UKAS MANAGEMENT SYSTEMS
ISO 9001

WINSTAR

Metalworking Tools

2017~2018 Catalogue



Winstar
Cutting Technologies

Vol. 18.1

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




globalgroup
social | ethical | objective

Certificate of Registration

This is to certify that the
QUALITY MANAGEMENT SYSTEM
of
WINSTAR Cutting Technologies Corp.
No. 10, Gongye 6th Road, Taiwan Technology Industrial Park, Taiwan City, TAINAN, R.O.C.
for
Design, Manufacture and Sales of Carbide Inserts and Cutting Tools
has been assessed and registered against the provisions of
ISO 9001:2008
International Standard
With

A

WinMills
Solid Carbide Endmills

A001 ~ A232



B

CARBIDEX
Indexable Milling & Turning

B001 ~ B186



C

DRIX
Holemaking Tools

C001 ~ C108



UKAS MANAGEMENT SYSTEMS
ISO 9001

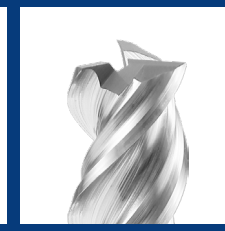
WinMills Solid Carbide Endmills











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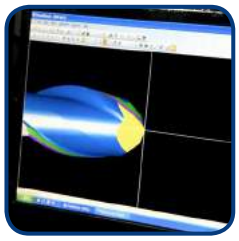




Winstar
Cutting Technologies

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H700 Series for Hardened steel, up to HRC 70

- For hardened steel, HRC ~70.
- Ultra grain carbide.
- High speed cutting.
- SICO, NACO coating.

- 高硬材質加工專用， ~HRC70。
- 進口極細鎢鋼棒料。
- 適用於高速加工。
- 提供 SICO 及 NACO 塗層。



H680 Series for Hardened steel, up to HRC 65

- For hardened steel, HRC 50~65.
- Ultra grain carbide.
- High precision and high performance.
- SICO-TH coating.

- 高硬高精加工專用，HRC50 ~65。
- 進口極細鎢鋼棒料。
- 適用於高精度及高效率加工。
- 提供 SICO-TH 塗層。



H650 Series for Hardened steel, up to HRC 60

- For hardened steel, HRC 40~60.
- Ultra grain carbide.
- SICO, ARCO coating.

- 高硬材質加工專用，HRC40 ~60。
- 進口極細鎢鋼棒料。
- 提供 SICO, ARCO 塗層。



G550 Series for Mold & Alloy steel, up to HRC 55

- For mold steel, alloy steel & cast iron, HRC 30~55.
- Micro grain carbide.
- UNICO coating.

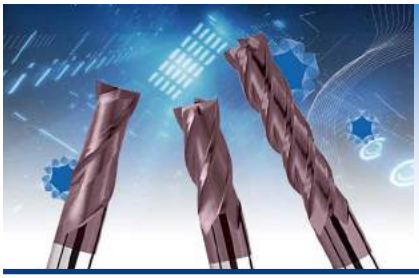
- 模具鋼及合金鋼加工專用，適用於預硬鋼、合金鋼、鑄鐵…，HRC30~55。
- 進口鎢鋼棒料。
- 提供 UNICO 塗層。



EUROS Series for High Feed Milling

- High feed & multiple application, for hardened & pre-hardened steel, Stainless, up to HRC 60.
- Tip with small chamfer or small radius design.
- UNICO, SICO coating.

- 多用途高進給加工專用，適用於高硬材質、預硬鋼、不鏽鋼加工用，HRC ~ 60。
- 刀尖小倒角或小圓角設計。
- 提供 UNICO, SICO 塗層。



G450 Series for Steel, up to HRC 48

- For steel, alloy steel, cast iron, aluminum alloy (Si>15%), HRC 15~48.
- Micro grain carbide.
- UNICO coating.
- 泛用材質加工專用，一般碳鋼、合金鋼、鑄鐵、鋁合金…，HRC15~48。
- 進口鎢鋼棒料。
- 提供 UNICO 塗層。



M500 Series for Stainless, Titanium & Inconel

- For stainless steel, difficult-to-cut material, HRC 20~50.
- Mold steel finishing.
- ARCO coating.
- 不鏽鋼、難切削材專用，HRC20~50。
- 模具鋼精修用。
- 提供 ARCO 塗層。



A200 Series for Graphite

- For Graphite.
- Micro grain carbide.
- DIA diamond coating.
- 石墨專用。
- 進口鎢鋼棒料。
- 提供 DIA 鑽石塗層。



A100 Series for Aluminum Alloy

- For non-ferrous, aluminum, aluminum alloy, copper, HRC<18.
- Micro grain carbide.
- High Helix offers excellent and stable finished surfaces.
- 非鐵金屬、鋁合金、銅專用，HRC<18。
- 進口鎢鋼棒料。
- 高螺旋設計提供優異穩定的成品表面。



WinMaster Series Replaceable Endmills

- For ordinary steel, alloy steel, cast iron, HRC 40~60.
- Micro grain carbide.
- SICO coating.
- Replaceable Endmills.
- 泛用材質加工專用，一般碳鋼、合金鋼、鑄鐵…，HRC40~60。
- 進口鎢鋼棒料。
- 提供 SICO 塗層。
- 鎖牙式銑刀。

ICONS Guide 標記說明

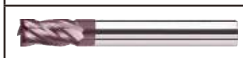
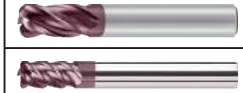
Micro Grain	MG
Ultra Micro Grain	UMG
Ultra Micro Grain 0.4μm	UMG 0.4μm
Helix Angle	30°
Material Hardness	HRC 35
Unequal	
Variable Helix	Varix
UNICO Coated	UNICO
ARCO Coated	ARCO

SICO Coated	SICO
SICO-TH Coated	SICO-TH
DIA Coated	DIA
Sharp Corner Type	
Flatland Type	
Chamfer Type	C
Corner Radius	R
Square Type 2F	
Square Type 3F	

Square Type 4F	
Square Type 6F	
Square Type 8F	
Ball Nose 2F	
Ball Nose 4F	
Corner Radius 2F	
Corner Radius 4F	

Appearance	Series	Code No .	Ø Range	Num.of Teeth	Helix Angle	Coating	Working Materials P	M	K	N	S	H	Page
H700 Series *for Hardened steel, up to HRC 70*													
	High Helix Square Type - 6F 鎢鋼平銑刀 - 高導型 - 6 刃	EHSSS6	Ø6~Ø14	6	45°	SICO	√	√	√			√	A008
	High Helix Square Type - 8F 鎢鋼平銑刀 - 高導型 - 8 刃	EHSSS8	Ø16~Ø20	8	45°	SICO	√	√	√			√	A008
	High Helix & Short Flute Square Type - 4F 鎢鋼平銑刀 - 高導短刃型 - 4 刃	EHSPS4, EHSUS4	Ø1~Ø5	4	45°	SICO	√	√	√			√	A009
	High Helix & Short Flute Square Type - 6F 鎢鋼平銑刀 - 高導短刃型 - 6 刃	EHSUS6	Ø6~Ø12	6	45°	SICO	√	√	√			√	A009
	High Helix & Short Flute Square Type - 8F 鎢鋼平銑刀 - 高導短刃型 - 8 刃	EHSUS8	Ø16~Ø20	8	45°	SICO	√	√	√			√	A009
	Low Helix & Short Flute Ball Nose Type - 2F 鎢鋼球型銑刀 - 低導短刃型 - 2 刃	EHBPS2, EHBUS2	0.5R~8R	2	15°	SICO	√	√	√			√	A010
	High Speed & High Feed Corner Radius Type - 4F 鎢鋼圓鼻銑刀 - 高進給直刃型 -4 刃	EHCUK4	0.5R~2R	4	0°	SICO	√		√			√	A011
	Straight Short Flute Corner Radius Type - 4F 鎢鋼圓鼻銑刀 - 直短刃型 - 4 刃	EHCPS4, EHCUS4	Ø1~Ø12	4	0°	SICO	√	√	√			√	A012
H680 Series *for Hardened steel, up to HRC 65 (High Precision Cutting)*													
	Square Type - 4F 鎢鋼平銑刀 - 標準型 - 4 刃	EHSFF4, EHSSF4	Ø1~Ø12	4	45°	SICO-TH	√	√	√			√	A014
	Long Shank Square Type - 4F 鎢鋼平銑刀 - 長柄型 - 4 刃	EHSLF4, EHSMF4 EHSNF4	Ø4~Ø12	4	45°	SICO-TH	√	√	√			√	A015
	Ball Nose Type - 2F 鎢鋼球型銑刀 - 標準型 - 2 刃	EHBFF2, EHBSF2	0.5R~6R	2	30°	SICO-TH	√	√	√			√	A016
	Long Shank Ball Nose Type - 2F 鎢鋼球型銑刀 - 長柄型 - 2 刃	EHBLF2, EHBNF2 EHBMF2	2R~6R	2	30°	SICO-TH	√	√	√			√	A017
	Short Flute Ball Nose Type - 2F 鎢鋼球型銑刀 - 短刃型 - 2 刃	EHBPF2, EHBUF2	0.5R~6R	2	30°	SICO-TH	√	√	√			√	A018
	Corner Radius Type - 4F 鎢鋼圓鼻銑刀 - 標準型 - 4 刃	EHCSF4	Ø3~Ø12	4	30°	SICO-TH	√	√	√			√	A019
	Long Shank Corner Radius Type - 4F 鎢鋼圓鼻銑刀 - 長柄型 - 4 刃	EHCLF4, EHCMF4 EHCNF4	Ø4~Ø12	4	30°	SICO-TH	√	√	√			√	A020

Appearance	Series	Code No .	Ø Range	Num.of Teeth	Helix Angle	Coating	Working Materials P	M	K	N	S	H	Page
H650 Series *for Hardened steel, up to HRC 60*													
	Square Type - 2F 鎢鋼平銑刀 - 標準型 - 2 刃	EHSFA2, EHSSA2	Ø1~Ø20	2	30°	ARCO	√	√	√			√	A022
	Square Type - 4F 鎢鋼平銑刀 - 標準型 - 4 刃	EHSFA4, EHSSA4	Ø1~Ø20	4	30°	ARCO	√	√	√			√	A023
	High Helix Square Type - 4F 鎢鋼平銑刀 - 高導型 - 4 刃	EHSFH4, EHSSH4	Ø1~Ø20	4	45°	ARCO	√	√	√			√	A024
	High Helix & Long Shank Square Type - 4F 鎢鋼平銑刀 - 高導長柄型 - 4 刃	EHSLH4, EHSMH4 EHSNH4	Ø3~Ø20	4	45°	ARCO	√	√	√			√	A025
	Long Neck Square Type - 2F 鎢鋼平銑刀 - 長頸型 - 2 刃	EHSBC2, EHSRC2	Ø0.2~Ø12	2	30°	ARCO	√	√	√			√	A026 ~ A031
	Long Neck Square Type - 4F 鎢鋼平銑刀 - 長頸型 - 4 刃	EHSBC4, EHSRC4	Ø1~Ø12	4	30°	ARCO	√	√	√			√	A032 ~ A034
	Ball Nose Type - 2F 鎢鋼球型銑刀 - 標準型 - 2 刃	EHBFH2, EHBSH2	0.5R~8R	2	30°	ARCO	√	√	√			√	A035
	Long Shank Ball Nose Type - 2F 鎢鋼球型銑刀 - 長柄型 - 2 刃	EHBLH2, EHBMH2 EHBNH2	1R~10R	2	30°	ARCO	√	√	√			√	A036
	Short Flute Ball Nose Type - 2F 鎢鋼球型銑刀 - 短刃型 - 2 刃	EHBUH2	1R~8R	2	27°	SICO	√	√	√			√	A037
	Long Neck Ball Nose Type - 2F 鎢鋼球型銑刀 - 長頸型 - 2 刃	EHBBC2, EHBRC2	0.15R~6R	2	30°	ARCO	√	√	√			√	A038 ~ A042
	Taper Neck Ball Nose Type - 2F 鎢鋼球型銑刀 - 斜頸型 - 2 刃	EHBRT2	1R~6R	2	30°	ARCO	√	√	√			√	A043
	Corner Radius Type - 4F 鎢鋼圓鼻銑刀 - 標準型 - 4 刃	EHCFH4, EHCSH4	Ø4~Ø12	4	30°	ARCO	√	√	√			√	A044
	Long Shank Corner Radius Type - 4F 鎢鋼圓鼻銑刀 - 長柄型 - 4 刃	EHCLH4, EHCMH4 EHCNH4	Ø4~Ø12	4	30°	ARCO	√	√	√			√	A045
	Short Flute Corner Radius Type - 4F 鎢鋼圓鼻銑刀 - 短刃型 - 4 刃	EHCUH4	Ø3~Ø12	4	30°	SICO	√	√	√			√	A046
	Long Neck Corner Radius Type - 2F 鎢鋼圓鼻銑刀 - 長頸型 - 2 刃	EHCBC2, EHCRC2	Ø1~Ø12	2	30°	ARCO	√	√	√			√	A047 ~ A053
	Long Neck Corner Radius Type - 4F 鎢鋼圓鼻銑刀 - 長頸型 - 4 刃	EHCBC4, EHCRC4	Ø2~Ø12	4	30°	ARCO	√	√	√			√	A054 ~ A058
	Double Corner High Feed EndMill - 4 / 6F 鎢鋼圓鼻銑刀 - 高進給型 - 4 / 6 刃	EHWSA4, EHWSA6	Ø6~Ø12	6	38°	SICO	√	√	√			√	A059
EUROS Series *for High Feed Milling, up to HRC 60*													
	High Feed Square Type - 4F 鎢鋼平銑刀 - 高進給倒角型 - 4 刃	EUSFA4, EUSSA4	Ø3~Ø16	4	30°	UNICO	√	√	√			√	A062
	EUROS - Toric Square Type - 4F 鎢鋼平銑刀 - 高進給圓角型 - 4 刃	EUSFR4, EUSSR4	Ø3~Ø16	4	40°	UNICO	√	√	√		√	√	A063
	EUROS - Toric Square Type - 4F 鎢鋼平銑刀 - 高進給圓角型 - 4 刃	EUSFH4, EUSSH4	Ø3~Ø16	4	40°	SICO	√	√	√		√	√	A064

Appearance	Series	Code No .	Ø Range	Num.of Teeth	Helix Angle	Coating	Working Materials P	M	K	N	S	H	Page
G550 Series *for Mold & Alloy steel, up to HRC 55*													
	Square Type - 2F 鎢鋼平銑刀 - 標準型 - 2 刃	EPSFC2, EPSSC2	Ø0.2~Ø25	2	30°	UNICO	√	√	√			√	A066
	Square Type - 3F 鎢鋼平銑刀 - 標準型 - 3 刃	EPSFC3, EPSSC3	Ø1~Ø25	3	30°	UNICO	√	√	√			√	A067
	Square Type - 4F 鎢鋼平銑刀 - 標準型 - 4 刃	EPSFC4, EPSSC4	Ø1~Ø25	4	30°	UNICO	√	√	√			√	A068
	Anti-Vibration Square Type - 4F 鎢鋼平銑刀 - 抗震不等型 - 4 刃	EPSSD4	Ø5~Ø16	4	30°	UNICO	√	√	√			√	A069
	High Helix Square Type - 4F 鎢鋼平銑刀 - 高導型 - 4 刃	EPSFH4, EPSSH4	Ø3~Ø16	4	45°	UNICO	√	√	√			√	A070
	Long Flute Square Type - 4F 鎢鋼平銑刀 - 長刃型 - 4 刃	EPSCC4	Ø3~Ø25	4	35°	UNICO	√	√	√			√	A071
	High Helix Square Type - 6F 鎢鋼平銑刀 - 高導型 - 6 刃	EPSSH6, EPSCH6	Ø6~Ø16	6	45°	UNICO	√	√	√			√	A072
	Long Shank Square Type - 2F 鎢鋼平銑刀 - 長柄型 - 2 刃	EPSLC2, EPSMC2 EPSNC2	Ø4~Ø20	2	30°	UNICO	√	√	√			√	A073
	Long Shank Square Type - 4F 鎢鋼平銑刀 - 長柄型 - 4 刃	EPSLC4, EPSMC4 EPSNC4	Ø3~Ø20	4	30°	UNICO	√	√	√			√	A074
	Roughing Square Type - 4F 鎢鋼平銑刀 - 粗銑型 - 4 刃	EPSRR4	Ø6~Ø20	4	30°	UNICO	√	√	√			√	A075
	Long Neck Square Type - 2F 鎢鋼平銑刀 - 長頸型 - 2 刃	EPSBC2, EPSRC2	Ø0.2~Ø12	2	30°	UNICO	√	√	√			√	A076 ~ A081
	Long Neck Square Type - 4F 鎢鋼平銑刀 - 長頸型 - 4 刃	EPSBC4, EPSRC4	Ø1~Ø12	4	30°	UNICO	√	√	√			√	A082 ~ A084
	Taper Square Type - 2F 鎢鋼平銑刀 - 斜度型 - 2 刃	EPSFT2, EPSST2	Ø1~Ø10	2	35°	UNICO	√	√	√			√	A085 ~ A087
	Ball Nose Type - 2F 鎢鋼球型銑刀 - 標準型 - 2 刃	EPBFC2, EPBSC2	0.1R~10R	2	30°	UNICO	√	√	√			√	A088
	Ball Nose Type - 4F 鎢鋼球型銑刀 - 標準型 - 4 刃	EPBFC4, EPBSC4	1R~10R	4	30°	UNICO	√	√	√			√	A089
	Long Shank Ball Nose Type - 2F 鎢鋼球型銑刀 - 長柄型 - 2 刃	EPBLC2, EPBMC2 EPBNC2	1.5R~10R	2	30°	UNICO	√	√	√			√	A090
	Long Shank Ball Nose Type - 4F 鎢鋼球型銑刀 - 長柄型 - 4 刃	EPBLC4, EPBMC4 EPBNC4	2R~8R	4	30°	UNICO	√	√	√			√	A091
	Long Neck Ball Nose Type - 2F 鎢鋼球型銑刀 - 長頸型 - 2 刃	EPBBC2, EPBRC2	0.15R~6R	2	30°	UNICO	√	√	√			√	A092 ~ A096
	Taper Ball Nose Type - 2F 鎢鋼球型銑刀 - 斜度型 - 2 刃	EPBFT2, EPBST2	1R~3R	2	30°	UNICO	√	√	√			√	A097
	Taper Neck Ball Nose Type - 2F 鎢鋼球型銑刀 - 斜頸型 - 2 刃	EPBRT2	0.5R~2R	2	30°	UNICO	√	√	√			√	A098
	Corner Radius Type - 2F 鎢鋼圓鼻銑刀 - 標準型 - 2 刃	EPCSC2	Ø4~Ø12	2	30°	UNICO	√	√	√			√	A099
	Corner Radius Type - 4F 鎢鋼圓鼻銑刀 - 標準型 - 4 刃	EPCSC4	Ø1~Ø12	4	30°	UNICO	√	√	√			√	A100
	High Helix Corner Radius Type - 4F 鎢鋼圓鼻銑刀 - 高導型 - 4 刃	EPCSH4	Ø3~Ø12	4	45°	UNICO	√	√	√			√	A101
	Long Shank Corner Radius Type - 4F 鎢鋼圓鼻銑刀 - 長柄型 - 4 刃	EPCLC4	Ø4~Ø16	4	30°	UNICO	√	√	√			√	A102
	Long Neck Corner Radius Type - 2F 鎢鋼圓鼻銑刀 - 長頸型 - 2 刃	EPCBC2, EPCRC2	Ø1~Ø12	2	30°	UNICO	√	√	√			√	A103 ~ A109
	Long Neck Corner Radius Type - 4F 鎢鋼圓鼻銑刀 - 長頸型 - 4 刃	EPCBC4, EPCRC4	Ø2~Ø12	4	30°	UNICO	√	√	√			√	A110 ~ A114
	Taper Neck Corner Radius Type - 2F 鎢鋼圓鼻銑刀 - 斜頸型 - 2 刃	EPCRT2	Ø1~Ø6	2	30°	UNICO	√	√	√			√	A115 ~ A116
	Inner Radius Type - 2F / 4F 鎢鋼內 R 角銑刀 - 2 / 4 刃	EPIFA2, EPISA2 EPIFA4, EPISA4	0.5R~6R	2	0°	UNICO	√	√	√				A117

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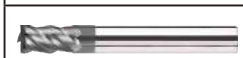
Appearance	Series	Code No .	Ø Range	Num.of Teeth	Helix Angle	Coating	Working Materials P	M	K	N	S	H	Page
G450 Series *for Alloy Steel, up to HRC 48*													
	Square Type - 2F 鎢鋼平銑刀 - 標準型 - 2 刃	EPSFA2, EPSSA2	Ø1~Ø25	2	35°	UNICO	√	√	√				A120
	Square Type - 4F 鎢鋼平銑刀 - 標準型 - 4 刃	EPSFA4, EPSSA4	Ø1~Ø25	4	35°	UNICO	√	√	√				A121
	Long Flute Square Type - 4F 鎢鋼平銑刀 - 長刃型 - 4 刃	EPSCA4	Ø3~Ø25	4	35°	UNICO	√	√	√				A122
	Long Shank SquareType - 2F 鎢鋼平銑刀 - 長柄型 - 2 刃	EPSLA2, EPSMA2 EPSNA2	Ø4~Ø16	2	30°	UNICO	√	√	√				A123
	Long Shank Square Type - 4F 鎢鋼平銑刀 - 長柄型 - 4 刃	EPSLA4, EPSMA4 EPSNA4	Ø4~Ø20	4	30°	UNICO	√	√	√				A124
M500 Series *for Stainless, Titanium & Inconel*													
	Square Type - 2F 鎢鋼平銑刀 - 標準型 - 2 刃	ESSFA2, ESSSA2	Ø3~Ø16	2	35°	ARCO	√	√			√	√	A126
	Square Type - 4F 鎢鋼平銑刀 - 標準型 - 4 刃	ESSFA4, ESSSA4	Ø3~Ø16	4	35°	ARCO	√	√			√	√	A127
	High Helix Square U Type - 4F 鎢鋼平銑刀 - 高導高效能 U 型 - 4 刃	ESSFB4, ESSSB4	Ø4~Ø16	4	45°	ARCO	√	√			√	√	A128
	Varix & Anti-Vibration Square U Type - 4F 鎢鋼平銑刀 - 抗震變導高效能 U 型 - 4 刃	ESSFU4, ESSSU4	Ø4~Ø16	4	35 & 38°	ARCO	√	√			√	√	A129
	High Helix & Anti-Vibration Square U Type - 4F 鎢鋼平銑刀 - 高導抗震高效能 U 型 - 4 刃	ESSSM4	Ø8~Ø16	4	52°	ARCO	√	√			√	√	A130
	Anti-Vibration Square Type - 4F 鎢鋼平銑刀 - 抗震不等 SD 型 - 4 刃	ESSSD4	Ø5~Ø16	4	35°	ARCO	√	√			√	√	A131
	Varix & Anti-Vibration Square Type - 4F 鎢鋼平銑刀 - 抗震變導 SV 型 - 4 刃	ESSSV4	Ø4~Ø16	4	35 & 38°	ARCO	√	√			√	√	A132
	Wave Edge Square Type - 3F 鎢鋼平銑刀 - 波浪型 - 3 刃	ESSSW3	Ø6~Ø20	3	30°	ARCO	√	√			√	√	A133
	Wave Edge Square Type - 4F 鎢鋼平銑刀 - 波浪型 - 4 刃	ESSSW4	Ø6~Ø20	4	30°	ARCO	√	√			√	√	A134
	Ball Nose Type - 2F 鎢鋼球型銑刀 - 標準型 - 2 刃	ESBFA2, ESBSA2	1R~8R	2	30°	ARCO	√	√			√	√	A135
	Corner Radius Type - 4F 鎢鋼圓鼻銑刀 - 標準型 - 4 刃	ESCSA4	Ø3~Ø12	4	30°	ARCO	√	√			√	√	A136
	High Helix & Anti-Vibration Corner Radius U Type - 4F 鎢鋼圓鼻銑刀 - 高導抗震高效能 U 型 - 4 刃	ESCSM4	Ø8~Ø16	4	52°	ARCO	√	√			√	√	A137
	Varix & Anti-Vibration Corner Radius Type - 4F 鎢鋼圓鼻銑刀 - 抗震變導 SV 型 - 4 刃	ESCSV4	Ø4~Ø16	4	35 & 38°	ARCO	√	√			√	√	A138

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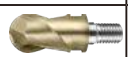
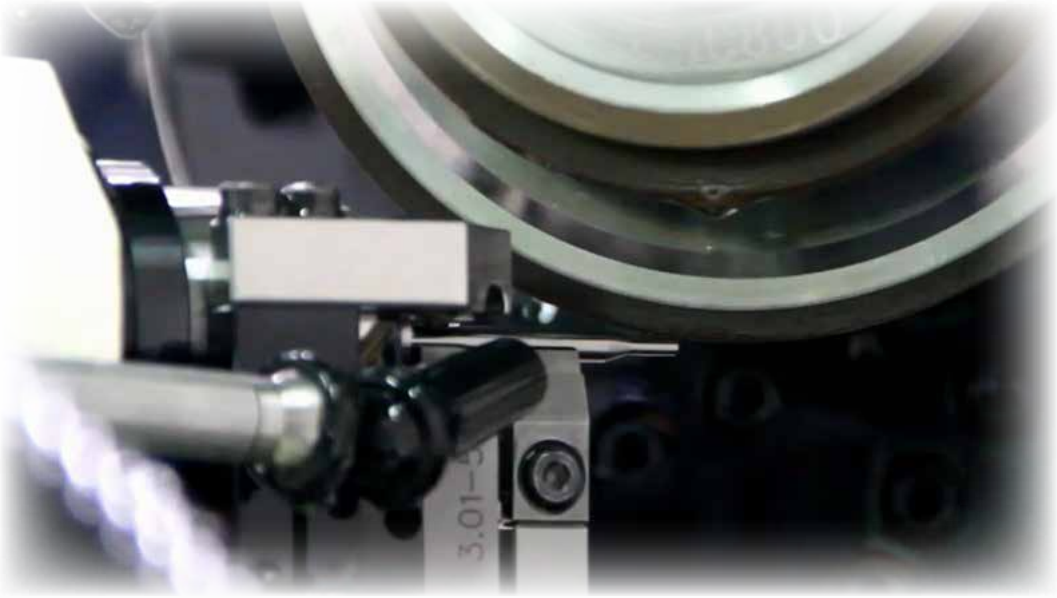
Appearance	Series	Code No .	Ø Range	Num.of Teeth	Helix Angle	Coating	Working Materials P	M	K	N	S	H	Page
A200 Series for Graphite													
	Square Type - 4F 鎢鋼平銑刀 - 標準型 - 4 刃	EGSFC4	Ø3~Ø12	4	30°	DIA				√			A140
	Long Flute Square Type - 4F 鎢鋼平銑刀 - 長刃型 - 4 刃	EGSCC4	Ø3~Ø12	4	30°	DIA				√			A141
	Long Shank Square Type - 4F 鎢鋼平銑刀 - 長柄型 - 4 刃	EGSEC4, EGSLC4	Ø4~Ø12	4	30°	DIA				√			A142
	Long Neck Square Type - 2F 鎢鋼平銑刀 - 長頸型 - 4 刃	EGSBC2, EGSRC2	Ø0.5~Ø6	2	30°	DIA				√			A143
	Ball Nose Type - 2F 鎢鋼球型銑刀 - 標準型 - 2 刃	EGBFC2, EGBSC2	0.1R~6R	2	30°	DIA				√			A144
	Long Shank Ball Nose Type - 2F 鎢鋼球型銑刀 - 長柄型 - 2 刃	EGBEC2, EGBLC2	2R~6R	2	30°	DIA				√			A145
	Long Neck Ball Nose Type - 2F 鎢鋼球型銑刀 - 長頸型 - 2 刃	EGBBC2, EGBRC2	0.25R~3R	2	30°	DIA				√			A146
	Corner Radius Type - 4F 鎢鋼圓鼻銑刀 - 標準型 - 4 刃	EGCFC4, EGCSC4	Ø3~Ø12	4	30°	DIA				√			A147
	Long Shank Corner Radius Type - 4F 鎢鋼圓鼻銑刀 - 長柄型 - 4 刃	EGCEC4, EGCLC4	Ø4~Ø12	4	30°	DIA				√			A148
	Long Neck Corner Radius Type - 2F 鎢鋼圓鼻銑刀 - 長頸型 - 2 刃	EGCBC2, EGCRC2	Ø1~Ø6	2	30°	DIA				√			A149
A100 Series for Aluminium Alloy													
	Square Type - 2F 鎢鋼平銑刀 - 標準型 - 2 刃	ENSFS2, ENSSS2	Ø1~Ø20	2	45°					√			A152
	Square Type - 3F 鎢鋼平銑刀 - 標準型 - 3 刃	ENSFS3, ENSSS3	Ø2~Ø20	3	45°					√			A153
	Square & Long Flute Type - 3F 鎢鋼平銑刀 - 長刃型 - 3 刃	ENSCS3	Ø3~Ø20	3	45°					√			A154
	Square & High Helix Type - 3F 鎢鋼平銑刀 - 高導型 - 3 刃	ENSSH3	Ø4~Ø16	3	55°					√			A155
	High Performance Square Type - 3F (for side milling) 鎢鋼平銑刀 - 高效能型 - 3 刃	ENSSB3	Ø4~Ø20	3	45°					√			A156
	Fine-Finishing Square Type - 3F 鎢鋼平銑刀 - 高光鏡面型 - 3 刃	ENSSP3	Ø6~Ø16	3	45°					√			A157
	Ball Nose Type - 2F 鎢鋼球型銑刀 - 標準型 - 2 刃	ENBFA2, ENBSA2	0.5R~8R	2	35°					√			A158
WinMaster Series Replaceable Endmills, up to HRC 60													
	Anti-Vibration Square Type - 4F 鎢鋼平銑刀 - 鎖牙式抗震 PD 型 - 4 刃	EPSWH4	Ø10~Ø20	4	30°	SICO	√	√	√	√		√	A160
	Ball Nose Type - 2F 鎢鋼球型銑刀 - 鎖牙式標準型 - 2 刃	EPBWH2	5R~10R	2	30°	SICO	√	√	√	√		√	A161
	Anti-Vibration Corner Radius Type - 4F 鎢鋼圓鼻銑刀 - 鎖牙式抗震 PD 型 - 4 刃	EPCWH4	Ø10~Ø20	4	30°	SICO	√	√	√	√		√	A162
	Carbide Extension Adapter (Anti-Vibration) 鎢鋼鎖牙式抗震延長桿	SWSEA	M5~M12										A163
	Carbide Extension Adapter (Anti-Vibration) 鎢鋼鎖牙式抗震延長桿	SWSEB	M6~M12										A164
	Carbide Extension Adapter (Anti-Vibration) 鎢鋼鎖牙式抗震延長桿	SWTEA	M5~M12										A165

WINSTAR

Endmills · Inserts · Drills





Winstar
Cutting Technologies

H700 Series for Hardened steel, up to HRC 70



- Ultra grain carbide rods with better abrasion resistance.
- SICO coating with anti-high temperature & anti-oxidation.
- Large core diameter promotes its rigidity of the tool.
- Negative rake angle design is suitable for machining hardened material.
- Tough cutting edge and more flute bring extreme high milling speed and excellent finishing surface.
- We also provide NACO coating.

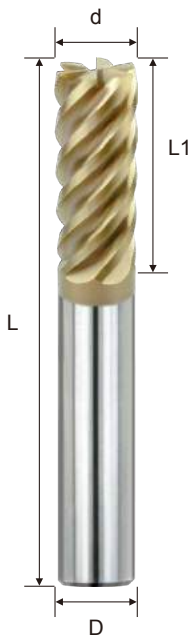
H700 - High Helix Square Type - 6F / 8F

鎢鋼平銑刀 - 高導型 - 6/8 刃

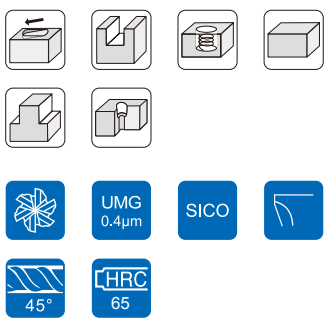
- SICO Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Horsepower consumption will be decreased with greater shearing action.
- High Helix and 6 Flutes design gives a good finishing surface.
- The coating can change to TOP ARCO, the prices will differ.

EHSSS6
EHSSS8

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EHSSS606000S	6	15	50	6	6
EHSSS608000S	8	20	60	8	6
EHSSS610000S	10	25	75	10	6
EHSSS612000S	12	30	75	12	6
EHSSS614000S	14	30	75	14	6
EHSSS816000S	16	40	100	16	8
EHSSS818000S	18	40	100	18	8
EHSSS820000S	20	45	100	20	8



d	Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03

Cutting conditions（建議切削參數表）: Table 001

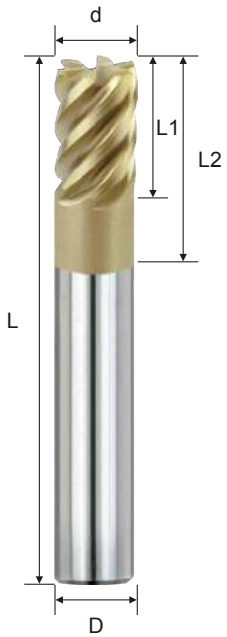
Winstar Cutting Technologies

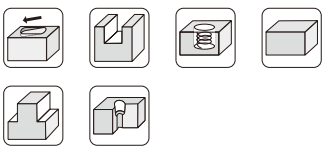
H700 - High Helix & Short Flute Square Type - 4F / 6F / 8F 鎢鋼平銑刀 - 高導短刃型 - 4/6/8 刃

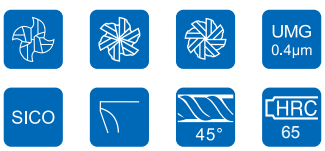
- SICO Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Greater shearing action results in increased speeds and feeds and faster stock removal.
- Prevents clogging of the flutes.
- The coating can change to TOP ARCO, the prices will differ.

EHSPS4
EHSUS4
EHSUS6
EHSUS8

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑







d	Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHSPS401000S	1	1.5	2.5	50	4	4
EHSPS402000S	2	3.0	5.0	50	4	4
EHSUS403000S	3	4.5	7.5	50	6	4
EHSUS404000S	4	6.0	10.0	50	6	4
EHSUS405000S	5	7.5	12.5	50	6	4
EHSUS606000S	6	9.0	15.0	50	6	6
EHSUS608000S	8	12.0	20.0	60	8	6
EHSUS610000S	10	15.0	25.0	75	10	6
EHSUS612000S	12	18.0	30.0	75	12	6
EHSUS816000S	16	24.0	40.0	100	16	8
EHSUS820000S	20	30.0	50.0	100	20	8

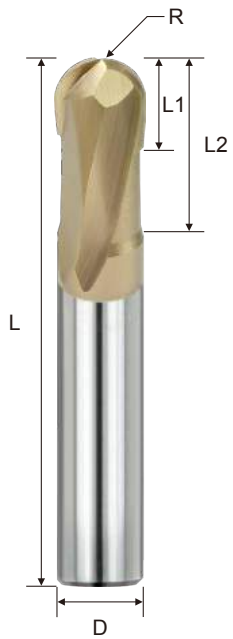
Cutting conditions（建議切削參數表）: Table 002

H700 - Low Helix & Short Flute Ball Nose Type - 2F　鎢鋼球型銑刀－低導短刃型－ 2 刃

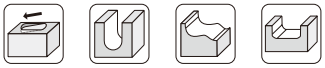
- SICO Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Due to short cutting length it provides an excellent surface roughness of the work pieces.
- Low helix design is suitable for hardened steel cutting.
- The coating can change to TOP ARCO, the prices will differ.

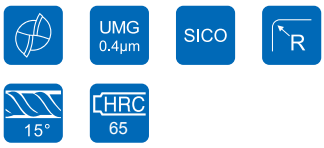
EHBPS2
EHBUS2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHBPS201000S	0.50R	1.0	1.0	2	50	4	2
EHBPS201500S	0.75R	1.5	1.5	3	50	4	2
EHBUS202000S	1.00R	2.0	2.0	4	50	6	2
EHBUS203000S	1.50R	3.0	3.0	6	50	6	2
EHBUS204000S	2.00R	4.0	4.0	8	50	6	2
EHBUS205000S	2.50R	5.0	5.0	10	50	6	2
EHBUS206000S	3.00R	6.0	6.0	12	50	6	2
EHBUS208000S	4.00R	8.0	8.0	16	60	8	2
EHBUS210000S	5.00R	10.0	10.0	20	75	10	2
EHBUS212000S	6.00R	12.0	12.0	24	75	12	2
EHBUS216000S	8.00R	16.0	16.0	32	100	16	2





d	R Tolerance
Ø ≦ 12	± 0.01
Ø > 12	± 0.015

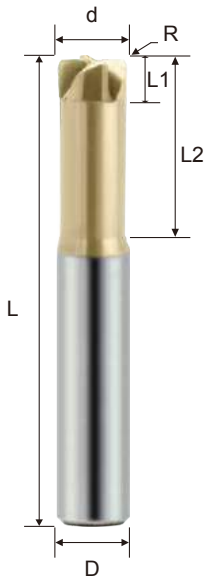
Cutting conditions（建議切削參數表）: Table 003

H700 - High Speed & High Feed Corner Radius Type - 4F　鎢鋼圓鼻銑刀－高進給直刃型－ 4 刃

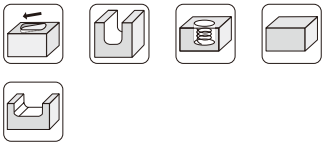
- SICO Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Non-Helix Design.
- Cutting edges are very strong and wear resistant.
- For High speed and high feed cutting.

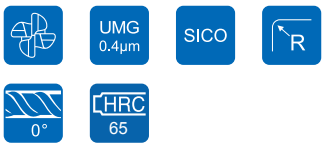
EHCUK4

P	M	K	N	S	H
☑	☐	☑	☐	☐	☑



Order No.	Dia. (d)	RADIUS (R)	Flute Length (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCUK40200506S	2	0.5R	1	6	50	6	4
EHCUK40300508S	3	0.5R	1.5	8	50	6	4
EHCUK40400512S	4	0.5R	2	12	60	6	4
EHCUK40400516S	4	0.5R	2	16	60	6	4
EHCUK40401012S	4	1R	2	12	60	6	4
EHCUK40401016S	4	1R	2	16	60	6	4
EHCUK40600512S	6	0.5R	3	12	60	6	4
EHCUK40600515S	6	0.5R	3	15	60	6	4
EHCUK40601015S	6	1R	3	15	60	6	4
EHCUK40601515S	6	1.5R	3	15	60	6	4
EHCUK40800520S	8	0.5R	4	20	60	8	4
EHCUK40801020S	8	1R	4	20	60	8	4
EHCUK41000525S	10	0.5R	5	25	75	10	4
EHCUK41001025S	10	1R	5	25	75	10	4
EHCUK41201030S	12	1R	6.0	30	75	12	4
EHCUK41202030S	12	2R	6.0	30	75	12	4





d	R Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03
R	± 0.015

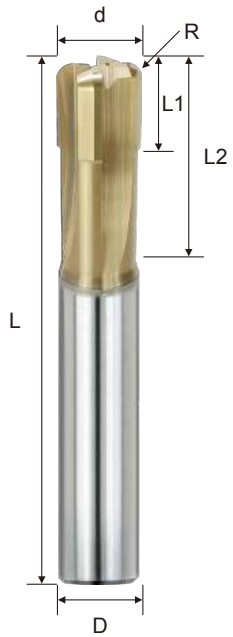
Cutting conditions（建議切削參數表）: Table 004

H700 - Straight Short Flute Corner Radius Type - 4F 鎢鋼圓鼻銑刀 - 直短刃型 - 4 刃

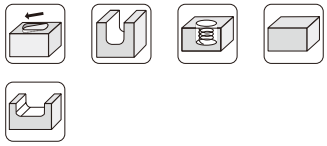
- SICO Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Non-Helix Design.
- Cutting edges are very strong and wear resistant.
- The coating can change to TOP ARCO, the prices will differ.

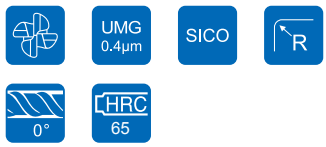
EHCPS4
EHCUS4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCPS401002S	1	0.20R	1	2.5	50	4	4
EHCPS402002S	2	0.25R	2	6.5	50	4	4
EHCUS403005S	3	0.50R	3	7.5	50	6	4
EHCUS404005S	4	0.50R	4	10.0	50	6	4
EHCUS404010S	4	1.00R	4	10.0	50	6	4
EHCUS405010S	5	1.00R	5	12.5	50	6	4
EHCUS406010S	6	1.00R	6	15.0	50	6	4
EHCUS406015S	6	1.50R	6	15.0	50	6	4
EHCUS408010S	8	1.00R	8	20.0	60	8	4
EHCUS408015S	8	1.50R	8	20.0	60	8	4
EHCUS408020S	8	2.00R	8	20.0	60	8	4
EHCUS410010S	10	1.00R	10	25.0	75	10	4
EHCUS410020S	10	2.00R	10	25.0	75	10	4
EHCUS412010S	12	1.00R	12	30.0	75	12	4
EHCUS412020S	12	2.00R	12	30.0	75	12	4
EHCUS412030S	12	3.00R	12	30.0	75	12	4





d	R Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03
R	± 0.015

Cutting conditions（建議切削參數表）: Table 005

H680 Series for Hardened steel, up to HRC 65 (High Precision Cutting)



- Ultra grain carbide rods with better abrasion resistance.
- Use SICO-TH coating with anti-high temperature & anti-oxidation.
- Special geometry design, suitable for high hardened working materials.
- Comparable to Europe, America, Japan's tolerance with high precision and high performance on Finishing working situation.
- Long Tool life tools reduce tool costs and working cost effectively.

High Precision

High Speed **High Hardened**

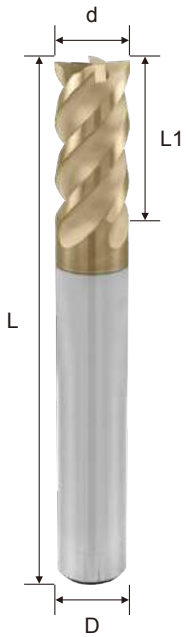
H680 - High Precision Square Type - 4F

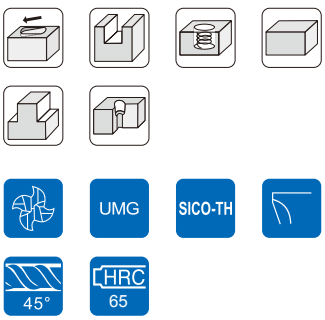
鎢鋼平銑刀 - 標準型 - 4 刃

- SICO-TH Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Ultra grain carbide rods with better abrasion resistance.
- Special geometry design, suitable for high hardened working materials.

EHSFF4
EHSSF4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑





d	Tolerance
Ø ≦ 6	+0 ~ -0.01
Ø ≧ 8	+0 ~ -0.02

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EHSFF401000S	1.0	3	50	4	4
EHSFF401500S	1.5	4	50	4	4
EHSFF402000S	2.0	5	50	4	4
EHSFF402500S	2.5	6	50	4	4
EHSSF403000S	3.0	8	50	6	4
EHSSF404000S	4.0	10	50	6	4
EHSSF405000S	5.0	13	50	6	4
EHSSF406000S	6.0	15	50	6	4
EHSSF408000S	8.0	20	60	8	4
EHSSF410000S	10.0	25	75	10	4
EHSSF412000S	12.0	30	75	12	4

Cutting conditions（建議切削參數表）: Table 006

Winstar Cutting Technologies

H680 - High Precision Long Shank Square Type - 4F

鎢鋼平銑刀 - 長柄型 - 4 刃

- SICO-TH Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Ultra grain carbide rods with better abrasion resistance.
- Special geometry design, suitable for high hardened working materials.

EHSLF4
EHSNF4
EHSMF4

P	M	K	N	S	H
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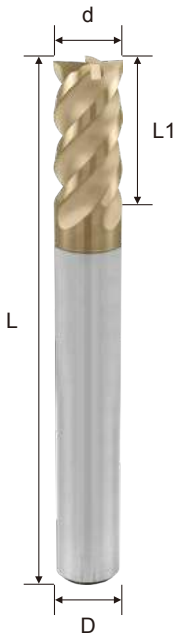
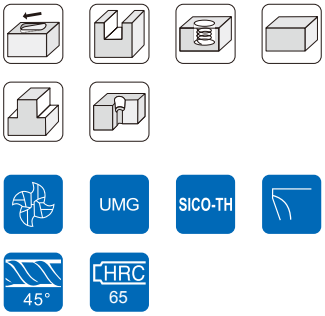


Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EHSLF404000S	4.0	10	75	6	4
EHSLF406000S	6.0	15	75	6	4
EHSNF406000S	6.0	15	100	6	4
EHSMF408000S	8.0	20	75	8	4
EHSLF408000S	8.0	20	100	8	4
EHSLF410000S	10.0	25	100	10	4
EHSLF412000S	12.0	30	100	12	4



d	Tolerance
Ø ≦ 6	+0 ~ -0.02
Ø ≧ 8	+0 ~ -0.03

Cutting conditions（建議切削參數表）: Table 006

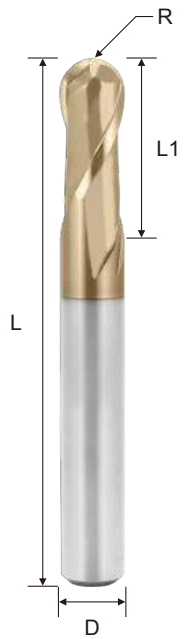
H680 - High Precision Ball Nose Type - 2F

鎢鋼球型銑刀 - 標準型 - 2 刃

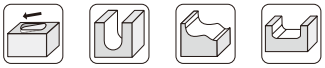
- SICO-TH Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Ultra grain carbide rods with better abrasion resistance.
- R tolerance ±5μm with high precision and high performance on Finishing working situation.
- Special geometry design, suitable for high hardened working materials.

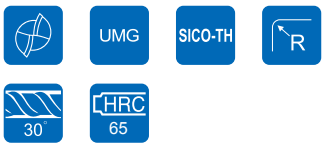
EHBFF2
EHBSF2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EHBFF201000S	0.5R	1.0	2	50	4	2
EHBFF202000S	1.0R	2.0	4	50	4	2
EHBFF204000S	2.0R	4.0	8	50	4	2
EHBSF203000S	1.5R	3.0	6	50	6	2
EHBSF204000S	2.0R	4.0	8	50	6	2
EHBSF206000S	3.0R	6.0	12	50	6	2
EHBSF208000S	4.0R	8.0	16	60	8	2
EHBSF210000S	5.0R	10.0	20	75	10	2
EHBSF212000S	6.0R	12.0	24	75	12	2





R	Tolerance
≦ R3	± 0.005
≧ R4	± 0.007

Cutting conditions（建議切削參數表）: Table 007

Winstar Cutting Technologies

H680 - High Precision Long Shank Ball Nose Type - 2F

鎢鋼球型銑刀 - 長柄型 - 2 刃

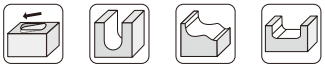
- SICO-TH Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Ultra grain carbide rods with better abrasion resistance.
- R tolerance ±5μm with high precision and high performance on Finishing working situation.
- Special geometry design, suitable for high hardened working materials.

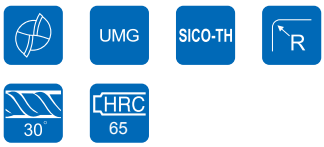
EHBLF2
EHBNF2
EHBMF2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EHBLF204000S	2R	4.0	8	75	6	2
EHBLF206000S	3R	6.0	12	75	6	2
EHBNF206000S	3R	6.0	12	100	6	2
EHBMF208000S	4R	8.0	16	75	8	2
EHBLF208000S	4R	8.0	16	100	8	2
EHBLF210000S	5R	10.0	20	100	10	2
EHBLF212000S	6R	12.0	24	100	12	2





R	Tolerance
≦ R3	± 0.007
≧ R4	± 0.007

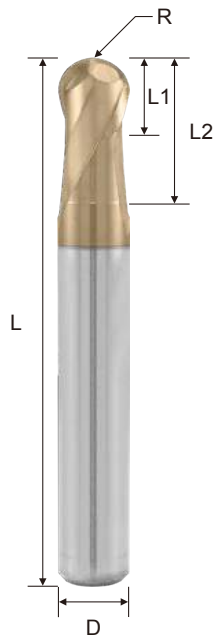
Cutting conditions（建議切削參數表）: Table 007

H680 - High Precision Short Flute Ball Nose Type - 2F 鎢鋼球型銑刀 - 短刃型 - 2 刃

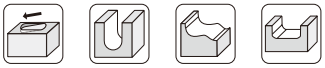
- SICO-TH Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Ultra grain carbide rods with better abrasion resistance.
- R tolerance ±5μm with high precision and high performance on Finishing working situation.
- Special geometry design, suitable for high hardened working materials.

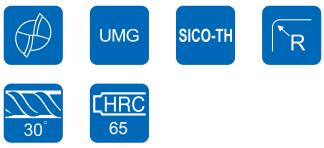
EHBPF2
EHBUF2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHBPF201000S	0.5R	1.0	1	2	50	4	2
EHBPF202000S	1.0R	2.0	2	4	50	4	2
EHBPF204000S	2.0R	4.0	4	8	50	6	2
EHBUF203000S	1.5R	3.0	3	6	50	6	2
EHBUF204000S	2.0R	4.0	4	8	50	6	2
EHBUF206000S	3.0R	6.0	6	12	50	6	2
EHBUF208000S	4.0R	8.0	8	16	60	8	2
EHBUF210000S	5.0R	10.0	10	20	75	10	2
EHBUF212000S	6.0R	12.0	12	24	75	12	2





R	Tolerance
≦ R3	± 0.005
≧ R4	± 0.007

Cutting conditions（建議切削參數表）: Table 007

Winstar Cutting Technologies

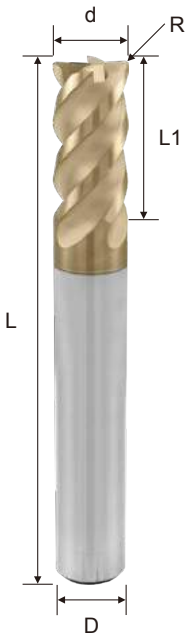
H680 - High Precision Corner Radius Type - 4F

鎢鋼圓鼻銑刀 - 標準型 - 4 刃

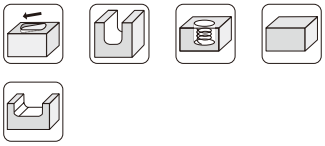
- SICO-TH Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Ultra grain carbide rods with better abrasion resistance.
- Special geometry design, suitable for high hardened working materials.

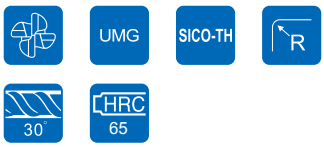
EHCSF4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EHCSF403005S	3.0	0.5R	6	50	6	4
EHCSF404005S	4.0	0.5R	8	50	6	4
EHCSF406005S	6.0	0.5R	12	50	6	4
EHCSF406010S	6.0	1R	12	50	6	4
EHCSF408005S	8.0	0.5R	16	60	8	4
EHCSF408010S	8.0	1R	16	60	8	4
EHCSF410005S	10.0	0.5R	20	75	10	4
EHCSF410010S	10.0	1R	20	75	10	4
EHCSF412005S	12.0	0.5R	24	75	12	4
EHCSF412010S	12.0	1R	24	75	12	4





d	R Tolerance
Ø ≦ 6	+0 ~ -0.01
Ø ≧ 8	+0 ~ -0.02
R	± 0.01

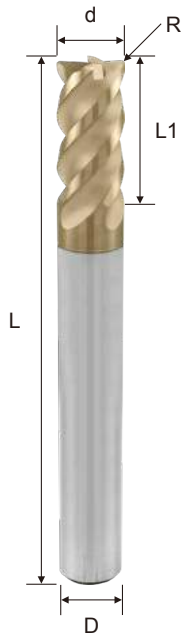
Cutting conditions（建議切削參數表）: Table 006

H680 - High Precision Long Shank Corner Radius Type - 4F　鎢鋼圓鼻銑刀 - 長柄型 - 4 刃

- SICO-TH Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Ultra grain carbide rods with better abrasion resistance.
- Special geometry design, suitable for high hardened working materials.

EHCLF4
EHCNF4
EHCMF4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EHCLF404005S	4	0.5R	8	75	6	4
EHCLF406005S	6	0.5R	12	75	6	4
EHCNF406005S	6	0.5R	12	100	6	4
EHCMF408005S	8	0.5R	16	75	8	4
EHCLF408005S	8	0.5R	16	100	8	4
EHCLF410005S	10	0.5R	20	100	10	4
EHCLF412005S	12	0.5R	24	100	12	4

Cutting conditions（建議切削參數表）: Table 006

d	R Tolerance
Ø ≦ 6	+0 ~ -0.02
Ø ≧ 8	+0 ~ -0.03
R	± 0.015

H650 Series for Hardened steel, up to HRC 60



- Ultra grain carbide rods with better abrasion resistance.
- SICO coating with anti-high temperature & anti-oxidation.
- ARCO coating shows good performance in coolant machining.
- Large core diameter promote its rigidity of the tool.
- Negative rake angle design is suitable for machining hardened material.
- Long tool-life and good performance in hardened steel material.

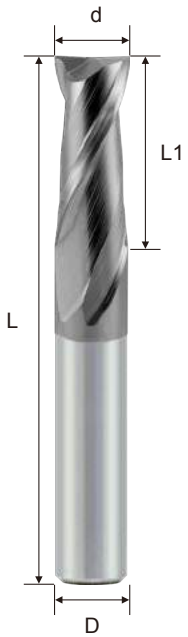
H650 - Square Type - 2F

鎢鋼平銑刀 - 標準型 - 2 刃

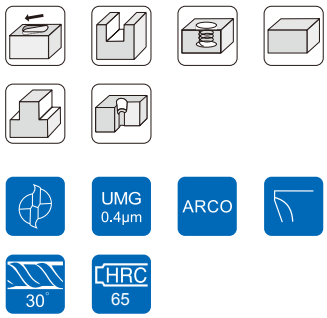
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- UMG Carbide with Incredible toughness and wear resistance at hi speeds.
- Negative angle design with stronger cutting edge.
- The coating can change to SICO, the prices will differ.

EHSFA2
EHSSA2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EHSFA201000A	1	3	50	4	2
EHSFA202000A	2	5	50	4	2
EHSFA203000A	3	8	50	4	2
EHSFA204000A	4	10	50	4	2
EHSSA203000A	3	8	50	6	2
EHSSA204000A	4	10	50	6	2
EHSSA205000A	5	13	50	6	2
EHSSA206000A	6	15	50	6	2
EHSSA208000A	8	20	60	8	2
EHSSA210000A	10	25	75	10	2
EHSSA212000A	12	30	75	12	2
EHSSA216000A	16	35	100	16	2
EHSSA220000A	20	45	100	20	2



d	Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03

Cutting conditions（建議切削參數表）: Table 008

Winstar Cutting Technologies

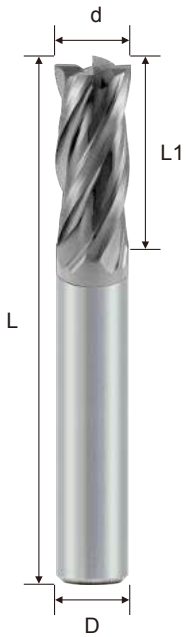
H650 - Square Type - 4F

鎢鋼平銑刀 - 標準型 - 4 刃

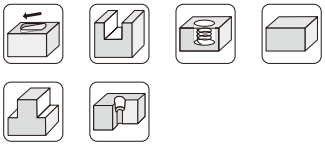
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- High helix angle on side milling with good surface and long tool life.
- UMG Carbide with Incredible toughness and wear resistance at hi speeds.
- The coating can change to SICO, the prices will differ.

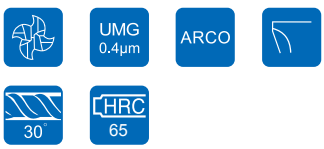
EHSFA4
EHSSA4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EHSFA401000A	1	3	50	4	4
EHSFA402000A	2	5	50	4	4
EHSFA403000A	3	8	50	4	4
EHSFA404000A	4	10	50	4	4
EHSSA403000A	3	8	50	6	4
EHSSA404000A	4	10	50	6	4
EHSSA405000A	5	13	50	6	4
EHSSA406000A	6	15	50	6	4
EHSSA408000A	8	20	60	8	4
EHSSA410000A	10	25	75	10	4
EHSSA412000A	12	30	75	12	4
EHSSA416000A	16	35	100	16	4
EHSSA420000A	20	45	100	20	4





d	Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03

Cutting conditions（建議切削參數表）: Table 009

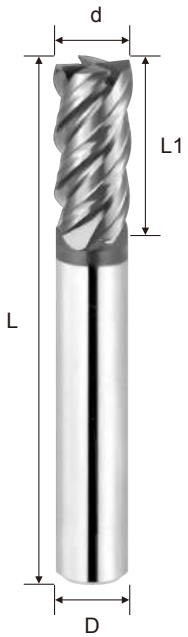
H650 - High Helix Square Type - 4F

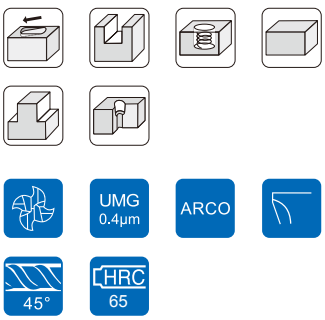
鎢鋼平銑刀 - 高導型 - 4 刃

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- UMG Carbide with Incredible toughness and wear resistance at hi speeds.
- Good surface and long tool life.
- The coating can change to SICO, the prices will differ.

EHSFH4
EHSSH4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑





d	Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EHSFH401000A	1.0	3	50	4	4
EHSFH401500A	1.5	4	50	4	4
EHSFH402000A	2.0	5	50	4	4
EHSFH402500A	2.5	6	50	4	4
EHSFH403000A	3.0	8	50	4	4
EHSFH404000A	4.0	10	50	4	4
EHSSH404000A	4.0	10	50	6	4
EHSSH405000A	5.0	13	50	6	4
EHSSH406000A	6.0	15	50	6	4
EHSSH408000A	8.0	20	60	8	4
EHSSH410000A	10.0	25	75	10	4
EHSSH412000A	12.0	30	75	12	4
EHSSH416000A	16.0	35	100	16	4
EHSSH420000A	20.0	45	100	20	4

Cutting conditions（建議切削參數表）: Table 010

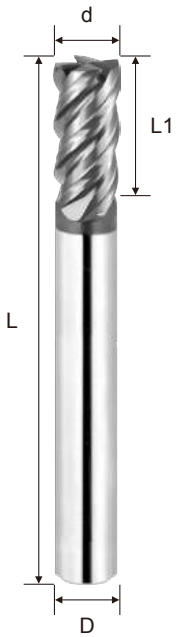
Winstar Cutting Technologies

H650 - High Helix & Long Shank Square Type - 4F 鎢鋼平銑刀 - 高導長柄型 - 4 刃

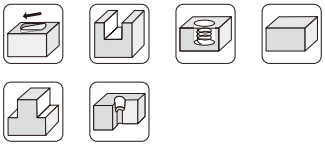
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- UMG Carbide with Incredible toughness and wear resistance at hi speeds.
- Good surface and long tool life.
- The coating can change to SICO, the prices will differ.

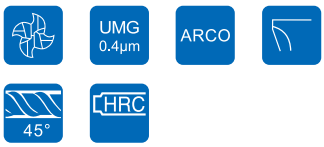
EHSLH4
EHSMH4
EHSNH4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EHSEH403000A	3.0	8	75	4	4
EHSKH403000A	3.0	8	100	4	4
EHSJH404000A	4.0	10	60	4	4
EHSEH404000A	4.0	10	75	4	4
EHSKH404000A	4.0	10	100	4	4
EHSMH406000A	6.0	15	60	6	4
EHSLH406000A	6.0	15	75	6	4
EHSNH406000A	6.0	15	100	6	4
EHSMH408000A	8.0	20	75	8	4
EHSLH408000A	8.0	20	100	8	4
EHSNH408000A	8.0	20	150	8	4
EHSLH410000A	10.0	25	100	10	4
EHSNH410000A	10.0	25	150	10	4
EHSLH412000A	12.0	30	100	12	4
EHSNH412000A	12.0	30	150	12	4
EHSLH416000A	16.0	35	150	16	4
EHSLH420000A	20.0	45	150	20	4





d	Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03

Cutting conditions（建議切削參數表）: Table 011

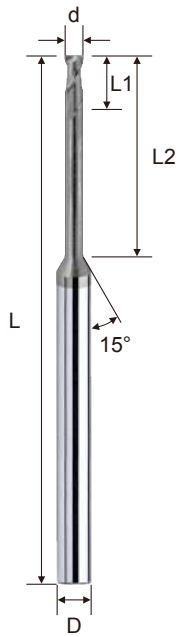
H650 - Long Neck Square Type - 2F

鎢鋼平銑刀 - 長頸型 - 2 刃

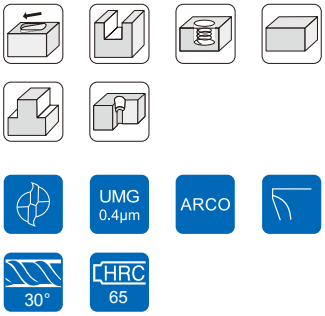
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long neck design is suitable for Rib cutting.
- The coating can change to SICO, the prices will differ.

EHSBC2
EHSRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHSBC200201A	0.2	0.3	1	50	4	2
EHSBC200202A	0.2	0.3	2	50	4	2
EHSBC200301A	0.3	0.4	1	50	4	2
EHSBC200302A	0.3	0.4	2	50	4	2
EHSBC200303A	0.3	0.4	3	50	4	2
EHSBC200304A	0.3	0.4	4	50	4	2
EHSBC200305A	0.3	0.4	5	50	4	2
EHSBC200401A	0.4	0.5	1	50	4	2
EHSBC200402A	0.4	0.5	2	50	4	2
EHSBC200403A	0.4	0.5	3	50	4	2
EHSBC200404A	0.4	0.5	4	50	4	2
EHSBC200405A	0.4	0.5	5	50	4	2
EHSBC200406A	0.4	0.5	6	50	4	2
EHSBC200408A	0.4	0.5	8	50	4	2
EHSBC200410A	0.4	0.5	10	50	4	2
EHSBC200502A	0.5	0.6	2	50	4	2
EHSBC200503A	0.5	0.6	3	50	4	2
EHSBC200504A	0.5	0.6	4	50	4	2
EHSBC200505A	0.5	0.6	5	50	4	2
EHSBC200506A	0.5	0.6	6	50	4	2
EHSBC200508A	0.5	0.6	8	50	4	2
EHSBC200510A	0.5	0.6	10	50	4	2
EHSBC200512A	0.5	0.6	12	50	4	2
EHSBC200514A	0.5	0.6	14	50	4	2



d	Tolerance
Ø	0 ~ -0.02

Cutting conditions（建議切削參數表）: Table 012 ~ 014

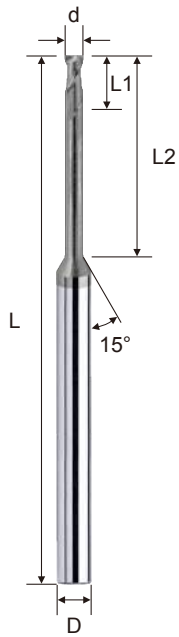
H650 - Long Neck Square Type - 2F

鎢鋼平銑刀 - 長頸型 - 2 刃

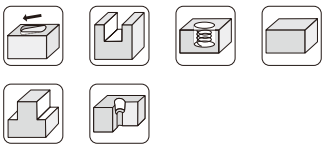
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long neck design is suitable for Rib cutting.
- The coating can change to SICO, the prices will differ.

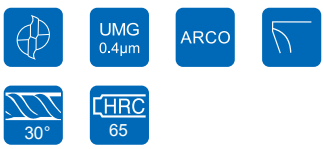
EHSBC2
EHSRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHSBC200602A	0.6	0.7	2	50	4	2
EHSBC200603A	0.6	0.7	3	50	4	2
EHSBC200604A	0.6	0.7	4	50	4	2
EHSBC200605A	0.6	0.7	5	50	4	2
EHSBC200606A	0.6	0.7	6	50	4	2
EHSBC200608A	0.6	0.7	8	50	4	2
EHSBC200610A	0.6	0.7	10	50	4	2
EHSBC200612A	0.6	0.7	12	50	4	2
EHSBC200614A	0.6	0.7	14	50	4	2
EHSBC200616A	0.6	0.7	16	50	4	2
EHSBC200702A	0.7	0.8	2	50	4	2
EHSBC200704A	0.7	0.8	4	50	4	2
EHSBC200706A	0.7	0.8	6	50	4	2
EHSBC200708A	0.7	0.8	8	50	4	2
EHSBC200710A	0.7	0.8	10	50	4	2
EHSBC200712A	0.7	0.8	12	50	4	2
EHSBC200802A	0.8	1.0	2	50	4	2
EHSBC200804A	0.8	1.0	4	50	4	2
EHSBC200806A	0.8	1.0	6	50	4	2
EHSBC200808A	0.8	1.0	8	50	4	2
EHSBC200810A	0.8	1.0	10	50	4	2
EHSBC200812A	0.8	1.0	12	50	4	2
EHSBC200814A	0.8	1.0	14	50	4	2
EHSBC200906A	0.9	1.1	6	50	4	2
EHSBC200908A	0.9	1.1	8	50	4	2
EHSBC200910A	0.9	1.1	10	50	4	2





d	Tolerance
Ø	0 ~ -0.02

Cutting conditions（建議切削參數表）: Table 012 ~ 014

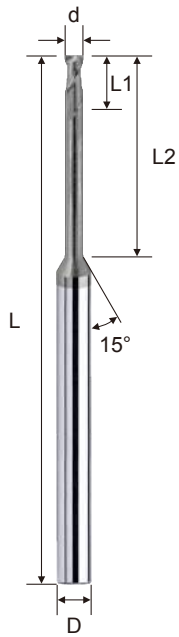
H650 - Long Neck Square Type - 2F

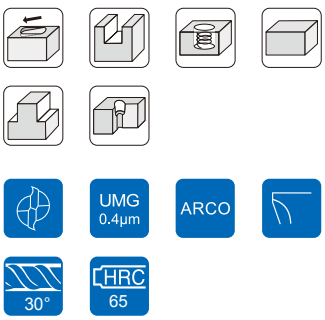
鎢鋼平銑刀 - 長頸型 - 2 刃

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long neck design is suitable for Rib cutting.
- The coating can change to SICO, the prices will differ.

EHSBC2
EHSRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑





d	Tolerance
Ø	0 ~ -0.02

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHSBC201002A	1.0	1.2	2	50	4	2
EHSBC201003A	1.0	1.2	3	50	4	2
EHSBC201004A	1.0	1.2	4	50	4	2
EHSBC201005A	1.0	1.2	5	50	4	2
EHSBC201006A	1.0	1.2	6	50	4	2
EHSBC201008A	1.0	1.2	8	50	4	2
EHSBC201010A	1.0	1.2	10	50	4	2
EHSBC201012A	1.0	1.2	12	50	4	2
EHSBC201014A	1.0	1.2	14	50	4	2
EHSBC201016A	1.0	1.2	16	50	4	2
EHSBC201018A	1.0	1.2	18	50	4	2
EHSBC201020A	1.0	1.2	20	50	4	2
EHSBC201204A	1.2	1.5	4	50	4	2
EHSBC201206A	1.2	1.5	6	50	4	2
EHSBC201208A	1.2	1.5	8	50	4	2
EHSBC201210A	1.2	1.5	10	50	4	2
EHSBC201212A	1.2	1.5	12	50	4	2
EHSBC201216A	1.2	1.5	16	50	4	2
EHSBC201220A	1.2	1.5	20	50	4	2
EHSBC201406A	1.4	1.8	6	50	4	2
EHSBC201408A	1.4	1.8	8	50	4	2
EHSBC201410A	1.4	1.8	10	50	4	2
EHSBC201414A	1.4	1.8	14	50	4	2
EHSBC201416A	1.4	1.8	16	50	4	2
EHSBC201420A	1.4	1.8	20	50	4	2

Cutting conditions（建議切削參數表）: Table 012 ~ 014

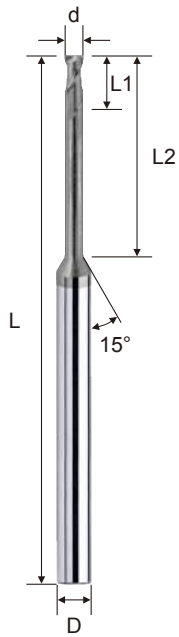
H650 - Long Neck Square Type - 2F

鎢鋼平銑刀 - 長頸型 - 2 刃

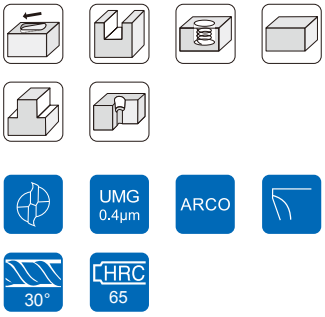
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long neck design is suitable for Rib cutting.
- The coating can change to SICO, the prices will differ.

EHSBC2
EHSRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHSBC201504A	1.5	1.8	4	50	4	2
EHSBC201506A	1.5	1.8	6	50	4	2
EHSBC201508A	1.5	1.8	8	50	4	2
EHSBC201510A	1.5	1.8	10	50	4	2
EHSBC201512A	1.5	1.8	12	50	4	2
EHSBC201514A	1.5	1.8	14	50	4	2
EHSBC201516A	1.5	1.8	16	50	4	2
EHSBC201518A	1.5	1.8	18	50	4	2
EHSBC201520A	1.5	1.8	20	50	4	2
EHSBC201610A	1.6	1.9	10	50	4	2
EHSBC201614A	1.6	1.9	14	50	4	2
EHSBC201618A	1.6	1.9	18	50	4	2
EHSBC201810A	1.8	2.0	10	50	4	2
EHSBC201814A	1.8	2.0	14	50	4	2
EHSBC201818A	1.8	2.0	18	50	4	2
EHSBC202004A	2.0	2.5	4	50	4	2
EHSBC202006A	2.0	2.5	6	50	4	2
EHSBC202008A	2.0	2.5	8	50	4	2
EHSBC202010A	2.0	2.5	10	50	4	2
EHSBC202012A	2.0	2.5	12	50	4	2
EHSBC202014A	2.0	2.5	14	50	4	2
EHSBC202016A	2.0	2.5	16	50	4	2
EHSBC202018A	2.0	2.5	18	50	4	2
EHSBC202020A	2.0	2.5	20	50	4	2
EHSBC202022A	2.0	2.5	22	60	4	2
EHSBC202025A	2.0	2.5	25	60	4	2
EHSBC202030A	2.0	2.5	30	75	4	2
EHSBC202035A	2.0	2.5	35	75	4	2



d	Tolerance
Ø	0 ~ -0.02

Cutting conditions（建議切削參數表）: Table 012 ~ 014

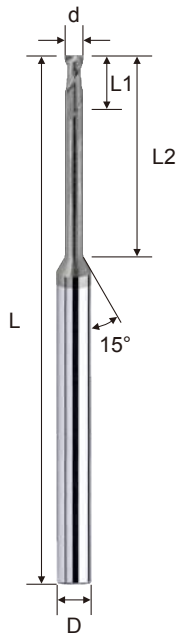
H650 - Long Neck Square Type - 2F

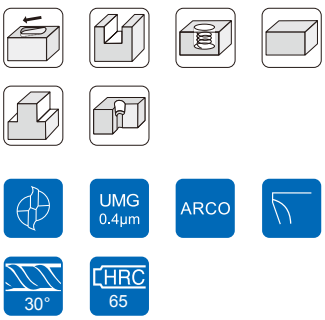
鎢鋼平銑刀 - 長頸型 - 2 刃

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long neck design is suitable for Rib cutting.
- The coating can change to SICO, the prices will differ.

EHSBC2
EHSRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑





d	Tolerance
Ø	0 ~ -0.02

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHSBC202508A	2.5	3.0	8	50	4	2
EHSBC202510A	2.5	3.0	10	50	4	2
EHSBC202512A	2.5	3.0	12	50	4	2
EHSBC202516A	2.5	3.0	16	50	4	2
EHSBC202520A	2.5	3.0	20	50	4	2
EHSBC202525A	2.5	3.0	25	60	4	2
EHSBC202530A	2.5	3.0	30	60	4	2
EHSBC202535A	2.5	3.0	35	60	4	2
EHSRC203006A	3.0	3.5	6	50	6	2
EHSRC203010A	3.0	3.5	10	50	6	2
EHSRC203012A	3.0	3.5	12	50	6	2
EHSRC203016A	3.0	3.5	16	50	6	2
EHSRC203020A	3.0	3.5	20	60	6	2
EHSRC203025A	3.0	3.5	25	60	6	2
EHSRC203030A	3.0	3.5	30	75	6	2
EHSRC203035A	3.0	3.5	35	75	6	2
EHSRC204008A	4.0	4.5	8	50	6	2
EHSRC204010A	4.0	4.5	10	50	6	2
EHSRC204012A	4.0	4.5	12	50	6	2
EHSRC204016A	4.0	4.5	16	50	6	2
EHSRC204020A	4.0	4.5	20	60	6	2
EHSRC204025A	4.0	4.5	25	60	6	2
EHSRC204030A	4.0	4.5	30	75	6	2
EHSRC204035A	4.0	4.5	35	75	6	2
EHSRC205016A	5.0	7.0	16	50	6	2
EHSRC205020A	5.0	7.0	20	60	6	2
EHSRC205025A	5.0	7.0	25	60	6	2
EHSRC205030A	5.0	7.0	30	75	6	2
EHSRC205035A	5.0	7.0	35	75	6	2

Cutting conditions（建議切削參數表）: Table 012 ~ 014

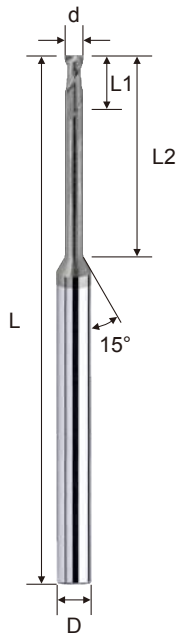
H650 - Long Neck Square Type - 2F

鎢鋼平銑刀 - 長頸型 - 2 刃

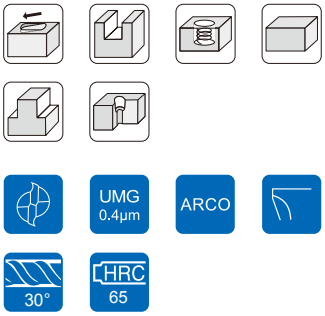
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long neck design is suitable for Rib cutting.
- The coating can change to SICO, the prices will differ.

EHSBC2
EHSRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHSRC206020A	6.0	10.0	20	60	6	2
EHSRC206030A	6.0	10.0	30	75	6	2
EHSRC208020A	8.0	15.0	20	60	8	2
EHSRC208030A	8.0	15.0	30	75	8	2
EHSRC208040A	8.0	15.0	40	100	8	2
EHSRC210025A	10.0	20.0	25	75	10	2
EHSRC210035A	10.0	20.0	35	75	10	2
EHSRC210045A	10.0	20.0	45	100	10	2
EHSRC212030A	12.0	25.0	30	75	12	2
EHSRC212040A	12.0	25.0	40	100	12	2
EHSRC212050A	12.0	25.0	50	100	12	2



d	Tolerance
Ø	0 ~ -0.02

Cutting conditions（建議切削參數表）: Table 012 ~ 014

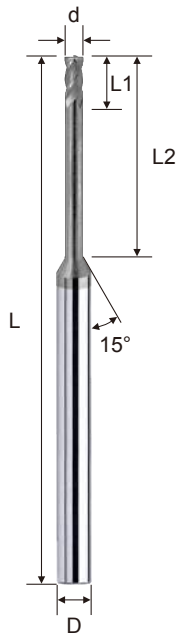
H650 - Long Neck Square Type - 4F

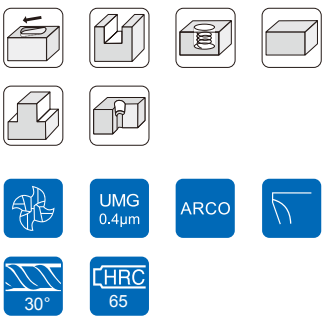
鎢鋼平銑刀 - 長頸型 - 4 刃

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long neck design is suitable for Rib cutting.
- The coating can change to SICO, the prices will differ.

EHSBC4
EHSRC4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑





d	Tolerance
Ø	0 ~ -0.02

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHSBC401003A	1.0	1.0	3	50	4	4
EHSBC401004A	1.0	1.0	4	50	4	4
EHSBC401006A	1.0	1.0	6	50	4	4
EHSBC401008A	1.0	1.0	8	50	4	4
EHSBC401010A	1.0	1.0	10	50	4	4
EHSBC401012A	1.0	1.0	12	50	4	4
EHSBC401016A	1.0	1.0	16	50	4	4
EHSBC401020A	1.0	1.0	20	50	4	4
EHSBC401025A	1.0	1.0	25	60	4	4
EHSRC401004A	1.0	1.0	4	50	6	4
EHSRC401006A	1.0	1.0	6	50	6	4
EHSRC401008A	1.0	1.0	8	50	6	4
EHSRC401010A	1.0	1.0	10	50	6	4
EHSRC401012A	1.0	1.0	12	50	6	4
EHSBC401506A	1.5	1.5	6	50	4	4
EHSBC401508A	1.5	1.5	8	50	4	4
EHSBC401510A	1.5	1.5	10	50	4	4
EHSBC401512A	1.5	1.5	12	50	4	4
EHSBC401516A	1.5	1.5	16	50	4	4
EHSBC401520A	1.5	1.5	20	50	4	4
EHSBC401525A	1.5	1.5	25	60	4	4
EHSRC401506A	1.5	1.5	6	50	6	4
EHSRC401508A	1.5	1.5	8	50	6	4
EHSRC401510A	1.5	1.5	10	50	6	4
EHSRC401512A	1.5	1.5	12	50	6	4

Cutting conditions（建議切削參數表）: Table 015

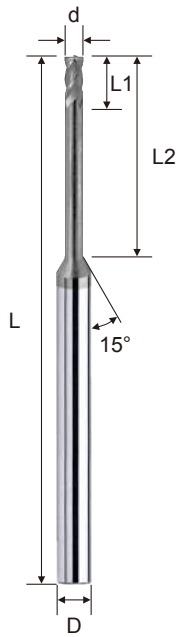
H650 - Long Neck Square Type - 4F

鎢鋼平銑刀 - 長頸型 - 4 刃

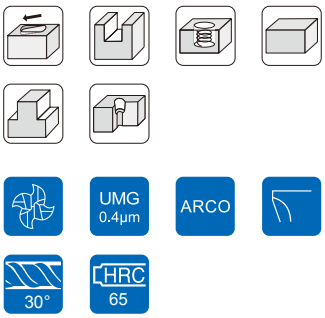
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long neck design is suitable for Rib cutting.
- The coating can change to SICO, the prices will differ.

EHSBC4
EHSRC4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHSBC402006A	2.0	2.0	6	50	4	4
EHSBC402008A	2.0	2.0	8	50	4	4
EHSBC402010A	2.0	2.0	10	50	4	4
EHSBC402012A	2.0	2.0	12	50	4	4
EHSBC402016A	2.0	2.0	16	50	4	4
EHSBC402020A	2.0	2.0	20	50	4	4
EHSBC402025A	2.0	2.0	25	60	4	4
EHSBC402030A	2.0	2.0	30	75	4	4
EHSRC402006A	2.0	2.0	6	50	6	4
EHSRC402008A	2.0	2.0	8	50	6	4
EHSRC402010A	2.0	2.0	10	50	6	4
EHSRC402016A	2.0	2.0	16	50	6	4
EHSBC402510A	2.5	2.5	10	50	4	4
EHSBC402512A	2.5	2.5	12	50	4	4
EHSBC402516A	2.5	2.5	16	50	4	4
EHSBC402520A	2.5	2.5	20	50	4	4
EHSBC402525A	2.5	2.5	25	60	4	4
EHSBC402530A	2.5	2.5	30	75	4	4
EHSRC402506A	2.5	2.5	6	50	6	4
EHSRC402510A	2.5	2.5	10	50	6	4
EHSRC403010A	3.0	3.0	10	50	6	4
EHSRC403012A	3.0	3.0	12	50	6	4
EHSRC403016A	3.0	3.0	16	50	6	4
EHSRC403020A	3.0	3.0	20	60	6	4
EHSRC403025A	3.0	3.0	25	60	6	4
EHSRC403030A	3.0	3.0	30	75	6	4
EHSRC403035A	3.0	3.0	35	75	6	4



d	Tolerance
Ø	0 ~ -0.02

Cutting conditions（建議切削參數表）: Table 015

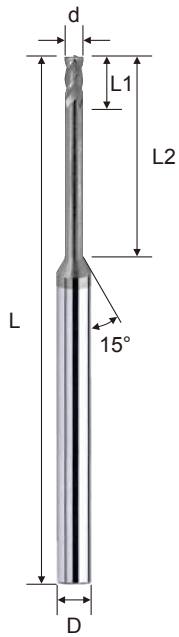
H650 - Long Neck Square Type - 4F

鎢鋼平銑刀 - 長頸型 - 4 刃

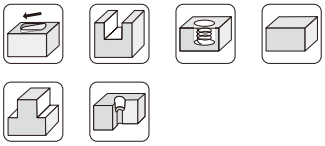
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long neck design is suitable for Rib cutting.
- The coating can change to SICO, the prices will differ.

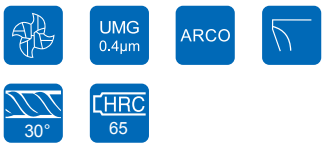
EHSBC4
EHSRC4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHSRC404010A	4.0	4.0	10	50	6	4
EHSRC404012A	4.0	4.0	12	50	6	4
EHSRC404016A	4.0	4.0	16	50	6	4
EHSRC404020A	4.0	4.0	20	60	6	4
EHSRC404025A	4.0	4.0	25	60	6	4
EHSRC404030A	4.0	4.0	30	75	6	4
EHSRC405016A	5.0	5.0	16	50	6	4
EHSRC405020A	5.0	5.0	20	60	6	4
EHSRC405025A	5.0	5.0	25	60	6	4
EHSRC405030A	5.0	5.0	30	75	6	4
EHSRC406020A	6.0	6.0	20	60	6	4
EHSRC406030A	6.0	6.0	30	75	6	4
EHSRC408020A	8.0	15.0	20	60	8	4
EHSRC408030A	8.0	15.0	30	75	8	4
EHSRC408040A	8.0	15.0	40	100	8	4
EHSRC410025A	10.0	20.0	25	75	10	4
EHSRC410035A	10.0	20.0	35	100	10	4
EHSRC410045A	10.0	20.0	45	100	10	4
EHSRC412030A	12.0	25.0	30	75	12	4
EHSRC412040A	12.0	25.0	40	100	12	4
EHSRC412050A	12.0	25.0	50	100	12	4





d	Tolerance
Ø	0 ~ -0.02

Cutting conditions（建議切削參數表）: Table 015

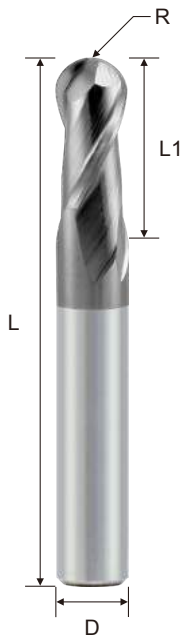
H650 - Ball Nose Type - 2F

鎢鋼球型銑刀 - 標準型 - 2 刃

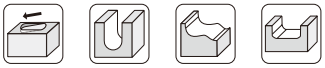
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Due to short cutting length provides an excellent face milling surface roughness of the work pieces.
- New tool geometry increases wear resistance and cutting force is decreased.
- The coating can change to SICO, the prices will differ.

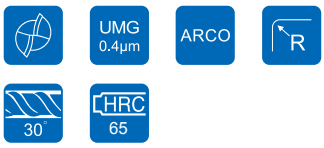
EHBFH2
EHBSH2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EHBFH201000A	0.50R	1.0	2	50	4	2
EHBFH201500A	0.75R	1.5	3	50	4	2
EHBFH202000A	1.00R	2.0	4	50	4	2
EHBFH203000A	1.50R	3.0	6	50	4	2
EHBFH204000A	2.00R	4.0	8	50	4	2
EHBSH205000A	2.50R	5.0	10	50	6	2
EHBSH206000A	3.00R	6.0	12	50	6	2
EHBSH208000A	4.00R	8.0	16	60	8	2
EHBSH210000A	5.00R	10.0	20	75	10	2
EHBSH212000A	6.00R	12.0	24	75	12	2
EHBSH216000A	8.00R	16.0	32	100	16	2





d	R Tolerance
Ø ≦ 12	± 0.01
Ø > 12	± 0.015

Cutting conditions（建議切削參數表）: Table 016

H650 - Long Shank Ball Nose Type - 2F

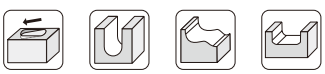
鎢鋼球型銑刀 - 長柄型 - 2 刃

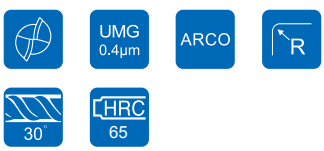
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Due to short cutting length provides an excellent face milling surface roughness of the work pieces.
- New tool geometry increases wear resistance and cutting force is decreased.
- The coating can change to SICO, the prices will differ.

EHBLH2
EHBMH2
EHBNH2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑







Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EHBEH202000A	1R	2.0	4	75	4	2
EHBEH203000A	1.5R	3.0	6	75	4	2
EHBKH203000A	1.5R	4.0	6	100	4	2
EHBJH204000A	2R	4.0	8	60	4	2
EHBEH204000A	2R	4.0	8	75	4	2
EHBKH204000A	2R	4.0	8	100	4	2
EHBMH206000A	3R	6.0	12	60	6	2
EHBLH206000A	3R	6.0	12	75	6	2
EHBNH206000A	3R	6.0	12	100	6	2
EHBMH208000A	4R	8.0	16	75	8	2
EHBLH208000A	4R	8.0	16	100	8	2
EHBNH208000A	4R	8.0	16	150	8	2
EHBLH210000A	5R	10.0	20	100	10	2
EHBNH210000A	5R	10.0	20	150	10	2
EHBLH212000A	6R	12.0	24	100	12	2
EHBNH212000A	6R	12.0	24	150	12	2
EHBLH216000A	8R	16.0	32	150	16	2
EHBLH220000A	10R	20.0	40	150	20	2

Cutting conditions（建議切削參數表）: Table 017

d	R Tolerance
Ø ≦ 12	± 0.01
Ø > 12	± 0.015

Winstar Cutting Technologies

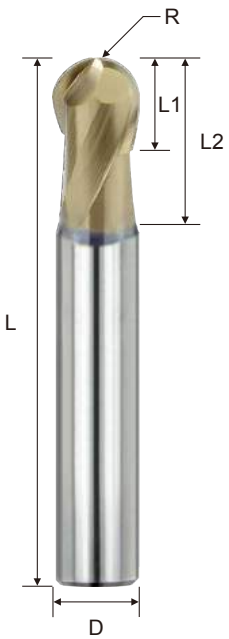
H650 - Short Flute Ball Nose Type - 2F

鎢鋼球型銑刀 - 短刃型 - 2 刃

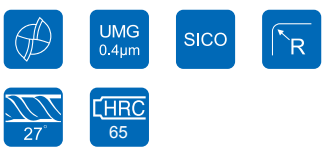
- SICO Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Due to short cutting length provides an excellent face milling surface roughness of the work pieces.
- Short cutting length provides hi resistance for hi speed cutting.
- The coating can change to TOP ARCO, the prices will differ.

EHBUH2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑







d	R Tolerance
Ø ≦ 12	± 0.01
Ø > 12	± 0.015

Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHBUH202000S	1.0R	2	2	4	50	6	2
EHBUH203000S	1.5R	3	3	6	50	6	2
EHBUH204000S	2.0R	4	4	8	50	6	2
EHBUH205000S	2.5R	5	5	10	50	6	2
EHBUH206000S	3.0R	6	6	12	50	6	2
EHBUH208000S	4.0R	8	8	16	60	8	2
EHBUH210000S	5.0R	10	10	20	75	10	2
EHBUH212000S	6.0R	12	12	24	75	12	2
EHBUH216000S	8.0R	16	16	32	100	16	2

Cutting conditions（建議切削參數表）: Table 018

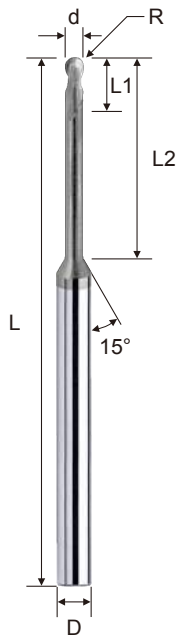
H650 - Long Neck Ball Nose Type - 2F

鎢鋼球型銑刀 - 長頸型 - 2 刃

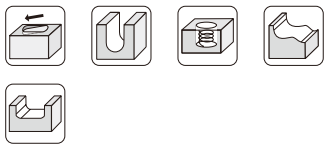
- ARCO coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Suitable for deep cutting due to the long neck design.
- Polish cutting edge provides stronger tip.
- The coating can change to SICO, the prices will differ.

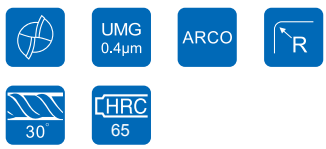
EHBBC2
EHBRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHBBC200301A	0.15R	0.3	0.3	1	50	4	2
EHBBC200302A	0.15R	0.3	0.3	2	50	4	2
EHBBC200303A	0.15R	0.3	0.3	3	50	4	2
EHBBC200401A	0.20R	0.4	0.4	1	50	4	2
EHBBC200402A	0.20R	0.4	0.4	2	50	4	2
EHBBC200403A	0.20R	0.4	0.4	3	50	4	2
EHBBC200404A	0.20R	0.4	0.4	4	50	4	2
EHBBC200405A	0.20R	0.4	0.4	5	50	4	2
EHBBC200406A	0.20R	0.4	0.4	6	50	4	2
EHBBC200408A	0.20R	0.4	0.4	8	50	4	2
EHBBC200501A	0.25R	0.5	0.5	1	50	4	2
EHBBC200502A	0.25R	0.5	0.5	2	50	4	2
EHBBC200503A	0.25R	0.5	0.5	3	50	4	2
EHBBC200504A	0.25R	0.5	0.5	4	50	4	2
EHBBC200505A	0.25R	0.5	0.5	5	50	4	2
EHBBC200506A	0.25R	0.5	0.5	6	50	4	2
EHBBC200508A	0.25R	0.5	0.5	8	50	4	2
EHBBC200510A	0.25R	0.5	0.5	10	50	4	2
EHBBC200601A	0.30R	0.6	0.6	1	50	4	2
EHBBC200602A	0.30R	0.6	0.6	2	50	4	2
EHBBC200603A	0.30R	0.6	0.6	3	50	4	2
EHBBC200604A	0.30R	0.6	0.6	4	50	4	2
EHBBC200605A	0.30R	0.6	0.6	5	50	4	2
EHBBC200606A	0.30R	0.6	0.6	6	50	4	2
EHBBC200608A	0.30R	0.6	0.6	8	50	4	2
EHBBC200610A	0.30R	0.6	0.6	10	50	4	2
EHBBC200612A	0.30R	0.6	0.6	12	50	4	2





d	R Tolerance
Ø	± 0.02

Cutting conditions（建議切削參數表）: Table 019

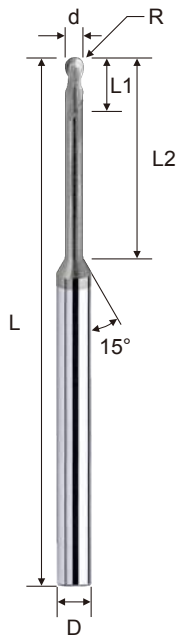
H650 - Long Neck Ball Nose Type - 2F

鎢鋼球型銑刀 - 長頸型 - 2 刃

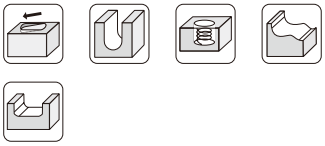
- ARCO coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Suitable for deep cutting due to the long neck design.
- Polish cutting edge provides stronger tip.
- The coating can change to SICO, the prices will differ.

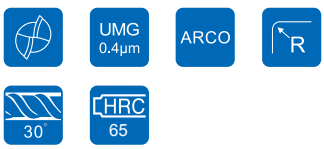
EHBBC2
EHBRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHBBC200702A	0.35R	0.7	0.7	2	50	4	2
EHBBC200704A	0.35R	0.7	0.7	4	50	4	2
EHBBC200708A	0.35R	0.7	0.7	8	50	4	2
EHBBC200710A	0.35R	0.7	0.7	10	50	4	2
EHBBC200712A	0.35R	0.7	0.7	12	50	4	2
EHBBC200802A	0.40R	0.8	0.8	2	50	4	2
EHBBC200804A	0.40R	0.8	0.8	4	50	4	2
EHBBC200806A	0.40R	0.8	0.8	6	50	4	2
EHBBC200808A	0.40R	0.8	0.8	8	50	4	2
EHBBC200810A	0.40R	0.8	0.8	10	50	4	2
EHBBC200812A	0.40R	0.8	0.8	12	50	4	2
EHBBC200904A	0.45R	0.9	0.9	4	50	4	2
EHBBC201002A	0.50R	1.0	1.0	2	50	4	2
EHBBC201003A	0.50R	1.0	1.0	3	50	4	2
EHBBC201004A	0.50R	1.0	1.0	4	50	4	2
EHBBC201005A	0.50R	1.0	1.0	5	50	4	2
EHBBC201006A	0.50R	1.0	1.0	6	50	4	2
EHBBC201008A	0.50R	1.0	1.0	8	50	4	2
EHBBC201010A	0.50R	1.0	1.0	10	50	4	2
EHBBC201012A	0.50R	1.0	1.0	12	50	4	2
EHBBC201014A	0.50R	1.0	1.0	14	50	4	2
EHBBC201016A	0.50R	1.0	1.0	16	50	4	2
EHBBC201018A	0.50R	1.0	1.0	18	50	4	2
EHBBC201020A	0.50R	1.0	1.0	20	50	4	2
EHBBC201022A	0.50R	1.0	1.0	22	60	4	2
EHBRC201004A	0.50R	1.0	1.0	4	50	6	2
EHBRC201006A	0.50R	1.0	1.0	6	50	6	2
EHBRC201008A	0.50R	1.0	1.0	8	50	6	2
EHBRC201010A	0.50R	1.0	1.0	10	50	6	2
EHBRC201012A	0.50R	1.0	1.0	12	50	6	2





d	R Tolerance
Ø	± 0.02

Cutting conditions（建議切削參數表）: Table 019

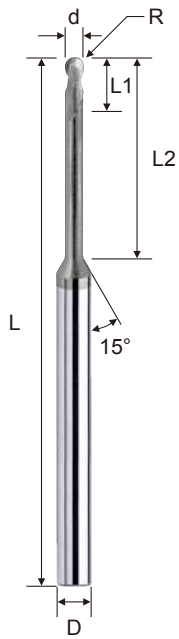
H650 - Long Neck Ball Nose Type - 2F

鎢鋼球型銑刀 - 長頸型 - 2 刃

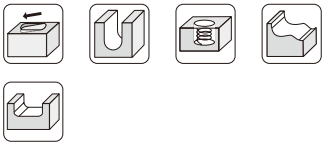
- ARCO coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Suitable for deep cutting due to the long neck design.
- Polish cutting edge provides stronger tip.
- The coating can change to SICO, the prices will differ.

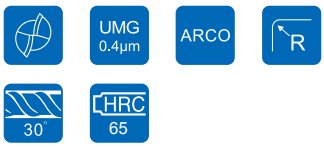
EHBBC2
EHBRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHBBC201204A	0.60R	1.2	1.2	4	50	4	2
EHBBC201206A	0.60R	1.2	1.2	6	50	4	2
EHBBC201208A	0.60R	1.2	1.2	8	50	4	2
EHBBC201210A	0.60R	1.2	1.2	10	50	4	2
EHBBC201212A	0.60R	1.2	1.2	12	50	4	2
EHBBC201216A	0.60R	1.2	1.2	16	50	4	2
EHBBC201220A	0.60R	1.2	1.2	20	50	4	2
EHBBC201224A	0.60R	1.2	1.2	24	60	4	2
EHBBC201406A	0.70R	1.4	1.4	6	50	4	2
EHBBC201408A	0.70R	1.4	1.4	8	50	4	2
EHBBC201412A	0.70R	1.4	1.4	12	50	4	2
EHBBC201416A	0.70R	1.4	1.4	16	50	4	2
EHBBC201503A	0.75R	1.5	1.5	3	50	4	2
EHBBC201504A	0.75R	1.5	1.5	4	50	4	2
EHBBC201506A	0.75R	1.5	1.5	6	50	4	2
EHBBC201508A	0.75R	1.5	1.5	8	50	4	2
EHBBC201510A	0.75R	1.5	1.5	10	50	4	2
EHBBC201512A	0.75R	1.5	1.5	12	50	4	2
EHBBC201514A	0.75R	1.5	1.5	14	50	4	2
EHBBC201516A	0.75R	1.5	1.5	16	50	4	2
EHBBC201518A	0.75R	1.5	1.5	18	50	4	2
EHBBC201520A	0.75R	1.5	1.5	20	50	4	2
EHBBC201522A	0.75R	1.5	1.5	22	60	4	2
EHBBC201525A	0.75R	1.5	1.5	25	60	4	2
EHBBC201530A	0.75R	1.5	1.5	30	75	4	2
EHBRC201506A	0.75R	1.5	1.5	6	50	6	2
EHBRC201508A	0.75R	1.5	1.5	8	50	6	2
EHBRC201510A	0.75R	1.5	1.5	10	50	6	2
EHBRC201512A	0.75R	1.5	1.5	12	50	6	2





d	R Tolerance
Ø	± 0.02

Cutting conditions（建議切削參數表）: Table 019

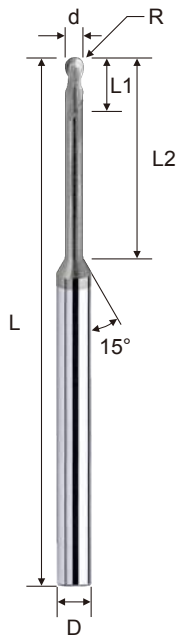
H650 - Long Neck Ball Nose Type - 2F

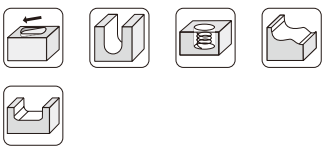
鎢鋼球型銑刀 - 長頸型 - 2 刃

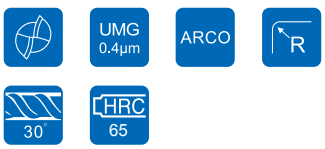
- ARCO coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Suitable for deep cutting due to the long neck design.
- Polish cutting edge provides stronger tip.
- The coating can change to SICO, the prices will differ.

EHBBC2
EHBRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑







d	R Tolerance
Ø	± 0.02

Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHBBC201606A	0.80R	1.6	1.6	6	50	4	2
EHBBC201608A	0.80R	1.6	1.6	8	50	4	2
EHBBC201612A	0.80R	1.6	1.6	12	50	4	2
EHBBC201616A	0.80R	1.6	1.6	16	50	4	2
EHBBC201620A	0.80R	1.6	1.6	20	50	4	2
EHBBC201806A	0.90R	1.8	1.8	6	50	4	2
EHBBC201808A	0.90R	1.8	1.8	8	50	4	2
EHBBC201812A	0.90R	1.8	1.8	12	50	4	2
EHBBC201816A	0.90R	1.8	1.8	16	50	4	2
EHBBC201820A	0.90R	1.8	1.8	20	50	4	2
EHBBC202004A	1.00R	2.0	2.0	4	50	4	2
EHBBC202006A	1.00R	2.0	2.0	6	50	4	2
EHBBC202008A	1.00R	2.0	2.0	8	50	4	2
EHBBC202010A	1.00R	2.0	2.0	10	50	4	2
EHBBC202012A	1.00R	2.0	2.0	12	50	4	2
EHBBC202014A	1.00R	2.0	2.0	14	50	4	2
EHBBC202016A	1.00R	2.0	2.0	16	50	4	2
EHBBC202018A	1.00R	2.0	2.0	18	50	4	2
EHBBC202020A	1.00R	2.0	2.0	20	50	4	2
EHBBC202022A	1.00R	2.0	2.0	22	60	4	2
EHBBC202025A	1.00R	2.0	2.0	25	60	4	2
EHBRC202006A	1.00R	2.0	2.0	6	50	6	2
EHBRC202008A	1.00R	2.0	2.0	8	50	6	2
EHBRC202010A	1.00R	2.0	2.0	10	50	6	2
EHBRC202016A	1.00R	2.0	2.0	16	50	6	2

Cutting conditions（建議切削參數表）: Table 019

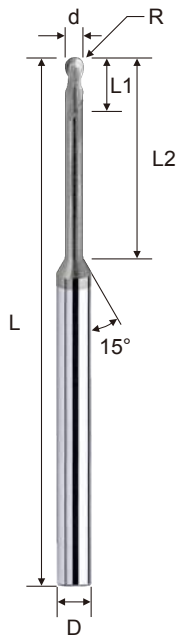
H650 - Long Neck Ball Nose Type - 2F

鎢鋼球型銑刀 - 長頸型 - 2 刃

- ARCO coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Suitable for deep cutting due to the long neck design.
- Polish cutting edge provides stronger tip.
- The coating can change to SICO, the prices will differ.

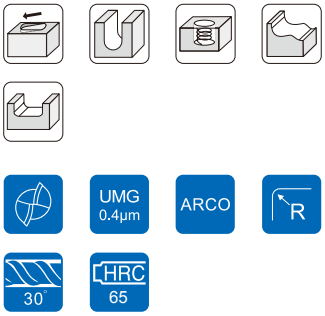
EHBBC2
EHBRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHBBC202508A	1.25R	2.5	2.5	8	50	4	2
EHBBC202510A	1.25R	2.5	2.5	10	50	4	2
EHBBC202516A	1.25R	2.5	2.5	16	50	4	2
EHBBC202520A	1.25R	2.5	2.5	20	60	4	2
EHBBC202525A	1.25R	2.5	2.5	25	60	4	2
EHBBC202530A	1.25R	2.5	2.5	30	75	4	2
EHBRC202506A	1.25R	2.5	2.5	6	50	6	2
EHBRC202510A	1.25R	2.5	2.5	10	50	6	2
EHBRC203006A	1.50R	3.0	3.0	6	50	6	2
EHBRC203008A	1.50R	3.0	3.0	8	50	6	2
EHBRC203010A	1.50R	3.0	3.0	10	50	6	2
EHBRC203012A	1.50R	3.0	3.0	12	50	6	2
EHBRC203016A	1.50R	3.0	3.0	16	60	6	2
EHBRC203020A	1.50R	3.0	3.0	20	60	6	2
EHBRC203025A	1.50R	3.0	3.0	25	60	6	2
EHBRC203030A	1.50R	3.0	3.0	30	75	6	2
EHBRC203035A	1.50R	3.0	3.0	35	75	6	2
EHBRC204008A	2.00R	4.0	4.0	8	50	6	2
EHBRC204010A	2.00R	4.0	4.0	10	50	6	2
EHBRC204012A	2.00R	4.0	4.0	12	50	6	2
EHBRC204016A	2.00R	4.0	4.0	16	60	6	2
EHBRC204020A	2.00R	4.0	4.0	20	60	6	2
EHBRC204025A	2.00R	4.0	4.0	25	60	6	2
EHBRC204030A	2.00R	4.0	4.0	30	75	6	2
EHBRC204035A	2.00R	4.0	4.0	35	75	6	2
EHBRC205015A	2.50R	5.0	5.0	15	60	6	2
EHBRC205020A	2.50R	5.0	5.0	20	60	6	2
EHBRC205025A	2.50R	5.0	5.0	25	60	6	2
EHBRC205030A	2.50R	5.0	5.0	30	75	6	2
EHBRC206015A	3.00R	6.0	10.0	15	50	6	2
EHBRC208025A	4.00R	8.0	12.0	25	60	8	2
EHBRC210030A	5.00R	10.0	16.0	30	75	10	2
EHBRC212030A	6.00R	12.0	18.0	30	75	12	2

Cutting conditions（建議切削參數表）: Table 019



d	R Tolerance
Ø	± 0.02

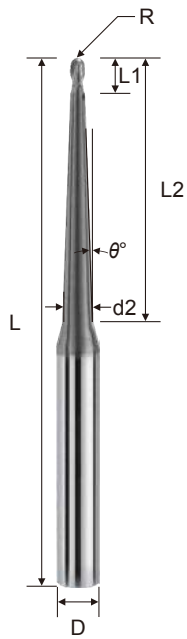
H650 - Taper Neck Ball Nose Type - 2F

鎢鋼球型銑刀 - 斜頸型 - 2 刃

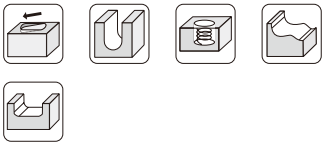
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- High strength of taper neck, can cut deep grooves without breaking.
- Suitable for cutting groves at hi speed.
- The coating can change to SICO, the prices will differ.

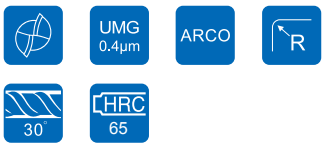
EHBRT2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Radius (R)	Dia. (d)	θ°	CL (L1)	EFF-L (L2)	NL (d2)	OAL (L)	Shank (D)	Flutes (F)
EHBRT201023AA	0.5R	1	1.5°	2	23	2.20	60	6	2
EHBRT202023AA	1.0R	2	1.5°	4	23	3.00	60	6	2
EHBRT2020423A	1.0R	2	3.0°	4	42	5.98	100	8	2
EHBRT203052AA	1.5R	3	1.5°	6	52	5.40	100	6	2
EHBRT2030473A	1.5R	3	3.0°	6	47	7.29	100	8	2
EHBRT204046AA	2.0R	4	1.5°	8	46	6.00	100	6	2
EHBRT2040383A	2.0R	4	3.0°	8	38	7.14	100	8	2
EHBRT2050283A	2.5R	5	3.0°	10	28	6.88	100	8	2
EHBRT2060383A	3.0R	6	3.0°	12	38	8.72	100	10	2
EHBRT2080383A	4.0R	8	3.0°	16	38	10.30	100	12	2
EHBRT2100573A	5.0R	10	3.0°	20	57	13.88	100	16	2
EHBRT2120383A	6.0R	12	3.0°	24	38	13.47	100	16	2





d	R Tolerance
Ø	± 0.02

Cutting conditions（建議切削參數表）: Table 020

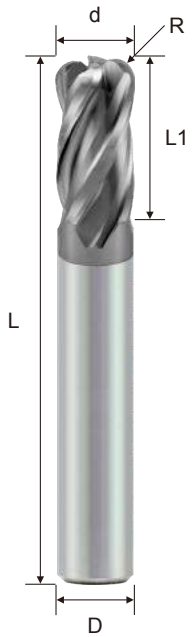
H650 - Corner Radius Type - 4F

鎢鋼圓鼻銑刀 - 標準型 - 4 刃

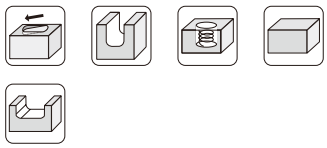
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long tool life and wear resistant due to its negative angle with corner radius design.
- The coating can change to SICO, the prices will differ.

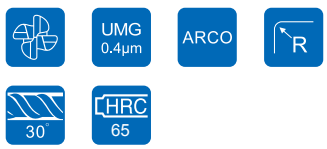
EHCFH4
EHCSH4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EHCFH404003A	4	0.3R	8	50	4	4
EHCFH404005A	4	0.5R	8	50	4	4
EHCFH404010A	4	1.0R	8	50	4	4
EHCSH404003A	4	0.3R	8	50	6	4
EHCSH404005A	4	0.5R	8	50	6	4
EHCSH404010A	4	1.0R	8	50	6	4
EHCSH405005A	5	0.5R	10	50	6	4
EHCSH405010A	5	1.0R	10	50	6	4
EHCSH406003A	6	0.3R	12	50	6	4
EHCSH406005A	6	0.5R	12	50	6	4
EHCSH406010A	6	1.0R	12	50	6	4
EHCSH408005A	8	0.5R	16	60	8	4
EHCSH408010A	8	1.0R	16	60	8	4
EHCSH408015A	8	1.5R	16	60	8	4
EHCSH410005A	10	0.5R	20	75	10	4
EHCSH410010A	10	1.0R	20	75	10	4
EHCSH410015A	10	1.5R	20	75	10	4
EHCSH410020A	10	2.0R	20	75	10	4
EHCSH412005A	12	0.5R	24	75	12	4
EHCSH412010A	12	1.0R	24	75	12	4
EHCSH412015A	12	1.5R	24	75	12	4
EHCSH412020A	12	2.0R	24	75	12	4





d	R Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03
R	± 0.015

Cutting conditions（建議切削參數表）: Table 021

Winstar Cutting Technologies

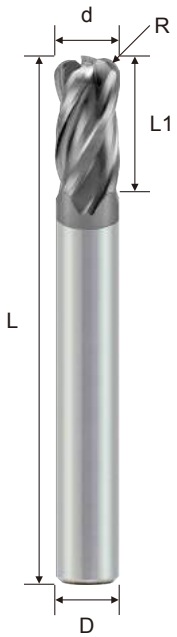
H650 - Long Shank Corner Radius Type - 4F

鎢鋼圓鼻銑刀 - 長柄型 - 4 刃

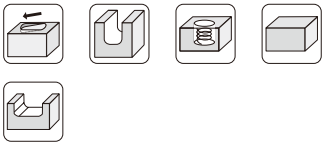
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Long tool life and wear resistant due to its negative angle with corner radius design.
- The coating can change to SICO, the prices will differ.

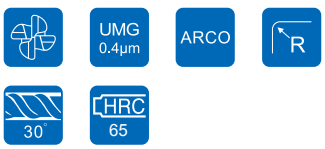
EHCLH4
EHCMH4
EHCNH4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EHCEH404005A	4	0.5R	8	75	4	4
EHCEH404010A	4	1.0R	8	75	4	4
EHCKH404005A	4	0.5R	8	100	4	4
EHCKH404010A	4	1.0R	8	100	4	4
EHCLH406005A	6	0.5R	12	75	6	4
EHCLH406010A	6	1.0R	12	75	6	4
EHCNH406005A	6	0.5R	12	100	6	4
EHCNH406010A	6	1.0R	12	100	6	4
EHCMH408005A	8	0.5R	16	75	8	4
EHCMH408010A	8	1.0R	16	75	8	4
EHCLH408005A	8	0.5R	16	100	8	4
EHCLH408010A	8	1.0R	16	100	8	4
EHCLH410005A	10	0.5R	20	100	10	4
EHCLH410010A	10	1.0R	20	100	10	4
EHCNH410005A	10	0.5R	20	150	10	4
EHCNH410010A	10	1.0R	20	150	10	4
EHCLH412005A	12	0.5R	24	100	12	4
EHCLH412010A	12	0.5R	24	100	12	4
EHCNH412005A	12	0.5R	24	150	12	4
EHCNH412010A	12	1.0R	24	150	12	4





d	R Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03
R	± 0.015

Cutting conditions（建議切削參數表）: Table 022

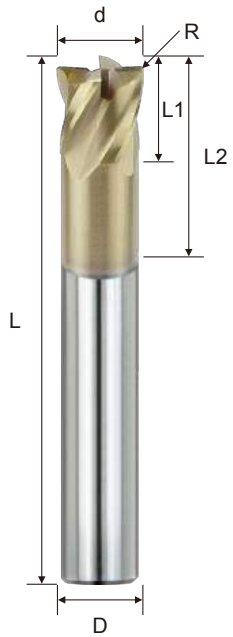
H650 - Short Flute Corner Radius Type - 4F

鎢鋼圓鼻銑刀 - 短刃型 - 4 刃

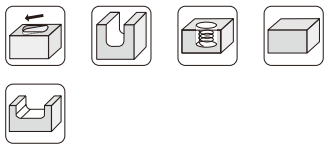
- SICO Nano coating provides a superior wear and heat resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Short cutting length with high rigidity is suitable for high speed cutting.
- The coating can change to TOP ARCO, the prices will differ.

