



PRECISION

Right Tool for your Job !

一廠  
Factory 1





## 二廠 Factory 2

### 沿革

1982年成立的台湾普慧企业，以拥有超过三十年成熟稳健技术为基础，专司于马达内藏式高速主轴，精密刀柄，特殊刀具的设计、製作及销售，亦是全球唯一可以同时生产这三项高品质技术产品的公司。在於航太、工具機、汽機車零件、機殼、模具等各類生產加工方面都以確保客戶品質為最高指標，並獲得業界各大廠的肯定。

普慧不僅在精密刀柄及特殊刀具領域取得卓越成就，更積極投入機械核心領域進行研發，持續打造競爭優勢。其中可協助機台提升轉

Parfaite Tool Co.,Ltd is founded in 1982 for the accumulation of almost 30 years of experience and craftsmanship in specializing the design, manufacture and sale of Motor built-in High Speed Spindle, High Precision Tool Holder and customized Tool. Parfaite is also the sole company of supplying the above mentioned high quality-technical products in the meantime.

For the various machining and manufacturing in the Industries such as Aerospace, Machining center, Automotive...etc, guaranteeing the quantity and making the clients fully rely on us is our supreme target.

We have been actively involved in the R & D of the mechanical core areas, in which, there is one product can help to enhance the speed

速效率-電動增速器榮獲台灣經濟部企業創新研究獎。1995年量產了台灣第一支馬達內藏式電動主轴，為公司建立了顯著的市場差異性。

除提升下游產業轉型，並延伸製造業的應用領域，整合到3C、醫療及綠能等新興領域，帶動產業創新的商機。普慧秉持著「挑戰技術的極限」精神，不斷的於技術上創新與改善，期待能為機械產業帶向新的紀元。

efficiency of the machine- Spindle Speeder , this product once received the "Innovative Research Award" from Ministry of Economic Affairs,Taiwan. It was Taiwan's first motor built-in high frequency spindle in 1995. In addition to enhancing the downstream industries, manufacturing applications and can be extended again in the future into 3C, medical and other emerging areas of green energy, promote business opportunities in the domestic industrial innovation.

Parfaite keeps the spirit of challenging the technology limit to improve and innovate on the technology, also expect to lead the machinery industry to a new era.

電動增速器 SPINDLE SPEEDER

SPINDLE SPEEDER

**P.30**



**S1010-24**  
24,000 RPM  
1.0 kw

**P.30**



**S1130-30**  
24,000 RPM  
3.0 kw

**P.31**



**MS01**  
60,000 RPM  
370 w

**P.31**



**MZ01-BT30**  
60,000 RPM  
370 w

**P.31**



**MZ01-BT40**  
60,000 RPM  
370 w

**P.31**



**MZ01-BT50**  
60,000 RPM  
370 w

HSK A TYPE DIN 69893 FORM A

HSKA TYPE

**P.32**  $3\mu$



**HSK-A-HY**  
HYDRAULIC  
CHUCK  
油壓刀把

**P.33**  $3\mu$




**HSK-A-SR**  
SLIM TYPE SHRINK  
FIT CHUCK  
SR細長型熱縮刀把

**P.34**  $3\mu$



**HSK-A-CR**  
STANDARD SHRINK  
FIT CHUCK  
CR標準型熱縮刀把

**P.36**  $5\mu$




**HSK-A-HER**  
HER COLLET  
CHUCK  
HER筒夾刀把

**P.37**  $5\mu$




**HSK-A-THER**  
THER SLIM COLLET  
CHUCK  
THER小徑刀把

**P.38**  $5\mu$



**HSK-A-ERBR**  
ER COLLET CHUCK  
WITH HIGH SPEED  
BEARING NUT  
高速鋼珠螺帽刀把

**P.39**



**HSK-A-ER**  
ER COLLET  
CHUCK  
ER筒夾刀把

**P.40**  $5\mu$



**HSK-A-PFKS**  
PFK HIGH SPEED  
COLLET CHUCK  
PFK高速刀把

**P.41**  $5\mu$



**HSK-A-PFK**  
PFK COLLET  
CHUCK  
PFK筒夾刀把

**P.42**



**HSK-A-PFC**  
POWER MILLING  
CHUCK  
強力銑刀刀把

**P.43**



**HSK-A-FMB**  
FACE MILL ARBOR  
FMB面銑刀用刀把

**P.44**



**HSK-A-SLE**  
SIDE LOCK ARBOR  
SLE側固刀把

HSK E TYPE DIN 69893 FORM E

HSKE TYPE

**P.46**  $3\mu$



**HSK-E-HY**  
HYDRAULIC  
CHUCK  
油壓刀把

**P.47**  $3\mu$



**HSK-E-SR**  
SLIM TYPE SHRINK  
FIT CHUCK  
SR細長型熱縮刀把

**P.48**  $3\mu$



**HSK-E-CR**  
STANDARD SHRINK  
FIT CHUCK  
CR標準型熱縮刀把

**P.49**  $5\mu$



**HSK-E-HER**  
HER COLLET  
CHUCK  
HER筒夾刀把

**P.50**  $5\mu$



**HSK-E-THER**  
THER SLIM COLLET  
CHUCK  
THER小徑刀把

**P.50**



**HSK-E-ERMS**  
ER HIGH SPEED  
SLIM CHUCK  
ER高速小徑刀把

**P.51**  $5\mu$



**HSK-E-ERBR**  
ER COLLET CHUCK  
WITH HIGH SPEED  
BEARING NUT  
高速鋼珠螺帽刀把

**P.52**



**HSK-E-ER**  
ER COLLET  
CHUCK  
ER筒夾刀把

**P.53**  $5\mu$



**HSK-E-PFKS**  
PFK HIGH SPEED  
COLLET CHUCK  
PFK高速刀把

**P.54**  $5\mu$



**HSK-E-PFK**  
PFK COLLET  
CHUCK  
PFK筒夾刀把

**BT** JIS 6339 ( MAS 403 BT )

P.56

3μ



**BT-HY**  
HYDRAULIC  
CHUCK  
油壓刀把

P.57

3μ



**BT-SR**  
SLIM TYPE SHRINK  
FIT CHUCK  
SR細長型熱縮刀把

P.58

3μ



**BT-CR**  
STANDARD SHRINK  
FIT CHUCK  
CR標準型熱縮刀把

P.60

5μ



**BT-HER**  
HER COLLET  
CHUCK  
HER筒夾刀把

P.63

5μ



**BT-THER**  
THER SLIM COLLET  
CHUCK  
THER小徑刀把

P.64

5μ



**BT-ERBR**  
ER COLLET CHUCK  
WITH HIGH SPEED  
BEARING NUT  
ER高速鋼珠螺帽刀把

P.66

5μ



**BT-ERB**  
ER COLLET  
CHUCK WITH  
BEARING NUT  
鋼珠螺帽刀把

P.69



**BT-ER**  
ER COLLET CHUCK  
ER 筒夾刀把

P.72



**BT-ERM**  
ER SLIM TYPE  
CHUCK  
ER 小徑刀把

P.73

5μ



**BT-PFKS**  
PFK HIGH SPEED  
COLLET CHUCK  
PFK 高速刀把

P.74

5μ



**BT-PFK**  
PFK COLLET  
CHUCK  
PFK 筒夾刀把

P.75



**BT-PFC**  
POWER MILLING  
CHUCK  
強力銑刀刀把

P.76



**BT-PFCS**  
POWER MILLING  
CHUCK SET  
強力銑刀刀把組

P.77



**BT-SLE**  
SIDE LOCK ARBOR  
SLE側固刀把

P.78



**BT-MTA**  
MORSE TAPER  
HOLDER  
MTA莫式錐度孔刀把

P.79



**BT-MTB**  
MTB MORSE TAPER  
HOLDER (B TYPE)  
MTB莫式錐度孔刀把

P.80



**BT-FMA/FMB**  
FACE MILL ARBOR  
FMA/B面銑刀用刀把

P.81



**BT-FMC**  
FACE MILL ARBOR  
FMC 面銑刀用刀把

P.82



**BT-KUP**  
KEYLESS DRILL  
CHUCK  
鑽夾頭刀把

P.83



**BT-WF**  
TAP ADAPTER  
HOLDER  
攻牙套筒刀把

P.84



**MT-WF**  
TAP ADAPTER  
HOLDER WITH  
MORSE TAPER  
攻牙套筒莫式錐柄

P.85



**TCB/TC**  
TAP ADAPTER  
攻牙套筒

**BTN** BT30 HOLDER WITHOUT KEYWAY

P.87

5μ



**BTN-HER**  
HER COLLET  
CHUCK  
HER筒夾刀把

P.88



**BTN-ER**  
ER COLLET  
CHUCK  
ER筒夾刀把

P.89

5μ



**BTN-PFKS**  
PFK HIGH SPEED  
COLLET CHUCK  
PFK高速刀把

P.89

5μ



**BTN-PFK**  
PFK COLLET CHUCK  
PFK筒夾刀把

BT

BTN

# INDEX

## SK DIN 69871

P.91

3μ



**SK-HY**  
HYDRAULIC  
CHUCK  
油壓刀把

P.92

3μ



**SK-CR**  
SHRINK FIT  
CHUCK  
熱縮刀把

P.93

5μ



**SK-HER**  
HER COLLET  
CHUCK  
HER筒夾刀把

P.94

5μ



**SK-THER**  
THER SLIM COLLET  
CHUCK  
THER 小徑刀把

P.95

5μ



**SK-ERB**  
ER COLLET CHUCK  
(BEARING NUT)  
鋼珠螺帽刀把

P.96



**SK-ER**  
ER COLLET  
CHUCK  
ER 筒夾刀把

P.97

5μ



**SK-PFKS**  
PFK HIGH SPEED  
COLLET CHUCK  
PFK高速刀把

P.98

5μ



**SK-PFK**  
PFK COLLET  
CHUCK  
PFK筒夾刀把

P.99



**SK-PFC**  
POWER MILLING  
CHUCK  
強力銑刀刀把

P.100



**SK-SLE**  
SIDE LOCK  
ARBOR  
SLE側固刀把

P.101



**SK-MTA**  
MORSE TAPER  
HOLDER  
MTA莫式錐度孔刀把

P.102



**SK-FMB**  
FACE MILL ARBOR  
FMB面銑刀用刀把

SK

## ISO

P.104

3μ



**ISO-HY**  
HYDRAULIC  
CHUCK  
油壓刀把

P.105

5μ



**ISO-HER**  
HER COLLET  
CHUCK  
HER 筒夾刀把

P.106



**ISO-ERMS**  
ER HIGH SPEED  
SLIM CHUCK  
ER高速小徑刀把

P.107

5μ



**ISO-PFKS**  
PFK HIGH SPEED  
COLLET CHUCK  
PFK高速刀把

P.108

5μ



**ISO-PFK**  
PFK COLLET  
CHUCK  
PFK筒夾刀把

ISO

## 延長桿 EXTENSION BAR

P.110



**ASSA-ERB**  
ER BALL  
BEARING NUT  
ER 鋼珠螺帽

P.110



**ASSA-ER**  
ER NUT  
ER 標準螺帽

P.111



**ASSA-ERM**  
SMALL DIA ER NUT  
ER 小徑螺帽

P.112



**AMTA-ER**  
MORSE TAPER ER  
COLLET CHUCK  
ER 莫式錐柄夾頭

EXTENSION BAR

## 測試棒 TEST BAR

P.113



HSK-A / E

P.113



BT

SPARE PARTS

拉桿 PULL STUD



筒夾 COLLET



止水環 SEALING DISK



螺栓 SCREW



螺帽 NUT



扳手 SPANNER



扭力扳手 TORQUE WRENCH





# QUALITY

Right Tool for  
your Job !





## 普慧刀把品質 Our Quality

	材質 Material	硬度 Hardness	表面粗糙度 Surface Finish on Taper	深冷處理 Cryogenic Treatment	錐柄精度 Shank Quality	偏擺精度 Run-Out Tolerance	研磨設備 Grinding Machines	檢驗方式 Inspection	動平衡 Balancing
	Steep Taper NiCrMo HSK/ Premium Chucks Higher Grade	55~58 Hrc Depth of Min. 0.8 mm	Ra. 0.15 $\mu$ m	-180 Degrees	AT3 or Better Than DIN69893	Same as Indicated in Catalogue	State of the Art from Swiss	100% Checked with Certified Gauge by Trained Technicians	Actual Balanced with Balanced Machines
<b>Other</b>	CrMo NiCrMo	50~55 Hrc Depth of Min. 0.6	Ra. 0.2 – 0.4 $\mu$ m	Nil or Only Sub-Zero (-90)	AT4 or Out of DIN 69893	Often Different as Indicated in Catalogue	Normal Grinder	Radon Inspection with Non Certified Gauge by Non Trained Employees	Only Pre-Balanced but Claimed Balanced

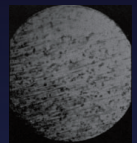
## 超冷處理 Cryogenic Treatment

可將刀把內部殘留之沃斯田鐵 (AUSTENITE) 變成麻田散鐵 (MARTENSITE)，其可變態之組織可達97~98%。右圖為兩片同材質，但不同熱處理之金相圖。  
刀把如經深冷處理，其壽命及穩定度遠超過未處理之材質。  
本公司產品經深冷處理之產品有 HY,CR,PFC 等。

To eliminate the stress after quenching and machining, and also prevent thermal shock. The austenite almost fully transforms into martensite ( around 97%~98% ).Cryogenic treatment makes tool holders better wear resistance, no deformation, and no change in hardness over time to further improve the stability and life of tool holders.  
Tool holders with cryogenic treatment are HY, CR, PFC etc.

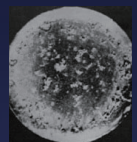
經過超冷處理後金相圖

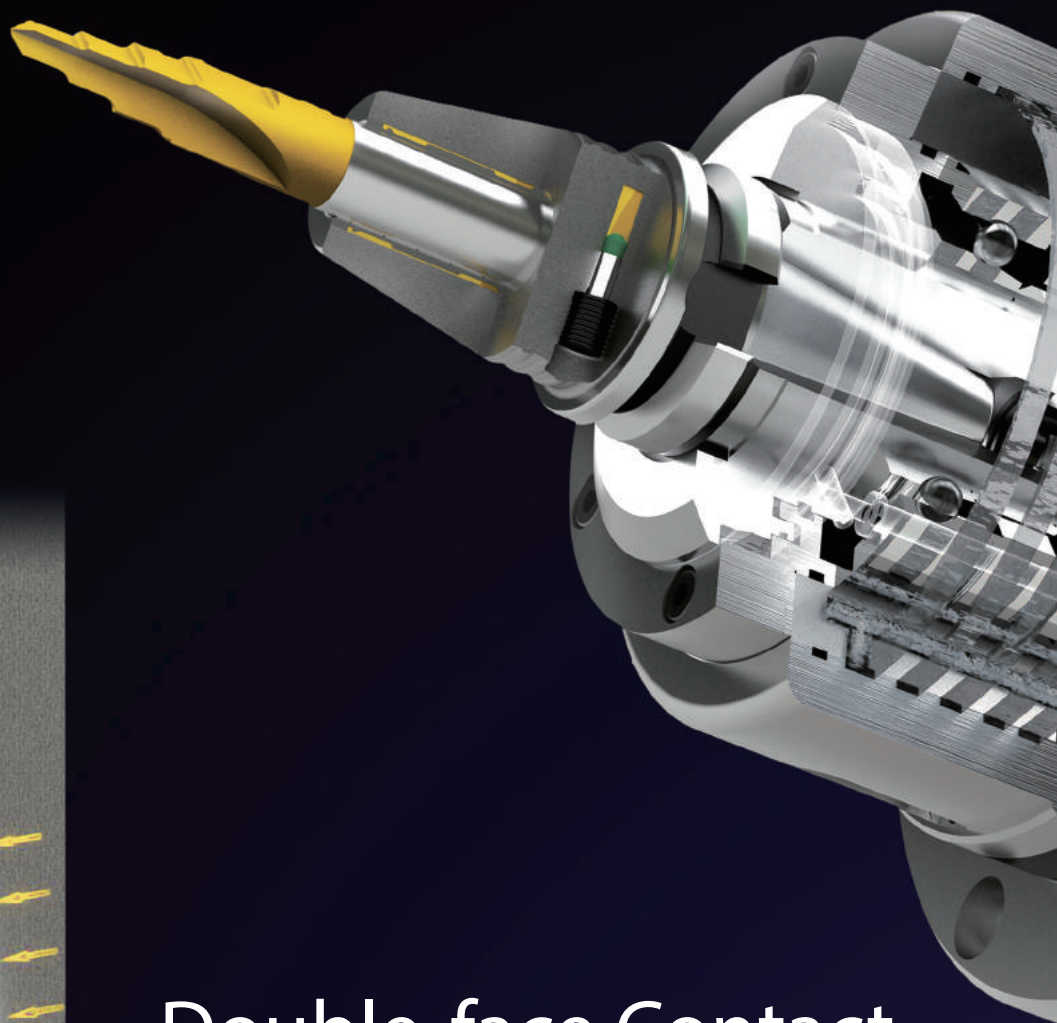
Constitution diagram after  
cryogenic treatment



未經過超冷處理之金相圖

Constitution diagram without  
cryogenic treatment





## Double-face Contact 二面承靠系統

將刀把錐面與法蘭面兩面緊貼心軸，可提升刀把與心軸接觸率達114%，較一般刀把更適於高轉速的狀態，有利於獲得更穩定的軸向平行度和強化動態轉速下的剛性變化。

(選配細節歡迎來電洽詢)



卓越精度 — 源自完美結合

Excellent precision

From The Perfect  
Combination

## HIGH REPEAT Accuracy

高重複精度

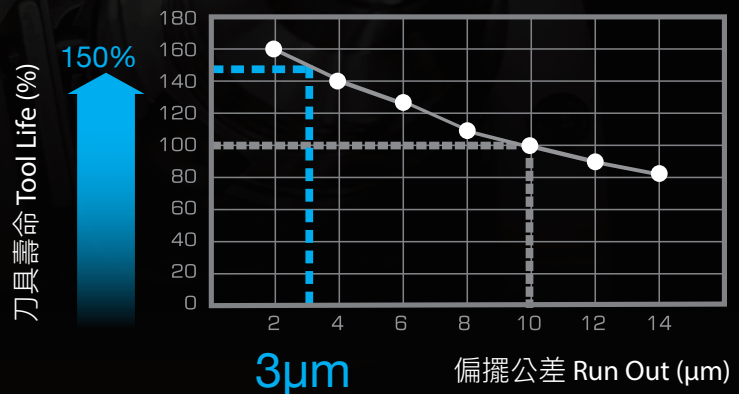
從旋轉件至刀具端的累積精度皆來自智慧的主軸與刀把，具有統一性的製造與檢測，相配件結合度高、品質穩定。  
(高精度之選配細節歡迎來電洽詢)

# 刀把特性比較表 Comparison Table



	精度 Run-Out	夾持力 Clamping Force	夾持範圍 Clamping Range	高速加工性 HSC	成本 Cost
<b>HY</b> Hydraulic Chuck 油壓刀把	$\leq 3\mu$	● ● ●	3-32mm	● ● ● ● ●	High 高
<b>CR</b> Standard Shrink Fit Chuck 標準型熱縮刀把	$\leq 3\mu$	● ● ● ●	4-32mm	● ● ● ● ●	Holder: Middle 刀把: 中等 Equipment: High 週邊: 高
<b>SR</b> Slim Type Shrink Fit Chuck 細長型熱縮刀把	$\leq 3\mu$	● ● ● ●	4-12mm	● ● ● ● ●	Holder: Middle 刀把: 中等 Equipment: High 週邊: 高
<b>HER</b> HER Collet Chuck HER 筒夾式刀把	$\leq 5\mu$	● ● ● ●	1-20mm	● ● ● ● ●	Fair 合理
<b>PFK</b> PFK Collet Chuck PFK 筒夾式刀把	$\leq 5\mu$	● ● ●	1-25mm	● ● ● ●	Fair 合理
<b>ERB / ERBR</b> ER Collet Chuck (Ball Bearing Nut) ER 筒夾式刀把 (鋼珠螺帽)	$\leq 5\mu$	● ● ●	1-26mm	● ● ● ●	Fair 合理
<b>PFC</b> Milling Chuck 強力銑刀刀把	$\leq 10\mu$	● ● ● ● ●	4-32mm	●	Middle 中等
<b>SLE</b> Side Lock Chuck 側固式刀把	$\leq 10\mu$	● ● ● ● ●	6-42mm	●	Low 低

## 刀把精度與刀具壽命比較表 Comparison Chart Of Tool Holder Run-out To Tool Life



如上圖所示，以偏擺精度 $10\mu$ 為基準100%，當偏擺精度提昇至 $3\mu$ 時，相對的刀具壽命將可提昇為150%以上。

As the chart shows, if the run-out of  $10\mu$  with 100% tool life is used as the reference point, 150% increase of tool life will be the result if the run-out of tool holder has improve to  $3\mu$ .

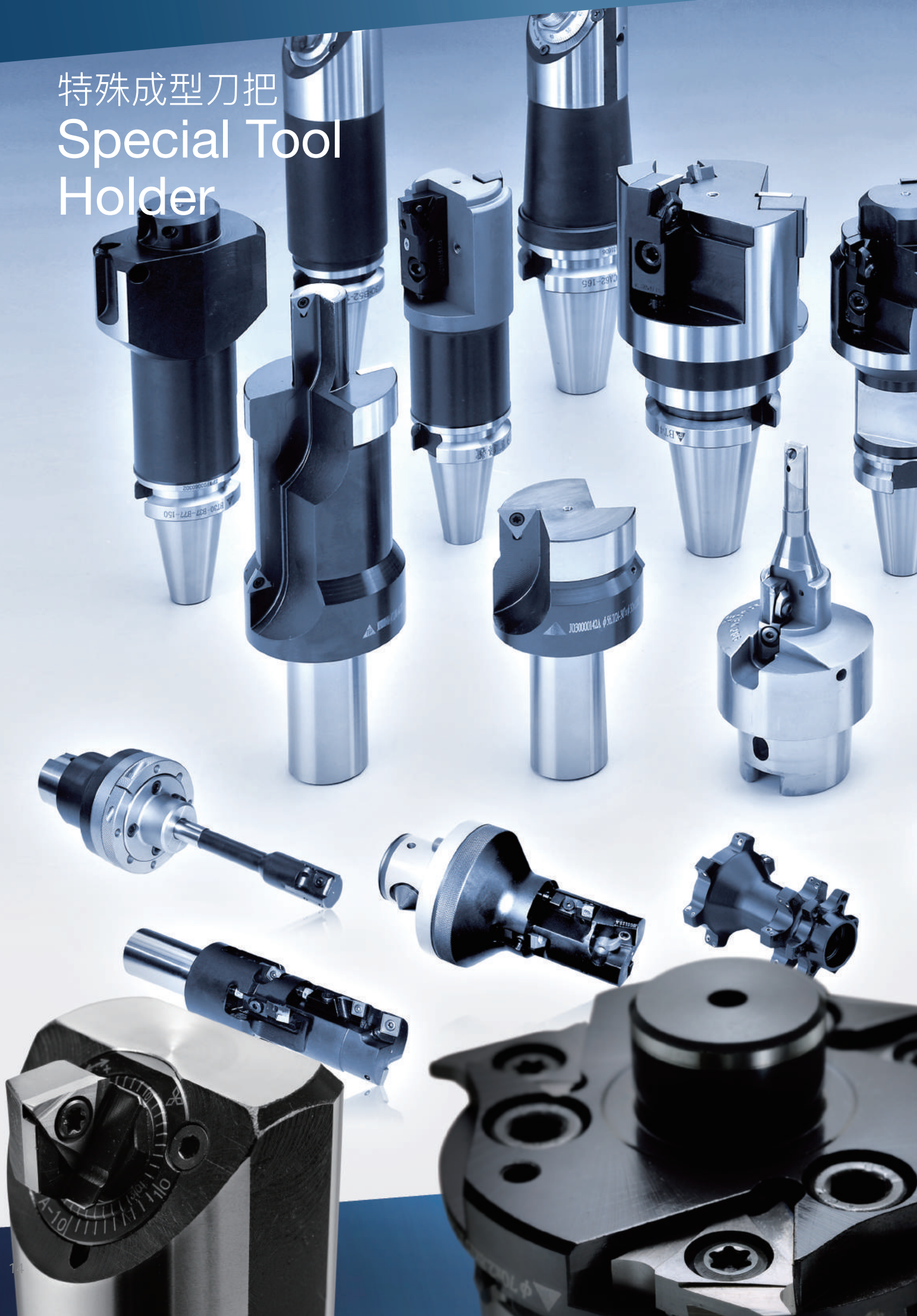
高速加工在精加工時，建議使用有減震功能之刀把，且選擇短刀具圓角之刀具，並減少刀長伸出量，以傾斜角度和最少量潤滑(MQL)加工來獲得最佳效果。

For finishing in HSM, we recommend to use the tool holder with vibration damping characteristic and also the cutting tool that has a shorter length with corner radius with shorter overhang to machine with inclination of the cutter in the feed direction together with Min. Quantity Lubrication to have the best performance.

高速加工相較於傳統加工，有著低切削深度但高轉速、高進給之特性。來達到高金屬移除率(減少生產時間、提高生產效率)之目標。因切削負荷較低，夾持力要求也也相對較小。故選擇高速加工用之刀柄時應注重其動平衡性及精度。

High Speed Machining has the characteristics of low depth of cut but high feed rate and high spindle r.p.m. to reach high material remove rate compares to conventional machining. The cutting load is also lighter. Therefore, the selection focus of tool holder for HSM is balancing and accuracy.

特殊成型刀把  
Special Tool  
Holder





**3 $\mu$ m**  
RUN-OUT

# 熱縮刀把

實現全方位超高精密加工夢想

## SHRINK FIT CHUCK



SR 細長型  
Slim Type

### 克服干涉加工！



柄部 / Shank Type	
HSK-A	33
HSK-E	47
BT	57
SK	92

**CR 標準型**  
Standard Type

**刀具偏擺 ≤ 3μ**

減少刀具磨耗，降低刀具費用  
大幅提升面粗度

**Run Out ≤ 3μ**

Reduce tooling costs.  
Better surface finish.

**一體肉厚式**

剛性佳提高刀具壽命

**High Rigidity**

Longer tool life

**超強夾持力**

粗加工或精加工皆可  
**Strong Clamping Force**  
Good Roughing and Finish

**超冷處理**

防止變形保持精度  
**Cryogenic Treatment**  
Minimise the deformation and maintain the accuracy.

**特殊材質**

超長壽命  
**Special Material**  
Longer tool life

**加熱機規格**  
Heater Specification



**GTS-9000**

Model / 規格	GTS-9000
Output / 加熱出力	10kw
Diameter / 刀具柄徑	≤ ø32mm ( 鎢鋼Carbide )
Size / 尺寸	W380xD405xH655mm
Weight / 重量	15.1kg
Electric current supply / 電壓	3相220v x 30A / 50 / 60Hz



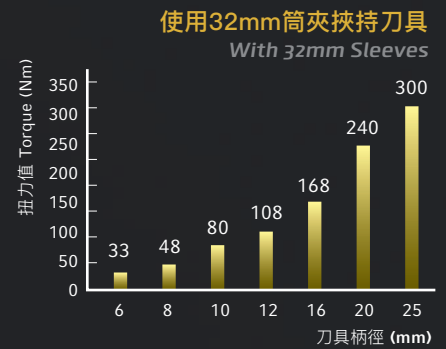
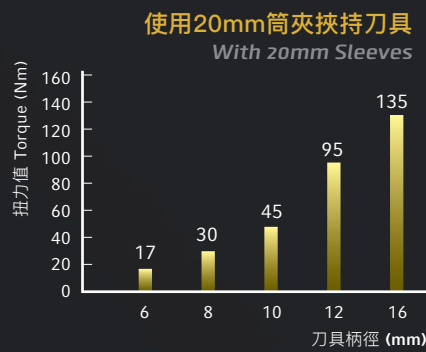
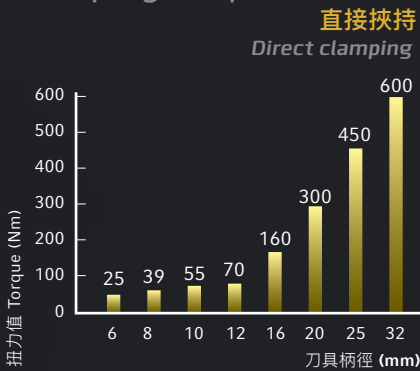
# 油壓刀把

無需昂貴設備亦能達到 3μ 加工夢想

## Hydraulic Chuck

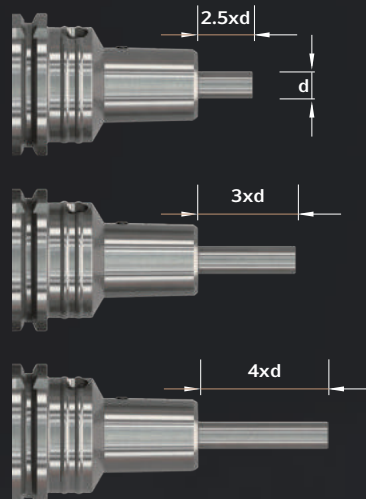
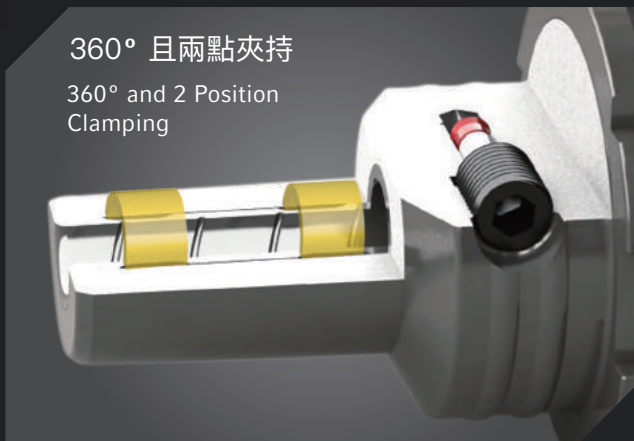
### 夾持扭力

Clamping Torque



同樣是3μ，但長度就是不同

The new definition of 3μ at 4d



Company (A)

Company (B)

**PARFAITE**  
We measure at longer distance.





柄部 / Shank Type	
HSK-A	32
HSK-E	46
BT	56
SK	91
ISO	104

### 刀具偏擺 $\leq 3\mu$

Run Out  $\leq 3\mu$

減少刀具磨耗，降低刀具費用  
 大幅提升面粗度  
 刀具柄徑四倍長精度 (最大80mm)  
 Reduce tooling casts.  
 Better surface finish  
 4 x d $\phi$  (max.80mm)

### 重複精度佳

High Repeat Accuracy

節省校刀時間

Reduce the down-times to set the tool to required accuracy compare to collet chuck.

### 含油壓油具減震功能

Vibration Dampening

提升面粗度

Significantly increase the surface quality.

### 夾刀操作簡單

Rapid and Tool Changing

約10秒內完成達到 $3\mu$ 精度  
 大幅降低精加工或需換刀之準備  
 不需昂貴複雜的周邊設備  
 10 sec to reach the accuracy of  $3\mu$ .  
 Reduce setup time for finishing or the process the needs to change cutting tool oftenly.  
 No need of peripheral equipment.

### 超冷處理

Cryogenic Treatment

降低變形，保持精度

To minimize the deformation of tool holder and attain the accuracy.

**5 $\mu$ m**  
RUN-OUT

# HER刀把 PAT.

## 梯形螺牙的威力

精度  
偏擺  $\leq 5\mu$

Precise  
Run Out  $\leq 5\mu$

防塵  
結合防水墊圈 (選配)

Dust /Chip Free  
Together with  
Sealing Disk  
(option)

全圓螺帽  
高速時風切聲低

Fully Round Nut  
Low Noise in High r.p.m.

-195°C 超冷處理  
防止變形保持精度

-195°C Cryogenic  
Treatment  
Minimise deformation  
and maintain the  
accuracy.

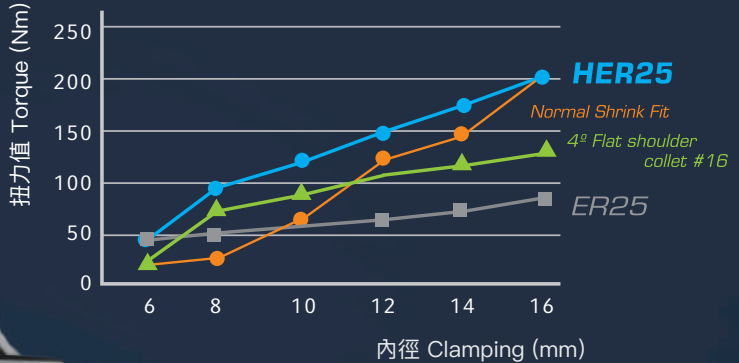
可中心出水及端面出水  
Coolant Through  
Jet coolant through

高扭力、夾持力強  
比4°筒夾刀把約大1.45倍  
比一般ER筒夾刀把約大2.3倍  
(內徑12mm, 如右表)

Strong Clamping Force  
145% Stronger than 4°  
For  $\phi 12$ , 230% Stronger than ER  
collet chuck ( as the right graph )

### 刀把夾持扭力比較

Transferable Torque of the HER System



如上圖以HER25為例所示，HER25夾持力優於熱縮、單邊4°平肩筒夾及傳統一般ER筒夾系統。

以HER25為例：

在內徑12mm時，夾持力比4°筒夾約大145%、比一般熱縮約大130%、比一般ER刀把約大230%。

HER has a larger clamping forces compare to normal shrink fit chuck , 4° flat shoulder collet chuck and traditional ER collet chuck.

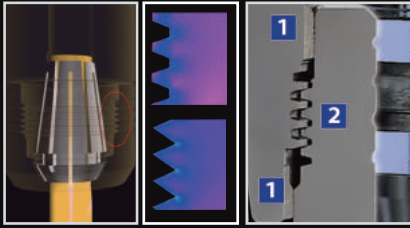
In the case of HER25:

For  $\phi 12$ , HER is 145% better than 4° flat shoulder collet chuck, 130% better than normal shrink fit chuck, and 230% better than ER25.

# HER COLLET CHUCK

柄部 / Shank Type	
HSK-A	36
HSK-E	49
BT	60
SK	93
ISO	105

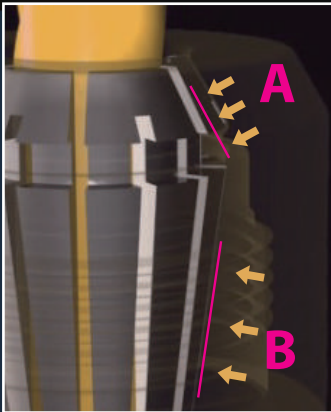
## 超完美精度 Unmistakable Precise



2倍長的超長導軌之特殊的構造 [1] 及梯形螺牙 [2] 可形成較大之傳導力，也大幅降低了摩擦力，因此，在鎖緊時，也確保螺帽在刀把的中心有完美的負載。還有其他高夾持力、高同心度、高重複精度優點，同時短螺紋的設計也節省組裝刀把的時間。

The special mechanism of extra long double-length guide (2) with trapezoidal thread (1) delivers a stronger torque transmitting power but reduces frictional force when tightening and also ensures the perfect centering of the nut on the chuck. Other than the benefits of high concentricity and repeatability with stronger clamping force, the design of shorter thread further reduces the time needed to assembly the chuck.

## 穩定性 / 三點兩面夾持的優勢 Stable

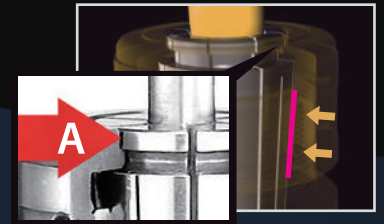


### 三點兩面夾持

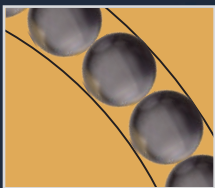
- 夾持力平均分布在刀具柄徑  
The distribution of clamping force on the gripped area of the cutting tool shank
- HER系統的夾持力平均分布於A、B面。  
The clamping force of HER system distributes evenly on A, B points

### 單面夾持

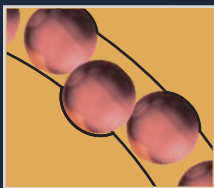
- 夾持力只分布在B面  
Point B has clamping forces.
- A面夾持力較小，刀具在筒夾內發生斷刀進而造成整組刀把及筒夾損壞。  
Point A has less clamping force. Cutting tool breaks easily inside the collet and resulting in total damage of the chuck.



## 耐久性 Durable



正常狀態  
Normal type



長時間使用後  
After long-time operation

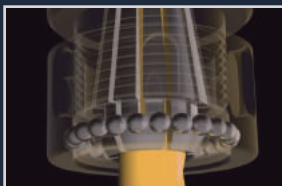


鋼珠為自由排列，會有不規則現象，在高速迴轉時，不平衡現象會顯現出來，有轉速上的限制。

The ball bearing nut can lose its balance during high speed rotation because the steel balls inside it are not fixed; therefore, there is a limitation of the rotation speed.

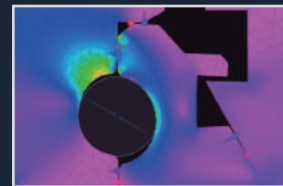
鋼珠或螺帽本體其一硬度較高，長時間下鋼珠或螺帽本體易變形，而造成精度變差。

Because the hardness of steel balls is higher than the nut body, the steel ball can cause of the nut to deform which leads to inaccuracy and vibration during the operation after the nut has been used for a period of time, or improperly locked.



螺帽之組裝件會留有間隙，細微之切屑會從此隙縫侵入，造成螺帽損害。

There are small gaps among parts in ball bearing nut units, and during machine operation, small pieces of chips or dirt may fall in and cause the nut to be unstable or damaged.



螺帽本體為組合式，在鋼珠之部位為剛性最差處，在過度或長時間使用下，會產生崩裂現象。

Ball bearing nut is made up of individual parts, and the weakest part is where the steel balls located. This part may chip or crack after a long period of time or excessive of use.

## HP 3μ級系列筒夾 / 扳手 / 螺帽



Grade HP = 3μ



替換接頭

Roller Bearing Head



扭力扳手

Torque Setting Wrench



一體式全圓扳手

Roller Bearing Wrench

# SPINDLE SPEEDER

The Most Economic Solution For Upgrading to H.S.C.

## 電動增速器 馬達 內藏式

實現精準，安定，穩定，高馬力之目標  
大幅提高原機台主軸轉速至30,000RPM的經濟方案



**FAST**  
轉速高 30,000 RPM



**PRECISE**  
精度高 2µm



**TWO FACE CLOSLY CONTACT, STRONG RIGIDITY**  
二面承靠剛性佳



**POWERFUL**  
馬力大 3.0 kw



**LOW VIBRATION, LOW NOISE**  
振動低，噪音低



### S1130

- 30,000RPM
- 3.0kw
- 偏擺 2µ
- RUN OUT 2µ
- 水冷 Water



### S1010

- 24,000RPM
- 1.0kw
- 偏擺 2µ
- RUN OUT 2µ
- 風冷 Fan

#### 特點

- 內藏高頻馬達，轉速可達三萬轉，機台主軸不必轉動，無齒輪噪音，可24小時運轉
- 高出力可做熱處理後模具鋼之加工
- 可運用兩面承靠刀把，提高主軸整體剛性
- 極低震動，精加工品質佳
- 可取代特殊放電加工，更可免除電極之製作
- 安裝簡便，不費時

#### Feature

- The built-in high frequency motor is directly driven by the converter to obtain the steeples R.P.M.
- Directly mounted on the machine spindle without rotating it.
- High output power, cutting on the heat-treated mould steel is available.
- Can be adapted with two faces closely contact tool holder to increase the rigidity of the spindle.
- Low vibration, high machining quality.
- Special E.D.M. can be substituted to eliminate the machining of the electrode.
- Easy installation, time saving.

只要在一般CNC機台裝上電動增速器，立刻升級為數控高速模具加工機。

Install the electrical high speed booster on the conventional machining center, it will be upgraded to high speed mold machine.



## 增速器與周邊之組合 Spindle Speeder and Accessories



S1010+變頻器 Inverter



S1130+周邊  
(含冰水機及變頻器) Control Unit

### S1130 增速器安裝程序 Setup Procedure for S1130



1 擦拭主軸內、外錐孔  
Wipe taper.



2 設定主軸不自轉程式  
Set the non-rotate of  
machine spindle.  
注意！此步驟非常重要  
Important!



3 安裝高速頭(如同安裝刀把)  
Install the spindle.  
(as same as install tool holder)



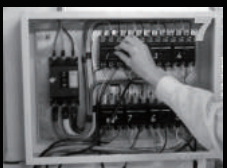
4 電控箱置於操作盤下  
Put the control unit  
under the panel.



5 接高速頭側電源  
Connect the line and  
pipe.



6 將電控箱冷卻水管接在主軸  
Connect the cooling pipe  
of control unit to the  
spindle.



7 將電源線接在電源箱上  
Connect the cable to  
source box.



8 啟動主軸，開始加工  
Turn on and start machining.

