 |                                                                                     |
|    | SEMT 13T3AGEN    |                 | ✓      | ✓      | ✓      | ✓      |      | 13.4            | 1.9                          | 3.97 | 1.5 | 4.2 | -  |  |
|    | SEMT 13T3AGSN-MG |                 | ✓      | ✓      | ✓      | ✓      |      | 13.4            | 1.9                          | 3.97 | 1.5 | 4.2 | -  |                                                                                     |
|    | SEMT 13T3AGSN-RG |                 | ✓      | ✓      | ✓      | ✓      |      | 13.4            | 1.9                          | 3.97 | 1.5 | 4.2 | -  |                                                                                     |
|  | SEMT 13T3AGSN-HG |                 | ✓      | ✓      | ✓      | ✓      |      | 13.4            | 1.9                          | 3.97 | 1.5 | 4.2 | -  |                                                                                     |
|  | SEET 13T3AGFN-AL |                 |        |        |        |        | ✓    | 13.4            | 1.9                          | 3.97 | 1.5 | 4.2 | -  |                                                                                     |

 Recommended Cutting Conditions

| Working Material        | Vc         | fz          | ap    |
|-------------------------|------------|-------------|-------|
| Carbon Steel (HB85-225) | 80 ~ 200   | 0.10 ~ 0.30 | ~ 5.5 |
| Stainless 300 Series    | 50 ~ 110   | 0.08 ~ 0.25 | ~ 3.0 |
| Cast Iron (HB140-220)   | 80 ~ 180   | 0.10 ~ 0.30 | ~ 5.0 |
| Aluminium Alloy         | 300 ~ 1000 | 0.10 ~ 0.40 | ~ 5.5 |

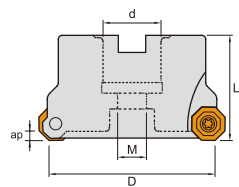
OF05 / OFMT05T3

平面銑削

- ◆ Great performance ensured at small to medium depth of cutting operations due to strong cutting edge and low cutting resistance.
- ◆ Innovative curve cutting edge design ensure ideal 45 degree cutting.
- ◆ Great surface finishing availability.

 **OF05F**





| Order No.        | D   | d     | L  | M  | T  | ap | Inserts     |  Screw |  Wrench |
|------------------|-----|-------|----|----|----|----|-------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IOF05F05-0500220 | 50  | 22    | 40 | 11 | 5  | 3  | OFMT05T3... | TS4006                                                                                    | TK15                                                                                       |
| IOF05F06-0630220 | 63  | 22    | 40 | 11 | 6  | 3  |             |                                                                                           |                                                                                            |
| IOF05F06-0630254 | 63  | 25.4  | 50 | 13 | 6  | 3  |             |                                                                                           |                                                                                            |
| IOF05F07-0800254 | 80  | 25.4  | 50 | 13 | 7  | 3  |             |                                                                                           |                                                                                            |
| IOF05F07-0800270 | 80  | 27    | 50 | 38 | 7  | 3  |             |                                                                                           |                                                                                            |
| IOF05F08-1000317 | 100 | 31.75 | 50 | 46 | 8  | 3  |             |                                                                                           |                                                                                            |
| IOF05F08-1000320 | 100 | 32    | 50 | 46 | 8  | 3  |             |                                                                                           |                                                                                            |
| IOF05F09-1250381 | 125 | 38.1  | 63 | 60 | 9  | 3  |             |                                                                                           |                                                                                            |
| IOF05F09-1250400 | 125 | 40    | 63 | 60 | 9  | 3  |             |                                                                                           |                                                                                            |
| IOF05F11-1600508 | 160 | 50.8  | 63 | 80 | 11 | 3  |             |                                                                                           |                                                                                            |

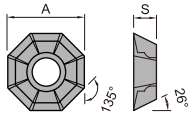


OFMT05T3

平面銑削刀片

- ◆ OF05 series offer economical and efficient cutting of all 8 cutting edges.
- ◆ Two types of geometry cover general operating conditions.
- ◆ High positive insert ensures less vibration and less power consumption.

 Specification

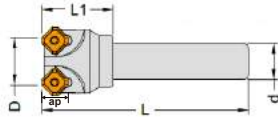
|                                                                                  | P              | Steel           |  |  |  |  |  | ◎ 1st choice    ○ 2nd choice |     |     |     |    |                                                                                     |
|----------------------------------------------------------------------------------|----------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------|-----|-----|-----|----|-------------------------------------------------------------------------------------|
|                                                                                  | M              | Stainless steel |  |  |  |  |  |                              |     |     |     |    |                                                                                     |
|                                                                                  | K              | Cast iron       |  |  |  |  |  |                              |     |     |     |    |                                                                                     |
| Inserts                                                                          | Designation    | Grade           |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Dimensions (mm)                                                                   |                              |     |     |     |    | Drawing                                                                             |
|                                                                                  |                | CX21NS          | CX31NA                                                                            | CX31NS                                                                            | CX41NS                                                                            | CX41NA                                                                            | A                                                                                 | B                            | S   | r   | d1  | t1 |                                                                                     |
|  | OFMT 05T3TN-MG |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   | 12.7                                                                              | -                            | 3.8 | 0.6 | 4.6 | -  |  |
|  | OFMT 05T3TN-RG |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   | 12.7                                                                              | -                            | 3.8 | 0.6 | 4.6 | -  |                                                                                     |

 Recommended Cutting Conditions

| Working Material        | Vc       | fz          | ap    |
|-------------------------|----------|-------------|-------|
| Carbon Steel (HB85-225) | 80 ~ 200 | 0.10 ~ 0.20 | ~ 2.8 |
| Stainless 300 Series    | 50 ~ 110 | 0.07 ~ 0.13 | ~ 1.7 |
| Cast Iron (HB140-220)   | 80 ~ 180 | 0.10 ~ 0.20 | ~ 2.8 |

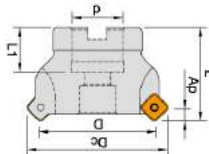
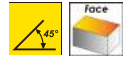
- ◆ Great performance ensured at large depth of cutting operations due to strong cutting edge and low cutting resistance.
- ◆ Innovative curve cutting edge design ensure ideal 45 degree cutting.
- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.

## SE45E



| Order No.        | D  | L1 | L   | d  | T | ap | Inserts              | Screw  | Wrench |
|------------------|----|----|-----|----|---|----|----------------------|--------|--------|
| ISE45E02-0320110 | 32 | 45 | 110 | 20 | 2 | 6  | SEKT1204<br>SEKW1204 | TS5006 | TK20   |
| ISE45E03-0400110 | 40 | 45 | 110 | 20 | 3 | 6  |                      |        |        |
| ISE45E04-0500120 | 50 | 45 | 120 | 20 | 4 | 6  |                      |        |        |
| ISE45E04-0500120 | 50 | 45 | 120 | 25 | 4 | 6  |                      |        |        |
| ISE45E05-0630120 | 63 | 45 | 120 | 25 | 5 | 6  |                      |        |        |
| ISE45E05-0630120 | 63 | 45 | 120 | 32 | 5 | 6  |                      |        |        |

## SE45F



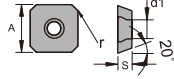
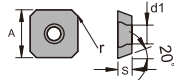
| Order No.        | D   | L  | L1 | d      | Dc  | T  | ap | Inserts              | Screw  | Wrench |
|------------------|-----|----|----|--------|-----|----|----|----------------------|--------|--------|
| ISE45F04-0500220 | 50  | 40 | 20 | 22     | 64  | 4  | 6  | SEKT1204<br>SEKW1204 | TS5006 | TK20   |
| ISE45F05-0630220 | 63  | 45 | 21 | 22     | 77  | 5  |    |                      |        |        |
| ISE45F05-0630254 | 63  | 45 | 21 | 25.4   | 77  | 5  |    |                      |        |        |
| ISE45F06-0800270 | 80  | 50 | 26 | 27     | 94  | 6  |    |                      |        |        |
| ISE45F06-0800317 | 80  | 50 | 26 | 31.75  | 94  | 6  |    |                      |        |        |
| ISE45F06-1000320 | 100 | 32 | 32 | 32     | 114 | 6  |    |                      |        |        |
| ISE45F06-1000317 | 100 | 32 | 32 | 31.75  | 114 | 6  |    |                      |        |        |
| ISE45F08-1250400 | 125 | 63 | 38 | 40     | 139 | 8  |    |                      |        |        |
| ISE45F08-1250381 | 125 | 63 | 38 | 38.1   | 139 | 8  |    |                      |        |        |
| ISE45F10-1600400 | 160 | 63 | 38 | 40     | 174 | 10 |    |                      |        |        |
| ISE45F10-1600508 | 160 | 63 | 38 | 50.8   | 174 | 10 |    |                      |        |        |
| ISE45F12-2000476 | 200 | 63 | 38 | 47.625 | 214 | 12 |    |                      |        |        |
| ISE45F14-2500476 | 250 | 63 | 38 | 47.625 | 264 | 14 |    |                      |        |        |

SEKT1204 , SEKW1204

平面銑削刀片

- ◆ Face milling insert with 90° lead angle.
- ◆ Multi Purpose 45° milling insert, designed for high depths of cut.
- ◆ Suitable for roughing to finishing-face milling operations.

 Specification

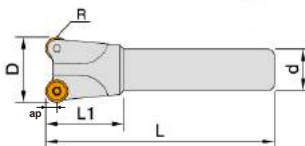
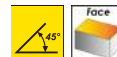
|                                                                                   | P                | Steel           | ◎      | ◎      | ◎      | ○      | ○               |   | ◎ 1st choice    ○ 2st choice |     |     |    |                                                                                     |  |
|-----------------------------------------------------------------------------------|------------------|-----------------|--------|--------|--------|--------|-----------------|---|------------------------------|-----|-----|----|-------------------------------------------------------------------------------------|--|
|                                                                                   | M                | Stainless steel | ○      | ○      | ○      | ◎      | ◎               |   |                              |     |     |    |                                                                                     |  |
|                                                                                   | K                | Cast iron       | ◎      | ○      | ○      | ○      | ○               |   |                              |     |     |    |                                                                                     |  |
| Inserts                                                                           | Designation      | Grade           |        |        |        |        | Dimensions (mm) |   |                              |     |     |    | Drawing                                                                             |  |
|                                                                                   |                  | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | A               | B | S                            | r   | d1  | t1 |                                                                                     |  |
|  | SEKT 1204AFTN-RG |                 | ✓      | ✓      | ✓      | ✓      | 12              | - | 4.76                         | 0.8 | 5.5 | -  |  |  |
|  | SEKW 1204AFEN    |                 | ✓      | ✓      | ✓      | ✓      | 12              | - | 4.76                         | 0.8 | 5.5 | -  |  |  |

 Recommended Cutting Conditions

| Working Material        | Vc       | fz          | ap    |
|-------------------------|----------|-------------|-------|
| Carbon Steel (HB85-225) | 80 ~ 200 | 0.10 ~ 0.30 | ~ 6.0 |
| Stainless 300 Series    | 50 ~ 110 | 0.08 ~ 0.25 | ~ 3.0 |
| Cast Iron (HB140-220)   | 80 ~ 180 | 0.10 ~ 0.30 | ~ 5.0 |

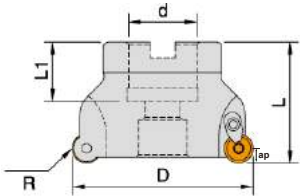
- ◆ Great performance ensured at large depth of cutting operations due to strong cutting edge and low cutting resistance.
- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.

### **ARD05E/07E/10E/12E**



| Order No.         | D  | L1 | L   | d  | R   | T | ap  | Inserts              |  Screw |  Wrench |
|-------------------|----|----|-----|----|-----|---|-----|----------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IARD05E02-0100100 | 10 | 25 | 100 | 10 | 2.5 | 2 | 2.5 | RDKW0501             | TS2003                                                                                    | TK06                                                                                       |
| IARD05E02-0120100 | 12 | 25 | 100 | 12 | 2.5 | 2 | 2.5 |                      |                                                                                           |                                                                                            |
| IARD05E03-0120130 | 12 | 25 | 130 | 12 | 2.5 | 3 | 2.5 |                      |                                                                                           |                                                                                            |
| IARD05E03-0160130 | 16 | 35 | 130 | 16 | 2.5 | 3 | 2.5 |                      |                                                                                           |                                                                                            |
| IARD05E03-0160180 | 16 | 35 | 180 | 16 | 2.5 | 3 | 2.5 | RDKW0702             | TS2015                                                                                    | TK08                                                                                       |
| IARD07E03-0160130 | 16 | 40 | 130 | 16 | 3.5 | 3 | 3.5 |                      |                                                                                           |                                                                                            |
| IARD07E03-0160180 | 16 | 35 | 180 | 16 | 3.5 | 3 | 3.5 |                      |                                                                                           |                                                                                            |
| IARD07E04-0200150 | 20 | 40 | 150 | 20 | 3.5 | 4 | 3.5 |                      |                                                                                           |                                                                                            |
| IARD07E04-0200200 | 20 | 40 | 200 | 20 | 3.5 | 4 | 3.5 |                      |                                                                                           |                                                                                            |
| IARD07E04-0250150 | 25 | 40 | 150 | 25 | 3.5 | 4 | 3.5 | RDMT10T3<br>RDMW10T3 | TS3504                                                                                    | TK15                                                                                       |
| IARD07E04-0250200 | 25 | 60 | 200 | 25 | 3.5 | 4 | 3.5 |                      |                                                                                           |                                                                                            |
| IARD10E02-0250150 | 25 | 45 | 150 | 25 | 5.0 | 2 | 5   |                      |                                                                                           |                                                                                            |
| IARD10E02-0250200 | 25 | 70 | 200 | 25 | 5.0 | 2 | 5   |                      |                                                                                           |                                                                                            |
| IARD10E02-0300150 | 30 | 45 | 150 | 25 | 5.0 | 2 | 5   |                      |                                                                                           |                                                                                            |
| IARD10E02-0300200 | 30 | 40 | 200 | 25 | 5.0 | 2 | 5   | RDMT1204<br>RDMW1204 | TS4008                                                                                    | TK15                                                                                       |
| IARD10E03-0320150 | 32 | 45 | 150 | 32 | 5.0 | 3 | 5   |                      |                                                                                           |                                                                                            |
| IARD10E03-0320200 | 32 | 70 | 200 | 32 | 5.0 | 3 | 5   |                      |                                                                                           |                                                                                            |
| IARD12E02-0320150 | 32 | 50 | 150 | 32 | 6.0 | 2 | 6   |                      |                                                                                           |                                                                                            |
| IARD12E02-0320250 | 32 | 70 | 250 | 32 | 6.0 | 2 | 6   |                      |                                                                                           |                                                                                            |
| IARD12E03-0400170 | 40 | 45 | 170 | 32 | 6.0 | 3 | 6   |                      |                                                                                           |                                                                                            |
| IARD12E03-0400220 | 40 | 45 | 220 | 32 | 6.0 | 3 | 6   |                      |                                                                                           |                                                                                            |

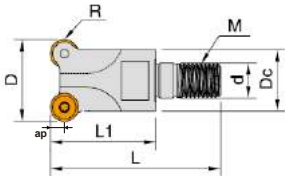
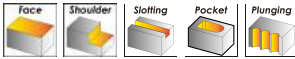
ARD10F/12F/16F



| Order No.         | D   | L  | L1 | d  | R | T | ap | Inserts              | Screw  | Wrench | Clamp | Clamp Screw |
|-------------------|-----|----|----|----|---|---|----|----------------------|--------|--------|-------|-------------|
| IARD10F04-0500220 | 50  | 45 | 22 | 22 | 5 | 4 | 5  | RDMT10T3<br>RDMW10T3 | TS3504 | TK15   | RD-45 | TS4009      |
| IARD10F06-0630220 | 63  | 45 | 22 | 22 | 5 | 6 | 5  |                      |        |        |       |             |
| IARD12F04-0500220 | 50  | 45 | 22 | 22 | 6 | 4 | 6  | RDMT1204<br>RDMW1204 | TS4008 | TK15   | RD-6R | TS5004      |
| IARD12F05-0500220 | 50  | 45 | 22 | 22 | 6 | 5 | 6  |                      |        |        |       |             |
| IARD12F05-0630220 | 63  | 45 | 22 | 22 | 6 | 5 | 6  |                      |        |        |       |             |
| IARD12F06-0630220 | 63  | 45 | 22 | 22 | 6 | 6 | 6  |                      |        |        |       |             |
| IARD12F07-0800270 | 80  | 50 | 26 | 27 | 6 | 7 | 6  |                      |        |        |       |             |
| IARD12F08-1000320 | 100 | 50 | 32 | 32 | 6 | 8 | 6  | RDMT1604<br>RDMW1604 | TS5007 | TK20   | RD-68 | TS5009      |
| IARD16F04-0630220 | 63  | 45 | 22 | 22 | 8 | 4 | 8  |                      |        |        |       |             |
| IARD16F05-0630220 | 63  | 45 | 22 | 22 | 8 | 5 | 8  |                      |        |        |       |             |
| IARD16F06-0800270 | 80  | 50 | 26 | 27 | 8 | 6 | 8  |                      |        |        |       |             |
| IARD16F07-1000320 | 100 | 50 | 32 | 32 | 8 | 7 | 8  |                      |        |        |       |             |
| IARD16F08-1250400 | 125 | 55 | 36 | 40 | 8 | 8 | 8  |                      |        |        |       |             |

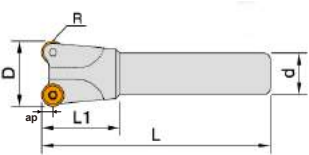


 **ARD05M/07M/10M**



| Order No.         | D  | Dc | L  | L1 | M   | d    | T | ap  | Inserts              |  Screw |  Wrench |
|-------------------|----|----|----|----|-----|------|---|-----|----------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IARD05M02-0120060 | 12 | 11 | 36 | 21 | M06 | 6.5  | 2 | 2.5 | RDKW0501             | TS2003                                                                                    | TK06                                                                                       |
| IARD05M03-0120060 | 12 | 11 | 36 | 21 | M06 | 6.5  | 3 | 2.5 |                      |                                                                                           |                                                                                            |
| IARD05M03-0160080 | 16 | 15 | 43 | 26 | M08 | 8.5  | 3 | 2.5 |                      |                                                                                           |                                                                                            |
| IARD05M04-0160080 | 16 | 15 | 43 | 26 | M08 | 8.5  | 4 | 2.5 |                      |                                                                                           |                                                                                            |
| IARD07M02-0160080 | 16 | 15 | 43 | 26 | M08 | 8.5  | 2 | 3.5 | RDKW0702             | TS2515                                                                                    | TK08                                                                                       |
| IARD07M03-0160080 | 16 | 15 | 43 | 26 | M08 | 8.5  | 3 | 3.5 |                      |                                                                                           |                                                                                            |
| IARD07M03-0200100 | 20 | 18 | 50 | 32 | M10 | 10.5 | 3 | 3.5 |                      |                                                                                           |                                                                                            |
| IARD07M04-0200100 | 20 | 18 | 50 | 32 | M10 | 10.5 | 4 | 3.5 |                      |                                                                                           |                                                                                            |
| IARD07M04-0250120 | 25 | 23 | 60 | 38 | M12 | 12.5 | 4 | 3.5 |                      |                                                                                           |                                                                                            |
| IARD07M05-0250120 | 25 | 23 | 60 | 38 | M12 | 12.5 | 5 | 3.5 | RDMT10T3<br>RDMW10T3 | TS3504                                                                                    | TK10                                                                                       |
| IARD10M02-0250120 | 25 | 23 | 60 | 38 | M12 | 12.5 | 2 | 5   |                      |                                                                                           |                                                                                            |
| IARD10M03-0250120 | 25 | 23 | 60 | 38 | M12 | 12.5 | 3 | 5   |                      |                                                                                           |                                                                                            |
| IARD10M03-0300120 | 30 | 23 | 60 | 38 | M12 | 12.5 | 3 | 5   |                      |                                                                                           |                                                                                            |
| IARD10M04-0300120 | 30 | 23 | 60 | 38 | M12 | 12.5 | 4 | 5   |                      |                                                                                           |                                                                                            |
| IARD10M04-0350120 | 35 | 23 | 60 | 38 | M12 | 12.5 | 4 | 5   |                      |                                                                                           |                                                                                            |
| IARD10M05-0350120 | 35 | 23 | 60 | 38 | M12 | 12.5 | 5 | 5   |                      |                                                                                           |                                                                                            |
| IARD10M05-0420160 | 42 | 29 | 66 | 43 | M16 | 17   | 5 | 5   |                      |                                                                                           |                                                                                            |
| IARD10M06-0420160 | 42 | 29 | 66 | 43 | M16 | 17   | 6 | 5   |                      |                                                                                           |                                                                                            |

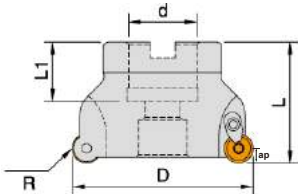




| Order No.       | D  | L1 | L   | d  | T | ap | Inserts              | <br>Screw | <br>Wrench |
|-----------------|----|----|-----|----|---|----|----------------------|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| IFRDE02-0200150 | 20 | 40 | 150 | 20 | 2 | 5  | RDMT1003<br>RDMX1003 | MS3507A                                                                                      | TF15                                                                                          |
| IFRDE02-0200200 | 20 | 40 | 200 | 20 | 2 | 5  |                      |                                                                                              |                                                                                               |
| IFRDE02-0210150 | 21 | 25 | 150 | 20 | 2 | 5  |                      |                                                                                              |                                                                                               |
| IFRDE02-0210200 | 21 | 25 | 200 | 20 | 2 | 5  |                      |                                                                                              |                                                                                               |
| IFRDE03-0250150 | 25 | 40 | 150 | 25 | 3 | 5  |                      |                                                                                              |                                                                                               |
| IFRDE03-0250200 | 25 | 40 | 200 | 25 | 3 | 5  |                      |                                                                                              |                                                                                               |
| IFRDE03-0250250 | 25 | 40 | 250 | 25 | 3 | 5  |                      |                                                                                              |                                                                                               |
| IFRDE03-0260150 | 26 | 25 | 150 | 25 | 3 | 5  |                      |                                                                                              |                                                                                               |
| IFRDE03-0260200 | 26 | 25 | 200 | 25 | 3 | 5  |                      |                                                                                              |                                                                                               |
| IFRDE03-0260250 | 26 | 25 | 250 | 25 | 3 | 5  |                      |                                                                                              |                                                                                               |
| IFRDE03-0300150 | 30 | 25 | 150 | 25 | 3 | 5  | RDMT1003<br>RDMX1003 | MS3509A                                                                                      |                                                                                               |
| IFRDE03-0300200 | 30 | 25 | 200 | 25 | 3 | 5  |                      |                                                                                              |                                                                                               |
| IFRDE03-0300250 | 30 | 25 | 250 | 25 | 3 | 5  |                      |                                                                                              |                                                                                               |
| IFRDE03-0350150 | 35 | 40 | 150 | 32 | 3 | 5  |                      |                                                                                              |                                                                                               |
| IFRDE03-0350200 | 35 | 40 | 200 | 32 | 3 | 5  |                      |                                                                                              |                                                                                               |
| IFRDE03-0350250 | 35 | 40 | 250 | 32 | 3 | 5  |                      |                                                                                              |                                                                                               |
| IFRDE03-0350300 | 35 | 40 | 300 | 32 | 3 | 5  |                      |                                                                                              |                                                                                               |
| IFRDE04-0350150 | 35 | 40 | 150 | 32 | 4 | 5  |                      |                                                                                              |                                                                                               |
| IFRDE04-0350200 | 35 | 40 | 200 | 32 | 4 | 5  |                      |                                                                                              |                                                                                               |
| IFRDE04-0350250 | 35 | 40 | 250 | 32 | 4 | 5  |                      |                                                                                              |                                                                                               |
| IFRDE04-0350300 | 35 | 40 | 300 | 32 | 4 | 5  |                      |                                                                                              |                                                                                               |

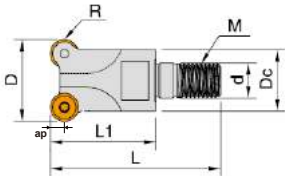
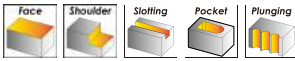


FRDF



| Order No.       | D  | d    | L  | M  | T | ap | Inserts              | Screw   | Wrench | Screw   |
|-----------------|----|------|----|----|---|----|----------------------|---------|--------|---------|
| IFRDF04-0500220 | 50 | 22   | 40 | 11 | 4 | 5  | RDMT1003<br>RDMX1003 | MS3509A | TF15   | MS3509A |
| IFRDF05-0500220 | 50 | 22   | 40 | 11 | 5 | 5  |                      |         |        |         |
| IFRDF04-0500254 | 50 | 25.4 | 40 | 11 | 4 | 5  |                      |         |        |         |
| IFRDF05-0500254 | 50 | 25.4 | 40 | 11 | 5 | 5  |                      |         |        |         |
| IFRDF05-0630254 | 63 | 25.4 | 50 | 13 | 5 | 5  |                      |         |        |         |
| IFRDF06-0630254 | 63 | 25.4 | 50 | 13 | 6 | 5  |                      |         |        |         |
| IFRDF06-0660254 | 66 | 25.4 | 50 | 13 | 6 | 5  |                      |         |        |         |
| IFRDF06-0660270 | 66 | 27.0 | 50 | 13 | 6 | 5  |                      |         |        |         |

FRDM



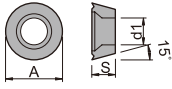
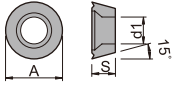
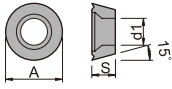
| Order No.       | D  | L  | M   | d    | T | ap | Inserts              | <br>Screw | <br>Wrench |
|-----------------|----|----|-----|------|---|----|----------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| IFRDM02-0200100 | 20 | 30 | M10 | 10.5 | 2 | 5  | RDMT1003<br>RDMX1003 | MS3507A                                                                                        | TF15                                                                                            |
| IFRDM02-0210100 | 21 | 30 | M10 | 10.5 | 2 | 5  |                      |                                                                                                |                                                                                                 |
| IFRDM03-0250120 | 25 | 35 | M12 | 12.5 | 3 | 5  |                      |                                                                                                |                                                                                                 |
| IFRDM03-0260120 | 26 | 35 | M12 | 12.5 | 3 | 5  |                      |                                                                                                |                                                                                                 |
| IFRDM03-0300120 | 30 | 35 | M12 | 12.5 | 3 | 5  |                      |                                                                                                |                                                                                                 |
| IFRDM03-0350160 | 35 | 43 | M16 | 17   | 3 | 5  |                      |                                                                                                |                                                                                                 |
| IFRDM04-0350160 | 35 | 43 | M16 | 17   | 4 | 5  |                      |                                                                                                |                                                                                                 |

RD.. Inserts

仿形銑削刀片

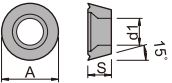
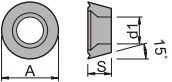
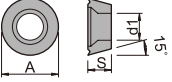
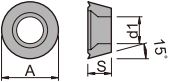
- ◆ Uses 15° positive round inserts with chip breakers.
- ◆ Can perform direct pocket cutting.
- ◆ Wide coverage for medium to roughing.
- ◆ 4-8 cutting edges available per insert.

 Specification

|                                                                                     | P            | Steel           |  |  |  |  |  |  1st choice  2st choice |      |   |      |    |                                                                                       |
|-------------------------------------------------------------------------------------|--------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---|------|----|---------------------------------------------------------------------------------------|
|                                                                                     | M            | Stainless steel |  |  |  |  |  |                                                                                                                                                                                             |      |   |      |    |                                                                                       |
|                                                                                     | K            | Cast iron       |  |  |  |  |  |                                                                                                                                                                                             |      |   |      |    |                                                                                       |
| Inserts                                                                             | Designation  | Grade           |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Dimensions (mm)                                                                   |                                                                                                                                                                                             |      |   |      |    | Drawing                                                                               |
|                                                                                     |              | CX21NS          | CX31NA                                                                            | CX31NS                                                                            | CX41NS                                                                            | CX41NA                                                                            | A                                                                                 | B                                                                                                                                                                                           | S    | r | d1   | t1 |                                                                                       |
|    | RDKW 0501MOE |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   | 5                                                                                 | -                                                                                                                                                                                           | 1.59 | - | 2.2  | -  |    |
|    | RDKW 0702MO  |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   | 7                                                                                 | -                                                                                                                                                                                           | 2.38 | - | 2.8  | -  |   |
|   | RDKW 0702MOE | ✓               | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | 7                                                                                 | -                                                                                                                                                                                           | 2.38 | - | 2.8  | -  |                                                                                       |
|  | RDKW 0702MOT | ✓               | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | 7                                                                                 | -                                                                                                                                                                                           | 2.38 | - | 2.8  | -  |                                                                                       |
|   | RDMT 1003MOE |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   | 10                                                                                | -                                                                                                                                                                                           | 3.18 | - | 4.15 | -  |  |
|   | RDMT 1003MOT | ✓               | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   | 10                                                                                | -                                                                                                                                                                                           | 3.18 | - | 4.15 | -  |                                                                                       |
|   | RDMX 1003MOE | ✓               | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |                                                                                   | 10                                                                                | -                                                                                                                                                                                           | 3.18 | - | 4.15 | -  |                                                                                       |
|   | RDMX 1003MOT | ✓               | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |                                                                                   | 10                                                                                | -                                                                                                                                                                                           | 3.18 | - | 4.15 | -  |                                                                                       |

Milling Inserts & Tools

### Specification

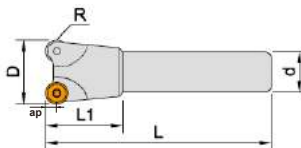
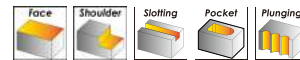
|                                                                                    | P            | Steel           | ⊙      | ⊙      | ⊙      | ○      | ○               |    |   | ⊙ 1st choice    ○ 2st choice |   |     |         |                                                                                       |  |
|------------------------------------------------------------------------------------|--------------|-----------------|--------|--------|--------|--------|-----------------|----|---|------------------------------|---|-----|---------|---------------------------------------------------------------------------------------|--|
|                                                                                    | M            | Stainless steel | ○      | ○      | ○      | ⊙      | ⊙               |    |   |                              |   |     |         |                                                                                       |  |
|                                                                                    | K            | Cast iron       | ⊙      | ○      | ○      | ○      | ○               |    |   |                              |   |     |         |                                                                                       |  |
| Inserts                                                                            | Designation  | Grade           |        |        |        |        | Dimensions (mm) |    |   |                              |   |     | Drawing |                                                                                       |  |
|                                                                                    |              | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA |                 | A  | B | S                            | r | d1  |         | t1                                                                                    |  |
|    | RDMT 10T3MOE |                 | ✓      | ✓      |        |        |                 | 10 | - | 3.97                         | - | 4.5 | -       |    |  |
|    | RDMT 10T3MOT | ✓               | ✓      | ✓      | ✓      |        |                 | 10 | - | 3.97                         | - | 4.5 | -       |                                                                                       |  |
|    | RDMW 10T3MOE |                 | ✓      | ✓      |        |        |                 | 10 | - | 3.97                         | - | 4.5 | -       |    |  |
|   | RDMT 1204MOT |                 | ✓      | ✓      | ✓      | ✓      |                 | 12 | - | 4.76                         | - | 4.4 | -       |   |  |
|  | RDMW 1204MOT |                 | ✓      | ✓      | ✓      | ✓      |                 | 12 | - | 4.76                         | - | 4.4 | -       |                                                                                       |  |
|  | RDMT 1604MOT |                 | ✓      | ✓      | ✓      | ✓      |                 | 16 | - | 4.76                         | - | 5.5 | -       |  |  |
|  | RDMW 1604MOT |                 | ✓      | ✓      | ✓      | ✓      |                 | 16 | - | 4.76                         | - | 5.5 | -       |                                                                                       |  |

### Recommended Cutting Conditions

| Working Material        | Vc       | fz          | ap            |
|-------------------------|----------|-------------|---------------|
| Carbon Steel (HB85-225) | 80 ~ 200 | 0.08 ~ 0.40 | ≤ 0.4 x Dim_A |
| Stainless 300 Series    | 50 ~ 110 | 0.05 ~ 0.35 | ≤ 0.3 x Dim_A |
| Cast Iron (HB140-220)   | 80 ~ 180 | 0.08 ~ 0.40 | ≤ 0.4 x Dim_A |

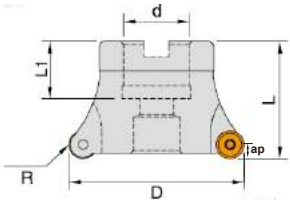
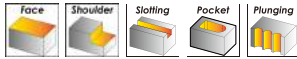
- ◆ Finishing and roughing capability in one optimized tool, specially designed for high speed machining.
- ◆ High removal rates can be achieved even at smaller low powered machines.
- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.

### BRP08E/10E/12E



| Order No.         | D  | L1 | L   | d  | T | ap | Inserts              | Screw  | Wrench |
|-------------------|----|----|-----|----|---|----|----------------------|--------|--------|
| IBRP08E01-0120100 | 12 | 30 | 100 | 12 | 1 | 4  | RPMT08T2             | TS3004 | TK09   |
| IBRP08E02-0160150 | 16 | 50 | 150 | 16 | 2 | 4  |                      |        |        |
| IBRP08E02-0200150 | 20 | 50 | 150 | 20 | 2 | 4  |                      |        |        |
| IBRP08E03-0250150 | 25 | 40 | 150 | 25 | 3 | 4  |                      |        |        |
| IBRP08E02-0200200 | 20 | 50 | 200 | 20 | 2 | 4  |                      |        |        |
| IBRP08E02-0200250 | 20 | 50 | 250 | 20 | 2 | 4  |                      |        |        |
| IBRP10E02-0250150 | 25 | 40 | 150 | 25 | 2 | 5  | RPMT10T3             | TS3503 | TK15   |
| IBRP10E03-0300150 | 30 | 40 | 150 | 25 | 3 | 5  |                      |        |        |
| IBRP10E03-0320150 | 32 | 40 | 150 | 32 | 3 | 5  |                      |        |        |
| IBRP10E03-0350150 | 35 | 40 | 150 | 32 | 3 | 5  |                      |        |        |
| IBRP10E03-0250200 | 25 | 50 | 200 | 25 | 3 | 5  |                      |        |        |
| IBRP10E02-0250200 | 25 | 50 | 200 | 25 | 2 | 5  |                      |        |        |
| IBRP10E02-0250250 | 25 | 50 | 250 | 25 | 2 | 5  |                      |        |        |
| IBRP10E03-0300200 | 30 | 70 | 200 | 25 | 3 | 5  |                      |        |        |
| IBRP10E03-0320200 | 32 | 70 | 200 | 32 | 3 | 5  |                      |        |        |
| IBRP10E03-0320250 | 32 | 50 | 250 | 32 | 3 | 5  |                      |        |        |
| IBRP10E03-0350200 | 35 | 50 | 200 | 32 | 3 | 5  | RPMT1204<br>RPMW1204 | TS4006 | TK15   |
| IBRP12E02-0320170 | 32 | 45 | 170 | 32 | 2 | 6  |                      |        |        |
| IBRP12E03-0400170 | 40 | 45 | 170 | 32 | 3 | 6  |                      |        |        |
| IBRP12E04-0500170 | 50 | 45 | 170 | 42 | 4 | 6  |                      |        |        |
| IBRP12E02-0320250 | 32 | 80 | 250 | 32 | 2 | 6  |                      |        |        |
| IBRP12E03-0400230 | 40 | 50 | 230 | 32 | 3 | 6  |                      |        |        |
| IBRP12E04-0500230 | 50 | 50 | 230 | 42 | 4 | 6  |                      |        |        |

 **BRP08F/10F/12F**



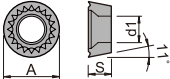
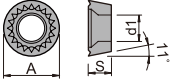
| Order No.         | D  | L  | L1 | d    | R | T | ap | Inserts              |  Screw |  Wrench |
|-------------------|----|----|----|------|---|---|----|----------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| IBRP08F05-0400160 | 40 | 40 | 18 | 16   | 4 | 5 | 4  | RPMT08T2             | TS3004                                                                                    | TK09                                                                                       |
| IBRP08F06-0500220 | 50 | 45 | 22 | 22   | 4 | 6 | 4  |                      |                                                                                           |                                                                                            |
| IBRP10F04-0400160 | 40 | 40 | 18 | 16   | 5 | 4 | 5  | RPMT10T3             | TS3503                                                                                    | TK15                                                                                       |
| IBRP10F05-0500220 | 50 | 45 | 22 | 22   | 5 | 5 | 5  |                      |                                                                                           |                                                                                            |
| IBRP10F05-0500254 | 50 | 45 | 22 | 25.4 | 5 | 5 | 5  |                      |                                                                                           |                                                                                            |
| IBRP10F06-0630220 | 63 | 45 | 22 | 22   | 5 | 6 | 5  |                      |                                                                                           |                                                                                            |
| IBRP10F06-0630254 | 63 | 45 | 22 | 25.4 | 5 | 6 | 5  |                      |                                                                                           |                                                                                            |
| IBRP12F04-0500220 | 50 | 45 | 22 | 22   | 6 | 4 | 5  |                      |                                                                                           |                                                                                            |
| IBRP12F04-0500254 | 50 | 45 | 22 | 25.4 | 6 | 4 | 6  | RPMT1204<br>RPMW1204 | TS4006                                                                                    | TK15                                                                                       |
| IBRP12F05-0630220 | 63 | 45 | 22 | 22   | 6 | 5 | 6  |                      |                                                                                           |                                                                                            |
| IBRP12F05-0630254 | 63 | 45 | 22 | 25.4 | 6 | 5 | 6  |                      |                                                                                           |                                                                                            |
| IBRP12F06-0800254 | 80 | 50 | 26 | 25.4 | 6 | 6 | 6  |                      |                                                                                           |                                                                                            |
| IBRP12F06-0800270 | 80 | 50 | 26 | 27   | 6 | 6 | 6  |                      |                                                                                           |                                                                                            |

RP.. Inserts

仿形銑削刀片

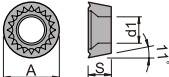
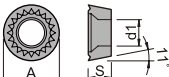
- ◆ Uses 11° positive round inserts with chip breakers.
- ◆ Can perform direct pocket cutting.
- ◆ Wide coverage for medium to roughing.
- ◆ 4-8 cutting edges available per insert.

 Specification

|                                                                                     | P            | Steel           |  |  |  |  |  |  1st choice  2st choice |      |   |     |    |                                                                                       |
|-------------------------------------------------------------------------------------|--------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---|-----|----|---------------------------------------------------------------------------------------|
|                                                                                     | M            | Stainless steel |  |  |  |  |  |                                                                                                                                                                                             |      |   |     |    |                                                                                       |
|                                                                                     | K            | Cast iron       |  |  |  |  |  |                                                                                                                                                                                             |      |   |     |    |                                                                                       |
| Inserts                                                                             | Designation  | Grade           |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Dimensions (mm)                                                                   |                                                                                                                                                                                             |      |   |     |    | Drawing                                                                               |
|                                                                                     |              | CX21NS          | CX31NA                                                                            | CX31NS                                                                            | CX41NS                                                                            | CX41NA                                                                            | A                                                                                 | B                                                                                                                                                                                           | S    | r | d1  | t1 |                                                                                       |
|    | RPMT 08T2MOE |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   | 8                                                                                 | -                                                                                                                                                                                           | 2.78 | - | 3.2 | -  |    |
|    | RPMT 08T2MOT |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   | 8                                                                                 | -                                                                                                                                                                                           | 2.78 | - | 3.2 | -  |                                                                                       |
|   | RPMT 10T3MOE |                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | 10                                                                                | -                                                                                                                                                                                           | 3.97 | - | 4.5 | -  |  |
|  | RPMT 10T3MOT |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   | 10                                                                                | -                                                                                                                                                                                           | 3.97 | - | 4.3 | -  |                                                                                       |

Milling Inserts & Tools

### Specification

|                                                                                   | P            | Steel           | ◎      | ◎      | ◎      | ○      | ○               |   |      | ◎ 1st choice    ○ 2st choice |     |    |                                                                                     |  |  |
|-----------------------------------------------------------------------------------|--------------|-----------------|--------|--------|--------|--------|-----------------|---|------|------------------------------|-----|----|-------------------------------------------------------------------------------------|--|--|
|                                                                                   | M            | Stainless steel | ○      | ○      | ○      | ◎      | ◎               |   |      |                              |     |    |                                                                                     |  |  |
|                                                                                   | K            | Cast iron       | ◎      | ○      | ○      | ○      | ○               |   |      |                              |     |    |                                                                                     |  |  |
| Inserts                                                                           | Designation  | Grade           |        |        |        |        | Dimensions (mm) |   |      |                              |     |    | Drawing                                                                             |  |  |
|                                                                                   |              | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | A               | B | S    | r                            | d1  | t1 |                                                                                     |  |  |
|  | RPMT 1204MOE |                 | ✓      | ✓      | ✓      | ✓      | 12              | - | 4.76 | -                            | 4.3 | -  |  |  |  |
|  | RPMT 1204MOT |                 | ✓      | ✓      | ✓      | ✓      | 12              | - | 4.76 | -                            | 4.3 | -  |                                                                                     |  |  |
|   | RPMW 1204MOE |                 | ✓      | ✓      | ✓      | ✓      | 12              | - | 4.76 | -                            | 4.3 | -  |  |  |  |
|   | RPMW 1204MOT |                 | ✓      | ✓      | ✓      | ✓      | 12              | - | 4.76 | -                            | 4.3 | -  |                                                                                     |  |  |

### Recommended Cutting Conditions

| Working Material        | Vc       | fz          | ap            |
|-------------------------|----------|-------------|---------------|
| Carbon Steel (HB85-225) | 80 ~ 200 | 0.08 ~ 0.40 | ≤ 0.4 x Dim_A |
| Stainless 300 Series    | 50 ~ 110 | 0.05 ~ 0.35 | ≤ 0.3 x Dim_A |
| Cast Iron (HB140-220)   | 80 ~ 180 | 0.08 ~ 0.40 | ≤ 0.4 x Dim_A |

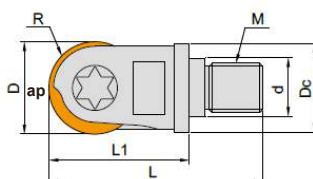
- ◆ Indexable ball type for molds in finishing applications.
- ◆ Long tool life can be achieved due to the excellent edge design and special grade.
- ◆ With consistent machining and high accurate finishing at high speed cutting.
- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.

### WF21E



| Order No.        | D  | L1 | L   | d  | R    | Inserts | Screw | Wrench |
|------------------|----|----|-----|----|------|---------|-------|--------|
| IWF21E00-0160150 | 16 | 36 | 150 | 16 | 8    | WP3216  | B08R  | TK20   |
| IWF21E00-0200160 | 20 | 45 | 160 | 20 | 10   | WP3220  | B10R  | TK20   |
| IWF21E00-0250180 | 25 | 45 | 180 | 25 | 12.5 | WP3225  | B12R  | TK30   |
| IWF21E00-0160200 | 16 | 30 | 200 | 20 | 8    | WP3216  | B08R  | TK20   |
| IWF21E00-0200250 | 20 | 30 | 250 | 25 | 10   | WP3220  | B10R  | TK20   |
| IWF21E00-0250250 | 25 | 35 | 250 | 32 | 12.5 | WP3225  | B12R  | TK30   |

### WF21M



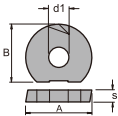
| Order No.        | D  | d    | Dc | L1 | L  | M   | R    | Inserts | Screw | Wrench |
|------------------|----|------|----|----|----|-----|------|---------|-------|--------|
| IWF21M00-0160080 | 16 | 8.5  | 15 | 26 | 45 | M8  | 8    | WP3216  | B08R  | TK20   |
| IWF21M00-0200100 | 20 | 10.5 | 18 | 35 | 53 | M10 | 10   | WP3220  | B10R  | TK20   |
| IWF21M00-0250120 | 25 | 12.5 | 23 | 41 | 63 | M12 | 12.5 | WP3225  | B12R  | TK30   |

## WP32.. Inserts

仿形銑削刀片

- ◆ High precision finishing purpose.
- ◆ High accurate ball nose radius tolerance.
- ◆ High performance and rigidity.