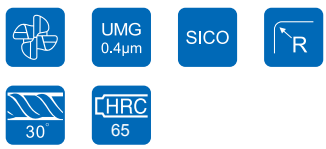
EHCUH4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCUH403001S	3	0.1R	3	7.5	50	6	4
EHCUH403005S	3	0.5R	3	7.5	50	6	4
EHCUH404002S	4	0.2R	4	10.0	50	6	4
EHCUH404005S	4	0.5R	4	10.0	50	6	4
EHCUH405002S	5	0.2R	5	12.5	50	6	4
EHCUH405005S	5	0.5R	5	12.5	50	6	4
EHCUH406002S	6	0.2R	6	15.0	50	6	4
EHCUH406005S	6	0.5R	6	15.0	50	6	4
EHCUH406010S	6	1.0R	6	15.0	50	6	4
EHCUH408003S	8	0.3R	8	20.0	60	8	4
EHCUH408005S	8	0.5R	8	20.0	60	8	4
EHCUH408010S	8	1.0R	8	20.0	60	8	4
EHCUH408015S	8	1.5R	8	20.0	60	8	4
EHCUH410003S	10	0.3R	10	25.0	75	10	4
EHCUH410005S	10	0.5R	10	25.0	75	10	4
EHCUH410010S	10	1.0R	10	25.0	75	10	4
EHCUH410015S	10	1.5R	10	25.0	75	10	4
EHCUH410020S	10	2.0R	10	25.0	75	10	4
EHCUH412003S	12	0.3R	12	30.0	75	12	4
EHCUH412005S	12	0.5R	12	30.0	75	12	4
EHCUH412010S	12	1.0R	12	30.0	75	12	4
EHCUH412015S	12	1.5R	12	30.0	75	12	4
EHCUH412020S	12	2.0R	12	30.0	75	12	4





d	R Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03
R	± 0.015

Cutting conditions（建議切削參數表）: Table 023

Winstar Cutting Technologies

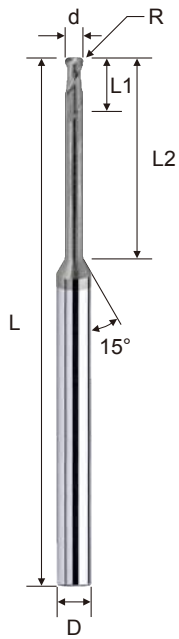
H650 - Long Neck Corner Radius Type - 2F

鎢鋼圓鼻銑刀 - 長頸型 - 2 刃

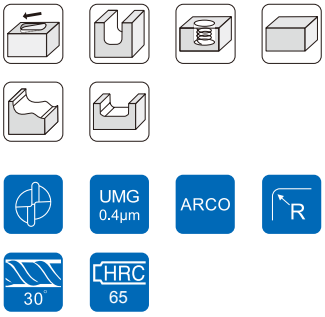
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

EHCBC2
EHCRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCBC20100104A	1.0	0.1R	1.0	4	50	4	2
EHCBC20100106A	1.0	0.1R	1.0	6	50	4	2
EHCBC20100108A	1.0	0.1R	1.0	8	50	4	2
EHCBC20100110A	1.0	0.1R	1.0	10	50	4	2
EHCBC20100112A	1.0	0.1R	1.0	12	50	4	2
EHCBC20100204A	1.0	0.2R	1.0	4	50	4	2
EHCBC20100206A	1.0	0.2R	1.0	6	50	4	2
EHCBC20100208A	1.0	0.2R	1.0	8	50	4	2
EHCBC20100210A	1.0	0.2R	1.0	10	50	4	2
EHCBC20100212A	1.0	0.2R	1.0	12	50	4	2
EHCBC20100304A	1.0	0.3R	1.0	4	50	4	2
EHCBC20100306A	1.0	0.3R	1.0	6	50	4	2
EHCBC20100308A	1.0	0.3R	1.0	8	50	4	2
EHCBC20100310A	1.0	0.3R	1.0	10	50	4	2
EHCBC20100312A	1.0	0.3R	1.0	12	50	4	2
EHCBC20120104A	1.2	0.1R	1.2	4	50	4	2
EHCBC20120106A	1.2	0.1R	1.2	6	50	4	2
EHCBC20120108A	1.2	0.1R	1.2	8	50	4	2
EHCBC20120110A	1.2	0.1R	1.2	10	50	4	2
EHCBC20120112A	1.2	0.1R	1.2	12	50	4	2
EHCBC20120204A	1.2	0.2R	1.2	4	50	4	2
EHCBC20120206A	1.2	0.2R	1.2	6	50	4	2
EHCBC20120208A	1.2	0.2R	1.2	8	50	4	2
EHCBC20120210A	1.2	0.2R	1.2	10	50	4	2
EHCBC20120212A	1.2	0.2R	1.2	12	50	4	2
EHCBC20120304A	1.2	0.3R	1.2	4	50	4	2
EHCBC20120306A	1.2	0.3R	1.2	6	50	4	2
EHCBC20120308A	1.2	0.3R	1.2	8	50	4	2
EHCBC20120310A	1.2	0.3R	1.2	10	50	4	2
EHCBC20120312A	1.2	0.3R	1.2	12	50	4	2



d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

Cutting conditions（建議切削參數表）: Table 024

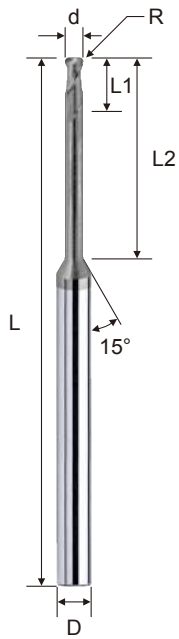
H650 - Long Neck Corner Radius Type - 2F

鎢鋼圓鼻銑刀 - 長頸型 - 2 刃

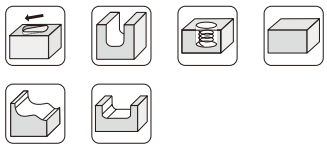
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

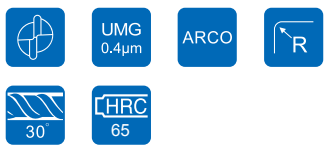
EHCBC2
EHCRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCBC20150106A	1.5	0.1R	1.5	6	50	4	2
EHCBC20150108A	1.5	0.1R	1.5	8	50	4	2
EHCBC20150110A	1.5	0.1R	1.5	10	50	4	2
EHCBC20150112A	1.5	0.1R	1.5	12	50	4	2
EHCBC20150116A	1.5	0.1R	1.5	16	50	4	2
EHCBC20150206A	1.5	0.2R	1.5	6	50	4	2
EHCBC20150208A	1.5	0.2R	1.5	8	50	4	2
EHCBC20150210A	1.5	0.2R	1.5	10	50	4	2
EHCBC20150212A	1.5	0.2R	1.5	12	50	4	2
EHCBC20150216A	1.5	0.2R	1.5	16	50	4	2
EHCBC20150306A	1.5	0.3R	1.5	6	50	4	2
EHCBC20150308A	1.5	0.3R	1.5	8	50	4	2
EHCBC20150310A	1.5	0.3R	1.5	10	50	4	2
EHCBC20150312A	1.5	0.3R	1.5	12	50	4	2
EHCBC20150316A	1.5	0.3R	1.5	16	50	4	2
EHCBC20150506A	1.5	0.5R	1.5	6	50	4	2
EHCBC20150508A	1.5	0.5R	1.5	8	50	4	2
EHCBC20150510A	1.5	0.5R	1.5	10	50	4	2
EHCBC20150512A	1.5	0.5R	1.5	12	50	4	2
EHCBC20150516A	1.5	0.5R	1.5	16	50	4	2





d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

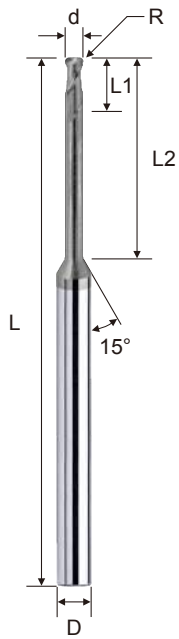
Cutting conditions（建議切削參數表）: Table 024

H650 - Long Neck Corner Radius Type - 2F 鎢鋼圓鼻銑刀 - 長頸型 - 2 刃

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

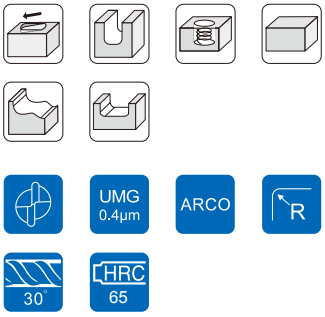
EHCBC2
EHCRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCBC20200106A	2.0	0.1R	2.0	6	50	4	2
EHCBC20200108A	2.0	0.1R	2.0	8	50	4	2
EHCBC20200110A	2.0	0.1R	2.0	10	50	4	2
EHCBC20200112A	2.0	0.1R	2.0	12	50	4	2
EHCBC20200116A	2.0	0.1R	2.0	16	50	4	2
EHCBC20200120A	2.0	0.1R	2.0	20	50	4	2
EHCBC20200125A	2.0	0.1R	2.0	25	60	4	2
EHCBC20200206A	2.0	0.2R	2.0	6	50	4	2
EHCBC20200208A	2.0	0.2R	2.0	8	50	4	2
EHCBC20200210A	2.0	0.2R	2.0	10	50	4	2
EHCBC20200212A	2.0	0.2R	2.0	12	50	4	2
EHCBC20200216A	2.0	0.2R	2.0	16	50	4	2
EHCBC20200220A	2.0	0.2R	2.0	20	50	4	2
EHCBC20200225A	2.0	0.2R	2.0	25	60	4	2
EHCBC20200306A	2.0	0.3R	2.0	6	50	4	2
EHCBC20200308A	2.0	0.3R	2.0	8	50	4	2
EHCBC20200310A	2.0	0.3R	2.0	10	50	4	2
EHCBC20200312A	2.0	0.3R	2.0	12	50	4	2
EHCBC20200316A	2.0	0.3R	2.0	16	50	4	2
EHCBC20200320A	2.0	0.3R	2.0	20	50	4	2
EHCBC20200325A	2.0	0.3R	2.0	25	60	4	2
EHCBC20200506A	2.0	0.5R	2.0	6	50	4	2
EHCBC20200508A	2.0	0.5R	2.0	8	50	4	2
EHCBC20200510A	2.0	0.5R	2.0	10	50	4	2
EHCBC20200512A	2.0	0.5R	2.0	12	50	4	2
EHCBC20200516A	2.0	0.5R	2.0	16	50	4	2
EHCBC20200520A	2.0	0.5R	2.0	20	50	4	2
EHCBC20200525A	2.0	0.5R	2.0	25	60	4	2
EHCRC20200510A	2.0	0.5R	2.0	10	50	6	2
EHCRC20200515A	2.0	0.5R	2.0	15	50	6	2

Cutting conditions（建議切削參數表）: Table 024



d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

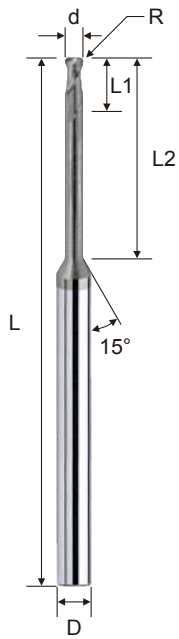
H650 - Long Neck Corner Radius Type - 2F

鎢鋼圓鼻銑刀 - 長頸型 - 2 刃

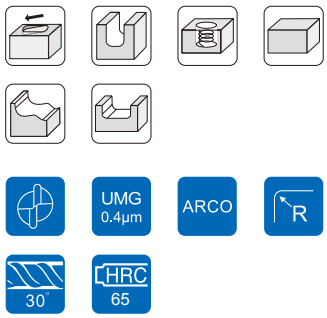
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

EHCBC2
EHCRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCBC20250110A	2.5	0.1R	2.5	10	50	4	2
EHCBC20250116A	2.5	0.1R	2.5	16	50	4	2
EHCBC20250120A	2.5	0.1R	2.5	20	50	4	2
EHCBC20250125A	2.5	0.1R	2.5	25	60	4	2
EHCBC20250210A	2.5	0.2R	2.5	10	50	4	2
EHCBC20250216A	2.5	0.2R	2.5	16	50	4	2
EHCBC20250220A	2.5	0.2R	2.5	20	50	4	2
EHCBC20250225A	2.5	0.2R	2.5	25	60	4	2
EHCBC20250310A	2.5	0.3R	2.5	10	50	4	2
EHCBC20250316A	2.5	0.3R	2.5	16	50	4	2
EHCBC20250320A	2.5	0.3R	2.5	20	50	4	2
EHCBC20250325A	2.5	0.3R	2.5	25	60	4	2
EHCBC20250510A	2.5	0.5R	2.5	10	50	4	2
EHCBC20250516A	2.5	0.5R	2.5	16	50	4	2
EHCBC20250520A	2.5	0.5R	2.5	20	50	4	2
EHCBC20250525A	2.5	0.5R	2.5	25	60	4	2



d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

Cutting conditions（建議切削參數表）: Table 024

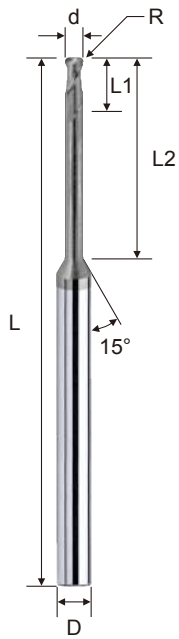
H650 - Long Neck Corner Radius Type - 2F

鎢鋼圓鼻銑刀 - 長頸型 - 2 刃

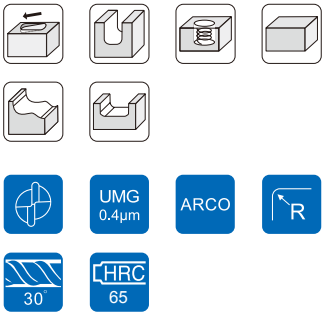
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

EHCBC2
EHCRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCRC20300110A	3.0	0.1R	3.0	10	50	6	2
EHCRC20300116A	3.0	0.1R	3.0	16	60	6	2
EHCRC20300120A	3.0	0.1R	3.0	20	60	6	2
EHCRC20300125A	3.0	0.1R	3.0	25	60	6	2
EHCRC20300130A	3.0	0.1R	3.0	30	75	6	2
EHCRC20300135A	3.0	0.1R	3.0	35	75	6	2
EHCRC20300210A	3.0	0.2R	3.0	10	50	6	2
EHCRC20300216A	3.0	0.2R	3.0	16	60	6	2
EHCRC20300220A	3.0	0.2R	3.0	20	60	6	2
EHCRC20300225A	3.0	0.2R	3.0	25	60	6	2
EHCRC20300230A	3.0	0.2R	3.0	30	75	6	2
EHCRC20300235A	3.0	0.2R	3.0	35	75	6	2
EHCRC20300310A	3.0	0.3R	3.0	10	50	6	2
EHCRC20300316A	3.0	0.3R	3.0	16	60	6	2
EHCRC20300320A	3.0	0.3R	3.0	20	60	6	2
EHCRC20300325A	3.0	0.3R	3.0	25	60	6	2
EHCRC20300330A	3.0	0.3R	3.0	30	75	6	2
EHCRC20300335A	3.0	0.3R	3.0	35	75	6	2
EHCRC20300510A	3.0	0.5R	3.0	10	50	6	2
EHCRC20300516A	3.0	0.5R	3.0	16	60	6	2
EHCRC20300520A	3.0	0.5R	3.0	20	60	6	2
EHCRC20300525A	3.0	0.5R	3.0	25	60	6	2
EHCRC20300530A	3.0	0.5R	3.0	30	75	6	2
EHCRC20300535A	3.0	0.5R	3.0	35	75	6	2
EHCRC20301010A	3.0	1.0R	3.0	10	50	6	2
EHCRC20301016A	3.0	1.0R	3.0	16	60	6	2
EHCRC20301020A	3.0	1.0R	3.0	20	60	6	2
EHCRC20301025A	3.0	1.0R	3.0	25	60	6	2
EHCRC20301030A	3.0	1.0R	3.0	30	75	6	2
EHCRC20301035A	3.0	1.0R	3.0	35	75	6	2



d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

Cutting conditions（建議切削參數表）: Table 024

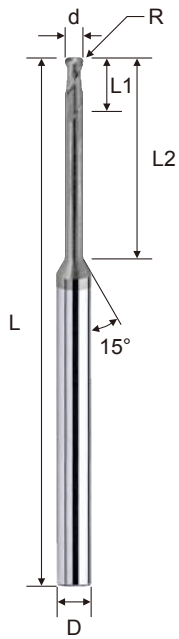
H650 - Long Neck Corner Radius Type - 2F

鎢鋼圓鼻銑刀 - 長頸型 - 2 刃

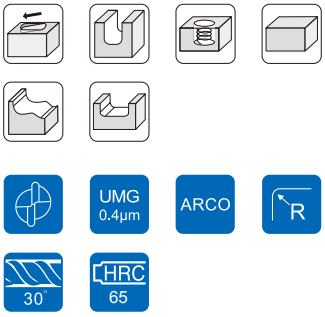
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

EHCBC2
EHCRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCRC20400113A	4.0	0.1R	4.0	13	50	6	2
EHCRC20400116A	4.0	0.1R	4.0	16	60	6	2
EHCRC20400120A	4.0	0.1R	4.0	20	60	6	2
EHCRC20400125A	4.0	0.1R	4.0	25	60	6	2
EHCRC20400130A	4.0	0.1R	4.0	30	75	6	2
EHCRC20400135A	4.0	0.1R	4.0	35	75	6	2
EHCRC20400213A	4.0	0.2R	4.0	13	50	6	2
EHCRC20400216A	4.0	0.2R	4.0	16	60	6	2
EHCRC20400220A	4.0	0.2R	4.0	20	60	6	2
EHCRC20400225A	4.0	0.2R	4.0	25	60	6	2
EHCRC20400230A	4.0	0.2R	4.0	30	75	6	2
EHCRC20400235A	4.0	0.2R	4.0	35	75	6	2
EHCRC20400313A	4.0	0.3R	4.0	13	50	6	2
EHCRC20400316A	4.0	0.3R	4.0	16	60	6	2
EHCRC20400320A	4.0	0.3R	4.0	20	60	6	2
EHCRC20400325A	4.0	0.3R	4.0	25	60	6	2
EHCRC20400330A	4.0	0.3R	4.0	30	75	6	2
EHCRC20400335A	4.0	0.3R	4.0	35	75	6	2
EHCRC20400513A	4.0	0.5R	4.0	13	50	6	2
EHCRC20400516A	4.0	0.5R	4.0	16	60	6	2
EHCRC20400520A	4.0	0.5R	4.0	20	60	6	2
EHCRC20400525A	4.0	0.5R	4.0	25	60	6	2
EHCRC20400530A	4.0	0.5R	4.0	30	75	6	2
EHCRC20400535A	4.0	0.5R	4.0	35	75	6	2
EHCRC20401013A	4.0	1.0R	4.0	13	50	6	2
EHCRC20401016A	4.0	1.0R	4.0	16	60	6	2
EHCRC20401020A	4.0	1.0R	4.0	20	60	6	2
EHCRC20401025A	4.0	1.0R	4.0	25	60	6	2
EHCRC20401030A	4.0	1.0R	4.0	30	75	6	2
EHCRC20401035A	4.0	1.0R	4.0	35	75	6	2



d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

Cutting conditions（建議切削參數表）: Table 024

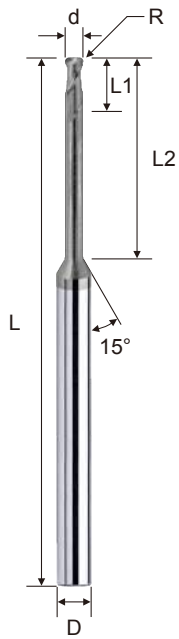
H650 - Long Neck Corner Radius Type - 2F

鎢鋼圓鼻銑刀 - 長頸型 - 2 刃

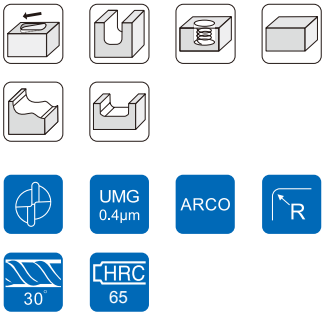
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

EHCBC2
EHCRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCRC20500116A	5.0	0.1R	5.0	16	60	6	2
EHCRC20500130A	5.0	0.1R	5.0	30	75	6	2
EHCRC20500216A	5.0	0.2R	5.0	16	60	6	2
EHCRC20500230A	5.0	0.2R	5.0	30	75	6	2
EHCRC20500316A	5.0	0.3R	5.0	16	60	6	2
EHCRC20500330A	5.0	0.3R	5.0	30	75	6	2
EHCRC20500516A	5.0	0.5R	5.0	16	60	6	2
EHCRC20500530A	5.0	0.5R	5.0	30	75	6	2
EHCRC20501016A	5.0	1.0R	5.0	16	60	6	2
EHCRC20501030A	5.0	1.0R	5.0	30	75	6	2
EHCRC20600120A	6.0	0.1R	7.0	20	60	6	2
EHCRC20600130A	6.0	0.1R	7.0	30	75	6	2
EHCRC20600220A	6.0	0.2R	7.0	20	60	6	2
EHCRC20600230A	6.0	0.2R	7.0	30	75	6	2
EHCRC20600320A	6.0	0.3R	7.0	20	60	6	2
EHCRC20600330A	6.0	0.3R	7.0	30	75	6	2
EHCRC20600520A	6.0	0.5R	7.0	20	60	6	2
EHCRC20600530A	6.0	0.5R	7.0	30	75	6	2
EHCRC20601020A	6.0	1.0R	7.0	20	60	6	2
EHCRC20601030A	6.0	1.0R	7.0	30	75	6	2
EHCRC20601520A	6.0	1.5R	7.0	20	60	6	2
EHCRC20601530A	6.0	1.5R	7.0	30	75	6	2
EHCRC20800522A	8.0	0.5R	9.0	22	60	8	2
EHCRC20801022A	8.0	1.0R	9.0	22	60	8	2
EHCRC20801522A	8.0	1.5R	9.0	22	60	8	2
EHCRC20802022A	8.0	2.0R	9.0	22	60	8	2
EHCRC21000524A	10.0	0.5R	11.0	24	75	10	2
EHCRC21001024A	10.0	1.0R	11.0	24	75	10	2
EHCRC21001524A	10.0	1.5R	11.0	24	75	10	2
EHCRC21002024A	10.0	2.0R	11.0	24	75	10	2
EHCRC21200526A	12.0	0.5R	13.0	26	75	12	2
EHCRC21201026A	12.0	1.0R	13.0	26	75	12	2
EHCRC21201526A	12.0	1.5R	13.0	26	75	12	2
EHCRC21202026A	12.0	2.0R	13.0	26	75	12	2



d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

Cutting conditions（建議切削參數表）: Table 024

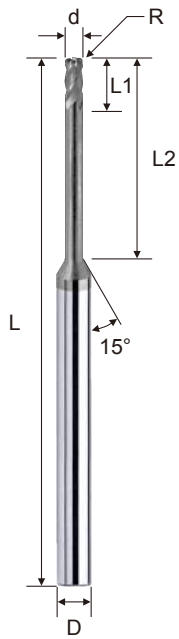
H650 - Long Neck Corner Radius Type - 4F

鎢鋼圓鼻銑刀 - 長頸型 - 4 刃

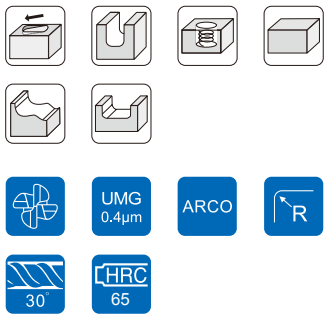
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

EHCBC4
EHCRC4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCBC40200106A	2.0	0.1R	2.0	6	50	4	4
EHCBC40200108A	2.0	0.1R	2.0	8	50	4	4
EHCBC40200110A	2.0	0.1R	2.0	10	50	4	4
EHCBC40200112A	2.0	0.1R	2.0	12	50	4	4
EHCBC40200116A	2.0	0.1R	2.0	16	50	4	4
EHCBC40200120A	2.0	0.1R	2.0	20	50	4	4
EHCBC40200125A	2.0	0.1R	2.0	25	60	4	4
EHCBC40200206A	2.0	0.2R	2.0	6	50	4	4
EHCBC40200208A	2.0	0.2R	2.0	8	50	4	4
EHCBC40200210A	2.0	0.2R	2.0	10	50	4	4
EHCBC40200212A	2.0	0.2R	2.0	12	50	4	4
EHCBC40200216A	2.0	0.2R	2.0	16	50	4	4
EHCBC40200220A	2.0	0.2R	2.0	20	50	4	4
EHCBC40200225A	2.0	0.2R	2.0	25	60	4	4
EHCBC40200306A	2.0	0.3R	2.0	6	50	4	4
EHCBC40200308A	2.0	0.3R	2.0	8	50	4	4
EHCBC40200310A	2.0	0.3R	2.0	10	50	4	4
EHCBC40200312A	2.0	0.3R	2.0	12	50	4	4
EHCBC40200316A	2.0	0.3R	2.0	16	50	4	4
EHCBC40200320A	2.0	0.3R	2.0	20	50	4	4
EHCBC40200325A	2.0	0.3R	2.0	25	60	4	4
EHCBC40200506A	2.0	0.5R	2.0	6	50	4	4
EHCBC40200508A	2.0	0.5R	2.0	8	50	4	4
EHCBC40200510A	2.0	0.5R	2.0	10	50	4	4
EHCBC40200512A	2.0	0.5R	2.0	12	50	4	4
EHCBC40200516A	2.0	0.5R	2.0	16	50	4	4
EHCBC40200520A	2.0	0.5R	2.0	20	50	4	4
EHCBC40200525A	2.0	0.5R	2.0	25	60	4	4
EHCRC40200510A	2.0	0.5R	2.0	10	50	6	4
EHCRC40200515A	2.0	0.5R	2.0	15	50	6	4



d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

Cutting conditions（建議切削參數表）: Table 025

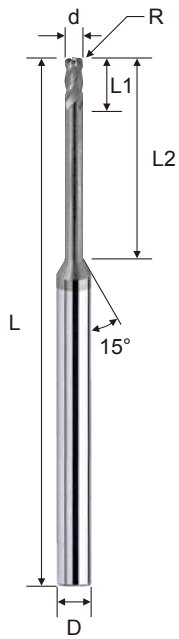
H650 - Long Neck Corner Radius Type - 4F

鎢鋼圓鼻銑刀 - 長頸型 - 4 刃

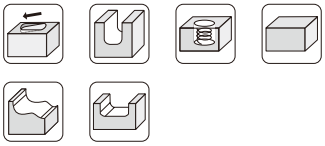
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

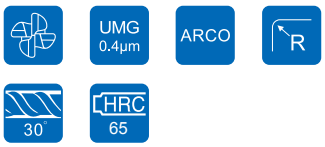
EHCBC4
EHCRC4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCBC40250110A	2.5	0.1R	2.5	10	50	4	4
EHCBC40250116A	2.5	0.1R	2.5	16	50	4	4
EHCBC40250120A	2.5	0.1R	2.5	20	50	4	4
EHCBC40250125A	2.5	0.1R	2.5	25	60	4	4
EHCBC40250210A	2.5	0.2R	2.5	10	50	4	4
EHCBC40250216A	2.5	0.2R	2.5	16	50	4	4
EHCBC40250220A	2.5	0.2R	2.5	20	50	4	4
EHCBC40250225A	2.5	0.2R	2.5	25	60	4	4
EHCBC40250310A	2.5	0.3R	2.5	10	50	4	4
EHCBC40250316A	2.5	0.3R	2.5	16	50	4	4
EHCBC40250320A	2.5	0.3R	2.5	20	50	4	4
EHCBC40250325A	2.5	0.3R	2.5	25	60	4	4
EHCBC40250510A	2.5	0.5R	2.5	10	50	4	4
EHCBC40250516A	2.5	0.5R	2.5	16	50	4	4
EHCBC40250520A	2.5	0.5R	2.5	20	50	4	4
EHCBC40250525A	2.5	0.5R	2.5	25	60	4	4





d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

Cutting conditions（建議切削參數表）: Table 025

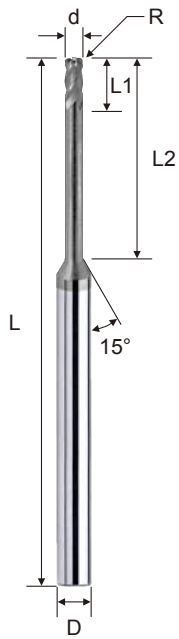
H650 - Long Neck Corner Radius Type - 4F

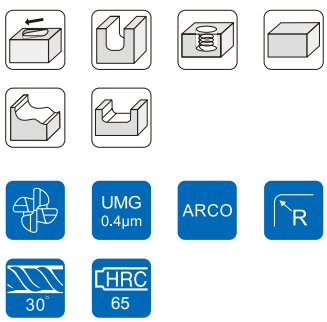
鎢鋼圓鼻銑刀 - 長頸型 - 4 刃

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

EHCBC4
EHCRC4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑





d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCRC40300110A	3.0	0.1R	3.0	10	50	6	4
EHCRC40300116A	3.0	0.1R	3.0	16	60	6	4
EHCRC40300120A	3.0	0.1R	3.0	20	60	6	4
EHCRC40300125A	3.0	0.1R	3.0	25	60	6	4
EHCRC40300130A	3.0	0.1R	3.0	30	75	6	4
EHCRC40300135A	3.0	0.1R	3.0	35	75	6	4
EHCRC40300210A	3.0	0.2R	3.0	10	50	6	4
EHCRC40300216A	3.0	0.2R	3.0	16	60	6	4
EHCRC40300220A	3.0	0.2R	3.0	20	60	6	4
EHCRC40300225A	3.0	0.2R	3.0	25	60	6	4
EHCRC40300230A	3.0	0.2R	3.0	30	75	6	4
EHCRC40300235A	3.0	0.2R	3.0	35	75	6	4
EHCRC40300310A	3.0	0.3R	3.0	10	50	6	4
EHCRC40300316A	3.0	0.3R	3.0	16	60	6	4
EHCRC40300320A	3.0	0.3R	3.0	20	60	6	4
EHCRC40300325A	3.0	0.3R	3.0	25	60	6	4
EHCRC40300330A	3.0	0.3R	3.0	30	75	6	4
EHCRC40300335A	3.0	0.3R	3.0	35	75	6	4
EHCRC40300510A	3.0	0.5R	3.0	10	50	6	4
EHCRC40300516A	3.0	0.5R	3.0	16	60	6	4
EHCRC40300520A	3.0	0.5R	3.0	20	60	6	4
EHCRC40300525A	3.0	0.5R	3.0	25	60	6	4
EHCRC40300530A	3.0	0.5R	3.0	30	75	6	4
EHCRC40300535A	3.0	0.5R	3.0	35	75	6	4
EHCRC40301010A	3.0	1.0R	3.0	10	50	6	4
EHCRC40301016A	3.0	1.0R	3.0	16	60	6	4
EHCRC40301020A	3.0	1.0R	3.0	20	60	6	4
EHCRC40301025A	3.0	1.0R	3.0	25	60	6	4
EHCRC40301030A	3.0	1.0R	3.0	30	75	6	4
EHCRC40301035A	3.0	1.0R	3.0	35	75	6	4

Cutting conditions（建議切削參數表）: Table 025

Winstar Cutting Technologies

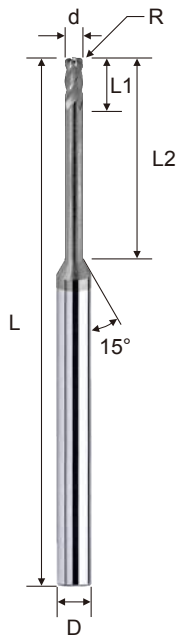
H650 - Long Neck Corner Radius Type - 4F

鎢鋼圓鼻銑刀 - 長頸型 - 4 刃

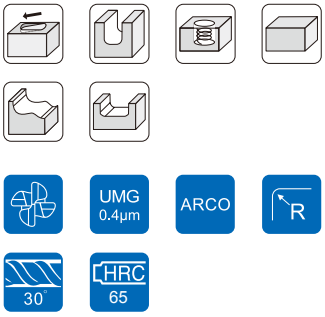
- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

EHCBC4
EHCRC4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCRC40400113A	4.0	0.1R	4.0	13	50	6	4
EHCRC40400116A	4.0	0.1R	4.0	16	60	6	4
EHCRC40400120A	4.0	0.1R	4.0	20	60	6	4
EHCRC40400125A	4.0	0.1R	4.0	25	60	6	4
EHCRC40400130A	4.0	0.1R	4.0	30	75	6	4
EHCRC40400135A	4.0	0.1R	4.0	35	75	6	4
EHCRC40400213A	4.0	0.2R	4.0	13	50	6	4
EHCRC40400216A	4.0	0.2R	4.0	16	60	6	4
EHCRC40400220A	4.0	0.2R	4.0	20	60	6	4
EHCRC40400225A	4.0	0.2R	4.0	25	60	6	4
EHCRC40400230A	4.0	0.2R	4.0	30	75	6	4
EHCRC40400235A	4.0	0.2R	4.0	35	75	6	4
EHCRC40400313A	4.0	0.3R	4.0	13	50	6	4
EHCRC40400316A	4.0	0.3R	4.0	16	60	6	4
EHCRC40400320A	4.0	0.3R	4.0	20	60	6	4
EHCRC40400325A	4.0	0.3R	4.0	25	60	6	4
EHCRC40400330A	4.0	0.3R	4.0	30	75	6	4
EHCRC40400335A	4.0	0.3R	4.0	35	75	6	4
EHCRC40400513A	4.0	0.5R	4.0	13	50	6	4
EHCRC40400516A	4.0	0.5R	4.0	16	60	6	4
EHCRC40400520A	4.0	0.5R	4.0	20	60	6	4
EHCRC40400525A	4.0	0.5R	4.0	25	60	6	4
EHCRC40400530A	4.0	0.5R	4.0	30	75	6	4
EHCRC40400535A	4.0	0.5R	4.0	35	75	6	4
EHCRC40401013A	4.0	1.0R	4.0	13	50	6	4
EHCRC40401016A	4.0	1.0R	4.0	16	60	6	4
EHCRC40401020A	4.0	1.0R	4.0	20	60	6	4
EHCRC40401025A	4.0	1.0R	4.0	25	60	6	4
EHCRC40401030A	4.0	1.0R	4.0	30	75	6	4
EHCRC40401035A	4.0	1.0R	4.0	35	75	6	4



d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

Cutting conditions（建議切削參數表）: Table 025

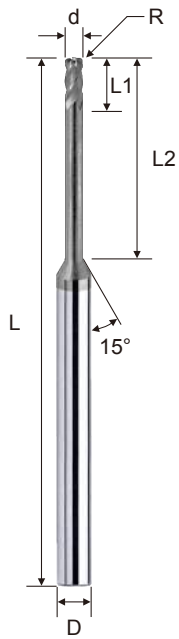
H650 - Long Neck Corner Radius Type - 4F

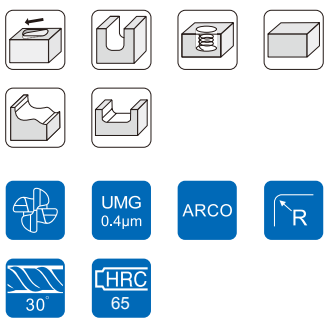
鎢鋼圓鼻銑刀 - 長頸型 - 4 刃

- ARCO coating provides a superior wear resistance.
- Suitable for HRC 50 and over HRC 50 Hardened Steel, also maximum up to HRC 65.
- Available in various effective cutting lengths.
- It is suitable for deep cutting.
- The coating can change to SICO, the prices will differ.

EHCBC4
EHCRC4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑





d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHCRC40500116A	5.0	0.1R	5.0	16	60	6	4
EHCRC40500130A	5.0	0.1R	5.0	30	75	6	4
EHCRC40500216A	5.0	0.2R	5.0	16	60	6	4
EHCRC40500230A	5.0	0.2R	5.0	30	75	6	4
EHCRC40500316A	5.0	0.3R	5.0	16	60	6	4
EHCRC40500330A	5.0	0.3R	5.0	30	75	6	4
EHCRC40500516A	5.0	0.5R	5.0	16	60	6	4
EHCRC40500530A	5.0	0.5R	5.0	30	75	6	4
EHCRC40501016A	5.0	1.0R	5.0	16	60	6	4
EHCRC40501030A	5.0	1.0R	5.0	30	75	6	4
EHCRC40600120A	6.0	0.1R	7.0	20	60	6	4
EHCRC40600130A	6.0	0.1R	7.0	30	75	6	4
EHCRC40600220A	6.0	0.2R	7.0	20	60	6	4
EHCRC40600230A	6.0	0.2R	7.0	30	75	6	4
EHCRC40600320A	6.0	0.3R	7.0	20	60	6	4
EHCRC40600330A	6.0	0.3R	7.0	30	75	6	4
EHCRC40600520A	6.0	0.5R	7.0	20	60	6	4
EHCRC40600530A	6.0	0.5R	7.0	30	75	6	4
EHCRC40601020A	6.0	1.0R	7.0	20	60	6	4
EHCRC40601030A	6.0	1.0R	7.0	30	75	6	4
EHCRC40601520A	6.0	1.5R	7.0	20	60	6	4
EHCRC40601530A	6.0	1.5R	7.0	30	75	6	4
EHCRC40800522A	8.0	0.5R	9.0	22	60	8	4
EHCRC40801022A	8.0	1.0R	9.0	22	60	8	4
EHCRC40801522A	8.0	1.5R	9.0	22	60	8	4
EHCRC40802022A	8.0	2.0R	9.0	22	60	8	4
EHCRC41000524A	10.0	0.5R	11.0	24	75	10	4
EHCRC41001024A	10.0	1.0R	11.0	24	75	10	4
EHCRC41001524A	10.0	1.5R	11.0	24	75	10	4
EHCRC41002024A	10.0	2.0R	11.0	24	75	10	4
EHCRC41200526A	12.0	0.5R	13.0	26	75	12	4
EHCRC41201026A	12.0	1.0R	13.0	26	75	12	4
EHCRC41201526A	12.0	1.5R	13.0	26	75	12	4
EHCRC41202026A	12.0	2.0R	13.0	26	75	12	4

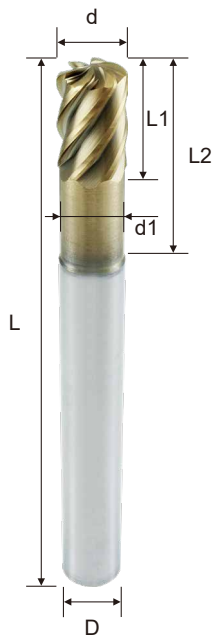
Cutting conditions（建議切削參數表）: Table 025

H650 - Double Corner High Feed EndMill - 4F / 6F 鎢鋼圓鼻銑刀 - 高進給型 - 4/6 刃

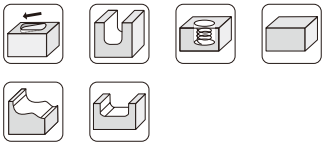
- SICO Nano coating provides a superior wear and heat resistance.
- Duotec design and multi-flute geometry design.
- High feed and high metal removal rate in surface milling.
- UMG Carbide substrate possess high TRS and good wear resistance.

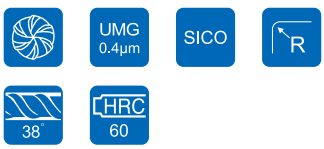
EHWSA4
EHWSA6

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑

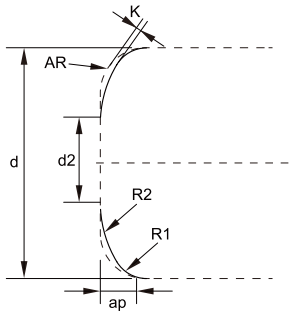


Order No.	Dia. (d)	ND (d1)	(d2)	(ap)	(R1)	(R2)	Approx Radius (AR)	(K)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EHWSA406000S	6	5.6	1.5	0.35	0.6	5.0	0.92	0.21	9	18	60	6	4
EHWSA608000S	8	7.6	3.2	0.40	0.8	4.5	1.16	0.22	12	24	75	8	6
EHWSA610000S	10	9.4	4.0	0.55	1.0	5.5	1.47	0.28	15	30	75	10	6
EHWSA612000S	12	11.4	4.8	0.70	1.2	6.5	1.77	0.34	18	36	75	12	6





d	Tolerance
Ø	0 ~ 0.02
R	± 0.02



WINSTAR

Endmills · Inserts · Drills



Winstar
Cutting Technologies

EUROS Series for High Feed Milling, up to HRC 60



- UNICO, SICO Nano coating provides a superior wear and heat resistance.
- Tip with small chamfer or small radius design.
- High feed & multiple application, Suitable for hardened & pre-hardened steel, Stainless, up to HRC 60.
- Achieve long tool life, perfect surfaces and considerable reduction of machining time.

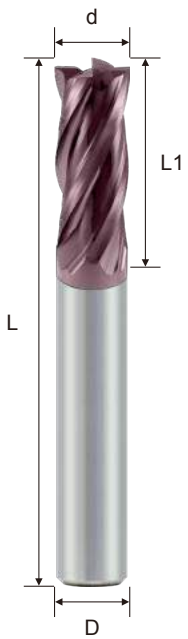
EUROS - High Feed Square Type - 4F

鎢鋼平銑刀 - 高進給倒角型 - 4 刃

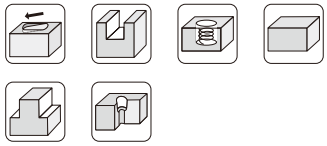
- Unico coating provides a superior wear and heat resistance.
- Honing & chamfering at the cutting edge geometries for high feed milling.
- Outstanding results for HRC 30 to HRC 55 steel, such as Alloy steel,cast Iron ...etc.
- Achieve long tool life, perfect surfaces and considerable reduction of machining time.

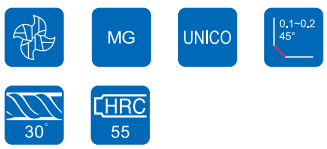
EUSFA4
EUSSA4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	45°	Flutes (F)
EUSSA403000U	3.0	8	50	6	0.10	4
EUSSA404000U	4.0	10	50	6	0.10	4
EUSSA405000U	5.0	13	50	6	0.15	4
EUSSA406000U	6.0	15	50	6	0.15	4
EUSSA408000U	8.0	20	60	8	0.15	4
EUSSA410000U	10.0	25	75	10	0.20	4
EUSSA412000U	12.0	30	75	12	0.20	4
EUSSA416000U	16.0	35	100	16	0.20	4

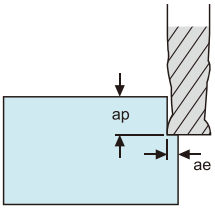




d	Tolerance
Ø < 3	0 ~ -0.02
3 ≦ Ø ≦ 10	0 ~ -0.03
Ø > 10	0 ~ -0.04

Feed recommend table

Dia (mm)	Fz (mm)
4	0.006 ~ 0.1
6	0.009 ~ 0.15
10	0.15 ~ 0.25



ap = 1.5D ae = 0.1D

Winstar Cutting Technologies

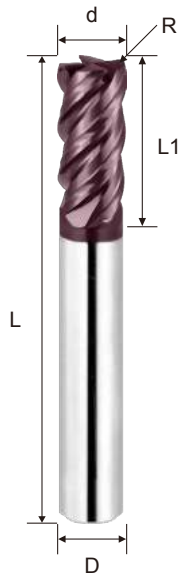
EUROS - Toric Square Type - 4F

鎢鋼平銑刀 - 高進給圓角型 - 4 刃

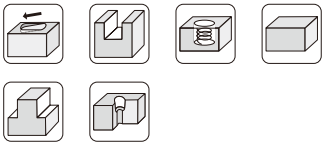
- Unico coating provides a superior wear and heat resistance.
- With "Small positive" rake angle and small corner radius geometries for high feed cutting.
- Outstanding results and tool life for 2-D and 3-D machining of HRC 30 to HRC 55 steel, such as Alloy steel,cast Iron...etc.
- Achieve long tool life, perfect surfaces and considerable reduction of machining time.

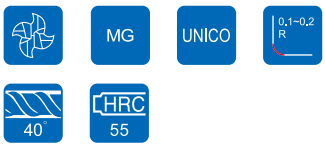
EUSFR4
EUSSR4

P	M	K	N	S	H
☑	☑	☑	☐	☑	☑



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	R	Flutes (F)
EUSSR403000U	3.0	8	50	6	0.10	4
EUSSR404000U	4.0	10	50	6	0.10	4
EUSSR405000U	5.0	13	50	6	0.15	4
EUSSR406000U	6.0	15	50	6	0.15	4
EUSSR408000U	8.0	20	60	8	0.15	4
EUSSR410000U	10.0	25	75	10	0.20	4
EUSSR412000U	12.0	30	75	12	0.20	4
EUSSR416000U	16.0	35	100	16	0.20	4

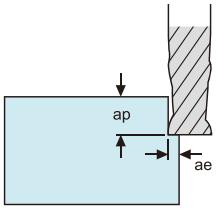




d	Tolerance
Ø < 3	0 ~ -0.02
3 ≦ Ø ≦ 10	0 ~ -0.03
Ø > 10	0 ~ -0.04

Feed recommend table

Dia (mm)	Fz (mm)
4	0.006 ~ 0.1
6	0.009 ~ 0.15
10	0.15 ~ 0.25



ap = 1.5D ae = 0.1D

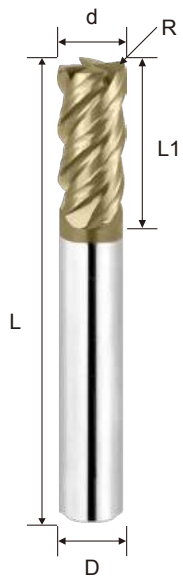
EUROS - Toric Square Type - 4F

鎢鋼平銑刀 - 高進給圓角型 - 4 刃

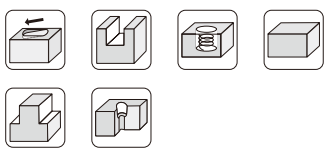
- SICO Nano coating provides a superior wear and heat resistance.
- With "Negative" rake angle and small corner radius geometries for high feed cutting.
- Outstanding results and tool life for 2-D and 3-D machining of HRC 50 to HRC 65 hardened and tempered steel.
- Achieve long tool life, perfect surfaces and considerable reduction of machining time.

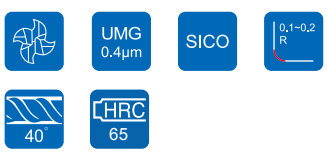
EUSFH4
EUSSH4

P	M	K	N	S	H
☑	☑	☑	☐	☑	☑



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	R	Flutes (F)
EUSSH403000S	3.0	8	50	6	0.10	4
EUSSH404000S	4.0	10	50	6	0.10	4
EUSSH405000S	5.0	13	50	6	0.15	4
EUSSH406000S	6.0	15	50	6	0.15	4
EUSSH408000S	8.0	20	60	8	0.15	4
EUSSH410000S	10.0	25	75	10	0.20	4
EUSSH412000S	12.0	30	75	12	0.20	4
EUSSH416000S	16.0	35	100	16	0.20	4

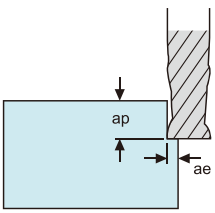




d	Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03

Feed recommend table

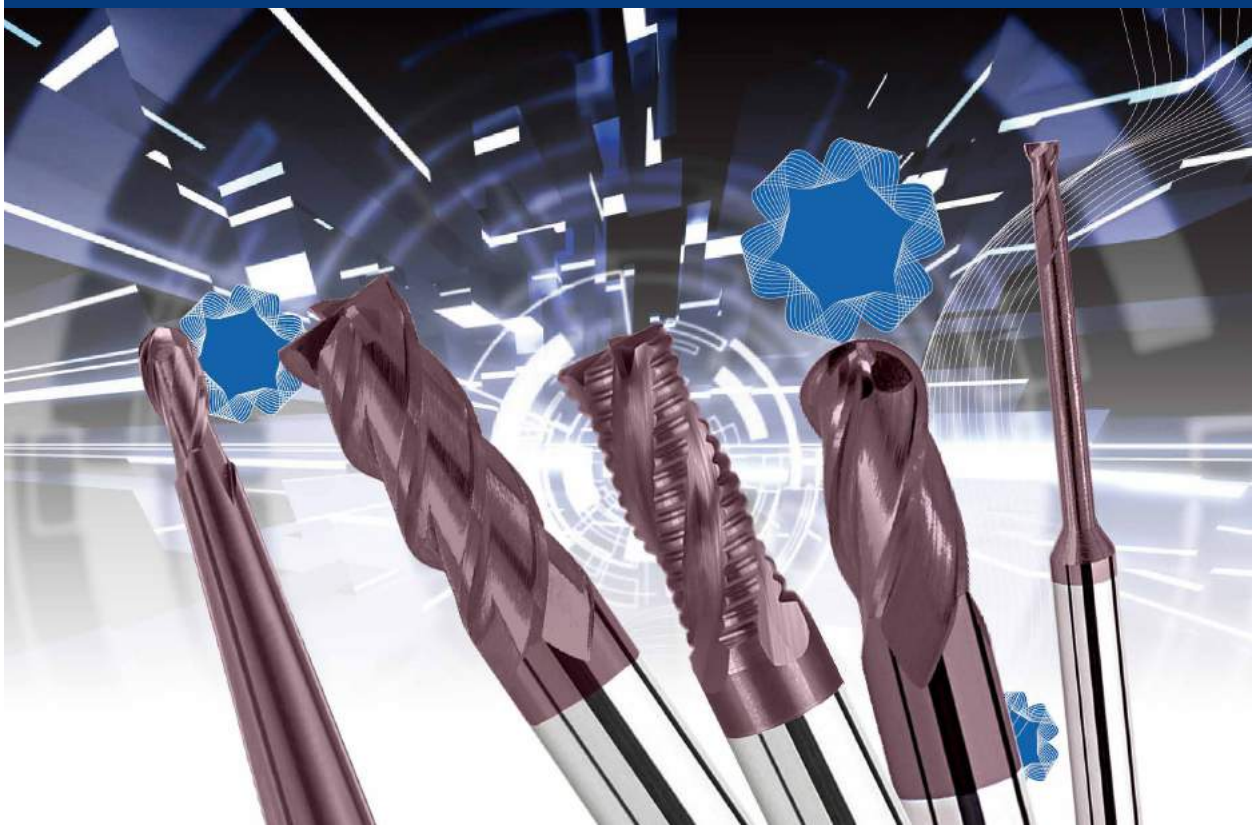
Dia (mm)	Fz (mm)
4	0.006 ~ 0.1
6	0.009 ~ 0.15
10	0.15 ~ 0.25



ap = 1.5D ae = 0.1D

Winstar Cutting Technologies

G550 Serie for Mold & Alloy steel, up to HRC 55



- Micro grain carbide rod is suitable for general machining.
- UNICO coating provides superior wear resistance and reduces the coefficient of friction.
- Stabilization of the cutting edge by edge flatland design and prevent chipping at corners.
- Universal geometry design is suitable for most materials.

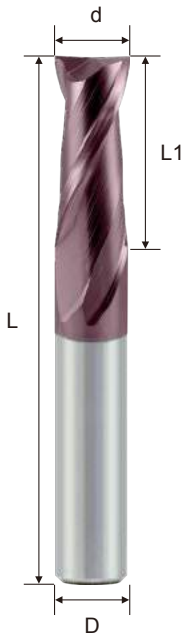
G550 - Square Type - 2F

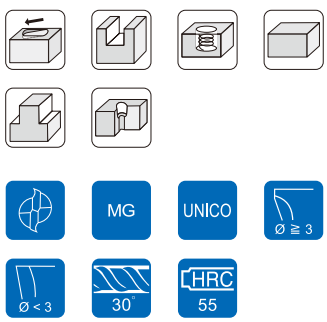
鎢鋼平銑刀 - 標準型 - 2 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel,etc.
- Strong geometry design has excellent cutting ability of cutting edges.
- High precision cutting for side milling.

EPSFC2
EPSSC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑





d	Tolerance
Ø < 3	0 ~ -0.02
3 ≦ Ø ≦ 10	0 ~ -0.03
Ø > 10	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSFC200200U	0.2	0.4	50	4	2
EPSFC200300U	0.3	0.6	50	4	2
EPSFC200400U	0.4	0.8	50	4	2
EPSFC200500U	0.5	1.0	50	4	2
EPSFC200600U	0.6	1.5	50	4	2
EPSFC200700U	0.7	2.0	50	4	2
EPSFC200800U	0.8	2.0	50	4	2
EPSFC200900U	0.9	2.0	50	4	2
EPSFC201000U	1.0	3.0	50	4	2
EPSFC201500U	1.5	4.0	50	4	2
EPSFC202000U	2.0	5.0	50	4	2
EPSFC202500U	2.5	6.0	50	4	2
EPSFC203000U	3.0	8.0	50	4	2
EPSFC203500U	3.5	9.0	50	4	2
EPSFC204000U	4.0	10.0	50	4	2
EPSSC201000U	1.0	3.0	50	6	2
EPSSC202000U	2.0	5.0	50	6	2
EPSSC203000U	3.0	8.0	50	6	2
EPSSC203500U	3.5	9.0	50	6	2
EPSSC204000U	4.0	10.0	50	6	2
EPSSC204500U	4.5	11.0	50	6	2
EPSSC205000U	5.0	13.0	50	6	2
EPSSC205500U	5.5	14.0	50	6	2
EPSSC206000U	6.0	15.0	50	6	2
EPSSC206500U	6.5	16.0	60	8	2
EPSSC207000U	7.0	18.0	60	8	2
EPSSC208000U	8.0	20.0	60	8	2
EPSSC209000U	9.0	22.0	75	10	2
EPSSC210000U	10.0	25.0	75	10	2
EPSSC211000U	11.0	25.0	75	12	2
EPSSC212000U	12.0	30.0	75	12	2
EPSSC214000U	14.0	30.0	75	14	2
EPSSC216000U	16.0	35.0	100	16	2
EPSSC218000U	18.0	40.0	100	20	2
EPSSC220000U	20.0	45.0	100	20	2
EPSSC225000U	25.0	45.0	100	25	2

Cutting conditions（建議切削參數表）: Table 026

G550 - Square Type - 3F

鎢鋼平銑刀 - 標準型 - 3 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel,etc.
- Strong geometry design has excellent cutting ability of cutting edges.
- High precision cutting for side milling.

EPSFC3
EPSSC3

P	M	K	N	S	H
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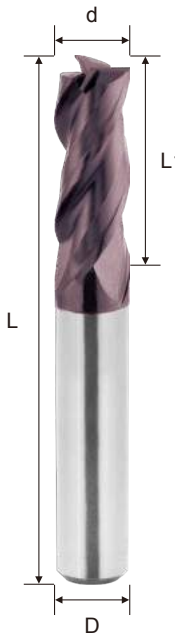
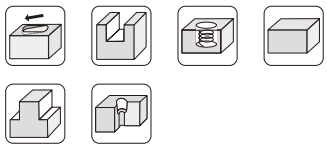
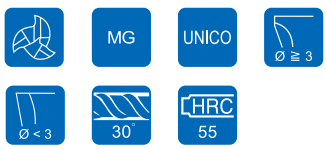


Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSTC301000U	1.0	3	50	3	3
EPSTC301500U	1.5	4	50	3	3
EPSTC302000U	2.0	5	50	3	3
EPSTC303000U	3.0	8	50	3	3
EPSFC301000U	1.0	3	50	4	3
EPSFC301500U	1.5	4	50	4	3
EPSFC302000U	2.0	5	50	4	3
EPSFC302500U	2.5	6	50	4	3
EPSFC303000U	3.0	8	50	4	3
EPSFC303500U	3.5	9	50	4	3
EPSFC304000U	4.0	10	50	4	3
EPSSC303000U	3.0	8	50	6	3
EPSSC303500U	3.5	9	50	6	3
EPSSC304000U	4.0	10	50	6	3
EPSSC304500U	4.5	11	50	6	3
EPSSC305000U	5.0	13	50	6	3
EPSSC305500U	5.5	14	50	6	3
EPSSC306000U	6.0	15	50	6	3
EPSSC306500U	6.5	16	60	8	3
EPSSC307000U	7.0	18	60	8	3
EPSSC308000U	8.0	20	60	8	3
EPSSC309000U	9.0	22	75	10	3
EPSSC310000U	10.0	25	75	10	3
EPSSC311000U	11.0	25	75	12	3
EPSSC312000U	12.0	30	75	12	3
EPSSC314000U	14.0	30	75	14	3
EPSSC316000U	16.0	35	100	16	3
EPSSC318000U	18.0	40	100	20	3
EPSSC320000U	20.0	45	100	20	3
EPSSC325000U	25.0	45	100	25	3





d	Tolerance
Ø < 3	0 ~ -0.02
3 ≦ Ø ≦ 10	0 ~ -0.03
Ø > 10	0 ~ -0.04

Cutting conditions（建議切削參數表）: Table 027

G550 - Square Type - 4F

鎢鋼平銑刀 - 標準型 - 4 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, Copper, FRP, etc.
- Strong geometry design has excellent cutting ability of cutting edges.
- High precision cutting for side milling.

EPSFC4
EPSSC4

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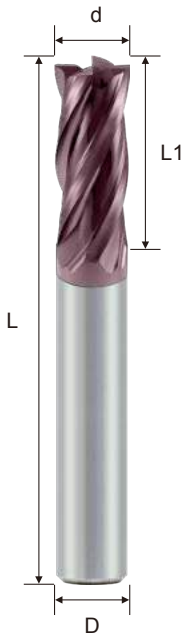
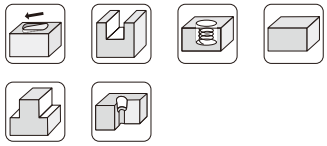
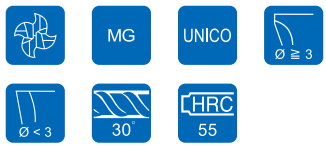


Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSTC401000U	1.0	3	50	3	4
EPSTC401500U	1.5	4	50	3	4
EPSTC402000U	2.0	5	50	3	4
EPSTC403000U	3.0	8	50	3	4
EPSFC401000U	1.0	3	50	4	4
EPSFC401500U	1.5	4	50	4	4
EPSFC402000U	2.0	5	50	4	4
EPSFC402500U	2.5	6	50	4	4
EPSFC403000U	3.0	8	50	4	4
EPSFC403500U	3.5	9	50	4	4
EPSFC404000U	4.0	10	50	4	4
EPSSC403000U	3.0	8	50	6	4
EPSSC403500U	3.5	9	50	6	4
EPSSC404000U	4.0	10	50	6	4
EPSSC404500U	4.5	11	50	6	4
EPSSC405000U	5.0	13	50	6	4
EPSSC405500U	5.5	14	50	6	4
EPSSC406000U	6.0	15	50	6	4
EPSSC406500U	6.5	16	60	8	4
EPSSC407000U	7.0	18	60	8	4
EPSSC408000U	8.0	20	60	8	4
EPSSC409000U	9.0	22	75	10	4
EPSSC410000U	10.0	25	75	10	4
EPSSC411000U	11.0	25	75	12	4
EPSSC412000U	12.0	30	75	12	4
EPSSC414000U	14.0	30	75	14	4
EPSSC416000U	16.0	35	100	16	4
EPSSC418000U	18.0	40	100	20	4
EPSSC420000U	20.0	45	100	20	4
EPSSC425000U	25.0	45	100	25	4





d	Tolerance
Ø < 3	0 ~ -0.02
3 ≦ Ø ≦ 10	0 ~ -0.03
Ø > 10	0 ~ -0.04

Cutting conditions（建議切削參數表）: Table 027

G550 - Anti-Vibration Square Type - 4F

鎢鋼平銑刀－抗震不等型－ 4 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Unequal axis and sophisticated geometry design provides outstanding Anti-vibrations capabilities.

EPSSD4

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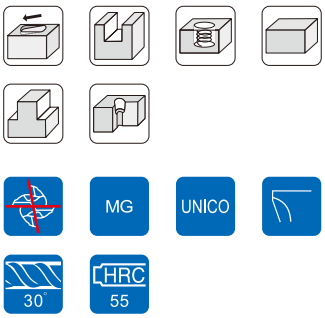
Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSSD405000U	5	13	50	6	4
EPSSD406000U	6	13	50	6	4
EPSSD408000U	8	16	60	8	4
EPSSD410000U	10	20	75	10	4
EPSSD412000U	12	24	75	12	4
EPSSD416000U	16	30	100	16	4



d	Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03

Cutting conditions（建議切削參數表）: Table 028

G550 - High Helix Square Type - 4F

鎢鋼平銑刀 - 高導型 - 4 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, FRP, etc.
- Greater shearing action results in increased speeds and feeds and faster stock removal.
- Strong helix design provides hi speed milling capabilities.

EPSFH4
EPSSH4

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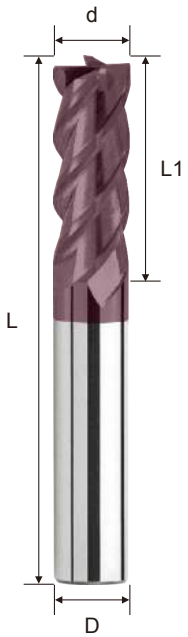
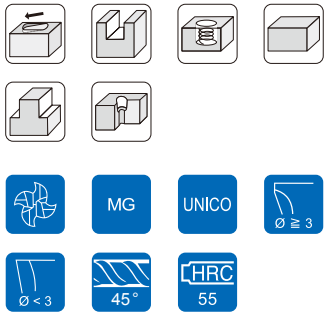


Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSFH403000U	3.0	8	50	4	4
EPSFH404000U	4.0	10	50	4	4
EPSSH405000U	5.0	13	50	6	4
EPSSH406000U	6.0	15	50	6	4
EPSSH407000U	7.0	18	60	8	4
EPSSH408000U	8.0	20	60	8	4
EPSSH409000U	9.0	22	75	10	4
EPSSH410000U	10.0	25	75	10	4
EPSSH411000U	11.0	25	75	12	4
EPSSH412000U	12.0	30	75	12	4
EPSSH414000U	14.0	30	75	14	4
EPSSH416000U	16.0	35	100	16	4



d	Tolerance
Ø < 3	0 ~ -0.02
3 ≦ Ø ≦ 10	0 ~ -0.03
Ø > 10	0 ~ -0.04

Cutting conditions（建議切削參數表）: Table 029

G550 - Long Flute Square Type - 4F

鎢鋼平銑刀 - 長刃型 - 4 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Available in various length of cut and overall length end mills.
- Long cutting length is suitable for deep side milling.

EPSCC4

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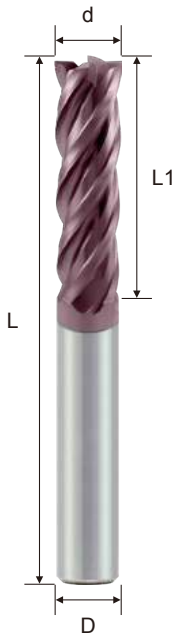
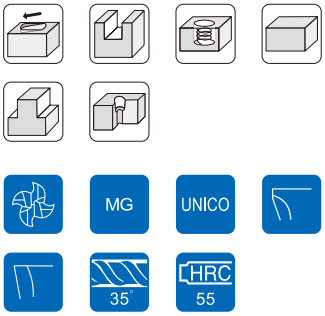


Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSCC403000U	3.0	15	60	6	4
EPSCC404000U	4.0	20	60	6	4
EPSCC405000U	5.0	25	75	6	4
EPSCC406000U	6.0	30	75	6	4
EPSCC408000U	8.0	35	100	8	4
EPSCC410000U	10.0	45	100	10	4
EPSCC412000U	12.0	45	100	12	4
EPSCC414000U	14.0	70	150	14	4
EPSCC416000U	16.0	70	150	16	4
EPSCC420000U	20.0	75	150	20	4
EPSCC425000U	25.0	75	150	25	4



d	Tolerance
Ø < 3	0 ~ -0.03
3 ≦ Ø ≦ 10	0 ~ -0.04
Ø > 10	0 ~ -0.05

Cutting conditions（建議切削參數表）: Table 030

G550 - High Helix Square Type - 6F

鎢鋼平銑刀 - 高導型 - 6 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, FRP, etc.
- Greater shearing action results in increased speeds and feeds and faster stock removal.
- Strong helix design provides hi speed milling capabilities.
- Six flute for good surface milling.

EPSSH6
EPSCH6

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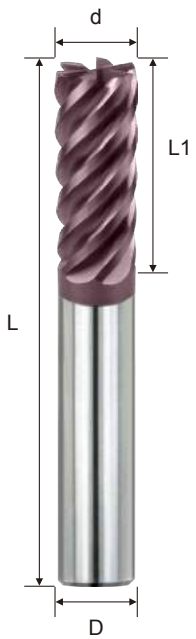

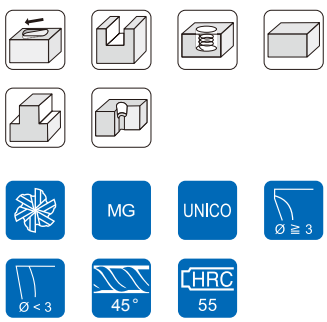

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSSH606000U	6	15	50	6	6
EPSSH608000U	8	20	60	8	6
EPSSH610000U	10	25	75	10	6
EPSSH612000U	12	30	75	12	6
EPSCH606000U	6	30	75	6	6
EPSCH608000U	8	35	100	8	6
EPSCH608000U45C	8	45	100	8	6
EPSCH610000U	10	45	100	10	6
EPSCH610000U55C	10	55	100	10	6
EPSCH612000U	12	45	100	12	6
EPSCH612000U55C	12	55	100	12	6
EPSCH616000U	16	70	150	16	6

d	Tolerance
Ø < 3	0 ~ -0.03
3 ≦ Ø ≦ 10	0 ~ -0.04
Ø > 10	0 ~ -0.05

G550 - Long Shank Square Type - 2F

鎢鋼平銑刀 - 長柄型 - 2 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Available in various length of cut and overall length end mills.
- Flat design to avoid chipping of the cutting tip.

EPSEC2
EPSKC2
EPSLC2
EPSNC2

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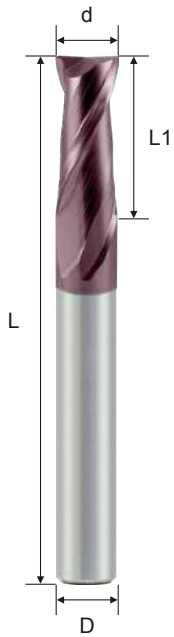
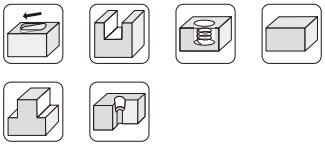
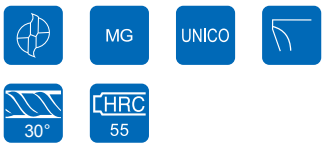


Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSJC204000U	4.0	10	60	4	2
EPSEC204000U	4.0	10	75	4	2
EPSKC204000U	4.0	10	100	4	2
EPSMC204000U	4.0	10	60	6	2
EPSLC204000U	4.0	10	75	6	2
EPSNC204000U	4.0	10	100	6	2
EPSMC206000U	6.0	15	60	6	2
EPSLC206000U	6.0	15	75	6	2
EPSNC206000U	6.0	15	100	6	2
EPSMC208000U	8.0	20	75	8	2
EPSLC208000U	8.0	20	100	8	2
EPSNC208000U	8.0	20	150	8	2
EPSLC210000U	10.0	25	100	10	2
EPSNC210000U	10.0	25	150	10	2
EPSLC212000U	12.0	30	100	12	2
EPSNC212000U	12.0	30	150	12	2
EPSLC216000U	16.0	40	150	16	2
EPSLC220000U	20.0	45	150	20	2





d	Tolerance
Ø < 3	0 ~ -0.03
3 ≦ Ø ≦ 10	0 ~ -0.04
Ø > 10	0 ~ -0.05

Cutting conditions（建議切削參數表）: Table 031

G550 - Long Shank Square Type - 4F

鎢鋼平銑刀 - 長柄型 - 4 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Available in various length of cut and overall length end mills.
- Flat design to avoid chipping of the cutting tip.

EPSEC4
EPSKC4
EPSLC4
EPSNC4

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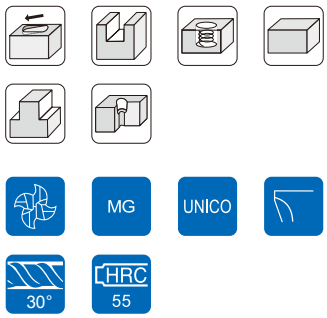
Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSEC403000U	3.0	8	75	4	4
EPSKC403000U	3.0	8	100	4	4
EPSJC404000U	4.0	10	60	4	4
EPSEC404000U	4.0	10	75	4	4
EPSKC404000U	4.0	10	100	4	4
EPSMC404000U	4.0	10	60	6	4
EPSLC404000U	4.0	10	75	6	4
EPSNC404000U	4.0	10	100	6	4
EPSMC406000U	6.0	15	60	6	4
EPSLC406000U	6.0	15	75	6	4
EPSNC406000U	6.0	15	100	6	4
EPSMC408000U	8.0	20	75	8	4
EPSLC408000U	8.0	20	100	8	4
EPSNC408000U	8.0	20	150	8	4
EPSLC410000U	10.0	25	100	10	4
EPSNC410000U	10.0	25	150	10	4
EPSLC412000U	12.0	30	100	12	4
EPSNC412000U	12.0	30	150	12	4
EPSLC416000U	16.0	40	150	16	4
EPSLC420000U	20.0	45	150	20	4



d	Tolerance
Ø < 3	0 ~ -0.03
3 ≦ Ø ≦ 10	0 ~ -0.04
Ø > 10	0 ~ -0.05

Cutting conditions（建議切削參數表）: Table 032

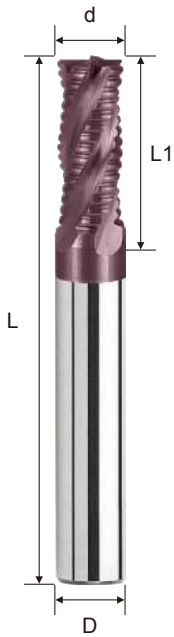
G550 - Roughing Square Type - 4F

鎢鋼平銑刀 - 粗銑型 - 4 刃

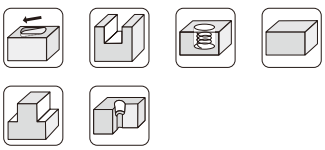
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Suitable for rough and high remove rate cutting environment.
- Chamfering design provides a stronger cutting edge.
- Middle coarse pitch provides hi performance and avoids tip fracture.

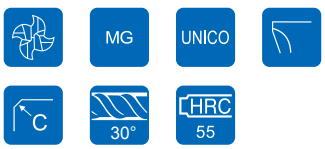
EPSRR4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSRR406000U	6	15	50	6	4
EPSRR408000U	8	20	60	8	4
EPSRR410000U	10	25	75	10	4
EPSRR412000U	12	30	75	12	4
EPSRR416000U	16	40	100	16	4
EPSRR420000U	20	45	100	20	4





d	Tolerance
Ø < 3	0 ~ -0.02
3 ≦ Ø ≦ 10	0 ~ -0.03
Ø > 10	0 ~ -0.04

Cutting conditions（建議切削參數表）: Table 033

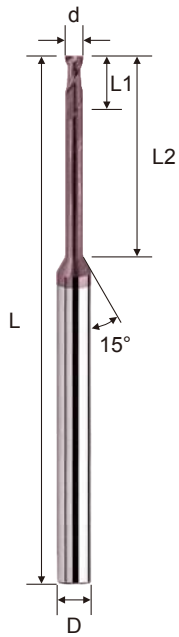
G550 - Long Neck Square Type - 2F

鎢鋼平銑刀 - 長頸型 - 2 刃

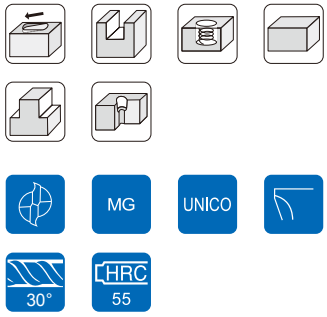
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

EPSBC2
EPSRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPSBC200201U	0.2	0.3	1	50	4	2
EPSBC200202U	0.2	0.3	2	50	4	2
EPSBC200301U	0.3	0.4	1	50	4	2
EPSBC200302U	0.3	0.4	2	50	4	2
EPSBC200303U	0.3	0.4	3	50	4	2
EPSBC200304U	0.3	0.4	4	50	4	2
EPSBC200305U	0.3	0.4	5	50	4	2
EPSBC200401U	0.4	0.5	1	50	4	2
EPSBC200402U	0.4	0.5	2	50	4	2
EPSBC200403U	0.4	0.5	3	50	4	2
EPSBC200404U	0.4	0.5	4	50	4	2
EPSBC200405U	0.4	0.5	5	50	4	2
EPSBC200406U	0.4	0.5	6	50	4	2
EPSBC200408U	0.4	0.5	8	50	4	2
EPSBC200410U	0.4	0.5	10	50	4	2
EPSBC200502U	0.5	0.6	2	50	4	2
EPSBC200503U	0.5	0.6	3	50	4	2
EPSBC200504U	0.5	0.6	4	50	4	2
EPSBC200505U	0.5	0.6	5	50	4	2
EPSBC200506U	0.5	0.6	6	50	4	2
EPSBC200508U	0.5	0.6	8	50	4	2
EPSBC200510U	0.5	0.6	10	50	4	2
EPSBC200512U	0.5	0.6	12	50	4	2
EPSBC200514U	0.5	0.6	14	50	4	2



d	Tolerance
Ø	0 ~ -0.02

Cutting conditions（建議切削參數表）: Table 034 ~ 036

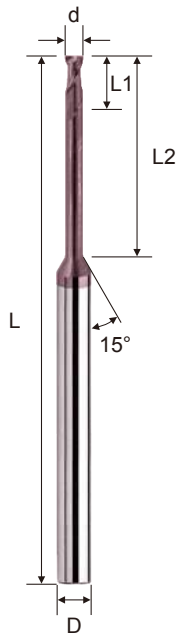
G550 - Long Neck Square Type - 2F

鎢鋼平銑刀 - 長頸型 - 2 刃

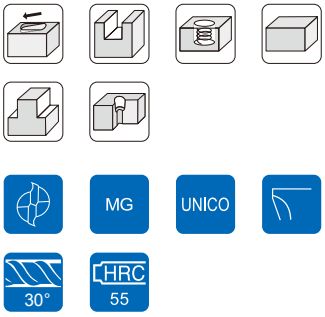
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

EPSBC2
EPSRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPSBC200602U	0.6	0.7	2	50	4	2
EPSBC200603U	0.6	0.7	3	50	4	2
EPSBC200604U	0.6	0.7	4	50	4	2
EPSBC200605U	0.6	0.7	5	50	4	2
EPSBC200606U	0.6	0.7	6	50	4	2
EPSBC200608U	0.6	0.7	8	50	4	2
EPSBC200610U	0.6	0.7	10	50	4	2
EPSBC200612U	0.6	0.7	12	50	4	2
EPSBC200614U	0.6	0.7	14	50	4	2
EPSBC200616U	0.6	0.7	16	50	4	2
EPSBC200702U	0.7	0.8	2	50	4	2
EPSBC200704U	0.7	0.8	4	50	4	2
EPSBC200706U	0.7	0.8	6	50	4	2
EPSBC200708U	0.7	0.8	8	50	4	2
EPSBC200710U	0.7	0.8	10	50	4	2
EPSBC200712U	0.7	0.8	12	50	4	2
EPSBC200802U	0.8	1.0	2	50	4	2
EPSBC200804U	0.8	1.0	4	50	4	2
EPSBC200806U	0.8	1.0	6	50	4	2
EPSBC200808U	0.8	1.0	8	50	4	2
EPSBC200810U	0.8	1.0	10	50	4	2
EPSBC200812U	0.8	1.0	12	50	4	2
EPSBC200814U	0.8	1.0	14	50	4	2
EPSBC200906U	0.9	1.1	6	50	4	2
EPSBC200908U	0.9	1.1	8	50	4	2
EPSBC200910U	0.9	1.1	10	50	4	2



d	Tolerance
Ø	0 ~ -0.02

Cutting conditions（建議切削參數表）: Table 034 ~ 036

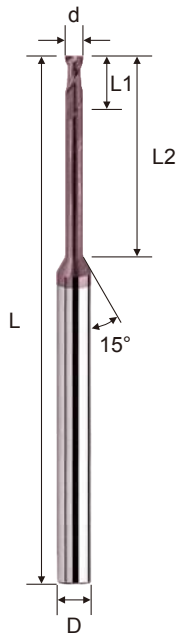
G550 - Long Neck Square Type - 2F

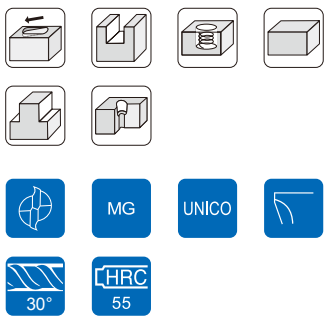
鎢鋼平銑刀 - 長頸型 - 2 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

EPSBC2
EPSRC2

P ☑ M ☑ K ☑ N ☐ S ☐ H ☑





d	Tolerance
Ø	0 ~ -0.02

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPSBC201002U	1.0	1.2	2	50	4	2
EPSBC201003U	1.0	1.2	3	50	4	2
EPSBC201004U	1.0	1.2	4	50	4	2
EPSBC201005U	1.0	1.2	5	50	4	2
EPSBC201006U	1.0	1.2	6	50	4	2
EPSBC201008U	1.0	1.2	8	50	4	2
EPSBC201010U	1.0	1.2	10	50	4	2
EPSBC201012U	1.0	1.2	12	50	4	2
EPSBC201014U	1.0	1.2	14	50	4	2
EPSBC201016U	1.0	1.2	16	50	4	2
EPSBC201018U	1.0	1.2	18	50	4	2
EPSBC201020U	1.0	1.2	20	50	4	2
EPSBC201204U	1.2	1.5	4	50	4	2
EPSBC201206U	1.2	1.5	6	50	4	2
EPSBC201208U	1.2	1.5	8	50	4	2
EPSBC201210U	1.2	1.5	10	50	4	2
EPSBC201212U	1.2	1.5	12	50	4	2
EPSBC201216U	1.2	1.5	16	50	4	2
EPSBC201220U	1.2	1.5	20	50	4	2
EPSBC201406U	1.4	1.8	6	50	4	2
EPSBC201408U	1.4	1.8	8	50	4	2
EPSBC201410U	1.4	1.8	10	50	4	2
EPSBC201414U	1.4	1.8	14	50	4	2
EPSBC201416U	1.4	1.8	16	50	4	2
EPSBC201420U	1.4	1.8	20	50	4	2

Cutting conditions（建議切削參數表）: Table 034 ~ 036

Winstar Cutting Technologies

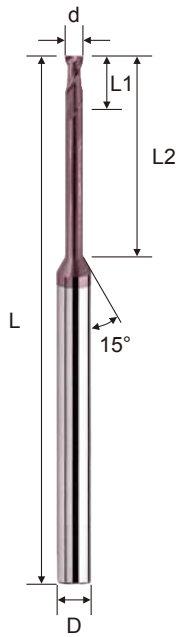
G550 - Long Neck Square Type - 2F

鎢鋼平銑刀 - 長頸型 - 2 刃

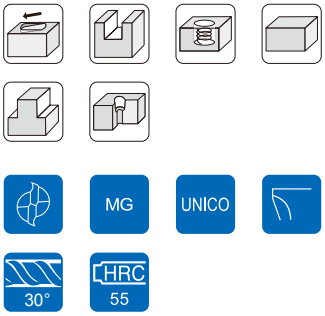
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

EPSBC2
EPSRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPSBC201504U	1.5	1.8	4	50	4	2
EPSBC201506U	1.5	1.8	6	50	4	2
EPSBC201508U	1.5	1.8	8	50	4	2
EPSBC201510U	1.5	1.8	10	50	4	2
EPSBC201512U	1.5	1.8	12	50	4	2
EPSBC201514U	1.5	1.8	14	50	4	2
EPSBC201516U	1.5	1.8	16	50	4	2
EPSBC201518U	1.5	1.8	18	50	4	2
EPSBC201520U	1.5	1.8	20	50	4	2
EPSBC201610U	1.6	1.9	10	50	4	2
EPSBC201614U	1.6	1.9	14	50	4	2
EPSBC201618U	1.6	1.9	18	50	4	2
EPSBC201810U	1.8	2.0	10	50	4	2
EPSBC201814U	1.8	2.0	14	50	4	2
EPSBC201818U	1.8	2.0	18	50	4	2
EPSBC202004U	2.0	2.5	4	50	4	2
EPSBC202006U	2.0	2.5	6	50	4	2
EPSBC202008U	2.0	2.5	8	50	4	2
EPSBC202010U	2.0	2.5	10	50	4	2
EPSBC202012U	2.0	2.5	12	50	4	2
EPSBC202014U	2.0	2.5	14	50	4	2
EPSBC202016U	2.0	2.5	16	50	4	2
EPSBC202018U	2.0	2.5	18	50	4	2
EPSBC202020U	2.0	2.5	20	50	4	2
EPSBC202022U	2.0	2.5	22	60	4	2
EPSBC202025U	2.0	2.5	25	60	4	2
EPSBC202030U	2.0	2.5	30	75	4	2
EPSBC202035U	2.0	2.5	35	75	4	2



d	Tolerance
Ø	0 ~ -0.02

Cutting conditions（建議切削參數表）: Table 034 ~ 036

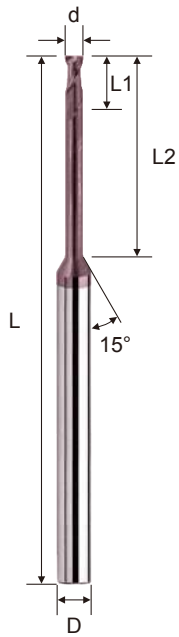
G550 - Long Neck Square Type - 2F

鎢鋼平銑刀 - 長頸型 - 2 刃

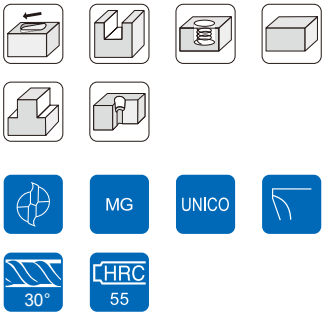
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

EPSBC2
EPSRC2

P ☑ M ☑ K ☑ N ☐ S ☐ H ☑



Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPSBC202508U	2.5	3.0	8	50	4	2
EPSBC202510U	2.5	3.0	10	50	4	2
EPSBC202512U	2.5	3.0	12	50	4	2
EPSBC202516U	2.5	3.0	16	50	4	2
EPSBC202520U	2.5	3.0	20	50	4	2
EPSBC202525U	2.5	3.0	25	60	4	2
EPSBC202530U	2.5	3.0	30	75	4	2
EPSBC202535U	2.5	3.0	35	75	4	2
EPSRC203006U	3.0	3.5	6	50	6	2
EPSRC203010U	3.0	3.5	10	50	6	2
EPSRC203012U	3.0	3.5	12	50	6	2
EPSRC203016U	3.0	3.5	16	50	6	2
EPSRC203020U	3.0	3.5	20	60	6	2
EPSRC203025U	3.0	3.5	25	60	6	2
EPSRC203030U	3.0	3.5	30	75	6	2
EPSRC203035U	3.0	3.5	35	75	6	2
EPSRC204008U	4.0	4.5	8	50	6	2
EPSRC204010U	4.0	4.5	10	50	6	2
EPSRC204012U	4.0	4.5	12	50	6	2
EPSRC204016U	4.0	4.5	16	50	6	2
EPSRC204020U	4.0	4.5	20	60	6	2
EPSRC204025U	4.0	4.5	25	60	6	2
EPSRC204030U	4.0	4.5	30	75	6	2
EPSRC204035U	4.0	4.5	35	75	6	2



d	Tolerance
Ø	0 ~ -0.02

Cutting conditions（建議切削參數表）: Table 034 ~ 036

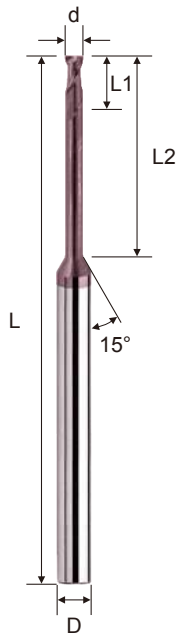
G550 - Long Neck Square Type - 2F

鎢鋼平銑刀 - 長頸型 - 2 刃

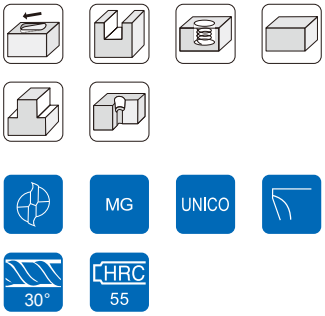
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

EPSBC2
EPSRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPSRC205016U	5.0	7.0	16	50	6	2
EPSRC205020U	5.0	7.0	20	60	6	2
EPSRC205025U	5.0	7.0	25	60	6	2
EPSRC205030U	5.0	7.0	30	75	6	2
EPSRC205035U	5.0	7.0	35	75	6	2
EPSRC206020U	6.0	10.0	20	60	6	2
EPSRC206030U	6.0	10.0	30	75	6	2
EPSRC208020U	8.0	15.0	20	60	8	2
EPSRC208030U	8.0	15.0	30	75	8	2
EPSRC208040U	8.0	15.0	40	100	8	2
EPSRC210025U	10.0	20.0	25	75	10	2
EPSRC210035U	10.0	20.0	35	75	10	2
EPSRC210045U	10.0	20.0	45	100	10	2
EPSRC212030U	12.0	25.0	30	75	12	2
EPSRC212040U	12.0	25.0	40	100	12	2
EPSRC212050U	12.0	25.0	50	100	12	2



d	Tolerance
Ø	0 ~ -0.02

Cutting conditions（建議切削參數表）: Table 034 ~ 036

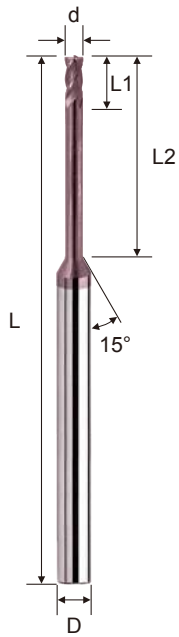
G550 - Long Neck Square Type - 4F

鎢鋼平銑刀 - 長頸型 - 4 刃

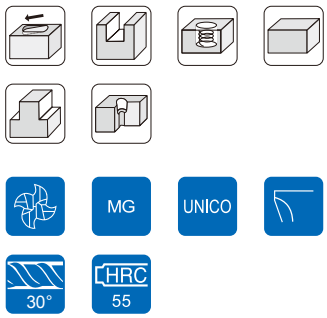
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, Copper, FRP, etc.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

EPSBC4
EPSRC4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPSBC401003U	1.0	1.0	3	50	4	4
EPSBC401004U	1.0	1.0	4	50	4	4
EPSBC401006U	1.0	1.0	6	50	4	4
EPSBC401008U	1.0	1.0	8	50	4	4
EPSBC401010U	1.0	1.0	10	50	4	4
EPSBC401012U	1.0	1.0	12	50	4	4
EPSBC401016U	1.0	1.0	16	50	4	4
EPSBC401020U	1.0	1.0	20	50	4	4
EPSBC401025U	1.0	1.0	25	60	4	4
EPSRC401004U	1.0	1.0	4	50	6	4
EPSRC401006U	1.0	1.0	6	50	6	4
EPSRC401008U	1.0	1.0	8	50	6	4
EPSRC401010U	1.0	1.0	10	50	6	4
EPSRC401012U	1.0	1.0	12	50	6	4
EPSBC401506U	1.5	1.5	6	50	4	4
EPSBC401508U	1.5	1.5	8	50	4	4
EPSBC401510U	1.5	1.5	10	50	4	4
EPSBC401512U	1.5	1.5	12	50	4	4
EPSBC401516U	1.5	1.5	16	50	4	4
EPSBC401520U	1.5	1.5	20	50	4	4
EPSBC401525U	1.5	1.5	25	60	4	4
EPSRC401506U	1.5	1.5	6	50	6	4
EPSRC401508U	1.5	1.5	8	50	6	4
EPSRC401510U	1.5	1.5	10	50	6	4
EPSRC401512U	1.5	1.5	12	50	6	4



d	Tolerance
Ø	0 ~ -0.02

Cutting conditions（建議切削參數表）: Table 037 ~ 038

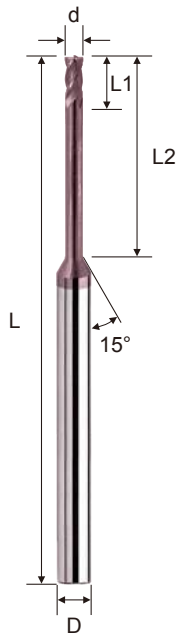
G550 - Long Neck Square Type - 4F

鎢鋼平銑刀 - 長頸型 - 4 刃

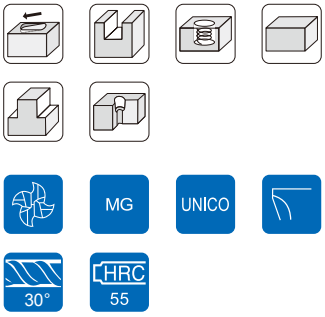
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, Copper, FRP, etc.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

EPSBC4
EPSRC4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPSBC402006U	2.0	2.0	6	50	4	4
EPSBC402008U	2.0	2.0	8	50	4	4
EPSBC402010U	2.0	2.0	10	50	4	4
EPSBC402012U	2.0	2.0	12	50	4	4
EPSBC402016U	2.0	2.0	16	50	4	4
EPSBC402020U	2.0	2.0	20	50	4	4
EPSBC402025U	2.0	2.0	25	60	4	4
EPSBC402030U	2.0	2.0	30	75	4	4
EPSRC402006U	2.0	2.0	6	50	6	4
EPSRC402008U	2.0	2.0	8	50	6	4
EPSRC402010U	2.0	2.0	10	50	6	4
EPSRC402016U	2.0	2.0	16	50	6	4
EPSBC402510U	2.5	2.5	10	50	4	4
EPSBC402512U	2.5	2.5	12	50	4	4
EPSBC402516U	2.5	2.5	16	50	4	4
EPSBC402520U	2.5	2.5	20	50	4	4
EPSBC402525U	2.5	2.5	25	60	4	4
EPSBC402530U	2.5	2.5	30	75	4	4
EPSRC402506U	2.5	2.5	6	50	6	4
EPSRC402510U	2.5	2.5	10	50	6	4
EPSRC403010U	3.0	3.0	10	50	6	4
EPSRC403012U	3.0	3.0	12	50	6	4
EPSRC403016U	3.0	3.0	16	50	6	4
EPSRC403020U	3.0	3.0	20	60	6	4
EPSRC403025U	3.0	3.0	25	60	6	4
EPSRC403030U	3.0	3.0	30	75	6	4
EPSRC403035U	3.0	3.0	35	75	6	4



d	Tolerance
Ø	0 ~ -0.02

Cutting conditions（建議切削參數表）: Table 037 ~ 038

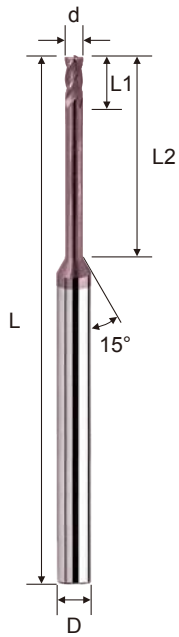
G550 - Long Neck Square Type - 4F

鎢鋼平銑刀 - 長頸型 - 4 刃

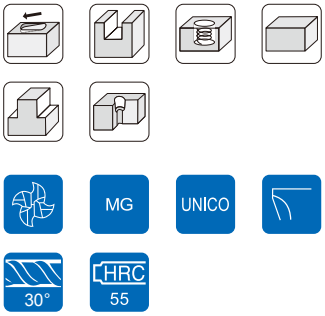
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, Copper, FRP, etc.
- Toughness and reduction of vibration.
- Available in various cut lengths.
- Suitable for deep cutting application.

EPSBC4
EPSRC4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPSRC404010U	4.0	4.0	10	50	6	4
EPSRC404012U	4.0	4.0	12	50	6	4
EPSRC404016U	4.0	4.0	16	50	6	4
EPSRC404020U	4.0	4.0	20	60	6	4
EPSRC404025U	4.0	4.0	25	60	6	4
EPSRC404030U	4.0	4.0	30	75	6	4
EPSRC405016U	5.0	5.0	16	50	6	4
EPSRC405020U	5.0	5.0	20	60	6	4
EPSRC405025U	5.0	5.0	25	60	6	4
EPSRC405030U	5.0	5.0	30	75	6	4
EPSRC406020U	6.0	6.0	20	60	6	4
EPSRC406030U	6.0	6.0	30	75	6	4
EPSRC408020U	8.0	15.0	20	60	8	4
EPSRC408030U	8.0	15.0	30	75	8	4
EPSRC408040U	8.0	15.0	40	100	8	4
EPSRC410025U	10.0	20.0	25	75	10	4
EPSRC410035U	10.0	20.0	35	100	10	4
EPSRC410045U	10.0	20.0	45	100	10	4
EPSRC412030U	12.0	25.0	30	75	12	4
EPSRC412040U	12.0	25.0	40	100	12	4
EPSRC412050U	12.0	25.0	50	100	12	4



d	Tolerance
Ø	0 ~ -0.02

Cutting conditions（建議切削參數表）: Table 037 ~ 038

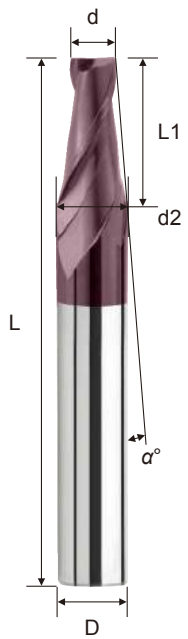
G550 - Taper Square Type - 2F

鎢鋼平銑刀 - 斜度型 - 2 刃

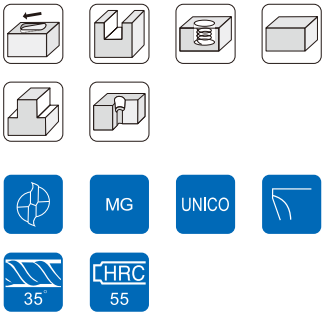
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- High strength of taper cutting length, can cut deep grooves without breaking.
- Convenient for Tap cutting in 3 axis machine.

EPSFT2
EPSST2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d1)	α°	CL (L1)	NL (d2)	OAL (L)	Shank (D)	Flutes (F)
EPSFT201005U	1.0	0.5°	4.0	1.07	50	4	2
EPSFT201010U	1.0	1.0°	4.0	1.14	50	4	2
EPSFT201015U	1.0	1.5°	4.0	1.21	50	4	2
EPSFT201020U	1.0	2.0°	4.0	1.28	50	4	2
EPSFT201025U	1.0	2.5°	4.0	1.35	50	4	2
EPSFT201030U	1.0	3.0°	4.0	1.42	50	4	2
EPSFT201050U	1.0	5.0°	4.0	1.70	50	4	2
EPSFT201070U	1.0	7.0°	4.0	1.98	50	4	2
EPSFT2010A0U	1.0	10.0°	4.0	2.41	50	4	2
EPSFT2010A5U	1.0	15.0°	4.0	3.14	50	4	2
EPSFT201505U	1.5	0.5°	5.0	1.59	50	4	2
EPSFT201510U	1.5	1.0°	5.0	1.68	50	4	2
EPSFT201515U	1.5	1.5°	5.0	1.76	50	4	2
EPSFT201520U	1.5	2.0°	5.0	1.85	50	4	2
EPSFT201525U	1.5	2.5°	5.0	1.93	50	4	2
EPSFT201530U	1.5	3.0°	5.0	2.02	50	4	2
EPSFT201550U	1.5	5.0°	5.0	2.37	50	4	2
EPSFT202005U	2.0	0.5°	6.0	2.10	50	4	2
EPSFT202010U	2.0	1.0°	6.0	2.21	50	4	2
EPSFT202015U	2.0	1.5°	6.0	2.31	50	4	2
EPSFT202020U	2.0	2.0°	6.0	2.41	50	4	2
EPSFT202025U	2.0	2.5°	6.0	2.52	50	4	2
EPSFT202030U	2.0	3.0°	6.0	2.62	50	4	2
EPSFT202050U	2.0	5.0°	6.0	3.05	50	4	2
EPSFT202070U	2.0	7.0°	6.0	3.47	50	4	2
EPSST2020A0U	2.0	10.0°	6.0	4.11	50	6	2
EPSST2020A5U	2.0	15.0°	6.0	5.22	50	6	2



d	Tolerance
Ø	0 ~ 0.05

Cutting conditions（建議切削參數表）: Table 039

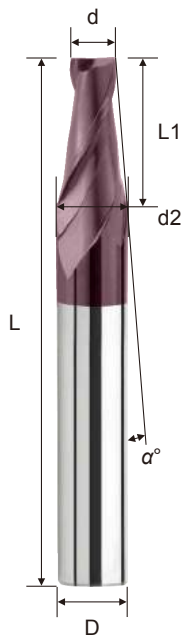
G550 - Taper Square Type - 2F

鎢鋼平銑刀 - 斜度型 - 2 刃

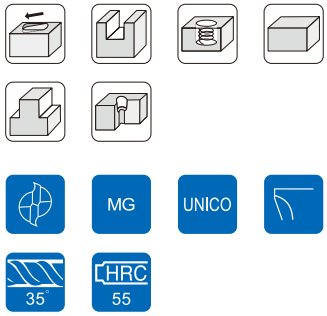
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- High strength of taper cutting length, can cut deep grooves without breaking.
- Convenient for Tap cutting in 3 axis machine.

EPSFT2
EPSST2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d1)	α°	CL (L1)	NL (d2)	OAL (L)	Shank (D)	Flutes (F)
EPSFT202505U	2.5	0.5°	8.0	2.64	50	4	2
EPSFT202510U	2.5	1.0°	8.0	2.78	50	4	2
EPSFT202515U	2.5	1.5°	8.0	2.91	50	4	2
EPSFT202520U	2.5	2.0°	8.0	3.05	50	4	2
EPSFT202525U	2.5	2.5°	8.0	3.20	50	4	2
EPSFT202530U	2.5	3.0°	8.0	3.33	50	4	2
EPSFT202550U	2.5	5.0°	8.0	3.90	50	4	2
EPSST203005U	3.0	0.5°	10.0	3.17	50	6	2
EPSST203010U	3.0	1.0°	10.0	3.35	50	6	2
EPSST203015U	3.0	1.5°	10.0	3.52	50	6	2
EPSST203020U	3.0	2.0°	10.0	3.69	50	6	2
EPSST203025U	3.0	2.5°	10.0	3.87	50	6	2
EPSST203030U	3.0	3.0°	10.0	4.05	50	6	2
EPSST203050U	3.0	5.0°	10.0	4.75	50	6	2
EPSST203070U	3.0	7.0°	12.0	6.00	50	6	2
EPSST2030A0U	3.0	10.0°	12.0	7.22	60	8	2
EPSST2030A5U	3.0	15.0°	12.0	9.40	75	10	2
EPSST204005U	4.0	0.5°	15.0	4.26	50	6	2
EPSST204010U	4.0	1.0°	15.0	4.52	50	6	2
EPSST204015U	4.0	1.5°	15.0	4.79	50	6	2
EPSST204020U	4.0	2.0°	15.0	5.04	50	6	2
EPSST204025U	4.0	2.5°	15.0	5.31	50	6	2
EPSST204030U	4.0	3.0°	15.0	5.57	50	6	2
EPSST204050U	4.0	5.0°	15.0	6.62	60	8	2
EPSST204070U	4.0	7.0°	16.0	8.00	60	8	2
EPSST2040A0U	4.0	10.0°	17.0	10.00	75	10	2
EPSST2040A5U	4.0	15.0°	14.9	12.00	75	12	2



d	Tolerance
Ø	0 ~ 0.05

Cutting conditions（建議切削參數表）: Table 039

Winstar Cutting Technologies

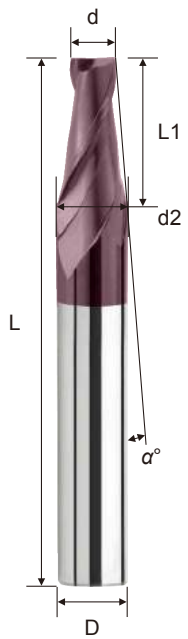
G550 - Taper Square Type - 2F

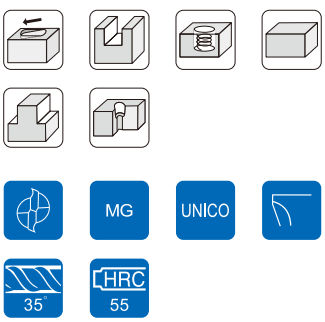
鎢鋼平銑刀 - 斜度型 - 2 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- High strength of taper cutting length, can cut deep grooves without breaking.
- Convenient for Tap cutting in 3 axis machine.

EPSFT2
EPSST2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑





d	Tolerance
Ø	0 ~ 0.05

Order No.	Dia. (d1)	α°	CL (L1)	NL (d2)	OAL (L)	Shank (D)	Flutes (F)
EPSST205005U	5.0	0.5°	20.0	5.34	60	6	2
EPSST205010U	5.0	1.0°	20.0	5.70	60	6	2
EPSST205015U	5.0	1.5°	19.6	6.00	60	6	2
EPSST205020U	5.0	2.0°	20.0	6.39	60	8	2
EPSST205025U	5.0	2.5°	20.0	6.74	60	8	2
EPSST205030U	5.0	3.0°	20.0	7.10	60	8	2
EPSST205050U	5.0	5.0°	20.0	8.50	75	10	2
EPSST205070U	5.0	7.0°	20.0	10.00	75	10	2
EPSST2050A0U	5.0	10.0°	20.0	12.00	75	12	2
EPSST206005U	6.0	0.5°	20.0	6.35	60	8	2
EPSST206010U	6.0	1.0°	20.0	6.70	60	8	2
EPSST206015U	6.0	1.5°	20.0	7.05	60	8	2
EPSST206020U	6.0	2.0°	20.0	7.40	60	8	2
EPSST206025U	6.0	2.5°	20.0	7.75	60	8	2
EPSST206030U	6.0	3.0°	20.0	8.10	75	10	2
EPSST206050U	6.0	5.0°	20.0	9.50	75	10	2
EPSST206070U	6.0	7.0°	24.0	12.00	75	12	2
EPSST2060A0U	6.0	10.0°	22.0	14.00	75	14	2
EPSST208005U	8.0	0.5°	25.0	8.44	75	10	2
EPSST208010U	8.0	1.0°	25.0	8.87	75	10	2
EPSST208015U	8.0	1.5°	25.0	9.31	75	10	2
EPSST208020U	8.0	2.0°	25.0	9.75	75	10	2
EPSST208030U	8.0	3.0°	25.0	10.62	75	12	2
EPSST208050U	8.0	5.0°	25.0	12.37	75	14	2
EPSST208070U	8.0	7.0°	32.0	16.00	100	16	2
EPSST2080A0U	8.0	10.0°	28.0	18.00	100	18	2
EPSST210005U	10.0	0.5°	35.0	10.61	75	12	2
EPSST210010U	10.0	1.0°	35.0	11.22	75	12	2
EPSST210015U	10.0	1.5°	35.0	11.83	75	12	2
EPSST210020U	10.0	2.0°	35.0	12.44	75	14	2
EPSST210030U	10.0	3.0°	35.0	13.67	75	14	2
EPSST210050U	10.0	5.0°	34.2	16.00	100	16	2

Cutting conditions（建議切削參數表）: Table 039

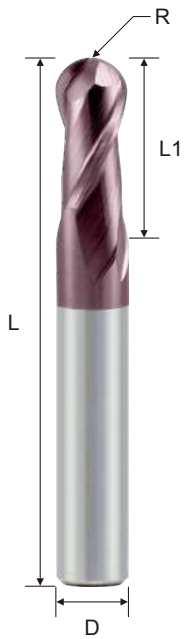
G550 - Ball Nose Type - 2F

鎢鋼球型銑刀 - 標準型 - 2 刃

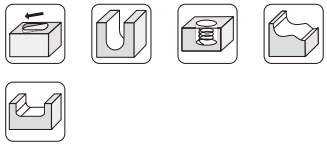
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- It provides an excellent surface due to better surface grindings.
- New tool geometry increases wear resistance and cutting force is decreased.
- Suitable for high speed profile surface milling.

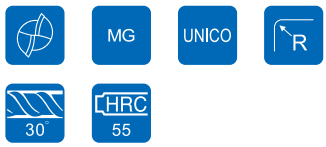
EPBFC2
EPBSC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPBFC200200U	0.10R	0.2	0.4	50	4	2
EPBFC200300U	0.15R	0.3	0.6	50	4	2
EPBFC200400U	0.20R	0.4	0.8	50	4	2
EPBFC200500U	0.25R	0.5	1.0	50	4	2
EPBFC200600U	0.30R	0.6	1.2	50	4	2
EPBFC200700U	0.35R	0.7	1.4	50	4	2
EPBFC200800U	0.40R	0.8	1.6	50	4	2
EPBFC200900U	0.45R	0.9	1.8	50	4	2
EPBFC201000U	0.50R	1.0	2.0	50	4	2
EPBFC201500U	0.75R	1.5	3.0	50	4	2
EPBFC202000U	1.00R	2.0	4.0	50	4	2
EPBFC203000U	1.50R	3.0	6.0	50	4	2
EPBFC204000U	2.00R	4.0	8.0	50	4	2
EPBSC203000U	1.50R	3.0	6.0	50	6	2
EPBSC204000U	2.00R	4.0	8.0	50	6	2
EPBSC205000U	2.50R	5.0	10.0	50	6	2
EPBSC206000U	3.00R	6.0	12.0	50	6	2
EPBSC207000U	3.50R	7.0	14.0	60	8	2
EPBSC208000U	4.00R	8.0	16.0	60	8	2
EPBSC210000U	5.00R	10.0	20.0	75	10	2
EPBSC212000U	6.00R	12.0	24.0	75	12	2
EPBSC216000U	8.00R	16.0	32.0	100	16	2
EPBSC220000U	10.00R	20.0	40.0	100	20	2





d	R Tolerance
Ø	± 0.02

Cutting conditions（建議切削參數表）: Table 040

Winstar Cutting Technologies

G550 - Ball Nose Type - 4F

鎢鋼球型銑刀 - 標準型 - 4 刃

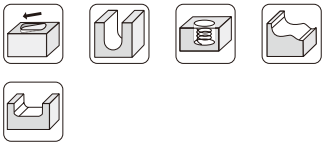
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, Copper, FRP, etc.
- It provides an excellent surface due to better surface grindings.
- New tool geometry increases wear resistance and cutting force is decreased.
- Multiple flutes design improves the cutting surface.

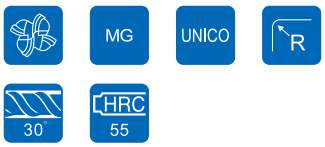
EPBFC4
EPBSC4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPBFC402000U	1.0R	2.0	4	50	4	4
EPBFC403000U	1.5R	3.0	6	50	4	4
EPBFC404000U	2.0R	4.0	8	50	4	4
EPBSC404000U	2.0R	4.0	8	50	6	4
EPBSC405000U	2.5R	5.0	10	50	6	4
EPBSC406000U	3.0R	6.0	12	50	6	4
EPBSC408000U	4.0R	8.0	16	60	8	4
EPBSC410000U	5.0R	10.0	20	75	10	4
EPBSC412000U	6.0R	12.0	24	75	12	4
EPBSC416000U	8.0R	16.0	32	100	16	4
EPBSC420000U	10.0R	20.0	40	100	20	4





d	R Tolerance
Ø	± 0.02

Cutting conditions（建議切削參數表）: Table 041

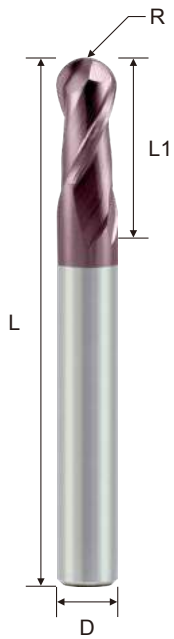
G550 - Long Shank Ball Nose Type - 2F

鎢鋼球型銑刀 - 長柄型 - 2 刃

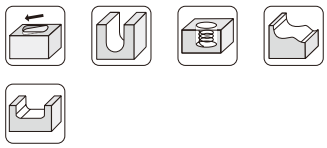
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- It provides an excellent surface due to better surface grindings.
- New tool geometry increases wear resistance and cutting force is decreased.
- Suitable for high speed profile surface milling.

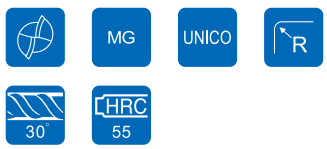
EPBEC2
EPBKC2
EPBLC2
EPBNC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPBEC203000U	1.5R	3.0	6	75	4	2
EPBKC203000U	1.5R	3.0	6	100	4	2
EPBJC204000U	2R	4.0	8	60	4	2
EPBEC204000U	2R	4.0	8	75	4	2
EPBKC204000U	2R	4.0	8	100	4	2
EPBMC204000U	2R	4.0	8	60	6	2
EPBLC204000U	2R	4.0	8	75	6	2
EPBNC204000U	2R	4.0	8	100	6	2
EPBMC206000U	3R	6.0	12	60	6	2
EPBLC206000U	3R	6.0	12	75	6	2
EPBNC206000U	3R	6.0	12	100	6	2
EPBMC208000U	4R	8.0	16	75	8	2
EPBLC208000U	4R	8.0	16	100	8	2
EPBNC208000U	4R	8.0	16	150	8	2
EPBLC210000U	5R	10.0	20	100	10	2
EPBNC210000U	5R	10.0	20	150	10	2
EPBLC212000U	6R	12.0	24	100	12	2
EPBNC212000U	6R	12.0	24	150	12	2
EPBLC216000U	8R	16.0	32	150	16	2
EPBLC220000U	10R	20.0	40	150	20	2





d	R Tolerance
Ø	± 0.02

Cutting conditions（建議切削參數表）: Table 042

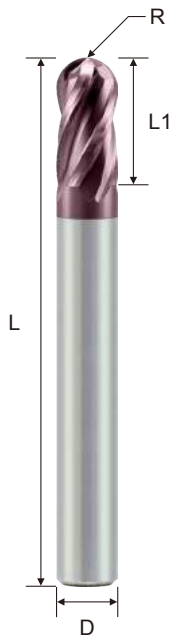
G550 - Long Shank Ball Nose Type - 4F

鎢鋼球型銑刀 - 長柄型 - 4 刃

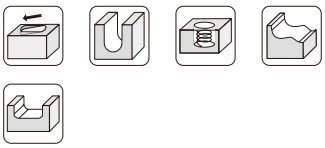
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- It provides an excellent surface due to better surface grindings.
- New tool geometry increases wear resistance and cutting force is decreased.
- Multiple flutes design and long shank design makes possible deep surface cutting.

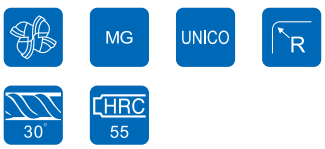
EPBEC4
EPBKC4
EPBLC4
EPBNC4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPBEC404000U	2R	4.0	8	75	4	4
EPBKC404000U	2R	4.0	8	100	4	4
EPBLC404000U	2R	4.0	8	75	6	4
EPBNC404000U	2R	4.0	8	100	6	4
EPBLC406000U	3R	6.0	12	75	6	4
EPBNC406000U	3R	6.0	12	100	6	4
EPBMC408000U	4R	8.0	16	75	8	4
EPBLC408000U	4R	8.0	16	100	8	4
EPBNC408000U	4R	8.0	16	150	8	4
EPBLC410000U	5R	10.0	20	100	10	4
EPBNC410000U	5R	10.0	20	150	10	4
EPBLC412000U	6R	12.0	24	100	12	4
EPBNC412000U	6R	12.0	24	150	12	4
EPBLC416000U	8R	16.0	32	150	16	4





d	R Tolerance
Ø	± 0.02

Cutting conditions（建議切削參數表）: Table 043

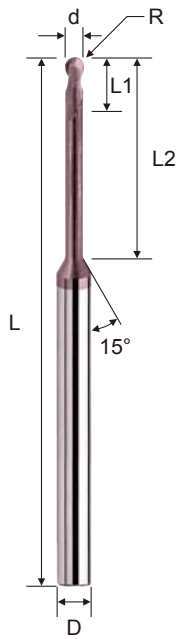
G550 - Long Neck Ball Nose Type - 2F

鎢鋼球型銑刀 - 長頸型 - 2 刃

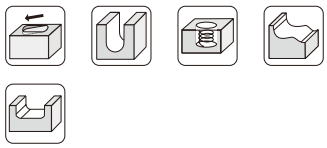
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, Copper, FRP, etc.
- Reduce vibration and more toughness.
- It provides an excellent surface due to better surface grindings.
- Long neck design is suitable for rid cutting.

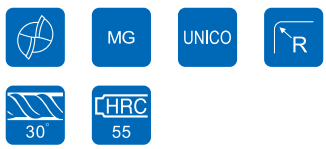
EPBBC2
EPBRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPBBC200301U	0.15R	0.3	0.3	1	50	4	2
EPBBC200302U	0.15R	0.3	0.3	2	50	4	2
EPBBC200303U	0.15R	0.3	0.3	3	50	4	2
EPBBC200401U	0.20R	0.4	0.4	1	50	4	2
EPBBC200402U	0.20R	0.4	0.4	2	50	4	2
EPBBC200403U	0.20R	0.4	0.4	3	50	4	2
EPBBC200404U	0.20R	0.4	0.4	4	50	4	2
EPBBC200405U	0.20R	0.4	0.4	5	50	4	2
EPBBC200406U	0.20R	0.4	0.4	6	50	4	2
EPBBC200408U	0.20R	0.4	0.4	8	50	4	2
EPBBC200501U	0.25R	0.5	0.5	1	50	4	2
EPBBC200502U	0.25R	0.5	0.5	2	50	4	2
EPBBC200503U	0.25R	0.5	0.5	3	50	4	2
EPBBC200504U	0.25R	0.5	0.5	4	50	4	2
EPBBC200505U	0.25R	0.5	0.5	5	50	4	2
EPBBC200506U	0.25R	0.5	0.5	6	50	4	2
EPBBC200508U	0.25R	0.5	0.5	8	50	4	2
EPBBC200510U	0.25R	0.5	0.5	10	50	4	2
EPBBC200601U	0.30R	0.6	0.6	1	50	4	2
EPBBC200602U	0.30R	0.6	0.6	2	50	4	2
EPBBC200603U	0.30R	0.6	0.6	3	50	4	2
EPBBC200604U	0.30R	0.6	0.6	4	50	4	2
EPBBC200605U	0.30R	0.6	0.6	5	50	4	2
EPBBC200606U	0.30R	0.6	0.6	6	50	4	2
EPBBC200608U	0.30R	0.6	0.6	8	50	4	2
EPBBC200610U	0.30R	0.6	0.6	10	50	4	2
EPBBC200612U	0.30R	0.6	0.6	12	50	4	2





d	R Tolerance
Ø	± 0.02

Cutting conditions（建議切削參數表）: Table 044 ~ 046

Winstar Cutting Technologies

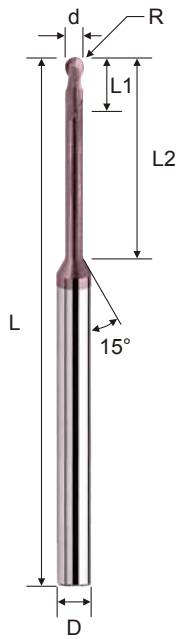
G550 - Long Neck Ball Nose Type - 2F

鎢鋼球型銑刀 - 長頸型 - 2 刃

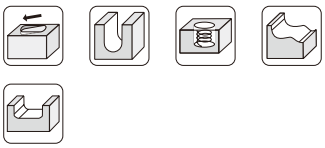
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, Copper, FRP, etc.
- Reduce vibration and more toughness.
- It provides an excellent surface due to better surface grindings.
- Long neck design is suitable for rid cutting.