清角、精加工  
之首選



MINITOR

# 增速器 / 無刷式馬達

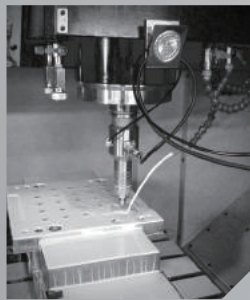
SPINDLE SPEEDER / BRUSHLESS MOTOR

錐柄式主軸

## TAPERD SHANK SPINDLE

Max RPM  
轉速 60,000min

Run Out  
主軸精度 1 $\mu$



加工中心機  
Machining Center



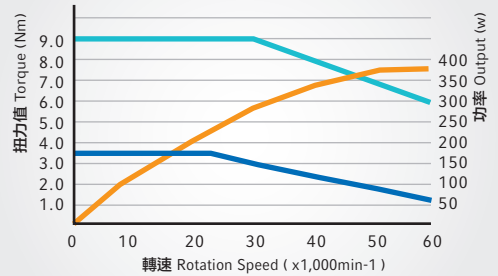
加工中心機  
Machining Center



加工中心機  
Machining Center

### 馬達特性表

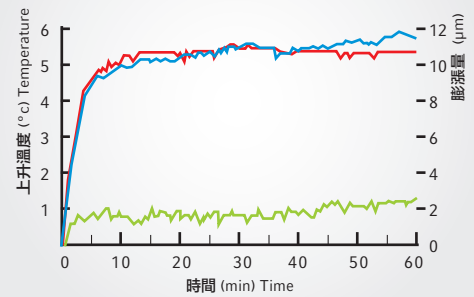
Motor characteristic table



— 扭力 Torque  
— Continuation Domain  
— 功率 Output

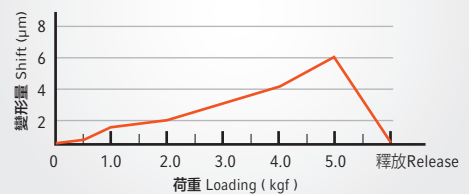
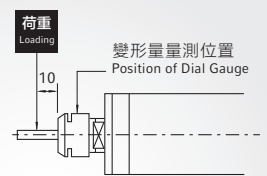
### 主軸熱變形量

Amount of dynamic main axis displacement and temperature rise time



### 主軸靜態剛性

Static mainaxis rigidity





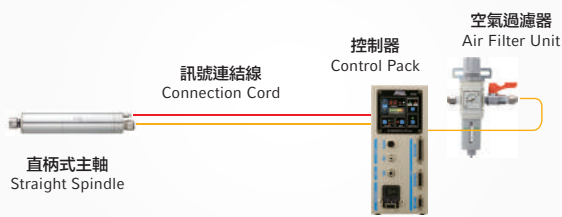
直柄式主軸

# STRAIGHT SPINDLE

## 主軸與週邊裝置



### 單主軸連接方式 Single Connection

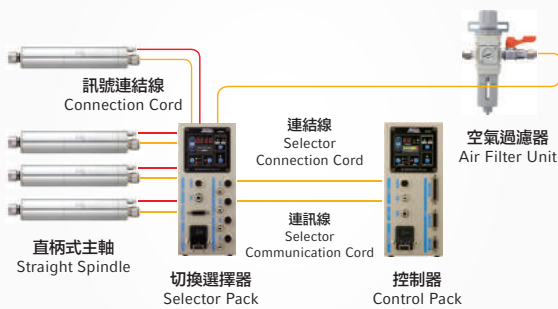


特殊鑽孔機  
Drilling Specialized Machine



內圓磨床  
Cylindrical Grinding Machine

### 多主軸連接方式 Multiple Connection



倒角機  
Machining Center



# 出水型刀把選用說明

## COOLANT TYPE TOOL HOLDER SELECTION

### ▶ HSK 中心出水

Center-Through Coolant Type for HSK Shank



Coolant Pipe  
出水管



HSK form A



HSK form E

### ▶ BT 中心出水

Center-Through Coolant Type for BT Shank



Type C 拉桿  
Pull Stud

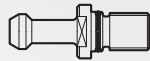
Type RC 拉桿  
Pull Stud



BT/ MAS 403 Form AD

### ▶ BT 法蘭出水

Flange-Through Coolant Type for BT Shank



Type F 拉桿  
Pull Stud



BT/ MAS 403 Form B

### ▶ SK 中心出水

Center-Through Coolant Type for SK Shank



Type A 拉桿  
Pull Stud

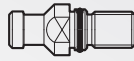
Type AR 拉桿  
Pull Stud



SK/ DIN69871 Form AD

### ▶ SK 法蘭出水

Flange-Through Coolant Type for SK Shank



Type BR 拉桿  
Pull Stud



SK/ DIN69871 Form B

拉桿型式對照表 Comparison table of pull stud

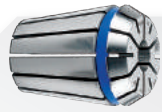
	BT 刀把			SK 刀把		
	C	RC	F	A	AR	BR
中心出水孔 Coolant Hole	■	■		■	■	
附 O-Ring			■			■
BT30/SK40			■	■	■	■
BT40/SK40	■	■	■	■	■	■
BT50/SK50	■	■		■	■	■



**HER 筒夾式刀把**  
HER Collet Chuck



**ER/HER 出水型調整螺絲**  
Coolant Type Screw for ER/HER



**HER 標準筒夾**  
HER Collet



**HER 用止水環**  
Sealing Disk for HER



**HER 止水型螺帽**  
HER coolant type nut



**HER 止水筒夾**  
HER Sealing Collet



**HER 標準型螺帽**  
Standard HER Nut



**HER 端面出水筒夾**  
HER Jet Coolant Collet



**HER 標準型螺帽**  
Standard HER Nut



**ER 系列筒夾式刀把**  
ER Collet Chuck



**ER/HER 出水型調整螺絲**  
Coolant Type Screw for ER/HER



**ER 止水筒夾**  
ER Sealing Collet



**ERB/ERBR/ER 螺帽**  
ERB/ERBR/ER Nut



**PFC 強力銑刀刀把**  
Power Milling Chuck



**PFC 出水型螺絲**  
Coolant Type Screw for PFC



**PFC 出水型筒夾**  
Coolant Type Collet for PFC



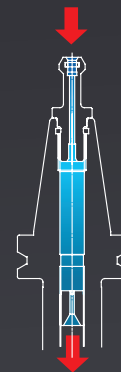
**HY 油壓刀把**  
Hydraulic Chuck



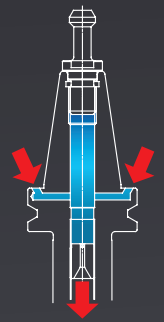
**HY 出水型螺絲**  
Coolant Type Screw for HY



**HY 出水型筒夾**  
Coolant Type Collet for HY



**BT 中心出水**  
Center-Through Coolant Type for BT Shank

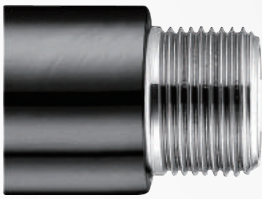


**BT 法蘭出水**  
Flange-Through Coolant Type for BT Shank

# 螺帽選用說明

## Description For Choosing Nut

### Standard type ER collet chuck body



#### 標準ER刀柄本體

Standard ER collet chuck body



#### ER-BR

Ball bearing nut for high speed

#### 高速用鋼珠螺帽

Ball bearing nut are special machined and therefore suitable for high speed application.

鋼珠及螺帽皆經過特殊加工，可適用於高速加工



#### ER-B

Ball bearing nut

#### 鋼珠螺帽

Better clamping force and accuracy thus more suitable for very precise machining.

可提昇夾持力及精度，適用於高精度加工



#### ER

Standard type

#### 一般標準螺帽

Suitable for general machining.

一般場合使用

Run out  $\leq 5\mu$  can be obtained by yes of the PARFAITE HP grade  $3\mu$  collet.

配合PARFAITE HP級 $3\mu$ 筒夾，偏擺可達 $\leq 5\mu$

### Mini type ER collet chuck body



#### 小徑ER刀柄本體

Mini type ER collet chuck body



#### ER-MS

Small outer diameter for high speed

#### 高速用小徑螺帽

The outer diameter is same as ERM nut but the immersion is symmetrical. It is suitable for high speed machining.

外徑尺寸與ER-M相同，但尺寸對稱，可適用於高速加工



#### ER-M

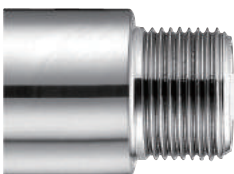
Small outer diameter

#### 小徑螺帽

The outer diameter of nut is smaller than standard nut. It is suitable in the situation of interference.

外徑尺寸較標準螺帽小，適用於有干涉之場合

### Standard PFK collet chuck body



#### 標準PFK刀柄本體

Standard PFK collet chuck body



#### PFK-S

High speed fully round nut

#### 高速全圓螺帽

Better run-out and low noise when rotating thus more suitable for high speed application.

全圓結構風切聲小且偏擺較佳，適合高速加工



#### PFK

Standard type

#### 一般標準螺帽

suitable for general machining.

一般場合使用

Run out  $\leq 5\mu$  can be obtained by yes of the PARFAITE P grade  $3\mu$  collet.

配合PARFAITE  $3\mu$  P筒夾，偏擺可達 $\leq 5\mu$

precision for professionals

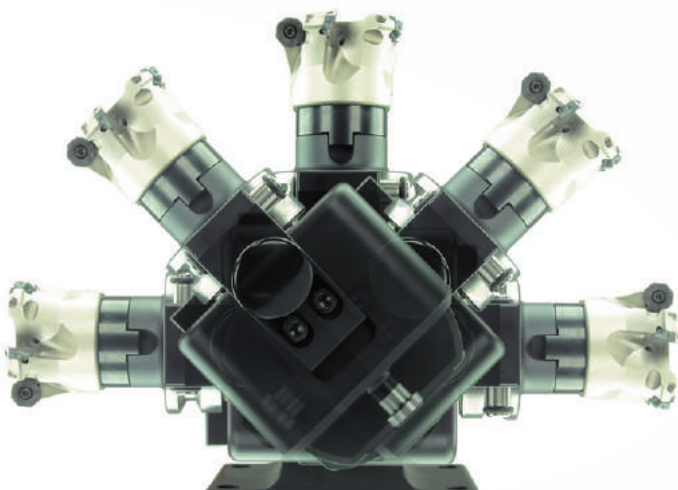
# PF-Clamp

The new  
tool assembly device

## 鎖刀座

### 主要特點

- 刀具組裝與分解過程極其穩定、安全。
- 使用輕巧，僅需較小的鎖緊力即可完成刀具裝卸。
- 不需其他工具，即可輕鬆完成各種規格更換。
- 可對應多種錐柄型式DIN、BT、CAT、HSK、CAPTO、KM、VDI。
- 採用更換式黃銅套來保護刀把的柄部。
- 鎖刀座採小體積設計，佔用面積僅140mmX100mm。



# PF-Clamp

Sensationally simply – simply sensationally

The new  
tool assembly device

- Secure tool assembling
- minimum locking force needed
- Quick-change function for different taper interfaces - w/o additional tooling
- Accident free assembling of cutting tools
- Spring-loaded locking pin
- Mechanical security pin
- Better tool clamping thanks to optimum ergonomics
- Replaceable brass tool pots protect taper surface
- Required space 140 x 100 mm

# 電動增速器

實現精準，安定，穩定，高馬力之目標  
大幅提高原機台主軸轉速至30,000RPM的經濟方案

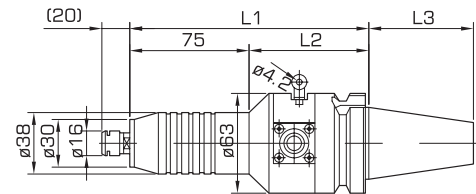
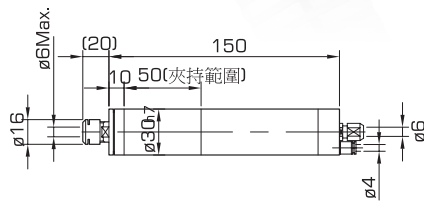
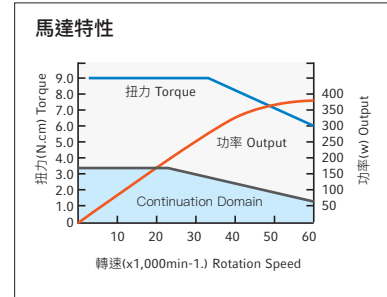


電動增速器全套購買之標準附件：

項目	數量
主軸	1
變頻器	1
電控箱	1
扳手	1
螺帽	1

主軸型號	Spindle Type	S1010-24	S1130-30
安裝方式	Installation Position	立式 Vert	臥式/立式 Horiz/Vert
轉速(最小V最高)	RPM (min/max)	12,000~24,000	15,000~30,000
頻率	Frequency / HZ	400	1,000
軸承	Bearing Type	鋼珠 Steel ball	陶瓷珠 Ceramic ball
軸承潤滑方式	Bearing Lubrication	滑脂 Grease	滑脂 Grease
使用電壓	Voltage / V	220	220
功率(S6)	Power / KW	1.0	3.0
扭力	Torque / NM	0.39	1.13
刀把/筒夾	Tool Holder/collet	ER20	ER25
刀具夾持柄	Tool Clamping DIA. / mm	ø1-ø13	ø1-ø16
冷卻方式	Cooling Type	風冷 Fan	水冷 Water
主體外徑	øD / mm	ø100	ø110
主軸全長	L / mm	251	235
全重	Weight / KG	7 (BT40)	12 (BT40)
		10 (BT50)	15 (BT50)

全套購買之標準附件： • 主軸 x 1 • 變頻器 x 1 • 電控箱 x 1 • 扳手 x 1 • 螺帽 x 1



**直柄式主軸      錐柄式主軸**  
**Straight Spindle      Taper Shank Spindle**

訂購編號	Order No.	MS01	MZ01-BT30	MZ01-BT40	MZ01-BT50	MZ01-ST32	
訊號連接線	Connection	SME-003 (option)	SME-003 (option)				
外觀尺寸	Size	L1	150	165	150	160	172
		L2	-	90	75	85	97
		L3	-	48.4	65.4	101.8	80
重量	Weight	600g	2.1kg	2.2kg	4.8kg	2.8Kg	
馬達種類	Motor Type	無刷式馬達 Brushless Motor					
筒夾規格 / 夾持範圍	Collet / Clamping Range	ER11 / φ0.6~φ7.0					
最大出力	Power	370W					
轉速	RPM	1,000~60,000 min-1					
扭力	Torque	8.82N.cm (900g.cm)					
主軸精度	Precision	1μm以下 (主軸錐柄位置) under 1μm at taper shank					
軸承種類	Bearing	陶瓷珠 Ceramic Ball					
潤滑方式	Bearing Lubrication	滑脂 Grease					
主軸靜剛性		5.8μm / 5kgf 時					
動態主軸熱變形量		徑向變形2.3μm, 軸向變形10.2μm					
冷卻方式	Cooling Type	強制空冷					
推薦空壓壓力	Recommended Air Pressure	0.25~0.5MPa (Max.0.9MPa)					
空氣流量		約30cc/min (於空壓壓力0.25MPa)					

全套購買之標準附件：• 增速器 x 1 • 變頻器 x 1 • 訊號連接線 x 1 • 空氣濾清器 x 1 • 扳手 x 1

# 油壓刀把 HYDRAULIC CHUCK



Balancing / 動平衡

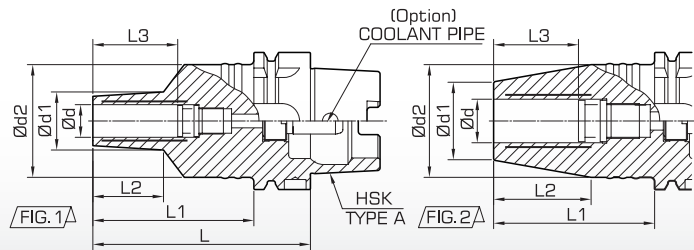
Dimensions / 尺寸標示

**G6.3**

Max. 25,000 RPM  
Or  $U \leq 1\text{gmm}$

Option / 選配  
**G2.5**

Max. 25,000 RPM  
Or  $U \leq 1\text{gmm}$



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Order No. 訂購編號	FIG	Ød	Ød1	Ød2	L	L1	L2	Tool Clamping Depth L3 刀具夾持深度	Screw 調整螺絲	Collet 筒夾	
HSK50A	HY06-080	1	6	26	40	80	54	24.5	31~36	HY06-M5	-
	HY08-080	1	8	28	40	80	54	25.5	31~36	HY08-M6	-
	HY10-080	1	10	30	40	80	54	35.5	35~40	HY08-M6	-
	HY12-090	1	12	32	40	90	64	40	39~45	HY08-M6	HY12-C
	HY14-090	1	14	34	40	90	64	40	39~45	HY14-M8	-
	HY16-090	2	16	35	40	90	64	40	42~48	HY14-M8	-
	HY18-090	2	18	37	42	90	64	40	42~48	HY18-M12	-
HY20-090	2	20	37	42	90	64	11	44~50	HY18-M12	HY20-C	
HSK63A	HY06-080	1	6	26	50	80	54	24.5	31~36	HY06-M5	-
	HY08-080	1	8	28	50	80	54	25.5	31~36	HY08-M6	-
	HY10-090	1	10	30	50	90	64	35.5	35~40	HY08-M6	-
	HY12-090	1	12	32	50	90	64	40	39~45	HY08-M6	HY12-C
	HY14-090	1	14	34	50	90	64	40	39~45	HY14-M8	-
	HY16-100	1	16	35	50	100	74	40	42~48	HY14-M8	-
	HY18-100	1	18	40	50	100	74	40	42~48	HY18-M12	-
	HY20-100	2	20	37	53	100	74	42	44~50	HY18-M12	HY20-C
HY25-120	2	25	43	57	120	94	37	50~56	HY25-M16	-	
HY32-120	2	32	50.5	62.5	120	94	31	53~60	HY25-M16	HY32-C	
HSK100A	HY10-100	1	10	30	50	100	71	35.5	35~40	HY08-M6	-
	HY12-100	1	12	32	50	100	71	40	39~45	HY08-M6	HY12-C
	HY14-100	1	14	34	50	100	71	40	39~45	HY14-M8	-
	HY16-100	1	16	35	50	100	71	40	42~48	HY14-M8	-
	HY18-100	1	18	40	50	100	71	40	42~48	HY18-M12	-
	HY20-105	2	20	37	53	105	76	42	44~50	HY18-M12	HY20-C
	HY25-120	2	25	43	57	120	91	37	50~56	HY25-M16	-
HY32-120	2	32	50.5	62.5	120	91	31	53~60	HY25-M16	HY32-C	

Remarks / 備註

- 直接夾持精度 Direct Clamping
- 刀具柄徑公差 h6( h6 Tooling Diameter Tolerance)
- 若需搭配中心出水管, 請參考 page.145 規格表
- 若需出水型刀把, 請參考 page.26 選用說明

Applications / 應用



Drilling  
鑽孔



Reaming  
銜孔



Endmilling  
銑削



# SR 細長型熱縮刀把

## SLIM TYPE SHRINK FIT CHUCK



Balancing / 動平衡

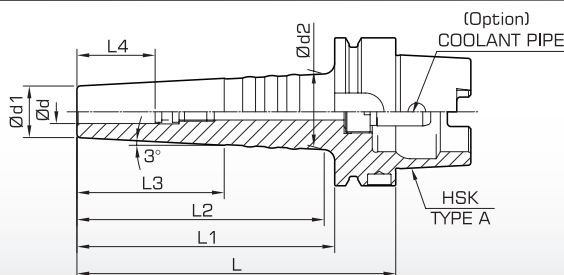
Dimensions / 尺寸標示

**G6.3**

Max.25,000 RPM  
Or U ≤ 1gmm

Option / 選配  
**G2.5**

Max.25,000 RPM  
Or U ≤ 1gmm



page.144



Order No. 訂購編號		ød	ød1	ød2	L	L1	L2	L3	Tool Clamping Depth L4 刀具夾持深度	Screw 調整螺絲
HSK50A	SR04-125	4	10	19.5	125	99	96.2	30	min18	-
	SR06-125	6	12	21.5	125	99	96.2	40	21.5~31.5	HY06-M5
	SR08-125	8	14	23.5	125	99	96.2	40	25.5~35.5	HY08-M6
	SR10-125	10	16	25.5	125	99	96.2	50	31.5~41.5	HY08-M6
HSK63A	SR04-120	4	10	18.8	120	94	89.3	30	min18	-
	SR04-150	4	10	21.8	150	124	119.3	30	min18	-
	SR06-120	6	12	20.8	120	94	89.3	40	21.5~31.5	HY06-M5
	SR06-150	6	12	23.8	150	124	119.3	40	21.5~31.5	HY06-M5
	SR08-120	8	14	22.8	120	94	89.3	40	25.5~35.5	HY08-M6
	SR08-150	8	14	25.8	150	124	119.3	40	25.5~35.5	HY08-M6
	SR10-120	10	16	24.9	120	94	89.3	50	31.5~41.5	HY08-M6
	SR10-150	10	16	27.9	150	124	119.3	50	31.5~41.5	HY08-M6
HSK100A	SR04-165	4	10	22	165	136	121.8	30	min18	-
	SR06-165	6	12	24.1	165	136	121.8	40	21.5~31.5	HY06-M5
	SR08-165	8	14	26.1	165	136	121.8	40	25.5~35.5	HY08-M6
	SR10-165	10	16	28.1	165	136	121.8	50	31.5~41.5	HY08-M6
	SR12-165	12	18	30.1	165	136	121.8	55	36.5~46.5	HY14-M8

Remarks / 備註

- 直接夾持精度 Direct Clamping
- 刀具柄徑公差 h6( h6 Tooling Diameter Tolerance)

Applications / 應用



Drilling  
鑽孔



Reaming  
銜孔



Endmilling  
銑削



Mini Diameter  
小徑加工

# CR 標準型熱縮刀把

## CR STANDARD SHRINK FIT CHUCK



Balancing / 動平衡

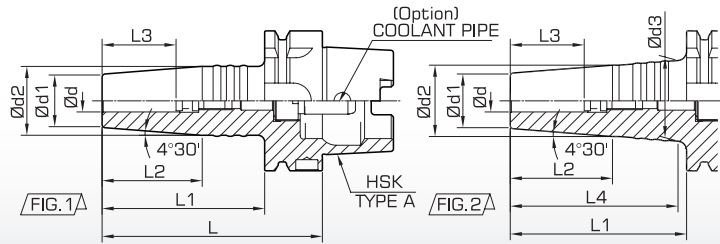
**G6.3**

Max.25,000 RPM  
Or  $U \leq 1\text{gmm}$

Option / 選配  
**G2.5**

Max.25,000 RPM  
Or  $U \leq 1\text{gmm}$

Dimensions / 尺寸標示



page.144



Order No. 訂購編號	FIG	ød	ød1	ød2	ød3	L	L1	L2	Tool Clamping Depth L3 刀具夾持深度	L4	Screw 調整螺絲	
HSK50A	CR04-060	1	4	16	21.2	-	60	34	-	min18	-	
	CR04-080	1	4	16	23	-	80	54	40	min18	-	
	CR06-080	1	6	21	27	-	80	54	34.3	21.5~31.5	-	HY06-M5
	CR08-080	1	8	21	27	-	80	54	34.3	25.5~35.5	-	HY08-M6
	CR10-085	1	10	24	32	-	85	59	47	31.5~41.5	-	HY08-M6
	CR12-090	1	12	24	32	-	90	64	47	36.5~46.5	-	HY14-M8
HSK63A	CR16-095	1	16	27	34	-	95	69	40.7	39.5~49.5	-	HY18-M12
	CR04-080	1	4	16	23	-	80	54	40	min18	-	-
	CR06-080	1	6	21	27	-	80	54	34.3	21.5~31.5	-	HY06-M5
	CR06-130	2	6	21	27	33.5	130	104	38.1	21.5~31.5	101.2	HY06-M5
	CR06-160	2	6	21	27	38.2	160	134	38.1	21.5~31.5	131.2	HY06-M5
	CR08-080	1	8	21	27	-	80	54	34.3	25.5~35.5	-	HY08-M6
	CR08-130	2	8	21	27	33.5	130	104	38.1	25.5~35.5	101.2	HY08-M6
	CR08-160	2	8	21	27	38.2	160	134	38.1	25.5~35.5	131.2	HY08-M6
	CR10-085	1	10	24	32	-	85	59	47	31.5~41.5	-	HY08-M6
	CR10-130	2	10	24	32	37.7	130	104	50.8	31.5~41.5	101.2	HY08-M6
	CR10-160	2	10	24	32	42.4	160	134	50.8	31.5~41.5	131.2	HY08-M6
	CR12-090	1	12	24	32	-	90	64	47	36.5~46.5	-	HY14-M8
	CR12-130	2	12	24	32	37.7	130	104	50.8	36.5~46.5	101.2	HY14-M8
	CR12-160	2	12	24	32	42.4	160	134	50.8	36.5~46.5	131.2	HY14-M8
	CR16-095	1	16	27	34	-	95	69	40.6	39.5~49.5	-	HY18-M12
	CR16-130	2	16	27	34	40.5	130	104	44.5	39.5~49.5	101.2	HY18-M12
	CR16-160	2	16	27	34	45.2	160	134	44.5	39.5~49.5	131.2	HY18-M12
	CR20-100	1	20	33	42	-	100	74	53.4	41.5~51.5	-	HY18-M12
	CR20-130	2	20	33	42	47.2	130	104	57.2	41.5~51.5	103.1	HY18-M12
	CR20-160	2	20	33	42	48.8	160	134	57.2	41.5~51.5	133.1	HY18-M12
CR25-115	1	25	44	53	-	115	89	51.5	47.5~57.5	-	HY25-M16	
CR25-130	1	25	44	53	-	130	104	51.5	47.5~57.5	-	HY25-M16	
CR25-160	1	25	44	53	-	160	134	51.5	47.5~57.5	-	HY25-M16	
CR32-120	1	32	44	53	-	120	94	51.5	50.5~60.5	-	HY25-M16	
CR32-160	1	32	44	53	-	160	134	51.5	50.5~60.5	-	HY25-M16	

Applications / 應用



Drilling  
鑽孔



Reaming  
鉸孔



Endmilling  
銑削

# CR 標準型熱縮刀把 CR STANDARD SHRINK FIT CHUCK



Balancing / 動平衡	Dimensions / 尺寸標示
<p><b>G6.3</b> Max.25,000 RPM Or U ≤ 1gmm</p> <p>Option / 選配 <b>G2.5</b> Max.25,000 RPM Or U ≤ 1gmm</p>	

page.144



Order No. 訂購編號	FIG	ød	ød1	ød2	ød3	L	L1	L2	L3	L4	Screw 調整螺絲	
HSK100A	CR06-085	1	6	21	27	-	85	56	34.3	21.5~31.5	-	HY06-M5
	CR06-130	2	6	21	27	32	130	101	38.1	21.5~31.5	91.8	HY06-M5
	CR06-160	2	6	21	27	36.7	160	131	38.1	21.5~31.5	121.8	HY06-M5
	CR08-085	1	8	21	27	-	85	56	34.3	25.5~35.5	-	HY08-M6
	CR08-130	2	8	21	27	32	130	101	38.1	25.5~35.5	91.8	HY08-M6
	CR08-160	2	8	21	27	36.7	160	131	38.1	25.5~35.5	121.8	HY08-M6
	CR10-090	1	10	24	32	-	90	61	47	31.5~41.5	-	HY08-M6
	CR10-130	2	10	24	32	36.2	130	101	50.8	31.5~41.5	91.8	HY08-M6
	CR10-160	2	10	24	32	40.9	160	131	50.8	31.5~41.5	121.8	HY08-M6
	CR12-095	1	12	24	32	-	95	66	47	36.5~46.5	-	HY14-M8
	CR12-130	2	12	24	32	36.2	130	101	50.8	36.5~46.5	91.8	HY14-M8
	CR12-160	2	12	24	32	40.9	160	131	50.8	36.5~46.5	121.8	HY14-M8
	CR16-100	1	16	27	34	-	100	71	40.7	39.5~49.5	-	HY18-M12
	CR16-130	2	16	27	34	39	130	101	45.5	39.5~49.5	91.8	HY18-M12
	CR16-160	2	16	27	34	43.7	160	131	45.5	39.5~49.5	121.8	HY18-M12
	CR20-105	1	20	33	42	-	105	76	53.4	41.5~51.5	-	HY18-M12
	CR20-130	2	20	33	42	45.4	130	101	57.2	41.5~51.5	91.8	HY18-M12
	CR20-160	2	20	33	42	47	160	131	57.2	41.5~51.5	121.8	HY18-M12
	CR25-115	1	25	44	53	-	115	86	52.1	47.5~57.5	-	HY25-M16
	CR25-160	2	25	44	53	60.1	160	131	55.9	47.5~57.5	126.4	HY25-M16
CR32-120	1	32	44	53	-	120	91	52.1	50.5~60.5	-	HY25-M16	
CR32-160	2	32	44	53	60.1	160	131	55.9	50.5~60.5	126.4	HY25-M16	

Remarks / 備註

- 刀具柄徑公差 h6 (h6 Tooling Diameter Tolerance)
- 若需搭配中心出水管，請參考 page.145 規格表
- 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Drilling  
鑽孔



Reaming  
銜孔



Endmilling  
銑削

# HER 筒夾刀把

## HER COLLET CHUCK



Balancing / 動平衡	Dimensions / 尺寸標示
<p><b>G6.3</b> Max.25,000 RPM Or U ≤ 1gmm</p> <p>Option / 選配 <b>G2.5</b> Max.25,000 RPM Or U ≤ 1gmm</p>	

HSK-A DIN 69893 FORM A

Order No. 訂購編號	Range 夾持範圍	Ød	Ød1	L	L1	Tool Clamping Depth L2 刀具夾持深度	<span style="font-size: small;">page.146</span> <span style="font-size: small;">page.144</span> <span style="font-size: small;">page.120</span> <span style="font-size: small;">page.149</span>			
							Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手
HSK50A	HER16-100	1.0~10.0	30	100	74	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER20-100	1.0~13.0	32	100	74	32~56	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER25-100	1.0~16.0	40	100	74	35~56	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
HSK63A	HER16-100	1.0~10.0	30	100	74	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER16-160	1.0~10.0	30	160	134	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER20-100	1.0~13.0	32	100	74	32~56	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER20-160	1.0~13.0	32	160	134	32~68	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER25-100	1.0~16.0	40	100	74	35~55	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
	HER25-160	1.0~16.0	40	160	134	35~73	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
	HER32-100	2.0~20.0	50	100	74	41~55	CAP-HER32	ER-M22	ER32-HP	PHS-20-RO500
HSK100A	HER32-160	2.0~20.0	50	160	134	41~78	CAP-HER32	ER-M22	ER32-HP	PHS-20-RO500
	HER16-100	1.0~10.0	30	100	71	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER16-160	1.0~10.0	30	160	131	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER20-100	1.0~13.0	32	100	71	32~50	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER20-160	1.0~13.0	32	160	131	32~68	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER25-100	1.0~16.0	40	100	71	35~53	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
	HER25-160	1.0~16.0	40	160	131	35~73	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
HER32-100	2.0~20.0	50	100	71	41~52	CAP-HER32	ER-M22	ER32-HP	PHS-20-RO500	
HER32-160	2.0~20.0	50	160	131	41~78	CAP-HER32	ER-M22	ER32-HP	PHS-20-RO500	

Remarks / 備註

- 需配合 3μ HP 筒夾 With 3μ HP Grade Collet
- 若需搭配中心出水管，請參考 page.145 規格表
- 若需出水型刀把，請參考 page.26 選用說明
- 筒夾夾持為一對一整數值

Applications / 應用



# THER 小徑刀把 THER SLIM COLLET CHUCK



Balancing / 動平衡	Dimensions / 尺寸標示
<p><b>G6.3</b> Max.25,000 RPM Or U ≤ 1gmm</p> <p>Option / 選配 <b>G2.5</b> Max.25,000 RPM Or U ≤ 1gmm</p>	

Order No. 訂購編號	Range $\phi d$ 夾持範圍	$\phi d1$	$\phi d2$	L	L1	L2	Tool Clamping Depth L3 刀具夾持深度	page.146	page.144	page.120	page.149	
								Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手	
HSK50A	THER11-100	1.0~7.0	16	20.6	100	74	69.2	19~48	CAP-THER11	ER-M8	ER11-HP	PHS-20-RO160
	THER16-100	1.0~10.0	22	26.2	100	74	69.2	29~58	CAP-THER16	ER-M11	ER16-HP	PHS-20-RO220
HSK63A	THER11-100	1.0~7.0	16	20.3	100	74	66.3	19~48	CAP-THER11	ER-M8	ER11-HP	PHS-20-RO160
	THER11-130	1.0~7.0	16	22.9	130	104	96.3	19~48	CAPTHER11	ER-M8	ER11-HP	PHS-20-RO160
	THER11-160	1.0~7.0	16	25.5	160	134	126.3	19~48	CAP-THER11	ER-M8	ER11-HP	PHS-20-RO160
	THER16-100	1.0~10.0	22	26.2	100	74	69.2	29~58	CAP-THER16	ER-M11	ER16-HP	PHS-20-RO220
	THER16-130	1.0~10.0	22	28.8	130	104	99.2	29~58	CAP-THER16	ER-M11	ER16-HP	PHS-20-RO220
	THER16-160	1.0~10.0	22	31.4	160	134	129.2	29~58	CAP-THER16	ER-M11	ER16-HP	PHS-20-RO220

Remarks / 備註

- 需配合 3 $\mu$  HP 筒夾 With 3 $\mu$  HP Grade Collet
- 若需搭配中心出水管，請參考 page.145 規格表
- 若需出水型刀把，請參考 page.26 選用說明
- 筒夾夾持為一對一整數值

Applications / 應用



# 高速鋼珠螺帽刀把

## ER COLLET CHUCK

( HIGH SPEED BEARING NUT )



Balancing / 動平衡	Dimensions / 尺寸標示
<p><b>G6.3</b> Max.25,000 RPM Or U ≤ 1gmm</p> <p>Option / 選配 <b>G2.5</b> Max.25,000 RPM Or U ≤ 1gmm</p>	

HSK-A DIN 69893 FORM A

Order No. 訂購編號	Range 夾持範圍	Range $\varnothing d$	$\varnothing d1$	L	L1	Tool Clamping Depth L2 刀具夾持深度	page.146	page.144	page.120	page.148
							Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手
<b>HSK50A</b>	ER16-100BR	1.0~10.0	32	100	74	29~58	CAP-ER16BR	ER-M11	ER16-HP	PHS-ER16B
	ER32-100BR	2.0~20.0	51	100	74	41~56	CAP-ER32BR	ER-M22	ER32-HP	PHS-ER32
<b>HSK63A</b>	ER16-100BR	1.0~10.0	32	100	74	29~58	CAP-ER16BR	ER-M11	ER16-HP	PHS-ER16B
	ER16-160BR	1.0~10.0	32	160	134	29~58	CAP-ER16BR	ER-M11	ER16-HP	PHS-ER16B
	ER25-100BR	1.0~16.0	43	100	74	35~55	CAP-ER25BR	ER-M18	ER25-HP	PHS-ER25
	ER25-160BR	1.0~16.0	43	160	134	35~73	CAP-ER25BR	ER-M18	ER25-HP	PHS-ER25
	ER32-100BR	2.0~20.0	51	100	74	41~55	CAP-ER32BR	ER-M22	ER32-HP	PHS-ER32
	ER32-160BR	2.0~20.0	51	160	134	41~78	CAP-ER32BR	ER-M22	ER32-HP	PHS-ER32
<b>HSK100A</b>	ER16-100BR	1.0~10.0	32	100	71	29~58	CAP-ER16BR	ER-M11	ER16-HP	PHS-ER16B
	ER16-160BR	1.0~10.0	32	160	131	29~58	CAP-ER16BR	ER-M11	ER16-HP	PHS-ER16B
	ER25-100BR	1.0~16.0	43	100	71	35~53	CAP-ER25BR	ER-M18	ER25-HP	PHS-ER25
	ER25-160BR	1.0~16.0	43	160	131	35~73	CAP-ER25BR	ER-M18	ER25-HP	PHS-ER25
	ER32-100BR	2.0~20.0	51	100	71	41~49	CAP-ER32BR	ER-M22	ER32-HP	PHS-ER32
	ER32-160BR	2.0~20.0	51	160	131	41~78	CAP-ER32BR	ER-M22	ER32-HP	PHS-ER32

Remarks / 備註

- 需配合 3 $\mu$  HP 筒夾 With 3 $\mu$  HP Grade Collet
- 若需搭配中心出水管，請參考 page.145 規格表
- 若需出水型刀把，請參考 page.26 選用說明

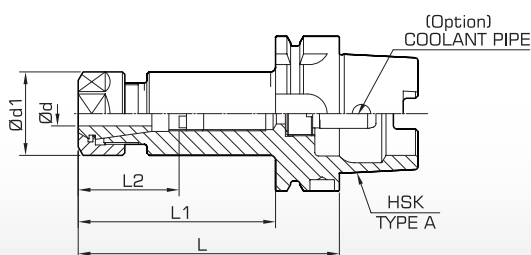
Applications / 應用



# ER 筒夾刀把 ER COLLET CHUCK



## Dimensions / 尺寸標示



Order No. 訂購編號	Range $\varnothing d$ 夾持範圍	$\varnothing d1$	L	L1	Tool Clamping Depth L2 刀具夾持深度	page.146		page.144		page.120		page.148	
						Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手				
HSK50A	ER16-100	0.6~10.0	28	100	74	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16			
	ER32-100	1.6~20.0	50	100	74	41~56	CAP-ER32	ER-M22	ER32	PHS-ER32			
HSK63A	ER16-100	0.6~10.0	28	100	74	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16			
	ER16-160	0.6~10.0	28	160	134	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16			
	ER25-100	0.6~16.0	42	100	74	35~55	CAP-ER25	ER-M18	ER25	PHS-ER25			
	ER25-160	0.6~16.0	42	160	134	35~73	CAP-ER25	ER-M18	ER25	PHS-ER25			
	ER32-100	1.6~20.0	50	100	74	41~54	CAP-ER32	ER-M22	ER32	PHS-ER32			
	ER32-160	1.6~20.0	50	160	134	41~78	CAP-ER32	ER-M22	ER32	PHS-ER32			
	ER40-120	2.6~26.0	63	120	94	50~68	CAP-ER40	ER-M28	ER40	PHS-ER40			
HSK100A	ER16-100	0.6~10.0	28	100	71	29~54	CAP-ER16	ER-M11	ER16	PHS-ER16			
	ER16-160	0.6~10.0	28	160	131	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16			
	ER25-100	0.6~16.0	42	100	71	35~50	CAP-ER25	ER-M18	ER25	PHS-ER25			
	ER25-160	0.6~16.0	42	160	131	35~73	CAP-ER25	ER-M18	ER25	PHS-ER25			
	ER32-100	1.6~20.0	50	100	71	41~49	CAP-ER32	ER-M22	ER32	PHS-ER32			
	ER32-160	1.6~20.0	50	160	131	41~78	CAP-ER32	ER-M22	ER32	PHS-ER32			
	ER40-120	2.6~26.0	63	120	97	50~68	CAP-ER40	ER-M28	ER40	PHS-ER40			

### Remarks / 備註

- 若需搭配中心出水管，請參考 page.145 規格表
- 若需出水型刀把，請參考 page.26 選用說明

### Applications / 應用



# PFK 高速刀把

## PFK HIGH SPEED COLLET CHUCK



Balancing / 動平衡

**G6.3**

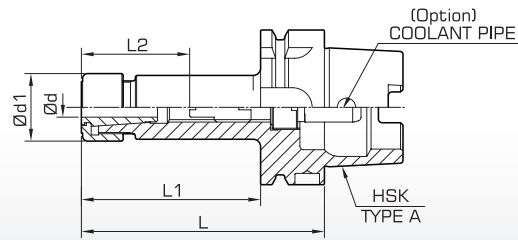
Max.25,000 RPM  
Or U ≤ 1gmm

Option / 選配

**G2.5**

Max.25,000 RPM  
Or U ≤ 1gmm

Dimensions / 尺寸標示



page.147

page.144

page.117

page.149



Nut  
螺帽



Screw  
調整螺絲



Collet  
筒夾



Wrench  
扳手

Order No. 訂購編號	Range 夾持範圍	Range $\phi d$	$\phi d1$	L	L1	Tool Clamping Depth L2 刀具夾持深度				
							Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手
HSK50A	PFK10-100S	1.75~10.0	27.5	100	74	30~40	CAP-PFK10S	PFK-M12	SK10P	PHS-10-TW275
	PFK16-100S	2.75~16.0	40	100	74	40~48	CAP-PFK16S	PFK-M12	SK16P	PHS-20-RO400
HSK63A	PFK10-105S	1.75~10.0	27.5	105	79	30~40	CAP-PFK10S	PFK-M12	SK10P	PHS-10-TW275
	PFK16-105S	2.75~16.0	40	105	79	40~48	CAP-PFK16S	PFK-M12	SK16P	PHS-20-RO400

Remarks / 備註

- 需配合 3μ P 筒夾 With 3μ P Grade Collet

Applications / 應用



Drilling  
鑽孔



Reaming  
鉸孔



Endmilling  
銑削



Tapping  
攻牙



# PFK 筒夾刀把

## PFK COLLET CHUCK



Balancing / 動平衡	Dimensions / 尺寸標示
<p><b>G6.3</b> Max.25,000 RPM Or <math>U \leq 1\text{gmm}</math></p> <p>Option / 選配 <b>G2.5</b> Max.25,000 RPM Or <math>U \leq 1\text{gmm}</math></p>	