### Specification

|                                                                                     | P           | Steel           | ⊙      | ⊙      | ⊙      | ○      | ○      | ⊙ |                 |    | ⊙ 1st choice    ○ 2st choice |   |    |    |         |                                                                                      |
|-------------------------------------------------------------------------------------|-------------|-----------------|--------|--------|--------|--------|--------|---|-----------------|----|------------------------------|---|----|----|---------|--------------------------------------------------------------------------------------|
|                                                                                     | M           | Stainless steel | ○      | ○      | ○      | ⊙      | ⊙      | ⊙ |                 |    |                              |   |    |    |         |                                                                                      |
|                                                                                     | K           | Cast iron       | ⊙      | ○      | ○      | ○      | ○      | ⊙ |                 |    |                              |   |    |    |         |                                                                                      |
| Inserts                                                                             | Designation | Grade           |        |        |        |        |        |   | Dimensions (mm) |    |                              |   |    |    | Drawing |                                                                                      |
|                                                                                     |             | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | CX11NS |   | A               | B  | S                            | r | d1 | t1 |         |                                                                                      |
|    | WP32 16-RG  |                 |        |        |        |        |        | ✓ |                 | 16 | 14.0                         | 3 | -  | 5  | -       |  |
|    | WP32 20-RG  |                 |        |        |        |        |        | ✓ |                 | 20 | 16.0                         | 3 | -  | 5  | -       |                                                                                      |
|    | WP32 25-RG  |                 |        |        |        |        |        | ✓ |                 | 25 | 21.5                         | 4 | -  | 6  | -       |                                                                                      |
|  | WP32 16-SG  |                 |        |        |        |        |        | ✓ |                 | 16 | 14.0                         | 3 | -  | 5  | -       |                                                                                      |
|  | WP32 20-SG  |                 |        |        |        |        |        | ✓ |                 | 20 | 16.0                         | 3 | -  | 5  | -       |                                                                                      |
|  | WP32 25-SG  |                 |        |        |        |        |        | ✓ |                 | 25 | 21.5                         | 4 | -  | 6  | -       |                                                                                      |

※ CX11NS, CX11NA special grade available.

### Recommended Cutting Conditions

| Working Material        | Vc        | fz          | ap             |
|-------------------------|-----------|-------------|----------------|
| Carbon Steel (HB85-225) | 100 ~ 250 | 0.10 ~ 0.30 | ≤ 0.07 x Dim_A |
| Stainless 300 Series    | 80 ~ 150  | 0.08 ~ 0.25 | ≤ 0.04 x Dim_A |
| Cast Iron (HB140-220)   | 100 ~ 250 | 0.10 ~ 0.30 | ≤ 0.07 x Dim_A |



## ***High Feed Milling Offers Increased Productivity!!!***

### **高進給銑削提升加工效率及生產率**

- *The CXBN Mini milling cutters offer exceptional milling performance.*
- *The smaller 6mm BNMX0603 high feed insert allows lowest cutting force to insure maximum productivity!*
- *Optimal insert geometries, wide range cutting applications, strong insert clamping and solid high feed design ensure higher efficient performance!*
- *Let the CXBN stream line your milling process!*

### **FEATURES AND BENEFITS**

- *Double sided designed with total 4 indexes provide for cost-effective machining.*
- *Available in end mill, modular head and face mill type.*
- *Up to 1 mm DOC capability.*
- *Strong positive insert rake face angles for lower cutting force and efficient milling.*
- *Single screw design for high rigid & tensile clamping.*

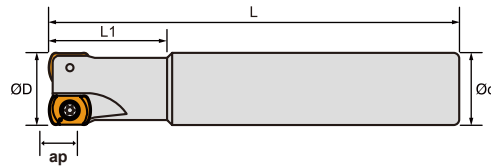


*These double-sided inserts provide four cutting edges for cost-effective machining, especially efficient in the machining of most common workpiece materials.*

- ◆ Suitable for high-velocity, high-speed cutter of steel materials, especially when performed on smaller machines equipped with high-speed and low torque spindles.
- ◆ Provides low cutting resistance for cost-effective and high-performance machining of common work piece materials when using cutter body diameters from 15mm to 63mm.
- ◆ SKD11 tool steel is used for best rigidity and performance.
- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.



## CXBNE

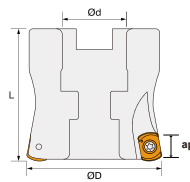


| Order No.        | D  | L1 | L   | d  | T | ap | Inserts  | Screw  | Wrench |
|------------------|----|----|-----|----|---|----|----------|--------|--------|
| ICXBNE02-0150130 | 15 | 26 | 130 | 16 | 2 | 1  | BNMX0603 | TS3004 | TK08   |
| ICXBNE02-0160130 | 16 | 26 | 130 | 16 | 2 | 1  |          |        |        |
| ICXBNE02-0170130 | 17 | 26 | 130 | 16 | 2 | 1  |          |        |        |
| ICXBNE02-0180150 | 18 | 25 | 150 | 20 | 2 | 1  |          |        |        |
| ICXBNE03-0200150 | 20 | 40 | 150 | 20 | 3 | 1  |          |        |        |
| ICXBNE03-0210150 | 21 | 40 | 150 | 20 | 3 | 1  |          |        |        |
| ICXBNE04-0250150 | 25 | 40 | 150 | 25 | 4 | 1  |          |        |        |
| ICXBNE04-0260150 | 26 | 30 | 150 | 25 | 4 | 1  |          |        |        |
| ICXBNE04-0320200 | 32 | 45 | 200 | 32 | 4 | 1  |          |        |        |

Customize available.



## CXBNF



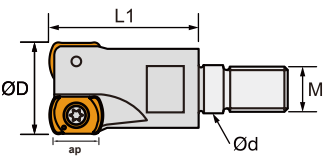
| Order No.          | D  | L  | d    | T | ap | Inserts  | Screw  | Wrench |
|--------------------|----|----|------|---|----|----------|--------|--------|
| ICXBNF06 - 0400220 | 40 | 50 | 22   | 6 | 1  | BNMX0603 | TS3004 | TK08   |
| ICXBNF06 - 0500220 | 50 | 50 | 22   | 6 | 1  |          |        |        |
| ICXBNF07 - 0500220 | 50 | 50 | 22   | 7 | 1  |          |        |        |
| ★ ICXBNF07W0500220 | 50 | 50 | 22   | 7 | 1  |          |        |        |
| ICXBNF08 - 0500220 | 50 | 50 | 22   | 8 | 1  |          |        |        |
| ICXBNF08 - 0520220 | 52 | 50 | 22   | 8 | 1  |          |        |        |
| ICXBNF07 - 0630220 | 63 | 50 | 22   | 7 | 1  |          |        |        |
| ICXBNF08 - 0630220 | 63 | 50 | 22   | 8 | 1  |          |        |        |
| ICXBNF08 - 0630254 | 63 | 50 | 25.4 | 8 | 1  |          |        |        |
| ICXBNF09 - 0630220 | 63 | 50 | 22   | 9 | 1  |          |        |        |

★ with Coolant Hole

Customize available.

 **CXBNM**

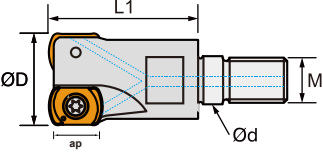


| Order No.        | D  | L1 | d    | M   | T | ap | Inserts  | Screw  | Wrench |
|------------------|----|----|------|-----|---|----|----------|--------|--------|
| ICXBNM02-0160080 | 16 | 26 | 8.5  | M8  | 2 | 1  | BNMX0603 | TS3004 | TK08   |
| ICXBNM03-0210100 | 21 | 30 | 10.8 | M10 | 3 | 1  |          |        |        |
| ICXBNM02-0200100 | 20 | 30 | 10.8 | M10 | 2 | 1  |          |        |        |
| ICXBNM03-0200100 | 20 | 30 | 10.8 | M10 | 3 | 1  |          |        |        |
| ICXBNM03-0250120 | 25 | 35 | 12.5 | M12 | 3 | 1  |          |        |        |
| ICXBNM04-0250120 | 25 | 35 | 12.5 | M12 | 4 | 1  |          |        |        |
| ICXBNM03-0260120 | 26 | 35 | 12.5 | M12 | 3 | 1  |          |        |        |
| ICXBNM05-0320160 | 32 | 40 | 17   | M16 | 5 | 1  |          |        |        |

Customize available.

 **CXBNM (with Coolant Hole)**



| Order No.        | D  | L  | d    | M   | T | ap | Inserts  | Screw  | Wrench |
|------------------|----|----|------|-----|---|----|----------|--------|--------|
| ICXBNM02W0160080 | 16 | 25 | 8.5  | M8  | 2 | 1  | BNMX0603 | TS3004 | TK08   |
| ICXBNM02W0170080 | 17 | 30 | 8.5  | M8  | 2 | 1  |          |        |        |
| ICXBNM03W0200100 | 20 | 30 | 10.8 | M10 | 3 | 1  |          |        |        |
| ICXBNM03W0210100 | 21 | 30 | 10.8 | M10 | 3 | 1  |          |        |        |
| ICXBNM04W0250120 | 25 | 35 | 12.5 | M12 | 4 | 1  |          |        |        |
| ICXBNM04W0260120 | 26 | 35 | 12.5 | M12 | 4 | 1  |          |        |        |
| ICXBNM05W0350160 | 35 | 43 | 17   | M16 | 5 | 1  |          |        |        |

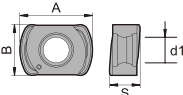
Customize available.

## BNMX0603

高進給平面銑削刀片

- ◆ High feed machining, low cutting force.
- ◆ Double sided design, total 4 cutting corners.
- ◆ High metal remove rate & low vibration.

### Specification

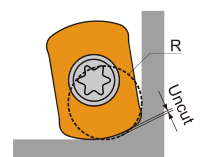
|                                                                                  | P                   | Steel           | ◎      | ◎      | ◎      | ○      | ○               |     | ◎ 1st choice    ○ 2nd choice |      |   |     |         |                                                                                     |
|----------------------------------------------------------------------------------|---------------------|-----------------|--------|--------|--------|--------|-----------------|-----|------------------------------|------|---|-----|---------|-------------------------------------------------------------------------------------|
|                                                                                  | M                   | Stainless steel | ○      | ○      | ○      | ◎      | ◎               |     |                              |      |   |     |         |                                                                                     |
|                                                                                  | K                   | Cast iron       | ◎      | ○      | ○      | ○      | ○               |     |                              |      |   |     |         |                                                                                     |
| Inserts                                                                          | Designation         | Grade           |        |        |        |        | Dimensions (mm) |     |                              |      |   |     | Drawing |                                                                                     |
|                                                                                  |                     | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA |                 | A   | B                            | S    | r | d1  |         | t1                                                                                  |
|  | <b>BNMX 0603-SG</b> | ✓               |        | ✓      | ✓      |        |                 | 9.0 | 6.3                          | 3.75 | - | 3.2 | -       |  |
|  | <b>BNMX 0603-MG</b> | ✓               |        | ✓      | ✓      |        |                 | 9.0 | 6.3                          | 3.75 | - | 3.2 | -       |                                                                                     |
|  | <b>BNMX 0603-RG</b> | ✓               |        | ✓      | ✓      |        |                 | 9.0 | 6.3                          | 3.75 | - | 3.2 | -       |                                                                                     |

### Recommended Cutting Conditions

| Working Material        | Vc        | fz        | ap    |
|-------------------------|-----------|-----------|-------|
| Carbon Steel (HB85-225) | 120 ~ 220 | 0.5 ~ 1.6 | ~ 0.9 |
| Stainless 300 Series    | 70 ~ 150  | 0.3 ~ 1.2 | ~ 0.7 |
| Cast Iron (HB140-220)   | 120 ~ 220 | 0.5 ~ 1.6 | ~ 0.9 |

### ■ Corner R Programming

| Designation | Approx. R (mm) |       |
|-------------|----------------|-------|
|             | Input. R       | Uncut |
| BNMX0603    | 2.0            | 0.42  |





## New Economical Solution for High Feed Milling Applications!!!

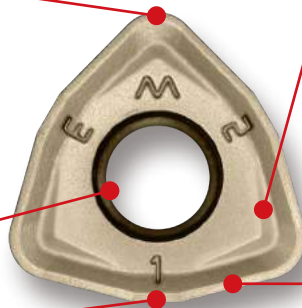
### 專為高進給銑削應用而生的經濟型銑刀片

- CXWN High Feed Mill Series is more economical due to the use of 6 cutting edges compared to conventional tool with a 3/4 edges positive insert.
- Double sided & negative geometry has been designed for rigidity of cutting edge.
- Unique insert design for multifunctional machining ability.



- Round edge geometry design secure edge rigidity, suitable for high feed rates.

- Single screw for easy and strong clamping force.



- Chip evacuation improvement design.
- Reduction of cutting load during machining.

- High rake angle cutting edge achieve superior cutting performance.
- Low cutting resistance design.

- Special flat design for surface roughness improvement.
- Decreasing force during high feed machining.

CXWN / WNMX09T3 高進給平面銑削

- ◆ Particularly suitable for high feed milling purpose.
- ◆ Provides low cutting resistance for cost-effective and high-performance machining of common work piece materials.
- ◆ SKD11 tool steel is used for best rigidity and performance.
- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.

 **CXWNE**

CAM  
R 2.5

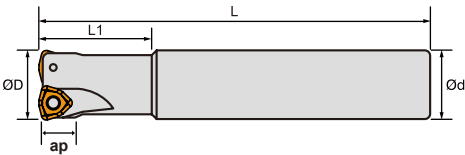
High Feed

Face

Shoulder

Slotting

Pocket



| Order No.        | D  | L1 | L   | d  | T | ap  | Inserts  |  Screw |  Wrench |
|------------------|----|----|-----|----|---|-----|----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| ICXWNE02-0250150 | 25 | 40 | 150 | 25 | 2 | 1.5 | WNMX09T3 | TS3006                                                                                    | TK10                                                                                       |
| ICXWNE02-0260150 | 26 | 40 | 150 | 25 | 2 | 1.5 |          |                                                                                           |                                                                                            |
| ICXWNE03-0300150 | 30 | 40 | 150 | 32 | 3 | 1.5 |          |                                                                                           |                                                                                            |
| ICXWNE03-0320150 | 32 | 40 | 150 | 32 | 3 | 1.5 |          |                                                                                           |                                                                                            |
| ICXWNE04-0350200 | 35 | 45 | 200 | 32 | 4 | 1.5 |          |                                                                                           |                                                                                            |
| ICXWNE04-0400200 | 40 | 45 | 200 | 32 | 4 | 1.5 |          |                                                                                           |                                                                                            |

Customize available.

 **CXWNF**

CAM  
R 2.5

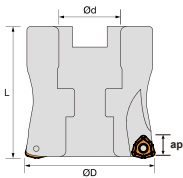
High Feed

Face

Shoulder

Slotting

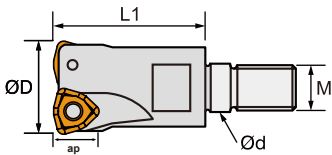
Pocket



| Order No.        | D  | L  | d    | T | ap  | Inserts  |  Screw |  Wrench |
|------------------|----|----|------|---|-----|----------|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| ICXWNF05-0500220 | 50 | 50 | 22   | 5 | 1.5 | WNMX09T3 | TS3006                                                                                     | TK10                                                                                         |
| ICXWNF05-0630220 | 63 | 50 | 22   | 5 | 1.5 |          |                                                                                            |                                                                                              |
| ICXWNF06-0630254 | 63 | 50 | 25.4 | 6 | 1.5 |          |                                                                                            |                                                                                              |
| ICXWNF06-0800270 | 80 | 55 | 27   | 6 | 1.5 |          |                                                                                            |                                                                                              |

Customize available.

 **CXWNM**

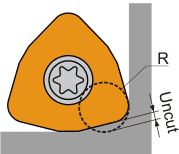


| Order No.        | D  | L1   | d  | M   | T | ap  | Inserts  |  Screw |  Wrench |
|------------------|----|------|----|-----|---|-----|----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| ICXWNM02-0250120 | 25 | 12.5 | 43 | M12 | 2 | 1.5 | WNMX09T3 | TS3006                                                                                    | TK10                                                                                       |

Customize available.

■ Corner R Programming

| Designation | Approx. R (mm) |       |
|-------------|----------------|-------|
|             | Input. R       | Uncut |
| WNMX09T3    | 2.5            | 0.6   |



## WNMX09T3

高進給平面銑削刀片

- ◆ Double sided with 6 cutting edges.
- ◆ Round edge suitable for high feed purpose.
- ◆ Better chip evacuation in various cutting applications.
- ◆ High rake angle design for low cutting force.

### Specification

|         | P              | Steel           | ◎      | ◎      | ◎      | ○      | ○      | ◎               |   | ◎ 1st choice    ○ 2nd choice |     |     |    |         |  |
|---------|----------------|-----------------|--------|--------|--------|--------|--------|-----------------|---|------------------------------|-----|-----|----|---------|--|
|         | M              | Stainless steel | ○      | ○      | ○      | ◎      | ◎      | ◎               |   |                              |     |     |    |         |  |
|         | K              | Cast iron       | ◎      | ○      | ○      | ○      | ○      | ◎               |   |                              |     |     |    |         |  |
| Inserts | Designation    | Grade           |        |        |        |        |        | Dimensions (mm) |   |                              |     |     |    | Drawing |  |
|         |                | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | CX11NS | A               | B | S                            | r   | d1  | t1 |         |  |
|         | WNMX 09T316-RG | ✓               |        | ✓      | ✓      |        |        | 9.525           | - | 3.97                         | 1.6 | 3.6 | -  |         |  |

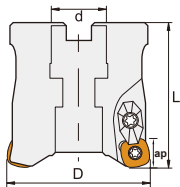
### Recommended Cutting Conditions

| Working Material        | Vc        | fz        | ap     |
|-------------------------|-----------|-----------|--------|
| Carbon Steel (HB85-225) | 120 ~ 220 | 0.8 ~ 1.5 | ~ 1.35 |
| Stainless 300 Series    | 70 ~ 150  | 0.5 ~ 1.2 | ~ 1.0  |
| Cast Iron (HB140-220)   | 120 ~ 220 | 0.8 ~ 1.5 | ~ 1.35 |

- ◆ Economical 4 cutting edges, has a unique R shape to enable maximum cutting depth of 2mm.
- ◆ Special deign for high feed machining, offers 3 to 5 times the deep cutting of conventional products, reducing cutting time and processing costs.
- ◆ Black oxide processing applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.

 **ASRFF**

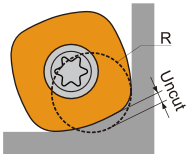




| Order No.        | D  | L      | d  | T | ap | Inserts              |  Screw |  Wrench |  Clamp |  Clamp Screw |
|------------------|----|--------|----|---|----|----------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| IASRFF03-0500220 | 50 | 22     | 50 | 3 | 2  | SDMT1205<br>SDNW1205 | MS4011A                                                                                 | TF15                                                                                      | YR-06                                                                                     | MS4008ES                                                                                        |
| IASRFF03-0500222 | 50 | 22.225 | 50 | 3 | 2  |                      |                                                                                         |                                                                                           |                                                                                           |                                                                                                 |
| IASRFF04-0500220 | 50 | 22     | 50 | 4 | 2  |                      |                                                                                         |                                                                                           |                                                                                           |                                                                                                 |
| IASRFF04-0500222 | 50 | 22.225 | 50 | 4 | 2  |                      |                                                                                         |                                                                                           |                                                                                           |                                                                                                 |
| IASRFF03-0630220 | 63 | 22     | 50 | 3 | 2  |                      |                                                                                         |                                                                                           |                                                                                           |                                                                                                 |
| IASRFF03-0630222 | 63 | 22.225 | 50 | 3 | 2  |                      |                                                                                         |                                                                                           |                                                                                           |                                                                                                 |
| IASRFF04-0630220 | 63 | 22     | 50 | 4 | 2  |                      |                                                                                         |                                                                                           |                                                                                           |                                                                                                 |
| IASRFF04-0630222 | 63 | 22.225 | 50 | 4 | 2  |                      |                                                                                         |                                                                                           |                                                                                           |                                                                                                 |
| IASRFF04-0800317 | 80 | 31.75  | 55 | 4 | 2  |                      |                                                                                         |                                                                                           |                                                                                           |                                                                                                 |
| IASRFF04-0800320 | 80 | 32     | 55 | 4 | 2  |                      |                                                                                         |                                                                                           |                                                                                           |                                                                                                 |
| IASRFF05-0800317 | 80 | 31.75  | 55 | 5 | 2  |                      |                                                                                         |                                                                                           |                                                                                           |                                                                                                 |
| IASRFF05-0800320 | 80 | 32     | 55 | 5 | 2  |                      |                                                                                         |                                                                                           |                                                                                           |                                                                                                 |

■ Corner R Programming

| Designation         | Approx. R (mm) |       |
|---------------------|----------------|-------|
|                     | Input. R       | Uncut |
| SDNW1205 / SDMT1205 | 4.5            | 0.83  |

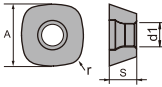
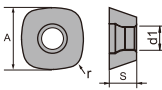


## SDMT1205 / SDNW1205

高進給平面銑削刀片

- ◆ Economical 4-corner type, especially design for high feed cutting.
- ◆ Reducing cutting time and processing costs.
- ◆ Unique R shape to achieve maximum cutting depth of 2mm.

### Specification

|                                                                                   | P                       | Steel           | ◎      | ◎      | ◎      | ○      | ○               |   | ◎ 1st choice    ○ 2nd choice |    |     |    |                                                                                     |  |
|-----------------------------------------------------------------------------------|-------------------------|-----------------|--------|--------|--------|--------|-----------------|---|------------------------------|----|-----|----|-------------------------------------------------------------------------------------|--|
|                                                                                   | M                       | Stainless steel | ○      | ○      | ○      | ◎      | ◎               |   |                              |    |     |    |                                                                                     |  |
|                                                                                   | K                       | Cast iron       | ◎      | ○      | ○      | ○      | ○               |   |                              |    |     |    |                                                                                     |  |
| Inserts                                                                           | Designation             | Grade           |        |        |        |        | Dimensions (mm) |   |                              |    |     |    | Drawing                                                                             |  |
|                                                                                   |                         | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA | A               | B | S                            | r  | d1  | t1 |                                                                                     |  |
|  | <b>SDMT 1205ZDTN-MG</b> |                 | ✓      | ✓      |        |        | 12.7            | - | 5.56                         | 15 | 4.6 | -  |  |  |
|  | <b>SDMT 1205ZDTN-RG</b> |                 | ✓      | ✓      |        |        | 12.7            | - | 5.56                         | 15 | 4.6 | -  |                                                                                     |  |
|  | <b>SDNW 1205ZDTN-RG</b> |                 | ✓      | ✓      | ✓      | ✓      | 12.7            | - | 5.56                         | 15 | 4.6 | -  |  |  |

MG: Low cutting force and chattering reduction.

HG: Strong edge strength for roughing.

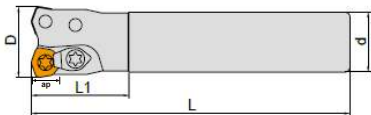
### Recommended Cutting Conditions

| Working Material        | Vc        | fz        | ap    |
|-------------------------|-----------|-----------|-------|
| Carbon Steel (HB85-225) | 100 ~ 220 | 0.8 ~ 1.8 | ~ 1.5 |
| Stainless 300 Series    | 70 ~ 150  | 0.6 ~ 1.2 | ~ 1.2 |
| Cast Iron (HB140-220)   | 100 ~ 220 | 0.8 ~ 1.8 | ~ 1.5 |

AJX12 / JDMW1204 高進給平面銑削

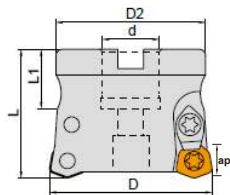
- ◆ Great performance ensured at large depth of cutting operations due to strong cutting edge and low cutting resistance.
- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.

AJX12E CAM R 3.0 High Feed Face Shoulder Slotting Pocket



| Order No.         | D  | L1 | L   | d  | T | ap | Inserts  | Screw  | Wrench | Clamp | Clamp Screw |
|-------------------|----|----|-----|----|---|----|----------|--------|--------|-------|-------------|
| IAJX12E02-0300150 | 30 | 35 | 150 | 25 | 2 | 2  | JDMW1204 | TS4004 | TK15   | AS04  | AJ4012      |
| IAJX12E02-0320150 | 32 | 35 | 150 | 32 | 2 | 2  |          |        |        |       |             |
| IAJX12E02-0350150 | 35 | 35 | 150 | 32 | 2 | 2  |          |        |        |       |             |
| IAJX12E03-0400170 | 40 | 35 | 170 | 32 | 3 | 2  |          |        |        |       |             |
| IAJX12E04-0500170 | 50 | 47 | 170 | 32 | 4 | 2  |          |        |        |       |             |

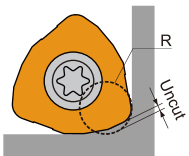
AJX12F CAM R 3.0 High Feed Face Shoulder Slotting Pocket



| Order No.        | D  | L1 | L  | d  | T | ap | Inserts  | Screw  | Wrench | Clamp | Clamp Screw |
|------------------|----|----|----|----|---|----|----------|--------|--------|-------|-------------|
| IAJX12F04-050022 | 50 | 23 | 50 | 22 | 4 | 2  | JDMW1204 | TS4008 | TK15   | AS04  | AJ4012      |
| IAJX12F05-063022 | 63 | 23 | 50 | 22 | 5 | 2  |          |        |        |       |             |
| IAJX12F06-080027 | 80 | 26 | 55 | 27 | 6 | 2  |          |        |        |       |             |

■ Corner R Programming

| Designation | Approx. R (mm) |       |
|-------------|----------------|-------|
|             | Input. R       | Uncut |
| JDMW1204    | 3.0            | 0.47  |

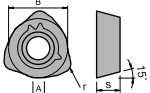


## JDMW1204

高進給平面銑削刀片

- ◆ Special inserts design with 3 cutting edges.
- ◆ Suitable for high feed machining.
- ◆ High metal remove rate & low vibration.

### Specification

|                                                                                  |                    |                 |        |        |        |        |                 |     |                              |      |     |      |         |                                                                                     |
|----------------------------------------------------------------------------------|--------------------|-----------------|--------|--------|--------|--------|-----------------|-----|------------------------------|------|-----|------|---------|-------------------------------------------------------------------------------------|
|                                                                                  | P                  | Steel           | ◎      | ◎      | ◎      | ○      | ○               |     | ◎ 1st choice    ○ 2nd choice |      |     |      |         |                                                                                     |
|                                                                                  | M                  | Stainless steel | ○      | ○      | ○      | ◎      | ◎               |     |                              |      |     |      |         |                                                                                     |
|                                                                                  | K                  | Cast iron       | ◎      | ○      | ○      | ○      | ○               |     |                              |      |     |      |         |                                                                                     |
| Inserts                                                                          | Designation        | Grade           |        |        |        |        | Dimensions (mm) |     |                              |      |     |      | Drawing |                                                                                     |
|                                                                                  |                    | CX21NS          | CX31NA | CX31NS | CX41NS | CX41NA |                 | A   | B                            | S    | r   | d1   |         | t1                                                                                  |
|  | JDMW 120420ZDSR-RG |                 | ✓      | ✓      | ✓      | ✓      |                 | 2.5 | 12.0                         | 4.76 | 2.0 | 4.75 | -       |  |

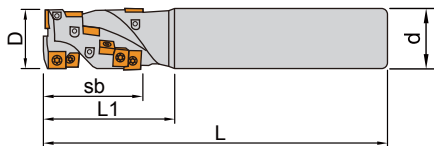
### Recommended Cutting Conditions

| Working Material        | Vc        | ap        | fz30-50(dia) | fz50-80(dia) |
|-------------------------|-----------|-----------|--------------|--------------|
| Carbon Steel (HB85-225) | 100 ~ 220 | 0.8 ~ 1.3 | 0.9 ~ 1.5    | ~ 1.5        |
| Stainless 300 Series    | 70 ~ 150  | 0.6 ~ 1.0 | 0.7 ~ 1.2    | ~ 1.2        |
| Cast Iron (HB140-220)   | 100 ~ 220 | 0.8 ~ 1.3 | 0.9 ~ 1.5    | ~ 1.5        |

- ◆ Great performance ensured at large depth of cutting operations.
- ◆ Innovative curve cutting edge design ensure ideal 90 degree cutting.
- ◆ SKD11 tool steel is used for best rigidity and performance.
- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.

 **SP05H/06H/07H/09H**



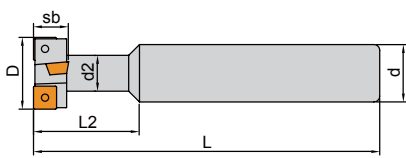


| Order No.        | D  | sb | L1  | L   | d  | T | Inserts  |  Screw |  Wrench |
|------------------|----|----|-----|-----|----|---|----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| ISP05H02-0160100 | 16 | 20 | 30  | 100 | 16 | 2 | SPMG0502 | TS2003                                                                                    | TK06                                                                                       |
| ISP06H02-0200110 | 20 | 30 | 40  | 110 | 20 | 2 | SPMG0602 | TS2205                                                                                    | TK06                                                                                       |
| ISP07H02-0250130 | 25 | 40 | 55  | 130 | 25 | 2 | SPMG07T3 | TS2511                                                                                    | TK08                                                                                       |
| ISP09H02-0320150 | 32 | 50 | 65  | 150 | 32 | 2 | SPMG0904 | TS3504                                                                                    | TK15                                                                                       |
| ISP09H03-0400180 | 40 | 70 | 90  | 180 | 32 | 3 | SPMG0904 | TS3504                                                                                    | TK15                                                                                       |
| ISP09H03-0400200 | 40 | 90 | 110 | 200 | 42 | 3 | SPMG0904 | TS3504                                                                                    | TK15                                                                                       |

Milling Inserts & Tools

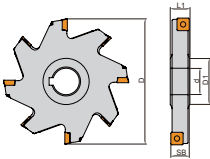
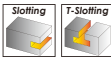
- ◆SKD11 tool steel is used for best rigidity and performance.
- ◆Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆To avoid the strain in second processing, finishing will be done after pre-harden.

SP05T/06T/07T/09T/11T



| Order No.        | D    | sb   | d2  | L2 | L   | d  | Inserts  | Screw  | Wrench |
|------------------|------|------|-----|----|-----|----|----------|--------|--------|
| ISP05T04-0190090 | 19   | 8    | 9.5 | 25 | 90  | 16 | SPMG0502 | TS2203 | TK06   |
| ISP06T04-0210100 | 21   | 9    | 11  | 27 | 100 | 16 | SPMG0602 | TS2205 | TK06   |
| ISP05T04-0220090 | 22   | 6.3  | 15  | 15 | 90  | 20 | SPMG0502 | TS2203 | TK06   |
| ISP07T04-0250110 | 25   | 11   | 12  | 31 | 110 | 20 | SPMG07T3 | TS2511 | TK08   |
| ISP09T04-0320110 | 32   | 14   | 17  | 39 | 110 | 25 | SPMG0904 | TS3504 | TK15   |
| ISP07T04-0326100 | 32.6 | 10.5 | 23  | 30 | 100 | 25 | SPMG07T3 | TS2511 | TK08   |
| ISP11T04-0400125 | 40   | 18   | 21  | 49 | 125 | 25 | SPMG1104 | TS4006 | TK15   |
| ISP09T04-0600160 | 60   | 15   | 25  | 40 | 160 | 25 | SPMG0904 | TS3504 | TK15   |
| ISP06T10-0950160 | 95   | 10   | 25  | 40 | 160 | 25 | SPMG0602 | TS2205 | TK06   |

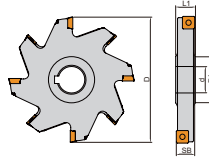
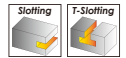
 SP05D/06D/07D/09D/11D



| Order No.        | D   | L1 | Sb | d  | T     | D1 | Inserts  |  Screw |  Wrench |
|------------------|-----|----|----|----|-------|----|----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| ISP05D06-0800220 | 80  | 12 | 6  | 22 | 2 x 4 | 44 | SPMG0502 | TS2203                                                                                    | TK06                                                                                       |
| ISP05D07-0800220 | 80  | 12 | 7  | 22 | 2 x 4 | 44 |          |                                                                                           |                                                                                            |
| ISP06D08-0800220 | 80  | 12 | 8  | 22 | 2 x 4 | 44 | SPMG0602 | TS2205                                                                                    | TK06                                                                                       |
| ISP06D09-0800220 | 80  | 12 | 9  | 22 | 2 x 4 | 44 |          |                                                                                           |                                                                                            |
| ISP06D10-0800220 | 80  | 12 | 10 | 22 | 2 x 4 | 44 |          |                                                                                           |                                                                                            |
| ISP07D11-0800220 | 80  | 12 | 11 | 22 | 2 x 4 | 44 | SPMG0703 | TS2511                                                                                    | TK08                                                                                       |
| ISP07D12-0800220 | 80  | 12 | 12 | 22 | 2 x 4 | 44 |          |                                                                                           |                                                                                            |
| ISP05D06-1000270 | 100 | 12 | 6  | 27 | 2 x 5 | 50 |          |                                                                                           |                                                                                            |
| ISP05D07-1000270 | 100 | 12 | 7  | 27 | 2 x 5 | 50 | SPMG0502 | TS2203                                                                                    | TK06                                                                                       |
| ISP06D09-1000270 | 100 | 12 | 9  | 27 | 2 x 5 | 50 | SPMG0602 | TS2205                                                                                    | TK06                                                                                       |
| ISP07D10-1000270 | 100 | 12 | 10 | 27 | 2 x 5 | 50 | SPMG0703 | TS2511                                                                                    | TK08                                                                                       |
| ISP07D11-1000270 | 100 | 12 | 11 | 27 | 2 x 5 | 50 |          |                                                                                           |                                                                                            |
| ISP07D12-1000270 | 100 | 12 | 12 | 27 | 2 x 5 | 50 |          |                                                                                           |                                                                                            |
| ISP09D14-1000270 | 100 | 16 | 14 | 27 | 2 x 5 | 50 | SPMG0904 | TS3504                                                                                    | TK15                                                                                       |
| ISP09D16-1000270 | 100 | 16 | 16 | 27 | 2 x 5 | 50 |          |                                                                                           |                                                                                            |
| ISP05D06-1250320 | 125 | 12 | 6  | 32 | 2 x 6 | 65 | SPMG0502 | TS2203                                                                                    | TK06                                                                                       |
| ISP05D07-1250320 | 125 | 12 | 7  | 32 | 2 x 6 | 65 |          |                                                                                           |                                                                                            |
| ISP06D08-1250320 | 125 | 12 | 8  | 32 | 2 x 6 | 65 | SPMG0602 | TS2205                                                                                    | TK06                                                                                       |
| ISP06D10-1250320 | 125 | 12 | 10 | 32 | 2 x 6 | 65 |          |                                                                                           |                                                                                            |
| ISP07D11-1250320 | 125 | 12 | 11 | 32 | 2 x 6 | 65 |          |                                                                                           |                                                                                            |
| ISP07D12-1250320 | 125 | 12 | 12 | 32 | 2 x 6 | 65 | SPMG0703 | TS2511                                                                                    | TK08                                                                                       |
| ISP09D14-1250320 | 125 | 16 | 14 | 32 | 2 x 6 | 65 |          |                                                                                           |                                                                                            |
| ISP09D16-1250320 | 125 | 16 | 16 | 32 | 2 x 6 | 65 | SPMG0904 | TS3504                                                                                    | TK15                                                                                       |
| ISP11D18-1250320 | 125 | 20 | 18 | 32 | 2 x 5 | 65 |          |                                                                                           |                                                                                            |
| ISP11D20-1250320 | 125 | 20 | 20 | 32 | 2 x 5 | 65 | SPMG1104 | TS4006                                                                                    | TK15                                                                                       |
| ISP07D11-1600400 | 160 | 12 | 11 | 40 | 2 x 8 | 75 |          |                                                                                           |                                                                                            |
| ISP07D12-1600400 | 160 | 12 | 12 | 40 | 2 x 8 | 75 | SPMG0703 | TS2511                                                                                    | TK08                                                                                       |
| ISP09D14-1600400 | 160 | 16 | 14 | 40 | 2 x 8 | 75 |          |                                                                                           |                                                                                            |
| ISP09D16-1600400 | 160 | 16 | 16 | 40 | 2 x 8 | 75 |          |                                                                                           |                                                                                            |
| ISP11D18-1600400 | 160 | 20 | 18 | 40 | 2 x 6 | 75 | SPMG1104 | TS4006                                                                                    | TK15                                                                                       |
| ISP11D20-1600400 | 160 | 20 | 20 | 40 | 2 x 6 | 75 |          |                                                                                           |                                                                                            |
| ISP09D14-2000400 | 200 | 16 | 14 | 40 | 2 x 9 | 80 | SPMG0904 | TS3504                                                                                    | TK15                                                                                       |
| ISP09D16-2000400 | 200 | 16 | 16 | 40 | 2 x 9 | 80 |          |                                                                                           |                                                                                            |
| ISP11D18-2000400 | 200 | 20 | 18 | 40 | 2 x 9 | 80 | SPMG1104 | TS4006                                                                                    | TK15                                                                                       |
| ISP11D20-2000400 | 200 | 20 | 20 | 40 | 2 x 7 | 80 |          |                                                                                           |                                                                                            |

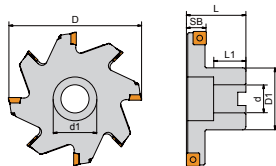
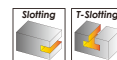


## SP05D/06D/07D/09D/11D



| Order No.        | D   | Sb | d     | L1 | D1 | T     | Inserts  | Screw  | Wrench |
|------------------|-----|----|-------|----|----|-------|----------|--------|--------|
| ISP05D06-0800254 | 80  | 6  | 25.4  | 12 | 44 | 2 x 4 | SPMG0502 | TS2003 | TK06   |
| ISP05D07-0800254 | 80  | 7  | 25.4  | 12 | 44 | 2 x 4 |          |        |        |
| ISP06D08-0800254 | 80  | 8  | 25.4  | 12 | 44 | 2 x 4 | SPMG0602 | TS2205 | TK06   |
| ISP06D09-0800254 | 80  | 9  | 25.4  | 12 | 44 | 2 x 4 |          |        |        |
| ISP06D10-0800254 | 80  | 10 | 25.4  | 12 | 44 | 2 x 4 |          |        |        |
| ISP07D11-0800254 | 80  | 11 | 25.4  | 12 | 44 | 2 x 4 | SPMG07T3 | TS2511 | TK08   |
| ISP07D12-0800254 | 80  | 12 | 25.4  | 12 | 44 | 2 x 4 |          |        |        |
| ISP05D06-1000254 | 100 | 6  | 25.4  | 12 | 50 | 2 x 5 | SPMG0502 | TS2003 | TK06   |
| ISP05D07-1000254 | 100 | 7  | 25.4  | 12 | 50 | 2 x 5 |          |        |        |
| ISP06D08-1000254 | 100 | 8  | 25.4  | 12 | 50 | 2 x 5 | SPMG0602 | TS2205 | TK06   |
| ISP06D09-1000254 | 100 | 9  | 25.4  | 12 | 50 | 2 x 5 |          |        |        |
| ISP06D10-1000254 | 100 | 10 | 25.4  | 12 | 50 | 2 x 5 |          |        |        |
| ISP07D11-1000254 | 100 | 11 | 25.4  | 12 | 50 | 2 x 5 | SPMG07T3 | TS2511 | TK08   |
| ISP07D12-1000254 | 100 | 12 | 25.4  | 12 | 50 | 2 x 5 |          |        |        |
| ISP09D14-1000254 | 100 | 14 | 25.4  | 16 | 50 | 2 x 5 | SPMG0904 | TS3504 | TK15   |
| ISP09D16-1000254 | 100 | 16 | 25.4  | 16 | 50 | 2 x 5 |          |        |        |
| ISP05D06-1250317 | 125 | 6  | 31.75 | 12 | 65 | 2 x 6 | SPMG0502 | TS2003 | TK06   |
| ISP05D07-1250317 | 125 | 7  | 31.75 | 12 | 65 | 2 x 6 |          |        |        |
| ISP06D08-1250317 | 125 | 8  | 31.75 | 12 | 65 | 2 x 6 | SPMG0602 | TS2205 | TK06   |
| ISP06D10-1250317 | 125 | 10 | 31.75 | 12 | 65 | 2 x 6 |          |        |        |
| ISP07D11-1250317 | 125 | 11 | 31.75 | 12 | 65 | 2 x 6 | SPMG07T3 | TS2511 | TK08   |
| ISP07D12-1250317 | 125 | 12 | 31.75 | 12 | 65 | 2 x 6 |          |        |        |
| ISP09D14-1250317 | 125 | 14 | 31.75 | 16 | 65 | 2 x 6 | SPMG0904 | TS3504 | TK15   |
| ISP09D16-1250317 | 125 | 16 | 31.75 | 16 | 65 | 2 x 6 |          |        |        |
| ISP11D18-1250317 | 125 | 18 | 31.75 | 20 | 65 | 2 x 5 | SPMG1104 | TS4006 | TK15   |
| ISP11D20-1250317 | 125 | 20 | 31.75 | 20 | 65 | 2 x 5 |          |        |        |
| ISP07D11-1600317 | 160 | 11 | 31.75 | 12 | 75 | 2 x 8 | SPMG07T3 | TS2511 | TK08   |
| ISP07D12-1600317 | 160 | 12 | 31.75 | 12 | 75 | 2 x 8 |          |        |        |
| ISP09D14-1600317 | 160 | 14 | 31.75 | 16 | 75 | 2 x 8 | SPMG0904 | TS3504 | TK15   |
| ISP09D16-1600317 | 160 | 16 | 31.75 | 16 | 75 | 2 x 8 |          |        |        |
| ISP11D18-1600317 | 160 | 18 | 31.75 | 20 | 75 | 2 x 6 | SPMG1104 | TS4006 | TK15   |
| ISP11D20-1600317 | 160 | 20 | 31.75 | 20 | 75 | 2 x 6 |          |        |        |

## SP05D/06D/07D/09D/11D

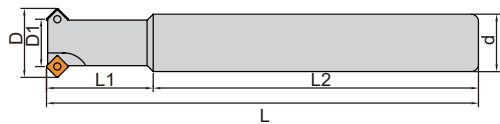


| Order No.        | D   | SB | L  | L1 | D1 | d1 | d  | T     | Inserts  | Screw  | Wrench |
|------------------|-----|----|----|----|----|----|----|-------|----------|--------|--------|
| ISP05D06S0800220 | 80  | 6  | 40 | 22 | 42 | 32 | 22 | 2 x 4 | SPMG0502 | TS2203 | TK06   |
| ISP05D07S0800220 | 80  | 7  | 40 | 22 | 42 | 32 | 22 | 2 x 4 |          |        |        |
| ISP06D08S0800220 | 80  | 8  | 40 | 22 | 42 | 32 | 22 | 2 x 4 | SPMG0602 | TS2205 | TK06   |
| ISP06D09S0800220 | 80  | 9  | 40 | 22 | 42 | 32 | 22 | 2 x 4 |          |        |        |
| ISP06D10S0800220 | 80  | 10 | 40 | 22 | 42 | 32 | 22 | 2 x 4 |          |        |        |
| ISP07D11S0800220 | 80  | 11 | 40 | 22 | 42 | 32 | 22 | 2 x 4 | SPMG0703 | TS2511 | TK08   |
| ISP07D12S0800220 | 80  | 12 | 40 | 22 | 42 | 32 | 22 | 2 x 4 |          |        |        |
| ISP05D06S1000270 | 100 | 6  | 40 | 22 | 50 | 32 | 27 | 2 x 5 | SPMG0502 | TS2203 | TK06   |
| ISP05D07S1000270 | 100 | 7  | 40 | 22 | 50 | 32 | 27 | 2 x 5 |          |        |        |
| ISP06D09S1000270 | 100 | 9  | 40 | 22 | 50 | 32 | 27 | 2 x 5 | SPMG0602 | TS2205 | TK06   |
| ISP07D10S1000270 | 100 | 10 | 40 | 22 | 50 | 32 | 27 | 2 x 5 |          |        |        |
| ISP07D11S1000270 | 100 | 11 | 40 | 22 | 50 | 32 | 27 | 2 x 5 |          |        |        |
| ISP07D12S1000270 | 100 | 12 | 40 | 22 | 50 | 32 | 27 | 2 x 5 | SPMG0703 | TS2511 | TK08   |
| ISP09D14S1000270 | 100 | 14 | 40 | 22 | 50 | 32 | 27 | 2 x 5 |          |        |        |
| ISP09D16S1000270 | 100 | 16 | 40 | 22 | 50 | 32 | 27 | 2 x 5 | SPMG0904 | TS3504 | TK15   |
| ISP05D06S1250320 | 125 | 6  | 45 | 25 | 70 | 46 | 32 | 2 x 6 |          |        |        |
| ISP05D07S1250320 | 125 | 7  | 45 | 25 | 70 | 46 | 32 | 2 x 6 | SPMG0502 | TS2203 | TK06   |
| ISP06D08S1250320 | 125 | 8  | 45 | 25 | 70 | 46 | 32 | 2 x 6 |          |        |        |
| ISP06D10S1250320 | 125 | 10 | 45 | 25 | 70 | 46 | 32 | 2 x 6 | SPMG0602 | TS2205 | TK06   |
| ISP07D11S1250320 | 125 | 11 | 45 | 25 | 70 | 46 | 32 | 2 x 6 |          |        |        |
| ISP07D12S1250320 | 125 | 12 | 45 | 25 | 70 | 46 | 32 | 2 x 6 | SPMG0703 | TS2511 | TK08   |
| ISP09D14S1250320 | 125 | 14 | 45 | 25 | 70 | 46 | 32 | 2 x 6 |          |        |        |
| ISP09D16S1250320 | 125 | 16 | 45 | 25 | 70 | 46 | 32 | 2 x 6 | SPMG0904 | TS3504 | TK15   |
| ISP11D18S1250320 | 125 | 18 | 45 | 25 | 70 | 46 | 32 | 2 x 5 |          |        |        |
| ISP11D20S1250320 | 125 | 20 | 45 | 25 | 70 | 46 | 32 | 2 x 5 | SPMG1104 | TS4006 | TK15   |
| ISP07D11S1600400 | 160 | 11 | 50 | 28 | 80 | 52 | 40 | 2 x 8 |          |        |        |
| ISP07D12S1600400 | 160 | 12 | 50 | 28 | 80 | 52 | 40 | 2 x 8 | SPMG0703 | TS2511 | TK08   |
| ISP09D14S1600400 | 160 | 14 | 50 | 28 | 80 | 52 | 40 | 2 x 8 |          |        |        |
| ISP09D16S1600400 | 160 | 16 | 50 | 28 | 80 | 52 | 40 | 2 x 8 | SPMG0904 | TS3504 | TK15   |
| ISP11D18S1600400 | 160 | 18 | 50 | 28 | 80 | 52 | 40 | 2 x 6 |          |        |        |
| ISP11D20S1600400 | 160 | 20 | 50 | 28 | 80 | 52 | 40 | 2 x 6 | SPMG1104 | TS4006 | TK15   |
| ISP09D14S2000400 | 200 | 14 | 50 | 28 | 90 | 52 | 40 | 2 x 9 |          |        |        |
| ISP09D16S2000400 | 200 | 16 | 50 | 28 | 90 | 52 | 40 | 2 x 9 | SPMG0904 | TS3504 | TK15   |
| ISP11D18S2000400 | 200 | 18 | 50 | 28 | 90 | 52 | 40 | 2 x 9 |          |        |        |
| ISP11D20S2000400 | 200 | 20 | 50 | 28 | 90 | 52 | 40 | 2 x 7 | SPMG1104 | TS4006 | TK15   |
|                  |     |    |    |    |    |    |    |       |          |        |        |

- ◆ Great performance ensured at large depth of cutting operations due to strong cutting edge and low cutting resistance.
- ◆ Innovative curve cutting edge design ensure ideal 90 degree cutting.
- ◆ SKD11 tool steel is used for best rigidity and performance.
- ◆ Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- ◆ To avoid the strain in second processing, finishing will be done after pre-harden.