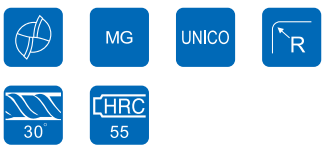
EPBBC2
EPBRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPBBC200702U	0.35R	0.7	0.7	2	50	4	2
EPBBC200704U	0.35R	0.7	0.7	4	50	4	2
EPBBC200708U	0.35R	0.7	0.7	8	50	4	2
EPBBC200710U	0.35R	0.7	0.7	10	50	4	2
EPBBC200712U	0.35R	0.7	0.7	12	50	4	2
EPBBC200802U	0.40R	0.8	0.8	2	50	4	2
EPBBC200804U	0.40R	0.8	0.8	4	50	4	2
EPBBC200806U	0.40R	0.8	0.8	6	50	4	2
EPBBC200808U	0.40R	0.8	0.8	8	50	4	2
EPBBC200810U	0.40R	0.8	0.8	10	50	4	2
EPBBC200812U	0.40R	0.8	0.8	12	50	4	2
EPBBC200904U	0.45R	0.9	0.9	4	50	4	2
EPBBC201002U	0.50R	1.0	1.0	2	50	4	2
EPBBC201003U	0.50R	1.0	1.0	3	50	4	2
EPBBC201004U	0.50R	1.0	1.0	4	50	4	2
EPBBC201005U	0.50R	1.0	1.0	5	50	4	2
EPBBC201006U	0.50R	1.0	1.0	6	50	4	2
EPBBC201008U	0.50R	1.0	1.0	8	50	4	2
EPBBC201010U	0.50R	1.0	1.0	10	50	4	2
EPBBC201012U	0.50R	1.0	1.0	12	50	4	2
EPBBC201014U	0.50R	1.0	1.0	14	50	4	2
EPBBC201016U	0.50R	1.0	1.0	16	50	4	2
EPBBC201018U	0.50R	1.0	1.0	18	50	4	2
EPBBC201020U	0.50R	1.0	1.0	20	50	4	2
EPBBC201022U	0.50R	1.0	1.0	22	60	4	2
EPBRC201004U	0.50R	1.0	1.0	4	50	6	2
EPBRC201006U	0.50R	1.0	1.0	6	50	6	2
EPBRC201008U	0.50R	1.0	1.0	8	50	6	2
EPBRC201010U	0.50R	1.0	1.0	10	50	6	2
EPBRC201012U	0.50R	1.0	1.0	12	50	6	2





d	R Tolerance
Ø	± 0.02

Cutting conditions（建議切削參數表）: Table 044 ~ 046

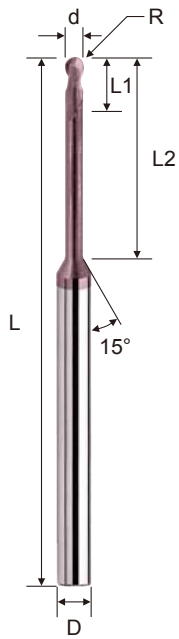
G550 - Long Neck Ball Nose Type - 2F

鎢鋼球型銑刀 - 長頸型 - 2 刃

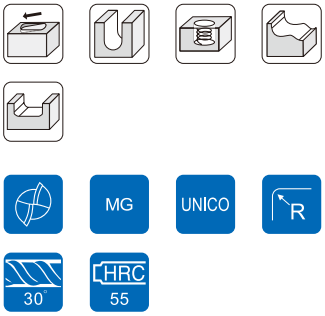
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, Copper, FRP, etc.
- Reduce vibration and more toughness.
- It provides an excellent surface due to better surface grindings.
- Long neck design is suitable for rid cutting.

EPBBC2
EPBRC2

P ☑ M ☑ K ☑ N ☐ S ☐ H ☑



Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPBBC201204U	0.60R	1.2	1.2	4	50	4	2
EPBBC201206U	0.60R	1.2	1.2	6	50	4	2
EPBBC201208U	0.60R	1.2	1.2	8	50	4	2
EPBBC201210U	0.60R	1.2	1.2	10	50	4	2
EPBBC201212U	0.60R	1.2	1.2	12	50	4	2
EPBBC201216U	0.60R	1.2	1.2	16	50	4	2
EPBBC201220U	0.60R	1.2	1.2	20	50	4	2
EPBBC201224U	0.60R	1.2	1.2	24	60	4	2
EPBBC201406U	0.70R	1.4	1.4	6	50	4	2
EPBBC201408U	0.70R	1.4	1.4	8	50	4	2
EPBBC201412U	0.70R	1.4	1.4	12	50	4	2
EPBBC201416U	0.70R	1.4	1.4	16	50	4	2
EPBBC201503U	0.75R	1.5	1.5	3	50	4	2
EPBBC201504U	0.75R	1.5	1.5	4	50	4	2
EPBBC201506U	0.75R	1.5	1.5	6	50	4	2
EPBBC201508U	0.75R	1.5	1.5	8	50	4	2
EPBBC201510U	0.75R	1.5	1.5	10	50	4	2
EPBBC201512U	0.75R	1.5	1.5	12	50	4	2
EPBBC201514U	0.75R	1.5	1.5	14	50	4	2
EPBBC201516U	0.75R	1.5	1.5	16	50	4	2
EPBBC201518U	0.75R	1.5	1.5	18	50	4	2
EPBBC201520U	0.75R	1.5	1.5	20	50	4	2
EPBBC201522U	0.75R	1.5	1.5	22	60	4	2
EPBBC201525U	0.75R	1.5	1.5	25	60	4	2
EPBBC201530U	0.75R	1.5	1.5	30	75	4	2
EPBRC201506U	0.75R	1.5	1.5	6	50	6	2
EPBRC201508U	0.75R	1.5	1.5	8	50	6	2
EPBRC201510U	0.75R	1.5	1.5	10	50	6	2
EPBRC201512U	0.75R	1.5	1.5	12	50	6	2



d	R Tolerance
Ø	± 0.02

Cutting conditions（建議切削參數表）: Table 044 ~ 046

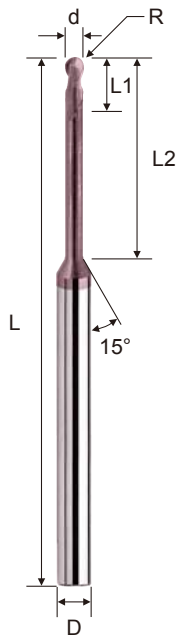
G550 - Long Neck Ball Nose Type - 2F

鎢鋼球型銑刀 - 長頸型 - 2 刃

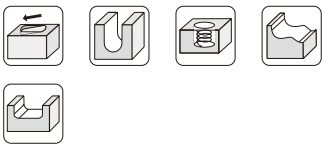
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, Copper, FRP, etc.
- Reduce vibration and more toughness.
- It provides an excellent surface due to better surface grindings.
- Long neck design is suitable for rid cutting.

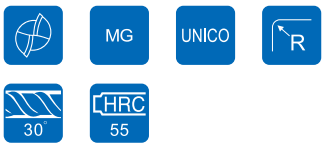
EPBBC2
EPBRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPBBC201606U	0.80R	1.6	1.6	6	50	4	2
EPBBC201608U	0.80R	1.6	1.6	8	50	4	2
EPBBC201612U	0.80R	1.6	1.6	12	50	4	2
EPBBC201616U	0.80R	1.6	1.6	16	50	4	2
EPBBC201620U	0.80R	1.6	1.6	20	50	4	2
EPBBC201806U	0.90R	1.8	1.8	6	50	4	2
EPBBC201808U	0.90R	1.8	1.8	8	50	4	2
EPBBC201812U	0.90R	1.8	1.8	12	50	4	2
EPBBC201816U	0.90R	1.8	1.8	16	50	4	2
EPBBC201820U	0.90R	1.8	1.8	20	50	4	2
EPBBC202004U	1.00R	2.0	2.0	4	50	4	2
EPBBC202006U	1.00R	2.0	2.0	6	50	4	2
EPBBC202008U	1.00R	2.0	2.0	8	50	4	2
EPBBC202010U	1.00R	2.0	2.0	10	50	4	2
EPBBC202012U	1.00R	2.0	2.0	12	50	4	2
EPBBC202014U	1.00R	2.0	2.0	14	50	4	2
EPBBC202016U	1.00R	2.0	2.0	16	50	4	2
EPBBC202018U	1.00R	2.0	2.0	18	50	4	2
EPBBC202020U	1.00R	2.0	2.0	20	50	4	2
EPBBC202022U	1.00R	2.0	2.0	22	60	4	2
EPBBC202025U	1.00R	2.0	2.0	25	60	4	2
EPBRC202006U	1.00R	2.0	2.0	6	50	6	2
EPBRC202008U	1.00R	2.0	2.0	8	50	6	2
EPBRC202010U	1.00R	2.0	2.0	10	50	6	2
EPBRC202016U	1.00R	2.0	2.0	16	50	6	2





d	R Tolerance
Ø	± 0.02

Cutting conditions（建議切削參數表）: Table 044 ~ 046

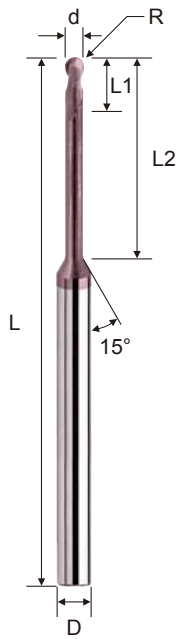
G550 - Long Neck Ball Nose Type - 2F

鎢鋼球型銑刀 - 長頸型 - 2 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, Copper, FRP, etc.
- Reduce vibration and more toughness.
- It provides an excellent surface due to better surface grindings.
- Long neck design is suitable for rid cutting.

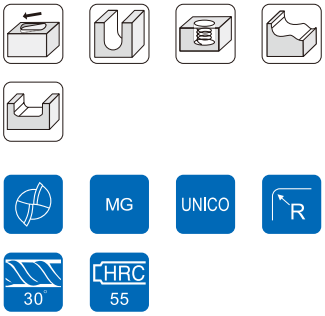
EPBBC2
EPBRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPBBC202508U	1.25R	2.5	2.5	8	50	4	2
EPBBC202510U	1.25R	2.5	2.5	10	50	4	2
EPBBC202516U	1.25R	2.5	2.5	16	50	4	2
EPBBC202520U	1.25R	2.5	2.5	20	60	4	2
EPBBC202525U	1.25R	2.5	2.5	25	60	4	2
EPBBC202530U	1.25R	2.5	2.5	30	75	4	2
EPBRC202506U	1.25R	2.5	2.5	6	50	6	2
EPBRC202510U	1.25R	2.5	2.5	10	50	6	2
EPBRC203006U	1.50R	3.0	3.0	6	50	6	2
EPBRC203008U	1.50R	3.0	3.0	8	50	6	2
EPBRC203012U	1.50R	3.0	3.0	12	50	6	2
EPBRC203016U	1.50R	3.0	3.0	16	60	6	2
EPBRC203020U	1.50R	3.0	3.0	20	60	6	2
EPBRC203025U	1.50R	3.0	3.0	25	60	6	2
EPBRC203030U	1.50R	3.0	3.0	30	75	6	2
EPBRC203035U	1.50R	3.0	3.0	35	75	6	2
EPBRC204008U	2.00R	4.0	4.0	8	50	6	2
EPBRC204010U	2.00R	4.0	4.0	10	50	6	2
EPBRC204012U	2.00R	4.0	4.0	12	50	6	2
EPBRC204016U	2.00R	4.0	4.0	16	60	6	2
EPBRC204020U	2.00R	4.0	4.0	20	60	6	2
EPBRC204025U	2.00R	4.0	4.0	25	60	6	2
EPBRC204030U	2.00R	4.0	4.0	30	75	6	2
EPBRC204035U	2.00R	4.0	4.0	35	75	6	2
EPBRC205015U	2.50R	5.0	5.0	15	60	6	2
EPBRC205020U	2.50R	5.0	5.0	20	60	6	2
EPBRC205025U	2.50R	5.0	5.0	25	60	6	2
EPBRC205030U	2.50R	5.0	5.0	30	75	6	2
EPBRC206015U	3.00R	6.0	10.0	15	50	6	2
EPBRC208025U	4.00R	8.0	12.0	25	60	8	2
EPBRC210030U	5.00R	10.0	16.0	30	75	10	2
EPBRC212030U	6.00R	12.0	18.0	30	75	12	2

Cutting conditions（建議切削參數表）: Table 044 ~ 046



d	R Tolerance
Ø	± 0.02

G550 - Taper Ball Nose Type - 2F

鎢鋼球型銑刀 - 斜度型 - 2 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Tape cutting length is convenient for high performance 3D milling.
- Stronger geometry design gives good wear resistance.

EPBFT2
EPBST2

P	M	K	N	S	H
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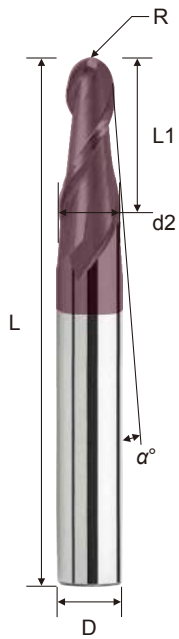
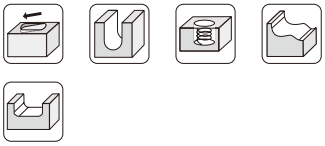
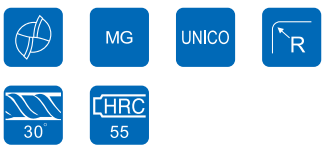


Order No.	Radius (R)	α°	CL (L1)	NL (d2)	OAL (L)	Shank (D)	Flutes (F)
EPBFT202010U	1.00R	1°	8	2.24	50	4	2
EPBFT202030U	1.00R	3°	8	2.74	50	4	2
EPBFT202050U	1.00R	5°	8	3.23	50	4	2
EPBFT202510U	1.25R	1°	10	2.81	50	4	2
EPBFT202530U	1.25R	3°	10	3.42	50	4	2
EPBST202550U	1.25R	5°	10	4.04	50	6	2
EPBFT203010U	1.50R	1°	12	3.37	50	4	2
EPBST203030U	1.50R	3°	12	4.10	50	6	2
EPBST203050U	1.50R	5°	12	4.85	50	6	2
EPBST204010U	2.00R	1°	16	4.49	60	6	2
EPBST204030U	2.00R	3°	16	5.47	60	6	2
EPBST204050U	2.00R	5°	16	6.46	60	8	2
EPBST206010U	3.00R	1°	24	6.73	75	8	2
EPBST206030U	3.00R	3°	24	8.20	75	10	2
EPBST206050U	3.00R	5°	24	9.67	75	10	2





d	R Tolerance
Ø	± 0.02

Cutting conditions（建議切削參數表）: Table 047

G550 - Taper Neck Ball Nose Type - 2F

鎢鋼球型銑刀 - 斜頸型 - 2 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Suitable for high performance profile milling.
- High strength of taper neck, can cut deep grooves without breaking.

EPBRT2

P	M	K	N	S	H
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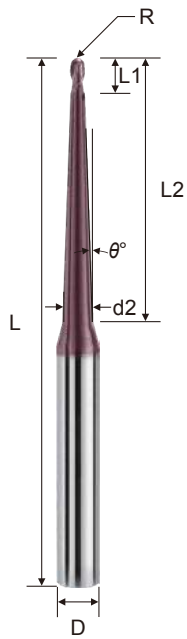
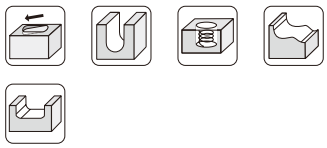
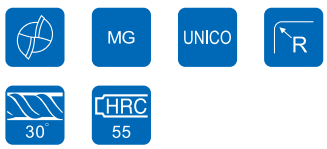


Order No.	Radius (R)	Dia. (d)	θ°	CL (L1)	EFF-L (L2)	NL (d2)	OAL (L)	Shank (D)	Flutes (F)
EPBRT201023AU	0.5R	1	1.5°	2	23	2.10	60	6	2
EPBRT2010235U	0.5R	1	5.0°	2	23	4.67	60	6	2
EPBRT2010423U	0.5R	1	3.0°	2	42	5.19	75	6	2
EPBRT202035HU	1.0R	2	0.5°	4	35	2.54	75	6	2
EPBRT2020351U	1.0R	2	1.0°	4	35	3.08	75	6	2
EPBRT202023AU	1.0R	2	1.5°	4	23	3.00	60	6	2
EPBRT202035AU	1.0R	2	1.5°	4	35	3.62	75	6	2
EPBRT2020235U	1.0R	2	5.0°	4	23	5.32	60	6	2
EPBRT2020413U	1.0R	2	3.0°	4	41	5.88	75	6	2
EPBRT203052AU	1.5R	3	1.5°	6	52	5.40	100	6	2
EPBRT2030323U	1.5R	3	3.0°	6	32	5.73	75	6	2
EPBRT204046AU	2.0R	4	1.5°	8	46	6.00	100	6	2
EPBRT2040273U	2.0R	4	3.0°	8	27	6.00	75	6	2





d	R Tolerance
Ø	± 0.02

Cutting conditions（建議切削參數表）: Table 047

Winstar Cutting Technologies

G550 - Corner Radius Type - 2F

鎢鋼圓筆銑刀 - 標準型 - 2 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Corner radius design is suitable for high speed surface milling and profiling.

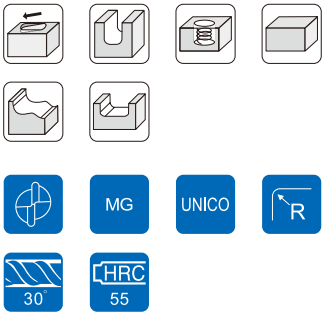
EPCSC2

P ☑ M ☑ K ☑ N ☐ S ☐ H ☑



1Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPCFC201001U	1.0	0.1R	2	50	4	2
EPCFC201002U	1.0	0.2R	2	50	4	2
EPCFC201003U	1.0	0.3R	2	50	4	2
EPCFC201502U	1.5	0.2R	3	50	4	2
EPCFC201503U	1.5	0.3R	3	50	4	2
EPCFC201505U	1.5	0.5R	3	50	4	2
EPCFC202002U	2.0	0.2R	4	50	4	2
EPCFC202003U	2.0	0.3R	4	50	4	2
EPCFC202005U	2.0	0.5R	4	50	4	2
EPCFC203002U	3.0	0.2R	6	50	4	2
EPCFC203003U	3.0	0.3R	6	50	4	2
EPCFC203005U	3.0	0.5R	6	50	4	2
EPCFC204002U	4.0	0.2R	8	50	4	2
EPCFC204003U	4.0	0.3R	8	50	4	2
EPCFC204005U	4.0	0.5R	8	50	4	2
EPCFC204010U	4.0	1R	8	50	4	2
EPCSC204003U	4.0	0.3R	8	50	6	2
EPCSC204005U	4.0	0.5R	8	50	6	2
EPCSC204010U	4.0	1R	8	50	6	2
EPCSC205005U	5.0	0.5R	10	50	6	2
EPCSC205010U	5.0	1R	10	50	6	2
EPCSC206003U	6.0	0.3R	12	50	6	2
EPCSC206005U	6.0	0.5R	12	50	6	2
EPCSC206010U	6.0	1R	12	50	6	2
EPCSC208005U	8.0	0.5R	16	60	8	2
EPCSC208010U	8.0	1R	16	60	8	2
EPCSC208015U	8.0	1.5R	16	60	8	2
EPCSC210005U	10.0	0.5R	20	75	10	2
EPCSC210010U	10.0	1R	20	75	10	2
EPCSC210015U	10.0	1.5R	20	75	10	2
EPCSC212020U	10.0	2R	20	75	10	2
EPCSC212005U	12.0	0.5R	20	75	12	2
EPCSC212010U	12.0	1R	20	75	12	2
EPCSC212015U	12.0	1.5R	20	75	12	2
EPCSC212020U	12.0	2R	20	75	12	2

Cutting conditions（建議切削參數表）: Table 048



d	R Tolerance
Ø < 3	0 ~ -0.03
3 ≦ Ø ≦ 10	0 ~ -0.04
Ø > 10	0 ~ -0.05
R	± 0.02

G550 - Corner Radius Type - 4F

鎢鋼圓鼻銑刀 - 標準型 - 4 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Corner radius with multiple design increases the finish milling surface.

EPCSC4

P	M	K	N	S	H
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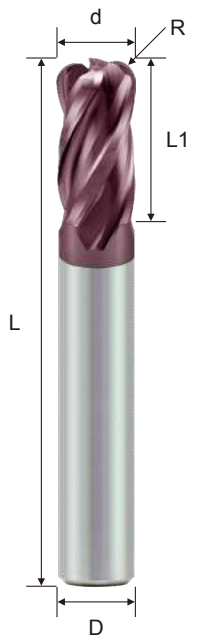
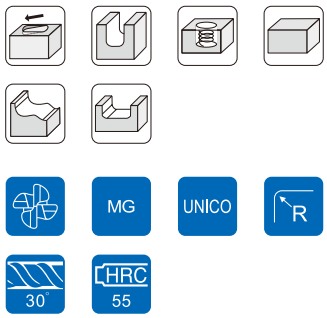


Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPCFC401002U	1	0.2R	2	50	4	4
EPCFC401003U	1	0.3R	2	50	4	4
EPCFC401502U	1.5	0.2R	3	50	4	4
EPCFC401503U	1.5	0.3R	3	50	4	4
EPCFC401505U	1.5	0.5R	3	50	4	4
EPCFC402002U	2.0	0.2R	4	50	4	4
EPCFC402003U	2.0	0.3R	4	50	4	4
EPCFC402005U	2.0	0.5R	4	50	4	4
EPCFC403002U	3	0.2R	6	50	4	4
EPCFC403003U	3	0.3R	6	50	4	4
EPCFC403005U	3	0.5R	6	50	4	4
EPCFC403010U	3	1R	6	50	4	4
EPCFC404001U	4	0.1R	8	50	4	4
EPCFC404002U	4	0.2R	8	50	4	4
EPCFC404003U	4	0.3R	8	50	4	4
EPCFC404005U	4	0.5R	8	50	4	4
EPCFC404010U	4	1R	8	50	4	4
EPCSC403003U	3	0.3R	6	50	6	4
EPCSC403005U	3	0.5R	6	50	6	4
EPCSC403010U	3	1R	6	50	6	4
EPCSC404003U	4	0.3R	8	50	6	4
EPCSC404005U	4	0.5R	8	50	6	4
EPCSC404010U	4	1R	8	50	6	4
EPCSC405005U	5	0.5R	10	50	6	4
EPCSC405010U	5	1R	10	50	6	4
EPCSC406003U	6	0.3R	12	50	6	4
EPCSC406005U	6	0.5R	12	50	6	4
EPCSC406010U	6	1R	12	50	6	4
EPCSC408005U	8	0.5R	16	60	8	4
EPCSC408010U	8	1R	16	60	8	4
EPCSC408015U	8	1.5R	16	60	8	4
EPCSC410005U	10	0.5R	20	75	10	4
EPCSC410010U	10	1R	20	75	10	4
EPCSC410015U	10	1.5R	20	75	10	4
EPCSC410020U	10	2R	20	75	10	4
EPCSC412005U	12	0.5R	24	75	12	4
EPCSC412010U	12	1R	24	75	12	4
EPCSC412015U	12	1.5R	24	75	12	4
EPCSC412020U	12	2R	24	75	12	4
EPCSC412030U	12	3R	24	75	12	4



d	R Tolerance
Ø < 3	0 ~ -0.03
3 ≦ Ø ≦ 10	0 ~ -0.04
Ø > 10	0 ~ -0.05
R	± 0.02

Cutting conditions（建議切削參數表）: Table 049

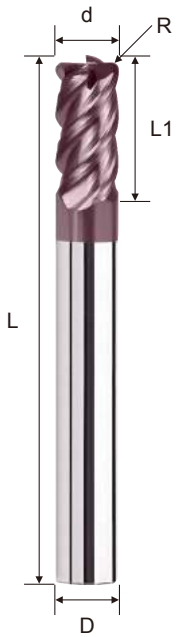
G550 - High Helix Corner Radius Type - 4F

鎢鋼圓鼻銑刀 - 高導型 - 4 刃

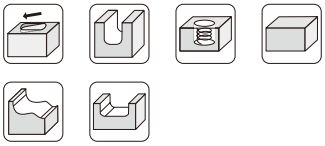
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Corner radius with high helix angle improves the side milling quality.

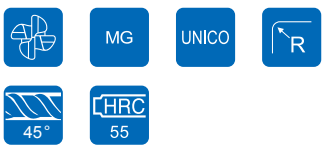
EPCSH4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPCFH403005U	3.0	0.5R	6	50	4	4
EPCFH404005U	4.0	0.5R	8	50	4	4
EPCSH405005U	5.0	0.5R	10	50	6	4
EPCSH405010U	5.0	1.0R	10	50	6	4
EPCSH406005U	6.0	0.5R	12	50	6	4
EPCSH406010U	6.0	1.0R	12	50	6	4
EPCSH408005U	8.0	0.5R	16	60	8	4
EPCSH408010U	8.0	1.0R	16	60	8	4
EPCSH410005U	10.0	0.5R	20	75	10	4
EPCSH410010U	10.0	1.0R	20	75	10	4
EPCSH410015U	10.0	1.5R	20	75	10	4
EPCSH410020U	10.0	2.0R	20	75	10	4
EPCSH412010U	12.0	1.0R	24	75	12	4
EPCSH412020U	12.0	2.0R	24	75	12	4
EPCSH412030U	12.0	3.0R	24	75	12	4





d	R Tolerance
Ø < 3	0 ~ -0.03
3 ≦ Ø ≦ 10	0 ~ -0.04
Ø > 10	0 ~ -0.05
R	± 0.02

Cutting conditions（建議切削參數表）: Table 050

G550 - Long Shank Corner Radius Type - 4F

鎢鋼圓鼻銑刀 - 長柄型 - 4 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Corner radius with multiple flutes is suitable for general cutting and 3D milling.

EPCLC4

P	M	K	N	S	H
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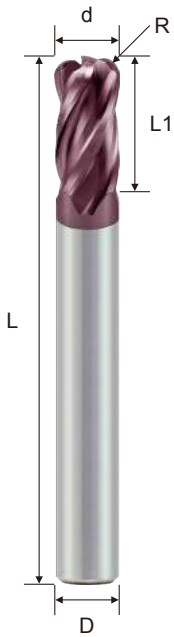
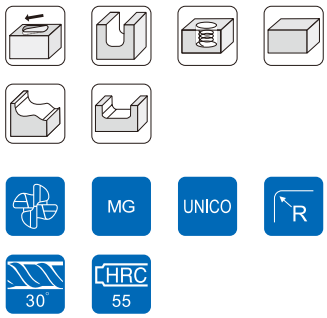


Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPCEC404005U	4	0.5R	8	75	4	4
EPCKC404005U	4	0.5R	8	100	4	4
EPCLC403005U	3	0.5R	6	75	6	4
EPCLC403010U	3	1R	6	75	6	4
EPCLC404005U	4	0.5R	8	75	6	4
EPCLC404010U	4	1R	8	75	6	4
EPCLC405005U	5	0.5R	10	75	6	4
EPCLC405010U	5	1R	10	75	6	4
EPCLC406005U	6	0.5R	12	75	6	4
EPCLC406010U	6	1R	12	75	6	4
EPCNC406005U	6	0.5R	12	100	6	4
EPCMC408005U	8	0.5R	16	75	8	4
EPCLC408005U	8	0.5R	16	100	8	4
EPCLC408010U	8	1R	16	100	8	4
EPCLC408015U	8	1.5R	16	100	8	4
EPCLC410005U	10	0.5R	20	100	10	4
EPCLC410010U	10	1R	20	100	10	4
EPCLC410015U	10	1.5R	20	100	10	4
EPCLC410020U	10	2R	20	100	10	4
EPCNC410005U	10	0.5R	20	150	10	4
EPCLC412005U	12	0.5R	24	100	12	4
EPCLC412010U	12	1R	24	100	12	4
EPCLC412015U	12	1.5R	24	100	12	4
EPCLC412020U	12	2R	24	100	12	4
EPCNC412005U	12	0.5R	24	150	12	4
EPCLC416010U	16	1R	32	150	16	4
EPCLC416020U	16	2R	32	150	16	4
EPCLC416030U	16	3R	32	150	16	4



d	R Tolerance
Ø < 3	0 ~ -0.03
3 ≦ Ø ≦ 10	0 ~ -0.04
Ø > 10	0 ~ -0.05
R	± 0.02

Cutting conditions（建議切削參數表）: Table 051

Winstar Cutting Technologies

G550 - Long Neck Corner Radius Type - 2F

鎢鋼圓鼻銑刀 - 長頸型 - 2 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.

EPCBC2
EPCRC2

P	M	K	N	S	H
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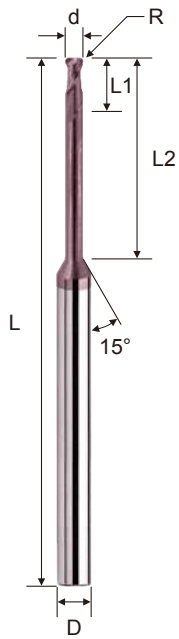
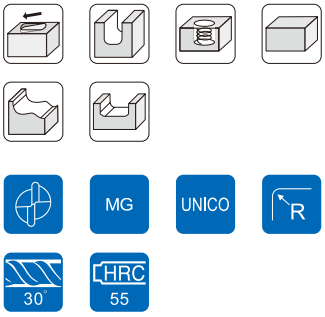


Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCBC20100104U	1.0	0.1R	1.0	4	50	4	2
EPCBC20100106U	1.0	0.1R	1.0	6	50	4	2
EPCBC20100108U	1.0	0.1R	1.0	8	50	4	2
EPCBC20100110U	1.0	0.1R	1.0	10	50	4	2
EPCBC20100112U	1.0	0.1R	1.0	12	50	4	2
EPCBC20100204U	1.0	0.2R	1.0	4	50	4	2
EPCBC20100206U	1.0	0.2R	1.0	6	50	4	2
EPCBC20100208U	1.0	0.2R	1.0	8	50	4	2
EPCBC20100210U	1.0	0.2R	1.0	10	50	4	2
EPCBC20100212U	1.0	0.2R	1.0	12	50	4	2
EPCBC20100304U	1.0	0.3R	1.0	4	50	4	2
EPCBC20100306U	1.0	0.3R	1.0	6	50	4	2
EPCBC20100308U	1.0	0.3R	1.0	8	50	4	2
EPCBC20100310U	1.0	0.3R	1.0	10	50	4	2
EPCBC20100312U	1.0	0.3R	1.0	12	50	4	2
EPCBC20120104U	1.2	0.1R	1.2	4	50	4	2
EPCBC20120106U	1.2	0.1R	1.2	6	50	4	2
EPCBC20120108U	1.2	0.1R	1.2	8	50	4	2
EPCBC20120110U	1.2	0.1R	1.2	10	50	4	2
EPCBC20120112U	1.2	0.1R	1.2	12	50	4	2
EPCBC20120204U	1.2	0.2R	1.2	4	50	4	2
EPCBC20120206U	1.2	0.2R	1.2	6	50	4	2
EPCBC20120208U	1.2	0.2R	1.2	8	50	4	2
EPCBC20120210U	1.2	0.2R	1.2	10	50	4	2
EPCBC20120212U	1.2	0.2R	1.2	12	50	4	2
EPCBC20120304U	1.2	0.3R	1.2	4	50	4	2
EPCBC20120306U	1.2	0.3R	1.2	6	50	4	2
EPCBC20120308U	1.2	0.3R	1.2	8	50	4	2
EPCBC20120310U	1.2	0.3R	1.2	10	50	4	2
EPCBC20120312U	1.2	0.3R	1.2	12	50	4	2



d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

Cutting conditions（建議切削參數表）: Table 052

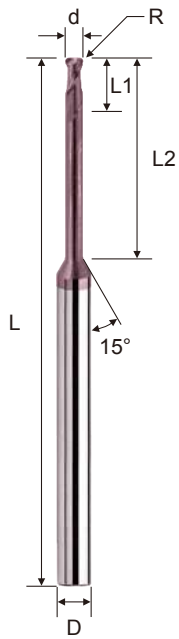
G550 - Long Neck Corner Radius Type - 2F

鎢鋼圓鼻銑刀 - 長頸型 - 2 刃

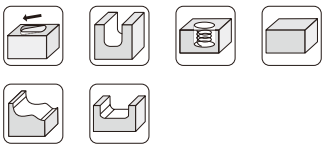
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.

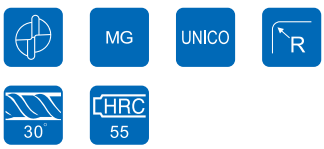
EPCBC2
EPCRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCBC20150106U	1.5	0.1R	1.5	6	50	4	2
EPCBC20150108U	1.5	0.1R	1.5	8	50	4	2
EPCBC20150110U	1.5	0.1R	1.5	10	50	4	2
EPCBC20150112U	1.5	0.1R	1.5	12	50	4	2
EPCBC20150116U	1.5	0.1R	1.5	16	50	4	2
EPCBC20150206U	1.5	0.2R	1.5	6	50	4	2
EPCBC20150208U	1.5	0.2R	1.5	8	50	4	2
EPCBC20150210U	1.5	0.2R	1.5	10	50	4	2
EPCBC20150212U	1.5	0.2R	1.5	12	50	4	2
EPCBC20150216U	1.5	0.2R	1.5	16	50	4	2
EPCBC20150306U	1.5	0.3R	1.5	6	50	4	2
EPCBC20150308U	1.5	0.3R	1.5	8	50	4	2
EPCBC20150310U	1.5	0.3R	1.5	10	50	4	2
EPCBC20150312U	1.5	0.3R	1.5	12	50	4	2
EPCBC20150316U	1.5	0.3R	1.5	16	50	4	2
EPCBC20150506U	1.5	0.5R	1.5	6	50	4	2
EPCBC20150508U	1.5	0.5R	1.5	8	50	4	2
EPCBC20150510U	1.5	0.5R	1.5	10	50	4	2
EPCBC20150512U	1.5	0.5R	1.5	12	50	4	2
EPCBC20150516U	1.5	0.5R	1.5	16	50	4	2





d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

Cutting conditions（建議切削參數表）: Table 052

Winstar Cutting Technologies

G550 - Long Neck Corner Radius Type - 2F

鎢鋼圓鼻銑刀 - 長頸型 - 2 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.

EPCBC2
EPCRC2

P	M	K	N	S	H
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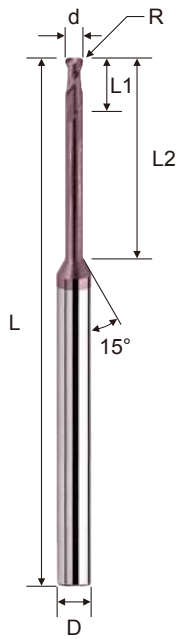
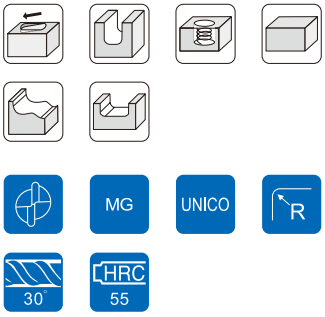


Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCBC20200106U	2.0	0.1R	2.0	6	50	4	2
EPCBC20200108U	2.0	0.1R	2.0	8	50	4	2
EPCBC20200110U	2.0	0.1R	2.0	10	50	4	2
EPCBC20200112U	2.0	0.1R	2.0	12	50	4	2
EPCBC20200116U	2.0	0.1R	2.0	16	50	4	2
EPCBC20200120U	2.0	0.1R	2.0	20	50	4	2
EPCBC20200125U	2.0	0.1R	2.0	25	60	4	2
EPCBC20200206U	2.0	0.2R	2.0	6	50	4	2
EPCBC20200208U	2.0	0.2R	2.0	8	50	4	2
EPCBC20200210U	2.0	0.2R	2.0	10	50	4	2
EPCBC20200212U	2.0	0.2R	2.0	12	50	4	2
EPCBC20200216U	2.0	0.2R	2.0	16	50	4	2
EPCBC20200220U	2.0	0.2R	2.0	20	50	4	2
EPCBC20200225U	2.0	0.2R	2.0	25	60	4	2
EPCBC20200306U	2.0	0.3R	2.0	6	50	4	2
EPCBC20200308U	2.0	0.3R	2.0	8	50	4	2
EPCBC20200310U	2.0	0.3R	2.0	10	50	4	2
EPCBC20200312U	2.0	0.3R	2.0	12	50	4	2
EPCBC20200316U	2.0	0.3R	2.0	16	50	4	2
EPCBC20200320U	2.0	0.3R	2.0	20	50	4	2
EPCBC20200325U	2.0	0.3R	2.0	25	60	4	2
EPCBC20200506U	2.0	0.5R	2.0	6	50	4	2
EPCBC20200508U	2.0	0.5R	2.0	8	50	4	2
EPCBC20200510U	2.0	0.5R	2.0	10	50	4	2
EPCBC20200512U	2.0	0.5R	2.0	12	50	4	2
EPCBC20200516U	2.0	0.5R	2.0	16	50	4	2
EPCBC20200520U	2.0	0.5R	2.0	20	50	4	2
EPCBC20200525U	2.0	0.5R	2.0	25	60	4	2
EPCRC20200510U	2.0	0.5R	2.0	10	50	6	2
EPCRC20200515U	2.0	0.5R	2.0	15	50	6	2



d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

Cutting conditions（建議切削參數表）: Table 052

G550 - Long Neck Corner Radius Type - 2F

鎢鋼圓鼻銑刀 - 長頸型 - 2 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.

EPCBC2
EPCRC2

P	M	K	N	S	H
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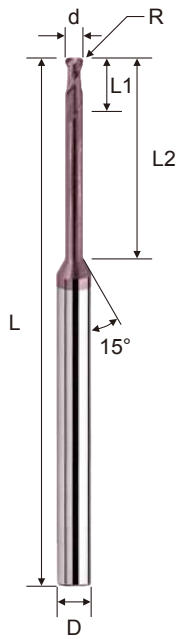
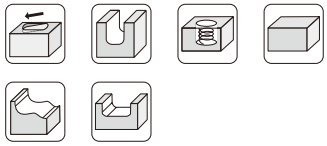
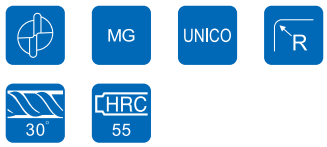


Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCBC20250110U	2.5	0.1R	2.5	10	50	4	2
EPCBC20250116U	2.5	0.1R	2.5	16	50	4	2
EPCBC20250120U	2.5	0.1R	2.5	20	50	4	2
EPCBC20250125U	2.5	0.1R	2.5	25	60	4	2
EPCBC20250210U	2.5	0.2R	2.5	10	50	4	2
EPCBC20250216U	2.5	0.2R	2.5	16	50	4	2
EPCBC20250220U	2.5	0.2R	2.5	20	50	4	2
EPCBC20250225U	2.5	0.2R	2.5	25	60	4	2
EPCBC20250310U	2.5	0.3R	2.5	10	50	4	2
EPCBC20250316U	2.5	0.3R	2.5	16	50	4	2
EPCBC20250320U	2.5	0.3R	2.5	20	50	4	2
EPCBC20250325U	2.5	0.3R	2.5	25	60	4	2
EPCBC20250510U	2.5	0.5R	2.5	10	50	4	2
EPCBC20250516U	2.5	0.5R	2.5	16	50	4	2
EPCBC20250520U	2.5	0.5R	2.5	20	50	4	2
EPCBC20250525U	2.5	0.5R	2.5	25	60	4	2





d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

Cutting conditions（建議切削參數表）: Table 052

Winstar Cutting Technologies

G550 - Long Neck Corner Radius Type - 2F

鎢鋼圓鼻銑刀 - 長頸型 - 2 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.

EPCBC2
EPCRC2

P	M	K	N	S	H
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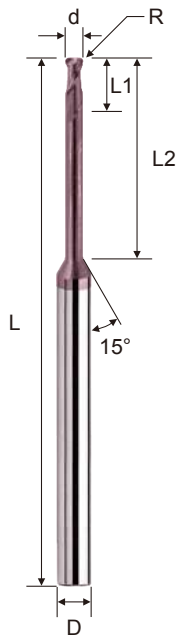
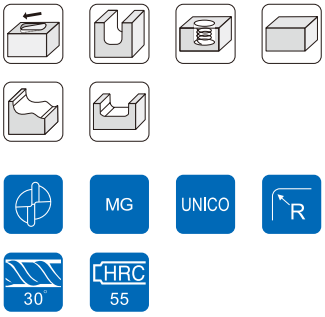


Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCRC20300110U	3.0	0.1R	3.0	10	50	6	2
EPCRC20300116U	3.0	0.1R	3.0	16	60	6	2
EPCRC20300120U	3.0	0.1R	3.0	20	60	6	2
EPCRC20300125U	3.0	0.1R	3.0	25	60	6	2
EPCRC20300130U	3.0	0.1R	3.0	30	75	6	2
EPCRC20300135U	3.0	0.1R	3.0	35	75	6	2
EPCRC20300210U	3.0	0.2R	3.0	10	50	6	2
EPCRC20300216U	3.0	0.2R	3.0	16	60	6	2
EPCRC20300220U	3.0	0.2R	3.0	20	60	6	2
EPCRC20300225U	3.0	0.2R	3.0	25	60	6	2
EPCRC20300230U	3.0	0.2R	3.0	30	75	6	2
EPCRC20300235U	3.0	0.2R	3.0	35	75	6	2
EPCRC20300310U	3.0	0.3R	3.0	10	50	6	2
EPCRC20300316U	3.0	0.3R	3.0	16	60	6	2
EPCRC20300320U	3.0	0.3R	3.0	20	60	6	2
EPCRC20300325U	3.0	0.3R	3.0	25	60	6	2
EPCRC20300330U	3.0	0.3R	3.0	30	75	6	2
EPCRC20300335U	3.0	0.3R	3.0	35	75	6	2
EPCRC20300510U	3.0	0.5R	3.0	10	50	6	2
EPCRC20300516U	3.0	0.5R	3.0	16	60	6	2
EPCRC20300520U	3.0	0.5R	3.0	20	60	6	2
EPCRC20300525U	3.0	0.5R	3.0	25	60	6	2
EPCRC20300530U	3.0	0.5R	3.0	30	75	6	2
EPCRC20300535U	3.0	0.5R	3.0	35	75	6	2
EPCRC20301010U	3.0	1.0R	3.0	10	50	6	2
EPCRC20301016U	3.0	1.0R	3.0	16	60	6	2
EPCRC20301020U	3.0	1.0R	3.0	20	60	6	2
EPCRC20301025U	3.0	1.0R	3.0	25	60	6	2
EPCRC20301030U	3.0	1.0R	3.0	30	75	6	2
EPCRC20301035U	3.0	1.0R	3.0	35	75	6	2



d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

Cutting conditions（建議切削參數表）: Table 052

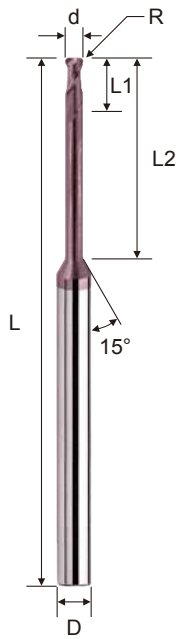
G550 - Long Neck Corner Radius Type - 2F

鎢鋼圓鼻銑刀 - 長頸型 - 2 刃

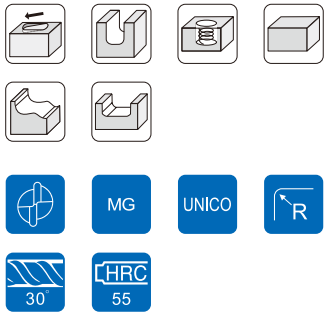
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.

EPCBC2
EPCRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCRC20400113U	4.0	0.1R	4.0	13	50	6	2
EPCRC20400116U	4.0	0.1R	4.0	16	60	6	2
EPCRC20400120U	4.0	0.1R	4.0	20	60	6	2
EPCRC20400125U	4.0	0.1R	4.0	25	60	6	2
EPCRC20400130U	4.0	0.1R	4.0	30	75	6	2
EPCRC20400135U	4.0	0.1R	4.0	35	75	6	2
EPCRC20400213U	4.0	0.2R	4.0	13	50	6	2
EPCRC20400216U	4.0	0.2R	4.0	16	60	6	2
EPCRC20400220U	4.0	0.2R	4.0	20	60	6	2
EPCRC20400225U	4.0	0.2R	4.0	25	60	6	2
EPCRC20400230U	4.0	0.2R	4.0	30	75	6	2
EPCRC20400235U	4.0	0.2R	4.0	35	75	6	2
EPCRC20400313U	4.0	0.3R	4.0	13	50	6	2
EPCRC20400316U	4.0	0.3R	4.0	16	60	6	2
EPCRC20400320U	4.0	0.3R	4.0	20	60	6	2
EPCRC20400325U	4.0	0.3R	4.0	25	60	6	2
EPCRC20400330U	4.0	0.3R	4.0	30	75	6	2
EPCRC20400335U	4.0	0.3R	4.0	35	75	6	2
EPCRC20400513U	4.0	0.5R	4.0	13	50	6	2
EPCRC20400516U	4.0	0.5R	4.0	16	60	6	2
EPCRC20400520U	4.0	0.5R	4.0	20	60	6	2
EPCRC20400525U	4.0	0.5R	4.0	25	60	6	2
EPCRC20400530U	4.0	0.5R	4.0	30	75	6	2
EPCRC20400535U	4.0	0.5R	4.0	35	75	6	2
EPCRC20401013U	4.0	1.0R	4.0	13	50	6	2
EPCRC20401016U	4.0	1.0R	4.0	16	60	6	2
EPCRC20401020U	4.0	1.0R	4.0	20	60	6	2
EPCRC20401025U	4.0	1.0R	4.0	25	60	6	2
EPCRC20401030U	4.0	1.0R	4.0	30	75	6	2
EPCRC20401035U	4.0	1.0R	4.0	35	75	6	2



d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

Cutting conditions（建議切削參數表）: Table 052

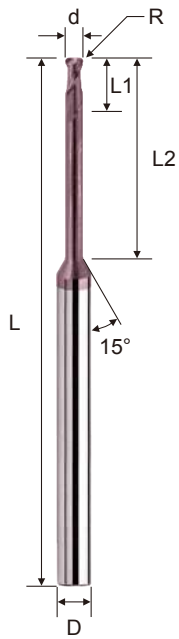
G550 - Long Neck Corner Radius Type - 2F

鎢鋼圓鼻銑刀 - 長頸型 - 2 刃

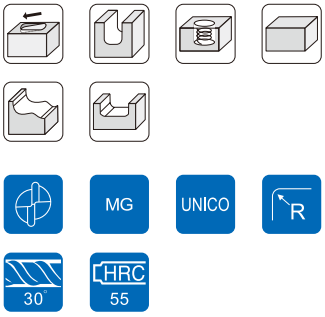
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.

EPCBC2
EPCRC2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCRC20500116U	5.0	0.1R	5.0	16	60	6	2
EPCRC20500130U	5.0	0.1R	5.0	30	75	6	2
EPCRC20500216U	5.0	0.2R	5.0	16	60	6	2
EPCRC20500230U	5.0	0.2R	5.0	30	75	6	2
EPCRC20500316U	5.0	0.3R	5.0	16	60	6	2
EPCRC20500330U	5.0	0.3R	5.0	30	75	6	2
EPCRC20500516U	5.0	0.5R	5.0	16	60	6	2
EPCRC20500530U	5.0	0.5R	5.0	30	75	6	2
EPCRC20501016U	5.0	1.0R	5.0	16	60	6	2
EPCRC20501030U	5.0	1.0R	5.0	30	75	6	2
EPCRC20600120U	6.0	0.1R	7.0	20	60	6	2
EPCRC20600130U	6.0	0.1R	7.0	30	75	6	2
EPCRC20600220U	6.0	0.2R	7.0	20	60	6	2
EPCRC20600230U	6.0	0.2R	7.0	30	75	6	2
EPCRC20600320U	6.0	0.3R	7.0	20	60	6	2
EPCRC20600330U	6.0	0.3R	7.0	30	75	6	2
EPCRC20600520U	6.0	0.5R	7.0	20	60	6	2
EPCRC20600530U	6.0	0.5R	7.0	30	75	6	2
EPCRC20601020U	6.0	1.0R	7.0	20	60	6	2
EPCRC20601030U	6.0	1.0R	7.0	30	75	6	2
EPCRC20601520U	6.0	1.5R	7.0	20	60	6	2
EPCRC20601530U	6.0	1.5R	7.0	30	75	6	2
EPCRC20800522U	8.0	0.5R	9.0	22	60	8	2
EPCRC20801022U	8.0	1.0R	9.0	22	60	8	2
EPCRC20801522U	8.0	1.5R	9.0	22	60	8	2
EPCRC20802022U	8.0	2.0R	9.0	22	60	8	2
EPCRC21000524U	10.0	0.5R	11.0	24	75	10	2
EPCRC21001024U	10.0	1.0R	11.0	24	75	10	2
EPCRC21001524U	10.0	1.5R	11.0	24	75	10	2
EPCRC21002024U	10.0	2.0R	11.0	24	75	10	2
EPCRC21200526U	12.0	0.5R	13.0	26	75	12	2
EPCRC21201026U	12.0	1.0R	13.0	26	75	12	2
EPCRC21201526U	12.0	1.5R	13.0	26	75	12	2
EPCRC21202026U	12.0	2.0R	13.0	26	75	12	2



d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

Cutting conditions（建議切削參數表）: Table 052

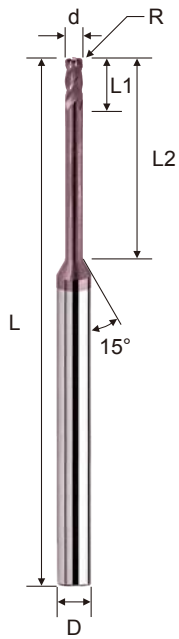
G550 - Long Neck Corner Radius Type - 4F

鎢鋼圓鼻銑刀 - 長頸型 - 4 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Multiple flutes and ling neck design provides better surface in deep cutting.
- Available in various cut lengths.

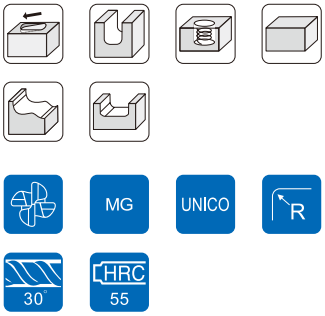
EPCBC4
EPCRC4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCBC40200106U	2.0	0.1R	2.0	6	50	4	4
EPCBC40200108U	2.0	0.1R	2.0	8	50	4	4
EPCBC40200110U	2.0	0.1R	2.0	10	50	4	4
EPCBC40200112U	2.0	0.1R	2.0	12	50	4	4
EPCBC40200116U	2.0	0.1R	2.0	16	50	4	4
EPCBC40200120U	2.0	0.1R	2.0	20	50	4	4
EPCBC40200125U	2.0	0.1R	2.0	25	60	4	4
EPCBC40200206U	2.0	0.2R	2.0	6	50	4	4
EPCBC40200208U	2.0	0.2R	2.0	8	50	4	4
EPCBC40200210U	2.0	0.2R	2.0	10	50	4	4
EPCBC40200212U	2.0	0.2R	2.0	12	50	4	4
EPCBC40200216U	2.0	0.2R	2.0	16	50	4	4
EPCBC40200220U	2.0	0.2R	2.0	20	50	4	4
EPCBC40200225U	2.0	0.2R	2.0	25	60	4	4
EPCBC40200306U	2.0	0.3R	2.0	6	50	4	4
EPCBC40200308U	2.0	0.3R	2.0	8	50	4	4
EPCBC40200310U	2.0	0.3R	2.0	10	50	4	4
EPCBC40200312U	2.0	0.3R	2.0	12	50	4	4
EPCBC40200316U	2.0	0.3R	2.0	16	50	4	4
EPCBC40200320U	2.0	0.3R	2.0	20	50	4	4
EPCBC40200325U	2.0	0.3R	2.0	25	60	4	4
EPCBC40200506U	2.0	0.5R	2.0	6	50	4	4
EPCBC40200508U	2.0	0.5R	2.0	8	50	4	4
EPCBC40200510U	2.0	0.5R	2.0	10	50	4	4
EPCBC40200512U	2.0	0.5R	2.0	12	50	4	4
EPCBC40200516U	2.0	0.5R	2.0	16	50	4	4
EPCBC40200520U	2.0	0.5R	2.0	20	50	4	4
EPCBC40200525U	2.0	0.5R	2.0	25	60	4	4
EPCRC40200510U	2.0	0.5R	2.0	10	50	6	4
EPCRC40200515U	2.0	0.5R	2.0	15	50	6	4

Cutting conditions（建議切削參數表）: Table 053



d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

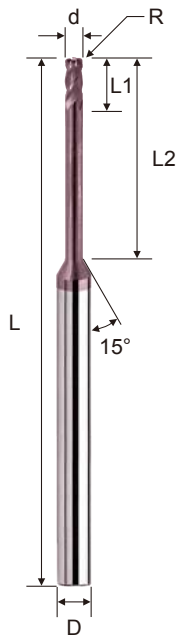
G550 - Long Neck Corner Radius Type - 4F

鎢鋼圓鼻銑刀 - 長頸型 - 4 刃

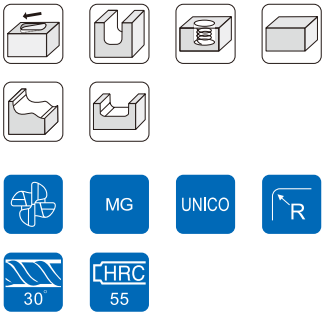
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Multiple flutes and ling neck design provides better surface in deep cutting.
- Available in various cut lengths.

EPCBC4
EPCRC4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCBC40250110U	2.5	0.1R	2.5	10	50	4	4
EPCBC40250116U	2.5	0.1R	2.5	16	50	4	4
EPCBC40250120U	2.5	0.1R	2.5	20	50	4	4
EPCBC40250125U	2.5	0.1R	2.5	25	60	4	4
EPCBC40250210U	2.5	0.2R	2.5	10	50	4	4
EPCBC40250216U	2.5	0.2R	2.5	16	50	4	4
EPCBC40250220U	2.5	0.2R	2.5	20	50	4	4
EPCBC40250225U	2.5	0.2R	2.5	25	60	4	4
EPCBC40250310U	2.5	0.3R	2.5	10	50	4	4
EPCBC40250316U	2.5	0.3R	2.5	16	50	4	4
EPCBC40250320U	2.5	0.3R	2.5	20	50	4	4
EPCBC40250325U	2.5	0.3R	2.5	25	60	4	4
EPCBC40250510U	2.5	0.5R	2.5	10	50	4	4
EPCBC40250516U	2.5	0.5R	2.5	16	50	4	4
EPCBC40250520U	2.5	0.5R	2.5	20	50	4	4
EPCBC40250525U	2.5	0.5R	2.5	25	60	4	4



d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

Cutting conditions（建議切削參數表）: Table 053

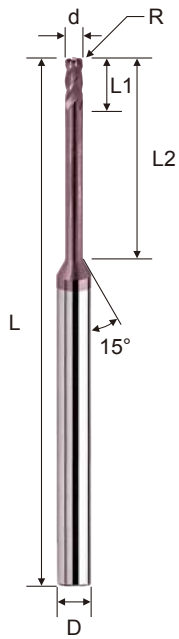
G550 - Long Neck Corner Radius Type - 4F

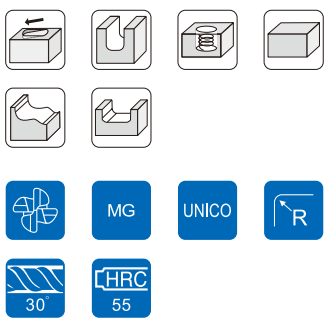
鎢鋼圓鼻銑刀 - 長頸型 - 4 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Multiple flutes and ling neck design provides better surface in deep cutting.
- Available in various cut lengths.

EPCBC4
EPCRC4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑





d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCRC40300110U	3.0	0.1R	3.0	10	50	6	4
EPCRC40300116U	3.0	0.1R	3.0	16	60	6	4
EPCRC40300120U	3.0	0.1R	3.0	20	60	6	4
EPCRC40300125U	3.0	0.1R	3.0	25	60	6	4
EPCRC40300130U	3.0	0.1R	3.0	30	75	6	4
EPCRC40300135U	3.0	0.1R	3.0	35	75	6	4
EPCRC40300210U	3.0	0.2R	3.0	10	50	6	4
EPCRC40300216U	3.0	0.2R	3.0	16	60	6	4
EPCRC40300220U	3.0	0.2R	3.0	20	60	6	4
EPCRC40300225U	3.0	0.2R	3.0	25	60	6	4
EPCRC40300230U	3.0	0.2R	3.0	30	75	6	4
EPCRC40300235U	3.0	0.2R	3.0	35	75	6	4
EPCRC40300310U	3.0	0.3R	3.0	10	50	6	4
EPCRC40300316U	3.0	0.3R	3.0	16	60	6	4
EPCRC40300320U	3.0	0.3R	3.0	20	60	6	4
EPCRC40300325U	3.0	0.3R	3.0	25	60	6	4
EPCRC40300330U	3.0	0.3R	3.0	30	75	6	4
EPCRC40300335U	3.0	0.3R	3.0	35	75	6	4
EPCRC40300510U	3.0	0.5R	3.0	10	50	6	4
EPCRC40300516U	3.0	0.5R	3.0	16	60	6	4
EPCRC40300520U	3.0	0.5R	3.0	20	60	6	4
EPCRC40300525U	3.0	0.5R	3.0	25	60	6	4
EPCRC40300530U	3.0	0.5R	3.0	30	75	6	4
EPCRC40300535U	3.0	0.5R	3.0	35	75	6	4
EPCRC40301010U	3.0	1.0R	3.0	10	50	6	4
EPCRC40301016U	3.0	1.0R	3.0	16	60	6	4
EPCRC40301020U	3.0	1.0R	3.0	20	60	6	4
EPCRC40301025U	3.0	1.0R	3.0	25	60	6	4
EPCRC40301030U	3.0	1.0R	3.0	30	75	6	4
EPCRC40301035U	3.0	1.0R	3.0	35	75	6	4

Cutting conditions（建議切削參數表）: Table 053

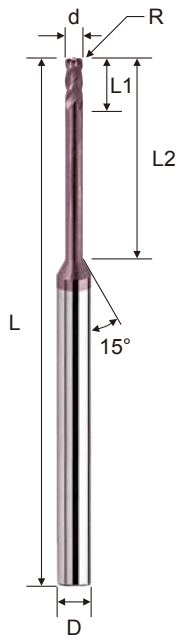
G550 - Long Neck Corner Radius Type - 4F

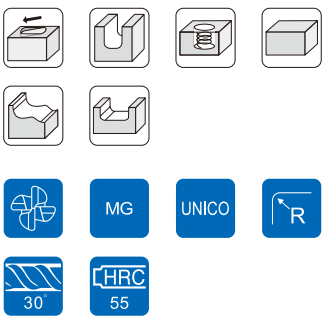
鎢鋼圓鼻銑刀 - 長頸型 - 4 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Multiple flutes and ling neck design provides better surface in deep cutting.
- Available in various cut lengths.

EPCBC4
EPCRC4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑





d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCRC40400113U	4.0	0.1R	4.0	13	50	6	4
EPCRC40400116U	4.0	0.1R	4.0	16	60	6	4
EPCRC40400120U	4.0	0.1R	4.0	20	60	6	4
EPCRC40400125U	4.0	0.1R	4.0	25	60	6	4
EPCRC40400130U	4.0	0.1R	4.0	30	75	6	4
EPCRC40400135U	4.0	0.1R	4.0	35	75	6	4
EPCRC40400213U	4.0	0.2R	4.0	13	50	6	4
EPCRC40400216U	4.0	0.2R	4.0	16	60	6	4
EPCRC40400220U	4.0	0.2R	4.0	20	60	6	4
EPCRC40400225U	4.0	0.2R	4.0	25	60	6	4
EPCRC40400230U	4.0	0.2R	4.0	30	75	6	4
EPCRC40400235U	4.0	0.2R	4.0	35	75	6	4
EPCRC40400313U	4.0	0.3R	4.0	13	50	6	4
EPCRC40400316U	4.0	0.3R	4.0	16	60	6	4
EPCRC40400320U	4.0	0.3R	4.0	20	60	6	4
EPCRC40400325U	4.0	0.3R	4.0	25	60	6	4
EPCRC40400330U	4.0	0.3R	4.0	30	75	6	4
EPCRC40400335U	4.0	0.3R	4.0	35	75	6	4
EPCRC40400513U	4.0	0.5R	4.0	13	50	6	4
EPCRC40400516U	4.0	0.5R	4.0	16	60	6	4
EPCRC40400520U	4.0	0.5R	4.0	20	60	6	4
EPCRC40400525U	4.0	0.5R	4.0	25	60	6	4
EPCRC40400530U	4.0	0.5R	4.0	30	75	6	4
EPCRC40400535U	4.0	0.5R	4.0	35	75	6	4
EPCRC40401013U	4.0	1.0R	4.0	13	50	6	4
EPCRC40401016U	4.0	1.0R	4.0	16	60	6	4
EPCRC40401020U	4.0	1.0R	4.0	20	60	6	4
EPCRC40401025U	4.0	1.0R	4.0	25	60	6	4
EPCRC40401030U	4.0	1.0R	4.0	30	75	6	4
EPCRC40401035U	4.0	1.0R	4.0	35	75	6	4

Cutting conditions（建議切削參數表）: Table 053

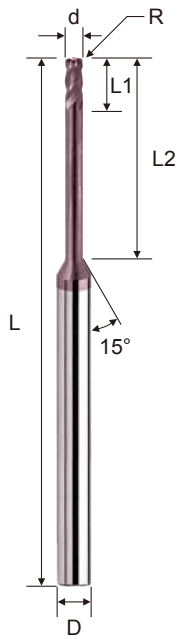
G550 - Long Neck Corner Radius Type - 4F

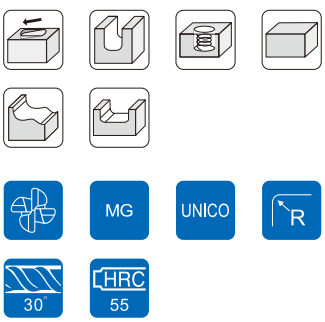
鎢鋼圓鼻銑刀 - 長頸型 - 4 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Multiple flutes and ling neck design provides better surface in deep cutting.
- Available in various cut lengths.

EPCBC4
EPCRC4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑





d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCRC40500116U	5.0	0.1R	5.0	16	60	6	4
EPCRC40500130U	5.0	0.1R	5.0	30	75	6	4
EPCRC40500216U	5.0	0.2R	5.0	16	60	6	4
EPCRC40500230U	5.0	0.2R	5.0	30	75	6	4
EPCRC40500316U	5.0	0.3R	5.0	16	60	6	4
EPCRC40500330U	5.0	0.3R	5.0	30	75	6	4
EPCRC40500516U	5.0	0.5R	5.0	16	60	6	4
EPCRC40500530U	5.0	0.5R	5.0	30	75	6	4
EPCRC40501016U	5.0	1.0R	5.0	16	60	6	4
EPCRC40501030U	5.0	1.0R	5.0	30	75	6	4
EPCRC40600120U	6.0	0.1R	7.0	20	60	6	4
EPCRC40600130U	6.0	0.1R	7.0	30	75	6	4
EPCRC40600220U	6.0	0.2R	7.0	20	60	6	4
EPCRC40600230U	6.0	0.2R	7.0	30	75	6	4
EPCRC40600320U	6.0	0.3R	7.0	20	60	6	4
EPCRC40600330U	6.0	0.3R	7.0	30	75	6	4
EPCRC40600520U	6.0	0.5R	7.0	20	60	6	4
EPCRC40600530U	6.0	0.5R	7.0	30	75	6	4
EPCRC40601020U	6.0	1.0R	7.0	20	60	6	4
EPCRC40601030U	6.0	1.0R	7.0	30	75	6	4
EPCRC40601520U	6.0	1.5R	7.0	20	60	6	4
EPCRC40601530U	6.0	1.5R	7.0	30	75	6	4
EPCRC40800522U	8.0	0.5R	9.0	22	60	8	4
EPCRC40801022U	8.0	1.0R	9.0	22	60	8	4
EPCRC40801522U	8.0	1.5R	9.0	22	60	8	4
EPCRC40802022U	8.0	2.0R	9.0	22	60	8	4
EPCRC41000524U	10.0	0.5R	11.0	24	75	10	4
EPCRC41001024U	10.0	1.0R	11.0	24	75	10	4
EPCRC41001524U	10.0	1.5R	11.0	24	75	10	4
EPCRC41002024U	10.0	2.0R	11.0	24	75	10	4
EPCRC41200526U	12.0	0.5R	13.0	26	75	12	4
EPCRC41201026U	12.0	1.0R	13.0	26	75	12	4
EPCRC41201526U	12.0	1.5R	13.0	26	75	12	4
EPCRC41202026U	12.0	2.0R	13.0	26	75	12	4

Cutting conditions（建議切削參數表）: Table 053

Winstar Cutting Technologies

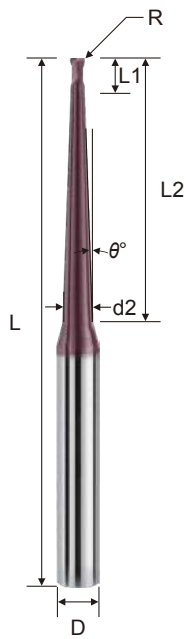
G550 - Taper Neck Corner Radius Type - 2F

鎢鋼圓鼻銑刀 - 斜頸型 - 2 刃

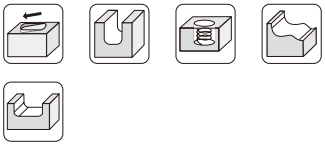
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Various tape angle makes it suitable for different applications.
- Small corner radius applied protect chipping of cutting edges.
  High strength of taper neck, can cut deep grooves without breaking.

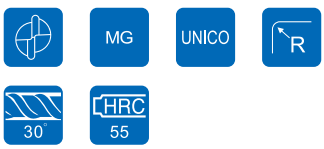
EPCRT2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	θ°	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCRT20100120HU	1.0	0.10R	0.5°	2.0	20	60	6	2
EPCRT201001201U	1.0	0.10R	1.0°	2.0	20	60	6	2
EPCRT20100120AU	1.0	0.10R	1.5°	2.0	20	60	6	2
EPCRT201201230HU2C	1.2	0.12R	0.5°	2.0	30	75	6	2
EPCRT2012012301U2C	1.2	0.12R	1.0°	2.0	30	75	6	2
EPCRT201201230AU2C	1.2	0.12R	1.5°	2.0	30	75	6	2
EPCRT201501530HU2C	1.5	0.15R	0.5°	2.0	30	75	6	2
EPCRT2015015301U2C	1.5	0.15R	1.0°	2.0	30	75	6	2
EPCRT201501530AU2C	1.5	0.15R	1.5°	2.0	30	75	6	2
EPCRT201801830HU2C	1.8	0.18R	0.5°	2.0	30	75	6	2
EPCRT2018018301U2C	1.8	0.18R	1.0°	2.0	30	75	6	2
EPCRT201801830AU2C	1.8	0.18R	1.5°	2.0	30	75	6	2
EPCRT20200225AU	2.0	0.20R	1.5°	3.0	25	75	6	2
EPCRT20200239AU	2.0	0.20R	1.5°	3.0	39	75	6	2
EPCRT20200525AU	2.0	0.50R	1.5°	3.0	25	75	6	2
EPCRT20200539AU	2.0	0.50R	1.5°	3.0	39	75	6	2
EPCRT20200550AU	2.0	0.50R	1.5°	3.0	50	100	6	2
EPCRT20200535HU4C	2.0	0.50R	0.5°	4.0	35	75	6	2
EPCRT202005351U4C	2.0	0.50R	1.0°	4.0	35	75	6	2
EPCRT20200535AU4C	2.0	0.50R	1.5°	4.0	35	75	6	2
EPCRT20250535HU5C	2.5	0.50R	0.5°	5.0	35	75	6	2
EPCRT202505351U5C	2.5	0.50R	1.0°	5.0	35	75	6	2
EPCRT20250535AU5C	2.5	0.50R	1.5°	5.0	35	75	6	2
EPCRT20251035HU5C	2.5	1.00R	0.5°	5.0	35	75	6	2
EPCRT202510351U5C	2.5	1.00R	1.0°	5.0	35	75	6	2
EPCRT20251035AU5C	2.5	1.00R	1.5°	5.0	35	75	6	2





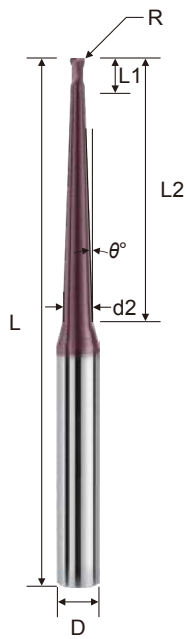
d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

G550 - Taper Neck Corner Radius Type - 2F　鎢鋼圓鼻銑刀 - 斜頸型 - 2 刃

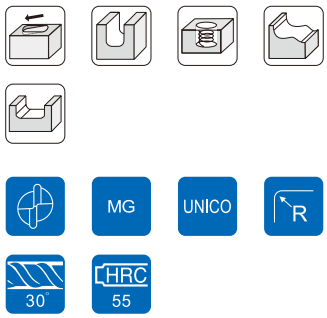
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Various tape angle makes it suitable for different applications.
- Small corner radius applied protect chipping of cutting edges.
  High strength of taper neck, can cut deep grooves without breaking.

EPCRT2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (d)	Corner Radius (R)	θ°	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EPCRT20300525AU	3.0	0.50R	1.5°	4.5	25	75	6	2
EPCRT20301025AU	3.0	1.00R	1.5°	4.5	25	75	6	2
EPCRT20301039AU	3.0	1.00R	1.5°	4.5	39	75	6	2
EPCRT20301050AU	3.0	1.00R	1.5°	4.5	50	100	6	2
EPCRT20300535HU5C	3.0	0.50R	0.5°	5.0	35	75	6	2
EPCRT203005351U5C	3.0	0.50R	1.0°	5.0	35	75	6	2
EPCRT20300535AU5C	3.0	0.50R	1.5°	5.0	35	75	6	2
EPCRT20301035HU5C	3.0	1.00R	0.5°	5.0	35	75	6	2
EPCRT203010351U5C	3.0	1.00R	1.0°	5.0	35	75	6	2
EPCRT20301035AU5C	3.0	1.00R	1.5°	5.0	35	75	6	2
EPCRT20350535HU	3.5	0.50R	0.5°	5.0	35	75	6	2
EPCRT203505351U	3.5	0.50R	1.0°	5.0	35	75	6	2
EPCRT20350535AU	3.5	0.50R	1.5°	5.0	35	75	6	2
EPCRT20351035HU	3.5	1.00R	0.5°	5.0	35	75	6	2
EPCRT203510351U	3.5	1.00R	1.0°	5.0	35	75	6	2
EPCRT20351035AU	3.5	1.00R	1.5°	5.0	35	75	6	2
EPCRT20400545HU	4.0	0.50R	0.5°	6.0	45	100	6	2
EPCRT204005451U	4.0	0.50R	1.0°	6.0	45	100	6	2
EPCRT20400525AU	4.0	0.50R	1.5°	6.0	25	75	6	2
EPCRT20400545AU	4.0	0.50R	1.5°	6.0	45	100	6	2
EPCRT20401045HU	4.0	1.00R	0.5°	6.0	45	100	6	2
EPCRT204010451U	4.0	1.00R	1.0°	6.0	45	100	6	2
EPCRT20401025AU	4.0	1.00R	1.5°	6.0	25	75	6	2
EPCRT20401045AU	4.0	1.00R	1.5°	6.0	45	100	6	2
EPCRT20501025AU	5.0	1.00R	1.5°	7.5	25	75	6	2
EPCRT20501050AU	5.0	1.00R	1.5°	7.5	50	100	8	2
EPCRT20601035AU	6.0	1.00R	1.5°	9.0	35	75	8	2
EPCRT20601050AU	6.0	1.00R	1.5°	9.0	50	100	10	2



d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

G550 - Inner Radius Type - 2F / 4F

鎢鋼內 R 角銑刀 - 2 / 4 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 30 to HRC 55 Ordinary Steel, Alloy Steel, Cast Iron, Heat-Resistant Steel, etc.
- Inner radius tools are suitable for chamfering with round corner application.

EPIFA2
EPISA2
EPIFA4
EPISA4

P	M	K	N	S	H
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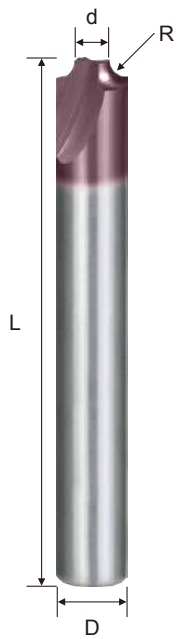
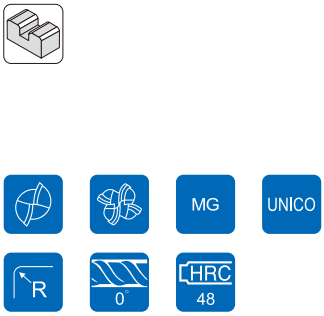
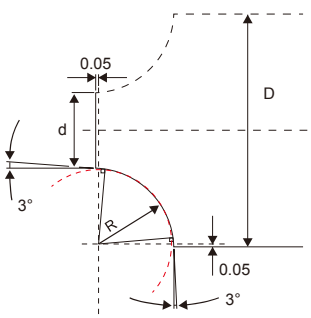


Order No.	Corner Radius (R)	Dia. (d1)	OAL (L)	Shank (D)	Flutes (F)
EPIFA202905U	0.5R	2.9	50	4	2
EPISA204905U	0.5R	4.9	50	6	2
EPIFA201910U	1.0R	1.9	50	4	2
EPISA203910U	1.0R	3.9	50	6	2
EPISA205910U	1.0R	5.9	60	8	2
EPISA204915U	1.5R	4.9	60	8	2
EPISA205920U	2.0R	5.9	75	10	2
EPISA204925U	2.5R	4.9	75	10	2
EPISA205930U	3.0R	5.9	75	12	2
EPISA203940U	4.0R	3.9	75	12	2
EPISA205950U	5.0R	5.9	75	16	2
EPISA203960U	6.0R	3.9	75	16	2
EPIFA402905U	0.5R	2.9	50	4	4
EPISA404905U	0.5R	4.9	50	6	4
EPIFA401910U	1.0R	1.9	50	4	4
EPISA403910U	1.0R	3.9	50	6	4
EPISA405910U	1.0R	5.9	60	8	4
EPISA404915U	1.5R	4.9	60	8	4
EPISA405920U	2.0R	5.9	75	10	4
EPISA404925U	2.5R	4.9	75	10	4
EPISA405930U	3.0R	5.9	75	12	4
EPISA403940U	4.0R	3.9	75	12	4
EPISA405950U	5.0R	5.9	75	16	4
EPISA403960U	6.0R	3.9	75	16	4

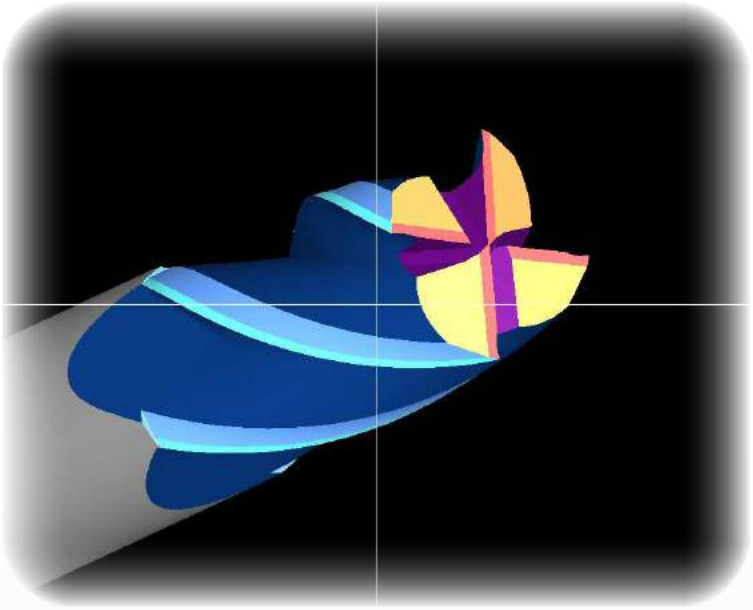
Cutting conditions（建議切削參數表）: Table 054





WINSTAR

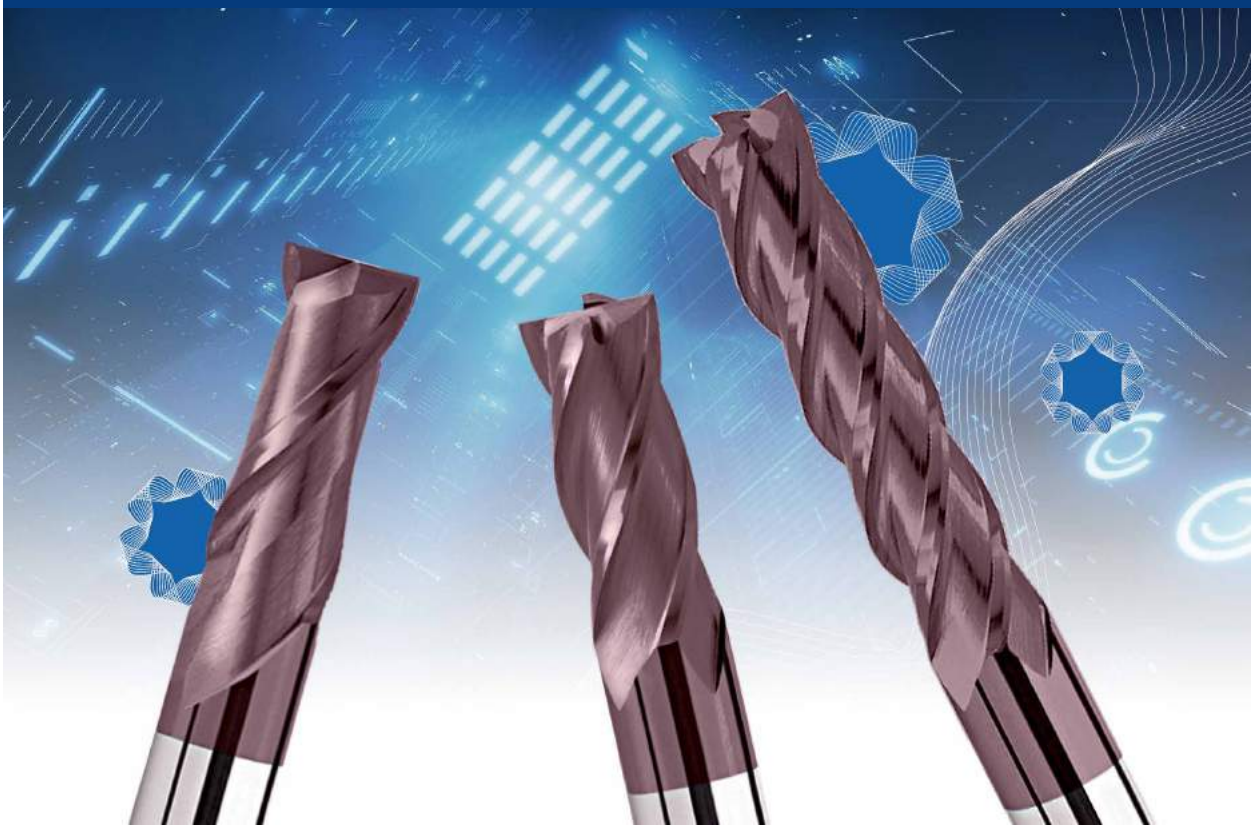
Endmills · Inserts · Drills





Winstar
Cutting Technologies

G450 Series for Alloy Steel, up to HRC 48



- Micro grain carbide rod is suitable for general machining.
- UNICO coating provides superior wear resistance and reduces the coefficient of friction.
- Positive geometry is suitable for better shearing.
- Excellent cutting ability of cutting edges.

G450 - Square Type - 2F

鎢鋼平銑刀 - 標準型 - 2 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 20 to HRC 45 Steel, Alloy Steel, Cast Iron, Aluminum Alloy (Si >15%).
- Excellent cutting ability of cutting edges.
- High precision cutting.
- Positive Geometry design is suitable for better shearing.

EPSFA2
EPSSA2

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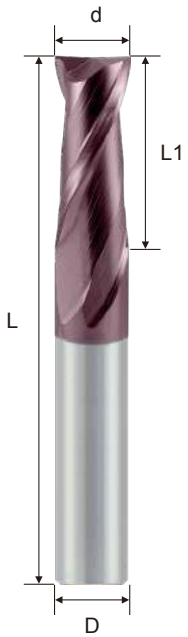
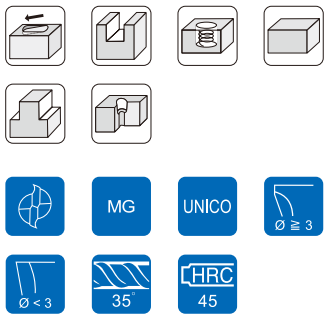


Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSFA201000U	1.0	3	50	4	2
EPSFA201500U	1.5	4	50	4	2
EPSFA202000U	2.0	5	50	4	2
EPSFA202500U	2.5	6	50	4	2
EPSFA203000U	3.0	8	50	4	2
EPSSA203000U	3.0	8	50	6	2
EPSSA203500U	3.5	9	50	6	2
EPSFA204000U	4.0	10	50	4	2
EPSSA204000U	4.0	10	50	6	2
EPSSA204500U	4.5	11	50	6	2
EPSSA205000U	5.0	13	50	6	2
EPSSA205500U	5.5	14	50	6	2
EPSSA206000U	6.0	15	50	6	2
EPSSA206500U	6.5	16	60	8	2
EPSSA207000U	7.0	18	60	8	2
EPSSA208000U	8.0	20	60	8	2
EPSSA209000U	9.0	22	75	10	2
EPSSA210000U	10.0	25	75	10	2
EPSSA212000U	12.0	30	75	12	2
EPSSA214000U	14.0	30	75	14	2
EPSSA216000U	16.0	35	100	16	2
EPSSA218000U	18.0	40	100	20	2
EPSSA220000U	20.0	45	100	20	2
EPSSA225000U	25.0	45	100	25	2



d	Tolerance
Ø < 3	0 ~ -0.02
3 ≦ Ø ≦ 10	0 ~ -0.03
Ø > 10	0 ~ -0.04

Cutting conditions（建議切削參數表）: Table 026

G450 - Square Type - 4F

鎢鋼平銑刀 - 標準型 - 4 刃

- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 20 to HRC 45 Steel, Alloy Steel, Cast Iron, Aluminum Alloy (Si >15%).
- Excellent cutting ability of cutting edges.
- High precision cutting.
- Positive Geometry design is suitable for better shearing.

EPSFA4
EPSSA4

P	M	K	N	S	H
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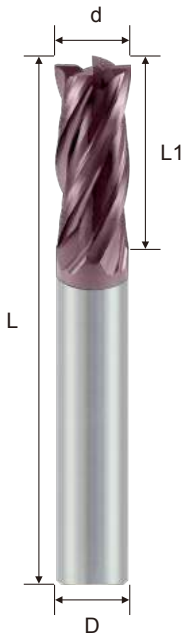
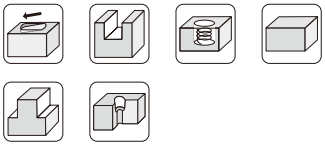
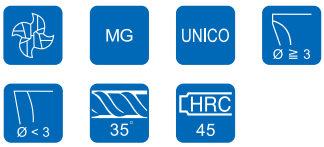


Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSFA401000U	1.0	3	50	4	4
EPSFA401500U	1.5	4	50	4	4
EPSFA402000U	2.0	5	50	4	4
EPSFA402500U	2.5	6	50	4	4
EPSFA403000U	3.0	8	50	4	4
EPSSA403000U	3.0	8	50	6	4
EPSFA404000U	4.0	10	50	4	4
EPSSA404000U	4.0	10	50	6	4
EPSSA405000U	5.0	13	50	6	4
EPSSA406000U	6.0	15	50	6	4
EPSSA408000U	8.0	20	60	8	4
EPSSA410000U	10.0	25	75	10	4
EPSSA412000U	12.0	30	75	12	4
EPSSA414000U	14.0	30	75	14	4
EPSSA416000U	16.0	35	100	16	4
EPSSA420000U	20.0	45	100	20	4
EPSSA425000U	25.0	45	100	25	4





d	Tolerance
Ø < 3	0 ~ -0.02
3 ≦ Ø ≦ 10	0 ~ -0.03
Ø > 10	0 ~ -0.04

Cutting conditions（建議切削參數表）: Table 027

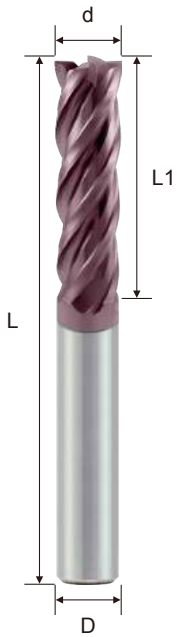
G450 - Long Flute Square Type - 4F

鎢鋼平銑刀 - 長刃型 - 4 刃

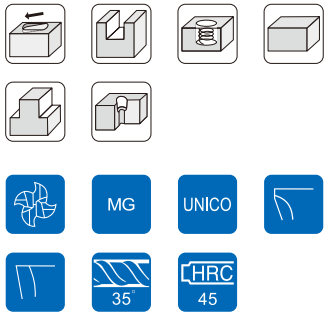
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 20 to HRC 45 Steel, Alloy Steel, Cast Iron, Aluminum Alloy (Si >15%).
- Excellent cutting ability of cutting edges.
- Long flutes is available in various length of cut and overall length end mills.

EPSCA4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☐



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSCA403000U	3.0	15	60	6	4
EPSCA404000U	4.0	20	60	6	4
EPSCA405000U	5.0	25	75	6	4
EPSCA406000U	6.0	30	75	6	4
EPSCA408000U	8.0	35	100	8	4
EPSCA410000U	10.0	45	100	10	4
EPSCA412000U	12.0	45	100	12	4
EPSCA414000U	14.0	70	150	14	4
EPSCA416000U	16.0	70	150	16	4
EPSCA420000U	20.0	75	150	20	4
EPSCA425000U	25.0	75	150	25	4



d	Tolerance
Ø < 3	0 ~ -0.03
3 ≦ Ø ≦ 10	0 ~ -0.04
Ø > 10	0 ~ -0.05

Cutting conditions（建議切削參數表）: Table 030

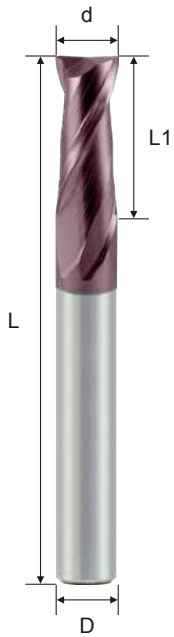
G450 - Long Shank Square Type - 2F

鎢鋼平銑刀 - 長柄型 - 2 刃

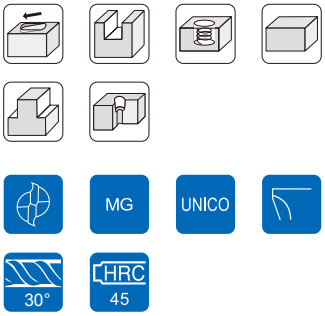
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 20 to HRC 45 Steel, Alloy Steel, Cast Iron, Aluminum Alloy (Si >15%).
- Excellent cutting ability of cutting edges.
- Long Shank is available in various length of cut and overall length end mills.

EPSEA2
EPSKA2
EPSLA2
EPSNA2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☐



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSEA204000U	4.0	10	75	4	2
EPSKA204000U	4.0	10	100	4	2
EPSLA204000U	4.0	10	75	6	2
EPSNA204000U	4.0	10	100	6	2
EPSLA205000U	5.0	13	75	6	2
EPSNA205000U	5.0	13	100	6	2
EPSLA206000U	6.0	15	75	6	2
EPSNA206000U	6.0	15	100	6	2
EPSMA208000U	8.0	20	75	8	2
EPSLA208000U	8.0	20	100	8	2
EPSNA208000U	8.0	20	150	8	2
EPSLA210000U	10.0	25	100	10	2
EPSNA210000U	10.0	25	150	10	2
EPSLA212000U	12.0	30	100	12	2
EPSNA212000U	12.0	30	150	12	2
EPSLA216000U	16.0	40	150	16	2



d	Tolerance
Ø < 3	0 ~ -0.03
3 ≦ Ø ≦ 10	0 ~ -0.04
Ø > 10	0 ~ -0.05

Cutting conditions（建議切削參數表）: Table 031

G450 - Long Shank Square Type - 4F

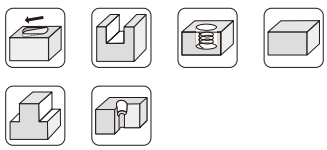
鎢鋼平銑刀 - 長柄型 - 4 刃

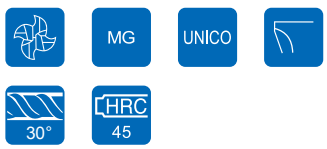
- UNICO Coating provides superior wear resistance and reduces the coefficient of friction.
- Suitable for HRC 20 to HRC 45 Steel, Alloy Steel, Cast Iron, Aluminum Alloy (Si >15%).
- Excellent cutting ability of cutting edges.
- Long Shank is available in various length of cut and overall length end mills.

EPSEA4
EPSKA4
EPSLA4
EPSNA4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☐







d	Tolerance
Ø < 3	0 ~ -0.03
3 ≦ Ø ≦ 10	0 ~ -0.04
Ø > 10	0 ~ -0.05

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EPSEA404000U	4.0	10	75	4	4
EPSKA404000U	4.0	10	100	4	4
EPSLA404000U	4.0	10	75	6	4
EPSNA404000U	4.0	10	100	6	4
EPSLA405000U	5.0	13	75	6	4
EPSNA405000U	5.0	13	100	6	4
EPSLA406000U	6.0	15	75	6	4
EPSNA406000U	6.0	15	100	6	4
EPSMA408000U	8.0	20	75	8	4
EPSLA408000U	8.0	20	100	8	4
EPSNA408000U	8.0	20	150	8	4
EPSLA410000U	10.0	25	100	10	4
EPSNA410000U	10.0	25	150	10	4
EPSLA412000U	12.0	30	100	12	4
EPSNA412000U	12.0	30	150	12	4
EPSLA416000U	16.0	40	150	16	4
EPSLA420000U	20.0	45	150	20	4

Cutting conditions（建議切削參數表）: Table 032

M500 Series for Stainless, Titanium, Inconel & Mold Steel



- Ultra grain carbide rods with better abrasion resistance.
- ARCO coating shows good performance in coolant machining.
- Anti-vibrations capabilities at high speeds and high remove rate.
- Varix Technology with different helix angles(35°and 38°) improves cutting performance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.

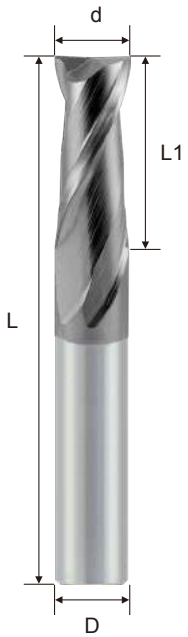
M500 - Square Type - 2F

鎢鋼平銑刀 - 標準型 - 2 刃

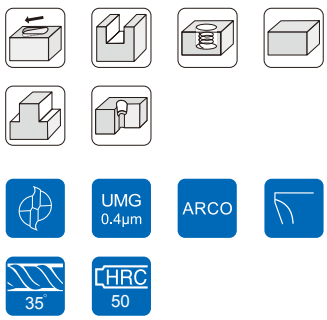
- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at high speeds.
- UMG carbide grade is suitable for cutting difficult materials.

ESSFA2
ESSSA2

P	M	K	N	S	H
☑	☑	☐	☐	☑	☑



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESSFA203000A	3	8	50	4	2
ESSFA204000A	4	10	50	4	2
ESSSA204000A	4	10	50	6	2
ESSSA205000A	5	13	50	6	2
ESSSA206000A	6	15	50	6	2
ESSSA208000A	8	20	60	8	2
ESSSA210000A	10	25	75	10	2
ESSSA212000A	12	30	75	12	2
ESSSA214000A	14	30	75	14	2
ESSSA216000A	16	35	100	16	2



d	Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03

Cutting conditions（建議切削參數表）: Table 055

M500 - Square Type - 4F

鎢鋼平銑刀 - 標準型 - 4 刃

- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at high speeds.
- High precise tolerance EndMills.
- UMG carbide grade is suitable for cutting difficult materials.

ESSFA4
ESSSA4

P	M	K	N	S	H
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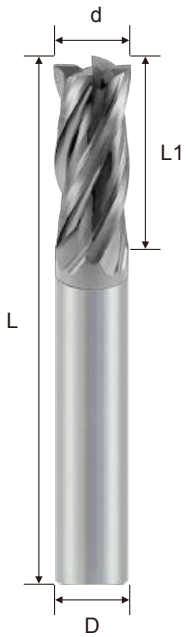
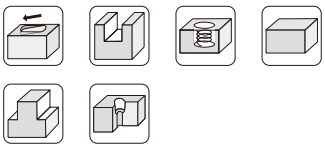
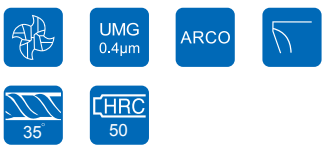


Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESSFA403000A	3	8	50	4	4
ESSFA404000A	4	10	50	4	4
ESSSA404000A	4	10	50	6	4
ESSSA405000A	5	13	50	6	4
ESSSA406000A	6	15	50	6	4
ESSSA408000A	8	20	60	8	4
ESSSA410000A	10	25	75	10	4
ESSSA412000A	12	30	75	12	4
ESSSA414000A	14	30	75	14	4
ESSSA416000A	16	35	100	16	4





d	Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03

Cutting conditions（建議切削參數表）: Table 056

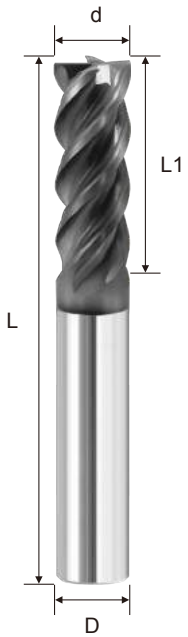
M500 - High Helix Square U Type - 4F

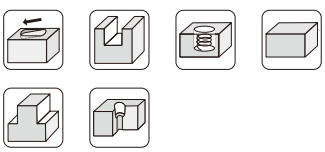
鎢鋼平銑刀 - 高導高效能 U 型 - 4 刃

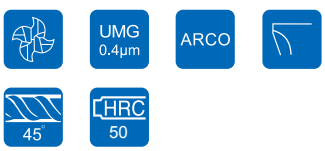
- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- U-flute design with high chips volume space and easy to remove chips.
- UMG carbide grade is suitable for cutting difficult materials.

ESSFB4
ESSSB4

P	M	K	N	S	H
☑	☑	☐	☐	☑	☑







d	Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03

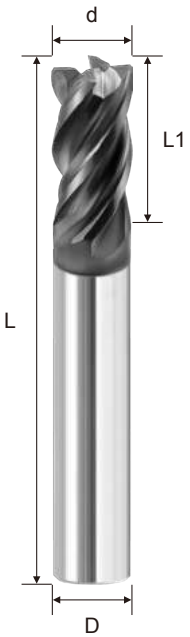
Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESSFB404000A	4	10	50	4	4
ESSSB404000A	4	10	50	6	4
ESSSB405000A	5	13	50	6	4
ESSSB406000A	6	15	50	6	4
ESSSB408000A	8	20	60	8	4
ESSSB410000A	10	25	75	10	4
ESSSB412000A	12	30	75	12	4
ESSSB414000A	14	30	75	14	4
ESSSB416000A	16	35	100	16	4

M500 - Varix & Anti-Vibration Square U Type - 4F 鎢鋼平銑刀 - 抗震變導高效能 U 型 - 4 刃

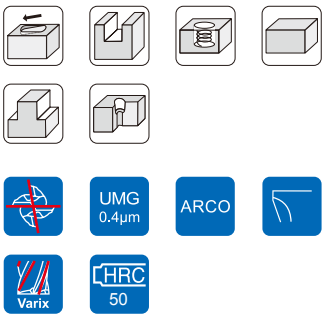
- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Unequal axis and sophisticated geometry design provides outstanding Anti-vibrations capabilities at high speeds.
- Varix Technology with different helix angles (35 ° and 38 °) improves cutting performance. Provides the highest cutting action for aerospace applications.

ESSFU4
ESSSU4

P	M	K	N	S	H
☑	☑	☐	☐	☑	☑



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESSFU404000A	4	10	50	4	4
ESSSU404000A	4	10	50	6	4
ESSSU405000A	5	13	50	6	4
ESSSU406000A	6	15	50	6	4
ESSSU408000A	8	20	60	8	4
ESSSU410000A	10	25	75	10	4
ESSSU412000A	12	30	75	12	4
ESSSU414000A	14	30	75	14	4
ESSSU416000A	16	35	100	16	4



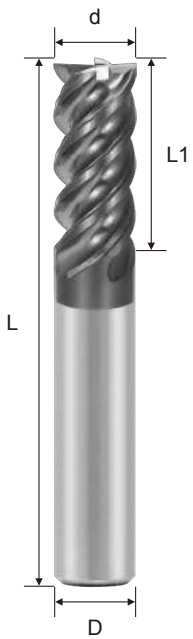
d	Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03

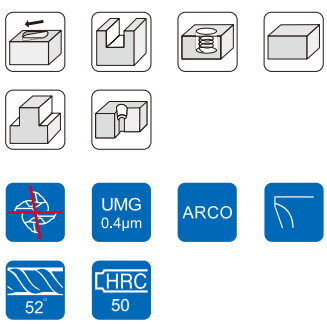
M500 - High Helix Anti-Vibration Square U Type - 4F 鎢鋼平銑刀 - 高導抗震高效能 U 型 - 4 刃

- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- U-flute design with high chips volume space and easy to remove chips.
- UMG carbide grade is suitable for cutting difficult materials.

ESSSM4

P	M	K	N	S	H
☑	☑	☐	☐	☑	☑





d	Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESSSM408000A	8	20	60	8	4
ESSSM410000A	10	30	75	10	4
ESSSM412000A	12	30	75	12	4
ESSSM416000A	16	32	100	16	4

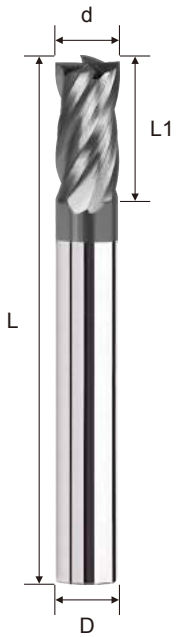
M500 - Anti-Vibration Square Type - 4F

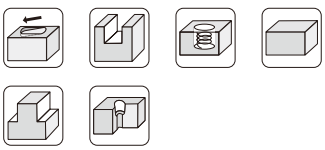
鎢鋼平銑刀 - 抗震不等 SD 型 - 4 刃

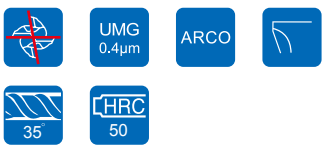
- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Unequal axis and sophisticated geometry design provides outstanding Anti-vibrations capabilities at high speeds.
- UMG carbide grade is suitable for cutting difficult materials.

ESSSD4

P	M	K	N	S	H
☑	☑	☐	☐	☑	☑







d	Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESSSD405000A	5	13	50	6	4
ESSSD406000A	6	13	50	6	4
ESSSD408000A	8	16	60	8	4
ESSSD410000A	10	20	75	10	4
ESSSD412000A	12	24	75	12	4
ESSSD416000A	16	30	100	16	4

Cutting conditions（建議切削參數表）: Table 057

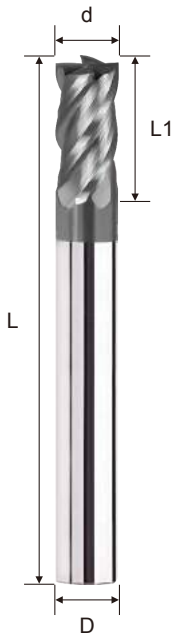
M500 - Varix & Anti-Vibration Square Type - 4F

鎢鋼平銑刀 - 抗震變導 SV 型 - 4 刃

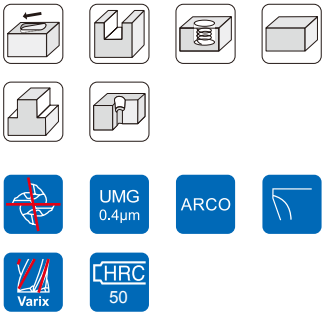
- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Unequal axis and sophisticated geometry design provides outstanding Anti-vibrations capabilities at high speeds.
- Varix Technology with different helix angles (35 ° and 38 °) improves cutting performance.
- Provides the highest cutting action for aerospace applications.

ESSSV4

P	M	K	N	S	H
☑	☑	☐	☐	☑	☑



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESSSV404000A	4	10	50	6	4
ESSSV405000A	5	13	50	6	4
ESSSV406000A	6	13	50	6	4
ESSSV408000A	8	16	60	8	4
ESSSV410000A	10	20	75	10	4
ESSSV412000A	12	24	75	12	4
ESSSV416000A	16	32	100	16	4



d	Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03

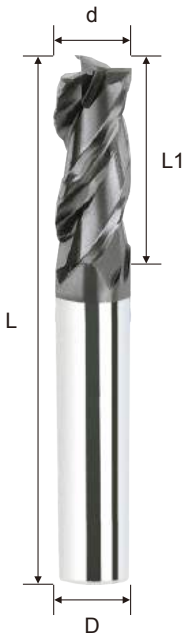
M500 - Wave Edge Square Type - 3F

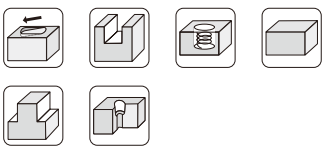
鎢鋼平銑刀 - 波浪型 - 3 刃

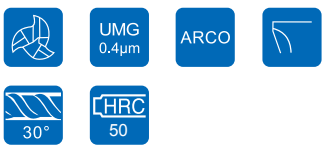
- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at high speeds.
- UMG carbide grade is suitable for cutting difficult materials.
- Wave type increases the performance.

ESSSW3

P ☑ M ☑ K ☐ N ☐ S ☑ H ☑







d	Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESSSW306000A	6	15	50	6	3
ESSSW308000A	8	20	60	8	3
ESSSW310000A	10	25	75	10	3
ESSSW312000A	12	30	75	12	3
ESSSW316000A	16	40	100	16	3
ESSSW320000A	20	45	100	20	3



Cutting conditions（建議切削參數表）: Table 058

M500 - Wave Edge Square Type - 4F

鎢鋼平銑刀 - 波浪型 - 4 刃

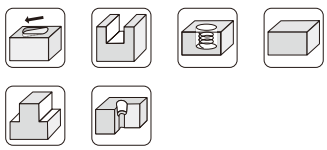
- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at high speeds.
- UMG carbide grade is suitable for cutting difficult materials.
- Wave type increases the performance.

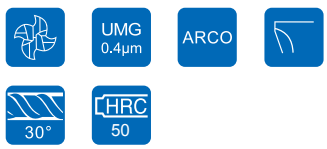
ESSSW4

P	M	K	N	S	H
☑	☑	☐	☐	☑	☑



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESSSW406000A	6	15	50	6	4
ESSSW408000A	8	20	60	8	4
ESSSW410000A	10	25	75	10	4
ESSSW412000A	12	30	75	12	4
ESSSW416000A	16	40	100	16	4
ESSSW420000A	20	45	100	20	4







d	Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03

Cutting conditions（建議切削參數表）: Table 058

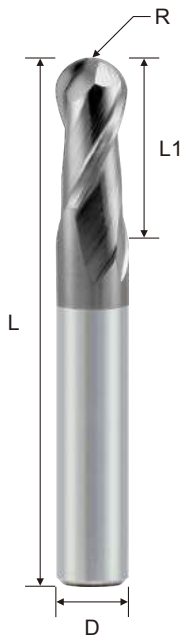
M500 - Ball Nose Type - 2F

鎢鋼球型銑刀 - 標準型 - 2 刃

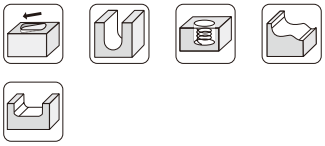
- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at hi speeds, suitable for high performance profile milling.
- New tool geometry increases wear resistance and cutting force is decreased
- UMG carbide grade is suitable for cutting difficult materials.

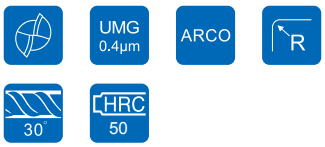
ESBFA2
ESBSA2

P	M	K	N	S	H
☑	☑	☐	☐	☑	☑



Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESBFA202000A	1.0R	2	4	50	4	2
ESBFA203000A	1.5R	3	6	50	4	2
ESBFA204000A	2.0R	4	8	50	4	2
ESBSA204000A	2.0R	4	8	50	6	2
ESBSA205000A	2.5R	5	10	50	6	2
ESBSA206000A	3.0R	6	12	50	6	2
ESBSA208000A	4.0R	8	16	60	8	2
ESBSA210000A	5.0R	10	20	75	10	2
ESBSA212000A	6.0R	12	24	75	12	2
ESBSA214000A	7.0R	14	28	75	14	2
ESBSA216000A	8.0R	16	32	100	16	2





d	R Tolerance
Ø ≦ 12	± 0.01
Ø > 12	± 0.015

Cutting conditions（建議切削參數表）: Table 059

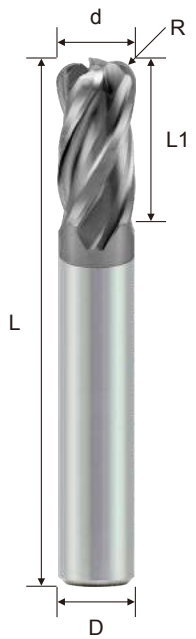
M500 - Corner Radius Type - 4F

鎢鋼圓鼻銑刀 - 標準型 - 4 刃

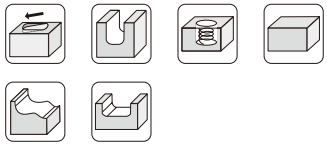
- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at high speeds.
- Corner geometry and stronger design makes it suitable for cutting difficult material.

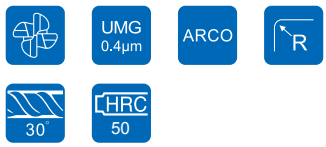
ESCSA4

P	M	K	N	S	H
☑	☑	☐	☐	☑	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESCSA403003A	3	0.3R	6	50	6	4
ESCSA403005A	3	0.5R	6	50	6	4
ESCSA403010A	3	1.0R	6	50	6	4
ESCSA404003A	4	0.3R	8	50	6	4
ESCSA404005A	4	0.5R	8	50	6	4
ESCSA404010A	4	1.0R	8	50	6	4
ESCSA405003A	5	0.3R	10	50	6	4
ESCSA405005A	5	0.5R	10	50	6	4
ESCSA406003A	6	0.3R	12	50	6	4
ESCSA406005A	6	0.5R	12	50	6	4
ESCSA406010A	6	1.0R	12	50	6	4
ESCSA408005A	8	0.5R	16	60	8	4
ESCSA408010A	8	1.0R	16	60	8	4
ESCSA408015A	8	1.5R	16	60	8	4
ESCSA410005A	10	0.5R	20	75	10	4
ESCSA410010A	10	1.0R	20	75	10	4
ESCSA410015A	10	1.5R	20	75	10	4
ESCSA410020A	10	2.0R	20	75	10	4
ESCSA412005A	12	0.5R	24	75	12	4
ESCSA412010A	12	1.0R	24	75	12	4
ESCSA412015A	12	1.5R	24	75	12	4
ESCSA412020A	12	2.0R	24	75	12	4
ESCSA412030A	12	3.0R	24	75	12	4





d	Tolerance
Ø < 3	0 ~ -0.03
3 ≦ Ø ≦ 10	0 ~ -0.04
Ø > 10	0 ~ -0.05
R	± 0.015

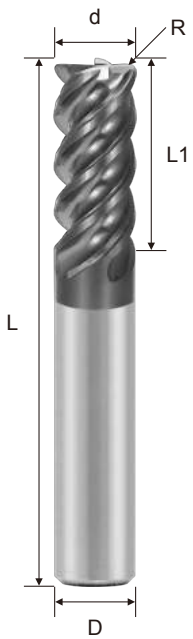
Cutting conditions（建議切削參數表）: Table 060

M500 - High Helix Anti-Vibration Corner Radius U Type - 4F 鎢鋼圓鼻銑刀 - 高導抗震高效能 U 型 - 4 刃

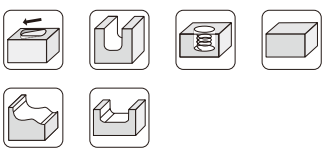
- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Incredible toughness and vibration reduction at high speeds.
- Corner geometry and stronger design makes it suitable for cutting difficult material.
- U-flute design with high chips volume space and easy to remove chips.

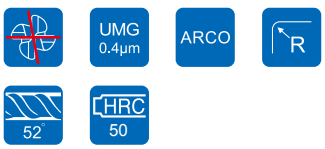
ESCSM4

P	M	K	N	S	H
☑	☑	☐	☐	☑	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESCSM408005A	8	0.5R	16	60	8	4
ESCSM410010A	10	1.0R	20	75	10	4
ESCSM412010A	12	1.0R	24	75	12	4
ESCSM416015A	16	1.5R	32	100	16	4





d	Tolerance
Ø < 3	0 ~ -0.03
3 ≦ Ø ≦ 10	0 ~ -0.04
Ø > 10	0 ~ -0.05
R	± 0.015

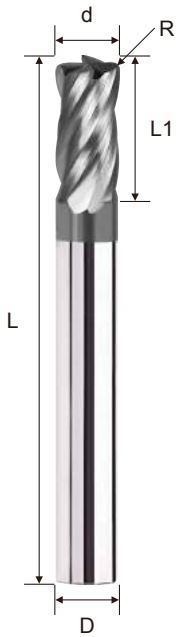
M500 - Varix & Anti-Vibration Corner Radius Type - 4F

鎢鋼圓鼻銑刀 - 抗震變導 SV 型 - 4 刃

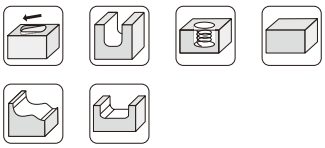
- ARCO coating provides a superior wear resistance.
- For difficult to cut materials like Stainless Steel, Titanium, Inconel, Alloy Steel & Mold Steel... etc.
- Unequal axis and sophisticated geometry design provides outstanding Anti-vibrations capabilities at high speeds.
- Varix Technology to improve cutting performance.