Order No. 訂購編號	FIG	Range 夾持範圍 ød	ød1	ød2	L	L1	L2	Tool Clamping Depth L3 刀具夾持 深度	page.147 Nut 螺帽	page.144 Screw 調整螺絲	page.117 Collet 筒夾	page.148 Wrench 扳手
HSK50A	1	0.7~6.0	19.5	32	100	74	63	21~35	CAP-PFK6	PFK-M8	SK6P	PHS-PFK6
	2	1.75~10.0	27.5	27.5	100	74	-	30~40	CAP-PFK10	PFK-M12	SK10P	PHS-PFK10
	2	2.75~16.0	40	40	100	74	-	40~48	CAP-PFK16	PFK-M12	SK16P	PHS-PFK16
HSK63A	1	0.7~6.0	19.5	32	100	74	63	21~35	CAP-PFK6	PFK-M8	SK6P	PHS-PFK6
	2	1.75~10.0	27.5	27.5	105	79	-	30~40	CAP-PFK10	PFK-M12	SK10P	PHS-PFK10
	2	2.75~16.0	40	40	105	79	-	40~48	CAP-PFK16	PFK-M12	SK16P	PHS-PFK16
	2	16.0~25.4	55	55	120	94	-	50~61	CAP-PFK25	PFK-M12	SK25P	PHS-PFK25

Remarks / 備註

- 需配合 3μ P 筒夾 With 3μ P Grade Collet

Applications / 應用

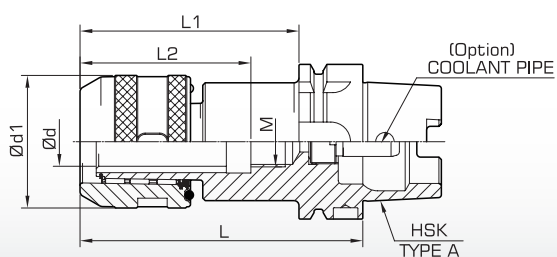


# 強力銑刀刀把

## POWER MILLING CHUCK



Dimensions / 尺寸標示



page.118

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Order No. 訂購編號		$\varnothing d$	$\varnothing D$	M	L	L1	Tool Clamping Depth L2 刀具夾持深度	Collet 筒夾	Wrench 扳手
HSK50A	PFC25-120	25	59	M22x1.5	120	94	68	-	PHS-ER40
HSK63A	PFC20-105	20	52	M18x1.5	105	79	63	PFC20	PHS-ER32
	PFC25-135	25	59	M22x1.5	135	109	68	-	PHS-ER40
	PFC32-135	32	69	M28x1.5	135	109	77	PFC32	PHS-PFC32
HSK100A	PFC20-120	20	52	M18x1.5	120	91	63	PFC20	PHS-ER32
	PFC25-135	25	59	M22x1.5	135	106	68	-	PHS-ER40
	PFC32-150	32	69	M28x1.5	150	121	77	PFC32	PHS-PFC32

Remarks / 備註

- 若需搭配中心出水管，請參考 page.145 規格表
- 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Reaming  
鉸孔



Endmilling  
銑削

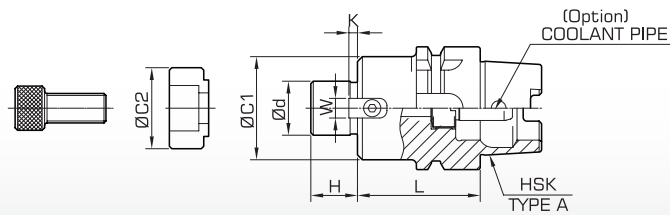
# FMB 面銑刀用刀把

## FACE MILL ARBOR

(METRIC SIZE)



Dimensions / 尺寸標示



Order No.  
訂購編號

		Ød	ØC1	ØC2	L	H	K	W
HSK50A	FMB16-045S ★	16	32	20	45	17	3.8	8
	FMB22-050	22	48	28	50	18	5	10
	FMB22-050S ★	22	40	28	50	18	5	10
	FMB27-055	27	58	33	55	20	6	12
	FMB27-055S ★	27	48	33	55	20	6	12
HSK63A	FMB16-045S ★	16	32	20	45	17	3.8	8
	FMB22-050	22	48	28	50	18	5	10
	FMB22-050S ★	22	40	28	50	18	5	10
	FMB27-055	27	58	33	55	20	6	12
	FMB27-055S ★	27	48	33	55	20	6	12
	FMB32-055	32	78	40	55	22	7	14
	FMB32-055S ★	32	58	40	55	22	7	14
FMB40-060	40	79	50	60	26	8.5	15.9	
HSK100A	FMB22-075	22	48	28	75	18	5	10
	FMB27-075	27	58	33	75	20	6	12
	FMB32-075	32	78	40	75	22	7	14
	FMB40-075	40	89	50	75	26	8.5	15.9

Remarks / 備註

- ★配合 SANDVIK 面銑刀之刀把規格尺寸  
APPLY TO SANDVIK'S FACE MILLER
- 若需搭配中心出水管，請參考 page.145 規格表

Applications / 應用



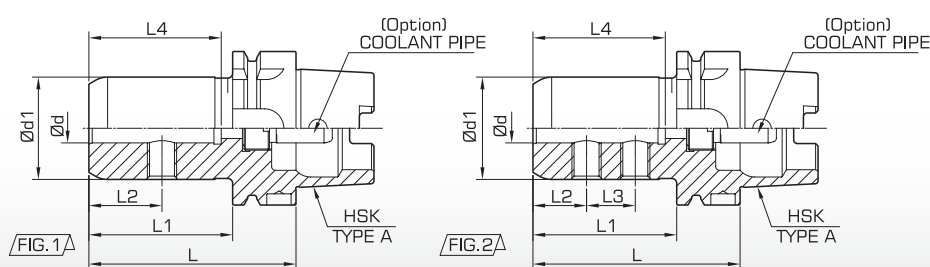
Face Milling  
面銑

# SLE 側固刀把

## SIDE LOCK ARBOR



Dimensions / 尺寸標示



page.144



Order No. 訂購編號	FIG	ød	ød1	L	L1	L2	L3	L4	Screw 固定螺絲	
HSK50A	SLE06-065	1	6	25	65	39	18	-	36	SLA-M6
	SLE08-065	1	8	28	65	39	18	-	40	SLA-M8
	SLE10-080	1	10	35	80	54	20	-	50	SLA-M10
	SLE12-080	1	12	42	80	54	22.5	-	55	SLA-M12
	SLE16-080	1	16	48	80	54	24	-	55	SLA-M12
	SLE20-080	1	20	52	80	54	25	-	55	SLA-M16
HSK63A	SLE06-065	1	6	25	65	39	18	-	36	SLA-M6
	SLE08-065	1	8	28	65	39	18	-	40	SLA-M8
	SLE10-080	1	10	35	80	54	20	-	50	SLA-M10
	SLE12-080	1	12	42	80	54	22.5	-	55	SLA-M12
	SLE16-080	1	16	48	80	54	24	-	55	SLA-M12
	SLE20-080	1	20	52	80	54	25	-	55	SLA-M16
HSK100A	SLE16-100	1	16	48	100	71	24	-	60	SLA-M12
	SLE20-100	1	20	52	100	71	25	-	60	SLA-M16
	SLE25-100	2	25	57	100	71	24	25	65	SLA-M16
	SLE32-100	2	32	63	100	71	24	28	67	SLA-M16
	SLE40-120	2	40	80	120	91	30	32	80	SLA-M20

Remarks / 備註

• 若需搭配中心出水管，請參考 page.145 規格表

Applications / 應用



Endmilling  
銑削



# HSK E TYPE

DIN 69893 FORM E

# 油壓刀把 HYDRAULIC CHUCK



Balancing / 動平衡

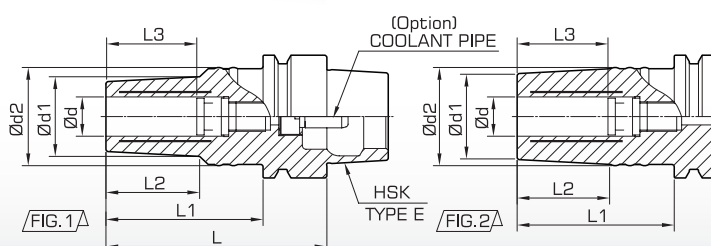
**G6.3**

Max.30,000 RPM  
Or U ≤ 1gmm

Option / 選配  
**G2.5**

Max.30,000 RPM  
Or U ≤ 1gmm

Dimensions / 尺寸標示



page.144

page.118



Order No. 訂購編號	FIG	ød	ød1	ød2	L	L1	L2	Tool Clamping Depth L3 刀具夾持深度	Screw 調整螺絲	Collet 筒夾	
HSK40E	HY06-070	1	6	26	33.8	70	50	24.5	31~36	HY06-M5	-
	HY08-070	1	8	28	33.8	70	50	25.5	31~36	HY08-M6	-
	HY10-080	1	10	30	33.8	80	60	35.5	35~40	HY08-M6	-
	HY12-080	1	12	32	33.8	80	60	40	39~45	HY08-M6	HY12-C
HSK50E	HY06-080	1	6	26	40	80	54	24.5	31~36	HY06-M5	-
	HY08-080	1	8	28	40	80	54	25.5	31~36	HY08-M6	-
	HY10-080	1	10	30	40	80	54	35.5	35~40	HY08-M6	-
	HY12-090	1	12	32	40	90	64	40	39~45	HY08-M6	HY12-C
	HY14-090	1	14	34	40	90	64	40	39~45	HY14-M8	-
	HY16-090	1	16	38	40	90	64	40	42~48	HY14-M8	-
	HY18-090	2	18	34	42	90	64	40	42~48	HY18-M12	-
HY20-090	2	20	37	42	90	64	11	44~50	HY18-M12	HY20-C	

Remarks / 備註

- 直接夾持精度 Direct Clamping
- 刀具柄徑公差 h6 (h6 Tooling Diameter Tolerance)
- 若需搭配中心出水管，請參考 page.145 規格表
- 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Drilling  
鑽孔



Reaming  
銜孔



Endmilling  
銑削

# SR 細長型熱縮刀把 SLIM TYPE SHRINK FIT CHUCK



Balancing / 動平衡

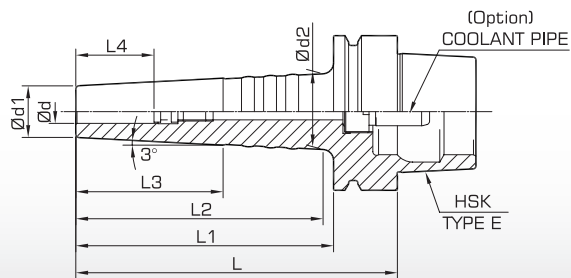
Dimensions / 尺寸標示

**G6.3**

Max.30,000 RPM  
Or U ≤ 1gmm

Option / 選配  
**G2.5**

Max.30,000 RPM  
Or U ≤ 1gmm



page.144

Order No. 訂購編號		$\varnothing d$	$\varnothing d_1$	$\varnothing d_2$	L	L1	L2	L3	Tool Clamping Depth L4 刀具夾持深度	Screw 調整螺絲
HSK25E	SR04-035	4	10	12.5	35	25	-	-	min18	-
	SR06-035	6	12	14.5	35	25	-	-	min24	-
HSK32E	SR04-060	4	10	14.1	60	40	-	-	min18	-
	SR04-090	4	10	16.7	90	70	-	30	min18	-
	SR06-060	6	12	16.1	60	40	-	-	min24	-
	SR06-090	6	12	18.7	90	70	-	40	21.5~31.5	HY06-M5
	SR08-060	8	14	18.1	60	40	-	-	min30	-
	SR08-090	8	14	20.7	90	70	-	40	25.5~35.5	HY08-M6
	SR10-060	10	16	20.1	60	40	-	-	min35	-
	SR10-090	10	16	22.7	90	70	-	50	31.5~41.5	HY08-M6
HSK40E	SR04-090	4	10	16.5	90	70	67.2	30	min18	-
	SR04-120	4	10	19.5	120	100	97.2	30	min18	-
	SR06-090	6	12	18.5	90	70	67.2	40	21.5~31.5	HY06-M5
	SR06-120	6	12	21.6	120	100	97.2	40	21.5~31.5	HY06-M5
	SR08-090	8	14	20.6	90	70	67.2	40	25.5~35.5	HY06-M5
	SR08-120	8	14	23.6	120	100	97.2	40	25.5~35.5	HY08-M6
	SR10-090	10	16	22.8	90	70	-	50	31.5~41.5	HY08-M6
	SR10-120	10	16	25.6	120	100	97.2	50	31.5~41.5	HY08-M6
HSK50E	SR04-125	4	10	19.4	125	99	96.2	30	min18	-
	SR06-125	6	12	21.5	125	99	96.2	40	21.5~31.5	HY06-M5
	SR08-125	8	14	23.5	125	99	96.2	40	25.5~35.5	HY08-M6
	SR10-125	10	16	25.5	125	99	96.2	50	31.5~41.5	HY08-M6

Remarks / 備註

- 直接夾持精度 Direct Clamping
- 刀具柄徑公差 h6( h6 Tooling Diameter Tolerance)
- 若需搭配中心出水管，請參考 page.145 規格表
- 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Drilling  
鑽孔



Reaming  
銜孔



Endmilling  
銑削



Mini Diameter  
小徑加工

# CR 標準型熱縮刀把

## CR STANDARD SHRINK FIT CHUCK



Balancing / 動平衡

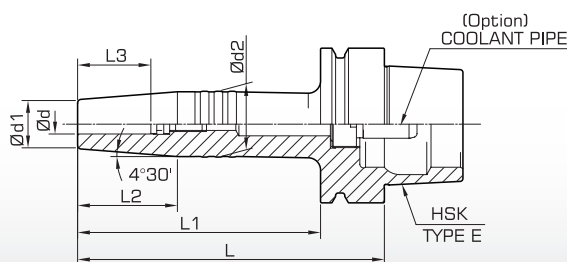
Dimensions / 尺寸標示

**G6.3**

Max.30,000 RPM  
Or U ≤ 1gmm

Option / 選配  
**G2.5**

Max.30,000 RPM  
Or U ≤ 1gmm



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Order No. 訂購編號		ød	ød1	ød2	L	L1	L2	Tool Clamping Depth L3 刀具夾持深度	Screw 調整螺絲
HSK32E	CR04-060	4	15	20	60	40	31.8	min18	-
	CR06-070	6	21	26	70	50	31.8	21.5~31.5	HY06-M5
	CR08-070	8	21	26	70	50	31.8	25.5~35.5	HY08-M6
	CR10-080	10	24	26	80	60	44.7	31.5~41.5	HY08-M6
HSK40E	CR04-060	4	15	20	60	40	31.8	min18	-
	CR06-080	6	21	27	80	60	34.3	21.5~31.5	HY06-M5
	CR08-080	8	21	27	80	60	34.3	25.5~35.5	HY08-M6
	CR10-080	10	24	32	80	60	47	31.5~41.5	HY08-M6
HSK50E	CR04-060	4	16	21.2	60	34	-	min18	-
	CR04-080	4	16	23	80	54	34.3	min18	-
	CR06-080	6	21	27	80	54	34.3	21.5~31.5	HY06-M5
	CR08-080	8	21	27	80	54	34.3	25.5~35.5	HY08-M6
	CR10-085	10	24	32	85	59	47	31.5~41.5	HY08-M6
	CR12-090	12	24	32	90	64	47	36.5~46.5	HY14-M8
CR16-095	16	27	34	95	69	40.7	39.5~49.5	HY18-M12	

Remarks / 備註

- 刀具柄徑公差 h6( h6 Tooling Diameter Tolerance)
- 若需搭配中心出水管，請參考 page.145 規格表
- 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Drilling  
鑽孔



Reaming  
鉸孔



Endmilling  
銑削



# HER 筒夾刀把 HER COLLET CHUCK



Balancing / 動平衡	Dimensions / 尺寸標示
<p><b>G6.3</b> Max.30,000 RPM Or <math>U \leq 1\text{mm}</math></p> <p>Option / 選配 <b>G2.5</b> Max.30,000 RPM Or <math>U \leq 1\text{mm}</math></p>	

Order No. 訂購編號	Range 夾持範圍	Ød	Ød1	L	L1	Tool Clamping Depth L2 刀具夾持深度	page.146	page.144	page.120	page.149
							Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手
HSK40E	HER16-060	1.0~10.0	30	60	40	max39.5	CAP-HER16	-	ER16-HP	PHS-20-RO300
	HER20-080	1.0~13.0	32	80	60	32~41	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER25-080	1.0~16.0	40	80	60	35~42	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
HSK50E	HER16-100	1.0~10.0	30	100	74	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER20-100	1.0~13.0	32	100	74	32~56	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER25-100	1.0~16.0	40	100	74	35~56	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
	HER32-100	2.0~20.0	50	100	74	41~55	CAP-HER32	ER-M22	ER32-HP	PHS-20-RO500

Remarks / 備註

- 需配合 3μ HP 筒夾 With 3μ HP Grade Collet
- 若需搭配中心出水管，請參考 page.145 規格表
- 若需出水型刀把，請參考 page.26 選用說明
- 筒夾夾持為一對一整數值

Applications / 應用



# THER 小徑刀把

## THER SLIM COLLET CHUCK



Balancing / 動平衡	Dimensions / 尺寸標示
HSK25E $U \leq 1\text{gmm}$  HSK32E $U \leq 1\text{gmm}$	

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Order No. 訂購編號	Range 夾持範圍	Range $\phi d$	$\phi d1$	L	L1	Tool Clamping Depth L2 刀具夾持深度	Nut 螺帽	Collet 筒夾	Wrench 扳手
HSK25E	THER16-043	0.6~10.0	22	43	33	max32	CAP-THER16	ER16-HP	PHS-20-RO220
HSK32E	THER16-060	0.6~10.0	22	76	40	max40	CAP-THER16	ER16-HP	PHS-20-RO220

Remarks / 備註

- 需配合 3 $\mu$  HP 筒夾 With 3 $\mu$  HP Grade Collet
- 筒夾夾持為一對一整數值

Applications / 應用



Drilling  
鑽孔



Reaming  
鉸孔



Endmilling  
銑削



Tapping  
攻牙



Mini Diameter  
小徑加工

# ER 高速小徑刀把

## ER HIGH SPEED SLIM CHUCK



Balancing / 動平衡	Dimensions / 尺寸標示
HSK25E $U \leq 1\text{gmm}$  HSK32E $U \leq 1\text{gmm}$	

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Order No. 訂購編號	Range 夾持範圍	Range $\phi d$	$\phi d1$	L	L1	Tool Clamping Depth L2 刀具夾持深度	Nut 螺帽	Collet 筒夾	Wrench 扳手
HSK25E	ER16-043MS	0.6~10.0	22	43	33	max32	CAP-ER16MS	ER16	PHS-ER16MS
HSK32E	ER16-060MS	0.6~10.0	22	60	40	max40	CAP-ER16MS	ER16	PHS-ER16MS
	ER20-060MS	1.0~10.0	28	60	40	max38	CAP-ER20MS	ER20	PHS-ER20MS

Applications / 應用



Drilling  
鑽孔



Endmilling  
銑削



Tapping  
攻牙



Mini Diameter  
小徑加工



# 高速鋼珠螺帽刀把

## ER COLLET CHUCK

( HIGH SPEED BEARING NUT )



HSK-E DIN 69893 FORM E

Balancing / 動平衡	Dimensions / 尺寸標示
<p><b>G6.3</b> Max.30,000 RPM Or <math>U \leq 1\text{gmm}</math></p> <p>Option / 選配 <b>G2.5</b> Max.30,000 RPM Or <math>U \leq 1\text{gmm}</math></p>	

Order No. 訂購編號	Range 夾持範圍	Ød	Ød1	L	L1	Tool Clamping Depth L2 刀具夾持深度	page.146	page.144	page.120	page.148
							Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手
HSK40E	ER20-080BR	1.0~13.0	36	80	60	32~41	CAP-ER20BR	ER-M14	ER20-HP	PHS-ER20B
	ER25-080BR	1.0~16.0	43	80	60	35~40	CAP-ER25BR	ER-M18	ER25-HP	PHS-ER25
HSK50E	ER16-100BR	1.0~10.0	32	100	74	29~58	CAP-ER16BR	ER-M11	ER16-HP	PHS-ER16B
	ER20-100BR	1.0~13.0	36	100	74	32~59	CAP-ER20BR	ER-M14	ER20-HP	PHS-ER20B
	ER25-100BR	1.0~16.0	43	100	74	35~57	CAP-ER25BR	ER-M18	ER25-HP	PHS-ER25
	ER32-100BR	2.0~20.0	51	100	74	41~56	CAP-ER32BR	ER-M22	ER32-HP	PHS-ER32

Remarks / 備註

- 需配合 3μ HP 筒夾 With 3μ HP Grade Collet
- 若需搭配中心出水管，請參考 page.145 規格表
- 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用

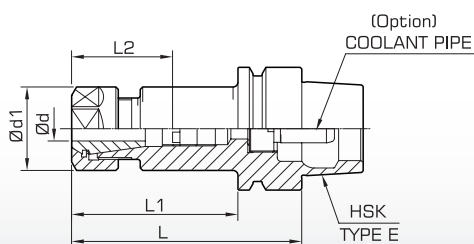


# ER 筒夾刀把

## ER COLLET CHUCK



Dimensions / 尺寸標示



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Nut  
螺帽



Screw  
調整螺絲



Collet  
筒夾



Wrench  
扳手

Order No. 訂購編號		Range 夾持範圍	$\varnothing d1$	L	L1	Tool Clamping Depth L2 刀具夾持深度				
HSK40E	ER20-080	0.6~13.0	34	80	60	32~41	CAP-ER20	ER-M14	ER20	PHS-ER20
	ER25-080	0.6~16.0	42	80	60	35~40	CAP-ER25	ER-M18	ER25	PHS-ER25
HSK50E	ER16-100	0.6~10.0	28	100	74	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16
	ER20-100	0.6~13.0	34	100	74	32~59	CAP-ER20	ER-M14	ER20	PHS-ER20
	ER25-100	0.6~16.0	42	100	74	35~73	CAP-ER25	ER-M18	ER25	PHS-ER25
	ER32-100	1.6~20.0	50	100	74	41~78	CAP-ER32	ER-M22	ER32	PHS-ER32

Remarks / 備註

- 若需搭配中心出水管，請參考 page.145 規格表
- 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Drilling  
鑽孔



Reaming  
鉸孔



Endmilling  
銑削

# PFK 高速刀把

## PFK HIGH SPEED COLLET CHUCK



HSK-E DIN 69893 FORM E

Balancing / 動平衡	Dimensions / 尺寸標示
<p><b>G6.3</b> Max.30,000 RPM Or <math>U \leq 1\text{gmm}</math></p> <p>Option / 選配 <b>G2.5</b> Max.30,000 RPM Or <math>U \leq 1\text{gmm}</math></p>	

Order No. 訂購編號	Range $\phi d$ 夾持範圍	$\phi d1$	L	L1	Tool Clamping Depth L2 刀具夾持深度	page.147	page.144	page.117	page.149	
						Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手	
HSK40E	PFK10-080S	1.75~10.0	27.5	80	60	max58.5	CAP-PFK10S	-	SK10P	PHS-10-TW275
	PFK16-080S	2.75~16.0	40	80	60	max49.5	CAP-PFK16S	-	SK16P	PHS-20-RO400
HSK50E	PFK10-100S	1.75~10.0	27.5	100	74	30~40	CAP-PFK10S	PFK-M12	SK10P	PHS-10-TW275
	PFK16-100S	2.75~16.0	40	100	74	40~48	CAP-PFK16S	PFK-M12	SK16P	PHS-20-RO400

Remarks / 備註

• 需配合 3 $\mu$  P 筒夾 With 3 $\mu$  P Grade Collet

Applications / 應用



# PFK 筒夾刀把

## PFK COLLET CHUCK



Balancing / 動平衡

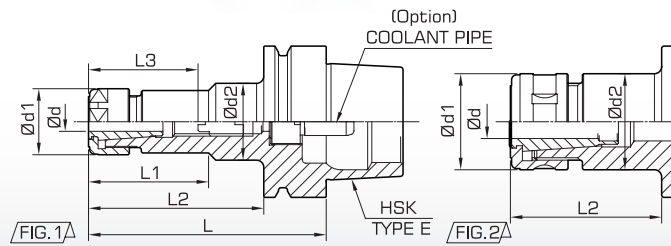
**G6.3**

Max.30,000 RPM  
Or U ≤ 1gmm

Option / 選配  
**G2.5**

Max.30,000 RPM  
Or U ≤ 1gmm

Dimensions / 尺寸標示



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Order No. 訂購編號	FIG	Range 夾持範圍 ød	ød1	ød2	L	L1	L2	Tool Clamping Depth L3 刀具夾持深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手	
HSK40E	PFK6-080	2	0.7~6.0	19.5	19.5	80	-	60	21~30	CAP-PFK6	PFK-M8	SK6P	PHS-PFK6
	PFK10-080	2	1.75~10.0	27.5	27.5	80	-	60	max58.5	CAP-PFK10	-	SK10P	PHS-PFK10
	PFK16-080	2	2.75~16.0	40	40	80	-	60	max49.5	CAP-PFK16	-	SK16P	PHS-PFK16
HSK50E	PFK6-100	1	0.7~6.0	19.5	32	100	63	74	21~35	CAP-PFK6	PFK-M8	SK6P	PHS-PFK6
	PFK10-100	2	1.75~10.0	27.5	27.5	100	-	74	30~40	CAP-PFK10	PFK-M12	SK10P	PHS-PFK10
	PFK16-100	2	2.75~16.0	40	40	100	-	74	40~48	CAP-PFK16	PFK-M12	SK16P	PHS-PFK16

Remarks / 備註

- 需配合 3μ P 筒夾 With 3μ P Grade Collet

Applications / 應用



Drilling  
鑽孔



Reaming  
鉸孔



Endmilling  
銑削



Tapping  
攻牙



# 油壓刀把 HYDRAULIC CHUCK



Balancing / 動平衡

**G6.3**

BT30 / BT40  
Max.25,000 RPM  
Or U ≤ 1gmm

**G6.3**

BT50  
Max.20,000 RPM  
Or U ≤ 1gmm

Option / 選配

**G2.5**

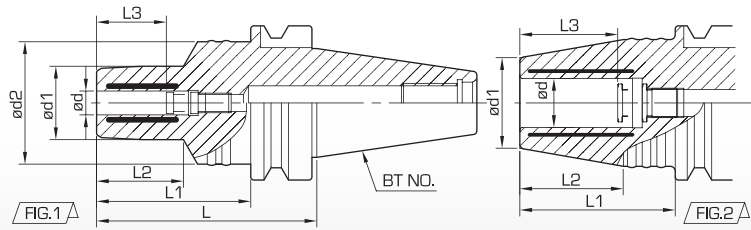
BT30 / BT40  
Max.25,000 RPM  
Or U ≤ 1gmm

Option / 選配

**G2.5**

BT50  
Max.20,000 RPM  
Or U ≤ 1gmm

Dimensions / 尺寸標示



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Order No. 訂購編號	FIG	ød	ød1	ød2	L	L1	L2	Tool Clamping Depth L3 刀具夾持深度	Screw 調整螺絲	Collet 筒夾	
BT30 (BTT30)	HY06-075	1	6	26	45.5	75	53	24.5	31~36	HY06-M5	-
	HY08-075	1	8	28	45.5	75	53	25.5	31~36	HY08-M6	-
	HY10-075	1	10	30	45.5	75	53	35.5	35~40	HY08-M6	-
	HY12-090	1	12	32	45.5	90	68	40	39~45	HY08-M6	HY12-C
	HY16-090	1	16	38	45.5	90	68	40	42~48	HY14-M8	-
HY20-090	2	20	37	51	90	68	42	44~50	HY18-M12	HY20-C	
BT40 (BTT40)	HY03-090	1	3	32	50	90	63	40	20~25	HY03-M5	-
	HY04-090	1	4	32	50	90	63	40	20~25	HY03-M5	-
	HY06-090	1	6	26	50	90	63	24.5	31~36	HY06-M5	-
	HY08-090	1	8	28	50	90	63	25.5	31~36	HY08-M6	-
	HY10-090	1	10	30	50	90	63	35.5	35~40	HY08-M6	-
	HY12-090	1	12	32	50	90	63	40	39~45	HY08-M6	HY12-C
	HY14-090	1	14	34	50	90	63	40	39~45	HY14-M8	-
	HY16-090	1	16	38	50	90	63	40	42~48	HY14-M8	-
	HY18-090	1	18	40	50	90	63	40	42~48	HY18-M12	-
	HY20-090	2	20	37	53	90	63	42	44~50	HY18-M12	HY20-C
HY25-100	2	25	43	57	100	73	37	50~56	HY25-M16	-	
HY32-105	2	32	50.5	62.5	105	78	31.5	53~60	HY25-M16	HY32-C	
BT50 (BTT50)	HY06-100	1	6	26	49	100	62	24.5	31~36	HY06-M5	-
	HY08-100	1	8	28	49	100	62	25.5	31~36	HY06-M5	-
	HY10-100	1	10	30	50	100	62	35.5	35~40	HY08-M6	-
	HY12-100	1	12	32	50	100	62	40	39~45	HY08-M6	HY12-C
	HY14-100	1	14	34	50	100	62	40	39~45	HY14-M8	-
	HY16-100	1	16	38	50	100	62	40	42~48	HY14-M8	-
	HY18-105	1	18	40	50	105	67	40	42~48	HY18-M12	-
	HY20-105	2	20	37	53	105	67	42	44~50	HY18-M12	HY20-C
	HY25-115	2	25	43	57	115	77	37	50~56	HY25-M16	-
	HY32-115	2	32	50.5	62.5	115	77	31.5	53~60	HY25-M16	HY32-C

Remarks / 備註

- 直接夾持精度 Direct Clamping
- 刀具柄徑公差 h6 (h6 Tooling Diameter Tolerance)
- 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Drilling  
鑽孔



Reaming  
鉸孔



Endmilling  
銑削



# SR 細長型熱縮刀把

## SLIM TYPE SHRINK FIT CHUCK



Balancing / 動平衡		Dimensions / 尺寸標示	
<b>G6.3</b> BT30 / BT40 Max.25,000 RPM Or U ≤ 1gmm	<b>G6.3</b> BT50 Max.20,000 RPM Or U ≤ 1gmm		
<b>G2.5</b> (Option / 選配) BT30 / BT40 Max.25,000 RPM Or U ≤ 1gmm	<b>G2.5</b> (Option / 選配) BT50 Max.20,000 RPM Or U ≤ 1gmm		

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Order No. 訂購編號	$\phi d$	$\phi d1$	$\phi d2$	L	L1	L2	L3	Tool Clamping Depth L4 刀具夾持深度	Screw 調整螺絲	
BT30 (BTT30)	SR04-090	4	10	16.3	90	68	65.2	30	min18	-
	SR04-120	4	10	19.3	120	98	95.2	30	min18	-
	SR06-090	6	12	18.3	90	68	65.2	40	21.5~31.5	HY06-M5
	SR06-120	6	12	21.4	120	98	95.2	40	21.5~31.5	HY06-M5
	SR08-090	8	14	20.3	90	68	65.2	40	25.5~35.5	HY08-M6
	SR08-120	8	14	23.4	120	98	95.2	40	25.5~35.5	HY08-M6
	SR10-090	10	16	22.4	90	68	65.2	50	31.5~41.5	HY08-M6
SR10-120	10	16	25.4	120	98	95.2	50	31.5~41.5	HY08-M6	
BT40 (BTT40)	SR04-120	4	10	18.7	120	93	88.3	30	min18	-
	SR04-150	4	10	21.7	150	123	118.3	30	min18	-
	SR06-120	6	12	20.7	120	93	88.3	40	21.5~31.5	HY06-M5
	SR06-150	6	12	23.7	150	123	188.3	40	21.5~31.5	HY06-M5
	SR08-120	8	14	22.7	120	93	88.3	40	25.5~35.5	HY08-M6
	SR08-150	8	14	25.7	150	123	118.3	40	25.5~35.5	HY08-M6
	SR10-120	10	16	24.7	120	93	88.3	50	31.5~41.5	HY08-M6
	SR10-150	10	16	27.8	150	123	118.3	50	31.5~41.5	HY08-M6
	SR12-120	12	18	26.7	120	93	88.3	55	36.5~46.5	HY14-M8
SR12-150	12	18	29.8	150	123	118.3	55	36.5~46.5	HY14-M8	
BT50 (BTT50)	SR04-135	4	10	18.1	135	97	82.8	30	min18	-
	SR04-165	4	10	21.1	165	127	112.8	30	min18	-
	SR06-135	6	12	20.1	135	97	82.8	40	21.5~31.5	HY06-M5
	SR06-165	6	12	23.2	165	127	112.8	40	21.5~31.5	HY06-M5
	SR08-135	8	14	22.1	135	97	82.8	40	25.5~35.5	HY08-M6
	SR08-165	8	14	25.2	165	127	112.8	40	25.5~35.5	HY08-M6
	SR10-135	10	16	24.2	135	97	82.8	50	31.5~41.5	HY08-M6
	SR10-165	10	16	27.2	165	127	112.8	50	31.5~41.5	HY08-M6
	SR12-135	12	18	26.2	135	97	82.8	55	36.5~46.5	HY14-M8
SR12-165	12	18	29.2	165	127	112.8	55	36.5~46.5	HY14-M8	

Remarks / 備註

- 直接夾持精度 Direct Clamping
- 刀具柄徑公差 h6 (h6 Tooling Diameter Tolerance)
- 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Drilling  
鑽孔



Reaming  
銜孔



Endmilling  
銑削



Mini Diameter  
小徑加工

# CR 標準型熱縮刀把

## CR STANDARD SHRINK FIT CHUCK



Balancing / 動平衡

**G6.3**

BT30 / BT40  
Max.25,000 RPM  
Or  $U \leq 1\text{gmm}$

**G2.5**

Option / 選配  
BT30 / BT40  
Max.25,000 RPM  
Or  $U \leq 1\text{gmm}$

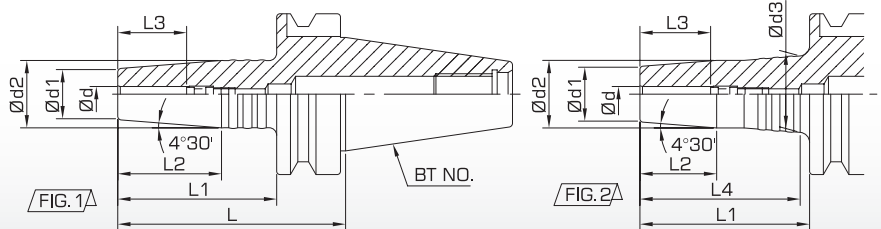
**G6.3**

BT50  
Max.20,000 RPM  
Or  $U \leq 1\text{gmm}$

**G2.5**

Option / 選配  
BT50  
Max.20,000 RPM  
Or  $U \leq 1\text{gmm}$

Dimensions / 尺寸標示



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Order No. 訂購編號	FIG	$\phi d$	$\phi d_1$	$\phi d_2$	$\phi d_3$	L	L1	L2	Tool Clamping Depth L3 刀具夾持深度	L4	Screw 調整螺絲	
BT30 (BTT30)	CR04-080	1	4	16	23	-	80	58	40.7	min18	-	-
	CR06-080	1	6	21	27	-	80	58	34.3	21.5~31.5	-	HY06-M5
	CR08-080	1	8	21	27	-	80	58	34.3	25.5~35.5	-	HY08-M6
	CR10-080	1	10	24	32	-	80	58	50.8	31.5~41.5	-	HY08-M6
	CR12-080	1	12	24	32	-	80	58	50.8	36.5~46.5	-	HY14-M8
	CR16-080	1	16	27	34	-	80	58	40.7	39.5~49.5	-	HY18-M12
BT40 (BTT40)	CR04-090	1	4	16	23	-	90	63	40.7	min18	-	-
	CR04-130	2	4	16	23	27.1	130	103	44.5	min18	100.2	-
	CR04-160	2	4	16	23	30.3	160	133	44.5	min18	130.2	-
	CR06-090	1	6	21	27	-	90	63	34.3	21.5~31.5	-	HY06-M5
	CR06-130	2	6	21	27	33.3	130	103	38.1	21.5~31.5	100.2	HY06-M5
	CR06-160	2	6	21	27	38.1	160	133	38.1	21.5~31.5	130.2	HY06-M5
	CR08-090	1	8	21	27	-	90	63	34.3	25.5~35.5	-	HY08-M6
	CR08-130	2	8	21	27	33.3	130	103	38.1	25.5~35.5	100.2	HY08-M6
	CR08-160	2	8	21	27	38.1	160	133	38.1	25.5~35.5	130.2	HY08-M6
	CR10-090	1	10	24	32	-	90	63	47	31.5~41.5	-	HY08-M6
	CR10-130	2	10	24	32	37.5	130	103	50.8	31.5~41.5	100.2	HY08-M6
	CR10-160	2	10	24	32	42.6	160	133	50.8	31.5~41.5	132.1	HY08-M6
	CR12-090	1	12	24	32	-	90	63	47	36.5~46.5	-	HY14-M8
	CR12-130	2	12	24	32	37.5	130	103	50.8	36.5~46.5	100.2	HY14-M8
	CR12-160	2	12	24	32	42.6	160	133	50.8	36.5~46.5	132.1	HY14-M8
	CR16-090	1	16	27	34	-	90	63	40.7	39.5~49.5	-	HY18-M12
	CR16-130	2	16	27	34	40.3	130	103	44.5	39.5~49.5	100.2	HY18-M12
	CR16-160	2	16	27	34	45.3	160	133	44.5	39.5~49.5	132.1	HY18-M12
	CR20-090	1	20	33	42	-	90	63	57.2	41.5~51.5	-	HY18-M12
	CR20-130	2	20	33	42	47	130	103	57.2	41.5~51.5	102.1	HY18-M12
	CR20-160	2	20	33	42	48.6	160	133	57.2	41.5~51.5	132.1	HY18-M12
	CR25-100	1	25	44	53	-	100	73	51.5	47.5~57.5	-	HY25-M16
	CR25-130	1	25	44	53	-	130	103	51.5	47.5~57.5	-	HY25-M16
	CR25-160	1	25	44	53	-	160	133	51.5	47.5~57.5	-	HY25-M16
CR32-100	1	32	44	53	-	100	73	51.5	50.5~60.5	-	HY25-M16	
CR32-130	1	32	44	53	-	130	103	51.5	50.5~60.5	-	HY25-M16	
CR32-160	1	32	44	53	-	160	133	51.5	50.5~60.5	-	HY25-M16	

# CR 標準型熱縮刀把

## CR STANDARD SHRINK FIT CHUCK



### Balancing / 動平衡

**G6.3**

BT30 / BT40  
Max.25,000 RPM  
Or U ≤ 1gmm

Option / 選配  
**G2.5**

BT30 / BT40  
Max.25,000 RPM  
Or U ≤ 1gmm

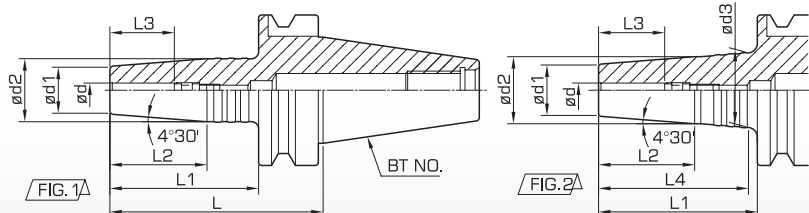
**G6.3**

BT50  
Max.20,000 RPM  
Or U ≤ 1gmm

Option / 選配  
**G2.5**

BT50  
Max.20,000 RPM  
Or U ≤ 1gmm

### Dimensions / 尺寸標示



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Order No. 訂購編號	FIG	ød	ød1	ød2	ød3	L	L1	L2	Tool Clamping Depth L3 刀具夾持深度	L4	Screw 調整螺絲	
BT50 (BTT50)	CR06-100	1	6	21	27	-	100	62	34.3	21.5~31.5	-	HY06-M5
	CR06-130	2	6	21	27	30.6	130	92	38.1	21.5~31.5	82.8	HY06-M5
	CR06-160	2	6	21	27	35.3	160	122	38.1	21.5~31.5	112.8	HY06-M5
	CR08-100	1	8	21	27	-	100	62	34.3	25.5~35.5	-	HY08-M6
	CR08-130	2	8	21	27	30.6	130	92	38.1	25.5~35.5	82.8	HY08-M6
	CR08-160	2	8	21	27	35.3	160	122	38.1	25.5~35.5	112.8	HY08-M6
	CR10-100	1	10	24	32	-	100	62	47	31.5~41.5	-	HY08-M6
	CR10-130	2	10	24	32	35.6	130	92	50.8	31.5~41.5	82.8	HY08-M6
	CR10-160	2	10	24	32	39.5	160	122	50.8	31.5~41.5	112.8	HY08-M6
	CR12-100	1	12	24	32	-	100	62	47	36.5~46.5	-	HY14-M8
	CR12-130	2	12	24	32	35.6	130	92	50.8	36.5~46.5	82.8	HY14-M8
	CR12-160	2	12	24	32	39.5	160	122	50.8	36.5~46.5	112.8	HY14-M8
	CR16-100	1	16	27	34	-	100	62	40.7	39.5~49.5	-	HY18-M12
	CR16-130	2	16	27	34	37.6	130	92	44.5	39.5~49.5	82.8	HY18-M12
	CR16-160	2	16	27	34	42.3	160	122	44.5	39.5~49.5	112.8	HY18-M12
	CR20-100	1	20	33	42	-	100	62	57.2	41.5~51.5	-	HY18-M12
	CR20-130	2	20	33	42	44.8	130	92	57.2	41.5~51.5	82.8	HY18-M12
	CR20-160	2	20	33	42	47.2	160	122	57.2	41.5~51.5	112.8	HY18-M12
	CR25-100	1	25	44	53	-	100	62	55.9	47.5~57.5	-	HY25-M16
	CR25-130	1	25	44	53	-	130	92	52.1	47.5~57.5	-	HY25-M16
CR25-160	2	25	44	53	58.7	160	122	55.9	47.5~57.5	117.4	HY25-M16	
CR32-100	1	32	44	53	-	100	62	55.9	50.5~60.5	-	HY25-M16	
CR32-130	1	32	44	53	-	130	92	52.1	50.5~60.5	-	HY25-M16	
CR32-160	2	32	44	53	58.7	160	122	55.9	50.5~60.5	117.4	HY25-M16	