 **SP05C/06C/09C**





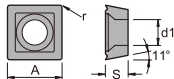
| Order No.        | D  | D1 | d  | L1 | L2  | L   | T | Inserts  |  Screw |  Wrench |
|------------------|----|----|----|----|-----|-----|---|----------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| ISP05C01-0110100 | 11 | 6  | 10 | 17 | 83  | 100 | 1 | SPMG0502 | TS2003                                                                                    | TK06                                                                                       |
| ISP05C02-0150120 | 15 | 10 | 12 | 20 | 100 | 120 | 2 |          |                                                                                           |                                                                                            |
| ISP05C03-0170150 | 17 | 11 | 16 | 25 | 125 | 150 | 3 |          |                                                                                           |                                                                                            |
| ISP05C03-0190150 | 19 | 13 | 16 | 30 | 120 | 150 | 3 |          |                                                                                           |                                                                                            |
| ISP05C04-0240150 | 24 | 18 | 20 | 35 | 115 | 150 | 4 |          |                                                                                           |                                                                                            |
| ISP06C03-0220120 | 22 | 16 | 16 | 30 | 80  | 120 | 3 | SPMG0602 | TS2205                                                                                    | TK06                                                                                       |
| ISP09C03-0270120 | 27 | 17 | 20 | 30 | 80  | 120 | 3 | SPMG07T3 | TS2511                                                                                    | TK08                                                                                       |
| ISP09C02-0300150 | 30 | 19 | 20 | 40 | 110 | 150 | 2 | SPMG0904 | TS3504                                                                                    | TK15                                                                                       |
| ISP09C03-0400150 | 40 | 29 | 25 | 40 | 110 | 150 | 3 |          |                                                                                           |                                                                                            |
| ISP09C04-0500150 | 50 | 39 | 25 | 40 | 110 | 150 | 4 |          |                                                                                           |                                                                                            |

SPMG Inserts

多功能銑削刀片

- ◆ Economical 4 cutting edges insert.
- ◆ Suitable for most materials by one optimized geometry.
- ◆ True 90° square shoulder angle.

 Specification

|                                                                                    | P              | Steel           |  |  |  |  |  |                 |  1st choice  2nd choice |      |     |      |    |                                                                                     |
|------------------------------------------------------------------------------------|----------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|----|-------------------------------------------------------------------------------------|
|                                                                                    | M              | Stainless steel |  |  |  |  |  |                 |                                                                                                                                                                                             |      |     |      |    |                                                                                     |
|                                                                                    | K              | Cast iron       |  |  |  |  |  |                 |                                                                                                                                                                                             |      |     |      |    |                                                                                     |
| Inserts                                                                            | Designation    |                 | Grade                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Dimensions (mm) |                                                                                                                                                                                             |      |     |      |    | Drawing                                                                             |
|                                                                                    |                |                 | CX21NS                                                                            | CX31NA                                                                            | CX31NS                                                                            | CX41NS                                                                            | CX41NA                                                                            | A               | B                                                                                                                                                                                           | S    | r   | d1   | t1 |                                                                                     |
|    | SPMG 050204-MG |                 |                                                                                   | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   | 5.00            | -                                                                                                                                                                                           | 2.38 | 0.4 | 2.30 | -  |  |
|    | SPMG 060204-MG |                 |                                                                                   | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   | 6.00            | -                                                                                                                                                                                           | 2.38 | 0.4 | 2.65 | -  |                                                                                     |
|    | SPMG 07T308-MG |                 |                                                                                   | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | 7.94            | -                                                                                                                                                                                           | 3.97 | 0.8 | 2.85 | -  |                                                                                     |
|   | SPMG 090408-MG |                 |                                                                                   | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | 9.80            | -                                                                                                                                                                                           | 4.3  | 0.8 | 4.05 | -  |                                                                                     |
|  | SPMG 110408-MG |                 |                                                                                   | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | 11.50           | -                                                                                                                                                                                           | 4.8  | 0.8 | 4.45 | -  |                                                                                     |

Milling Inserts & Tools

### Recommended Cutting Conditions

for SPH

| Working Material        | Vc        | fz          |
|-------------------------|-----------|-------------|
| Carbon Steel (HB85-225) | 110 ~ 140 | 0.08 ~ 0.13 |
| Stainless 300 Series    | 130 ~ 170 | 0.06 ~ 0.15 |
| Cast Iron (HB140-220)   | 90 ~ 180  | 0.10 ~ 0.15 |

for SPT

| Working Material        | Vc        | fz          |
|-------------------------|-----------|-------------|
| Carbon Steel (HB85-225) | 180 ~ 220 | 0.08 ~ 0.12 |
| Stainless 300 Series    | 100 ~ 120 | 0.07 ~ 0.10 |
| Cast Iron (HB140-220)   | 140 ~ 280 | 0.07 ~ 0.10 |

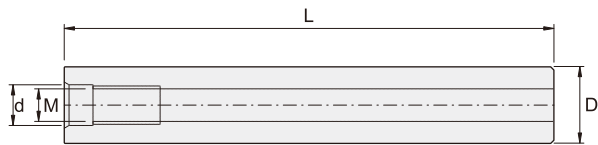
for SPDM / SPDI / SPD

| Working Material        | Vc        | fz          |
|-------------------------|-----------|-------------|
| Carbon Steel (HB85-225) | 100 ~ 220 | 0.10 ~ 0.35 |
| Stainless 300 Series    | 130 ~ 200 | 0.12 ~ 0.30 |
| Cast Iron (HB140-220)   | 100 ~ 210 | 0.10 ~ 0.20 |

for SPC

| Working Material        | Vc        | fz          |             |             |             |             |
|-------------------------|-----------|-------------|-------------|-------------|-------------|-------------|
|                         |           | Ø13~15      | Ø16~22      | Ø23~33      | Ø34~41      | Ø42~50      |
| Carbon Steel (HB85-225) | 160 ~ 250 | 0.06 ~ 0.12 | 0.06 ~ 0.10 | 0.06 ~ 0.12 | 0.12 ~ 0.24 | 0.12 ~ 0.25 |
| Stainless 300 Series    | 120 ~ 180 | 0.05 ~ 0.10 | 0.06 ~ 0.12 | 0.08 ~ 0.15 | 0.10 ~ 0.17 | 0.12 ~ 0.20 |
| Cast Iron (HB140-220)   | 160 ~ 220 | 0.06 ~ 0.12 | 0.08 ~ 0.16 | 0.12 ~ 0.20 | 0.16 ~ 0.25 | 0.18 ~ 0.26 |

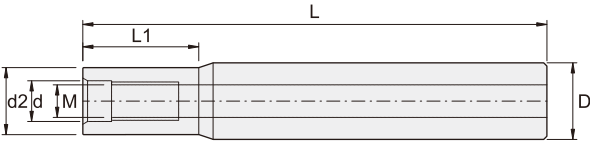
 **WSEA Carbide Extension Adapter (Anti-Vibration) - Straight Shank**



| Order No.   | Dimensions (mm) |     |    |     |
|-------------|-----------------|-----|----|-----|
|             | d               | L   | D  | M   |
| IWSEA050750 | 5.5             | 75  | 10 | M5  |
| IWSEA051000 | 5.5             | 100 | 10 | M5  |
| IWSEA051500 | 5.5             | 150 | 10 | M5  |
| IWSEA061001 | 6.5             | 100 | 10 | M6  |
| IWSEA061501 | 6.5             | 150 | 10 | M6  |
| IWSEA060750 | 6.5             | 75  | 12 | M6  |
| IWSEA061000 | 6.5             | 100 | 12 | M6  |
| IWSEA061500 | 6.5             | 150 | 12 | M6  |
| IWSEA062000 | 6.5             | 200 | 12 | M6  |
| IWSEA081000 | 8.5             | 100 | 16 | M8  |
| IWSEA081500 | 8.5             | 150 | 16 | M8  |
| IWSEA082000 | 8.5             | 200 | 16 | M8  |
| IWSEA082500 | 8.5             | 250 | 16 | M8  |
| IWSEA101000 | 10.5            | 100 | 20 | M10 |
| IWSEA101500 | 10.5            | 150 | 20 | M10 |
| IWSEA102000 | 10.5            | 200 | 20 | M10 |
| IWSEA102500 | 10.5            | 250 | 20 | M10 |
| IWSEA103000 | 10.5            | 300 | 20 | M10 |
| IWSEA121000 | 12.5            | 100 | 25 | M12 |
| IWSEA121500 | 12.5            | 150 | 25 | M12 |
| IWSEA122000 | 12.5            | 200 | 25 | M12 |
| IWSEA122500 | 12.5            | 250 | 25 | M12 |
| IWSEA123000 | 12.5            | 300 | 25 | M12 |

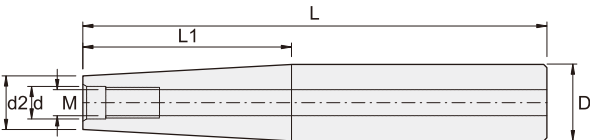
Milling Inserts & Tools

 **WSEB Carbide Extension Adapter (Anti-Vibration)**



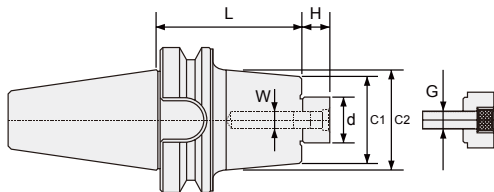
| Order No.    | Dimensions (mm) |      |    |     |    |     |
|--------------|-----------------|------|----|-----|----|-----|
|              | d               | d2   | L1 | L   | D  | M   |
| IWSEB0610024 | 6.5             | 11.8 | 24 | 100 | 12 | M6  |
| IWSEB0615024 | 6.5             | 11.5 | 24 | 150 | 12 | M6  |
| IWSEB0815030 | 8.5             | 15   | 30 | 150 | 16 | M8  |
| IWSEB0820040 | 8.5             | 15   | 40 | 200 | 16 | M8  |
| IWSEB1015040 | 10.5            | 19   | 40 | 150 | 20 | M10 |
| IWSEB1020040 | 10.5            | 19   | 40 | 200 | 20 | M10 |
| IWSEB1215048 | 12.5            | 24   | 48 | 150 | 25 | M12 |
| IWSEB1220048 | 12.5            | 24   | 48 | 200 | 25 | M12 |

 **WTEA Carbide Extension Adapter (Anti-Vibration) - Taper Shank**



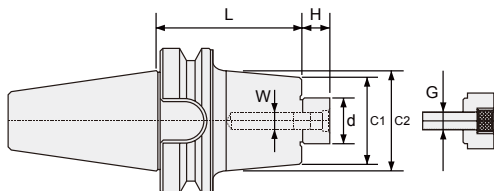
| Order No.   | Dimensions (mm) |      |    |     |    |     |
|-------------|-----------------|------|----|-----|----|-----|
|             | d               | d2   | L1 | L   | D  | M   |
| IWTEA051500 | 5.5             | 9.8  | 60 | 150 | 12 | M5  |
| IWTEA061500 | 6.5             | 11.8 | 70 | 150 | 16 | M6  |
| IWTEA082000 | 8.5             | 15.5 | 90 | 200 | 20 | M8  |
| IWTEA102000 | 10.5            | 19.8 | 90 | 200 | 25 | M10 |
| IWTEA122000 | 12.5            | 24.5 | 90 | 200 | 32 | M12 |

 **BT40FMA Face Mill Holder**



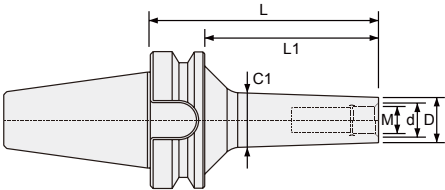
| Order No.     | Dimensions (mm) |       |     |    |    |    |      |     |
|---------------|-----------------|-------|-----|----|----|----|------|-----|
|               | Cutter dia.     | d     | L   | C1 | C2 | H  | W    | G   |
| IBT40FMA25045 | 76              | 25.4  | 45  | 50 | -  | 20 | 9.5  | M12 |
| IBT40FMA25090 | 76              | 25.4  | 90  | 50 | 60 | 20 | 9.5  | M12 |
| IBT40FMA31045 | 100             | 31.75 | 45  | 60 | -  | 22 | 12.5 | M12 |
| IBT40FMA31075 | 100             | 31.75 | 75  | 60 | 70 | 22 | 12.5 | M12 |
| IBT40FMA31105 | 100             | 31.75 | 105 | 60 | 70 | 22 | 12.5 | M12 |

 **BT40FMB Face Mill Holder**



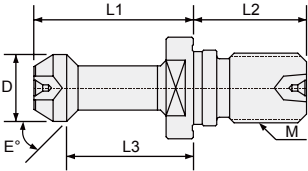
| Order No.     | Dimensions (mm) |    |     |    |    |    |    |     |
|---------------|-----------------|----|-----|----|----|----|----|-----|
|               | Cutter dia.     | d  | L   | C1 | C2 | H  | W  | G   |
| IBT40FMB22045 | 60              | 22 | 45  | 50 | -  | 18 | 10 | M10 |
| IBT40FMB22060 | 60              | 22 | 60  | 50 | 60 | 81 | 10 | M10 |
| IBT40FMB22090 | 60              | 22 | 90  | 50 | 60 | 18 | 10 | M10 |
| IBT40FMB27045 | 80              | 27 | 45  | 60 | -  | 20 | 12 | M12 |
| IBT40FMB27060 | 80              | 27 | 60  | 60 | -  | 20 | 12 | M12 |
| IBT40FMB27090 | 80              | 27 | 90  | 60 | -  | 20 | 12 | M12 |
| IBT40FMB27105 | 80              | 27 | 105 | 60 | -  | 20 | 12 | M12 |
| IBT40FMB32045 | 100             | 32 | 45  | 78 | -  | 20 | 14 | M16 |
| IBT40FMB40060 | 125             | 40 | 60  | 85 | -  | 22 | 16 | M16 |

 **BT40DM Replaceable Integrated Shank**



| Order No.    | Dimensions (mm) |    |    |    |    |     |
|--------------|-----------------|----|----|----|----|-----|
|              | d               | L  | L1 | D  | C1 | M   |
| IBT40DM08050 | 8.5             | 50 | 23 | 13 | 15 | M8  |
| IBT40DM10057 | 10.5            | 57 | 30 | 18 | 21 | M10 |
| IBT40DM12080 | 12.5            | 80 | 53 | 21 | 25 | M12 |

 **P40T Pull Studs**



| Order No. | Dimensions (mm) |    |    |    |    |     | For Shank |
|-----------|-----------------|----|----|----|----|-----|-----------|
|           | L1              | L2 | L3 | D  | E° | M   |           |
| IP40T01   | 35              | 25 | 28 | 15 | 45 | M16 | BT40      |
| IP40T02   | 35              | 25 | 28 | 15 | 60 | M16 | BT40      |



FEATURES

- When the Torque is Reached, you will hear “CLICK”.
- Perfect positioning and quick release in the bits.Easy to pull the bit out to change new one
- You don’t have to guess -a precision torque tool for a Secure hold
- Because of proper testing equipment and system, we will make sure that you don’t have to question our products accuracy and quality.
- Convenient for CNC cutting tool of milling and turning machining.

Contents

- Case x 1
- Torque Screwdriver x 1
- 25mm Bits x 1
- 50mm Bits x 1

| Parts No. | Contents |        |       |      |             | N.W. |
|-----------|----------|--------|-------|------|-------------|------|
|           | Adapter  |        |       | Bit  |             |      |
|           | Nm       | Kgfcmm | In-lb | Size | 25mm + 50mm |      |
| ITX06     | 0.6      | 6.1    | 5.3   | TX6  | 1pcs + 1pcs | 124g |
| ITX08     | 1.2      | 12     | 10.6  | TX8  | 1pcs + 1pcs |      |

## Milling Inserts Grade Comparison Chart

銑刀片材質等級比較表

| ISO Code                    |     | CARBIDEX                   | Mitsubishi                           | Sumiotmo         | TaugeTec         | SECO                      |
|-----------------------------|-----|----------------------------|--------------------------------------|------------------|------------------|---------------------------|
| <b>P</b><br>Steel           | P10 |                            |                                      | ACP100           | TT2510           |                           |
|                             | P20 | CX21NS<br>CX31NX           | MP6120<br>VP15TF                     | ACP200           | TT7080<br>TT7030 | F25M<br>MP3000            |
|                             | P30 | CX31NX<br>CX31NS           | VP15TF<br>MP6120<br>MP6130<br>VP30RT | ACP300           | TT9080<br>TT9030 | F30M<br>F40M<br>MP3000    |
|                             | P40 | CX41NX<br>CX41NS           | VP30RT                               |                  | TT8080<br>TT8020 | F40M<br>T60M              |
| <b>M</b><br>Stainless Steel | M10 |                            |                                      | ACM100<br>ACK300 |                  |                           |
|                             | M20 | CX31NX<br>CX31NS           | VP15TF<br>MP7130<br>MP7140<br>VP20RT | ACM200           | TT9080<br>TT9030 | F25M<br>F30M<br>MP30000   |
|                             | M30 | CX31NX<br>CX41NX<br>CX41NS | VP15TF<br>MP7130<br>MP7140<br>VP30RT | ACM300           | TT8080<br>TT8020 | F30M<br>F40M<br>MP3000    |
|                             | M40 | CX41NX<br>CX41NS           | MP7140<br>VP30RT                     |                  |                  | F40M                      |
| <b>K</b><br>Cast Iron       | K01 |                            | MP8010                               |                  |                  |                           |
|                             | K10 | CX21NS                     | MP8010                               |                  | TT7515           | MK1500                    |
|                             | K20 | CX31NX<br>CX31NS           | VP15TF<br>VP20RT                     | ACK200           | TT7515<br>TT6080 | MK1500<br>MK2000<br>T150M |
|                             | K30 |                            |                                      | ACK300           | TT6080           | MK2000<br>MK2050          |

The above table is selected from a publication for reference only, which is not obtained approval from each brand.



*Turning*

車 削

Designations For Turning Inserts

車刀片型號編碼

C

N

M

G

12

04

08

-

MG

①

②

③

④

⑤

⑥

⑦

⑧

① Insert Shape

② Relief Angle

③ Tolerance

④ Cross Section Type

| Class | d (±mm)   | m (±mm)   | s (±mm)   |
|-------|-----------|-----------|-----------|
| A     | 0.025     | 0.005     | 0.025     |
| F     | 0.013     | 0.005     | 0.025     |
| C     | 0.025     | 0.013     | 0.025     |
| H     | 0.013     | 0.013     | 0.025     |
| E     | 0.025     | 0.025     | 0.025     |
| G     | 0.025     | 0.025     | 0.05~0.13 |
| J     | 0.05~0.15 | 0.005     | 0.025     |
| K     | 0.05~0.15 | 0.013     | 0.025     |
| L     | 0.05~0.15 | 0.025     | 0.025     |
| M     | 0.05~0.15 | 0.08~0.2  | 0.05~0.13 |
| N     | 0.05~0.15 | 0.08~0.2  | 0.025     |
| U     | 0.08~0.25 | 0.13~0.38 | 0.13      |

| Class | Insert | Class | Insert        |
|-------|--------|-------|---------------|
| A     |        | N     |               |
| C     |        | Q     |               |
| F     |        | R     |               |
| G     |        | T     |               |
| H     |        | U     |               |
| J     |        | W     |               |
| M     |        | X     | Special shape |

⑤ Edge Length

⑥ Thickness

⑦ Radius

⑧ Chip Breaker

| Metric |    |    |    |    |    |    | I.C.   |
|--------|----|----|----|----|----|----|--------|
|        |    |    |    |    |    |    | mm     |
| 03     | 04 | 03 | 06 | 03 | -  | 02 | 3.97   |
| 04     | 05 | 04 | 08 | 04 | 08 | S3 | 4.76   |
| 05     | 06 | 05 | 09 | 05 | 09 | 03 | 5.56   |
| -      | -  | -  | -  | 06 | -  | -  | 6.00   |
| 06     | 07 | 06 | 11 | 06 | 11 | 04 | 6.35   |
| 08     | 09 | 07 | 13 | 07 | 13 | 05 | 7.94   |
| -      | -  | -  | -  | 08 | -  | -  | 8.00   |
| 09     | 11 | 09 | 16 | 09 | 16 | 06 | 9.525  |
| -      | -  | -  | -  | 10 | -  | -  | 10.00  |
| 11     | 13 | 11 | 19 | 11 | 19 | 07 | 11.11  |
| -      | -  | -  | -  | 12 | -  | -  | 12.00  |
| 12     | 15 | 12 | 22 | 12 | 22 | 08 | 12.70  |
| 14     | 17 | 14 | 24 | 14 | 24 | 09 | 14.29  |
| 16     | 19 | 15 | 27 | 15 | 27 | 10 | 15.875 |
| -      | -  | -  | -  | 16 | -  | -  | 16.00  |
| 17     | 21 | 17 | 30 | 17 | 30 | 11 | 17.46  |
| 19     | 23 | 19 | 33 | 19 | 33 | 13 | 19.05  |
| -      | -  | -  | -  | 20 | -  | -  | 20.00  |
| 22     | 27 | 22 | 38 | 22 | 38 | 15 | 22.225 |
| -      | -  | -  | -  | 25 | -  | -  | 25.00  |
| 25     | 31 | 25 | 44 | 25 | 44 | 17 | 25.40  |
| 32     | 38 | 31 | 54 | 31 | 54 | 21 | 31.75  |
| -      | -  | -  | -  | 32 | -  | -  | 32.00  |

| Symbol | 01   | T1   | 02   | 03   | T3   | 04   | 05   | 06   | 07   | 09   |
|--------|------|------|------|------|------|------|------|------|------|------|
| S(mm)  | 1.59 | 1.98 | 2.38 | 3.18 | 3.97 | 4.76 | 5.56 | 6.35 | 7.94 | 9.52 |

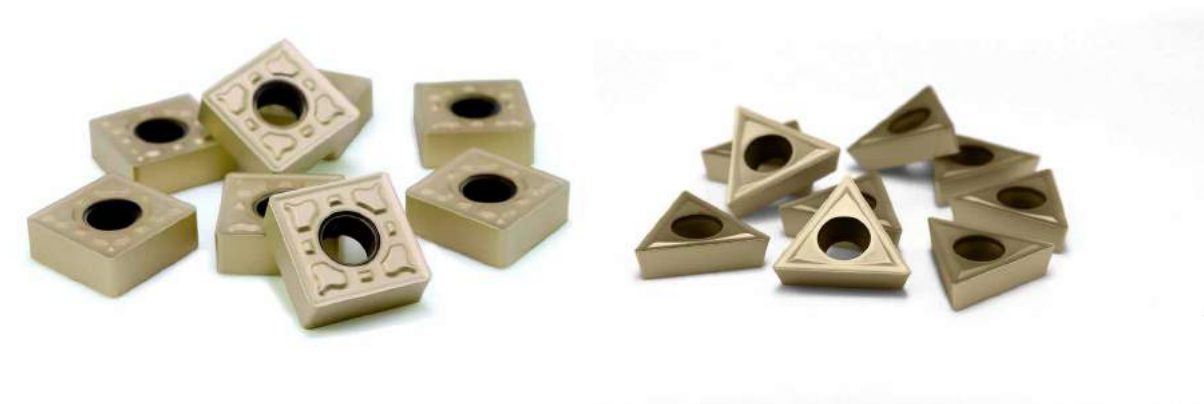
| Symbol | 01  | 02  | 04  | 08  | 12  | 16  | 20  | 24  | 28  | 32  |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| r(mm)  | 0.1 | 0.2 | 0.4 | 0.8 | 1.2 | 1.6 | 2.0 | 2.4 | 2.8 | 3.2 |

|                                        |
|----------------------------------------|
| Positive Type                          |
| MP, MG                                 |
| Negative Type                          |
| SM, SP, MM, MS, ME, MP, MK, MG, RP, RG |



“ ∞ “ Infinity Nano Coating:

- ✓ Adopting new Infinty Coating Technology with high hardness and oxidation resistance.
- ✓ High toughness substrate and adopting special coating technology.
- ✓ Excellent turning machining of steel, stainless steel and cast iron.
- ✓ Machining with high temperature stability and improved wear resistance.



| Grade Type | Substrate (HRA) | Coating Type | Thickness | Application              | Material |    |    | Suitable Condition |
|------------|-----------------|--------------|-----------|--------------------------|----------|----|----|--------------------|
| CX2565     | 91.7            | Al.Ti.N      | >10       | Medium to Simi-Finishing | P        | K  | M  |                    |
|            |                 |              |           |                          | ★★       | ★★ | ★  |                    |
| CX2555     | 91.6            | Al.Ti.Si.N   | >3        | Medium to Simi-Finishing | P        | K  | M  |                    |
|            |                 |              |           |                          | ★★       | ★  | ★★ |                    |
| CX3565     | 90              | Al.Ti.N      | >10       | Medium to Roughing       | M        | P  | K  |                    |
|            |                 |              |           |                          | ★★       | ★★ | ★★ |                    |
| CX3555     | 89.8            | Al.Ti.Si.N   | >3        | Medium to Roughing       | M        | P  | K  |                    |
|            |                 |              |           |                          | ★★       | ★  | ★  |                    |

\* Turning Grade Comparison Chart.....Page B185



### Negative Types

- 50+ types to choose from.
- > 10  $\mu$  thick coating layer structure for various applications.
- Longitudinal, profile and face turning machining.
- Usable range cover from medium to roughing.



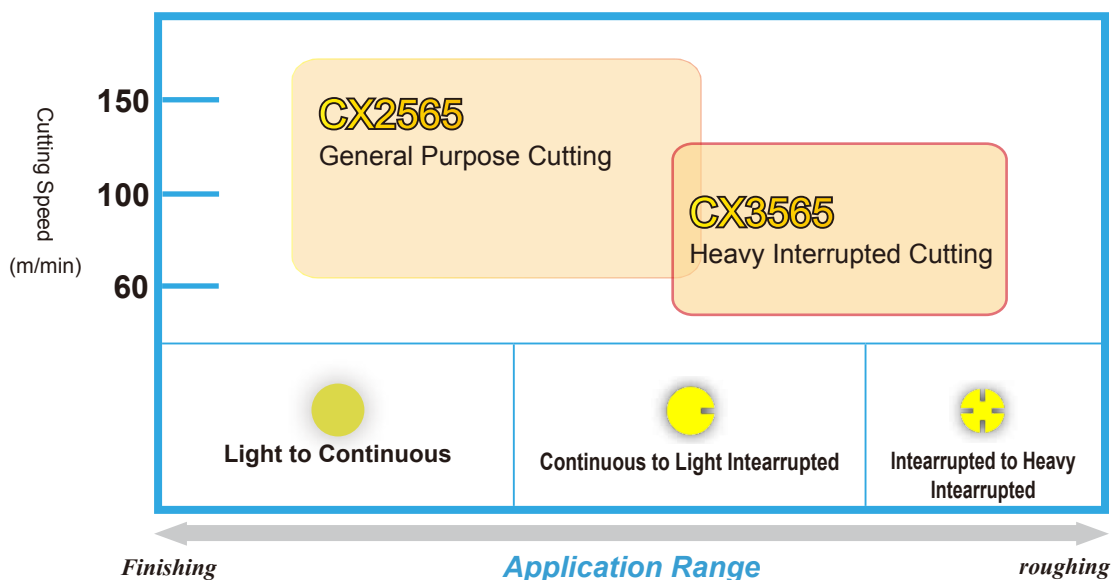
### Positive Types

- 25+ types to choose from.
- Thick or normal coating layer structure for different applications.
- Internal turning, profiling and boring machining.
- Usable range cover from semi-finishing to roughing.

**NEW**

## CX2565 / CX3565

2017 New Turning Grades for General Purpose

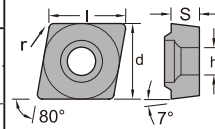


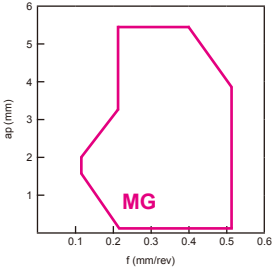
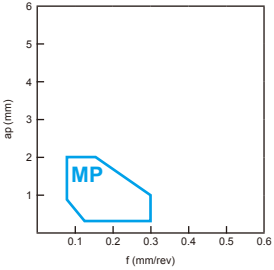
### Features:

- Excellent heat resistance and wear resistance.
- Improve the adhesion resistance ability.
- Corner visibility with a unique color.
- Extend tool life and thereby reduces tools costs in a wide range of machining applications.

CCMT - Positive Turning Insert

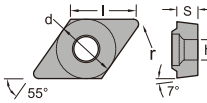
正角車刀片

|                                                                                  | P              | Steel           |  |  |  |                                                                                   |  |                 |      | Cutting Type :  General  Interrupted |      |     |         |                                                                                     |             |
|----------------------------------------------------------------------------------|----------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--|-----------------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|---------|-------------------------------------------------------------------------------------|-------------|
|                                                                                  | M              | Stainless steel |  |                                                                                   |  |  |  |                 |      |                                                                                                                                                                                                        |      |     |         |                                                                                     |             |
|                                                                                  | K              | Cast iron       |  |                                                                                   |  |                                                                                   |  |                 |      |                                                                                                                                                                                                        |      |     |         |                                                                                     |             |
| Inserts                                                                          | Designation    |                 | Grade                                                                             |                                                                                   |                                                                                   |                                                                                   |  | Dimensions (mm) |      |                                                                                                                                                                                                        |      |     | Drawing | Tool Page                                                                           |             |
|                                                                                  |                |                 | CX2565                                                                            | CX2555                                                                            | CX3565                                                                            | CX3555                                                                            |  |                 | d    | l                                                                                                                                                                                                      | S    | r   |         |                                                                                     | h           |
|  | CCMT 060204-MP |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  |                 | 6.35 | 6.4                                                                                                                                                                                                    | 2.38 | 0.4 | 2.8     |  | B143 ~ B146 |
|                                                                                  | 09T304-MP      |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  |                 | 9.53 | 9.7                                                                                                                                                                                                    | 3.97 | 0.4 | 4.4     |                                                                                     |             |
|                                                                                  | 09T308-MP      |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  |                 | 9.53 | 9.7                                                                                                                                                                                                    | 3.97 | 0.8 | 4.4     |                                                                                     |             |
|  | CCMT 060202-MG |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  |                 | 6.35 | 6.4                                                                                                                                                                                                    | 2.38 | 0.4 | 2.8     |                                                                                     | B168 ~ B170 |
|                                                                                  | 060204-MG      |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  |                 | 6.35 | 6.4                                                                                                                                                                                                    | 2.38 | 0.4 | 2.8     |                                                                                     |             |
|                                                                                  | 09T304-MG      |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  |                 | 9.53 | 9.7                                                                                                                                                                                                    | 3.97 | 0.4 | 4.4     |                                                                                     |             |
|                                                                                  | 09T308-MG      |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  |                 | 9.53 | 9.7                                                                                                                                                                                                    | 3.97 | 0.8 | 4.4     |                                                                                     |             |
|                                                                                  | 120408-MG      |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  |                 | 12.7 | 12.9                                                                                                                                                                                                   | 4.76 | 0.8 | 5.5     |                                                                                     |             |

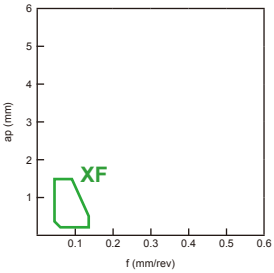


DCGT - Positive Turning Insert

正角車刀片

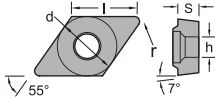
|                                                                                  | P               | Steel           |  |  |  |  |                                                                                   |      | Cutting Type :  General  Interrupted |      |     |         |                                                                                     |             |
|----------------------------------------------------------------------------------|-----------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|---------|-------------------------------------------------------------------------------------|-------------|
|                                                                                  | M               | Stainless steel |  |  |                                                                                   |  |  |      |                                                                                                                                                                                                        |      |     |         |                                                                                     |             |
|                                                                                  | K               | Cast iron       |  |  |                                                                                   |  |                                                                                   |      |                                                                                                                                                                                                        |      |     |         |                                                                                     |             |
| Inserts                                                                          | Designation     | Grade           |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Dimensions (mm)                                                                   |      |                                                                                                                                                                                                        |      |     | Drawing | Tool Page                                                                           |             |
|                                                                                  |                 | CX1555          | CX2565                                                                            | CX2555                                                                            | CX3565                                                                            | CX3555                                                                            |                                                                                   | d    | l                                                                                                                                                                                                      | S    | r   |         |                                                                                     | h           |
|  | DCGT 11T301R-XF | ✓               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 9.53 | 11.6                                                                                                                                                                                                   | 3.97 | 0.1 | 4.4     |  | B147 ~ B151 |
|                                                                                  | 11T302R-XF      | ✓               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 9.53 | 11.6                                                                                                                                                                                                   | 3.97 | 0.2 | 4.4     |                                                                                     |             |
|                                                                                  | 11T304R-XF      | ✓               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 9.53 | 11.6                                                                                                                                                                                                   | 3.97 | 0.4 | 4.4     |                                                                                     |             |
|  | DCGT 11T301L-XF | ✓               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 9.53 | 11.6                                                                                                                                                                                                   | 3.97 | 0.1 | 4.4     |                                                                                     | B170 ~ B172 |
|                                                                                  | 11T302L-XF      | ✓               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 9.53 | 11.6                                                                                                                                                                                                   | 3.97 | 0.2 | 4.4     |                                                                                     |             |
|                                                                                  | 11T304L-XF      | ✓               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 9.53 | 11.6                                                                                                                                                                                                   | 3.97 | 0.4 | 4.4     |                                                                                     |             |

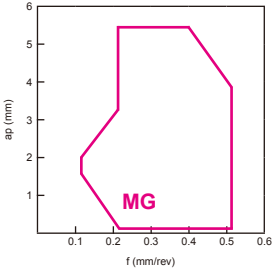
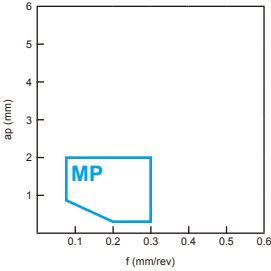
\*Customize radius and geometries available



DCMT - Positive Turning Insert

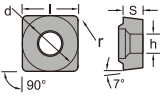
正角車刀片

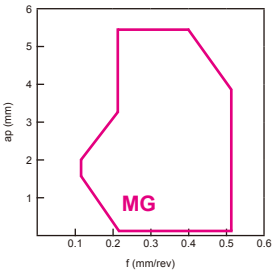
|                                                                                  | P              | Steel           |  |  |  |  |                                                                                   |      | Cutting Type :  General  Interrupted |      |     |         |                                                                                     |      |
|----------------------------------------------------------------------------------|----------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|---------|-------------------------------------------------------------------------------------|------|
|                                                                                  | M              | Stainless steel |  |  |                                                                                   |  |  |      |                                                                                                                                                                                                          |      |     |         |                                                                                     |      |
|                                                                                  | K              | Cast iron       |  |  |                                                                                   |  |                                                                                   |      |                                                                                                                                                                                                          |      |     |         |                                                                                     |      |
| Inserts                                                                          | Designation    | Grade           |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Dimensions (mm)                                                                   |      |                                                                                                                                                                                                          |      |     | Drawing | Tool Page                                                                           |      |
|                                                                                  |                | CX1555          | CX2565                                                                            | CX2555                                                                            | CX3565                                                                            | CX3555                                                                            |                                                                                   | d    | l                                                                                                                                                                                                        | S    | r   |         |                                                                                     | h    |
|  | DCMT 11T304-MP |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |                                                                                   | 9.53 | 11.6                                                                                                                                                                                                     | 3.97 | 0.4 | 4.4     |  | B147 |
|                                                                                  | 11T308-MP      |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |                                                                                   | 9.53 | 11.6                                                                                                                                                                                                     | 3.97 | 0.8 | 4.4     |                                                                                     | B151 |
|  | DCMT 070202-MG |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |                                                                                   | 6.35 | 7.75                                                                                                                                                                                                     | 2.38 | 0.2 | 2.8     |                                                                                     | B170 |
|                                                                                  | 070204-MG      |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |                                                                                   | 6.35 | 7.75                                                                                                                                                                                                     | 2.38 | 0.4 | 2.8     |                                                                                     | B172 |
|                                                                                  | 11T304-MG      |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |                                                                                   | 9.53 | 11.6                                                                                                                                                                                                     | 3.97 | 0.4 | 4.4     |                                                                                     |      |
|                                                                                  | 11T308-MG      |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |                                                                                   | 9.53 | 11.6                                                                                                                                                                                                     | 3.97 | 0.8 | 4.4     |                                                                                     |      |



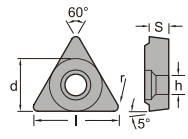
SCMT - Positive Turning Insert

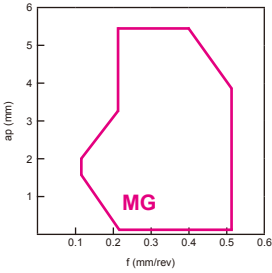
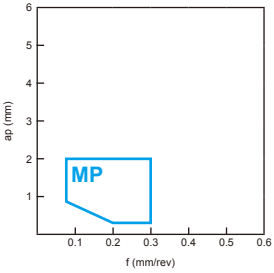
正角車刀片

|                                                                                  | P              | Steel           |  |  |  |                                                                                   |  |                 | Cutting Type :  General  Interrupted |      |     |     |                                                                                     |                   |
|----------------------------------------------------------------------------------|----------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|-------------------------------------------------------------------------------------|-------------------|
|                                                                                  | M              | Stainless steel |  |                                                                                   |  |  |  |                 |                                                                                                                                                                                                        |      |     |     |                                                                                     |                   |
|                                                                                  | K              | Cast iron       |  |                                                                                   |  |                                                                                   |  |                 |                                                                                                                                                                                                        |      |     |     |                                                                                     |                   |
| Inserts                                                                          | Designation    |                 | Grade                                                                             |                                                                                   |                                                                                   |                                                                                   |  | Dimensions (mm) |                                                                                                                                                                                                        |      |     |     | Drawing                                                                             | Tool Page         |
|                                                                                  |                |                 | CX2565                                                                            | CX2555                                                                            | CX3565                                                                            | CX3555                                                                            |  | d               | l                                                                                                                                                                                                      | S    | r   | h   |                                                                                     |                   |
|  | SCMT 09T304-MG |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  | 9.53            | 9.53                                                                                                                                                                                                   | 3.97 | 0.4 | 4.4 |  | B173<br>~<br>B175 |
|                                                                                  | 09T308-MG      |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  | 9.53            | 9.53                                                                                                                                                                                                   | 3.97 | 0.8 | 4.4 |                                                                                     |                   |



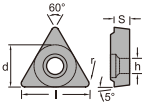
TCMT - Positive Turning Insert 正角車刀片

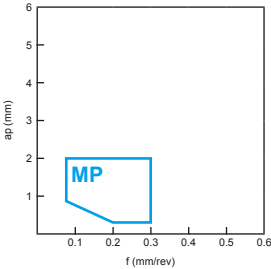
|                                                                                  | P              | Steel           |  |  |  |                                                                                   |                 |      |      | Cutting Type :  General  Interrupted |     |         |                                                                                     |                   |
|----------------------------------------------------------------------------------|----------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------|------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------|-------------------------------------------------------------------------------------|-------------------|
|                                                                                  | M              | Stainless steel |  |                                                                                   |  |  |                 |      |      |                                                                                                                                                                                                           |     |         |                                                                                     |                   |
|                                                                                  | K              | Cast iron       |  |                                                                                   |  |                                                                                   |                 |      |      |                                                                                                                                                                                                           |     |         |                                                                                     |                   |
| Inserts                                                                          | Designation    | Grade           |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Dimensions (mm) |      |      |                                                                                                                                                                                                           |     | Drawing | Tool Page                                                                           |                   |
|                                                                                  |                | CX2565          | CX2555                                                                            | CX3565                                                                            | CX3555                                                                            |                                                                                   |                 | d    | l    | S                                                                                                                                                                                                         | r   |         |                                                                                     | h                 |
|  | TCMT 110204-MP | ✓               | ✓                                                                                 |                                                                                   |                                                                                   |                                                                                   |                 | 6.35 | 11.0 | 2.38                                                                                                                                                                                                      | 0.4 | 2.8     |  | B152<br>~<br>B154 |
|  | TCMT 110204-MG | ✓               | ✓                                                                                 |                                                                                   |                                                                                   |                                                                                   |                 | 6.35 | 11.0 | 2.38                                                                                                                                                                                                      | 0.4 | 2.8     |                                                                                     | B176<br>~<br>B177 |
|                                                                                  | 16T304-MG      | ✓               | ✓                                                                                 |                                                                                   |                                                                                   |                                                                                   |                 | 9.53 | 16.5 | 3.97                                                                                                                                                                                                      | 0.4 | 4.4     |                                                                                     |                   |
|                                                                                  | 16T308-MG      | ✓               | ✓                                                                                 |                                                                                   |                                                                                   |                                                                                   |                 | 9.53 | 16.5 | 3.97                                                                                                                                                                                                      | 0.8 | 4.4     |                                                                                     |                   |