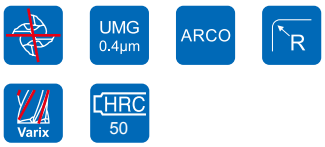
ESCSV4

P	M	K	N	S	H
☑	☑	☐	☐	☑	☑



Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ESCSV404003A	4	0.3R	8	50	4	4
ESCSV405003A	5	0.3R	10	50	6	4
ESCSV406005A	6	0.5R	12	50	6	4
ESCSV408005A	8	0.5R	16	60	8	4
ESCSV410005A	10	0.5R	20	75	10	4
ESCSV412005A	12	0.5R	24	75	12	4
ESCSV412010A	12	1.0R	24	75	12	4
ESCSV416010A	16	1.0R	32	100	16	4



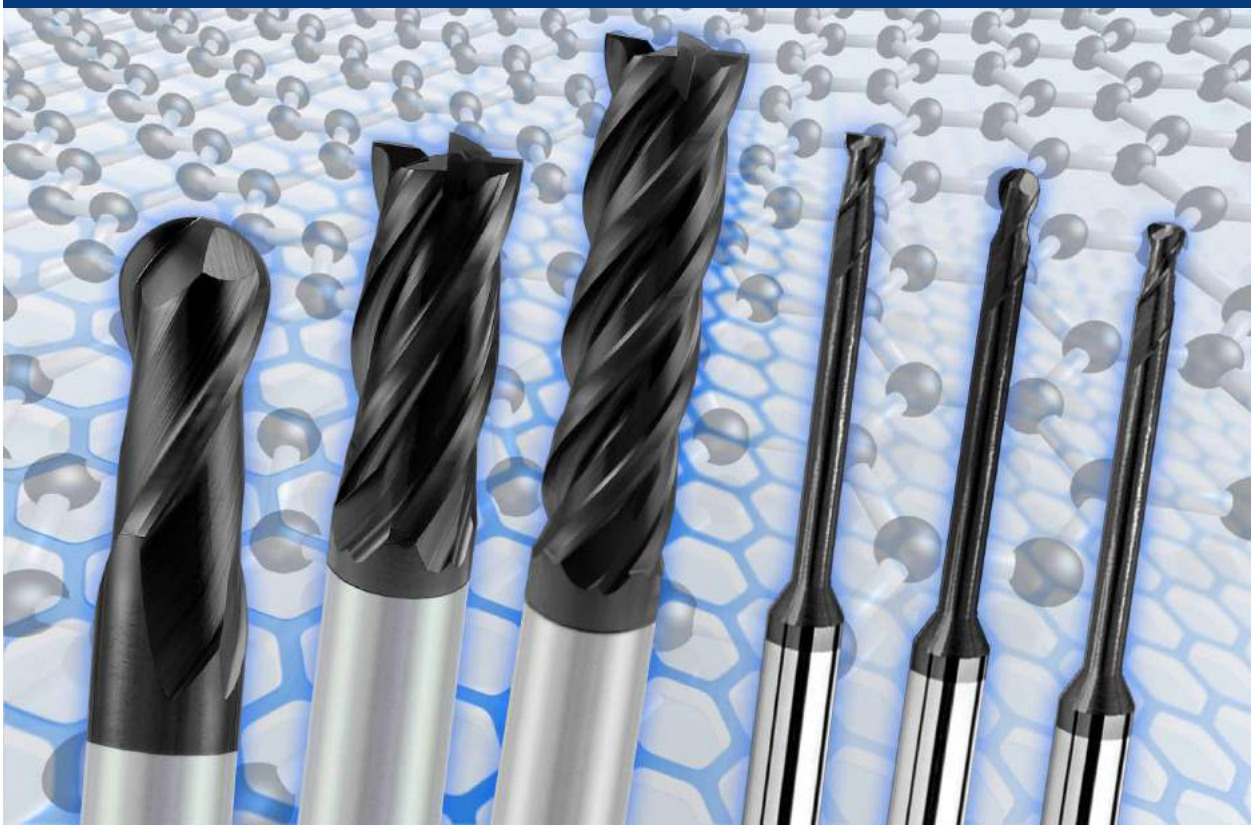


d	Tolerance
Ø < 3	0 ~ -0.03
3 ≦ Ø ≦ 10	0 ~ -0.04
Ø > 10	0 ~ -0.05
R	± 0.015

Cutting conditions（建議切削參數表）: Table 061

Winstar Cutting Technologies

A200 Series for Graphite



- Suitable carbide rod for Diamond coating which brings good tightness of Diamond coating.
- The DIAMOND coating protects the cutting edge of the end mill which better than conventional coating.
- Suitable for Graphite.
- Available in various effective length.
- Suitable carbide rod brings good tightness of Diamond coating.

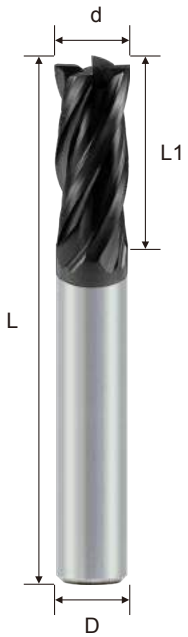
A200 - Square Type - 4F

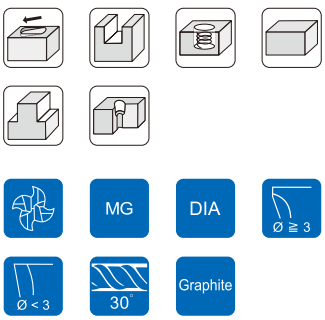
鎢鋼平銑刀 - 標準型 - 4 刃

- The DIAMOND coating protects the cutting edge of the end mill which better than conventional coating.
- Suitable for Graphite.
- Strong geometry design has excellent cutting ability of cutting edges.
- High precision cutting for side milling.

EGSFC4

P ☐ M ☐ K ☐ N ☑ S ☐ H ☐





Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EGSFC403000D	3.0	8	50	4	4
EGSFC404000D	4.0	10	50	4	4
EGSSC404000D	4.0	10	50	6	4
EGSSC405000D	5.0	13	50	6	4
EGSSC406000D	6.0	15	50	6	4
EGSSC408000D	8.0	20	60	8	4
EGSSC410000D	10.0	25	75	10	4
EGSSC412000D	12.0	30	75	12	4

d	Tolerance
Ø < 3	0 ~ -0.02
3 ≦ Ø ≦ 10	0 ~ -0.03
Ø > 10	0 ~ -0.04

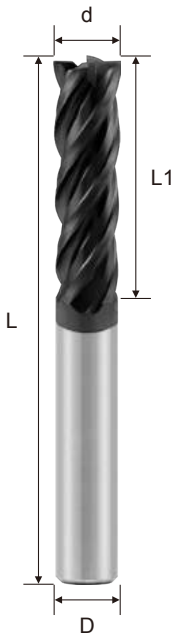
A200 - Long Flute Square Type - 4F

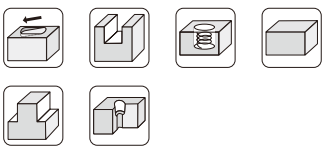
鎢鋼平銑刀 - 長刃型 - 4 刃

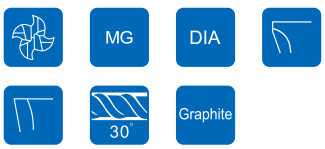
- The DIAMOND coating protects the cutting edge of the end mill which better than conventional coating.
- Suitable for Graphite.
- Available in various effective length.
- Long cutting length is suitable for deep side milling.

EGSCC4

P ☐ M ☐ K ☐ N ☑ S ☐ H ☐







Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EGSCC403000D	3	15	60	6	4
EGSCC404000D	4	20	60	6	4
EGSCC405000D	5	25	75	6	4
EGSCC406000D	6	30	75	6	4
EGSCC408000D	8	35	100	8	4
EGSCC410000D	10	45	100	10	4
EGSCC412000D	12	45	100	12	4

d	Tolerance
Ø < 3	0 ~ -0.03
3 ≦ Ø ≦ 10	0 ~ -0.04
Ø > 10	0 ~ -0.05

A200 - Long Shank Square Type - 4F

鎢鋼平銑刀 - 長柄型 - 4 刃

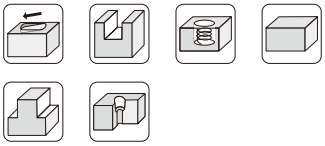
- The DIAMOND coating protects the cutting edge of the end mill which better than conventional coating.
- Suitable for Graphite.
- Available in various length of cut and overall length end mills.
- Flat design to avoid chipping of the cutting tip.

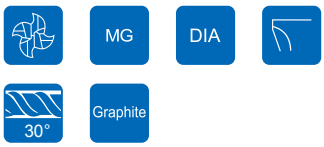
EGSEC4
EGSLC4

P ☐ M ☐ K ☐ N ☑ S ☐ H ☐



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EGSEC404000D	4.0	10	75	4	4
EGSKC404000D	4.0	10	100	4	4
EGSLC404000D	4.0	10	75	6	4
EGSNC404000D	4.0	10	100	6	4
EGSLC406000D	6.0	15	75	6	4
EGSNC406000D	6.0	15	100	6	4
EGSMC408000D	8.0	20	75	8	4
EGSLC408000D	8.0	20	100	8	4
EGSNC408000D	8.0	20	150	8	4
EGSLC410000D	10.0	25	100	10	4
EGSNC410000D	10.0	25	150	10	4
EGSLC412000D	12.0	30	100	12	4
EGSNC412000D	12.0	30	150	12	4





d	Tolerance
Ø < 3	0 ~ -0.03
3 ≦ Ø ≦ 10	0 ~ -0.04
Ø > 10	0 ~ -0.05

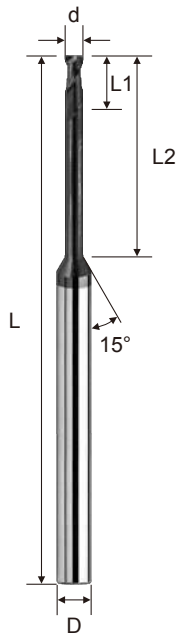
A200 - Long Neck Square Type - 2F

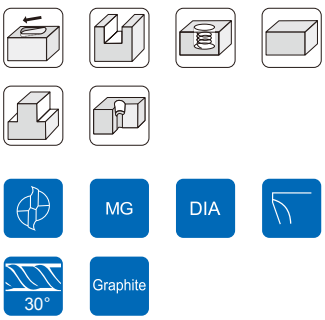
鎢鋼平銑刀 - 長頸型 - 2 刃

- The DIAMOND coating protects the cutting edge of the end mill which better than conventional coating.
- Suitable for Graphite.
- Available in various effective length.
- Suitable for deep cutting application.

EGSBC2
EGSRC2

P ☐ M ☐ K ☐ N ☑ S ☐ H ☐





d	Tolerance
Ø	0 ~ -0.02

Order No.	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EGSBC200504D	0.5	0.6	4	50	4	2
EGSBC200506D	0.5	0.6	6	50	4	2
EGSBC200508D	0.5	0.6	8	50	4	2
EGSBC201006D	1	1.2	6	50	4	2
EGSBC201008D	1	1.2	8	50	4	2
EGSBC201012D	1	1.2	12	50	4	2
EGSBC201016D	1	1.2	16	50	4	2
EGSBC201020D	1	1.2	20	50	4	2
EGSBC201508D	1.5	1.8	8	50	4	2
EGSBC201512D	1.5	1.8	12	50	4	2
EGSBC201516D	1.5	1.8	16	50	4	2
EGSBC201520D	1.5	1.8	20	50	4	2
EGSBC202010D	2	2.5	10	50	4	2
EGSBC202016D	2	2.5	16	50	4	2
EGSBC202020D	2	2.5	20	50	4	2
EGSBC202025D	2	2.5	25	60	4	2
EGSRC203012D	3	3.5	12	50	6	2
EGSRC203020D	3	3.5	20	60	6	2
EGSRC203025D	3	3.5	25	60	6	2
EGSRC203030D	3	3.5	30	75	6	2
EGSRC204016D	4	4.5	16	50	6	2
EGSRC204020D	4	4.5	20	60	6	2
EGSRC204025D	4	4.5	25	60	6	2
EGSRC204030D	4	4.5	30	75	6	2
EGSRC204035D	4	4.5	35	75	6	2
EGSRC205020D	5	7	20	60	6	2
EGSRC205025D	5	7	25	60	6	2
EGSRC205030D	5	7	30	75	6	2
EGSRC205035D	5	7	35	75	6	2
EGSRC206020D	6	10	20	60	6	2
EGSRC206030D	6	10	30	75	6	2

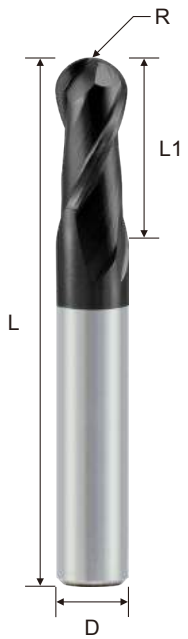
A200 - Ball Nose Type - 2F

鎢鋼球型銑刀 - 標準型 - 2 刃

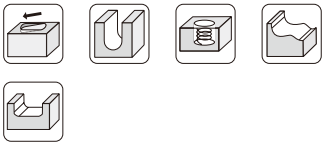
- The DIAMOND coating protects the cutting edge of the end mill which better than conventional coating.
- Suitable for Graphite.
- It provides an excellent surface due to better surface grindings.
- New tool geometry increases wear resistance and cutting force is decreased.
- Suitable for high speed profile surface milling.

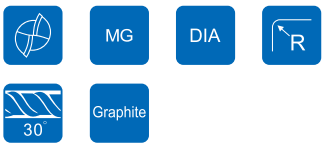
EGBFC2
EGBSC2

P ☐ M ☐ K ☐ N ☑ S ☐ H ☐



Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EGBFC200200D	0.1R	0.2	0.4	50	4	2
EGBFC200300D	0.15R	0.3	0.6	50	4	2
EGBFC200400D	0.2R	0.4	0.8	50	4	2
EGBFC200500D	0.25R	0.5	1.0	50	4	2
EGBFC200600D	0.3R	0.6	1.2	50	4	2
EGBFC200700D	0.35R	0.7	1.4	50	4	2
EGBFC200800D	0.4R	0.8	1.6	50	4	2
EGBFC200900D	0.45R	0.9	1.8	50	4	2
EGBFC201000D	0.5R	1.0	2	50	4	2
EGBFC201500D	0.75R	1.5	3	50	4	2
EGBFC202000D	1R	2.0	4	50	4	2
EGBFC203000D	1.5R	3.0	6	50	4	2
EGBFC204000D	2R	4.0	8	50	4	2
EGBSC204000D	2R	4.0	8	50	6	2
EGBSC205000D	2.5R	5.0	10	50	6	2
EGBSC206000D	3R	6.0	12	60	6	2
EGBSC208000D	4R	8.0	16	60	8	2
EGBSC210000D	5R	10.0	20	75	10	2
EGBSC212000D	6R	12.0	24	75	12	2





d	R Tolerance
Ø	± 0.02

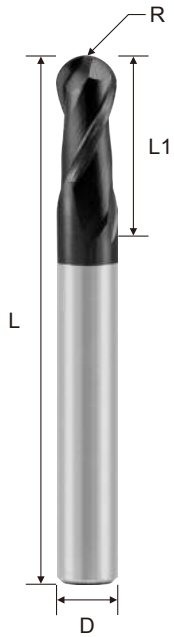
A200 - Long Shank Ball Nose Type - 2F

鎢鋼球型銑刀 - 長柄型 - 2 刃

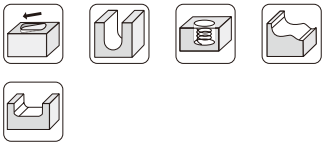
- The DIAMOND coating protects the cutting edge of the end mill which better than conventional coating.
- Suitable for Graphite.
- It provides an excellent surface due to better surface grindings.
- New tool geometry increases wear resistance and cutting force is decreased.
- Suitable for high speed profile surface milling.

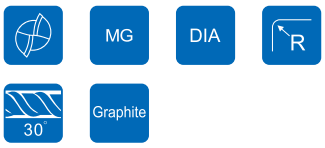
EGBEC2
EGBLC2

P ☐ M ☐ K ☐ N ☑ S ☐ H ☐



Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EGBEC204000D	2R	4.0	8	75	4	2
EGBKC204000D	2R	4.0	8	100	4	2
EGBLC204000D	2R	4.0	8	75	6	2
EGBNC204000D	2R	4.0	8	100	6	2
EGBLC206000D	3R	6.0	12	75	6	2
EGBNC206000D	3R	6.0	12	100	6	2
EGBMC208000D	4R	8.0	16	75	8	2
EGBLC208000D	4R	8.0	16	100	8	2
EGBNC208000D	4R	8.0	16	150	8	2
EGBLC210000D	5R	10.0	20	100	10	2
EGBNC210000D	5R	10.0	20	150	10	2
EGBLC212000D	6R	12.0	24	100	12	2
EGBNC212000D	6R	12.0	24	150	12	2





d	R Tolerance
Ø	± 0.02

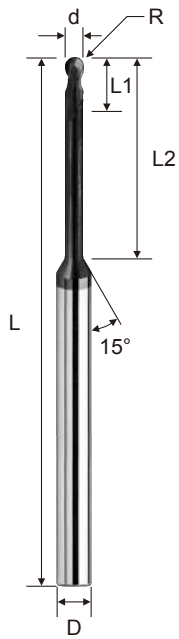
A200 - Long Neck Ball Nose Type - 2F

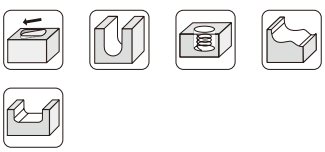
鎢鋼圓鼻銑刀 - 長頸型 - 2 刃

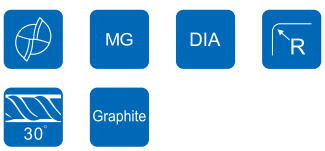
- The DIAMOND coating protects the cutting edge of the end mill which better than conventional coating.
- Suitable for Graphite.
- Reduce vibration and more toughness.
- It provides an excellent surface due to better surface grindings.
- Long neck design is suitable for rid cutting.

EGBBC2
EGBRC2

P ☐ M ☐ K ☐ N ☑ S ☐ H ☐







d	R Tolerance
Ø	± 0.02

Order No.	Radius (R)	Dia. (d)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EGBBC200504D	0.25R	0.5	0.5	4	50	4	2
EGBBC200506D	0.25R	0.5	0.5	6	50	4	2
EGBBC200508D	0.25R	0.5	0.5	8	50	4	2
EGBBC201006D	0.5R	1	1	6	50	4	2
EGBBC201008D	0.5R	1	1	8	50	4	2
EGBBC201012D	0.5R	1	1	12	50	4	2
EGBBC201016D	0.5R	1	1	16	50	4	2
EGBBC201020D	0.5R	1	1	20	50	4	2
EGBBC201508D	0.75R	1.5	1.5	8	50	4	2
EGBBC201512D	0.75R	1.5	1.5	12	50	4	2
EGBBC201516D	0.75R	1.5	1.5	16	50	4	2
EGBBC201520D	0.75R	1.5	1.5	20	50	4	2
EGBBC202010D	1R	2	2	10	50	4	2
EGBBC202016D	1R	2	2	16	50	4	2
EGBBC202020D	1R	2	2	20	50	4	2
EGBBC202025D	1R	2	2	25	60	4	2
EGBRC203012D	1.5R	3	3	12	50	6	2
EGBRC203016D	1.5R	3	3	16	60	6	2
EGBRC203020D	1.5R	3	3	20	60	6	2
EGBRC203025D	1.5R	3	3	25	60	6	2
EGBRC203030D	1.5R	3	3	30	75	6	2
EGBRC204016D	2R	4	4	16	60	6	2
EGBRC204020D	2R	4	4	20	60	6	2
EGBRC204025D	2R	4	4	25	60	6	2
EGBRC204030D	2R	4	4	30	75	6	2
EGBRC205020D	2.5R	5	5	20	60	6	2
EGBRC205025D	2.5R	5	5	25	60	6	2
EGBRC205030D	2.5R	5	5	30	75	6	2
EGBRC206020D	3R	6	10	20	60	6	2
EGBRC206030D	3R	6	10	30	75	6	2

A200 - Corner Radius Type - 4F

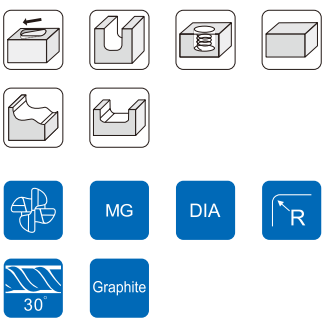
鎢鋼圓鼻銑刀 - 標準型 - 4 刃

- The DIAMOND coating protects the cutting edge of the end mill which better than conventional coating.
- Suitable for Graphite.
- Corner radius with multiple design increases the finish milling surface.

EGCFC4
EGCSC4

P ☐ M ☐ K ☐ N ☑ S ☐ H ☐





d	R Tolerance
Ø < 3	0 ~ -0.03
3 ≦ Ø ≦ 10	0 ~ -0.04
Ø > 10	0 ~ -0.05
R	± 0.02

Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EGCFC403003D	3	0.3R	6	50	4	4
EGCFC403005D	3	0.5R	6	50	4	4
EGCFC403010D	3	1R	6	50	4	4
EGCFC404003D	4	0.3R	8	50	4	4
EGCFC404005D	4	0.5R	8	50	4	4
EGCFC404010D	4	1R	8	50	4	4
EGCSC403003D	3	0.3R	6	50	6	4
EGCSC403005D	3	0.5R	6	50	6	4
EGCSC403010D	3	1R	6	50	6	4
EGCSC404003D	4	0.3R	8	50	6	4
EGCSC404005D	4	0.5R	8	50	6	4
EGCSC404010D	4	1R	8	50	6	4
EGCSC405005D	5	0.5R	10	50	6	4
EGCSC405010D	5	1R	10	50	6	4
EGCSC406003D	6	0.3R	12	50	6	4
EGCSC406005D	6	0.5R	12	50	6	4
EGCSC406010D	6	1R	12	50	6	4
EGCSC408005D	8	0.5R	16	60	8	4
EGCSC408010D	8	1R	16	60	8	4
EGCSC408015D	8	1.5R	16	60	8	4
EGCSC410005D	10	0.5R	20	75	10	4
EGCSC410010D	10	1R	20	75	10	4
EGCSC410015D	10	1.5R	20	75	10	4
EGCSC410020D	10	2R	20	75	10	4
EGCSC412005D	12	0.5R	24	75	12	4
EGCSC412010D	12	1R	24	75	12	4
EGCSC412015D	12	1.5R	24	75	12	4
EGCSC412020D	12	2R	24	75	12	4
EGCSC412030D	12	3R	24	75	12	4
EGCSC408010D	8	1R	16	60	8	4
EGCSC408015D	8	1.5R	16	60	8	4
EGCSC410005D	10	0.5R	20	75	10	4
EGCSC410010D	10	1R	20	75	10	4
EGCSC410015D	10	1.5R	20	75	10	4
EGCSC410020D	10	2R	20	75	10	4
EGCSC412005D	12	0.5R	24	75	12	4
EGCSC412010D	12	1R	24	75	12	4
EGCSC412015D	12	1.5R	24	75	12	4
EGCSC412020D	12	2R	24	75	12	4
EGCSC412030D	12	3R	24	75	12	4

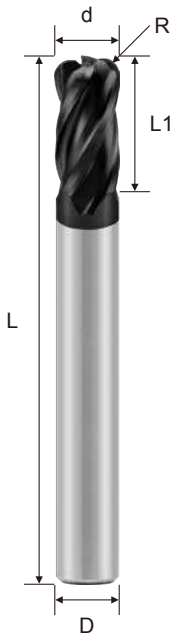
A200 - Long Shank Corner Radius Type - 4F

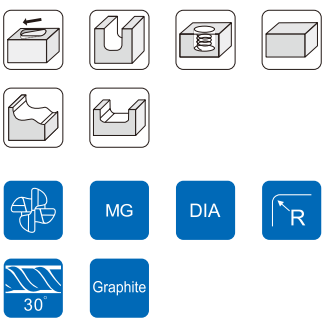
鎢鋼圓鼻銑刀 - 長柄型 - 4 刃

- The DIAMOND coating protects the cutting edge of the end mill which better than conventional coating.
- Suitable for Graphite.
- Corner radius with multiple design increases the finish milling surface.

EGCEC4
EGCLC4

P ☐ M ☐ K ☐ N ☑ S ☐ H ☐





Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
EGCEC404005D	4	0.5R	8	75	4	4
EGCKC404005D	4	0.5R	8	100	4	4
EGCLC403005D	3	0.5R	6	75	6	4
EGCLC403010D	3	1R	6	75	6	4
EGCLC404005D	4	0.5R	8	75	6	4
EGCLC404010D	4	1R	8	75	6	4
EGCLC405005D	5	0.5R	10	75	6	4
EGCLC405010D	5	1R	10	75	6	4
EGCLC406005D	6	0.5R	12	75	6	4
EGCNC406005D	6	0.5R	12	100	6	4
EGCLC406010D	6	1R	12	75	6	4
EGCMC408005D	8	0.5R	16	75	8	4
EGCLC408005D	8	0.5R	16	100	8	4
EGCLC408010D	8	1R	16	100	8	4
EGCLC408015D	8	1.5R	16	100	8	4
EGCLC410005D	10	0.5R	20	100	10	4
EGCNC410005D	10	0.5R	20	150	10	4
EGCLC410010D	10	1R	20	100	10	4
EGCLC410015D	10	1.5R	20	100	10	4
EGCLC410020D	10	2R	20	100	10	4
EGCLC412005D	12	0.5R	24	100	12	4
EGCNC412005D	12	0.5R	24	150	12	4
EGCLC412010D	12	1R	24	100	12	4
EGCLC412015D	12	1.5R	24	100	12	4
EGCLC412020D	12	2R	24	100	12	4

d	R Tolerance
Ø < 3	0 ~ -0.03
3 ≦ Ø ≦ 10	0 ~ -0.04
Ø > 10	0 ~ -0.05
R	± 0.02

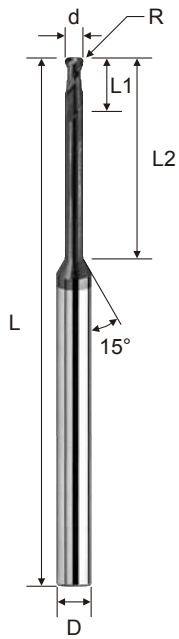
A200 - Long Neck Corner Radius Type - 2F

鎢鋼圓鼻銑刀 - 長頸型 - 2 刃

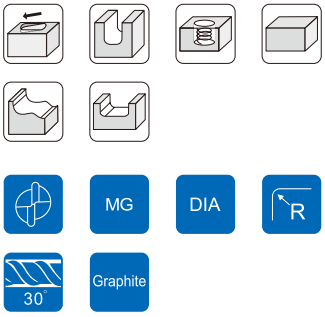
- The DIAMOND coating protects the cutting edge of the end mill which better than conventional coating.
- Suitable for Graphite.
- Available in various cut lengths.
- Corner radius with long neck are suitable for deep general cutting and 3D milling.

EGCBC2
EGCRC2

P ☐ M ☐ K ☐ N ☑ S ☐ H ☐



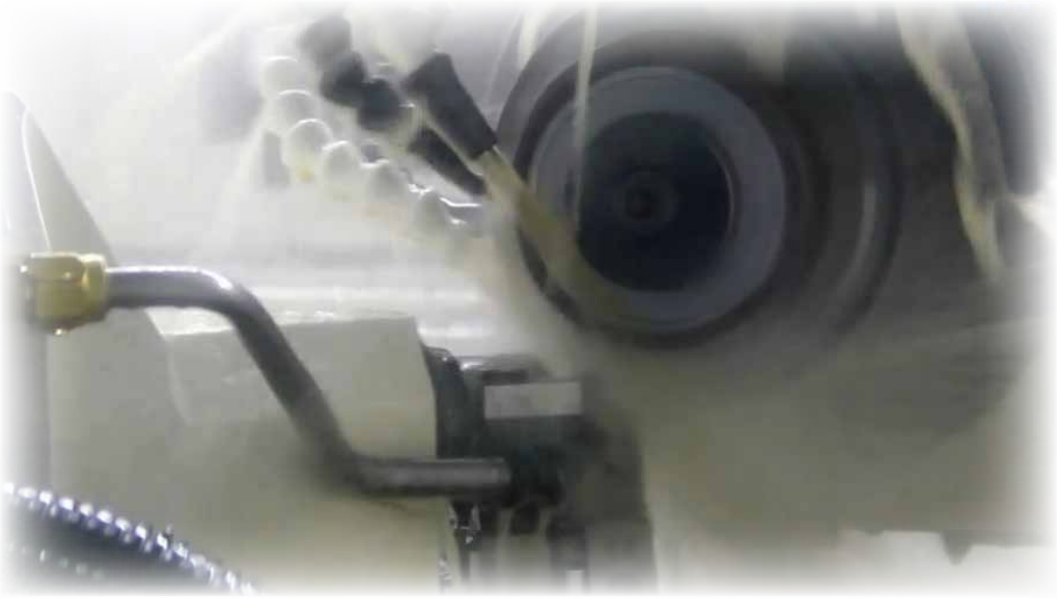
Order No.	Dia. (d)	Corner Radius (R)	CL (L1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (F)
EGCBC20100106D	1	0.1R	1	6	50	4	2
EGCBC20100108D	1	0.1R	1	8	50	4	2
EGCBC20100110D	1	0.1R	1	10	50	4	2
EGCBC20100112D	1	0.1R	1	12	50	4	2
EGCBC20200210D	2	0.2R	2	10	50	4	2
EGCBC20200216D	2	0.2R	2	16	50	4	2
EGCBC20200220D	2	0.2R	2	20	50	4	2
EGCBC20200225D	2	0.2R	2	25	60	4	2
EGCBC20200510D	2	0.5R	2	10	50	4	2
EGCBC20200516D	2	0.5R	2	16	50	4	2
EGCBC20200520D	2	0.5R	2	20	50	4	2
EGCBC20200525D	2	0.5R	2	25	60	4	2
EGCRC20300210D	3	0.2R	3	10	50	6	2
EGCRC20300220D	3	0.2R	3	20	60	6	2
EGCRC20300230D	3	0.2R	3	30	75	6	2
EGCRC20300510D	3	0.5R	3	10	50	6	2
EGCRC20300520D	3	0.5R	3	20	60	6	2
EGCRC20300530D	3	0.5R	3	30	75	6	2
EGCRC20400516D	4	0.5R	4	16	60	6	2
EGCRC20400525D	4	0.5R	4	25	60	6	2
EGCRC20400535D	4	0.5R	4	35	75	6	2
EGCRC20401016D	4	1R	4	16	60	6	2
EGCRC20401025D	4	1R	4	25	60	6	2
EGCRC20401035D	4	1R	4	35	75	6	2
EGCRC20500520D	5	0.5R	5	20	60	6	2
EGCRC20500530D	5	0.5R	5	30	75	6	2
EGCRC20600520D	6	0.5R	7	20	60	6	2
EGCRC20600530D	6	0.5R	7	30	75	6	2
EGCRC20601020D	6	1R	7	20	60	6	2
EGCRC20601030D	6	1R	7	30	75	6	2



d	Tolerance
Ø	0 ~ 0.02
R	± 0.02

WINSTAR

Endmills · Inserts · Drills





Winstar
Cutting Technologies

A100 Series for Aluminium Alloy



- Micro grain carbide rod is suitable for general machining.
- High efficient processing can be achieved by great chip evacuation.
- High helix angle offers stable and excellent finished surface in high speed.
- Radial flute design is good for chip evacuation and easy of machining.

A100 - Square Type - 2F

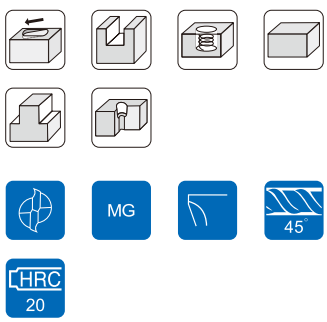
鎢鋼平銑刀 - 標準型 - 2 刃

- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC< 20).
- CrN coating is optional for Copper Electrode and high Si(>12%) content Aluminum Alloy.
- High Helix offers excellent and stable finished surfaces in high speed.
- Great chip evacuation and flute polishing increase cutting surface and feed rate.

ENSFS2
ENSSS2

P ☐ M ☐ K ☐ N ☑ S ☐ H ☐





d	Tolerance
Ø < 3	0 ~ -0.02
3 ≦ Ø ≦ 10	0 ~ -0.03
Ø > 10	0 ~ -0.04

Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ENSFS201000	1	3	50	4	2
ENSFS202000	2	6	50	4	2
ENSFS203000	3	9	50	4	2
ENSFS204000	4	12	50	4	2
ENSSS204000	4	12	50	6	2
ENSSS205000	5	15	50	6	2
ENSSS206000	6	15	50	6	2
ENSSS208000	8	20	60	8	2
ENSSS210000	10	30	75	10	2
ENSSS212000	12	30	75	12	2
ENSSS216000	16	40	100	16	2
ENSSS220000	20	45	100	20	2

Cutting conditions（建議切削參數表）: Table 062

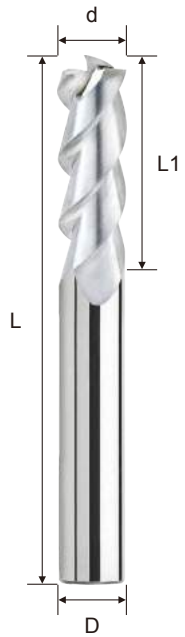
A100 - Square Type - 3F

鎢鋼平銑刀 - 標準型 - 3 刃

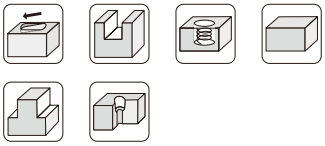
- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC< 20)
- CrN coating is optional for Copper Electrode and high Si(>12%) content Aluminum Alloy.
- High Helix offers excellent and stable finished surfaces in high speed.
- Great chip evacuation and flute polishing get good cutting surface and high feed rate.

ENSFS3
ENSSS3

P ☐ M ☐ K ☐ N ☑ S ☐ H ☐



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ENSFS302000	2	6	50	4	3
ENSFS303000	3	9	50	4	3
ENSFS304000	4	12	50	4	3
ENSSS304000	4	12	50	6	3
ENSSS305000	5	15	50	6	3
ENSSS306000	6	15	50	6	3
ENSSS308000	8	20	60	8	3
ENSSS310000	10	30	75	10	3
ENSSS312000	12	30	75	12	3
ENSSS316000	16	40	100	16	3
ENSSS320000	20	45	100	20	3





d	Tolerance
Ø < 3	0 ~ -0.02
3 ≦ Ø ≦ 10	0 ~ -0.03
Ø > 10	0 ~ -0.04

Cutting conditions（建議切削參數表）: Table 062

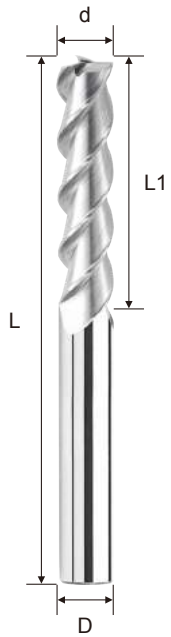
A100 - Long Flute Square Type - 3F

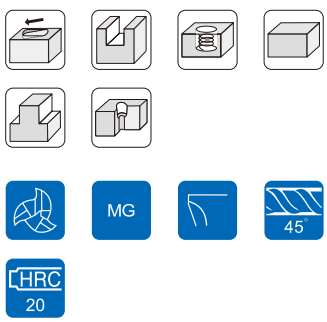
鎢鋼平銑刀 - 長刃型 - 3 刃

- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC< 20)
- CrN coating is optional for Copper Electrode and high Si(>12%) content Aluminum Alloy.
- High Helix offers excellent and stable finished surfaces in high speed.
- Great chip evacuation and flute polishing get good cutting surface and high feed rate.

ENSCS3

P ☐ M ☐ K ☐ N ☑ S ☐ H ☐





Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ENSCS303000	3	15	60	6	3
ENSCS304000	4	20	60	6	3
ENSCS305000	5	25	60	6	3
ENSCS306000	6	30	75	6	3
ENSCS308000	8	45	100	8	3
ENSCS310000	10	55	100	10	3
ENSCS312000	12	55	100	12	3
ENSCS316000	16	75	150	16	3
ENSCS320000	20	90	150	20	3

Cutting conditions（建議切削參數表）: Table 062

d	Tolerance
Ø < 3	0 ~ -0.02
3 ≦ Ø ≦ 10	0 ~ -0.03
Ø > 10	0 ~ -0.04

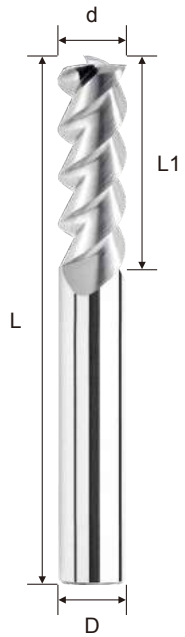
A100 - High Helix Square Type - 3F

鎢鋼平銑刀 - 高導型 - 3 刃

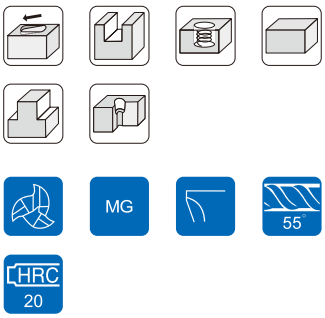
- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC< 20).
- CrN coating is optional for Copper Electrode and high Si(>12%) content Aluminum Alloy.
- 55° degree Helix offers excellent and stable finished surfaces in high speed side milling.
- Flute polishing gives a very good cutting surface and high feed rate.

ENSSH3

P ☐ M ☐ K ☐ N ☑ S ☐ H ☐



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ENSSH304000	4	12	50	6	3
ENSSH305000	5	15	50	6	3
ENSSH306000	6	15	50	6	3
ENSSH308000	8	20	60	8	3
ENSSH310000	10	30	75	10	3
ENSSH312000	12	30	75	12	3
ENSSH316000	16	40	100	16	3



d	Tolerance
Ø < 3	0 ~ -0.02
3 ≦ Ø ≦ 10	0 ~ -0.03
Ø > 10	0 ~ -0.04

Cutting conditions（建議切削參數表）: Table 062

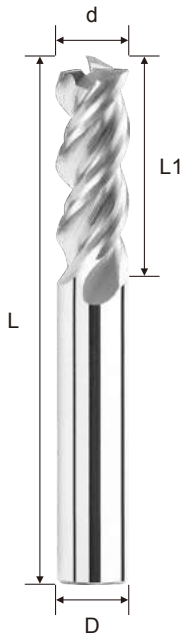
A100 - High Performance Square Type - 3F (for side milling)

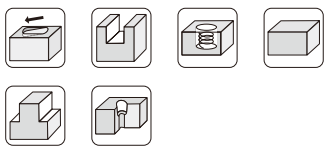
鎢鋼平銑刀 - 高效能型 - 3 刃

- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC< 20).
- CrN coating is optional for Copper Electrode and high Si(>12%) content Aluminum Alloy.
- U-flute design with high chips volume space and easy to remove chips.
- Excellent for high feed rough milling.
- Also suitable for surface finish in high speed milling.

ENSSB3

P ☐ M ☐ K ☐ N ☑ S ☐ H ☐







Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ENSSB304000	4	12	50	6	3
ENSSB305000	5	15	50	6	3
ENSSB306000	6	15	50	6	3
ENSSB308000	8	20	60	8	3
ENSSB310000	10	30	75	10	3
ENSSB312000	12	30	75	12	3
ENSSB316000	16	40	100	16	3
ENSSB320000	20	45	100	20	3

d	Tolerance
Ø < 3	0 ~ -0.02
3 ≦ Ø ≦ 10	0 ~ -0.03
Ø > 10	0 ~ -0.04

A100 - Fine-Finishing Square Type - 3F

鎢鋼平銑刀 - 高光鏡面型 - 3 刃

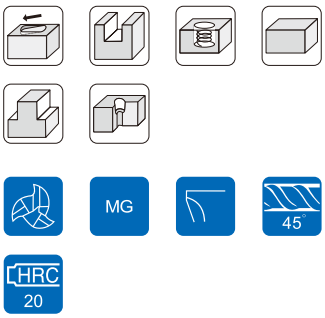
- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy , Copper (HRC<20)
- 45° High Helix offers excellent stable and finished surfaces.
- Great chip evacuation and flute polish increase cutting surface and feed rate.

ENSSP3

P ☐ M ☐ K ☐ N ☑ S ☐ H ☐



Order No.	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ENSSP306000	6	15	50	6	3
ENSSP308000	8	20	60	8	3
ENSSP310000	10	30	75	10	3
ENSSP312000	12	30	75	12	3
ENSSP316000	16	40	100	16	3



d	Tolerance
Ø < 3	0 ~ -0.02
3 ≦ Ø ≦ 10	0 ~ -0.03
Ø > 10	0 ~ -0.04

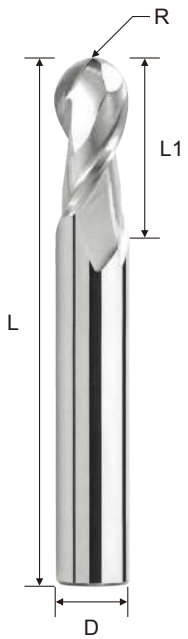
A100 - Ball Nose Type - 2F

鎢鋼球型銑刀 - 標準型 - 2 刃

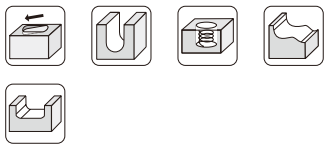
- Suitable for cutting non-ferrous metals, Aluminum, Aluminum Alloy, Copper (HRC< 20).
- CrN coating is optional for Copper Electrode and high Si(>12%) content Aluminum Alloy.
- Great chip evacuation.
- Due to polish surface grinding of cutting it provides an excellent surface.
- New tool geometry increases wear resistance and cutting force is decreased.

ENBFA2
ENBSA2

P	M	K	N	S	H
☐	☐	☐	☑	☐	☐



Order No.	Radius (R)	Dia. (d)	CL (L1)	OAL (L)	Shank (D)	Flutes (F)
ENBFA201000	0.5R	1	2	50	4	2
ENBFA202000	1.0R	2	4	50	4	2
ENBFA203000	1.5R	3	6	50	4	2
ENBFA204000	2.0R	4	8	50	4	2
ENBSA204000	2.0R	4	8	50	6	2
ENBSA205000	2.5R	5	10	50	6	2
ENBSA206000	3.0R	6	12	50	6	2
ENBSA208000	4.0R	8	16	60	8	2
ENBSA210000	5.0R	10	20	75	10	2
ENBSA212000	6.0R	12	24	75	12	2
ENBSA216000	8.0R	16	32	100	16	2

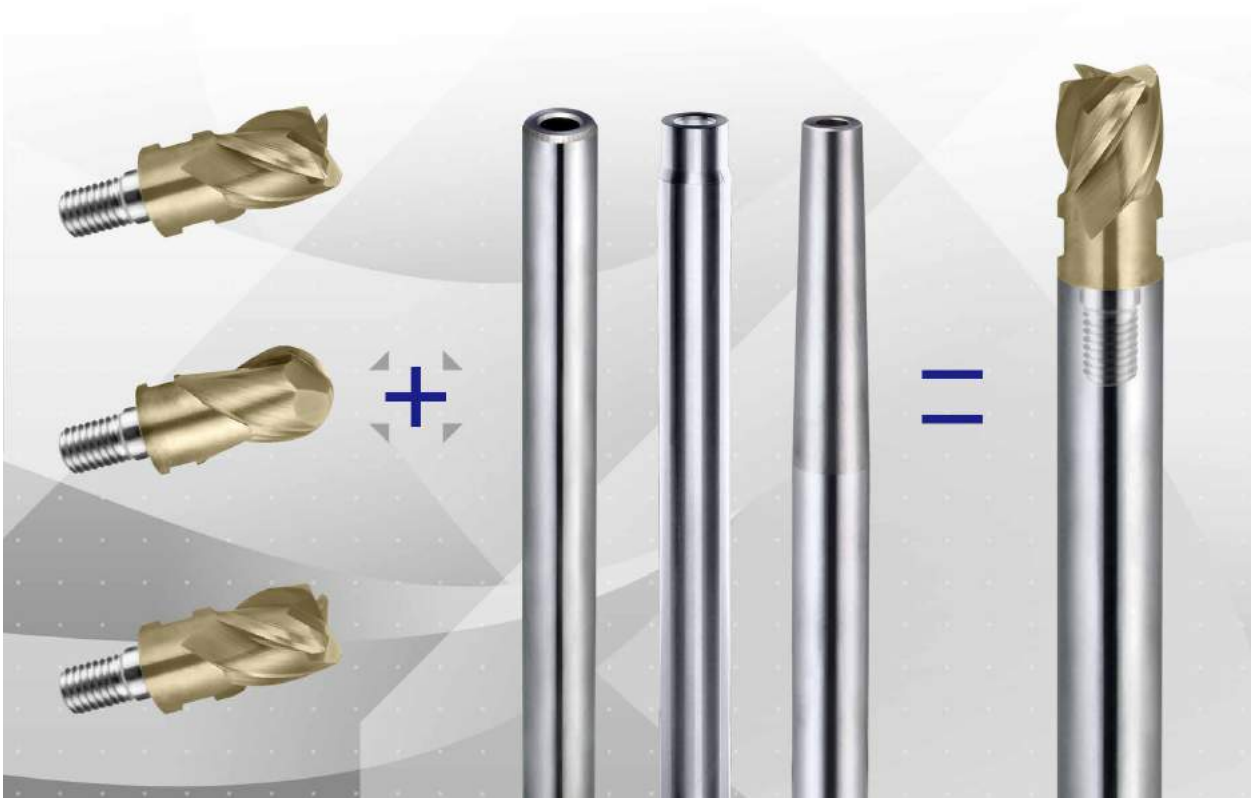




d	R Tolerance
Ø	± 0.02

Cutting conditions（建議切削參數表）: Table 063

WinMaster Series Replaceable Endmills, up to HRC 60



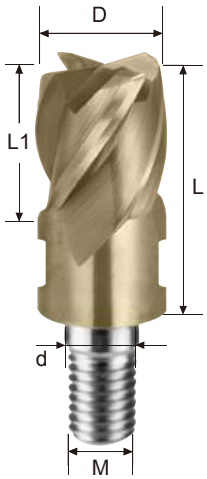
- High efficiency machining.
- Excellent compatibility.
- SICO coating.
- Flexible adapter.

WinMaster Series - Anti-Vibration Square Type - 4F

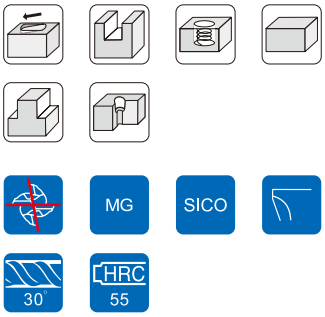
鎢鋼平銑刀 - 鎖牙式抗震 PD 型 - 4 刃

EPSWH4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (D)	CL (L1)	ND (d)	M (M)	Flutes (F)
EPSWH410000S	10	10	5.5	M5	4
EPSWH412000S	12	12	6.5	M6	4
EPSWH416000S	16	16	8.5	M8	4
EPSWH420000S	20	20	10.5	M10	4



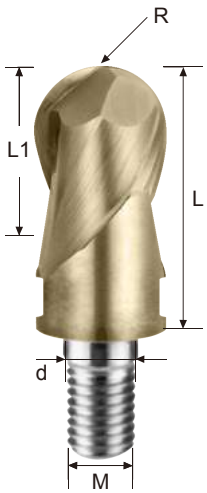
d	Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03

Cutting conditions（建議切削參數表）: Table 064

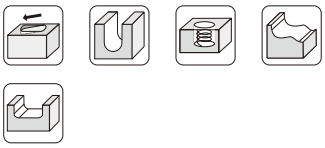
Winstar Cutting Technologies

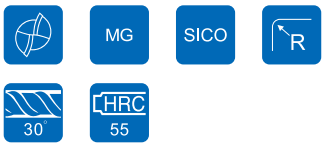
EPBWH2

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Radius (R)	Dia. (D)	CL (L1)	ND (d)	M (M)	Flutes (F)
EPBWH210000S	5R	10	10	5.5	M5	2
EPBWH212000S	6R	12	12	6.5	M6	2
EPBWH216000S	8R	16	16	8.5	M8	2
EPBWH220000S	10R	20	20	10.5	M10	2





d	R Tolerance
Ø ≦ 12	± 0.01
Ø > 12	± 0.015

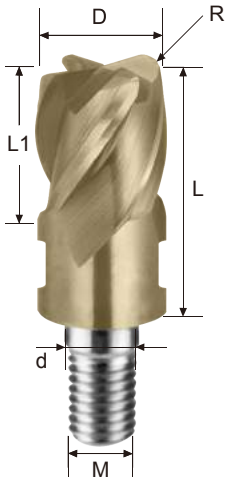
Cutting conditions（建議切削參數表）: Table 065

WinMaster Series - Anti-Vibration Corner Radius Type - 4F

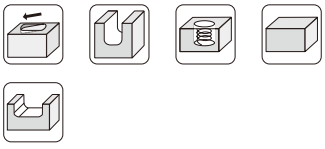
鎢鋼圓鼻銑刀 - 鎖牙式抗震 PD 型 - 4 刃

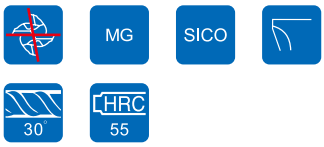
EPCWH4

P	M	K	N	S	H
☑	☑	☑	☐	☐	☑



Order No.	Dia. (D)	Corner Radius (R)	CL (L1)	ND (d)	M (M)	Flutes (F)
EPCWH410005S	10	0.5R	10	5.5	M5	4
EPCWH410010S	10	1.0R	10	5.5	M5	4
EPCWH410020S	10	2.0R	10	5.5	M5	4
EPCWH412005S	12	0.5R	12	6.5	M6	4
EPCWH412010S	12	1.0R	12	6.5	M6	4
EPCWH412020S	12	2.0R	12	6.5	M6	4
EPCWH412030S	12	3.0R	12	6.5	M6	4
EPCWH416010S	16	1.0R	16	8.5	M8	4
EPCWH416020S	16	2.0R	16	8.5	M8	4
EPCWH416030S	16	3.0R	16	8.5	M8	4
EPCWH420010S	20	1.0R	20	10.5	M10	4
EPCWH420020S	20	2.0R	20	10.5	M10	4
EPCWH420030S	20	3.0R	20	10.5	M10	4





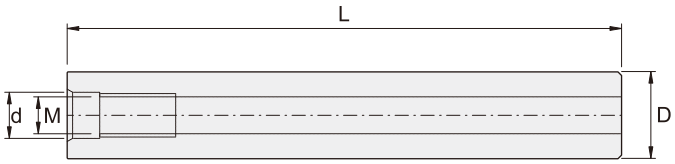
d	Tolerance
Ø ≦ 12	0 ~ -0.02
Ø > 12	0 ~ -0.03

Cutting conditions（建議切削參數表）: Table 064

Winstar Cutting Technologies

SWSEA

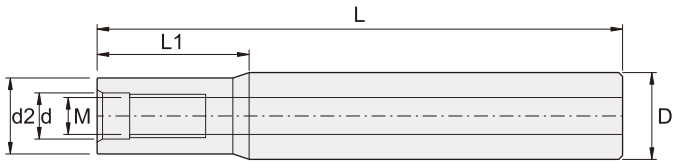




Order No.	Dimensions, mm			
	d	L	D	M
ISWSEA050750	5.5	75	10	M5
ISWSEA051000	5.5	100	10	M5
ISWSEA051500	5.5	150	10	M5
ISWSEA061001	6.5	100	10	M6
ISWSEA061501	6.5	150	10	M6
ISWSEA060750	6.5	75	12	M6
ISWSEA061000	6.5	100	12	M6
ISWSEA061500	6.5	150	12	M6
ISWSEA062000	6.5	200	12	M6
ISWSEA081000	8.5	100	16	M8
ISWSEA081500	8.5	150	16	M8
ISWSEA082000	8.5	200	16	M8
ISWSEA082500	8.5	250	16	M8
ISWSEA101000	10.5	100	20	M10
ISWSEA101500	10.5	150	20	M10
ISWSEA102000	10.5	200	20	M10
ISWSEA102500	10.5	250	20	M10
ISWSEA103000	10.5	300	20	M10
ISWSEA121000	12.5	100	25	M12
ISWSEA121500	12.5	150	25	M12
ISWSEA122000	12.5	200	25	M12
ISWSEA122500	12.5	250	25	M12
ISWSEA123000	12.5	300	25	M12

SWSEB

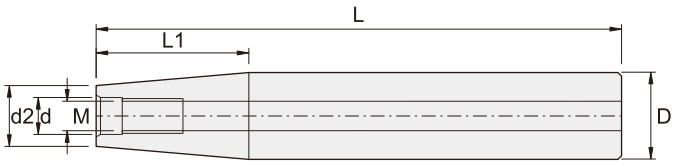




Order No.	Dimensions, mm					
	d	d2	L1	L	D	M
ISWSEB0610024	6.5	11.8	24	100	12	M6
ISWSEB0615024	6.5	11.5	24	150	12	M6
ISWSEB0815030	8.5	15	30	150	16	M8
ISWSEB0820040	8.5	15	40	200	16	M8
ISWSEB1015040	10.5	19	40	150	20	M10
ISWSEB1020040	10.5	19	40	200	20	M10
ISWSEB1220048	12.5	24	48	150	25	M12
ISWSEB1220048	12.5	24	48	200	25	M12

SWTEA





Order No.	Dimensions, mm					
	d	d2	L1	L	D	M
ISWTEA051500	5.5	9.8	60	150	12	M5
ISWTEA061500	6.5	11.8	70	150	16	M6
ISWTEA082000	8.5	15.5	90	200	20	M8
ISWTEA102000	10.5	19.8	90	200	25	M10
ISWTEA122000	12.5	24.5	90	200	32	M12

WINSTAR

Endmills · Inserts · Drills





Winstar
Cutting Technologies

Table 001

EHSSS6, EHSSS8

WORKING MATERIAL	HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
CODE	SKT, SKD		SKT, SKD		SKT, SKD	
HARDNESS	HRC 45~55		HRC 55~60		HRC 60~70	
Vc	129 M/min		98 M/min		65 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
6MM	6,890	1,900	5,200	1,000	3,445	505
8MM	5,200	1,900	3,900	1,000	2,600	505
10MM	4,160	1,900	3,120	1,000	2,080	505
12MM	3,445	1,900	2,600	1,000	1,755	505
14MM	2,925	1,800	2,210	1,000	1,430	505
16MM	2,535	1,700	2,015	930	1,294	505
18MM	2,275	1,600	1,885	895	1,151	505
20MM	2,015	1,500	1,495	845	1,040	505
25MM	1,625	1,500	1,242	915	826	505
Milling Amount (mm)			ap 1.5D / ae 0.05D, aeMax ≦ 1.0mm		ap 1.5D / ae 0.03D, aeMax ≦ 0.5mm	ap 1.0D / ae 0.02D, aeMax ≦ 0.5mm

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

Table 002

EHSPS4, EHSUS4, EHSUS6, EHSUS8

WORKING MATERIAL	HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
CODE	SKT, SKD		SKT, SKD		SKT, SKD	
HARDNESS	HRC 45~55		HRC 55~60		HRC 60~70	
Vc	208 M/min		195 M/min		129 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
6MM	11,050	2,450	10,335	2,000	6,890	1,210
8MM	8,255	2,440	7,735	1,995	5,200	1,215
10MM	6,630	2,450	6,110	1,970	4,160	1,215
12MM	5,525	2,450	5,135	1,985	3,445	1,210
14MM	4,680	2,420	4,420	1,995	2,925	1,200
16MM	4,095	2,420	3,900	2,000	2,535	1,285
18MM	3,640	2,420	3,445	2,000	2,275	1,200
20MM	3,250	2,400	3,055	1,970	2,015	1,180
25MM	2,600	2,400	2,470	1,990	1,625	1,190
Milling Amount (mm)			ap / ae 1.5D / 0.05D aeMax ≦ 1.0mm		ap / ae 1.5D / 0.03D aeMax ≦ 0.5mm	ap / ae 1.0D / 0.02D aeMax ≦ 0.5mm

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

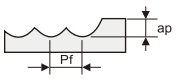
Table 003

EHBPS2, EHBUS2

WORKING MATERIAL	HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
CODE	SKT, SKD		SKT, SKD		SKT, SKD	
HARDNESS	HRC 45~55		HRC 55~60		HRC 60~70	
Vc	129 M/min		116 M/min		63 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
0.5R	41,600	960	39,000	850	33,150	500
1.0R	40,950	1,900	37,050	1,880	20,150	600
1.5R	27,300	2,080	24,700	1,880	13,650	625
2.0R	20,150	2,050	18,200	1,850	10,335	630
2.5R	16,250	2,060	14,300	1,815	8,255	630
3.0R	13,650	2,080	12,350	1,880	6,890	630
4.0R	10,335	1,550	9,295	1,400	5,135	470
5.0R	8,255	1,250	7,410	1,100	4,095	375
6.0R	6,890	1,050	6,175	950	3,445	315
8.0R	5,135	790	4,745	710	2,535	230

Milling Amount (mm)

	ap	Pf
R ≦ 8	0.02D	0.1D
R ＞ 8	0.32mm	0.1D

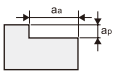


1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

Table 004

EHCUK4

WORKING MATERIAL	HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
HARDNESS	HRC 40~50		HRC 50~55		HRC 55~60	
Vc	130 M/min		78 M/min		52 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
2mm	20,700	5,750	12,420	3,450	8,280	2,310
3mm	13,800	6,050	8,280	3,640	5,520	2,420
4mm	10,350	7,030	6,210	4,220	4,140	2,810
6mm	6,900	6,900	4,140	4,140	2,760	2,760
8mm	5,200	6,850	3,105	4,090	2,070	2,730
10mm	4,150	6,600	2,500	3,970	1,650	2,640
12mm	3,450	6,900	2,070	4,140	1,380	2,760
Milling Amount (mm)						

	aa	ap
R ≦ 1	0.1 x R	0.25D
R > 1	0.2mm	0.25D

	aa	ap
R ≦ 1	0.05 x R	0.25D
R > 1	0.1mm	0.25D

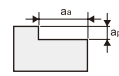
	aa	ap
R ≦ 1	0.05 x R	0.25D
R > 1	0.1mm	0.25D

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

Table 005

EHCPS4, EHCUS4

WORKING MATERIAL	HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
CODE	SKT, SKD		SKT, SKD		SKT, SKD	
HARDNESS	HRC 45~55		HRC 55~60		HRC 60~70	
Vc	65 M/min		39 M/min		26 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
1MM	20,670	2,150	12,350	980	8,281	500
2MM	10,335	2,145	6,175	980	4,134	500
3MM	6,890	2,150	4,160	990	2,756	500
4MM	5,200	2,160	3,120	990	2,067	500
6MM	3,445	2,150	2,080	990	1,378	500
8MM	2,600	2,160	1,560	990	1,034	500
10MM	2,080	2,160	1,242	980	826	500
12MM	1,755	2,190	1,034	980	689	500
Milling Amount (mm)						

	aa	ap
R ≦ 2	0.2 x R	0.5D
R > 2	0.4mm	0.5D

	aa	ap
R ≦ 2	0.1 x R	0.5D
R > 2	0.2mm	0.5D

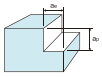
	aa	ap
R ≦ 2	0.1 x R	0.5D
R > 2	0.2mm	0.5D

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

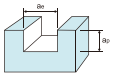
1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

Table 006

EHSFF4, EHSSF4, EHSLF4, EHNF4, EHMF4, EHCSF4, EHCLF4, EHCNF4, EHCMF4

Side Milling 

Work Material	Condition Range	Cutting Depth	Cutting Condition	Diameter (d)							
				Ø1	Ø2	Ø3	Ø4	Ø6	Ø8	Ø10	Ø12
Pre-Harden Steels (HRC 35~45) NAK80、CENA1	High Speed	ap=1.5D	RPM	35000	17500	12000	8700	5830	4380	3500	2900
		ae=0.05D	Feed(mm/min)	630	830	1000	1000	1100	1100	1100	1100
	General	ap=1.5D	RPM	25500	12700	8500	6350	4200	3200	2500	2150
		ae=0.07D	Feed(mm/min)	460	510	550	600	750	800	750	700
Hardened Steels (HRC 45~60)SKD61、SKD11、SKH51	High Speed	ap=1.5D	RPM	32000	16000	11000	8000	5300	4000	3200	2750
		ae=0.02D	Feed(mm/min)	600	750	800	850	900	1000	900	850
	General	ap=1.5D	RPM	22000	11200	7400	5600	3750	2800	2200	2000
		ae=0.05D	Feed(mm/min)	360	440	460	500	560	600	580	550

Slotting Milling 

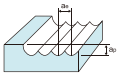
Work Material	Condition Range	Cutting Depth	Cutting Condition	Diameter (d)						
				Ø3	Ø4	Ø5	Ø6	Ø8	Ø10	Ø12
Pre-Harden Steels (HRC 35~45) NAK80、CENA1	General	ap=0.5D	RPM	7690	5800	4640	3770	2900	2320	1890
		ae=1D	Feed(mm/min)	460	580	670	610	580	550	520
Hardened Steels (HRC 45~60)SKD61、SKD11、SKH51	General	ap=0.2D	RPM	3990	3000	2430	1950	1500	1200	1020
		ae=1D	Feed(mm/min)	200	240	300	330	300	270	240

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

Table 007

EHBFF2, EHBSF2, EHBLF2, EHBNF2, EHBMF2, EPBPF2, EHBUF2



Work Material	Condition Range	Cutting Depth	Cutting Condition	Diameter (d)						
				0.5R	1R	2R	3R	4R	5R	6R
Pre-Harden Steels (HRC 35~45) NAK80、CENA1	High Speed	ap=0.05~0.1	RPM	50000	32000	22000	16000	12000	10000	8000
		ae=0.02D	Feed(mm/min)	4000	3000	2850	2800	2400	2000	1600
	General	ap=0.05~0.1	RPM	36000	20000	13000	8500	6400	5000	4200
		ae=0.02D	Feed(mm/min)	1600	1500	1500	1400	1200	1060	920
Hardened Steels (HRC 45~55)SKD61、SKT4	High Speed	ap=0.05~0.1	RPM	50000	32000	20000	13000	10000	8000	6600
		ae=0.02D	Feed(mm/min)	3200	2560	2500	2200	1840	1600	1400
	General	ap=0.05~0.1	RPM	36000	20000	10000	6800	5200	4000	3500
		ae=0.02D	Feed(mm/min)	1280	1280	1280	1160	960	820	730
Hardened Steels (HRC 55~60)SKD11、SKH51	High Speed	ap=0.05~0.1	RPM	50000	32000	16000	11000	8000	6400	5300
		ae=0.15D	Feed(mm/min)	2000	2000	1920	1760	1400	1200	1060
	General	ap=0.05~0.1	RPM	25000	15000	9500	6500	4800	3800	3200
		ae=0.15D	Feed(mm/min)	1000	1000	960	960	840	720	640

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

Table 008

EHSFA2, EHSSA2

Material 工件材料	PREHARDENED STEELS 調質鋼 NAK80 CENA1				HARDENED STEELS 淬火鋼 SKD61,SKD11				Hardened Steel 淬火鋼 SKD11,SKH51			
Hardness 硬度	HRC 35~45				HRC 40~55				HRC 55~65			
VC 線速度	145(m/min)				125 (m/min)				105 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	15390	705	0.15	3	13270	610	0.15	3	11150	510	0.15	3
4mm	11550	690	0.2	4	9950	595	0.2	4	8360	500	0.2	4
6mm	7700	615	0.3	6	6630	530	0.3	6	5570	445	0.3	6
8mm	5770	460	0.4	8	4980	395	0.4	8	4180	335	0.4	8
10mm	4620	462	0.5	10	3980	395	0.5	10	3345	335	0.5	10
12mm	3850	385	0.6	12	3320	330	0.6	12	2790	280	0.6	12

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

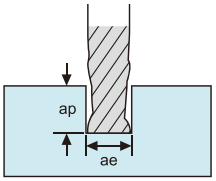


Table 009

EHSFA4, EHSSA4

Material 工件材料	PREHARDENED STEELS 調質鋼 NAK80 CENA1				HARDENED STEELS 淬火鋼 SKD61,SKD11				Hardened Steel 淬火鋼 SKD11,SKH51			
Hardness 硬度	HRC 35~45				HRC 40~55				HRC 55~65			
VC 線速度	145(m/min)				125 (m/min)				105 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	15390	1415	3	0.15	13270	1220	3	0.15	11150	1025	3	0.15
4mm	11550	1386	4	0.2	9950	1194	4	0.2	8360	1003	4	0.2
6mm	7700	1232	6	0.3	6630	1060	6	0.3	5570	891	6	0.3
8mm	5770	923	8	0.4	4980	796	8	0.4	4180	668	8	0.4
10mm	4620	924	10	0.5	3980	796	10	0.5	3345	669	10	0.5
12mm	3850	770	12	0.6	3320	664	12	0.6	2790	558	12	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

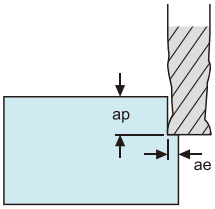


Table 010

EHSFH4, EHSSH4

Material 工件材料	PREHARDENED STEELS 調質鋼 NAK80 CENA1				HARDENED STEELS 淬火鋼 SKD61,SKD11				Hardened Steel 淬火鋼 SKD11,SKH51			
Hardness 硬度	HRC 35~45				HRC 40~55				HRC 55~65			
VC 線速度	145(m/min)				125 (m/min)				105 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	15390	1415	3	0.15	13270	1220	3	0.15	11150	1025	3	0.15
4mm	11550	1386	4	0.2	9950	1194	4	0.2	8360	1003	4	0.2
6mm	7700	1232	6	0.3	6630	1060	6	0.3	5570	891	6	0.3
8mm	5770	923	8	0.4	4980	796	8	0.4	4180	668	8	0.4
10mm	4620	924	10	0.5	3980	796	10	0.5	3345	669	10	0.5
12mm	3850	770	12	0.6	3320	664	12	0.6	2790	558	12	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

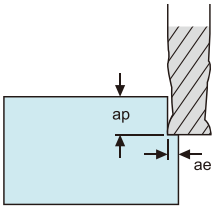


Table 011

EHSLH4, EHSMH4, EHSNH4

Material 工件材料	PREHARDENED STEELS 調質鋼 NAK80 CENA1				HARDENED STEELS 淬火鋼 SKD61,SKD11				Hardened Steel 淬火鋼 SKD11,SKH51			
Hardness 硬度	HRC 35~45				HRC 40~55				HRC 55~65			
VC 線速度	123 (m/min)				106 (m/min)				89 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	13080	1200	3	0.15	11280	1038	3	0.15	9480	871	3	0.15
4mm	9820	1178	4	0.2	8460	1015	4	0.2	7100	852	4	0.2
6mm	6545	1050	6	0.3	5635	900	6	0.3	4740	757	6	0.3
8mm	4905	785	8	0.4	4235	676	8	0.4	3555	568	8	0.4
10mm	3927	785	10	0.5	3385	676	10	0.5	2845	568	10	0.5
12mm	3270	655	12	0.6	2820	564	12	0.6	2370	474	12	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

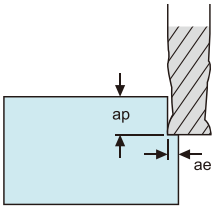


Table 012

EHSBC2, EHSRC2

Material 工件材料		PREHARDENED STEELS 調質鋼 NAK80 CENA1			HARDENED STEELS 淬火鋼 SKD61,SKD11			Hardened Steel 淬火鋼 SKD11,SKH51			
Hardness 硬度		HRC 35~45			HRC 40~55			HRC 55~65			
Dia 刃徑	EFF-L 有效長	RPM 轉速	Feed (mm/min) 進給	ap (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
0.2mm	0.5	56000	270	0.003	44800	180	0.002	15000	10	0.001	0.160
	1	50900	230	0.004	40800	160	0.003	-	-	-	
	1.5	48200	200	0.002	38500	140	0.002	-	-	-	
0.3mm	1.5	50800	360	0.005	42700	260	0.004	14600	13	0.003	0.057
	3	31900	190	0.001	25500	130	0.001	14600	10	0.001	0.004
	5	20400	80	0.001	16300	60	0.001	-	-	-	-
0.4mm	1	48100	470	0.008	38500	320	0.005	14300	17	0.003	0.054
	5	30100	240	0.002	24100	160	0.001	14300	14	0.001	0.003
	10	24600	150	0.001	19700	100	0.001	14300	11	0.001	0.001
0.5mm	3	32200	370	0.008	25700	260	0.006	14000	19	0.004	0.016
	5	27200	290	0.006	21700	200	0.004	14000	17	0.003	0.008
	8	21600	190	0.001	17400	130	0.001	14000	14	0.001	0.002
	10	19600	150	0.001	15600	100	0.001	14000	12	0.001	0.001
	14	16300	70	0.001	13000	50	0.001	-	-	-	-
0.6mm	3	33500	500	0.013	26800	340	0.009	12000	22	0.005	0.114
	6	23000	290	0.005	18400	200	0.003	12000	19	0.002	0.008
	8	20000	230	0.003	16000	160	0.002	12000	17	0.001	0.003
	10	17900	180	0.002	14300	130	0.001	12000	15	0.001	0.002
	12	16400	150	0.001	13100	100	0.001	12000	13	0.001	0.001
	16	13500	70	0.001	10800	50	0.001	-	-	-	-
0.7mm	4	25800	440	0.012	20600	290	0.009	10000	22	0.006	0.047
	6	21200	330	0.007	16900	230	0.005	10000	20	0.003	0.014
	8	18400	260	0.004	14700	190	0.003	10000	18	0.002	0.006
	10	16500	220	0.003	13200	160	0.002	10000	16	0.001	0.003
0.8mm	4	24100	480	0.019	19300	330	0.013	8000	20	0.010	0.080
	8	17200	300	0.006	13800	200	0.004	8000	16	0.003	0.010
	12	14100	200	0.003	11300	140	0.002	8000	12	0.001	0.003
	14	12300	150	0.001	9800	100	0.001	-	-	-	
0.9mm	6	18500	420	0.013	14800	290	0.010	7200	18	0.007	0.038
	8	16100	330	0.008	12900	230	0.006	7200	16	0.004	0.016
	10	14500	270	0.005	11600	190	0.004	7200	14	0.002	0.008

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

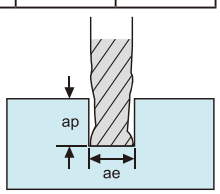


Table 013

EHSBC2, EHSRC2

Material 工件材料		PREHARDENED STEELS 調質鋼 NAK80 CENA1			HARDENED STEELS 淬火鋼 SKD61,SKD11			Hardened Steel 淬火鋼 SKD11,SKH51			
Hardness 硬度		HRC 35~45			HRC 40~55			HRC 55~65			
Dia 刃徑	EFF-L 有效長	RPM 轉速	Feed (mm/min) 進給	ap (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
1.0mm	5	19600	510	0.022	15700	360	0.016	6500	15	0.009	0.013
	10	13800	300	0.007	11000	210	0.005	6500	12	0.003	0.013
	12	12600	250	0.005	10100	170	0.003	6500	11	0.002	0.007
	14	11700	210	0.003	9400	150	0.002	650	10	0.001	0.005
	16	11000	180	0.003	8800	130	0.002	-	-	-	-
	20	9800	130	0.002	7900	90	0.001	-	-	-	-
1.2mm	6	16100	490	0.026	12800	340	0.019	9600	22	0.011	0.120
	12	11400	290	0.008	9100	200	0.005	-	-	-	-
	16	9800	220	0.004	7900	150	0.003	-	-	-	-
	20	8800	170	0.003	7000	120	0.002	-	-	-	-
1.4mm	8	12900	440	0.025	10300	310	0.018	9600	18	0.010	0.094
	10	11500	380	0.017	9200	260	0.012	-	-	-	0.048
	16	9100	250	0.007	7300	180	0.005	-	-	-	0.012
	20	7800	180	0.004	6200	120	0.003	-	-	-	0.005
1.5mm	8	12500	460	0.029	10000	320	0.020	9600	25	0.012	0.124
	12	10200	340	0.016	8200	240	0.011	-	-	-	-
	14	9500	300	0.012	7600	210	0.008	-	-	-	-
	16	8900	270	0.009	7100	190	0.007	-	-	-	-
	20	7900	220	0.006	6300	150	0.004	-	-	-	-
1.6mm	10	10800	410	0.025	8600	280	0.018	9600	15	0.010	0.082
	14	9100	320	0.014	7300	220	0.010	-	-	-	-
	18	8000	260	0.009	6400	180	0.006	-	-	-	-
2.0mm	6	12500	650	0.045	10000	450	0.032	9600	211	0.019	0.926
	10	9700	470	0.031	7800	330	0.022	9600	45	0.013	0.200
	12	8900	420	0.026	7100	290	0.019	9600	56	0.011	0.116
	14	8200	370	0.022	6600	260	0.016	9600	16	0.009	0.073
	20	6900	280	0.013	5500	190	0.009	-	-	-	-
	25	6200	230	0.008	4900	160	0.006	-	-	-	-
	30	5600	180	0.005	4500	130	0.004	-	-	-	-
2.5mm	8	9600	670	0.054	7700	460	0.039	9600	227	0.023	0.954
	12	7900	520	0.042	6300	360	0.030	9600	67	0.018	0.283
	16	6800	430	0.031	5500	290	0.022	9600	28	0.013	0.119
	20	6100	360	0.023	4900	250	0.017	9600	14	0.010	0.061
	25	5500	300	0.015	4400	210	0.011	-	-	-	-
	30	5000	250	0.010	4000	170	0.007	-	-	-	-
	35	4800	190	0.007	3800	140	0.005	-	-	-	-

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

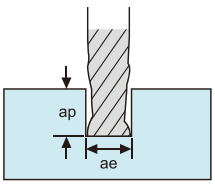


Table 014

EHSBC2, EHSRC2

Material 工件材料		PREHARDENED STEELS 調質鋼 NAK80 CENA1			HARDENED STEELS 淬火鋼 SKD61,SKD11			Hardened Steel 淬火鋼 SKD11,SKH51			
Hardness 硬度		HRC 35~45			HRC 40~55			HRC 55~65			
Dia 刃徑	EFF-L 有效長	RPM 轉速	Feed (mm/min) 進給	ap (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3.0mm	6	8000	700	0.072	6400	480	0.052	8000	435	0.031	1.978
	10	7200	620	0.064	5800	430	0.046	8000	222	0.027	1.013
	16	5900	470	0.045	4700	320	0.032	8000	54	0.019	0.247
	20	5300	400	0.035	4300	280	0.025	8000	27	0.015	0.127
	25	4800	340	0.025	3900	230	0.018	8000	14	0.010	0.065
	30	4500	290	0.018	3600	200	0.013	8000	10	0.007	0.038
	35	4200	250	0.013	3300	170	0.009	-	-	-	-
4.0mm	8	6800	770	0.093	5300	500	0.070	6000	450	0.050	1.990
	12	5100	600	0.078	4100	410	0.056	6000	388	0.033	1.852
	16	4400	510	0.065	3600	350	0.046	6000	164	0.027	0.781
	20	4000	440	0.054	3200	300	0.038	6000	84	0.022	0.400
	25	3600	380	0.042	2900	260	0.030	6000	43	0.018	0.205
	30	3300	330	0.033	2600	230	0.024	6000	24	0.014	0.119
	35	3100	290	0.026	2500	200	0.019	6000	15	0.011	0.075
5.0mm	16	3500	520	0.089	2800	360	0.064	4800	457	0.038	1.907
	20	3100	440	0.085	2500	310	0.061	4800	234	0.036	0.977
	25	2800	390	0.077	2200	270	0.055	4800	120	0.033	0.500
	30	2500	340	0.066	2000	230	0.047	4800	69	0.028	0.289
	35	2300	300	0.054	1900	210	0.038	4800	43	0.022	0.182
6.0mm	20	2600	470	0.088	2100	330	0.063	4000	607	0.037	2.025
	30	2000	340	0.077	1600	240	0.055	4000	180	0.033	0.600
8.0mm	20	2300	450	0.130	1700	330	0.090	3400	580	0.050	1.600
	40	1500	250	0.800	1100	160	0.060	3400	84	0.035	0.200
10.0mm	25	2100	430	0.130	1500	310	0.080	3200	540	0.050	1.760
	45	1300	220	0.700	900	150	0.050	3200	76	0.030	0.240
12.0mm	30	2000	400	0.140	1400	280	0.080	3000	540	0.050	1.840
	50	1500	200	0.800	800	140	0.050	3000	72	0.030	0.280

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

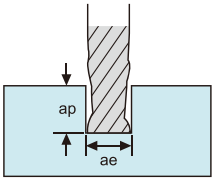


Table 015

EHSBC4, EHSRC4

Material 工件材料	PREHARDENED STEELS 調質鋼 NAK80 CENA1		HARDENED STEELS 淬火鋼 SKD61,SKD11		Hardened Steel 淬火鋼 SKD11,SKH51	
Hardness 硬度	HRC 35~45		HRC 40~55		HRC 55~65	
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	RPM 轉速	Feed (mm/min) 進給	RPM 轉速	Feed (mm/min) 進給
1mm	38000	1050	25500	710	20500	430
2mm	26000	1250	17500	840	14500	520
3mm	17300	1250	11500	840	9500	520
4mm	13200	1300	8800	880	7200	540
5mm	12500	1500	8300	1000	6400	580
6mm	10350	1400	6900	950	5300	560
8mm	7800	1350	5200	900	4000	520
10mm	6450	1260	4100	840	3200	480
12mm	5250	1260	3500	840	2650	480

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

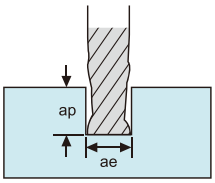


Table 016

EHBFH2, EHBSH2

Material 工件材料	PREHARDENED STEELS 調質鋼 NAK80 CENA1				HARDENED STEELS 淬火鋼 SKD61,SKD11				Hardened Steel 淬火鋼 SKD11,SKH51			
Hardness 硬度	HRC 35~45				HRC 40~55				HRC 55~65			
VC 線速度	145 (m/min)				125 (m/min)				105 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
1R	45270	1130	0.14	0.2	39030	975	0.14	0.2	32780	820	0.14	0.2
2R	22636	1358	0.28	0.4	19500	1170	0.28	0.4	16400	984	0.28	0.4
3R	15090	1130	0.42	0.6	13000	975	0.42	0.6	10930	820	0.42	0.6
4R	11320	905	0.56	0.8	9750	780	0.56	0.8	8195	655	0.56	0.8
5R	9055	770	0.7	1	7800	663	0.7	1	6555	557	0.7	1
6R	7545	680	0.84	1.2	6500	585	0.84	1.2	5460	491	0.84	1.2

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

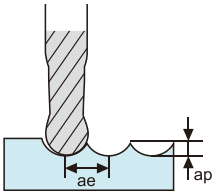


Table 017

EHBLH2, EHBMH2, EHBNH2

Material 工件材料	PREHARDENED STEELS 調質鋼 NAK80 CENA1				HARDENED STEELS 淬火鋼 SKD61,SKD11				Hardened Steel 淬火鋼 SKD11,SKH51			
Hardness 硬度	HRC 35~45				HRC 40~55				HRC 55~65			
VC 線速度	145 (m/min)				125 (m/min)				105 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
1R	36200	904	0.14	0.2	31200	780	0.14	0.2	26200	656	0.14	0.2
2R	18100	1086	0.28	0.4	15600	930	0.28	0.4	13120	787	0.28	0.4
3R	12050	904	0.42	0.6	10400	780	0.42	0.6	8750	656	0.42	0.6
4R	9050	724	0.56	0.8	7800	624	0.56	0.8	6550	524	0.56	0.8
5R	7250	616	0.7	1	6250	530	0.7	1	5250	446	0.7	1
6R	6036	544	0.84	1.2	5200	468	0.84	1.2	4370	393	0.84	1.2

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

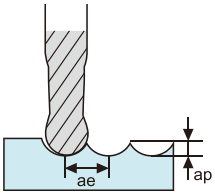


Table 018

EHBUH2

Material 工件材料	PREHARDENED STEELS 調質鋼 NAK80 CENA1				HARDENED STEELS 淬火鋼 SKD61,SKD11				Hardened Steel 淬火鋼 SKD11,SKH51			
Hardness 硬度	HRC 35~45				HRC 40~55				HRC 55~65			
VC 線速度	145 (m/min)				125 (m/min)				105 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
1R	45270	1130	0.14	0.2	39030	975	0.14	0.2	32780	820	0.14	0.2
2R	22636	1358	0.28	0.4	19500	1170	0.28	0.4	16400	984	0.28	0.4
3R	15090	1130	0.42	0.6	13000	975	0.42	0.6	10930	820	0.42	0.6
4R	11320	905	0.56	0.8	9750	780	0.56	0.8	8195	655	0.56	0.8
5R	9055	770	0.7	1	7800	663	0.7	1	6555	557	0.7	1
6R	7545	680	0.84	1.2	6500	585	0.84	1.2	5460	491	0.84	1.2

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

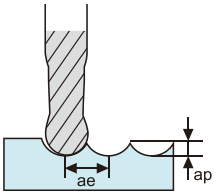


Table 019

EHBBC2, EHBRC2

Material 工件材料		PREHARDENED STEELS 調質鋼 NAK80 CENA1				HARDENED STEELS 淬火鋼 SKD61,SKD11				Hardened Steel 淬火鋼 SKD11,SKH51			
Hardness 硬度		HRC 35~45				HRC 40~55				HRC 55~65			
Radius 半徑	EFF-L 有效長	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
R0.15	1	45000	552	0.010	0.010	38000	420	0.090	0.010	38000	348	0.007	0.009
	3	40800	360	0.006	0.007	33600	264	0.005	0.005	33600	216	0.004	0.005
R0.2	1	54000	768	0.016	0.022	39600	516	0.013	0.022	39600	432	0.011	0.021
	3	44400	480	0.010	0.010	32400	312	0.009	0.010	32400	264	0.008	0.010
	5	30000	372	0.008	0.010	26400	288	0.006	0.010	26400	228	0.004	0.005
R0.25	5	34800	552	0.008	0.008	31200	444	0.007	0.010	31200	216	0.006	0.009
	10	28800	456	0.007	0.010	28800	372	0.005	0.010	27600	216	0.005	0.009
R0.3	1	39600	960	0.022	0.091	27600	600	0.019	0.091	26400	516	0.014	0.091
	5	28800	504	0.012	0.043	26400	396	0.008	0.042	26400	336	0.007	0.040
	10	24000	360	0.005	0.020	22800	312	0.004	0.020	22800	240	0.003	0.018
R0.4	2	34800	816	0.045	0.100	27600	552	0.038	0.100	26400	456	0.030	0.010
	6	28800	636	0.028	0.068	21600	420	0.020	0.068	21600	348	0.015	0.065
	10	2040	468	0.020	0.050	19200	408	0.015	0.050	16800	336	0.010	0.050
R0.5	5	33600	900	0.052	0.220	21600	540	0.040	0.220	18000	540	0.008	0.014
	10	16320	600	0.020	0.056	15000	456	0.014	0.056	13680	312	0.008	0.050
	16	13680	480	0.016	0.056	12360	384	0.012	0.056	11520	252	0.005	0.030
R0.75	10	14760	782	0.080	0.170	9720	480	0.062	0.170	9720	456	0.050	0.160
	18	12120	504	0.022	0.110	9600	432	0.020	0.110	9600	408	0.012	0.110
	30	9840	456	0.012	0.050	9480	420	0.010	0.050	9480	396	0.010	0.050
R1.0	4	21000	1392	0.180	0.350	14640	1080	0.140	0.350	14640	900	0.120	0.350
	10	21000	1224	0.140	0.230	14640	972	0.110	0.230	14640	792	0.090	0.230
	20	15960	600	0.060	0.110	12720	600	0.055	0.110	12720	492	0.035	0.110
R1.5	6	14400	1824	0.200	0.340	9840	1320	0.160	0.320	6480	732	0.160	0.320
	10	14400	1824	0.200	0.340	9840	1320	0.160	0.320	6480	732	0.160	0.300
	20	12360	1476	0.145	0.320	8520	1128	0.120	0.310	5760	660	0.080	0.300
	30	9360	816	0.100	0.150	8520	816	0.080	0.150	5760	384	0.070	0.300
R2.0	8	10440	1752	0.290	0.550	7200	1332	0.220	0.500	7200	1056	0.150	0.500
	20	10440	1752	0.290	0.550	7200	1332	0.220	0.500	7200	1056	0.150	0.500
	30	8880	1380	0.200	0.320	6600	1056	0.150	0.300	6600	816	0.130	0.300
	35	7200	1056	0.132	0.320	6600	1056	0.100	0.300	6600	816	0.090	0.300
R2.5	15	8400	1500	0.300	0.700	6000	1140	0.220	0.700	6000	900	0.200	0.650
	25	8400	1380	0.300	0.550	6000	1080	0.220	0.550	6000	816	0.200	0.500
R3.0	15	8160	1764	0.420	0.800	5760	1320	0.300	0.800	4440	864	0.300	0.800
R4.0	25	7200	1176	0.350	0.750	4920	912	0.180	0.600	4560	732	0.200	0.630
R5.0	30	5880	1128	0.370	0.900	4800	852	0.200	0.670	4200	708	0.200	0.650
R6.0	30	4800	984	0.420	0.900	4320	828	0.250	0.600	3600	600	0.250	0.600

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

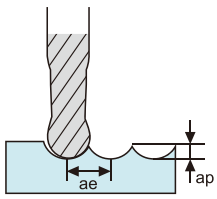
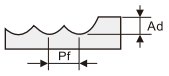


Table 020

EHBRT2

WORKING MATERIAL	HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
CODE	SKT, SKD		SKT, SKD		SKT, SKD	
HARDNESS	HRC 35~45		HRC 45~55		HRC 55~60	
Vc	260 M/min		195 M/min		130 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
1.0R	41,600	1,920	31,200	1,440	20,800	960
2.0R	20,800	1,920	15,600	1,440	10,335	955
3.0R	13,650	1,890	10,335	1,430	6,890	955
4.0R	10,335	1,910	7,735	1,430	5,200	960
5.0R	8,255	1,905	6,240	1,440	4,160	960
6.0R	6,890	1,910	5,200	1,440	3,445	955
8.0R	5,200	1,920	3,900	1,440	2,600	960
10.0R	4,160	1,920	3,120	1,440	2,080	960
Milling Amount (mm)	Ad = 0.05D Pf = 0.1D					

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

Table 021

EHCSH4

Material 工件材料	PREHARDENED STEELS 調質鋼 NAK80 CENA1				HARDENED STEELS 淬火鋼 SKD61,SKD11				Hardened Steel 淬火鋼 SKD11,SKH51			
Hardness 硬度	HRC 35~45				HRC 40~55				HRC 55~65			
VC 線速度	145 (m/min)				125 (m/min)				105 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	15390	1415	3	0.15	13270	1220	3	0.15	11150	1025	3	0.15
4mm	11550	1386	4	0.2	9950	1194	4	0.2	8360	1003	4	0.2
6mm	7700	1232	6	0.3	6630	1060	6	0.3	5570	891	6	0.3
8mm	5770	923	8	0.4	4980	796	8	0.4	4180	668	8	0.4
10mm	4620	924	10	0.5	3980	796	10	0.5	3345	669	10	0.5
12mm	3850	770	12	0.6	3320	664	12	0.6	2790	558	12	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

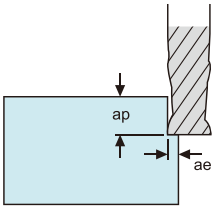


Table 022

EHCLH4

Material 工件材料	PREHARDENED STEELS 調質鋼 NAK80 CENA1				HARDENED STEELS 淬火鋼 SKD61,SKD11				Hardened Steel 淬火鋼 SKD11,SKH51			
Hardness 硬度	HRC 35~45				HRC 40~55				HRC 55~65			
VC 線速度	123 (m/min)				106 (m/min)				89 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	13080	1200	3	0.15	11280	1038	3	0.15	9480	871	3	0.15
4mm	9820	1178	4	0.2	8460	1015	4	0.2	7100	852	4	0.2
6mm	6545	1050	6	0.3	5635	900	6	0.3	4740	757	6	0.3
8mm	4905	785	8	0.4	4235	676	8	0.4	3555	568	8	0.4
10mm	3927	785	10	0.5	3385	676	10	0.5	2845	568	10	0.5
12mm	3270	655	12	0.6	2820	564	12	0.6	2370	474	12	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

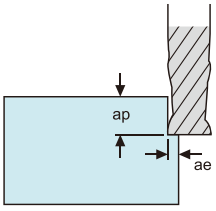


Table 023

EHCUH4

Material 工件材料	PREHARDENED STEELS 調質鋼 NAK80 CENA1				HARDENED STEELS 淬火鋼 SKD61,SKD11				Hardened Steel 淬火鋼 SKD11,SKH51			
Hardness 硬度	HRC 35~45				HRC 40~55				HRC 55~65			
VC 線速度	123 (m/min)				106 (m/min)				89 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	15390	1415	3	0.15	13270	1220	3	0.15	11150	1025	3	0.15
4mm	11550	1386	4	0.2	9950	1194	4	0.2	8360	1003	4	0.2
6mm	7700	1232	6	0.3	6630	1060	6	0.3	5570	891	6	0.3
8mm	5770	923	8	0.4	4980	796	8	0.4	4180	668	8	0.4
10mm	4620	924	10	0.5	3980	796	10	0.5	3345	669	10	0.5
12mm	3850	770	12	0.6	3320	664	12	0.6	2790	558	12	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

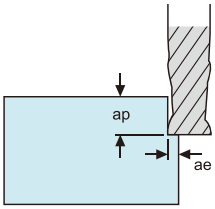


Table 024

EHCBC2, EHCRC2

Material 工件材料		PREHARDENED STEELS 調質鋼 NAK80 CENA1				HARDENED STEELS 淬火鋼 SKD61,SKD11				Hardened Steel 淬火鋼 SKD11,SKH51			
Hardness 硬度		HRC 35~45				HRC 40~55				HRC 55~65			
Dia 刃徑	EFF-L 有效長	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
1.0mm	4	13800	805	0.029	0.264	11730	655	0.034	0.264	8280	78	0.017	0.264
	10	8625	311	0.011	0.123	7475	264	0.013	0.123	5290	31	0.006	0.123
1.2mm	6	9200	575	0.018	0.088	8165	483	0.215	0.088	6095	59	0.011	0.088
	12	6670	368	0.007	0.070	5980	299	0.008	0.070	4370	37	0.004	0.070
1.5mm	4	12880	1070	0.044	0.440	11730	920	0.059	0.440	8970	121	0.032	0.440
	10	8280	736	0.031	0.282	7590	633	0.041	0.282	5865	83	0.022	0.282
	16	5865	403	0.005	0.106	5405	345	0.006	0.106	4141	45	0.003	0.106
2.0mm	6	12535	1001	0.042	0.792	11730	909	0.095	0.792	9430	130	0.035	0.792
	12	9200	805	0.030	0.440	8280	725	0.043	0.440	6785	105	0.025	0.440
	20	6900	633	0.017	0.194	6440	564	0.023	0.194	5175	82	0.014	0.194
	25	5865	541	0.005	0.132	5405	495	0.005	0.132	4255	68	0.002	0.132
2.5mm	10	10350	1001	0.051	0.528	9775	943	0.073	0.528	8165	151	0.047	0.528
	25	6210	437	0.011	0.176	5865	414	0.016	0.176	4830	65	0.010	0.176
3.0mm	10	10350	1127	0.103	0.616	9775	874	0.103	0.655	8740	196	0.073	0.655
	20	8165	863	0.071	0.567	7705	667	0.071	0.567	6900	147	0.043	0.567
	30	6900	702	0.049	0.371	6325	541	0.049	0.371	5865	115	0.028	0.362
4.0mm	13	8740	1058	0.081	1.124	7360	920	0.117	1.124	6210	210	0.083	1.124
	20	6785	978	0.053	0.880	5750	840	0.078	0.880	4830	194	0.057	0.880
	30	5750	748	0.028	0.671	4715	656	0.041	0.671	4025	149	0.030	0.708
5.0mm	16	7705	1702	0.106	1.346	5520	1139	0.150	1.346	4600	342	0.110	1.346
	30	5290	817	0.053	1.035	3795	541	0.075	1.035	3220	164	0.055	1.035
6.0mm	20	5980	1219	0.476	1.356	3565	1035	0.186	1.356	3105	393	0.145	1.356
	30	4600	909	0.410	1.304	2645	759	0.164	1.304	2300	304	0.123	1.304
8.0mm	22	5520	1081	0.419	1.518	3220	909	0.164	1.518	2760	346	0.128	1.518
10.0mm	24	4485	920	0.356	1.645	2760	771	0.139	1.645	2300	294	0.108	1.645
12.0mm	26	3795	771	0.299	2.024	2300	644	0.117	2.024	1955	247	0.091	2.024

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

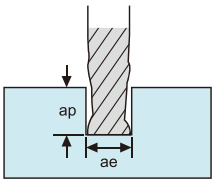


Table 025

EHCBC4, EHCRC4

Material 工件材料		PREHARDENED STEELS 調質鋼 NAK80 CENA1				Hardened Steel 淬火鋼 SKD11,SKH51			
Hardness 硬度		HRC 35~45				HRC 55~65			
Dia 刃徑	EFF-L 有效長	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
2.0mm	6	12650	1265	0.063	0.633	11730	1173	0.059	0.713
	12	8970	1012	0.045	0.396	8280	943	0.043	0.396
2.5mm	10	10580	1380	0.065	0.528	9775	1150	0.065	0.528
	20	7590	1150	0.047	0.640	7360	655	0.030	0.220
3.0mm	10	11040	2070	0.094	0.684	10235	2070	0.059	0.684
	20	8165	1495	0.057	0.567	7705	1495	0.035	0.567
4.0mm	13	9085	1576	0.105	1.150	7590	1530	0.082	1.150
	20	7130	1380	0.069	0.920	59801	1288	0.054	0.920
	30	6325	1104	0.043	0.745	5290	1058	0.033	0.745
6.0mm	20	5635	1691	0.176	2.305	3335	978	0.176	1.281
	30	2875	782	0.098	1.320	1610	460	0.098	0.733
8.0mm	22	4600	1840	0.212	2.921	2760	782	0.212	1.518
10.0mm	24	3680	2013	0.242	3.140	2185	621	0.253	1.645
12.0mm	26	2875	2070	0.265	3.105	1725	495	0.276	1.714

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

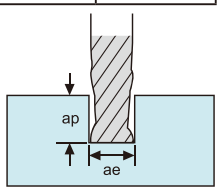


Table 026

EPSFC2, EPSSC2, EPSFA2, EPSSA2

Material 工件材料	CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼				ALLOY STEEL / TOOL STEEL 合金鋼 / 工具鋼 SCM, SKT, SKD				PREHARDENED STEEL 調質鋼 NAK80 CENA1			
Hardness 硬度	HB180~250				HRC25~35				HRC35~45			
VC 線速度	120(m/min)				95(m/min)				79(m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	12700	380	1.5	3	10000	300	0.9	3	8386	251	0.15	3
4mm	9550	382	2	4	7560	302	1.2	4	6290	251	0.2	4
6mm	6370	445	3	6	5040	352	1.8	6	4200	294	0.3	6
8mm	4770	333	4	8	3780	264	2.4	8	3140	220	0.4	8
10mm	3820	230	5	10	3020	181	3	10	2515	150	0.5	10
12mm	3180	190	6	12	2520	151	3.6	12	2100	126	0.6	12

Material 工件材料	HARDENED STEEL 淬火鋼 SKD61, SKD11				STAINLESS STEEL 不鏽鋼 SUS304 316				CAST IRON 鑄鐵 FC / FCD			
Hardness 硬度	HRC 40~55)											
VC 線速度	48(m/min)				79(m/min)				120(m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	5095	152	0.15	3	8386	251	0.15	3	12700	380	1.5	3
4mm	3820	152	0.2	4	6290	251	0.2	4	9550	382	2	4
6mm	2548	178	0.3	6	4200	294	0.3	6	6370	445	3	6
8mm	1910	133	0.4	8	3140	220	0.4	8	4770	333	4	8
10mm	1528	92	0.5	10	2515	150	0.5	10	3820	230	5	10
12mm	1274	76	0.6	12	2100	126	0.6	12	3180	190	6	12

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

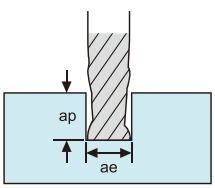


Table 027

EPSFC3, EPSSC3, EPSFC4, EPSSC4, EPSFA4, EPSSA4

Material 工件材料	CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼				ALLOY STEEL / TOOL STEEL 合金鋼 / 工具鋼 SCM, SKT, SKD				PREHARDENED STEEL 調質鋼 NAK80 CENA1			
Hardness 硬度	HB180~250				HRC25~35				HRC35~45			
VC 線速度	120 (m/min)				95 (m/min)				79 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	12700	762	3	0.15	10000	600	3	0.15	8386	503	3	0.15
4mm	9550	764	4	0.2	7560	604	4	0.2	6290	503	4	0.2
6mm	6370	890	6	0.3	5040	705	6	0.3	4200	588	6	0.3
8mm	4770	668	8	0.4	3780	529	8	0.4	3140	440	8	0.4
10mm	3820	458	10	0.5	3020	362	10	0.5	2515	301	10	0.5
12mm	3180	380	12	0.6	2520	302	12	0.6	2100	252	12	0.6

Material 工件材料	HARDENED STEEL 淬火鋼 SKD61, SKD11				STAINLESS STEEL 不鏽鋼 SUS304 316				CAST IRON 鑄鐵 FC / FCD			
Hardness 硬度	HRC 40~55)											
VC 線速度	48 (m/min)				79 (m/min)				120 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	5095	305	3	0.15	8386	503	3	0.15	12700	503	3	0.15
4mm	3820	305	4	0.2	6290	503	4	0.2	9550	503	4	0.2
6mm	2548	356	6	0.3	4200	588	6	0.3	6370	588	6	0.3
8mm	1910	267	8	0.4	3140	440	8	0.4	4770	440	8	0.4
10mm	1528	183	10	0.5	2515	301	10	0.5	3820	301	10	0.5
12mm	1274	152	12	0.6	2100	252	12	0.6	3180	252	12	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

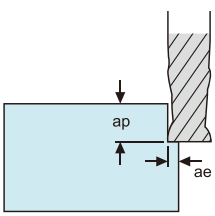


Table 028

EPSSD4

Material 工件材料	CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼				ALLOY STEEL / TOOL STEEL 合金鋼 / 工具鋼 SCM, SKT, SKD				PREHARDENED STEEL 調質鋼 NAK80 CENA1			
Hardness 硬度	HB180~250				HRC25~35				HRC35~45			
VC 線速度	120 (m/min)				80 (m/min)				60 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	12700	1270	3	1.5	8492	850	3	1.5	6370	254	3	1.5
4mm	9550	955	4	2	6370	637	4	2	4778	190	4	2
6mm	6370	1020	6	3	4246	680	6	3	3184	190	6	3
8mm	4770	954	8	4	3184	636	8	4	2388	238	8	4
10mm	3820	916	10	5	2548	610	10	5	1910	190	10	5
12mm	3180	826	12	6	2120	550	12	6	1592	190	12	6

Material 工件材料	HARDENED STEEL 淬火鋼 SKD61, SKD11				STAINLESS STEEL 不鏽鋼 SUS304 316				CAST IRON 鑄鐵 FC / FCD			
Hardness 硬度	HRC 40~55)											
VC 線速度	30 (m/min)				70 (m/min)				108 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	3184	127	3	0.6	7430	743	3	1.5	11460	1146	3	1.5
4mm	2388	95	4	0.8	5570	577	4	2	8600	860	4	2
6mm	1590	95	6	1.2	3720	595	6	3	5730	916	6	3
8mm	1194	120	8	1.6	2780	556	8	4	4300	860	8	4
10mm	955	95	10	2	2230	535	10	5	3440	825	10	5
12mm	796	95	12	2.4	1860	484	12	6	2866	750	12	6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

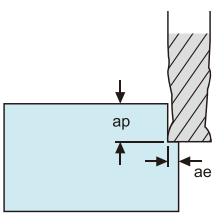


Table 029

EPSFH4, EPSSH4

Material 工件材料	CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼				ALLOY STEEL / TOOL STEEL 合金鋼 / 工具鋼 SCM, SKT, SKD				PREHARDENED STEEL 調質鋼 NAK80 CENA1			
Hardness 硬度	HB180~250				HRC25~35				HRC35~45			
VC 線速度	120 (m/min)				95 (m/min)				79 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	12700	762	4.5	0.15	10000	600	4.5	0.15	8386	503	4.5	0.15
4mm	9550	764	6	0.2	7560	604	6	0.2	6290	503	6	0.2
6mm	6370	890	9	0.3	5040	705	9	0.3	4200	588	9	0.3
8mm	4770	668	12	0.4	3780	529	12	0.4	3140	440	12	0.4
10mm	3820	458	15	0.5	3020	362	15	0.5	2515	301	15	0.5
12mm	3180	380	18	0.6	2520	302	18	0.6	2100	252	18	0.6

Material 工件材料	HARDENED STEEL 淬火鋼 SKD61, SKD11				STAINLESS STEEL 不鏽鋼 SUS304 316				CAST IRON 鑄鐵 FC / FCD			
Hardness 硬度	HRC 40~55)											
VC 線速度	48 (m/min)				79 (m/min)				120 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	5095	305	4.5	0.15	7430	743	4.5	0.15	12700	503	4.5	0.15
4mm	3820	305	6	0.2	5570	577	6	0.2	9550	503	6	0.2
6mm	2548	356	9	0.3	3720	595	9	0.3	6370	588	9	0.3
8mm	1910	267	12	0.4	2780	556	12	0.4	4770	440	12	0.4
10mm	1528	183	15	0.5	2230	535	15	0.5	3820	301	15	0.5
12mm	1274	152	18	0.6	1860	484	18	0.6	3180	252	18	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

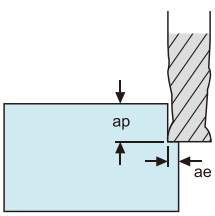


Table 030

EPSCC4, EPSCA4

Material 工件材料	CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼				ALLOY STEEL / TOOL STEEL 合金鋼 / 工具鋼 SCM, SKT, SKD				PREHARDENED STEEL 調質鋼 NAK80 CENA1			
Hardness 硬度	HB180~250				HRC25~35				HRC35~45			
VC 線速度	96 (m/min)				76 (m/min)				63 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	10160	610	3	0.15	8000	480	3	0.15	6708	402	3	0.15
4mm	7640	610	4	0.2	6048	483	4	0.2	5032	402	4	0.2
6mm	5096	712	6	0.3	4032	564	6	0.3	3360	470	6	0.3
8mm	3816	534	8	0.4	3024	423	8	0.4	2512	352	8	0.4
10mm	3056	366	10	0.5	2416	290	10	0.5	2012	240	10	0.5
12mm	2544	304	12	0.6	2016	242	12	0.6	1680	202	12	0.6

Material 工件材料	HARDENED STEEL 淬火鋼 SKD61, SKD11				STAINLESS STEEL 不鏽鋼 SUS304 316				CAST IRON 鑄鐵 FC / FCD			
Hardness 硬度	HRC 40~55)											
VC 線速度	38 (m/min)				63 (m/min)				96 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	4076	244	3	0.15	6708	402	3	0.15	10160	610	3	0.15
4mm	3056	244	4	0.2	5032	402	4	0.2	7640	610	4	0.2
6mm	2038	285	6	0.3	3360	470	6	0.3	5096	712	6	0.3
8mm	1528	214	8	0.4	2512	352	8	0.4	3816	534	8	0.4
10mm	1222	146	10	0.5	2012	240	10	0.5	3056	366	10	0.5
12mm	1016	122	12	0.6	1680	202	12	0.6	2544	304	12	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

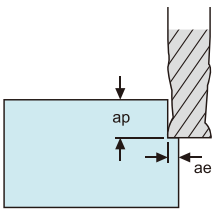


Table 031

EPSLC2, EPSMC2, EPSNC2, EPSLA2, EPSMA2, EPSNA2

Material 工件材料	CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼				ALLOY STEEL / TOOL STEEL 合金鋼 / 工具鋼 SCM, SKT, SKD				PREHARDENED STEEL 調質鋼 NAK80 CENA1			
Hardness 硬度	HB180~250				HRC25~35				HRC35~45			
VC 線速度	102 (m/min)				80 (m/min)				67 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	10800	323	1.5	3	8500	255	0.9	3	7128	213	0.15	3
4mm	8118	324	2	4	4626	256	1.2	4	5346	213	0.2	4
6mm	5414	378	3	6	4284	300	1.8	6	3570	250	0.3	6
8mm	4054	283	4	8	3210	224	2.4	8	2670	187	0.4	8
10mm	3248	195	5	10	2568	154	3	10	2138	127	0.5	10
12mm	2700	160	6	12	2142	128	3.6	12	1785	107	0.6	12

Material 工件材料	HARDENED STEEL 淬火鋼 SKD61, SKD11				STAINLESS STEEL 不鏽鋼 SUS304 316				CAST IRON 鑄鐵 FC / FCD			
Hardness 硬度	HRC 40~55)											
VC 線速度	40 (m/min)				67 (m/min)				102 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	4330	130	0.15	3	7128	213	0.15	3	10800	323	1.5	3
4mm	3247	130	0.2	4	5346	213	0.2	4	8118	324	2	4
6mm	2165	151	0.3	6	3570	250	0.3	6	5414	378	3	6
8mm	1624	113	0.4	8	2670	187	0.4	8	4054	283	4	8
10mm	1298	78	0.5	10	2138	127	0.5	10	3248	195	5	10
12mm	1082	65	0.6	12	1785	107	0.6	12	2700	160	6	12

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

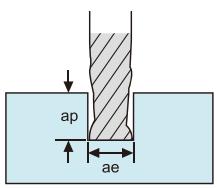


Table 032

EPSLC4, EPSMC4, EPSNC4, EPSLA4, EPSMA4, EPSNA4

Material 工件材料	CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼				ALLOY STEEL / TOOL STEEL 合金鋼 / 工具鋼 SCM, SKT, SKD				PREHARDENED STEEL 調質鋼 NAK80 CENA1			
Hardness 硬度	HB180~250				HRC25~35				HRC35~45			
VC 線速度	102 (m/min)				80 (m/min)				67 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	10800	647	3	0.15	8500	510	3	0.15	7128	427	3	0.15
4mm	8118	649	4	0.2	4626	513	4	0.2	5346	427	4	0.2
6mm	5414	756	6	0.3	4284	600	6	0.3	3570	500	6	0.3
8mm	4054	568	8	0.4	3210	450	8	0.4	2670	340	8	0.4
10mm	3248	389	10	0.5	2568	307	10	0.5	2138	255	10	0.5
12mm	2700	323	12	0.6	2142	256	12	0.6	1785	214	12	0.6

Material 工件材料	HARDENED STEEL 淬火鋼 SKD61, SKD11				STAINLESS STEEL 不鏽鋼 SUS304 316				CAST IRON 鑄鐵 FC / FCD			
Hardness 硬度	HRC 40~55)											
VC 線速度	40 (m/min)				67 (m/min)				102 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	4330	260	3	0.15	7128	427	3	0.15	10800	647	3	0.15
4mm	3247	260	4	0.2	5346	427	4	0.2	8118	649	4	0.2
6mm	2165	302	6	0.3	3570	500	6	0.3	5414	756	6	0.3
8mm	1624	226	8	0.4	2670	340	8	0.4	4054	568	8	0.4
10mm	1298	155	10	0.5	2138	255	10	0.5	3248	389	10	0.5
12mm	1082	129	12	0.6	1785	214	12	0.6	2700	323	12	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

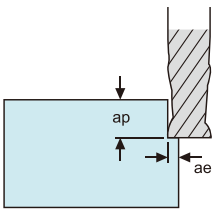


Table 033

EPSRR4

Material 工件材料	CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼				ALLOY STEEL / TOOL STEEL 合金鋼 / 工具鋼 SCM, SKT, SKD				PREHARDENED STEEL 調質鋼 NAK80 CENA1			
Hardness 硬度	HB 180~250				HRC 25~35				HRC 35~45			
VC 線速度	68 (m/min)				54 (m/min)				45 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
6mm	3600	430	6	0.6	2880	295	6	0.6	2340	200	6	0.6
8mm	2700	430	8	0.8	2160	295	8	0.8	1800	200	8	0.8
10mm	2160	430	10	1	1710	295	10	1	1440	200	10	1
12mm	1800	430	12	1.2	1440	295	12	1.2	1200	200	12	1.2

Material 工件材料	HARDENED STEEL 淬火鋼 SKD61, SKD11				STAINLESS STEEL 不鏽鋼 SUS304 316				CAST IRON 鑄鐵 FC / FCD			
Hardness 硬度	HRC 40~55											
VC 線速度	27 (m/min)				54 (m/min)				79 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
6mm	1440	85	6	0.3	2880	295	6	0.6	4320	520	6	0.6
8mm	1080	85	8	0.4	2160	295	8	0.8	3240	520	8	0.8
10mm	860	85	10	0.5	1710	295	10	1	2520	520	10	1
12mm	720	85	12	0.6	1440	295	12	1.2	2160	520	12	1.2

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

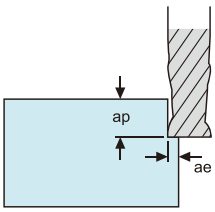


Table 034

EPSBC2, EPSRC2

Material 工件材料		Carbon Steels/Cast iron/Alloy Steels S50C/FC250/SCM/NAK		
Hardness 硬度		HRC 35~45		
Dia 刃徑	EFF-L 有效長	RPM 轉速	Feed (mm/min) 進給	ap (mm)
0.2mm	1	40000	400	0.001
	2	40000	200	0.005
0.3mm	1	40000	650	0.007
	2	40000	550	0.004
	3	40000	500	0.002
	4	30000	200	0.001
0.4mm	2	40000	800	0.007
	4	40000	800	0.003
	6	28000	350	0.001
	8	20000	200	0.001
	10	17000	150	0.001
0.5mm	4	40000	850	0.003
	6	40000	700	0.003
	8	30000	500	0.002
	12	20000	300	0.001
	14	14000	150	0.001
0.6mm	4	40000	950	0.010
	8	35000	500	0.004
	10	25000	450	0.003
	12	20000	300	0.002
	16	12000	150	0.001
0.7mm	4	40000	950	0.015
	8	30000	700	0.005
	12	9000	200	0.002
0.8mm	4	40000	1100	0.015
	8	40000	1000	0.010
	12	25000	400	0.030
	14	20000	300	0.020
0.9mm	6	40000	1300	0.020
	8	38000	1200	0.010
	10	35000	1000	0.010

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

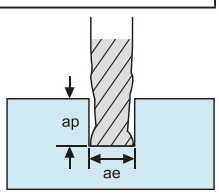


Table 035

EPSBC2, EPSRC2

Material 工件材料		**Carbon Steels/Cast iron/Alloy Steels** S50C/FC250/SCM/NAK		
Hardness 硬度		HRC 35~45		
Dia 刃徑	EFF-L 有效長	RPM 轉速	Feed (mm/min) 進給	ap (mm)
1.0mm	6	40000	1600	0.040
	8	40000	1600	0.030
	10	38000	1300	0.025
	12	30000	1000	0.02
	16	23000	600	0.010
	20	15000	400	0.005
1.2mm	6	40000	1900	0.060
	10	35000	1500	0.040
	16	15000	500	0.020
	20	6500	150	0.01
1.4mm	6	40000	1900	0.060
	10	35000	1500	0.040
	16	15000	500	0.02
	20	6500	150	0.01
1.5mm	6	40000	2400	0.1
	10	30000	1800	0.05
	12	28000	1300	0.04
	16	20000	800	0.02
	20	15000	600	0.02
1.6mm	10	30000	1800	0.07
	14	25000	1500	0.05
	18	20000	1000	0.04
1.8mm	10	30000	1800	0.07
	14	25000	1500	0.05
	18	20000	1000	0.04
2.0mm	6	40000	2400	0.18
	10	30000	1800	0.1
	12	25000	1500	0.08
	16	20000	1000	0.06
	20	12000	800	0.05
	25	9000	600	0.04
	30	8000	500	0.04
	35	6500	300	0.02

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

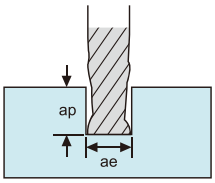


Table 036

EPSBC2, EPSRC2

Material 工件材料		Carbon Steels/Cast iron/Alloy Steels S50C/FC250/SCM/NAK		
Hardness 硬度		HRC 35~45		
Dia 刃徑	EFF-L 有效長	RPM 轉速	Feed (mm/min) 進給	ap (mm)
2.5mm	8	25000	2500	0.2
	12	20000	2000	0.15
	16	18000	1700	0.1
	20	12000	1000	0.08
	25	10000	700	0.07
	30	9000	600	0.06
	35	8500	500	0.05
3.0mm	8	20000	2000	0.3
	12	20000	1500	0.18
	16	15000	1400	0.15
	20	10000	800	0.1
	25	8000	600	0.08
	30	7000	450	0.06
	35	6000	300	0.05
4.0mm	10	20000	3200	0.3
	16	13000	2500	0.25
	20	11000	2200	0.22
	25	8000	1500	0.15
	30	6400	1200	0.12
	35	5000	700	0.08
5.0mm	16	12000	2500	0.35
	20	10000	1200	0.3
	25	8000	1000	0.25
	30	6000	900	0.2
	35	5100	750	0.15
6.0mm	20	10000	2000	0.4
	30	6000	1200	0.3
8.0mm	20	3200	910	0.18
	30	3000	800	0.15
	40	2600	600	0.12
10.0mm	25	2900	890	0.20
	35	2500	700	0.16
	45	2200	580	0.14
12.0mm	30	2500	710	0.22
	40	2300	500	0.18
	50	1900	420	0.16

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

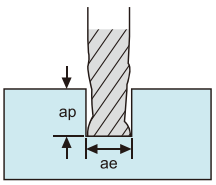


Table 037

EPSBC4, EPSRC4

Material 工件材料		Carbon Steels/Cast iron/Alloy Steels S50C/FC250/SCM/NAK		
Hardness 硬度		HRC 35~45		
Dia 刃徑	EFF-L 有效長	RPM 轉速	Feed (mm/min) 進給	ap (mm)
1.0mm	4	40000	3000	0.040
	8	36000	2400	0.030
	10	30000	1500	0.025
	12	20000	1000	0.020
	16	10000	500	0.005
1.5mm	6	40000	3200	0.060
	10	35000	2500	0.050
	12	32000	2400	0.050
	16	16000	1100	0.030
	20	10000	600	0.010
	25	9000	500	0.009
2.0mm	6	40000	4000	0.100
	10	35000	3500	0.080
	12	32000	3200	0.070
	16	24000	2400	0.050
	20	12000	1200	0.030
	25	10000	800	0.020
	30	5000	500	0.010
2.5mm	10	32000	4000	0.200
	12	28000	2500	0.120
	16	23000	1800	0.100
	20	20000	1500	0.060
	25	9000	1100	0.040
	30	2500	300	0.005
3.0mm	10	25000	3600	0.400
	12	23000	3000	0.300
	16	18000	2500	0.200
	20	15000	2000	0.150
	25	12000	1700	0.100
	30	7000	800	0.050
	35	5000	300	0.030