### Remarks / 備註

- 刀具柄徑公差 h6( h6 Tooling Diameter Tolerance)
- 若需出水型刀把，請參考 page.26 選用說明

### Applications / 應用



Drilling  
鑽孔



Reaming  
銜孔



Endmilling  
銑削

# HER 筒夾刀把

## HER COLLET CHUCK



Balancing / 動平衡

**G6.3**

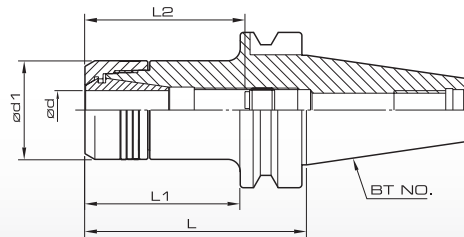
BT30  
Max.25,000 RPM  
Or U ≤ 1gmm

Option / 選配

**G2.5**

BT30  
Max.25,000 RPM  
Or U ≤ 1gmm

Dimensions / 尺寸標示



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Nut  
螺帽



Screw  
調整螺絲



Collet  
筒夾



Wrench  
扳手

Order No. 訂購編號	Range 夾持範圍	ød	ød1	L	L1	Tool Clamping Depth L2 刀具夾持深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手
BT30 (BTT30)	HER16-060	1.0~10.0	30	60	38	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER16-075	1.0~10.0	30	75	53	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER16-090	1.0~10.0	30	90	68	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER16-120	1.0~10.0	30	120	98	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER20-060	1.0~13.0	32	60	38	32~68	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER20-075	1.0~13.0	32	75	53	32~68	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER20-090	1.0~13.0	32	90	68	32~68	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER20-120	1.0~13.0	32	120	98	32~68	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER25-060	1.0~16.0	40	60	38	35~58	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
	HER25-075	1.0~16.0	40	75	53	35~73	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
	HER25-090	1.0~16.0	40	90	68	35~73	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
	HER25-120	1.0~16.0	40	120	98	35~73	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
	HER32-060	2.0~20.0	50	60	38	41~49	CAP-HER32	ER-M22	ER32-HP	PHS-20-RO500
	HER32-075	2.0~20.0	50	75	53	41~64	CAP-HER32	ER-M22	ER32-HP	PHS-20-RO500
HER32-090	2.0~20.0	50	90	68	41~78	CAP-HER32	ER-M22	ER32-HP	PHS-20-RO500	

Remarks / 備註

- 需配合 3μ HP 筒夾 With 3μ HP Grade Collet
- 若需出水型刀把，請參考 page.26 選用說明
- 筒夾夾持為 一對一整數值

Applications / 應用



Drilling  
鑽孔



Reaming  
銜孔



Endmilling  
銑削

# HER 筒夾刀把 HER COLLET CHUCK



Balancing / 動平衡

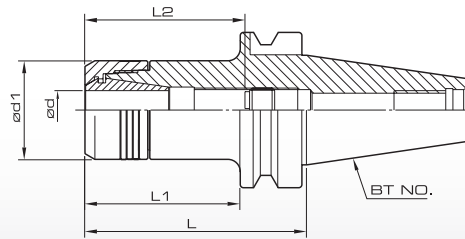
**G6.3**

BT40  
Max.25,000 RPM  
Or U ≤ 1gmm

Option / 選配  
**G2.5**

BT40  
Max.25,000 RPM  
Or U ≤ 1gmm

Dimensions / 尺寸標示



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Nut  
螺帽



Screw  
調整螺絲



Collet  
筒夾



Wrench  
扳手

Order No. 訂購編號	Range 夾持範圍	ød	ød1	L	L1	Tool Clamping Depth L2 刀具夾持深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手
BT40 (BTT40)	HER16-075	1.0~10.0	30	75	48	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER16-090	1.0~10.0	30	90	63	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER16-120	1.0~10.0	30	120	93	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER16-150	1.0~10.0	30	150	123	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER20-075	1.0~13.0	32	75	48	32~68	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER20-090	1.0~13.0	32	90	63	32~68	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER20-120	1.0~13.0	32	120	93	32~68	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER20-150	1.0~13.0	32	150	123	32~68	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER25-075	1.0~16.0	40	75	48	35~73	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
	HER25-090	1.0~16.0	40	90	63	35~73	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
	HER25-120	1.0~16.0	40	120	93	35~73	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
	HER25-150	1.0~16.0	40	150	123	35~73	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
	HER32-075	2.0~20.0	50	75	48	41~78	CAP-HER32	ER-M22	ER32-HP	PHS-20-RO500
	HER32-090	2.0~20.0	50	90	63	41~78	CAP-HER32	ER-M22	ER32-HP	PHS-20-RO500
	HER32-120	2.0~20.0	50	120	93	41~78	CAP-HER32	ER-M22	ER32-HP	PHS-20-RO500
HER32-150	2.0~20.0	50	150	123	41~78	CAP-HER32	ER-M22	ER32-HP	PHS-20-RO500	

Remarks / 備註

- 需配合 3μ HP 筒夾 With 3μ HP Grade Collet
- 若需出水型刀把，請參考 page.26 選用說明
- 筒夾夾持為一對一整數值

Applications / 應用



Drilling  
鑽孔



Reaming  
鉸孔



Endmilling  
銑削

# HER 筒夾刀把

## HER COLLET CHUCK



Balancing / 動平衡

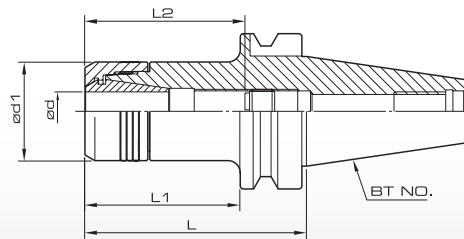
**G6.3**

BT50  
Max.20,000 RPM  
Or  $U \leq 1\text{gmm}$

Option / 選配  
**G2.5**

BT50  
Max.20,000 RPM  
Or  $U \leq 1\text{gmm}$

Dimensions / 尺寸標示



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Nut  
螺帽



Screw  
調整螺絲



Collet  
筒夾



Wrench  
扳手

Order No. 訂購編號	Range 夾持範圍	ød	ød1	L	L1	Tool Clamping Depth L2 刀具夾持深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手
BT50 (BTT50)	HER16-105	1.0~10.0	30	105	67	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER16-135	1.0~10.0	30	135	97	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER16-165	1.0~10.0	30	165	127	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER20-105	1.0~13.0	32	105	67	32~68	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER20-135	1.0~13.0	32	135	97	32~68	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER20-165	1.0~13.0	32	165	127	32~68	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER25-105	1.0~16.0	40	105	67	35~73	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
	HER25-135	1.0~16.0	40	135	97	35~73	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
	HER25-165	1.0~16.0	40	165	127	35~73	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
	HER25-200	1.0~16.0	40	200	162	35~73	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
	HER32-105	2.0~20.0	50	105	67	41~78	CAP-HER32	ER-M22	ER32-HP	PHS-20-RO500
	HER32-135	2.0~20.0	50	135	97	41~78	CAP-HER32	ER-M22	ER32-HP	PHS-20-RO500
HER32-165	2.0~20.0	50	165	127	41~78	CAP-HER32	ER-M22	ER32-HP	PHS-20-RO500	
HER32-200	2.0~20.0	50	200	162	41~78	CAP-HER32	ER-M22	ER32-HP	PHS-20-RO500	

Remarks / 備註

- 需配合 3μ HP 筒夾 With 3μ HP Grade Collet
- 若需出水型刀把, 請參考 page.26 選用說明
- 筒夾夾持為 一對一整數值

Applications / 應用



Drilling  
鑽孔



Reaming  
鉸孔



Endmilling  
銑削



Tapping  
攻牙

# THER 小徑刀把 THER SLIM COLLET CHUCK



5  $\mu$ m  
HIGH PRECISION

Balancing / 動平衡

Dimensions / 尺寸標示

**G6.3**

BT30 / BT40  
Max.25,000 RPM  
Or  $U \leq 1\text{gmm}$

**G6.3**

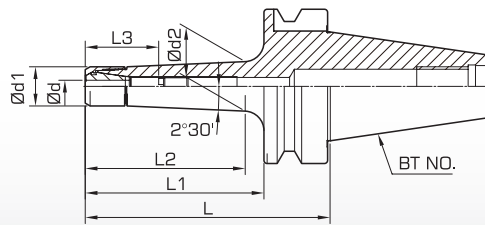
BT50  
Max.20,000 RPM  
Or  $U \leq 1\text{gmm}$

**G2.5**

BT30 / BT40  
Max.25,000 RPM  
Or  $U \leq 1\text{gmm}$

**G2.5**

BT50  
Max.20,000 RPM  
Or  $U \leq 1\text{gmm}$



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Tool  
Clamping  
Depth L3  
刀具夾持  
深度



Nut  
螺帽



Screw  
調整螺絲



Collet  
筒夾



Wrench  
扳手

Order No. 訂購編號		Range $\phi d$ 夾持範圍	$\phi d1$	$\phi d2$	L	L1	L2	L3	Tool Clamping Depth L3 刀具夾持 深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手
BT30 (BTT30)	THER11-100	1.0~7.0	16	20.9	100	78	73.2	19~48	CAP-THER11	ER-M8	ER11-HP	PHS-20-RO160	
	THER16-100	1.0~10.0	22	26.5	100	78	73.2	29~58	CAP-THER16	ER-M11	ER16-HP	PHS-20-RO220	
BT40 (BTT40)	THER11-100	1.0~7.0	16	20.2	100	73	65.3	19~48	CAP-THER11	ER-M8	ER11-HP	PHS-20-RO160	
	THER11-130	1.0~7.0	16	22.8	130	103	95.3	19~48	CAP-THER11	ER-M8	ER11-HP	PHS-20-RO160	
	THER11-160	1.0~7.0	16	25.5	160	133	125.3	19~48	CAP-THER11	ER-M8	ER11-HP	PHS-20-RO160	
	THER16-100	1.0~10.0	22	26.1	100	73	68.2	29~58	CAP-THER16	ER-M11	ER16-HP	PHS-20-RO220	
	THER16-130	1.0~10.0	22	28.7	130	103	98.2	29~58	CAP-THER16	ER-M11	ER16-HP	PHS-20-RO220	
	THER16-160	1.0~10.0	22	31.3	160	133	128.2	29~58	CAP-THER16	ER-M11	ER16-HP	PHS-20-RO220	
BT50 (BTT50)	THER11-100	1.0~7.0	16	18.7	100	62	47.7	19~48	CAP-THER11	ER-M8	ER11-HP	PHS-20-RO160	
	THER11-130	1.0~7.0	16	21.3	130	92	77.7	19~48	CAP-THER11	ER-M8	ER11-HP	PHS-20-RO160	
	THER11-160	1.0~7.0	16	23.9	160	122	107.7	19~48	CAP-THER11	ER-M8	ER11-HP	PHS-20-RO160	
	THER16-100	1.0~10.0	22	24.3	100	62	47.7	29~58	CAP-THER16	ER-M11	ER16-HP	PHS-20-RO220	
	THER16-130	1.0~10.0	22	26.9	130	92	77.7	29~58	CAP-THER16	ER-M11	ER16-HP	PHS-20-RO220	
	THER16-160	1.0~10.0	22	29.5	160	122	107.7	29~58	CAP-THER16	ER-M11	ER16-HP	PHS-20-RO220	

Remarks / 備註

- 需配合 3 $\mu$  HP 筒夾 With 3 $\mu$  HP Grade Collet
- 若需出水型刀把，請參考 page.26 選用說明
- 筒夾夾持為一對一整數值

Applications / 應用



Drilling  
鑽孔



Reaming  
銜孔



Tapping  
攻牙



Mini Diameter  
小徑加工

# ER 高速鋼珠螺帽刀把

## ER COLLET CHUCK

(HIGH SPEED BEARING NUT)



Balancing / 動平衡

**G6.3**

BT30 / BT40  
Max.25,000 RPM  
Or  $U \leq 1\text{gmm}$

Option / 選配  
**G2.5**

BT30 / BT40  
Max.25,000 RPM  
Or  $U \leq 1\text{gmm}$

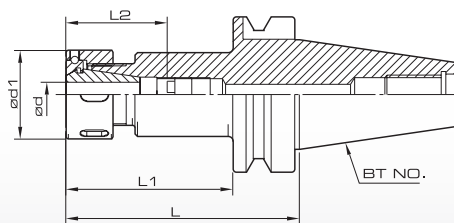
**G6.3**

BT50  
Max.20,000 RPM  
Or  $U \leq 1\text{gmm}$

Option / 選配  
**G2.5**

BT50  
Max.20,000 RPM  
Or  $U \leq 1\text{gmm}$

Dimensions / 尺寸標示



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Order No. 訂購編號	Range 夾持範圍	ød	ød1	L	L1	Tool Clamping Depth L2 刀具夾持深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手
BT30 (BTT30)	ER11-060BR	1.0~7.0	23.5	60	38	19~50	CAP-ER11BR	ER-M8	ER11-HP	PHS-ER11B
	ER11-075BR	1.0~7.0	23.5	75	53	19~50	CAP-ER11BR	ER-M8	ER11-HP	PHS-ER11B
	ER11-090BR	1.0~7.0	23.5	90	68	19~50	CAP-ER11BR	ER-M8	ER11-HP	PHS-ER11B
	ER11-120BR	1.0~7.0	23.5	120	98	19~50	CAP-ER11BR	ER-M8	ER11-HP	PHS-ER11B
	ER16-060BR	1.0~10.0	32	60	38	29~58	CAP-ER16BR	ER-M11	ER16-HP	PHS-ER16B
	ER16-075BR	1.0~10.0	32	75	53	29~58	CAP-ER16BR	ER-M11	ER16-HP	PHS-ER16B
	ER16-090BR	1.0~10.0	32	90	68	29~58	CAP-ER16BR	ER-M11	ER16-HP	PHS-ER16B
	ER16-120BR	1.0~10.0	32	120	98	29~58	CAP-ER16BR	ER-M11	ER16-HP	PHS-ER16B
	ER20-060BR	1.0~13.0	36	60	38	32~63	CAP-ER20BR	ER-M14	ER20-HP	PHS-ER20B
	ER20-075BR	1.0~13.0	36	75	53	32~68	CAP-ER20BR	ER-M14	ER20-HP	PHS-ER20B
	ER20-090BR	1.0~13.0	36	90	68	32~68	CAP-ER20BR	ER-M14	ER20-HP	PHS-ER20B
	ER20-120BR	1.0~13.0	36	120	98	32~68	CAP-ER20BR	ER-M14	ER20-HP	PHS-ER20B
	ER25-060BR	1.0~16.0	43	60	38	35~63	CAP-ER25BR	ER-M18	ER25-HP	PHS-ER25
	ER25-075BR	1.0~16.0	43	75	53	35~78	CAP-ER25BR	ER-M18	ER25-HP	PHS-ER25
	ER25-090BR	1.0~16.0	43	90	68	35~78	CAP-ER25BR	ER-M18	ER25-HP	PHS-ER25
	ER25-120BR	1.0~16.0	43	120	98	35~78	CAP-ER25BR	ER-M18	ER25-HP	PHS-ER25
	ER32-060BR	2.0~20.0	51	60	38	41~48	CAP-ER32BR	ER-M22	ER32-HP	PHS-ER32
	ER32-075BR	2.0~20.0	51	75	53	41~63	CAP-ER32BR	ER-M22	ER32-HP	PHS-ER32
	ER32-090BR	2.0~20.0	51	90	68	41~78	CAP-ER32BR	ER-M22	ER32-HP	PHS-ER32
	ER32-105BR	2.0~20.0	51	105	83	41~88	CAP-ER32BR	ER-M22	ER32-HP	PHS-ER32
ER32-120BR	2.0~20.0	51	120	98	41~88	CAP-ER32BR	ER-M22	ER32-HP	PHS-ER32	

Remarks / 備註

- 需配合 3μ HP 筒夾 With 3μ HP Grade Collet
- 若需出水型刀把, 請參考 page.26 選用說明

Applications / 應用



Drilling  
鑽孔



Reaming  
鉸孔



Endmilling  
銑削



Tapping  
攻牙



# ER 高速鋼珠螺帽刀把

## ER COLLET CHUCK

(HIGH SPEED BEARING NUT)



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Nut  
螺帽

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Screw  
調整螺絲

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Collet  
筒夾

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Wrench  
扳手

Order No. 訂購編號	Range 夾持範圍	ød	ød1	Tool Clamping Depth L2		L	L1	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手
				L	L1						
BT40 (BTT40)	ER11-075BR	1.0~7.0	23.5	75	48	19~50		CAP-ER11BR	ER-M8	ER11-HP	PHS-ER11B
	ER11-090BR	1.0~7.0	23.5	90	63	19~50		CAP-ER11BR	ER-M8	ER11-HP	PHS-ER11B
	ER11-120BR	1.0~7.0	23.5	120	93	19~50		CAP-ER11BR	ER-M8	ER11-HP	PHS-ER11B
	ER11-150BR	1.0~7.0	23.5	150	123	19~50		CAP-ER11BR	ER-M8	ER11-HP	PHS-ER11B
	ER16-075BR	1.0~10.0	32	75	48	29~58		CAP-ER16BR	ER-M11	ER16-HP	PHS-ER16B
	ER16-090BR	1.0~10.0	32	90	63	29~58		CAP-ER16BR	ER-M11	ER16-HP	PHS-ER16B
	ER16-120BR	1.0~10.0	32	120	93	29~58		CAP-ER16BR	ER-M11	ER16-HP	PHS-ER16B
	ER16-150BR	1.0~10.0	32	150	123	29~58		CAP-ER16BR	ER-M11	ER16-HP	PHS-ER16B
	ER16-200BR	1.0~10.0	32	200	173	29~58		CAP-ER16BR	ER-M11	ER16-HP	PHS-ER16B
	ER20-075BR	1.0~13.0	36	75	48	32~68		CAP-ER20BR	ER-M14	ER20-HP	PHS-ER20B
	ER20-090BR	1.0~13.0	36	90	63	32~68		CAP-ER20BR	ER-M14	ER20-HP	PHS-ER20B
	ER20-120BR	1.0~13.0	36	120	93	32~68		CAP-ER20BR	ER-M14	ER20-HP	PHS-ER20B
	ER20-135BR	1.0~13.0	36	135	108	32~68		CAP-ER20BR	ER-M14	ER20-HP	PHS-ER20B
	ER20-150BR	1.0~13.0	36	150	123	32~68		CAP-ER20BR	ER-M14	ER20-HP	PHS-ER20B
	ER20-200BR	1.0~13.0	36	200	173	32~68		CAP-ER20BR	ER-M14	ER20-HP	PHS-ER20B
	ER25-075BR	1.0~16.0	43	75	48	35~78		CAP-ER25BR	ER-M18	ER25-HP	PHS-ER25
	ER25-090BR	1.0~16.0	43	90	63	35~78		CAP-ER25BR	ER-M18	ER25-HP	PHS-ER25
	ER25-120BR	1.0~16.0	43	120	93	35~78		CAP-ER25BR	ER-M18	ER25-HP	PHS-ER25
	ER25-150BR	1.0~16.0	43	150	123	35~78		CAP-ER25BR	ER-M18	ER25-HP	PHS-ER25
	ER25-200BR	1.0~16.0	43	200	173	35~78		CAP-ER25BR	ER-M18	ER25-HP	PHS-ER25
BT50 (BTT50)	ER32-075BR	2.0~20.0	51	75	48	41~78		CAP-ER32BR	ER-M22	ER32-HP	PHS-ER32
	ER32-090BR	2.0~20.0	51	90	63	41~78		CAP-ER32BR	ER-M22	ER32-HP	PHS-ER32
	ER32-120BR	2.0~20.0	51	120	93	41~78		CAP-ER32BR	ER-M22	ER32-HP	PHS-ER32
	ER32-150BR	2.0~20.0	51	150	123	41~78		CAP-ER32BR	ER-M22	ER32-HP	PHS-ER32
	ER32-200BR	2.0~20.0	51	200	173	41~78		CAP-ER32BR	ER-M22	ER32-HP	PHS-ER32
	ER16-105BR	1.0~10.0	32	105	67	29~58		CAP-ER16BR	ER-M11	ER16-HP	PHS-ER16B
	ER16-135BR	1.0~10.0	32	135	97	29~58		CAP-ER16BR	ER-M11	ER16-HP	PHS-ER16B
	ER16-165BR	1.0~10.0	32	165	127	29~58		CAP-ER16BR	ER-M11	ER16-HP	PHS-ER16B
	ER16-200BR	1.0~10.0	32	200	162	29~58		CAP-ER16BR	ER-M11	ER16-HP	PHS-ER16B
	ER20-105BR	1.0~13.0	36	105	67	32~68		CAP-ER20BR	ER-M14	ER20-HP	PHS-ER20B
	ER20-135BR	1.0~13.0	36	135	97	32~68		CAP-ER20BR	ER-M14	ER20-HP	PHS-ER20B
	ER20-165BR	1.0~13.0	36	165	127	32~68		CAP-ER20BR	ER-M14	ER20-HP	PHS-ER20B
	ER20-200BR	1.0~13.0	36	200	162	32~68		CAP-ER20BR	ER-M14	ER20-HP	PHS-ER20B
	ER25-105BR	1.0~16.0	43	105	67	35~73		CAP-ER25BR	ER-M18	ER25-HP	PHS-ER25
	ER25-135BR	1.0~16.0	43	135	97	35~73		CAP-ER25BR	ER-M18	ER25-HP	PHS-ER25
	ER25-165BR	1.0~16.0	43	165	127	35~73		CAP-ER25BR	ER-M18	ER25-HP	PHS-ER25
	ER25-200BR	1.0~16.0	43	200	162	35~73		CAP-ER25BR	ER-M18	ER25-HP	PHS-ER25
	ER32-105BR	2.0~20.0	51	105	67	41~78		CAP-ER32BR	ER-M22	ER32-HP	PHS-ER32
	ER32-135BR	2.0~20.0	51	135	97	41~78		CAP-ER32BR	ER-M22	ER32-HP	PHS-ER32
	ER32-165BR	2.0~20.0	51	165	127	41~78		CAP-ER32BR	ER-M22	ER32-HP	PHS-ER32
ER32-200BR	2.0~20.0	51	200	162	41~78		CAP-ER32BR	ER-M22	ER32-HP	PHS-ER32	

### Remarks / 備註

- 需配合 3μ HP 筒夾 With 3μ HP Grade Collet
- 若需出水型刀把, 請參考 page.26 選用說明

### Applications / 應用



Drilling  
鑽孔



Reaming  
鉸孔



Endmilling  
銑削



Tapping  
攻牙

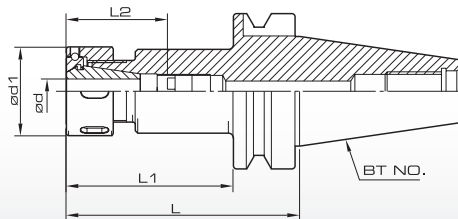
# 鋼珠螺帽刀把

## ER COLLET CHUCK

( BEARING NUT )



Dimensions / 尺寸標示



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Order No. 訂購編號	Range 夾持範圍	ød	ød1	L	L1	Tool Clamping Depth L2 刀具夾持深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手
BT30 ( BTT30 )	ER11-060B	1.0~7.0	23.5	60	38	19~50	CAP-ER11B	ER-M8	ER11-HP	PHS-ER11B
	ER11-075B	1.0~7.0	23.5	75	53	19~50	CAP-ER11B	ER-M8	ER11-HP	PHS-ER11B
	ER11-090B	1.0~7.0	23.5	90	68	19~50	CAP-ER11B	ER-M8	ER11-HP	PHS-ER11B
	ER11-120B	1.0~7.0	23.5	120	98	19~50	CAP-ER11B	ER-M8	ER11-HP	PHS-ER11B
	ER16-060B	1.0~10.0	32	60	38	29~58	CAP-ER16B	ER-M11	ER16-HP	PHS-ER16B
	ER16-075B	1.0~10.0	32	75	53	29~58	CAP-ER16B	ER-M11	ER16-HP	PHS-ER16B
	ER16-090B	1.0~10.0	32	90	68	29~58	CAP-ER16B	ER-M11	ER16-HP	PHS-ER16B
	ER16-120B	1.0~10.0	32	120	98	29~58	CAP-ER16B	ER-M11	ER16-HP	PHS-ER16B
	ER20-060B	1.0~13.0	36	60	38	32~63	CAP-ER20B	ER-M14	ER20-HP	PHS-ER20B
	ER20-075B	1.0~13.0	36	75	53	32~68	CAP-ER20B	ER-M14	ER20-HP	PHS-ER20B
	ER20-090B	1.0~13.0	36	90	68	32~68	CAP-ER20B	ER-M14	ER20-HP	PHS-ER20B
	ER20-120B	1.0~13.0	36	120	98	32~68	CAP-ER20B	ER-M14	ER20-HP	PHS-ER20B
	ER25-060B	1.0~16.0	43	60	38	35~63	CAP-ER25B	ER-M18	ER25-HP	PHS-ER25
	ER25-075B	1.0~16.0	43	75	53	35~78	CAP-ER25B	ER-M18	ER25-HP	PHS-ER25
	ER25-090B	1.0~16.0	43	90	68	35~78	CAP-ER25B	ER-M18	ER25-HP	PHS-ER25
	ER25-120B	1.0~16.0	43	120	98	35~78	CAP-ER25B	ER-M18	ER25-HP	PHS-ER25
	ER32-060B	2.0~20.0	51	60	38	41~48	CAP-ER32B	ER-M22	ER32-HP	PHS-ER32
	ER32-075B	2.0~20.0	51	75	53	41~63	CAP-ER32B	ER-M22	ER32-HP	PHS-ER32
	ER32-090B	2.0~20.0	51	90	68	41~78	CAP-ER32B	ER-M22	ER32-HP	PHS-ER32
	ER32-105B	2.0~20.0	51	105	83	41~88	CAP-ER32B	ER-M22	ER32-HP	PHS-ER32
ER32-120B	2.0~20.0	51	120	98	41~88	CAP-ER32B	ER-M22	ER32-HP	PHS-ER32	

Remarks / 備註

- 需配合 3μ HP 筒夾 With 3μ HP Grade Collet
- 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Drilling  
鑽孔



Reaming  
銜孔



Endmilling  
銑削



Tapping  
攻牙

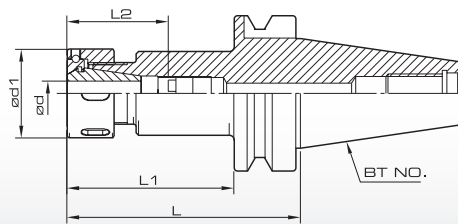
# 鋼珠螺帽刀把

## ER COLLET CHUCK

( BEARING NUT )



Dimensions / 尺寸標示



BT JIS B6339 ( MAS 403 BT )

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Order No. 訂購編號	Range 夾持範圍	ød	ød1	L	L1	Tool Clamping Depth L2 刀具夾持深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手
BT40 (BTT40)	ER11-075B	1.0~7.0	23.5	75	48	19~50	CAP-ER11B	ER-M8	ER11-HP	PHS-ER11B
	ER11-090B	1.0~7.0	23.5	90	63	19~50	CAP-ER11B	ER-M8	ER11-HP	PHS-ER11B
	ER11-120B	1.0~7.0	23.5	120	93	19~50	CAP-ER11B	ER-M8	ER11-HP	PHS-ER11B
	ER11-150B	1.0~7.0	23.5	150	123	19~50	CAP-ER11B	ER-M8	ER11-HP	PHS-ER11B
	ER16-075B	1.0~10.0	32	75	48	29~58	CAP-ER16B	ER-M11	ER16-HP	PHS-ER16B
	ER16-090B	1.0~10.0	32	90	63	29~58	CAP-ER16B	ER-M11	ER16-HP	PHS-ER16B
	ER16-120B	1.0~10.0	32	120	93	29~58	CAP-ER16B	ER-M11	ER16-HP	PHS-ER16B
	ER16-150B	1.0~10.0	32	150	123	29~58	CAP-ER16B	ER-M11	ER16-HP	PHS-ER16B
	ER16-200B	1.0~10.0	32	200	173	29~58	CAP-ER16B	ER-M11	ER16-HP	PHS-ER16B
	ER20-075B	1.0~13.0	36	75	48	32~68	CAP-ER20B	ER-M14	ER20-HP	PHS-ER20B
	ER20-090B	1.0~13.0	36	90	63	32~68	CAP-ER20B	ER-M14	ER20-HP	PHS-ER20B
	ER20-120B	1.0~13.0	36	120	93	32~68	CAP-ER20B	ER-M14	ER20-HP	PHS-ER20B
	ER20-135B	1.0~13.0	36	135	108	32~68	CAP-ER20B	ER-M14	ER20-HP	PHS-ER20B
	ER20-150B	1.0~13.0	36	150	123	32~68	CAP-ER20B	ER-M14	ER20-HP	PHS-ER20B
	ER20-200B	1.0~13.0	36	200	173	32~68	CAP-ER20B	ER-M14	ER20-HP	PHS-ER20B
	ER25-075B	1.0~16.0	43	75	48	35~78	CAP-ER25B	ER-M18	ER25-HP	PHS-ER25
	ER25-090B	1.0~16.0	43	90	63	35~78	CAP-ER25B	ER-M18	ER25-HP	PHS-ER25
	ER25-120B	1.0~16.0	43	120	93	35~78	CAP-ER25B	ER-M18	ER25-HP	PHS-ER25
	ER25-150B	1.0~16.0	43	150	123	35~78	CAP-ER25B	ER-M18	ER25-HP	PHS-ER25
	ER25-200B	1.0~16.0	43	200	173	35~78	CAP-ER25B	ER-M18	ER25-HP	PHS-ER25
	ER32-075B	2.0~20.0	51	75	48	41~78	CAP-ER32B	ER-M22	ER32-HP	PHS-ER32
	ER32-090B	2.0~20.0	51	90	63	41~78	CAP-ER32B	ER-M22	ER32-HP	PHS-ER32
	ER32-120B	2.0~20.0	51	120	93	41~78	CAP-ER32B	ER-M22	ER32-HP	PHS-ER32
	ER32-150B	2.0~20.0	51	150	123	41~78	CAP-ER32B	ER-M22	ER32-HP	PHS-ER32
	ER32-200B	2.0~20.0	51	200	173	41~78	CAP-ER32B	ER-M22	ER32-HP	PHS-ER32
	ER40-090B	3.0~26.0	63	90	63	50~93	CAP-ER40B	ER-M28	ER40-HP	PHS-ER40
	ER40-120B	3.0~26.0	63	120	93	50~93	CAP-ER40B	ER-M28	ER40-HP	PHS-ER40
	ER40-150B	3.0~26.0	63	150	123	50~93	CAP-ER40B	ER-M28	ER40-HP	PHS-ER40

Remarks / 備註

- 需配合 3μ HP 筒夾 With 3μ HP Grade Collet
- 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Drilling  
鑽孔



Reaming  
鉸孔



Endmilling  
銑削



Tapping  
攻牙

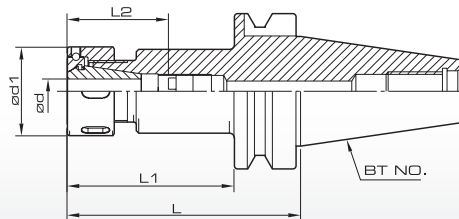
# 鋼珠螺帽刀把

## ER COLLET CHUCK

( BEARING NUT )



Dimensions / 尺寸標示



BT JIS B6339 (MAS 403 BT)

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Order No. 訂購編號	Range $\phi d$ 夾持範圍	$\phi d1$	L	L1	Tool Clamping Depth L2 刀具夾持深度	page.146			page.144		page.120	page.148
						Nut 螺帽	Screw 調整螺絲	Collet 筒夾			Wrench 扳手	
BT50 (BTT50)	ER16-105B	1.0~10.0	32	105	67	29~58	CAP-ER16B	ER-M11	ER16-HP	PHS-ER16B		
	ER16-135B	1.0~10.0	32	135	97	29~58	CAP-ER16B	ER-M11	ER16-HP	PHS-ER16B		
	ER16-165B	1.0~10.0	32	165	127	29~58	CAP-ER16B	ER-M11	ER16-HP	PHS-ER16B		
	ER16-200B	1.0~10.0	32	200	162	29~58	CAP-ER16B	ER-M11	ER16-HP	PHS-ER16B		
	ER20-105B	1.0~13.0	36	105	67	32~68	CAP-ER20B	ER-M14	ER20-HP	PHS-ER20B		
	ER20-135B	1.0~13.0	36	135	97	32~68	CAP-ER20B	ER-M14	ER20-HP	PHS-ER20B		
	ER20-165B	1.0~13.0	36	165	127	32~68	CAP-ER20B	ER-M14	ER20-HP	PHS-ER20B		
	ER20-200B	1.0~13.0	36	200	162	32~68	CAP-ER20B	ER-M14	ER20-HP	PHS-ER20B		
	ER25-105B	1.0~16.0	43	105	67	35~73	CAP-ER25B	ER-M18	ER25-HP	PHS-ER25B		
	ER25-135B	1.0~16.0	43	135	97	35~73	CAP-ER25B	ER-M18	ER25-HP	PHS-ER25B		
	ER25-165B	1.0~16.0	43	165	127	35~73	CAP-ER25B	ER-M18	ER25-HP	PHS-ER25B		
	ER25-200B	1.0~16.0	43	200	162	35~73	CAP-ER25B	ER-M18	ER25-HP	PHS-ER25B		
	ER32-105B	2.0~20.0	51	105	67	41~78	CAP-ER32B	ER-M22	ER32-HP	PHS-ER32		
	ER32-135B	2.0~20.0	51	135	97	41~78	CAP-ER32B	ER-M22	ER32-HP	PHS-ER32		
	ER32-165B	2.0~20.0	51	165	127	41~78	CAP-ER32B	ER-M22	ER32-HP	PHS-ER32		
	ER32-200B	2.0~20.0	51	200	162	41~78	CAP-ER32B	ER-M22	ER32-HP	PHS-ER32		
ER40-105B	3.0~26.0	63	105	67	50~93	CAP-ER40B	ER-M28	ER40-HP	PHS-ER40			
ER40-135B	3.0~26.0	63	135	97	50~93	CAP-ER40B	ER-M28	ER40-HP	PHS-ER40			
ER40-165B	3.0~26.0	63	165	127	50~93	CAP-ER40B	ER-M28	ER40-HP	PHS-ER40			
ER40-200B	3.0~26.0	63	200	162	50~93	CAP-ER40B	ER-M28	ER40-HP	PHS-ER40			

Remarks / 備註

- 需配合 3 $\mu$  HP 筒夾 With 3 $\mu$  HP Grade Collet
- 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Drilling  
鑽孔



Reaming  
銜孔



Endmilling  
銼削



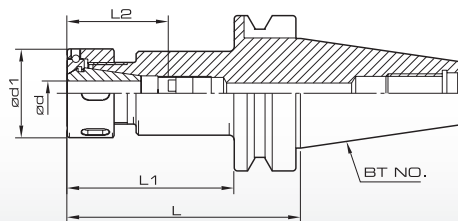
Tapping  
攻牙

# ER 筒夾刀把

## ER COLLET CHUCK



Dimensions / 尺寸標示



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page.120

page.148



Order No. 訂購編號	Range $\phi d$ 夾持範圍	$\phi d1$	L	L1	Tool Clamping Depth L2 刀具夾持深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手	
BT30 (BTT30)	ER11-060	0.6~7.0	19	60	38	19~50	CAP-ER11	ER-M8	ER11	PHS-ER11
	ER11-075	0.6~7.0	19	75	53	19~50	CAP-ER11	ER-M8	ER11	PHS-ER11
	ER11-090	0.6~7.0	19	90	68	19~50	CAP-ER11	ER-M8	ER11	PHS-ER11
	ER11-120	0.6~7.0	19	120	98	19~50	CAP-ER11	ER-M8	ER11	PHS-ER11
	ER16-060	0.6~10.0	28	60	38	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16
	ER16-075	0.6~10.0	28	75	53	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16
	ER16-090	0.6~10.0	28	90	68	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16
	ER16-120	0.6~10.0	28	120	98	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16
	ER20-060	0.6~13.0	34	60	38	32~63	CAP-ER20	ER-M14	ER20	PHS-ER20
	ER20-075	0.6~13.0	34	75	53	32~68	CAP-ER20	ER-M14	ER20	PHS-ER20
	ER20-090	0.6~13.0	34	90	68	32~68	CAP-ER20	ER-M14	ER20	PHS-ER20
	ER20-120	0.6~13.0	34	120	98	32~68	CAP-ER20	ER-M14	ER20	PHS-ER20
	ER25-060	0.6~16.0	42	60	38	35~63	CAP-ER25	ER-M18	ER25	PHS-ER25
	ER25-075	0.6~16.0	42	75	53	35~78	CAP-ER25	ER-M18	ER25	PHS-ER25
	ER25-090	0.6~16.0	42	90	68	35~78	CAP-ER25	ER-M18	ER25	PHS-ER25
	ER25-120	0.6~16.0	42	120	98	35~78	CAP-ER25	ER-M18	ER25	PHS-ER25
	ER32-060	1.6~20.0	50	60	38	41~48	CAP-ER32	ER-M22	ER32	PHS-ER32
	ER32-075	1.6~20.0	50	75	53	41~63	CAP-ER32	ER-M22	ER32	PHS-ER32
ER32-090	1.6~20.0	50	90	68	41~78	CAP-ER32	ER-M22	ER32	PHS-ER32	
ER32-105	1.6~20.0	50	105	83	41~88	CAP-ER32	ER-M22	ER32	PHS-ER32	
ER32-120	1.6~20.0	50	120	98	41~88	CAP-ER32	ER-M22	ER32	PHS-ER32	

Remarks / 備註

• 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Drilling  
鑽孔



Endmilling  
銑削



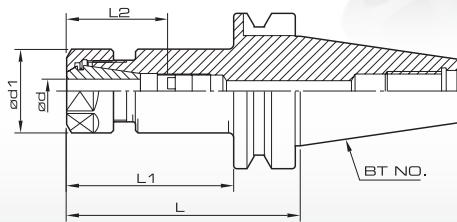
Tapping  
攻牙

# ER 筒夾刀把

## ER COLLET CHUCK



Dimensions / 尺寸標示



BT JIS B6339 (MAS 403 BT)



Order No. 訂購編號	Range $\phi d$ 夾持範圍	$\phi d_1$	L	L <sub>1</sub>	Tool Clamping Depth L <sub>2</sub> 刀具夾持深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手	
										page.146
BT40 (BTT40)	ER11-075	0.6~7.0	19	75	48	19~50	CAP-ER11	ER-M8	ER11	PHS-ER11
	ER11-090	0.6~7.0	19	90	63	19~50	CAP-ER11	ER-M8	ER11	PHS-ER11
	ER11-120	0.6~7.0	19	120	93	19~50	CAP-ER11	ER-M8	ER11	PHS-ER11
	ER11-150	0.6~7.0	19	150	123	19~50	CAP-ER11	ER-M8	ER11	PHS-ER11
	ER16-075	0.6~10.0	28	75	48	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16
	ER16-090	0.6~10.0	28	90	63	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16
	ER16-120	0.6~10.0	28	120	93	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16
	ER16-150	0.6~10.0	28	150	123	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16
	ER16-200	0.6~10.0	28	200	173	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16
	ER20-075	0.6~13.0	34	75	48	32~68	CAP-ER20	ER-M14	ER20	PHS-ER20
	ER20-090	0.6~13.0	34	90	63	32~68	CAP-ER20	ER-M14	ER20	PHS-ER20
	ER20-120	0.6~13.0	34	120	93	32~68	CAP-ER20	ER-M14	ER20	PHS-ER20
	ER20-135	0.6~13.0	34	135	108	32~68	CAP-ER20	ER-M14	ER20	PHS-ER20
	ER20-150	0.6~13.0	34	150	123	32~68	CAP-ER20	ER-M14	ER20	PHS-ER20
	ER20-200	0.6~13.0	34	200	173	32~68	CAP-ER20	ER-M14	ER20	PHS-ER20
	ER25-075	0.6~16.0	42	75	48	35~78	CAP-ER25	ER-M18	ER25	PHS-ER25
	ER25-090	0.6~16.0	42	90	63	35~78	CAP-ER25	ER-M18	ER25	PHS-ER25
	ER25-120	0.6~16.0	42	120	93	35~78	CAP-ER25	ER-M18	ER25	PHS-ER25
	ER25-150	0.6~16.0	42	150	123	35~78	CAP-ER25	ER-M18	ER25	PHS-ER25
	ER25-200	0.6~16.0	42	200	173	35~78	CAP-ER25	ER-M18	ER25	PHS-ER25
	ER32-075	1.6~20.0	50	75	48	41~78	CAP-ER32	ER-M22	ER32	PHS-ER32
	ER32-090	1.6~20.0	50	90	63	41~78	CAP-ER32	ER-M22	ER32	PHS-ER32
	ER32-120	1.6~20.0	50	120	93	41~78	CAP-ER32	ER-M22	ER32	PHS-ER32
	ER32-150	1.6~20.0	50	150	123	41~78	CAP-ER32	ER-M22	ER32	PHS-ER32
	ER32-200	1.6~20.0	50	200	173	41~78	CAP-ER32	ER-M22	ER32	PHS-ER32
	ER40-090	2.6~26.0	63	90	63	50~93	CAP-ER40	ER-M28	ER40	PHS-ER40
	ER40-120	2.6~26.0	63	120	93	50~93	CAP-ER40	ER-M28	ER40	PHS-ER40
	ER40-150	2.6~26.0	63	150	123	50~93	CAP-ER40	ER-M28	ER40	PHS-ER40