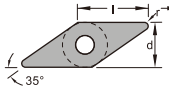
TPMH - Positive Turning Insert

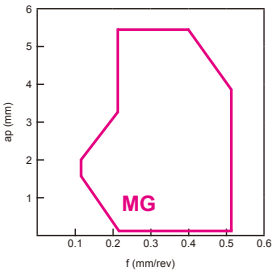
正角車刀片

|                                                                                  | P              | Steel           |  |  |  |                                                                                   |  |                 | Cutting Type :  General  Interrupted |      |     |     |                                                                                     |           |
|----------------------------------------------------------------------------------|----------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|-------------------------------------------------------------------------------------|-----------|
|                                                                                  | M              | Stainless steel |  |                                                                                   |  |  |  |                 |                                                                                                                                                                                                          |      |     |     |                                                                                     |           |
|                                                                                  | K              | Cast iron       |  |                                                                                   |  |                                                                                   |  |                 |                                                                                                                                                                                                          |      |     |     |                                                                                     |           |
| Inserts                                                                          | Designation    |                 | Grade                                                                             |                                                                                   |                                                                                   |                                                                                   |  | Dimensions (mm) |                                                                                                                                                                                                          |      |     |     | Drawing                                                                             | Tool Page |
|                                                                                  |                |                 | CX2565                                                                            | CX2555                                                                            | CX3565                                                                            | CX3555                                                                            |  | d               | l                                                                                                                                                                                                        | S    | r   | h   |                                                                                     |           |
|  | TPMH 160304-MP |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  | 9.53            | 16.5                                                                                                                                                                                                     | 3.18 | 0.4 | 4.4 |  | -         |



VBMT - Positive Turning Insert 正角車刀片

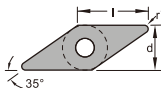
|                                                                                  | P              | Steel           | ☛      | ☛      | ☛      |   |                 |      | Cutting Type : ☛ General    ☛ Interrupted |      |     |         |                                                                                     |                           |
|----------------------------------------------------------------------------------|----------------|-----------------|--------|--------|--------|---|-----------------|------|-------------------------------------------|------|-----|---------|-------------------------------------------------------------------------------------|---------------------------|
|                                                                                  | M              | Stainless steel | ☛      |        | ☛      | ☛ |                 |      |                                           |      |     |         |                                                                                     |                           |
|                                                                                  | K              | Cast iron       | ☛      |        | ☛      |   |                 |      |                                           |      |     |         |                                                                                     |                           |
| Inserts                                                                          | Designation    | Grade           |        |        |        |   | Dimensions (mm) |      |                                           |      |     | Drawing | Tool Page                                                                           |                           |
|                                                                                  |                | CX2565          | CX2555 | CX3565 | CX3555 |   |                 | d    | l                                         | S    | r   |         |                                                                                     | h                         |
|  | VBMT 160404-MG | ✓               | ✓      |        |        |   |                 | 9.53 | 16.6                                      | 4.76 | 0.4 | 4.4     |  | B155                      |
|                                                                                  | 160408-MG      | ✓               | ✓      |        |        |   |                 | 9.53 | 16.6                                      | 4.76 | 0.8 | 4.4     |                                                                                     | B158<br>B178<br>~<br>B179 |



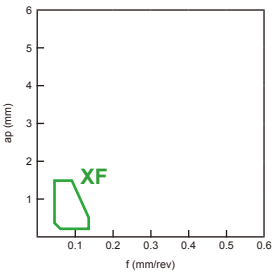
Turning Inserts & Tools

VCGT - Positive Turning Insert

正角車刀片

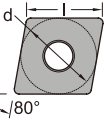
|                                                                                  | P               | Steel           |  |  |  |  |  | Cutting Type :  General  Interrupted |      |      |     |         |                                                                                     |      |
|----------------------------------------------------------------------------------|-----------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|-----|---------|-------------------------------------------------------------------------------------|------|
|                                                                                  | M               | Stainless steel |  |  |  |  |  |                                                                                                                                                                                                        |      |      |     |         |                                                                                     |      |
|                                                                                  | K               | Cast iron       |  |  |  |  |  |                                                                                                                                                                                                        |      |      |     |         |                                                                                     |      |
| Inserts                                                                          | Designation     | Grade           |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Dimensions (mm)                                                                   |                                                                                                                                                                                                        |      |      |     | Drawing | Tool Page                                                                           |      |
|                                                                                  |                 | CX2565          | CX2555                                                                            | CX3565                                                                            | CX3555                                                                            | CX1555                                                                            |                                                                                   | d                                                                                                                                                                                                      | l    | S    | r   |         |                                                                                     | h    |
|  | VCGT 110301R-XF |                 |                                                                                   |                                                                                   |                                                                                   | ✓                                                                                 |                                                                                   | 11.1                                                                                                                                                                                                   | 6.35 | 3.18 | 0.1 | 2.8     |  | B156 |
|                                                                                  | 110302R-XF      |                 |                                                                                   |                                                                                   |                                                                                   | ✓                                                                                 |                                                                                   | 11.1                                                                                                                                                                                                   | 6.35 | 3.18 | 0.2 | 2.8     |                                                                                     | B158 |
|                                                                                  | 110304R-XF      |                 |                                                                                   |                                                                                   |                                                                                   | ✓                                                                                 |                                                                                   | 11.1                                                                                                                                                                                                   | 6.35 | 3.18 | 0.4 | 2.8     |                                                                                     | B178 |
|  | VCGT 110301L-XF |                 |                                                                                   |                                                                                   |                                                                                   | ✓                                                                                 |                                                                                   | 11.1                                                                                                                                                                                                   | 6.35 | 3.18 | 0.1 | 2.8     |                                                                                     | B179 |
|                                                                                  | 110302L-XF      |                 |                                                                                   |                                                                                   |                                                                                   | ✓                                                                                 |                                                                                   | 11.1                                                                                                                                                                                                   | 6.35 | 3.18 | 0.2 | 2.8     |                                                                                     |      |
|                                                                                  | 110304L-XF      |                 |                                                                                   |                                                                                   |                                                                                   | ✓                                                                                 |                                                                                   | 11.1                                                                                                                                                                                                   | 6.35 | 3.18 | 0.4 | 2.8     |                                                                                     |      |
|  | VCGT 110304-FG  |                 |                                                                                   |                                                                                   |                                                                                   | ✓                                                                                 |                                                                                   | 11.1                                                                                                                                                                                                   | 6.35 | 3.18 | 0.4 | 2.8     |                                                                                     |      |

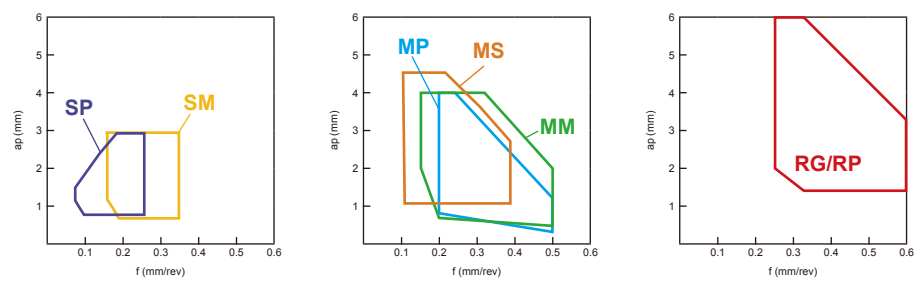
\*Customize radius and geometries available



CNMG - Negative Turning Insert

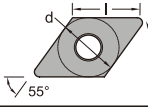
負角車刀片

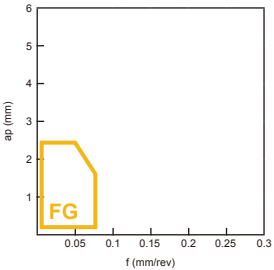
|                                                                                    | P              | Steel           |  |  |  |                                                                                   |  |                 |      |      |     | Cutting Type :  General  Interrupted |                                                                                      |  |  |           |
|------------------------------------------------------------------------------------|----------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--|-----------------|------|------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--|--|-----------|
|                                                                                    | M              | Stainless steel |  |                                                                                   |  |  |  |                 |      |      |     |                                                                                                                                                                                                        |                                                                                      |  |  |           |
|                                                                                    | K              | Cast iron       |  |                                                                                   |  |                                                                                   |  |                 |      |      |     |                                                                                                                                                                                                        |                                                                                      |  |  |           |
| Inserts                                                                            | Designation    |                 | Grade                                                                             |                                                                                   |                                                                                   |                                                                                   |  | Dimensions (mm) |      |      |     |                                                                                                                                                                                                        | Drawing                                                                              |  |  | Tool Page |
|                                                                                    |                |                 | CX2565                                                                            | CX2555                                                                            | CX3565                                                                            | CX3555                                                                            |  | d               | l    | S    | r   | h                                                                                                                                                                                                      |                                                                                      |  |  |           |
|    | CNMG 120404-SM |                 |                                                                                   | ✓                                                                                 |                                                                                   |                                                                                   |  | 12.7            | 12.9 | 4.76 | 0.4 | 5.16                                                                                                                                                                                                   |  |  |  |           |
|                                                                                    | 120408-SM      |                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |  | 12.7            | 12.9 | 4.76 | 0.8 | 5.16                                                                                                                                                                                                   |                                                                                      |  |  |           |
|    | CNMG 120404-SP |                 |                                                                                   | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |  | 12.7            | 12.9 | 4.76 | 0.4 | 5.16                                                                                                                                                                                                   |                                                                                      |  |  |           |
|                                                                                    | 120408-SP      |                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |  | 12.7            | 12.9 | 4.76 | 0.8 | 5.16                                                                                                                                                                                                   |                                                                                      |  |  |           |
|    | CNMG 120404-MM |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  | 12.7            | 12.9 | 4.76 | 0.4 | 5.16                                                                                                                                                                                                   |                                                                                      |  |  |           |
|                                                                                    | 120408-MM      |                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |  | 12.7            | 12.9 | 4.76 | 0.8 | 5.16                                                                                                                                                                                                   |                                                                                      |  |  |           |
|    | CNMG 120408-MS |                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |  | 12.7            | 12.9 | 4.76 | 0.8 | 5.16                                                                                                                                                                                                   |                                                                                      |  |  |           |
|    | CNMG 120404-MP |                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |  | 12.7            | 12.9 | 4.76 | 0.4 | 5.16                                                                                                                                                                                                   |                                                                                      |  |  |           |
|                                                                                    | 120408-MP      |                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |  | 12.7            | 12.9 | 4.76 | 0.8 | 5.16                                                                                                                                                                                                   |                                                                                      |  |  |           |
|                                                                                    | 120412-MP      |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  | 12.7            | 12.9 | 4.76 | 1.2 | 5.16                                                                                                                                                                                                   |                                                                                      |  |  |           |
|  | CNMG 120408-MK |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  | 12.7            | 12.9 | 4.76 | 0.8 | 5.16                                                                                                                                                                                                   |                                                                                      |  |  |           |
|  | CNMG 120408-MG |                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |  | 12.7            | 12.9 | 4.76 | 0.8 | 5.16                                                                                                                                                                                                   |                                                                                      |  |  |           |
|  | CNMG 120408-RG |                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |  | 12.7            | 12.9 | 4.76 | 0.8 | 5.16                                                                                                                                                                                                   |                                                                                      |  |  |           |
|  | CNMG 120408-RP |                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |  | 12.7            | 12.9 | 4.76 | 0.4 | 5.16                                                                                                                                                                                                   |                                                                                      |  |  |           |
|                                                                                    | 120412-RP      |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  | 12.7            | 12.9 | 4.76 | 0.8 | 5.16                                                                                                                                                                                                   |                                                                                      |  |  |           |



DNMG - Negative Turning Insert

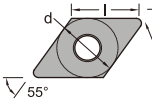
負角車刀片

|                                                                                  | P              | Steel           |  |  |  |                                                                                   |  |                 | Cutting Type :  General  Interrupted |      |     |      |                                                                                     |              |
|----------------------------------------------------------------------------------|----------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|------|-------------------------------------------------------------------------------------|--------------|
|                                                                                  | M              | Stainless steel |  |                                                                                   |  |  |  |                 |                                                                                                                                                                                                          |      |     |      |                                                                                     |              |
|                                                                                  | K              | Cast iron       |  |                                                                                   |  |                                                                                   |  |                 |                                                                                                                                                                                                          |      |     |      |                                                                                     |              |
| Inserts                                                                          | Designation    |                 | Grade                                                                             |                                                                                   |                                                                                   |                                                                                   |  | Dimensions (mm) |                                                                                                                                                                                                          |      |     |      | Drawing                                                                             | Tool Page    |
|                                                                                  |                |                 | CX2565                                                                            | CX2555                                                                            | CX3565                                                                            | CX3555                                                                            |  | d               | l                                                                                                                                                                                                        | S    | r   | h    |                                                                                     |              |
|  | DNMG 110408-MG |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  | 9.53            | 11.6                                                                                                                                                                                                     | 4.76 | 0.8 | 3.81 |  | B138<br>B161 |
|                                                                                  | 150408-MG      |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  | 12.7            | 15.5                                                                                                                                                                                                     | 4.76 | 0.8 | 5.16 |                                                                                     |              |

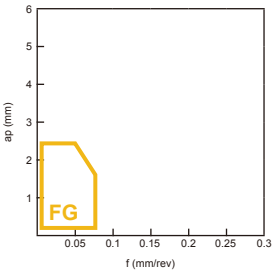


DNGX - Negative Turning Insert

負角車刀片

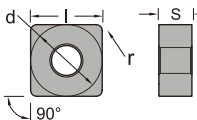
|                                                                                  | P              | Steel           |  |  |  |                                                                                   |   |                 | Cutting Type :  General  Interrupted |      |     |     |                                                                                     |           |
|----------------------------------------------------------------------------------|----------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|-------------------------------------------------------------------------------------|-----------|
|                                                                                  | M              | Stainless steel |  |                                                                                   |  |  |   |                 |                                                                                                                                                                                                          |      |     |     |                                                                                     |           |
|                                                                                  | K              | Cast iron       |  |                                                                                   |  |                                                                                   |   |                 |                                                                                                                                                                                                          |      |     |     |                                                                                     |           |
| Inserts                                                                          | Designation    |                 | Grade                                                                             |                                                                                   |                                                                                   |                                                                                   |   | Dimensions (mm) |                                                                                                                                                                                                          |      |     |     | Drawing                                                                             | Tool Page |
|                                                                                  |                |                 | CX2565                                                                            | CX2555                                                                            | CX3565                                                                            | CX3555                                                                            |   | d               | l                                                                                                                                                                                                        | S    | r   | h   |                                                                                     |           |
|  | DNGX 110401-FG |                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   | ✓ | 9.525           | 11.6                                                                                                                                                                                                     | 4.76 | 0.1 | 4.5 |  | -         |

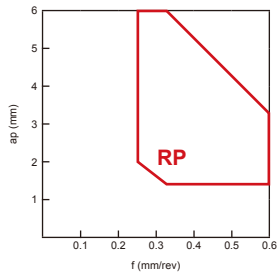
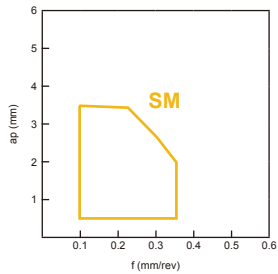
\*Customize radius available



SNMG - Negative Turning Insert

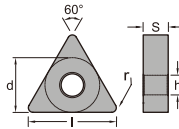
負角車刀片

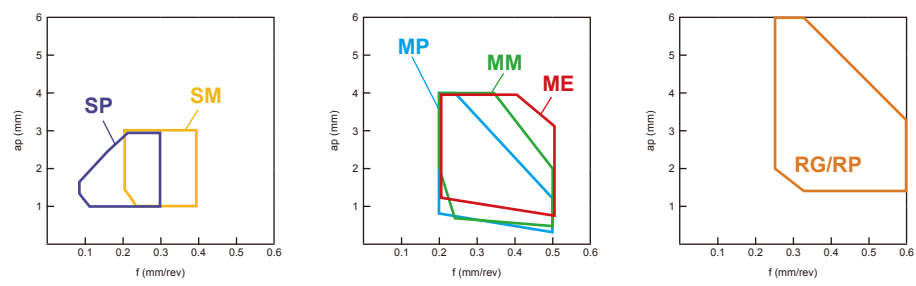
|                                                                                  | P              | Steel           |  |  |  |                                                                                   |  |                 |      | Cutting Type :  General  Interrupted |      |     |         |                                                                                     |      |
|----------------------------------------------------------------------------------|----------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--|-----------------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|---------|-------------------------------------------------------------------------------------|------|
|                                                                                  | M              | Stainless steel |  |                                                                                   |  |  |  |                 |      |                                                                                                                                                                                                        |      |     |         |                                                                                     |      |
|                                                                                  | K              | Cast iron       |  |                                                                                   |  |                                                                                   |  |                 |      |                                                                                                                                                                                                        |      |     |         |                                                                                     |      |
| Inserts                                                                          | Designation    |                 | Grade                                                                             |                                                                                   |                                                                                   |                                                                                   |  | Dimensions (mm) |      |                                                                                                                                                                                                        |      |     | Drawing | Tool Page                                                                           |      |
|                                                                                  |                |                 | CX2565                                                                            | CX2555                                                                            | CX3565                                                                            | CX3555                                                                            |  |                 | d    | l                                                                                                                                                                                                      | S    | r   |         |                                                                                     | h    |
|  | SNMG 120404-SM |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  |                 | 12.7 | 12.7                                                                                                                                                                                                   | 4.76 | 0.4 | 5.16    |  | B162 |
|  | SNMG 120408-MG |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  |                 | 12.7 | 12.7                                                                                                                                                                                                   | 4.76 | 0.8 | 5.16    |                                                                                     |      |
|  | SNMG 120408-RP |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  |                 | 12.7 | 12.7                                                                                                                                                                                                   | 4.76 | 0.8 | 5.16    |                                                                                     |      |
|                                                                                  | 120412-RP      |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  |                 | 12.7 | 12.7                                                                                                                                                                                                   | 4.76 | 1.2 | 5.16    |                                                                                     |      |



TNMG - Negative Turning Insert

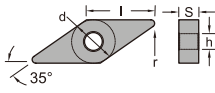
負角車刀片

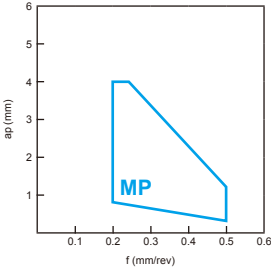
|                                                                                    | P               | Steel           |  |  |  |                                                                                   |                 |      |      |      | Cutting Type :  General  Interrupted |         |                                                                                      |                                                        |  |
|------------------------------------------------------------------------------------|-----------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------|------|------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------------------------------------------------------------------------------------|--------------------------------------------------------|--|
|                                                                                    | M               | Stainless steel |  |                                                                                   |  |  |                 |      |      |      |                                                                                                                                                                                                        |         |                                                                                      |                                                        |  |
|                                                                                    | K               | Cast iron       |  |                                                                                   |  |                                                                                   |                 |      |      |      |                                                                                                                                                                                                        |         |                                                                                      |                                                        |  |
| Inserts                                                                            | Designation     | Grade           |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Dimensions (mm) |      |      |      |                                                                                                                                                                                                        | Drawing | Tool Page                                                                            |                                                        |  |
|                                                                                    |                 | CX2565          | CX2555                                                                            | CX3565                                                                            | CX3555                                                                            |                                                                                   |                 | d    | l    | S    | r                                                                                                                                                                                                      |         |                                                                                      | h                                                      |  |
|    | TNMG 160408-SM  | ✓               | ✓                                                                                 |                                                                                   |                                                                                   |                                                                                   |                 | 9.53 | 16.5 | 4.76 | 0.8                                                                                                                                                                                                    | 3.81    |  | B139<br>~<br>B141<br><br>B161<br><br>B163<br>~<br>B164 |  |
|    | TNMG 160404-SP  | ✓               | ✓                                                                                 |                                                                                   |                                                                                   |                                                                                   |                 | 9.53 | 16.5 | 4.76 | 0.4                                                                                                                                                                                                    | 3.81    |                                                                                      |                                                        |  |
|                                                                                    | 160408-SP       | ✓               | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                 | 9.53 | 16.5 | 4.76 | 0.8                                                                                                                                                                                                    | 3.81    |                                                                                      |                                                        |  |
|    | TNMG 160408-MM  | ✓               | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                 | 9.53 | 16.5 | 4.76 | 0.8                                                                                                                                                                                                    | 3.81    |                                                                                      |                                                        |  |
|    | TNMG 160404R-ME | ✓               | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                 | 9.53 | 16.5 | 4.76 | 0.4                                                                                                                                                                                                    | 3.81    |                                                                                      |                                                        |  |
|                                                                                    | 160408R-ME      | ✓               | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                 | 9.53 | 16.5 | 4.76 | 0.8                                                                                                                                                                                                    | 3.81    |                                                                                      |                                                        |  |
|    | TNMG 160404L-ME | ✓               | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                 | 9.53 | 16.5 | 4.76 | 0.4                                                                                                                                                                                                    | 3.81    |                                                                                      |                                                        |  |
|                                                                                    | 160408L-ME      | ✓               | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                 | 9.53 | 16.5 | 4.76 | 0.8                                                                                                                                                                                                    | 3.81    |                                                                                      |                                                        |  |
|  | TNMG 160404-MP  | ✓               | ✓                                                                                 |                                                                                   |                                                                                   |                                                                                   |                 | 9.53 | 16.5 | 4.76 | 0.4                                                                                                                                                                                                    | 3.81    |                                                                                      |                                                        |  |
|                                                                                    | 160408-MP       | ✓               | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                 | 9.53 | 16.5 | 4.76 | 0.8                                                                                                                                                                                                    | 3.81    |                                                                                      |                                                        |  |
|                                                                                    | 160412-MP       | ✓               | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                 | 9.53 | 16.5 | 4.76 | 1.2                                                                                                                                                                                                    | 3.81    |                                                                                      |                                                        |  |
|  | TNMG 220408-MP  | ✓               | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                 | 12.7 | 22   | 4.76 | 0.8                                                                                                                                                                                                    | 5.16    |                                                                                      |                                                        |  |
|  | TNMG 160404-MG  | ✓               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                 | 9.53 | 16.5 | 4.76 | 0.4                                                                                                                                                                                                    | 3.81    |                                                                                      |                                                        |  |
|  | TNMG 160408-RG  | ✓               | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                 | 9.53 | 16.5 | 4.76 | 0.8                                                                                                                                                                                                    | 3.81    |                                                                                      |                                                        |  |
|  | TNMG 160408-RP  | ✓               | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                 | 9.53 | 16.5 | 4.76 | 0.8                                                                                                                                                                                                    | 3.81    |                                                                                      |                                                        |  |
|                                                                                    | 160412-RP       | ✓               | ✓                                                                                 |                                                                                   |                                                                                   |                                                                                   |                 | 9.53 | 16.5 | 4.76 | 1.2                                                                                                                                                                                                    | 3.81    |                                                                                      |                                                        |  |



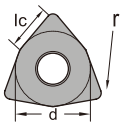
VNMG - Negative Turning Insert

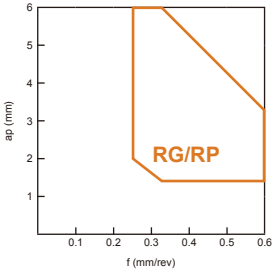
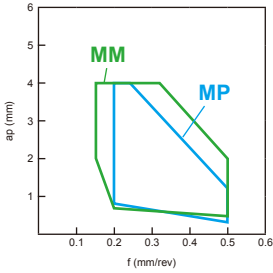
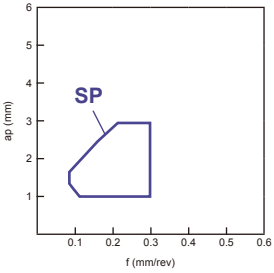
負角車刀片

|                                                                                  | P              | Steel           |  |  |  |                                                                                   |                 |      | Cutting Type :  General  Interrupted |      |     |         |                                                                                     |                   |
|----------------------------------------------------------------------------------|----------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|---------|-------------------------------------------------------------------------------------|-------------------|
|                                                                                  | M              | Stainless steel |  |                                                                                   |  |  |                 |      |                                                                                                                                                                                                          |      |     |         |                                                                                     |                   |
|                                                                                  | K              | Cast iron       |  |                                                                                   |  |                                                                                   |                 |      |                                                                                                                                                                                                          |      |     |         |                                                                                     |                   |
| Inserts                                                                          | Designation    | Grade           |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Dimensions (mm) |      |                                                                                                                                                                                                          |      |     | Drawing | Tool Page                                                                           |                   |
|                                                                                  |                | CX2565          | CX2555                                                                            | CX3565                                                                            | CX3555                                                                            |                                                                                   |                 | d    | l                                                                                                                                                                                                        | S    | r   |         |                                                                                     | h                 |
|  | VNMG 160404-MP | ✓               | ✓                                                                                 |                                                                                   |                                                                                   |                                                                                   |                 | 9.53 | 16.5                                                                                                                                                                                                     | 4.76 | 0.8 | 3.81    |  | B141              |
|  | VNMG 160408-MG | ✓               | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                 | 9.53 | 16.5                                                                                                                                                                                                     | 4.76 | 0.8 | 3.81    |                                                                                     | B165<br>~<br>B166 |



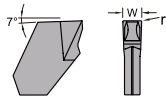
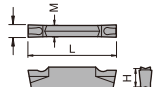
WNMG - Negative Turning Insert 負角車刀片

|                                                                                   | P              | Steel           |  |  |  |                                                                                   |  |                 |      |     | Cutting Type :  General  Interrupted |     |         |                                                                                     |                           |  |
|-----------------------------------------------------------------------------------|----------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--|-----------------|------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------|-------------------------------------------------------------------------------------|---------------------------|--|
|                                                                                   | M              | Stainless steel |  |                                                                                   |  |  |  |                 |      |     |                                                                                                                                                                                                        |     |         |                                                                                     |                           |  |
|                                                                                   | K              | Cast iron       |  |                                                                                   |  |                                                                                   |  |                 |      |     |                                                                                                                                                                                                        |     |         |                                                                                     |                           |  |
| Inserts                                                                           | Designation    |                 | Grade                                                                             |                                                                                   |                                                                                   |                                                                                   |  | Dimensions (mm) |      |     |                                                                                                                                                                                                        |     | Drawing | Tool Page                                                                           |                           |  |
|                                                                                   |                |                 | CX2565                                                                            | CX2555                                                                            | CX3565                                                                            | CX3555                                                                            |  |                 | d    | l   | S                                                                                                                                                                                                      | r   |         |                                                                                     | h                         |  |
|   | WNMG 080404-SP |                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |  |                 | 12.7 | 8.7 | 4.76                                                                                                                                                                                                   | 0.4 | 5.16    |  | B142<br>B166<br>~<br>B167 |  |
|                                                                                   | 080408-SP      |                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |  |                 | 12.7 | 8.7 | 4.76                                                                                                                                                                                                   | 0.8 | 5.16    |                                                                                     |                           |  |
|   | WNMG 080408-MM |                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |  |                 | 12.7 | 8.7 | 4.76                                                                                                                                                                                                   | 0.8 | 5.16    |                                                                                     |                           |  |
|   | WNMG 080404-MP |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  |                 | 12.7 | 8.7 | 4.76                                                                                                                                                                                                   | 0.4 | 5.16    |                                                                                     |                           |  |
|                                                                                   | 080408-MP      |                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |  |                 | 12.7 | 8.7 | 4.76                                                                                                                                                                                                   | 0.8 | 5.16    |                                                                                     |                           |  |
|                                                                                   | 080412-MP      |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  |                 | 12.7 | 8.7 | 4.76                                                                                                                                                                                                   | 1.2 | 5.16    |                                                                                     |                           |  |
|   | WNMG 080408-RG |                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |  |                 | 12.7 | 8.7 | 4.76                                                                                                                                                                                                   | 0.4 | 5.16    |                                                                                     |                           |  |
|  | WNMG 080408-RP |                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 |  |                 | 12.7 | 8.7 | 4.76                                                                                                                                                                                                   | 0.8 | 5.16    |                                                                                     |                           |  |
|                                                                                   | 080412-RP      |                 | ✓                                                                                 | ✓                                                                                 |                                                                                   |                                                                                   |  |                 | 12.7 | 8.7 | 4.76                                                                                                                                                                                                   | 1.2 | 5.16    |                                                                                     |                           |  |



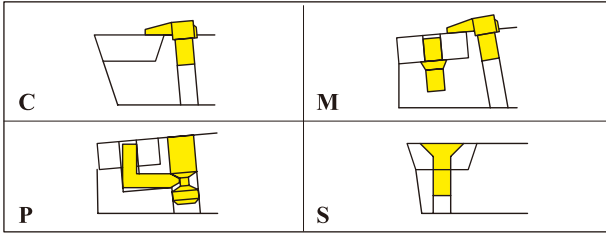
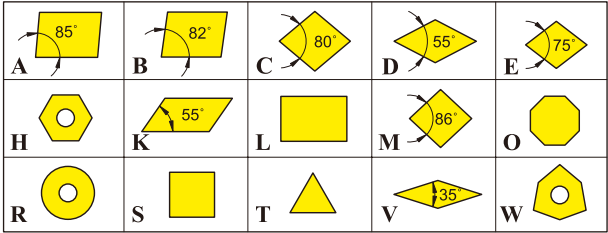
## TGTN, GMM - Parting Insert

切斷刀片

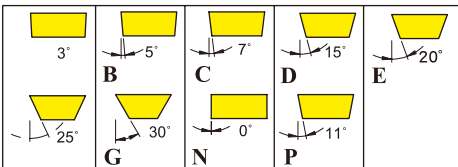
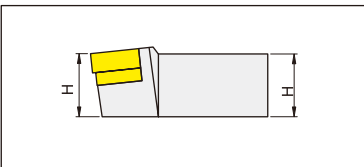
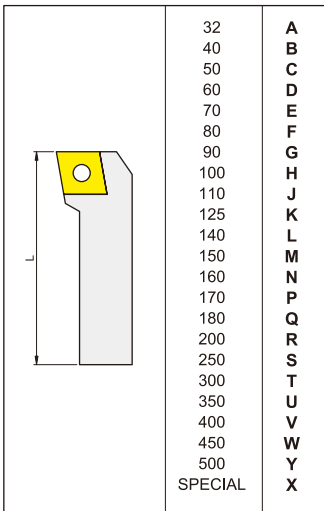
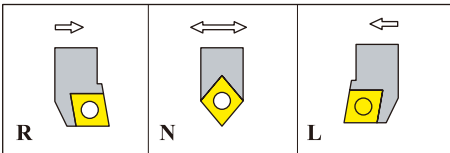
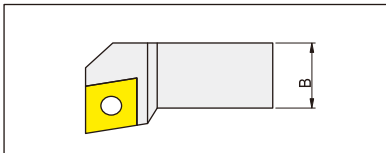
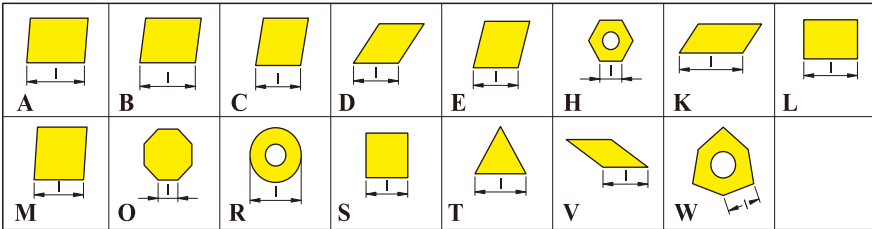
|                                                                                  | P                  | Steel           | ●      | ✱ |  |  |  |                 |      |     | Cutting Type : ● General ✱ Interrupted |  |  |                                                                                     |             |  |
|----------------------------------------------------------------------------------|--------------------|-----------------|--------|---|--|--|--|-----------------|------|-----|----------------------------------------|--|--|-------------------------------------------------------------------------------------|-------------|--|
|                                                                                  | M                  | Stainless steel |        |   |  |  |  |                 |      |     |                                        |  |  |                                                                                     |             |  |
|                                                                                  | K                  | Cast iron       | ●      | ✱ |  |  |  |                 |      |     |                                        |  |  |                                                                                     |             |  |
| Inserts                                                                          | Designation        | Grade           |        |   |  |  |  | Dimensions (mm) |      |     |                                        |  |  | Drawing                                                                             | Cutter Page |  |
|                                                                                  |                    | CX30NS          | CX40NS |   |  |  |  | w               | r    | h   | m                                      |  |  |                                                                                     |             |  |
|  | <b>TGTN 0220</b>   | ✓               | ✓      |   |  |  |  | 2.2             | 0.2  |     |                                        |  |  |  | B181        |  |
|  | <b>TGTN 0310</b>   | ✓               | ✓      |   |  |  |  | 3.1             | 0.15 |     |                                        |  |  |                                                                                     |             |  |
|  | <b>GMM 2020-RG</b> | ✓               | ✓      |   |  |  |  | 2.2             | 2.0  | 4.3 | 1.5                                    |  |  |  | B183        |  |

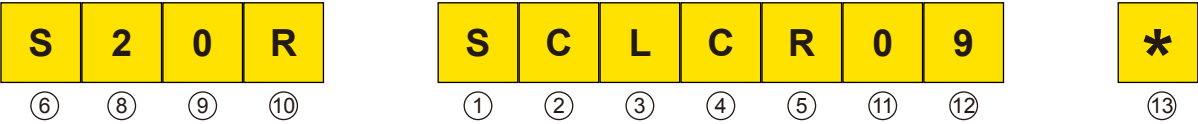


|   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M | C | L | N | R | 2 | 5 | 2 | 5 | M | 1 | 2 | * |
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ | ⑪ | ⑫ | ⑬ |

|                                                                                  |  |  |  |  |                                                                                    |  |  |  |  |  |  |  |
|----------------------------------------------------------------------------------|--|--|--|--|------------------------------------------------------------------------------------|--|--|--|--|--|--|--|
| ① TYPE OF LOCJING                                                                |  |  |  |  | ② INSERT SHAPE                                                                     |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

|                |   |   |   |   |   |   |   |   |   |   |   |  |
|----------------|---|---|---|---|---|---|---|---|---|---|---|--|
| ③ INSERT SHAPE |   |   |   |   |   |   |   |   |   |   |   |  |
| A              | B | C | D | E | F | G | H | J | K | L | M |  |
| N              | P | Q | R | S | T | U | V | W | Y | X |   |  |

|                                                                                    |  |  |  |  |                                                                                     |  |  |             |  |                                                                                      |  |  |  |  |  |
|------------------------------------------------------------------------------------|--|--|--|--|-------------------------------------------------------------------------------------|--|--|-------------|--|--------------------------------------------------------------------------------------|--|--|--|--|--|
| ④ RAKE                                                                             |  |  |  |  | ⑥/⑦ SHANK HEIGHT                                                                    |  |  |             |  | ⑩ SHANK LENGTH                                                                       |  |  |  |  |  |
|  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |
|                                                                                    |  |  |  |  |                                                                                     |  |  |             |  |                                                                                      |  |  |  |  |  |
| ⑤ HAND OF TOOL                                                                     |  |  |  |  | ⑧/⑨ SHANK WIDTH                                                                     |  |  |             |  | ⑧/⑨ SHANK WIDTH                                                                      |  |  |  |  |  |
|  |  |  |  |  |  |  |  |             |  |                                                                                      |  |  |  |  |  |
| ⑤ HAND OF TOOL                                                                     |  |  |  |  |                                                                                     |  |  |             |  |                                                                                      |  |  |  |  |  |
|  |  |  |  |  |                                                                                     |  |  |             |  |                                                                                      |  |  |  |  |  |
|                                                                                    |  |  |  |  |                                                                                     |  |  | INSERTS R-L |  |                                                                                      |  |  |  |  |  |

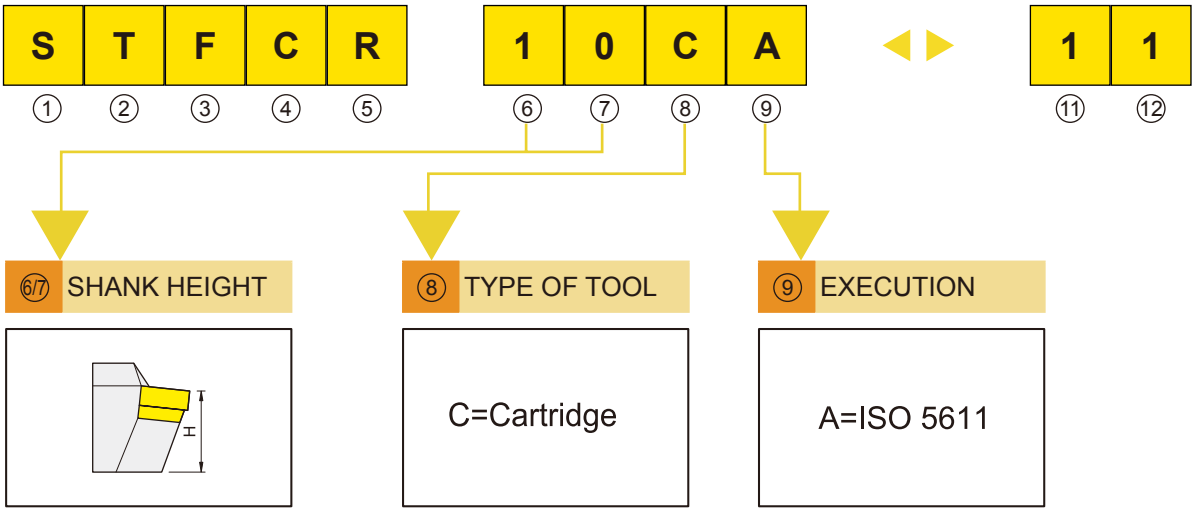


⑥ SHANK

S = Steel shank  
A = Steel shank+coolant hole  
B = Steel shank+device anti-vibration  
C = Cemented carbide shank with steel head  
D = Steel shank+device anti-vibration+coolant hole  
E = Cemented carbide shank with steel head+coolant hole  
F = Cemented carbide shank with steel head+device anti-vibration  
G = Cemented carbide shank with steel head+device anti-vibration+coolant hole  
H = Heavy metal shank  
J = Heavy metal shank+coolant hole

Turning Inserts & Tools

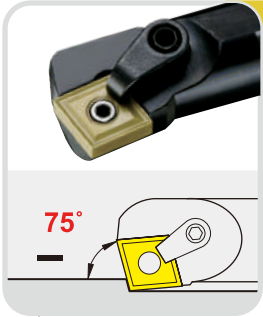
CARTRIDGES DESIGNATION





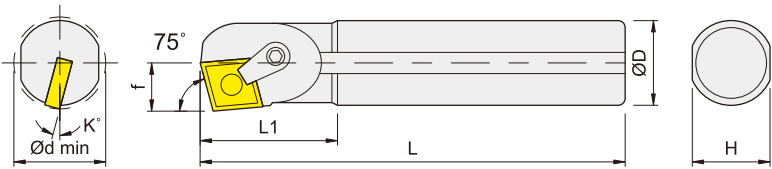
|            |           |           |            |           |             |
|------------|-----------|-----------|------------|-----------|-------------|
| MCBN B159  | MCKN B159 | MCLN B160 | MCNN B160  | MDJN B161 | MTQN B161   |
| MSDN B162  | MSSN B162 | MTJN B163 | MTEN B163  | DTFN B164 | MTFN B164   |
| MVJN B165  | MVQN B165 | MVVN B166 | WWLN B166  | MWLN B167 | MWLN-N B167 |
| SCBC B168  | SCKC B168 | SCLC B169 | SCL2C B169 | SCNC B170 | SDJC B170   |
| SDJ2C B171 | SDNC B171 | SDQC B172 | SDFC B172  | SSAC B173 | SSBC B173   |
| SSDC B174  | SSEC B174 | SSXC B175 | SSYC B175  | STAC B176 | STFC B176   |
| STGC B177  | CTYC B177 | SVJB B178 | SVJ2B B178 | SVQB B179 | SVVB B179   |

Internal Turning Tools 內徑車刀桿



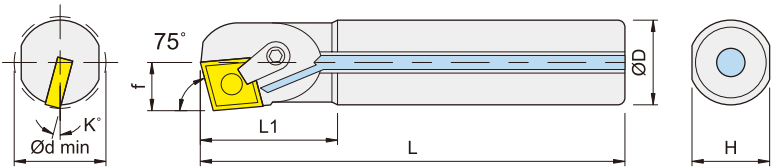
MCKN

■ S.-MCKNR/L-12 Steel shank



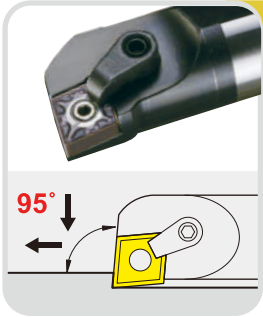
Right-hand shown

■ A.-MCKNR/L-12 Steel shank+coolant hole



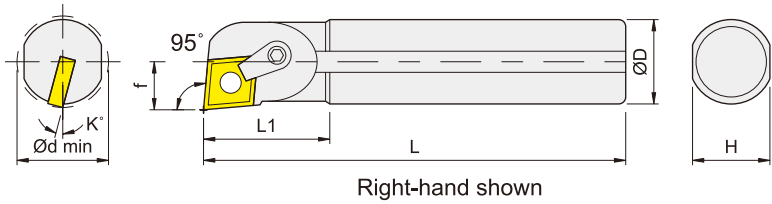
Right-hand shown

| Item Code        | Dimensions, mm |     |    |    |    |    |      | Insert     | Shim   | Pin   | Wrench | Clamp | Screw | Wrench |
|------------------|----------------|-----|----|----|----|----|------|------------|--------|-------|--------|-------|-------|--------|
|                  | D              | L   | L1 | f  | H  | K  | dmin |            |        |       |        |       |       |        |
| IS20R-MCKNR/L-12 | 20             | 200 | 36 | 13 | 18 | 15 | 25   | CN..1204.. | --     | MLP44 | PL25   | MC620 | MS620 | PL30   |
| IS25R-MCKNR/L-12 | 25             | 200 | 40 | 15 | 23 | 13 | 30   | CN..1204.. | CMS432 | MLP46 | PL25   | MC620 | MS625 | PL30   |
| IS32S-MCKNR/L-12 | 32             | 250 | 48 | 20 | 30 | 13 | 40   |            |        |       |        |       |       |        |
| IS40T-MCKNR/L-12 | 40             | 300 | 55 | 25 | 37 | 12 | 50   |            |        |       |        |       |       |        |
| IS50U-MCKNR/L-12 | 50             | 350 | 60 | 30 | 47 | 10 | 60   |            |        |       |        |       |       |        |
| IS60V-MCKNR/L-12 | 60             | 400 | 60 | 35 | 57 | 9  | 70   | CN..1204.. | CMS432 | MLP46 | PL25   | MC620 | MS620 | PL30   |
| IA20R-MCKNR/L-12 | 20             | 200 | 36 | 13 | 18 | 15 | 25   |            |        |       |        |       |       |        |
| IA25R-MCKNR/L-12 | 25             | 200 | 40 | 15 | 23 | 13 | 30   |            |        |       |        |       |       |        |
| IA32S-MCKNR/L-12 | 32             | 250 | 48 | 20 | 30 | 13 | 40   |            |        |       |        |       |       |        |
| IA40T-MCKNR/L-12 | 40             | 300 | 55 | 25 | 37 | 12 | 50   | CN..1204.. | CMS432 | MLP46 | PL25   | MC620 | MS625 | PL30   |