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

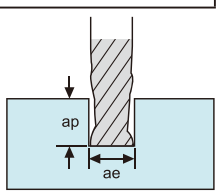


Table 038

EPSBC4, EPSRC4

Material 工件材料		Carbon Steels/Cast iron/Alloy Steels S50C/FC250/SCM/NAK		
Hardness 硬度		HRC 35~45		
Dia 刃徑	EFF-L 有效長	RPM 轉速	Feed (mm/min) 進給	ap (mm)
4mm	10	20000	3200	1.200
	12	18000	3000	1.000
	16	15000	2500	1.000
	20	12000	2000	0.500
	25	10000	1800	0.400
	30	8000	1300	0.200
5mm	20	12000	2300	1.000
	25	9500	1800	0.500
	30	6400	1200	0.200
6mm	20	11000	2200	1.200
	30	8000	1600	0.600
8mm	20	8000	1600	1.000
	30	4000	800	0.500
	40	4000	800	0.500
10mm	25	6400	1300	1.000
	35	3200	640	0.600
	45	3200	640	0.600
12mm	30	6000	1200	2.000
	40	3200	640	0.600
	50	3200	640	0.600

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

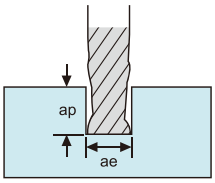
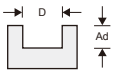


Table 039

EPSFT2, EPSST2

WORKING MATERIAL	ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		HARDENED STEEL		STAINLESS STEEL		CAST IRON	
CODE	45C,S50C,SCM		SCM,SKT,SKD		SCM,SKT,SKD		SKT, SKD		SUS 304		FC / FCD	
HARDNESS	HRC < 20		HRC 20 ~ 30		HRC 30 ~ 40		HRC 45~45		–		–	
Vc	88 M/min		71 M/min		59 M/min		35 M/min		71 M/min		103 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
1MM	26,000	190	22,230	140	18,720	100	10,400	40	22,230	165	32,760	240
2MM	14,040	235	11,232	160	9,360	110	5,616	45	11,232	185	16,380	270
3MM	9,828	270	7,488	175	6,084	120	3,900	55	7,488	205	11,232	310
4MM	7,020	260	5,616	175	4,680	120	2,808	50	5,616	205	8,424	310
5MM	5,850	270	4,446	175	3,744	120	2,340	55	4,446	205	6,552	300
6MM	4,680	260	3,744	175	3,042	120	1,872	50	3,744	205	5,616	310
8MM	3,510	260	2,808	175	2,340	120	1,404	50	2,808	205	4,212	310
10MM	2,808	260	2,223	175	1,872	120	1,131	50	2,223	205	3,276	300
Milling Amount (mm)							Ad = 0.1D (D < 3, Ad ≦ 0.05D)		Ad = 0.5D (D < 3, Ad ≦ 0.25D)			

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

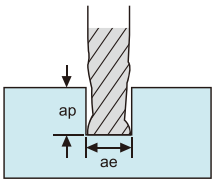


Table 040

EPBFC2, EPBSC2

Material 工件材料	CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼				ALLOY STEEL / TOOL STEEL 合金鋼 / 工具鋼 SCM, SKT, SKD				PREHARDENED STEEL 調質鋼 NAK80 CENA1			
Hardness 硬度	HB180~250				HRC25~35				HRC35~45			
VC 線速度	120 (m/min)				95 (m/min)				79 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
1R	37470	936	0.14	0.2	29660	740	0.14	0.2	24660	616	0.14	0.2
2R	18730	1120	0.28	0.4	14830	890	0.28	0.4	12330	740	0.28	0.4
3R	12490	936	0.42	0.6	9890	740	0.42	0.6	8220	616	0.42	0.6
4R	9366	750	0.56	0.8	7415	593	0.56	0.8	6170	494	0.56	0.8
5R	7490	636	0.7	1	5930	504	0.7	1	4930	420	0.7	1
6R	6244	560	0.84	1.2	4940	444	0.84	1.2	4110	370	0.84	1.2

Material 工件材料	HARDENED STEEL 淬火鋼 SKD61, SKD11				STAINLESS STEEL 不鏽鋼 SUS304 316				CAST IRON 鑄鐵 FC / FCD			
Hardness 硬度	HRC 40~55)											
VC 線速度	48 (m/min)				79 (m/min)				120 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
1R	14990	374	0.14	0.2	24660	616	0.14	0.2	37470	936	0.14	0.2
2R	7490	450	0.28	0.4	12330	740	0.28	0.4	18730	1120	0.28	0.4
3R	4995	374	0.42	0.6	8220	616	0.42	0.6	12490	936	0.42	0.6
4R	3750	300	0.56	0.8	6170	494	0.56	0.8	9366	750	0.56	0.8
5R	3000	255	0.7	1	4930	420	0.7	1	7490	636	0.7	1
6R	2500	225	0.84	1.2	4110	370	0.84	1.2	6244	560	0.84	1.2

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

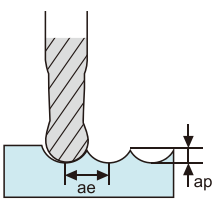


Table 041

EPBFC4, EPBSC4

Material 工件材料	CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼				ALLOY STEEL / TOOL STEEL 合金鋼 / 工具鋼 SCM, SKT, SKD				PREHARDENED STEEL 調質鋼 NAK80 CENA1			
Hardness 硬度	HB180~250				HRC25~35				HRC35~45			
VC 線速度	120 (m/min)				95 (m/min)				79 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
1R	37470	936	0.14	0.2	29660	740	0.14	0.2	24660	616	0.14	0.2
2R	18730	1120	0.28	0.4	14830	890	0.28	0.4	12330	740	0.28	0.4
3R	12490	936	0.42	0.6	9890	740	0.42	0.6	8220	616	0.42	0.6
4R	9366	750	0.56	0.8	7415	593	0.56	0.8	6170	494	0.56	0.8
5R	7490	636	0.7	1	5930	504	0.7	1	4930	420	0.7	1
6R	6244	560	0.84	1.2	4940	444	0.84	1.2	4110	370	0.84	1.2

Material 工件材料	HARDENED STEEL 淬火鋼 SKD61, SKD11				STAINLESS STEEL 不鏽鋼 SUS304 316				CAST IRON 鑄鐵 FC / FCD			
Hardness 硬度	HRC 40~55)											
VC 線速度	48 (m/min)				79 (m/min)				120 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
1R	14990	374	0.14	0.2	24660	616	0.14	0.2	37470	936	0.14	0.2
2R	7490	450	0.28	0.4	12330	740	0.28	0.4	18730	1120	0.28	0.4
3R	4995	374	0.42	0.6	8220	616	0.42	0.6	12490	936	0.42	0.6
4R	3750	300	0.56	0.8	6170	494	0.56	0.8	9366	750	0.56	0.8
5R	3000	255	0.7	1	4930	420	0.7	1	7490	636	0.7	1
6R	2500	225	0.84	1.2	4110	370	0.84	1.2	6244	560	0.84	1.2

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

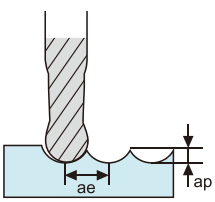


Table 042

EPBLC2, EPBMC2, EPBNC2

Material 工件材料	CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼				ALLOY STEEL / TOOL STEEL 合金鋼 / 工具鋼 SCM, SKT, SKD				PREHARDENED STEEL 調質鋼 NAK80 CENA1			
Hardness 硬度	HB180~250				HRC25~35				HRC35~45			
VC 線速度	120 (m/min)				95 (m/min)				79 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
1R	31850	796	0.14	0.2	25210	629	0.14	0.2	20960	524	0.14	0.2
2R	15920	952	0.28	0.4	12606	757	0.28	0.4	10480	629	0.28	0.4
3R	10620	796	0.42	0.6	8400	629	0.42	0.6	6990	524	0.42	0.6
4R	7960	638	0.56	0.8	6300	504	0.56	0.8	5244.5	420	0.56	0.8
5R	6370	540	0.7	1	5040	428	0.7	1	4190	357	0.7	1
6R	5308	476	0.84	1.2	4200	377	0.84	1.2	3495	315	0.84	1.2

Material 工件材料	HARDENED STEEL 淬火鋼 SKD61, SKD11				STAINLESS STEEL 不鏽鋼 SUS304 316				CAST IRON 鑄鐵 FC / FCD			
Hardness 硬度	HRC 40~55)				HRC25~35				HRC35~45			
VC 線速度	48 (m/min)				79 (m/min)				120 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
1R	12740	318	0.14	0.2	20960	524	0.14	0.2	31850	796	0.14	0.2
2R	6370	383	0.28	0.4	10480	629	0.28	0.4	15920	952	0.28	0.4
3R	4245.8	318	0.42	0.6	6990	524	0.42	0.6	10620	796	0.42	0.6
4R	3187.5	255	0.56	0.8	5244.5	420	0.56	0.8	7960	638	0.56	0.8
5R	2550	217	0.7	1	4190	357	0.7	1	6370	540	0.7	1
6R	2125	191	0.84	1.2	3495	315	0.84	1.2	5308	476	0.84	1.2

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

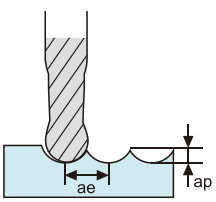


Table 043

EPBLC4, EPBMC4, EPBNC4

Material 工件材料	CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼				ALLOY STEEL / TOOL STEEL 合金鋼 / 工具鋼 SCM, SKT, SKD				PREHARDENED STEEL 調質鋼 NAK80 CENA1			
Hardness 硬度	HB180~250				HRC25~35				HRC35~45			
VC 線速度	120 (m/min)				95 (m/min)				79 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
1R	31850	796	0.14	0.2	25210	629	0.14	0.2	20960	524	0.14	0.2
2R	15920	952	0.28	0.4	12606	757	0.28	0.4	10480	629	0.28	0.4
3R	10620	796	0.42	0.6	8400	629	0.42	0.6	6990	524	0.42	0.6
4R	7960	638	0.56	0.8	6300	504	0.56	0.8	5245	420	0.56	0.8
5R	6370	540	0.7	1	5040	428	0.7	1	4190	357	0.7	1
6R	5308	476	0.84	1.2	4200	377	0.84	1.2	3495	315	0.84	1.2

Material 工件材料	HARDENED STEEL 淬火鋼 SKD61, SKD11				STAINLESS STEEL 不鏽鋼 SUS304 316				CAST IRON 鑄鐵 FC / FCD			
Hardness 硬度	HRC 40~55)				HRC25~35				HRC35~45			
VC 線速度	48 (m/min)				79 (m/min)				120 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
1R	12740	318	0.14	0.2	20960	524	0.14	0.2	31850	796	0.14	0.2
2R	6370	383	0.28	0.4	10480	629	0.28	0.4	15920	952	0.28	0.4
3R	4246	318	0.42	0.6	6990	524	0.42	0.6	10620	796	0.42	0.6
4R	3188	255	0.56	0.8	5245	420	0.56	0.8	7960	638	0.56	0.8
5R	2550	217	0.7	1	4190	357	0.7	1	6370	540	0.7	1
6R	2125	191	0.84	1.2	3495	315	0.84	1.2	5308	476	0.84	1.2

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

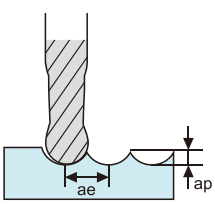


Table 044

EPBBC2, EPBRC2

Material 工件材料		PREHARDENED STEELS 調質鋼 NAK80 CENA1				HARDENED STEELS 淬火鋼 SKD61,SKD11				Copper 銅			
Hardness 硬度		HRC 35~45				HRC 40~55							
Radius 半徑	EFF-L 有效長	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
R0.15	1.5	48000	480	0.010	0.010	41000	370	0.009	0.010	54000	640	0.014	0.015
	2	43000	370	0.008	0.008	37000	270	0.008	0.008	49000	530	0.011	0.011
	3	38000	320	0.007	0.006	32000	240	0.006	0.006	43000	460	0.009	0.010
	4	28000	200	0.003	0.004	24000	160	0.003	0.004	37000	300	0.004	0.006
	5	26000	125	0.001	0.003	18000	110	0.002	0.003	31000	200	0.002	0.004
R0.2	2	48000	590	0.018	0.024	37000	400	0.015	0.020	54000	790	0.022	0.036
	4	38000	400	0.009	0.012	30000	270	0.009	0.012	50000	640	0.012	0.018
	6	29000	260	0.005	0.006	26000	200	0.004	0.006	37000	360	0.006	0.010
	8	27000	170	0.003	0.003	23000	150	0.002	0.003	27000	200	0.003	0.006
R0.25	2	42000	750	0.022	0.036	32000	500	0.018	0.036	57000	1250	0.028	0.054
	4	38000	580	0.017	0.024	31000	400	0.014	0.024	55000	1010	0.021	0.036
	6	28000	400	0.008	0.012	27000	330	0.005	0.012	36000	610	0.009	0.018
	10	28000	400	0.008	0.012	27000	330	0.005	0.012	36000	460	0.009	0.018
R0.3	2	37000	770	0.027	0.144	37000	770	0.027	0.096	57000	1540	0.034	0.144
	4	35000	600	0.020	0.108	35000	600	0.020	0.072	54000	1130	0.026	0.108
	6	28000	460	0.016	0.072	28000	460	0.016	0.048	46000	960	0.019	0.072
	8	24000	400	0.009	0.054	24000	400	0.009	0.036	30000	570	0.010	0.054
	10	24000	330	0.006	0.036	24000	330	0.006	0.024	30000	490	0.007	0.036
	12	24000	330	0.006	0.036	24000	330	0.006	0.024	30000	490	0.007	0.036
R0.35	4	33000	600	0.035	0.042	26500	410	0.029	0.096	54500	1500	0.045	0.063
	8	12215	420	0.020	0.048	22500	355	0.012	0.048	32000	800	0.019	0.072
	10	22500	380	0.014	0.042	21500	330	0.011	0.042	26500	540	0.017	0.063
	12	21500	380	0.012	0.032	21500	320	0.010	0.042	23000	420	0.017	0.063
R0.4	4	31000	600	0.050	0.012	27000	440	0.041	0.120	55000	1860	0.063	0.018
	8	21000	430	0.021	0.060	22000	390	0.018	0.060	34000	1040	0.027	0.090
	12	19000	430	0.018	0.040	20000	350	0.016	0.060	16000	350	0.027	0.090
	16	16000	430	0.013	0.018	20000	310	0.014	0.060	7600	115	0.027	0.090
R0.45	4	32000	685	0.054	0.130	24500	460	0.043	0.180	50500	1900	0.067	0.190
R0.5	4	32000	770	0.057	0.240	22000	480	0.045	0.240	46000	2000	0.071	0.360
	6	26000	760	0.055	0.120	17600	480	0.009	0.120	39000	1500	0.071	0.180
	8	26000	760	0.034	0.120	17600	480	0.027	0.120	39000	1500	0.043	0.180
	12	17600	530	0.024	0.060	16500	420	0.018	0.060	18700	660	0.027	0.090
	16	15400	440	0.018	0.060	14300	360	0.014	0.060	18700	640	0.022	0.090
	22	14300	360	0.013	0.036	13200	300	0.009	0.036	18700	540	0.017	0.054

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

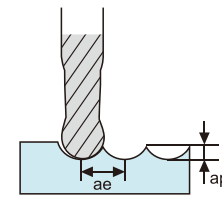


Table 045

EPBBC2, EPBRC2

Material 工件材料		PREHARDENED STEELS 調質鋼 NAK80 CENA1				HARDENED STEELS 淬火鋼 SKD61,SKD11				Copper 銅			
Hardness 硬度		HRC 35~45				HRC 40~55							
Radius 半徑	EFF-L 有效長	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
R0.6	6	26000	770	0.068	0.240	18200	480	0.054	0.240	38000	2000	0.085	0.360
	10	16400	530	0.027	0.120	15100	420	0.022	0.120	24000	1080	0.036	0.180
	12	15300	530	0.027	0.120	14100	420	0.022	0.120	24000	1080	0.036	0.180
	16	13100	460	0.019	0.096	11900	380	0.016	0.096	15400	580	0.024	0.144
	20	12100	380	0.013	0.060	11000	320	0.009	0.096	15400	580	0.017	0.090
	24	11100	320	0.009	0.040	9800	290	0.070	0.040	15400	580	0.010	0.060
R0.7	6	17600	680	0.076	0.180	13600	440	0.063	0.180	28000	1470	0.099	0.270
	8	17600	680	0.079	0.180	13600	440	0.063	0.180	28000	1470	0.099	0.270
	12	13800	530	0.033	0.180	13600	420	0.027	0.180	19800	1080	0.042	0.270
	16	13100	480	0.027	0.120	11900	390	0.021	0.120	13200	620	0.033	0.180
R0.75	4	21000	1060	0.137	0.216	14800	660	0.110	0.216	30000	2200	0.171	0.324
	8	16300	700	0.084	0.180	12100	450	0.069	0.180	26000	1500	0.106	0.270
	12	16300	700	0.084	0.180	12100	450	0.069	0.180	26000	1500	0.106	0.270
	16	12400	480	0.027	0.120	11600	390	0.022	0.120	12100	620	0.036	0.180
	20	12400	480	0.016	0.060	11600	390	0.012	0.060	12100	620	0.019	0.090
	25	12400	440	0.016	0.060	11000	390	0.012	0.060	11000	500	0.019	0.090
	30	10900	400	0.016	0.060	11000	390	0.012	0.060	10700	450	0.019	0.090
R0.8	8	18900	940	0.126	0.216	13800	580	0.102	0.216	26000	1970	0.157	0.324
	12	15100	700	0.09	0.120	11500	440	0.072	0.120	25000	1490	0.112	0.180
	16	12300	530	0.036	0.096	11400	440	0.030	0.096	17600	110	0.046	0.144
	20	11500	480	0.030	0.060	10900	400	0.024	0.060	11000	630	0.036	0.090
R0.9	6	18400	1200	0.185	0.320	18400	738	0.150	0.320	32000	2600	0.230	0.021
	12	13800	700	0.094	0.180	10300	440	0.077	0.180	21000	1480	0.120	0.270
	16	10800	530	0.039	0.120	9900	420	0.031	0.120	15400	1080	0.048	0.180
	20	10200	480	0.031	0.060	9700	400	0.025	0.060	10500	630	0.039	0.090
R1.0	6	18500	1260	0.185	0.360	13200	960	0.150	0.360	22000	2140	0.232	0.540
	10	18500	1120	0.147	0.240	13200	870	0.120	0.240	22000	1920	0.185	0.360
	12	16000	990	0.133	0.240	11700	780	0.107	0.240	18700	1470	0.166	0.360
	16	16000	990	0.118	0.240	11700	780	0.090	0.240	18700	1470	0.148	0.360
	18	14700	580	0.074	0.120	11600	580	0.061	0.120	14300	1070	0.093	0.180
	20	14700	580	0.074	0.120	11600	580	0.061	0.120	14300	1070	0.093	0.180
	25	10600	450	0.058	0.120	10200	450	0.045	0.120	9500	630	0.074	0.180

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

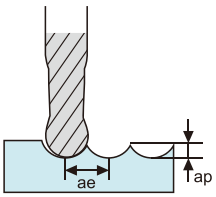


Table 046

EPBBC2, EPBRC2

Material 工件材料		PREHARDENED STEELS 調質鋼 NAK80 CENA1				HARDENED STEELS 淬火鋼 SKD61,SKD11				Copper 銅			
Hardness 硬度		HRC 35~45				HRC 40~55							
Radius 半徑	EFF-L 有效長	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
R1.25	8	14500	1400	0.185	0.240	9700	1080	0.150	0.240	18400	2400	0.232	0.360
	10	14500	1400	0.185	0.240	9700	1080	0.150	0.240	18400	2400	0.232	0.360
	16	13500	1230	0.166	0.240	8400	980	0.135	0.240	16100	1810	0.208	0.360
	20	10200	950	0.093	0.120	8400	980	0.074	0.120	11500	1330	0.116	0.180
	25	8400	540	0.074	0.120	8400	560	0.061	0.120	6900	770	0.093	0.180
	30	8400	540	0.033	0.060	8400	560	0.026	0.060	6900	770	0.040	0.090
R1.5	8	12900	1680	0.222	0.360	9200	1300	0.180	0.360	15000	2890	0.278	0.540
	12	12900	1510	0.222	0.360	9200	1170	0.180	0.360	15000	2600	0.278	0.540
	16	11300	1330	0.166	0.360	8100	1040	0.135	0.360	12700	1970	0.029	0.504
	20	11300	1330	0.166	0.360	8100	1040	0.135	0.360	12700	1970	0.029	0.504
	25	8800	1040	0.111	0.180	8100	1040	0.090	0.180	10100	1450	0.139	0.270
	30	8800	780	0.111	0.180	8100	780	0.090	0.180	10100	1450	0.139	0.270
	35	7900	62	0.055	0.180	7500	650	0.045	0.180	6600	840	0.073	0.270
R2.0	8	9700	1560	0.297	0.600	6800	1210	0.241	0.600	11500	2710	0.370	0.900
	12	9700	1560	0.297	0.600	6800	1210	0.241	0.600	11500	2710	0.390	0.900
	16	9700	1560	0.297	0.600	6800	1210	0.241	0.600	11500	2710	0.390	0.900
	20	9700	1560	0.297	0.600	6800	1210	0.241	0.600	11500	2710	0.390	0.900
	25	8400	1250	0.223	0.360	6000	980	0.180	0.36	10300	1850	0.279	0.540
	30	8400	1250	0.223	0.360	6000	980	0.180	0.361	10300	1850	0.279	0.540
	35	6600	950	0.148	0.360	6000	700	0.120	0.360	7500	1360	0.185	0.540
R2.5	15	7800	1350	0.324	0.800	5600	1050	0.252	0.800	9600	2590	0.406	0.900
	20	7800	1240	0.324	0.600	5600	950	0.252	0.600	9600	2100	0.406	0.900
	25	7800	1240	0.324	0.600	5600	950	0.252	0.600	9600	2100	0.406	0.900
	30	7800	760	0.243	0.600	4800	600	0.197	0.600	8200	1320	0.305	0.900
R3.0	15	7400	1670	0.443	1.200	5200	1300	0.360	1.200	8000	2530	0.555	1.800
R4.0	25	7200	1200	0.5	1.000	5200	920	0.350	1.000	9000	2400	0.600	1.500
R5.0	30	6800	720	0.23	0.600	4600	570	0.190	0.570	7800	1300	0.300	0.900
R6.0	30	6350	684	0.210	0.570	4370	541.5	0.181	0.550	7410	1235	0.285	0.855

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

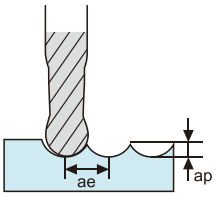


Table 047

EPBFT2, EPBST2, EPBRT2

WORKING MATERIAL	ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		HARDENED STEEL		STAINLESS STEEL		CAST IRON	
CODE	45C,S50C,SCM		SCM,SKT,SKD		SCM,SKT,SKD		SKT, SKD		SUS 304		FC / FCD	
HARDNESS	HRC < 20		HRC 20 ~ 30		HRC 30 ~ 40		HRC 45~45		–		–	
Vc	94 M/min		71 M/min		34 M/min		38 M/min		71 M/min		94 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
1.0R	26,676	700	21,060	470	15,210	280	10,660	140	21,060	555	29,718	780
2.0R	14,976	875	11,232	560	8,190	335	5,980	175	11,232	655	14,976	875
3.0R	9,828	860	7,488	560	4,914	300	3,926	170	7,488	655	9,828	860
Milling Amount (mm)	Ad = 0.05D Pf = 0.1D											

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

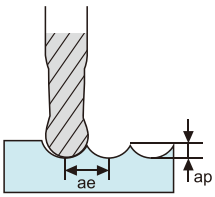


Table 048

EPCSC2

Material 工件材料	CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼				ALLOY STEEL / TOOL STEEL 合金鋼 / 工具鋼 SCM, SKT, SKD				PREHARDENED STEEL 調質鋼 NAK80 CENA1			
Hardness 硬度	HB180~250				HRC25~35				HRC35~45			
VC 線速度	120 (m/min)				95 (m/min)				79 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	12700	380	1.5	3	10000	300	0.9	3	8386	251	0.15	3
4mm	9550	382	2	4	7560	302	1.2	4	6290	251	0.2	4
6mm	6370	445	3	6	5040	352	1.8	6	4200	294	0.3	6
8mm	4770	333	4	8	3780	264	2.4	8	3140	220	0.4	8
10mm	3820	230	5	10	3020	181	3	10	2515	150	0.5	10
12mm	3180	190	6	12	2520	151	3.6	12	2100	126	0.6	12

Material 工件材料	HARDENED STEEL 淬火鋼 SKD61, SKD11				STAINLESS STEEL 不鏽鋼 SUS304 316				CAST IRON 鑄鐵 FC / FCD			
Hardness 硬度	HRC 40~55)											
VC 線速度	48 (m/min)				79 (m/min)				120 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	5095	152	0.15	3	8386	251	0.15	3	12700	380	1.5	3
4mm	3820	152	0.2	4	6290	251	0.2	4	9550	382	2	4
6mm	2548	178	0.3	6	4200	294	0.3	6	6370	445	3	6
8mm	1910	133	0.4	8	3140	220	0.4	8	4770	333	4	8
10mm	1528	92	0.5	10	2515	150	0.5	10	3820	230	5	10
12mm	1274	76	0.6	12	2100	126	0.6	12	3180	190	6	12

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

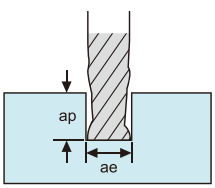


Table 049

EPCSC4

Material 工件材料	CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼				ALLOY STEEL / TOOL STEEL 合金鋼 / 工具鋼 SCM, SKT, SKD				PREHARDENED STEEL 調質鋼 NAK80 CENA1			
Hardness 硬度	HB180~250				HRC25~35				HRC35~45			
VC 線速度	120 (m/min)				95 (m/min)				79 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	12700	762	3	0.15	10000	600	3	0.15	8386	503	3	0.15
4mm	9550	764	4	0.2	7560	604	4	0.2	6290	503	4	0.2
6mm	6370	890	6	0.3	5040	705	6	0.3	4200	588	6	0.3
8mm	4770	668	8	0.4	3780	529	8	0.4	3140	440	8	0.4
10mm	3820	458	10	0.5	3020	362	10	0.5	2515	301	10	0.5
12mm	3180	380	12	0.6	2520	302	12	0.6	2100	252	12	0.6

Material 工件材料	HARDENED STEEL 淬火鋼 SKD61, SKD11				STAINLESS STEEL 不鏽鋼 SUS304 316				CAST IRON 鑄鐵 FC / FCD			
Hardness 硬度	HRC 40~55)											
VC 線速度	48 (m/min)				79 (m/min)				120 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	5095	305	3	0.15	8386	503	3	0.15	12700	503	3	0.15
4mm	3820	305	4	0.2	6290	503	4	0.2	9550	503	4	0.2
6mm	2548	356	6	0.3	4200	588	6	0.3	6370	588	6	0.3
8mm	1910	267	8	0.4	3140	440	8	0.4	4770	440	8	0.4
10mm	1528	183	10	0.5	2515	301	10	0.5	3820	301	10	0.5
12mm	1274	152	12	0.6	2100	252	12	0.6	3180	252	12	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

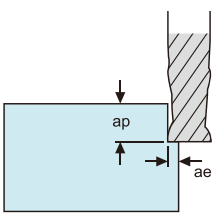


Table 050

EPCSH4

Material 工件材料	CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼				ALLOY STEEL / TOOL STEEL 合金鋼 / 工具鋼 SCM, SKT, SKD				PREHARDENED STEEL 調質鋼 NAK80 CENA1			
Hardness 硬度	HB180~250				HRC25~35				HRC35~45			
VC 線速度	120 (m/min)				95 (m/min)				79 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	12700	762	3	0.15	10000	600	3	0.15	8386	503	3	0.15
4mm	9550	764	4	0.2	7560	604	4	0.2	6290	503	4	0.2
6mm	6370	890	6	0.3	5040	705	6	0.3	4200	588	6	0.3
8mm	4770	668	8	0.4	3780	529	8	0.4	3140	440	8	0.4
10mm	3820	458	10	0.5	3020	362	10	0.5	2515	301	10	0.5
12mm	3180	380	12	0.6	2520	302	12	0.6	2100	252	12	0.6

Material 工件材料	HARDENED STEEL 淬火鋼 SKD61, SKD11				STAINLESS STEEL 不鏽鋼 SUS304 316				CAST IRON 鑄鐵 FC / FCD			
Hardness 硬度	HRC 40~55)											
VC 線速度	48 (m/min)				79 (m/min)				120 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	5095	305	3	0.15	8386	503	3	0.15	12700	503	3	0.15
4mm	3820	305	4	0.2	6290	503	4	0.2	9550	503	4	0.2
6mm	2548	356	6	0.3	4200	588	6	0.3	6370	588	6	0.3
8mm	1910	267	8	0.4	3140	440	8	0.4	4770	440	8	0.4
10mm	1528	183	10	0.5	2515	301	10	0.5	3820	301	10	0.5
12mm	1274	152	12	0.6	2100	252	12	0.6	3180	252	12	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

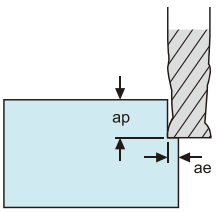


Table 051

EPCLC4

Material 工件材料	CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼				ALLOY STEEL / TOOL STEEL 合金鋼 / 工具鋼 SCM, SKT, SKD				PREHARDENED STEEL 調質鋼 NAK80 CENA1			
Hardness 硬度	HB180~250				HRC25~35				HRC35~45			
VC 線速度	102 (m/min)				80 (m/min)				67 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	10800	647	3	0.15	8500	510	3	0.15	7128	427	3	0.15
4mm	8118	649	4	0.2	4626	513	4	0.2	5346	427	4	0.2
6mm	5414	756	6	0.3	4284	600	6	0.3	3570	500	6	0.3
8mm	4054	568	8	0.4	3210	450	8	0.4	2670	340	8	0.4
10mm	3248	389	10	0.5	2568	307	10	0.5	2138	255	10	0.5
12mm	2700	323	12	0.6	2142	256	12	0.6	1785	214	12	0.6

Material 工件材料	HARDENED STEEL 淬火鋼 SKD61, SKD11				STAINLESS STEEL 不鏽鋼 SUS304 316				CAST IRON 鑄鐵 FC / FCD			
Hardness 硬度	HRC 40~55)											
VC 線速度	40 (m/min)				67 (m/min)				102 (m/min)			
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)	RPM 轉速	Feed (mm/min) 進給	ap (mm)	ae (mm)
3mm	4330	260	3	0.15	7128	427	3	0.15	10800	647	3	0.15
4mm	3247	260	4	0.2	5346	427	4	0.2	8118	649	4	0.2
6mm	2165	302	6	0.3	3570	500	6	0.3	5414	756	6	0.3
8mm	1624	226	8	0.4	2670	340	8	0.4	4054	568	8	0.4
10mm	1298	155	10	0.5	2138	255	10	0.5	3248	389	10	0.5
12mm	1082	129	12	0.6	1785	214	12	0.6	2700	323	12	0.6

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

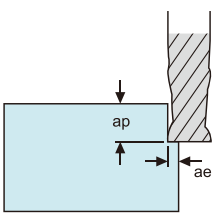


Table 052

EPCBC2, EPCRC2

Material 工件材料	CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼 SCM, SNCM, S45		ALLOY STEEL / TOOL STEEL 合金鋼 / 工具鋼 SCM, SKT, SKD		PREHARDENED STEEL 調質鋼 NAK80 CENA1	
Hardness 硬度	~HRC35		HRC35~45		HRC45~55	
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	RPM 轉速	Feed (mm/min) 進給	RPM 轉速	Feed (mm/min) 進給
1.0mm	33100	280	21600	120	13200	70
1.2mm	30000	300	18000	125	12000	70
1.5mm	26400	300	16200	130	10200	70
2.0mm	21600	310	13800	140	8640	80
2.5mm	18000	320	11400	150	7320	80
3.0mm	15900	330	10300	160	6300	80
4.0mm	12800	400	8200	200	5150	95
5.0mm	11000	500	7000	240	4560	120
6.0mm	9500	600	6000	300	3930	140
8.0mm	7200	640	4550	300	3020	140
10.0mm	6000	640	4000	300	2420	140
12.0mm	5000	500	3340	270	2000	120

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

Table 053

EPCBC4, EPCRC4

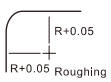
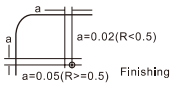
Material 工件材料	CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼 SCM, SNCM, S45		ALLOY STEEL / TOOL STEEL 合金鋼 / 工具鋼 SCM, SKT, SKD		PREHARDENED STEEL 調質鋼 NAK80 CENA1	
Hardness 硬度	~HRC35		HRC35~45		HRC45~55	
Dia（刃徑）	RPM 轉速	Feed (mm/min) 進給	RPM 轉速	Feed (mm/min) 進給	RPM 轉速	Feed (mm/min) 進給
2mm	21600	380	13800	280	8640	150
2.5mm	18000	390	11400	300	7320	150
3mm	15900	400	10300	310	6300	150
4mm	12800	500	8200	360	5150	160
5mm	11000	510	7000	430	4560	200
6mm	9500	510	6000	430	3930	200
8mm	7200	550	4550	430	3020	200
10mm	6000	550	4000	430	2420	200
12mm	5000	430	3340	380	2000	160

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

Table 054

EPIFA2, EPISA2, EPIFA4, EPISA4

WORKING MATERIAL	CARBON STEEL			ALLOY STEEL / TOOL STEEL			HARDENED STEEL		
CODE	S50C			SCM, SKD			SKT, SKD		
HARDNESS	HRC < 20			HRC 30 ~ 40			HRC 40~50		
Vc	30~40 M/min			20~30 M/min			15~25 M/min		
DIAMETER	R.P.M	ROUGHING FEED (mm/min)	FINISHING FEED (mm/min)	R.P.M	ROUGHING FEED (mm/min)	FINISHING FEED (mm/min)	R.P.M	ROUGHING FEED (mm/min)	FINISHING FEED (mm/min)
0.50R	8,800	50	80	6,400	40	55	5,100	30	50
0.75R	7,200	50	80	5,100	40	55	4,100	30	50
1.00R	5,000	50	80	3,500	40	55	3,400	30	50
1.25R	4,300	50	80	3,100	40	55	2,900	30	50
1.50R	3,000	50	80	2,200	40	55	2,600	30	50
2.00R	2,600	50	80	1,900	40	55	2,200	30	50
2.50R	2,200	50	80	1,800	40	55	2,000	30	50
3.00R	2,000	50	80	1,600	40	55	1,700	30	50
4.00R	1,500	50	80	1,200	40	55	1,300	30	50
5.00R	1,300	50	80	960	40	55	1,000	30	50
6.00R	1,200	50	80	880	40	55	900	30	50
Milling Amount (mm)	 			· Divide the cutting depth into several time paths. · Use cutting fluid.					

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

Table 055

ESSFA2, ESSSA2

WORKING MATERIAL	STAINLESS 304		Moderately Difficults SUS		STAINLESS 316 L		TITANIUM (ALLOYS)		SOFT STEEL		SG CAST IRON		High Temperature ALLOYS	
Vc	72~90 M/min		56~70 M/min		48~60 M/min		40~56 M/min		120~160 M/min		96~120 M/min		20~25 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
4MM	7,452	458	4,459	286	3,822	183	3,185	122	9,554	764	7,643	611	1,592	56
5MM	4,586	440	3,567	286	3,057	245	2,548	122	7,643	734	6,115	587	1,274	45
6MM	3,822	489	2,972	333	2,548	245	2,123	136	6,369	815	5,096	652	1,062	58
8MM	2,866	458	2,229	321	1,911	245	1,592	153	4,777	917	3,822	734	796	69
10MM	2,293	440	1,783	286	1,529	220	1,274	124	3,822	734	3,057	587	637	55
12MM	1,911	398	1,486	262	1,274	204	1,062	136	3,185	714	2,548	570	531	65
14MM	1,638	351	1,274	232	1,092	185	910	126	2,730	637	2,184	510	455	65
16MM	1,433	321	1,115	214	955	168	796	114	2,389	574	1,911	458	398	62

Milling Amount (mm)

	aa
D ≦ ø3	0.15D
ø3 < D	0.20D



	aa
D ≦ ø6	0.10D
ø6 < D	0.15D

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

Table 056

ESSFA4, ESSSA4

WORKING MATERIAL	STAINLESS 304		Moderately Difficults SUS		STAINLESS 316 L		TITANIUM (ALLOYS)		SOFT STEEL		SG CAST IRON		High Temperature ALLOYS	
Vc	72~90 M/min		56~70 M/min		48~60 M/min		40~56 M/min		120~160 M/min		96~120 M/min		20~25 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
4MM	5,732	458	4,459	286	3,822	183	3,185	122	9,554	764	7,643	611	1,592	56
5MM	4,586	440	3,567	286	3,057	245	2,548	122	7,643	734	6,115	587	1,274	45
6MM	3,822	489	2,972	333	2,548	245	2,123	136	6,369	815	5,096	652	1,062	58
8MM	2,866	458	2,229	321	1,911	245	1,592	153	4,777	917	3,822	734	796	69
10MM	2,293	440	1,783	286	1,529	220	1,274	124	3,822	734	3,057	587	637	55
12MM	1,911	398	1,486	262	1,274	204	1,062	136	3,185	714	2,548	570	531	65
14MM	1,638	351	1,274	232	1,092	185	910	126	2,730	637	2,184	510	455	65
16MM	1,433	321	1,115	214	955	168	796	114	2,389	574	1,911	458	398	62

Milling Amount (mm)

	aa
D ≦ ø3	0.15D
ø3 < D	0.20D



	aa
D ≦ ø6	0.10D
ø6 < D	0.15D

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

Table 057

ESSSD4

WORKING MATERIAL	STAINLESS 304		Moderately Difficults SUS		STAINLESS 316 L		TITANIUM (ALLOYS)		SOFT STEEL		SG CAST IRON		High Temperature ALLOYS	
Vc	72~90 M/min		56~70 M/min		48~60 M/min		40~56 M/min		120~160 M/min		96~120 M/min		20~25 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
4MM	5,732	573	4,459	357	3,822	229	3,185	153	9,554	955	7,643	764	1,592	70
5MM	4,586	550	3,567	357	3,057	306	2,548	153	7,643	917	6,115	734	1,274	56
6MM	3,822	611	2,972	416	2,548	306	2,123	170	6,369	1,019	5,096	815	1,062	72
8MM	2,866	573	2,229	401	1,911	306	1,592	191	4,777	1,146	3,822	917	796	86
10MM	2,293	550	1,783	357	1,529	275	1,274	155	3,822	917	3,057	734	637	69
12MM	1,911	497	1,486	327	1,274	255	1,062	170	3,185	892	2,548	713	531	81
14MM	1,638	439	1,274	290	1,092	231	910	157	2,730	797	2,184	638	455	82
16MM	1,433	401	1,115	268	955	210	796	143	2,389	717	1,911	573	398	78
Milling Amount (mm)	a_a = 1.0D a_r = 0.5D 												a_a = 1.0D a_r = 0.2D	
	a_d = 1.0D 												a_d = 0.3D	

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

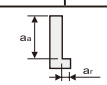
Table 058

ESSSW3, ESSSW4

WORKING MATERIAL	ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		HARDENED STEEL		STAINLESS STEEL		CAST IRON	
CODE	45C,S50C,SCM		SCM,SKT,SKD		SCM,SKT,SKD		SKT, SKD		SUS 304		FC / FCD	
HARDNESS	HRC < 20		HRC 20 ~ 30		HRC 30 ~ 40		HRC 45~45		–		–	
Vc	88 M/min		71 M/min		59 M/min		35 M/min		71 M/min		103 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
1MM	26,000	190	22,230	140	18,720	100	10,400	40	22,230	165	32,760	240
2MM	14,040	235	11,232	160	9,360	110	5,616	45	11,232	185	16,380	270
3MM	9,828	270	7,488	175	6,084	120	3,900	55	7,488	205	11,232	310
4MM	7,020	260	5,616	175	4,680	120	2,808	50	5,616	205	8,424	310
5MM	5,850	270	4,446	175	3,744	120	2,340	55	4,446	205	6,552	300
6MM	4,680	260	3,744	175	3,042	120	1,872	50	3,744	205	5,616	310
8MM	3,510	260	2,808	175	2,340	120	1,404	50	2,808	205	4,212	310
10MM	2,808	260	2,223	175	1,872	120	1,131	50	2,223	205	3,276	300
12MM	2,340	260	1,872	175	1,560	120	936	50	1,872	205	2,808	310
14MM	2,340	300	1,768	195	1,482	135	936	60	1,768	230	2,600	335
16MM	2,028	300	2,730	345	1,300	135	819	60	2,730	400	2,340	345
18MM	2,028	305	1,378	175	1,144	120	819	60	1,378	205	2,080	310
20MM	1,560	260	1,248	175	1,040	120	624	50	1,248	205	1,820	300

Milling Amount (mm)

	aa	ar
D<ø 6	1.0D	0.02D
ø6 ≦ D	1.0D	0.05D



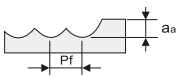
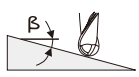
	aa	ar
D < ø 6	1.0D	0.01D
ø 6≦ D	1.0D	0.02D

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

Table 059

ESBFA2, ESBSA2

WORKING MATERIAL	ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		HARDENED STEEL		STAINLESS STEEL		CAST IRON	
CODE	45C,S50C,SCM		SCM,SKT,SKD		SCM,SKT,SKD		SKT, SKD		SUS 304		FC / FCD	
HARDNESS	HRC < 20		HRC 20 ~ 30		HRC 30 ~ 40		HRC 45~55		–		–	
Vc	94 M/min		71 M/min		44 M/min		38 M/min		71 M/min		94 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
0.5R	46,800	545	42,120	420	28,080	230	18,720	110	42,120	490	58,500	685
1.0R	26,676	700	21,060	470	15,210	280	10,660	140	21,060	555	29,718	780
2.0R	14,976	875	11,232	560	8,190	335	5,980	175	11,232	655	14,976	875
3.0R	9,828	860	7,488	560	4,914	300	3,926	170	7,488	655	9,828	860
4.0R	7,488	875	5,616	560	3,744	305	2,990	175	5,616	655	7,488	875
5.0R	5,967	870	4,446	550	2,808	285	2,379	175	4,446	650	5,967	870
6.0R	4,914	860	3,744	560	2,340	285	1,976	175	3,744	655	4,914	860
8.0R	4,160	970	3,120	620	2,028	330	1,664	195	3,120	730	4,160	970
10.0R	3,380	890	2,496	560	1,690	310	1,352	175	2,496	655	3,380	890
When β is less than 15° milling speed and feed speed in the table can be increased 1.0-1.2 times.												
Milling Amount (mm)	a_a = 0.02D Pf = 0.05D											

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

Table 060

ESCSA4

WORKING MATERIAL	ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		ALLOY STEEL / TOOL STEEL		HARDENED STEEL		STAINLESS STEEL		CAST IRON	
CODE	45C,S50C,SCM		SCM,SKT,SKD		SCM,SKT,SKD		SKT, SKD		SUS 304		FC / FCD	
HARDNESS	HRC < 20		HRC 20 ~ 30		HRC 30 ~ 40		HRC 45~45		–		–	
Vc	88 M/min		71 M/min		59 M/min		35 M/min		71 M/min		103 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
3MM	9,828	455	7,098	295	6,084	195	3,900	90	7,488	345	11,232	520
4MM	7,020	430	5,616	295	4,680	200	2,808	85	5,616	345	8,424	520
5MM	5,850	450	4,446	290	3,744	200	2,340	90	4,446	345	6,552	505
6MM	4,680	430	3,744	295	3,042	195	1,872	85	3,744	345	5,616	520
8MM	3,510	430	2,808	295	2,340	200	1,404	85	2,808	345	4,212	520
10MM	2,808	430	2,223	290	1,872	200	1,131	85	2,223	340	3,276	505
12MM	2,340	430	1,872	295	1,560	200	936	85	1,872	345	2,808	520

Milling Amount (mm)

	aa	ar
D<ø6	1.0D	0.02D
ø6≦D	1.0D	0.05D



	aa	ar
D < ø6	1.0D	0.01D
ø6≦D	1.0D	0.02D

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

Table 061

ESCSV4

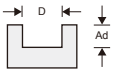
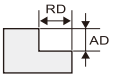
WORKING MATERIAL	STAINLESS 304		Moderately Difficults SUS		STAINLESS 316 L		TITANIUM (ALLOYS)		SOFT STEEL		SG CAST IRON		High Temperature ALLOYS	
Vc	72~90 M/min		56~70 M/min		48~60 M/min		40~56 M/min		120~160 M/min		96~120 M/min		20~25 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
4MM	5,732	573	4,459	357	3,822	229	3,185	153	9,554	955	7,643	764	1,592	70
5MM	4,586	550	3,567	357	3,057	306	2,548	153	7,643	917	6,115	734	1,274	56
6MM	3,822	611	2,972	416	2,548	306	2,123	170	6,369	1,019	5,096	815	1,062	72
8MM	2,866	573	2,229	401	1,911	306	1,592	191	4,777	1,146	3,822	917	796	86
10MM	2,293	550	1,783	357	1,529	275	1,274	155	3,822	917	3,057	734	637	69
12MM	1,911	497	1,486	327	1,274	255	1,062	170	3,185	892	2,548	713	531	81
14MM	1,638	439	1,274	290	1,092	231	910	157	2,730	797	2,184	638	455	82
16MM	1,433	401	1,115	268	955	210	796	143	2,389	717	1,911	573	398	78
Milling Amount (mm)	a_a = 1.0D a_r = 0.5D 												a_a = 1.0D a_r = 0.2D	
	a_d = 1.0D 												a_d = 0.3D	

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

Table 062

ENSFS2, ENSSS2, ENSFS3, ENSSS3, ENSCS3, ENSSH3

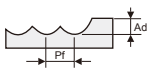
WORKING MATERIAL	ALLUMINUM ALLOY			
CODE	A5052			
	Slotting		Side Milling	
Vc	196 M/min		325 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
3MM	20,800	1,200	34,580	1,350
4MM	15,600	1,000	26,000	1,350
5MM	12,480	900	20,670	1,350
6MM	10,400	820	17,290	1,350
8MM	7,800	750	13,000	1,350
10MM	6,240	680	10,270	1,350
12MM	5,200	620	8,580	1,350
Milling Amount (mm)	Ad = 0.1D  			

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

Table 063

ENBFA2, ENBSA2

WORKING MATERIAL	ALLUMINUM ALLOY	
CODE	A5052	
Vc	327 M/min	
DIAMETER	R.P.M	FEED (mm/min)
2MM	50,700	2,000
3MM	33,800	2,000
4MM	26,000	2,000
5MM	20,800	2,000
6MM	16,900	2,000
8MM	13,000	2,000
10MM	10,400	2,000
12MM	7,800	2,000
16MM	6,500	2,000
Milling Amount (mm)	Ad = 0.1D 	

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

Table 064

EPSWH4, EPCWH4

WORKING MATERIAL	CAST IRON		ALLOY STEEL / TOOL STEEL		HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
CODE	FC / FCD		SCM,SKT,SKD		SKT,SKD		SKT, SKD		SKT,SKD	
HARDNESS	~ HRC 20		HRC 20 ~ 30		HRC 30 ~ 40		HRC 45~55		HRC 55~60	
Vc	163 M/min		143 M/min		143 M/min		122 M/min		103 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
10MM	5,200	1,150	4,550	990	4,550	830	3,900	610	3,315	400
12MM	4,420	1,150	3,770	990	3,770	830	3,250	610	2,730	400
16MM	3,250	1,150	2,730	950	2,730	830	2,340	610	1,950	390
18MM	2,860	1,150	2,470	960	2,470	830	2,080	610	1,690	390
20MM	2,600	1,150	2,210	960	2,210	830	1,950	610	1,560	390
Milling Amount (mm)										

	aa	ar
D<ø6	1.0D	0.02D
ø6≦D	1.0D	0.05D



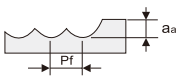
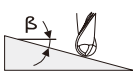
	aa	ar
D < ø6	1.0D	0.01D
ø6≦D	1.0D	0.02D

1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

Table 065

EPBWH2

WORKING MATERIAL	CAST IRON		ALLOY STEEL / TOOL STEEL		HARDENED STEEL		HARDENED STEEL		HARDENED STEEL	
CODE	FC / FCD		SCM,SKT,SKD		SKT,SKD		SKT, SKD		SKT,SKD	
HARDNESS	~ HRC 20		HRC 20 ~ 30		HRC 30 ~ 40		HRC 45~55		HRC 55~60	
Vc	163 M/min		143 M/min		143 M/min		122 M/min		103 M/min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
10MM	5,200	1,150	4,550	990	4,550	830	3,900	610	3,315	400
12MM	4,420	1,150	3,770	990	3,770	830	3,250	610	2,730	400
16MM	3,250	1,150	2,730	950	2,730	830	2,340	610	1,950	390
18MM	2,860	1,150	2,470	960	2,470	830	2,080	610	1,690	390
20MM	2,600	1,150	2,210	960	2,210	830	1,950	610	1,560	390
Milling Amount (mm)	aa = 0.02D Pf = 0.05D									

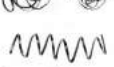
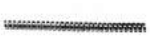
1.Use as highly rigid and accurate machine as possible.
2.If the rpm available is lower than the recommend condition, please reduce the feed rate to the same ratio.
3.Use long shank type please reduce the rpm and feed rate.
4.The Feed and RPM may be changed depending on the M/C conditions ,lubricating and cooling system.

1. 盡可能用高剛性、高精機床。
2. 機床轉速不足時，請將進給、轉速同比例下調。
3. 長柄型或偏擺過大時請視情況下調轉速、進給。
4. 以上數據為建議值，適當的條件仍須視機台狀況、夾治具品質、潤滑冷卻系統…等改變。

Cutting Tool Evaluation Report 刀具切削報告

Company 公司名				Department 部門		Name of Contact 聯絡人			
Address 地址				TEL 電話		Date 測試日期			
Material 工件	Material Name 材質名稱			Remark:					
	Hardness 硬度								
	Quantity 加工數量								
Machine 機械	Machine No. 機台型號								
	Power 主軸出力 (HP)								
Tools 工具	Brand Name 品牌								
	Part Number 型號								
	Tool Diameter 刀具刃徑								
	Tool teeth 刀具齒數								
Cutting Conditions 切削條件	N (rpm) 轉速								
	Vc (m/min) 切削速度								
	fz (mm/rev、mm/tooth) 每刃進給量								
	F (mm/min) 進給速度								
	Ad×Rd (mm) 切深 × 側深								
	Cutting time (mm/pcs) 切削時間								
	Wet / Dry 濕式 / 乾式								
Results 結果	Tool Life Criterion 壽命判定基準								
	Chips Types 切屑								
Appraise 總合評價	Overall Rating 性能，成本等總體評價								
	Accept 接受		☐ Yes ☐ No		☐ Yes ☐ No		☐ Yes ☐ No		☐ Yes ☐ No

Tool Life Criterion 壽命判定基準	① Change constant 加工數量 ② Surface roughness 表面粗糙度 ③ Dimensional change 加工精度 ④ Happen burr 產生毛邊 ⑤ Spindle load 主軸負載 ⑥ Situation of tip control 尖點損耗 ⑦ Tool wear 刀具磨損 ⑧ Chipping, breaks 崩刃 , 碎裂

Chips Types 切屑	①  ②  ③  ④ ⑤  ⑥  ⑦  ⑧ ⑨

UKAS
MANAGEMENT
SYSTEMS
ISO 9001

CARBIDEX *Indexable Milling & Turning*



Winstar
Cutting Technologies









Winstar
Cutting Technologies

Milling
銑　削

Milling Inserts 銑刀片
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Milling Insert Geometries（銑刀片刀口幾何）..... *B002*
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Cutter Types（刀桿種類）..... *B014*
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Face Milling Cutters（平面銑削）..... *B062*
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Turning
車　削

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Designations For Turning Inserts（車刀片型號編碼）..... *B112*
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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 eonomy 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



CXSN Face Milling

CXSN 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

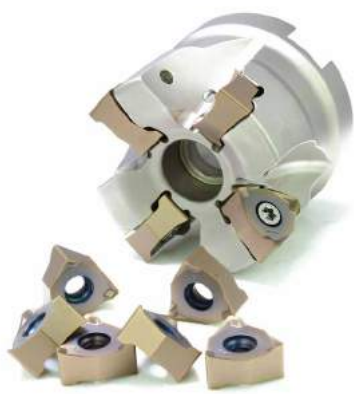


CXWN High Feed Face Milling

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 μ 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

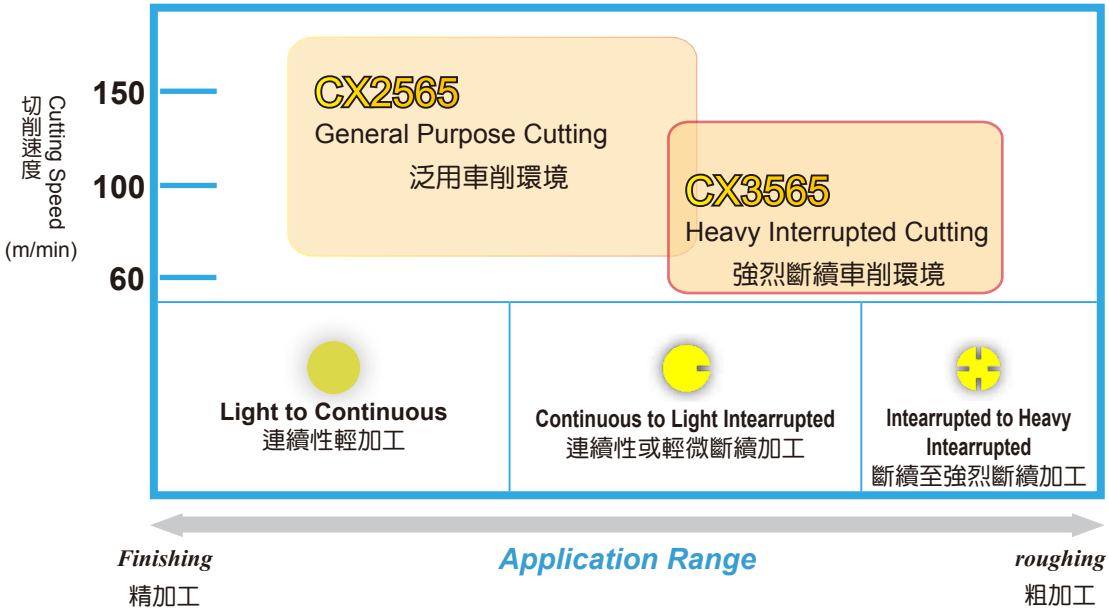
- 25+ types to choose from.
- Thick or normal coating layer structure for different applications.
- Internal turning, profiling and boring machining.
- Usable range cover from semi-finishing to roughing.

- 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.

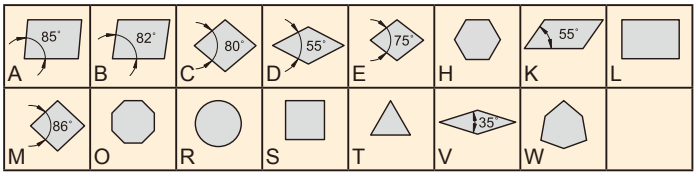
特性：

- 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。

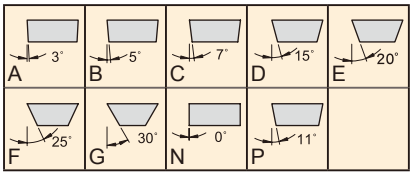
Designations For Milling Insert 刀片型號編碼

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

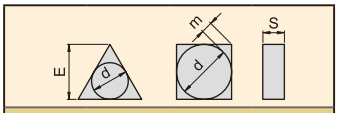
① Insert Shape



② Relief Angle



③ Tolerance

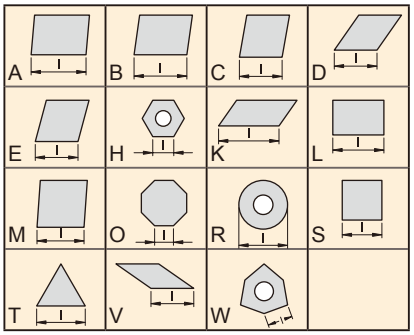


Tolerance	Range of tolerance		
	d±	m±	s±
A	0.025	0.005	0.025
C	0.025	0.013	0.025
E	0.025	0.025	0.025
F	0.013	0.005	0.025
G	0.025	0.025	0.05~0.13
H	0.013	0.013	0.025
J	0.05~0.15	0.005	0.025
K	0.05~0.15	0.013	0.025
L	0.05~0.15	0.025	0.025
M	0.05~0.15	0.08~0.2	0.05~0.13
N	0.05~0.15	0.08~0.2	0.025
U	0.08~0.25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

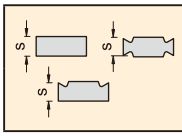
⑤ Edge Length



⑧ Cutting Edge

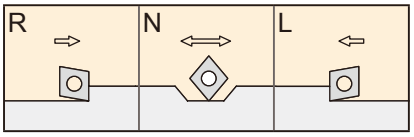
E	F	T	S
Rounded	Sharp	Chamferd	Chamferd and rounded

⑥ Thickness

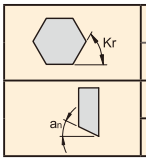


Index	01	T1	02	03	T3	04	05	06	07	09
S(mm)	1.59	1.98	2.38	3.18	3.97	4.76	5.56	6.35	7.94	9.52

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

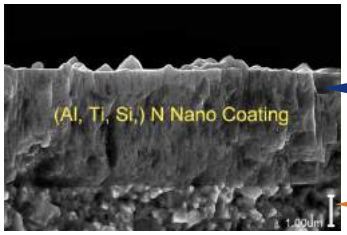
Chip breaker design

SG, MG, RG, HG

Milling Insert Grades 銑刀片材質等級

" ∞ " 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 materia 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	★ ★ ★ ★	★ ★ ★ ★ ★	●

· First choice for **mold steel**, **hardened steel** and **Ni-base superalloys**.
· High-performance premium grade with a high level of shock and heat resistance.
· Specially designed to operates at medium to high cutting speeds and is capable of retaining a secure cutting edge at high metal removal condition.

CX31NS	91.8	Ti.Si.X.N	3~4	★ ★ ★ ★	★ ★ ★ ★ ★	◔
CX31NA	91.7	Al.Ti.X.N	3~4	★ ★ ★ ★ ★	★ ★ ★ ★	◔

· **General** machining application. (**P,K**)
· Both wear resistance and impact resistance are well-balanced.
· Priority grade for medium cutting.

CX41NS	90.2	Ti.Si.X.N	3~4	★ ★ ★ ★	★ ★ ★ ★ ★	✣
CX41NA	90.3	Al.Ti.X.N	3~4	★ ★ ★ ★ ★	★ ★ ★ ★	✣

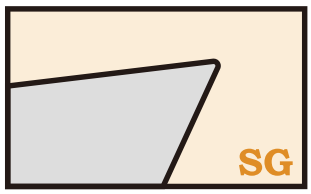
· **Stainless material** machining is recommended.
· Priority grade for roughing purpose & interrupted machining, for P, M, K.
· Excellent shock resistance ability.

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

Milling Insert Geometries

銑刀片刀口幾何

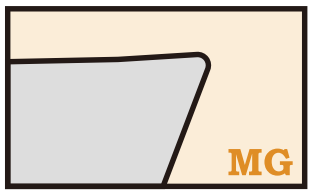
Examples of different insert geometries for a specific insert type chart.



SG - Positive and small rounded cutting edge.

Excellent surface for finishing purpose.

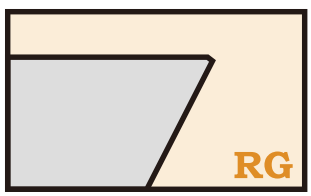
精加工及優良的表面光潔度



MG - Positive and rounded cutting edge.

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

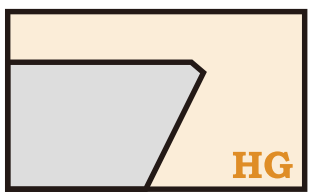
中加工刀口設計，適合低阻力及低功率的機台使用



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

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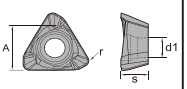
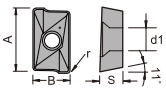
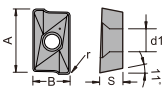
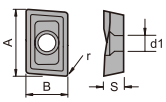
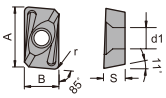
銑刀片規格總覽

	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		A	B	S	r	d1	t1				
	**3PMX 100408-MG** *T*		✓		✓	✓			6.9	-	4	0.8	3	-		B023 ~ B026		
	**APKT 100304PDER-MG** *I*		✓	✓	✓				10.5	6.7	3.5	0.4	2.8	-		B039 ~ B040		
	**APKT 100308PDER-MG** *I*		✓	✓	✓				10.5	6.7	3.5	0.8	2.8	-				
	**APKT 100304PDER-RG** *I*		✓	✓	✓				10.5	6.7	3.5	0.4	2.8	-				
	**APKT 160408PDER-MG** *I*			✓	✓	✓	✓		16.3	9.525	5.25	0.8	4.5	-		B041 ~ B044		
	**APKT 160408PDER-RG** *I*			✓	✓	✓	✓		16.3	9.525	5.25	0.8	4.5	-				
	**APMT 103508PDER-RG** *S*			✓	✓	✓	✓		10.64	6.5	3.5	0.8	3	-		B030 ~ B031		
	**APMT 113508PDER-MG** *M*		✓	✓	✓	✓	✓		11.0	6.35	3.5	0.8	2.8	-		B032 ~ B034		
	**APMT 113508PDER-RG** *M*		✓	✓	✓	✓	✓		11.0	6.35	3.5	0.8	2.8	-				
	**APMT 113508PDER-HG** *D*			✓	✓	✓	✓		11.0	6.35	3.5	0.8	2.8	-				

*Customize geometries and grades available

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銑刀片規格總覽

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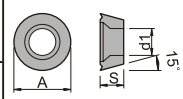
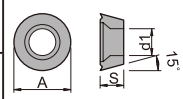
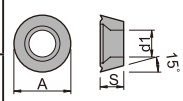
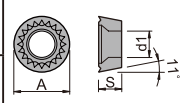
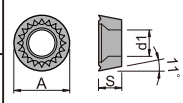
Index 銑刀片規格總覽

	P	Steel	◎	◎	◎	○	○	
	M	Stainless steel	○	○	○	◎	◎	
	K	Cast iron	◎	○	○	○	○	

◎ 1st choice ○ 2st choice

Inserts	Designation	Grade CX21NS	CX31NA	CX31NS	CX41NS	CX41NA		Dimensions (mm) A	B	S	r	d1	t1	Drawing	Cutter Page
	RDMX 12T3MOS T		✓	✓	✓	✓		12	-	3.97	-	4.1	-		-
	RDMX 12T3MOE L		✓	✓	✓	✓		12	-	3.97	-	4.1	-		
	RDMX 12T3MOT L	✓	✓	✓	✓	✓		12	-	3.97	-	4.1	-		
	RDMT 1204MOT H		✓	✓	✓	✓		12	-	4.76	-	4.4	-		B072 ~ B078
	RDMW 1204MOT W		✓	✓	✓	✓		12	-	4.76	-	4.4	-		
	RDMT 1604MOT H		✓	✓	✓	✓		16	-	4.76	-	5.5	-		B072 ~ B078
	RDMW 1604MOT H		✓	✓	✓	✓		16	-	4.76	-	5.5	-		
	RPMT 08T2MOE M		✓	✓				8	-	2.78	-	3.2	-		B079 ~ B082
	RPMT 08T2MOT M		✓	✓				8	-	2.78	-	3.2	-		
	RPMW 1003MOE M		✓	✓				10	-	3.18	-	4.6	-		B079 ~ B082
	RPMW 1003MOT M	✓	✓	✓				10	-	3.18	-	4.6	-		

*Customize geometries and grades available

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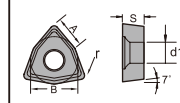
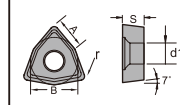
	P	Steel	◎	◎	◎	○	○	
	M	Stainless steel	○	○	○	◎	◎	
	K	Cast iron	◎	○	○	○	○	

◎ 1st choice ○ 2st choice

Inserts	Designation	Grade CX21NS	CX31NA	CX31NS	CX41NS	CX41NA		Dimensions (mm) A	B	S	r	d1	t1	Drawing	Cutter Page
	**WCMT 030208-MM** C		✓	✓				3.8	5.56	2.38	0.8	2.8	-		-
	**WCMT 040208-MM** C		✓	✓				4.3	6.35	2.38	0.8	3.0	-		-
	**WCMT 050308-MM** C		✓	✓				5.4	7.94	3.18	0.8	3.4	-		-
	**WCMT 06T308-MM** C		✓	✓	✓	✓		6.5	9.53	3.97	0.8	4.0	-		-
	**WCMT 080412-MM** C		✓	✓	✓	✓		8.7	12.7	4.76	1.2	4.3	-		-
	**WCMT 030208-MG** S			✓	✓			3.8	5.56	2.38	0.8	2.8	-		-
	**WCMT 040208-MG** S			✓	✓			4.3	6.35	2.38	0.8	3.0	-		-
	**WCMT 050308-MG** S			✓	✓			5.4	7.94	3.18	0.8	3.4	-		-
	**WCMT 06T308-MG** S			✓	✓			6.5	9.53	3.97	0.8	4.0	-		-
	**WCMT 080412-MG** S			✓	✓			8.7	12.7	4.76	1.2	4.3	-		-

*Customize geometries and grades available

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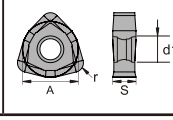
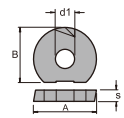
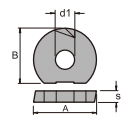
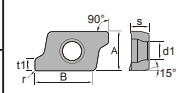
	P	Steel	◎	◎	◎	○	○	◎	
	M	Stainless steel	○	○	○	◎	◎	◎	
	K	Cast iron	◎	○	○	○	○	◎	

◎ 1st choice ○ 2st choice

Inserts	Designation	Grade CX21NS	CX31NA	CX31NS	CX41NS	CX41NA	CX11NS		Dimensions (mm) A	B	S	r	d1	t1	Drawing	Cutter Page
	*Double Sided* **WNMX 09T316-RG** *K*	✓		✓	✓				9.525	-	3.97	1.6	3.6	-		B090 ~ B092
	**WP32 16-RG** *W*						✓		16	14.0	3	-	5	-		B083 ~ B084
	**WP32 20-RG** *W*						✓		20	16.0	3	-	5	-		
	**WP32 25-RG** *W*						✓		25	21.5	4	-	6	-		
	**WP32 16-SG** *W*						✓		16	14.0	3	-	5	-		B083 ~ B084
	**WP32 20-SG** *W*						✓		20	16.0	3	-	5	-		
	**WP32 25-SG** *W*						✓		25	21.5	4	-	6	-		
	**WRT 070204-RG** *S*	✓	✓	✓					4.30	6.4	2.38	0.4	2.2	1.3		B056
	**WRT 100308-RG** *S*	✓	✓	✓					6.35	9.3	3.4	0.8	2.9	1.8		B057 ~ B058

**Customize geometries and grades available*

Winstar Cutting Technologies

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Cutter Types 刀桿種類

Shoulder Milling 方肩銑削

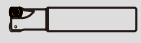
Cutter Series	Cutter Range			Inserts	Page
					
CXXN	Ø20 ~ Ø32	Ø50 ~ Ø63	Ø20 ~ Ø26	XNMX0403 ***(DoubleSide)***	B018~019
	-	Ø50 ~ Ø160	-	XNMX0806 ***(DoubleSide)***	B020
3P10	Ø20 ~ Ø26	Ø50 ~ Ø63	Ø21 ~ Ø33	3PMX1004	B024~025
XO06	Ø10 ~ Ø17	-	-	XOMT0602	B028
AP10	Ø16 ~ Ø40	Ø50 ~ Ø63	-	APMT1035	B030
BAP3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

Face Milling 平面銑削

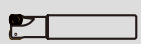
Cutter Series	Cutter Range			Inserts	Page
					
CXSN	-	Ø50 ~ Ø200	-	SNMX1205 ***(DoubleSide)***	B064
CXON	-	Ø52.9 ~ Ø102.9	-	ONMX0505 ***(DoubleSide)***	B064
ASX3	-	Ø50 ~ Ø315	-	SEMT13T3	B066
OF05	-	Ø50 ~ Ø125	-	OFMT05T3	B068
SE45	Ø32 ~ Ø63	Ø50 ~ Ø250	-	SEKT1204	B070
				SEKW1204	

Cutter Types 刀桿種類

Copy Milling 仿形銑削

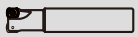
Cutter Series	Cutter Range			Inserts	Page
					
ARD	Ø10 ~ Ø16	-	Ø12 ~ Ø16	RDKW0501	B072~074
	Ø16 ~ Ø25	-	Ø16 ~ Ø25	RDKW0702	B072~074
	Ø25 ~ Ø32	Ø50 ~ Ø63	Ø25 ~ Ø42	RDMT10T3	B072~074
	Ø25 ~ Ø32	Ø50 ~ Ø63	Ø25 ~ Ø42	RDMW10T3	B072~074
	Ø32 ~ Ø40	Ø50 ~ Ø100	-	RDMT1204	B072~073
	Ø32 ~ Ø40	Ø50 ~ Ø100	-	RDMW1204	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

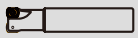
Cutter Series	Cutter Range			Inserts	Page
					
CXBN	Ø15 ~ Ø32	Ø40 ~ Ø63	Ø16 ~ Ø35	BNMX0603*(DoubleSide)*	B086~087
CXWN	Ø25 ~ Ø40	Ø50 ~ Ø80	Ø25	WNMX09T3*(DoubleSide)*	B090~091
ASRF	-	Ø50 ~ Ø80	-	SDNW1205 SDMT1205	B093
AJX12	Ø30 ~ Ø50	Ø50 ~ Ø80	-	JDMW1204	B095

Cutter Types 刀桿種類

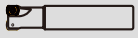
Helical Milling 玉米銑削

Cutter Series	Cutter Range			Inserts	Page
					
SPH	Ø16 ~ Ø40	-	-	SPMG...	B097

Disc Milling 三面刃銑削

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

Chamfer Milling 倒角銑削

Cutter Series	Cutter Range			Inserts	Page
					
SPC	Ø11 ~ Ø50	-	-	SPMG...	B102

CXXN */ XNMX0403 ,XNMX0806*

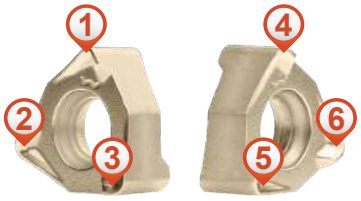
方肩銑削



Economical solution in various end-milling applications!!!

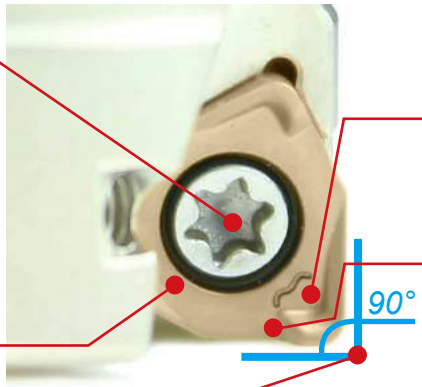
經濟多元的端銑解決方案

- *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.*



· *Chip evacuation improvement design.*

· *Reduction of cutting load during machining.*

· *Special flat design for surface roughness improvement.*

· *Decreasing cutting force during high feed machining.*

· *Suitable for different materials by optimized geometries.*

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

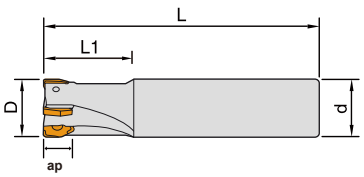
CXXN / *XNMX0403*

方肩銑削

- Great perfomance 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

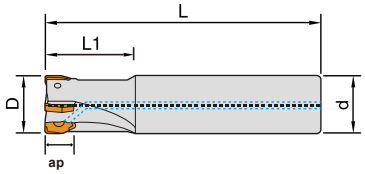




Order No.	D	L1	L	d	T	ap	Inserts	Screw	Wrench
ICXXNE03-0200150	20	40	150	20	3	4	XNMX0403	TS2512	TK08
ICXXNE04-0250150	25	40	150	25	4	4			
ICXXNE05-0320200	32	45	200	32	5	4			

CXXNE *(with Coolant Hole)*



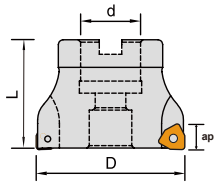


Order No.	D	L1	L	d	T	ap	Inserts	Screw	Wrench
ICXXNE03W0200110	20	28	110	20	3	4	XNMX0403	MS2506E	TK08
ICXXNE03W0200150	20	28	150	20	3	4			
ICXXNE04W0250120	25	28	120	25	4	4			
ICXXNE04W0250170	25	28	170	25	4	4			
ICXXNE05W0320130	32	30	130	30	5	4			
ICXXNE05W0320195	32	30	195	30	5	4			

Customize available.

CXXNF

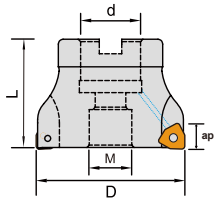




Order No.	D	L	d	T	ap	Inserts	Screw	Wrench
ICXXNF06-0500220	50	50	22	6	4	XNMX0403	TS2512	TK08
ICXXNF07-0630220	63	50	22	7	4			
ICXXNF07-0630254	63	50	25.4	7	4			

CXNNF (with Coolant Hole)

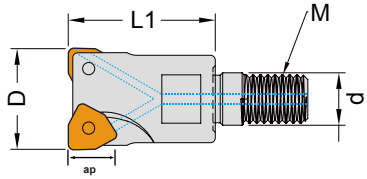




Order No.	D	L	d	M	T	ap	Inserts	Screw	Wrench
ICXXNF07W0400160	40	40	16	8.5	7	4	XNMX0403	TS2515	TK08
ICXXNF09W0500220	50	40	22	11	9	4			

CXXNM (with Coolant Hole)

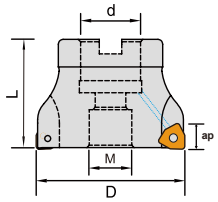




Order No.	D	L1	d	M	T	ap	Inserts	Screw	Wrench
ICXXNM03W0200100	20	28	10.5	M10	3	4	XNMX0403	TS2512	TK08
ICXXNM03W0210100	21	44	10.5	M10	3	4			
ICXXNM04W0250120	25	30	12.5	M12	4	4			
ICXXNM04W0260120	26	49	12.5	M12	4	4			

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.

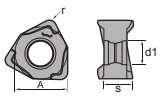


XNMX0403 / XNMX0806

方肩銑削刀片

- *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

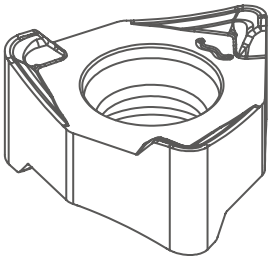
Working Material	Vc	fz	ap
Carbon Steel (HB85-225)	80 ~ 220	0.10 ~ 0.16	~ 3.0
Stainless 300 Series	50 ~ 130	0.08 ~ 0.12	~ 1.6
Cast Iron (HB140-220)	80 ~ 200	0.10 ~ 0.16	~ 3.0

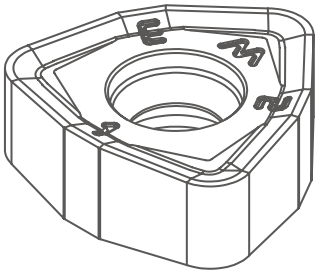
for XNMX0806

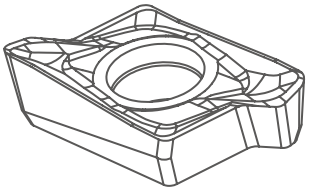
Working Material	Vc	fz	ap
Carbon Steel (HB85-225)	80 ~ 220	0.13 ~ 0.25	~ 7.0
Stainless 300 Series	50 ~ 130	0.10 ~ 0.20	~ 4.5
Cast Iron (HB140-220)	80 ~ 200	0.13 ~ 0.25	~ 7.0

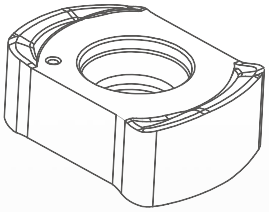
WINSTAR

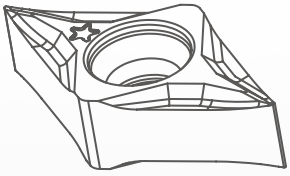
Endmills · Inserts · Drills













Winstar
Cutting Technologies

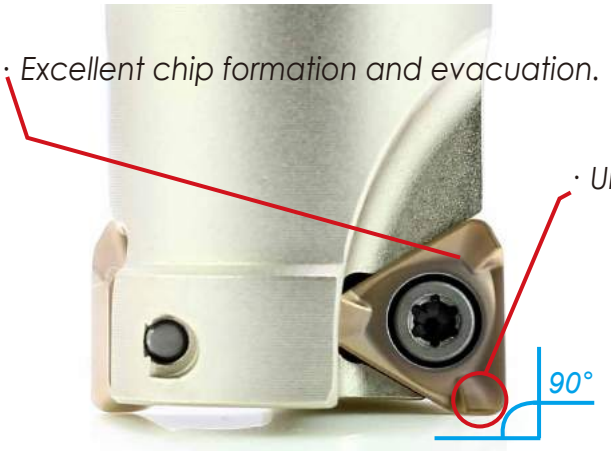
Economical Shoulder Milling Cutter



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.*



- *True 90° square shoulder angle.*

- *Unique geometry design for superb surface finish.*



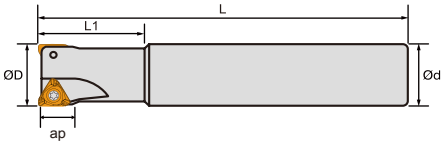
- *Low cutting force due to large rake angle.*

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



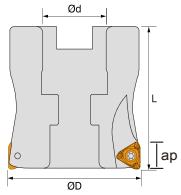


Order No.	D	L1	L	d	T	ap	Inserts	Screw	Wrench
I3P10E02-0200130	20	50	130	20	2	7	3PMX1004...	TS2517	TK09
I3P10E02-0210130	21	30	130	20	2	7			
I3P10E02-0250250	25	30	250	25	2	7			
I3P10E03-0250150	25	55	150	25	3	7			
I3P10E03-0260150	26	35	150	25	3	7			

Customize available.

3P10F



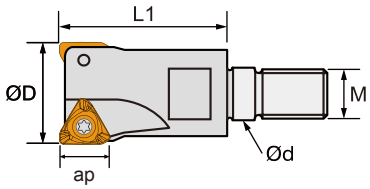


Order No.	D	L	d	T	ap	Inserts	Screw	Wrench
I3P10F07-0500220	50	50	22	7	7	3PMX1004...	TS2517	TK09
I3P10F09-0630220	63	50	22	9	7			

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.

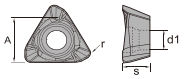


3PMX1004

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

XO06 / XOMT0602 方肩銑削



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 vibrationorces.***
- ***High performance.***

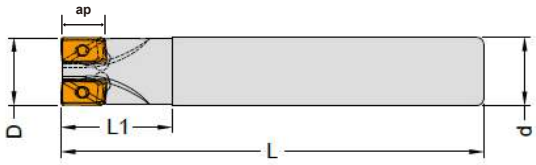
XO06 / *XOMT0602*

方肩銑削

- 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			

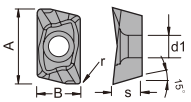
Customize available.

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

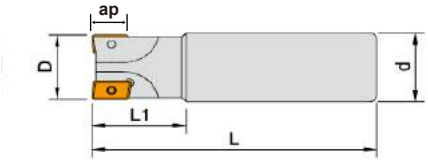
AP10 / *APMT1035*

方肩銑削

- Great perfomance 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



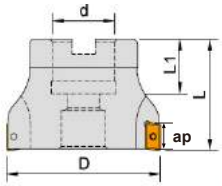


Order No.	D	L1	L	d	T	ap	Inserts	Screw	Wrench
IAP10E02-0160120	16	25	120	16	2	10	APMT1035	TS2502	TK08
IAP10E03-0200120	20	30	120	20	3	10			
IAP10E04-0250150	25	35	150	25	4	10		TS2507	
IAP10E05-0320150	32	45	150	32	5	10			
IAP10E06-0400135	40	45	135	32	6	10			

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			

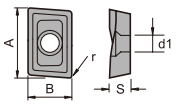
Customize available.

APMP1035

方肩銑削刀片

- *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

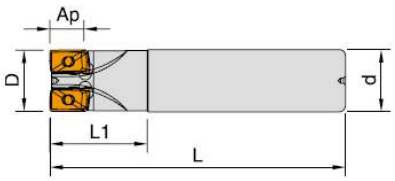
BAP3 / *APMT1135*

方肩銑削

- Great perfomance 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.

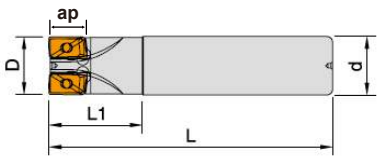
BAP3E





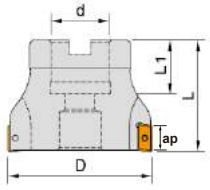
Order No.	D	L1	L	d	T	ap	Inserts	Screw	Wrench
IBAP3E02-0160100	16	25	100	16	2	11	AP…1135	TS2507	TK08
IBAP3E02-0170100	17	30	100	16	2	11			
IBAP3E02-0190100	19	30	100	16	2	11			
IBAP3E03-0200100	20	30	100	20	3	11			
IBAP3E03-0210100	21	30	100	20	3	11			
IBAP3E03-0220100	22	35	100	20	3	11			
IBAP3E03-0230100	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			

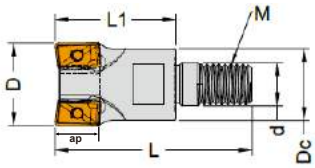
BAP3F



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



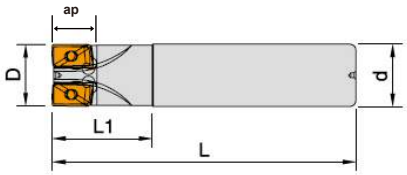


Order No.	D	Dc	L	L1	M	T	ap	Inserts	Screw	Wrench
IBAP3M02-0160080	16	15	43	26	M8	2	11	AP…1135	TS2507	TK08
IBAP3M02-0170080	17	15	43	26	M8	2	11			
IBAP3M02-0200100	20	18	49	30	M10	2	11			
IBAP3M03-0200100	20	18	49	30	M10	3	11			
IBAP3M02-0210100	21	18	49	30	M10	2	11			
IBAP3M03-0210100	21	18	49	30	M10	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

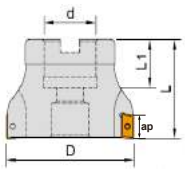




Order No.	D	L1	L	d	T	ap	Inserts	Screw	Wrench
IBAP4E02-0250150	25	40	150	25	2	16	AP…1604	TS4023	TK15
IBAP4E02-0260150	26	40	150	25	2	16			
IBAP4E02-0300150	30	40	150	25	2	16			
IBAP4E03-0320150	32	45	150	32	3	16			
IBAP4E03-0350150	35	45	150	32	3	16			
IBAP4E04-0400170	40	45	170	32	4	16			
IBAP4E02-0250200	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			

BAP4F

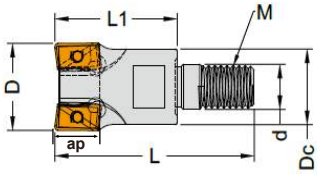




Order No.	D	L	L1	d	T	ap	Inserts	Screw	Wrench
IBAP4F04-0400160	40	40	18	16	4	16	AP…1604	TS4004	TK15
IBAP4F05-0500220	50	45	22	22	5	16			
IBAP4F05-0500254	50	45	18	25.4	5	16			
IBAP4F06-0630220	63	45	22	22	6	16			
IBAP4F06-0630254	63	45	22	25.4	6	16			
IBAP4F07-0800270	80	50	26	27	7	16			
IBAP4F07-0800254	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			

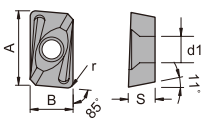
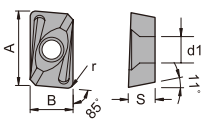


APMT1135 / APMT1604

方肩銑削刀片

- *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 perfomance 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

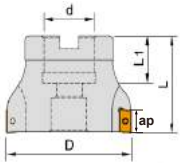




Order No.	D	L	L1	L	d	T	ap	Inserts	Screw	Wrench
IAPK3E02-0160120	16	25	25	120	16	2	10	APKT1003	TS2507	TK08
IAPK3E02-0160160	16	25	25	160	16	2	10			
IAPK3E02-0170120	17	25	25	120	16	2	10			
IAPK3E02-0170160	17	25	25	160	16	2	10			
IAPK3E02-0200120	20	30	30	120	20	2	10			
IAPK3E02-0200150	20	30	30	150	20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

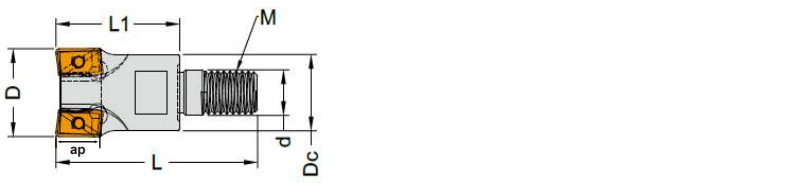
APK3F





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

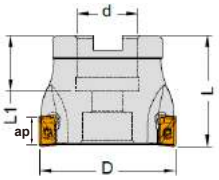




Order No.	D	L	L1	d	T	ap	Inserts	Screw	Wrench
IAPK4E02-0250150	25	150	40	25	2	16	APKT1604	TS4005	TK15
IAPK4E02-0250220	25	220	40	25	2	16			
IAPK4E02-0260150	26	150	40	25	2	16			
IAPK4E02-0260220	26	220	40	25	2	16			
IAPK4E02-0320150	32	150	45	32	2	16			
IAPK4E02-0320250	32	250	45	32	2	16			
IAPK4E02-0330150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

APK4F

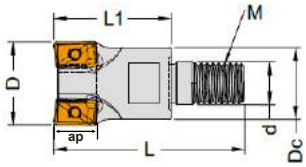




Order No.	D	L	L1	d	T	ap	Inserts	Screw	Wrench
IAPK4F09-1000320	100	55	26	32	9	16	APKT1604	TS4005	TK15
IAPK4F04-0500220	50	50	23	22	4	16			
IAPK4F05-0630220	63	50	23	22	5	16			
IAPK4F05-0630254	63	50	23	25.4	5	16			
IAPK4F06-0800270	80	55	32	27	6	16			
IAPK4F06-0800254	80	55	32	25.4	6	16			
IAPK4F08-1000320	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			

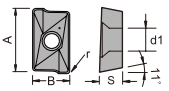
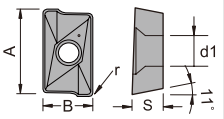


APKT1003 / APKT1604

方肩銑削刀片

- *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

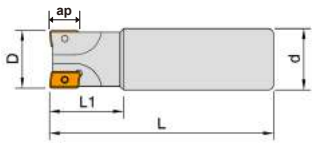
WEX2 / AXMT1235

方肩銑削

- 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.

WEX2E

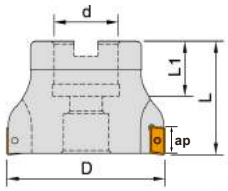




Order No.	D	L1	L	d	T	ap	Inserts	Screw	Wrench
IWEX2E02-0160120	16	35	120	16	2	12	AXMT1235	TS3002	TK09
IWEX2E02-0170120	17	35	120	16	2	12			
IWEX2E02-0180120	18	35	120	16	2	12			
IWEX2E02-0190120	19	35	120	16	2	12			
IWEX2E03-0200120	20	40	120	20	3	12			
IWEX2E03-0210120	21	40	120	20	3	12			
IWEX2E03-0220120	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



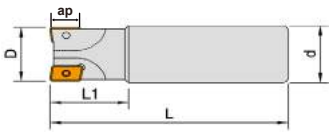


Order No.	D	L	L1	d	T	ap	Inserts	Screw	Wrench
IWEX2F06-0500220	50	45	20	22	6	12	AXMT1235	TS3002	TK09
IWEX2F07-0630220	63	45	20	22	7	12			
IWEX2F07-0630254	63	45	20	25.4	7	12			
IWEX2F08-0800270	80	50	26	27	8	12			
IWEX2F08-0800254	80	50	26	25.4	8	12			
IWEX2F10-1000320	100	50	26	32	10	12			
IWEX2F10-1000317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



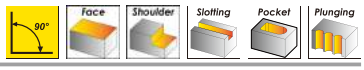
WEX7E

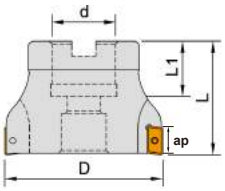




Order No.	D	L	L1	d	T	ap	Inserts	Screw	Wrench
IWEX7E02-0250150	25	150	40	25	2	17	AXMT1705	TS4004	TK15
IWEX7E02-0260150	26	150	40	25	2	17			
IWEX7E02-0270150	27	150	40	25	2	17			
IWEX7E02-0280150	28	150	40	25	2	17			
IWEX7E02-0290150	29	150	40	25	2	17			
IWEX7E02-0300150	30	150	40	25	2	17			
IWEX7E02-0310150	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			

WEX7F





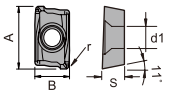
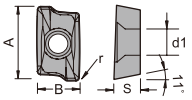
Order No.	D	L	L1	d	T	ap	Inserts	Screw	Wrench
IWEX7F04-0500220	50	45	20	22	4	17	AXMT1705	TS4004	TK15
IWEX7F05-0630220	63	45	20	22	5	17			
IWEX7F05-0630254	63	45	20	25.4	5	17			
IWEX7F06-0800270	80	50	26	27	6	17			
IWEX7F06-0800254	80	50	26	25.4	6	17			
IWEX7F07-1000320	100	50	26	32	7	17			
IWEX7F07-1000317	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 ○ 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		
	**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

JD15 / JDMT1505 方肩銑削

- 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			

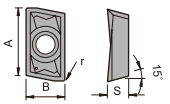


JD15 / JDMT1505 方肩銑削刀片

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

Specification

										◎ 1st choice ○ 2st choice
	P	Steel	◎	◎	◎	○	○			
	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

R390 / *W39011T3*

方肩銑削

- Finishing and roughing capability in one optimized tool, specially designed for high speed machining.
- High removal rates cab 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



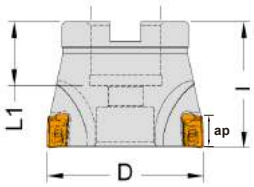


Order No.	D	L1	L	d	T	ap	Inserts	Screw	Wrench
IR390E02 - 0160150	16	30	150	16	2	11	W390 11T3	TS2507	TK08
IR390E02 - 0170150	17	30	150	16	2	11			
IR390E02 - 0180150	18	30	150	16	2	11			
★ IR390E02W0200150	20	30	150	20	2	11			
IR390E03 - 0200150	20	30	150	20	3	11			
IR390E02 - 0210150	21	30	150	20	2	11			
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



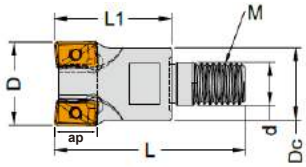


Order No.	D	L	L1	d	Dc	T	ap	Inserts	Screw	Wrench
IR390F04-0500220	50	40	21	22	42	4	11	W390 11T3	TS2503-8	TK08
IR390F05-0500220	50	40	21	22	42	5	11			
IR390F05-0630220	63	40	21	22	50	5	11			
IR390F06-0630220	63	40	21	22	50	6	11			
IR390F06-0800270	80	50	23	27	60	6	11			
IR390F08-0800270	80	50	23	27	60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



R390M





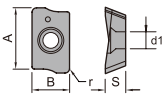
Order No.	D	Dc	L	L1	M	d	T	ap	Inserts	Screw	Wrench
IR390M02-0160080	16	15	43	26	M8	6.5	2	11	W390 11T3	TS2503-8	TK08
IR390M02-0170080	17	15	43	26	M8	8.5	2	11			
IR390M02-0180080	18	15	43	32	M8	8.5	2	11			
IR390M02-0200010	20	18	50	32	M10	10.5	2	11			
IR390M03-0200010	20	18	50	32	M10	10.5	3	11			
IR390M02-0210010	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.

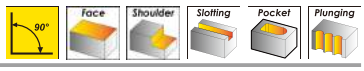
RT07E

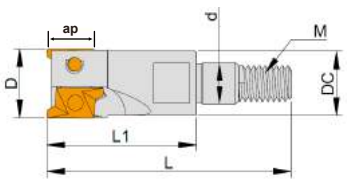




Order No.	D	L1	L	d	T	ap	Inserts	Screw	Wrench
IRT07E02-0110100	11	18	100	10	2	6	WRT0702	TS2003	TK06
IRT07E02-0130100	13	20	100	12	2	6			

RT07M

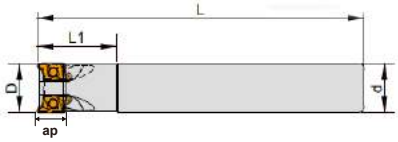




Order No.	D	L	L1	M	d	T	ap	Inserts	Screw	Wrench
IRT07M02-0100050	10	31	18	M5	5.5	2	6	WRT0702	TS2003	TK06
IRT07M02-0110050	11	31	18	M5	5.5	2	6			
IRT07M02-0120060	12	34	20	M5	6.5	2	6			
IRT07M02-0130060	13	34	20	M5	6.5	2	6			

RT10E

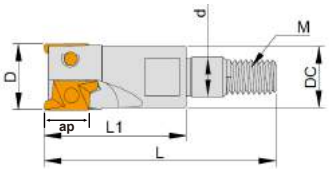




Order No.	D	L1	L	d	T	ap	Inserts	Screw	Wrench
IRT10E02-0170150	17	30	150	16	2	9	WRT1003	TS2515	TK08
IRT10E03-0210150	21	30	150	20	3	9			
IRT10E03-0260150	26	40	150	25	3	9			
IRT10E04-0330150	33	40	150	32	4	9			
IRT10E04-0350150	35	40	150	32	4	9			

RT10M





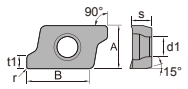
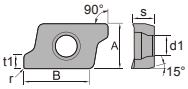
Order No.	D	L	L1	M	d	T	ap	Inserts	Screw	Wrench
IRT10M02-0170080	17	47	30	M8	25	2	9	WRT1003	TS2515	TK08
IRT10M03-0210100	21	49	32	M10	32	3	9			
IRT10M03-0260120	26	110	40	M12	20	3	9			
IRT10M04-0330160	33	110	40	M16	25	4	9			
IRT10M04-0350160	35	115	40	M16	32	4	9			

WRT0702 / WRT1003

方肩銑削刀片

- *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

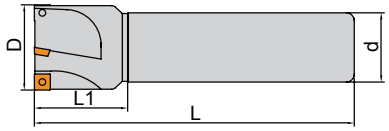
for WRT1003

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

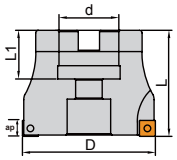




Order No.	D	L1	L	d	T	ap	Inserts	Screw	Wrench
ISP05E02-0120100	12	20	100	12	2	5	SPMG0502	TS2003	TK06
ISP05E02-0130100	13	20	100	12	2	5			
ISP05E02-0140100	14	20	100	12	2	5			
ISP05E02-0150100	15	20	100	12	2	5			
ISP06E02-0160120	16	25	120	16	2	6	SPMG0602	TS2205	TK06
ISP06E02-0170120	17	25	120	16	2	6			
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			

SPF06F/09F



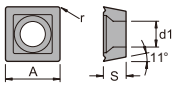


Order No.	D	L1	L	d	T	ap	Inserts	Screw	Wrench
ISP06F06-0400160	40	18	40	16	6	6	SPMG0602	TS2205	TK06
ISP06F07-0500220	50	20	45	22	7	6			
ISP06F07-0500254	50	20	45	25.4	7	6			
ISP06F09-0630220	63	20	45	22	9	6			
ISP06F09-0630254	63	20	45	25.4	9	6			
ISP06F11-0800270	80	23	50	27	11	6			
ISP06F11-0800254	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

CXSN / *SNMX1205*

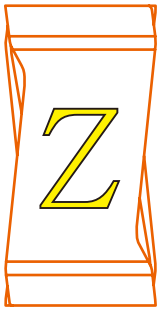
平面銑削



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

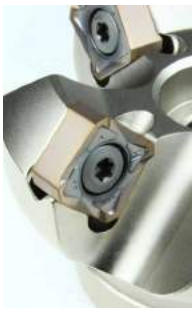
獨特的刀口幾何設計將平面銑削的震動頻率最小化

- *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!!

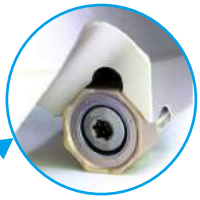
以八角與四角型刀片達成最經濟的面銑加工效益！！

- 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)

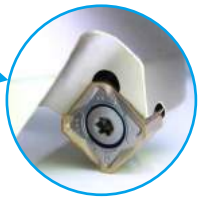




RG

· Square insert

SNMX1205 (Total 8 cutting edges)





MG

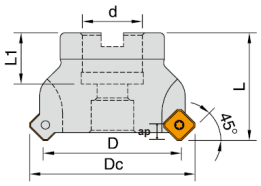


RG

CXSN ,CXON / *SNMX1205 ,ONMX0505* 平面銑削

- 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.

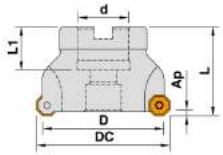
CXSNF



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 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.*

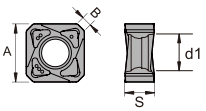
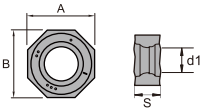
Customize available.

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

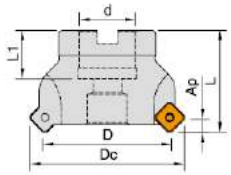
Working Material	Vc	fz	ap	
			SNMX1205	ONMX0505
Carbon Steel (HB85-225)	80 ~ 200	0.10 ~ 0.30	~ 6.0	~ 2.0
Stainless 300 Series	50 ~ 110	0.08 ~ 0.25	~ 3.6	~ 1.5
Cast Iron (HB140-220)	80 ~ 180	0.10 ~ 0.30	~ 6.0	~ 2.0

ASX3 / *SEMT13T3*

平面銑削

- Great perfomance 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

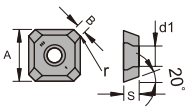
SEMT13T3

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

									◎ 1st choice ○ 2st choice
	P	Steel	◎	◎	◎	○	○		
	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

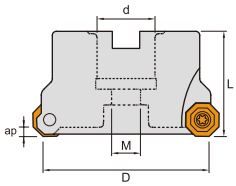
Working Material	Vc	fz	ap
Carbon Steel (HB85-225)	80 ~ 200	0.10 ~ 0.30	~ 5.5
Stainless 300 Series	50 ~ 110	0.08 ~ 0.25	~ 3.0
Cast Iron (HB140-220)	80 ~ 180	0.10 ~ 0.30	~ 5.0
Aluminium Alloy	300 ~ 1000	0.10 ~ 0.40	~ 5.5

OF05 / *OFMT05T3*

平面銑削

- Great perfomance 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			



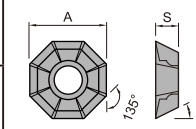
OFMT05T3 平面銑削刀片

- *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	◎	◎	◎	○	○	
	M	Stainless steel	○	○	○	◎	◎	
	K	Cast iron	◎	○	○	○	○	

◎ 1st choice ○ 2st choice

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

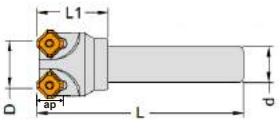
Working Material	Vc	fz	ap
Carbon Steel (HB85-225)	80 ~ 200	0.10 ~ 0.20	~ 2.8
Stainless 300 Series	50 ~ 110	0.07 ~ 0.13	~ 1.7
Cast Iron (HB140-220)	80 ~ 180	0.10 ~ 0.20	~ 2.8

SE45 / *SEKT1204 , SEKW1204*

平面銑削

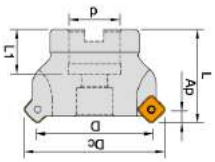
- Great perfomance ensured at large depth of cutting operations due to strong cutting edge and low cutting resistance.
- Innovative curve cutting edge design ensure ideal 45 degree cutting.
- Nickel contain plating applied for excellent corrosion resistance effect also increase surface hardness.
- To 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 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



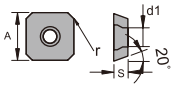
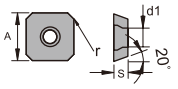
Order No.	D	L	L1	d	Dc	T	ap	Inserts	Screw	Wrench
ISE45F04-0500220	50	40	20	22	64	4	6	SEKT1204 SEKW1204	TS5006	TK20
ISE45F05-0630220	63	45	21	22	77	5				
ISE45F05-0630254	63	45	21	25.4	77	5				
ISE45F06-0800270	80	50	26	27	94	6				
ISE45F06-0800317	80	50	26	31.75	94	6				
ISE45F06-1000320	100	32	32	32	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	-	

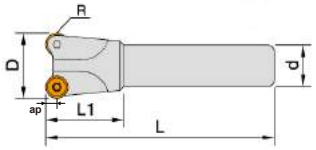
Recommended Cutting Conditions

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

ARD / RD.. Inserts 仿形銑削

- Great perfomance 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.

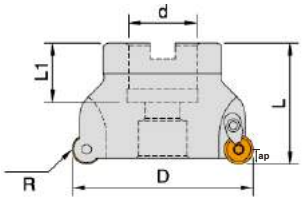
ARD05E/07E/10E/12E



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			
IARD07E03-0160130	16	40	130	16	3.5	3	3.5	RDKW0702	TS2015	TK08
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			
IARD07E04-0250200	25	60	200	25	3.5	4	3.5			
IARD10E02-0250150	25	45	150	25	5.0	2	5	RDMT10T3 RDMW10T3	TS3504	TK15
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			
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	RDMT1204 RDMW1204	TS4008	TK15
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

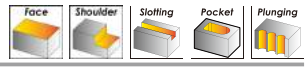


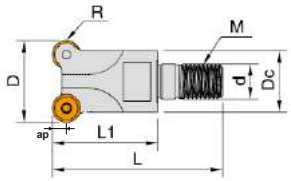


Order No.	D	L	L1	d	R	T	ap	Inserts	Screw	Wrench	Clamp	Clamp Screw
IARD10F04-0500220	50	45	22	22	5	4	5	RDMT10T3 RDMW10T3	TS3504	TK15	RD-45	TS4009
IARD10F06-0630220	63	45	22	22	5	6	5					
IARD12F04-0500220	50	45	22	22	6	4	6	RDMT1204 RDMW1204	TS4008	TK15	RD-6R	TS5004
IARD12F05-0500220	50	45	22	22	6	5	6					
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					
IARD16F04-0630220	63	45	22	22	8	4	8	RDMT1604 RDMW1604	TS5007	TK20	RD-68	TS5009
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

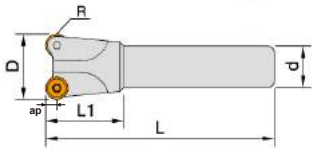




Order No.	D	Dc	L	L1	M	d	T	ap	Inserts	Screw	Wrench
IARD05M02-0120060	12	11	36	21	M06	6.5	2	2.5	RDKW0501	TS2003	TK06
IARD05M03-0120060	12	11	36	21	M06	6.5	3	2.5			
IARD05M03-0160080	16	15	43	26	M08	8.5	3	2.5			
IARD05M04-0160080	16	15	43	26	M08	8.5	4	2.5			
IARD07M02-0160080	16	15	43	26	M08	8.5	2	3.5	RDKW0702	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			
IARD10M02-0250120	25	23	60	38	M12	12.5	2	5	RDMT10T3 RDMW10T3	TS3504	TK10
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			



FRDE

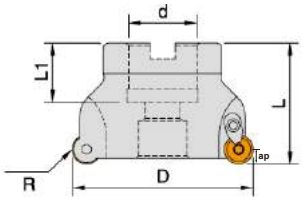


Order No.	D	L1	L	d	T	ap	Inserts	Screw	Wrench
IFRDE02-0200150	20	40	150	20	2	5	RDMT1003 RDMX1003	MS3507A	TF15
IFRDE02-0200200	20	40	200	20	2	5			
IFRDE02-0210150	21	25	150	20	2	5			
IFRDE02-0210200	21	25	200	20	2	5			
IFRDE03-0250150	25	40	150	25	3	5			
IFRDE03-0250200	25	40	200	25	3	5			
IFRDE03-0250250	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 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

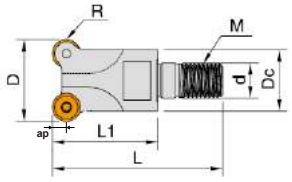




Order No.	D	d	L	M	T	ap	Inserts	Screw	Wrench	Screw
IFRDF04-0500220	50	22	40	11	4	5	RDMT1003 RDMX1003	MS3509A	TF15	MS3509A
IFRDF05-0500220	50	22	40	11	5	5				
IFRDF04-0500254	50	25.4	40	11	4	5				
IFRDF05-0500254	50	25.4	40	11	5	5				
IFRDF05-0630254	63	25.4	50	13	5	5				
IFRDF06-0630254	63	25.4	50	13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

FRDM





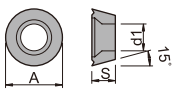
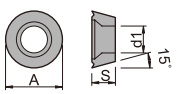
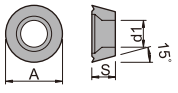
Order No.	D	L	M	d	T	ap	Inserts	Screw	Wrench
IFRDM02-0200100	20	30	M10	10.5	2	5	RDMT1003 RDMX1003	MS3507A	TF15
IFRDM02-0210100	21	30	M10	10.5	2	5			
IFRDM03-0250120	25	35	M12	12.5	3	5			
IFRDM03-0260120	26	35	M12	12.5	3	5			
IFRDM03-0300120	30	35	M12	12.5	3	5		MS3509A	
IFRDM03-0350160	35	43	M16	17	3	5			
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

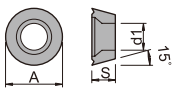
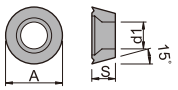
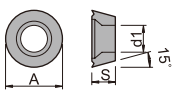
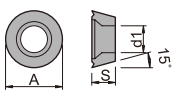
	P	Steel	◎	◎	◎	○	○		◎ 1st choice ○ 2st choice							
	M	Stainless steel	○	○	○	◎	◎									
	K	Cast iron	◎	○	○	○	○									
Inserts	Designation		Grade						Dimensions (mm)						Drawing	
			CX21NS	CX31NA	CX31NS	CX41NS	CX41NA		A	B	S	r	d1	t1		
	**RDKW 0501MOE**			✓	✓				5	-	1.59	-	2.2	-		
	**RDKW 0702MO**			✓	✓				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	-		

RD.. Inserts 仿形銑削刀片

Specification

	P	Steel	◎	◎	◎	○	○	
	M	Stainless steel	○	○	○	◎	◎	
	K	Cast iron	◎	○	○	○	○	

◎ 1st choice ○ 2st choice

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

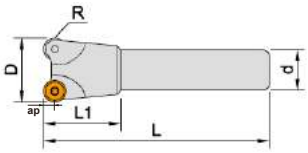
Working Material	Vc	fz	ap
Carbon Steel (HB85-225)	80 ~ 200	0.08 ~ 0.40	≤ 0.4 x Dim_A
Stainless 300 Series	50 ~ 110	0.05 ~ 0.35	≤ 0.3 x Dim_A
Cast Iron (HB140-220)	80 ~ 180	0.08 ~ 0.40	≤ 0.4 x Dim_A

BRP / RP.. Inserts 仿形銑削

- Finishing and roughing capability in one optimized tool, specially designed for high speed machining.
- High removal rates cab 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.

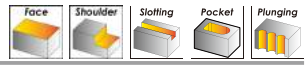
BRP08E/10E/12E

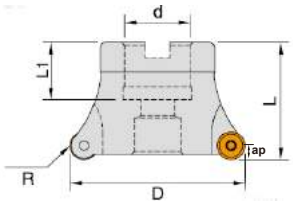




Order No.	D	L1	L	d	T	ap	Inserts	Screw	Wrench
IBRP08E01-0120100	12	30	100	12	1	4	RPMT08T2	TS3004	TK09
IBRP08E02-0160150	16	50	150	16	2	4			
IBRP08E02-0200150	20	50	150	20	2	4			
IBRP08E03-0250150	25	40	150	25	3	4			
IBRP08E02-0200200	20	50	200	20	2	4			
IBRP08E02-0200250	20	50	250	20	2	4			
IBRP10E02-0250150	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			
IBRP12E02-0320170	32	45	170	32	2	6	RPMT1204 RPMW1204	TS4006	TK15
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



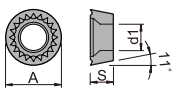
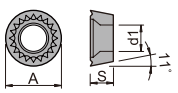


Order No.	D	L	L1	d	R	T	ap	Inserts	Screw	Wrench
IBRP08F05-0400160	40	40	18	16	4	5	4	RPMT08T2	TS3004	TK09
IBRP08F06-0500220	50	45	22	22	4	6	4			
IBRP10F04-0400160	40	40	18	16	5	4	5	RPMT10T3	TS3503	TK15
IBRP10F05-0500220	50	45	22	22	5	5	5			
IBRP10F05-0500254	50	45	22	25.4	5	5	5			
IBRP10F06-0630220	63	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 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	-		

RP.. Inserts

仿形銑削刀片

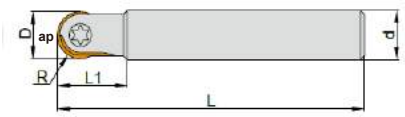
Specification

| | | |

WF21 / WP32.. Inserts 仿形銑削

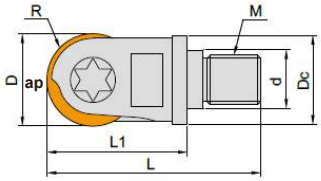
- Indexable ball type for molds in finishing applications.
- Long tool life can be achieved due to the excellent edge design and special grade.
- With consistent machining and high accurate finishing at high speed cutting.
- Nickel contain plating applied for excellent corrosion resistance effect also 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



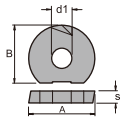
Order No.	D	d	Dc	L1	L	M	R	Inserts	Screw	Wrench
IWF21M00-0160080	16	8.5	15	26	45	M8	8	WP3216	B08R	TK20
IWF21M00-0200100	20	10.5	18	35	53	M10	10	WP3220	B10R	TK20
IWF21M00-0250120	25	12.5	23	41	63	M12	12.5	WP3225	B12R	TK30

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

CXBN / BNMX0603 高進給平面銑削



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 deigned 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.*





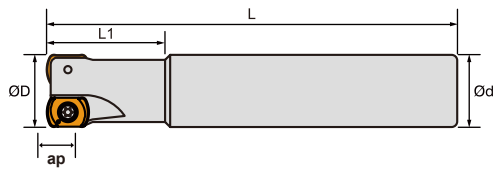
These double-sided inserts provide four cutting edges for cost-effective machining, especially efficient in the machining of most common workpiece materials.

CXBN / *BNMX0603* 高進給平面銑削

- Suitable for high-velocity, high-speed cutter of steel materials, especially when performed on smaller machines equipped with high-speed and low torque spindles.
- Povides 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

CAM R 2.0 | High Feed | Face | Shoulder | Slotting | Pocket

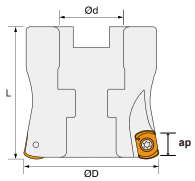


Order No.	D	L1	L	d	T	ap	Inserts	Screw	Wrench
ICXBNE02-0150130	15	26	130	16	2	1	BNMX0603	TS3004	TK08
ICXBNE02-0160130	16	26	130	16	2	1			
ICXBNE02-0170130	17	26	130	16	2	1			
ICXBNE02-0180150	18	25	150	20	2	1			
ICXBNE03-0200150	20	40	150	20	3	1			
ICXBNE03-0210150	21	40	150	20	3	1			
ICXBNE04-0250150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

CAM R 2.0 | High Feed | Face | Shoulder | Slotting | Pocket

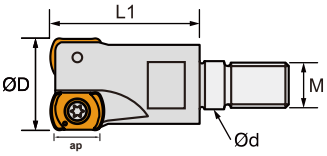


Order No.	D	L	d	T	ap	Inserts	Screw	Wrench
ICXBNF06 - 0400220	40	50	22	6	1	BNMX0603	TS3004	TK08
ICXBNF06 - 0500220	50	50	22	6	1			
ICXBNF07 - 0500220	50	50	22	7	1			
★ ICXBNF07W0500220	50	50	22	7	1			
ICXBNF08 - 0500220	50	50	22	8	1			
ICXBNF08 - 0520220	52	50	22	8	1			
ICXBNF07 - 0630220	63	50	22	7	1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

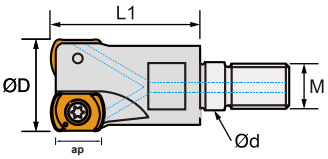
CXBNM



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			

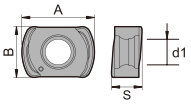
Customize available.