Remarks / 備註

• 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Drilling  
鑽孔



Endmilling  
銑削



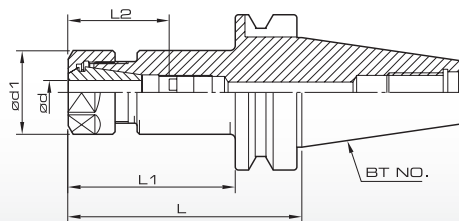
Tapping  
攻牙

# ER 筒夾刀把

## ER COLLET CHUCK



Dimensions / 尺寸標示



BT JIS B6339 (MAS 403 BT)

Order No. 訂購編號	Range $\phi d$ 夾持範圍	$\phi d1$	L	L1	Tool Clamping Depth L2 刀具夾持深度	page.146		page.144		page.120		page.148	
						Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手				
BT50 (BTT50)	ER16-105	0.6~10.0	28	105	67	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16			
	ER16-135	0.6~10.0	28	135	97	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16			
	ER16-165	0.6~10.0	28	165	127	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16			
	ER16-200	0.6~10.0	28	200	162	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16			
	ER20-105	0.6~13.0	34	105	67	32~68	CAP-ER20	ER-M14	ER20	PHS-ER20			
	ER20-135	0.6~13.0	34	135	97	32~68	CAP-ER20	ER-M14	ER20	PHS-ER20			
	ER20-165	0.6~13.0	34	165	127	32~68	CAP-ER20	ER-M14	ER20	PHS-ER20			
	ER20-200	0.6~13.0	34	200	162	32~68	CAP-ER20	ER-M14	ER20	PHS-ER20			
	ER25-105	0.6~16.0	42	105	67	35~73	CAP-ER25	ER-M18	ER25	PHS-ER25			
	ER25-135	0.6~16.0	42	135	97	35~73	CAP-ER25	ER-M18	ER25	PHS-ER25			
	ER25-165	0.6~16.0	42	165	127	35~73	CAP-ER25	ER-M18	ER25	PHS-ER25			
	ER25-200	0.6~16.0	42	200	162	35~73	CAP-ER25	ER-M18	ER25	PHS-ER25			
	ER32-105	1.6~20.0	50	105	67	41~78	CAP-ER32	ER-M22	ER32	PHS-ER32			
	ER32-135	1.6~20.0	50	135	97	41~78	CAP-ER32	ER-M22	ER32	PHS-ER32			
	ER32-165	1.6~20.0	50	165	127	41~78	CAP-ER32	ER-M22	ER32	PHS-ER32			
	ER32-200	1.6~20.0	50	200	162	41~78	CAP-ER32	ER-M22	ER32	PHS-ER32			
	ER40-105	2.6~26.0	63	105	67	50~93	CAP-ER40	ER-M28	ER40	PHS-ER40			
	ER40-135	2.6~26.0	63	135	97	50~93	CAP-ER40	ER-M28	ER40	PHS-ER40			
	ER40-165	2.6~26.0	63	165	127	50~93	CAP-ER40	ER-M28	ER40	PHS-ER40			
	ER40-200	2.6~26.0	63	200	162	50~93	CAP-ER40	ER-M28	ER40	PHS-ER40			

Remarks / 備註

• 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Drilling  
鑽孔



Endmilling  
銑削



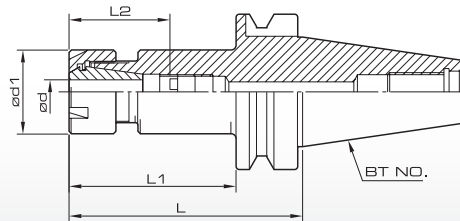
Tapping  
攻牙

# ER 小徑刀把

## ER SLIM TYPE CHUCK



Dimensions / 尺寸標示



BT JIS B6339 (MAS 403 BT)

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Order No. 訂購編號	Range $\phi d$ 夾持範圍	$\phi d1$	L	L1	Tool Clamping Depth L2 刀具夾持深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手	
BT30 (BTT30)	ER11-070M	0.6~7.0	16	70	48	19~48	CAP-ER11M	ER-M8	ER11	PHS-ER11M
	ER11-100M	0.6~7.0	16	100	78	19~48	CAP-ER11M	ER-M8	ER11	PHS-ER11M
	ER11-120M	0.6~7.0	16	120	98	19~48	CAP-ER11M	ER-M8	ER11	PHS-ER11M
	ER16-070M	0.6~10.0	22	70	48	29~58	CAP-ER16M	ER-M11	ER16	PHS-ER16M
	ER16-100M	0.6~10.0	22	100	78	29~58	CAP-ER16M	ER-M11	ER16	PHS-ER16M
	ER16-120M	0.6~10.0	22	120	98	29~58	CAP-ER16M	ER-M11	ER16	PHS-ER16M
	ER20-070M	0.6~13.0	28	70	48	32~68	CAP-ER20M	ER-M14	ER20	PHS-ER20M
	ER20-100M	0.6~13.0	28	100	78	32~68	CAP-ER20M	ER-M14	ER20	PHS-ER20M
BT40 (BTT40)	ER20-120M	0.6~13.0	28	120	98	32~68	CAP-ER20M	ER-M14	ER20	PHS-ER20M
	ER11-090M	0.6~7.0	16	90	63	19~48	CAP-ER11M	ER-M8	ER11	PHS-ER11M
	ER11-120M	0.6~7.0	16	120	93	19~48	CAP-ER11M	ER-M8	ER11	PHS-ER11M
	ER16-090M	0.6~10.0	22	90	63	29~58	CAP-ER16M	ER-M11	ER16	PHS-ER16M
	ER16-120M	0.6~10.0	22	120	93	29~58	CAP-ER16M	ER-M11	ER16	PHS-ER16M
	ER16-150M	0.6~10.0	22	150	123	29~58	CAP-ER16M	ER-M11	ER16	PHS-ER16M
	ER20-090M	0.6~13.0	28	90	63	32~68	CAP-ER20M	ER-M14	ER20	PHS-ER20M
	ER20-120M	0.6~13.0	28	120	93	32~68	CAP-ER20M	ER-M14	ER20	PHS-ER20M
BT50 (BTT50)	ER20-150M	0.6~13.0	28	150	123	32~68	CAP-ER20M	ER-M14	ER20	PHS-ER20M
	ER16-105M	0.6~10.0	22	105	67	29~58	CAP-ER16M	ER-M11	ER16	PHS-ER16M
	ER16-135M	0.6~10.0	22	135	97	29~58	CAP-ER16M	ER-M11	ER16	PHS-ER16M
	ER16-165M	0.6~10.0	22	165	127	29~58	CAP-ER16M	ER-M11	ER16	PHS-ER16M
	ER20-105M	0.6~13.0	28	105	67	32~68	CAP-ER20M	ER-M14	ER20	PHS-ER20M
	ER20-135M	0.6~13.0	28	135	97	32~68	CAP-ER20M	ER-M14	ER20	PHS-ER20M
ER20-165M	0.6~13.0	28	165	127	32~68	CAP-ER20M	ER-M14	ER20	PHS-ER20M	

Remarks / 備註

• 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Drilling  
鑽孔



Tapping  
攻牙



Mini Diameter  
小徑加工



# PFK 高速刀把

## PFK HIGH SPEED COLLET CHUCK



5  $\mu$ m  
RUN-OUT  
HIGH PRECISION

Dimensions / 尺寸標示

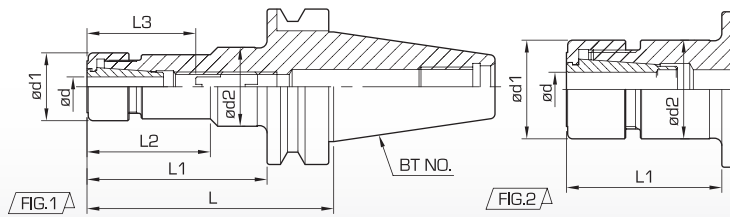
**G6.3**

BT30 / BT40  
Max.25,000 RPM  
Or  $U \leq 1\text{gmm}$

**G6.3**

BT50  
Max.20,000 RPM  
Or  $U \leq 1\text{gmm}$

Dimensions / 尺寸標示



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Tool  
Clamping  
Depth L3  
刀具夾持  
深度



Nut  
螺帽



Screw  
調整螺絲



Collet  
筒夾



Wrench  
扳手

Order No. 訂購編號	FIG	Range $\phi d$ 夾持範圍	$\phi d1$	$\phi d2$	L	L1	L2	Tool Clamping Depth L3 刀具夾持 深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手	
BT30 (BTT30)	PFK10-060S	2	1.75~10.0	27.5	27.5	60	38	-	30~50	CAP-PFK10S	PFK-M12	SK10P	PHS-10-TW275
	PFK10-090S	2	1.75~10.0	27.5	27.5	90	68	-	30~50	CAP-PFK10S	PFK-M12	SK10P	PHS-10-TW275
	PFK10-120S	2	1.75~10.0	27.5	27.5	120	98	-	30~50	CAP-PFK10S	PFK-M12	SK10P	PHS-10-TW275
	PFK16-060S	2	2.75~16.0	40	40	60	38	-	40~54	CAP-PFK16S	PFK-M12	SK16P	PHS-20-RO400
	PFK16-090S	2	2.75~16.0	40	40	90	68	-	40~70	CAP-PFK16S	PFK-M12	SK16P	PHS-20-RO400
BT40 (BTT40)	PFK10-060S	2	1.75~10.0	27.5	27.5	60	33	-	30~50	CAP-PFK10S	PFK-M12	SK10P	PHS-10-TW275
	PFK10-090S	2	1.75~10.0	27.5	27.5	90	63	-	30~50	CAP-PFK10S	PFK-M12	SK10P	PHS-10-TW275
	PFK10-120S	1	1.75~10.0	27.5	32	120	93	70	30~50	CAP-PFK10S	PFK-M12	SK10P	PHS-10-TW275
	PFK10-150S	1	1.75~10.0	27.5	32	150	123	70	30~50	CAP-PFK10S	PFK-M12	SK10P	PHS-10-TW275
	PFK16-060S	2	2.75~16.0	40	40	60	33	-	50~65	CAP-PFK16S	PFK-M18	SK16P	PHS-20-RO400
	PFK16-090S	2	2.75~16.0	40	40	90	63	-	40~70	CAP-PFK16S	PFK-M18	SK16P	PHS-20-RO400
	PFK16-120S	2	2.75~16.0	40	40	120	93	-	40~70	CAP-PFK16S	PFK-M18	SK16P	PHS-20-RO400
BT50 (BTT50)	PFK10-105S	2	1.75~10.0	27.5	27.5	105	67	-	30~50	CAP-PFK10S	PFK-M12	SK10P	PHS-10-TW275
	PFK10-135S	1	1.75~10.0	27.5	32	135	97	70	30~50	CAP-PFK10S	PFK-M12	SK10P	PHS-10-TW275
	PFK10-165S	1	1.75~10.0	27.5	32	165	127	75	30~50	CAP-PFK10S	PFK-M12	SK10P	PHS-10-TW275
	PFK16-105S	2	2.75~16.0	40	40	105	67	-	40~70	CAP-PFK16S	PFK-M18	SK16P	PHS-20-RO400
	PFK16-135S	2	2.75~16.0	40	40	135	97	-	40~70	CAP-PFK16S	PFK-M18	SK16P	PHS-20-RO400
PFK16-165S	1	2.75~16.0	40	50	165	127	90	40~70	CAP-PFK16S	PFK-M18	SK16P	PHS-20-RO400	

Remarks / 備註

• 需配合 3 $\mu$  P 筒夾 With 3 $\mu$  P Grade Collet

Applications / 應用



Drilling  
鑽孔



Reaming  
銜孔



Endmilling  
銑削



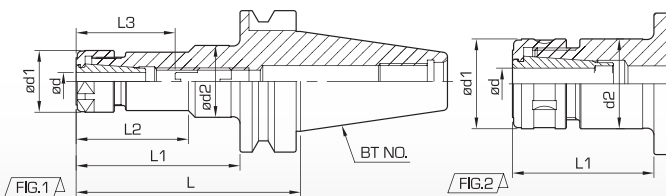
Tapping  
攻牙

# PFK 筒夾刀把

## PFK COLLET CHUCK



Dimensions / 尺寸標示



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Tool Clamping Depth L3  
刀具夾持深度



Nut 螺帽



Screw 調整螺絲



Collet 筒夾



Wrench 扳手

Order No. 訂購編號	FIG	Range 夾持範圍	ød	ød1	ød2	L	L1	L2	Tool Clamping Depth L3 刀具夾持深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手
BT30 (BTT30)	PFK6-060	2	0.7~6.0	19.5	19.5	60	38	-	21~35	CAP-PFK6	PFK-M8	SK6P	PHS-PFK6
	PFK6-090	1	0.7~6.0	19.5	32	90	68	61	21~35	CAP-PFK6	PFK-M8	SK6P	PHS-PFK6
	PFK6-120	1	0.7~6.0	19.5	32	120	98	63	21~35	CAP-PFK6	PFK-M8	SK6P	PHS-PFK6
	PFK10-060	2	1.75~10.0	27.5	27.5	60	38	-	30~50	CAP-PFK10	PFK-M12	SK10P	PHS-PFK10
	PFK10-090	2	1.75~10.0	27.5	27.5	90	68	-	30~50	CAP-PFK10	PFK-M12	SK10P	PHS-PFK10
	PFK10-120	2	1.75~10.0	27.5	27.5	120	98	-	30~50	CAP-PFK10	PFK-M12	SK10P	PHS-PFK10
	PFK16-060	2	2.75~16.0	40	40	60	38	-	40~54	CAP-PFK16	PFK-M12	SK16P	PHS-PFK16
	PFK16-090	2	2.75~16.0	40	40	90	68	-	40~70	CAP-PFK16	PFK-M12	SK16P	PHS-PFK16
	PFK16-120	2	2.75~16.0	40	40	120	98	-	40~70	CAP-PFK16	PFK-M18	SK16P	PHS-PFK16
PFK25-090	2	6.0~25.4	55	54	90	68	-	50~80	CAP-PFK25	PFK-M12	SK25P	PHS-PFK25	
BT40 (BTT40)	PFK6-060	2	0.7~6.0	19.5	19.5	60	33	-	21~35	CAP-PFK6	PFK-M8	SK6P	PHS-PFK6
	PFK6-090	2	0.7~6.0	19.5	19.5	90	63	-	21~35	CAP-PFK6	PFK-M8	SK6P	PHS-PFK6
	PFK6-120	1	0.7~6.0	19.5	32	120	93	63	21~35	CAP-PFK6	PFK-M8	SK6P	PHS-PFK6
	PFK6-150	1	0.7~6.0	19.5	32	150	123	63	21~35	CAP-PFK6	PFK-M8	SK6P	PHS-PFK6
	PFK10-060	2	1.75~10.0	27.5	27.5	60	33	-	30~50	CAP-PFK10	PFK-M12	SK10P	PHS-PFK10
	PFK10-090	2	1.75~10.0	27.5	27.5	90	63	-	30~50	CAP-PFK10	PFK-M12	SK10P	PHS-PFK10
	PFK10-120	1	1.75~10.0	27.5	32	120	93	70	30~50	CAP-PFK10	PFK-M12	SK10P	PHS-PFK10
	PFK10-150	1	1.75~10.0	27.5	32	150	123	70	30~50	CAP-PFK10	PFK-M12	SK10P	PHS-PFK10
	PFK16-060	2	2.75~16.0	40	40	60	33	-	50~65	CAP-PFK16	PFK-M18	SK16P	PHS-PFK16
	PFK16-090	2	2.75~16.0	40	40	90	63	-	40~70	CAP-PFK16	PFK-M18	SK16P	PHS-PFK16
	PFK16-120	2	2.75~16.0	40	40	120	93	-	40~70	CAP-PFK16	PFK-M18	SK16P	PHS-PFK16
	PFK16-150	2	2.75~16.0	40	40	150	123	-	40~70	CAP-PFK16	PFK-M18	SK16P	PHS-PFK16
PFK25-090	2	6.0~25.4	55	55	90	63	-	50~70	CAP-PFK25	PFK-M28	SK25P	PHS-PFK25	
PFK25-120	2	6.0~25.4	55	55	120	93	-	50~85	CAP-PFK25	PFK-M28	SK25P	PHS-PFK25	
BT50 (BTT50)	PFK6-105	2	0.7~6.0	19.5	19.5	105	67	-	21~35	CAP-PFK6	PFK-M8	SK6P	PHS-PFK6
	PFK6-135	1	0.7~6.0	19.5	32	135	63	97	21~35	CAP-PFK6	PFK-M8	SK6P	PHS-PFK6
	PFK6-165	1	0.7~6.0	19.5	32	165	63	127	21~35	CAP-PFK6	PFK-M8	SK6P	PHS-PFK6
	PFK10-105	2	1.75~10.0	27.5	27.5	105	67	-	30~50	CAP-PFK10	PFK-M12	SK10P	PHS-PFK10
	PFK10-135	1	1.75~10.0	27.5	32	135	97	70	30~50	CAP-PFK10	PFK-M12	SK10P	PHS-PFK10
	PFK10-165	1	1.75~10.0	27.5	32	165	127	75	30~50	CAP-PFK10	PFK-M12	SK10P	PHS-PFK10
	PFK16-105	2	2.75~16.0	40	40	105	67	-	40~70	CAP-PFK16	PFK-M18	SK16P	PHS-PFK16
	PFK16-135	2	2.75~16.0	40	40	135	97	-	40~70	CAP-PFK16	PFK-M18	SK16P	PHS-PFK16
	PFK16-165	1	2.75~16.0	40	50	165	127	90	40~70	CAP-PFK16	PFK-M18	SK16P	PHS-PFK16
	PFK25-105	2	6.0~25.4	55	55	105	67	-	50~85	CAP-PFK25	PFK-M28	SK25P	PHS-PFK25
	PFK25-135	2	6.0~25.4	55	55	135	97	-	50~85	CAP-PFK25	PFK-M28	SK25P	PHS-PFK25
	PFK25-165	2	6.0~25.4	55	55	165	127	-	50~85	CAP-PFK25	PFK-M28	SK25P	PHS-PFK25

Remarks / 備註

- 需配合 3μ P 筒夾 With 3μ P Grade Collet

Applications / 應用



Drilling 鑽孔



Reaming 銜孔



Endmilling 銑削

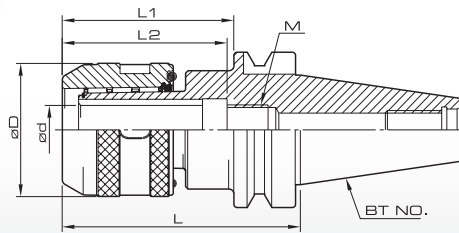


Tapping 攻牙

# 強力銑刀刀把 POWER MILLING CHUCK



Dimensions / 尺寸標示



page.118

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Order No. 訂購編號		$\phi d1$	$\phi D$	L	L1	Tool Clamping Depth L2 刀具夾持深度	M	Collet 筒夾	Wrench 扳手
BT30 (BTT30)	PFC20-075	20	52	75	53	63	M18x1.5	PFC20	PHS-ER32
	PFC25-075	25	59	75	53	68	M22x1.5	-	PHS-ER40
BT40 (BTT40)	PFC20-075	20	52	75	48	63	M18x1.5	PFC20	PHS-ER32
	PFC20-090	20	52	90	63	63	M18x1.5	PFC20	PHS-ER32
	PFC20-105	20	52	105	78	63	M18x1.5	PFC20	PHS-ER32
	PFC20-120	20	52	120	93	63	M18x1.5	PFC20	PHS-ER32
	PFC25-075	25	59	75	48	68	M22x1.5	-	PHS-ER40
	PFC25-090	25	59	90	63	68	M22x1.5	-	PHS-ER40
	PFC25-105	25	59	105	78	68	M22x1.5	-	PHS-ER40
	PFC25-120	25	59	120	93	68	M22x1.5	-	PHS-ER40
	PFC32-090	32	69	90	63	77	M28x1.5	PFC32	PHS-PFC32
	PFC32-105	32	69	105	78	77	M28x1.5	PFC32	PHS-PFC32
	PFC32-120	32	69	120	93	77	M28x1.5	PFC32	PHS-PFC32
	PFC32-150	32	69	150	123	77	M28x1.5	PFC32	PHS-PFC32
BT50 (BTT50)	PFC20-105	20	52	105	67	63	M18x1.5	PFC20	PHS-ER32
	PFC20-135	20	52	135	97	63	M18x1.5	PFC20	PHS-ER32
	PFC20-165	20	52	165	127	63	M18x1.5	PFC20	PHS-ER32
	PFC25-105	25	59	105	67	68	M22x1.5	-	PHS-ER40
	PFC25-135	25	59	135	97	68	M22x1.5	-	PHS-ER40
	PFC25-165	25	59	165	127	68	M22x1.5	-	PHS-ER40
	PFC32-105	32	69	105	67	77	M28x1.5	PFC32	PHS-PFC32
	PFC32-135	32	69	135	97	77	M28x1.5	PFC32	PHS-PFC32
	PFC32-165	32	69	165	127	77	M28x1.5	PFC32	PHS-PFC32
	PFC32-200	32	69	200	162	77	M28x1.5	PFC32	PHS-PFC32
	PFC32-250	32	69	250	212	77	M28x1.5	PFC32	PHS-PFC32
	PFC32-300	32	69	300	262	77	M28x1.5	PFC32	PHS-PFC32

Remarks / 備註

- 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Reaming  
鉸孔



Endmilling  
銑削

**BT**

# 強力銑刀刀把組

## POWER MILLING CHUCK SET


**BT** JIS B6339 (MAS 403 BT)

page.118

Collet  
筒夾

page.148

Wrench  
扳手Order No.  
訂購編號

BT30 (BTT30)	PFCS20-075	6,8,10,12,16mm	PFC20	PHS-ER32
	PFCS20-075	6,8,10,12,16mm	PFC20	PHS-ER32
BT40 (BTT40)	PFCS20-075	6,8,10,12,16mm	PFC20	PHS-ER32
	PFCS20-090	6,8,10,12,16mm	PFC20	PHS-ER32
	PFCS20-105	6,8,10,12,16mm	PFC20	PHS-ER32
	PFCS20-120	6,8,10,12,16mm	PFC20	PHS-ER32
	PFCS32-090	6,8,10,12,16,20,25mm	PFC32	PHS-PFC32
	PFCS32-105	6,8,10,12,16,20,25mm	PFC32	PHS-PFC32
	PFCS32-120	6,8,10,12,16,20,25mm	PFC32	PHS-PFC32
BT50 (BTT50)	PFCS32-150	6,8,10,12,16,20,25mm	PFC32	PHS-PFC32
	PFCS20-105	6,8,10,12,16mm	PFC20	PHS-ER32
	PFCS20-135	6,8,10,12,16mm	PFC20	PHS-ER32
	PFCS20-165	6,8,10,12,16mm	PFC20	PHS-ER32
	PFCS32-105	6,8,10,12,16,20,25mm	PFC32	PHS-PFC32
	PFCS32-135	6,8,10,12,16,20,25mm	PFC32	PHS-ER32
	PFCS32-165	6,8,10,12,16,20,25mm	PFC32	PHS-ER32

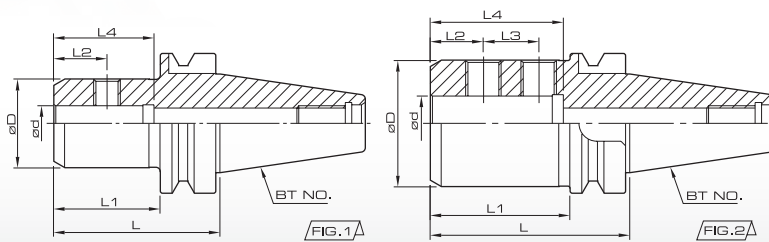
Remarks / 備註

- 若需出水型刀把，請參考 page.26 選用說明

# SLE 側固刀把 SIDE LOCK ARBOR



Dimensions / 尺寸標示



page.144



Order No. 訂購編號	FIG	ød	øD	L	L1	L2	L3	L4	Screw 止動螺絲	
BT30 (BTT30)	SLE06-060	1	6	25	60	38	18	-	35	SLA-M6
	SLE08-060	1	8	28	60	38	18	-	40	SLA-M8
	SLE10-060	1	10	35	60	38	20	-	50	SLA-M10
	SLE12-060	1	12	42	60	38	22.5	-	55	SLA-M12
	SLE16-060	1	16	48	60	38	24	-	60	SLA-M12
	SLE20-075	1	20	52	75	53	25	-	60	SLA-M16
	SLE25-075	2	25	45.5	75	53	25	20	65	SLA-M10
	SLE32-075	2	32	52	75	53	15	20	50	SLA-M10
BT40 (BTT40)	SLE06-075	1	6	25	75	48	18	-	35	SLA-M6
	SLE08-075	1	8	28	75	48	18	-	40	SLA-M8
	SLE10-075	1	10	35	75	48	20	-	50	SLA-M10
	SLE12-075	1	12	42	75	48	22.5	-	55	SLA-M12
	SLE16-075	1	16	48	75	48	24	-	60	SLA-M12
	SLE20-075	1	20	52	75	48	25	-	60	SLA-M16
	SLE25-090	2	25	57	90	63	24	25	65	SLA-M16
	SLE32-090	2	32	63	90	63	24	28	70	SLA-M16
BT50 (BTT50)	SLE10-075	1	10	35	75	37	20	-	50	SLA-M10
	SLE12-075	1	12	42	75	37	22.5	-	55	SLA-M12
	SLE16-090	1	16	48	90	52	24	-	60	SLA-M12
	SLE20-090	1	20	52	90	52	25	-	60	SLA-M16
	SLE25-105	2	25	57	105	67	24	25	65	SLA-M16
	SLE32-105	2	32	63	105	67	24	28	70	SLA-M16
	SLE40-120	2	40	80	120	82	30	32	80	SLA-M20
	SLE42-120	2	42	80	120	82	30	32	80	SLA-M20

Applications / 應用



Endmilling  
銑削

# MTA 莫式錐度孔刀把

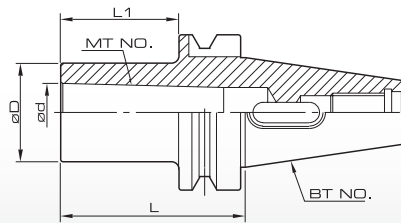
## MORSE TAPER HOLDER



Application: Adapt for tooling with MT shank.

應用: MT柄刀具聯結用

### Dimensions / 尺寸標示



Order No. 訂購編號	MT NO.		ød	øD	L	L1
BT30 (BTT30)	MTA1-045	1	12.065	25	45	23
	MTA2-060	2	17.78	32	60	38
	MTA3-080	3	23.825	40	80	58
BT40 (BTT40)	MTA1-045	1	12.065	25	45	18
	MTA1-120	1	12.065	25	120	93
	MTA2-045	2	17.78	32	45	18
	MTA2-120	2	17.78	32	120	93
	MTA3-075	3	23.825	40	75	48
	MTA3-135	3	23.825	40	135	108
	MTA4-090	4	31.267	50	90	63
	MTA4-165	4	31.267	50	165	138
BT50 (BTT50)	MTA1-045	1	12.065	25	45	7
	MTA1-120	1	12.065	25	120	82
	MTA1-180	1	12.065	25	180	142
	MTA2-045	2	17.78	32	45	7
	MTA2-135	2	17.78	32	135	97
	MTA2-180	2	17.78	32	180	142
	MTA3-060	3	23.825	40	60	22
	MTA3-150	3	23.825	40	150	112
	MTA3-180	3	23.825	40	180	142
	MTA4-075	4	31.267	50	75	37
	MTA4-180	4	31.267	50	180	142
	MTA5-105	5	44.399	65	105	67
MTA5-210	5	44.399	65	210	172	

# MTB 莫式錐度孔刀把

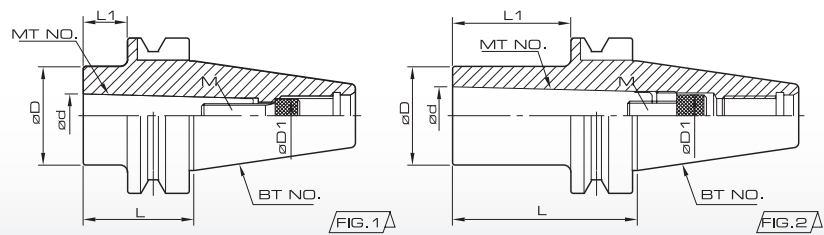
## MTB MORSE TAPER HOLDER

( B-TYPE WITH DRAW BOLT )



Application: Adapt for tooling with MT shank.  
應用: MT柄刀具聯結用

Dimensions / 尺寸標示

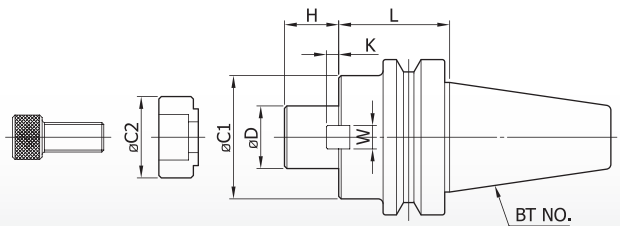


Order No. 訂購編號		FIG	MT NO.	ød	øD	øD1	L	L1	M
BT40	MTB1-045	1	1	12.065	25	10	45	18	M6x1.0
	MTB2-045	1	2	17.78	32	13.5	45	18	M10x1.5
	MTB3-075	2	3	23.825	40	17	75	48	M12x1.75
	MTB4-090	2	4	31.267	50	20	90	63	M16x2.0
BT50	MTB1-045	1	1	12.065	25	10	45	7	M6x1.0
	MTB2-045	1	2	17.78	32	16	45	7	M10x1.5
	MTB3-060	1	3	23.825	40	18	60	22	M12x1.75
	MTB4-075	1	4	31.267	50	20	75	37	M16x2.0
	MTB5-120	2	5	44.399	70	30	120	82	M20x2.5

# FMA/FMB面銑刀用刀把 (英制銑刀用 Inch size) FACE MILL ARBOR (公制銑刀用 Metric size)



Dimensions / 尺寸標示



Order No. 訂購編號		øD	øC1	øC2	L	H	K	W
BT30 (BTT30)	FMA25.4-030	25.4	45	33	30	20	5	9.5
	FMA25.4-045	25.4	45	33	45	20	5	9.5
	FMA25.4-060	25.4	45	33	60	20	5	9.5
BT40 (BTT40)	FMA25.4-045	25.4	50	33	45	20	5	9.5
	FMA25.4-090	25.4	50	33	90	20	5	9.5
	FMA31.75-045	31.75	60	40	45	22	7	12.7
	FMA31.75-090	31.75	60	40	90	22	7	12.7
	FMA38.1-060	38.1	78	50	60	26	9	15.9
BT50 (BTT50)	FMA25.4-090	25.4	50	33	90	20	5	9.5
	FMA31.75-075	31.75	60	40	75	22	7	12.7
	FMA38.1-075	38.1	80	50	75	26	9	15.9
BT30 (BTT30)	FMB16-045S ★	16	32	20	45	17	3.8	8
	FMB22-045	22	45	28	45	18	5	10
	FMB22-045S ★	22	40	28	45	18	5	10
	FMB27-045	27	58	33	45	20	6	12
	FMB27-045S ★	27	48	33	45	20	6	12
BT40 (BTT40)	FMB16-045S ★	16	32	20	45	17	3.8	8
	FMB22-045	22	48	28	45	18	5	10
	FMB22-045S ★	22	40	28	45	18	5	10
	FMB27-060	27	58	33	60	20	6	12
	FMB27-060S ★	27	48	33	60	20	6	12
	FMB32-060	32	78	40	60	22	7	14
	FMB32-060S ★	32	58	40	60	22	7	14
	FMB40-060	40	79	50	60	26	8.5	15.9
	FMB40-060S ★	40	76	50	60	26	8.3	15.9
BT50 (BTT50)	FMB27-090	27	58	33	90	20	6	12
	FMB27-090S ★	27	48	33	90	20	6	12
	FMB32-090	32	78	40	90	22	7	14
	FMB32-090S ★	32	58	40	90	22	7	14
	FMB40-090	40	80	50	90	26	8.5	15.9
FMB40-090S ★	40	76	50	90	26	8.3	15.9	

Remarks / 備註

★需配合 SANDVIK 面銑刀之刀把規格尺寸  
APPLY TO SANDVIK'S FACE MILLER.

Applications / 應用

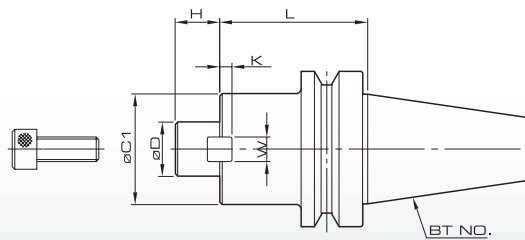




# FMC 面銑刀用 BT 刀把 FACE MILL ARBOR



Dimensions / 尺寸標示



Order No. 訂購編號		øD	øC1	L	H	K	W	Lock Screw 鎖緊螺栓
BT30 (BTT30)	FMC22-045	22	45	45	18	5	10	M10
	FMC25.4-060	25.4	45	60	20	5	9.5	M12
BT40 (BTT40)	FMC22-045	22	48	45	18	5	10	M10
	FMC25.4-060	25.4	50	60	20	5	9.5	M12
	FMC27-060	27	58	60	20	6	12	M12
	FMC32-060	32	78	60	22	7	14	M16
BT50 (BTT50)	FMC25.4-090	25.4	50	90	20	5	9.5	M12
	FMC27-090	27	58	90	20	6	12	M12
	FMC32-090	32	78	90	22	7	14	M16

Applications / 應用



Face Milling  
面銑

BT

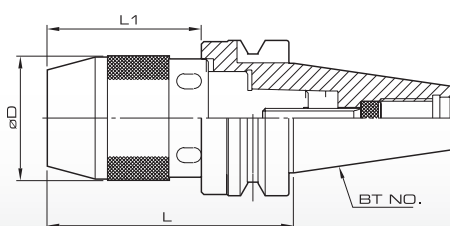
# 鑽夾頭刀把 KEYLESS DRILL CHUCK



Can be made upon requested dimensions

※本產品可依指定尺寸製造

Dimensions / 尺寸標示



Order No. 訂購編號		Range 夾持範圍	øD	L	L1
BT30 (BTT30)	KUP08-080	0.3~8	38	80	58
	KUP13-110	1~13	50	110	88
BT40 (BTT40)	KUP08-085	0.3~8	38	85	58
	KUP13-100	1~13	50	100	73
	KUP13-130	1~13	50	130	103
	KUP16-130	3~16	58	130	103
BT50 (BTT50)	KUP08-085	0.3~8	38	85	47
	KUP13-100	1~13	50	102	72
	KUP13-180	1~13	50	180	142
	KUP16-130	3~16	58	130	92

Applications / 應用

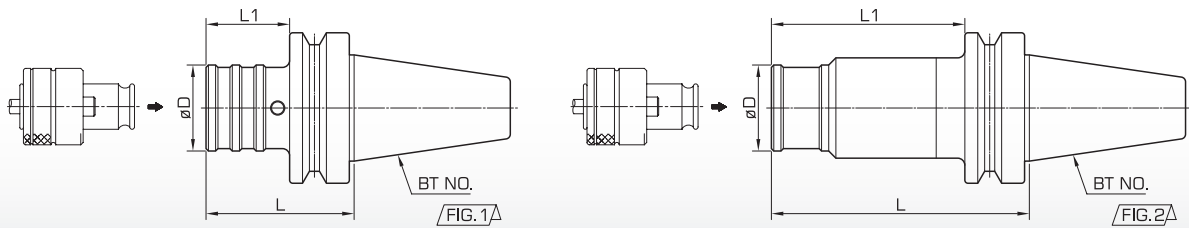


Drilling  
鑽孔

# 攻牙套筒刀把 TAP ADAPTER HOLDER



Dimensions / 尺寸標示



page.85



LENGTH COMPENSATION  
軸方向補正

Order No. 訂購編號	FIG	MACHINING CAPACITY 加工能力	TAP ADAPTER 適用攻牙套筒	COMP. 拉伸量	EXP. 壓縮量	øD	L	L1	
BT30	WF12-068	1	M3~M14	TC312 TC312B	7.5	7.5	36	68	46
BT40	WF12-073	1	M3~M14	TC312 TC312B	7.5	7.5	36	73	46
	WF12-135	2	M3~M14	TC312 TC312B	15	20	46	135	110
	WF12-165	2	M3~M14	TC312 TC312B	15	20	46	165	140
BT50	WF12-084	1	M3~M14	TC312 TC312B	7.5	7.5	36	84	46
	WF12-135	2	M3~M14	TC312 TC312B	15	20	46	135	97
	WF12-165	2	M3~M14	TC312 TC312B	15	20	46	165	127
BT30	WF20-094	1	M8~M24	TC820 TC820B	12.5	12.5	53	94	72
BT40	WF20-094	1	M8~M24	TC820 TC820B	12.5	12.5	53	94	67
BT50	WF20-103	1	M8~M24	TC820 TC820B	12.5	12.5	53	103	65
BT40	WF33-157	1	M14~M36	TC1433 TC1433B	20	20	78	157	130
BT50	WF33-142	1	M14~M36	TC1433 TC1433B	20	20	78	142	104

Applications / 應用



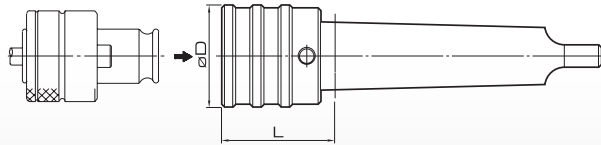
Tapping  
攻牙

BT

# 攻牙套筒莫氏錐柄 TAP ADAPTER HOLDER WITH MORSE TAPER



Dimensions / 尺寸標示



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LENGTH COMPENSATION  
軸方向補正

Order No. 訂購編號	MACHINING CAPACITY 加工能力	TAP ADAPTER 適用攻牙套筒	COMP. 拉伸量	EXP. 壓縮量	øD	L
MT2-WF12	M3~M14 U1/4~U7/16(U9/16) PT 1/8~1/4	TC312 TC312B	7.5	7.5	36	46
MT3-WF20	M8~M24 U3/8~U7/8 PT 1/8~1/2	TC820 TC820B	12.5	12.5	53	70
MT4-WF20	M8~M24 U3/8~U7/8 PT 1/8~1/2	TC820 TC820B	12.5	12.5	53	77

Applications / 應用



Tapping  
攻牙

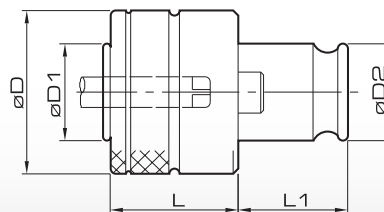
BT JIS B6339 (MAS 403 BT)

# 攻牙套筒 TAP ADAPTER



Application: Tapping with safe torque.  
應用: 安全扭力攻牙

Dimensions / 尺寸標示



Order No. 訂購編號	MACHINING CAPACITY 加工能力	SHANK DIA. 攻牙柄部徑	øD	øD1	øD2	L	L1
TC312	M2~M14	4~11	32	19	19	25	21.5
TC820	M6~M24	6.2~18	50	30	31	34	35
TC1433	M14~M36	10.5~26	72	47	48	45	55.5

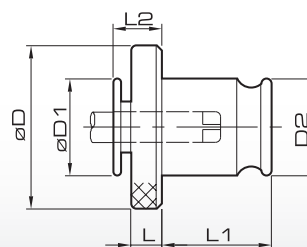
Applications / 應用



Tapping  
攻牙



Dimensions / 尺寸標示



Order No. 訂購編號	MACHINING CAPACITY 加工能力	SHANK DIA. 攻牙柄部徑	øD	øD1	øD2	L	L1	L2
TC312B	M3~M14	4~11	30	19	19	4	21.5	7
TC820B	M8~M24	6.2~19	48	30	31	5	35	11
TC1433B	M14~M36	10.5~28	70	47	48	6	55.5	14