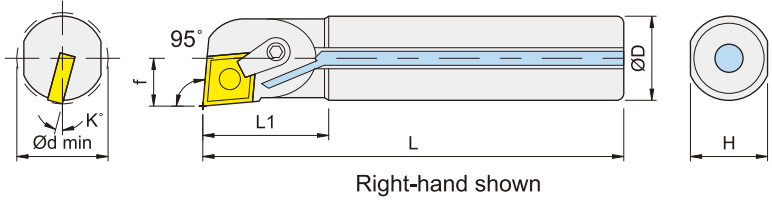


MCLN

■ S..-MCKNR/L-12 Steel shank



■ A..-MCKNR/L-12 Steel shank+coolant hole

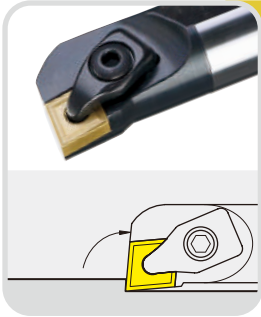


| Item Code        | Dimensions, mm |     |    |    |    |    |      | Insert     |        |       |      |       |       |      |
|------------------|----------------|-----|----|----|----|----|------|------------|--------|-------|------|-------|-------|------|
|                  | D              | L   | L1 | f  | H  | K  | dmin |            |        |       |      |       |       |      |
| IS20R-MCLNR/L-12 | 20             | 200 | 36 | 13 | 18 | 15 | 25   | CN..1204.. | --     | MLP44 | PL25 | MC620 | MS620 | PL30 |
| IS25R-MCLNR/L-12 | 25             | 200 | 40 | 15 | 23 | 13 | 30   |            |        |       |      |       |       |      |
| IS32S-MCLNR/L-12 | 32             | 250 | 48 | 20 | 30 | 13 | 40   |            |        |       |      |       |       |      |
| IS40T-MCLNR/L-12 | 40             | 300 | 55 | 25 | 37 | 12 | 50   |            |        |       |      |       |       |      |
| IS50U-MCLNR/L-12 | 50             | 350 | 60 | 30 | 47 | 10 | 60   |            |        |       |      |       |       |      |
| IS60V-MCLNR/L-12 | 60             | 400 | 60 | 35 | 57 | 9  | 70   | CN..1204.. |        |       |      |       |       |      |
| IA20R-MCLNR/L-12 | 20             | 200 | 36 | 13 | 18 | 15 | 25   |            | --     | MLP44 | PL25 | MC620 | MS620 | PL30 |
| IA25R-MCLNR/L-12 | 25             | 200 | 40 | 15 | 23 | 13 | 30   |            |        |       |      |       |       |      |
| IA32S-MCLNR/L-12 | 32             | 250 | 48 | 20 | 30 | 13 | 40   |            |        |       |      |       |       |      |
| IA40T-MCLNR/L-12 | 40             | 300 | 55 | 25 | 37 | 12 | 50   |            | CMS432 | MLP46 | PL25 | MC620 | MS625 | PL30 |

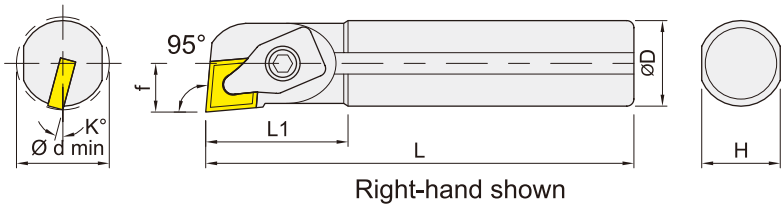
Turning Inserts & Tools

Internal Turning Tools

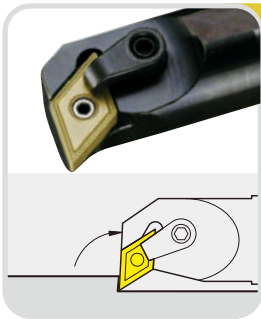
內徑車刀桿



DCLN



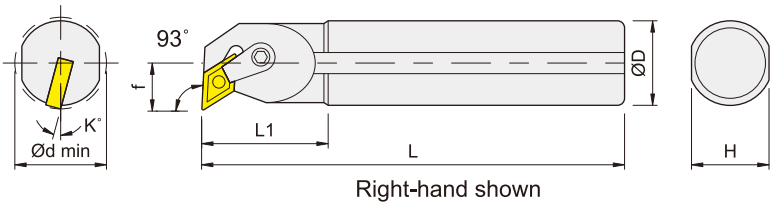
| Item Code        | Dimensions, mm |     |    |    |    |    |      | Insert     | Shim | Screw | Wrench | Clamp  | Wrench |
|------------------|----------------|-----|----|----|----|----|------|------------|------|-------|--------|--------|--------|
|                  | D              | L   | L1 | f  | H  | K  | dmin |            |      |       |        |        |        |
| IS20R-DCLNR/L-12 | 20             | 200 | 36 | 14 | 18 | 15 | 28   | CN..1204.. | --   | --    | --     | MCD425 | PL40   |
| IS25R-DCLNR/L-12 | 25             | 200 | 40 | 15 | 23 | 15 | 30   |            |      |       |        |        |        |



MDUN

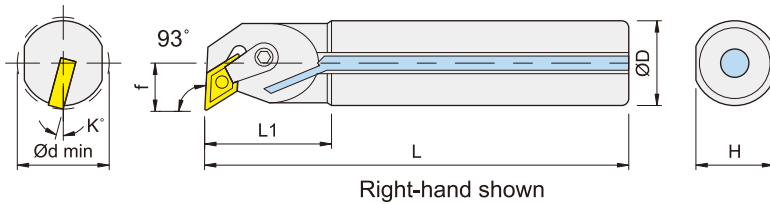
S..-MDUNR/L-15

Steel shank



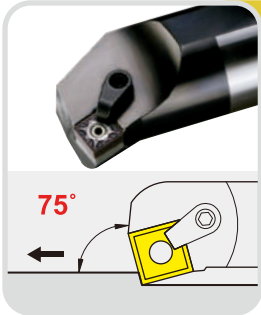
A..-MDUNR/L-15

Steel shank+coolant hole

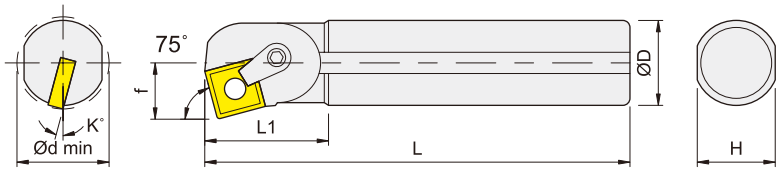


| Item Code        | Dimensions, mm |     |    |    |    |    |      | Insert     | Shim   | Pin   | Wrench | Clamp | Screw | Wrench |
|------------------|----------------|-----|----|----|----|----|------|------------|--------|-------|--------|-------|-------|--------|
|                  | D              | L   | L1 | f  | H  | K  | dmin |            |        |       |        |       |       |        |
| IS25R-MDUNR/L-15 | 25             | 200 | 40 | 17 | 23 | 13 | 32   | DN..1504.. | --     | MLP44 | PL25   | MC620 | MS620 | PL30   |
| IS32S-MDUNR/L-15 | 32             | 250 | 50 | 21 | 30 | 13 | 40   | DN..1504.. | DMS432 | MLP46 | PL25   | MC620 | MS625 | PL30   |
| IA25R-MDUNR/L-15 | 25             | 200 | 40 | 17 | 23 | 13 | 32   | DN..1504.. | --     | MLP44 | PL25   | MC620 | MS620 | PL30   |
| IA32S-MDUNR/L-15 | 32             | 250 | 50 | 21 | 30 | 13 | 40   | DN..1504.. | DMS432 | MLP46 | PL25   | MC620 | MS625 | PL30   |

Internal Turning Tools 內徑車刀桿

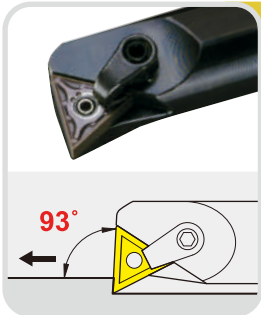


MSKN



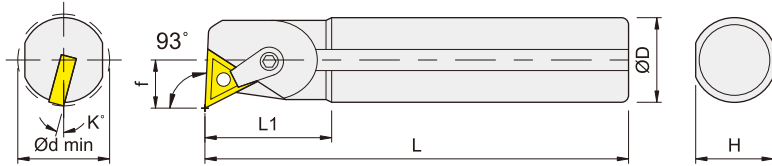
Right-hand shown

| Item Code        | Dimensions, mm |     |    |    |    |    |      | Insert     | Shim   | Pin   | Wrench | Clamp | Screw | Wrench |
|------------------|----------------|-----|----|----|----|----|------|------------|--------|-------|--------|-------|-------|--------|
|                  | D              | L   | L1 | f  | H  | K  | dmin |            |        |       |        |       |       |        |
| IS40T-MSKNR/L-12 | 40             | 300 | 55 | 25 | 37 | 12 | 50   | SN..1204.. | SMS432 | MLP46 | PL25   | MC620 | MS625 | PL30   |
| IS50U-MSKNR/L-12 | 50             | 350 | 60 | 30 | 47 | 10 | 60   |            |        |       |        |       |       |        |
| IS60V-MSKNR/L-12 | 60             | 400 | 60 | 36 | 57 | 9  | 70   |            |        |       |        |       |       |        |



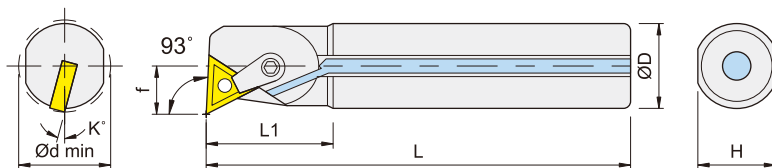
MTUN

S..-MTUNR/L-16 Steel shank



Right-hand shown

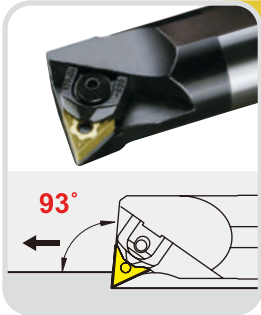
A..-MTUNR/L-16 Steel shank+coolant hole



Right-hand shown

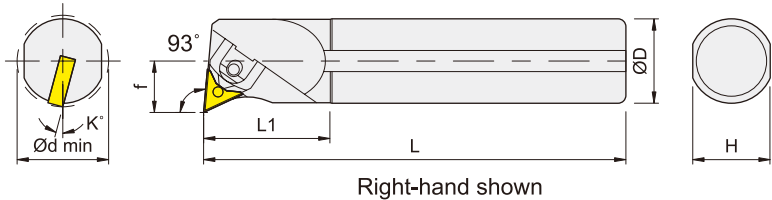
| Item Code        | Dimensions, mm |     |    |    |    |    |      | Insert     | Shim   | Pin    | Wrench | Clamp | Screw | Wrench |
|------------------|----------------|-----|----|----|----|----|------|------------|--------|--------|--------|-------|-------|--------|
|                  | D              | L   | L1 | f  | H  | K  | dmin |            |        |        |        |       |       |        |
| IS20R-MTUNR/L-16 | 20             | 200 | 36 | 13 | 18 | 15 | 25   | TN..1604.. | --     | MLP33L | PL20   | MC515 | MS520 | PL25   |
| IS25R-MTUNR/L-16 | 25             | 200 | 40 | 15 | 23 | 13 | 30   |            |        |        |        |       |       |        |
| IS32S-MTUNR/L-16 | 32             | 250 | 48 | 20 | 30 | 13 | 40   | TN..1604.. | TMS322 | MLP34L | PL20   | MC620 | MS625 | PL30   |
| IS40T-MTUNR/L-16 | 40             | 300 | 55 | 26 | 37 | 10 | 50   |            |        |        |        |       |       |        |
| IS50U-MTUNR/L-16 | 50             | 350 | 60 | 31 | 47 | 9  | 60   |            |        |        |        |       |       |        |
| IS60V-MTUNR/L-16 | 60             | 400 | 60 | 36 | 57 | 8  | 70   |            |        |        |        |       |       |        |
| IA20R-MTUNR/L-16 | 20             | 200 | 36 | 13 | 18 | 15 | 25   | TN..1604.. | --     | MLP33L | PL20   | MC515 | MS520 | PL25   |
| IA25R-MTUNR/L-16 | 25             | 200 | 40 | 15 | 23 | 13 | 30   |            |        |        |        |       |       |        |
| IA32S-MTUNR/L-16 | 32             | 250 | 48 | 20 | 30 | 13 | 40   | TN..1604.. | TMS322 | MLP34L | PL20   | MC620 | MS625 | PL30   |
| IA40T-MTUNR/L-16 | 40             | 300 | 55 | 26 | 37 | 10 | 50   |            |        |        |        |       |       |        |

Internal Turning Tools 內徑車刀桿



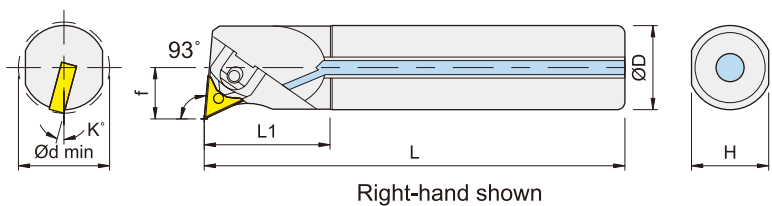
WTUN

S.-WTUNR/L-16 Steel shank

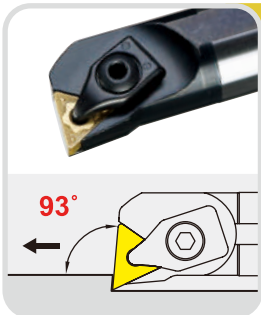


A.-WTUNR/L-16 Steel shank+coolant

hole

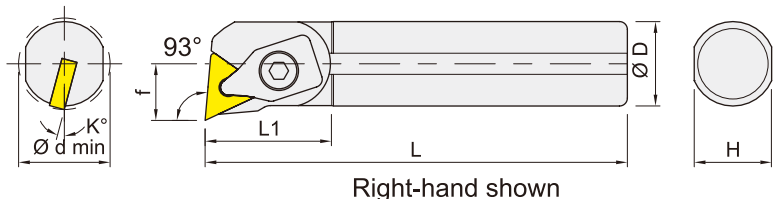


| Item Code        | Dimensions, mm |     |    |    |    |    |      | Insert     | Shim   | Pin    | Clamp    | Wrench |
|------------------|----------------|-----|----|----|----|----|------|------------|--------|--------|----------|--------|
|                  | D              | L   | L1 | f  | H  | K  | dmin |            |        |        |          |        |
| IS32S-WTUNR/L-16 | 32             | 250 | 48 | 20 | 30 | 13 | 40   | TN..1604.. | TMS322 | SCP315 | MCW3-P25 | PL25   |
| IS40T-WTUNR/L-16 | 40             | 300 | 55 | 26 | 37 | 10 | 50   |            |        |        |          |        |
| IS40U-WTUNR/L-16 | 40             | 350 | 55 | 26 | 37 | 10 | 50   |            |        |        |          |        |
| IS50U-WTUNR/L-16 | 50             | 350 | 60 | 31 | 47 | 9  | 60   |            |        |        |          |        |
| IS50V-WTUNR/L-16 | 50             | 400 | 60 | 31 | 47 | 9  | 60   |            |        |        |          |        |
| IS60V-WTUNR/L-16 | 60             | 400 | 60 | 36 | 57 | 8  | 70   |            |        |        |          |        |
| IA32S-WTUNR/L-16 | 32             | 250 | 48 | 20 | 30 | 13 | 40   | TN..1604.. | TMS322 | SCP315 | MCW3-P25 | PL25   |
| IA40T-WTUNR/L-16 | 40             | 300 | 55 | 26 | 37 | 10 | 50   |            |        |        |          |        |
| IA40U-WTUNR/L-16 | 40             | 350 | 55 | 26 | 37 | 10 | 50   |            |        |        |          |        |



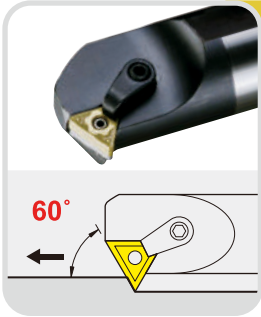
DTUN

S.-DTUNR/L-16 Steel shank



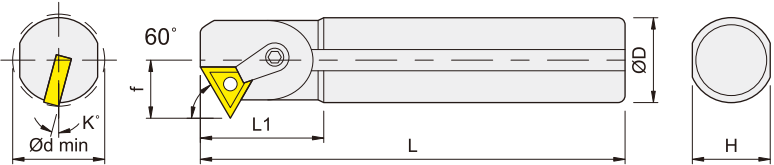
| Item Code        | Dimensions, mm |     |    |    |    |    |      | Insert     | Shim   | Screw    | Wrench | Clamp   | Wrench |
|------------------|----------------|-----|----|----|----|----|------|------------|--------|----------|--------|---------|--------|
|                  | D              | L   | L1 | f  | H  | K  | dmin |            |        |          |        |         |        |
| IS20R-DTUNR/L-16 | 20             | 200 | 36 | 14 | 18 | 15 | 28   | TN..1604.. | --     | --       | --     | MCD324  | PL40   |
| IS25R-DTUNR/L-16 | 25             | 200 | 40 | 15 | 23 | 13 | 30   |            |        |          |        |         |        |
| IS32S-DTUNR-16   | 32             | 250 | 48 | 20 | 30 | 13 | 40   | TN..1604.. | TWS322 | MS4008ES | PL25   | MCD324B | PL40   |

Internal Turning Tools 內徑車刀桿



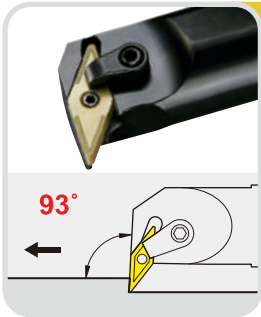
MTWN

S.-MTWNR/L-16 Steel shank



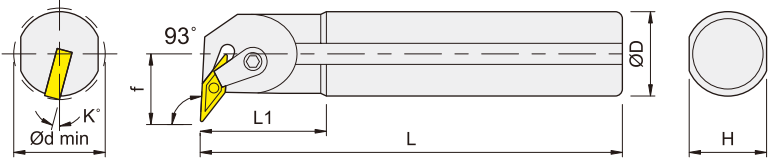
Right-hand shown

| Item Code        | Dimensions, mm |     |    |      |    |    |      | Insert     | Shim   | Pin    | Wrench | Clamp | Screw | Wrench |
|------------------|----------------|-----|----|------|----|----|------|------------|--------|--------|--------|-------|-------|--------|
|                  | D              | L   | L1 | f    | H  | K  | dmin |            |        |        |        |       |       |        |
| IS20R-MTWNR/L-16 | 20             | 200 | 36 | 13.5 | 18 | 15 | 27   | TN..1604.. | --     | MLP33L | PL20   | MC515 | MS520 | PL25   |
| IS25R-MTWNR/L-16 | 25             | 200 | 40 | 16   | 23 | 13 | 32   |            |        |        |        |       |       |        |
| IS32S-MTWNR/L-16 | 32             | 250 | 48 | 20   | 30 | 13 | 40   |            | TWS322 | MLP34L | PL20   | MC620 | MS625 | PL30   |



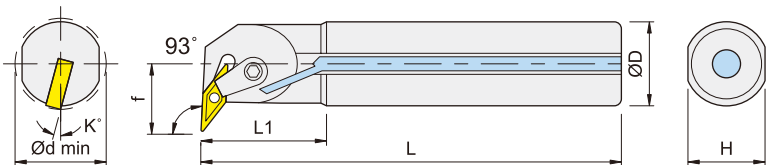
MVUN

S.-MVUNR/L-16 Steel shank



Right-hand shown

A.-MVUNR/L-16 Steel shank+coolant hole

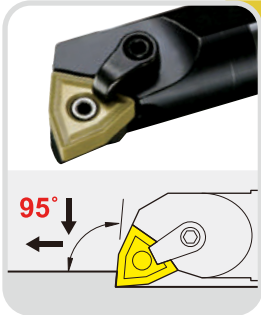


Right-hand shown

| Item Code        | Dimensions, mm |     |    |    |    |    |      | Insert     | Shim   | Pin    | Wrench | Clamp | Screw | Wrench |
|------------------|----------------|-----|----|----|----|----|------|------------|--------|--------|--------|-------|-------|--------|
|                  | D              | L   | L1 | f  | H  | K  | dmin |            |        |        |        |       |       |        |
| IS25R-MVUNR/L-16 | 25             | 200 | 40 | 18 | 23 | 13 | 32   | VN..1604.. | --     | MLP33L | PL20   | MC515 | MS520 | PL25   |
| IS32S-MVUNR/L-16 | 32             | 250 | 50 | 22 | 30 | 15 | 40   | VN..1604.. | VMS322 | MLP34L | PL20   | MC620 | MS625 | PL30   |
| IA25R-MVUNR/L-16 | 25             | 200 | 40 | 18 | 23 | 13 | 32   | VN..1604.. | --     | MLP33L | PL20   | MC515 | MS520 | PL25   |
| IA32S-MVUNR/L-16 | 32             | 250 | 50 | 22 | 30 | 15 | 40   | VN..1604.. | VMS322 | MLP34L | PL20   | MC620 | MS625 | PL30   |

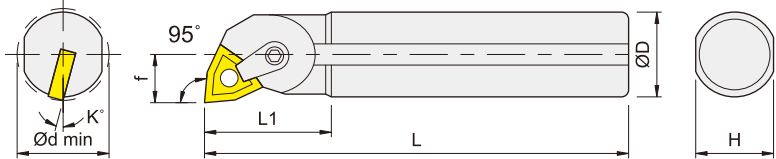
Turning Inserts & Tools

Internal Turning Tools 內徑車刀桿



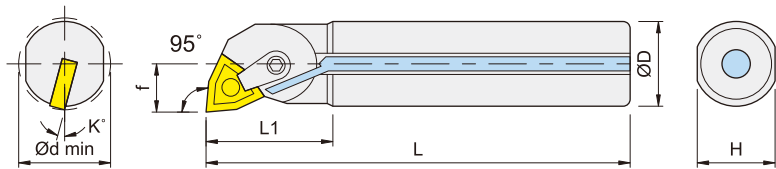
MWLN

■ S..MWLNR/L-08 Steel shank



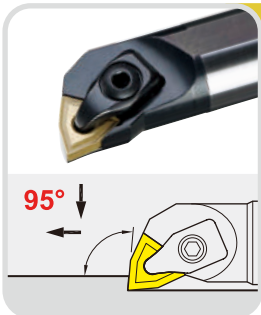
Right-hand shown

■ A..MWLNR/L-08 Steel shank+coolant hole



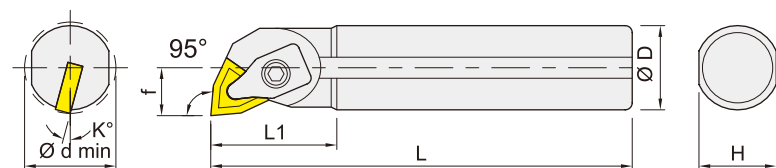
Right-hand shown

| Item Code        | Dimensions, mm |     |    |    |    |    |      | Insert     |  |  |  |  |  |  |
|------------------|----------------|-----|----|----|----|----|------|------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
|                  | D              | L   | L1 | f  | H  | K  | dmin |            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| IS20R-MWLNR/L-08 | 20             | 200 | 36 | 13 | 18 | 15 | 25   | WN..0804.. | --                                                                                | MLP44                                                                             | PL25                                                                              | MC515                                                                             | MS520                                                                             | PL25                                                                              |
| IS25R-MWLNR/L-08 | 25             | 200 | 40 | 15 | 23 | 13 | 30   |            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| IS32S-MWLNR/L-08 | 32             | 250 | 48 | 20 | 30 | 13 | 40   | WN..0804.. | WMS432                                                                            | MLP46                                                                             | PL25                                                                              | MC515                                                                             | MS520                                                                             | PL25                                                                              |
| IS40T-MWLNR/L-08 | 40             | 300 | 55 | 26 | 37 | 10 | 50   |            |                                                                                   |                                                                                   |                                                                                   | MC620                                                                             | MS625                                                                             | PL30                                                                              |
| IS50U-MWLNR/L-08 | 50             | 350 | 60 | 31 | 47 | 9  | 60   |            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| IS60V-MWLNR/L-08 | 60             | 400 | 60 | 36 | 57 | 8  | 70   |            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| IA20R-MWLNR/L-08 | 20             | 200 | 36 | 13 | 18 | 15 | 25   | WN..0804.. | --                                                                                | MLP44                                                                             | PL25                                                                              | MC515                                                                             | MS520                                                                             | PL25                                                                              |
| IA25R-MWLNR/L-08 | 25             | 200 | 40 | 15 | 23 | 13 | 30   |            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| IA32S-MWLNR/L-08 | 32             | 250 | 48 | 20 | 30 | 13 | 40   |            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |



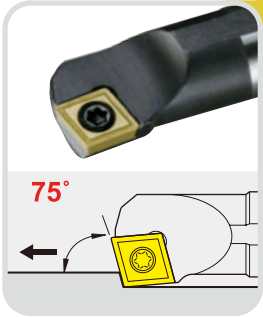
DWLN

■ S..DWLNR/L-.. Steel shank



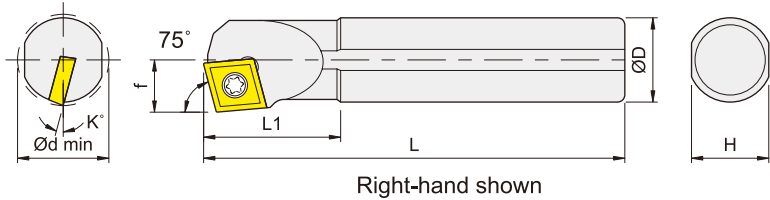
Right-hand shown

| Item Code        | Dimensions, mm |     |    |    |    |    |      | Insert     | Shim | Screw | Wrench | Clamp  | Wrench |
|------------------|----------------|-----|----|----|----|----|------|------------|------|-------|--------|--------|--------|
|                  | D              | L   | L1 | f  | H  | K  | dmin |            |      |       |        |        |        |
| IS20R-DWLNR/L-08 | 20             | 200 | 36 | 14 | 18 | 15 | 28   | WN..0804.. | --   | --    | --     | MCD425 | PL40   |
| IS25R-DWLNR/L-08 | 25             | 200 | 40 | 15 | 23 | 13 | 30   |            |      |       |        |        |        |



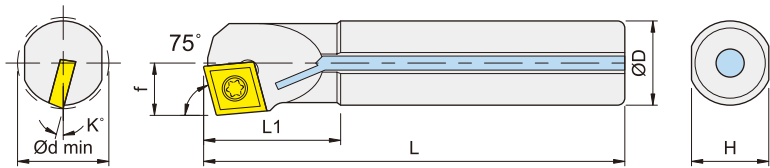
SCKC

■ S..-SCKC/PR/L-.. Steel shank



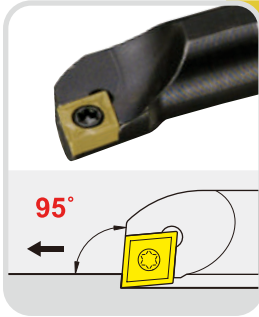
Right-hand shown

■ A..-SCKC/PR/L-.. Steel shank+coolant hole



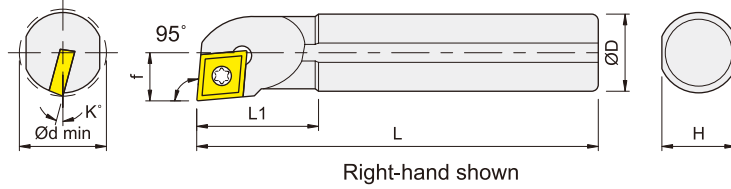
Right-hand shown

| Item Code        | Dimensions, mm |     |    |    |    |    |      | Insert     | Screw   | Wrench |
|------------------|----------------|-----|----|----|----|----|------|------------|---------|--------|
|                  | D              | L   | L1 | f  | H  | K  | dmin |            |         |        |
| IS08K-SCKCR/L-06 | 8              | 125 | 18 | 5  | 7  | 15 | 10   | CC..0602.. | MS2506A | TF9    |
| IS10K-SCKCR/L-06 | 10             | 125 | 22 | 6  | 9  | 13 | 12   |            |         |        |
| IS12M-SCKCR/L-06 | 12             | 150 | 26 | 8  | 11 | 10 | 16   |            |         |        |
| IS16Q-SCKCR/L-06 | 16             | 180 | 32 | 10 | 15 | 7  | 20   |            |         |        |
| IS12M-SCKCR/L-09 | 12             | 150 | 26 | 8  | 11 | 11 | 16   | CC..09T3.. | MS4009A | TF15   |
| IS16Q-SCKCR/L-09 | 16             | 180 | 32 | 10 | 15 | 7  | 20   |            |         |        |
| IS20R-SCKCR/L-09 | 20             | 200 | 36 | 13 | 18 | 5  | 25   |            |         |        |
| IA08K-SCKCR/L-06 | 8              | 125 | 18 | 5  | 7  | 15 | 10   | CC..0602.. | MS2506A | TF9    |
| IA10K-SCKCR/L-06 | 10             | 125 | 22 | 6  | 9  | 13 | 12   |            |         |        |
| IA12M-SCKCR/L-06 | 12             | 150 | 26 | 8  | 11 | 10 | 16   |            |         |        |
| IA16Q-SCKCR/L-06 | 16             | 180 | 32 | 10 | 15 | 7  | 20   |            |         |        |
| IA12M-SCKCR/L-09 | 12             | 150 | 26 | 8  | 11 | 11 | 16   | CC..09T3.. | MS4009A | TF15   |
| IA16Q-SCKCR/L-09 | 16             | 180 | 32 | 10 | 15 | 7  | 20   |            |         |        |
| IA20R-SCKCR/L-09 | 20             | 200 | 36 | 13 | 18 | 5  | 25   |            |         |        |



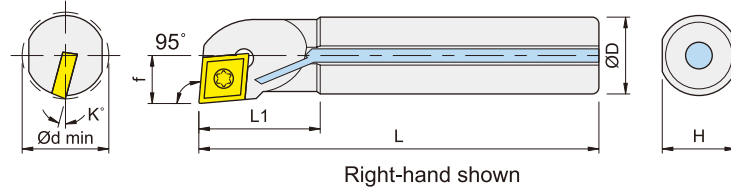
### SCLC

#### ■ S...SCLCR/L... Steel shank

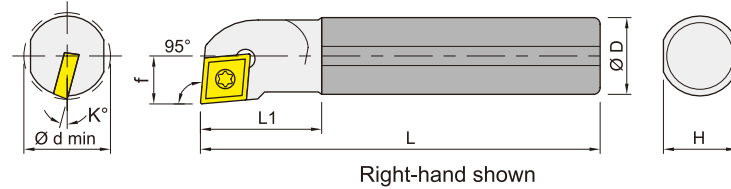


#### ■ A...SCLCR/L... Steel shank+coolant

hole



#### ■ C...SCLCR/L... Carbide shank



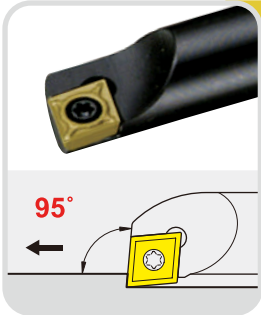
| Item Code            | Dimensions, mm |     |    |      |    |    |      | Insert     | Screw<br> | Wrench<br> |
|----------------------|----------------|-----|----|------|----|----|------|------------|-----------|------------|
|                      | D              | L   | L1 | f    | H  | K  | dmin |            |           |            |
| IS08K-SCLCR/L-06     | 8              | 125 | 18 | 5    | 7  | 15 | 10   | CC..0602.. | MS2506A   | TF9        |
| IS08K-SCLCR/L-06-D09 | 8              | 125 | 18 | 4.5  | 7  | 15 | 9    |            |           |            |
| IS10K-SCLCR/L-06     | 10             | 125 | 22 | 6    | 9  | 13 | 12   |            |           |            |
| IS10K-SCLCR/L-06-D11 | 10             | 125 | 22 | 5.5  | 9  | 13 | 11   |            |           |            |
| IS12M-SCLCR/L-06     | 12             | 150 | 26 | 8    | 11 | 10 | 16   |            |           |            |
| IS12M-SCLCR/L-06-D13 | 12             | 150 | 26 | 6.5  | 11 | 10 | 13   |            |           |            |
| IS14Q-SCLCR/L-06     | 14             | 180 | 26 | 8    | 13 | 10 | 16   |            |           |            |
| IS16Q-SCLCR/L-06     | 16             | 180 | 32 | 10   | 15 | 7  | 20   |            |           |            |
| IS12M-SCLCR/L-09     | 12             | 150 | 26 | 8    | 11 | 10 | 16   | CC..09T3.. | MS4009A   | TF15       |
| IS14Q-SCLCR/L-09     | 14             | 180 | 26 | 8    | 13 | 10 | 16   |            |           |            |
| IS15Q-SCLCR/L-09     | 15             | 180 | 32 | 8.5  | 14 | 10 | 17   |            |           |            |
| IS16Q-SCLCR/L-09     | 16             | 180 | 32 | 10   | 15 | 7  | 20   |            |           |            |
| IS16Q-SCLCR/L-09-D18 | 16             | 180 | 32 | 9    | 15 | 7  | 18   |            |           |            |
| IS18Q-SCLCR-09       | 18             | 180 | 32 | 10   | 17 | 7  | 20   |            |           |            |
| IS20R-SCLCR/L-09     | 20             | 200 | 36 | 13   | 18 | 5  | 25   |            |           |            |
| IS22R-SCLCR/L-09     | 22             | 200 | 40 | 12.5 | 20 | 5  | 25   |            |           |            |
| IS25R-SCLCR/L-09     | 25             | 200 | 40 | 15   | 23 | 5  | 30   | CC..09T3.. | MS4011A   | TF15       |

## Internal Turning Tools

內徑車刀桿

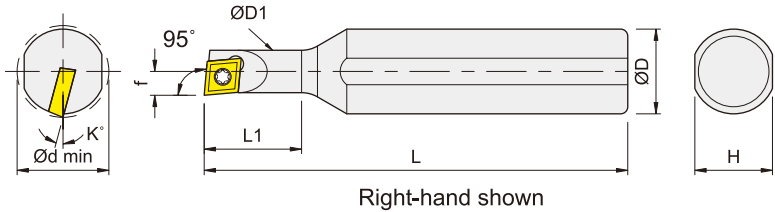
| Item Code            | Dimensions, mm |     |    |     |      |    |      | Insert     | Screw<br> | Wrench<br> |
|----------------------|----------------|-----|----|-----|------|----|------|------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
|                      | D              | L   | L1 | f   | H    | K  | dmin |            |                                                                                             |                                                                                               |
| IS32S-SCLCR/L-12     | 32             | 250 | 48 | 20  | 30   | 5  | 38   | CC..1204.. | MS5011A                                                                                     | TF20                                                                                          |
| IS40T-SCLCR/L-12     | 40             | 300 | 55 | 26  | 37   | 3  | 50   |            |                                                                                             |                                                                                               |
| IS40V-SCLCR/L-12     | 40             | 400 | 55 | 26  | 37   | 3  | 50   |            |                                                                                             |                                                                                               |
| IA08K-SCLCR/L-06     | 8              | 125 | 18 | 5   | 7    | 15 | 10   | CC..0602.. | MS2506A                                                                                     | TF9                                                                                           |
| IA08K-SCLCR/L-06-D09 | 8              | 125 | 18 | 4.5 | 7    | 15 | 9    |            |                                                                                             |                                                                                               |
| IA10K-SCLCR/L-06     | 10             | 125 | 22 | 6   | 9    | 13 | 12   |            |                                                                                             |                                                                                               |
| IA10K-SCLCR/L-06-D11 | 10             | 125 | 22 | 5.5 | 9    | 13 | 11   |            |                                                                                             |                                                                                               |
| IA12M-SCLCR/L-06     | 12             | 150 | 26 | 8   | 11   | 10 | 16   |            |                                                                                             |                                                                                               |
| IA12M-SCLCR/L-06-D13 | 12             | 150 | 26 | 6.5 | 11   | 10 | 13   |            |                                                                                             |                                                                                               |
| IA14Q-SCLCR/L-06     | 14             | 180 | 26 | 8   | 13   | 10 | 16   |            |                                                                                             |                                                                                               |
| IA16Q-SCLCR/L-06     | 16             | 180 | 32 | 10  | 15   | 7  | 20   |            |                                                                                             |                                                                                               |
| IA12M-SCLCR/L-09     | 12             | 150 | 26 | 8   | 11   | 10 | 16   |            |                                                                                             |                                                                                               |
| IA16Q-SCLCR/L-09     | 16             | 180 | 32 | 10  | 15   | 7  | 20   | CC..09T3.. | MS4009A                                                                                     | TF15                                                                                          |
| IA16Q-SCLCR/L-09-D18 | 16             | 180 | 32 | 9   | 15   | 7  | 18   |            |                                                                                             |                                                                                               |
| IA20R-SCLCR/L-09     | 20             | 200 | 36 | 13  | 18   | 5  | 25   |            |                                                                                             |                                                                                               |
| IA25R-SCLCR/L-09     | 25             | 200 | 40 | 15  | 23   | 5  | 30   | CC..09T3.. | MS4011A                                                                                     | TF15                                                                                          |
| IA32S-SCLCR/L-12     | 32             | 250 | 48 | 20  | 30   | 5  | 38   | CC..1204.. | MS5011A                                                                                     | TF20                                                                                          |
| IC06J-SCLCR/L-04     | 6              | 110 | 15 | 3.5 | 5.7  | 15 | 7    | CC..0401.. | MS2004A                                                                                     | TF6                                                                                           |
| IC07J-SCLCR/L-06     | 7              | 110 | 18 | 4   | 6.7  | 15 | 10   | CC..0602.. | MS2506A                                                                                     | TF9                                                                                           |
| IC08K-SCLCR/L-06     | 8              | 125 | 18 | 5   | 7.2  | 15 | 10   | CC..0602.. | MS2506A                                                                                     | TF9                                                                                           |
| IC08K-SCLCR-06-D09   | 8              | 125 | 18 | 4.5 | 7.2  | 15 | 9    |            |                                                                                             |                                                                                               |
| IC10K-SCLCR/L-06     | 10             | 125 | 22 | 6   | 9.2  | 13 | 12   |            |                                                                                             |                                                                                               |
| IC10K-SCLCR-06-D11   | 10             | 125 | 22 | 5.5 | 9.2  | 13 | 11   |            |                                                                                             |                                                                                               |
| IC12M-SCLCR/L-06     | 12             | 150 | 26 | 8   | 11.2 | 10 | 16   |            |                                                                                             |                                                                                               |
| IC12M-SCLCR-06-D13   | 12             | 150 | 26 | 6.5 | 11.2 | 10 | 13   |            |                                                                                             |                                                                                               |
| IC12M-SCLCR/L-09     | 12             | 150 | 26 | 8   | 11.2 | 10 | 16   | CC..09T3.. | MS4009A                                                                                     | TF15                                                                                          |
| IC16Q-SCLCR/L-09     | 16             | 180 | 32 | 10  | 15.2 | 7  | 20   |            |                                                                                             |                                                                                               |
| IC16Q-SCLCR/L-09-D18 | 16             | 180 | 32 | 9   | 15.2 | 7  | 18   |            |                                                                                             |                                                                                               |

Internal Turning Tools 內徑車刀桿



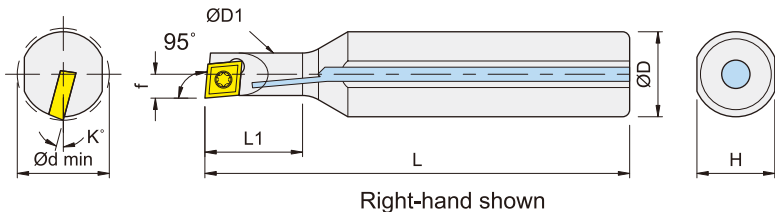
SCLC

S...SCLCR/L-... Steel shank



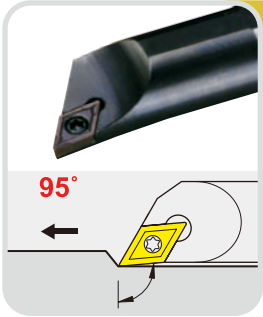
Right-hand shown

A...SCLCR/L-... Steel shank+coolant hole



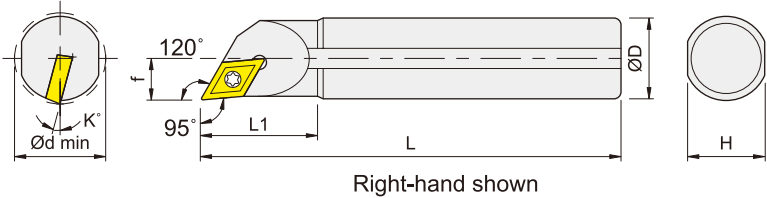
Right-hand shown

| Item Code           | Dimensions, mm |    |     |    |     |    |    |      | Insert     | Screw   | Wrench |
|---------------------|----------------|----|-----|----|-----|----|----|------|------------|---------|--------|
|                     | D              | D1 | L   | L1 | f   | H  | K  | dmin |            |         |        |
| IS1607K-SCLCR/L-06  | 16             | 7  | 125 | 20 | 4   | 15 | 13 | 8    | CC..0602.. | MS2506A | TF9    |
| IS1608K-SCLCR/L-06A | 16             | 8  | 125 | 20 | 4.5 | 15 | 11 | 9    |            |         |        |
| IS1608K-SCLCR/L-06  | 16             | 8  | 125 | 25 | 4.5 | 15 | 11 | 9    |            |         |        |
| IS1609K-SCLCR/L-06  | 16             | 9  | 125 | 25 | 5   | 15 | 11 | 10   |            |         |        |
| IA1607K-SCLCR/L-06  | 16             | 7  | 125 | 20 | 4   | 15 | 13 | 8    | CC..0602.. | MS2506A | TF9    |
| IA1608K-SCLCR/L-06A | 16             | 8  | 125 | 20 | 4.5 | 15 | 11 | 9    |            |         |        |
| IA1608K-SCLCR-06    | 16             | 8  | 125 | 25 | 4.5 | 15 | 11 | 9    |            |         |        |
| IA1609K-SCLCR/L-06  | 16             | 9  | 125 | 25 | 5   | 15 | 11 | 10   |            |         |        |



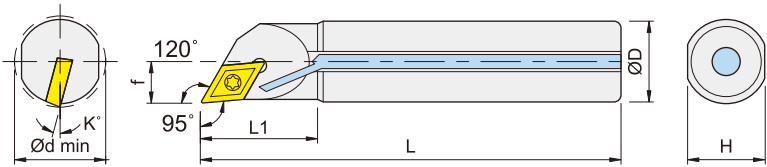
SDJC

■ S..-SDJCR/L-.. Steel shank



Right-hand shown

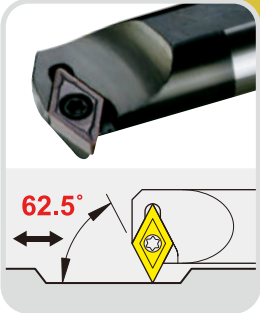
■ A..-SDJCR/L-.. Steel shank+coolant hole