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

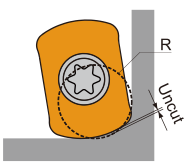
	P	Steel	◎	◎	◎	○	○		◎ 1st choice ○ 2st choice						
	M	Stainless steel	○	○	○	◎	◎								
	K	Cast iron	◎	○	○	○	○								
Inserts	Designation		Grade						Dimensions (mm)						Drawing
			CX21NS	CX31NA	CX31NS	CX41NS	CX41NA		A	B	S	r	d1	t1	
	**BNMX 0603-SG**		✓		✓	✓			9.0	6.3	3.75	-	3.2	-	
	**BNMX 0603-MG**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



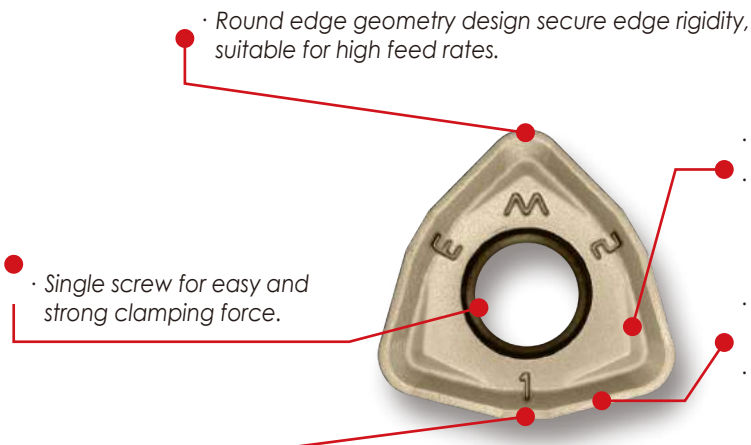


New Economical Solution for High Feed Milling Applications!!!

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.*





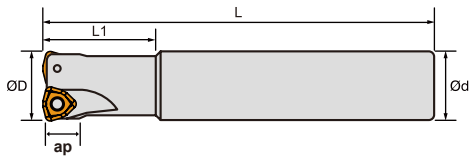
CXWN / *WNMX09T3*

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

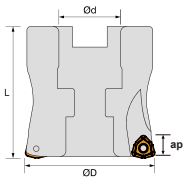


Order No.	D	L1	L	d	T	ap	Inserts	Screw	Wrench
ICXWNE02-0250150	25	40	150	25	2	1.5	WNMX09T3	TS3006	TK10
ICXWNE02-0260150	26	40	150	25	2	1.5			
ICXWNE03-0300150	30	40	150	32	3	1.5			
ICXWNE03-0320150	32	40	150	32	3	1.5			
ICXWNE04-0350200	35	45	200	32	4	1.5			
ICXWNE04-0400200	40	45	200	32	4	1.5			

Customize available.

CXWNF

CAM R 2.5 | High Feed | Face | Shoulder | Slotting | Pocket

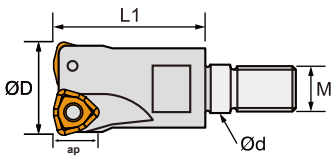


Order No.	D	L	d	T	ap	Inserts	Screw	Wrench
ICXWNF05-0500220	50	50	22	5	1.5	WNMX09T3	TS3006	TK10
ICXWNF05-0630220	63	50	22	5	1.5			
ICXWNF06-0630254	63	50	25.4	6	1.5			
ICXWNF06-0800270	80	55	27	6	1.5			

Customize available.

CXWNM

CAM R 2.5 | High Feed | Face | Shoulder | Slotting | Pocket

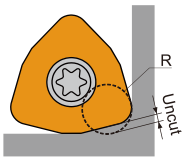


Order No.	D	L1	d	M	T	ap	Inserts	Screw	Wrench
ICXWNM02-0250120	25	12.5	43	M12	2	1.5	WNMX09T3	TS3006	TK10

Customize available.

■ Corner R Programming

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





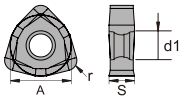


WNMX09T3 高進給平面銑削刀片

- *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

									◎ 1st choice ○ 2st choice
	P	Steel	◎	◎	◎	○	○	◎	
	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

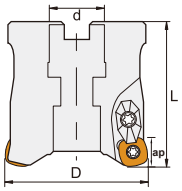
ASRF / *SDMT1205 / SDNW1205*

高進給平面銑削

- 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

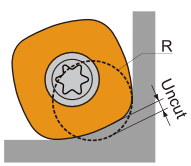




Order No.	D	L	d	T	ap	Inserts	Screw	Wrench	Clamp	Clamp Screw
IASRFF03-0500220	50	22	50	3	2	SDMT1205 SDNW1205	MS4011A	TF15	YR-06	MS4008ES
IASRFF03-0500222	50	22.225	50	3	2					
IASRFF04-0500220	50	22	50	4	2					
IASRFF04-0500222	50	22.225	50	4	2					
IASRFF03-0630220	63	22	50	3	2					
IASRFF03-0630222	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

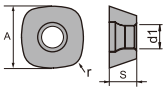
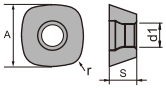


SDMT1205 / SDNW1205

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 ○ 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	
	**SDMT 1205ZDTN-MG**			✓	✓				12.7	-	5.56	15	4.6	-	
	**SDMT 1205ZDTN-RG**			✓	✓				12.7	-	5.56	15	4.6	-	
	**SDNW 1205ZDTN-RG**			✓	✓	✓	✓		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 perfomance 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

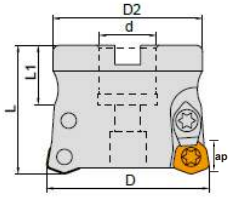
CAM R 3.0 | High Feed | Face | Shoulder | Slotting | Pocket



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

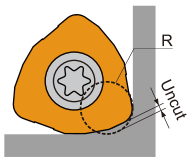
CAM R 3.0 | High Feed | Face | Shoulder | Slotting | Pocket



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

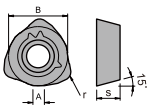


JDMW1204

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 ○ 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	
	**JDMW 120420ZDSR-RG**			✓	✓	✓	✓		2.5	12.0	4.76	2.0	4.75	-	

Recommended Cutting Conditions

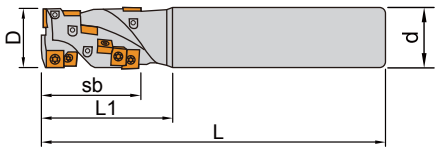
Working Material	Vc	ap	fz30-50(dia)	fz50-80(dia
Carbon Steel (HB85-225)	100 ~ 220	0.8 ~ 1.3	0.9 ~ 1.5	~ 1.5
Stainless 300 Series	70 ~ 150	0.6 ~ 1.0	0.7 ~ 1.2	~ 1.2
Cast Iron (HB140-220)	100 ~ 220	0.8 ~ 1.3	0.9 ~ 1.5	~ 1.5

SPH / SPMG.. Inserts 玉米銑削

- Great perfomance 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



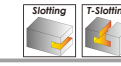


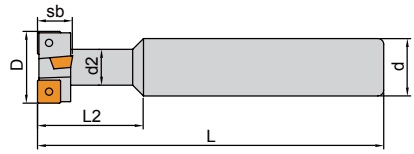
Order No.	D	sb	L1	L	d	T	Inserts	Screw	Wrench
ISP05H02-0160100	16	20	30	100	16	2	SPMG0502	TS2003	TK06
ISP06H02-0200110	20	30	40	110	20	2	SPMG0602	TS2205	TK06
ISP07H02-0250130	25	40	55	130	25	2	SPMG07T3	TS2511	TK08
ISP09H02-0320150	32	50	65	150	32	2	SPMG0904	TS3504	TK15
ISP09H03-0400180	40	70	90	180	32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

SPT / SPMG.. Inserts 三面刃銑削

- 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.

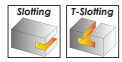
SP05T/06T/07T/09T/11T

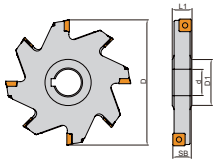




Order No.	D	sb	d2	L2	L	d	Inserts	Screw	Wrench
ISP05T04-0190090	19	8	9.5	25	90	16	SPMG0502	TS2203	TK06
ISP06T04-0210100	21	9	11	27	100	16	SPMG0602	TS2205	TK06
ISP05T04-0220090	22	6.3	15	15	90	20	SPMG0502	TS2203	TK06
ISP07T04-0250110	25	11	12	31	110	20	SPMG07T3	TS2511	TK08
ISP09T04-0320110	32	14	17	39	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

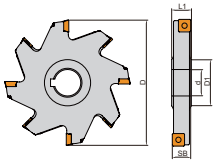
SP05D/06D/07D/09D/11D





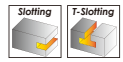
Order No.	D	L1	Sb	d	T	D1	Inserts	Screw	Wrench
ISP05D06-0800220	80	12	6	22	2 x 4	44	SPMG0502	TS2203	TK06
ISP05D07-0800220	80	12	7	22	2 x 4	44			
ISP06D08-0800220	80	12	8	22	2 x 4	44	SPMG0602	TS2205	TK06
ISP06D09-0800220	80	12	9	22	2 x 4	44			
ISP06D10-0800220	80	12	10	22	2 x 4	44			
ISP07D11-0800220	80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

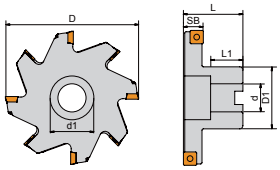
SP05D/06D/07D/09D/11D



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



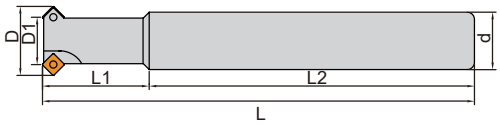


Order No.	D	SB	L	L1	D1	d1	d	T	Inserts	Screw	Wrench
ISP05D06S0800220	80	6	40	22	42	32	22	2 x 4	SPMG0502	TS2203	TK06
ISP05D07S0800220	80	7	40	22	42	32	22	2 x 4			
ISP06D08S0800220	80	8	40	22	42	32	22	2 x 4	SPMG0602	TS2205	TK06
ISP06D09S0800220	80	9	40	22	42	32	22	2 x 4			
ISP06D10S0800220	80	10	40	22	42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

- Great perfomance 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



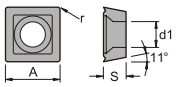


Order No.	D	D1	d	L1	L2	L	T	Inserts	Screw	Wrench
ISP05C01-0110100	11	6	10	17	83	100	1	SPMG0502	TS2003	TK06
ISP05C02-0150120	15	10	12	20	100	120	2			
ISP05C03-0170150	17	11	16	25	125	150	3			
ISP05C03-0190150	19	13	16	30	120	150	3			
ISP05C04-0240150	24	18	20	35	115	150	4			
ISP06C03-0220120	22	16	16	30	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 ○ 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	-		
	**SPMG 110408-MG**			✓	✓	✓	✓		11.50	-	4.8	0.8	4.45	-		

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

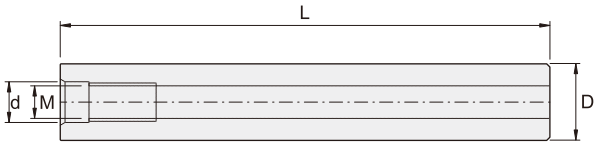
for SPDM / SPDI / SPD

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

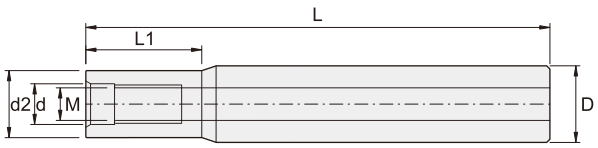
Working Material	Vc	fz				
		Ø13~15	Ø16~22	Ø23~33	Ø34~41	Ø42~50
Carbon Steel (HB85-225)	160 ~ 250	0.06 ~ 0.12	0.06 ~ 0.10	0.06 ~ 0.12	0.12 ~ 0.24	0.12 ~ 0.25
Stainless 300 Series	120 ~ 180	0.05 ~ 0.10	0.06 ~ 0.12	0.08 ~ 0.15	0.10 ~ 0.17	0.12 ~0.20
Cast Iron (HB140-220)	160 ~ 220	0.06 ~ 0.12	0.08 ~ 0.16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

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



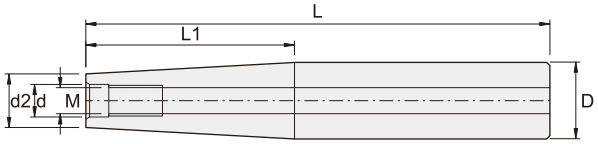
Order No.	Dimensions (mm)			
	d	L	D	M
IWSEA050750	5.5	75	10	M5
IWSEA051000	5.5	100	10	M5
IWSEA051500	5.5	150	10	M5
IWSEA061001	6.5	100	10	M6
IWSEA061501	6.5	150	10	M6
IWSEA060750	6.5	75	12	M6
IWSEA061000	6.5	100	12	M6
IWSEA061500	6.5	150	12	M6
IWSEA062000	6.5	200	12	M6
IWSEA081000	8.5	100	16	M8
IWSEA081500	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

WSEB Carbide Extension Adapter (Anti-Vibration)



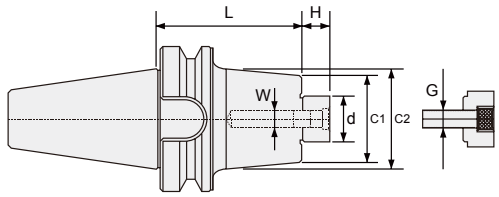
Order No.	Dimensions (mm)					
	d	d2	L1	L	D	M
IWSEB0610024	6.5	11.8	24	100	12	M6
IWSEB0615024	6.5	11.5	24	150	12	M6
IWSEB0815030	8.5	15	30	150	16	M8
IWSEB0820040	8.5	15	40	200	16	M8
IWSEB1015040	10.5	19	40	150	20	M10
IWSEB1020040	10.5	19	40	200	20	M10
IWSEB1215048	12.5	24	48	150	25	M12
IWSEB1220048	12.5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

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



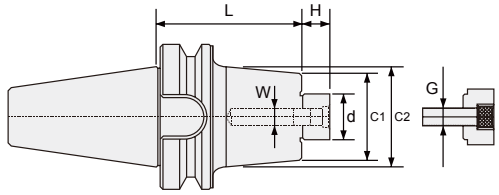
Order No.	Dimensions (mm)					
	d	d2	L1	L	D	M
IWTEA051500	5.5	9.8	60	150	12	M5
IWTEA061500	6.5	11.8	70	150	16	M6
IWTEA082000	8.5	15.5	90	200	20	M8
IWTEA102000	10.5	19.8	90	200	25	M10
IWTEA122000	12.5	24.5	90	200	32	M12

BT40FMA Face Mill Holder



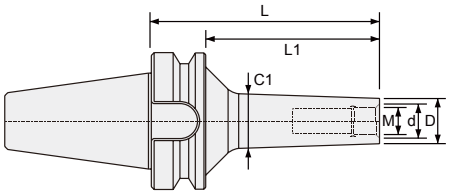
Order No.	Dimensions (mm)							
	Cutter dia.	d	L	C1	C2	H	W	G
IBT40FMA25045	76	25.4	45	50	-	20	9.5	M12
IBT40FMA25090	76	25.4	90	50	60	20	9.5	M12
IBT40FMA31045	100	31.75	45	60	-	22	12.5	M12
IBT40FMA31075	100	31.75	75	60	70	22	12.5	M12
IBT40FMA31105	100	31.75	105	60	70	22	12.5	M12

BT40FMB Face Mill Holder



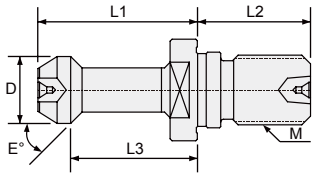
Order No.	Dimensions (mm)							
	Cutter dia.	d	L	C1	C2	H	W	G
IBT40FMB22045	60	22	45	50	-	18	10	M10
IBT40FMB22060	60	22	60	50	60	81	10	M10
IBT40FMB22090	60	22	90	50	60	18	10	M10
IBT40FMB27045	80	27	45	60	-	20	12	M12
IBT40FMB27060	80	27	60	60	-	20	12	M12
IBT40FMB27090	80	27	90	60	-	20	12	M12
IBT40FMB27105	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 hol.d*
- *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	Kgfcm	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
P Steel	P10			ACP100	TT2510	
	P20	***CX21NS*** ***CX31NX***	MP6120 VP15TF	ACP200	TT7080 TT7030	F25M MP3000
	P30	***CX31NX*** ***CX31NS***	VP15TF MP6120 MP6130 VP30RT	ACP300	TT9080 TT9030	F30M F40M MP3000
	P40	***CX41NX*** ***CX41NS***	VP30RT		TT8080 TT8020	F40M T60M
M Stainless Steel	M10			ACM100 ACK300		
	M20	***CX31NX*** ***CX31NS***	VP15TF MP7130 MP7140 VP20RT	ACM200	TT9080 TT9030	F25M F30M MP30000
	M30	***CX31NX*** ***CX41NX*** ***CX41NS***	VP15TF MP7130 MP7140 VP30RT	ACM300	TT8080 TT8020	F30M F40M MP3000
	M40	***CX41NX*** ***CX41NS***	MP7140 VP30RT			F40M
K Cast Iron	K01		MP8010			
	K10	***CX21NS***	MP8010		TT7515	MK1500
	K20	***CX31NX*** ***CX31NS***	VP15TF VP20RT	ACK200	TT7515 TT6080	MK1500 MK2000 T150M
	K30			ACK300	TT6080	MK2000 MK2050

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





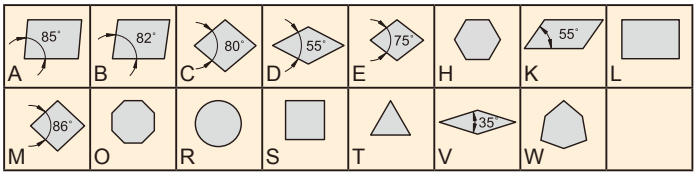
Turning

車　削

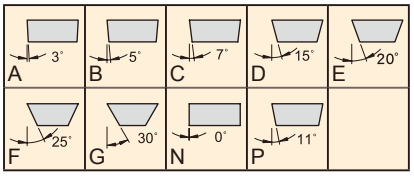
Designations For Turning Inserts 車刀片型號編碼

C	N	M	G	12	04	08	-	MG
①	②	③	④	⑤	⑥	⑦		⑧

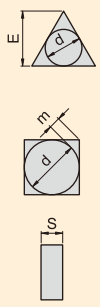
① Insert Shape



② Relief Angle



③ Tolerance



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

④ Cross Section Type

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

⑤ Edge Length

C	D	S	T	R	V	W	I.C.
Metric							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

⑥ Thickness



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

⑦ Radius



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

⑧ Chip Breaker

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

Coated Carbide Grade 車刀片材質等級

“ ∞ “ 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
					P	K	M	
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	★★	★	★★	
					M	P	K	
CX3565	90	Al.Ti.N	>10	Medium to Roughing	★★	★★	★★	
					M	P	K	
CX3555	89.8	Al.Ti.Si.N	>3	Medium to Roughing	★★	★	★	

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

Coated Carbide Grade
車刀片材質等級



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

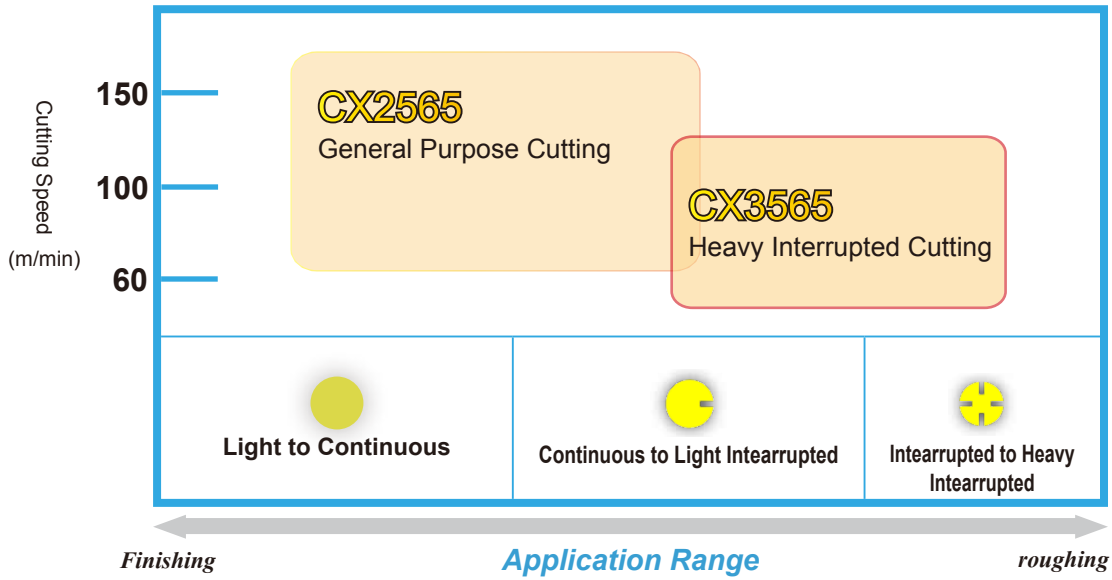


Positive Types
- 25+ types to choose from.
- Thick or normal coating layer structure for different applications.
- Internal turning, profiling and boring machining.
- Usable range cover from semi-finishing to roughing.

NEW

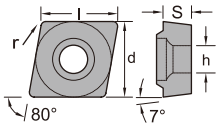
CX2565 / CX3565

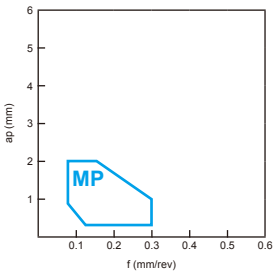
2017 New Turning Grades for General Purpose

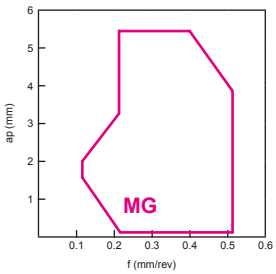


Features:
- Excellent heat resistance and wear resistance.
- Improve the adhesion resistance ability.
- Corner visibility with a unique color.
- Extend tool life and thereby reduces tools costs in a wide range of machining applications.

CCMT - Positive Turning Insert 正角車刀片

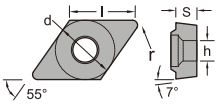
	P	Steel	●	●	✱				Cutting Type : ● General ✱ Interrupted								
	M	Stainless steel	●		✱	✱											
	K	Cast iron	●		✱												
Inserts	Designation		Grade						Dimensions (mm)					Drawing		Tool Page	
			CX2565	CX2555	CX3565	CX3555			d	l	S	r	h				
	CCMT	060204-MP	✓	✓					6.35	6.4	2.38	0.4	2.8			B143 ~ 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				



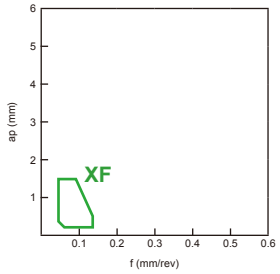


DCGT - Positive Turning Insert 正角車刀片

	P	Steel	●	●	●	✱			Cutting Type : ● General ✱ Interrupted
	M	Stainless steel	●	●		✱	✱		
	K	Cast iron	●	●		✱			

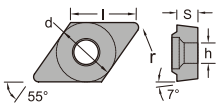
Inserts	Designation		Grade						Dimensions (mm)					Drawing	Tool Page
			CX1555	CX2565	CX2555	CX3565	CX3555		d	l	S	r	h		
	DCGT	11T301R-XF	✓						9.53	11.6	3.97	0.1	4.4		B147 ~ B151 B170 ~ B172
		11T302R-XF	✓						9.53	11.6	3.97	0.2	4.4		
		11T304R-XF	✓						9.53	11.6	3.97	0.4	4.4		
	DCGT	11T301L-XF	✓						9.53	11.6	3.97	0.1	4.4		
		11T302L-XF	✓						9.53	11.6	3.97	0.2	4.4		
		11T304L-XF	✓						9.53	11.6	3.97	0.4	4.4		

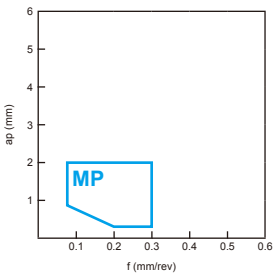
✱Customize radius and geometries available

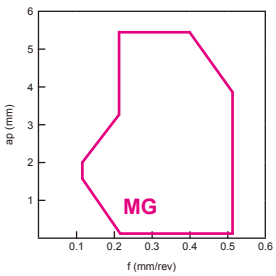


DCMT - Positive Turning Insert 正角車刀片

	P	Steel	●	●	●	✱			Cutting Type : ● General ✱ Interrupted
	M	Stainless steel	●	●		✱	✱		
	K	Cast iron	●	●		✱			

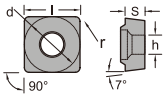
Inserts	Designation		Grade						Dimensions (mm)					Drawing	Tool Page
			CX1555	CX2565	CX2555	CX3565	CX3555		d	l	S	r	h		
	DCMT	11T304-MP		✓	✓				9.53	11.6	3.97	0.4	4.4		B147 ~ B151
		11T308-MP		✓	✓				9.53	11.6	3.97	0.8	4.4		
	DCMT	070202-MG		✓	✓				6.35	7.75	2.38	0.2	2.8		B170 ~ B172
		070204-MG		✓	✓				6.35	7.75	2.38	0.4	2.8		
		11T304-MG		✓	✓				9.53	11.6	3.97	0.4	4.4		
		11T308-MG		✓	✓				9.53	11.6	3.97	0.8	4.4		

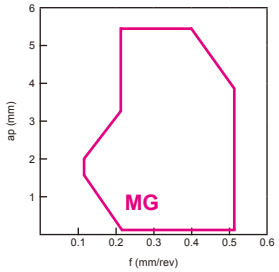




SCMT - Positive Turning Insert 正角車刀片

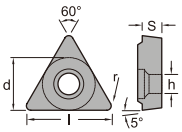
	P	Steel	●	●	✱				Cutting Type : ● General ✱ Interrupted
	M	Stainless steel	●		✱	✱			
	K	Cast iron	●		✱				

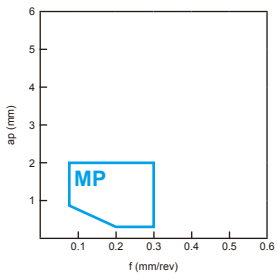
Inserts	Designation		Grade						Dimensions (mm)					Drawing	Tool Page
			CX2565	CX2555	CX3565	CX3555			d	l	S	r	h		
	**SCMT**	**09T304-MG**	✓	✓					9.53	9.53	3.97	0.4	4.4		B173 ~ B175
		09T308-MG	✓	✓					9.53	9.53	3.97	0.8	4.4		

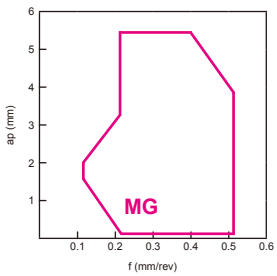


TCMT - Positive Turning Insert 正角車刀片

	P	Steel	●	●	✱				Cutting Type : ● General ✱ Interrupted
	M	Stainless steel	●		✱	✱			
	K	Cast iron	●		✱				

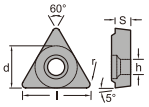
Inserts	Designation	Grade						Dimensions (mm)					Drawing	Tool Page
		CX2565	CX2555	CX3565	CX3555			d	l	S	r	h		
	**TCMT 110204-MP**	✓	✓					6.35	11.0	2.38	0.4	2.8		B152 ~ B154
	**TCMT 110204-MG**	✓	✓					6.35	11.0	2.38	0.4	2.8		B176 ~ B177
	16T304-MG	✓	✓					9.53	16.5	3.97	0.4	4.4		
	16T308-MG	✓	✓					9.53	16.5	3.97	0.8	4.4		

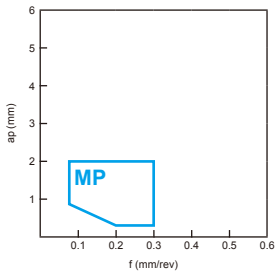




TPMH - Positive Turning Insert 正角車刀片

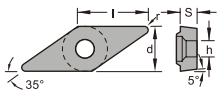
	P	Steel	●	●	✱				Cutting Type : ● General ✱ Interrupted
	M	Stainless steel	●		✱	✱			
	K	Cast iron	●		✱				

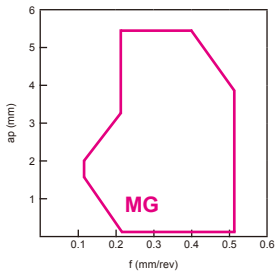
Inserts	Designation	Grade						Dimensions (mm)					Drawing	Tool Page
		CX2565	CX2555	CX3565	CX3555			d	l	S	r	h		
	**TPMH 160304-MP**	✓	✓					9.53	16.5	3.18	0.4	4.4		-



VBMT - Positive Turning Insert 正角車刀片

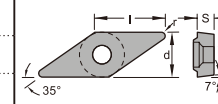
	P	Steel	●	●	✱				Cutting Type : ● General ✱ Interrupted
	M	Stainless steel	●		✱	✱			
	K	Cast iron	●		✱				

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 ~ B158 B178 ~ B179
	160408-MG	✓	✓					9.53	16.6	4.76	0.8	4.4		

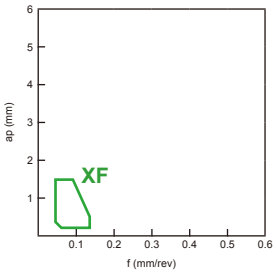


VCGT - Positive Turning Insert 正角車刀片

	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 ~ B158
		110302R-XF					✓		11.1	6.35	3.18	0.2	2.8		
		110304R-XF					✓		11.1	6.35	3.18	0.4	2.8		
	VCGT	110301L-XF					✓		11.1	6.35	3.18	0.1	2.8		
		110302L-XF					✓		11.1	6.35	3.18	0.2	2.8		
		110304L-XF					✓		11.1	6.35	3.18	0.4	2.8		B178 ~ B179
	VCGT	110304-FG					✓		11.1	6.35	3.18	0.4	2.8		

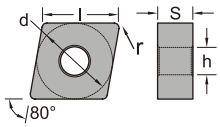
*Customize radius and geometries available

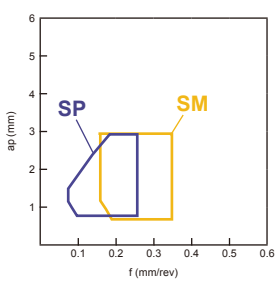


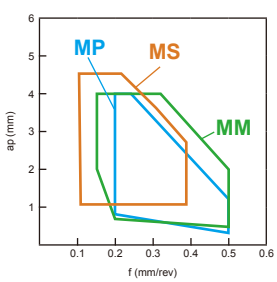
Winstar Cutting Technologies

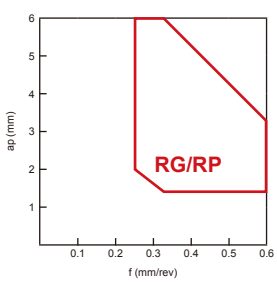
CNMG - Negative Turning Insert 負角車刀片

	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		B136 ~ B139, B159 ~ B160
	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		

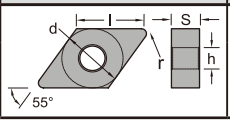


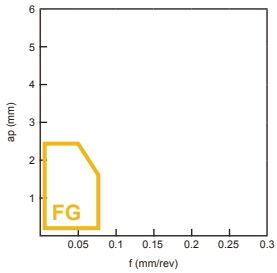




DNMG - Negative Turning Insert 負角車刀片

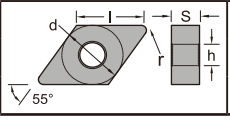
	P	Steel	●	●	✱				Cutting Type : ● General ✱ Interrupted
	M	Stainless steel	●		✱	✱			
	K	Cast iron	●		✱				

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 B161
		150408-MG	✓	✓					12.7	15.5	4.76	0.8	5.16		

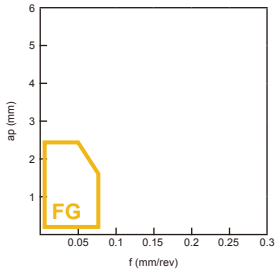


DNGX - Negative Turning Insert 負角車刀片

	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		-

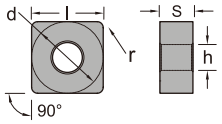
✱Customize radius available

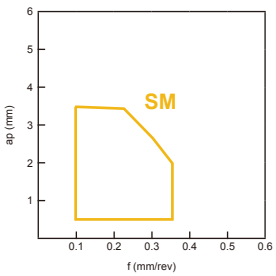


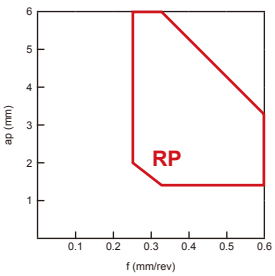
SNMG - Negative Turning Insert

負角車刀片

	P	Steel	●	●	✱				Cutting Type : ● General ✱ Interrupted
	M	Stainless steel	●		✱	✱			
	K	Cast iron	●		✱				

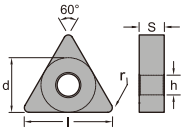
Inserts	Designation	Grade						Dimensions (mm)					Drawing	Tool Page
		CX2565	CX2555	CX3565	CX3555			d	l	S	r	h		
	**SNMG 120404-SM**	✓	✓					12.7	12.7	4.76	0.4	5.16		B162
	**SNMG 120408-MG**	✓	✓					12.7	12.7	4.76	0.8	5.16		
	**SNMG 120408-RP**	✓	✓					12.7	12.7	4.76	0.8	5.16		
	120412-RP	✓	✓					12.7	12.7	4.76	1.2	5.16		

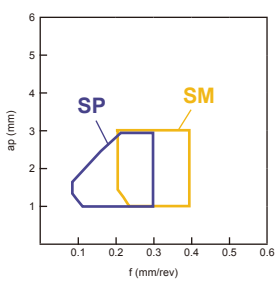


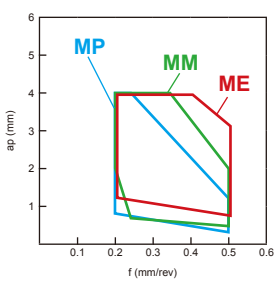


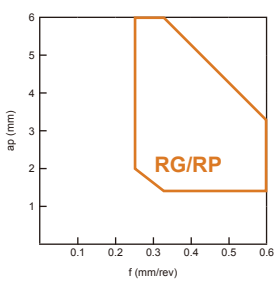
TNMG - Negative Turning Insert 負角車刀片

	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 ~ B141, B161, B163 ~ 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		

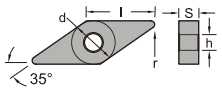


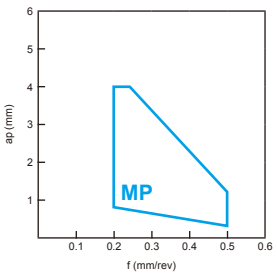




VNMG - Negative Turning Insert 負角車刀片

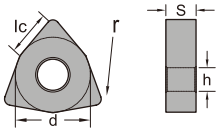
	P	Steel	●	●	✱				Cutting Type : ● General ✱ Interrupted
	M	Stainless steel	●		✱	✱			
	K	Cast iron	●		✱				

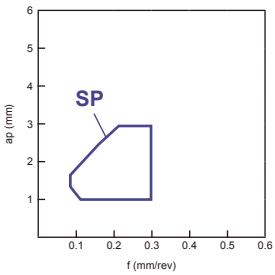
Inserts	Designation	Grade						Dimensions (mm)					Drawing	Tool Page
		CX2565	CX2555	CX3565	CX3555			d	l	S	r	h		
	**VNMG 160404-MP**	✓	✓					9.53	16.5	4.76	0.8	3.81		B141
	**VNMG 160408-MG**	✓	✓	✓	✓			9.53	16.5	4.76	0.8	3.81		B165 ~ B166

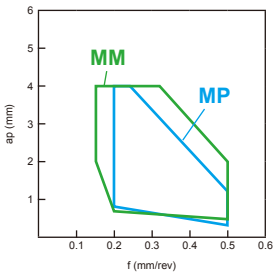


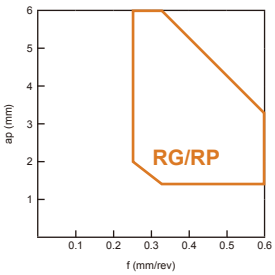
WNMG - Negative Turning Insert 負角車刀片

	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		
	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		B142
	080408-MP	✓	✓	✓	✓			12.7	8.7	4.76	0.8	5.16		B166 ~ B167
	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		



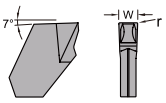
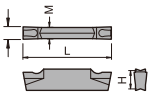




TGTN, GMM - Parting Insert

切斷刀片

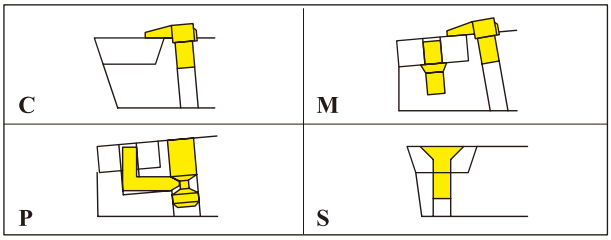
	P	Steel	●	✱					Cutting Type : ● General ✱ Interrupted
	M	Stainless steel							
	K	Cast iron	●	✱					

Inserts	Designation	Grade						Dimensions (mm)						Drawing	Cutter Page
		CX30NS	CX40NS					w	r	h	m				
	**TGTN 0220**	✓	✓					2.2	0.2						B181
	**TGTN 0310**	✓	✓					3.1	0.15						
	**GMM 2020-RG**	✓	✓					2.2	2.0	4.3	1.5				B183

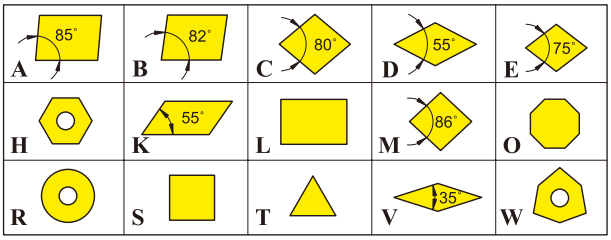
Tools Designation for External Turning 車刀桿型號編碼

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

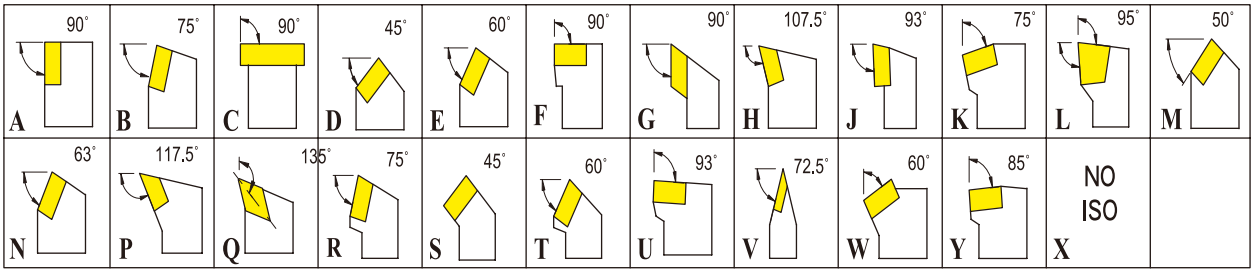
① TYPE OF LOCJING



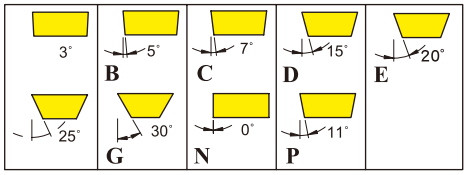
② INSERT SHAPE



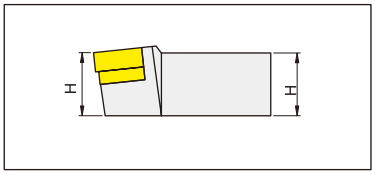
③ INSERT SHAPE



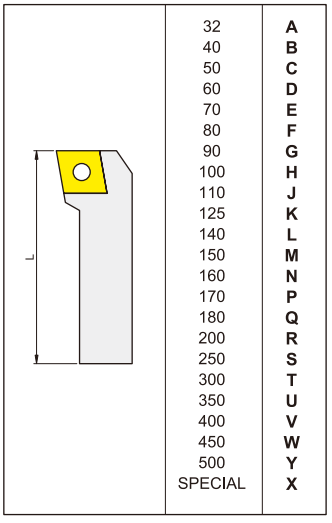
④ RAKE



⑥/⑦ SHANK HEIGHT

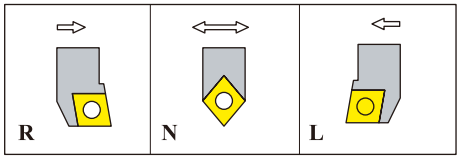


⑩ SHANK LENGTH

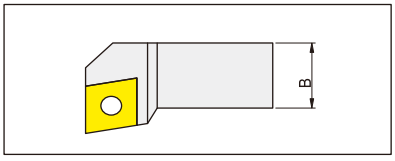


32	A
40	B
50	C
60	D
70	E
80	F
90	G
100	H
110	J
125	K
140	L
150	M
160	N
170	P
180	Q
200	R
250	S
300	T
350	U
400	V
450	W
500	Y
SPECIAL	X

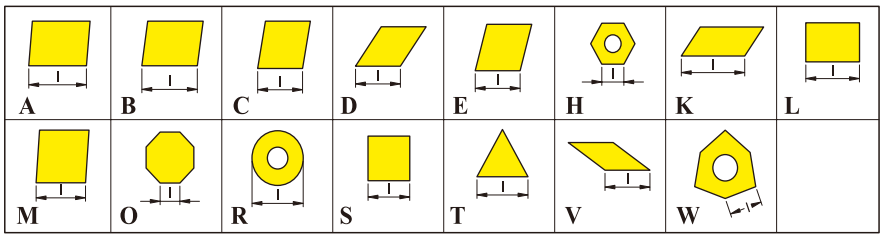
⑤ HAND OF TOOL



⑧/⑨ SHANK WIDTH



⑤ HAND OF TOOL



⑧/⑨ SHANK WIDTH

INSERTS	R-L

Winstar Cutting Technologies

Tools Designation for Internal Turning 車刀桿型號編碼

S	2	0	R
⑥	⑧	⑨	⑩

S	C	L	C	R	0	9		*
①	②	③	④	⑤	⑪	⑫		⑬

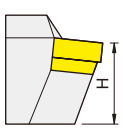
⑥ SHANK

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

CARTRIDGES DESIGNATION

S	T	F	C	R	1	0	C	A		1	1
①	②	③	④	⑤	⑥	⑦	⑧	⑨		⑪	⑫

⑥/⑦ SHANK HEIGHT



⑧ TYPE OF TOOL

C=Cartridge

⑨ EXECUTION

A=ISO 5611

Internal Turning Tools Illustrated Index

內徑車刀桿

MCKN B136

MCLN B137

DCLN B138

MDUN B138

MSKN B139

MTUN B139

WTUN B140

DTUN B140

MTWN B141

MVUN B141

MWLN B142

DWLN B142

SCKC B143

SCLC B144

SCLC B144

SDJC B147

SDNC B148

SDQC B149

SDUC B148

SDZC B151

STUC B152

STWC B154

SVJB B155

SVJC B156

SVQB B157

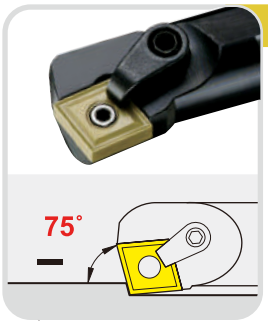
SVUB B158

SVVB B158


External Turning Tools Illustrated Index 外徑車刀桿

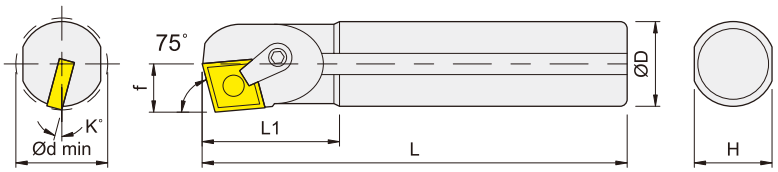
MCBN B159 
MCKN B159 
MCLN B160 
MCNN B160 
MDJN B161 
MTQN B161 
MSDN B162 
MSSN B162 
MTJN B163 
MTEN B163 
DTFN B164 
MTFN B164 
MVJN B165 
MVQN B165 
MVVN B166 
WWLN B166 
MWLN B167 
MWLN-N B167 
SCBC B168 
SCKC B168 
SCLC B169 
SCL2C B169 
SCNC B170 
SDJC B170 
SDJ2C B171 
SDNC B171 
SDQC B172 
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



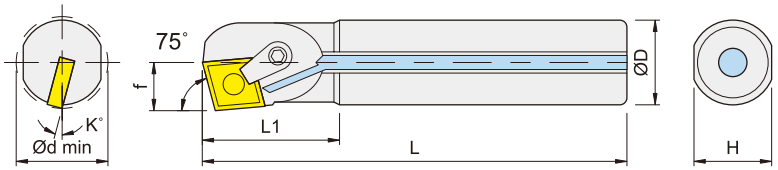
MCKN

■ S..-MCKNR/L-12 Steel shank



Right-hand shown

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

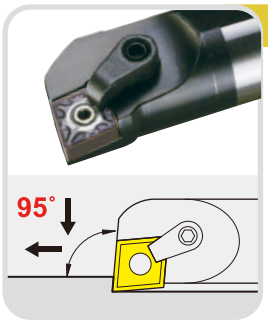


Right-hand shown

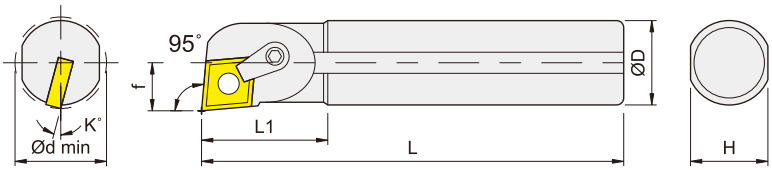
Item Code	Dimensions, mm							Insert	Shim	Pin	Wrench	Clamp	Screw	Wrench
	D	L	L1	f	H	K	dmin							
IS20R-MCKNR/L-12	20	200	36	13	18	15	25	CN..1204..	--	MLP44	PL25	MC620	MS620	PL30
IS25R-MCKNR/L-12	25	200	40	15	23	13	30							
IS32S-MCKNR/L-12	32	250	48	20	30	13	40	CN..1204..	CMS432	MLP46	PL25	MC620	MS625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

Internal Turning Tools 內徑車刀桿

MCLN

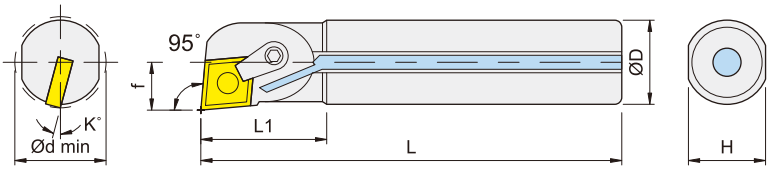


■ S..-MCKNR/L-12 Steel shank



Right-hand shown

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

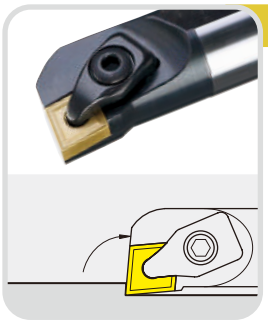


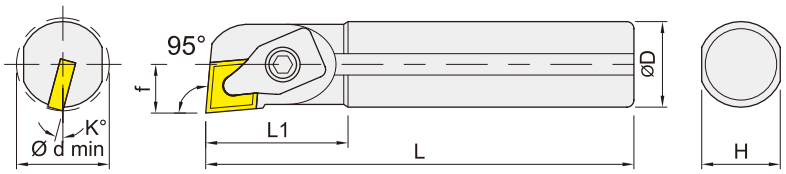
Right-hand shown

Item Code	Dimensions, mm							Insert	Shim	Pin	Wrench	Clamp	Screw	Wrench
	D	L	L1	f	H	K	dmin							
IS20R-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		CMS432	MLP46	PL25	MC620	MS625	PL30
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							
IA20R-MCLNR/L-12	20	200	36	13	18	15	25	CN..1204..	--	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		CMS432	MLP46	PL25	MC620	MS625	PL30
IA40T-MCLNR/L-12	40	300	55	25	37	12	50							

Internal Turning Tools 內徑車刀桿

DCLN

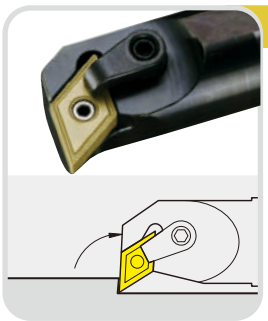




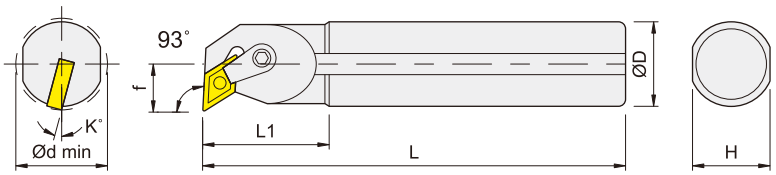
Right-hand shown

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

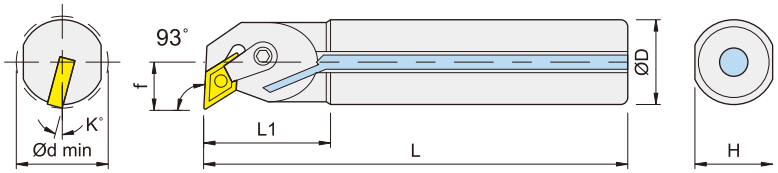


■ S..-MDUNR/L-15 Steel shank



Right-hand shown

■ A..-MDUNR/L-15 Steel shank+coolant hole

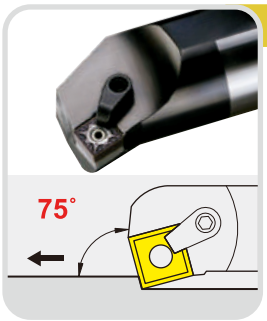


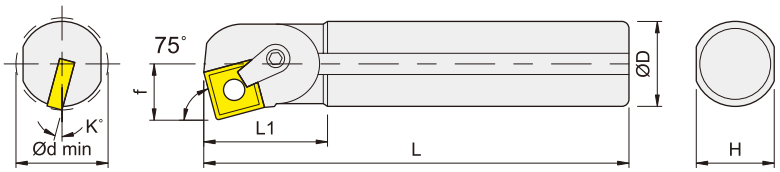
Right-hand shown

Item Code	Dimensions, mm							Insert	Shim	Pin	Wrench	Clamp	Screw	Wrench
	D	L	L1	f	H	K	dmin							
IS25R-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

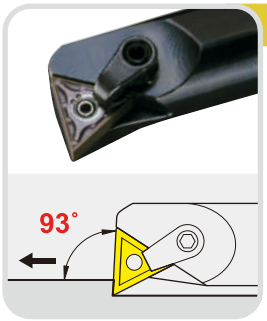




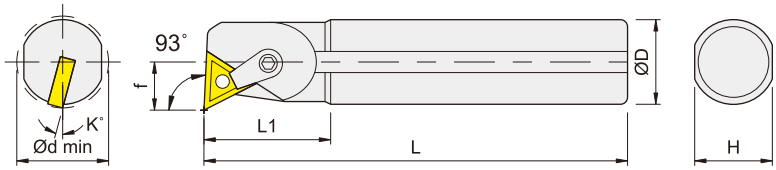
Right-hand shown

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

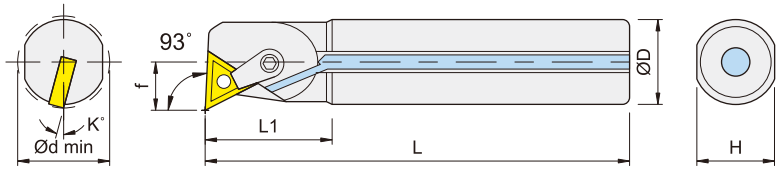


■ S..-MTUNR/L-16 Steel shank



Right-hand shown

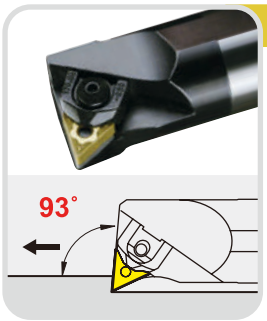
■ A..-MTUNR/L-16 Steel shank+coolant hole



Right-hand shown

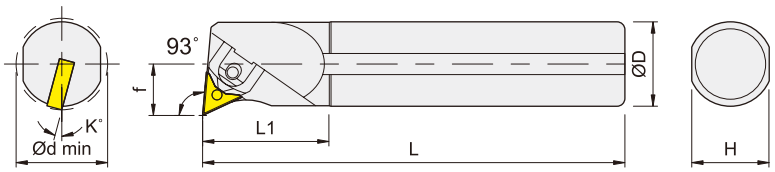
Item Code	Dimensions, mm							Insert	Shim	Pin	Wrench	Clamp	Screw	Wrench
	D	L	L1	f	H	K	dmin							
IS20R-MTUNR/L-16	20	200	36	13	18	15	25	TN..1604..	--	MLP33L	PL20	MC515	MS520	PL25
IS25R-MTUNR/L-16	25	200	40	15	23	13	30							
IS32S-MTUNR/L-16	32	250	48	20	30	13	40	TN..1604..	TMS322	MLP34L	PL20	MC620	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



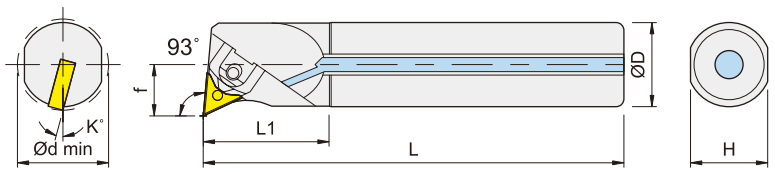
WTUN

■ S..-WTUNR/L-16 Steel shank



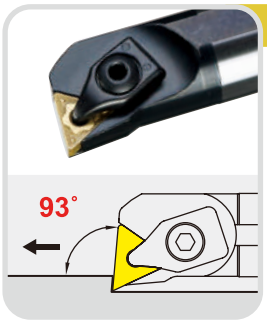
Right-hand shown

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



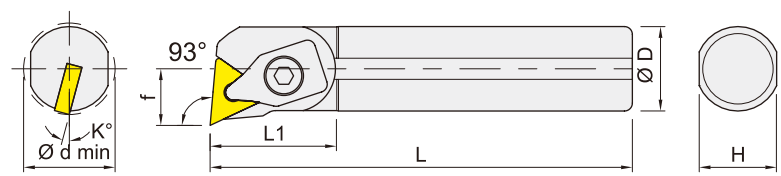
Right-hand shown

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	TN..1604..	TMS322	SCP318	MCW3-P25	PL25
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	TN..1604..	TMS322	SCP318	MCW3-P25	PL25
IA40U-WTUNR/L-16	40	350	55	26	37	10	50					



DTUN

■ S..-DTUNR/L-16 Steel shank

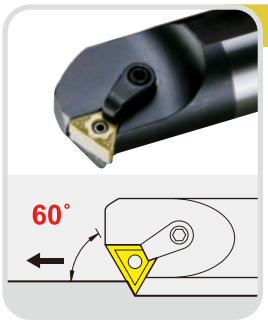


Right-hand shown

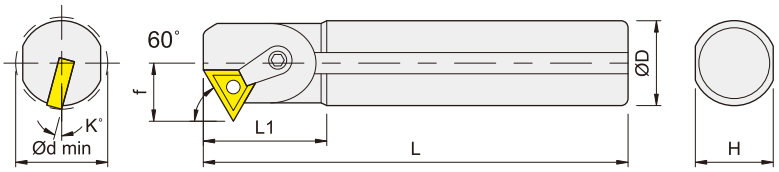
Item Code	Dimensions, mm							Insert	Shim	Screw	Wrench	Clamp	Wrench
	D	L	L1	f	H	K	dmin						
IS20R-DTUNR/L-16	20	200	36	14	18	15	28	TN..1604..	--	--	--	MCD324	PL40
IS25R-DTUNR/L-16	25	200	40	15	23	13	30						
IS32S-DTUNR-16	32	250	48	20	30	13	40	TN..1604..	TWS322	MS4008ES	PL25	MCD324B	PL40

Internal Turning Tools 內徑車刀桿

MTWN



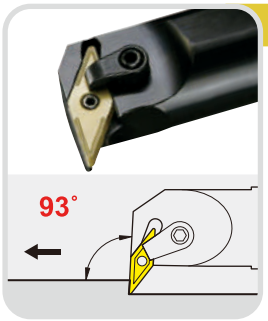
■ S..-MTWNR/L-16 Steel shank



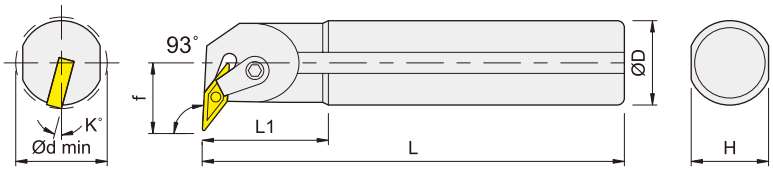
Right-hand shown

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

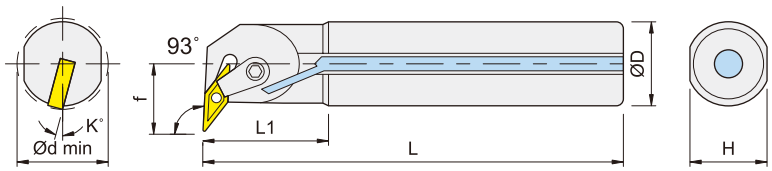


■ S..-MVUNR/L-16 Steel shank



Right-hand shown

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

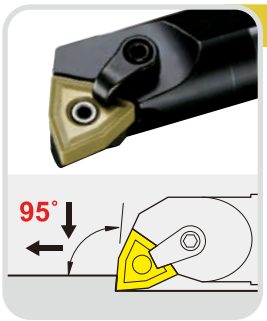


Right-hand shown

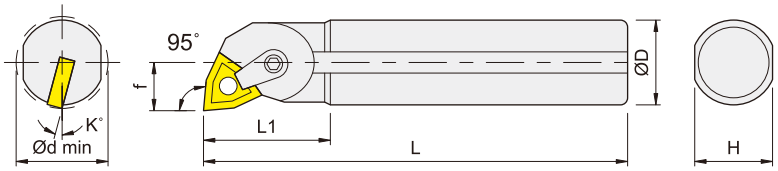
Item Code	Dimensions, mm							Insert	Shim	Pin	Wrench	Clamp	Screw	Wrench
	D	L	L1	f	H	K	dmin							
IS25R-MVUNR/L-16	25	200	40	18	23	13	32	VN..1604..	--	MLP33L	PL20	MC515	MS520	PL25
IS32S-MVUNR/L-16	32	250	50	22	30	15	40	VN..1604..	VMS322	MLP34L	PL20	MC620	MS625	PL30
IA25R-MVUNR/L-16	25	200	40	18	23	13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

Internal Turning Tools 內徑車刀桿

MWLN

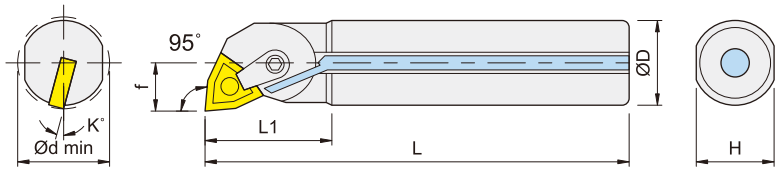


■ S..-MWLNR/L-08 Steel shank



Right-hand shown

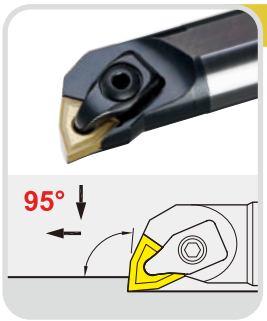
■ A..-MWLNR/L-08 Steel shank+coolant hole



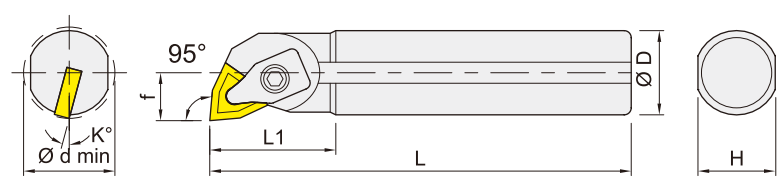
Right-hand shown

Item Code	Dimensions, mm							Insert	Shim	Pin	Wrench	Clamp	Screw	Wrench
	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		WMS432	MLP46	PL25	MC515	MS520	PL25

DWLN



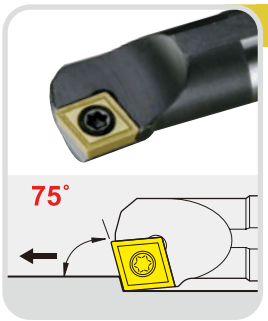
■ S..-DWLNR/L-.. Steel shank



Right-hand shown

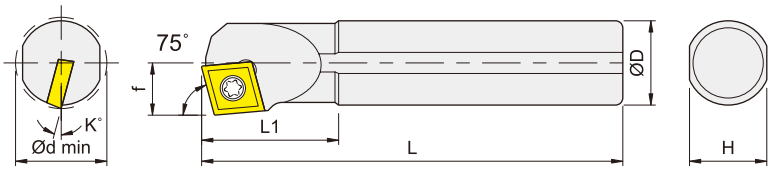
Item Code	Dimensions, mm							Insert	Shim	Screw	Wrench	Clamp	Wrench
	D	L	L1	f	H	K	dmin						
IS20R-DWLNR/L-08	20	200	36	14	18	15	28	WN..0804..	--	--	--	MCD425	PL40
IS25R-DWLNR/L-08	25	200	40	15	23	13	30						

Internal Turning Tools 內徑車刀桿



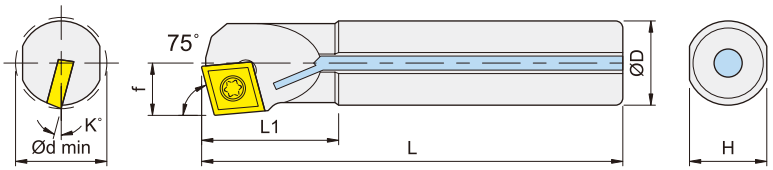
SCKC

■ S..-SCKC/PR/L-.. Steel shank



Right-hand shown

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

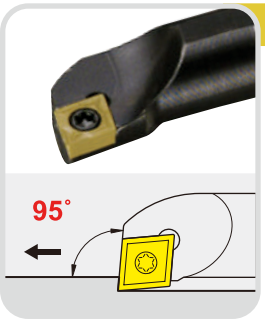


Right-hand shown

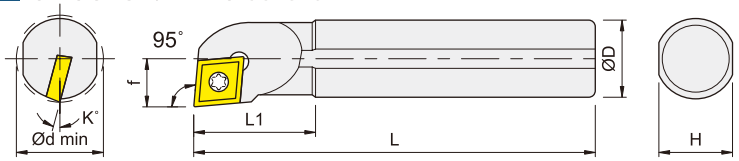
Item Code	Dimensions, mm							Insert	Screw	Wrench
	D	L	L1	f	H	K	dmin			
IS08K-SCKCR/L-06	8	125	18	5	7	15	10	CC..0602..	MS2506A	TF9
IS10K-SCKCR/L-06	10	125	22	6	9	13	12			
IS12M-SCKCR/L-06	12	150	26	8	11	10	16			
IS16Q-SCKCR/L-06	16	180	32	10	15	7	20			
IS12M-SCKCR/L-09	12	150	26	8	11	11	16	CC..09T3..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

Internal Turning Tools 內徑車刀桿

SCLC

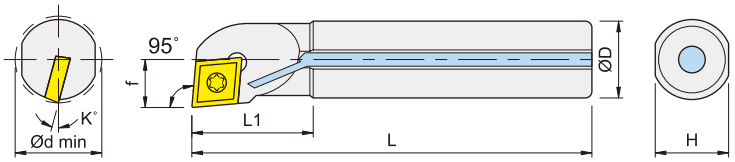


■ S..-SCLCR/L-.. Steel shank



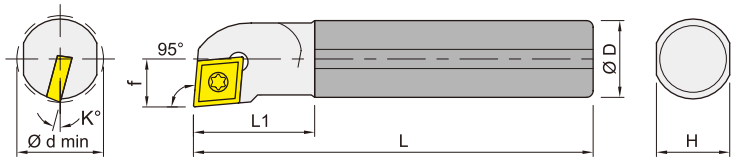
Right-hand shown

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



Right-hand shown

■ C..-SCLCR/L-.. Carbide shank



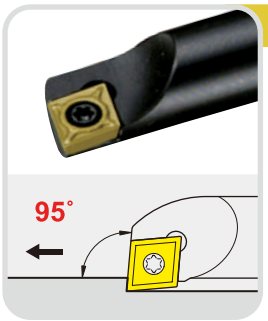
Right-hand shown

Item Code	Dimensions, mm							Insert	Screw	Wrench
	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

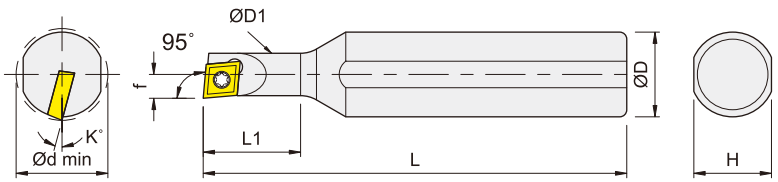
Internal Turning Tools 內徑車刀桿

Item Code	Dimensions, mm							Insert	Screw 	Wrench 
	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	CC..09T3..	MS4009A	TF15
IA16Q-SCLCR/L-09	16	180	32	10	15	7	20			
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			

SCLC

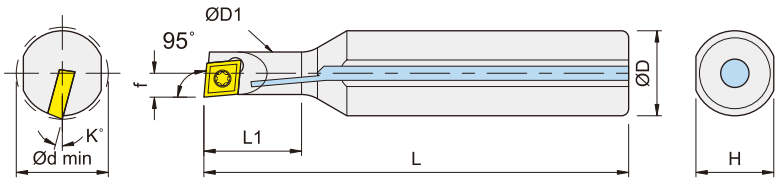


S..-SCLCR/L-.. Steel shank



Right-hand shown

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

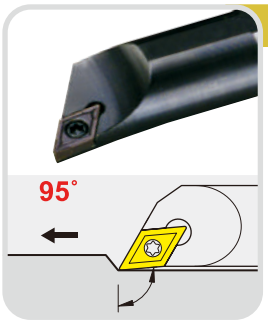


Right-hand shown

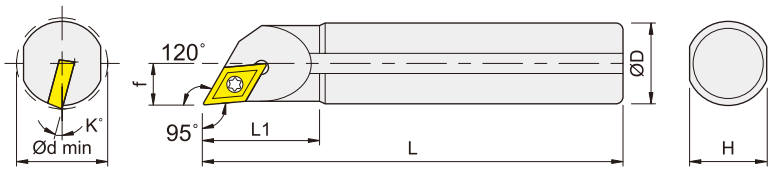
Item Code	Dimensions, mm								Insert	Screw	Wrench
	D	D1	L	L1	f	H	K	dmin			
IS1607K-SCLCR/L-06	16	7	125	20	4	15	13	8	CC..0602..	MS2506A	TF9
IS1608K-SCLCR/L-06A	16	8	125	20	4.5	15	11	9			
IS1608K-SCLCR/L-06	16	8	125	25	4.5	15	11	9			
IS1609K-SCLCR/L-06	16	9	125	25	5	15	11	10			
IA1607K-SCLCR/L-06	16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

Internal Turning Tools 內徑車刀桿

SDJC

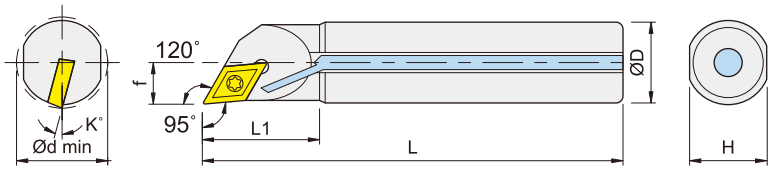


■ S..-SDJCR/L-.. Steel shank



Right-hand shown

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

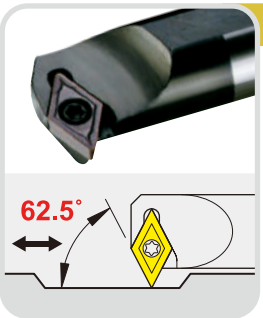


Right-hand shown

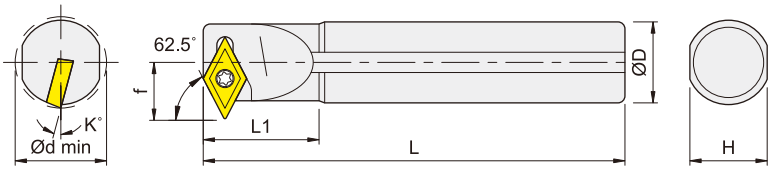
Item Code	Dimensions, mm							Insert	Screw	Wrench
	D	L	L1	f	H	K	dmin			
IS08K-SDJCR/L-07	8	125	22	5	7	15	10	DC..0702..	MS2506A	TF9
IS10K-SDJCR/L-07	10	125	25	6	9	13	12			
IS12M-SDJCR/L-07	12	150	30	7	11	10	14			
IS16Q-SDJCR/L-07	16	180	38	9.5	15	7	19			
IS16Q-SDJCR/L-11	16	180	38	9.5	15	7	19	DC..11T3..	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

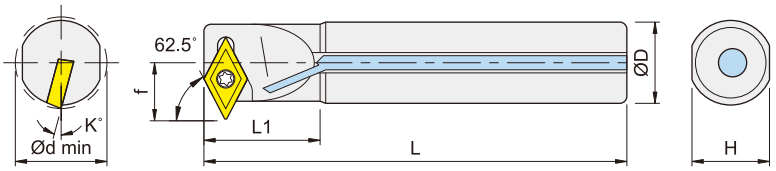


■ S..-SDNCR/L-.. Steel shank



Right-hand shown

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

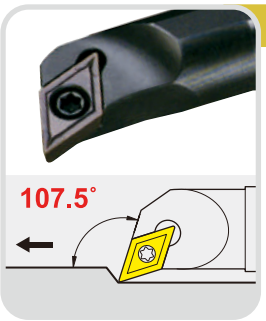


Right-hand shown

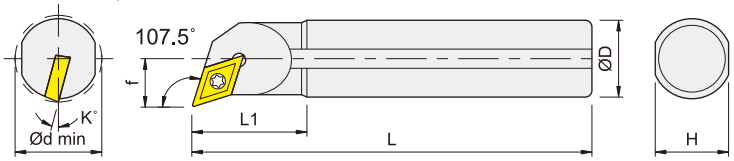
Item Code	Dimensions, mm							Insert	Screw	Wrench
	D	L	L1	f	H	K	dmin			
IS12M-SDNCR/L-07	12	150	25	9	11	7	16	DC..0702..	MS2506A	TF9
IS16Q-SDNCR/L-07	16	180	30	11	15	7	20			
IS20R-SDNCR/L-11	20	200	35	15	18	7	25	DC..11T3..	MS4009A	TF15
IS25R-SDNCR/L-11	25	200	35	17	23	5	32			
IS32S-SDNCR/L-11	32	250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

Internal Turning Tools 內徑車刀桿

SDQC

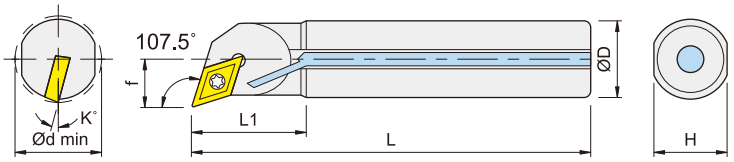


■ S..-SDQCR/L-.. Steel shank



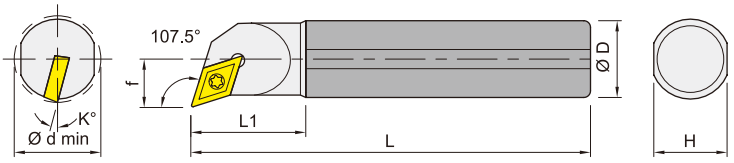
Right-hand shown

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



Right-hand shown

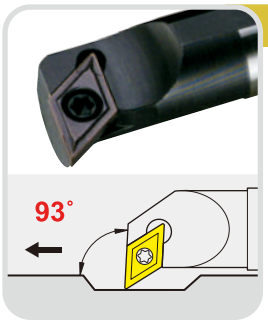
■ C..-SDQCR/L-.. Carbide shank



Right-hand shown

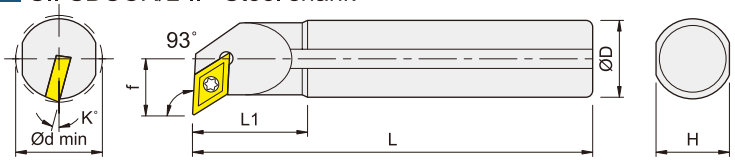
Item Code	Dimensions, mm							Insert	Screw	Wrench
	D	L	L1	f	H	K	dmin			
IS10K-SDQCR/L-07	10	125	22	6	9	13	13	DC..0702..	MS2506A	TF9
IS12M-SDQCR/L-07	12	150	30	8	11	10	16			
IS16Q-SDQCR/L-07	16	180	35	10	15	7	20			
IS20R-SDQCR/L-07	20	200	40	13	18	7	25			
IS16Q-SDQCR/L-11	16	180	35	10	15	7	20	DC..11T3..	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			
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	DC..11T3..	MS4009A	TF15
IA20R-SDQCR/L-11	20	200	40	13	18	7	25			
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			
IC10M-SDQCR-07	10	150	22	6	9	13	13	DC..0702..	MS2506A	TF9
IC12Q-SDQCR-07	12	180	30	8	11	10	16			
IC16Q-SDQCR-07	16	180	35	10	15	7	20			

Internal Turning Tools 內徑車刀桿



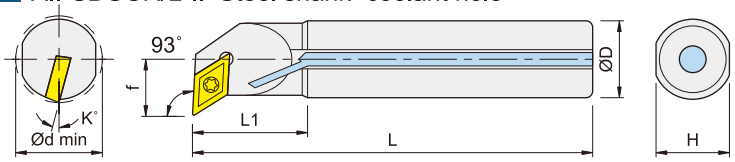
SDUC

■ S..-SDUCR/L-.. Steel shank



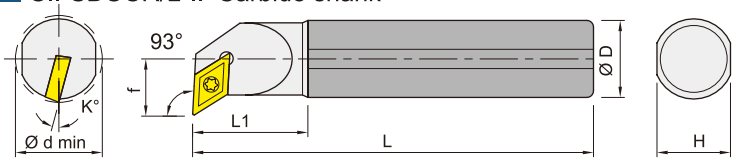
Right-hand shown

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



Right-hand shown

■ C..-SDUCR/L-.. Carbide shank

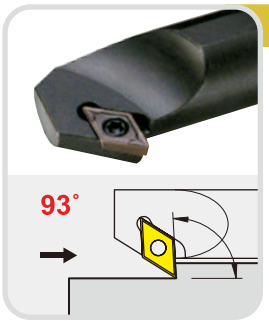


Right-hand shown

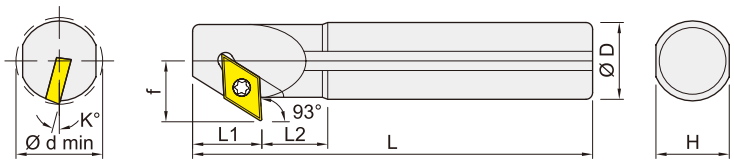
Item Code	Dimensions, mm							Insert	Screw	Wrench
	D	L	L1	f	H	K	dmin			
IS10K-SDUCR/L-07	10	125	25	7	9	13	13	DC..0702..	MS2506A	TF9
IS12M-SDUCR/L-07	12	150	30	9	11	10	16			
IS16Q-SDUCR/L-07	16	180	30	11	15	7	20			
IS20R-SDUCR/L-07	20	200	40	13	18	7	25			
IS16Q-SDUCR/L-11	16	180	30	11	15	7	20	DC..11T3..	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			
IA10K-SDUCR/L-07	10	125	25	7	9	13	13	DC..0702..	MS2506A	TF9
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			
IC10M-SDUCR-07	10	150	25	7	9	13	13	DC..0702..	MS2506A	TF9
IC12Q-SDUCR-07	12	180	30	9	11	10	16			
IC16R-SDUCR-11	16	200	30	11	15	7	20	DC..11T3..	MS4009A	TF15

Internal Turning Tools 內徑車刀桿

SDZC

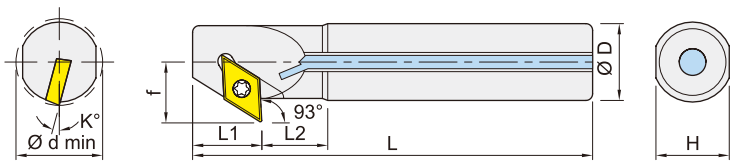


■ S..-SDZCR/L-.. Steel shank



Right-hand shown

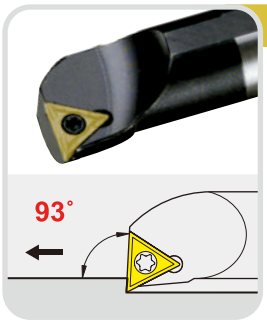
■ A..-SDZCR/L-.. Steel shank+coolant hole



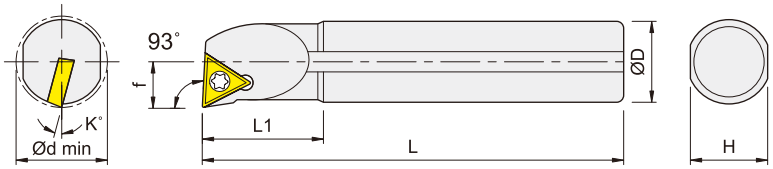
Right-hand shown

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			

STUC

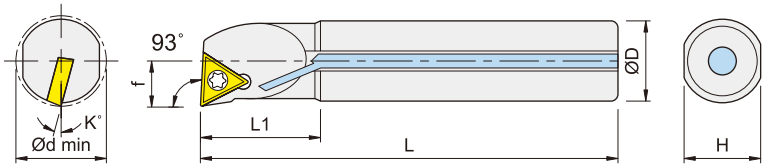


S..-STUCR/L-.. Steel shank



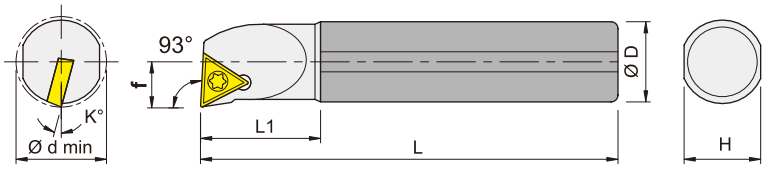
Right-hand shown

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



Right-hand shown

C..-STUCR/L-.. Carbide shank

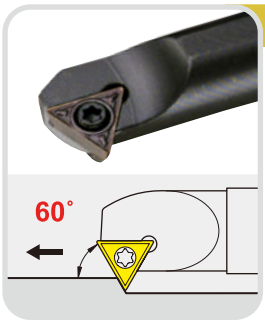


Item Code	Dimensions, mm							Insert	Screw	Wrench
	D	L	L1	f	H	K	dmin			
IS08K-STUCR/L-09	8	125	18	5.5	7	15	10	TC..0902..	MS2205A	TF7
IS10K-STUCR/L-09	10	125	22	6	9	13	12		MS2206A	
IS10K-STUCR/L-09-D11	10	125	22	5.5	9	13	12			
IS12M-STUCR-09	12	150	26	8	11	10	16			
IS14M-STUCR-09	14	150	26	8	13	10	16			
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

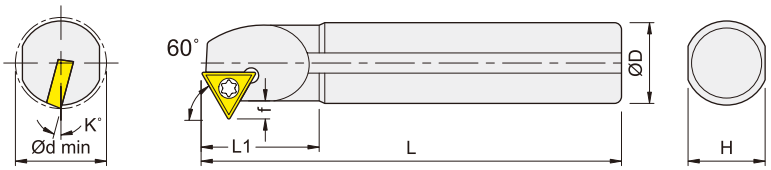
Item Code	Dimensions, mm							Insert	Screw 	Wrench 
	D	L	L1	f	H	K	dmin			
IA08K-STUCR/L-09	8	125	18	5.5	7	15	10	TC..0902..	MS2205A	TF7
IA10K-STUCR/L-09	10	125	22	6	9	13	12		MS2206A	
IA10K-STUCR/L-11	10	125	22	6	9	13	12	TC..1102..	MS2506A	TF9
IA12M-STUCR/L-11	12	150	26	8	11	10	16			
IA16Q-STUCR/L-11	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			

Internal Turning Tools 內徑車刀桿



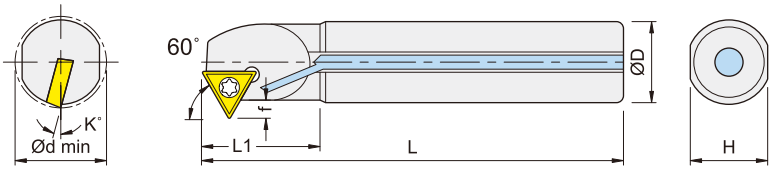
STWC

■ S..-STWCR/L-.. Steel shank



Right-hand shown

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

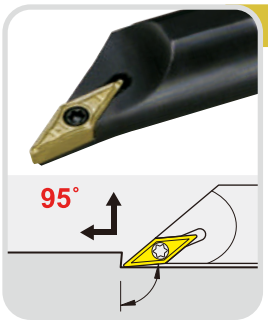


Right-hand shown

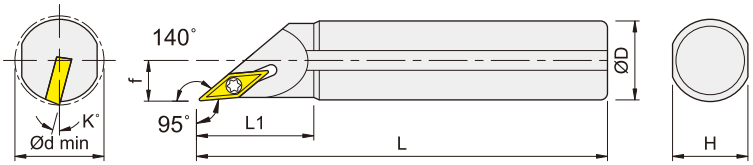
Item Code	Dimensions, mm							Insert	Screw	Wrench
	D	L	L1	f	H	K	dmin			
IS08K-STWCR/L-09	8	125	23	2	7	15	11	TC..0902..	MS2205A	TF7
IS10K-STWCR/L-11	10	125	23	2.5	9	15	13	TC..1102..	MS2506A	TF9
IS12M-STWCR/L-11	12	150	30	2.5	11	13	16			
IS16Q-STWCR/L-11	16	180	30	2.5	15	10	20			
IS20R-STWCR/L-11	20	200	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

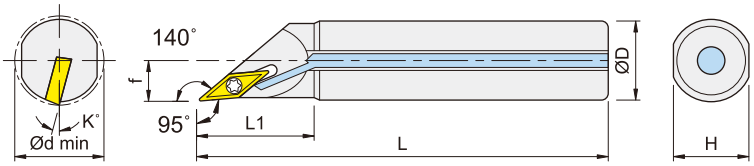


■ S..-SVJBR/L-.. Steel shank



Right-hand shown

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

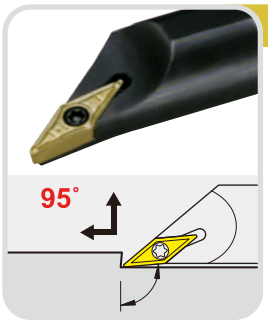


Right-hand shown

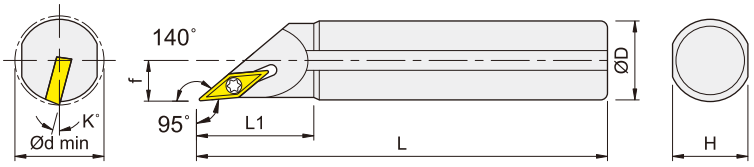
Item Code	Dimensions, mm							Insert	Screw	Wrench
	D	L	L1	f	H	K	dmin			
IS16Q-SVJBR/L-16	16	180	38	9.5	15	7	19	VB..1604..	MS3509B	TF15
IS20R-SVJBR/L-16	20	200	42	11.5	18	7	23			
IS25R-SVJBR/L-16	25	200	45	14	23	5	28			
IS32S-SVJBR/L-16	32	250	50	17.5	30	4	35			
IA16Q-SVJBR/L-16	16	180	38	9.5	15	7	19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

Internal Turning Tools 內徑車刀桿

SVJC

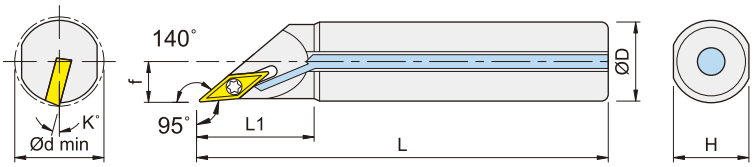


■ S..-SVJCR/L-.. Steel shank



Right-hand shown

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

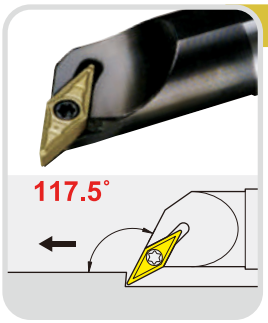


Right-hand shown

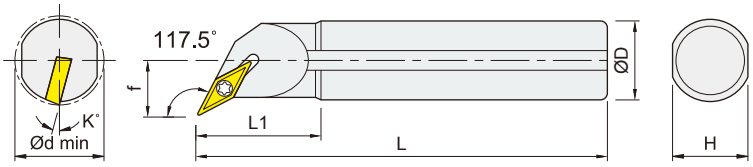
Item Code	Dimensions, mm							Insert	Screw	Wrench
	D	L	L1	f	H	K	dmin			
IS10K-SVJCR/L-11	10	125	25	6	9	13	12	VC..1103..	MS2506A	TF9
IS12M-SVJCR/L-11	12	150	30	7	11	10	14			
IS16Q-SVJCR/L-11	16	180	38	9.5	15	7	19			
IS20R-SVJCR/L-11	20	200	42	11.5	18	7	23			
IA10K-SVJCR/L-11	10	125	25	6	9	13	12			
IA12M-SVJCR/L-11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

Internal Turning Tools 內徑車刀桿

SVQB

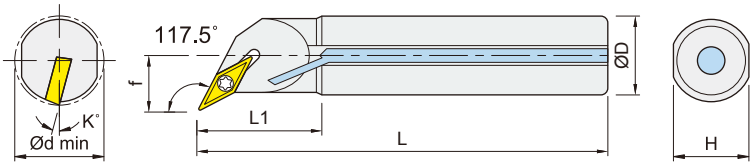


■ S..-SVQB/CR/L-.. Steel shank



Right-hand shown

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

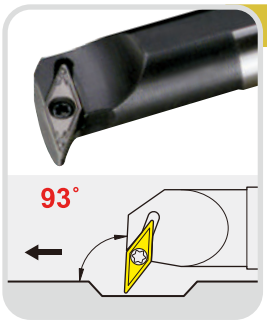


Right-hand shown

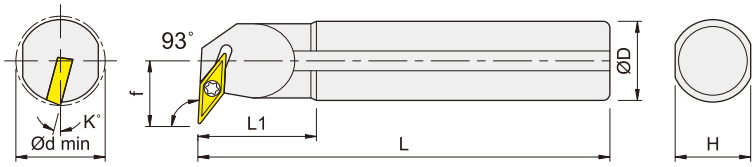
Item Code	Dimensions, mm							Insert	Shim	Screw	Wrench	Screw	Wrench
	D	L	L1	f	H	K	dmin						
IS25R-SVQBR/L-16	25	200	45	17	23	5	32	VB..1604..	--	--	--	MS3509B	TF15
IS32S-SVQBR/L-16	32	250	48	20	30	5	40		VSS322	MDS5035	PL35	MS3512B	
IS40T-SVQBR/L-16	40	300	60	25.5	37	5	50						
IA25R-SVQBR/L-16	25	200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

Internal Turning Tools 內徑車刀桿

SVUB

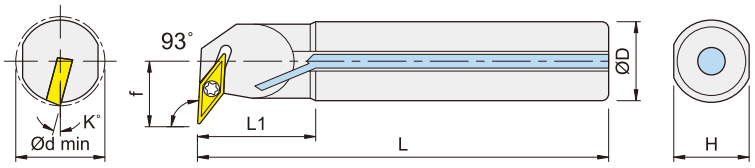


■ S..-SVUBR/L-.. Steel shank



Right-hand shown

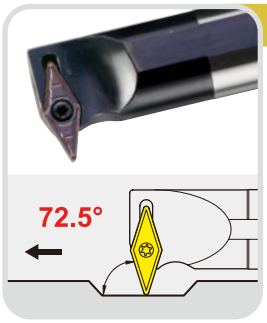
■ A..-SVUBR/L-.. Steel shank+coolant hole

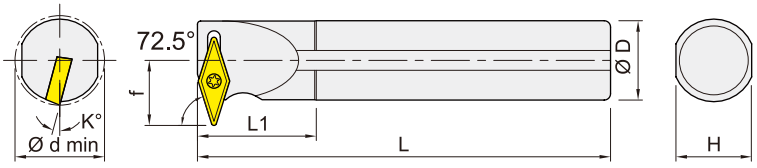


Right-hand shown

Item Code	Dimensions, mm							Insert	Shim	Screw	Wrench	Screw	Wrench
	D	L	L1	f	H	K	dmin						
IS25R-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						
IA25R-SVUBR/L-16	25	200	45	18	23	5	32		--	--	--	MS3509B	
IS16Q-SVUCR/L-11	16	180	30	13	15	7	22	VC..1103..	--	--	--	MS2506A	TF9
IS20R-SVUCR/L-11	20	200	40	15	18	7	27						
IA16Q-SVUCR/L-11	16	180	30	13	15	7	22						
IA20R-SVUCR/L-11	20	200	40	15	18	7	27						

SVVB



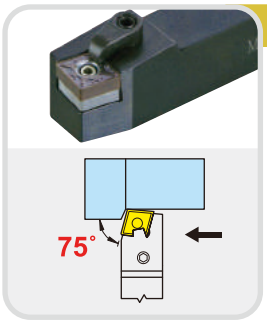


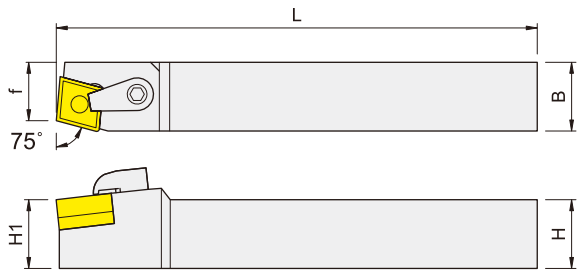
Right-hand shown

Item Code	Dimensions, mm							Insert	Shim	Screw	Wrench	Screw	Wrench
	D	L	L1	f	H	K	dmin						
IS25R-SVVBR/L-16	25	200	45	20.5	23	5	34	VB..1604..	--	--	--	MS3509B	TF15
IS25S-SVVBR/L-16	25	250	45	20.5	23	5	34						
IS32S-SVVBR/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

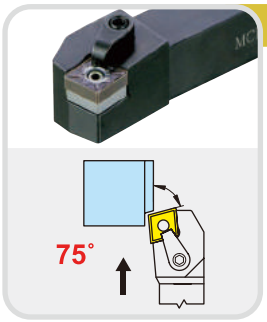


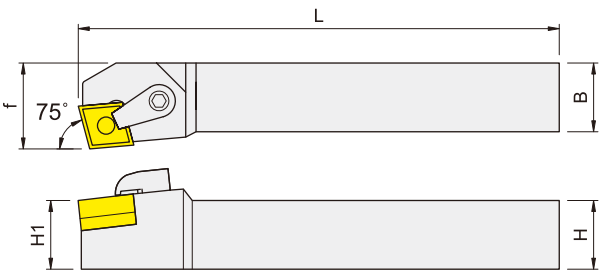


Right-hand shown

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							

MCKN



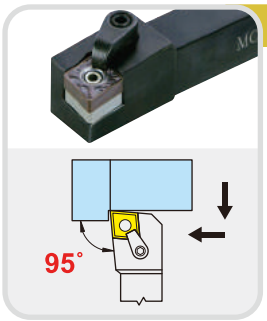


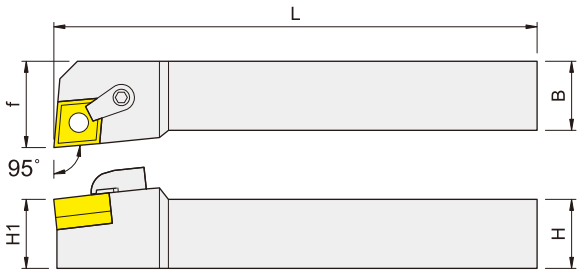
Right-hand shown

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							
IMCKNR/L-2525M-12	25	25	150	25	32					MS630		
IMCKNR/L-3232P-12	32	32	170	32	40							

External Turning Tools 外徑車刀桿

MCLN

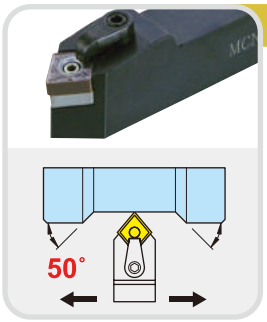


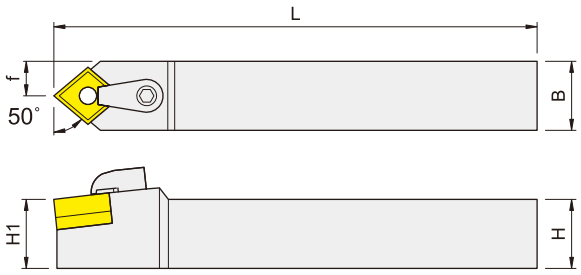


Right-hand shown

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							
IMCLNR/L-2525M-12	25	25	150	25	32					MS630		
IMCLNR/L-3232P-12	32	32	170	32	40							

MCNN

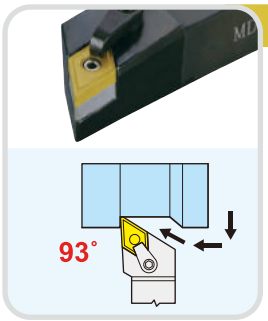


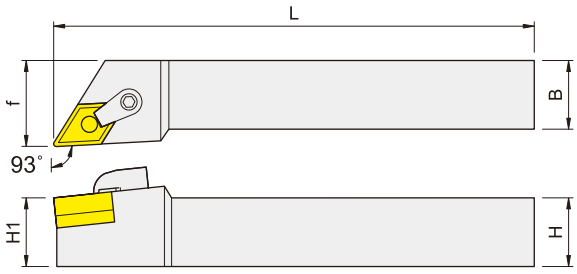


Item Code	Dimensions, mm					Insert	Pin	Shim	Wrench	Screw	Clamp	Wrench
	H	B	L	L1	f							
IMCNNN-1616K-12	16	16	125	16	8	CN..1204..	MLP46	CMS432	PL25	MS625	MC620	PL30
IMCNNN-2020K-12	20	20	125	20	10							
IMCNNN-2525M-12	25	25	150	25	12.5					MS630		
IMCNNN-3232P-12	32	32	170	32	16							

External Turning Tools 外徑車刀桿

MDJN

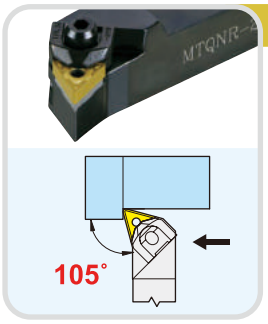


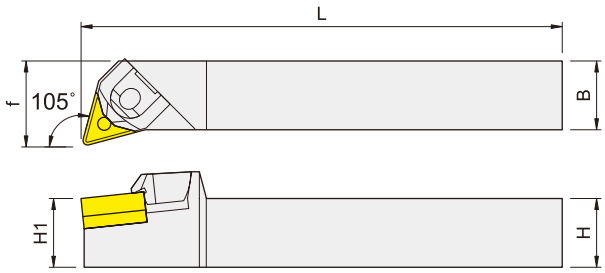


Right-hand shown

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		

MTQN



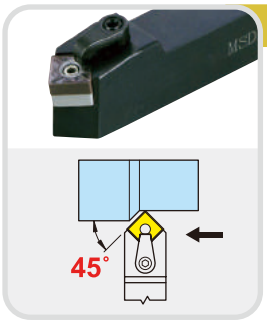


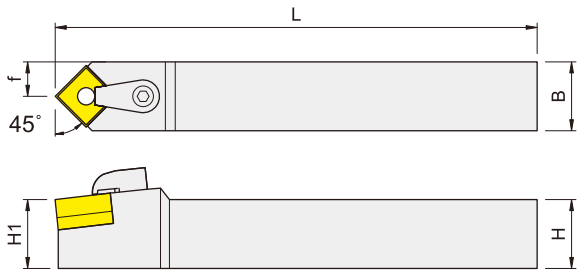
Right-hand shown

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

External Turning Tools 外徑車刀桿

MSDN

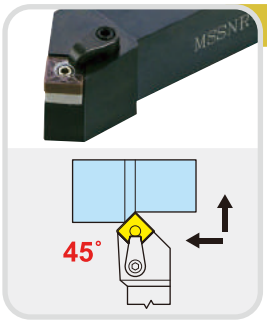


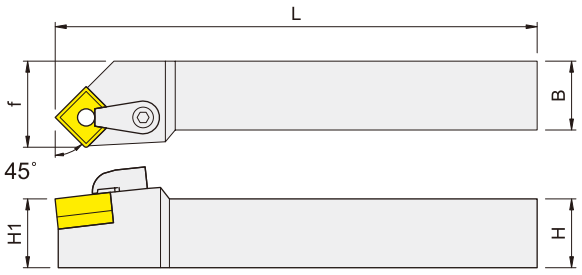


Right-hand shown

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		

MSSN



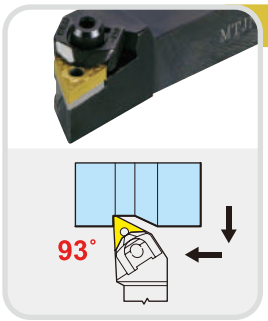


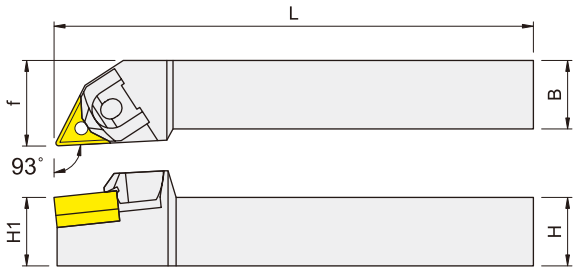
Right-hand shown

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							
IMSSNR/L-2525M-12	25	25	150	25	32					MS630		

External Turning Tools 外徑車刀桿

MTJN

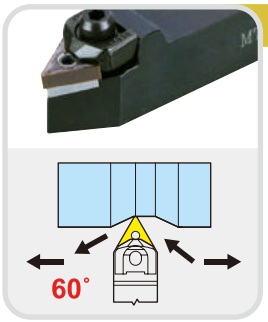


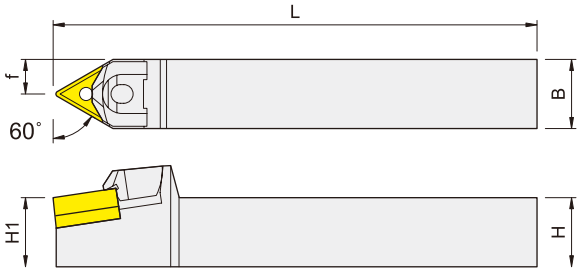


Right-hand shown

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

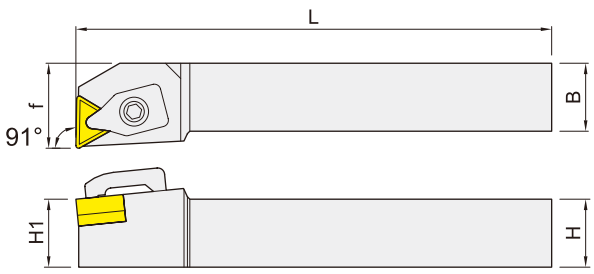




Item Code	Dimensions, mm					Insert	Pin	Screw	Wrench	Shim	Clamp	Wrench
	H	B	L	L1	f							
IMTENN-1216K-16	12	16	125	16	8	TN..1604..	MCP3	MCS3S-08	PL30	TWS322	MCW3-P40	PL40
IMTENN-1616K-16	16	16	125	16	8							
IMTENN-2020K-16	20	20	125	20	10							
IMTENN-2525M-16	25	25	150	25	12.5							

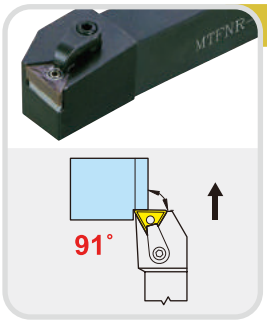
External Turning Tools 外徑車刀桿

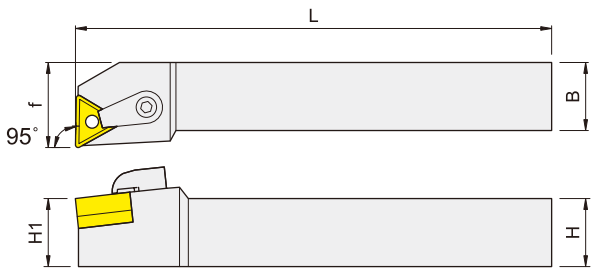




Right-hand shown

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						



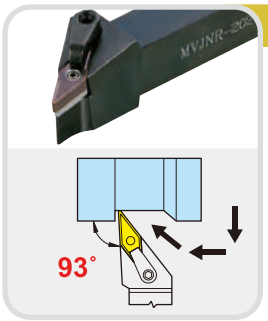


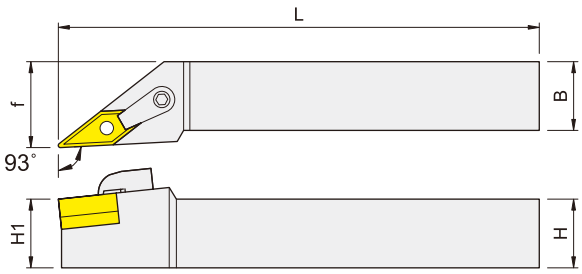
Right-hand shown

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

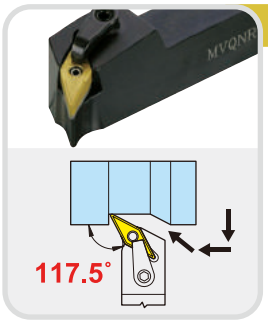


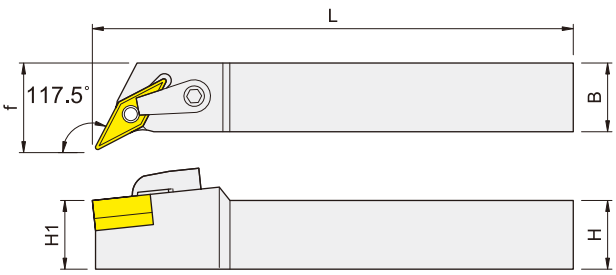


Right-hand shown

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							
IMVJNR/L-2525M-16	25	25	150	25	32					MS630		

MVQN



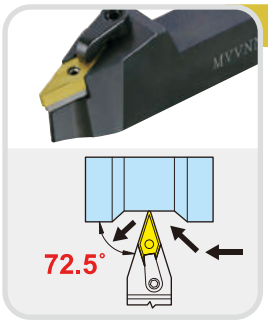


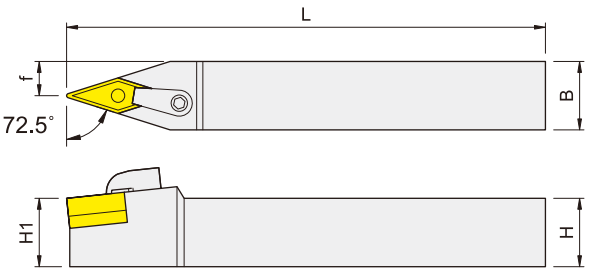
Right-hand shown

Item Code	Dimensions, mm					Insert	Pin	Shim	Wrench	Screw	Clamp	Wrench
	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		

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
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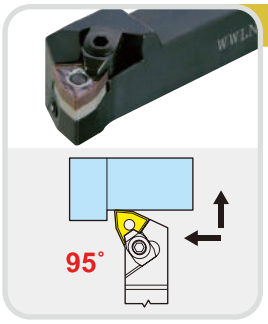
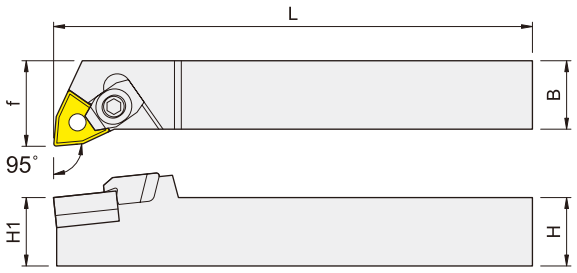
IMVVNN-2525M-16	25	25	150	25	12.5					MS630		

WWLN





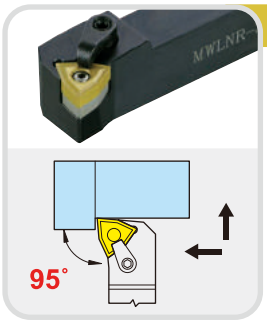
Right-hand shown

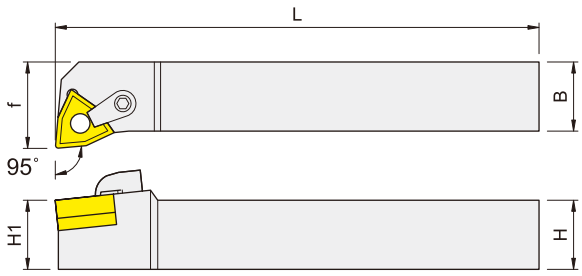
Item Code	Dimensions, mm					Insert	Pin	Shim	Wrench	Clamp	Wrench
	H	B	L	L1	f						
IWWLNL-2020K-08	20	20	125	20	25	WN..0804..	SCO418	WMS432	PL30	WCW6-P4	PL40
IWWLNL-2525M-08	25	25	150	25	32						

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

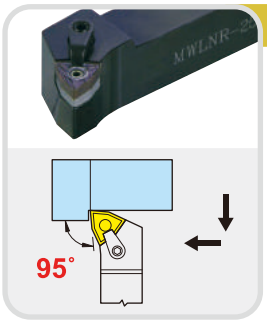


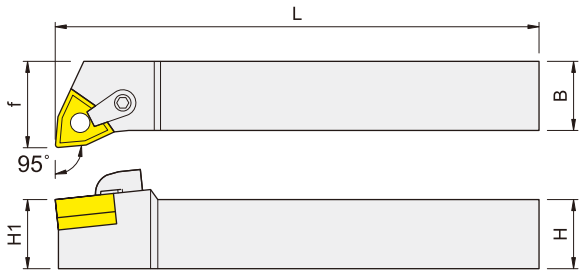


Right-hand shown

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

MWLN-N



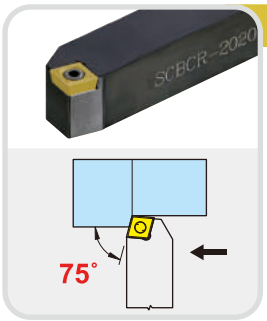


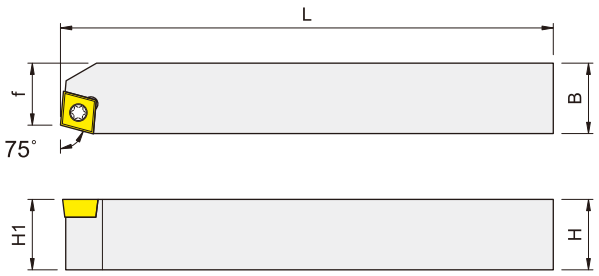
Right-hand shown

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

External Turning Tools 外徑車刀桿

SCBC

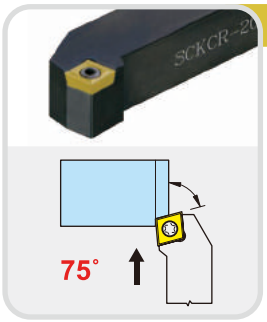


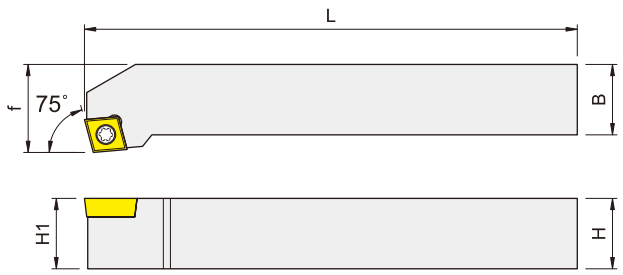


Right-hand shown

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

SCKC



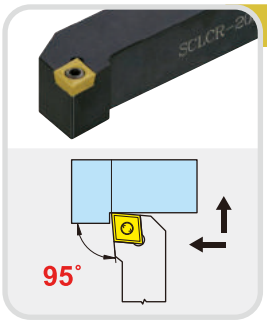


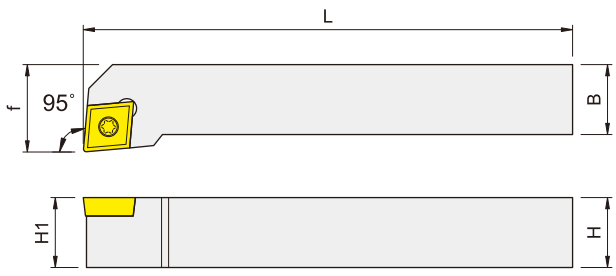
Right-hand shown

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

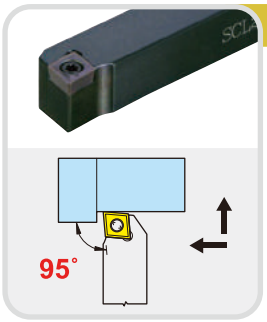


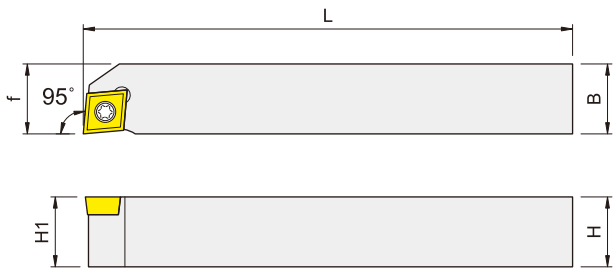


Right-hand shown

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



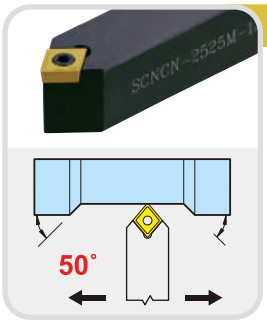


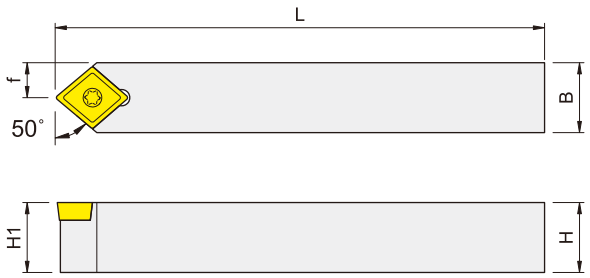
Right-hand shown

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

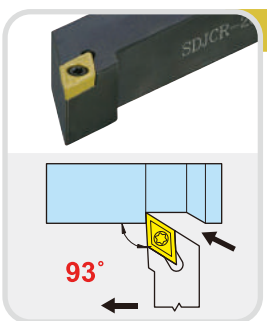
SCNC

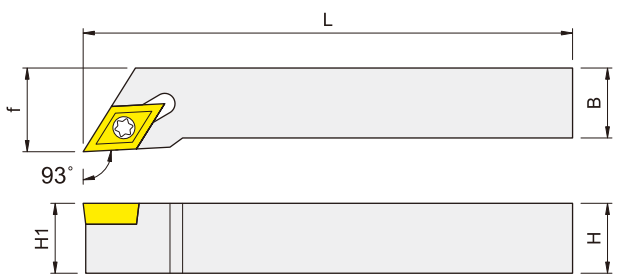




Item Code	Dimensions, mm					Insert	Clamp	Wrench
	H	B	L	L1	f			
ISCNCN-1616K-06	16	16	125	16	8	CC..0602..	MS2506A	TF9
ISCNCN-1212K-09	12	12	125	12	6	CC..09T3..	MS4011A	TF15
ISCNCN-1616K-09	16	16	125	16	8			
ISCNCN-2020K-09	20	20	125	20	10			
ISCNCN-2525M-09	25	25	150	25	12.5			
ISCNCN-2020K-12	20	20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