Applications / 應用



Tapping  
攻牙

# BTN

BTN BT30 HOLDER WITHOUT KEYWAY



# HER 筒夾刀把 HER COLLET CHUCK



Balancing / 動平衡

Dimensions / 尺寸標示

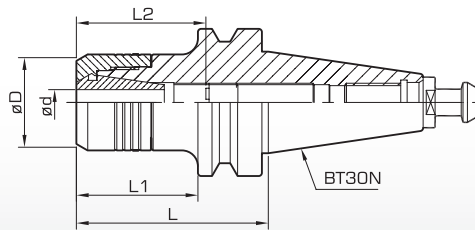
**G6.3**

Max.30,000 RPM  
Or U ≤ 1gmm

Option / 選配

**G2.5**

Max.30,000 RPM  
Or U ≤ 1gmm



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Nut  
螺帽



Screw  
調整螺絲



Collet  
筒夾



Wrench  
扳手

Order No. 訂購編號	Range 夾持範圍	ød1	L	L1	Tool Clamping Depth L2 刀具夾持深度					
						Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手	
BT30N	HER16-060	1.0~10.0	30	60	38	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER20-060	1.0~13.0	32	60	38	32~65	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER25-060	1.0~16.0	40	60	38	35~58	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400

Remarks / 備註

- 需配合 3μ HP 筒夾 With 3μ HP Grade Collet
- 若需出水型刀把，請參考 page.26 選用說明
- 筒夾夾持為一對一整數值

Applications / 應用



Drilling  
鑽孔



Reaming  
銜孔



Endmilling  
銑削



Tapping  
攻牙

# ER 筒夾刀把

## ER COLLET CHUCK



Balancing / 動平衡

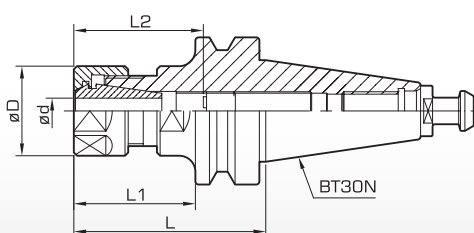
Dimensions / 尺寸標示

**G6.3**

Max.30,000 RPM  
Or U ≤ 1gmm

Option / 選配  
**G2.5**

Max.30,000 RPM  
Or U ≤ 1gmm



BTN BTN HOLDER WITHOUT KEYWAY

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Order No. 訂購編號	Range 夾持範圍	ød1	L	L1	Tool Clamping Depth L2 刀具夾持深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手	
BT30N	ER16-060	0.6~10.0	28	60	38	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16
	ER20-060	0.6~13.0	34	60	38	32~63	CAP-ER20	ER-M14	ER20	PHS-ER20
	ER25-075	0.6~16.0	42	75	53	35~78	CAP-ER25	ER-M18	ER25	PHS-ER25

Remarks / 備註

- 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Drilling  
鑽孔



Endmilling  
銑削



Tapping  
攻牙



# PFK 高速刀把 PFK HIGH SPEED COLLET CHUCK

**5** RUN-OUT  
**5**  $\mu\text{m}$   
HIGH PRECISION



Balancing / 動平衡

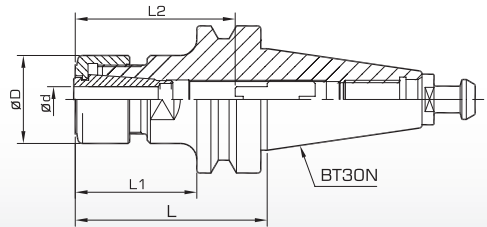
Dimensions / 尺寸標示

**G6.3**

Max.25,000 RPM  
Or  $U \leq 1\text{gmm}$

Option / 選配  
**G2.5**

Max.25,000 RPM  
Or  $U \leq 1\text{gmm}$



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Nut  
螺帽



Screw  
調整螺絲



Collet  
筒夾



Wrench  
扳手

Order No. 訂購編號	Range 夾持範圍	$\phi d$	$\phi d1$	L	L1	Tool Clamping Depth L2 刀具夾持深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手
BT30N	PFK10-060S	1.75~10.0	27.5	60	38	30~50	CAP-PFK10S	PFK-M12	SK10P	PHS-10-TW275
	PFK16-060S	2.75~16.0	40	60	38	40~54	CAP-PFK16S	PFK-M18	SK16P	PHS-20-RO400

Remarks / 備註

• 需配合 3 $\mu$  P 筒夾 With 3 $\mu$  P Grade Collet

Applications / 應用



Drilling  
鑽孔



Reaming  
銜孔



Endmilling  
銑削



Tapping  
攻牙

# PFK 筒夾刀把 PFK COLLET CHUCK

**5** RUN-OUT  
**5**  $\mu\text{m}$   
HIGH PRECISION

Balancing / 動平衡

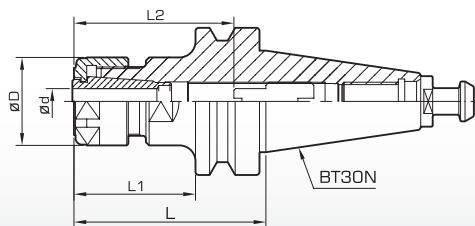
Dimensions / 尺寸標示

**G6.3**

Max.25,000 RPM  
Or  $U \leq 1\text{gmm}$

Option / 選配  
**G2.5**

Max.25,000 RPM  
Or  $U \leq 1\text{gmm}$



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Nut  
螺帽



Screw  
調整螺絲



Collet  
筒夾



Wrench  
扳手

Order No. 訂購編號	Range 夾持範圍	$\phi d$	$\phi d1$	L	L1	Tool Clamping Depth L2 刀具夾持深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手
BT30N	PFK10-060	1.75~10.0	27.5	60	38	30~50	CAP-PFK10	PFK-M12	SK10P	PHS-PFK10
	PFK16-060	2.75~16.0	40	60	38	40~54	CAP-PFK16	PFK-M12	SK16P	PHS-PFK16

Remarks / 備註

• 需配合 3 $\mu$  P 筒夾 With 3 $\mu$  P Grade Collet

Applications / 應用



Drilling  
鑽孔



Reaming  
銜孔



Endmilling  
銑削



Tapping  
攻牙

SK

DIN 69871



# 油壓刀把 HYDRAULIC CHUCK



3<sup>μm</sup> RUN-OUT  
HIGH PRECISION

Balancing / 動平衡

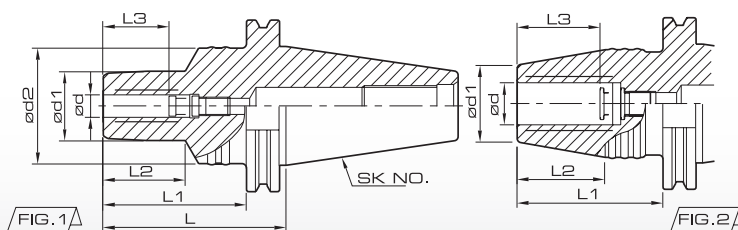
Dimensions / 尺寸標示

**G6.3**

SK40  
Max.25,000 RPM  
Or U ≤ 1gmm

**G6.3**

SK50  
Max.20,000 RPM  
Or U ≤ 1gmm



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Order No.  
訂購編號

Order No. 訂購編號	FIG	ød	ød1	ød2	L	L1	L2	Tool Clamping Depth L3 刀具夾持深度	Screw 調整螺絲	Collet 筒夾	
SK40	HY06-080	1	6	26	50	80	60.9	24.5	31~36	HY06-M5	-
	HY08-080	1	8	28	50	80	60.9	25.5	31~36	HY08-M6	-
	HY10-080	1	10	30	50	80	60.9	35.5	35~40	HY08-M6	-
	HY12-080	1	12	32	50	80	60.9	40	39~45	HY08-M6	HY12-C
	HY14-085	1	14	34	50	85	65.9	40	39~45	HY14-M8	-
	HY16-085	1	16	38	50	85	65.9	40	42~48	HY14-M8	-
	HY18-085	1	18	40	50	85	65.9	40	42~48	HY18-M12	-
	HY20-085	2	20	37	50	85	65.9	34	44~50	HY18-M12	HY20-C
	HY25-110	2	25	43	57	110	90.9	37	50~56	HY25-M16	-
SK50	HY32-115	2	32	50.5	62.5	115	95.9	31	53~60	HY25-M16	HY32-C
	HY20-085	2	20	37	50	85	65.9	34	44~50	HY18-M12	HY20-C
	HY32-100	2	32	50.5	62.5	100	80.9	31	53~60	HY25-M16	HY32-C

Remarks / 備註

- 直接夾持精度 Direct Clamping
- 刀具柄徑公差 h6( h6 Tooling Diameter Tolerance)
- 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Drilling  
鑽孔



Reaming  
銜孔



Endmilling  
銑削

# CR 標準型熱縮刀把

## CR STANDARD SHRINK FIT CHUCK



Balancing / 動平衡

**G6.3**

SK40  
Max.25,000 RPM  
Or U ≤ 1gmm

Option / 選配  
**G2.5**

SK40  
Max.25,000 RPM  
Or U ≤ 1gmm

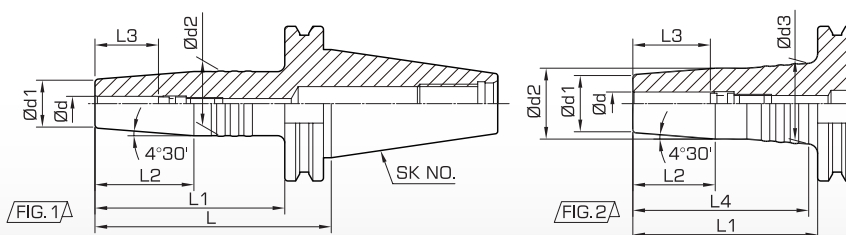
**G6.3**

SK50  
Max.20,000 RPM  
Or U ≤ 1gmm

Option / 選配  
**G2.5**

SK50  
Max.20,000 RPM  
Or U ≤ 1gmm

Dimensions / 尺寸標示



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Order No.  
訂購編號

FIG

Ød

Ød1

Ød2

Ød3

L

L1

L2

Tool Clamping  
Depth L3  
刀具夾持深度

L4

Screw  
調整螺絲

Order No. 訂購編號	FIG	Ød	Ød1	Ød2	Ød3	L	L1	L2	Tool Clamping Depth L3 刀具夾持深度	L4	Screw 調整螺絲	
SK40	CR04-080	1	4	16	23	-	80	60.9	40.7	min 18	-	
	CR06-080	1	6	21	27	-	80	60.9	34.3	21.5~31.5	-	HY06-M5
	CR06-130	2	6	21	27	31.9	130	110.9	38.1	21.5~31.5	108.1	HY06-M5
	CR08-080	1	8	21	27	-	80	60.9	34.3	25.5~35.5	-	HY08-M6
	CR08-130	2	8	21	27	31.9	130	110.9	38.1	25.5~35.5	108.1	HY08-M6
	CR10-080	1	10	24	32	-	80	60.9	47	31.5~41.5	-	HY08-M6
	CR10-130	2	10	24	32	31.9	130	110.9	50.8	31.5~41.5	108.1	HY08-M6
	CR10-160	2	10	24	32	35.1	160	140.9	50.8	31.5~41.5	138.1	HY08-M6
	CR12-080	1	12	24	32	-	80	60.9	47	36.5~46.5	-	HY14-M8
	CR12-130	2	12	24	32	31.9	130	110.9	50.8	36.5~46.5	108.1	HY14-M8
CR12-160	2	12	24	32	35.1	160	140.9	50.8	36.5~46.5	138.1	HY14-M8	
SK50	CR06-080	1	6	21	27	-	80	60.9	34.3	21.5~31.5	-	HY06-M5
	CR06-130	2	6	21	27	31.4	130	110.9	38.1	21.5~31.5	103.3	HY06-M5
	CR06-160	2	6	21	27	34.4	160	140.9	38.1	21.5~31.5	131.4	HY06-M5
	CR08-080	1	8	21	27	-	80	60.9	34.3	25.5~35.5	-	HY08-M6
	CR08-130	2	8	21	27	31.4	130	110.9	38.1	25.5~35.5	103.3	HY08-M6
	CR08-160	2	8	21	27	34.4	160	140.9	38.1	25.5~35.5	131.4	HY08-M6
	CR10-080	1	10	24	32	-	80	60.9	47	31.5~41.5	-	HY08-M6
	CR10-130	2	10	24	32	31.4	130	110.9	50.8	31.5~41.5	103.3	HY08-M6
	CR10-160	2	10	24	32	34.4	160	140.9	50.8	31.5~41.5	131.4	HY08-M6
	CR12-080	1	12	24	32	-	80	60.9	47	36.5~46.5	-	HY14-M8
CR12-130	2	12	24	32	31.4	130	110.9	50.8	36.5~46.5	103.3	HY14-M8	
CR12-160	2	12	24	32	34.4	160	140.9	50.8	36.5~46.5	131.4	HY14-M8	

Remarks / 備註

- 刀具柄徑公差 h6 (h6 Tooling Diameter Tolerance)
- 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



# HER 筒夾刀把 HER COLLET CHUCK



5  $\mu$ m  
HIGH PRECISION

Balancing / 動平衡

Dimensions / 尺寸標示

**G6.3**

SK40  
Max.25,000 RPM  
Or  $U \leq 1\text{gmm}$

**G6.3**

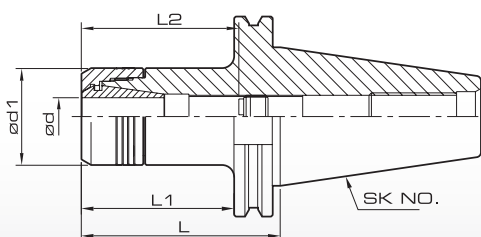
SK50  
Max.20,000 RPM  
Or  $U \leq 1\text{gmm}$

Option / 選配  
**G2.5**

SK40  
Max.25,000 RPM  
Or  $U \leq 1\text{gmm}$

Option / 選配  
**G2.5**

SK50  
Max.20,000 RPM  
Or  $U \leq 1\text{gmm}$



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Nut  
螺帽



Screw  
調整螺絲



Collet  
筒夾



Wrench  
扳手

Order No. 訂購編號	Range $\phi d$ 夾持範圍	$\phi d1$	L	L1	Tool Clamping Depth L2 刀具夾持深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手	
SK40	HER16-070	1.0~10.0	30	70	51	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER16-100	1.0~10.0	30	100	81	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER20-070	1.0~13.0	32	70	51	32~68	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER20-100	1.0~13.0	32	100	81	32~68	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER25-070	1.0~16.0	40	70	51	35~73	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
	HER25-100	1.0~16.0	40	100	81	35~73	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
	HER32-070	2.0~20.0	50	70	51	41~78	CAP-HER32	ER-M22	ER32-HP	PHS-20-RO500
	HER32-100	2.0~20.0	50	100	81	41~78	CAP-HER32	ER-M22	ER32-HP	PHS-20-RO500
SK50	HER16-100	1.0~10.0	30	100	81	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER16-160	1.0~10.0	30	160	141	29~58	CAP-HER16	ER-M11	ER16-HP	PHS-20-RO300
	HER20-100	1.0~13.0	32	100	81	32~68	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER20-160	1.0~13.0	32	160	141	32~68	CAP-HER20	ER-M14	ER20-HP	PHS-20-RO320
	HER25-100	1.0~16.0	40	100	81	35~73	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
	HER25-160	1.0~16.0	40	160	141	35~73	CAP-HER25	ER-M18	ER25-HP	PHS-20-RO400
	HER32-100	2.0~20.0	50	100	81	41~78	CAP-HER32	ER-M22	ER32-HP	PHS-20-RO500
HER32-160	2.0~20.0	50	160	141	41~78	CAP-HER32	ER-M22	ER32-HP	PHS-20-RO500	

Remarks / 備註

- 需配合 3 $\mu$  HP 筒夾 With 3 $\mu$  HP Grade Collet
- 若需出水型刀把，請參考 page.26 選用說明
- 筒夾夾持為一對一整數值

Applications / 應用



Drilling  
鑽孔



Reaming  
銜孔



Endmilling  
銑削



Tapping  
攻牙

# THER 小徑刀把

## THER SLIM COLLET CHUCK



Balancing / 動平衡

**G6.3**

SK40  
Max.25,000 RPM  
Or U ≤ 1gmm

Option / 選配  
**G2.5**

SK40  
Max.25,000 RPM  
Or U ≤ 1gmm

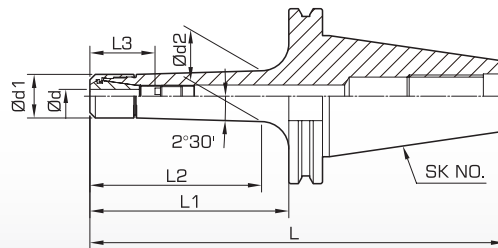
**G6.3**

SK50  
Max.20,000 RPM  
Or U ≤ 1gmm

Option / 選配  
**G2.5**

SK50  
Max.20,000 RPM  
Or U ≤ 1gmm

Dimensions / 尺寸標示



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Tool Clamping Depth L3  
刀具夾持深度



Nut  
螺帽



Screw  
調整螺絲



Collet  
筒夾



Wrench  
扳手

Order No. 訂購編號	Range 夾持範圍	Ød1	Ød2	L	L1	L2	Tool Clamping Depth L3 刀具夾持深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手	
SK40	THER11-100	1.0~7.0	16	20.9	100	80.9	73.2	19~48	CAP-THER11	ER-M11	ER11-HP	PHS-20-RO160
	THER11-130	1.0~7.0	16	23.5	130	110.9	103.2	19~48	CAP-THER11	ER-M11	ER11-HP	PHS-20-RO160
	THER11-160	1.0~7.0	16	26.2	160	140.9	133.2	19~48	CAP-THER11	ER-M11	ER11-HP	PHS-20-RO160
	THER16-100	1.0~10.0	22	26.8	100	80.9	76.1	29~58	CAP-THER16	ER-M16	ER16-HP	PHS-20-RO220
	THER16-130	1.0~10.0	22	29.4	130	110.9	106.1	29~58	CAP-THER16	ER-M16	ER16-HP	PHS-20-RO220
	THER16-160	1.0~10.0	22	32	160	140.9	136.1	29~58	CAP-THER16	ER-M16	ER16-HP	PHS-20-RO220
SK50	THER11-100	1.0~7.0	16	20.3	100	80.9	66.6	19~48	CAP-THER11	ER-M11	ER11-HP	PHS-20-RO160
	THER11-130	1.0~7.0	16	22.9	130	110.9	96.6	19~48	CAP-THER11	ER-M11	ER11-HP	PHS-20-RO160
	THER11-160	1.0~7.0	16	25.6	160	140.9	126.6	19~48	CAP-THER11	ER-M11	ER11-HP	PHS-20-RO160
	THER16-100	1.0~10.0	22	26	100	80.9	66.6	29~58	CAP-THER16	ER-M16	ER16-HP	PHS-20-RO220
	THER16-130	1.0~10.0	22	28.6	130	110.9	96.6	29~58	CAP-THER16	ER-M16	ER16-HP	PHS-20-RO220
	THER16-160	1.0~10.0	22	31.2	160	140.9	126.6	29~58	CAP-THER16	ER-M16	ER16-HP	PHS-20-RO220

Remarks / 備註

- 需配合 3μ HP 筒夾 With 3μ HP Grade Collet
- 若需出水型刀把，請參考 page.26 選用說明
- 筒夾夾持為一對一整數值

Applications / 應用



Drilling  
鑽孔



Reaming  
鉸孔



Tapping  
攻牙

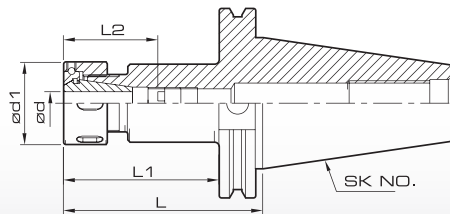


Mini Diameter  
小徑加工

# 鋼珠螺帽刀把 BALL BEARING NUT ER COLLET CHUCK



Dimensions / 尺寸標示



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Nut  
螺帽

Screw  
調整螺絲

Collet  
筒夾

Wrench  
扳手

Order No. 訂購編號	Range 夾持範圍	ød1	L	L1	Tool Clamping Depth L2 刀具夾持深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手	
SK40	ER11-090B	1.0~7.0	23.5	90	71	19~48	CAP-ER11B	ER-M8	ER11-HP	PHS-ER11B
	ER11-120B	1.0~7.0	23.5	120	101	19~48	CAP-ER11B	ER-M8	ER11-HP	PHS-ER11B
	ER16-090B	1.0~10.0	32	90	71	29~58	CAP-ER16B	ER-M11	ER16-HP	PHS-ER16B
	ER16-120B	1.0~10.0	32	120	101	29~58	CAP-ER16B	ER-M11	ER16-HP	PHS-ER16B
	ER20-090B	1.0~13.0	36	90	71	32~68	CAP-ER20B	ER-M14	ER20-HP	PHS-ER20B
	ER20-120B	1.0~13.0	36	120	101	32~68	CAP-ER20B	ER-M14	ER20-HP	PHS-ER20B
	ER25-090B	1.0~16.0	43	90	71	35~73	CAP-ER25B	ER-M18	ER25-HP	PHS-ER25
	ER25-120B	1.0~16.0	43	120	101	35~73	CAP-ER25B	ER-M18	ER25-HP	PHS-ER25
	ER32-090B	2.0~20.0	51	90	71	41~78	CAP-ER32B	ER-M22	ER32-HP	PHS-ER32
	ER32-120B	2.0~20.0	51	120	101	41~78	CAP-ER32B	ER-M22	ER32-HP	PHS-ER32
SK50	ER40-090B	3.0~26.0	63	90	71	50~93	CAP-ER40B	ER-M28	ER40-HP	PHS-ER40
	ER40-120B	3.0~26.0	63	120	101	50~93	CAP-ER40B	ER-M28	ER40-HP	PHS-ER40
	ER16-100B	1.0~10.0	32	100	81	29~58	CAP-ER16B	ER-M11	ER16-HP	PHS-ER16B
	ER16-130B	1.0~10.0	32	130	111	29~58	CAP-ER16B	ER-M11	ER16-HP	PHS-ER16B
	ER16-160B	1.0~10.0	32	160	141	29~58	CAP-ER16B	ER-M11	ER16-HP	PHS-ER16B
	ER20-100B	1.0~13.0	36	100	81	32~68	CAP-ER20B	ER-M14	ER20-HP	PHS-ER20B
	ER20-130B	1.0~13.0	36	130	111	32~68	CAP-ER20B	ER-M14	ER20-HP	PHS-ER20B
	ER20-160B	1.0~13.0	36	160	141	32~68	CAP-ER20B	ER-M14	ER20-HP	PHS-ER20B
	ER25-100B	1.0~16.0	43	100	81	35~73	CAP-ER25B	ER-M18	ER25-HP	PHS-ER25
	ER25-130B	1.0~16.0	43	130	111	35~73	CAP-ER25B	ER-M18	ER25-HP	PHS-ER25
	ER25-160B	1.0~16.0	43	160	141	35~73	CAP-ER25B	ER-M18	ER25-HP	PHS-ER25
	ER32-100B	2.0~20.0	51	100	81	41~78	CAP-ER32B	ER-M22	ER32-HP	PHS-ER32
	ER32-130B	2.0~20.0	51	130	111	41~78	CAP-ER32B	ER-M22	ER32-HP	PHS-ER32
	ER32-160B	2.0~20.0	51	160	141	41~78	CAP-ER32B	ER-M22	ER32-HP	PHS-ER32
ER40-100B	3.0~26.0	63	100	81	50~93	CAP-ER40B	ER-M28	ER40-HP	PHS-ER40	
ER40-130B	3.0~26.0	63	130	111	50~93	CAP-ER40B	ER-M28	ER40-HP	PHS-ER40	
ER40-160B	3.0~26.0	63	160	141	50~93	CAP-ER40B	ER-M28	ER40-HP	PHS-ER40	

Remarks / 備註

- 需配合 3μ HP 筒夾 With 3μ HP Grade Collet
- 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Drilling  
鑽孔



Reaming  
銜孔



Endmilling  
銑削



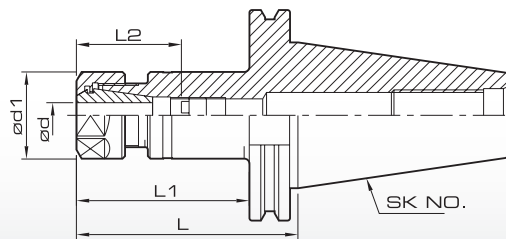
Tapping  
攻牙

# ER 筒夾刀把

## ER COLLET CHUCK



Dimensions / 尺寸標示



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Nut  
螺帽



Screw  
調整螺絲



Collet  
筒夾



Wrench  
扳手

Order No. 訂購編號	Range $\phi d$ 夾持範圍	$\phi d1$	L	L1	Tool Clamping Depth L2 刀具夾持深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手	
SK40	ER11-090	0.6~7.0	19	90	71	19~48	CAP-ER11	ER-M8	ER11	PHS-ER11
	ER11-120	0.6~7.0	19	120	101	19~48	CAP-ER11	ER-M8	ER11	PHS-ER11
	ER16-090	0.6~10.0	28	90	71	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16
	ER16-120	0.6~10.0	28	120	101	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16
	ER20-090	0.6~13.0	34	90	71	32~68	CAP-ER20	ER-M14	ER20	PHS-ER20
	ER20-120	0.6~13.0	34	120	101	32~68	CAP-ER20	ER-M14	ER20	PHS-ER20
	ER25-090	0.6~16.0	42	90	71	35~73	CAP-ER25	ER-M18	ER25	PHS-ER25
	ER25-120	0.6~16.0	42	120	101	35~73	CAP-ER25	ER-M18	ER25	PHS-ER25
	ER32-090	1.6~20.0	50	90	71	41~78	CAP-ER32	ER-M22	ER32	PHS-ER32
	ER32-120	1.6~20.0	50	120	101	41~78	CAP-ER32	ER-M22	ER32	PHS-ER32
	ER40-090	2.6~26.0	63	90	71	50~93	CAP-ER40	ER-M28	ER40	PHS-ER40
	ER40-120	2.6~26.0	63	120	101	50~93	CAP-ER40	ER-M28	ER40	PHS-ER40
SK50	ER16-100	0.6~10.0	28	100	81	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16
	ER16-130	0.6~10.0	28	130	111	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16
	ER16-160	0.6~10.0	28	160	141	29~58	CAP-ER16	ER-M11	ER16	PHS-ER16
	ER20-100	0.6~13.0	34	100	81	32~68	CAP-ER20	ER-M14	ER20	PHS-ER20
	ER20-130	0.6~13.0	34	130	111	32~68	CAP-ER20	ER-M14	ER20	PHS-ER20
	ER20-160	0.6~13.0	34	160	141	32~68	CAP-ER20	ER-M14	ER20	PHS-ER20
	ER25-100	0.6~16.0	42	100	81	35~73	CAP-ER25	ER-M18	ER25	PHS-ER25
	ER25-130	0.6~16.0	42	130	111	35~73	CAP-ER25	ER-M18	ER25	PHS-ER25
	ER25-160	0.6~16.0	42	160	141	35~73	CAP-ER25	ER-M18	ER25	PHS-ER25
	ER32-100	1.6~20.0	50	100	81	41~78	CAP-ER32	ER-M22	ER32	PHS-ER32
	ER32-130	1.6~20.0	50	130	111	41~78	CAP-ER32	ER-M22	ER32	PHS-ER32
	ER32-160	1.6~20.0	50	160	141	41~78	CAP-ER32	ER-M22	ER32	PHS-ER32
ER40-100	2.6~26.0	63	100	81	50~93	CAP-ER40	ER-M28	ER40	PHS-ER40	
ER40-130	2.6~26.0	63	130	111	50~93	CAP-ER40	ER-M28	ER40	PHS-ER40	
ER40-160	2.6~26.0	63	160	141	50~93	CAP-ER40	ER-M28	ER40	PHS-ER40	

Remarks / 備註

• 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Drilling  
鑽孔



Endmilling  
銑削



Tapping  
攻牙



# PFK 高速刀把

## PFK HIGH SPEED COLLET CHUCK



Balancing / 動平衡

Dimensions / 尺寸標示

**G6.3**

SK40  
Max.25,000 RPM  
Or U ≤ 1gmm

**G2.5**

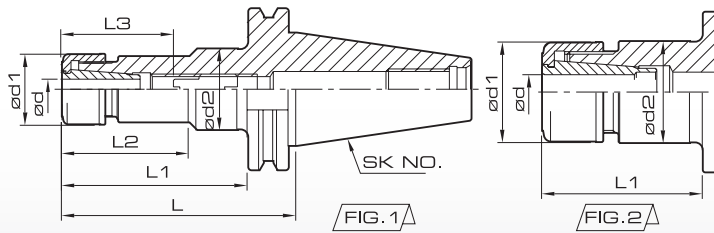
Option / 選配  
SK40  
Max.25,000 RPM  
Or U ≤ 1gmm

**G6.3**

SK50  
Max.20,000 RPM  
Or U ≤ 1gmm

**G2.5**

Option / 選配  
SK50  
Max.20,000 RPM  
Or U ≤ 1gmm



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Tool Clamping Depth L3  
刀具夾持深度



Nut  
螺帽



Screw  
調整螺絲



Collet  
筒夾



Wrench  
扳手

Order No. 訂購編號	FIG	Range 夾持範圍	ød	ød1	ød2	L	L1	L2	Tool Clamping Depth L3 刀具夾持深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手
SK40	PFK10-090S	2	1.75~10.0	27.5	27.5	90	71	-	30~50	CAP-PFK10S	PFK-M12	SK10P	PHS-10-TW275
	PFK10-120S	1	1.75~10.0	27.5	32	120	101	70	30~50	CAP-PFK10S	PFK-M12	SK10P	PHS-10-TW275
	PFK16-090S	2	2.75~16.0	40	40	90	71	-	40~70	CAP-PFK16S	PFK-M18	SK16P	PHS-20-RO400
	PFK16-120S	2	2.75~16.0	40	40	120	101	-	40~70	CAP-PFK16S	PFK-M18	SK16P	PHS-20-RO400
SK50	PFK10-105S	1	1.75~10.0	27.5	32	105	86	70	30~50	CAP-PFK10S	PFK-M12	SK10P	PHS-10-TW275
	PFK10-135S	1	1.75~10.0	27.5	32	135	116	70	30~50	CAP-PFK10S	PFK-M12	SK10P	PHS-10-TW275
	PFK10-165S	1	1.75~10.0	27.5	32	165	146	75	30~50	CAP-PFK10S	PFK-M12	SK10P	PHS-10-TW275
	PFK16-105S	2	2.75~16.0	40	40	105	86	-	40~70	CAP-PFK16S	PFK-M18	SK16P	PHS-20-RO400
	PFK16-165S	1	2.75~16.0	40	50	165	146	95	40~70	CAP-PFK16S	PFK-M18	SK16P	PHS-20-RO400

Remarks / 備註

• 需配合 3μ P 筒夾 With 3μ P Grade Collet

Applications / 應用



Drilling  
鑽孔



Reaming  
鉸孔



Endmilling  
銑削



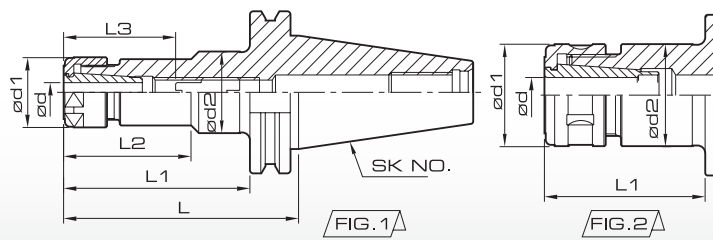
Tapping  
攻牙

# PFK 筒夾刀把

## PFK COLLET CHUCK



Dimensions / 尺寸標示



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Tool Clamping Depth L3  
刀具夾持深度



Nut 螺帽



Screw 調整螺絲



Collet 筒夾



Wrench 扳手

Order No. 訂購編號	FIG	Range 夾持範圍 ød	ød1	ød2	L	L1	L2	Tool Clamping Depth L3 刀具夾持深度	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手	
SK40	PFK6-090	1	0.7~6.0	19.5	32	90	71	63	21~35	CAP-PFK6	PFK-M8	SK6P	PHS-PFK6
	PFK6-120	1	0.7~6.0	19.5	32	120	101	63	21~35	CAP-PFK6	PFK-M8	SK6P	PHS-PFK6
	PFK10-090	2	1.75~10.0	27.5	27.5	90	71	-	30~50	CAP-PFK10	PFK-M12	SK10P	PHS-PFK10
	PFK10-120	1	1.75~10.0	27.5	32	120	101	70	30~50	CAP-PFK10	PFK-M12	SK10P	PHS-PFK10
	PFK16-090	2	2.75~16.0	40	40	90	71	-	40~70	CAP-PFK16	PFK-M18	SK16P	PHS-PFK16
	PFK16-120	2	2.75~16.0	40	40	120	101	-	40~70	CAP-PFK16	PFK-M18	SK16P	PHS-PFK16
	PFK25-090	2	6.0~25.4	55	55	90	71	-	50~70	CAP-PFK25	PFK-M28	SK25P	PHS-PFK25
	PFK25-120	2	6.0~25.4	55	55	120	101	-	50~70	CAP-PFK25	PFK-M28	SK25P	PHS-PFK25
SK50	PFK6-105	1	0.7~6.0	19.5	32	105	86	63	21~35	CAP-PFK6	PFK-M8	SK6P	PHS-PFK6
	PFK6-135	1	0.7~6.0	19.5	32	135	116	97	21~35	CAP-PFK6	PFK-M8	SK6P	PHS-PFK6
	PFK6-165	1	0.7~6.0	19.5	32	165	146	127	21~35	CAP-PFK6	PFK-M8	SK6P	PHS-PFK6
	PFK10-105	1	1.75~10.0	27.5	32	105	86	70	30~50	CAP-PFK10	PFK-M12	SK10P	PHS-PFK10
	PFK10-135	1	1.75~10.0	27.5	32	135	116	70	30~50	CAP-PFK10	PFK-M12	SK10P	PHS-PFK10
	PFK10-165	1	1.75~10.0	27.5	32	165	146	75	30~50	CAP-PFK10	PFK-M12	SK10P	PHS-PFK10
	PFK16-105	2	2.75~16.0	40	40	105	86	-	40~70	CAP-PFK16	PFK-M18	SK16P	PHS-PFK16
	PFK16-165	1	2.75~16.0	40	50	165	146	95	40~70	CAP-PFK16	PFK-M18	SK16P	PHS-PFK16
	PFK25-105	2	6.0~25.4	55	55	105	86	-	50~85	CAP-PFK25	PFK-M28	SK25P	PHS-PFK25
	PFK25-165	2	6.0~25.4	55	55	165	146	-	50~85	CAP-PFK25	PFK-M28	SK25P	PHS-PFK25

Remarks / 備註

- 需配合 3μ P 筒夾 With 3μ P Grade Collet

Applications / 應用



Drilling  
鑽孔



Reaming  
鉋孔



Endmilling  
銑削

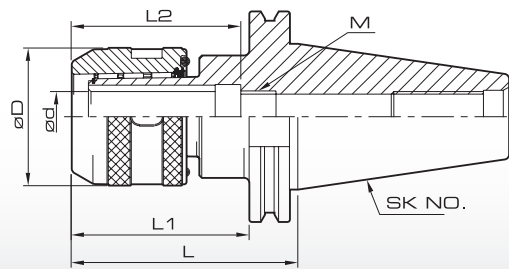


Tapping  
攻牙

# 強力銑刀刀把 POWER MILLING CHUCK



Dimensions / 尺寸標示



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Collet  
筒夾



Wrench  
扳手

Order No. 訂購編號	$\phi d1$	$\phi D$	M	L	L1	Tool Clamping Depth L2 刀具夾持深度	Collet 筒夾	Wrench 扳手	
SK40	PFC20-075	20	52	M18X1.5	75	56	63	PFC20	PHS-ER32
	PFC20-090	20	52	M18X1.5	90	71	63	PFC20	PHS-ER32
	PFC20-105	20	52	M18X1.5	105	86	63	PFC20	PHS-ER32
	PFC20-120	20	52	M18X1.5	120	101	63	PFC20	PHS-ER32
	PFC32-090	32	69	M28X1.5	90	71	77	PFC32	PHS-PFC32
	PFC32-105	32	69	M28X1.5	105	86	77	PFC32	PHS-PFC32
	PFC32-120	32	69	M28X1.5	120	101	77	PFC32	PHS-PFC32
SK50	PFC32-105	32	69	M28X1.5	105	86	77	PFC32	PHS-PFC32
	PFC32-135	32	69	M28X1.5	135	116	77	PFC32	PHS-PFC32

Remarks / 備註

• 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Reaming  
銜孔



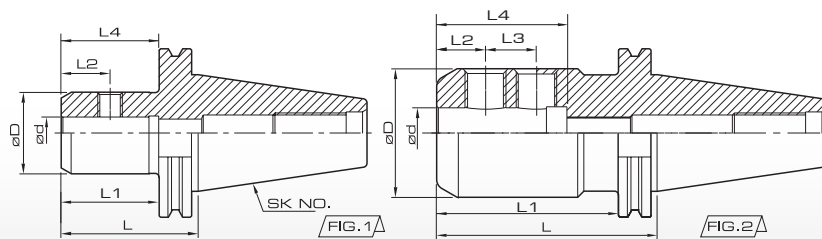
Endmilling  
銜削

# SLE 側固刀把

## SIDE LOCK ARBOR



Dimensions / 尺寸標示



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Screw  
止動螺絲

Order No. 訂購編號	FIG	ød	øD	L	L1	L2	L3	L4	Screw 止動螺絲	
SK40	SLE08-075	1	8	28	75	55.9	18	-	40	SLA-M8
	SLE10-075	1	10	35	75	55.9	20	-	50	SLA-M10
	SLE12-075	1	12	42	75	55.9	22.5	-	55	SLA-M12
	SLE16-075	1	16	48	75	55.9	24	-	60	SLA-M12
	SLE20-075	1	20	52	75	55.9	25	-	60	SLA-M16
	SLE25-100	2	25	57	100	80.9	24	25	65	SLA-M16
	SLE32-100	2	32	63	100	80.9	24	28	70	SLA-M16
SK50	SLE10-063	1	10	35	63	43.9	20	-	50	SLA-M10
	SLE12-063	1	12	42	63	43.9	22.5	-	55	SLA-M12
	SLE16-063	1	16	48	63	43.9	24	-	60	SLA-M12
	SLE20-063	1	20	52	63	43.9	25	-	60	SLA-M16
	SLE25-080	2	25	57	80	65.9	24	24	65	SLA-M16
	SLE32-100	2	32	63	100	85.9	24	28	70	SLA-M16
	SLE40-120	2	40	80	120	100.9	30	32	80	SLA-M20
SLE42-120	2	42	80	120	100.9	30	32	80	SLA-M20	

Applications / 應用



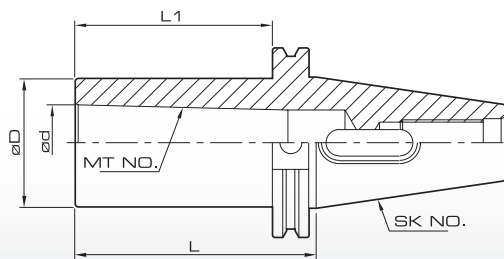
Endmilling  
銑削

# MTA 莫式錐度孔刀把 MORSE TAPER HOLDER



Application: Adapt for tooling with MT shank.  
應用: MT柄刀具聯結用

Dimensions / 尺寸標示



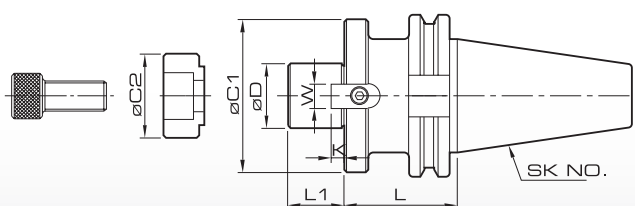
Order No. 訂購編號		MT NO.	ød	øD	L	L1
SK40	MTA1-045	1	12.065	25	45	25.9
	MTA2-060	2	17.78	32	60	40.9
	MTA3-075	3	23.825	40	75	55.9
	MTA4-095	4	31.267	50	95	75.9
SK50	MTA1-045	1	12.065	25	45	25.9
	MTA2-060	2	17.78	32	60	40.9
	MTA3-065	3	23.825	40	65	45.9
	MTA4-095	4	31.267	50	95	75.9
	MTA5-105	5	44.399	65	105	85.9

# 面銑刀用刀把

## FACE MILL LOCK ARBOR



Dimensions / 尺寸標示

Order No.  
訂購編號

		$\phi D$	$\phi C1$	$\phi C2$	L	L1	K	W
SK40	FMB22-050	22	48	28	50	18	5	10
	FMB22-050S ★	22	40	28	50	18	5	10
	FMB27-055	27	58	33	55	20	6	12
	FMB27-055S ★	27	48	33	55	20	6	12
	FMB32-055	32	78	40	55	22	7	14
	FMB32-055S ★	32	58	40	55	22	7	14
	FMB40-060	40	79	50	60	26	8.5	15.9
	FMB40-060S ★	40	76	50	60	26	8.3	15.9
SK50	FMB22-050	22	50	28	50	18	5	10
	FMB22-050S ★	22	40	28	50	18	5	10
	FMB27-055	27	58	33	55	20	6	12
	FMB27-055S ★	27	48	33	55	20	6	12
	FMB32-055	32	78	40	55	22	7	14
	FMB32-055S ★	32	58	40	55	22	7	14
	FMB40-060	40	89	50	60	26	8.5	15.9
	FMB40-060S ★	40	76	50	60	26	8.3	15.9

Remarks / 備註

★需配合 SANDVIK 面銑刀之刀把規格尺寸  
APPLY TO SANDVIK'S FACE MILLER.