Right-hand shown

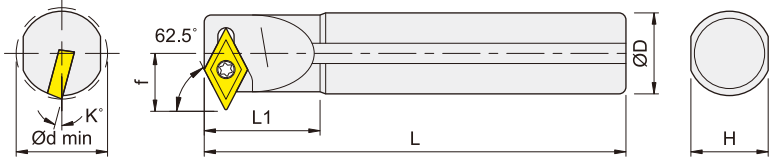
| Item Code        | Dimensions, mm |     |    |      |    |    |      | Insert     | Screw   | Wrench |
|------------------|----------------|-----|----|------|----|----|------|------------|---------|--------|
|                  | D              | L   | L1 | f    | H  | K  | dmin |            |         |        |
| IS08K-SDJCR/L-07 | 8              | 125 | 22 | 5    | 7  | 15 | 10   | DC..0702.. | MS2506A | TF9    |
| IS10K-SDJCR/L-07 | 10             | 125 | 25 | 6    | 9  | 13 | 12   |            |         |        |
| IS12M-SDJCR/L-07 | 12             | 150 | 30 | 7    | 11 | 10 | 14   |            |         |        |
| IS16Q-SDJCR/L-07 | 16             | 180 | 38 | 9.5  | 15 | 7  | 19   |            |         |        |
| IS16Q-SDJCR/L-11 | 16             | 180 | 38 | 9.5  | 15 | 7  | 19   | DC..11T3.. | MS4009A | TF15   |
| IS20R-SDJCR/L-11 | 20             | 200 | 42 | 11.5 | 18 | 7  | 23   |            |         |        |
| IS25R-SDJCR/L-11 | 25             | 200 | 45 | 14   | 23 | 5  | 28   | DC..11T3.. | MS4009A | TF15   |
| IS32S-SDJCR/L-11 | 32             | 250 | 48 | 17.5 | 30 | 5  | 35   |            |         |        |
| IA08K-SDJCR/L-07 | 8              | 125 | 22 | 5    | 7  | 15 | 10   | DC..0702.. | MS2506A | TF9    |
| IA10K-SDJCR/L-07 | 10             | 125 | 25 | 6    | 9  | 13 | 12   |            |         |        |
| IA12M-SDJCR/L-07 | 12             | 150 | 30 | 7    | 11 | 10 | 14   |            |         |        |
| IA16Q-SDJCR/L-07 | 16             | 180 | 38 | 9.5  | 15 | 7  | 19   |            |         |        |
| IA16Q-SDJCR/L-11 | 16             | 180 | 38 | 9.5  | 15 | 7  | 19   | DC..11T3.. | MS4009A | TF15   |
| IA20R-SDJCR/L-11 | 20             | 200 | 42 | 11.5 | 18 | 7  | 23   |            |         |        |
| IA25R-SDJCR/L-11 | 25             | 200 | 45 | 14   | 23 | 5  | 28   |            |         |        |

Internal Turning Tools 內徑車刀桿



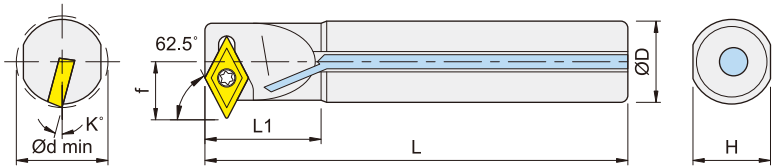
SDNC

■ S..-SDNCR/L-.. Steel shank



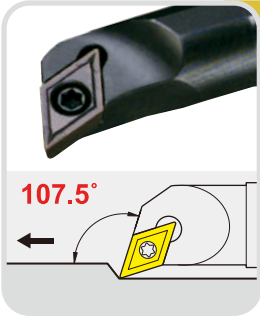
Right-hand shown

■ A..-SDNCR/L-.. Steel shank+coolant hole



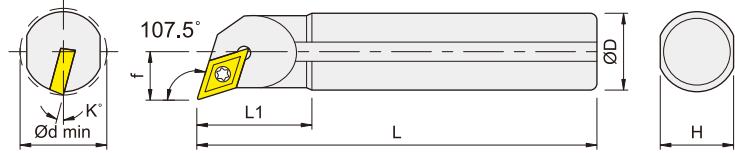
Right-hand shown

| Item Code        | Dimensions, mm |     |    |      |    |   |      | Insert     | Screw<br> | Wrench<br> |
|------------------|----------------|-----|----|------|----|---|------|------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
|                  | D              | L   | L1 | f    | H  | K | dmin |            |                                                                                             |                                                                                               |
| IS12M-SDNCR/L-07 | 12             | 150 | 25 | 9    | 11 | 7 | 16   | DC..0702.. | MS2506A                                                                                     | TF9                                                                                           |
| IS16Q-SDNCR/L-07 | 16             | 180 | 30 | 11   | 15 | 7 | 20   |            |                                                                                             |                                                                                               |
| IS20R-SDNCR/L-11 | 20             | 200 | 35 | 15   | 18 | 7 | 25   | DC..11T3.. | MS4009A                                                                                     | TF15                                                                                          |
| IS25R-SDNCR/L-11 | 25             | 200 | 35 | 17   | 23 | 5 | 32   |            |                                                                                             |                                                                                               |
| IS32S-SDNCR/L-11 | 32             | 250 | 40 | 20.5 | 30 | 5 | 40   | DC..0702.. | MS2506A                                                                                     | TF9                                                                                           |
| IA12M-SDNCR/L-07 | 12             | 150 | 25 | 9    | 11 | 7 | 16   |            |                                                                                             |                                                                                               |
| IA16Q-SDNCR/L-07 | 16             | 180 | 30 | 11   | 15 | 7 | 20   | DC..11T3.. | MS4009A                                                                                     | TF15                                                                                          |
| IA20R-SDNCR/L-11 | 20             | 200 | 35 | 15   | 18 | 7 | 25   |            |                                                                                             |                                                                                               |
| IA25R-SDNCR/L-11 | 25             | 200 | 35 | 17   | 23 | 5 | 32   |            |                                                                                             |                                                                                               |



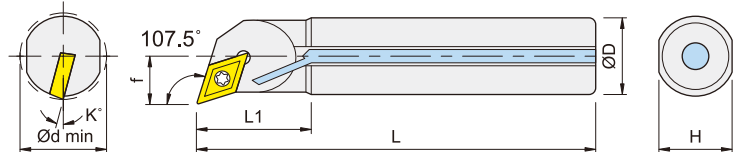
**SDQC**

■ S..-SDQCR/L-.. Steel shank



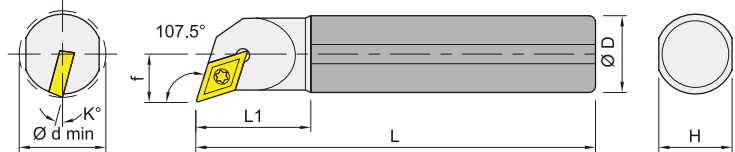
Right-hand shown

■ A..-SDQCR/L-.. Steel shank+coolant hole



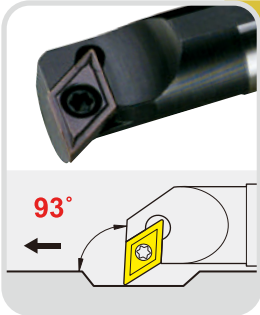
Right-hand shown

■ C..-SDQCR/L-.. Carbide shank



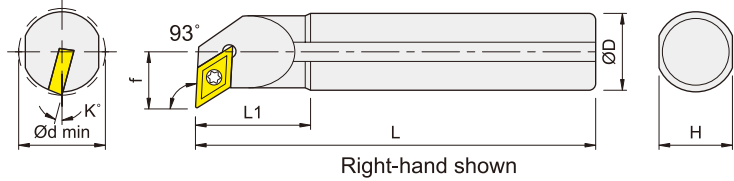
Right-hand shown

| Item Code        | Dimensions, mm |     |    |    |    |    |      | Insert     | Screw   | Wrench |
|------------------|----------------|-----|----|----|----|----|------|------------|---------|--------|
|                  | D              | L   | L1 | f  | H  | K  | dmin |            |         |        |
| IS10K-SDQCR/L-07 | 10             | 125 | 22 | 6  | 9  | 13 | 13   | DC..0702.. | MS2506A | TF9    |
| IS12M-SDQCR/L-07 | 12             | 150 | 30 | 8  | 11 | 10 | 16   |            |         |        |
| IS16Q-SDQCR/L-07 | 16             | 180 | 35 | 10 | 15 | 7  | 20   |            |         |        |
| IS20R-SDQCR/L-07 | 20             | 200 | 40 | 13 | 18 | 7  | 25   |            |         |        |
| IS16Q-SDQCR/L-11 | 16             | 180 | 35 | 10 | 15 | 7  | 20   | DC..11T3.. | MS4009A | TF15   |
| IS20R-SDQCR/L-11 | 20             | 200 | 40 | 13 | 18 | 7  | 25   |            |         |        |
| IS25R-SDQCR/L-11 | 25             | 200 | 45 | 15 | 23 | 5  | 32   |            |         |        |
| IS32S-SDQCR/L-11 | 32             | 250 | 48 | 20 | 30 | 5  | 40   |            |         |        |
| IS40T-SDQCR/L-11 | 40             | 300 | 55 | 25 | 37 | 3  | 50   | DC..11T3.. | MS4009A | TF15   |
| IS50U-SDQCR/L-11 | 50             | 350 | 60 | 30 | 47 | 2  | 60   |            |         |        |
| IA10K-SDQCR/L-07 | 10             | 125 | 22 | 6  | 9  | 13 | 13   | DC..0702.. | MS2506A | TF9    |
| IA12M-SDQCR/L-07 | 12             | 150 | 30 | 8  | 11 | 10 | 16   |            |         |        |
| IA16Q-SDQCR/L-07 | 16             | 180 | 35 | 10 | 15 | 7  | 20   |            |         |        |
| IA16Q-SDQCR/L-11 | 16             | 180 | 35 | 10 | 15 | 7  | 20   |            |         |        |
| IA20R-SDQCR/L-11 | 20             | 200 | 40 | 13 | 18 | 7  | 25   | DC..11T3.. | MS4009A | TF15   |
| IA25R-SDQCR/L-11 | 25             | 200 | 45 | 15 | 23 | 5  | 32   |            |         |        |
| IA32S-SDQCR/L-11 | 32             | 250 | 48 | 20 | 30 | 5  | 40   |            |         |        |
| IA40T-SDQCR/L-11 | 40             | 300 | 55 | 25 | 37 | 3  | 50   |            |         |        |
| IA50U-SDQCR/L-11 | 50             | 350 | 60 | 30 | 47 | 2  | 60   | DC..0702.. | MS2506A | TF9    |
| IC10M-SDQCR-07   | 10             | 150 | 22 | 6  | 9  | 13 | 13   |            |         |        |
| IC12Q-SDQCR-07   | 12             | 180 | 30 | 8  | 11 | 10 | 16   |            |         |        |
| IC16Q-SDQCR-07   | 16             | 180 | 35 | 10 | 15 | 7  | 20   |            |         |        |

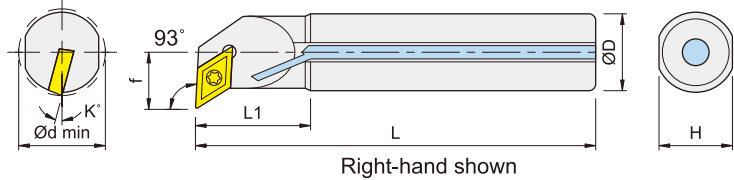


SDUC

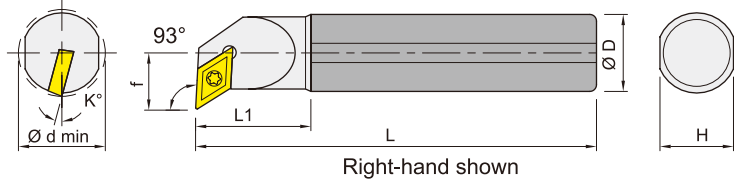
S...SDUCR/L... Steel shank



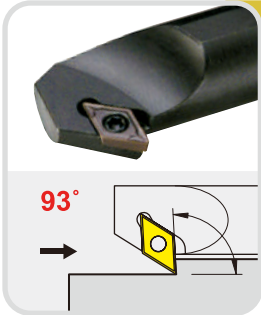
A...SDUCR/L... Steel shank+coolant hole



C...SDUCR/L... Carbide shank

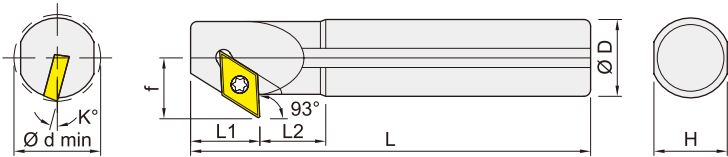


| Item Code        | Dimensions, mm |     |    |    |    |    |      | Insert     | Screw   | Wrench |
|------------------|----------------|-----|----|----|----|----|------|------------|---------|--------|
|                  | D              | L   | L1 | f  | H  | K  | dmin |            |         |        |
| IS10K-SDUCR/L-07 | 10             | 125 | 25 | 7  | 9  | 13 | 13   | DC..0702.. | MS2506A | TF9    |
| IS12M-SDUCR/L-07 | 12             | 150 | 30 | 9  | 11 | 10 | 16   |            |         |        |
| IS16Q-SDUCR/L-07 | 16             | 180 | 30 | 11 | 15 | 7  | 20   |            |         |        |
| IS20R-SDUCR/L-07 | 20             | 200 | 40 | 13 | 18 | 7  | 25   |            |         |        |
| IS16Q-SDUCR/L-11 | 16             | 180 | 30 | 11 | 15 | 7  | 20   | DC..11T3.. | MS4009A | TF15   |
| IS20R-SDUCR/L-11 | 20             | 200 | 40 | 13 | 18 | 7  | 25   |            |         |        |
| IS25R-SDUCR/L-11 | 25             | 200 | 45 | 17 | 23 | 5  | 32   |            |         |        |
| IS32S-SDUCR/L-11 | 32             | 250 | 48 | 20 | 30 | 5  | 40   |            |         |        |
| IS40T-SDUCR/L-11 | 40             | 300 | 55 | 25 | 37 | 3  | 50   | DC..11T3.. | MS4009A | TF15   |
| IA10K-SDUCR/L-07 | 10             | 125 | 25 | 7  | 9  | 13 | 13   |            |         |        |
| IA12M-SDUCR/L-07 | 12             | 150 | 30 | 9  | 11 | 10 | 16   |            |         |        |
| IA16Q-SDUCR/L-07 | 16             | 180 | 30 | 11 | 15 | 7  | 20   |            |         |        |
| IA16Q-SDUCR/L-11 | 16             | 180 | 30 | 11 | 15 | 7  | 20   | DC..11T3.. | MS4009A | TF15   |
| IA20R-SDUCR/L-11 | 20             | 200 | 40 | 13 | 18 | 7  | 25   |            |         |        |
| IA25R-SDUCR/L-11 | 25             | 200 | 45 | 17 | 23 | 5  | 32   |            |         |        |
| IA32S-SDUCR/L-11 | 32             | 250 | 48 | 20 | 30 | 5  | 40   |            |         |        |
| IA40T-SDUCR/L-11 | 40             | 300 | 55 | 25 | 37 | 3  | 50   | DC..0702.. | MS2506A | TF9    |
| IC10M-SDUCR-07   | 10             | 150 | 25 | 7  | 9  | 13 | 13   |            |         |        |
| IC12Q-SDUCR-07   | 12             | 180 | 30 | 9  | 11 | 10 | 16   | DC..11T3.. | MS4009A | TF15   |
| IC16R-SDUCR-11   | 16             | 200 | 30 | 11 | 15 | 7  | 20   |            |         |        |



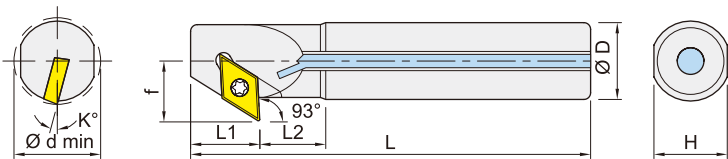
SDZC

S...SDZCR/L... Steel shank



Right-hand shown

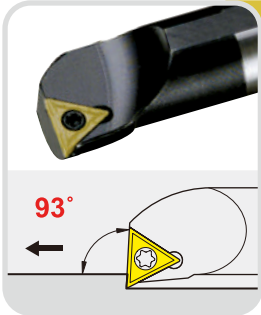
A...SDZCR/L... Steel shank+coolant hole



Right-hand shown

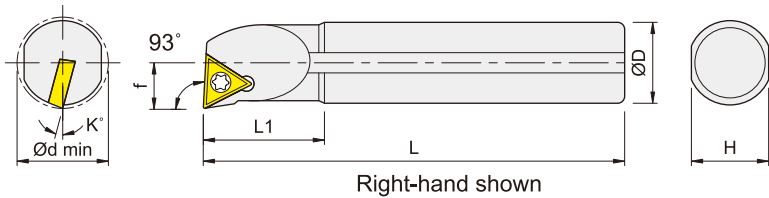
| Item Code        | Dimensions, mm |     |    |    |      |    |    |      | Insert     | Screw   | Wrench |
|------------------|----------------|-----|----|----|------|----|----|------|------------|---------|--------|
|                  | D              | L   | L1 | L2 | f    | H  | K  | dmin |            |         |        |
| IS10M-SDZCR/L-07 | 10             | 150 | 12 | 13 | 8.5  | 9  | 13 | 14   | DC..0702.. | MS2506A | TF9    |
| IS12M-SDZCR/L-07 | 12             | 150 | 12 | 16 | 10.5 | 11 | 10 | 17   |            |         |        |
| IS16Q-SDZCR/L-07 | 16             | 180 | 12 | 18 | 12.5 | 15 | 7  | 21   |            |         |        |
| IS20R-SDZCR/L-11 | 20             | 200 | 18 | 17 | 15.5 | 18 | 7  | 26   | DC..11T3.. | MS4009A | TF15   |
| IS25R-SDZCR/L-11 | 25             | 200 | 18 | 22 | 18   | 23 | 5  | 33   |            |         |        |
| IS32S-SDZCR/L-11 | 32             | 250 | 18 | 42 | 21.5 | 30 | 5  | 40   |            |         |        |
| IA10M-SDZCR/L-07 | 10             | 150 | 12 | 13 | 8.5  | 9  | 13 | 14   | DC..0702.. | MS2506A | TF9    |
| IA12M-SDZCR/L-07 | 12             | 150 | 12 | 16 | 10.5 | 11 | 10 | 17   |            |         |        |
| IA16Q-SDZCR/L-07 | 16             | 180 | 12 | 18 | 12.5 | 15 | 7  | 21   |            |         |        |
| IA20R-SDZCR/L-11 | 20             | 200 | 18 | 17 | 15.5 | 18 | 7  | 26   | DC..11T3.. | MS4009A | TF15   |
| IA25R-SDZCR/L-11 | 25             | 200 | 18 | 22 | 18   | 23 | 5  | 33   |            |         |        |
| IA32S-SDZCR/L-11 | 32             | 250 | 18 | 42 | 21.5 | 30 | 5  | 40   |            |         |        |

Internal Turning Tools 內徑車刀桿

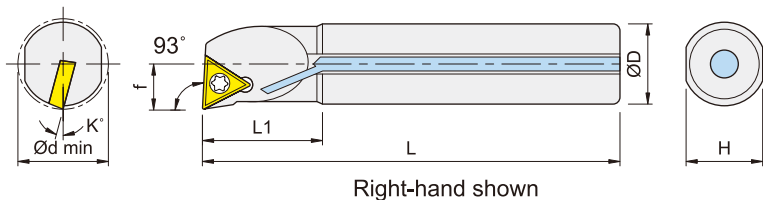


STUC

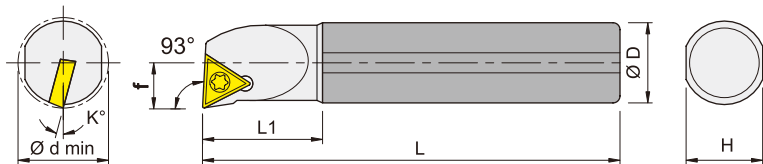
■ S..-STUCR/L-... Steel shank



■ A..-STUCR/L-... Steel shank+coolant hole



■ C..-STUCR/L-... Carbide shank

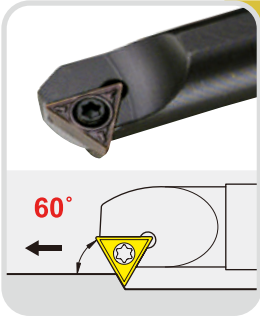


| Item Code            | Dimensions, mm |     |    |     |    |    |      | Insert     | Screw<br> | Wrench<br> |
|----------------------|----------------|-----|----|-----|----|----|------|------------|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
|                      | D              | L   | L1 | f   | H  | K  | dmin |            |                                                                                               |                                                                                                 |
| IS08K-STUCR/L-09     | 8              | 125 | 18 | 5.5 | 7  | 15 | 10   | TC..0902.. | MS2205A                                                                                       | TF7                                                                                             |
| IS10K-STUCR/L-09     | 10             | 125 | 22 | 6   | 9  | 13 | 12   |            |                                                                                               |                                                                                                 |
| IS10K-STUCR/L-09-D11 | 10             | 125 | 22 | 5.5 | 9  | 13 | 12   |            |                                                                                               |                                                                                                 |
| IS12M-STUCR-09       | 12             | 150 | 26 | 8   | 11 | 10 | 16   |            |                                                                                               |                                                                                                 |
| IS14M-STUCR-09       | 14             | 150 | 26 | 8   | 13 | 10 | 16   |            |                                                                                               |                                                                                                 |
| IS10K-STUCR/L-11     | 10             | 125 | 22 | 6   | 9  | 13 | 12   | TC..1102.. | MS2506A                                                                                       | TF9                                                                                             |
| IS12M-STUCR/L-11     | 12             | 150 | 26 | 8   | 11 | 10 | 16   |            |                                                                                               |                                                                                                 |
| IS12M-STUCR/L-11-D13 | 12             | 150 | 26 | 6.5 | 11 | 10 | 13   |            |                                                                                               |                                                                                                 |
| IS16Q-STUCR/L-11     | 16             | 180 | 32 | 10  | 15 | 7  | 20   |            |                                                                                               |                                                                                                 |
| IS16Q-STUCR/L-11-D18 | 16             | 180 | 32 | 9   | 15 | 7  | 18   |            |                                                                                               |                                                                                                 |
| IS20R-STUCR/L-16     | 20             | 200 | 36 | 13  | 18 | 7  | 25   | TC..16T3.. | MS4011A                                                                                       | TF15                                                                                            |
| IS25R-STUCR/L-16     | 25             | 200 | 40 | 15  | 23 | 5  | 30   |            |                                                                                               |                                                                                                 |
| IS32S-STUCR/L-16     | 32             | 250 | 48 | 20  | 30 | 5  | 38   |            |                                                                                               |                                                                                                 |
| IS32T-STUCR/L-16     | 32             | 300 | 48 | 20  | 30 | 5  | 38   |            |                                                                                               |                                                                                                 |

Internal Turning Tools 內徑車刀桿

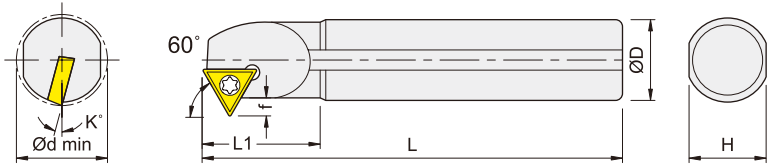
| Item Code            | Dimensions, mm |     |    |     |      |    |      | Insert     |  Screw |  Wrench |
|----------------------|----------------|-----|----|-----|------|----|------|------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
|                      | D              | L   | L1 | f   | H    | K  | dmin |            |                                                                                          |                                                                                            |
| IA08K-STUCR/L-09     | 8              | 125 | 18 | 5.5 | 7    | 15 | 10   | TC..0902.. | MS2205A                                                                                  | TF7                                                                                        |
| IA10K-STUCR/L-09     | 10             | 125 | 22 | 6   | 9    | 13 | 12   |            | MS2206A                                                                                  |                                                                                            |
| IA10K-STUCR/L-11     | 10             | 125 | 22 | 6   | 9    | 13 | 12   | TC..1102.. | MS2506A                                                                                  | TF9                                                                                        |
| IA12M-STUCR/L-11     | 12             | 150 | 26 | 8   | 11   | 10 | 16   |            |                                                                                          |                                                                                            |
| IA16Q-STUCR/L-11     | 16             | 180 | 32 | 10  | 15   | 7  | 20   |            |                                                                                          |                                                                                            |
| IA20R-STUCR/L-16     | 20             | 200 | 36 | 13  | 18   | 7  | 25   | TC..16T3.. | MS4011A                                                                                  | TF15                                                                                       |
| IA25R-STUCR/L-16     | 25             | 200 | 40 | 15  | 23   | 5  | 30   |            |                                                                                          |                                                                                            |
| IA32S-STUCR/L-16     | 32             | 250 | 48 | 20  | 30   | 5  | 38   |            |                                                                                          |                                                                                            |
| IA32T-STUCR/L-16     | 32             | 300 | 48 | 20  | 30   | 5  | 38   |            |                                                                                          |                                                                                            |
| IC08K-STUCR/L-09     | 8              | 125 | 18 | 5.5 | 7.2  | 15 | 10   | TC..0902.. | MS2205A                                                                                  | TF7                                                                                        |
| IC10K-STUCR/L-09     | 10             | 125 | 22 | 6   | 9.2  | 13 | 12   |            | MS2206A                                                                                  |                                                                                            |
| IC10K-STUCR/L-11     | 10             | 125 | 22 | 6   | 9.2  | 13 | 12   | TC..1102.. | MS2506A                                                                                  | TF9                                                                                        |
| IC12M-STUCR/L-11     | 12             | 150 | 26 | 8   | 11.2 | 10 | 16   |            |                                                                                          |                                                                                            |
| IC16R-STUCR/L-11     | 16             | 200 | 32 | 10  | 15.2 | 7  | 20   |            |                                                                                          |                                                                                            |
| IC16R-STUCR/L-11-D18 | 16             | 200 | 32 | 9   | 15.2 | 7  | 18   |            |                                                                                          |                                                                                            |

Turning Inserts & Tools



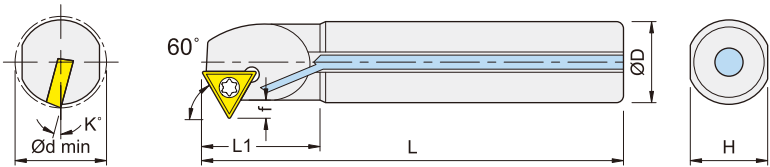
STWC

■ S...-STWCR/L... Steel shank



Right-hand shown

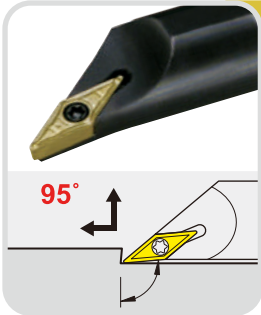
■ A...-STWCR/L... Steel shank+coolant hole



Right-hand shown

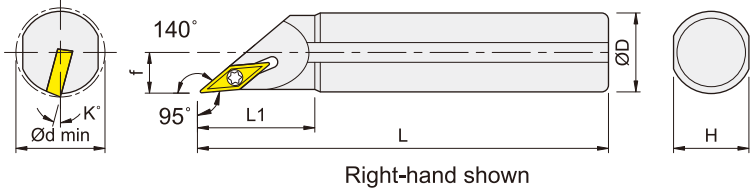
| Item Code        | Dimensions, mm |     |    |     |    |    |      | Insert     | Screw<br> | Wrench<br> |
|------------------|----------------|-----|----|-----|----|----|------|------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
|                  | D              | L   | L1 | f   | H  | K  | dmin |            |                                                                                             |                                                                                               |
| IS08K-STWCR/L-09 | 8              | 125 | 23 | 2   | 7  | 15 | 11   | TC..0902.. | MS2205A                                                                                     | TF7                                                                                           |
| IS10K-STWCR/L-11 | 10             | 125 | 23 | 2.5 | 9  | 15 | 13   | TC..1102.. | MS2506A                                                                                     | TF9                                                                                           |
| IS12M-STWCR/L-11 | 12             | 150 | 30 | 2.5 | 11 | 13 | 16   |            |                                                                                             |                                                                                               |
| IS16Q-STWCR/L-11 | 16             | 180 | 30 | 2.5 | 15 | 10 | 20   |            |                                                                                             |                                                                                               |
| IS20R-STWCR/L-11 | 20             | 200 | 40 | 2.5 | 18 | 7  | 25   |            |                                                                                             |                                                                                               |
| IS20R-STWCR/L-16 | 20             | 200 | 40 | 4.5 | 18 | 8  | 26   | TC..16T3.. | MS4011A                                                                                     | TF15                                                                                          |
| IS25R-STWCR/L-16 | 25             | 200 | 45 | 4.5 | 23 | 6  | 30   |            |                                                                                             |                                                                                               |
| IS32S-STWCR/L-16 | 32             | 250 | 45 | 4.5 | 30 | 4  | 40   |            |                                                                                             |                                                                                               |
| IA10K-STWCR/L-11 | 10             | 125 | 23 | 2.5 | 9  | 15 | 13   | TC..1102.. | MS2506A                                                                                     | TF9                                                                                           |
| IA12M-STWCR/L-11 | 12             | 150 | 30 | 2.5 | 11 | 13 | 16   |            |                                                                                             |                                                                                               |
| IA16Q-STWCR/L-11 | 16             | 180 | 30 | 2.5 | 15 | 10 | 20   |            |                                                                                             |                                                                                               |
| IA20R-STWCR/L-11 | 20             | 200 | 40 | 2.5 | 18 | 7  | 25   |            |                                                                                             |                                                                                               |
| IA20R-STWCR/L-16 | 20             | 200 | 40 | 4.5 | 18 | 8  | 26   | TC..16T3.. | MS4011A                                                                                     | TF15                                                                                          |
| IA25R-STWCR/L-16 | 25             | 200 | 45 | 4.5 | 23 | 6  | 30   |            |                                                                                             |                                                                                               |
| IA32S-STWCR/L-16 | 32             | 250 | 45 | 4.5 | 30 | 4  | 40   |            |                                                                                             |                                                                                               |

Internal Turning Tools 內徑車刀桿



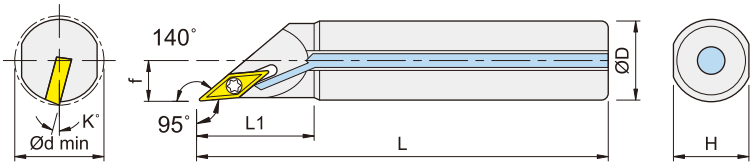
SVJB

■ S..-SVJBR/L-.. Steel shank



Right-hand shown

■ A..-SVJBR/L-.. Steel shank+coolant hole

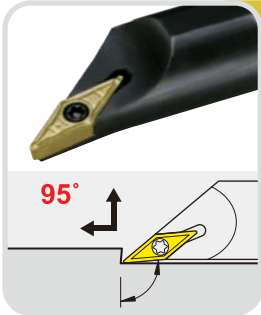


Right-hand shown

| Item Code        | Dimensions, mm |     |    |      |    |   |      | Insert     | Screw   | Wrench |
|------------------|----------------|-----|----|------|----|---|------|------------|---------|--------|
|                  | D              | L   | L1 | f    | H  | K | dmin |            |         |        |
| IS16Q-SVJBR/L-16 | 16             | 180 | 38 | 9.5  | 15 | 7 | 19   | VB..1604.. | MS3509B | TF15   |
| IS20R-SVJBR/L-16 | 20             | 200 | 42 | 11.5 | 18 | 7 | 23   |            |         |        |
| IS25R-SVJBR/L-16 | 25             | 200 | 45 | 14   | 23 | 5 | 28   |            |         |        |
| IS32S-SVJBR/L-16 | 32             | 250 | 50 | 17.5 | 30 | 4 | 35   |            |         |        |
| IA16Q-SVJBR/L-16 | 16             | 180 | 38 | 9.5  | 15 | 7 | 19   | VB..1604.. | MS3509B | TF15   |
| IA20R-SVJBR/L-16 | 20             | 200 | 42 | 11.5 | 18 | 7 | 23   |            |         |        |
| IA25R-SVJBR/L-16 | 25             | 200 | 45 | 14   | 23 | 5 | 28   |            |         |        |
| IA32S-SVJBR/L-16 | 32             | 250 | 50 | 17.5 | 30 | 4 | 35   |            |         |        |

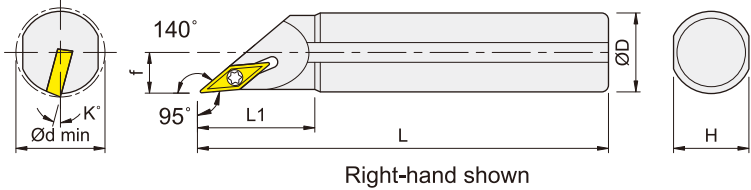
Turning Inserts & Tools

Internal Turning Tools 內徑車刀桿



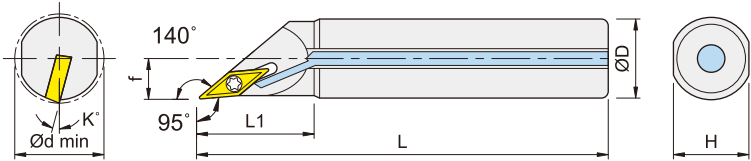
SVJC

■ S..-SVJCR/L-.. Steel shank



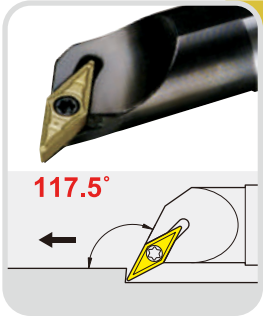
Right-hand shown

■ A..-SVJCR/L-.. Steel shank+coolant hole



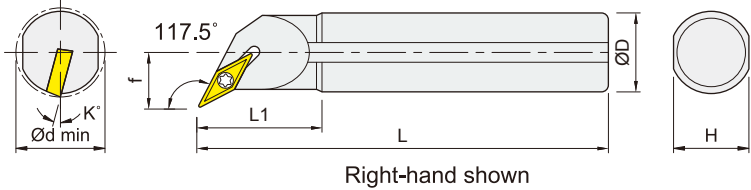
Right-hand shown

| Item Code        | Dimensions, mm |     |    |      |    |    |      | Insert     | Screw   | Wrench |
|------------------|----------------|-----|----|------|----|----|------|------------|---------|--------|
|                  | D              | L   | L1 | f    | H  | K  | dmin |            |         |        |
| IS10K-SVJCR/L-11 | 10             | 125 | 25 | 6    | 9  | 13 | 12   | VC..1103.. | MS2506A | TF9    |
| IS12M-SVJCR/L-11 | 12             | 150 | 30 | 7    | 11 | 10 | 14   |            |         |        |
| IS16Q-SVJCR/L-11 | 16             | 180 | 38 | 9.5  | 15 | 7  | 19   |            |         |        |
| IS20R-SVJCR/L-11 | 20             | 200 | 42 | 11.5 | 18 | 7  | 23   |            |         |        |
| IA10K-SVJCR/L-11 | 10             | 125 | 25 | 6    | 9  | 13 | 12   |            |         |        |
| IA12M-SVJCR/L-11 | 12             | 150 | 30 | 7    | 11 | 10 | 14   |            |         |        |
| IA16Q-SVJCR/L-11 | 16             | 180 | 38 | 9.5  | 15 | 7  | 19   |            |         |        |
| IA20R-SVJCR/L-11 | 20             | 200 | 42 | 11.5 | 18 | 7  | 23   |            |         |        |



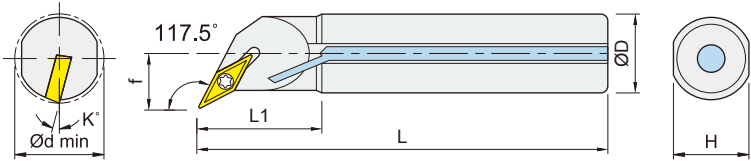
SVQB

■ S..-SVQB/CR/L-.. Steel shank



Right-hand shown

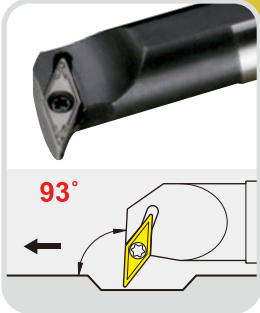
■ A..-SVQB/CR/L-.. Steel shank+coolant hole



Right-hand shown

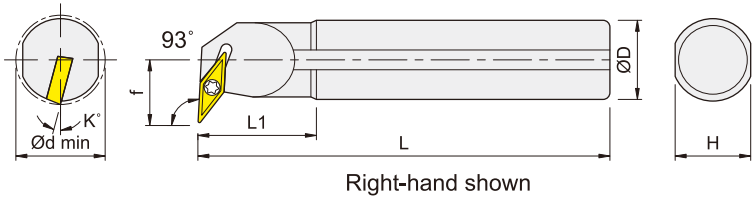
| Item Code        | Dimensions, mm |     |    |      |    |    |      | Insert     | Shim   | Screw   | Wrench | Screw   | Wrench |
|------------------|----------------|-----|----|------|----|----|------|------------|--------|---------|--------|---------|--------|
|                  | D              | L   | L1 | f    | H  | K  | dmin |            |        |         |        |         |        |
| IS25R-SVQBR/L-16 | 25             | 200 | 45 | 17   | 23 | 5  | 32   | VB..1604.. | --     | --      | --     | MS3509B | TF15   |
| IS32S-SVQBR/L-16 | 32             | 250 | 48 | 20   | 30 | 5  | 40   |            | VSS322 | MDS5035 | PL35   | MS3512B |        |
| IS40T-SVQBR/L-16 | 40             | 300 | 60 | 25.5 | 37 | 5  | 50   |            | --     | --      | --     | MS3509B |        |
| IA25R-SVQBR/L-16 | 25             | 200 | 45 | 17   | 23 | 5  | 32   |            | VSS322 | MDS5035 | PL35   | MS3512B |        |
| IA32S-SVQBR/L-16 | 32             | 250 | 48 | 20   | 30 | 5  | 40   |            | --     | --      | --     | MS3509B |        |
| IS12M-SVQCR/L-11 | 12             | 150 | 28 | 9    | 11 | 10 | 16   | VC..1103.. | --     | --      | --     | MS2506A | TF9    |
| IS16Q-SVQCR/L-11 | 16             | 180 | 35 | 11   | 15 | 7  | 20   |            | --     | --      | --     | MS2506A |        |
| IS20R-SVQCR/L-11 | 20             | 200 | 40 | 13   | 18 | 7  | 25   |            | --     | --      | --     | MS2506A |        |
| IA16Q-SVQCR/L-11 | 16             | 180 | 35 | 11   | 15 | 7  | 20   |            | --     | --      | --     | MS2506A |        |
| IA25R-SVQCR/L-16 | 20             | 200 | 40 | 13   | 18 | 7  | 25   |            | --     | --      | --     | MS2506A |        |

Internal Turning Tools 內徑車刀桿

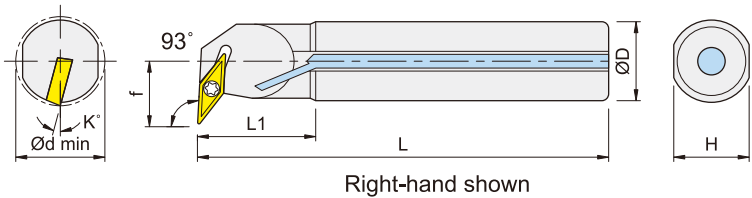


SVUB

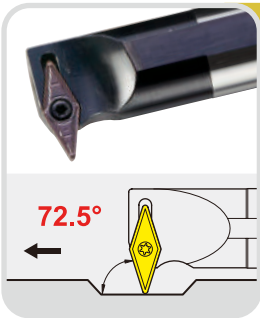
S...SVUBR/L-.. Steel shank



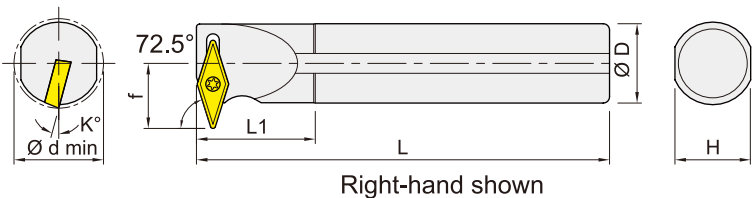
A...SVUBR/L-.. Steel shank+coolant hole



| Item Code        | Dimensions, mm |     |    |    |    |   |      | Insert     | Shim   | Screw   | Wrench | Screw   | Wrench |
|------------------|----------------|-----|----|----|----|---|------|------------|--------|---------|--------|---------|--------|
|                  | D              | L   | L1 | f  | H  | K | dmin |            |        |         |        |         |        |
| IS25R-SVUBR/L-16 | 25             | 200 | 45 | 18 | 23 | 5 | 32   | VB..1604.. | --     | --      | --     | MS3509B | TF15   |
| IS32S-SVUBR/L-16 | 32             | 250 | 50 | 22 | 30 | 5 | 40   |            | VSS322 | MDS5035 | PL35   | MS3512B |        |
| IS40T-SVUBR/L-16 | 40             | 300 | 55 | 27 | 37 | 5 | 50   |            | --     | --      | --     | MS3509B |        |
| IA25R-SVUBR/L-16 | 25             | 200 | 45 | 18 | 23 | 5 | 32   | VC..1103.. | --     | --      | --     | MS3509B | TF9    |
| IS16Q-SVUCR/L-11 | 16             | 180 | 30 | 13 | 15 | 7 | 22   |            |        |         |        | MS2506A |        |
| IS20R-SVUCR/L-11 | 20             | 200 | 40 | 15 | 18 | 7 | 27   |            |        |         |        | MS2506A |        |
| IA16Q-SVUCR/L-11 | 16             | 180 | 30 | 13 | 15 | 7 | 22   |            |        |         |        | MS2506A |        |
| IA20R-SVUCR/L-11 | 20             | 200 | 40 | 15 | 18 | 7 | 27   |            |        |         |        | MS2506A |        |

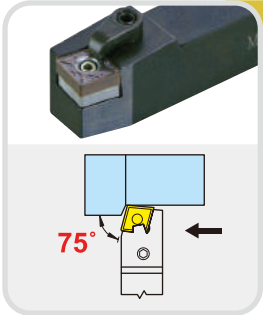


SVVB

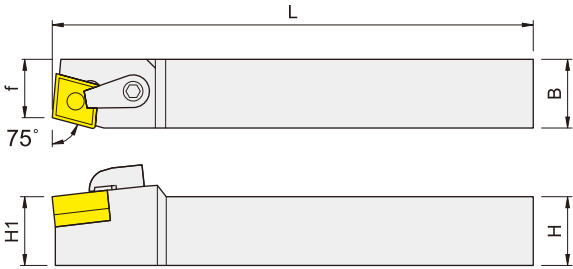


| Item Code       | Dimensions, mm |     |    |      |    |   |      | Insert     | Shim   | Screw   | Wrench | Screw   | Wrench |
|-----------------|----------------|-----|----|------|----|---|------|------------|--------|---------|--------|---------|--------|
|                 | D              | L   | L1 | f    | H  | K | dmin |            |        |         |        |         |        |
| IS25R-SVVB/L-16 | 25             | 200 | 45 | 20.5 | 23 | 5 | 34   | VB..1604.. | --     | --      | --     | MS3509B | TF15   |
| IS25S-SVVB/L-16 | 25             | 250 | 45 | 20.5 | 23 | 5 | 34   |            |        |         |        | MS3509B |        |
| IS32S-SVVB/L-16 | 32             | 250 | 50 | 25   | 30 | 5 | 42   | VB..1604.. | VSS322 | MDS5035 | PL35   | MS3512B | TF15   |