SDJC



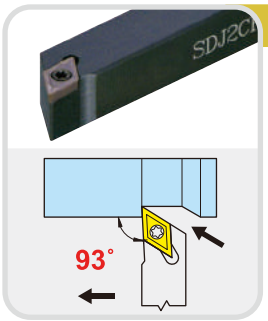


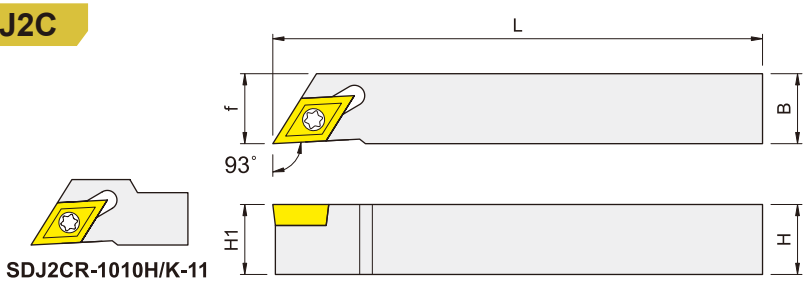
Right-hand shown

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



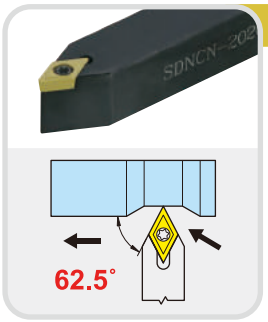


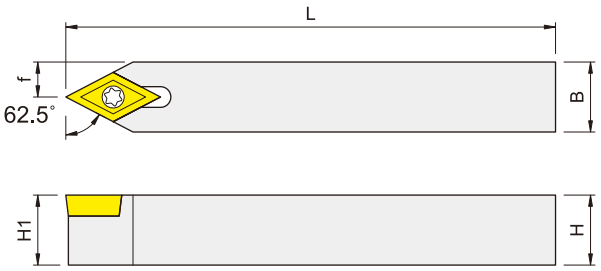
SDJ2CR-1010H/K-11

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

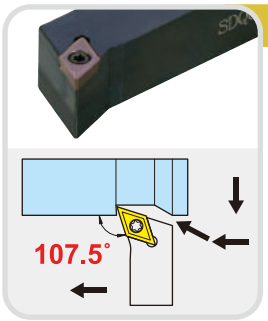


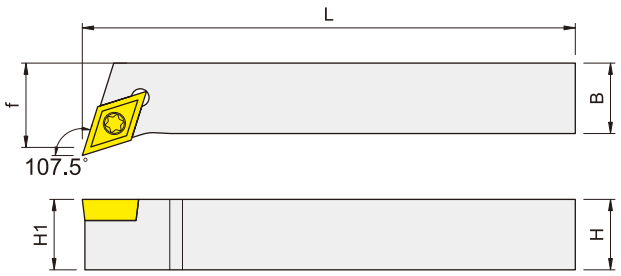


Item Code	Dimensions, mm					Insert	Clamp	Wrench
	H	B	L	L1	f			
ISDNCN-1010H-07	10	10	100	10	5	DC..0702..	MS2506A	TF9
ISDNCN-1212H-07	12	12	100	12	6			
ISDNCN-1616K-07	16	16	125	16	8			
ISDNCN-1212H-11	12	12	100	12	6	DC..11T3..	MS4009A	TF15
ISDNCN-1212K-11	12	12	125	12	6			
ISDNCN-1616K-11	16	16	125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

SDQC

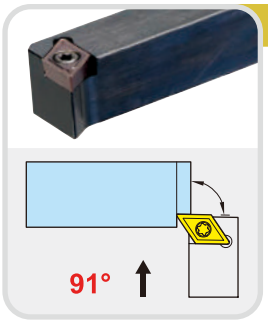


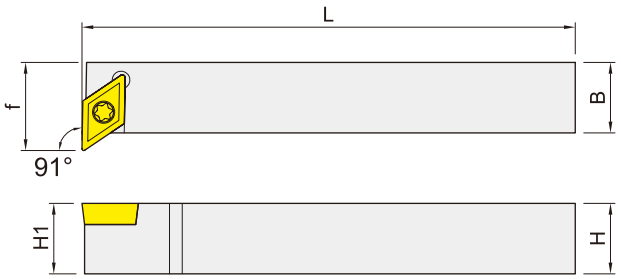


Right-hand shown

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			

SDFC



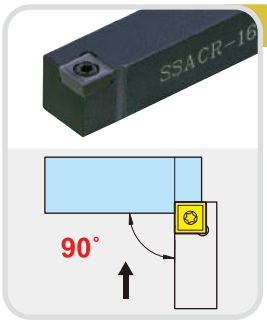


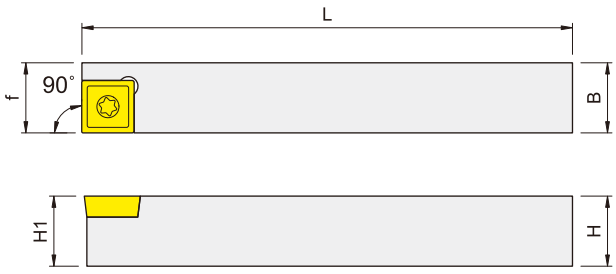
Right-hand shown

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

SSAC

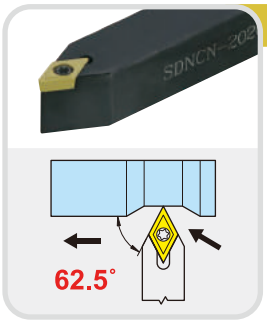


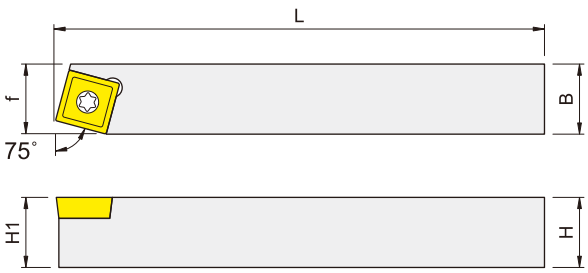


Right-hand shown

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			

SSBC



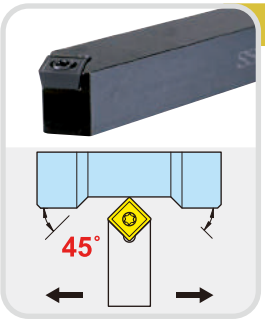


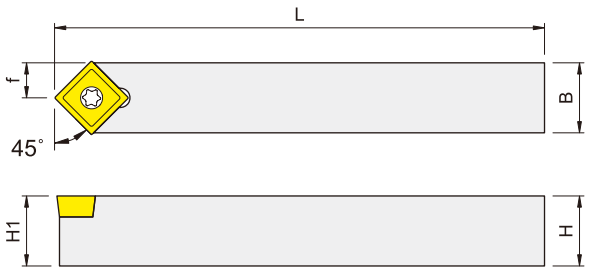
Right-hand shown

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

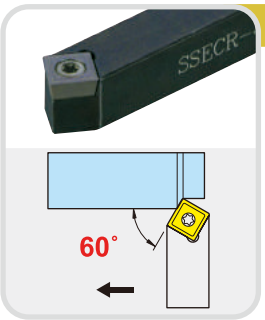
SSDC

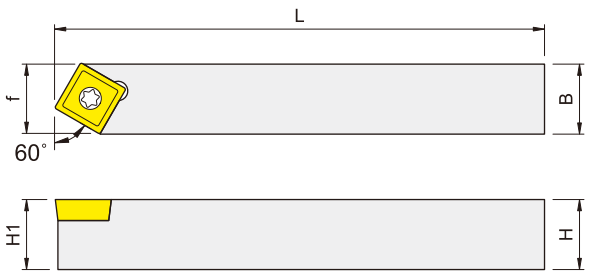




Item Code	Dimensions, mm					Insert	Clamp	Wrench
	H	B	L	L1	f			
ISSDCN-3.4H-09	9.5	12.7	100	9.5	6.35	SC..09T3..	MS4009A	TF15
ISSDCN-4.4H-09	12.7	12.7	100	12.7	6.35	SC..09T3..	MS4011A	TF15
ISSDCN-1212H-09	12	12	100	12	6			
ISSDCN-1616K-09	16	16	125	16	8			
ISSDCN-2020K-09	20	20	125	20	10			
ISSDCN-2525M-09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

SSEC



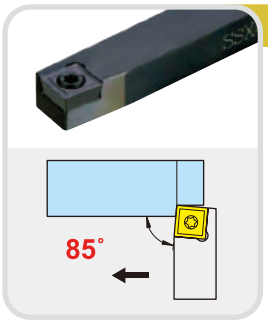


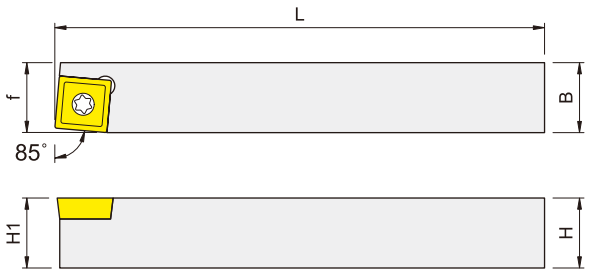
Right-hand shown

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

SSXC

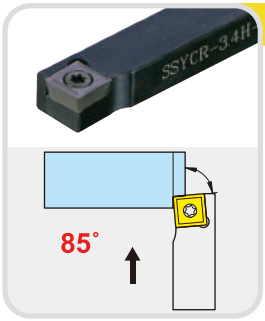


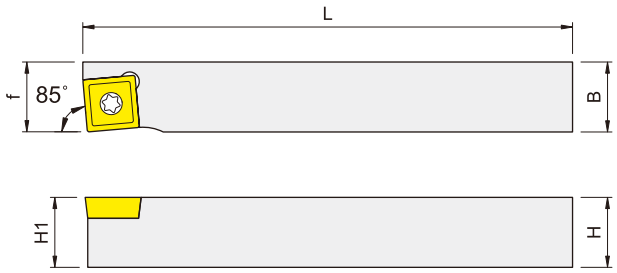


Right-hand shown

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

SSYC



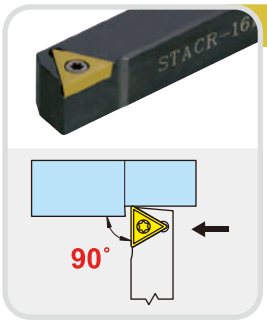


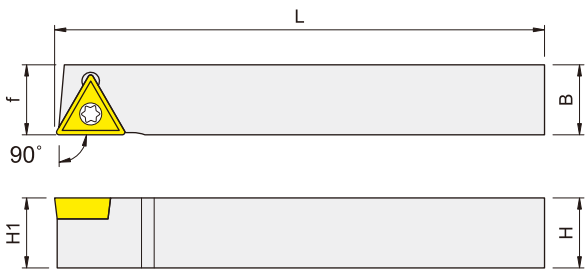
Right-hand shown

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

External Turning Tools 外徑車刀桿

STAC

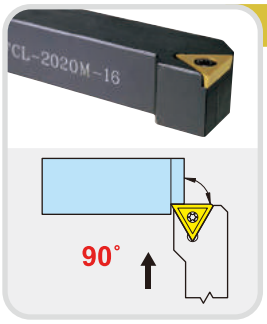


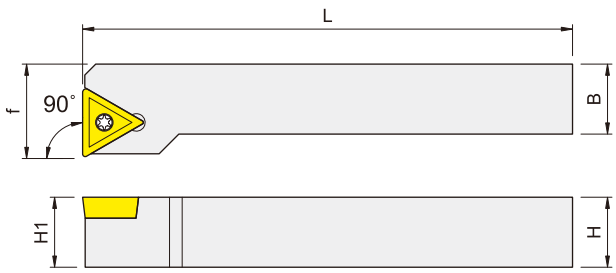


Right-hand shown

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			
ISTACR-1616K-16	16	16	125	16	16	TC..16T3..	MS4011A	TF15

STFC



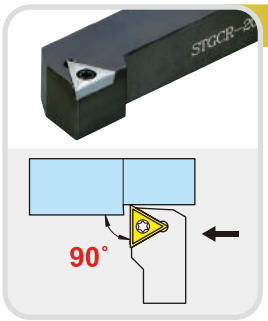


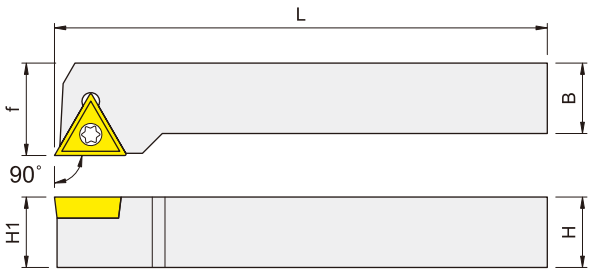
Right-hand shown

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

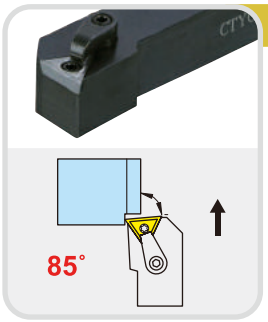


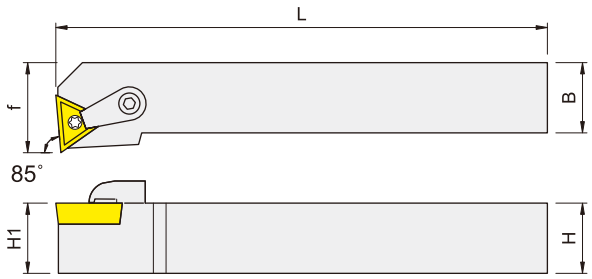


Right-hand shown

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

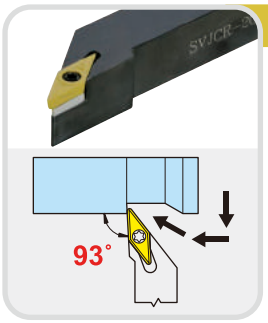




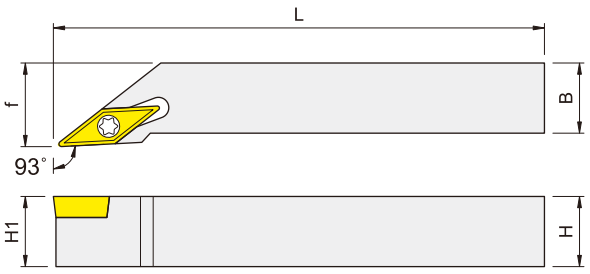
Right-hand shown

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

External Turning Tools 外徑車刀桿

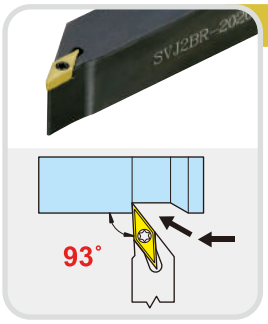


SVJB

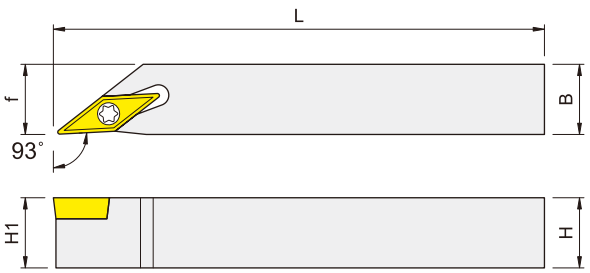


Right-hand shown

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

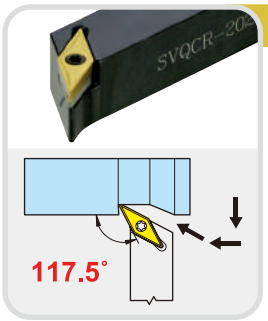


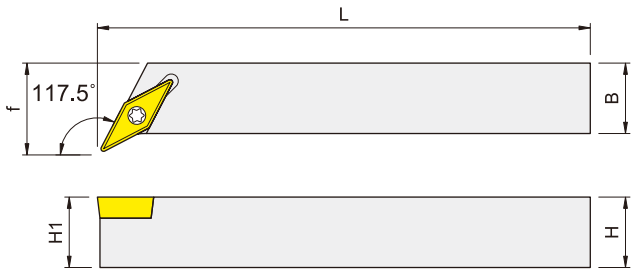
Right-hand shown

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

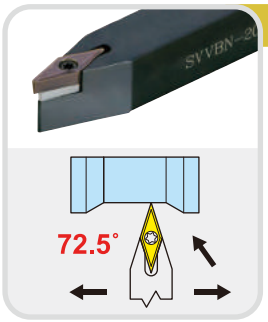


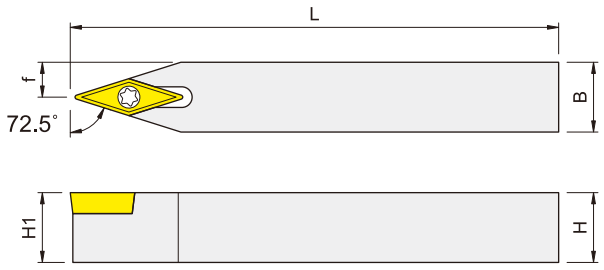


Right-hand shown

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

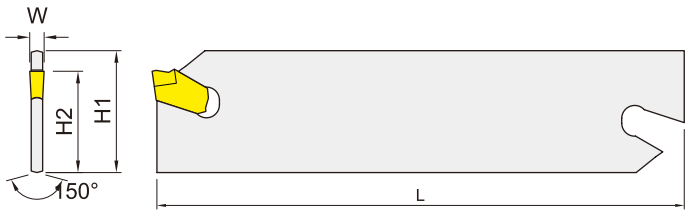
Winstar
Cutting Technologies

SGIH / *TGTN0220, TGTN0310*

切斷刀桿

ISGIH

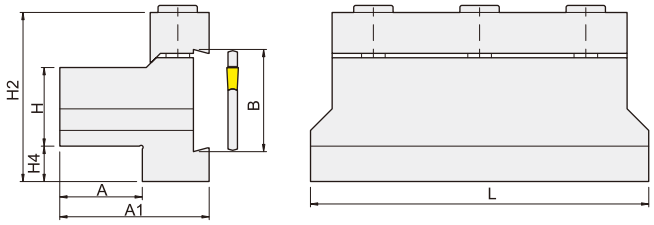




Item Code	Dimensions, mm				Insert	Tool Block	Wrench
	H1	H2	L	W			
ISGIH26-2	26	21.4	110	2.2	TGTN0220	SGTBU..-26	ESG-1
ISGIH32-2	32	25	150	2.2		SGTBU..-32	
ISGIH26-3	26	21.4	110	3.1	TGTN0310	SGTBU..-26	
ISGIH32-3	32	25	150	3.1		SGTBU..-32	

ISGTBU

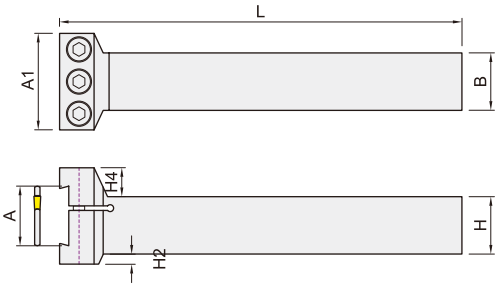




Item Code	Dimensions, mm							Clamp	Screw	Wrench	BLADE
	H	B	A	A1	L	H2	H4				
ISGTBU20-26	20	26	21	38	86	43	9	BKU-86	HTM630	PL50	ISGIH26-3
ISGTBU25-26	25	26	23	40	86	43	4				
ISGTBU20-32	20	32	21	40	110	50	13	BKU-100			ISGFH32-3
ISGTBU25-32	25	32	23	42	110	50	8				

ISGTBV





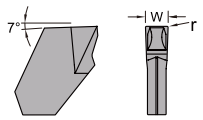
Item Code	Dimensions, mm							Clamp	Screw	Wrench	BLADE
	H	B	A	A1	L	H2	H4				
ISGTBV25-26	25	25	26	42	125	4.4	12.6	BKU-86	HTM630	PL50	ISGIH26...

TGTN0220 / TGTN0310

切斷刀片

Specification

	P	Steel	●	✱					Cutting Type : ● General ✱ Interrupted
	M	Stainless steel							
	K	Cast iron	●	✱					

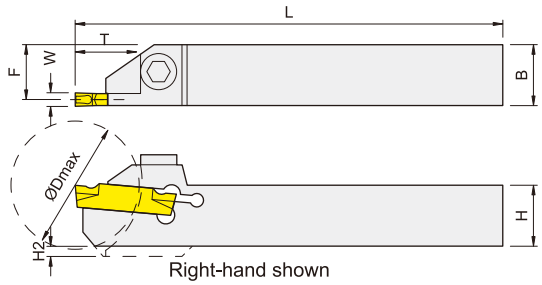
Inserts	Designation	Grade						Dimensions (mm)					Drawing
		CX30NS	CX40NS					w	r				
	**TGTN 0220**	✓	✓					2.2	0.2				
	**TGTN 0310**	✓	✓					3.1	0.15				

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



Right-hand shown

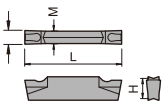
Item Code	Dimensions, mm					Width W(mm)		Insert	Screw	Wrench
	H	B	L	F	T	min	max			
IKGMR/L-1212K-1.5-L10	12	12	125	11.4	10	1.5	2.0	GMM2020...	HTM416	PL30
IKGMR/L-1616K-1.5-L10	16	16	125	15.4					HTM520	PL40
IKGMR/L-2020K-1.5-L10	20	20	125	19.4					HTM525	PL40
IKGMR/L-2525M-1.5-L10	25	25	150	24.4						
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						

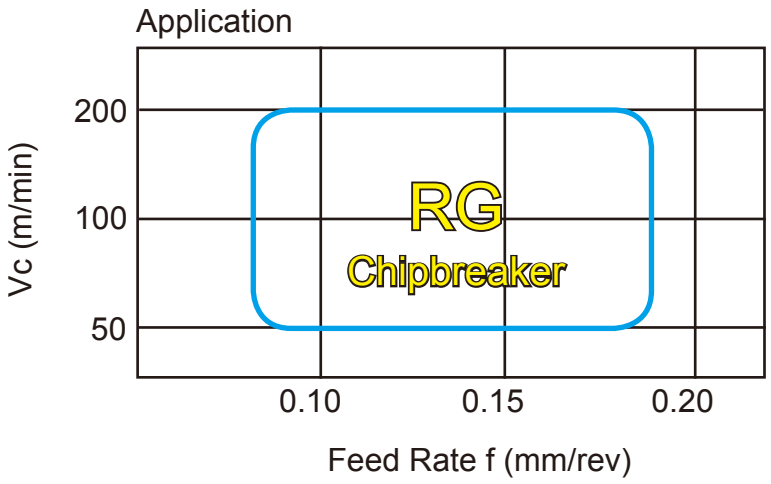
GMM2020

切斷刀片

Specification

	P	Steel	●	✱					Cutting Type : ● General ✱ Interrupted
	M	Stainless steel	●	✱					
	K	Cast iron	●	✱					

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

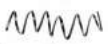
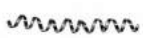
ISO Code		CARBIDEX	Mitsubishi	Sumiotmo	TaugeTec	SECO
P Steel	P10		UE6110	AC810P	TT8105	TP1500
	P20	***CX2565*** ***CX2565***	MC6025 VP15TF VP20RT	AC820P AC520U	TT8115	TP2500 CP250
	P30	***CX2565*** ***CX2555***	UE6035 VP15TF VP20RT	AC830P AC530U	TT8125 TT5100	TP3500 CP500
	P40	***CX3565*** ***CX3555***	UE6035 UH6400	AP830P AC530U	TT8135 TT7100	TP3500 CP500
M Stainless Steel	M10		VP10MF MC7015	AC610M		TP1500 TS2000
	M20	***CX3565*** ***CX3555***	VP15TF VP20MF US7020 MC7025	AC610M AC520U	TT9215	TM2000 TP2500 TS2500
	M30	***CX3565*** ***CX3555***	VP15TF MP7035 MC7025 US735	AC6030M AC630M AC530U	TT9225	TM4000 TP3500 CP500
	M40		MP7035 US735	AC6040M AC530U	TT9235 TT8020	TM4000
K Cast Iron	K01		MC5005	AC405K	TT7005	
	K10	***CX2565***	UC5015	AC415K	TT7015 TT7310	TK1000 TS2000
	K20	***CX2565*** ***CX2555***	VP15TF UC5115	AC420K		TK2000 CP500
	K30		VP15TF 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	☐ Yes ☐ No		☐ Yes ☐ No		☐ Yes ☐ No		☐ Yes ☐ 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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SYSTEMS
ISO 9001

DRIX Holemaking Tools



Winstar
Cutting Technologies









Winstar
Cutting Technologies

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鑽　削

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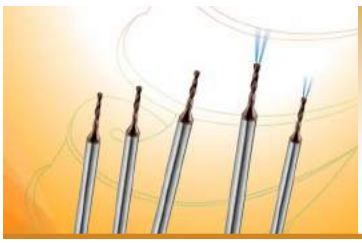
DP Series for Universal

- 3×D ~ 20×D Cutting depth.
- Internal & External Coolant.
- 140° Tip Angle, Reinforced Shank.
- UNIX Coating.

- 3×D ~ 20×D 加工深度。
- 冷卻方式 ： 內冷孔 & 外冷。
- 140° 鑽尖 , 銑刀柄。
- UNIX 塗層。



DL Series for Mini Hole

- 3×D, 4×D Cutting depth.
- Internal & External Coolant.
- 130°, 140° Tip Angle, Reinforced Shank.
- UNIX Coating.

- 3×D, 4×D 加工深度。
- 冷卻方式：內冷孔 & 外冷。
- 130°, 140° 鑽尖 , 銑刀柄。
- UNIX 塗層。



DM Series for Stainless Steel

- 3×D, 5×D Cutting depth.
- Internal Coolant.
- 140° Tip Angle, Reinforced Shank.
- UNIX Coating.

- 3×D, 5×D 加工深度。
- 冷卻方式：內冷孔。
- 140° 鑽尖 , 銑刀柄。
- UNIX 塗層。



DH Series for Hardened Steel

- 3×D, 5×D Cutting depth.
- Internal Coolant.
- 140° Tip Angle, Reinforced Shank.
- SINIX Coating.

- 3×D, 5×D 加工深度。
- 冷卻方式：內冷孔。
- 140° 鑽尖 , 銑刀柄。
- SINIX 塗層。



DG Series for General Purpose

- 3×D, 5×D Cutting depth.
- External Coolant.
- 130° Tip Angle, Straight Shank.
- UNIX Coating.

- 3×D, 5×D 加工深度。
- 冷卻方式：外冷。
- 130° 鑽尖 , 直柄。
- UNIX 塗層。



DSP Series Indexable Drills

- 2×D ~ 5×D Cutting depth.
- Diameter 12.5~50mm.
- Internal Coolant.
- Use SPMG insert.

- 2×D ~ 5×D 加工深度。
- 適用 12.5~50mm 孔徑加工。
- 冷卻方式：內冷孔。
- 使用 SPMG 刀片。



DWC Series Indexable Drills

- 2×D ~ 5×D Cutting depth.
- Diameter 14~60mm.
- Internal Coolant.
- Use WCMT insert.

- 2×D ~ 5×D 加工深度。
- 適用 14~60mm 孔徑加工。
- 冷卻方式：內冷孔。
- 使用 WCMT 刀片。



DZ Series for Step Hole

- Internal & External Coolant.
- Reinforced Shank.
- UNIX Coating.
- Customized available.

- 冷卻方式：內冷孔 & 外冷。
- 銑刀柄。
- UNIX 塗層。
- 可客制化。



DR Series Machine Reamers

- Internal & External Coolant.
- Specially for high accurate hole machining.
- UNIX Coating.
- Customized available.

- 冷卻方式：內冷孔 & 外冷。
- 專為高精度的孔加工設計。
- UNIX 塗層。
- 可客制化。



DB Series Boring System

- Easy to adjust.
- High rigidity tool body.
- Various inserts available.
- Diameter 25mm to 610mm.

- 易於調整加工孔徑。
- 高剛性合金鋼本體。
- 可適用多種刀片。
- 適用 25-610mm 孔徑加工。



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Solid Carbide Drills

Appearance	Items	Series	Coolant	ØRange	Degree Tip Angle	Page
DP Series for Universal (Reinforced Shank)						
	DPC3 Solid Carbide Drills - 3×D (for Universal) 內冷泛用鎢鋼鑽頭	DPC	Internal	Ø3.17~Ø20	140	C006
	DPC5 Solid Carbide Drills - 5×D (for Universal) 內冷泛用鎢鋼鑽頭	DPC	Internal	Ø3.17~Ø20	140	C008
	DPC7 Solid Carbide Drills - 7×D (for Universal) 內冷泛用鎢鋼鑽頭	DPC	Internal	Ø4~Ø16	140	C010
	DPC9 Solid Carbide Drills - 10×D (for Deep hole) 內冷深孔鎢鋼鑽頭	DPC	Internal	Ø3~Ø12	135	C011
	DPC9 Solid Carbide Drills - 15×D (for Deep hole) 內冷深孔鎢鋼鑽頭	DPC	Internal	Ø3~Ø12	135	C012
	DPC9 Solid Carbide Drills - 20×D (for Deep hole) 內冷深孔鎢鋼鑽頭	DPC	Internal	Ø3~Ø10	135	C013
	DPN3 Solid Carbide Drills - 3×D (for Universal) 外冷泛用鎢鋼鑽頭	DPN	External	Ø3~Ø20	140	C014
	DPN5 Solid Carbide Drills - 5×D (for Universal) 外冷泛用鎢鋼鑽頭	DPN	External	Ø3~Ø20	140	C016
DL Series for Mini Hole (Reinforced Shank)						
	DLC Solid Carbide Drills - 3~4×D (for Mini hole) 內冷小徑鎢鋼鑽頭	DLC	Internal	Ø2.0~Ø3.9	130, 140	C022
	DLN Solid Carbide Drills - 3×D (for Mini hole) 外冷小徑鎢鋼鑽頭	DLN	External	Ø0.2~Ø2.9	130	C023
DM Series for Stainless Steel & Superalloy (Reinforced Shank)						
	DMC3 Solid Carbide Drills - 3×D (for Stainless Steel) 內冷不鏽鋼用鎢鋼鑽頭	DMC	Internal	Ø4~Ø20	140	C026
	DMC5 Solid Carbide Drills - 5×D (for Stainless Steel) 內冷不鏽鋼用鎢鋼鑽頭	DMC	Internal	Ø4~Ø20	140	C027
	DMN3 Solid Carbide Drills - 3×D (for Stainless Steel) 外冷不鏽鋼用鎢鋼鑽頭	DMN	External	Ø4~Ø20	140	C028
DH Series for Superalloy & Hardened Steel (Reinforced Shank)						
	DHN3 Solid Carbide Drills - 3×D (for Hardened Steel) 外冷高硬用鎢鋼鑽頭	DHN	External	Ø0.9~Ø12	140	C032
DA Series for Straight Flute (with Straight Flute)						
	DAN3 Solid Carbide Drills - 3×D (with Straight Flute) 外冷直刃鑽鉸刀	DAN	External	Ø4~Ø16	130	C040
	DAN5 Solid Carbide Drills - 5×D (with Straight Flute) 外冷直刃鑽鉸刀	DAN	External	Ø4~Ø16	130	C041

Solid Carbide Drills

Appearance	Items	Series	Coolant	ØRange	Degree Tip Angle	Page
DZ Series with for Step Hole (Reinforced Shank)						
	DZC Solid Carbide Drills (for Step hole) 內冷階梯鎢鋼鑽頭	DZC	Internal	Ø3.3~Ø8.5	140	C044
	DZN Solid Carbide Drills (for Step hole) 外冷階梯鎢鋼鑽頭	DZN	External	Ø3.3~Ø8.5	140	C045
DF Series for General Purpose (with Flat Tip)						
	DFN3 Solid Carbide Drills - 3×D (with Flat Tip) 外冷平底鎢鋼鑽頭	DFN	External	Ø3~Ø20	180	C048
DG Series for General Purpose (Straight Shank)						
	DGN3 Solid Carbide Drills - 3×D (for General Purpose) 外冷泛用鎢鋼鑽頭	DGN	External	Ø2~Ø16	130	C052
	DGN5 Solid Carbide Drills - 5×D (for General Purpose) 外冷泛用鎢鋼鑽頭	DGN	External	Ø5~Ø16	130	C054
DT Series for Spotting						
	DTN Solid Carbide Drills - Tip angle 90° (for Spotting) 外冷定點鎢鋼鑽頭	DTN	External	Ø1.3~Ø16	90	C056
	DTN Solid Carbide Drills - Tip angle 120° (for Spotting) 外冷定點鎢鋼鑽頭	DTN	External	Ø3~Ø16	120	C057
	DTN Solid Carbide Drills - Tip angle 140° (for Spotting) 外冷定點鎢鋼鑽頭	DTN	External	Ø3~Ø16	140	C060
	DTN Solid Carbide Drills - Tip angle 90°, Long shank (for Spotting) 外冷定點鎢鋼鑽頭	DTN	External	Ø4~Ø16	90	C058
	DTN Solid Carbide Drills - Tip angle 120°, Long shank (for Spotting) 外冷定點鎢鋼鑽頭	DTN	External	Ø4~Ø16	120	C059
	DTN Solid Carbide Drills - Tip angle 140°, Long shank (for Spotting) 外冷定點鎢鋼鑽頭	DTN	External	Ø4~Ø16	140	C060
DC Series for Centering						
	DCN Solid Carbide Drills - Countersink Angle 60° (for Centering) 外冷中心鎢鋼鑽頭	DCN	External	Ø1~Ø5	120	C062
	DCN Solid Carbide Drills - Countersink Angle 90° (for Centering) 外冷中心鎢鋼鑽頭	DCN	External	Ø1~Ø5	120	C063

Indexable Drills

Appearance	Item		Page
SPMG Inserts			
	SPMG	050204-MG	C067
		060204-MG	
		07T308-MG	
		090408-MG	
		110408-MG	

Appearance	Item	Code No.	Coolant	ØRange	Page
DSP Indexable Drills					
	DSP Indexable Drills - 2×D 內冷捨棄式快速鑽頭	IDSP	Internal	Ø12.5~Ø50	C070
	DSP Indexable Drills - 3×D 內冷捨棄式快速鑽頭	IDSP	Internal	Ø12.5~Ø50	C072
	DSP Indexable Drills - 4×D 內冷捨棄式快速鑽頭	IDSP	Internal	Ø12.5~Ø50	C074
	DSP Indexable Drills - 5×D 內冷捨棄式快速鑽頭	IDSP	Internal	Ø13~Ø44	C076

Appearance	Item		Page
WCMT Inserts			
	WCMT	030208-MM	C068
		040208-MM	
		050308-MM	
		06T308-MM	
		080412-MM	

Appearance	Item	Code No.	Coolant	ØRange	Page
DWC Indexable Drills					
	DWC Indexable Drills - 2×D 內冷捨棄式快速鑽頭	IDWC	Internal	Ø14~Ø60	C078
	DWC Indexable Drills - 3×D 內冷捨棄式快速鑽頭	IDWC	Internal	Ø14~Ø60	C080
	DWC Indexable Drills - 4×D 內冷捨棄式快速鑽頭	IDWC	Internal	Ø14~Ø60	C082
	DWC Indexable Drills - 5×D 內冷捨棄式快速鑽頭	IDWC	Internal	Ø16~Ø44	C084

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Solid Carbide Reamers

Appearance	Items	Series	Coolant	ØRange	Degree Tip Angle	Page
DR Series for Machine Reamers						
	DRC Solid Carbide Machine Reamers 內冷鎢鋼機械鉸刀	DRC	Internal	Ø3~Ø12	-	C086
	DRN Solid Carbide Machine Reamers 外冷鎢鋼機械鉸刀	DRN	External	Ø3~Ø12	-	C087

Boring System

Appearance	Item		Page
CCMT Inserts			
	CCMT	060204-MP	C090
		09T304-MP	
		09T308-MP	
	CCMT	060202-MG	C090
		060204-MG	
		09T304-MG	
		09T308-MG	
		120408-MG	
SCMT Inserts			
	SCMT	09T304-MG	C091
		09T308-MG	
TCMT Inserts			
	TCMT	110204-MP	C092
	TCMT	110204-MG	C092
		16T304-MG	
		16T308-MG	

Boring System

Appearance	Items	Series	Coolant	ØRange	Page
DB Series for Boring System					
	DB Rough boring head 雙刃粗搪刀	DB	External	Ø25~Ø204	C093
	DB Rough boring tool 雙刃粗搪刀含 BT 刀柄	DB	External	Ø25~Ø204	C094
	DBLA Rough boring head for large hole 大徑雙刃粗搪刀	DBLA	External	Ø200~Ø610	C095
	DBLA Rough boring tool for large hole 大徑雙刃粗搪刀含 BT 刀柄	DBLA	External	Ø200~Ø610	C096
	DBBT series taper shank DBBT 系列搪刀刀柄	DBBT	-	-	C097

DPC, DPN Solid Carbide Drills (for Universal)

內冷 & 外冷泛用鎢鋼鑽頭



FEATURES

- Superior Rigidity
- High Cutting Performance
- Customized Service
- For Steel, Stainless steel, Cast iron
- 刀具剛性優異
- 高效能加工效率
- 提供客製化服務
- 適用於一般鋼料、不鏽鋼、鑄鐵

SPECS

- UNIX Coating
- 135° or 140° tip angle
- Reinfored Shank

DPC3 Solid Carbide Drills - 3×D (for Universal)

內冷泛用鎢鋼鑽頭

P	M	K	N	S	H
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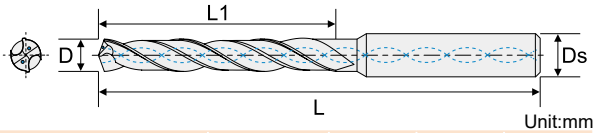
Product Specs

- 3×D Cutting depth
- Reinforced Shank
- 140° Tip Angle
- Internal Coolant
- UNIX Coating
- Tolerance h8 standard / m7 possible on request
- Double Margins Design
- SX Design
- For Steel, Alloy Steel, Cast Iron and 400 series Stainless Steel.





Unit:mm

Order No.	D	L1	L	Ds
DPC303170301	3.17(1/8")	20	60	4
DPC304000301	4.00	24	66	6
DPC304100301	4.10	24	66	6
DPC304200301	4.20	24	66	6
DPC304300301	4.30	24	66	6
DPC304400301	4.40	24	66	6
DPC304500301	4.50	24	66	6
DPC304600301	4.60	24	66	6
DPC304650301	4.65(13/71")	24	66	6
DPC304700301	4.70	24	66	6
DPC304760301	4.76(3/16")	28	66	6
DPC304800301	4.80	28	66	6
DPC304900301	4.90	28	66	6
DPC305000301	5.00	28	66	6
DPC305100301	5.10	28	66	6
DPC305200301	5.20	28	66	6
DPC305300301	5.30	28	66	6
DPC305400301	5.40	28	66	6
DPC305500301	5.50	28	66	6
DPC305560301	5.56	28	66	6
DPC305600301	5.60	28	66	6
DPC305700301	5.70	28	66	6
DPC305800301	5.80	28	66	6
DPC305900301	5.90	28	66	6
DPC306000301	6.00	28	66	6
DPC306100301	6.10	34	79	8
DPC306200301	6.20	34	79	8
DPC306300301	6.30	34	79	8
DPC306350301	6.35(1/4")	34	79	8
DPC306400301	6.40	34	79	8
DPC306500301	6.50	34	79	8
DPC306600301	6.60	34	79	8
DPC306700301	6.70	34	79	8
DPC306800301	6.80	34	79	8
DPC306900301	6.90	34	79	8
DPC307000301	7.00	34	79	8
DPC307100301	7.10	41	79	8
DPC307200301	7.20	41	79	8
DPC307300301	7.30	41	79	8
DPC307400301	7.40	41	79	8
DPC307500301	7.50	41	79	8
DPC307600301	7.60	41	79	8
DPC307700301	7.70	41	79	8
DPC307800301	7.80	41	79	8
DPC307900301	7.90	41	79	8
DPC307940301	7.94(5/16)	41	79	8

Order No.	D	L1	L	Ds
DPC308000301	8.00	41	79	8
DPC308100301	8.10	47	89	10
DPC308200301	8.20	47	89	10
DPC308300301	8.30	47	89	10
DPC308400301	8.40	47	89	10
DPC308500301	8.50	47	89	10
DPC308600301	8.60	47	89	10
DPC308700301	8.70	47	89	10
DPC308800301	8.80	47	89	10
DPC308900301	8.90	47	89	10
DPC309000301	9.00	47	89	10
DPC309100301	9.10	47	89	10
DPC309200301	9.20	47	89	10
DPC309250301	9.25(23/64")	47	89	10
DPC309300301	9.30	47	89	10
DPC309400301	9.40	47	89	10
DPC309500301	9.50	47	89	10
DPC309520301	9.52(3/8")	47	89	10
DPC309600301	9.60	47	89	10
DPC309700301	9.70	47	89	10
DPC309800301	9.80	47	89	10
DPC309900301	9.90	47	89	10
DPC310000301	10.00	47	89	10
DPC310100301	10.10	55	102	12
DPC310200301	10.20	55	102	12
DPC310300301	10.30	55	102	12
DPC310400301	10.40	55	102	12
DPC310500301	10.50	55	102	12
DPC310600301	10.60	55	102	12
DPC310700301	10.70	55	102	12
DPC310800301	10.80	55	102	12
DPC310900301	10.90	55	102	12
DPC311000301	11.00	55	102	12
DPC311100301	11.10	55	102	12
DPC311110301	11.11(7/16")	55	102	12
DPC311200301	11.20	55	102	12
DPC311300301	11.30	55	102	12
DPC311400301	11.40	55	102	12
DPC311500301	11.50	55	102	12
DPC311600301	11.60	55	102	12
DPC311700301	11.70	55	102	12
DPC311800301	11.80	55	102	12
DPC311900301	11.90	55	102	12

DPC3 Solid Carbide Drills - 3×D (for Universal)

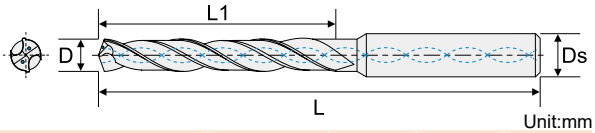
內冷泛用鎢鋼鑽頭

P	M	K	N	S	H
●	●	●			○

Product Specs

- 3×D Cutting depth
- Reinforced Shank
- 140° Tip Angle
- Internal Coolant
- UNIX Coating
- Tolerance h8 standard / m7 possible on request
- Double Margins Design
- SX Design
- For Steel, Alloy Steel, Cast Iron and 400 series Stainless Steel.





Unit:mm

Order No.	D	L1	L	Ds
DPC312000301	12.00	55	102	12
DPC312100301	12.10	60	107	14
DPC312200301	12.20	60	107	14
DPC312300301	12.30	60	107	14
DPC312400301	12.40	60	107	14
DPC312500301	12.50	60	107	14
DPC312600301	12.60	60	107	14
DPC312700301	12.70(1/2")	60	107	14
DPC312800301	12.80	60	107	14
DPC312900301	12.90	60	107	14
DPC313000301	13.00	60	107	14
DPC313200301	13.20	60	107	14
DPC313300301	13.30	60	107	14
DPC313500301	13.50	60	107	14
DPC313700301	13.70	60	107	14
DPC313800301	13.80	60	107	14
DPC314000301	14.00	60	107	14
DPC314200301	14.20	65	115	16
DPC314290301	14.29(9/16")	65	115	16
DPC314300301	14.30	65	115	16
DPC314400301	14.40	65	115	16
DPC314500301	14.50	65	115	16
DPC314700301	14.70	65	115	16
DPC315000301	15.00	65	115	16
DPC315200301	15.20	65	115	16
DPC315500301	15.50	65	115	16
DPC315600301	15.60	65	115	16
DPC315700301	15.70	65	115	16
DPC315800301	15.80	65	115	16
DPC315870301	15.87(5/8")	65	115	16
DPC316000301	16.00	65	115	16
DPC316500301	16.50	73	123	18
DPC317000301	17.00	73	123	18
DPC317500301	17.50	73	123	18
DPC318000301	18.00	73	123	18
DPC318500301	18.50	79	131	20
DPC319000301	19.00	79	131	20
DPC319050301	19.05(3/4")	79	131	20
DPC319500301	19.50	79	131	20
DPC320000301	20.00	79	131	20

Order No.	D	L1	L	Ds

DPC5 Solid Carbide Drills - 5×D (for Universal)

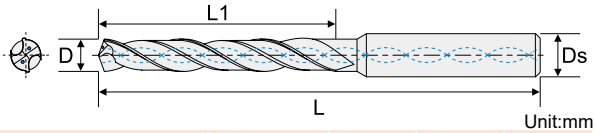
內冷泛用鎢鋼鑽頭

P	M	K	N	S	H
●	●	●			○

Product Specs

- 5×D Cutting depth
- Reinforced Shank
- 140° Tip Angle
- Internal Coolant
- UNIX Coating
- Tolerance h8 standard / m7 possible on request
- Double Margins Design
- SX Design
- For Steel, Alloy Steel, Cast Iron and 400 series Stainless Steel.





Unit:mm

Order No.	D	L1	L	Ds
DPC503170501	3.17(1/8")	28	60	4
DPC504000501	4.00	36	74	6
DPC504100501	4.10	36	74	6
DPC504200501	4.20	36	74	6
DPC504300501	4.30	36	74	6
DPC504400501	4.40	36	74	6
DPC504500501	4.50	36	74	6
DPC504600501	4.60	36	74	6
DPC504650501	4.65(13/71")	36	74	6
DPC504700501	4.70	36	74	6
DPC504760501	4.76(3/16")	44	82	6
DPC504800501	4.80	44	82	6
DPC504900501	4.90	44	82	6
DPC505000501	5.00	44	82	6
DPC505100501	5.10	44	82	6
DPC505200501	5.20	44	82	6
DPC505300501	5.30	44	82	6
DPC505400501	5.40	44	82	6
DPC505500501	5.50	44	82	6
DPC505550501	5.55(7/32")	44	82	6
DPC505600501	5.60	44	82	6
DPC505700501	5.70	44	82	6
DPC505800501	5.80	44	82	6
DPC505900501	5.90	44	82	6
DPC506000501	6.00	44	82	6
DPC506100501	6.10	53	91	8
DPC506200501	6.20	53	91	8
DPC506300501	6.30	53	91	8
DPC506350501	6.35(1/4")	53	91	8
DPC506400501	6.40	53	91	8
DPC506500501	6.50	53	91	8
DPC506600501	6.60	53	91	8
DPC506700501	6.70	53	91	8
DPC506800501	6.80	53	91	8
DPC506900501	6.90	53	91	8
DPC507000501	7.00	53	91	8
DPC507100501	7.10	53	91	8
DPC507200501	7.20	53	91	8
DPC507300501	7.30	53	91	8
DPC507400501	7.40	53	91	8
DPC507500501	7.50	53	91	8
DPC507600501	7.60	53	91	8
DPC507700501	7.70	53	91	8
DPC507800501	7.80	53	91	8
DPC507900501	7.90	53	91	8
DPC507940501	7.94(5/16")	53	91	8

Order No.	D	L1	L	Ds
DPC508000501	8.00	53	91	8
DPC508100501	8.10	61	103	10
DPC508200501	8.20	61	103	10
DPC508300501	8.30	61	103	10
DPC508400501	8.40	61	103	10
DPC508500501	8.50	61	103	10
DPC508600501	8.60	61	103	10
DPC508700501	8.70	61	103	10
DPC508800501	8.80	61	103	10
DPC508900501	8.90	61	103	10
DPC509000501	9.00	61	103	10
DPC509100501	9.10	61	103	10
DPC509200501	9.20	61	103	10
DPC509250501	9.25(23/64")	61	103	10
DPC509300501	9.30	61	103	10
DPC509400501	9.40	61	103	10
DPC509500501	9.50	61	103	10
DPC509520501	9.52(3/8")	61	103	10
DPC509600501	9.60	61	103	10
DPC509700501	9.70	61	103	10
DPC509800501	9.80	61	103	10
DPC509900501	9.90	61	103	10
DPC510000501	10.00	61	103	10
DPC510100501	10.10	71	118	12
DPC510200501	10.20	71	118	12
DPC510300501	10.30	71	118	12
DPC510400501	10.40	71	118	12
DPC510500501	10.50	71	118	12
DPC510600501	10.60	71	118	12
DPC510700501	10.70	71	118	12
DPC510800501	10.80	71	118	12
DPC510900501	10.90	71	118	12
DPC511000501	11.00	71	118	12
DPC511100501	11.10	71	118	12
DPC511110501	11.11(7/16")	71	118	12
DPC511200501	11.20	71	118	12
DPC511300501	11.30	71	118	12
DPC511400501	11.40	71	118	12
DPC511500501	11.50	71	118	12
DPC511600501	11.60	71	118	12
DPC511700501	11.70	71	118	12
DPC511800501	11.80	71	118	12
DPC511900501	11.90	71	118	12

DPC5 Solid Carbide Drills - 5×D (for Universal)

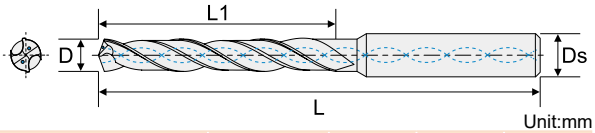
內冷泛用鎢鋼鑽頭

P	M	K	N	S	H
●	●	●			○

Product Specs

- 5×D Cutting depth
- Reinforced Shank
- 140° Tip Angle
- Internal Coolant
- UNIX Coating
- Tolerance h8 standard / m7 possible on request
- Double Margins Design
- SX Design
- For Steel, Alloy Steel, Cast Iron and 400 series Stainless Steel.





Unit:mm

Order No.	D	L1	L	Ds
DPC512000501	12.00	71	118	12
DPC512100501	12.10	77	124	14
DPC512200501	12.20	77	124	14
DPC512300501	12.30	77	124	14
DPC512400501	12.40	77	124	14
DPC512500501	12.50	77	124	14
DPC512600501	12.60	77	124	14
DPC512700501	12.70(1/2")	77	124	14
DPC512800501	12.80	77	124	14
DPC512900501	12.90	77	124	14
DPC513000501	13.00	77	124	14
DPC513100501	13.10	77	124	14
DPC513300501	13.30	77	124	14
DPC513400501	13.40	77	124	14
DPC513500501	13.50	77	124	14
DPC513600501	13.60	77	124	14
DPC513700501	13.70	77	124	14
DPC513800501	13.80	77	124	14
DPC513900501	13.90	77	124	14
DPC514000501	14.00	77	124	14
DPC514100501	14.10	83	133	16
DPC514200501	14.20	83	133	16
DPC514290501	14.29(9/16")	83	133	16
DPC514300501	14.30	83	133	16
DPC514400501	14.40	83	133	16
DPC514500501	14.50	83	133	16
DPC514600501	14.60	83	133	16
DPC514700501	14.70	83	133	16
DPC514800501	14.80	83	133	16
DPC514900501	14.90	83	133	16
DPC515000501	15.00	83	133	16
DPC515100501	15.10	83	133	16
DPC515200501	15.20	83	133	16
DPC515300501	15.30	83	133	16
DPC515400501	15.40	83	133	16
DPC515500501	15.50	83	133	16
DPC515600501	15.60	83	133	16
DPC515700501	15.70	83	133	16
DPC515800501	15.80	83	133	16
DPC515870501	15.87(5/8")	83	133	16
DPC515900501	15.90	83	133	16
DPC516000501	16.00	83	133	16
DPC516500501	16.50	93	143	18
DPC517000501	17.00	93	143	18
DPC517500501	17.50	93	143	18
DPC518000501	18.00	93	143	18
DPC518500501	18.50	101	153	20

Order No.	D	L1	L	Ds
DPC519000501	19.00	101	153	20
DPC519050501	19.05(3/4")	101	153	20
DPC519500501	19.50	101	153	20
DPC520000501	20.00	101	153	20

DPC7 Solid Carbide Drills - 7×D (for Universal)

內冷泛用鎢鋼鑽頭

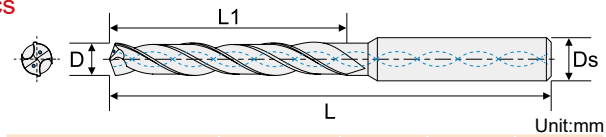
P	M	K	N	S	H
●	●	●			○

Product Specs

- 7×D Cutting depth
- Reinforced Shank
- 140° Tip Angle
- Internal Coolant
- UNIX Coating
- Tolerance h8 standard / m7 possible on request
- Double Margins Design
- SX Design
- For Steel, Alloy Steel, Cast Iron and 400 series Stainless Steel.

＊ Made to order, MOQ 5pcs





Unit:mm

Order No.	D	L1	L	Ds
DPC704000701	4.00	40	75	6
DPC704100701	4.10	40	75	6
DPC704200701	4.20	40	75	6
DPC704300701	4.30	45	85	6
DPC704400701	4.40	45	85	6
DPC704500701	4.50	45	85	6
DPC704600701	4.60	45	85	6
DPC704650701	4.65(13/71")	45	85	6
DPC704700701	4.70	45	85	6
DPC704800701	4.80	50	90	6
DPC704900701	4.90	50	90	6
DPC705000701	5.00	50	90	6
DPC705100701	5.10	50	90	6
DPC705200701	5.20	50	90	6
DPC705300701	5.30	50	90	6
DPC705400701	5.40	57	97	6
DPC705500701	5.50	57	97	6
DPC705700701	5.70	57	97	6
DPC705800701	5.80	57	97	6
DPC705900701	5.90	57	97	6
DPC706000701	6.00	57	97	6
DPC706200701	6.20	66	106	8
DPC706300701	6.30	66	106	8
DPC706350701	6.35(1/4")	66	106	8
DPC706500701	6.50	66	106	8
DPC706600701	6.60	66	106	8
DPC706700701	6.70	66	106	8
DPC706800701	6.80	66	106	8
DPC706900701	6.90	76	116	8
DPC707000701	7.00	76	116	8
DPC707100701	7.10	76	116	8
DPC707200701	7.20	76	116	8
DPC707500701	7.50	76	116	8
DPC707600701	7.60	76	116	8
DPC707700701	7.70	76	116	8
DPC707800701	7.80	76	116	8
DPC708000701	8.00	76	116	8
DPC708100701	8.10	87	131	10
DPC708200701	8.20	87	131	10
DPC708400701	8.40	87	131	10
DPC708500701	8.50	87	131	10
DPC708600701	8.60	87	131	10
DPC708700701	8.70	87	131	10
DPC708800701	8.80	87	131	10
DPC708900701	8.90	87	131	10

Order No.	D	L1	L	Ds
DPC709000701	9.00	95	139	10
DPC709100701	9.10	95	139	10
DPC709200701	9.20	95	139	10
DPC709300701	9.30	95	139	10
DPC709400701	9.40	95	139	10
DPC709500701	9.50	95	139	10
DPC709520701	9.52	95	139	10
DPC709700701	9.70	95	139	10
DPC709800701	9.80	95	139	10
DPC710000701	10.00	95	139	10
DPC710200701	10.20	106	155	12
DPC710300701	10.30	106	155	12
DPC710500701	10.50	106	155	12
DPC710720701	10.72(27/64")	106	155	12
DPC710800701	10.80	106	155	12
DPC711000701	11.00	106	155	12
DPC711200701	11.20	114	155	12
DPC711500701	11.50	114	155	12
DPC711800701	11.80	114	155	12
DPC712000701	12.00	114	155	12
DPC712100701	12.10	133	182	14
DPC712200701	12.20	133	182	14
DPC712300701	12.30	133	182	14
DPC712500701	12.50	133	182	14
DPC712700701	12.70	133	182	14
DPC713000701	13.00	133	182	14
DPC713500701	13.50	133	182	14
DPC714000701	14.00	133	182	14
DPC714100701	14.10	152	200	16
DPC714200701	14.20	152	200	16
DPC714500701	14.50	152	200	16
DPC715000701	15.00	152	200	16
DPC715500701	15.50	152	200	16
DPC715870701	15.87	152	200	16
DPC716000701	16.00	152	200	16

DPC9 Solid Carbide Drills - 10×D (for Deep Hole)

內冷深孔鎢鋼鑽頭

P	M	K	N	S	H
●	●	●	○	○	○

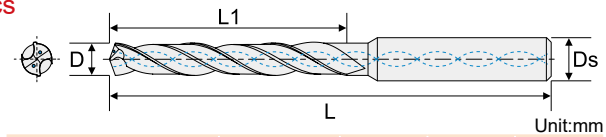
Product Specs

- 10×D Cutting depth
- Reinforced Shank
- 135° Tip Angle
- Internal Coolant
- UNIX Coating
- Tolerance h8
- Double Margins Design
- SX Design
- For Steel, Alloy Steel, Stainless Steel and Cast Iron.

※Require an initial pilot hole to guide the drill.

＊ Made to order, MOQ 5pcs





Unit:mm

Order No.	D	L1	L	Ds
DPC903001001	3.00	48	100	4
DPC903501001	3.50	48	100	4
DPC904001001	4.00	48	100	4
DPC904501001	4.50	72	125	6
DPC905001001	5.00	72	125	6
DPC905501001	5.50	72	125	6
DPC906001001	6.00	72	125	6
DPC906501001	6.50	96	150	8
DPC907001001	7.00	96	150	8
DPC907501001	7.50	96	150	8
DPC908001001	8.00	96	150	8
DPC908501001	8.50	120	175	10
DPC909001001	9.00	120	175	10
DPC909501001	9.50	120	175	10
DPC910001001	10.00	120	175	10
DPC911001001	11.00	132	200	12
DPC912001001	12.00	144	200	12

Order No.	D	L1	L	Ds

DPC9 Solid Carbide Drills - 15×D (for Deep Hole)

內冷深孔鎢鋼鑽頭

P	M	K	N	S	H
●	●	●	○	○	○

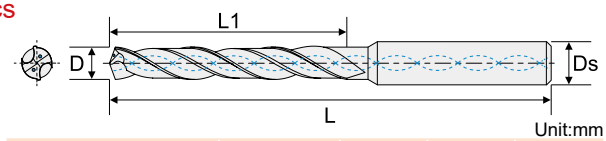
Product Specs

- 15×D Cutting depth
- Reinforced Shank
- 135° Tip Angle
- Internal Coolant
- UNIX Coating
- Tolerance h8
- Double Margins Design
- SX Design
- For Steel, Alloy Steel, Stainless Steel and Cast Iron.

※Require an initial pilot hole to guide the drill.

＊ Made to order, MOQ 5pcs





Unit:mm

Order No.	D	L1	L	Ds
DPC903001501	3.00	55	95	3
DPC903501501	3.50	76	116	4
DPC904001501	4.00	76	116	4
DPC904501501	4.50	93	133	6
DPC905001501	5.00	93	133	6
DPC905501501	5.50	110	150	6
DPC906001501	6.00	110	150	6
DPC906501501	6.50	127	167	8
DPC907001501	7.00	127	167	8
DPC907501501	7.50	143	183	8
DPC908001501	8.00	143	183	8
DPC908501501	8.50	160	204	10
DPC909001501	9.00	160	204	10
DPC909501501	9.50	177	221	10
DPC910001501	10.00	177	221	10
DPC911001501	11.00	198	247	12
DPC912001501	12.00	214	263	12

Order No.	D	L1	L	Ds

DPC9 Solid Carbide Drills - 20×D (for Deep Hole)

內冷深孔鎢鋼鑽頭

P	M	K	N	S	H
●	●	●	○	○	○

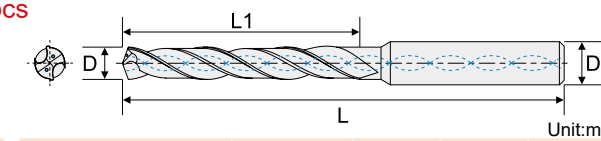
Product Specs

- 20×D Cutting depth
- Reinforced Shank
- 135° Tip Angle
- Internal Coolant
- UNIX Coating
- Tolerance h8
- Double Margins Design
- SX Design
- For Steel, Alloy Steel, Stainless Steel and Cast Iron.

※Require an initial pilot hole to guide the drill.

＊ Made to order, MOQ 5pcs





Unit:mm

Order No.	D	L1	L	Ds
DPC903002001	3.00	70	110	3
DPC903502001	3.50	83	123	4
DPC904002001	4.00	96	136	4
DPC904502001	4.50	118	158	6
DPC905002001	5.00	118	158	6
DPC905502001	5.50	140	180	6
DPC906002001	6.00	140	180	6
DPC906502001	6.50	162	202	8
DPC907002001	7.00	162	202	8
DPC907502001	7.50	183	223	8
DPC908002001	8.00	183	223	8
DPC908502001	8.50	205	249	10
DPC909002001	9.00	205	249	10
DPC909502001	9.50	227	271	10
DPC910002001	10.00	227	271	10

Order No.	D	L1	L	Ds

DPN3 Solid Carbide Drills - 3×D (for Universal)

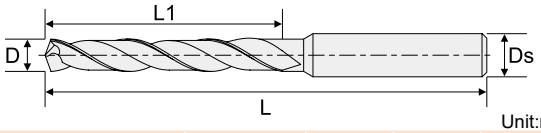
外冷泛用鎢鋼鑽頭

P	M	K	N	S	H
●	○	●			

Product Specs

- 3×D Cutting depth
- Reinforced Shank
- 140° Tip Angle
- External Coolant
- UNIX Coating
- Tolerance h8
- SX Design
- For Steel, Alloy Steel up to 1200 N/mm2, Cast Iron and 400 series Stainless Steel.





Unit:mm

Order No.	D	L1	L	Ds
DPN303000341	3.00	20	60	4
DPN303100341	3.10	20	60	4
DPN303170341	3.17(1/8")	20	60	4
DPN303200341	3.20	20	60	4
DPN303250341	3.25(5/39")	20	60	4
DPN303300341	3.30	20	60	4
DPN303400341	3.40	20	60	4
DPN303500341	3.50	20	60	4
DPN303600341	3.60	20	60	4
DPN303700341	3.70	20	60	4
DPN303800341	3.80	24	60	4
DPN303900341	3.90	24	60	4
DPN303970341	3.97(5/32")	24	60	4
DPN303000301	3.00	20	62	6
DPN303100301	3.10	20	62	6
DPN303200301	3.20	20	62	6
DPN303250301	3.25(5/39")	20	62	6
DPN303300301	3.30	20	62	6
DPN303400301	3.40	20	62	6
DPN303500301	3.50	20	62	6
DPN303600301	3.60	20	62	6
DPN303700301	3.70	20	62	6
DPN303800301	3.80	24	66	6
DPN303900301	3.90	24	66	6
DPN303970301	3.97(5/32")	24	66	6
DPN304000301	4.00	24	66	6
DPN304100301	4.10	24	66	6
DPN304200301	4.20	24	66	6
DPN304300301	4.30	24	66	6
DPN304400301	4.40	24	66	6
DPN304500301	4.50	24	66	6
DPN304600301	4.60	24	66	6
DPN304650301	4.65(13/71")	24	66	6
DPN304700301	4.70	24	66	6
DPN304760301	4.76(3/16")	28	66	6
DPN304800301	4.80	28	66	6
DPN304900301	4.90	28	66	6
DPN305000301	5.00	28	66	6
DPN305100301	5.10	28	66	6
DPN305200301	5.20	28	66	6
DPN305300301	5.30	28	66	6
DPN305400301	5.40	28	66	6
DPN305500301	5.50	28	66	6
DPN305560301	5.56(7/32")	28	66	6
DPN305600301	5.60	28	66	6
DPN305700301	5.70	28	66	6
DPN305800301	5.80	28	66	6
DPN305900301	5.90	28	66	6

Order No.	D	L1	L	Ds
DPN306000301	6.00	28	66	6
DPN306100301	6.10	34	79	8
DPN306200301	6.20	34	79	8
DPN306300301	6.30	34	79	8
DPN306350301	6.35(1/4")	34	79	8
DPN306400301	6.40	34	79	8
DPN306500301	6.50	34	79	8
DPN306600301	6.60	34	79	8
DPN306700301	6.70	34	79	8
DPN306800301	6.80	34	79	8
DPN306900301	6.90	34	79	8
DPN307000301	7.00	34	79	8
DPN307100301	7.10	41	79	8
DPN307200301	7.20	41	79	8
DPN307300301	7.30	41	79	8
DPN307400301	7.40	41	79	8
DPN307500301	7.50	41	79	8
DPN307600301	7.60	41	79	8
DPN307700301	7.70	41	79	8
DPN307800301	7.80	41	79	8
DPN307900301	7.90	41	79	8
DPN307940301	7.94(5/16")	41	79	8
DPN308000301	8.00	41	79	8
DPN308100301	8.10	47	89	10
DPN308200301	8.20	47	89	10
DPN308300301	8.30	47	89	10
DPN308400301	8.40	47	89	10
DPN308500301	8.50	47	89	10
DPN308600301	8.60	47	89	10
DPN308700301	8.70	47	89	10
DPN308800301	8.80	47	89	10
DPN308900301	8.90	47	89	10
DPN309000301	9.00	47	89	10
DPN309100301	9.10	47	89	10
DPN309200301	9.20	47	89	10
DPN309250301	9.25(23/64")	47	89	10
DPN309300301	9.30	47	89	10
DPN309400301	9.40	47	89	10
DPN309500301	9.50	47	89	10
DPN309520301	9.52(3/8")	47	89	10
DPN309600301	9.60	47	89	10
DPN309700301	9.70	47	89	10
DPN309800301	9.80	47	89	10
DPN309900301	9.90	47	89	10

DPN3 Solid Carbide Drills - 3×D (for Universal)

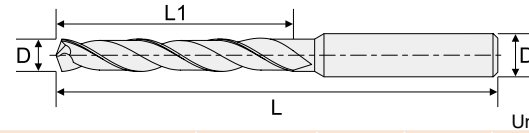
外冷泛用鎢鋼鑽頭

P	M	K	N	S	H
●	○	●			

Product Specs

- 3×D Cutting depth
- Reinforced Shank
- 140° Tip Angle
- External Coolant
- UNIX Coating
- Tolerance h8
- SX Design
- For Steel, Alloy Steel up to 1200 N/mm2, Cast Iron and 400 series Stainless Steel.





Unit:mm

Order No.	D	L1	L	Ds
DPN310000301	10.00	47	89	10
DPN310100301	10.10	55	102	12
DPN310200301	10.20	55	102	12
DPN310300301	10.30	55	102	12
DPN310400301	10.40	55	102	12
DPN310500301	10.50	55	102	12
DPN310600301	10.60	55	102	12
DPN310700301	10.70	55	102	12
DPN310800301	10.80	55	102	12
DPN310900301	10.90	55	102	12
DPN311000301	11.00	55	102	12
DPN311100301	11.10	55	102	12
DPN311110301	11.11(7/16")	55	102	12
DPN311200301	11.20	55	102	12
DPN311300301	11.30	55	102	12
DPN311400301	11.40	55	102	12
DPN311500301	11.50	55	102	12
DPN311600301	11.60	55	102	12
DPN311700301	11.70	55	102	12
DPN311800301	11.80	55	102	12
DPN311900301	11.90	55	102	12
DPN312000301	12.00	55	102	12
DPN312100301	12.10	60	107	14
DPN312200301	12.20	60	107	14
DPN312300301	12.30	60	107	14
DPN312400301	12.40	60	107	14
DPN312500301	12.50	60	107	14
DPN312600301	12.60	60	107	14
DPN312700301	12.70(1/2")	60	107	14
DPN312800301	12.80	60	107	14
DPN312900301	12.90	60	107	14
DPN313000301	13.00	60	107	14
DPN313200301	13.20	60	107	14
DPN313300301	13.30	60	107	14
DPN313500301	13.50	60	107	14
DPN313700301	13.70	60	107	14
DPN313800301	13.80	60	107	14
DPN314000301	14.00	60	107	14
DPN314200301	14.20	65	115	16
DPN314290301	14.29(9/16")	65	115	16
DPN314300301	14.30	65	115	16
DPN314400301	14.40	65	115	16
DPN314500301	14.50	65	115	16
DPN314700301	14.70	65	115	16

Order No.	D	L1	L	Ds
DPN315000301	15.00	65	115	16
DPN315200301	15.20	65	115	16
DPN315500301	15.50	65	115	16
DPN315600301	15.60	65	115	16
DPN315700301	15.70	65	115	16
DPN315800301	15.80	65	115	16
DPN315870301	15.87(5/8")	65	115	16
DPN316000301	16.00	65	115	16
DPN316500301	16.50	73	123	18
DPN317000301	17.00	73	123	18
DPN317500301	17.50	73	123	18
DPN318000301	18.00	73	123	18
DPN318500301	18.50	79	131	20
DPN319000301	19.00	79	131	20
DPN319050301	19.05(3/4")	79	131	20
DPN319500301	19.50	79	131	20
DPN320000301	20.00	79	131	20

DPN5 Solid Carbide Drills - 5×D (for Universal)

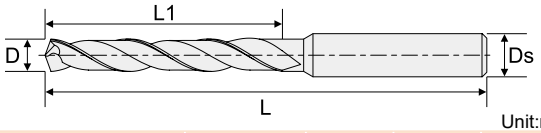
外冷泛用鎢鋼鑽頭

P	M	K	N	S	H
●	○	●			

Product Specs

- 5×D Cutting depth
- Reinforced Shank
- 140° Tip Angle
- External Coolant
- UNIX Coating
- Tolerance h8
- SX Design
- For Steel, Alloy Steel up to 1200 N/mm2, Cast Iron and 400 series Stainless Steel.





Unit:mm

Order No.	D	L1	L	Ds
DPN503000501	3.00	28	66	6
DPN503170501	3.17(1/8")	28	66	6
DPN503250501	3.25(5/39")	28	66	6
DPN503300501	3.30	28	66	6
DPN503400501	3.40	28	66	6
DPN503500501	3.50	28	66	6
DPN503600501	3.60	28	66	6
DPN503700501	3.70	28	66	6
DPN503800501	3.80	36	74	6
DPN503970501	3.97(5/32")	36	74	6
DPN504000501	4.00	36	74	6
DPN504100501	4.10	36	74	6
DPN504200501	4.20	36	74	6
DPN504300501	4.30	36	74	6
DPN504400501	4.40	36	74	6
DPN504500501	4.50	36	74	6
DPN504600501	4.60	36	74	6
DPN504650501	4.65(13/71")	36	74	6
DPN504700501	4.70	36	74	6
DPN504760501	4.76(3/16")	44	82	6
DPN504800501	4.80	44	82	6
DPN504900501	4.90	44	82	6
DPN505000501	5.00	44	82	6
DPN505100501	5.10	44	82	6
DPN505200501	5.20	44	82	6
DPN505300501	5.30	44	82	6
DPN505400501	5.40	44	82	6
DPN505500501	5.50	44	82	6
DPN505560501	5.56(7/32")	44	82	6
DPN505600501	5.60	44	82	6
DPN505700501	5.70	44	82	6
DPN505800501	5.80	44	82	6
DPN505900501	5.90	44	82	6
DPN506000501	6.00	44	82	6
DPN506100501	6.10	53	91	8
DPN506200501	6.20	53	91	8
DPN506300501	6.30	53	91	8
DPN506350501	6.35(1/4")	53	91	8
DPN506400501	6.40	53	91	8
DPN506500501	6.50	53	91	8
DPN506600501	6.60	53	91	8
DPN506700501	6.70	53	91	8
DPN506800501	6.80	53	91	8
DPN506900501	6.90	53	91	8

Order No.	D	L1	L	Ds
DPN507000501	7.00	53	91	8
DPN507100501	7.10	53	91	8
DPN507200501	7.20	53	91	8
DPN507300501	7.30	53	91	8
DPN507400501	7.40	53	91	8
DPN507500501	7.50	53	91	8
DPN507600501	7.60	53	91	8
DPN507700501	7.70	53	91	8
DPN507800501	7.80	53	91	8
DPN507900501	7.90	53	91	8
DPN507940501	7.94(5/16")	53	91	8
DPN508000501	8.00	53	91	8
DPN508100501	8.10	61	103	10
DPN508200501	8.20	61	103	10
DPN508300501	8.30	61	103	10
DPN508400501	8.40	61	103	10
DPN508500501	8.50	61	103	10
DPN508600501	8.60	61	103	10
DPN508700501	8.70	61	103	10
DPN508800501	8.80	61	103	10
DPN508900501	8.90	61	103	10
DPN509000501	9.00	61	103	10
DPN509100501	9.10	61	103	10
DPN509200501	9.20	61	103	10
DPN509250501	9.25(23/64")	61	103	10
DPN509300501	9.30	61	103	10
DPN509400501	9.40	61	103	10
DPN509500501	9.50	61	103	10
DPN509520501	9.52(3/8")	61	103	10
DPN509600501	9.60	61	103	10
DPN509700501	9.70	61	103	10
DPN509800501	9.80	61	103	10
DPN509900501	9.90	61	103	10
DPN510000501	10.00	61	103	10
DPN510100501	10.10	71	118	12
DPN510200501	10.20	71	118	12
DPN510300501	10.30	71	118	12
DPN510400501	10.40	71	118	12
DPN510500501	10.50	71	118	12
DPN510600501	10.60	71	118	12
DPN510700501	10.70	71	118	12
DPN510800501	10.80	71	118	12
DPN510900501	10.90	71	118	12

DPN5 Solid Carbide Drills - 5×D (for Universal)

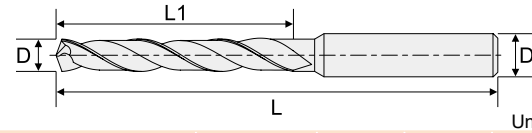
外冷泛用鎢鋼鑽頭

P	M	K	N	S	H
●	○	●			

Product Specs

- 5×D Cutting depth
- Reinforced Shank
- 140° Tip Angle
- External Coolant
- UNIX Coating
- Tolerance h8
- SX Design
- For Steel, Alloy Steel up to 1200 N/mm2, Cast Iron and 400 series Stainless Steel.





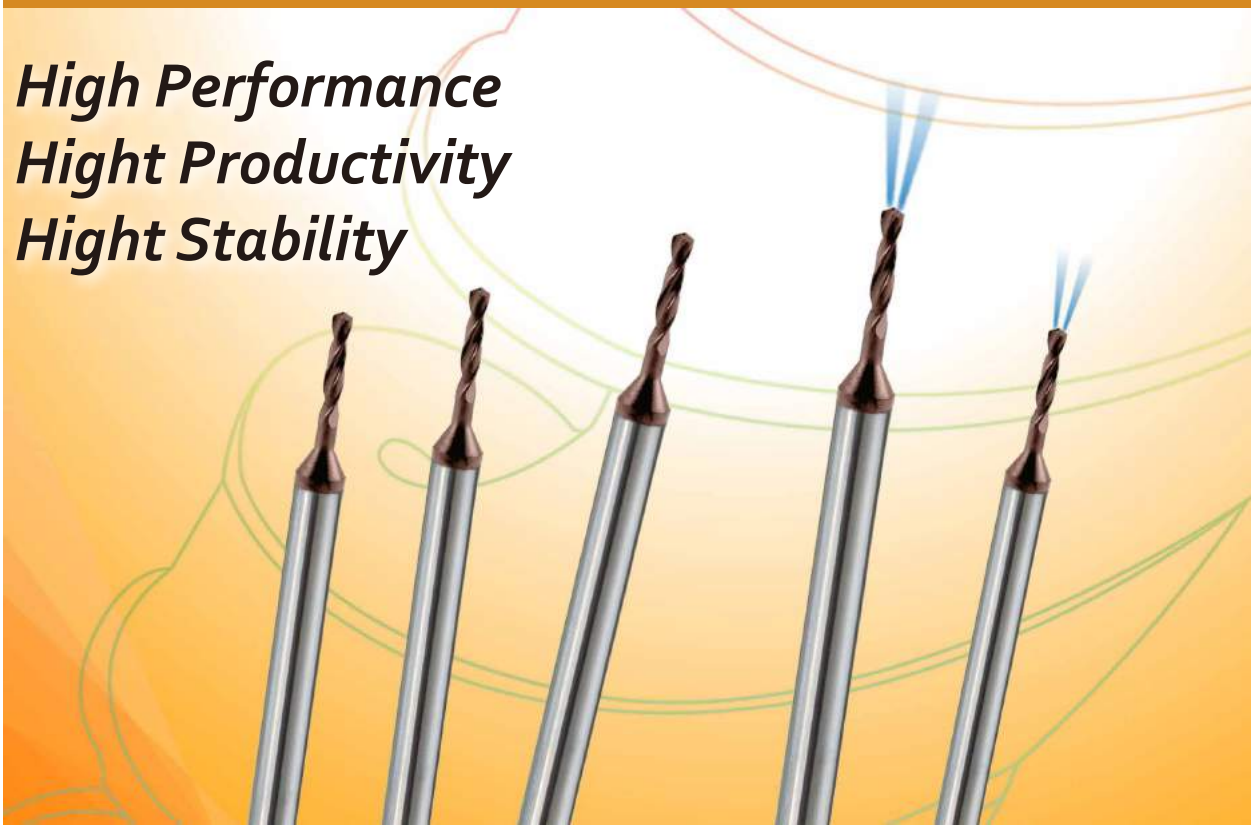
Unit:mm

Order No.	D	L1	L	Ds
DPN511000501	11.00	71	118	12
DPN511100501	11.10	71	118	12
DPN511110501	11.11(7/16")	71	118	12
DPN511200501	11.20	71	118	12
DPN511300501	11.30	71	118	12
DPN511400501	11.40	71	118	12
DPN511500501	11.50	71	118	12
DPN511600501	11.60	71	118	12
DPN511700501	11.70	71	118	12
DPN511800501	11.80	71	118	12
DPN511900501	11.90	71	118	12
DPN512000501	12.00	71	118	12
DPN512100501	12.10	77	124	14
DPN512200501	12.20	77	124	14
DPN512300501	12.30	77	124	14
DPN512400501	12.40	77	124	14
DPN512500501	12.50	77	124	14
DPN512600501	12.60	77	124	14
DPN512700501	12.70(1/2")	77	124	14
DPN512800501	12.80	77	124	14
DPN512900501	12.90	77	124	14
DPN513000501	13.00	77	124	14
DPN513100501	13.10	77	124	14
DPN513300501	13.30	77	124	14
DPN513400501	13.40	77	124	14
DPN513500501	13.50	77	124	14
DPN513600501	13.60	77	124	14
DPN513700501	13.70	77	124	14
DPN513800501	13.80	77	124	14
DPN513900501	13.90	77	124	14
DPN514000501	14.00	77	124	14
DPN514100501	14.10	83	133	16
DPN514200501	14.20	83	133	16
DPN514290501	14.29(9/16")	83	133	16
DPN514300501	14.30	83	133	16
DPN514400501	14.40	83	133	16
DPN514500501	14.50	83	133	16
DPN514600501	14.60	83	133	16
DPN514700501	14.70	83	133	16
DPN514800501	14.80	83	133	16
DPN514900501	14.90	83	133	16

Order No.	D	L1	L	Ds
DPN515000501	15.00	83	133	16
DPN515100501	15.10	83	133	16
DPN515200501	15.20	83	133	16
DPN515300501	15.30	83	133	16
DPN515400501	15.40	83	133	16
DPN515500501	15.50	83	133	16
DPN515600501	15.60	83	133	16
DPN515700501	15.70	83	133	16
DPN515800501	15.80	83	133	16
DPN515870501	15.87(5/8")	83	133	16
DPN515900501	15.90	83	133	16
DPN516000501	16.00	83	133	16
DPN516500501	16.50	93	143	18
DPN517000501	17.00	93	143	18
DPN517500501	17.50	93	143	18
DPN518000501	18.00	93	143	18
DPN518500501	18.50	101	153	20
DPN519000501	19.00	101	153	20
DPN519050501	19.05(3/4")	101	153	20
DPN519500501	19.50	101	153	20
DPN520000501	20.00	101	153	20

DLC, DLN Solid Carbide Drills (for Mini Hole)

內冷 & 外冷小徑鎢鋼鑽頭



FEATURES

- Internal coolant design
- Unique UNIX coating improves tool life
-
- Customized available
- Diameter 0.2-3.9mm
- 高效內冷孔
- **UNIX** 鍍膜提升刀具壽命
- 優化排屑槽，提升刀具效能與壽命
- 提供客製化服務
- 尺寸範圍 0.2-3.9mm

DLC Solid Carbide Drills - 3~4×D (for Mini hole)

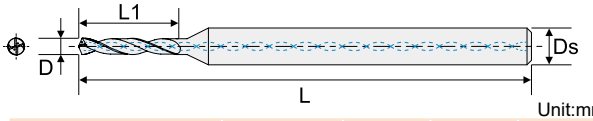
內冷小徑鎢鋼鑽頭

P	M	K	N	S	H
●	●	●			

Product Specs

- 3~4×D Cutting depth
- Reinforced Shank
- 130°, 140° Tip Angle
- Internal Coolant
- UNIX Coating
- Tolerance h7
- Double Margins Design
- SX Design
- For Alloy Steel, Stainless Steel and Cast Iron.





Unit:mm

Order No.	D	L1	L	Ds
DLC02000301	2.00	12	50	3
DLC02100301	2.10	12	50	3
DLC02200301	2.20	12	50	3
DLC02300301	2.30	12	50	3
DLC02400301	2.40	16	50	3
DLC02500301	2.50	16	50	3
DLC02600301	2.60	16	50	3
DLC02700301	2.70	16	50	3
DLC02800301	2.80	16	50	3
DLC02900301	2.90	16	50	3
DLC03000301	3.00	20	60	4
DLC03100301	3.10	20	60	4
DLC03200301	3.20	20	60	4
DLC03300301	3.30	20	60	4
DLC03400301	3.40	20	60	4
DLC03500301	3.50	20	60	4
DLC03600301	3.60	20	60	4
DLC03700301	3.70	20	60	4
DLC03800301	3.80	24	60	4
DLC03900301	3.90	24	60	4

Order No.	D	L1	L	Ds

DLN Solid Carbide Drills - 3×D (for Mini hole)

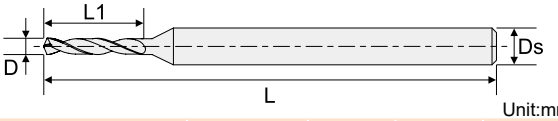
外冷小徑鎢鋼鑽頭

P	M	K	N	S	H
●	○	●			

Product Specs

- 3×D Cutting depth
- Reinforced Shank
- 130° Tip Angle
- External Coolant
- UNIX Coating
- Tolerance h7
- NX Design
- For Alloy Steel and Cast Iron.





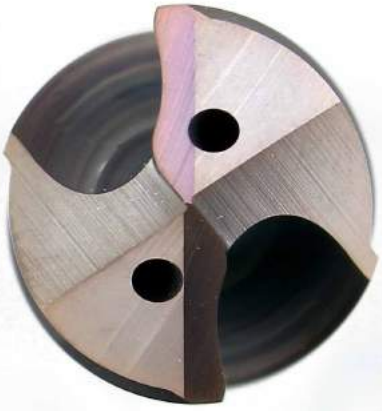
Unit:mm

Order No.	D	L1	L	Ds
DLN00200301	0.20	1.5	38	3
DLN00300301	0.30	2	38	3
DLN00400301	0.40	3	38	3
DLN00500301	0.50	3	38	3
DLN00600301	0.60	3	38	3
DLN00700301	0.70	3	38	3
DLN00800301	0.80	4	38	3
DLN00900301	0.90	4	38	3
DLN01000301	1.00	4	38	3
DLN01100301	1.10	6	38	3
DLN01200301	1.20	6	38	3
DLN01300301	1.30	6	38	3
DLN01400301	1.40	6	38	3
DLN01500301	1.50	6	38	3
DLN01600301	1.60	8	38	3
DLN01700301	1.70	8	38	3
DLN01800301	1.80	8	38	3
DLN01900301	1.90	8	38	3
DLN02000301	2.00	8	38	3
DLN02100301	2.10	8	38	3
DLN02200301	2.20	8	38	3
DLN02300301	2.30	8	38	3
DLN02400301	2.40	8	38	3
DLN02500301	2.50	8	38	3
DLN02600301	2.60	8	38	3
DLN02700301	2.70	8	38	3
DLN02800301	2.80	8	38	3
DLN02900301	2.90	8	38	3
DLN02900301	2.90	8	38	3

Order No.	D	L1	L	Ds

WINSTAR

Endmills · Inserts · Drills





Winstar
Cutting Technologies

DMC, DMN Solid Carbide Drills (for Superalloy & Stainless Steel) 內冷不銹鋼用鎢鋼鑽頭

High Performance
Excellent Tool Life



FEATURES

- Suitable for Inconel, Titanium and Stainless Steel machining.
- Special NR geometry design for excellent chip removal.
- chips evacuation.
- Drill performance compete against not of international manufacturers.

- 適用於鎳基合金、鈦合金與不鏽鋼加工
- 特殊的 NR 鑽尖幾何設計，強力的斷屑能力，避免切屑堆積
- 最適化的排屑溝槽設計，大幅提升排屑效率
- 刀具品質及壽命媲美歐美品牌

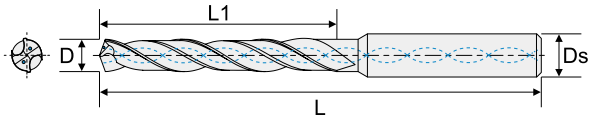
DMC3 Solid Carbide Drills - 3×D (Internal Coolant)

P	M	K	N	S	H
●	●	●	○	●	

Product Specs

- 3×D Cutting depth
- Reinforced Shank
- 140° Tip Angle
- Internal Coolant
- SINIX Coating
- Tolerance h8
- Double Margins Design
- NR Tip Design
- For High Temperature Alloy, Stainless Steel, Steel, Alloy Steel and Cast Iron.





Unit:mm

Order No.	D	L1	L	Ds
DMC304000302	4.00	24	66	6
DMC304200302	4.20	24	66	6
DMC304500302	4.50	24	66	6
DMC304600302	4.60	24	66	6
DMC304650302	4.65	24	66	6
DMC304800302	4.80	28	66	6
DMC305000302	5.00	28	66	6
DMC305500302	5.50	28	66	6
DMC305560302	5.56(7/32")	28	66	6
DMC305700302	5.70	28	66	6
DMC305800302	5.80	28	66	6
DMC306000302	6.00	28	66	6
DMC306350302	6.35(1/4")	34	79	8
DMC306500302	6.50	34	79	8
DMC306800302	6.80	34	79	8
DMC307000302	7.00	34	79	8
DMC307400302	7.40	41	79	8
DMC307500302	7.50	41	79	8
DMC307800302	7.80	41	79	8
DMC308000302	8.00	41	79	8
DMC308500302	8.50	47	89	10
DMC308600302	8.60	47	89	10
DMC308800302	8.80	47	89	10
DMC309000302	9.00	47	89	10
DMC309250302	9.25	47	89	10
DMC309300302	9.30	47	89	10
DMC309500302	9.50	47	89	10
DMC309800302	9.80	47	89	10
DMC310000302	10.00	47	89	10
DMC310200302	10.20	55	102	12
DMC310500302	10.50	55	102	12
DMC310700302	10.70	55	102	12
DMC311000302	11.00	55	102	12
DMC311200302	11.20	55	102	12
DMC311500302	11.50	55	102	12

Order No.	D	L1	L	Ds
DMC311700302	11.70	55	102	12
DMC312000302	12.00	55	102	12
DMC312500302	12.50	60	107	14
DMC312700302	12.70	60	107	14
DMC313000302	13.00	60	107	14
DMC313500302	13.50	60	107	14
DMC313700302	13.70	60	107	14
DMC314000302	14.00	60	107	14
DMC314500302	14.50	65	115	16
DMC314700302	14.70	65	115	16
DMC315000302	15.00	65	115	16
DMC315500302	15.50	65	115	16
DMC315700302	15.70	65	115	16
DMC316000302	16.00	65	115	16
DMC318000302	18.00	73	123	18
DMC319000302	19.00	79	131	20
DMC320000302	20.00	79	131	20

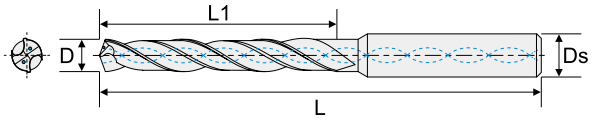
DMC5 Solid Carbide Drills - 5×D (Internal Coolant)

P	M	K	N	S	H
●	●	●	○	●	

Product Specs

- 5×D Cutting depth
- Reinforced Shank
- 140° Tip Angle
- Internal Coolant
- SINIX Coating
- Tolerance h8
- Double Margins Design
- NR Tip Design
- For High Temperature Alloy, Stainless Steel, Steel, Alloy Steel and Cast Iron.





Unit:mm

Order No.	D	L1	L	Ds
DMC503400542	3.40	28	60	4
DMC503800542	3.80	36	74	4
DMC504000502	4.00	36	74	6
DMC504200502	4.20	36	74	6
DMC504500502	4.50	36	74	6
DMC504600502	4.60	36	74	6
DMC504650502	4.65	36	74	6
DMC504800502	4.80	44	82	6
DMC505000502	5.00	44	82	6
DMC505500502	5.50	44	82	6
DMC505550502	5.55	44	82	6
DMC505800502	5.80	44	82	6
DMC506000502	6.00	44	82	6
DMC506500502	6.50	53	91	8
DMC506800502	6.80	53	91	8
DMC507000502	7.00	53	91	8
DMC507400502	7.40	53	91	8
DMC507500502	7.50	53	91	8
DMC507800502	7.80	53	91	8
DMC508000502	8.00	53	91	8
DMC508500502	8.50	61	103	10
DMC508800502	8.80	61	103	10
DMC509000502	9.00	61	103	10
DMC509250502	9.25	61	103	10
DMC509300502	9.30	61	103	10
DMC509500502	9.50	61	103	10
DMC509800502	9.80	61	103	10
DMC510000502	10.00	61	103	10
DMC510200502	10.20	71	118	12
DMC510500502	10.50	71	118	12
DMC510700502	10.70	71	118	12
DMC511000502	11.00	71	118	12
DMC511200502	11.20	71	118	12
DMC511500502	11.50	71	118	12
DMC511700502	11.70	71	118	12

Order No.	D	L1	L	Ds
DMC512000502	12.00	71	118	12
DMC512500502	12.50	77	124	14
DMC512700502	12.70	77	124	14
DMC513000502	13.00	77	124	14
DMC513500502	13.50	77	124	14
DMC513700502	13.70	77	124	14
DMC514000502	14.00	77	124	14
DMC514500502	14.50	83	133	16
DMC514700502	14.70	83	133	16
DMC515000502	15.00	83	133	16
DMC515500502	15.50	83	133	16
DMC515700502	15.70	83	133	16
DMC516000502	16.00	83	133	16
DMC518000502	18.00	93	143	18
DMC519000502	19.00	101	153	20
DMC520000502	20.00	101	153	20

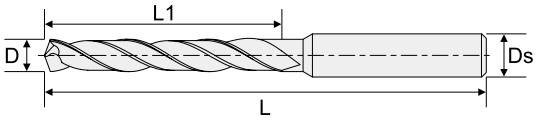
DMN3 Solid Carbide Drills - 3×D (External Coolant)

P	M	K	N	S	H
●	●	●	○	●	

Product Specs

- 3×D Cutting depth
- Reinforced Shank
- 140° Tip Angle
- External Coolant
- SINIX Coating
- Tolerance h8
- Double Margins Design
- NR Tip Design
- For High Temperature Alloy, Stainless Steel, Steel, Alloy Steel and Cast Iron.





Unit:mm

Order No.	D	L1	L	Ds
DMN304000302	4.00	24	66	6
DMN304200302	4.20	24	66	6
DMN304500302	4.50	24	66	6
DMN304600302	4.60	24	66	6
DMN304650302	4.65	24	66	6
DMN304800302	4.80	28	66	6
DMN305000302	5.00	28	66	6
DMN305500302	5.50	28	66	6
DMN305560302	5.56(7/32")	28	66	6
DMN305700302	5.70	28	66	6
DMN305800302	5.80	28	66	6
DMN306000302	6.00	28	66	6
DMN306350302	6.35(1/4")	34	79	8
DMN306500302	6.50	34	79	8
DMN306800302	6.80	34	79	8
DMN307000302	7.00	34	79	8
DMN307400302	7.40	41	79	8
DMN307500302	7.50	41	79	8
DMN307800302	7.80	41	79	8
DMN308000302	8.00	41	79	8
DMN308500302	8.50	47	89	10
DMN308800302	8.80	47	89	10
DMN309000302	9.00	47	89	10
DMN309250302	9.25	47	89	10
DMN309300302	9.30	47	89	10
DMN309500302	9.50	47	89	10

Order No.	D	L1	L	Ds
DMN309800302	9.80	47	89	10
DMN310000302	10.00	47	89	10
DMN310200302	10.20	55	102	12
DMN310500302	10.50	55	102	12
DMN310700302	10.70	55	102	12
DMN311000302	11.00	55	102	12
DMN311200302	11.20	55	102	12
DMN311500302	11.50	55	102	12
DMN311700302	11.70	55	102	12
DMN312000302	12.00	55	102	12
DMN312500302	12.50	60	107	14
DMN312700302	12.70	60	107	14
DMN313000302	13.00	60	107	14
DMN313500302	13.50	60	107	14
DMN313700302	13.70	60	107	14
DMN314000302	14.00	60	107	14
DMN314500302	14.50	65	115	16
DMN314700302	14.70	65	115	16
DMN315000302	15.00	65	115	16
DMN315500302	15.50	65	115	16
DMN315700302	15.70	65	115	16
DMN316000302	16.00	65	115	16
DMN318000302	18.00	73	123	18
DMN319000302	19.00	79	131	20
DMN320000302	20.00	79	131	20

Recommended Cutting Conditions - DMN

Material	Stainless Steel				Titanium Alloy		Nickel Alloy	
Hardness	≤ HB 200		> HB 200		HB 280 ~ 340		HRC 38 ~ 45	
VC	60 ~ 100 m/min		40 ~ 80 m/min		20 ~ 40 m/min		18 ~ 30 m/min	
Dia (mm)	RPM	Feed(mm/rev)	RPM	Feed(mm/rev)	RPM	Feed(mm/rev)	RPM	Feed(mm/rev)
4	6400	0.06 ~ 0.12	4800	0.06 ~ 0.12	3200	0.05 ~ 0.08	1600	0.05 ~ 0.08
6	4200	0.09 ~ 0.18	3200	0.09 ~ 0.18	2100	0.07 ~ 0.12	1100	0.07 ~ 0.12
8	3200	0.12 ~ 0.24	2400	0.12 ~ 0.24	1600	0.10 ~ 0.16	800	0.10 ~ 0.16
10	2500	0.17 ~ 0.27	1900	0.17 ~ 0.27	1300	0.12 ~ 0.20	640	0.12 ~ 0.20
12	2100	0.19 ~ 0.30	1600	0.19 ~ 0.30	1100	0.14 ~ 0.24	530	0.14 ~ 0.24
16	1600	0.22 ~ 0.32	1200	0.22 ~ 0.32	800	0.19 ~ 0.32	400	0.19 ~ 0.32
20	1300	0.28 ~ 0.40	1000	0.28 ~ 0.40	600	0.24 ~ 0.40	320	0.24 ~ 0.40

∗ The feed rate of DMC can increase 20% than DMN.

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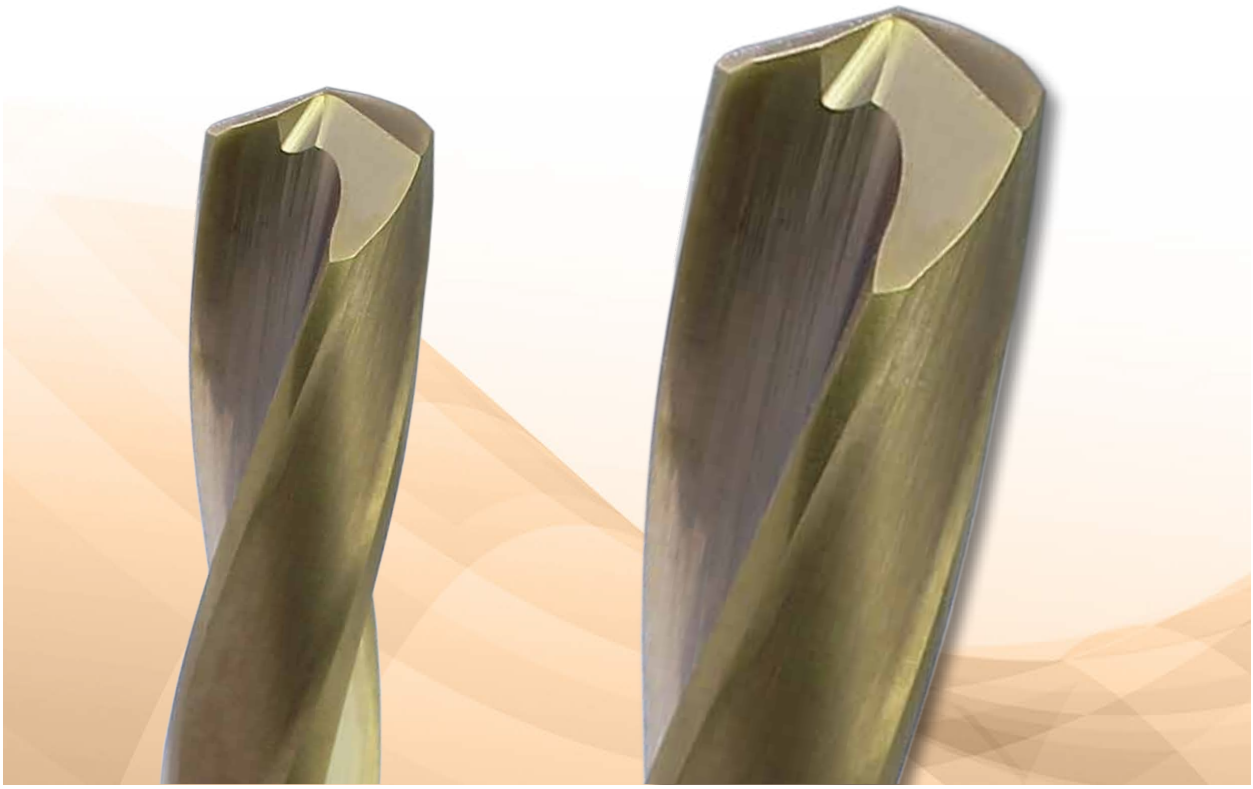
DHN Solid Carbide Drills (for Superalloy &Hardened Steel) 內冷 & 外冷高硬用鎢鋼鑽頭



FEATURES

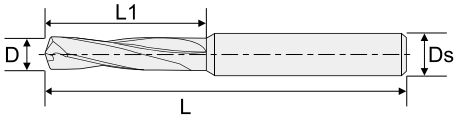
- Suitable for Superalloy and Hardened steel machining.
- Special RX geometry design for tip protecting.
- Low helix and special coating with efficiency cutting ability.
- 適用於高溫合金與高硬度鋼加工
- 特殊的 RX 鑽尖幾何設計，加強保護鑽尖，避免崩裂
- 低螺旋設計和特殊塗層，具有高效切削能力

DHN3 Solid Carbide Drills - 3×D (External Coolant)

P	M	K	N	S	H
○	○	○		●	●

- Reinforced Shank
- 140° Tip Angle
- Helix : 12° ~ 20°
- UNIX Coating
- Tolerance h8
- Single Margin
- RX Tip Design
- For Superalloy and Hardened steel.





Unit:mm

Order No.	D	L1	L	Ds
DHN300900301	0.90	8	50	3
DHN300950301	0.95	8	50	3
DHN301000301	1.00	8	50	3
DHN301100301	1.10	8	50	3
DHN301200301	1.20	8	50	3
DHN301250301	1.25	8	50	3
DHN301300301	1.30	10	50	3
DHN301320301	1.32	10	50	3
DHN301400301	1.40	10	50	3
DHN301450301	1.45	10	50	3
DHN301500301	1.50	10	50	3
DHN301600301	1.60	10	50	3
DHN301650301	1.65	10	50	3
DHN301700301	1.70	10	50	3
DHN301750301	1.75	10	50	3
DHN301850301	1.85	10	50	3
DHN301900301	1.90	10	50	3
DHN302000301	2.00	12	50	3
DHN302050301	2.05	12	50	3
DHN302100301	2.10	12	50	3
DHN302200301	2.20	12	50	3
DHN302300301	2.30	12	50	3
DHN302400301	2.40	12	50	3
DHN302500301	2.50	12	50	3

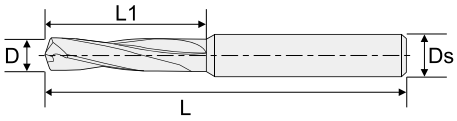
Order No.	D	L1	L	Ds

DHN3 Solid Carbide Drills - 3×D (External Coolant)

P	M	K	N	S	H
○	○	○		●	●

- Reinforced Shank
- 140° Tip Angle
- Helix : 12° ~ 20°
- SINIX Plus Coating
- Tolerance h8
- Double Margins
- RX Tip Design
- For Superalloy and Hardened steel.





Unit:mm

Order No.	D	L1	L	Ds
DHN304000307	4.00	24	66	6
DHN304200307	4.20	24	66	6
DHN304500307	4.50	24	66	6
DHN304600307	4.60	24	66	6
DHN304650307	4.65	24	66	6
DHN304800307	4.80	28	66	6
DHN305000307	5.00	28	66	6
DHN305500307	5.50	28	66	6
DHN305560307	5.56(7/32")	28	66	6
DHN305700307	5.70	28	66	6
DHN305800307	5.80	28	66	6
DHN306000307	6.00	28	66	6
DHN306350307	6.35(1/4")	34	79	8
DHN306500307	6.50	34	79	8
DHN306800307	6.80	34	79	8
DHN307000307	7.00	34	79	8
DHN307400307	7.40	41	79	8
DHN307500307	7.50	41	79	8
DHN307800307	7.80	41	79	8

Order No.	D	L1	L	Ds
DHN308000307	8.00	41	79	8
DHN308500307	8.50	47	89	10
DHN308800307	8.80	47	89	10
DHN309000307	9.00	47	89	10
DHN309250307	9.25	47	89	10
DHN309300307	9.30	47	89	10
DHN309500307	9.50	47	89	10
DHN309800307	9.80	47	89	10
DHN310000307	10.00	47	89	10
DHN310200307	10.20	55	102	12
DHN310500307	10.50	55	102	12
DHN310700307	10.70	55	102	12
DHN311000307	11.00	55	102	12
DHN311200307	11.20	55	102	12
DHN311500307	11.50	55	102	12
DHN311700307	11.70	55	102	12
DHN312000307	12.00	55	102	12

DHN Solid Carbide Drills

Recommended Cutting Conditions

Material	Hardened Steel / Pre-Hardened Steel						Nickel Alloy	
Hardness	HRC 40 ~ 45		HRC 45 ~ 50		HRC 50 ~ 60		HRC 38 ~ 45	
VC	30 ~ 50 m/min		20 ~ 30 m/min		20 ~ 30 m/min		15 ~ 30 m/min	
Dia (mm)	RPM	Feed(mm/rev)	RPM	Feed(mm/rev)	RPM	Feed(mm/rev)	RPM	Feed(mm/rev)
4	3200	0.04 ~ 0.08	2000	0.04 ~ 0.08	2000	0.03 ~ 0.06	1600	0.04 ~ 0.08
5	2500	0.05 ~ 0.10	1600	0.05 ~ 0.10	1600	0.04 ~ 0.08	1300	0.05 ~ 0.10
6	2100	0.06 ~ 0.12	1300	0.06 ~ 0.12	1300	0.05 ~ 0.09	1100	0.06 ~ 0.12
7	1800	0.07 ~ 0.14	1100	0.07 ~ 0.14	1100	0.06 ~ 0.11	900	0.07 ~ 0.14
8	1600	0.08 ~ 0.16	1000	0.08 ~ 0.16	1000	0.06 ~ 0.12	800	0.08 ~ 0.16
9	1400	0.09 ~ 0.18	900	0.09 ~ 0.18	900	0.07 ~ 0.14	700	0.09 ~ 0.18
10	1300	0.10 ~ 0.20	800	0.10 ~ 0.20	800	0.08 ~ 0.15	600	0.10 ~ 0.20
11	1150	0.11 ~ 0.22	720	0.11 ~ 0.22	720	0.09 ~ 0.17	600	0.11 ~ 0.22
12	1100	0.12 ~ 0.24	700	0.12 ~ 0.24	700	0.10 ~ 0.18	500	0.12 ~ 0.24

Cutting Test

Material	Diameter	Coolant
Steel HRC 50	Ø6 mm	External

VC	S	Vf	fn	ap
30 m/min	1592 rpm	76 mm/min	0.05 mm/rev	6 mm



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DAN Solid Carbide Drills (with Straight Flute) 外冷直刃鑽鉸刀



FEATURES

- Tolerance: h7
- Tip angle: 130°
- UNIX Coating
- 3×D ~ 5×D Cutting Depth
- 鑽尖 130°
- 3×D ~ 5×D 加工深度
- UNIX 塗層
- 鑽孔及鉸孔一次完成

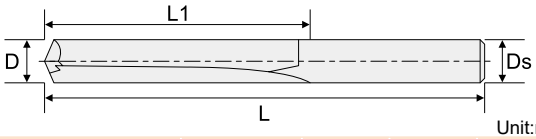
DAN3 Solid Carbide Drills - 3×D (with Straight Flute) 外冷直刃鑽鉸刀

P	M	K	N	S	H
○		●	●		

Product Specs

- 3×D Cutting depth
- 130° Tip Angle
- External Coolant
- UNIX Coating
- Tolerance h7
- For Cast Iron, Aluminum and Copper.





Unit:mm

Order No.	D	L1	L	Ds
DAN304000301	4.00	24	75	4
DAN304500301	4.50	24	75	6
DAN305000301	5.00	28	75	6
DAN305500301	5.50	28	75	6
DAN306000301	6.00	28	75	6
DAN306500301	6.50	34	100	8
DAN307000301	7.00	34	100	8
DAN307500301	7.50	41	100	8
DAN308000301	8.00	41	100	8
DAN308500301	8.50	47	100	10
DAN309000301	9.00	47	100	10
DAN309500301	9.50	47	100	10
DAN310000301	10.00	47	100	10
DAN312000301	12.00	55	100	12
DAN314000301	14.00	60	100	14
DAN316000301	16.00	65	107	16

Order No.	D	L1	L	Ds

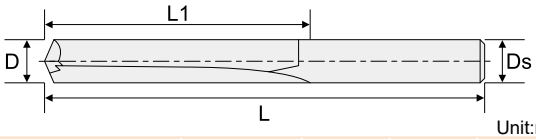
DAN5 Solid Carbide Drills - 5×D (with Straight Flute) 外冷直刃鑽鉸刀

P	M	K	N	S	H
○		●	●		

Product Specs

- 5×D Cutting depth
- 130° Tip Angle
- External Coolant
- UNIX Coating
- Tolerance h7
- For Cast Iron, Aluminum and Copper.





Unit:mm

Order No.	D	L1	L	Ds
DAN504000501	4.00	36	100	4
DAN504500501	4.50	36	100	6
DAN505000501	5.00	44	100	6
DAN505500501	5.50	44	100	6
DAN506000501	6.00	44	100	6
DAN506500501	6.50	53	100	8
DAN507000501	7.00	53	100	8
DAN507500501	7.50	53	100	8
DAN508000501	8.00	53	100	8
DAN508500501	8.50	61	107	10
DAN509000501	9.00	61	107	10
DAN509500501	9.50	61	107	10
DAN510000501	10.00	61	107	10
DAN512000501	12.00	71	150	12
DAN514000501	14.00	77	150	14
DAN516000501	16.00	83	150	16

Order No.	D	L1	L	Ds

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Winstar
Cutting Technologies

DZC, DZN Solid Carbide Drills (for Step Hole)

內冷 & 外冷階梯鎢鋼鑽頭



FEATURES

- For drill a hole with counterbore, countersink, or chamfer
- For steel,alloy steel,cast iron
- Customized Service
- 專為沉孔加工、導角加工設計
- 適用鋼、合金鋼、鑄鐵的孔加工
- 提供客製化服務

DZC Solid Carbide Drills (for Step hole)

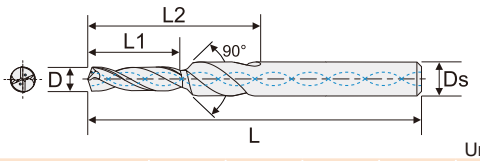
內冷階梯鎢鋼鑽頭

P	M	K	N	S	H
●	●	●			○

Product Specs

- Reinforced Shank
- Internal Coolant
- UNIX Coating
- Tolerance h8
- For drill with a counterbore, countersink, or chamfer.
- Customizable
- For Steel, Alloy Steel, Stainless Steel and Cast Iron.





Unit:mm

Order No.	D	L1	L2	L	Ds
DZC03300301	3.30	12	26	62	6
DZC04200301	4.20	15	28	66	6
DZC05000301	5.00	18	36	79	8
DZC06800301	6.80	24	48	90	10
DZC08500301	8.50	30	55	102	12

Order No.	D	L1	L2	L	Ds

DZN Solid Carbide Drills (for Step hole)

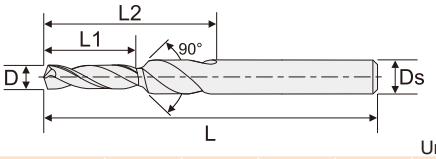
外冷階梯鎢鋼鑽頭

P	M	K	N	S	H
●	○	●			

Product Specs

- Reinforced Shank
- External Coolant
- UNIX Coating
- Tolerance h8
- For drill with a counterbore, countersink, or chamfer.
- Customizable
- For Steel, Alloy Steel, Stainless Steel and Cast Iron.





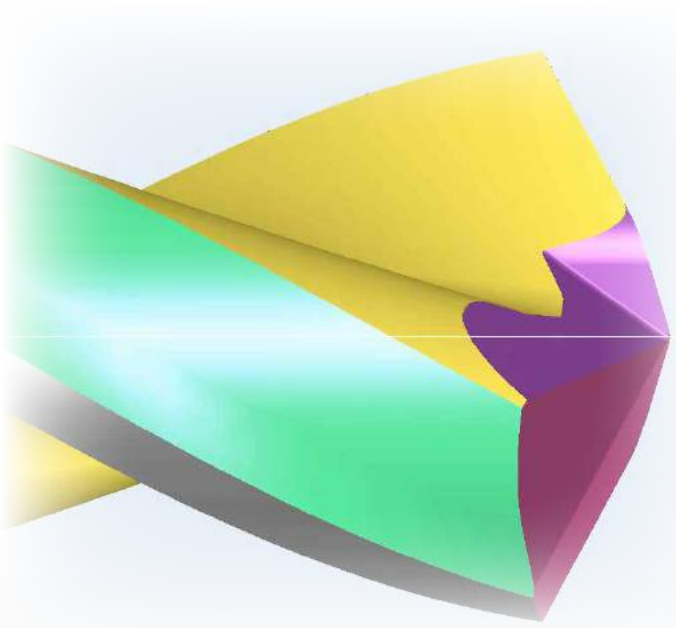
Unit:mm

Order No.	D	L1	L2	L	Ds
DZN03300301	3.30	12	26	62	6
DZN04200301	4.20	15	28	66	6
DZN05000301	5.00	18	36	79	8
DZN06800301	6.80	24	48	90	10
DZN08500301	8.50	30	55	102	12

Order No.	D	L1	L2	L	Ds

WINSTAR

Endmills · Inserts · Drills





Winstar
Cutting Technologies

DFN3 Solid Carbide Drills - 3×D (with Flat tip) 外冷平底鎢鋼鑽頭



FEATURES

- Multiple application
- Counter boring、Slope、Curve、Cross hole、Thin plate
- Pre-hole
- Hole correction
- Reduce manufacturing procedure

- 適用多種加工場景
- 搪孔加工 、斜面鑽孔、曲面鑽孔、跨孔鑽孔、薄板鑽孔
- 導引孔加工
- 孔位校正
- 有效減少加工程序

DFN3 Solid Carbide Drills - 3×D (with Flat tip)

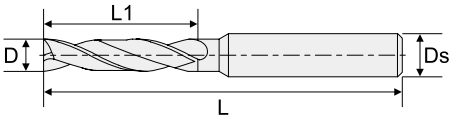
外冷平底鎢鋼鑽頭

P	M	K	N	S	H
●	○	●			

Product Specs

- 3×D Cutting depth
- Reinforced Shank
- Flat tip
- External Coolant
- SINIX Coating
- Tolerance h8
- FX Design
- For Steel, Alloy Steel, Stainless Steel (Martensitic), Cast iron, Non-ferrous metal.





Unit:mm

Order No.	D	L1	L	Ds
DFN303000342	3.00	20	60	4
DFN303100342	3.10	20	60	4
DFN303170342	3.17(1/8")	20	60	4
DFN303200342	3.20	20	60	4
DFN303250342	3.25(5/39")	20	60	4
DFN303300342	3.30	20	60	4
DFN303400342	3.40	20	60	4
DFN303500342	3.50	20	60	4
DFN303600342	3.60	20	60	4
DFN303700342	3.70	20	60	4
DFN303800342	3.80	24	60	4
DFN303900342	3.90	24	60	4
DFN303970342	3.97(5/32")	24	60	4
DFN303000302	3.00	20	62	6
DFN303100302	3.10	20	62	6
DFN303200302	3.20	20	62	6
DFN303250302	3.25(5/39")	20	62	6
DFN303300302	3.30	20	62	6
DFN303400302	3.40	20	62	6
DFN303500302	3.50	20	62	6
DFN303600302	3.60	20	62	6
DFN303700302	3.70	20	62	6
DFN303800302	3.80	24	66	6
DFN303900302	3.90	24	66	6
DFN303970302	3.97(5/32")	24	66	6
DFN304000302	4.00	24	66	6
DFN304100302	4.10	24	66	6
DFN304200302	4.20	24	66	6
DFN304300302	4.30	24	66	6
DFN304400302	4.40	24	66	6
DFN304500302	4.50	24	66	6
DFN304600302	4.60	24	66	6
DFN304650302	4.65(13/71")	24	66	6
DFN304700302	4.70	24	66	6
DFN304800302	4.80	28	66	6
DFN304900302	4.90	28	66	6
DFN305000302	5.00	28	66	6
DFN305100302	5.10	28	66	6
DFN305200302	5.20	28	66	6
DFN305300302	5.30	28	66	6
DFN305400302	5.40	28	66	6
DFN305500302	5.50	28	66	6
DFN305560302	5.56(7/32")	28	66	6
DFN305600302	5.60	28	66	6
DFN305700302	5.70	28	66	6
DFN305800302	5.80	28	66	6
DFN305900302	5.90	28	66	6

Order No.	D	L1	L	Ds
DFN306000302	6.00	28	66	6
DFN306100302	6.10	34	79	8
DFN306200302	6.20	34	79	8
DFN306300302	6.30	34	79	8
DFN306350302	6.35	34	79	8
DFN306400302	6.40	34	79	8
DFN306500302	6.50	34	79	8
DFN306600302	6.60	34	79	8
DFN306700302	6.70	34	79	8
DFN306800302	6.80	34	79	8
DFN306900302	6.90	34	79	8
DFN307000302	7.00	34	79	8
DFN307100302	7.10	41	79	8
DFN307200302	7.20	41	79	8
DFN307300302	7.30	41	79	8
DFN307400302	7.40	41	79	8
DFN307500302	7.50	41	79	8
DFN307600302	7.60	41	79	8
DFN307700302	7.70	41	79	8
DFN307800302	7.80	41	79	8
DFN307900302	7.90	41	79	8
DFN308000302	8.00	41	79	8
DFN308100302	8.10	47	89	10
DFN308200302	8.20	47	89	10
DFN308300302	8.30	47	89	10
DFN308400302	8.40	47	89	10
DFN308500302	8.50	47	89	10
DFN308600302	8.60	47	89	10
DFN308700302	8.70	47	89	10
DFN308800302	8.80	47	89	10
DFN308900302	8.90	47	89	10
DFN309000302	9.00	47	89	10
DFN309100302	9.10	47	89	10
DFN309200302	9.20	47	89	10
DFN309250302	9.25(23/64")	47	89	10
DFN309300302	9.30	47	89	10
DFN309400302	9.40	47	89	10
DFN309500302	9.50	47	89	10
DFN309600302	9.60	47	89	10
DFN309700302	9.70	47	89	10
DFN309800302	9.80	47	89	10
DFN309900302	9.90	47	89	10

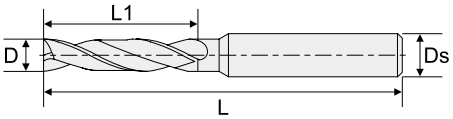
DFN3 Solid Carbide Drills - 3×D (with Flat tip) 外冷平底鎢鋼鑽頭

P	M	K	N	S	H
●	○	●			

Product Specs

- 3×D Cutting depth
- Reinforced Shank
- Flat tip
- External Coolant
- SINIX Coating
- Tolerance h8
- FX Design
- For Steel, Alloy Steel, Stainless Steel (Martensitic), Cast iron, Non-ferrous metal.