Applications / 應用

Face Milling  
面銑



# 油壓刀把 HYDRAULIC CHUCK



Including pull stud and balancing.  
附拉桿，動平衡。

Balancing / 動平衡	Dimensions / 尺寸標示
<p>Option / 選配</p> <p><b>G2.5</b></p> <p>Max.30,000 RPM Or U ≤ 1gmm</p>	

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Collet  
筒夾



Pull Stud  
拉桿



Screw  
調整螺絲

Order No. 訂購編號	▲ ød	ød1	L	L1	L2	Tool Clamping Depth L3 刀具夾持深度	Collet 筒夾	Pull Stud 拉桿	Screw 調整螺絲
ISO30	6	26	60	24.5	40.9	31~36	-	PI30T-1	HY06-M5
	8	28	60	25.5	40.9	31~36	-	PI30T-1	HY08-M6
	10	30	75	35.5	55.9	35~40	-	PI30T-1	HY08-M6
	12	32	75	40	55.9	39~45	HY12-C	PI30T-1	HY08-M6

Remarks / 備註

- 直接夾持精度 Direct Clamping
- 刀具柄徑公差 h6( h6 Tooling Diameter Tolerance)
- 若需出水型刀把，請參考 page.26 選用說明

Applications / 應用



Drilling  
鑽孔



Reaming  
鉸孔



Endmilling  
銑削



# HER 筒夾刀把

## HER COLLET CHUCK



Including pull stud and balancing.  
附拉桿，動平衡。



Balancing / 動平衡	Dimensions / 尺寸標示
<p>Option / 選配</p> <p><b>G2.5</b></p> <p>Max.30,000 RPM Or U ≤ 1gmm</p>	

Order No. 訂購編號	FIG	Range 夾持範圍	ød	ød1	L	L1	page.115 Pull Stud 拉桿	page.146 Nut 螺帽	page.120 Collet 筒夾	page.149 Wrench 扳手 A	page.148 Wrench 扳手 B
ISO20	HER16-035	1	1.0~10.0	30	35	26	PI20T-1	CAP-HER16	ER16-HP	PHS-20-RO300	PHS-ISO20
ISO25	HER16-035	1	1.0~10.0	30	35	26.2	PI25T-1	CAP-HER16	ER16-HP	PHS-20-RO300	PHS-ISO25
ISO30	HER16-060	2	1.0~10.0	30	60	40.9	PI30T-1	CAP-HER16	ER16-HP	PHS-20-RO300	-
	HER20-060	2	1.0~13.0	32	60	40.9	PI30T-1	CAP-HER20	ER20-HP	PHS-20-RO320	-
	HER25-060	2	1.0~16.0	40	60	40.9	PI30T-1	CAP-HER25	ER25-HP	PHS-20-RO400	-

### Remarks / 備註

- 需配合 3μ HP 筒夾 With 3μ HP Grade Collet
- 若需出水型刀把，請參考 page.26 選用說明
- 筒夾夾持為一對一整數值

### Applications / 應用


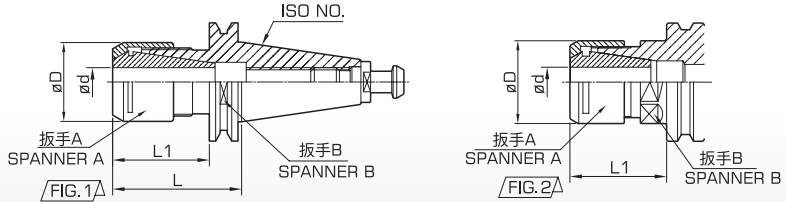


# ER 高速小徑刀把

## ER HIGH SPEED SLIM CHUCK



Including pull stud and balancing.  
附拉桿・動平衡。

Balancing / 動平衡	Dimensions / 尺寸標示
 <p>Option / 選配 <b>G2.5</b> Max.30,000 RPM Or U ≤ 1gmm</p>	

Order No. 訂購編號	FIG	Range 夾持範圍 ød	øD	L	L1	Pull Stud 拉桿	Nut 螺帽	Collet 筒夾	Wrench 扳手 A	Wrench 扳手 B	
ISO20	ER16-035MS	1	0.6~10.0	22	35	26	PI20T-1	CAP-ER16MS	ER16	PHS-ER16MS	PHS-ISO20
ISO25	ER16-035MS	1	0.6~10.0	22	35	26.2	PI25T-1	CAP-ER16MS	ER16	PHS-ER16MS	PHS-ISO20
	ER20-035MS	1	0.6~13.0	28	35	26.2	PI25T-1	CAP-ER20MS	ER20	PHS-ER20MS	PHS-ISO25
ISO30	ER16-060MS	2	0.6~10.0	22	60	40.9	PI30T-1	CAP-ER16MS	ER16	PHS-ER16MS	-
	ER25-060MS	2	0.6~16.0	35	60	40.9	PI30T-1	CAP-ER25MS	ER25	PHS-ER25MS	PHS-ISO30

Applications / 應用



# PFK 高速刀把

## PFK HIGH SPEED COLLET CHUCK



Including pull stud and balancing.  
附拉桿，動平衡。



Balancing / 動平衡	Dimensions / 尺寸標示
<p>Option / 選配</p> <p><b>G2.5</b></p> <p>Max.30,000 RPM Or U ≤ 1gmm</p>	

Order No. 訂購編號	FIG	Range 夾持範圍	Ød	Ød1	L	L1	Pull Stud 拉桿	Nut 螺帽	Collet 筒夾	Wrench 扳手 A	Wrench 扳手 B
ISO20	1	1.75~10.0	27.5	27.5	35	26	PI20T-1	CAP-PFK10S	SK10P	PHS-10-TW275	PHS-ISO20
ISO25	1	1.75~10.0	27.5	27.5	35	26.2	PI25T-1	CAP-PFK10S	SK10P	PHS-10-TW275	PHS-ISO25
ISO30	1	1.75~10.0	27.5	27.5	60	40.9	PI30T-1	CAP-PFK10S	SK10P	PHS-10-TW275	PHS-PFK10
	2	2.75~16.0	40	40	60	40.9	PI30T-1	CAP-PFK16S	SK16P	PHS-20-R0400	PHS-ISO30

Remarks / 備註

- 需配合 3μ P 筒夾 With 3μ P Grade Collet

Applications / 應用



# PFK 筒夾刀把

## PFK COLLET CHUCK



Including pull stud and balancing.  
附拉桿，動平衡。

Balancing / 動平衡	Dimensions / 尺寸標示
<p>Option / 選配</p> <p><b>G2.5</b></p> <p>Max.30,000 RPM Or U ≤ 1gmm</p>	



Order No. 訂購編號	FIG	Range 夾持範圍 ød	ød1	L	L1	Pull Stud 拉桿	Nut 螺帽	Collet 筒夾	Wrench 扳手 A	Wrench 扳手 B	
ISO20	PFK10-035	1	1.75~10.0	27.5	35	26	PI20T-1	CAP-PFK10	SK10P	PHS-PFK10	PHS-ISO20
ISO25	PFK10-035	1	1.75~10.0	27.5	35	26.2	PI25T-1	CAP-PFK10	SK10P	PHS-PFK10	PHS-ISO25
ISO30	PFK10-060	1	1.75~10.0	27.5	60	40.9	PI30T-1	CAP-PFK10	SK10P	PHS-PFK10	PHS-PFK10
	PFK16-060	2	2.75~16.0	40	60	40.9	PI30T-1	CAP-PFK16	SK16P	PHS-PFK16	PHS-ISO30

Remarks / 備註

- 需配合 3μ P 筒夾 With 3μ P Grade Collet

Applications / 應用



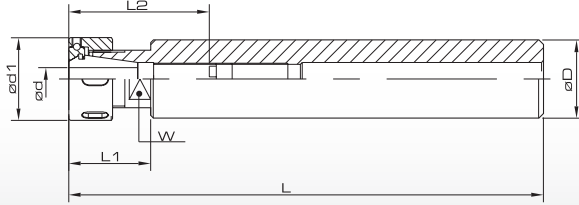


EXTENSION BAR  
TEST BAR  
SPARE PARTS

## Extension Bar

# ER 鋼珠螺帽延長桿 ER BALL BEARING NUT EXTENSION BAR

Dimensions / 尺寸標示



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Nut  
螺帽

Screw  
調整螺絲

Collet  
筒夾

Wrench  
扳手

Order No. 訂購編號	Range 夾持範圍	øD	ød1	L	L1	L2	W					
ASSA16	ER11-105B	1.0~7.0	16	23.5	105	25	20~50	13	CAP-ER11B	ER-M8	ER11-HP	PHS-ER11B
ASSA20	ER11-125B	1.0~7.0	20	23.5	125	25	20~50	13	CAP-ER11B	ER-M8	ER11-HP	PHS-ER11B
	ER16-135B	1.0~10.0	20	32	135	35	29~60	19	CAP-ER16B	ER-M11	ER16-HP	PHS-ER16B
ASSA25	ER16-155B	1.0~10.0	25	32	155	35	29~60	19	CAP-ER16B	ER-M11	ER16-HP	PHS-ER16B
	ER20-156B	1.0~13.0	25	36	156	36	33~70	21	CAP-ER20B	ER-M14	ER20-HP	PHS-ER20B
ASSA32	ER20-186B	1.0~13.0	32	36	186	36	33~70	21	CAP-ER20B	ER-M14	ER20-HP	PHS-ER20B
	ER25-200B	1.0~16.0	32	43	200	50	37~80	27	CAP-ER25B	ER-M18	ER25-HP	PHS-ER25

Applications / 應用



Drilling  
鑽孔

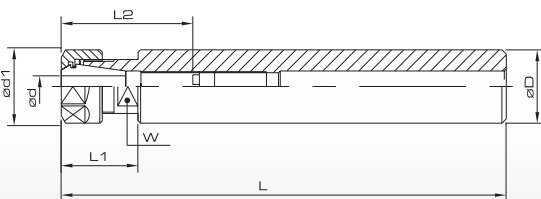
Reaming  
銜孔

Endmilling  
銑削

Tapping  
攻牙

# ER 標準螺帽延長桿 ER NUT EXTENSION BAR

Dimensions / 尺寸標示



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Nut  
螺帽

Screw  
調整螺絲

Collet  
筒夾

Wrench  
扳手

Order No. 訂購編號	Range 夾持範圍	øD	ød1	L	L1	L2	W					
ASSA16	ER11-105	0.6~7.0	16	19	105	25	20~50	13	CAP-ER11	ER-M8	ER11	PHS-ER11
ASSA20	ER11-125	0.6~7.0	20	19	125	25	20~50	13	CAP-ER11	ER-M8	ER11	PHS-ER11
	ER16-135	0.6~10.0	20	28	135	35	29~60	19	CAP-ER16	ER-M11	ER16	PHS-ER16
ASSA25	ER16-155	0.6~10.0	25	28	155	35	29~60	19	CAP-ER16	ER-M11	ER16	PHS-ER16
	ER20-156	0.6~13.0	25	34	156	36	33~70	21	CAP-ER20	ER-M14	ER20	PHS-ER20
ASSA32	ER20-186	0.6~13.0	32	34	186	36	33~70	21	CAP-ER20	ER-M14	ER20	PHS-ER20
	ER25-200	0.6~16.0	32	42	200	50	37~80	27	CAP-ER25	ER-M18	ER25	PHS-ER25

Applications / 應用



Drilling  
鑽孔

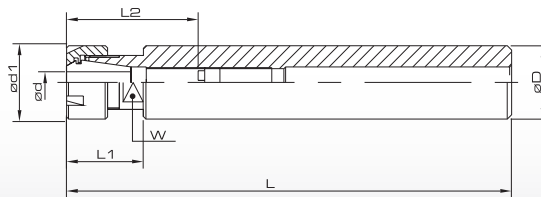
Endmilling  
銑削

Tapping  
攻牙

# ER 小徑螺帽延長桿 SMALL DIA ER NUT EXTENSION BAR



Dimensions / 尺寸標示



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Nut  
螺帽

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Screw  
調整螺絲

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Collet  
筒夾

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Wrench  
扳手

Order No. 訂購編號	Range 夾持範圍	$\phi d$	$\phi D$	$\phi d1$	L	L1	L2	W	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手
ASSA16	ER11-120M	0.6~7.0	16	16	120	25	20~50	13	CAP-ER11M	ER-M8	ER11	PHS-ER11M
	ER11-160M	0.6~7.0	16	16	160	25	20~50	13	CAP-ER11M	ER-M8	ER11	PHS-ER11M
ASSA20	ER16-150M	0.6~10.0	20	22	150	35	29~60	19	CAP-ER16M	ER-M11	ER16	PHS-ER16M
	ER16-200M	0.6~10.0	20	22	200	35	29~60	19	CAP-ER16M	ER-M11	ER16	PHS-ER16M
ASSA25	ER20-160M	0.6~13.0	25	28	160	36	33~70	21	CAP-ER20M	ER-M14	ER20	PHS-ER20M
	ER20-220M	0.6~13.0	25	28	220	36	33~70	21	CAP-ER20M	ER-M14	ER20	PHS-ER20M

Applications / 應用



Drilling  
鑽孔



Endmilling  
銑削



Tapping  
攻牙

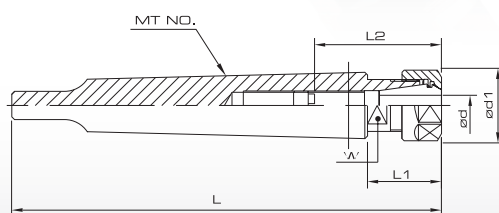


Mini Diameter  
小徑加工

# ER 莫氏錐柄夾頭 MORSE TAPER ER COLLET CHUCK



Dimensions / 尺寸標示



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Nut  
螺帽



Screw  
調整螺絲



Collet  
筒夾



Wrench  
扳手

Order No. 訂購編號	Range ød 夾持範圍	MT NO.	ød1	L	L1	L2	W	Nut 螺帽	Screw 調整螺絲	Collet 筒夾	Wrench 扳手	
AMTA2	ER11-25	0.6~7.0	2	19	105	25	16~44	13	CAP-ER11	ER-M8	ER11	PHS-ER11
	ER16-36	0.6~10.0	2	28	116	36	27~58	19	CAP-ER16	ER-M11	ER16	PHS-ER16
AMTA3	ER16-36	0.6~10.0	3	28	135	36	27~53	19	CAP-ER16	ER-M11	ER16	PHS-ER16
AMTA2	ER20-40	0.6~13.0	2	34	120	40	32~53	21	CAP-ER20	ER-M11	ER20	PHS-ER20
AMTA3	ER20-40	0.6~13.0	3	34	139	40	32~58	21	CAP-ER20	ER-M14	ER20	PHS-ER20
	ER25-50	0.6~16.0	3	42	149	50	36~64	27	CAP-ER25	ER-M18	ER25	PHS-ER25
AMTA4	ER25-50	0.6~16.0	4	42	174	50	36~64	27	CAP-ER25	ER-M18	ER25	PHS-ER25
AMTA3	ER32-52	1.6~20.0	3	50	151	52	41~61	35	CAP-ER32	ER-M18	ER32	PHS-ER32
AMTA4	ER32-52	1.6~20.0	4	50	176	52	41~65	35	CAP-ER32	ER-M18	ER32	PHS-ER32
AMTA3	ER40-60	2.6~26.0	3	63	159	60	47~67	41	CAP-ER40	ER-M18	ER40	PHS-ER40
AMTA4	ER40-60	2.6~26.0	4	63	184	60	47~72	41	CAP-ER40	ER-M22	ER40	PHS-ER40

Applications / 應用



Drilling  
鑽孔



Endmilling  
銑削



Tapping  
攻牙



# 測試棒 TEST BAR

## 應用

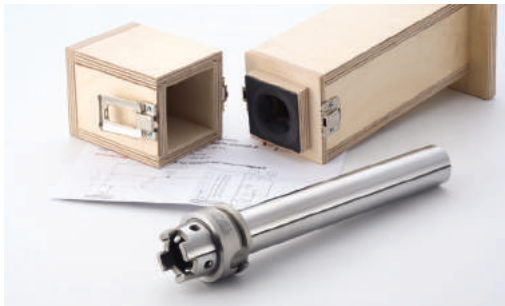
- 機台精度測試用
- 每組含木盒、試棒、出廠檢驗報告，如須公證另需付費

Application for machine precision test

- Each model provide wood box and inspection report.
- Additional charge should be paid if the official approval is requested.

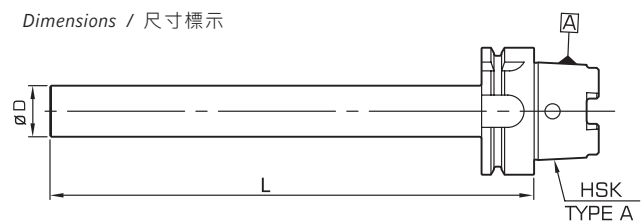
## HSK-A 型與 HSK-E 型共用

HSK-A Type and HSK-E are shared.



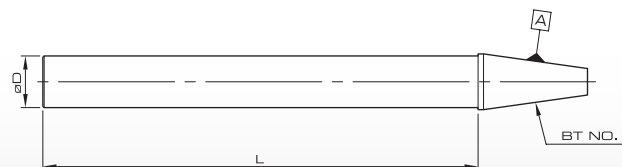
DIN 69893 From A

Dimensions / 尺寸標示



Order No. 訂購編號	øD	L	Run-out 偏擺精度	Circularity 真圓度	Cylindricity 圓筒度
HSK40A-25-L160	25	160	0.003	0.001	0.002
HSK50A-32-L236	32	236	0.003	0.001	0.003
HSK63A-40-L346	40	346	0.003	0.001	0.003

JIS B 6339 (MAS 403 BT)



Order No. 訂購編號	øD	L	Taper shank precision 錐柄精度	Run-out 偏擺精度	Circularity 真圓度	Cylindricity 圓筒度
BT30-32-L235	32	235	AT2	0.003	0.001	0.002
BT40-40-L335	40	335	AT2	0.003	0.001	0.003
BT50-50-L335	50	335	AT2	0.003	0.001	0.003

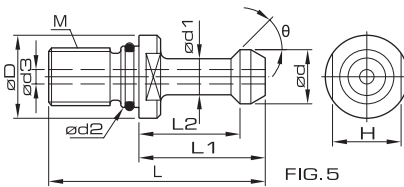
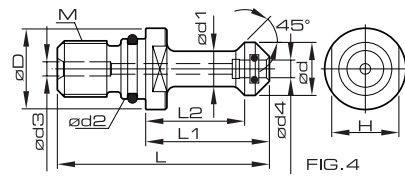
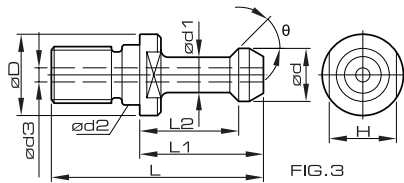
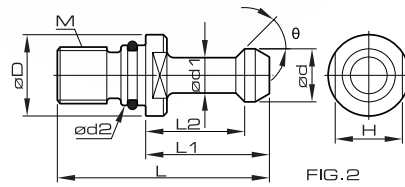
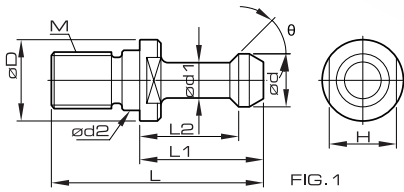
# SPARE PARTS

## 拉桿

### PULL STUD



#### BT拉桿螺栓規格 MAS403



拉桿型式對照表 Comparison table of pull stud

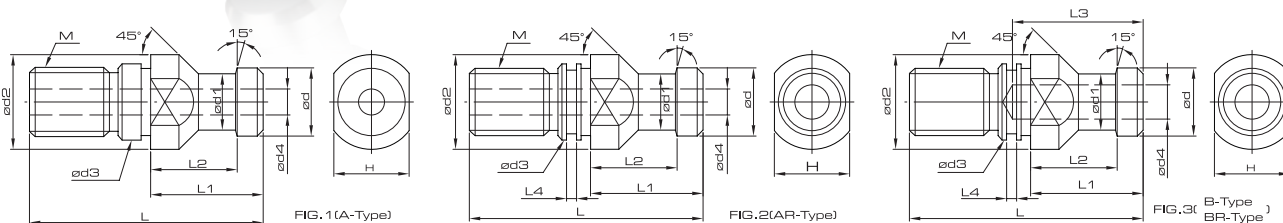
	BT 刀把			SK 刀把		
	C	RC	F	A	AR	BR
中心出水孔	■	■		■	■	
附 O-Ring		■	■		■	■
BT30/SK30		■		■		■
BT40/SK40	■	■	■	■	■	■
BT50/SK50	■	■		■		■

Order No. 訂購編號	FIG	øD	ød	ød1	ød2	ød3	ød4	L	L1	L2	M	H	θ
P30T-1	1	16.5	11	7	12.5	-	-	43	23	18	M12x1.75	13	45°
P30T-1RC	5	16.5	11	7	12.5	2	-	43	23	18	M12x1.75	13	45°
P30T-2	1	16.5	11	7	12.5	-	-	43	23	18	M12x1.75	13	60°
P40T-1	1	23	15	10	17	-	-	60	35	28	M16x2.0	19	45°
P40T-1F	2	23	15	10	17	-	-	60	35	28	M16x2.0	19	45°
P40T-1C	3	23	15	10	17	4	-	60	35	28	M16x2.0	19	45°
P40T-1RC	4	23	15	10	17	3	5	60	35	28	M16x2.0	19	45°
P40T-2	1	23	15	10	17	-	-	60	35	28	M16x2.0	19	60°
P40T-2C	3	23	15	10	17	4	-	60	35	28	M16x2.0	19	60°
P50T-1	1	38	23	17	25	-	-	85	45	35	M24x3.0	30	45°
P50T-1C	3	38	23	17	25	7	-	85	45	35	M24x3.0	30	45°
P50T-1RC	4	38	23	17	25	6	8	85	45	35	M24x3.0	30	45°
P50T-2	1	38	23	17	25	-	-	85	45	35	M24x3.0	30	60°
P50T-2C	3	38	23	17	25	7	-	85	45	35	M24x3.0	30	60°
P50T-3	1	38	23	17	25	-	-	85	45	35	M24x3.0	30	90°

# 拉桿 PULL STUD



## DIN拉桿螺栓規格 DIN 69872 Type A 及 Type B

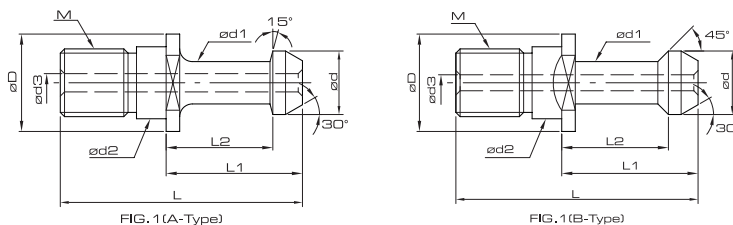


Order No.  
訂購編號

Order No. 訂購編號	FIG	ød	ød1	ød2	ød3	ød4	L	L1	L2	L3	L4	H	M
PD30T-A	1	13	9	17	13	-	44	24	19	-	-	14	M12x1.75
PD30T-BR	3	13	9	17	13	-	44	24	19	-	1.4	14	M12x1.75
PD40T-A	1	19	14	23	17	7	54	26	20	-	-	19	M16x2.0
PD40T-AR	2	19	14	23	17	7	54	26	20	-	1.9	19	M16x2.0
PD40T-BR	3	19	14	23	17	7	54	26	20	27	1.9	19	M16x2.0
PD50T-A	1	28	21	36	25	11.5	74	34	25	-	-	30	M24x3.0
PD50T-BR	3	28	21	36	25	11.5	74	34	25	37	3	30	M24x3.0



## ISO拉桿螺栓規格 ISO 7388/2

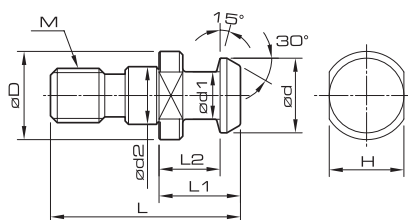


Order No.  
訂購編號

Order No. 訂購編號	FIG	øD	ød	ød1	ød2	ød3	L	L1	L2	M
ISO40-A	1	23	19	14	17	7	54	26	20	M16xP2.0
ISO40-B	2	22.5	18.95	12.95	17	7.35	44.5	16.4	11.15	M16xP2.0
ISO50-A	1	36	28	21	25	11.5	74	34	25	M24xP3.0
ISO50-B	2	37	29.1	19.6	25	11.55	65.5	25.55	17.95	M24xP3.0



## ISO (雕刻機用) 拉桿螺栓規格 PULL STUD TYPE ISO (For Engraving Machine)



Order No.  
訂購編號

Order No. 訂購編號	øD	ød	ød1	ød2	L	L1	L2	H	M
PI20T-1	11.4	9	6	8.5	26	12	9	10	M8xP1.25
PI25T-1	12	10	7	9	32	16	11.6	10	M8xP1.25
PI30T-1	17	13	9	13	45	24	19	14	M12xP1.75

COLLET



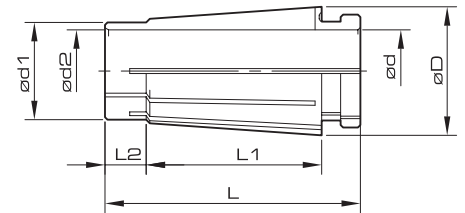
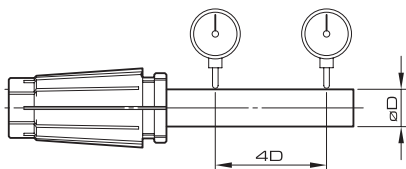
# PFK 筒夾

## PFK COLLET



訂購例  
Order example:  
SK10-6  
PFK10-6AA  
SK10-6P

MODEL 型號	Type 規格	Range 夾持範圍	MODEL 型號	Type 規格	Range 夾持範圍	MODEL 型號	Type 規格	Range 夾持範圍
SK6/PFK6-AA/SK6-P	PFK6-2.0	2.0~1.75	SK16/PFK-AA/SK16-P	PFK16-3.0	3.0~2.75	SK25/PFK25-AA/SK25-P	PFK25-6.0	6.0~5.5
	PFK6-2.25	2.25~2.0		PFK16-3.5	3.5~3.1		PFK25-8.0	8.0~7.5
	PFK6-2.5	2.5~2.25		PFK16-4.0	4.0~3.6		PFK25-10.0	10.0~9.5
	PFK6-2.75	2.75~2.5		PFK16-4.5	4.5~4.1		PFK25-12.0	12.0~11.5
	PFK6-3.0	3.0~2.75		PFK16-5.0	5.0~4.6		PFK25-16.0	16.0~15.5
	PFK6-3.5	3.5~3.1		PFK16-5.5	5.5~5.1		PFK25-20.0	20.0~19.5
	PFK6-4.0	4.0~3.6		PFK16-6.0	6.0~5.6		PFK25-25.0	25.0~24.5
	PFK6-4.5	4.5~4.1		PFK16-6.5	6.5~6.1			
	PFK6-5.0	5.0~4.6		PFK16-7.0	7.0~6.6			
	PFK6-5.5	5.5~5.1		PFK16-7.5	7.5~7.1			
PFK6-6.0	6.0~5.6	PFK16-8.0	8.0~7.6					
SK10/PFK10-AA/SK10-P	PFK10-2.0	2.0~1.75	PFK16-8.5	8.5~8.1				
	PFK10-2.25	2.25~2.0	PFK16-9.0	9.0~8.6				
	PFK10-2.5	2.5~2.25	PFK16-9.5	9.5~9.1				
	PFK10-2.75	2.75~2.5	PFK16-10.0	10.0~9.6				
	PFK10-3.0	3.0~2.75	PFK16-10.5	10.5~10.1				
	PFK10-3.5	3.5~3.1	PFK16-11.0	11.0~10.6				
	PFK10-4.0	4.0~3.6	PFK16-11.5	11.5~11.1				
	PFK10-4.5	4.5~4.1	PFK16-12.0	12.0~11.6				
	PFK10-5.0	5.0~4.6	PFK16-12.5	12.5~12.1				
	PFK10-5.5	5.5~5.1	PFK16-13.0	13.0~12.6				
	PFK10-6.0	6.0~5.6	PFK16-13.5	13.5~13.1				
	PFK10-6.5	6.5~6.1	PFK16-14.0	14.0~13.6				
	PFK10-7.0	7.0~6.6	PFK16-14.5	14.5~14.1				
	PFK10-7.5	7.5~7.1	PFK16-15.0	15.0~14.6				
PFK10-8.0	8.0~7.6	PFK16-15.5	15.5~15.1					
PFK10-8.5	8.5~8.1	PFK16-16.0	16.0~15.6					
PFK10-9.0	9.0~8.6							
PFK10-9.5	9.5~9.1							
PFK10-10.0	10.0~9.6							



PKF/SK 筒夾尺寸表  
PFK/SK Collet Dimensions

MODEL	D	d1	d2	L	L1	L2
PFK6	10.5	7.5	5.8	25	17	4
SK6	10.5	7.5	5.8	25	17	4
PFK10	15.6	11.8	10	30	21.3	5
SK10	15.6	11.8	10	30	21.3	5
PFK16	24.6	18.8	16	45	32	8
SK16	24.6	18.8	16	45	32	8
PFK25	35.6	28.8	25.4	57	43	8.5
SK25	35.6	28.8	25.4	57	43	8.5

精度等級 Precision Class 偏擺精度 Run out accuracy

AA 精度等級 Precision 5 μ

P 精度等級 Precision 3 μ

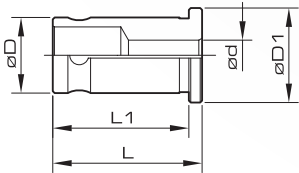
# SPARE PARTS

## PFC / HY 筒夾 PFC / HY COLLET

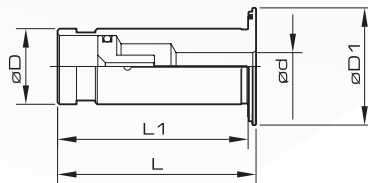
### 筒夾 應用於強力(PFC)刀把

COLLET APPLY TO PFC  
TOOL HOLDER

一般型  
Normal Type



一般型  
Normal Type



中心出水型(型式C)  
Coolant Through Type



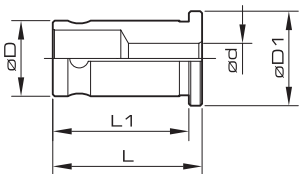
Order No. 訂購編號	Precision Class 精密等級	øD	ød	øD1	L	L1
PFC20	一般級 Normal	20	4,5,6,7,8,9,10,12,14,16	25	51.5	49.5
PFC20-A	精密級 A Class	20	4,5,6,7,8,9,10,12,14,16	25	51.5	49.5
PFC20C	精密級	20	4,5,6,7,8,9,10,12,14,16	31	52.5	50.5
PFC32	一般級 Normal	32	6,8,10,12,14,16,18,20,25	37.5	64	61.5
PFC32-A	精密級 A Class	32	6,8,10,12,14,16,18,20,25	37.5	64	61.5
PFC32C	精密級	32	6,8,10,12,14,16,18,20,25	45	63.5	60.5

訂購例 Order Example: PFC20-8, PFC20-8A, PFC20C-8

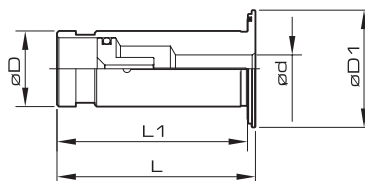
### 筒夾 應用於油壓(HY)刀把

COLLET

APPLY TO HY TOOL HOLDER



一般型  
Normal Type



中心出水型(型式C)  
Coolant Through Type



Order No. 訂購編號	øD	ød	øD1	L	L1
HY12C	12	3,4,5,6,8	19	47	45
HY20	20	4,5,6,7,8,9,10,12,14,16	25	51.5	49.5
HY20C	20	4,5,6,7,8,9,10,12,14,16	31	52.5	50.5
HY32	32	6,8,10,12,14,16,18,20,25	37.5	64	61.5
HY32C	32	6,8,10,12,14,16,18,20,25	45	63.5	60.5

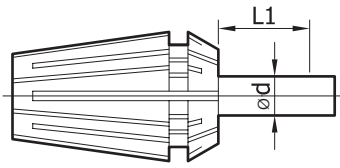
訂購例 Order Example: HY20-8, HY20C-8

Remarks / 備註

- 刀具柄徑公差 h6 (h6 Tooling Diameter Tolerance)

# E R 筒夾偏擺精度

## ER Collet Concentricity Charts



øD	L1	一般級 Normal	A 級
1.0-1.5	6	0.015	0.01
1.5-3.0	10	0.015	0.01
3.0-6.0	16	0.015	0.01
6.0-10.0	25	0.015	0.01
10.0-18.0	40	0.02	0.015
18.0-27.0	50	0.02	0.015
27.0-35.0	60	0.025	0.02

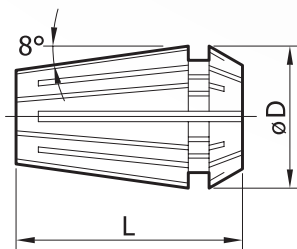
øD	L1	AA 級	HP 級
1.0-1.6	2-3	0.006	0.003
1.6-3.0	10	0.006	0.003
3.0-7.0	16	0.006	0.003
7.0-10.0	25	0.006	0.003
10.0-18.0	40	0.006	0.003
18.0-26.0	50	0.006	0.003
26.0-34.0	60	-	-

• 精度以筒夾整數為準

# SPARE PARTS

## ER 標準型筒夾

### ER Collet



MODEL	øD	L	HP 級 (6μm)		AA 級 (10μm)		A 級 (15μm)		一般級 Normal (20μm)				
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range			
ER8	8.5 (8.5)	13.6 (13.5)	ER8-1	HP	0.6-1.0	ER8-1	AA	0.6-1.0	ER8-1	A	0.6-1.0	ER8-1	0.6-1.0
			ER8-1.5	HP	1.1-1.5	ER8-1.5	AA	1.1-1.5	ER8-1.5	A	1.1-1.5	ER8-1.5	1.1-1.5
			ER8-2	HP	1.6-2.0	ER8-2	AA	1.6-2.0	ER8-2	A	1.6-2.0	ER8-2	1.6-2.0
			ER8-2.5	HP	2.1-2.5	ER8-2.5	AA	2.1-2.5	ER8-2.5	A	2.1-2.5	ER8-2.5	2.1-2.5
			ER8-3	HP	2.6-3.0	ER8-3	AA	2.6-3.0	ER8-3	A	2.6-3.0	ER8-3	2.6-3.0
			ER8-3.5	HP	3.1-3.5	ER8-3.5	AA	3.1-3.5	ER8-3.5	A	3.1-3.5	ER8-3.5	3.1-3.5
			ER8-4	HP	3.6-4.0	ER8-4	AA	3.6-4.0	ER8-4	A	3.6-4.0	ER8-4	3.6-4.0
			ER8-4.5	HP	4.1-4.5	ER8-4.5	AA	4.1-4.5	ER8-4.5	A	4.1-4.5	ER8-4.5	4.1-4.5
ER8-5	HP	4.6-5.0	ER8-5	AA	4.6-5.0	ER8-5	A	4.6-5.0	ER8-5	4.6-5.0			

• øD x L = 8.5 x 13.6 (HP/AA) | øD x L = 8.5 x 13.5 (A/一般級 Normal)

MODEL	øD	L	HP 級 (3μm)		AA 級 (6μm)		A 級 (10μm)		一般級 Normal (20μm)				
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range			
ER11	11.3 (11.5)	18 (18)	ER11-1	HP	0.6-1.0	ER11-1	AA	0.6-1.0	ER11-1	A	0.6-1.0	ER11-1	0.6-1.0
			ER11-1.5	HP	1.1-1.5	ER11-1.5	AA	1.1-1.5	ER11-1.5	A	1.5	ER11-1.5	1.5
			ER11-2	HP	1.6-2.0	ER11-2	AA	1.6-2.0	ER11-2	A	1.6-2.0	ER11-2	1.6-2.0
			ER11-2.5	HP	2.1-2.5	ER11-2.5	AA	2.1-2.5	ER11-2.5	A	2.5	ER11-2.5	2.5
			ER11-3	HP	2.6-3.0	ER11-3	AA	2.6-3.0	ER11-3	A	2.6-3.0	ER11-3	2.6-3.0
			ER11-3.5	HP	3.1-3.5	ER11-3.5	AA	3.1-3.5	ER11-3.5	A	3.5	ER11-3.5	3.5
			ER11-4	HP	3.6-4.0	ER11-4	AA	3.6-4.0	ER11-4	A	3.6-4.0	ER11-4	3.6-4.0
			ER11-4.5	HP	4.1-4.5	ER11-4.5	AA	4.1-4.5	ER11-4.5	A	4.5	ER11-4.5	4.5
			ER11-5	HP	4.6-5.0	ER11-5	AA	4.6-5.0	ER11-5	A	4.6-5.0	ER11-5	4.6-5.0
			ER11-5.5	HP	5.1-5.5	ER11-5.5	AA	5.1-5.5	ER11-5.5	A	5.5	ER11-5.5	5.5
			ER11-6	HP	5.6-6.0	ER11-6	AA	5.6-6.0	ER11-6	A	5.6-6.0	ER11-6	5.6-6.0
			ER11-6.5	HP	6.1-6.5	ER11-6.5	AA	6.1-6.5	ER11-6.5	A	6.5	ER11-6.5	6.5
			ER11-7	HP	6.6-7.0	ER11-7	AA	6.6-7.0	ER11-7	A	6.6-7.0	ER11-7	6.6-7.0

• øD x L = 11.3 x 18 (HP/AA) | øD x L = 11.5 x 18 (A/一般級 Normal)



# ER 標準型筒夾

## ER Collet

MODEL	øD	L	HP 級 (3µm)			AA 級 (6µm)			A 級 (10µm)		一般級 Normal (20µm)		
			訂購編號 Order No.	夾持範圍 Range		訂購編號 Order No.	夾持範圍 Range		訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	
ER16	17 (17)	27.5 (27)	ER16-1	HP	0.6-1.0	ER16-1	AA	0.6-1.0	ER16-1	A	0.6-1.0	ER16-1	0.6-1.0
			ER16-1.5	HP	1.1-1.5	ER16-1.5	AA	1.1-1.5	ER16-1.5	A	1.5	ER16-1.5	1.5
			ER16-2	HP	1.6-2.0	ER16-2	AA	1.6-2.0	ER16-2	A	1.1-2.0	ER16-2	1.1-2.0
			ER16-2.5	HP	2.1-2.5	ER16-2.5	AA	2.1-2.5	ER16-2.5	A	2.5	ER16-2.5	2.5
			ER16-3	HP	2.6-3.0	ER16-3	AA	2.6-3.0	ER16-3	A	2.1-3.0	ER16-3	2.1-3.0
			ER16-3.5	HP	3.1-3.5	ER16-3.5	AA	3.1-3.5	ER16-3.5	A	3.5	ER16-3.5	3.5
			ER16-4	HP	3.6-4.0	ER16-4	AA	3.6-4.0	ER16-4	A	3.1-4.0	ER16-4	3.1-4.0
			ER16-4.5	HP	4.1-4.5	ER16-4.5	AA	4.1-4.5	ER16-4.5	A	4.5	ER16-4.5	4.5
			ER16-5	HP	4.6-5.0	ER16-5	AA	4.6-5.0	ER16-5	A	4.1-5.0	ER16-5	4.1-5.0
			ER16-5.5	HP	5.1-5.5	ER16-5.5	AA	5.1-5.5	ER16-5.5	A	5.5	ER16-5.5	5.5
			ER16-6	HP	5.6-6.0	ER16-6	AA	5.6-6.0	ER16-6	A	5.1-6.0	ER16-6	5.1-6.0
			ER16-6.5	HP	6.1-6.5	ER16-6.5	AA	6.1-6.5	ER16-6.5	A	6.5	ER16-6.5	6.5
			ER16-7	HP	6.6-7.0	ER16-7	AA	6.6-7.0	ER16-7	A	6.1-7.0	ER16-7	6.1-7.0
			ER16-7.5	HP	7.1-7.5	ER16-7.5	AA	7.1-7.5	ER16-7.5	A	7.5	ER16-7.5	7.5
			ER16-8	HP	7.6-8.0	ER16-8	AA	7.6-8.0	ER16-8	A	7.1-8.0	ER16-8	7.1-8.0
			ER16-8.5	HP	8.1-8.5	ER16-8.5	AA	8.1-8.5	ER16-8.5	A	8.5	ER16-8.5	8.5
			ER16-9	HP	8.6-9.0	ER16-9	AA	8.6-9.0	ER16-9	A	8.1-9.0	ER16-9	8.1-9.0
ER16-9.5	HP	9.1-9.5	ER16-9.5	AA	9.1-9.5	ER16-9.5	A	9.5	ER16-9.5	9.5			
ER16-10	HP	9.6-10.0	ER16-10	AA	9.6-10.0	ER16-10	A	9.1-10.0	ER16-10	9.1-10.0			

• øD x L = 17 x 27.5 (HP/AA) | øD x L = 17 x 27 (A/一般級 Normal)