External Turning Tools 外徑車刀桿

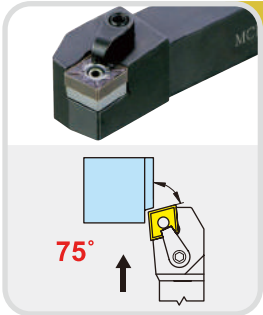


MCBN

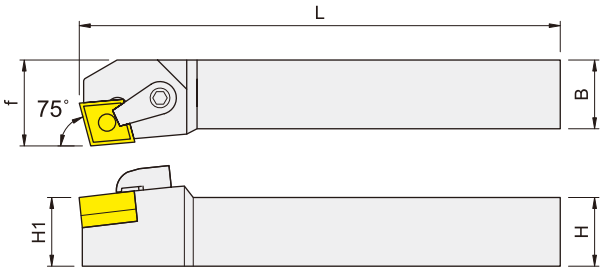


Right-hand shown

| Item Code         | Dimensions, mm |    |     |    |    | Insert     | Pin   | Shim   | Wrench | Screw | Clamp | Wrench |
|-------------------|----------------|----|-----|----|----|------------|-------|--------|--------|-------|-------|--------|
|                   | H              | B  | L   | L1 | f  |            |       |        |        |       |       |        |
| IMCBNR/L-2020K-12 | 20             | 20 | 125 | 20 | 17 | CN..1204.. | MLP46 | CMS432 | PL25   | MS625 | MC620 | PL30   |
| IMCBNR/L-2525M-12 | 25             | 25 | 150 | 25 | 22 |            |       |        |        | MS630 |       |        |
| IMCBNR/L-3232P-12 | 32             | 32 | 170 | 32 | 29 |            |       |        |        | MS630 |       |        |



MCKN

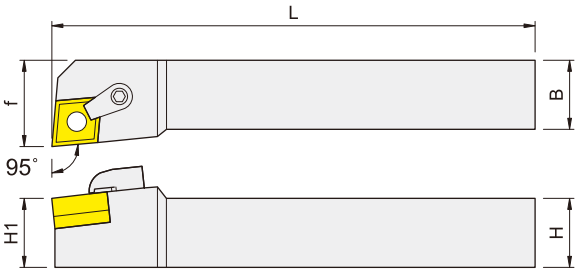
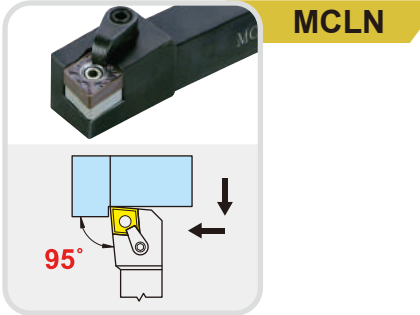


Right-hand shown

| Item Code         | Dimensions, mm |    |     |    |    | Insert     | Pin   | Shim   | Wrench | Screw | Clamp | Wrench |
|-------------------|----------------|----|-----|----|----|------------|-------|--------|--------|-------|-------|--------|
|                   | H              | B  | L   | L1 | f  |            |       |        |        |       |       |        |
| IMCKNR/L-1616K-12 | 16             | 16 | 125 | 16 | 20 | CN..1204.. | MLP46 | CMS432 | PL25   | MS625 | MC620 | PL30   |
| IMCKNR/L-2020K-12 | 20             | 20 | 125 | 20 | 25 |            |       |        |        | MS625 |       |        |
| IMCKNR/L-2525M-12 | 25             | 25 | 150 | 25 | 32 |            |       |        |        | MS630 |       |        |
| IMCKNR/L-3232P-12 | 32             | 32 | 170 | 32 | 40 |            |       |        |        | MS630 |       |        |

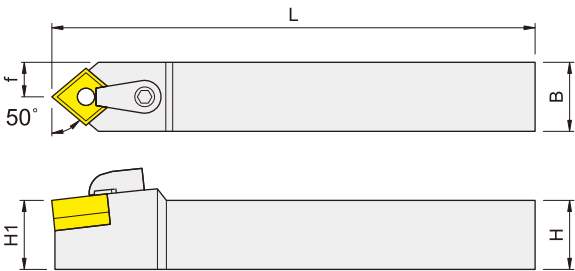
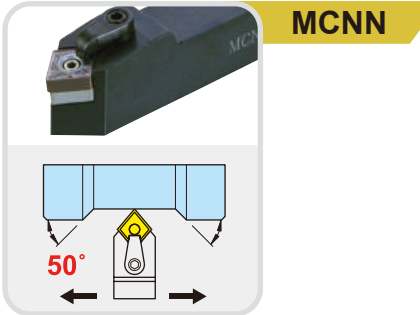
Turning Inserts & Tools

External Turning Tools 外徑車刀桿



Right-hand shown

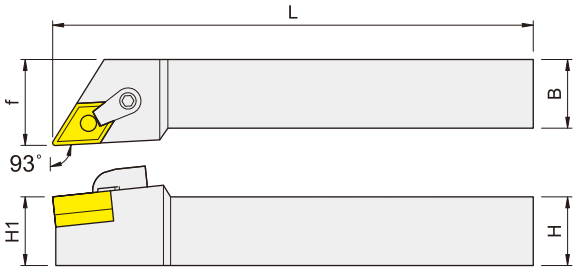
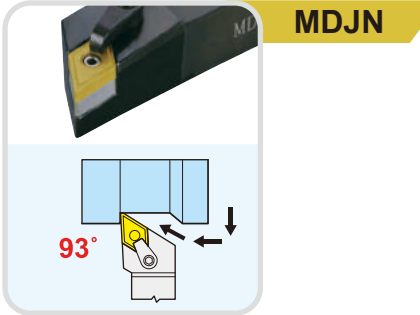
| Item Code         | Dimensions, mm |    |     |    |    | Insert     | Pin   | Shim   | Wrench | Screw | Clamp | Wrench |
|-------------------|----------------|----|-----|----|----|------------|-------|--------|--------|-------|-------|--------|
|                   | H              | B  | L   | L1 | f  |            |       |        |        |       |       |        |
| IMCLNR/L-1616K-12 | 16             | 16 | 125 | 16 | 20 | CN..1204.. | MLP46 | CMS432 | PL25   | MS625 | MC620 | PL30   |
| IMCLNR/L-2020K-12 | 20             | 20 | 125 | 20 | 25 |            |       |        |        | MS630 |       |        |
| IMCLNR/L-2525M-12 | 25             | 25 | 150 | 25 | 32 |            |       |        |        |       |       |        |
| IMCLNR/L-3232P-12 | 32             | 32 | 170 | 32 | 40 |            |       |        |        |       |       |        |



| Item Code       | Dimensions, mm |    |     |    |      | Insert     | Pin   | Shim   | Wrench | Screw | Clamp | Wrench |
|-----------------|----------------|----|-----|----|------|------------|-------|--------|--------|-------|-------|--------|
|                 | H              | B  | L   | L1 | f    |            |       |        |        |       |       |        |
| IMCNNN-1616K-12 | 16             | 16 | 125 | 16 | 8    | CN..1204.. | MLP46 | CMS432 | PL25   | MS625 | MC620 | PL30   |
| IMCNNN-2020K-12 | 20             | 20 | 125 | 20 | 10   |            |       |        |        | MS630 |       |        |
| IMCNNN-2525M-12 | 25             | 25 | 150 | 25 | 12.5 |            |       |        |        |       |       |        |
| IMCNNN-3232P-12 | 32             | 32 | 170 | 32 | 16   |            |       |        |        |       |       |        |

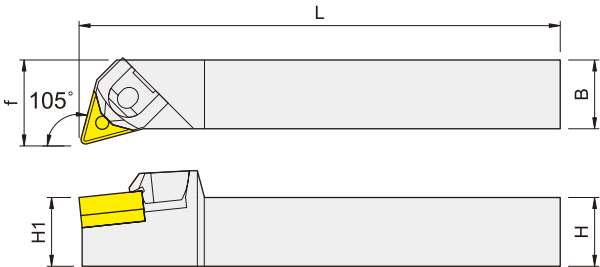
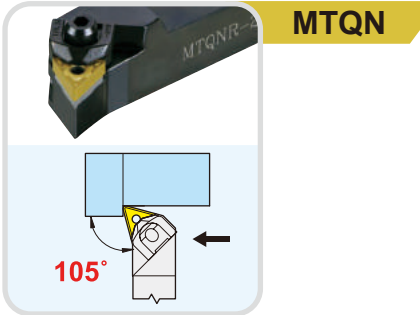
External Turning Tools

外徑車刀桿



Right-hand shown

| Item Code           | Dimensions, mm |    |     |    |    | Insert     | Pin    | Shim   | Wrench | Screw | Clamp | Wrench |
|---------------------|----------------|----|-----|----|----|------------|--------|--------|--------|-------|-------|--------|
|                     | H              | B  | L   | L1 | f  |            |        |        |        |       |       |        |
| IMDJNR/L-2020K-15   | 20             | 20 | 125 | 20 | 25 | DN..1504.. | MLP46L | DMS442 | PL25   | MS625 | MC622 | PL30   |
| IMDJNR/L-2525M-15   | 25             | 25 | 150 | 25 | 32 |            |        |        |        | MS630 |       |        |
| IMDJNR/L-2020K-1506 | 20             | 20 | 125 | 20 | 25 | DN..1506.. | MLP46L | DMS432 | PL25   | MS625 | MC622 | PL30   |
| IMDJNR/L-2525M-1506 | 25             | 25 | 150 | 25 | 32 |            |        |        |        | MS630 |       |        |



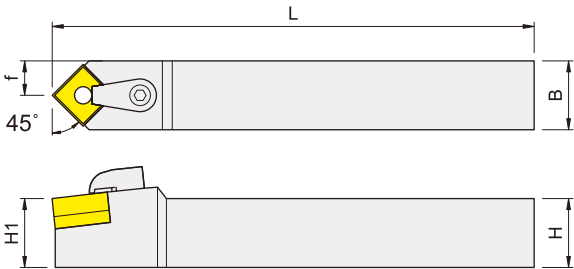
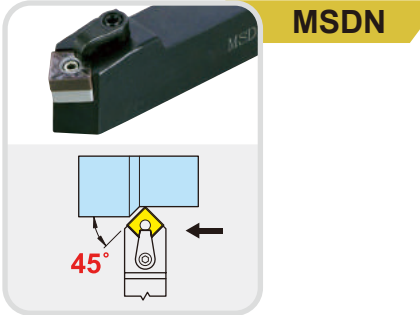
Right-hand shown

| Item Code         | Dimensions, mm |    |     |    |    | Insert     | Pin  | Screw    | Wrench | Shim   | Clamp    | Wrench |
|-------------------|----------------|----|-----|----|----|------------|------|----------|--------|--------|----------|--------|
|                   | H              | B  | L   | L1 | f  |            |      |          |        |        |          |        |
| IMTDNR/L-2020K-16 | 20             | 20 | 125 | 20 | 25 | TN..1604.. | MCP3 | MCS3S-11 | PL30   | TWS322 | MCW3-P40 | PL40   |
| IMTDNR/L-2525K-16 | 25             | 25 | 150 | 25 | 32 |            |      |          |        |        |          |        |

Turning Inserts & Tools

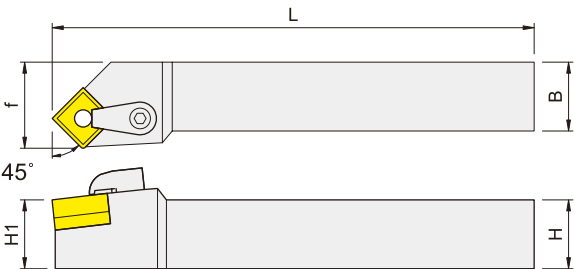
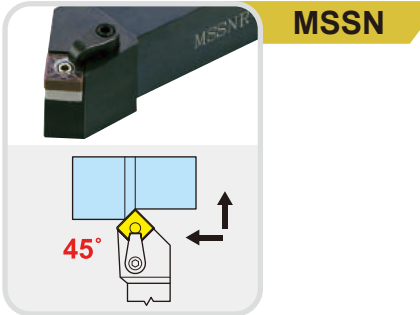
External Turning Tools

外徑車刀桿



Right-hand shown

| Item Code       | Dimensions, mm |    |     |    |      | Insert     | Pin   | Shim   | Wrench | Screw | Clamp | Wrench |
|-----------------|----------------|----|-----|----|------|------------|-------|--------|--------|-------|-------|--------|
|                 | H              | B  | L   | L1 | f    |            |       |        |        |       |       |        |
| IMSDNN-2020K-12 | 20             | 20 | 125 | 20 | 10   | SN..1204.. | MLP46 | SMS432 | PL25   | MS625 | MC620 | PL30   |
| IMSDNN-2525M-12 | 25             | 25 | 150 | 25 | 12.5 |            |       |        |        | MS630 |       |        |

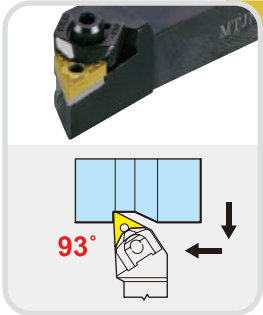


Right-hand shown

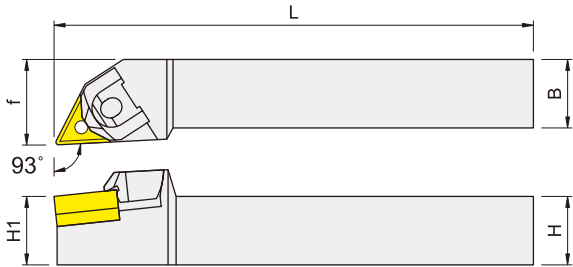
| Item Code         | Dimensions, mm |    |     |    |    | Insert     | Pin   | Shim   | Wrench | Screw | Clamp | Wrench |
|-------------------|----------------|----|-----|----|----|------------|-------|--------|--------|-------|-------|--------|
|                   | H              | B  | L   | L1 | f  |            |       |        |        |       |       |        |
| IMSSNR-1616K-12   | 16             | 16 | 125 | 16 | 20 | SN..1204.. | MLP46 | SMS432 | PL25   | MS625 | MC620 | PL30   |
| IMSSNR/L-2020K-12 | 20             | 20 | 125 | 20 | 25 |            |       |        |        | MS625 |       |        |
| IMSSNR/L-2525M-12 | 25             | 25 | 150 | 25 | 32 |            |       |        |        | MS630 |       |        |

External Turning Tools

外徑車刀桿

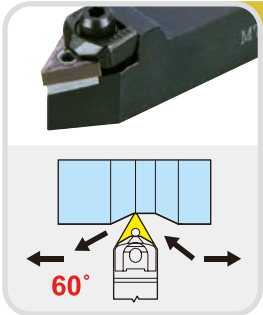


MTJN

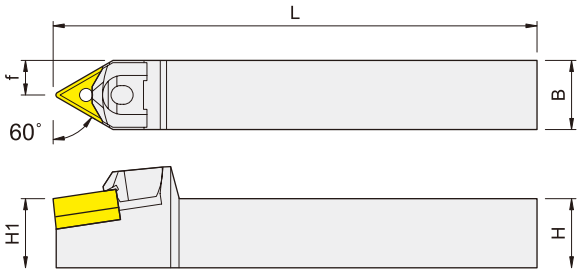


Right-hand shown

| Item Code         | Dimensions, mm |    |     |    |    | Insert     | Pin  | Screw    | Wrench | Shim   | Clamp    | Wrench |
|-------------------|----------------|----|-----|----|----|------------|------|----------|--------|--------|----------|--------|
|                   | H              | B  | L   | L1 | f  |            |      |          |        |        |          |        |
| IMTJNR/L-1216K-16 | 12             | 16 | 125 | 16 | 21 | TN..1604.. | MCP3 | MCS3S-11 | PL30   | TWS322 | MCW3-P40 | PL40   |
| IMTJNR/L-1616K-16 | 16             | 16 | 125 | 16 | 21 |            |      |          |        |        |          |        |
| IMTJNR/L-2020K-16 | 20             | 20 | 125 | 20 | 25 |            |      |          |        |        |          |        |
| IMTJNR/L-2525M-16 | 25             | 25 | 150 | 25 | 32 |            |      |          |        |        |          |        |
| IMTJNR/L-3232P-16 | 32             | 32 | 170 | 32 | 40 |            |      |          |        |        |          |        |



MTEN



| Item Code       | Dimensions, mm |    |     |    |      | Insert     | Pin  | Screw    | Wrench | Shim   | Clamp    | Wrench |
|-----------------|----------------|----|-----|----|------|------------|------|----------|--------|--------|----------|--------|
|                 | H              | B  | L   | L1 | f    |            |      |          |        |        |          |        |
| IMTENN-1216K-16 | 12             | 16 | 125 | 16 | 8    | TN..1604.. | MCP3 | MCS3S-08 | PL30   | TWS322 | MCW3-P40 | PL40   |
| IMTENN-1616K-16 | 16             | 16 | 125 | 16 | 8    |            |      |          |        |        |          |        |
| IMTENN-2020K-16 | 20             | 20 | 125 | 20 | 10   |            |      |          |        |        |          |        |
| IMTENN-2525M-16 | 25             | 25 | 150 | 25 | 12.5 |            |      |          |        |        |          |        |

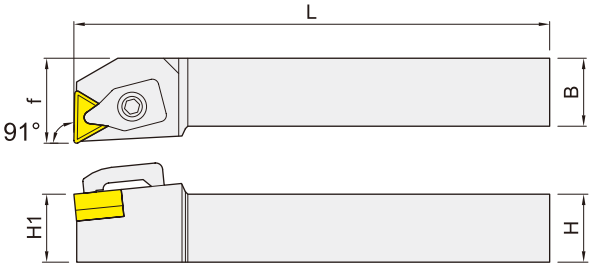
Turning Inserts & Tools

External Turning Tools

外徑車刀桿

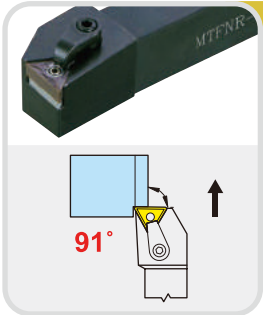


DTFN

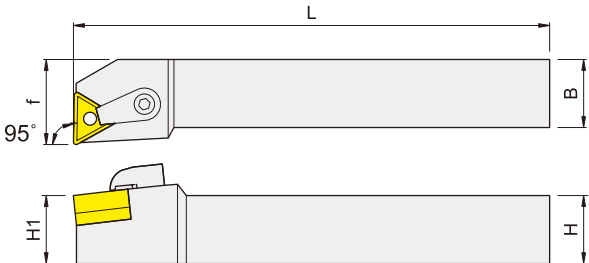


Right-hand shown

| Item Code         | Dimensions, mm |    |     |    |    | Insert     | Shim   | Screw    | Wrench | Clamp  | Wrench |
|-------------------|----------------|----|-----|----|----|------------|--------|----------|--------|--------|--------|
|                   | H              | B  | L   | L1 | f  |            |        |          |        |        |        |
| IDTFNR/L-1616K-16 | 16             | 16 | 125 | 16 | 20 | TN..1604.. | TWS322 | MS4008ES | PL25   | MCD324 | PL40   |
| IDTFNR/L-2020K-16 | 20             | 20 | 125 | 20 | 25 |            |        |          |        |        |        |
| IDTFNR/L-2525M-16 | 25             | 25 | 150 | 25 | 32 |            |        |          |        |        |        |



MTFN

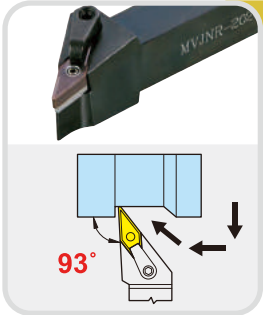


Right-hand shown

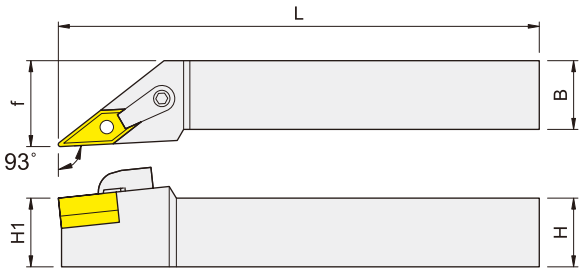
| Item Code       | Dimensions, mm |    |     |    |    | Insert     | Pin    | Shim   | Wrench | Screw | Clamp | Wrench |
|-----------------|----------------|----|-----|----|----|------------|--------|--------|--------|-------|-------|--------|
|                 | H              | B  | L   | L1 | f  |            |        |        |        |       |       |        |
| IMTFNR-1616K-16 | 16             | 16 | 125 | 16 | 20 | TN..1604.. | MLP34L | TMS322 | PL20   | MS625 | MC620 | PL30   |
| IMTFNR-2020K-16 | 20             | 20 | 125 | 20 | 25 |            |        |        |        | MS630 |       |        |
| IMTFNR-2525M-16 | 25             | 25 | 150 | 25 | 32 |            |        |        |        |       |       |        |

External Turning Tools

外徑車刀桿

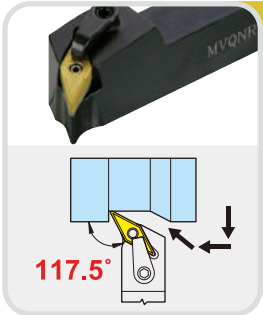


MVJN

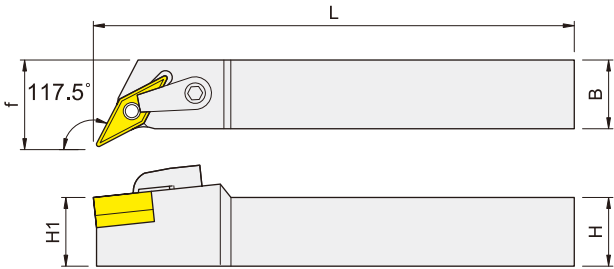


Right-hand shown

| Item Code         | Dimensions, mm |    |     |    |    | Insert     | Pin    | Shim   | Wrench | Screw | Clamp | Wrench |
|-------------------|----------------|----|-----|----|----|------------|--------|--------|--------|-------|-------|--------|
|                   | H              | B  | L   | L1 | f  |            |        |        |        |       |       |        |
| IMVJNR/L-1616K-16 | 16             | 16 | 125 | 16 | 21 | VN..1604.. | MLP34L | VMS322 | PL20   | MS625 | MC622 | PL30   |
| IMVJNR/L-2020K-16 | 20             | 20 | 125 | 20 | 25 |            |        |        |        | MS630 |       |        |
| IMVJNR/L-2525M-16 | 25             | 25 | 150 | 25 | 32 |            |        |        |        | MS630 |       |        |



MVQN

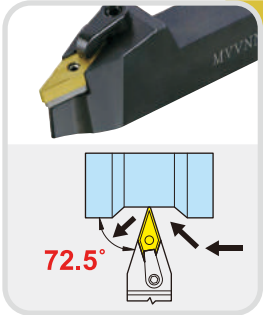


Right-hand shown

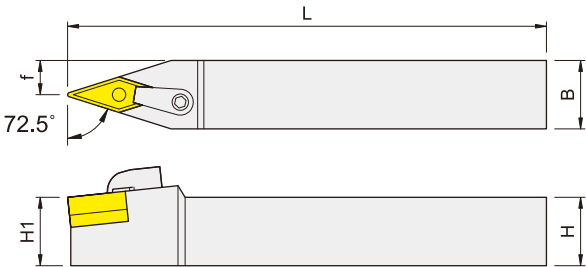
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|-------------------|----------------|----|-----|----|----|------------|--------|--------|--------|-------|-------|--------|
|                   | H              | B  | L   | L1 | f  |            |        |        |        |       |       |        |
| IMVQNR/L-2020K-16 | 20             | 20 | 125 | 20 | 25 | VN..1604.. | MLP34L | VMS322 | PL20   | MS625 | MC622 | PL30   |
| IMVQNR/L-2525M-16 | 25             | 25 | 150 | 25 | 32 |            |        |        |        | MS630 |       |        |

Turning Inserts & Tools

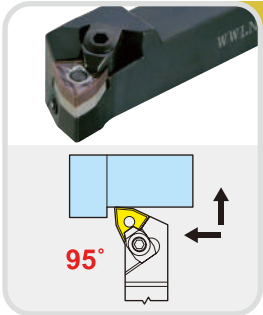
External Turning Tools 外徑車刀桿



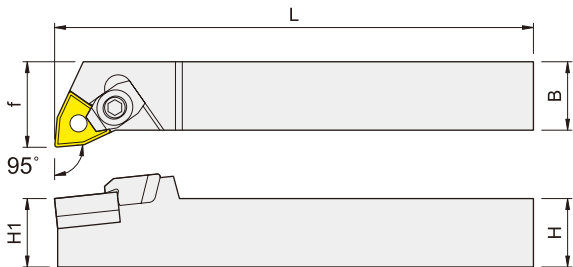
MVVN



| Item Code       | Dimensions, mm |    |     |    |      | Insert     | Pin    | Shim   | Wrench | Screw | Clamp | Wrench |
|-----------------|----------------|----|-----|----|------|------------|--------|--------|--------|-------|-------|--------|
|                 | H              | B  | L   | L1 | f    |            |        |        |        |       |       |        |
| IMVVNN-1616K-16 | 16             | 16 | 125 | 16 | 8    | VN..1604.. | MLP34L | VMS322 | PL20   | MS625 | MC622 | PL30   |
| IMVVNN-2020K-16 | 20             | 20 | 125 | 20 | 10   |            |        |        |        | MS630 |       |        |
| IMVVNN-2525M-16 | 25             | 25 | 150 | 25 | 12.5 |            |        |        |        | MS630 |       |        |



WWLN



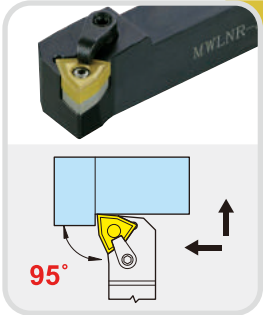
Right-hand shown

| Item Code       | Dimensions, mm |    |     |    |    | Insert     | Pin    | Shim   | Wrench | Clamp   | Wrench |
|-----------------|----------------|----|-----|----|----|------------|--------|--------|--------|---------|--------|
|                 | H              | B  | L   | L1 | f  |            |        |        |        |         |        |
| IWWLNL-2020K-08 | 20             | 20 | 125 | 20 | 25 | WN..0804.. | SCO418 | WMS432 | PL30   | WCW6-P4 | PL40   |
| IWWLNL-2525M-08 | 25             | 25 | 150 | 25 | 32 |            |        |        |        |         |        |

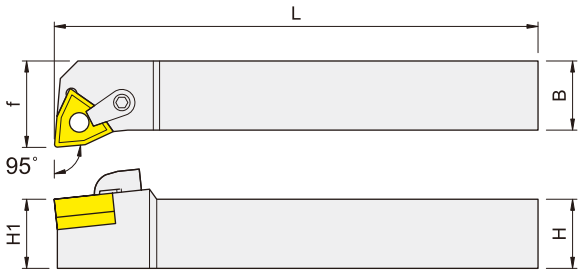
| Item Code       | Dimensions, mm |    |     |    |    | Insert     | Pin  | Screw    | Wrench | Shim   | Clamp   | Wrench |
|-----------------|----------------|----|-----|----|----|------------|------|----------|--------|--------|---------|--------|
|                 | H              | B  | L   | L1 | f  |            |      |          |        |        |         |        |
| IWWLNR-2020K-08 | 20             | 20 | 125 | 20 | 25 | WN..0804.. | MCP4 | MCS3S-08 | PL30   | WMS432 | WCW6-P4 | PL40   |
| IWWLNR-2525M-08 | 25             | 25 | 150 | 25 | 32 |            |      |          |        |        |         |        |

External Turning Tools

外徑車刀桿

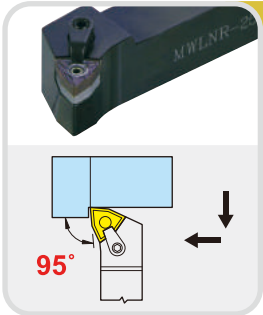


MWLN

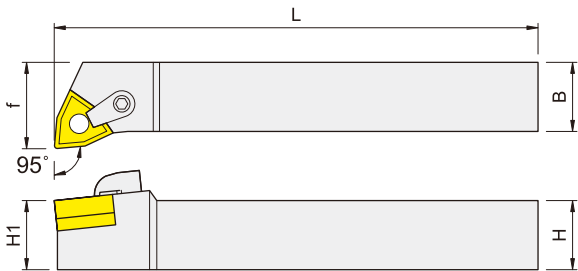


Right-hand shown

| Item Code          | Dimensions, mm |    |     |    |    | Insert     | Pin   | Shim   | Wrench | Screw | Clamp | Wrench |
|--------------------|----------------|----|-----|----|----|------------|-------|--------|--------|-------|-------|--------|
|                    | H              | B  | L   | L1 | f  |            |       |        |        |       |       |        |
| IMWLNLR/L-2020K-08 | 20             | 20 | 125 | 20 | 25 | WN..0804.. | MLP46 | WMS432 | PL25   | MS625 | MC620 | PL30   |
| IMWLNLR/L-2525M-08 | 25             | 25 | 150 | 25 | 32 |            |       |        |        | MS630 |       |        |



MWLN-N



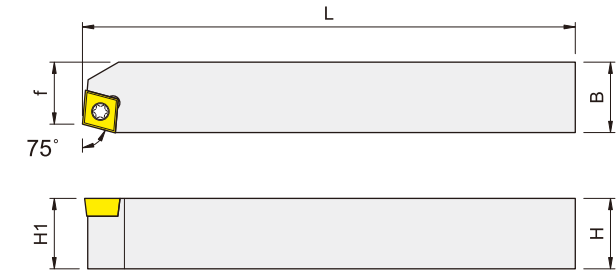
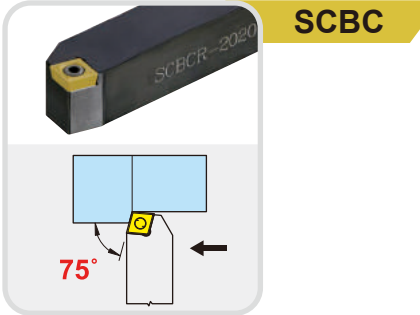
Right-hand shown

| Item Code           | Dimensions, mm |    |     |    |    | Insert     | Pin   | Shim   | Wrench | Screw | Clamp | Wrench |
|---------------------|----------------|----|-----|----|----|------------|-------|--------|--------|-------|-------|--------|
|                     | H              | B  | L   | L1 | f  |            |       |        |        |       |       |        |
| IMWLNLR/L-2020K-08N | 20             | 20 | 125 | 20 | 25 | WN..0804.. | MLP46 | WMS432 | PL25   | MS625 | MC620 | PL30   |
| IMWLNLR/L-2525M-08N | 25             | 25 | 150 | 25 | 32 |            |       |        |        | MS630 |       |        |

Turning Inserts & Tools

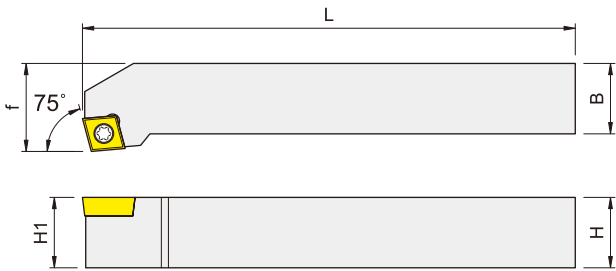
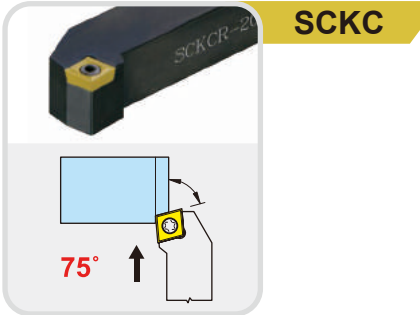
External Turning Tools

外徑車刀桿



Right-hand shown

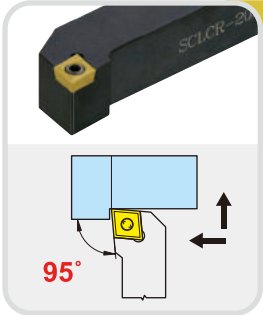
| Item Code         | Dimensions, mm |    |     |    |      | Insert     | Clamp   | Wrench |
|-------------------|----------------|----|-----|----|------|------------|---------|--------|
|                   | H              | B  | L   | L1 | f    |            |         |        |
| ISBCBR/L-2020K-09 | 20             | 20 | 125 | 20 | 17.5 | CC..09T3.. | MS4011A | TF15   |



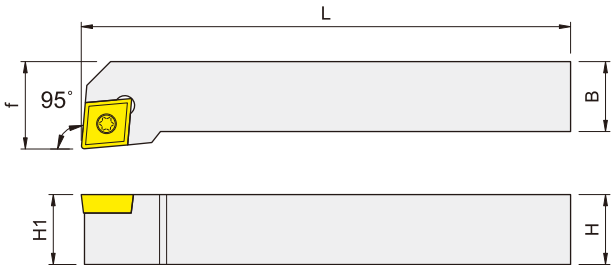
Right-hand shown

| Item Code         | Dimensions, mm |    |     |    |    | Insert     | Clamp   | Wrench |
|-------------------|----------------|----|-----|----|----|------------|---------|--------|
|                   | H              | B  | L   | L1 | f  |            |         |        |
| ISCKCR/L-1212K-09 | 12             | 12 | 125 | 12 | 16 | CC..09T3.. | MS4011A | TF15   |
| ISCKCR/L-1616K-09 | 16             | 16 | 125 | 16 | 20 |            |         |        |
| ISCKCR/L-2020K-09 | 20             | 20 | 125 | 20 | 25 |            |         |        |
| ISCKCR/L-2525M-09 | 25             | 25 | 150 | 25 | 32 |            |         |        |

External Turning Tools 外徑車刀桿

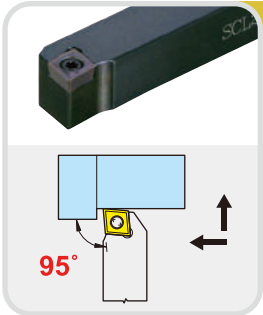


SCLC

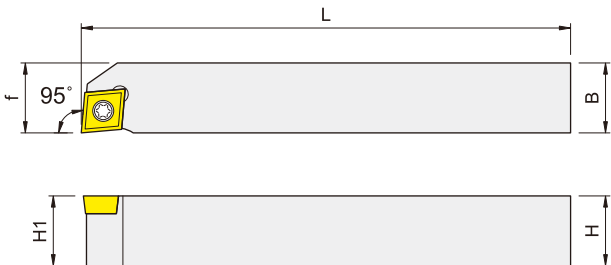


Right-hand shown

| Item Code         | Dimensions, mm |    |     |    |    | Insert     | Clamp   | Wrench |
|-------------------|----------------|----|-----|----|----|------------|---------|--------|
|                   | H              | B  | L   | L1 | f  |            |         |        |
| ISCLCR/L-1010H-06 | 10             | 10 | 100 | 10 | 12 | CC..0602.. | MS2506A | TF9    |
| ISCLCR/L-1010K-06 | 10             | 10 | 125 | 10 | 12 |            |         |        |
| ISCLCR/L-1212H-09 | 12             | 12 | 100 | 12 | 16 | CC..09T3.. | MS4011A | TF15   |
| ISCLCR/L-1212K-09 | 12             | 12 | 125 | 12 | 16 |            |         |        |
| ISCLCR/L-1616K-09 | 16             | 16 | 125 | 16 | 20 |            |         |        |
| ISCLCR/L-2020K-09 | 20             | 20 | 125 | 20 | 25 |            |         |        |
| ISCLCR/L-2525M-09 | 25             | 25 | 150 | 25 | 32 |            |         |        |
| ISCLCR/L-2020K-12 | 20             | 20 | 125 | 20 | 25 | CC..1204.. | MS5011A | TF20   |
| ISCLCR/L-2525K-12 | 25             | 25 | 150 | 25 | 32 |            |         |        |



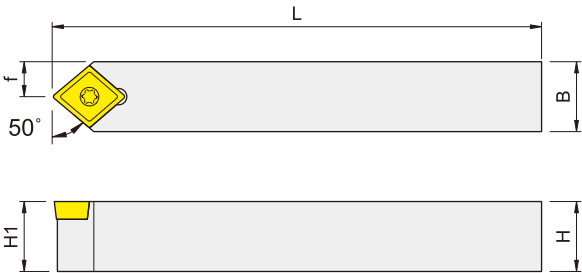
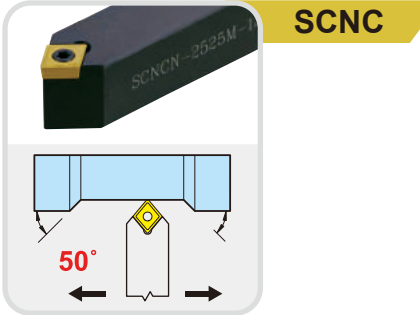
SCL2C



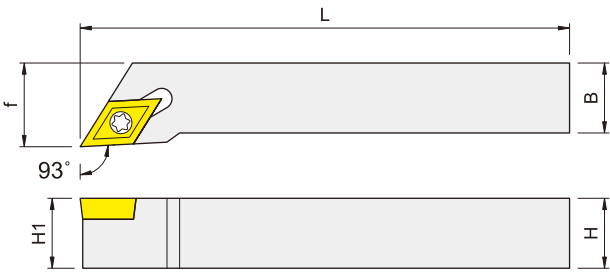
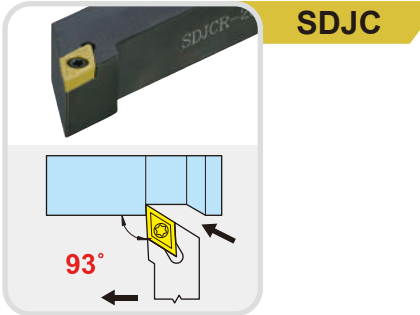
Right-hand shown

| Item Code          | Dimensions, mm |    |     |    |    | Insert     | Clamp   | Wrench |
|--------------------|----------------|----|-----|----|----|------------|---------|--------|
|                    | H              | B  | L   | L1 | f  |            |         |        |
| ISCL2CR/L-1010H-06 | 10             | 10 | 100 | 10 | 10 | CC..0602.. | MS2506A | TF9    |
| ISCL2CR/L-1212H-09 | 12             | 12 | 100 | 12 | 12 | CC..09T3.. | MS4011A | TF15   |
| ISCL2CR/L-1616K-09 | 16             | 16 | 125 | 16 | 16 |            |         |        |
| ISCL2CR/L-2020K-09 | 20             | 20 | 125 | 20 | 25 |            |         |        |

External Turning Tools 外徑車刀桿



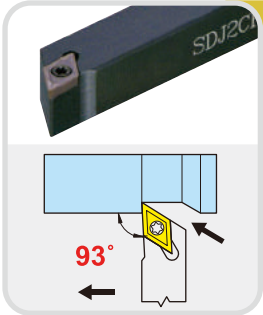
| Item Code       | Dimensions, mm |    |     |    |      | Insert     | Clamp   | Wrench |
|-----------------|----------------|----|-----|----|------|------------|---------|--------|
|                 | H              | B  | L   | L1 | f    |            |         |        |
| ISCNCN-1616K-06 | 16             | 16 | 125 | 16 | 8    | CC..0602.. | MS2506A | TF9    |
| ISCNCN-1212K-09 | 12             | 12 | 125 | 12 | 6    | CC..09T3.. | MS4011A | TF15   |
| ISCNCN-1616K-09 | 16             | 16 | 125 | 16 | 8    |            |         |        |
| ISCNCN-2020K-09 | 20             | 20 | 125 | 20 | 10   |            |         |        |
| ISCNCN-2525M-09 | 25             | 25 | 150 | 25 | 12.5 |            |         |        |
| ISCNCN-2020K-12 | 20             | 20 | 125 | 20 | 10   | CC..1204.. | MS5011A | TF20   |
| ISCNCN-2525M-12 | 25             | 25 | 150 | 25 | 12.5 |            |         |        |



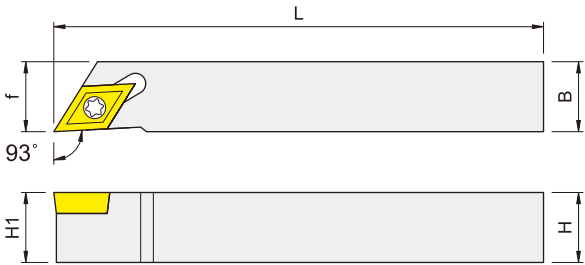
Right-hand shown

| Item Code         | Dimensions, mm |    |     |    |    | Insert     | Clamp   | Wrench |
|-------------------|----------------|----|-----|----|----|------------|---------|--------|
|                   | H              | B  | L   | L1 | f  |            |         |        |
| ISDJCR/L-1010H-07 | 10             | 10 | 100 | 10 | 12 | DC..0702.. | MS2506A | TF9    |
| ISDJCR/L-1212H-07 | 12             | 12 | 100 | 12 | 16 |            |         |        |
| ISDJCR/L-1212K-07 | 12             | 12 | 125 | 12 | 16 |            |         |        |
| ISDJCR/L-1616K-07 | 16             | 16 | 125 | 16 | 20 |            |         |        |
| ISDJCR/L-2020K-07 | 20             | 20 | 125 | 20 | 25 |            |         |        |
| ISDJCR/L-1212H-11 | 12             | 12 | 100 | 12 | 16 | DC..11T3.. | MS4009A | TF15   |
| ISDJCR/L-1212K-11 | 12             | 12 | 125 | 12 | 16 |            |         |        |
| ISDJCR/L-1616K-11 | 16             | 16 | 125 | 16 | 20 |            |         |        |
| ISDJCR/L-2020K-11 | 20             | 20 | 125 | 20 | 25 |            |         |        |
| ISDJCR/L-2525M-11 | 25             | 25 | 150 | 25 | 32 |            |         |        |

External Turning Tools 外徑車刀桿

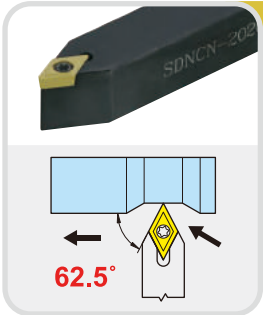


SDJ2C

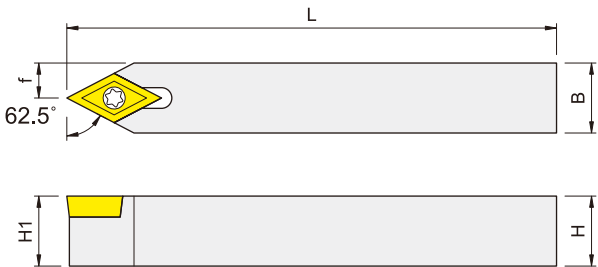


Right-hand shown

| Item Code          | Dimensions, mm |    |     |    |    | Insert     | Clamp   | Wrench |
|--------------------|----------------|----|-----|----|----|------------|---------|--------|
|                    | H              | B  | L   | L1 | f  |            |         |        |
| ISDJ2CR/L-1010H-07 | 10             | 10 | 100 | 10 | 10 | DC..0702.. | MS2506A | TF9    |
| ISDJ2CR/L-1212H-07 | 12             | 12 | 100 | 12 | 12 |            |         |        |
| ISDJ2CR/L-1212K-07 | 12             | 12 | 125 | 12 | 12 |            |         |        |
| ISDJ2CR/L-1616K-07 | 16             | 16 | 125 | 16 | 16 |            |         |        |
| ISDJ2CR/L-2020K-07 | 20             | 20 | 125 | 20 | 20 |            |         |        |
| ISDJ2CR/L-2525M-07 | 25             | 25 | 150 | 25 | 25 |            |         |        |
| ISDJ2CR-1010H-11   | 10             | 10 | 100 | 10 | 10 | DC..11T3.. | MS4009A | TF15   |
| ISDJ2CR-1010K-11   | 10             | 10 | 125 | 10 | 10 |            |         |        |
| ISDJ2CR/L-1212H-11 | 12             | 12 | 100 | 12 | 12 |            |         |        |
| ISDJ2CR/L-1616K-11 | 16             | 16 | 125 | 16 | 16 |            |         |        |
| ISDJ2CR/L-2020K-11 | 20             | 20 | 125 | 20 | 20 |            |         |        |
| ISDJ2CR/L-2525M-11 | 25             | 25 | 150 | 25 | 25 |            |         |        |
| ISDJ2CR/L-3232P-11 | 32             | 32 | 170 | 32 | 32 |            |         |        |