Unit:mm

Order No.	D	L1	L	Ds
DFN310000302	10.00	47	89	10
DFN310100302	10.10	55	102	12
DFN310200302	10.20	55	102	12
DFN310300302	10.30	55	102	12
DFN310400302	10.40	55	102	12
DFN310500302	10.50	55	102	12
DFN310600302	10.60	55	102	12
DFN310700302	10.70	55	102	12
DFN310800302	10.80	55	102	12
DFN310900302	10.90	55	102	12
DFN311000302	11.00	55	102	12
DFN311100302	11.10	55	102	12
DFN311200302	11.20	55	102	12
DFN311300302	11.30	55	102	12
DFN311400302	11.40	55	102	12
DFN311500302	11.50	55	102	12
DFN311600302	11.60	55	102	12
DFN311700302	11.70	55	102	12
DFN311800302	11.80	55	102	12
DFN311900302	11.90	55	102	12
DFN312000302	12.00	55	102	12
DFN312100302	12.10	60	107	14
DFN312200302	12.20	60	107	14
DFN312300302	12.30	60	107	14
DFN312400302	12.40	60	107	14
DFN312500302	12.50	60	107	14
DFN312600302	12.60	60	107	14
DFN312700302	12.70(1/2")	60	107	14
DFN312800302	12.80	60	107	14
DFN312900302	12.90	60	107	14
DFN313000302	13.00	60	107	14
DFN313200302	13.20	60	107	14
DFN313300302	13.30	60	107	14
DFN313500302	13.50	60	107	14
DFN313700302	13.70	60	107	14
DFN313800302	13.80	60	107	14
DFN314000302	14.00	60	107	14
DFN314200302	14.20	65	115	16
DFN314300302	14.30	65	115	16
DFN314400302	14.40	65	115	16
DFN314500302	14.50	65	115	16
DFN314700302	14.70	65	115	16

Order No.	D	L1	L	Ds
DFN315000302	15.00	65	115	16
DFN315200302	15.20	65	115	16
DFN315500302	15.50	65	115	16
DFN315600302	15.60	65	115	16
DFN315700302	15.70	65	115	16
DFN315800302	15.80	65	115	16
DFN316000302	16.00	65	115	16
DFN316500302	16.50	73	123	18
DFN317000302	17.00	73	123	18
DFN317500302	17.50	73	123	18
DFN318000302	18.00	73	123	18
DFN318500302	18.50	79	131	20
DFN319000302	19.00	79	131	20
DFN319500302	19.50	79	131	20
DFN320000302	20.00	79	131	20

WINSTAR

Endmills · Inserts · Drills





Winstar
Cutting Technologies

DGN Solid Carbide Drills (for General Purpose) 外冷泛用鎢鋼鑽頭



Product Features

- General Purpose Drilling
- For Steel and Cast Iron
- Longer Tool Life
- Competitive Price
- 泛用鑽孔
- 適用一般鋼料與鑄鐵
- 刀具壽命佳
- 價格實惠

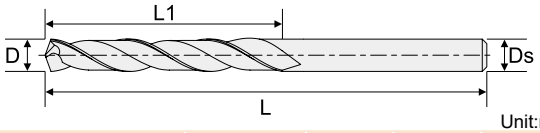
DGN3 Solid Carbide Drills - 3×D (for General Purpose) 外冷泛用鎢鋼鑽頭

P	M	K	N	S	H
●	○	●			

Product Specs

- 3×D Cutting depth
- Straight Shank
- 130° Tip Angle
- External Coolant
- UNIX Coating
- Tolerance h8
- NX Design
- For Alloy Steel, Steel, Stainless Steel and Cast Iron.





Unit:mm

Order No.	D	L1	L	Ds
DGN302000301	2.00	12	38	2.00
DGN302100301	2.10	12	38	2.10
DGN302200301	2.20	13	40	2.20
DGN302300301	2.30	13	40	2.30
DGN302380301	2.38(3/32")	14	43	2.38
DGN302400301	2.40	14	43	2.40
DGN302500301	2.50	14	43	2.50
DGN302600301	2.60	14	43	2.60
DGN302700301	2.70	16	46	2.70
DGN302780301	2.78(7/64")	16	46	2.78
DGN302800301	2.80	16	46	2.80
DGN302900301	2.90	16	46	2.90
DGN303000301	3.00	16	46	3.00
DGN303100301	3.10	18	49	3.10
DGN303170301	3.17(1/8")	18	49	3.17
DGN303200301	3.20	18	49	3.20
DGN303300301	3.30	18	49	3.30
DGN303400301	3.40	20	52	3.40
DGN303500301	3.50	20	52	3.50
DGN303570301	3.57(9/64")	20	52	3.57
DGN303600301	3.60	20	52	3.60
DGN303700301	3.70	20	52	3.70
DGN303800301	3.80	22	55	3.80
DGN303900301	3.90	22	55	3.90
DGN303970301	3.97(5/32")	22	55	3.97
DGN304000301	4.00	22	55	4.00
DGN304100301	4.10	22	55	4.10
DGN304200301	4.20	24	58	4.20
DGN304300301	4.30	24	58	4.30
DGN304370301	4.37(11/64")	24	58	4.37
DGN304400301	4.40	24	58	4.40
DGN304500301	4.50	24	58	4.50
DGN304600301	4.60	24	58	4.60
DGN304700301	4.70	24	58	4.70
DGN304760301	4.76(3/16")	26	62	4.76
DGN304800301	4.80	26	62	4.80
DGN304900301	4.90	26	62	4.90
DGN305000301	5.00	26	62	5.00
DGN305100301	5.10	26	62	5.10
DGN305200301	5.20	26	62	5.20
DGN305300301	5.30	26	62	5.30
DGN305400301	5.40	28	66	5.40
DGN305500301	5.50	28	66	5.50
DGN305600301	5.60	28	66	5.60
DGN305700301	5.70	28	66	5.70
DGN305800301	5.80	28	66	5.80
DGN305900301	5.90	28	66	5.90

Order No.	D	L1	L	Ds
DGN306000301	6.00	28	66	6.00
DGN306100301	6.10	31	70	6.10
DGN306200301	6.20	31	70	6.20
DGN306300301	6.30	31	70	6.30
DGN306350301	6.35(1/4")	31	70	6.35
DGN306400301	6.40	31	70	6.40
DGN306500301	6.50	31	70	6.50
DGN306600301	6.60	31	70	6.60
DGN306700301	6.70	31	70	6.70
DGN306800301	6.80	34	74	6.80
DGN306900301	6.90	34	74	6.90
DGN307000301	7.00	34	74	7.00
DGN307100301	7.10	34	74	7.10
DGN307140301	7.14(9/32")	34	74	7.14
DGN307200301	7.20	34	74	7.20
DGN307300301	7.30	34	74	7.30
DGN307400301	7.40	34	74	7.40
DGN307500301	7.50	34	74	7.50
DGN307600301	7.60	37	79	7.60
DGN307700301	7.70	37	79	7.70
DGN307800301	7.80	37	79	7.80
DGN307900301	7.90	37	79	7.90
DGN307940301	7.94(5/16")	37	79	7.94
DGN308000301	8.00	37	79	8.00
DGN308100301	8.10	37	79	8.10
DGN308200301	8.20	37	79	8.20
DGN308300301	8.30	37	79	8.30
DGN308400301	8.40	37	79	8.40
DGN308500301	8.50	37	79	8.50
DGN308600301	8.60	37	79	8.60
DGN308700301	8.70	37	79	8.70
DGN308730301	8.73(11/32")	40	84	8.73
DGN308800301	8.80	40	84	8.80
DGN308900301	8.90	40	84	8.90
DGN309000301	9.00	40	84	9.00
DGN309100301	9.10	40	84	9.10
DGN309200301	9.20	40	84	9.20
DGN309300301	9.30	40	84	9.30
DGN309400301	9.40	40	84	9.40
DGN309500301	9.50	40	84	9.50
DGN309700301	9.70	43	89	9.70
DGN309800301	9.80	43	89	9.80
DGN309900301	9.90	43	89	9.90

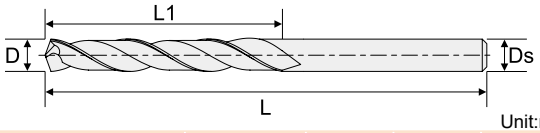
DGN3 Solid Carbide Drills - 3×D (for General Purpose) 外冷泛用鎢鋼鑽頭

P	M	K	N	S	H
●	○	●			

Product Specs

- 3×D Cutting depth
- Straight Shank
- 130° Tip Angle
- External Coolant
- UNIX Coating
- Tolerance h8
- NX Design
- For Alloy Steel, Steel, Stainless Steel and Cast Iron.





Unit:mm

Order No.	D	L1	L	Ds
DGN310000301	10.00	43	89	10.00
DGN310100301	10.10	43	89	10.10
DGN310200301	10.20	43	89	10.20
DGN310300301	10.30	43	89	10.30
DGN310400301	10.40	43	89	10.40
DGN310500301	10.50	43	89	10.50
DGN310600301	10.60	43	89	10.60
DGN310800301	10.80	47	95	10.80
DGN310900301	10.90	47	95	10.90
DGN311000301	11.00	47	95	11.00
DGN311100301	11.10	47	95	11.10
DGN311200301	11.20	47	95	11.20
DGN311500301	11.50	47	95	11.50
DGN311600301	11.60	47	95	11.60
DGN311800301	11.80	47	95	11.80
DGN311900301	11.90	51	102	11.90
DGN312000301	12.00	51	102	12.00
DGN312500301	12.50	51	102	12.50
DGN312700301	12.70	51	102	12.70
DGN313000301	13.00	51	102	13.00
DGN313500301	13.50	54	107	13.50
DGN314000301	14.00	54	107	14.00
DGN314500301	14.50	56	111	14.50
DGN315000301	15.00	56	111	15.00
DGN315500301	15.50	58	115	15.50
DGN316000301	16.00	58	115	16.00

Order No.	D	L1	L	Ds

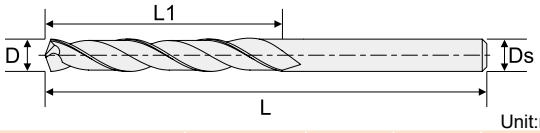
DGN5 Solid Carbide Drills - 5×D (for General Purpose) 外冷泛用鎢鋼鑽頭

P	M	K	N	S	H
●	○	●			

Product Specs

- 5×D Cutting depth
- Straight Shank
- 130° Tip Angle
- External Coolant
- UNIX Coating
- Tolerance h8
- NX Design
- For Alloy Steel, Steel, Stainless Steel and Cast Iron.





Unit:mm

Order No.	D	L1	L	Ds
DGN505000501	5.00	34	73	5.00
DGN505100501	5.10	38	76	5.10
DGN505200501	5.20	38	76	5.20
DGN505300501	5.30	38	76	5.30
DGN505400501	5.40	38	76	5.40
DGN505500501	5.50	38	76	5.50
DGN505600501	5.60	41	81	5.60
DGN505700501	5.70	41	81	5.70
DGN505800501	5.80	41	81	5.80
DGN505900501	5.90	41	81	5.90
DGN506000501	6.00	41	81	6.00
DGN506100501	6.10	41	81	6.10
DGN506200501	6.20	41	81	6.20
DGN506300501	6.30	41	81	6.30
DGN506400501	6.40	41	81	6.40
DGN506500501	6.50	41	81	6.50
DGN506600501	6.60	43	83	6.60
DGN506700501	6.70	43	83	6.70
DGN506800501	6.80	43	83	6.80
DGN506900501	6.90	43	83	6.90
DGN507000501	7.00	43	83	7.00
DGN507100501	7.10	45	87	7.10
DGN507200501	7.20	45	87	7.20
DGN507300501	7.30	45	87	7.30
DGN507400501	7.40	45	87	7.40
DGN507500501	7.50	45	87	7.50
DGN507600501	7.60	48	90	7.60
DGN507700501	7.70	48	90	7.70
DGN507800501	7.80	48	90	7.80
DGN507900501	7.90	48	90	7.90
DGN508000501	8.00	48	90	8.00
DGN508100501	8.10	53	96	8.10
DGN508200501	8.20	53	96	8.20
DGN508300501	8.30	53	96	8.30
DGN508400501	8.40	53	96	8.40
DGN508500501	8.50	53	96	8.50
DGN508600501	8.60	55	98	8.60
DGN508700501	8.70	55	98	8.70
DGN508800501	8.80	55	98	8.80

Order No.	D	L1	L	Ds
DGN509000501	9.00	55	98	9.00
DGN509100501	9.10	58	102	9.10
DGN509200501	9.20	58	102	9.20
DGN509300501	9.30	58	102	9.30
DGN509500501	9.50	58	102	9.50
DGN509600501	9.60	60	105	9.60
DGN509700501	9.70	60	105	9.70
DGN509800501	9.80	60	105	9.80
DGN510000501	10.00	60	105	10.00
DGN510200501	10.20	66	112	10.20
DGN510300501	10.30	66	112	10.30
DGN510400501	10.40	66	112	10.40
DGN510500501	10.50	66	112	10.50
DGN510600501	10.60	68	114	10.60
DGN510700501	10.70	68	114	10.70
DGN510800501	10.80	68	114	10.80
DGN510900501	10.90	68	114	10.90
DGN511000501	11.00	68	114	11.00
DGN511100501	11.10	71	118	11.10
DGN511200501	11.20	71	118	11.20
DGN511400501	11.40	71	118	11.40
DGN511500501	11.50	71	118	11.50
DGN511600501	11.60	73	121	11.60
DGN511700501	11.70	73	121	11.70
DGN511800501	11.80	73	121	11.80
DGN511900501	11.90	73	121	11.90
DGN512000501	12.00	73	121	12.00
DGN512500501	12.50	76	135	12.50
DGN512700501	12.70	78	137	12.70
DGN513000501	13.00	78	137	13.00
DGN513500501	13.50	84	144	13.50
DGN514000501	14.00	86	147	14.00
DGN514500501	14.50	89	151	14.50
DGN515000501	15.00	91	153	15.00
DGN515500501	15.50	94	157	15.50
DGN516000501	16.00	96	160	16.00

DTN Solid Carbide Drills (for Spotting) 外冷定點鎢鋼鑽頭



Product Spec.

- Spotting Drills
  - Tip angle 90°
  - Tip angle 120°
- Better Tool Life
- Competitive Price
- Customized Service
- 刀具壽命佳
- 價格實惠
- 客製化服務

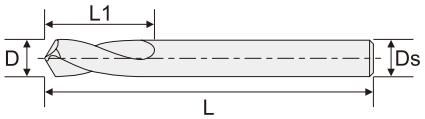
DTN Solid Carbide Drills - Tip angle 90° (for Spotting) 外冷定點鎢鋼鑽頭

P	M	K	N	S	H
●	○	●			

Product Specs

- 90° Tip Angle
- 45° Chamfer Angle
- External Coolant
- UNIX Coating
- Tolerance h8
- For Alloy Steel, Stainless Steel and Cast Iron.





Unit:mm

Order No.	D	L1	L	Ds
DTN01300901	1.30	4	50	3
DTN01700901	1.70	5	50	3
DTN03000901	3.00	8	50	3
DTN04000901	4.00	10	50	4
DTN05000901	5.00	13	50	5
DTN06000901	6.00	15	50	6
DTN08000901	8.00	20	60	8
DTN10000901	10.00	25	75	10
DTN12000901	12.00	30	75	12
DTN16000901	16.00	35	100	16

Order No.	D	L1	L	Ds

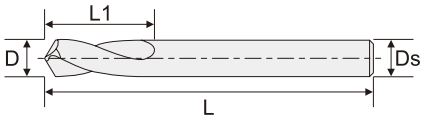
DTN Solid Carbide Drills - Tip angle 120° (for Spotting) 外冷定點鎢鋼鑽頭

P	M	K	N	S	H
●	○	●			

Product Specs

- 120° Tip Angle
- 60° Chamfer Angle
- External Coolant
- UNIX Coating
- Tolerance h8
- For Alloy Steel, Stainless Steel and Cast Iron.





Unit:mm

Order No.	D	L1	L	Ds
DTN03001201	3.00	8	50	3
DTN04001201	4.00	10	50	4
DTN05001201	5.00	13	50	5
DTN06001201	6.00	15	50	6
DTN08001201	8.00	20	60	8
DTN10001201	10.00	25	75	10
DTN12001201	12.00	30	75	12
DTN16001201	16.00	35	100	16

Order No.	D	L1	L	Ds

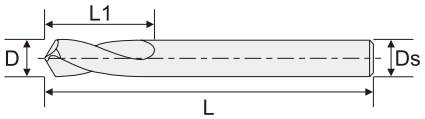
DTN Solid Carbide Drills - Tip angle 90°, Long shank (for Spotting) 外冷定點鎢鋼鑽頭

P	M	K	N	S	H
●	○	●			

Product Specs

- 90° Tip Angle
- 45° Chamfer Angle
- External Coolant
- UNIX Coating
- Tolerance h8
- For Alloy Steel, Stainless Steel and Cast Iron.





Unit:mm

Order No.	D	L1	L	Ds
DTN04000911	4.00	10	75	4
DTN05000911	5.00	13	75	5
DTN06000911	6.00	15	100	6
DTN08000911	8.00	20	100	8
DTN10000911	10.00	25	150	10
DTN12000911	12.00	30	150	12
DTN16000911	16.00	35	150	16

Order No.	D	L1	L	Ds

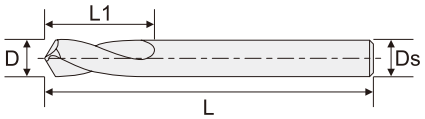
DTN Solid Carbide Drills - Tip angle 120°, Long shank (for Spotting) 外冷定點鎢鋼鑽頭

P	M	K	N	S	H
●	○	●			

Product Specs

- 120° Tip Angle
- 60° Chamfer Angle
- External Coolant
- UNIX Coating
- Tolerance h8
- For Alloy Steel, Stainless Steel and Cast Iron.





Unit:mm

Order No.	D	L1	L	Ds
DTN04001211	4.00	10	75	4
DTN05001211	5.00	13	75	5
DTN06001211	6.00	15	100	6
DTN08001211	8.00	20	100	8
DTN10001211	10.00	25	150	10
DTN12001211	12.00	30	150	12
DTN16001211	16.00	35	150	16

Order No.	D	L1	L	Ds

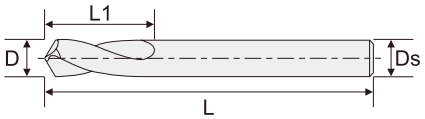
DTN Solid Carbide Drills - Tip angle 140° (for Spotting) 外冷定點鎢鋼鑽頭

P	M	K	N	S	H
●	○	●			

Product Specs

- 140° Tip Angle
- 70° Chamfer Angle
- External Coolant
- UNIX Coating
- Tolerance h8
- For Alloy Steel, Stainless Steel and Cast Iron.





Unit:mm

Order No.	D	L1	L	Ds
DTN03001401	3.00	8	50	3
DTN04001401	4.00	10	50	4
DTN05001401	5.00	13	50	5
DTN06001401	6.00	15	50	6
DTN08001401	8.00	20	60	8
DTN10001401	10.00	25	75	10
DTN12001401	12.00	30	75	12
DTN16001401	16.00	35	100	16

Order No.	D	L1	L	Ds
DTN04001411	4.00	10	75	4
DTN05001411	5.00	13	75	5
DTN06001411	6.00	15	100	6
DTN08001411	8.00	20	125	8
DTN10001411	10.00	25	150	10
DTN12001411	12.00	30	150	12
DTN16001411	16.00	35	150	16

DCN Solid Carbide Drills (for Centering) 外冷中心鎗鋼鑽頭



Product Spec.

- Spotting Drills
  - Countersink angle 60°
  - Countersink angle 90°
- Better Tool Life
- Competitive Price
- Customized Service
- 刀具壽命佳
- 價格實惠
- 客製化服務

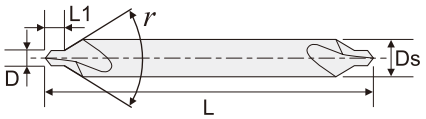
DCN Solid Carbide Drills - Countersink angle 60° (for Centering) 外冷中心鎗鋼鑽頭

P	M	K	N	S	H
●	○	●			

Product Specs

- 120° Tip Angle
- 60° Countersink Angle (γ)
- External Coolant
- UNIX Coating
- Tolerance h8
- For Alloy Steel, Stainless Steel and Cast Iron.





Unit:mm

Order No.	D	L1	L	Ds
DCN01000601	1.00	1.6	38	3
DCN01250601	1.25	1.9	38	3
DCN01600601	1.60	2.4	42	4
DCN02000601	2.00	2.9	50	5
DCN02500601	2.50	3.6	50	6
DCN03000601	3.00	3.9	60	8
DCN03150601	3.15	3.9	60	8
DCN04000601	4.00	5.0	75	10
DCN05000601	5.00	6.3	75	12

Order No.	D	L1	L	Ds

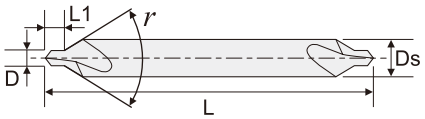
DCN Solid Carbide Drills - Countersink angle 90° (for Centering) 外冷中心鎗鋼鑽頭

P	M	K	N	S	H
●	○	●			

Product Specs

- 120° Tip Angle
- 90° Countersink Angle (γ)
- External Coolant
- UNIX Coating
- Tolerance h8
- For Alloy Steel, Stainless Steel and Cast Iron.





Unit:mm

Order No.	D	L1	L	Ds
DCN01000901	1.00	1.6	38	3
DCN01250901	1.25	1.9	38	3
DCN01600901	1.60	2.4	42	4
DCN02000901	2.00	2.9	50	5
DCN02500901	2.50	3.6	50	6
DCN03000901	3.00	3.9	60	8
DCN03150901	3.15	3.9	60	8
DCN04000901	4.00	5.0	75	10
DCN05000901	5.00	6.3	75	12

Order No.	D	L1	L	Ds

WINSTAR

Endmills · Inserts · Drills



Winstar
Cutting Technologies

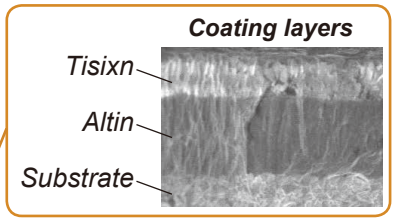
Indexable Drill Insert & Tools 捨棄式鑽頭刀片與刀桿



Product Features

-
- Durable full SDK holder body
-
- Internal coolant design
- Better tool life
- 經濟與效能
- 高耐久工具鋼刀桿
- 優異的排屑效率
- 内冷孔設計
- 良好的刀具壽命

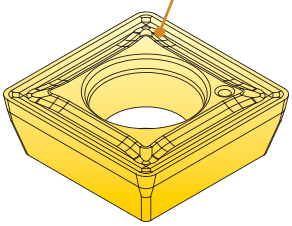
Grade Descriptions



Grade Code : CX31NS, CX41NS

Ingredient : Ti, Al, Si, N

Feature :
- Si contained
- Improve the hardness and heat resistance
- The Si NANO particles uniformly distributed
- Effective protection of the substrate
- Extend inserts life



Grade	ISO	Substrate (HRA)	Coating Type	Thickness	Coolant		Cutting Condition
					WET	DRY	
CX31NS	P20~P30 M15~M30 K30	91.6	TiSixN	~ 3	★★	★	Medium Continuous
CX41NS	P20~P40 M20~M40 K30	90.0	TiSixN	~ 3	★★	★	Rough Interrupted

Chip breaker design



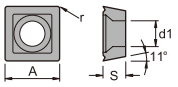


SPMG Inserts

SPMG 刀片

	P	Steel	◎	◎	◎	○	○	
	M	Stainless steel	○	○	○	◎	◎	
	K	Cast iron	◎	○	○	○	○	

◎ 1st choice ○ 2st choice

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	-	

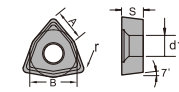
Holder Page : C070~C076

WCMT Inserts

WCMT 刀片

	P	Steel	◎	◎	◎	○	○	
	M	Stainless steel	○	○	○	◎	◎	
	K	Cast iron	◎	○	○	○	○	

◎ 1st choice ○ 2st choice

Inserts	Designation		Grade						Dimensions (mm)						Drawing
			CX21NS	CX31NA	CX31NS	CX41NS	CX41NA		A	B	S	r	d1	t1	
	**WCMT**	**030208-MM**			✓	✓			3.8	5.56	2.38	0.8	2.8	-	
	**WCMT**	**040208-MM**			✓	✓			4.3	6.35	2.38	0.8	3.0	-	
	**WCMT**	**050308-MM**			✓	✓			5.4	7.94	3.18	0.8	3.4	-	
	**WCMT**	**06T308-MM**			✓	✓			6.5	9.53	3.97	0.8	4.0	-	
	**WCMT**	**080412-MM**			✓	✓			8.7	12.7	4.76	1.2	4.3	-	

Holder Page : C078~C084

Winstar Cutting Technologies

DSP Indexable Drills 內冷捨棄式快速鑽頭



Product Features

- SPMG series inserts
-
- Internal coolant
- Better tool life
- Self-Produced inserts
- Diameter 12.5-50 mm
- 使用 SPMG 系列刀片
- 排屑槽設計優化
- 內冷孔設計
- 良好刀具壽命
- 刀片全程自產，提供您最佳性價比
- 孔徑加工範圍 : 12.5-50mm

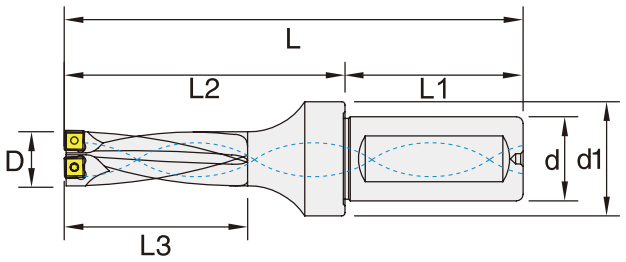
DSP Indexable Drills - 2×D

內冷捨棄式快速鑽頭

Product Specs

- 2×D Cutting depth
- High durable SDK holder body
- Internal Coolant
- Use with SPMG series inserts
- Indexable Insert with 4 sides cutting edge
- For Alloy Steel, Steel, Stainless Steel and Cast Iron.





Item Code	Dimensions, mm							Teeth	Insert	Screw	Wrench
	D	d	d1	L	L3	L2	L1				
IDSP1252-20T2-05	12.5	20	27	94	26	44	50	2	SPMG0502...	TS2003	TK06
IDSP1302-20T2-05	13							2			
IDSP1352-20T2-05	13.5			96	28	46		2			
IDSP1402-20T2-05	14							2			
IDSP1452-20T2-05	14.5			99	30	49		2			
IDSP1502-20T2-05	15							2			
IDSP1552-25T2-06	15.5	25	33	108	32	52	56	2	SPMG0602...	TS2202	TK06
IDSP1602-25T2-06	16							2			
IDSP1652-25T2-06	16.5			110	34	54		2			
IDSP1702-25T2-06	17							2			
IDSP1752-25T2-06	17.5			113	36	57		2			
IDSP1802-25T2-06	18							2			
IDSP1852-25T2-06	18.5			115	38	59		2			
IDSP1902-25T2-06	19							2			
IDSP1952-25T2-06	19.5			119	40	63		2			
IDSP2002-25T2-06	20							2			
IDSP2052-25T2-06	20.5			121	42	65		2			
IDSP2102-25T2-06	21							2			
IDSP2152-25T2-06	21.5			123	44	67		2			
IDSP2202-25T2-07	22							2	SPMG07T308	TS2511	TK08
IDSP2252-32T2-07	22.5	32	43	131	46	71	60	2			
IDSP2302-32T2-07	23							2			
IDSP2352-32T2-07	23.5			134	48	74		2			
IDSP2402-32T2-07	24							2			
IDSP2452-32T2-07	24.5			137	50	77		2			
IDSP2502-32T2-07	25							2			
IDSP2552-32T2-07	25.5			139	52	79		2			
IDSP2602-32T2-07	26							2			
IDSP2652-32T2-07	26.5			142	54	81		2			
IDSP2702-32T2-07	27							2			
IDSP2752-32T2-07	27.5			144	56	84		2			

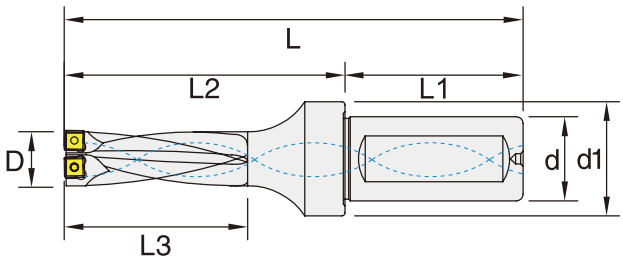
DSP Indexable Drills - 2×D

內冷捨棄式快速鑽頭

Product Specs

- 2×D Cutting depth
- High durable SDK holder body
- Internal Coolant
- Use with SPMG series inserts
- Indexable Insert with 4 sides cutting edge
- For Alloy Steel, Steel, Stainless Steel and Cast Iron.





Item Code	Dimensions, mm							Teeth	Insert	Screw	Wrench
	D	d	d1	L	L3	L2	L1				
IDSP2802-32T2-09	28	32	43	144	56	84	60	2	SPMG090408	TS3504	TK15
IDSP2852-32T2-09	28.5			146	58	86		2			
IDSP2902-32T2-09	29							2			
IDSP2952-32T2-09	29.5			148	60	88		2			
IDSP3002-32T2-09	30							2			
IDSP3052-32T2-09	30.5			150	62	90		2			
IDSP3102-32T2-09	31							2			
IDSP3152-32T2-09	31.5			152	64	92		2			
IDSP3202-32T2-09	32							2			
IDSP3252-32T2-09	32.5			154	66	94		2			
IDSP3302-32T2-09	33							2			
IDSP3402-32T2-11	34			156	68	96		2	SPMG110408	TS4006	TK15
IDSP3502-32T2-11	35			158	70	98		2			
IDSP3602-32T2-11	36			160	72	100		2			
IDSP3702-32T2-11	37			162	74	102		2			
IDSP3802-32T2-11	38			164	76	104		2			
IDSP3902-32T2-11	39			166	78	106		2			
IDSP4002-40T2-11	40	40	53	185	80	115		2			
IDSP4102-40T2-11	41			187	82	117		2			

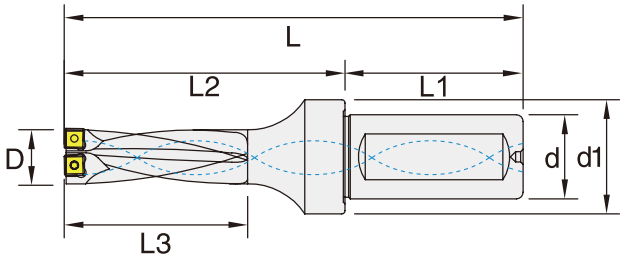
DSP Indexable Drills - 3×D

內冷捨棄式快速鑽頭

Product Specs

- 3×D Cutting depth
- High durable SDK holder body
- Internal Coolant
- Use with SPMG series inserts
- Indexable Insert with 4 sides cutting edge
- For Alloy Steel, Steel, Stainless Steel and Cast Iron.





Item Code	Dimensions, mm							Teeth	Insert	Screw	Wrench
	D	d	d1	L	L3	L2	L1				
IDSP1253-20T2-05	12.5	20	25	107	39	57	50	2	SPMG0502...	TS2003	TK06
IDSP1303-20T2-05	13							2			
IDSP1353-20T2-05	13.5			110	42	60		2			
IDSP1403-20T2-05	14							2			
IDSP1453-20T2-05	14.5			114	45	64		2			
IDSP1503-20T2-05	15							2			
IDSP1553-25T2-06	15.5	25	33	124	48	68	56	2	SPMG0602...	TS2202	TK06
IDSP1603-25T2-06	16							2			
IDSP1653-25T2-06	16.5			127	51	71		2			
IDSP1703-25T2-06	17							2			
IDSP1753-25T2-06	17.5			131	54	75		2			
IDSP1803-25T2-06	18							2			
IDSP1853-25T2-06	18.5			134	57	78		2			
IDSP1903-25T2-06	19							2			
IDSP1953-25T2-06	19.5			139	60	83		2			
IDSP2003-25T2-06	20							2			
IDSP2053-25T2-06	20.5			142	63	86		2			
IDSP2103-25T2-06	21							2			
IDSP2153-25T2-06	21.5			145	66	89		2			
IDSP2203-25T2-07	22							2	SPMG07T3...	TS2511	TK08
IDSP2253-32T2-07	22.5	32	43	154	69	94	60	2			
IDSP2303-32T2-07	23							2			
IDSP2353-32T2-07	23.5			158	72	98		2			
IDSP2403-32T2-07	24							2			
IDSP2453-32T2-07	24.5			162	75	102		2			
IDSP2503-32T2-07	25							2			
IDSP2553-32T2-07	25.5			165	78	105		2			
IDSP2603-32T2-07	26							2			
IDSP2653-32T2-07	26.5			169	81	108		2			
IDSP2703-32T2-07	27							2			
IDSP2753-32T2-07	27.5			172	84	112		2			

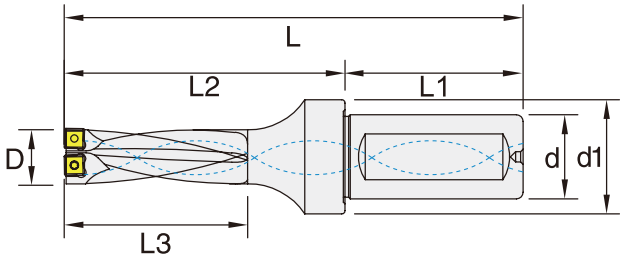
DSP Indexable Drills - 3×D

內冷捨棄式快速鑽頭

Product Specs

- 3×D Cutting depth
- High durable SDK holder body
- Internal Coolant
- Use with SPMG series inserts
- Indexable Insert with 4 sides cutting edge
- For Alloy Steel, Steel, Stainless Steel and Cast Iron.





Item Code	Dimensions, mm							Teeth	Insert	Screw	Wrench
	D	d	d1	L	L3	L2	L1				
IDSP2803-32T2-09	28	32	43	172	84	112	60	2	SPMG0904...	TS3504	TK15
IDSP2853-32T2-09	28.5			175	87	115		2			
IDSP2903-32T2-09	29							2			
IDSP2953-32T2-09	29.5			178	90	118		2			
IDSP3003-32T2-09	30							2			
IDSP3053-32T2-09	30.5			181	93	121		2			
IDSP3103-32T2-09	31							2			
IDSP3153-32T2-09	31.5			184	96	124		2			
IDSP3203-32T2-09	32							2			
IDSP3253-32T2-09	32.5			187	99	127		2			
IDSP3303-32T2-09	33							2			
IDSP3403-32T2-11	34			190	102	130		2	SPMG1104...	TS4006	TK15
IDSP3503-32T2-11	35			193	105	133		2			
IDSP3603-32T2-11	36			196	108	136		2			
IDSP3703-32T2-11	37			199	111	139		2			
IDSP3803-32T2-11	38			202	114	142		2			
IDSP3903-32T2-11	39			205	117	145		2			
IDSP4003-40T2-11	40	40	53	225	120	155		2			
IDSP4103-40T2-11	41			228	123	158		2			

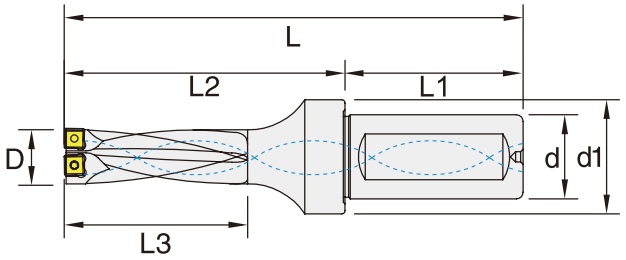
DSP Indexable Drills - 4×D

內冷捨棄式快速鑽頭

Product Specs

- 4×D Cutting depth
- High durable SDK holder body
- Internal Coolant
- Use with SPMG series inserts
- Indexable Insert with 4 sides cutting edge
- For Alloy Steel, Steel, Stainless Steel and Cast Iron.





Item Code	Dimensions, mm							Teeth	Insert	Screw	Wrench
	D	d	d1	L	L3	L2	L1				
IDSP1254-20T2-05	12.5	20	27	120	52	70	50	2	SPMG0502...	TS2003	TK06
IDSP1304-20T2-05	13							2			
IDSP1354-20T2-05	13.5			124	56	74		2			
IDSP1404-20T2-05	14							2			
IDSP1454-20T2-05	14.5			129	60	79		2			
IDSP1504-20T2-05	15							2			
IDSP1554-25T2-06	15.5	25	33	140	64	84	56	2	SPMG0602...	TS2205	TK06
IDSP1604-25T2-06	16							2			
IDSP1654-25T2-06	16.5			144	68	88		2			
IDSP1704-25T2-06	17							2			
IDSP1754-25T2-06	17.5			148	72	92		2			
IDSP1804-25T2-06	18							2			
IDSP1854-25T2-06	18.5			152	76	96		2			
IDSP1904-25T2-06	19							2			
IDSP1954-25T2-06	19.5			156	80	100		2			
IDSP2004-25T2-06	20							2			
IDSP2054-25T2-06	20.5			160	84	104		2			
IDSP2104-25T2-06	21							2			
IDSP2154-25T2-06	21.5			164	88	108		2			
IDSP2204-25T2-07	22							2	SPMG07T3...	TS2511	TK08
IDSP2254-32T2-07	22.5	32	43	177	92	117	60	2			
IDSP2304-32T2-07	23							2			
IDSP2354-32T2-07	23.5			181	96	121		2			
IDSP2404-32T2-07	24							2			
IDSP2454-32T2-07	24.5			185	100	125		2			
IDSP2504-32T2-07	25							2			
IDSP2554-32T2-07	25.5			189	104	129		2			
IDSP2604-32T2-07	26							2			
IDSP2654-32T2-07	26.5			196	108	136		2			
IDSP2704-32T2-07	27							2			
IDSP2754-32T2-07	27.5			200	112	140		2			

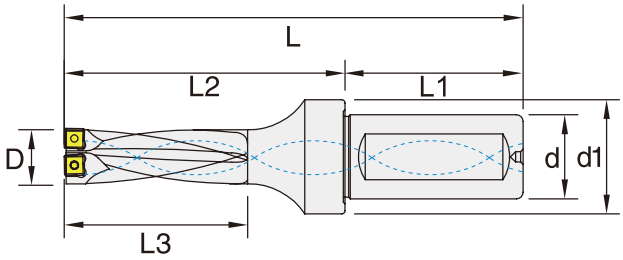
DSP Indexable Drills - 4×D

內冷捨棄式快速鑽頭

Product Specs

- 4×D Cutting depth
- High durable SDK holder body
- Internal Coolant
- Use with SPMG series inserts
- Indexable Insert with 4 sides cutting edge
- For Alloy Steel, Steel, Stainless Steel and Cast Iron.





Item Code	Dimensions, mm							Teeth	Insert	Screw	Wrench
	D	d	d1	L	L3	L2	L1				
IDSP2804-32T2-09	28	32	43	200	112	140	60	2	SPMG0904...	TS3504	TK15
IDSP2854-32T2-09	28.5			204	116	144		2			
IDSP2904-32T2-09	29							2			
IDSP2954-32T2-09	29.5			208	120	148		2			
IDSP3004-32T2-09	30							2			
IDSP3054-32T2-09	30.5			212	124	152		2			
IDSP3104-32T2-09	31							2			
IDSP3154-32T2-09	31.5			216	128	156		2			
IDSP3204-32T2-09	32							2			
IDSP3254-32T2-09	32.5			220	132	160		2			
IDSP3304-32T2-09	33							2			
IDSP3404-32T2-11	34			224	136	164		2	SPMG1104...	TS4006	TK15
IDSP3504-32T2-11	35			228	140	168		2			
IDSP3604-32T2-11	36			232	144	172		2			
IDSP3704-32T2-11	37			236	148	176		2			
IDSP3804-32T2-11	38			240	152	180		2			
IDSP3904-32T2-11	39			244	156	184		2			
IDSP4004-40T2-11	40	40	53	265	160	195		2			
IDSP4104-40T2-11	41			269	164	199		2			

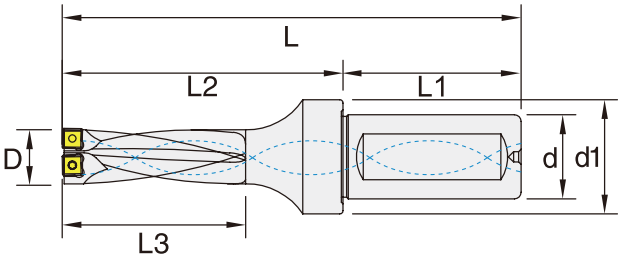
DSP Indexable Drills - 5×D

內冷捨棄式快速鑽頭

Product Specs

- 5×D Cutting depth
- High durable SDK holder body
- Internal Coolant
- Use with SPMG series inserts
- Indexable Insert with 4 sides cutting edge
- For Alloy Steel, Steel, Stainless Steel and Cast Iron.





Item Code	Dimensions, mm							Teeth	Insert	Screw	Wrench
	D	d	d1	L	L3	L2	L1				
IDSP1305-20T2-05	13	20	27	133	65	83	50	2	SPMG0502...	TS2003	TK06
IDSP1405-20T2-05	14			138	70	88		2			
IDSP1505-20T2-05	15			144	75	94		2			
IDSP1605-25T2-06	16	25	33	156	80	100	56	2	SPMG0602	TS2205	TK06
IDSP1705-25T2-06	17			161	85	105		2			
IDSP1805-25T2-06	18			166	90	110		2			
IDSP1905-25T2-06	19			171	95	115		2			
IDSP2005-25T2-06	20			176	100	120		2			
IDSP2105-25T2-06	21			181	105	125		2			
IDSP2205-25T2-07	22			186	110	130		2	SPMG07T3	TS2511	TK08
IDSP2305-32T2-07	23	32	43	200	115	140	60	2			
IDSP2405-32T2-07	24			205	120	145		2			
IDSP2505-32T2-07	25			210	125	150		2			
IDSP2605-32T2-07	26			215	130	155		2			
IDSP2705-32T2-07	27			223	135	163		2			
IDSP2805-32T2-09	28			228	140	168		2	SPMG0904	TS3504	TK15
IDSP2905-32T2-09	29			233	145	173		2			
IDSP3005-32T2-09	30			238	150	178		2			
IDSP3105-32T2-09	31			243	155	183		2			
IDSP3205-32T2-09	32			248	160	188		2			
IDSP3305-32T2-09	33			253	165	193		2			
IDSP3405-32T2-11	34			258	170	198		2	SPMG1104	TS4006	TK15
IDSP3505-32T2-11	35			263	175	203		2			
IDSP3605-32T2-11	36			268	180	208		2			

DWC Indexable Drills 內冷捨棄式快速鑽頭



Product Features

- WCMT series inserts
-
- Internal coolant
- Better tool life
- Self-Produced inserts
- Diameter 14-60 mm
- 使用 WCMT 系列刀片
- 排屑設計優化
- 內冷孔設計
- 良好刀具壽命
- 刀片全程自產，提供您最佳性價比
- 孔徑加工範圍 :14-60mm

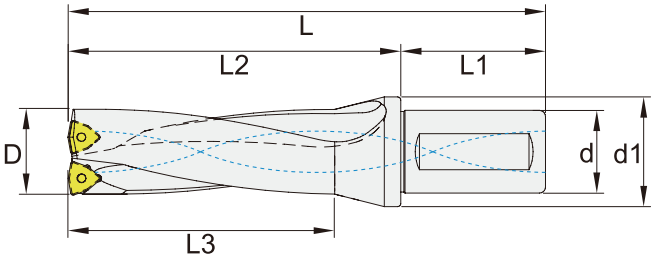
DWC Indexable Drills - 2×D

內冷捨棄式快速鑽頭

Product Specs

- 2×D Cutting depth
- High durable SDK holder body
- Internal Coolant
- Use with WCMT series inserts
- Indexable Insert with 3 sides cutting edge
- For Alloy Steel, Steel, Stainless Steel and Cast Iron.





Item Code	Dimensions, mm							Teeth	Insert	Screw	Wrench
	D	d	d1	L	L3	L2	L1				
IDWC1402-25T2-03	14	25	38	114	28	58	56	2	WCMT0302...	TS2502	TK08
IDWC1452-25T2-03	14.5							2			
IDWC1502-25T2-03	15			116	30	60		2		TS2507	
IDWC1552-25T2-03	15.5							2			
IDWC1602-25T2-03	16			119	32	63		2			
IDWC1652-25T2-03	16.5							2			
IDWC1702-25T2-03	17			120	34	64		2			
IDWC1752-25T2-03	17.5							2			
IDWC1802-25T2-03	18			122	36	66		2			
IDWC1852-25T2-03	18.5							2			
IDWC1902-25T2-03	19			124	38	68		2			
IDWC1952-25T2-03	19.5							2			
IDWC2002-25T2-03	20			126	40	70		2			
IDWC2052-25T2-03	20.5							2			
IDWC2102-25T2-04	21			128	42	72		2	WCMT0402...		
IDWC2152-25T2-04	21.5							2			
IDWC2202-32T2-04	22	32	43	136	44	76	60	2			
IDWC2252-32T2-04	22.5							2			
IDWC2302-32T2-04	23			138	46	78		2			
IDWC2352-32T2-04	23.5							2			
IDWC2402-32T2-04	24			141	48	81		2			
IDWC2452-32T2-04	24.5							2			
IDWC2502-32T2-04	25			142	50	82		2			
IDWC2552-32T2-04	25.5							2			
IDWC2602-32T2-05	26			144	52	84		2	WCMT0503...	TS3007	TK10
IDWC2702-32T2-05	27			146	54	86		2			
IDWC2802-32T2-05	28			148	56	88		2			
IDWC2902-32T2-05	29			150	58	90		2			
IDWC3002-32T2-05	30			152	60	92		2			

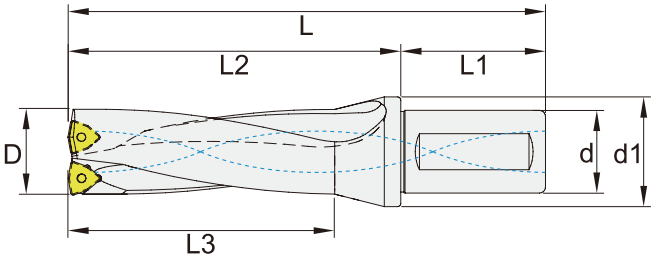
DWC Indexable Drills - 2×D

內冷捨棄式快速鑽頭

Product Specs

- 2×D Cutting depth
- High durable SDK holder body
- Internal Coolant
- Use with WCMT series inserts
- Indexable Insert with 3 sides cutting edge
- For Alloy Steel, Steel, Stainless Steel and Cast Iron.





Item Code	Dimensions, mm							Teeth	Insert	Screw	Wrench
	D	d	d1	L	L3	L2	L1				
IDWC3102-32T2-06	31			154	62	94		2			
IDWC3202-32T2-06	32			156	64	96		2			
IDWC3302-32T2-06	33			159	66	99		2			
IDWC3402-32T2-06	34			160	68	100		2			
IDWC3502-32T2-06	35	32	43	162	70	102	60	2			
IDWC3602-32T2-06	36			164	72	104		2	WCMT06T3...	TS3504	
IDWC3702-32T2-06	37			166	74	106		2			
IDWC3802-32T2-06	38			168	76	106		2			
IDWC3902-32T2-06	39			170	78	110		2			
IDWC4002-40T2-06	40			185	80	115		2			
IDWC4102-40T2-06	41			187	82	117		2			
IDWC4202-40T2-08	42			189	84	119		2			
IDWC4302-40T2-08	43			191	86	121		2			
IDWC4402-40T2-08	44			194	88	124		2			
IDWC4502-40T2-08	45			195	90	125		2			
IDWC4602-40T2-08	46			197	92	127		2			
IDWC4702-40T2-08	47		54	199	94	129		2			
IDWC4802-40T2-08	48			201	96	131		2			
IDWC4902-40T2-08	49			202	98	132		2			
IDWC5002-40T2-08	50	40		204	100	134	70	2			
IDWC5102-40T2-08	51			206	102	136		2	WCMT0804...	TS4004	
IDWC5202-40T2-08	52			208	104	138		2			
IDWC5302-40T2-08	53			210	106	140		2			
IDWC5402-40T2-08	54			212	108	142		2			
IDWC5502-40T2-08	55			215	110	145		2			
IDWC5602-40T2-08	56		58	217	112	147		2			
IDWC5702-40T2-08	57			219	114	149		2			
IDWC5802-40T2-08	58		59	221	116	151		2			
IDWC5902-40T2-08	59			223	118	153		2			
IDWC6002-40T2-08	60		63	225	120	155					

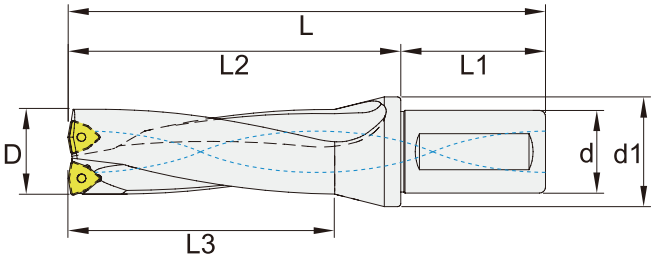
DWC Indexable Drills - 3×D

內冷捨棄式快速鑽頭

Product Specs

- 3×D Cutting depth
- High durable SDK holder body
- Internal Coolant
- Use with WCMT series inserts
- Indexable Insert with 3 sides cutting edge
- For Alloy Steel, Steel, Stainless Steel and Cast Iron.





Item Code	Dimensions, mm							Teeth	Insert	Screw	Wrench
	D	d	d1	L	L3	L2	L1				
IDWC1403-25T2-03	14	25	38	128	42	72	56	2	WCMT0302...	TS2502	TK08
IDWC1453-25T2-03	14.5							2			
IDWC1503-25T2-03	15			131	45	75		2		TS2507	
IDWC1553-25T2-03	15.5							2			
IDWC1603-25T2-03	16			134	48	78		2			
IDWC1653-25T2-03	16.5							2			
IDWC1703-25T2-03	17			137	51	81		2			
IDWC1753-25T2-03	17.5							2			
IDWC1803-25T2-03	18			140	54	84		2			
IDWC1853-25T2-03	18.5							2			
IDWC1903-25T2-03	19			143	57	87		2			
IDWC1953-25T2-03	19.5							2			
IDWC2003-25T2-03	20			146	60	90		2			
IDWC2053-25T2-03	20.5							2			
IDWC2103-25T2-04	21			149	63	93		2	WCMT0402...		
IDWC2153-25T2-04	21.5			151	64	95		2			
IDWC2203-32T2-04	22	32	43	158	66	98	60	2			
IDWC2253-32T2-04	22.5							2			
IDWC2303-32T2-04	23			161	69	101		2			
IDWC2353-32T2-04	23.5							2			
IDWC2403-32T2-04	24			164	72	104		2			
IDWC2453-32T2-04	24.5							2			
IDWC2503-32T2-04	25			167	75	107		2			
IDWC2553-32T2-04	25.5							2			
IDWC2603-32T2-05	26			170	78	110		2	WCMT0503...	TS3007	TK10
IDWC2703-32T2-05	27			173	81	113		2			
IDWC2803-32T2-05	28			176	84	116		2			
IDWC2903-32T2-05	29			179	87	119		2			
IDWC3003-32T2-05	30			182	90	122		2			
IDWC3053-32T2-06	30.5			182	93	125		2	WCMT06T3...	TS3504	TK15
IDWC3103-32T2-06	31			185	93	125		2			

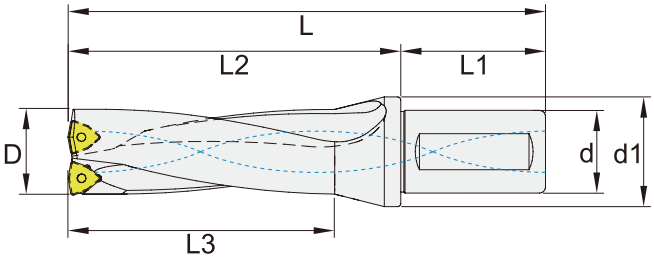
DWC Indexable Drills - 3×D

內冷捨棄式快速鑽頭

Product Specs

- 3×D Cutting depth
- High durable SDK holder body
- Internal Coolant
- Use with WCMT series inserts
- Indexable Insert with 3 sides cutting edge
- For Alloy Steel, Steel, Stainless Steel and Cast Iron.





Item Code	Dimensions, mm							Teeth	Insert	Screw	Wrench
	D	d	d1	L	L3	L2	L1				
IDWC3153-32T2-06	31.5	32	43	185	93	125	60	2	WCMT06T3...	TS3504	TK15
IDWC3203-32T2-06	32			188	96	128		2			
IDWC3253-32T2-06	32.5			188	96	128		2			
IDWC3303-32T2-06	33			191	99	131		2			
IDWC3403-32T2-06	34			194	102	134		2			
IDWC3503-32T2-06	35			197	105	137		2			
IDWC3603-32T2-06	36			200	108	140		2			
IDWC3703-32T2-06	37			203	111	143		2			
IDWC3803-32T2-06	38			206	114	146		2			
IDWC3903-32T2-06	39			209	117	149	70	2			
IDWC4003-40T2-06	40	40	54	225	120	155		2			
IDWC4103-40T2-06	41			228	123	158		2			
IDWC4203-40T2-08	42			231	126	161		2	WCMT0804...	TS4004	
IDWC4303-40T2-08	43			234	129	164		2			
IDWC4403-40T2-08	44			238	132	168		2			
IDWC4503-40T2-08	45			240	135	170		2			
IDWC4603-40T2-08	46			243	138	173		2			
IDWC4703-40T2-08	47			246	141	176		2			
IDWC4803-40T2-08	48			249	144	179		2			
IDWC4903-40T2-08	49			253	147	182		2			
IDWC5003-40T2-08	50			254	150	184		2			
IDWC5103-40T2-08	51			257	153	187		2			
IDWC5203-40T2-08	52			260	156	190		2			
IDWC5303-40T2-08	53			263	159	193		2			
IDWC5403-40T2-08	54			266	162	196		2			
IDWC5503-40T2-08	55		58	270	165	200		2			
IDWC5603-40T2-08	56			273	168	203		2			
IDWC5703-40T2-08	57			276	171	205		2			
IDWC5803-40T2-08	58		59	279	174	209		2			
IDWC5903-40T2-08	59			282	177	212		2			
IDWC6003-40T2-08	60		63	285	180	215		2			

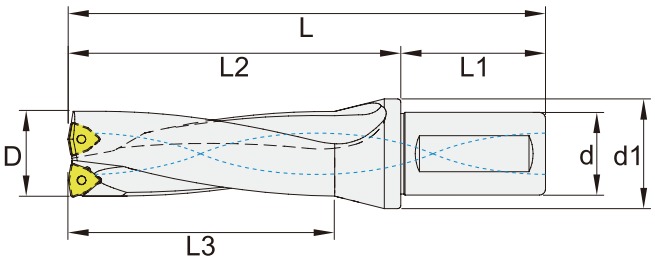
DWC Indexable Drills - 4×D

內冷捨棄式快速鑽頭

Product Specs

- 4×D Cutting depth
- High durable SDK holder body
- Internal Coolant
- Use with WCMT series inserts
- Indexable Insert with 3 sides cutting edge
- For Alloy Steel, Steel, Stainless Steel and Cast Iron.





Item Code	Dimensions, mm							Teeth	Insert	Screw	Wrench
	D	d	d1	L	L3	L2	L1				
IDWC1404-25T2-03	14	25	38	142	56	86	56	2	WCMT0302...	TS2502	TK08
IDWC1504-25T2-03	15			146	60	90		2		TS2507	
IDWC1604-25T2-03	16			150	64	94		2			
IDWC1704-25T2-03	17			154	68	98		2			
IDWC1804-25T2-03	18			158	72	102		2			
IDWC1904-25T2-03	19			162	76	106		2			
IDWC2004-25T2-03	20			166	80	110		2			
IDWC2104-25T2-04	21			170	84	114		2	WCMT0402...	TS2507	
IDWC2204-32T2-04	22	32	43	180	88	120	60	2			
IDWC2304-32T2-04	23			184	92	124		2			
IDWC2404-32T2-04	24			188	96	128		2			
IDWC2504-32T2-04	25			192	100	132		2			
IDWC2604-32T2-05	26			196	104	136		2	WCMT0503...	TS3007	TK10
IDWC2704-32T2-05	27			200	108	140		2			
IDWC2804-32T2-05	28			204	112	144		2			
IDWC2904-32T2-05	29			208	116	148		2			
IDWC3004-32T2-05	30			212	120	152		2			
IDWC3104-32T2-06	31			216	124	156		2	WCMT06T3...	TS3504	TK15
IDWC3204-32T2-06	32			220	128	160		2			
IDWC3304-32T2-06	33			224	132	164		2			
IDWC3404-32T2-06	34			228	136	168		2			
IDWC3504-32T2-06	35			232	140	172		2			
IDWC3604-32T2-06	36			236	144	176		2			
IDWC3704-32T2-06	37			240	148	180		2			
IDWC3804-32T2-06	38			244	152	184		2			
IDWC3904-32T2-06	39			248	156	188		2			
IDWC4004-40T2-06	40	40	54	265	160	195	70	2			
IDWC4104-40T2-06	41			269	164	199		2			

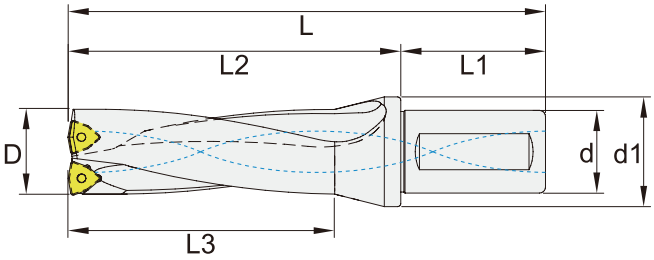
DWC Indexable Drills - 4×D

內冷捨棄式快速鑽頭

Product Specs

- 4×D Cutting depth
- High durable SDK holder body
- Internal Coolant
- Use with WCMT series inserts
- Indexable Insert with 3 sides cutting edge
- For Alloy Steel, Steel, Stainless Steel and Cast Iron.





Item Code	Dimensions, mm							Teeth	Insert	Screw	Wrench
	D	d	d1	L	L3	L2	L1				
IDWC4204-40T2-08	42	40	54	273	168	203	70	2	WCMT0804...	TS4004	TK15
IDWC4304-40T2-08	43			277	172	207		2			
IDWC4404-40T2-08	44			282	176	212		2			
IDWC4504-40T2-08	45			285	180	215		2			
IDWC4604-40T2-08	46			289	184	219		2			
IDWC4704-40T2-08	47			293	188	223		2			
IDWC4804-40T2-08	48			297	192	227		2			
IDWC4904-40T2-08	49			301	196	231		2			
IDWC5004-40T2-08	50			305	200	235		2			
IDWC5104-40T2-08	51			309	204	239		2			
IDWC5204-40T2-08	52			313	208	243		2			
IDWC5304-40T2-08	53			317	212	247		2			
IDWC5404-40T2-08	54			320	216	250		2			
IDWC5504-40T2-08	55			325	220	255		2			
IDWC5604-40T2-08	56		58	329	224	259		2			
IDWC5704-40T2-08	57			333	228	263		2			
IDWC5804-40T2-08	58		59	337	232	267		2			
IDWC5904-40T2-08	59			341	236	271		2			
IDWC6004-40T2-08	60		63	345	240	275		2			

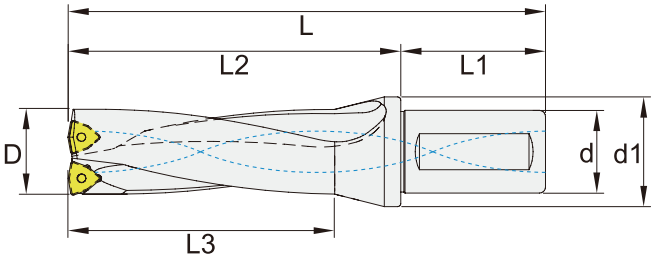
DWC Indexable Drills - 5×D

內冷捨棄式快速鑽頭

Product Specs

- 5×D Cutting depth
- High durable SDK holder body
- Internal Coolant
- Use with WCMT series inserts
- Indexable Insert with 3 sides cutting edge
- For Alloy Steel, Steel, Stainless Steel and Cast Iron.





Item Code	Dimensions, mm							Teeth	Insert	Screw	Wrench
	D	d	d1	L	L3	L2	L1				
IDWC1605-25T2-03	16	25	38	166	80	110	56	2	WCMT0302...	TS2507	TK08
IDWC1705-25T2-03	17	25	38	171	85	115	56	2			
IDWC1805-25T2-03	18	25	38	176	90	120	56	2			
IDWC1905-25T2-03	19	25	38	181	95	125	56	2			
IDWC2005-25T2-03	20	25	38	186	100	130	56	2			
IDWC2105-25T2-03	21	25	38	191	105	135	56	2			
IDWC2205-25T2-03	22	25	38	196	110	140	56	2			
IDWC2305-32T2-04	23	32	43	207	115	147	60	2	WCMT0402...	TS2507	TK08
IDWC2405-32T2-04	24	32	43	212	120	152	60	2			
IDWC2505-32T2-04	25	32	43	217	125	157	60	2			
IDWC2605-32T2-05	26	32	43	222	130	162	60	2	WCMT0503...	TS3007	TK10
IDWC2705-32T2-05	27	32	43	227	135	167	60	2			
IDWC2805-32T2-05	28	32	43	232	140	172	60	2			
IDWC2905-32T2-05	29	32	43	237	145	177	60	2			
IDWC3005-32T2-05	30	32	43	242	150	182	60	2			
IDWC3105-32T2-06	31	32	43	247	155	187	60	2	WCMT06T3...	TS3504	TK15
IDWC3205-32T2-06	32	32	43	252	160	192	60	2			
IDWC3305-32T2-06	33	32	43	257	165	197	60	2			
IDWC3405-32T2-06	34	32	43	262	170	202	60	2			
IDWC3505-32T2-06	35	32	43	267	175	207	60	2			
IDWC3605-32T2-06	36	32	43	272	180	212	60	2			
IDWC4405-40T2-08	44	40	54	326	220	256	70	2	WCMT0804...	TS4004	TK15

DRC, DRN Solid Carbide Machine Reamers 內冷 & 外冷鎢鋼機械鉸刀



Product Features

- Unique durable UNIX coating
- Specially for high accurate hole machining
- Superior hole surface finish
- Internal & external coolant available
- Customized available
- 高耐久 UNIX 鍍膜技術
- 專為高精度的孔加工設計
- 加工表面品質優異
- 內冷孔與外冷產品可供選擇
- 提供客製化服務

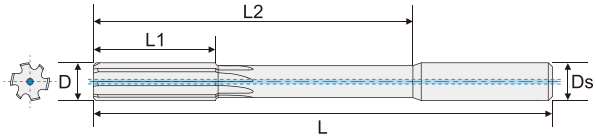
DRC Solid Carbide Machine Reamers 內冷鎢鋼機械鉸刀

P	M	K	N	S	H
●	○	●	●	○	

Product Specs

- Internal
- Straight flute
- UNIX Coating
- Tolerance h7
- Provides high degree of accuracy of leave smooth sides
- For blind hole using
- For steel, 400 series stainless steel, cast iron, aluminum Alloy





Order No.	D	L1	L2	L	Ds	F
DRC03000901	3.00	15	35	60	4	4
DRC03100901	3.10	15	35	60	4	4
DRC03200901	3.20	15	35	60	4	4
DRC03300901	3.30	15	35	60	4	4
DRC03400901	3.40	15	35	60	4	4
DRC03500901	3.50	18	35	60	4	4
DRC03600901	3.60	18	35	60	4	4
DRC03700901	3.70	18	35	60	4	4
DRC03800901	3.80	18	35	60	4	4
DRC03900901	3.90	18	35	60	4	4
DRC04000901	4.00	19	50	75	4	4
DRC04100901	4.10	19	50	75	6	4
DRC04200901	4.20	19	50	75	6	4
DRC04300901	4.30	19	50	75	6	4
DRC04400901	4.40	19	50	75	6	4
DRC04500901	4.50	21	50	75	6	4
DRC04600901	4.60	21	50	75	6	4
DRC04700901	4.70	21	50	75	6	4
DRC04800901	4.80	21	50	75	6	4
DRC04900901	4.90	21	50	75	6	4
DRC05000901	5.00	23	50	75	6	6
DRC05100901	5.10	23	50	75	6	6
DRC05200901	5.20	23	50	75	6	6
DRC05300901	5.30	23	50	75	6	6
DRC05400901	5.40	23	50	75	6	6
DRC05500901	5.50	26	50	75	6	6
DRC05600901	5.60	26	50	75	6	6
DRC05700901	5.70	26	50	75	6	6
DRC05800901	5.80	26	50	75	6	6
DRC05900901	5.90	26	50	75	6	6
DRC06000901	6.00	26	65	100	6	6
DRC06500901	6.50	28	65	100	8	6
DRC07000901	7.00	31	70	109	8	6
DRC07500901	7.50	31	70	109	8	6
DRC08000901	8.00	33	80	109	8	6
DRC08500901	8.50	33	80	125	10	6
DRC09000901	9.00	36	85	125	10	6
DRC09500901	9.50	36	85	125	10	6
DRC10000901	10.00	38	85	125	10	6
DRC10500901	10.50	38	85	125	12	6
DRC11000901	11.00	41	100	150	12	6
DRC11500901	11.50	41	100	150	12	6
DRC12000901	12.00	44	100	150	12	6

Order No.	D	L1	L2	L	Ds	F

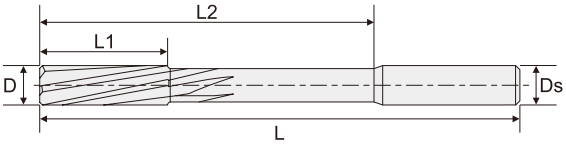
DRN Solid Carbide Machine Reamers 外冷鎢鋼機械鉸刀

P	M	K	N	S	H
●		●	●		

Product Specs

- External
- Left Helix Angle
- UNIX Coating
- Tolerance h7
- Provide high degree of accuracy to leave smooth sides.
- For through hole using
- For Steel, Alloy Steel, Cast Iron, Aluminum Alloy.



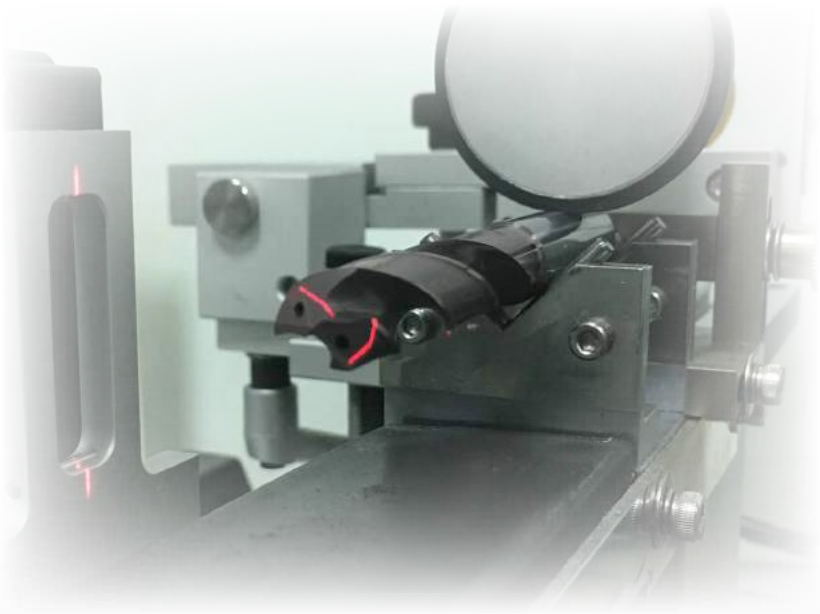


Order No.	D	L1	L2	L	Ds	F
DRN03000901	3.00	15	35	60	4	4
DRN03100901	3.10	15	35	60	4	4
DRN03200901	3.20	15	35	60	4	4
DRN03300901	3.30	15	35	60	4	4
DRN03400901	3.40	15	35	60	4	4
DRN03500901	3.50	18	35	60	4	4
DRN03600901	3.60	18	35	60	4	4
DRN03700901	3.70	18	35	60	4	4
DRN03800901	3.80	18	35	60	4	4
DRN03900901	3.90	18	35	60	4	4
DRN04000901	4.00	19	50	75	4	4
DRN04100901	4.10	19	50	75	6	4
DRN04200901	4.20	19	50	75	6	4
DRN04300901	4.30	19	50	75	6	4
DRN04400901	4.40	19	50	75	6	4
DRN04500901	4.50	21	50	75	6	4
DRN04600901	4.60	21	50	75	6	4
DRN04700901	4.70	21	50	75	6	4
DRN04800901	4.80	21	50	75	6	4
DRN04900901	4.90	21	50	75	6	4
DRN05000901	5.00	23	50	75	6	6
DRN05100901	5.10	23	50	75	6	6
DRN05200901	5.20	23	50	75	6	6
DRN05300901	5.30	23	50	75	6	6
DRN05400901	5.40	23	50	75	6	6
DRN05500901	5.50	26	50	75	6	6
DRN05600901	5.60	26	50	75	6	6
DRN05700901	5.70	26	50	75	6	6
DRN05800901	5.80	26	50	75	6	6
DRN05900901	5.90	26	50	75	6	6
DRN06000901	6.00	26	65	100	6	6
DRN06500901	6.50	28	65	100	8	6
DRN07000901	7.00	31	70	109	8	6
DRN07500901	7.50	31	70	109	8	6
DRN08000901	8.00	33	80	109	8	6
DRN08500901	8.50	33	80	125	10	6
DRN09000901	9.00	36	85	125	10	6
DRN09500901	9.50	36	85	125	10	6
DRN10000901	10.00	38	85	125	10	6
DRN10500901	10.50	38	85	125	12	6
DRN11000901	11.00	41	100	150	12	6
DRN11500901	11.50	41	100	150	12	6
DRN12000901	12.00	44	100	150	12	6

Order No.	D	L1	L2	L	Ds	F

WINSTAR

Endmills · Inserts · Drills





Winstar
Cutting Technologies

DB & DBLA rough boring head 雙刃粗搪刀 & 大徑雙刃粗搪刀

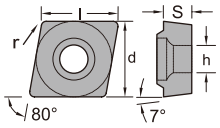


FEATURES

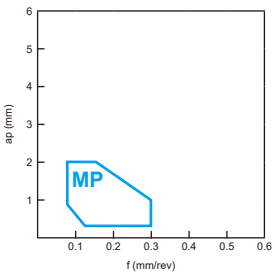
- Easy to adjust
- High rigidity tool body
- Various inserts available
- Diameter 25mm to 610mm
- 易於調整加工孔徑
- 高剛性合金鋼本體
- 可適用多種刀片
- 適用 **25-610mm** 孔徑加工

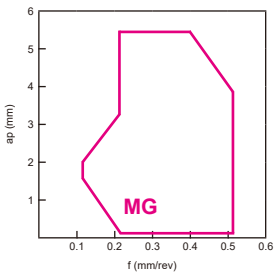
CCMT - Positive Turning Insert 搪刀刀片

	P	Steel	●	●	✱				Cutting Type : ● General ✱ Interrupted
	M	Stainless steel	●		✱	✱			
	K	Cast iron	●		✱				

Inserts	Designation		Grade						Dimensions (mm)					Drawing
			CX2565	CX2555	CX3565	CX3555			d	l	S	r	h	
	CCMT	060204-MP	✓	✓					6.35	6.4	2.38	0.4	2.8	
		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	
		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	

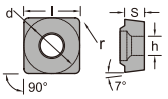
Holder Page : C093, C095



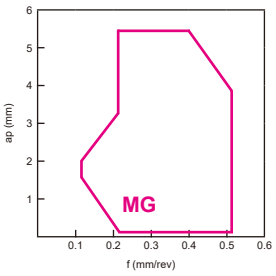


SCMT - Positive Turning Insert 搪刀刀片

	P	Steel	●	●	✱				Cutting Type : ● General ✱ Interrupted
	M	Stainless steel	●		✱	✱			
	K	Cast iron	●		✱				

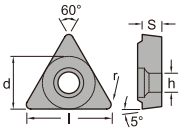
Inserts	Designation		Grade						Dimensions (mm)					Drawing
			CX2565	CX2555	CX3565	CX3555			d	l	S	r	h	
	SCMT	09T304-MG	✓	✓					9.53	9.53	3.97	0.4	4.4	
		09T308-MG	✓	✓					9.53	9.53	3.97	0.8	4.4	

Holder Page : C093, C095

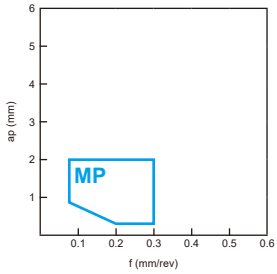


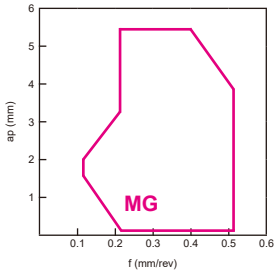
TCMT - Positive Turning Insert 搪刀刀片

	P	Steel	●	●	✱				Cutting Type : ● General ✱ Interrupted
	M	Stainless steel	●		✱	✱			
	K	Cast iron	●		✱				

Inserts	Designation	Grade						Dimensions (mm)					Drawing
		CX2565	CX2555	CX3565	CX3555			d	l	S	r	h	
	**TCMT 110204-MP**	✓	✓					6.35	11.0	2.38	0.4	2.8	
	**TCMT 110204-MG**	✓	✓					6.35	11.0	2.38	0.4	2.8	
	16T304-MG	✓	✓					9.53	16.5	3.97	0.4	4.4	
	16T308-MG	✓	✓					9.53	16.5	3.97	0.8	4.4	

Holder Page : C093, C095

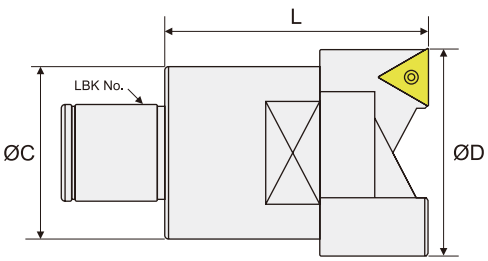


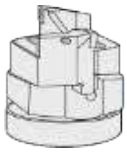


DB Rough boring head 雙刃粗搪刀

- Adjustable twin boring arm system for variety situation of rough boring.
- .
- Step boring arm design, suitable for single bit boring, twin bit boring, and step boring.
- Side division easy to adjust tool extended without pre-setter.
- Boring diameter from 25mm to 204mm.





	Order No.	LBK No.	Boring Range ØD (mm)	L (mm)	C (mm)	Insert	Weight (kg)
	IDB25-33-C	IDB2	25 ~ 33	45	24	CCMT060204	0.15
	IDB32-42-C	IDB3	32 ~ 42	55	31	CCMT060204	0.3
	IDB32-42-T					TCMT110204	
	IDB40-55-C	IDB4	40 ~ 50	65	39	CCMT09T304	0.5
	IDB40-55-T					TCMT16T304	
	IDB40-55-S					SCMT09T304	
	IDB52-70-C	IDB5	52 ~ 70	75	50	CCMT09T304	1.0
	IDB52-70-T					TCMT16T304	
	IDB52-70-S					SCMT09T304	
	IDB68-92-C	IDB6	68 ~ 92	85	64	CCMT120408	2.0
	IDB68-92-T					TCMT16T304	
	IDB68-92-S					SCMT09T304	
	IDB90-122-C		90 ~ 122	100	80	CCMT120408	2.9
	IDB120-164-C	IDB20	120 ~ 164	100	100	CCMT120408	3.8
	IDB160-204-C		160 ~ 204	130	130	CCMT120408	4.8

DB Rough boring tool 雙刃粗搪刀含 BT 刀柄



Fig. 1

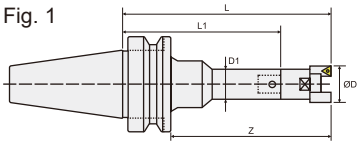
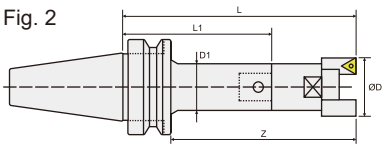


Fig. 2

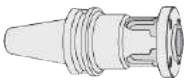
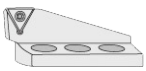


Order No.	Type	ØD (mm)	Z (mm)	Tool Connection		LBK No.	L (mm)	L1 (mm)	D1 (mm)	Weight (kg)
				IDB Shank Type	Boring Head Type					
IDB-BT30-25-125		25 ~ 33	95	IDB-BT30-2-80	IDB25-33	IDB2	125	80	24	0.8
IDB-BT30-32-135		32 ~ 42		IDB-BT30-3-80	IDB32-42	IDB3			31	1.0
IDB-BT30-40-135		40 ~ 55	105	IDB-BT30-4-70	IDB40-55	IDB4	135	70	39	1.3
IDB-BT30-52-135		52 ~ 70		IDB-BT30-5-60	IDB52-70	IDB5			50	1.8
IDB-BT30-68-145		68 ~ 92	115	IDB-BT30-6-60	IDB68-92	IDB6	145	60	64	3.0
IDB-BT30-90-160		90 ~ 122	130		IDB90-122		160			3.9
IDB-BT40-25-130		25 ~ 33	95	IDB-BT40-2-85	IDB25-33	IDB2	130	85	24	1.3
IDB-BT40-32-150		32 ~ 42		IDB-BT40-3-95	IDB32-42	IDB3		95	31	1.5
IDB-BT40-40-150		40 ~ 55	115	IDB-BT40-4-85	IDB40-55	IDB4	150	85	39	1.8
IDB-BT40-52-150		52 ~ 70		IDB-BT40-5-75	IDB52-70	IDB5		75	50	2.3
IDB-BT40-68-150		68 ~ 92		IDB-BT40-6-65	IDB68-92	IDB6		65	64	3.3
IDB-BT40-90-165		90 ~ 122			IDB90-122					4.2
IDB-BT40-120-165	Fig. 2	120 ~ 164	130	IDB-BT40-120-70	IDB120-164	IDB120	165	70	95	7.0
IDB-BT40-160-165		160 ~ 204			IDB160-204					8.0
IDB-BT50-25-155		25 ~ 33	105	IDB-BT50-2-110	IDB25-33	IDB2	155	110	24	4.1
IDB-BT50-32-180		32 ~ 42	130	IDB-BT50-3-125	IDB32-42	IDB3	180	125	31	4.4
IDB-BT50-40-180		40 ~ 55		IDB-BT50-4-115	IDB40-55	IDB4		115	39	4.8
IDB-BT50-40-240			190	IDB-BT50-4-175			240	175		5.3
IDB-BT50-52-180		52 ~ 70	130	IDB-BT50-5-105	IDB52-70	IDB5	180	105	50	5.5
IDB-BT50-52-255			205	IDB-BT50-5-180			255	180		6.5
IDB-BT50-52-315			265	IDB-BT50-5-240			315	240		7.2
IDB-BT50-68-180		68 ~ 92	130	IDB-BT50-6-95	IDB68-92	IDB6	180	105	64	6.5
IDB-BT50-68-255			205	IDB-BT50-6-170			255	180		8.3
IDB-BT50-68-315			265	IDB-BT50-6-230			315	240		9.6
IDB-BT50-68-375			325	IDB-BT50-6-290			375	290		11.0
IDB-BT50-68-435	Fig. 1		385	IDB-BT50-6-350			435	350		15.5
IDB-BT50-90-195		90 ~ 122	145	IDB-BT50-6-95	IDB90-122		195	95		7.4
IDB-BT50-90-270	Fig. 2		220	IDB-BT50-6-170			270	170		9.2
IDB-BT50-90-330			280	IDB-BT50-6-230			330	230		10.5
IDB-BT50-90-390	Fig. 1		340	IDB-BT50-6-290			390	290		11.9
IDB-BT50-90-450			400	IDB-BT50-6-350			450	350		16.4
IDB-BT50-120-195			150	IDB-BT50-120-100	IDB120-164	IDB120	195	100	95	8.8
IDB-BT50-120-295			250	IDB-BT50-200			295	200		11.3
IDB-BT50-120-395			350	IDB-BT50-300			395	300		13.8
IDB-BT50-120-495	Fig. 2	160 ~ 204	450	IDB-BT50-400			495	400		16.3
IDB-BT50-160-195			150	IDB-BT50-100			195	100		9.8
IDB-BT50-160-295			250	IDB-BT50-200			295	200		12.3
IDB-BT50-160-395			350	IDB-BT50-300			395	300		14.8
IDB-BT50-160-495			450	IDB-BT50-400			495	400		17.3

DBLA Rough boring head for large hole 大徑雙刃粗搪刀

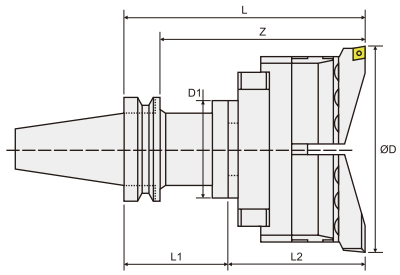
- Optional accessories for different boring work and working diameter.
- .
- Alloy steel body provides great rigidity to large size rough boring.
- Variable inserts for different material of rough boring.
- Boring diameter from 200mm to 610mm.



Boring Head	Order No.		IDBLA200	IDBLA300	IDBLA400	IDBLA500
	Length (mm)		130			
	Total Weight (kg)		9.5	11.5	13.5	15.5
	Boring Range (mm)		200 ~ 310	300 ~ 410	400 ~ 510	500 ~ 610
Module	Shank		IDB-BT50-120-165			
	Flange		BR200			
	Weight (kg)		2.7			
	Extemsopm Slie		RST200	RST300	RST400	RST500
	Weight (kg)		3.4	5.4	7.4	9.4
	Clamp Base		RS200			
	Weight (kg)		0.98			
	Height Setting Shim		RS201			
	Weight (kg)		0.05			
	Insert Height		RB200C12, RB200T16			
	Insert		CCMT1204... , TCMT16T3...			
	Weight (kg)		0.68			

DBLA Rough boring tool for large hole 大徑雙刃粗搪刀含 BT 刀柄





Order No.	Boring Range ØD(mm)	Z (mm)	Shank Type	Boring Head Type	LNK No.	L (mm)	L1 (mm)	D1 (mm)	Weight
IDBLA-BT50-200-230	200 ~ 310	185	IDB-BT50-120-100	IDBLA200	IDB120	230	100	95	18
IDBLA-BT50-200-330		285	IDB-BT50-120-200			330	200		19
IDBLA-BT50-200-430		385	IDB-BT50-120-300			430	300		23
IDBLA-BT50-200-530		485	IDB-BT50-120-400			530	400		27
IDBLA-BT50-300-230	300 ~ 410	185	IDB-BT50-120-100	IDBLA300		230	100		20
IDBLA-BT50-300-330		285	IDB-BT50-120-200			330	200		21
IDBLA-BT50-300-430		385	IDB-BT50-120-300			430	300		25
IDBLA-BT50-300-530		485	IDB-BT50-120-400			530	400		29
IDBLA-BT50-400-230	400 ~ 510	185	IDB-BT50-120-100	IDBLA400		230	100		22
IDBLA-BT50-400-330		285	IDB-BT50-120-200			330	200		23
IDBLA-BT50-400-430		385	IDB-BT50-120-300			430	300		27
IDBLA-BT50-400-530		485	IDB-BT50-120-400			530	400		31
IDBLA-BT50-500-230	500 ~ 610	185	IDB-BT50-120-100	IDBLA500		230	100		24
IDBLA-BT50-500-330		285	IDB-BT50-120-200			330	200		25
IDBLA-BT50-500-430		385	IDB-BT50-120-300			430	300		29
IDBLA-BT50-500-530		485	IDB-BT50-120-400			530	400		33

DBBT Taper shank 搪刀刀柄





Fig. 1

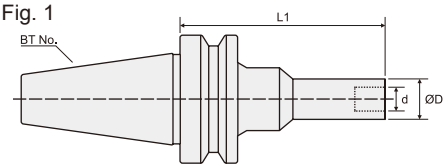


Fig. 2

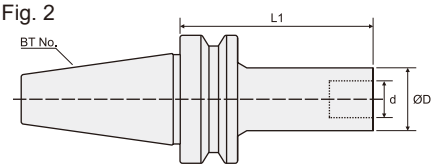
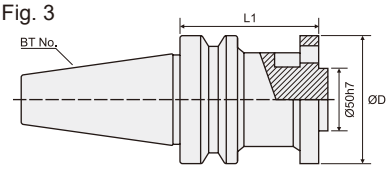


Fig. 3



Order No.	Type	OAL with boring head (L) (mm)	L1 (mm)	ØD (mm)	Weight
IDB1-BT30-105	Fig. 2	105	70	19	0.70
IDB2-BT30-120		120	80	24	0.80
IDB3-BT30-120		120	80	31	0.90
IDB4-BT30-120		120	70	39	1.00
IDB5-BT30-120		120	60	50	1.10
IDB6-BT30-130		130	60	64	1.20
IDB1-BT40-110		110	75	19	1.20
IDB2-BT40-125		125	85	24	1.30
IDB3-BT40-135		135	95	31	1.45
IDB4-BT40-135		135	85	39	1.50
IDB5-BT40-135		135	75	50	1.40
IDB6-BT40-135		135	65	64	2.15
IDB1-BT50-150	Fig. 1	150	115	19	3.50
IDB2-BT50-150	Fig. 2	155	110	24	4.20
IDB3-BT50-165		165	125	31	4.40
IDB4-BT50-165		165	115	39	4.80
IDB4-BT50-225		225	175	39	5.20
IDB5-BT50-165		165	105	50	5.90
IDB5-BT50-240		240	180	50	6.50
IDB5-BT50-300		300	240	50	6.90
IDB6-BT50-165		165	95	64	4.09
IDB6-BT50-240		240	170	64	6.15
IDB6-BT50-300		300	230	64	7.74
IDB6-BT50-360	Fig. 1	290	290	64	9.07
IDB6-BT50-420	Fig. 2	420	350	90	13.51
IDB120-BT40-200	Fig. 3	170	70	95	3.20
IDB120-BT50-230		205	105	95	5.71
IDB120-BT50-330		300	200	95	8.79
IDB120-BT50-430		400	300	95	11.25
IDB120-BT50-530		530	430	95	13.74

Recommended Cutting Conditions 切削條件數據表

DPC, DMC (Internal Coolant)

Work Material		Drill Diameter	Ø3-6mm		Ø6.1~10mm		Ø10.1-16mm	
		Hardness	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)
P	Mild Steel	(<180HB)	70~120	0.1~0.2	90~130	0.15~0.3	110~150	0.25~0.4
	Cabon Steel	(180~280HB)	70~110	0.1~0.2	90~120	0.15~0.3	110~140	0.25~0.4
	Alloy Steel	(280~350HB)	60~100	0.08~0.18	65~110	0.15~0.27	80~120	0.22~0.35
M	Stainless Steel	(<200HB)	35~60	0.06~0.15	45~80	0.1~0.25	55~100	0.2~0.3
K	Cast Iron	(<350Mpa)	70~100	0.1~0.2	80~120	0.15~0.3	90~140	0.25~0.4
	Ductile Cast Iron	(<450Mpa)	50~80	0.1~0.2	60~90	0.15~0.3	70~110	0.25~0.4
N	Aluminum <12% Si	-	80~140	0.1~0.25	100~160	0.15~0.35	110~180	0.3~0.45
	Aluminum >12% Si	-	70~120	0.1~0.25	90~130	0.15~0.35	100~150	0.3~0.45
S	Heat Resistant Alloy	-	15~30	0.02~0.08	20~40	0.04~0.1	25~45	0.06~0.12
H	Hardened Material	40~60HRC	10~25	0.02~0.08	15~35	0.04~0.1	20~40	0.06~0.12

DPN, DFN, DGN (External Coolant)

Work Material		Drill Diameter	Ø3-6mm		Ø6.1~10mm		Ø10.1-16mm	
		Hardness	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)
P	Mild Steel	(<180HB)	40~70	0.1~0.2	55~85	0.15~0.3	60~100	0.25~0.4
	Cabon Steel	(180~280HB)	35~65	0.1~0.2	50~80	0.15~0.3	55~90	0.25~0.4
	Alloy Steel	(280~350HB)	30~60	0.08~0.18	40~75	0.15~0.27	50~85	0.22~0.35
M	Stainless Steel	(<200HB)	20~40	0.06~0.15	25~50	0.1~0.25	30~60	0.2~0.3
K	Cast Iron	(<350Mpa)	40~60	0.1~0.2	50~75	0.15~0.3	55~85	0.25~0.4
	Ductile Cast Iron	(<450Mpa)	35~55	0.1~0.2	45~70	0.15~0.3	50~80	0.25~0.4
N	Aluminum <12% Si	-	60~100	0.1~0.25	65~115	0.15~0.35	70~130	0.3~0.45
	Aluminum >12% Si	-	50~90	0.1~0.25	60~110	0.15~0.35	65~120	0.3~0.45
S	Heat Resistant Alloy	-	15~30	0.02~0.08	20~40	0.04~0.1	25~45	0.06~0.12
H	Hardened Material	40~60HRC	10~25	0.02~0.08	15~35	0.04~0.1	20~40	0.06~0.12

Warning :For slope drilling, please adjust cutting data acording to inclined angle
1. For inclined angle under 20 degree, reduce the feed to 50%
2. For inclined angle between 20 to 50 degree, reduce the feed to 40%, and reduce rotation to 70%
3. For inclined angle between 50 to 65 degree, reduce the feed to 30%, and reduce rotation to 70%
4. Not recommend to side milling

Recommended Cutting Conditions 切削條件數據表

DZC, DDC, DHC, DLC (Internal Coolant)

Work Material		Drill Diameter	Ø3-6mm		Ø6.1~10mm		Ø10.1-16mm	
		Hardness	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)
P	Mild Steel	(<180HB)	60~100	0.1~0.2	80~120	0.15~0.3	100~140	0.25~0.4
	Cabon Steel	(180~280HB)	60~90	0.1~0.2	80~110	0.15~0.3	100~130	0.25~0.4
	Alloy Steel	(280~350HB)	50~80	0.08~0.18	60~100	0.15~0.27	70~110	0.22~0.35
M	Stainless Steel	(<200HB)	30~50	0.06~0.15	40~70	0.1~0.25	50~90	0.2~0.3
K	Cast Iron	(<350Mpa)	70~100	0.1~0.2	80~120	0.15~0.3	90~140	0.25~0.4
	Ductile Cast Iron	(<450Mpa)	50~80	0.1~0.2	60~90	0.15~0.3	70~110	0.25~0.4
N	Aluminum <12% Si	-	70~120	0.1~0.25	80~140	0.15~0.35	90~160	0.3~0.45
	Aluminum >12% Si	-	60~100	0.1~0.25	70~120	0.15~0.35	90~140	0.3~0.45
S	Heat Resistant Alloy	-	15~30	0.02~0.08	20~40	0.04~0.1	25~45	0.06~0.12
H	Hardened Material	40~60HRC	10~25	0.02~0.08	15~35	0.04~0.1	20~40	0.06~0.12

Note:DDC drills require an initial pilot hole to help guide the drill.

DZN (External Coolant)

Work Material		Drill Diameter	Ø3-6mm		Ø6.1~10mm		Ø10.1-16mm	
		Hardness	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)
P	Mild Steel	(<180HB)	35~60	0.1~0.2	45~75	0.15~0.3	50~85	0.25~0.4
	Cabon Steel	(180~280HB)	30~55	0.1~0.2	40~70	0.15~0.3	45~80	0.25~0.4
	Alloy Steel	(280~350HB)	25~50	0.08~0.18	35~65	0.15~0.27	40~75	0.22~0.35
M	Stainless Steel	(<200HB)	20~40	0.06~0.15	25~50	0.1~0.25	30~60	0.2~0.3
K	Cast Iron	(<350Mpa)	40~60	0.1~0.2	50~75	0.15~0.3	55~85	0.25~0.4
	Ductile Cast Iron	(<450Mpa)	35~55	0.1~0.2	45~70	0.15~0.3	50~80	0.25~0.4
N	Aluminum <12% Si	-	60~100	0.1~0.25	65~115	0.15~0.35	70~130	0.3~0.45
	Aluminum >12% Si	-	50~90	0.1~0.25	60~110	0.15~0.35	65~120	0.3~0.45
S	Heat Resistant Alloy	-	15~30	0.02~0.08	20~40	0.04~0.1	25~45	0.06~0.12
H	Hardened Material	40~60HRC	10~25	0.02~0.08	15~35	0.04~0.1	20~40	0.06~0.12

Note: for DLN please use 3-6mm table, for smaller size please reduce 20%.

DSP (2×D, 3×D)

Work Material		Hardness	Cutting speed Vc (m/min)	Feed Rate (mm/rev)				
				SPMG05 Ø13-Ø15	SPMG06 Ø16-Ø21	SPMG07 Ø22-Ø27	SPMG09 Ø28-Ø33	SPMG11 Ø34-Ø41
P	Mild Steel	(<180HB)	220~350	0.04~0.08	0.05~0.10	0.06~0.13	0.07~0.15	0.08~0.18
	Cabon Steel	(180~280HB)	100~150	0.04~0.08	0.05~0.09	0.06~0.12	0.07~0.13	0.08~0.15
	Alloy Steel	(280~350HB)	80~140	0.04~0.07	0.05~0.08	0.05~0.09	0.06~0.12	0.07~0.14
M	Stainless Steel	(<200HB)	80~180	0.04~0.08	0.05~0.09	0.05~0.10	0.06~0.12	0.07~0.14
K	Cast Iron	(<350Mpa)	150~250	0.05~0.09	0.07~0.12	0.08~0.15	0.09~0.17	0.12~0.20
	Ductile Cast Iron	(<450Mpa)	100~160	0.05~0.08	0.06~0.11	0.07~0.13	0.08~0.15	0.10~0.18
N	Aluminum <12% Si	-	300~400	0.05~0.11	0.07~0.13	0.08~0.15	0.09~0.20	0.12~0.25
	Aluminum >12% Si	-	200~330	0.04~0.08	0.05~0.10	0.06~0.13	0.07~0.15	0.08~0.18
S	Heat Resistant Alloy	-	30~60	0.02~0.04	0.03~0.05	0.03~0.05	0.04~0.06	0.05~0.08
H	Hardened Material	40~60HRC	30~60	0.02~0.04	0.03~0.05	0.03~0.05	0.04~0.06	0.05~0.08

Apply for 4×D reduce 10%, 5×D reduce 15%.

DWC (2×D, 3×D)

Work Material		Hardness	Cutting speed Vc (m/min)	Feed Rate (mm/rev)				
				WCMT03 Ø14-Ø20.5	WCMT04 Ø22-Ø25.5	WCMT05 Ø26-Ø30	WCMT06 Ø31-Ø39	WCMT08 Ø40-Ø60
P	Mild Steel	(<180HB)	110~220	0.06~0.09	0.06~0.11	0.07~0.13	0.08~0.18	0.10~0.25
	Cabon Steel	(180~280HB)	90~140	0.06~0.09	0.06~0.11	0.07~0.13	0.08~0.18	0.10~0.25
	Alloy Steel	(280~350HB)	70~120	0.05~0.07	0.05~0.09	0.06~0.11	0.07~0.14	0.08~0.17
M	Stainless Steel	(<200HB)	60~140	0.05~0.09	0.05~0.10	0.06~0.13	0.07~0.15	0.08~0.18
K	Cast Iron	(<350Mpa)	110~260	0.07~0.11	0.07~0.13	0.08~0.15	0.09~0.18	0.11~0.22
	Ductile Cast Iron	(<450Mpa)	90~120	0.06~0.10	0.06~0.12	0.07~0.14	0.08~0.16	0.10~0.20
N	Aluminum <12% Si	-	200~360	0.06~0.11	0.08~0.13	0.09~0.15	0.11~0.18	0.12~0.25
	Aluminum >12% Si	-	150~250	0.06~0.11	0.08~0.13	0.09~0.15	0.11~0.18	0.12~0.25
S	Heat Resistant Alloy	-	25~50	0.03~0.05	0.03~0.06	0.04~0.08	0.05~0.10	0.06~0.12
H	Hardened Material	-	-	-	-	-	-	-

Apply for 4×D reduce 10%, 5×D reduce 15%.

Recommended Cutting Conditions 切削條件數據表

DRC (Internal Coolant)

Work Material		Drill Diameter	Ø3-6mm		Ø6.1~10mm		Ø10.1-12mm	
		Hardness	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)
P	Mild Steel	(<180HB)	40~70	0.1~0.2	40~70	0.1~0.24	40~70	0.1~0.3
	Cabon Steel	(180~280HB)	25~50	0.1~0.2	25~50	0.1~0.24	25~50	0.1~0.3
	Alloy Steel	(280~350HB)	15~25	0.08~0.16	15~25	0.08~0.2	15~25	0.08~0.24
M	Stainless Steel	(<200HB)	8~15	0.08~0.16	8~15	0.08~0.18	8~15	0.08~0.2
K	Cast Iron	(<350Mpa)	35~60	0.1~0.32	35~60	0.1~0.36	35~60	0.1~0.4
	Ductile Cast Iron	(<450Mpa)	20~45	0.1~0.24	20~45	0.1~0.28	20~45	0.1~0.32
N	Aluminum <12% Si	-	110~195	0.12~0.32	110~195	0.12~0.36	110~195	0.12~0.4
	Aluminum >12% Si	-	105~180	0.12~0.32	105~180	0.12~0.36	105~180	0.12~0.4
S	Heat Resistant Alloy	-	8~15	0.08~0.16	8~15	0.08~0.18	8~15	0.08~0.2
H	Hardened Material	-	-	-	-	-	-	-

DRN (External Coolant)

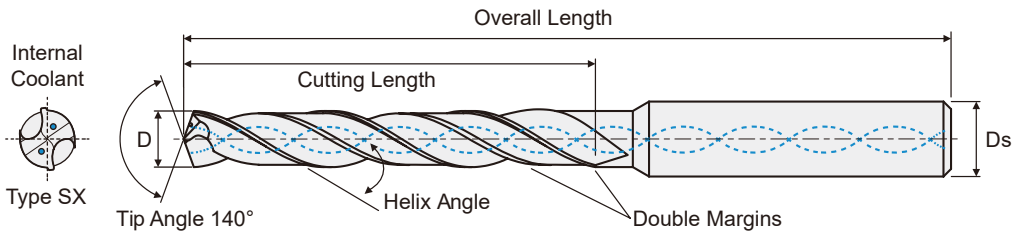
Work Material		Drill Diameter	Ø3-6mm		Ø6.1~10mm		Ø10.1-12mm	
		Hardness	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)
P	Mild Steel	(<180HB)	10~20	0.03~0.12	10~20	0.06~0.2	10~20	0.1~0.22
	Cabon Steel	(180~280HB)	10~16	0.03~0.12	10~16	0.06~0.2	10~16	0.1~0.22
	Alloy Steel	(280~350HB)	8~12	0.03~0.12	8~12	0.06~0.2	8~12	0.1~0.22
M	Stainless Steel	-	-	-	-	-	-	-
K	Cast Iron	(<350Mpa)	8~16	0.03~0.12	8~16	0.06~0.02	8~16	0.1~0.22
	Ductile Cast Iron	(<450Mpa)	8~16	0.03~0.12	8~16	0.06~0.02	8~16	0.1~0.22
N	Aluminum <12% Si	-	20~30	0.03~0.13	20~30	0.07~0.23	20~30	0.1~0.28
	Aluminum >12% Si	-	20~30	0.03~0.13	20~30	0.07~0.23	20~30	0.1~0.28
S	Heat Resistant Alloy	-	-	-	-	-	-	-
H	Hardened Material	-	-	-	-	-	-	-

Boring

Work Material		Hardness	Cutting Speed (m/min)	Feed (mm/rev)
P	Mild Steel	(<180HB)	90~200	0.04~0.14
	Cabon Steel	(180~280HB)	60~180	0.04~0.15
	Alloy Steel	(280~350HB)	50~150	0.04~0.15
M	Stainless Steel	(<200HB)	60~230	0.07~0.12
K	Cast Iron	(<350Mpa)	120~230	0.04~0.13
	Ductile Cast Iron	(<450Mpa)	120~230	0.04~0.13
N	Aluminum <12% Si	-	120~700	0.04~0.25
	Aluminum >12% Si	-	120~700	0.04~0.25
S	Heat Resistant Alloy	-	20~80	0.04~0.05
H	Hardened Material	-	20~70	0.04~0.05

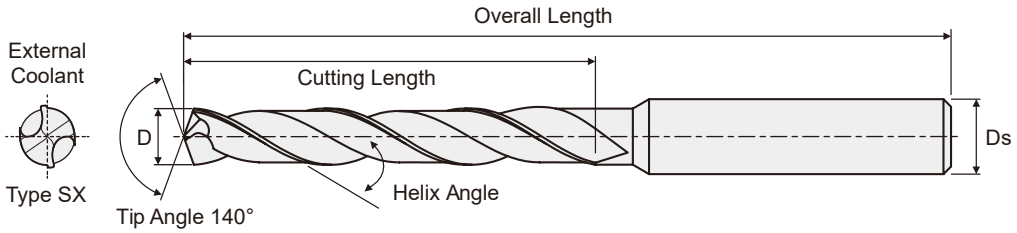
For High Performance Series with Internal Coolant

Reinforced Shank with Double Margins



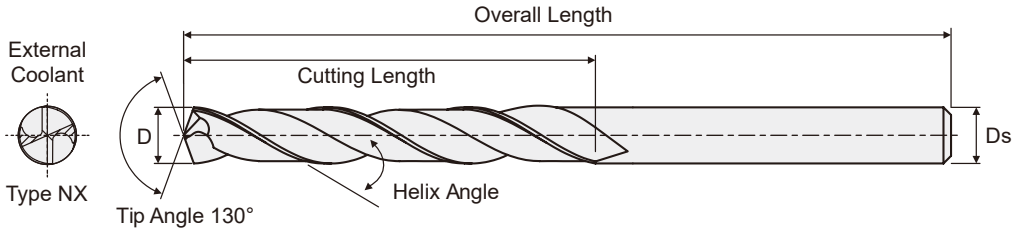
For High Performance Series with External Coolant

Reinforced Shank with Single Margin



For General Purpose Series with External Coolant

Straight Shank



Drill Troubleshooting Guide 鑽削加工異常原因及對策

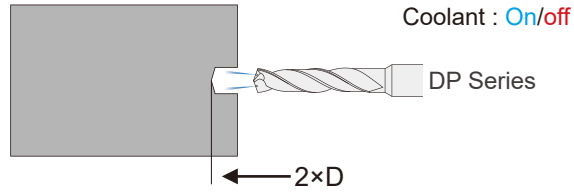
Trouble / 情況	Occurrences / 原因	Countermeasures / 對策
Deformation of hole 鑽孔成橢圓	Becoming thread scratch in the hole 形成螺紋刮痕	1.Check for suitable Guide-bush 使用適合之鑽套 2.Reduce relief angle 減少間隙角度 3.Check for proper point angle & length of lips 檢查鑽頭尖端角度及兩邊長度是否對稱
	Generation of chattering & vibration 產生顫動、振動	1.Reduce relief angle 減少間隙角度 2.Grind web thinning 腹板削薄 3.Shortening length of drill 縮短鑽頭長度，增加剛性 4.Check for proper drill 檢查鑽頭角度研磨是否正確 5.Check for chuck & collet & socket 檢查夾具與鑽頭接觸情形 6.Pre-centering 預先鑽好中心孔 7.Inspect rigidity of the drill machine 提高工作機械的剛性
	Poor chip evacuation 切屑排出不易	1.Increase feed 加大每週進給量 2.Check for proper helix angle 選擇正確螺旋角 3.Check for proper chip space 加大槽寬比 4.Using step feed 採用間歇式進給
鑽孔傾斜	Drill won't enter work 剛切入時不良	1.Check for suitable Guide-bush 使用適合之鑽套 2.Reduce feed 減少切入時之每週進給量 3.Pre-centering 預先鑽好中心孔
	Insufficient rigidity of drill 鑽頭剛性不良	Shortening length of drill 縮短鑽頭長度，增加剛性
	Unsuitable angle 鑽頭角度不對	Regrinding 再研磨
Excessive wear of cutting edge 外角磨損	Cutting speed too high 切削速度太快	1.Reduce cutting speed 降低切削速度 2.Check lip relief 加大間隙角 充分供給切削液 4.Check for proper material 提高鑽頭之材質

Drill Troubleshooting Guide 鑽削加工異常原因及對策

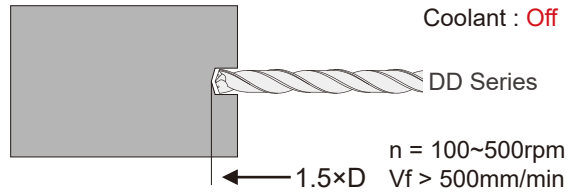
Trouble / 情況	Occurrences / 原因	Countermeasures / 對策
Poor surface conditions of work piece 孔壁粗糙	Excessive wear of cutting edge 刀刃磨損太大	Regrinding 再研磨
	Too much feed 進刀速度太大	Decrease feed 降低進刀速度
	Chips clog in hole 切削阻塞	Add number of exit 增加退刀次數
	The others 其他	1.Thin web 腹板削薄 2.Check for proper Guide-bush 使用適合導套 3.Use the highly rigid spindle 採用高剛性主軸
Breakage 切削中鑽頭折斷	Feed too heavy 進給量太大	Decrease feed rate 減少每週進給量
	Chips clog in hole 切削阻塞	1.Check for proper chip space 加大槽寬比 2.Check for proper helix angle 選擇適當之螺旋角度
	鑽頭剛性不足	1.Reduce feed 減少每週進告量 2.Shortening length of drill 縮短鑽頭長度，增加剛性 3.Increasing web thickness 腹板厚度加大
	Unstable in throughout hole drilling 貫穿時安定性不夠（工件不完全被夾住）	1.Reduce feed while throughout drilling 降低貫穿時的每週進給量 2.Check set up rigidity 工作保持固定 3.Use the highly rigid spindle 採用高剛性主軸
Chipping 切唇崩刃	Feed speed too high 進給速度太快	Decrease feed rate 減少每週進給量
	Tool high lip relief angle 切刃強度不足（過度的間隙角度）	1.Reduce lip relief angle 減少間隙角度 2.Reduce feed in drilling 降低貫空時的每週進給量 3.Check set up rigidity 工作保持固定
	During oversize operation 使用在擴孔作業時	1.Properly grind point angle 加大尖端角度 2.Reduce cutting speed 降低切削速度
Hole oversize 孔徑擴大	Point angle is not properly, large chip 尖端角度未對稱或刃大小不一	1.Regrinding 再研磨 2.Thin web 腹板削薄 3.Properly grind point angle 減少尖端角度 4.Guide-bush 使用鑽套

P	M	K	N	S	H
●	●	●	○	○	○

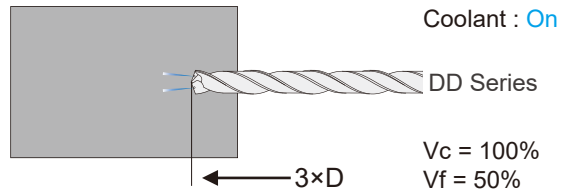
1 Short drill for piloting



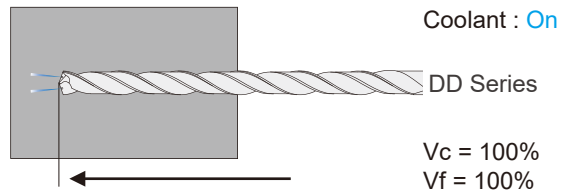
2 Long drill into pilot hole



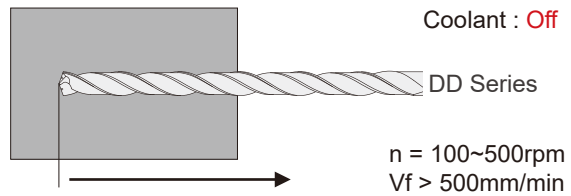
3 Spotting



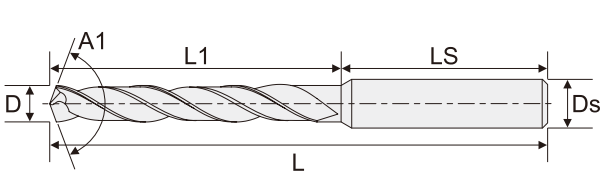
4 Deep Hole drilling

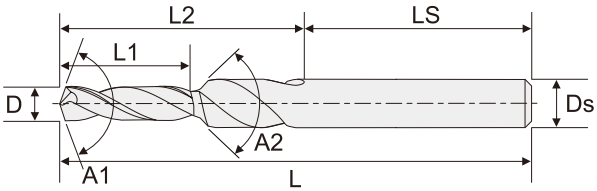


5 Retracting



Drill Tailor-made Order Form 鑽頭客製表





Tool Data

Unit : mm

D：_____ Ds：_____ A1：_____ A2：_____ Working depth：_____

L：_____ L1：_____ L2：_____ LS：_____ Helix type：☐ Left ☐ Right

Hole tolerance：_____

Work piece

Part：_____ Material：_____ Hardness：_____

Technical data

· Machine type

☐ MCT ☐ Lathe ☐ Vertical ☐ Horizontal

· Coolant supply

☐ Internal ☐ External

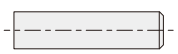
Hole type

☐ Blind hole ☐ Through hole

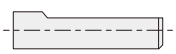
Coating

☐ UNIX ☐ SINIX ☐ No Coating

Shank type



☐ Cylindrical shank



☐

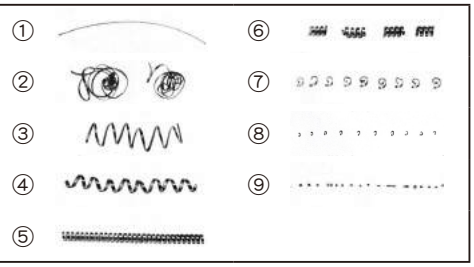
Comment

Cutting Tools Evaluation Report 刀具切削報告

Company 公司名				Department 部門		Name of Contact 聯絡人		
Address 地址				TEL 電話		Date 測試日期		
Material 工件	Material Name 材質名稱			Remark: 備註				
	Hardness 硬度							
	Quantity 加工數量							
Machine 機台	Machine No. 機台型號							
	Power 主軸出力	(HP)						
Tools 刀具	Brand Name 品牌							
	Part Number 型號							
	External / Internal Coolant 外冷 / 內冷							
	Tool Diameter 刀具刃徑							
	Woring Depth 加工深度							
Cutting Conditions 加工條件	N (rpm) 轉速							
	Vc (m/min) 切削速度							
	fz (mm/rev、mm/tooth) 每轉進給							
	F (mm/min) 每分鐘進給							
	Ad×Rd (mm) 切削總長（切深 × 孔數）							
	Cutting time (mm/pcs) 切削壽命 （孔數）							
	Wet / Dry 濕式 / 乾式							
Results 加工結果	Tool Life Criterion 壽命判定標準							
	Chips Types 切屑類型							
Appraise 綜合評價	Overall Rating 性能 / 壽命 / 成本等總體評價							
	Accept 接受	☐ Yes 是	☐ No 否	☐ Yes 是	☐ No 否	☐ Yes 是	☐ No 否	☐ Yes 是 ☐ No 否

Tool Life Criterion 壽命判斷標準	① Change constant 加工數量 ② Surface roughness 表面粗糙度 ③ Dimensional change 加工精度 ④ Happen burr 產生毛邊 ⑤ Spindle load 主軸負載 ⑥ Situation of tip control 尖點損耗 ⑦ Tool wear 刀具磨損 ⑧ Chipping, breaks 刀具崩刃、碎裂

Chips Types 切屑類型



Winstar Cutting Technologies



Winstar
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WINSTAR is your first choice of cutting tools supplier from Taiwan.

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Indexable Milling & Turning

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WINSTAR CUTTING TECHNOLOGIES CORP.
萬 事 達 切 削 科 技 股 份 有 限 公 司
No. 10, Gongye 6th Road, Tainan Technology Industrial Park,
Tainan City 709, Taiwan
709 台灣台南市安南區工業六路 10 號（台南科技工業區）
TEL : +886-6-3840386 FAX : +886-6-3840387
www.winstarcutting.com info@winstarcutting.com