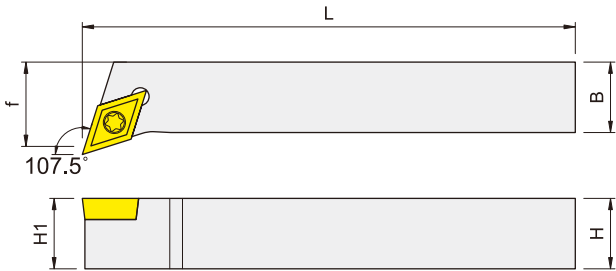
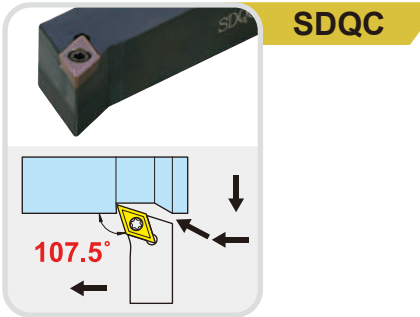


SDNC



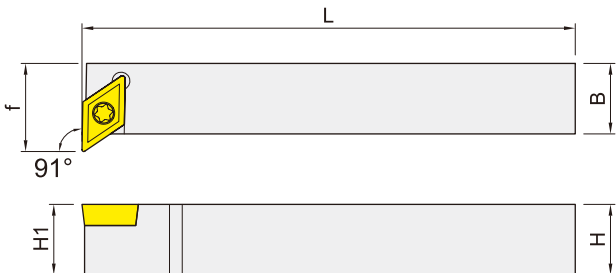
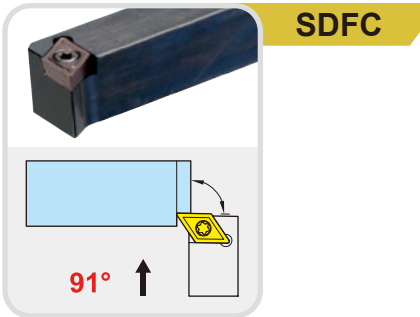
| Item Code       | Dimensions, mm |    |     |    |      | Insert     | Clamp   | Wrench |
|-----------------|----------------|----|-----|----|------|------------|---------|--------|
|                 | H              | B  | L   | L1 | f    |            |         |        |
| ISDNCN-1010H-07 | 10             | 10 | 100 | 10 | 5    | DC..0702.. | MS2506A | TF9    |
| ISDNCN-1212H-07 | 12             | 12 | 100 | 12 | 6    |            |         |        |
| ISDNCN-1616K-07 | 16             | 16 | 125 | 16 | 8    |            |         |        |
| ISDNCN-1212H-11 | 12             | 12 | 100 | 12 | 6    | DC..11T3.. | MS4009A | TF15   |
| ISDNCN-1212K-11 | 12             | 12 | 125 | 12 | 6    |            |         |        |
| ISDNCN-1616K-11 | 16             | 16 | 125 | 16 | 8    |            |         |        |
| ISDNCN-2020K-11 | 20             | 20 | 125 | 20 | 10   |            |         |        |
| ISDNCN-2525M-11 | 25             | 25 | 150 | 25 | 12.5 |            |         |        |

External Turning Tools 外徑車刀桿



Right-hand shown

| Item Code         | Dimensions, mm |    |     |    |    | Insert     | Clamp   | Wrench |
|-------------------|----------------|----|-----|----|----|------------|---------|--------|
|                   | H              | B  | L   | L1 | f  |            |         |        |
| ISDQCR/L-1212H-11 | 12             | 12 | 100 | 12 | 16 | DC..11T3.. | MS4009A | TF15   |
| ISDQCR/L-1616K-11 | 16             | 16 | 125 | 16 | 20 |            |         |        |
| ISDQCR/L-2020K-11 | 20             | 20 | 125 | 20 | 25 |            |         |        |
| ISDQCR/L-2525M-11 | 25             | 25 | 150 | 25 | 32 |            |         |        |

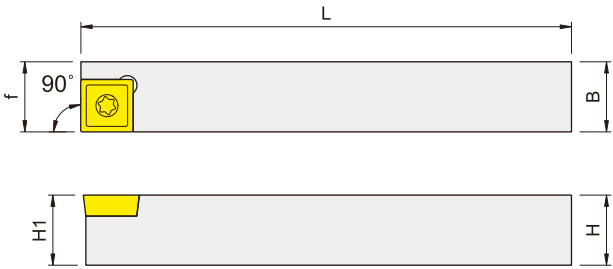
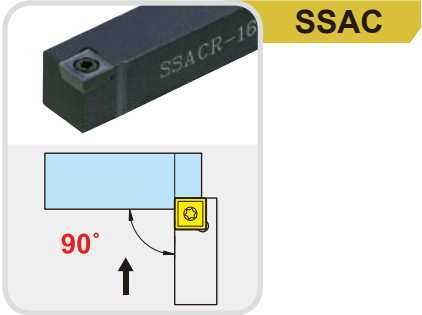


Right-hand shown

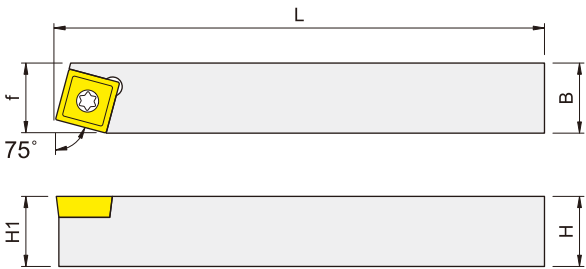
| Item Code         | Dimensions, mm |    |     |    |    | Insert     | Clamp   | Wrench |
|-------------------|----------------|----|-----|----|----|------------|---------|--------|
|                   | H              | B  | L   | L1 | f  |            |         |        |
| ISDFCR/L-1212K-07 | 12             | 12 | 125 | 12 | 16 | DC..0702.. | MS2506A | TF9    |
| ISDFCR/L-1212K-11 | 12             | 12 | 125 | 12 | 19 | DC..11T3.. | MS4009A | TF15   |
| ISDFCR/L-1616K-11 | 16             | 16 | 125 | 16 | 20 |            |         |        |

External Turning Tools

外徑車刀桿



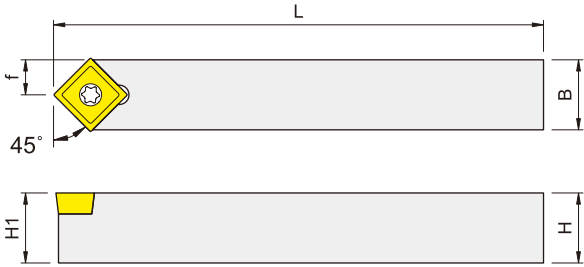
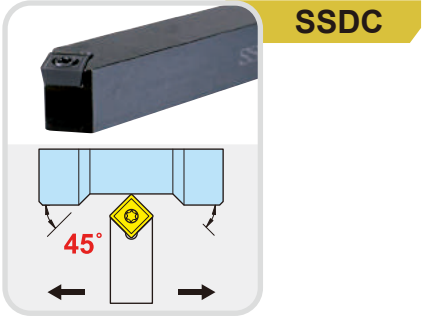
| Item Code         | Dimensions, mm |      |     |      |      | Insert     | Clamp   | Wrench |
|-------------------|----------------|------|-----|------|------|------------|---------|--------|
|                   | H              | B    | L   | L1   | f    |            |         |        |
| ISSACR/L-3.4H-09  | 9.5            | 12.7 | 100 | 9.5  | 12.7 | SC..09T3.. | MS4009A | TF15   |
| ISSACR/L-4.4H-09  | 12.7           | 12.7 | 100 | 12.7 | 12.7 | SC..09T3.. | MS4011A | TF15   |
| ISSACR-1212H-09   | 12             | 12   | 100 | 12   | 12   |            |         |        |
| ISSACR/L-1616K-09 | 16             | 16   | 125 | 16   | 16   |            |         |        |



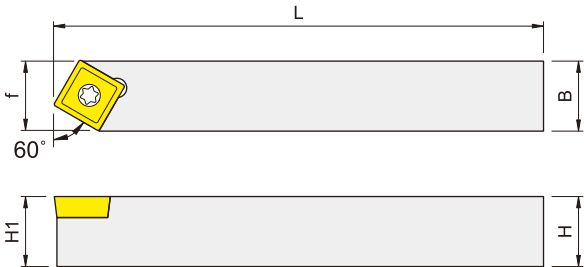
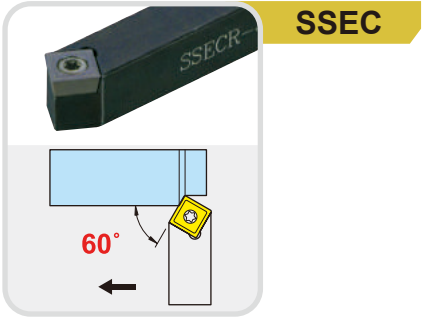
| Item Code         | Dimensions, mm |      |     |      |      | Insert     | Clamp   | Wrench |
|-------------------|----------------|------|-----|------|------|------------|---------|--------|
|                   | H              | B    | L   | L1   | f    |            |         |        |
| ISSBCR/L-3.4H-09  | 9.5            | 12.7 | 100 | 9.5  | 12.7 | SC..09T3.. | MS4009A | TF15   |
| ISSBCR/L-4.4H-09  | 12.7           | 12.7 | 100 | 12.7 | 12.7 | SC..09T3.. | MS4011A | TF15   |
| ISSBCR/L-1212H-09 | 12             | 12   | 100 | 12   | 12   |            |         |        |

External Turning Tools

外徑車刀桿



| Item Code       | Dimensions, mm |      |     |      |      | Insert     | Clamp   | Wrench |
|-----------------|----------------|------|-----|------|------|------------|---------|--------|
|                 | H              | B    | L   | L1   | f    |            |         |        |
| ISSDCN-3.4H-09  | 9.5            | 12.7 | 100 | 9.5  | 6.35 | SC..09T3.. | MS4009A | TF15   |
| ISSDCN-4.4H-09  | 12.7           | 12.7 | 100 | 12.7 | 6.35 | SC..09T3.. | MS4011A | TF15   |
| ISSDCN-1212H-09 | 12             | 12   | 100 | 12   | 6    |            |         |        |
| ISSDCN-1616K-09 | 16             | 16   | 125 | 16   | 8    |            |         |        |
| ISSDCN-2020K-09 | 20             | 20   | 125 | 20   | 10   |            |         |        |
| ISSDCN-2525M-09 | 25             | 25   | 150 | 25   | 12.5 |            |         |        |

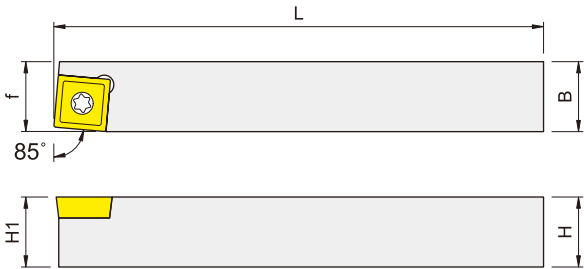
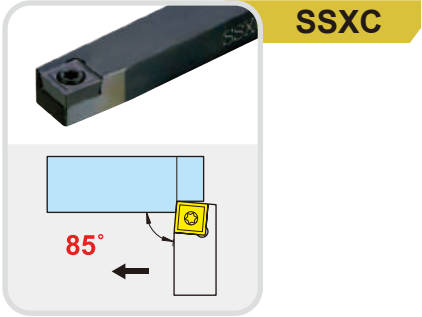


Right-hand shown

| Item Code         | Dimensions, mm |      |     |      |      | Insert     | Clamp   | Wrench |
|-------------------|----------------|------|-----|------|------|------------|---------|--------|
|                   | H              | B    | L   | L1   | f    |            |         |        |
| ISSECR/L-3.4H-09  | 9.5            | 12.7 | 100 | 9.5  | 12.7 | SC..09T3.. | MS4009A | TF15   |
| ISSECR/L-4.4H-09  | 12.7           | 12.7 | 100 | 12.7 | 12.7 | SC..09T3.. | MS4011A | TF15   |
| ISSECR/L-1212H-09 | 12             | 12   | 100 | 12   | 12   |            |         |        |

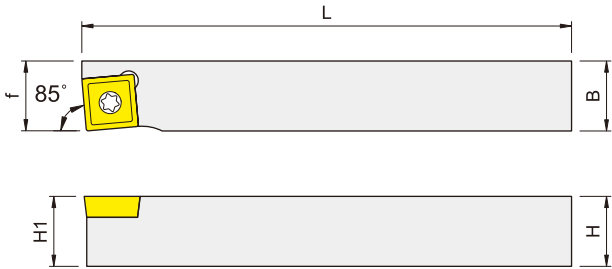
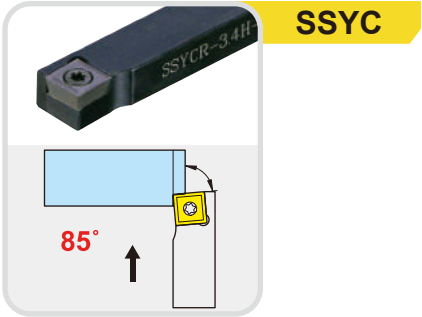
External Turning Tools

外徑車刀桿



Right-hand shown

| Item Code      | Dimensions, mm |      |     |     |      | Insert     | Clamp   | Wrench |
|----------------|----------------|------|-----|-----|------|------------|---------|--------|
|                | H              | B    | L   | L1  | f    |            |         |        |
| ISSXCR-3.4H-09 | 9.5            | 12.7 | 100 | 9.5 | 12.7 | SC..09T3.. | MS4009A | TF15   |

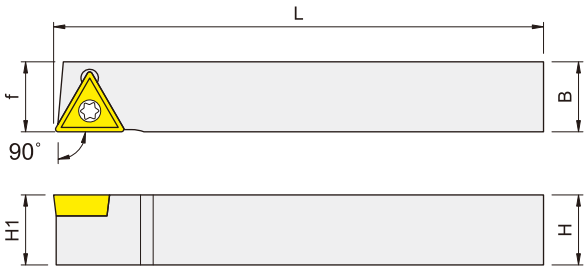
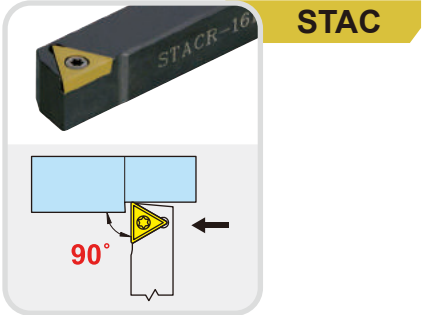


Right-hand shown

| Item Code        | Dimensions, mm |      |     |     |      | Insert     | Clamp   | Wrench |
|------------------|----------------|------|-----|-----|------|------------|---------|--------|
|                  | H              | B    | L   | L1  | f    |            |         |        |
| ISSYCR/L-3.4H-09 | 9.5            | 12.7 | 100 | 9.5 | 12.7 | SC..09T3.. | MS4009A | TF15   |

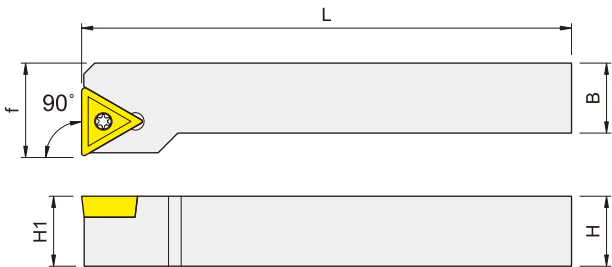
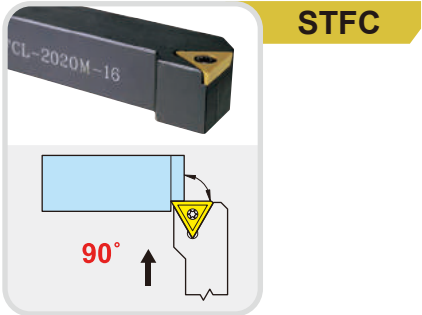
Turning Inserts & Tools

External Turning Tools 外徑車刀桿



Right-hand shown

| Item Code       | Dimensions, mm |      |     |      |      | Insert     | Clamp   | Wrench |
|-----------------|----------------|------|-----|------|------|------------|---------|--------|
|                 | H              | B    | L   | L1   | f    |            |         |        |
| ISTACR-1010H-11 | 10             | 10   | 100 | 10   | 10   | TC..1102.. | MS2506A | TF9    |
| ISTACR-1212H-11 | 12             | 12   | 100 | 12   | 12   |            |         |        |
| ISTACR-1616K-11 | 16             | 16   | 125 | 16   | 16   |            |         |        |
| ISTACR-3.4H-11  | 9.5            | 12.7 | 100 | 9.5  | 12.7 |            |         |        |
| ISTACR-4.4H-11  | 12.7           | 12.7 | 100 | 12.7 | 12.7 | TC..16T3.. | MS4011A | TF15   |
| ISTACR-1616K-16 | 16             | 16   | 125 | 16   | 16   |            |         |        |

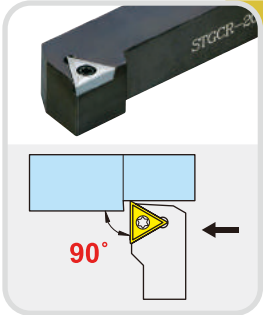


Right-hand shown

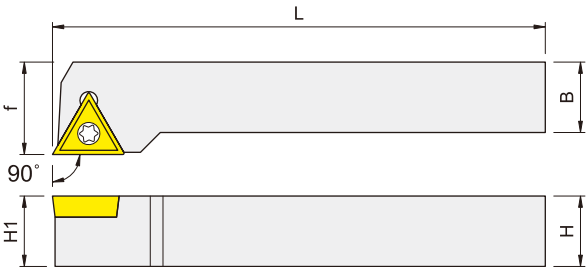
| Item Code         | Dimensions, mm |    |     |    |    | Insert     | Clamp   | Wrench |
|-------------------|----------------|----|-----|----|----|------------|---------|--------|
|                   | H              | B  | L   | L1 | f  |            |         |        |
| ISTFCR/L-2020K-16 | 20             | 20 | 125 | 20 | 25 | TC..16T3.. | MS4011A | TF15   |
| ISTFCR/L-2525M-16 | 25             | 25 | 150 | 25 | 32 |            |         |        |

External Turning Tools

外徑車刀桿

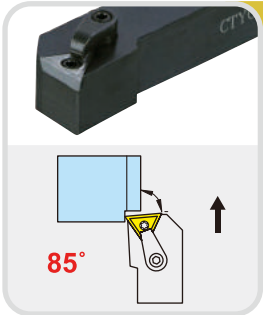


STGC

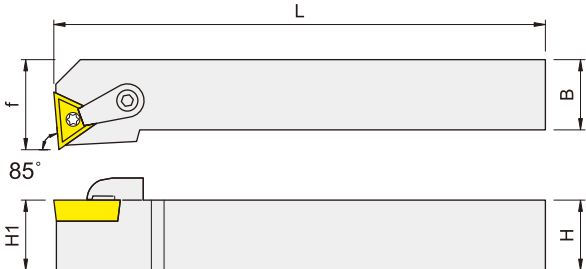


Right-hand shown

| Item Code       | Dimensions, mm |    |     |    |    | Insert     | Clamp   | Wrench |
|-----------------|----------------|----|-----|----|----|------------|---------|--------|
|                 | H              | B  | L   | L1 | f  |            |         |        |
| ISTGCR-1212H-16 | 12             | 12 | 100 | 12 | 16 | TC..16T3.. | MS4011A | TF15   |
| ISTGCR-1616K-16 | 16             | 16 | 125 | 16 | 20 |            |         |        |
| ISTGCR-2020K-16 | 20             | 20 | 125 | 20 | 25 |            |         |        |
| ISTGCR-2525M-16 | 20             | 25 | 150 | 25 | 32 |            |         |        |



CTYC

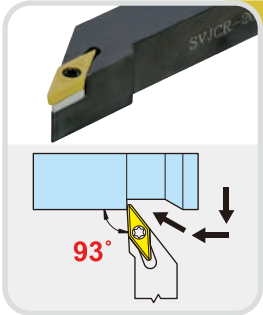


Right-hand shown

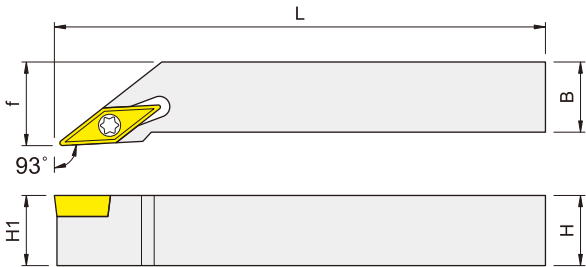
| Item Code         | Dimensions, mm |    |     |    |    | Insert     | Screw   | Wrench | Screw | Clamp | Wrench |
|-------------------|----------------|----|-----|----|----|------------|---------|--------|-------|-------|--------|
|                   | H              | B  | L   | L1 | f  |            |         |        |       |       |        |
| ICTYCR/L-2020K-16 | 20             | 20 | 125 | 20 | 25 | TC..16T3.. | MS4011A | TF15   | MS625 | MC620 | PL30   |

Turning Inserts & Tools

External Turning Tools 外徑車刀桿

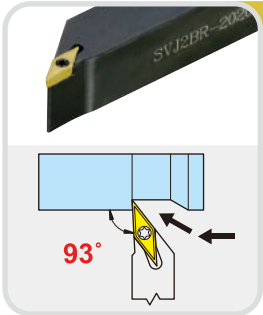


SVJB

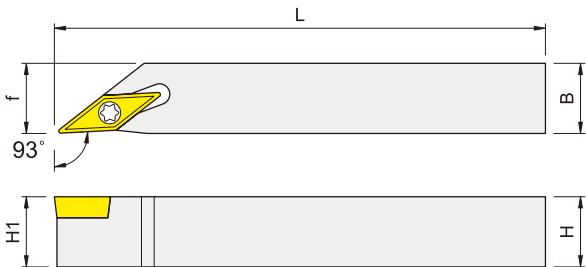


Right-hand shown

| Item Code         | Dimensions, mm |    |     |    |    | Insert     | Shim   | Screw   | Wrench | Screw   | Wrench |
|-------------------|----------------|----|-----|----|----|------------|--------|---------|--------|---------|--------|
|                   | H              | B  | L   | L1 | f  |            |        |         |        |         |        |
| ISVJBR/L-1616K-16 | 16             | 16 | 125 | 16 | 20 | VB..1604.. | VSS322 | MDS5035 | PL35   | MS3512B | TF15   |
| ISVJBR/L-2020K-16 | 20             | 20 | 125 | 20 | 25 |            |        |         |        |         |        |
| ISVJBR/L-2525M-16 | 25             | 25 | 150 | 25 | 32 |            |        |         |        |         |        |
| ISVJCR/L-1010H-11 | 10             | 10 | 100 | 10 | 12 | VC..1103.. | --     | --      | --     | MS2506A | TF9    |
| ISVJCR/L-1212K-11 | 12             | 12 | 125 | 12 | 16 |            |        |         |        |         |        |
| ISVJCR/L-1616K-11 | 16             | 16 | 125 | 16 | 20 |            |        |         |        |         |        |
| ISVJCR/L-2020K-11 | 20             | 20 | 125 | 20 | 25 |            |        |         |        |         |        |
| ISVJCR/L-2525M-11 | 25             | 25 | 150 | 25 | 32 |            |        |         |        |         |        |



SVJ2B

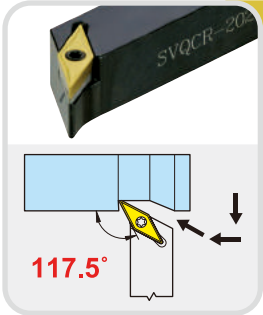


Right-hand shown

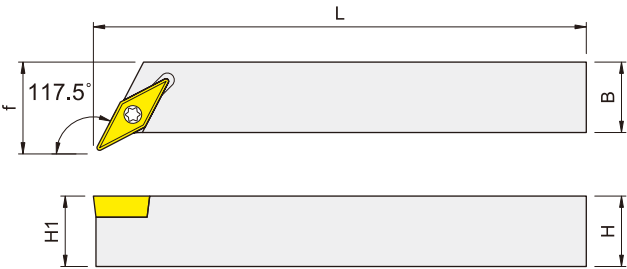
| Item Code          | Dimensions, mm |    |     |    |    | Insert     | Screw | Wrench | Screw | Clamp   | Wrench |
|--------------------|----------------|----|-----|----|----|------------|-------|--------|-------|---------|--------|
|                    | H              | B  | L   | L1 | f  |            |       |        |       |         |        |
| ISVJ2CR/L-1010H-11 | 10             | 10 | 100 | 10 | 10 | VC..1103.. | --    | --     | --    | MS2506A | TF9    |
| ISVJ2CR/L-1212H-11 | 12             | 12 | 100 | 12 | 12 |            |       |        |       |         |        |
| ISVJ2CR/L-1616K-11 | 16             | 16 | 125 | 16 | 16 |            |       |        |       |         |        |
| ISVJ2CR/L-2020K-11 | 20             | 20 | 125 | 20 | 20 |            |       |        |       |         |        |

External Turning Tools

外徑車刀桿

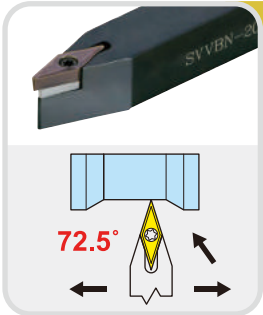


SVQB

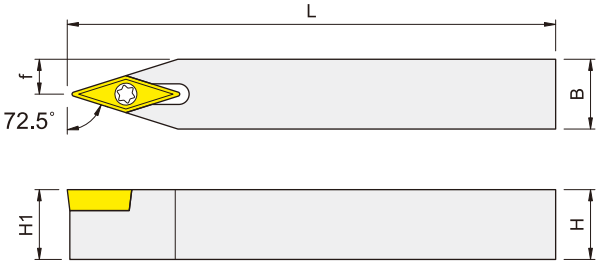


Right-hand shown

| Item Code         | Dimensions, mm |    |     |    |    | Insert     | Shim   | Screw   | Wrench | Screw   | Wrench |
|-------------------|----------------|----|-----|----|----|------------|--------|---------|--------|---------|--------|
|                   | H              | B  | L   | L1 | f  |            |        |         |        |         |        |
| ISVQBR/L-2020K-16 | 20             | 20 | 125 | 20 | 25 | VB..1604.. | VSS322 | MDS5035 | PL35   | MS3512B | TF15   |
| ISVQBR/L-2525M-16 | 25             | 25 | 150 | 25 | 32 |            |        |         |        |         |        |
| ISVQCR/L-1212H-11 | 12             | 12 | 100 | 12 | 16 | VC..1103.. | --     | --      | --     | MS2506A | TF9    |
| ISVQCR/L-1616K-11 | 16             | 16 | 125 | 16 | 20 |            |        |         |        |         |        |
| ISVQCR/L-2020K-11 | 20             | 20 | 125 | 20 | 25 |            |        |         |        |         |        |



SVVB



| Item Code       | Dimensions, mm |    |     |    |      | Insert     | Screw  | Wrench  | Screw | Clamp   | Wrench |
|-----------------|----------------|----|-----|----|------|------------|--------|---------|-------|---------|--------|
|                 | H              | B  | L   | L1 | f    |            |        |         |       |         |        |
| ISVVBN-1616K-16 | 16             | 16 | 125 | 16 | 8    | VB..1604.. | VSS322 | MDS5035 | PL35  | MS3512B | TF15   |
| ISVVBN-2020K-16 | 20             | 20 | 125 | 20 | 10   |            |        |         |       |         |        |
| ISVVBN-2525M-16 | 25             | 25 | 150 | 25 | 12.5 |            |        |         |       |         |        |
| ISVVBN-1010H-11 | 10             | 10 | 100 | 10 | 5    | VC..1103.. | --     | --      | --    | MS2506A | TF9    |
| ISVVCN-1212K-11 | 12             | 12 | 125 | 12 | 6    |            |        |         |       |         |        |
| ISVVCN-1616K-11 | 16             | 16 | 125 | 16 | 8    |            |        |         |       |         |        |
| ISVVCN-2020K-11 | 20             | 20 | 125 | 20 | 10   |            |        |         |       |         |        |
| ISVVCN-2525M-11 | 25             | 25 | 150 | 25 | 12.5 |            |        |         |       |         |        |

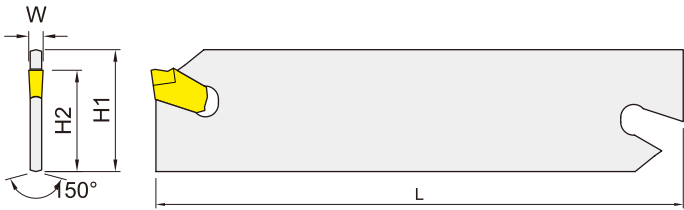


*Parting*

切 斷



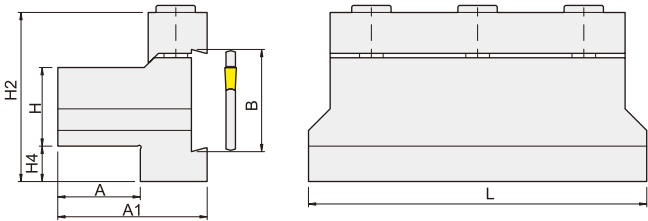
ISGIH



| Item Code | Dimensions, mm |      |     |     | Insert   | Tool Block  | Wrench |
|-----------|----------------|------|-----|-----|----------|-------------|--------|
|           | H1             | H2   | L   | W   |          |             |        |
| ISGIH26-2 | 26             | 21.4 | 110 | 2.2 | TGTN0220 | SGTBU...-26 | ESG-1  |
| ISGIH32-2 | 32             | 25   | 150 | 2.2 |          | SGTBU...-32 |        |
| ISGIH26-3 | 26             | 21.4 | 110 | 3.1 | TGTN0310 | SGTBU...-26 |        |
| ISGIH32-3 | 32             | 25   | 150 | 3.1 |          | SGTBU...-32 |        |



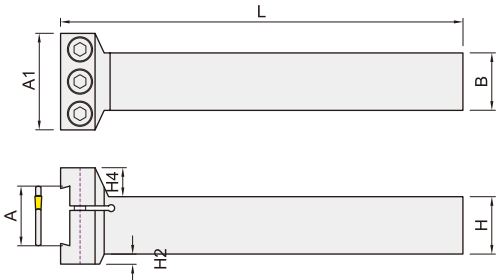
ISGTBU



| Item Code   | Dimensions, mm |    |    |    |     |    |    | Clamp  | Screw  | Wrench | BLADE     |
|-------------|----------------|----|----|----|-----|----|----|--------|--------|--------|-----------|
|             | H              | B  | A  | A1 | L   | H2 | H4 |        |        |        |           |
| ISGTBU20-26 | 20             | 26 | 21 | 38 | 86  | 43 | 9  | BKU-86 | HTM630 | PL50   | ISGIH26-3 |
| ISGTBU25-26 | 25             | 26 | 23 | 40 | 86  | 43 | 4  |        |        |        | BKU-100   |
| ISGTBU20-32 | 20             | 32 | 21 | 40 | 110 | 50 | 13 |        |        |        |           |
| ISGTBU25-32 | 25             | 32 | 23 | 42 | 110 | 50 | 8  |        |        |        |           |



ISGTBV



| Item Code   | Dimensions, mm |    |    |    | L   | H2  | H4   | Clamp  | Screw  | Wrench | BLADE      |
|-------------|----------------|----|----|----|-----|-----|------|--------|--------|--------|------------|
|             | H              | B  | A  | A1 |     |     |      |        |        |        |            |
| ISGTBV25-26 | 25             | 25 | 26 | 42 | 125 | 4.4 | 12.6 | BKU-86 | HTM630 | PL50   | ISGIH26... |

### Specification

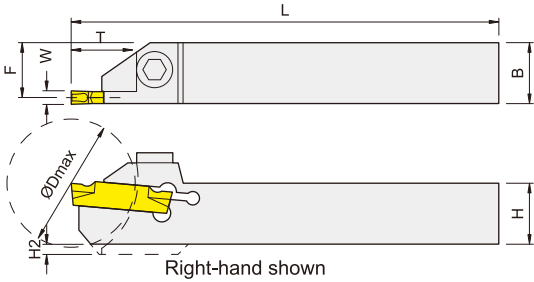
|         | P           | Steel           |        |        |  |  |                 |      |  |  | Cutting Type :  General  Interrupted |         |  |  |
|---------|-------------|-----------------|--------|--------|--|--|-----------------|------|--|--|--------------------------------------|---------|--|--|
|         | M           | Stainless steel |        |        |  |  |                 |      |  |  |                                      |         |  |  |
|         | K           | Cast iron       |        |        |  |  |                 |      |  |  |                                      |         |  |  |
| Inserts | Designation |                 | Grade  |        |  |  | Dimensions (mm) |      |  |  |                                      | Drawing |  |  |
|         |             |                 | CX30NS | CX40NS |  |  | w               | r    |  |  |                                      |         |  |  |
|         | TGTN 0220   |                 | ✓      | ✓      |  |  | 2.2             | 0.2  |  |  |                                      |         |  |  |
|         | TGTN 0310   |                 | ✓      | ✓      |  |  | 3.1             | 0.15 |  |  |                                      |         |  |  |

### Recommended Cutting Conditions

| Working Material        | Vc        | fz                 |
|-------------------------|-----------|--------------------|
| Carbon Steel (HB85-225) | 90 ~ 250  | 0.08 (0.06 ~ 0.12) |
| Stainless 300 Series    | 55 ~ 110  | 0.06 (0.06 ~ 0.12) |
| Cast Iron (HB140-220)   | 110 ~ 275 | 0.15 (0.06 ~ 0.12) |



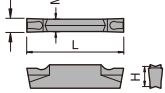
IKGM

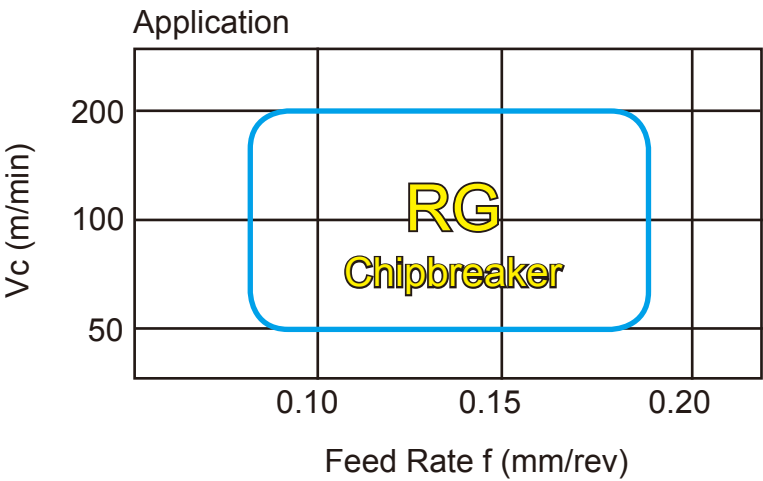


| Item Code             | Dimensions, mm |    |     |      |    | Windth W(mm) |     | Insert     | Screw  | Wrench |        |      |
|-----------------------|----------------|----|-----|------|----|--------------|-----|------------|--------|--------|--------|------|
|                       | H              | B  | L   | F    | T  | min          | max |            |        |        |        |      |
| IKGMR/L-1212K-1.5-L10 | 12             | 12 | 125 | 11.4 | 10 | 1.5          | 2.0 | GMM2020... | HTM416 | PL30   |        |      |
| IKGMR/L-1616K-1.5-L10 | 16             | 16 | 125 | 15.4 |    |              |     |            | HTM520 | PL40   |        |      |
| IKGMR/L-2020K-1.5-L10 | 20             | 20 | 125 | 19.4 |    |              |     |            | HTM525 | PL40   |        |      |
| IKGMR/L-2525M-1.5-L10 | 25             | 25 | 150 | 24.4 |    |              |     |            |        |        |        |      |
| IKGMR/L-1212K-2T-L10  | 12             | 12 | 125 | 11.1 | 10 | 2.0          | 3.0 |            | HTM416 | PL30   |        |      |
| IKGMR/L-1616K-2T-L10  | 16             | 16 | 125 | 15.1 |    |              |     |            | HTM520 | PL40   |        |      |
| IKGMR/L-2020K-2T-L10  | 20             | 20 | 125 | 19.1 |    |              |     |            | HTM525 | PL40   |        |      |
| IKGMR/L-2525M-2T-L10  | 25             | 25 | 150 | 24.1 |    |              |     |            |        |        |        |      |
| IKGMR/L-1212K-2T-L13  | 12             | 12 | 125 | 11.1 | 13 |              |     |            |        |        | HTM520 | PL40 |
| IKGMR/L-1616K-2T-L13  | 16             | 16 | 125 | 15.1 |    |              |     |            |        |        | HTM525 | PL40 |
| IKGMR/L-2020K-2T-L13  | 20             | 20 | 125 | 19.1 |    |              |     |            |        |        |        |      |
| IKGMR/L-2525K-2T-L13  | 25             | 25 | 150 | 24.1 |    |              |     |            |        |        |        |      |
| IKGMR/L-1212K-2T-L17  | 12             | 12 | 125 | 11.1 | 17 |              |     |            |        |        |        |      |
| IKGMR/L-1616K-2T-L17  | 16             | 16 | 125 | 15.1 |    |              |     |            |        |        |        |      |
| IKGMR/L-2020K-2T-L17  | 20             | 20 | 125 | 19.1 |    |              |     |            |        |        |        |      |
| IKGMR/L-2525M-2T-L17  | 25             | 25 | 150 | 24.1 |    |              |     |            |        |        |        |      |

Parting Inserts & Tools

Specification

|                                                                                  | P           | Steel           | General | Interrupted |  |  |  |                 |     | Cutting Type : General Interrupted |     |  |                                                                                     |  |
|----------------------------------------------------------------------------------|-------------|-----------------|---------|-------------|--|--|--|-----------------|-----|------------------------------------|-----|--|-------------------------------------------------------------------------------------|--|
|                                                                                  | M           | Stainless steel | General | Interrupted |  |  |  |                 |     |                                    |     |  |                                                                                     |  |
|                                                                                  | K           | Cast iron       | General | Interrupted |  |  |  |                 |     |                                    |     |  |                                                                                     |  |
| Inserts                                                                          | Designation |                 | Grade   |             |  |  |  | Dimensions (mm) |     |                                    |     |  | Drawing                                                                             |  |
|                                                                                  |             |                 | CX30NS  | CX40NS      |  |  |  | w               | r   | h                                  | m   |  |                                                                                     |  |
|  | GMM 2020-RG |                 | ✓       | ✓           |  |  |  | 2.2             | 2.0 | 4.3                                | 1.5 |  |  |  |



Recommended Cutting Conditions

| Working Material        | Vc       | fz          |
|-------------------------|----------|-------------|
| Carbon Steel (HB85-225) | 60 ~ 200 | 0.08 ~ 0.18 |
| Stainless 300 Series    | 60 ~ 150 |             |
| Cast Iron (HB140-220)   | 50 ~ 140 |             |

Turning Inserts Grade Comparison Chart 車刀片材質等級比較表

| ISO Code                    |     | CARBIDEX         | Mitsubishi                           | Sumiotmo                    | TaugeTec         | SECO                       |
|-----------------------------|-----|------------------|--------------------------------------|-----------------------------|------------------|----------------------------|
| <div>PSteel</div>           | P10 |                  | UE6110                               | AC810P                      | TT8105           | TP1500                     |
|                             | P20 | CX2565<br>CX2565 | MC6025<br>VP15TF<br>VP20RT           | AC820P<br>AC520U            | TT8115           | TP2500<br>CP250            |
|                             | P30 | CX2565<br>CX2555 | UE6035<br>VP15TF<br>VP20RT           | AC830P<br>AC530U            | TT8125<br>TT5100 | TP3500<br>CP500            |
|                             | P40 | CX3565<br>CX3555 | UE6035<br>UH6400                     | AP830P<br>AC530U            | TT8135<br>TT7100 | TP3500<br>CP500            |
| <div>MStainless Steel</div> | M10 |                  | VP10MF<br>MC7015                     | AC610M                      |                  | TP1500<br>TS2000           |
|                             | M20 | CX3565<br>CX3555 | VP15TF<br>VP20MF<br>US7020<br>MC7025 | AC610M<br>AC520U            | TT9215           | TM2000<br>TP2500<br>TS2500 |
|                             | M30 | CX3565<br>CX3555 | VP15TF<br>MP7035<br>MC7025<br>US735  | AC6030M<br>AC630M<br>AC530U | TT9225           | TM4000<br>TP3500<br>CP500  |
|                             | M40 |                  | MP7035<br>US735                      | AC6040M<br>AC530U           | TT9235<br>TT8020 | TM4000                     |
| <div>KCast Iron</div>       | K01 |                  | MC5005                               | AC405K                      | TT7005           |                            |
|                             | K10 | CX2565           | UC5015                               | AC415K                      | TT7015<br>TT7310 | TK1000<br>TS2000           |
|                             | K20 | CX2565<br>CX2555 | VP15TF<br>UC5115                     | AC420K                      |                  | TK2000<br>CP500            |
|                             | K30 |                  | VP15TF<br>UE6110                     |                             |                  |                            |

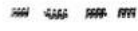
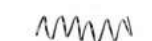
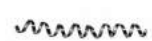
The above table is selected from a publication for reference only, which is not obtained approval from each brand.

## Cutting Tools Evaluation Report

切削報告

|                    |                        |                                                          |                                                          |                                                          |                                                          |                                                          |
|--------------------|------------------------|----------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|
| Company            |                        |                                                          | Department                                               |                                                          | Name of Contact                                          |                                                          |
| Address            |                        |                                                          | TEL                                                      |                                                          | Date                                                     |                                                          |
| Material           | Material Name          |                                                          | Remark:                                                  |                                                          |                                                          |                                                          |
|                    | Hardness               |                                                          |                                                          |                                                          |                                                          |                                                          |
|                    | Number/mooth           |                                                          |                                                          |                                                          |                                                          |                                                          |
| Machine            | CNC Machine            |                                                          |                                                          |                                                          |                                                          |                                                          |
|                    | Power                  |                                                          |                                                          |                                                          |                                                          |                                                          |
| Tools              | Brand                  |                                                          |                                                          |                                                          |                                                          |                                                          |
|                    | Type                   |                                                          |                                                          |                                                          |                                                          |                                                          |
|                    | Grade                  |                                                          |                                                          |                                                          |                                                          |                                                          |
|                    | Tool diameter          |                                                          |                                                          |                                                          |                                                          |                                                          |
|                    | Tool teeth             |                                                          |                                                          |                                                          |                                                          |                                                          |
| Cutting Conditions | N (rpm)                |                                                          |                                                          |                                                          |                                                          |                                                          |
|                    | Vc (m/min)             |                                                          |                                                          |                                                          |                                                          |                                                          |
|                    | fz (mm/rev 、 mm/tooth) |                                                          |                                                          |                                                          |                                                          |                                                          |
|                    | F (mm/min)             |                                                          |                                                          |                                                          |                                                          |                                                          |
|                    | Ad×Rd (mm)             |                                                          |                                                          |                                                          |                                                          |                                                          |
|                    | Cutting time (mm/pcs)  |                                                          |                                                          |                                                          |                                                          |                                                          |
|                    | Wet / Dry              |                                                          |                                                          |                                                          |                                                          |                                                          |
| Results            | Tool Life Criterion    |                                                          |                                                          |                                                          |                                                          |                                                          |
|                    | Chips Types            |                                                          |                                                          |                                                          |                                                          |                                                          |
| Appraise           | Overall Rating         |                                                          |                                                          |                                                          |                                                          |                                                          |
|                    | Accept                 | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No |

|                     |                            |
|---------------------|----------------------------|
| Tool Life Criterion | ① Change constant          |
|                     | ② Surface roughness        |
|                     | ③ Dimensional change       |
|                     | ④ Happen burr              |
|                     | ⑤ Spindle load             |
|                     | ⑥ Situation of tip control |
|                     | ⑦ Tool wear                |
|                     | ⑧ Chipping, breaks         |

|             |                                                                                        |                                                                                         |
|-------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Chips Types | ①  | ⑥  |
|             | ②  | ⑦  |
|             | ③  | ⑧  |
|             | ④  | ⑨  |
|             | ⑤  |                                                                                         |





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