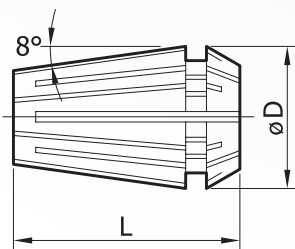
MODEL	øD	L	HP 級 (3µm)			AA 級 (6µm)			A 級 (10µm)		一般級 Normal (20µm)		
			訂購編號 Order No.	夾持範圍 Range		訂購編號 Order No.	夾持範圍 Range		訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	
ER20	21 (21)	31.5 (31)	ER20-1	HP	0.6-1.0	ER20-1	AA	0.6-1.0	ER20-1	A	1.0	ER20-1	1.0
			ER20-1.5	HP	1.1-1.5	ER20-1.5	AA	1.1-1.5	ER20-1.5	A	-	ER20-1.5	-
			ER20-2	HP	1.6-2.0	ER20-2	AA	1.6-2.0	ER20-2	A	1.1-2.0	ER20-2	1.1-2.0
			ER20-2.5	HP	2.1-2.5	ER20-2.5	AA	2.1-2.5	ER20-2.5	A	2.5	ER20-2.5	2.5
			ER20-3	HP	2.6-3.0	ER20-3	AA	2.6-3.0	ER20-3	A	2.1-3.0	ER20-3	2.1-3.0
			ER20-3.5	HP	3.1-3.5	ER20-3.5	AA	3.1-3.5	ER20-3.5	A	3.5	ER20-3.5	3.5
			ER20-4	HP	3.6-4.0	ER20-4	AA	3.6-4.0	ER20-4	A	3.1-4.0	ER20-4	3.1-4.0
			ER20-4.5	HP	4.1-4.5	ER20-4.5	AA	4.1-4.5	ER20-4.5	A	4.5	ER20-4.5	4.5
			ER20-5	HP	4.6-5.0	ER20-5	AA	4.6-5.0	ER20-5	A	4.1-5.0	ER20-5	4.1-5.0
			ER20-5.5	HP	5.1-5.5	ER20-5.5	AA	5.1-5.5	ER20-5.5	A	5.5	ER20-5.5	5.5
			ER20-6	HP	5.6-6.0	ER20-6	AA	5.6-6.0	ER20-6	A	5.1-6.0	ER20-6	5.1-6.0
			ER20-6.5	HP	6.1-6.5	ER20-6.5	AA	6.1-6.5	ER20-6.5	A	6.5	ER20-6.5	6.5
			ER20-7	HP	6.6-7.0	ER20-7	AA	6.6-7.0	ER20-7	A	6.1-7.0	ER20-7	6.1-7.0
			ER20-7.5	HP	7.1-7.5	ER20-7.5	AA	7.1-7.5	ER20-7.5	A	7.5	ER20-7.5	7.5
			ER20-8	HP	7.6-8.0	ER20-8	AA	7.6-8.0	ER20-8	A	7.1-8.0	ER20-8	7.1-8.0
			ER20-8.5	HP	8.1-8.5	ER20-8.5	AA	8.1-8.5	ER20-8.5	A	8.5	ER20-8.5	8.5
			ER20-9	HP	8.6-9.0	ER20-9	AA	8.6-9.0	ER20-9	A	8.1-9.0	ER20-9	8.1-9.0
ER20-9.5	HP	9.1-9.5	ER20-9.5	AA	9.1-9.5	ER20-9.5	A	9.5	ER20-9.5	9.5			
ER20-10	HP	9.6-10.0	ER20-10	AA	9.6-10.0	ER20-10	A	9.1-10.0	ER20-10	9.1-10.0			
ER20-10.5	HP	10.1-10.5	ER20-10.5	AA	10.1-10.5	ER20-10.5	A	10.5	ER20-10.5	10.5			
ER20-11	HP	10.6-11.0	ER20-11	AA	10.6-11.0	ER20-11	A	10.1-11.0	ER20-11	10.1-11.0			
ER20-11.5	HP	11.1-11.5	ER20-11.5	AA	11.1-11.5	ER20-11.5	A	11.5	ER20-11.5	11.5			
ER20-12	HP	11.6-12.0	ER20-12	AA	11.6-12.0	ER20-12	A	11.1-12.0	ER20-12	11.1-12.0			
ER20-12.5	HP	12.1-12.5	ER20-12.5	AA	12.1-12.5	ER20-12.5	A	12.5	ER20-12.5	12.5			
ER20-13	HP	12.6-13.0	ER20-13	AA	12.6-13.0	ER20-13	A	12.1-13.0	ER20-13	12.1-13.0			

• øD x L = 21 x 31.5 (HP/AA) | øD x L = 21 x 31 (A/一般級 Normal)

# SPARE PARTS

## E R 標準型筒夾

### ER Collet



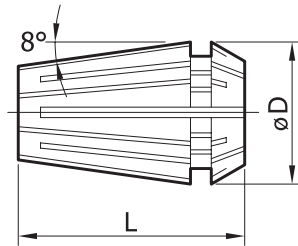
SPARE PARTS

MODEL	øD	L	HP 級 (3μm)		AA 級 (6μm)		A 級 (10μm)		一般級 Normal (20μm)				
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range			
ER25	26 (26)	34 (35)	ER25-1	HP	0.6-1.0	ER25-1	AA	0.6-1.0	-	-	-	-	
			ER25-1.5	HP	1.1-1.5	ER25-1.5	AA	1.1-1.5	-	-	-	-	
			ER25-2	HP	1.6-2.0	ER25-2	AA	1.6-2.0	ER25-2	A	1.1-2.0	ER25-2	1.1-2.0
			ER25-2.5	HP	2.1-2.5	ER25-2.5	AA	2.1-2.5	-	-	-	-	
			ER25-3	HP	2.6-3.0	ER25-3	AA	2.6-3.0	ER25-3	A	2.1-3.0	ER25-3	2.1-3.0
			ER25-3.5	HP	3.1-3.5	ER25-3.5	AA	3.1-3.5	-	-	-	-	
			ER25-4	HP	3.6-4.0	ER25-4	AA	3.6-4.0	ER25-4	A	3.1-4.0	ER25-4	3.1-4.0
			ER25-4.5	HP	4.1-4.5	ER25-4.5	AA	4.1-4.5	-	-	-	-	
			ER25-5	HP	4.6-5.0	ER25-5	AA	4.6-5.0	ER25-5	A	4.1-5.0	ER25-5	4.1-5.0
			ER25-5.5	HP	5.1-5.5	ER25-5.5	AA	5.1-5.5	-	-	-	-	
			ER25-6	HP	5.6-6.0	ER25-6	AA	5.6-6.0	ER25-6	A	5.1-6.0	ER25-6	5.1-6.0
			ER25-6.5	HP	6.1-6.5	ER25-6.5	AA	6.1-6.5	-	-	-	-	
			ER25-7	HP	6.6-7.0	ER25-7	AA	6.6-7.0	ER25-7	A	6.1-7.0	ER25-7	6.1-7.0
			ER25-7.5	HP	7.1-7.5	ER25-7.5	AA	7.1-7.5	-	-	-	-	
			ER25-8	HP	7.6-8.0	ER25-8	AA	7.6-8.0	ER25-8	A	7.1-8.0	ER25-8	7.1-8.0
			ER25-8.5	HP	8.1-8.5	ER25-8.5	AA	8.1-8.5	-	-	-	-	
ER25-9	HP	8.6-9.0	ER25-9	AA	8.6-9.0	ER25-9	A	8.1-9.0	ER25-9	8.1-9.0			
ER25-9.5	HP	9.1-9.5	ER25-9.5	AA	9.1-9.5	-	-	-	-				
ER25-10	HP	9.6-10.0	ER25-10	AA	9.6-10.0	ER25-10	A	9.1-10.0	ER25-10	9.1-10.0			
ER25-10.5	HP	10.1-10.5	ER25-10.5	AA	10.1-10.5	-	-	-	-				
ER25-11	HP	10.6-11.0	ER25-11	AA	10.6-11.0	ER25-11	A	10.1-11.0	ER25-11	10.1-11.0			
ER25-11.5	HP	11.1-11.5	ER25-11.5	AA	11.1-11.5	-	-	-	-				
ER25-12	HP	11.6-12.0	ER25-12	AA	11.6-12.0	ER25-12	A	11.1-12.0	ER25-12	11.1-12.0			
ER25-12.5	HP	12.1-12.5	ER25-12.5	AA	12.1-12.5	-	-	-	-				
ER25-13	HP	12.6-13.0	ER25-13	AA	12.6-13.0	ER25-13	A	12.1-13.0	ER25-13	12.1-13.0			
ER25-13.5	HP	13.1-13.5	ER25-13.5	AA	13.1-13.5	-	-	-	-				
ER25-14	HP	13.6-14.0	ER25-14	AA	13.6-14.0	ER25-14	A	13.1-14.0	ER25-14	13.1-14.0			
ER25-14.5	HP	14.1-14.5	ER25-14.5	AA	14.1-14.5	-	-	-	-				
ER25-15	HP	14.6-15.0	ER25-15	AA	14.6-15.0	ER25-15	A	14.1-15.0	ER25-15	14.1-15.0			
ER25-15.5	HP	15.1-15.5	ER25-15.5	AA	15.1-15.5	-	-	-	-				
ER25-16	HP	15.6-16.0	ER25-16	AA	15.6-16.0	ER25-16	A	15.1-16.0	ER25-16	15.1-16.0			

• øD x L = 26 x 34 (HP/AA) | øD x L = 26 x 35 (A/一般級 Normal)

# E R 標準型筒夾

## ER Collet



MODEL	øD	L	HP 級 (3μm)			AA 級 (6μm)			A 級 (15μm)		一般級 Normal (20μm)		
			訂購編號 Order No.	夾持範圍 Range		訂購編號 Order No.	夾持範圍 Range		訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	
ER32	33	40	ER32-2	HP	1.6-2.0	ER32-2	AA	1.6-2.0	-	-	-	-	
			ER32-2.5	HP	2.1-2.5	ER32-2.5	AA	2.1-2.5	-	-	-	-	
			ER32-3	HP	2.6-3.0	ER32-3	AA	2.6-3.0	ER32-3	A	2.1-3.0	ER32-3	2.1-3.0
			ER32-3.5	HP	3.1-3.5	ER32-3.5	AA	3.1-3.5	-	-	-	-	
			ER32-4	HP	3.6-4.0	ER32-4	AA	3.6-4.0	ER32-4	A	3.1-4.0	ER32-4	3.1-4.0
			ER32-4.5	HP	4.1-4.5	ER32-4.5	AA	4.1-4.5	-	-	-	-	
			ER32-5	HP	4.6-5.0	ER32-5	AA	4.6-5.0	ER32-5	A	4.1-5.0	ER32-5	4.1-5.0
			ER32-5.5	HP	5.1-5.5	ER32-5.5	AA	5.1-5.5	-	-	-	-	
			ER32-6	HP	5.6-6.0	ER32-6	AA	5.6-6.0	ER32-6	A	5.1-6.0	ER32-6	5.1-6.0
			ER32-6.5	HP	6.1-6.5	ER32-6.5	AA	6.1-6.5	-	-	-	-	
			ER32-7	HP	6.6-7.0	ER32-7	AA	6.6-7.0	ER32-7	A	6.1-7.0	ER32-7	6.1-7.0
			ER32-7.5	HP	7.1-7.5	ER32-7.5	AA	7.1-7.5	-	-	-	-	
			ER32-8	HP	7.6-8.0	ER32-8	AA	7.6-8.0	ER32-8	A	7.1-8.0	ER32-8	7.1-8.0
			ER32-8.5	HP	8.1-8.5	ER32-8.5	AA	8.1-8.5	-	-	-	-	
			ER32-9	HP	8.6-9.0	ER32-9	AA	8.6-9.0	ER32-9	A	8.1-9.0	ER32-9	8.1-9.0
			ER32-9.5	HP	9.1-9.5	ER32-9.5	AA	9.1-9.5	-	-	-	-	
			ER32-10	HP	9.6-10.0	ER32-10	AA	9.6-10.0	ER32-10	A	9.1-10.0	ER32-10	9.1-10.0
			ER32-10.5	HP	10.1-10.5	ER32-10.5	AA	10.1-10.5	-	-	-	-	
			ER32-11	HP	10.6-11.0	ER32-11	AA	10.6-11.0	ER32-11	A	10.1-11.0	ER32-11	10.1-11.0
			ER32-11.5	HP	11.1-11.5	ER32-11.5	AA	11.1-11.5	-	-	-	-	
ER32-12	HP	11.6-12.0	ER32-12	AA	11.6-12.0	ER32-12	A	11.1-12.0	ER32-12	11.1-12.0			
ER32-12.5	HP	12.1-12.5	ER32-12.5	AA	12.1-12.5	-	-	-	-				
ER32-13	HP	12.6-13.0	ER32-13	AA	12.6-13.0	ER32-13	A	12.1-13.0	ER32-13	12.1-13.0			
ER32-13.5	HP	13.1-13.5	ER32-13.5	AA	13.1-13.5	-	-	-	-				
ER32-14	HP	13.6-14.0	ER32-14	AA	13.6-14.0	ER32-14	A	13.1-14.0	ER32-14	13.1-14.0			
ER32-14.5	HP	14.1-14.5	ER32-14.5	AA	14.1-14.5	-	-	-	-				
ER32-15	HP	14.6-15.0	ER32-15	AA	14.6-15.0	ER32-15	A	14.1-15.0	ER32-15	14.1-15.0			
ER32-15.5	HP	15.1-15.5	ER32-15.5	AA	15.1-15.5	-	-	-	-				
ER32-16	HP	15.6-16.0	ER32-16	AA	15.6-16.0	ER32-16	A	15.1-16.0	ER32-16	15.1-16.0			
ER32-16.5	HP	16.1-16.5	ER32-16.5	AA	16.1-16.5	-	-	-	-				
ER32-17	HP	16.6-17.0	ER32-17	AA	16.6-17.0	ER32-17	A	16.1-17.0	ER32-17	16.1-17.0			
ER32-17.5	HP	17.1-17.5	ER32-17.5	AA	17.1-17.5	-	-	-	-				
ER32-18	HP	17.6-18.0	ER32-18	AA	17.6-18.0	ER32-18	A	17.1-18.0	ER32-18	17.1-18.0			
ER32-18.5	HP	18.1-18.5	ER32-18.5	AA	18.1-18.5	-	-	-	-				
ER32-19	HP	18.6-19.0	ER32-19	AA	18.6-19.0	ER32-19	A	18.1-19.0	ER32-19	18.1-19.0			
ER32-19.5	HP	19.1-19.5	ER32-19.5	AA	19.1-19.5	-	-	-	-				
ER32-20	HP	19.6-20.0	ER32-20	AA	19.6-20.0	ER32-20	A	19.1-20.0	ER32-20	19.1-20.0			

SPARE PARTS

# SPARE PARTS

## E R 標準型筒夾

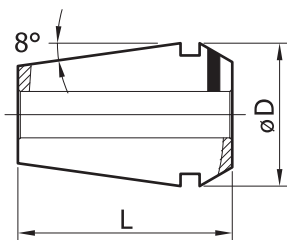
### ER Collet

MODEL	øD	L	HP 級 (3µm)		AA 級 (6µm)		A 級 (15µm)		一般級 Normal (20µm)	
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range
ER40	41	46	ER40-3	HP 2.6-3.0	ER40-3	AA 2.6-3.0	-	-	-	-
			ER40-3.5	HP 3.1-3.5	ER40-3.5	AA 3.1-3.5	-	-	-	-
			ER40-4	HP 3.6-4.0	ER40-4	AA 3.6-4.0	ER40-4	A 3.1-4.0	ER40-4	3.1-4.0
			ER40-4.5	HP 4.1-4.5	ER40-4.5	AA 4.1-4.5	-	-	-	-
			ER40-5	HP 4.6-5.0	ER40-5	AA 4.6-5.0	ER40-5	A 4.1-5.0	ER40-5	4.1-5.0
			ER40-5.5	HP 5.1-5.5	ER40-5.5	AA 5.1-5.5	-	-	-	-
			ER40-6	HP 5.6-6.0	ER40-6	AA 5.6-6.0	ER40-6	A 5.1-6.0	ER40-6	5.1-6.0
			ER40-6.5	HP 6.1-6.5	ER40-6.5	AA 6.1-6.5	-	-	-	-
			ER40-7	HP 6.6-7.0	ER40-7	AA 6.6-7.0	ER40-7	A 6.1-7.0	ER40-7	6.1-7.0
			ER40-7.5	HP 7.1-7.5	ER40-7.5	AA 7.1-7.5	-	-	-	-
			ER40-8	HP 7.6-8.0	ER40-8	AA 7.6-8.0	ER40-8	A 7.1-8.0	ER40-8	7.1-8.0
			ER40-8.5	HP 8.1-8.5	ER40-8.5	AA 8.1-8.5	-	-	-	-
			ER40-9	HP 8.6-9.0	ER40-9	AA 8.6-9.0	ER40-9	A 8.1-9.0	ER40-9	8.1-9.0
			ER40-9.5	HP 9.1-9.5	ER40-9.5	AA 9.1-9.5	-	-	-	-
			ER40-10	HP 9.6-10.0	ER40-10	AA 9.6-10.0	ER40-10	A 9.1-10.0	ER40-10	9.1-10.0
			ER40-10.5	HP 10.1-10.5	ER40-10.5	AA 10.1-10.5	-	-	-	-
			ER40-11	HP 10.6-11.0	ER40-11	AA 10.6-11.0	ER40-11	A 10.1-11.0	ER40-11	10.1-11.0
			ER40-11.5	HP 11.1-11.5	ER40-11.5	AA 11.1-11.5	ER40-11.5	A 11.5	-	-
			ER40-12	HP 11.6-12.0	ER40-12	AA 11.6-12.0	ER40-12	A 11.1-12.0	ER40-12	11.1-12.0
			ER40-12.5	HP 12.1-12.5	ER40-12.5	AA 12.1-12.5	ER40-12.5	A 12.5	-	-
			ER40-13	HP 12.6-13.0	ER40-13	AA 12.6-13.0	ER40-13	A 12.1-13.0	ER40-13	12.1-13.0
			ER40-13.5	HP 13.1-13.5	ER40-13.5	AA 13.1-13.5	ER40-13.5	A 13.5	-	-
			ER40-14	HP 13.6-14.0	ER40-14	AA 13.6-14.0	ER40-14	A 13.1-14.0	ER40-14	13.1-14.0
			ER40-14.5	HP 14.1-14.5	ER40-14.5	AA 14.1-14.5	ER40-14.5	A 14.5	-	-
			ER40-15	HP 14.6-15.0	ER40-15	AA 14.6-15.0	ER40-15	A 14.1-15.0	ER40-15	14.1-15.0
			ER40-15.5	HP 15.1-15.5	ER40-15.5	AA 15.1-15.5	ER40-15.5	A 15.5	-	-
			ER40-16	HP 15.6-16.0	ER40-16	AA 15.6-16.0	ER40-16	A 15.1-16.0	ER40-16	15.1-16.0
			ER40-16.5	HP 16.1-16.5	ER40-16.5	AA 16.1-16.5	ER40-16.5	A 16.5	-	-
			ER40-17	HP 16.6-17.0	ER40-17	AA 16.6-17.0	ER40-17	A 16.1-17.0	ER40-17	16.1-17.0
			ER40-17.5	HP 17.1-17.5	ER40-17.5	AA 17.1-17.5	ER40-17.5	A 17.5	-	-
ER40-18	HP 17.6-18.0	ER40-18	AA 17.6-18.0	ER40-18	A 17.1-18.0	ER40-18	17.1-18.0			
ER40-18.5	HP 18.1-18.5	ER40-18.5	AA 18.1-18.5	ER40-18.5	A 18.5	-	-			
ER40-19	HP 18.6-19.0	ER40-19	AA 18.6-19.0	ER40-19	A 18.1-19.0	ER40-19	18.1-19.0			
ER40-19.5	HP 19.1-19.5	ER40-19.5	AA 19.1-19.5	ER40-19.5	A 19.5	-	-			
ER40-20	HP 19.6-20.0	ER40-20	AA 19.6-20.0	ER40-20	A 19.1-20.0	ER40-20	19.1-20.0			
ER40-20.5	HP 20.1-20.5	ER40-20.5	AA 20.1-20.5	ER40-20.5	A 20.5	-	-			
ER40-21	HP 20.6-21.0	ER40-21	AA 20.6-21.0	ER40-21	A 20.1-21.0	ER40-21	20.1-21.0			
ER40-21.5	HP 21.1-21.5	ER40-21.5	AA 21.1-21.5	ER40-21.5	A 21.5	-	-			
ER40-22	HP 21.6-22.0	ER40-22	AA 21.6-22.0	ER40-22	A 21.1-22.0	ER40-22	21.1-22.0			
ER40-22.5	HP 22.1-22.5	ER40-22.5	AA 22.1-22.5	ER40-22.5	A 22.5	-	-			
ER40-23	HP 22.6-23.0	ER40-23	AA 22.6-23.0	ER40-23	A 22.1-23.0	ER40-23	22.1-23.0			
ER40-23.5	HP 23.1-23.5	ER40-23.5	AA 23.1-23.5	ER40-23.5	A 23.5	-	-			
ER40-24	HP 23.6-24.0	ER40-24	AA 23.6-24.0	ER40-24	A 23.1-24.0	ER40-24	23.1-24.0			
ER40-24.5	HP 24.1-24.5	ER40-24.5	AA 24.1-24.5	ER40-24.5	A 24.5	-	-			
ER40-25	HP 24.6-25.0	ER40-25	AA 24.6-25.0	ER40-25	A 24.1-25.0	ER40-25	24.1-25.0			
ER40-25.5	HP 25.1-25.5	ER40-25.5	AA 25.1-25.5	ER40-25.5	A 25.5	-	-			
ER40-26	HP 25.6-26.0	ER40-26	AA 25.6-26.0	ER40-26	A 25.1-26.0	ER40-26	25.1-26.0			
-	-	-	-	-	ER40-26.5	A 26.5	-	-		

MODEL	øD	L	HP 級		AA 級		A 級 (15µm)		一般級 Normal (25µm)	
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range
ER50	52	60	-	-	-	-	ER50-12	A 10.0-12.0	ER50-12	10.0-12.0
			-	-	-	-	ER50-14	A 12.0-14.0	ER50-14	12.0-14.0
			-	-	-	-	ER50-16	A 14.0-16.0	ER50-16	14.0-16.0
			-	-	-	-	ER50-18	A 16.0-18.0	ER50-18	16.0-18.0
			-	-	-	-	ER50-20	A 18.0-20.0	ER50-20	18.0-20.0
			-	-	-	-	ER50-22	A 20.0-22.0	ER50-22	20.0-22.0
			-	-	-	-	ER50-24	A 22.0-24.0	ER50-24	22.0-24.0
			-	-	-	-	ER50-26	A 24.0-26.0	ER50-26	24.0-26.0
			-	-	-	-	ER50-28	A 26.0-28.0	ER50-28	26.0-28.0
			-	-	-	-	ER50-30	A 28.0-30.0	ER50-30	28.0-30.0
			-	-	-	-	ER50-32	A 30.0-32.0	ER50-32	30.0-32.0
			-	-	-	-	ER50-34	A 32.0-34.0	ER50-34	32.0-34.0

SPARE PARTS



# ER 止水型筒夾

## ER Sealing Collet

MODEL	øD	L	HP 級 (3µm)		AA 級 (6µm)		一般級 Normal			
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range		
ER11	11.2 (11.5)	18 (18)	ER11C-3	HP	3.0	ER11C-3	AA	3.0	-	-
			ER11C-4	HP	4.0	ER11C-4	AA	4.0	-	-
			ER11C-5	HP	5.0	ER11C-5	AA	5.0	-	-
			ER11C-6	HP	6.0	ER11C-6	AA	6.0	-	-
			ER11C-7	HP	7.0	ER11C-7	AA	7.0	-	-

• øD x L = 11.2 x 18 (HP/AA) | øD x L = 11.5 x 18 (一般級 Normal)

MODEL	øD	L	HP 級 (3µm)		AA 級 (6µm)		一般級 Normal (20µm)			
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range		
ER16	16.7 (17)	27.5 (27)	ER16C-3	HP	3.0	ER16C-3	AA	3.0	-	-
			ER16C-4	HP	4.0	ER16C-4	AA	4.0	ER16C-4	3.1-4.0
			ER16C-5	HP	5.0	ER16C-5	AA	5.0	ER16C-5	4.1-5.0
			ER16C-6	HP	6.0	ER16C-6	AA	6.0	ER16C-6	5.1-6.0
			ER16C-7	HP	7.0	ER16C-7	AA	7.0	ER16C-7	6.1-7.0
			ER16C-8	HP	8.0	ER16C-8	AA	8.0	ER16C-8	7.1-8.0
			ER16C-9	HP	9.0	ER16C-9	AA	9.0	ER16C-9	8.1-9.0
			ER16C-10	HP	10.0	ER16C-10	AA	10.0	ER16C-10	9.1-10.0

• øD x L = 16.7 x 27.5 (HP/AA) | øD x L = 17 x 27 (一般級 Normal)

MODEL	øD	L	HP 級 (3µm)		AA 級 (6µm)		一般級 Normal (20µm)			
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range		
ER20	20.7 (21)	31.5 (31)	ER20C-3	HP	3.0	ER20C-3	AA	3.0	-	-
			ER20C-4	HP	4.0	ER20C-4	AA	4.0	ER20C-4	3.1-4.0
			ER20C-5	HP	5.0	ER20C-5	AA	5.0	ER20C-5	4.1-5.0
			ER20C-6	HP	6.0	ER20C-6	AA	6.0	ER20C-6	5.1-6.0
			ER20C-7	HP	7.0	ER20C-7	AA	7.0	ER20C-7	6.1-7.0
			ER20C-8	HP	8.0	ER20C-8	AA	8.0	ER20C-8	7.1-8.0
			ER20C-9	HP	9.0	ER20C-9	AA	9.0	ER20C-9	8.1-9.0
			ER20C-10	HP	10.0	ER20C-10	AA	10.0	ER20C-10	9.1-10.0
			ER20C-11	HP	11.0	ER20C-11	AA	11.0	ER20C-11	10.1-11.0
			ER20C-12	HP	12.0	ER20C-12	AA	12.0	ER20C-12	11.1-12.0
			-	-	-	-	-	-	ER20C-13	12.1-13.0

• øD x L = 20.7 x 31.5 (HP/AA) | øD x L = 21 x 31 (一般級 Normal)

MODEL	øD	L	HP 級 (3µm)		AA 級 (6µm)		一般級 Normal (20µm)			
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range		
ER25	25.7 (26)	34 (35)	ER25C-3	HP	3.0	ER25C-3	AA	3.0	-	-
			ER25C-4	HP	4.0	ER25C-4	AA	4.0	ER25C-4	3.1-4.0
			ER25C-5	HP	5.0	ER25C-5	AA	5.0	ER25C-5	4.1-5.0
			ER25C-6	HP	6.0	ER25C-6	AA	6.0	ER25C-6	5.1-6.0
			ER25C-7	HP	7.0	ER25C-7	AA	7.0	ER25C-7	6.1-7.0
			ER25C-8	HP	8.0	ER25C-8	AA	8.0	ER25C-8	7.1-8.0
			ER25C-9	HP	9.0	ER25C-9	AA	9.0	ER25C-9	8.1-9.0
			ER25C-10	HP	10.0	ER25C-10	AA	10.0	ER25C-10	9.1-10.0
			ER25C-11	HP	11.0	ER25C-11	AA	11.0	ER25C-11	10.1-11.0
			ER25C-12	HP	12.0	ER25C-12	AA	12.0	ER25C-12	11.1-12.0
			ER25C-13	HP	13.0	ER25C-13	AA	13.0	ER25C-13	12.1-13.0
			ER25C-14	HP	14.0	ER25C-14	AA	14.0	ER25C-14	13.1-14.0
			ER25C-15	HP	15.0	ER25C-15	AA	15.0	ER25C-15	14.1-15.0
			ER25C-16	HP	16.0	ER25C-16	AA	16.0	ER25C-16	15.1-16.0

• øD x L = 25.7 x 34 (HP/AA) | øD x L = 26 x 35 (一般級 Normal)

# SPARE PARTS

MODEL	øD	L	HP 級 (3µm)			AA 級 (6µm)			一般級 Normal (20µm)	
			訂購編號 Order No.	夾持範圍 Range		訂購編號 Order No.	夾持範圍 Range		訂購編號 Order No.	夾持範圍 Range
ER32	32.7 (33)	40 (40)	ER32C-3	HP	3.0	ER32C-3	AA	3.0	-	-
			ER32C-4	HP	4.0	ER32C-4	AA	4.0	ER32C-4	3.1-4.0
			ER32C-5	HP	5.0	ER32C-5	AA	5.0	ER32C-5	4.1-5.0
			ER32C-6	HP	6.0	ER32C-6	AA	6.0	ER32C-6	5.1-6.0
			ER32C-7	HP	7.0	ER32C-7	AA	7.0	ER32C-7	6.1-7.0
			ER32C-8	HP	8.0	ER32C-8	AA	8.0	ER32C-8	7.1-8.0
			ER32C-9	HP	9.0	ER32C-9	AA	9.0	ER32C-9	8.1-9.0
			ER32C-10	HP	10.0	ER32C-10	AA	10.0	ER32C-10	9.1-10.0
			ER32C-11	HP	11.0	ER32C-11	AA	11.0	ER32C-11	10.1-11.0
			ER32C-12	HP	12.0	ER32C-12	AA	12.0	ER32C-12	11.1-12.0
			ER32C-13	HP	13.0	ER32C-13	AA	13.0	ER32C-13	12.1-13.0
			ER32C-14	HP	14.0	ER32C-14	AA	14.0	ER32C-14	13.1-14.0
			ER32C-15	HP	15.0	ER32C-15	AA	15.0	ER32C-15	14.1-15.0
			ER32C-16	HP	16.0	ER32C-16	AA	16.0	ER32C-16	15.1-16.0
			ER32C-17	HP	17.0	ER32C-17	AA	17.0	ER32C-17	16.1-17.0
			ER32C-18	HP	18.0	ER32C-18	AA	18.0	ER32C-18	17.1-18.0
			ER32C-19	HP	19.0	ER32C-19	AA	19.0	ER32C-19	18.1-19.0
			ER32C-20	HP	20.0	ER32C-20	AA	20.0	ER32C-20	19.1-20.0

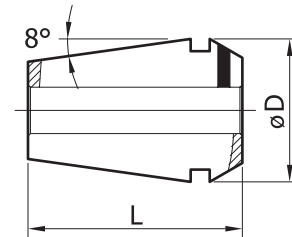
• øD x L = 32.7 x 40 (HP/AA) | øD x L = 33 x 40 (一般級 Normal)

MODEL	øD	L	HP 級 (3µm)			AA 級 (6µm)			一般級 Normal (20µm)	
			訂購編號 Order No.	夾持範圍 Range		訂購編號 Order No.	夾持範圍 Range		訂購編號 Order No.	夾持範圍 Range
ER40	40.7 (41)	46 (46)	-	-	-	-	-	-	ER40C-4	3.1-4.0
			-	-	-	-	-	-	ER40C-5	4.1-5.0
			ER40C-6	HP	6.0	ER40C-6	AA	6.0	ER40C-6	5.1-6.0
			-	-	-	-	-	-	ER40C-7	6.1-7.0
			ER40C-8	HP	8.0	ER40C-8	AA	8.0	ER40C-8	7.1-8.0
			-	-	-	-	-	-	ER40C-9	8.1-9.0
			ER40C-10	HP	10.0	ER40C-10	AA	10.0	ER40C-10	9.1-10.0
			-	-	-	-	-	-	ER40C-11	10.1-11.0
			ER40C-12	HP	12.0	ER40C-12	AA	12.0	ER40C-12	11.1-12.0
			-	-	-	-	-	-	ER40C-13	12.1-13.0
			ER40C-14	HP	14.0	ER40C-14	AA	14.0	ER40C-14	13.1-14.0
			-	-	-	-	-	-	ER40C-15	14.1-15.0
			ER40C-16	HP	16.0	ER40C-16	AA	16.0	ER40C-16	15.1-16.0
			-	-	-	-	-	-	ER40C-17	16.1-17.0
			ER40C-18	HP	18.0	ER40C-18	AA	18.0	ER40C-18	17.1-18.0
			-	-	-	-	-	-	ER40C-19	18.1-19.0
			ER40C-20	HP	20.0	ER40C-20	AA	20.0	ER40C-20	19.1-20.0
			-	-	-	-	-	-	ER40C-21	20.1-21.0
			ER40C-22	HP	22.0	ER40C-22	AA	22.0	ER40C-22	21.1-22.0
			-	-	-	-	-	-	ER40C-23	22.1-23.0
			-	-	-	-	-	-	ER40C-24	23.1-24.0
			ER40C-25	HP	25.0	ER40C-25	AA	25.0	ER40C-25	24.1-25.0
			-	-	-	-	-	-	ER40C-26	25.1-26.0

• øD x L = 40.7 x 46 (HP/AA) | øD x L = 41 x 46 (一般級 Normal)

# E R 端面出水型筒夾

## E R Jet Coolant Collet



MODEL	øD	L	HP 級 (3µm)	
			訂購編號 Order No.	夾持範圍 Range
ER16	16.7	27.5	ER16J-4	HP 4.0
			ER16J-6	HP 6.0
			ER16J-8	HP 8.0

MODEL	øD	L	HP 級 (3µm)	
			訂購編號 Order No.	夾持範圍 Range
ER25	25.7	34	ER25J-4	HP 4.0
			ER25J-6	HP 6.0
			ER25J-8	HP 8.0
			ER25J-10	HP 10.0
			ER25J-12	HP 12.0
			ER25J-14	HP 14.0

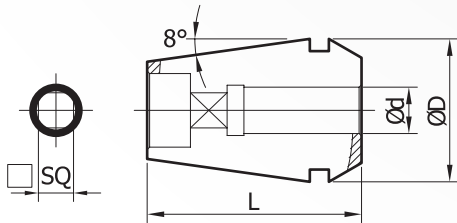
MODEL	øD	L	HP 級 (3µm)	
			訂購編號 Order No.	夾持範圍 Range
ER32	32.7	40	ER32J-4	HP 4.0
			ER32J-6	HP 6.0
			ER32J-8	HP 8.0
			ER32J-10	HP 10.0
			ER32J-12	HP 12.0
			ER32J-14	HP 14.0
			ER32J-16	HP 16.0
			ER32J-18	HP 18.0
			ER32J-20	HP 20.0

MODEL	øD	L	HP 級 (3µm)	
			訂購編號 Order No.	夾持範圍 Range
ER40	40.7	46	ER40J-10	HP 10.0
			ER40J-12	HP 12.0
			ER40J-14	HP 14.0
			ER40J-16	HP 16.0
			ER40J-18	HP 18.0
			ER40J-20	HP 20.0
			ER40J-25	HP 25.0

# SPARE PARTS

## E R 攻牙筒夾

### ER Tap Collet



MODEL	øD	L	ød	□ SQ	TAP	STD	訂購編號 Order No.
ER16	17	27	4.5	3.4	M6	DIN	ER16-4.5x3.4
			5	4	M4	JIS	ER16-5x4
			5.5	4.5	M5	JIS	ER16-5.5x4.5
			6	4.5	M6	JIS	ER16-6x4.5
			6	4.9	M8	DIN	ER16-6x4.9
			6.2	5	M8	JIS	ER16-6.2x5
			7	5.5	M10	DIN	ER16-7x5.5
			7	5.5	M10	JIS	ER16-7x5.5

• 訂購例 Order Example : ER16-5x4

MODEL	øD	L	ød	□ SQ	TAP	STD	訂購編號 Order No.
ER20	21	31	4.5	3.4	M6	DIN	ER20-4.5x3.4
			5	4	M4	JIS	ER20-5x4
			5.5	4.5	M5	JIS	ER20-5.5x4.5
			6	4.5	M6	JIS	ER20-6x4.5
			6	4.9	M8	DIN	ER20-6x4.9
			6.2	5	M8	JIS	ER20-6.2x5
			7	5.5	M10	DIN	ER20-7x5.5
			7	5.5	M10	JIS	ER20-7x5.5
			8.5	6.5	M12	JIS	ER20-8.5x6.5
			9	7.1	M12	DIN	ER20-9x7
			10	8	M10	DIN	ER20-10x8

• 訂購例 Order Example : ER20-5x4

MODEL	øD	L	ød	□ SQ	TAP	STD	訂購編號 Order No.
ER25	26	35	4.5	3.4	M6	DIN	ER25-4.5x3.4
			5	4	M4	JIS	ER25-5x4
			5.5	4.5	M5	JIS	ER25-5.5x4.5
			6	4.5	M6	JIS	ER25-6x4.5
			6	4.9	M8	DIN	ER25-6x4.9
			6.2	5	M8	JIS	ER25-6.2x5
			7	5.5	M10	DIN	ER25-7x5.5
			7	5.5	M10	JIS	ER25-7x5.5
			8.5	6.5	M12	JIS	ER25-8.5x6.5
			9	7.1	M12	DIN	ER25-9x7
			10	8	M10	DIN	ER25-10x8
			10.5	8	M14	JIS	ER25-10.5x8
			11	9	M14	DIN	ER25-11x9
			12	9	M16	DIN	ER25-12x9
12.5	10	M16	JIS	ER25-12.5x10			

• 訂購例 Order Example : ER25-5x4

MODEL	øD	L	ød	□ SQ	TAP	STD	訂購編號 Order No.
ER32	33	40	4.5	3.4	M6	DIN	ER32-4.5x3.4
			5	4	M4	JIS	ER32-5x4
			5.5	4.5	M5	JIS	ER32-5.5x4.5
			6	4.5	M6	JIS	ER32-6x4.5
			6	4.9	M8	DIN	ER32-6x4.9
			6.2	5	M8	JIS	ER32-6.2x5
			7	5.5	M10	DIN	ER32-7x5.5
			7	5.5	M10	JIS	ER32-7x5.5
			8.5	6.5	M12	JIS	ER32-8.5x6.5
			9	7.1	M12	DIN	ER32-9x7.1
			10	8	M10	DIN	ER32-10x8
			10.5	8	M14	JIS	ER32-10.5x8
			11	9	M14	DIN	ER32-11x9
			12	9	M16	DIN	ER32-12x9
			12.5	10	M16	JIS	ER32-12.5x10
			14	11	M18	DIN	ER32-14x11
			14	11	M18	JIS	ER32-14x11
15	12	M20	JIS	ER32-15x12			
16	12	M20	DIN	ER32-16x12			
17	13	M22	JIS	ER32-17x13			

• 訂購例 Order Example : ER32-5x4

MODEL	øD	L	ød	□ SQ	TAP	STD	訂購編號 Order No.
ER40	41	46	6	4.5	M6	JIS	ER40-6x4.5
			6	4.9	M8	DIN	ER40-6x4.9
			6.2	5	M8	JIS	ER40-6.2x5
			7	5.5	M10	DIN	ER40-7x5.5
			7	5.5	M10	JIS	ER40-7x5.5
			8.5	6.5	M12	JIS	ER40-8.5x6.5
			9	7.1	M12	DIN	ER40-9x7.1
			10	8	M10	DIN	ER40-10x8
			10.5	8	M14	JIS	ER40-10.5x8
			11	9	M14	DIN	ER40-11x9
			12	9	M16	DIN	ER40-12x9
			12.5	10	M16	JIS	ER40-12.5x10
			14	11	M18	DIN	ER40-14x11
			14	11	M18	JIS	ER40-14x11
			15	12	M20	JIS	ER40-15x12
			16	12	M20	DIN	ER40-16x12
			17	13	M22	JIS	ER40-17x13
			18	14.5	M22	DIN	ER40-18x14.5
			19	15	M24	JIS	ER40-19x15
			20	15	M27	JIS	ER40-20x15
			20	16	M27	DIN	ER40-20x16
			22	18	M30	DIN	ER40-22x18

• 訂購例 Order Example : ER40-6x4.9

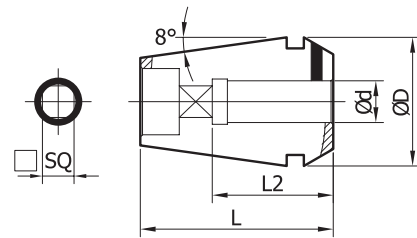


# ER 止水攻牙筒夾

## ER Sealing Tap Collet

MODEL	øD	L	L2	ød	□ SQ	TAP	STD	訂購編號 Order No.
ER16	16.7	27.5	18	2.8	2.1	M2	DIN	ER16C-2.8x2.1
				2.8	2.1	M2.2	DIN	ER16C-2.8x2.1
				2.8	2.1	M2.5	DIN	ER16C-2.8x2.1
				2.8	2.1	M4	DIN	ER16C-2.8x2.1
				3.5	2.7	M3	DIN	ER16C-3.5x2.7
				3.5	2.7	M5	DIN	ER16C-3.5x2.7
				4	3.2	M4	ISO	ER16C-4x3.2
				4	3.2	M5	ISO	ER16C-4x3.2
				4.5	3.55	M6	ISO	ER16C-4.5x3.55
				5	4	M5	ISO	ER16C-5x4
				5.5	4.5	M7	DIN	ER16C-5.5x4.5
				6	5	M5	DIN	ER16C-6x5
				6	5	M6	DIN	ER16C-6x5
				6	5	M8	DIN	ER16C-6x5
				6.3	5	M6	ISO	ER16C-6.3x5
				6.3	5	M8	ISO	ER16C-6.3x5
				7	5.6	M7	DIN	ER16C-7x5.6
				7	5.6	M9	DIN	ER16C-7x5.6
			7	5.6	M10	DIN	ER16C-7x5.6	
			22	8	6.3	M8	ISO	ER16C-8x6.3
8	6.3	M10		ISO	ER16C-8x6.3			
9	7.1	M12		ISO	ER16C-9x7.1			

• (10µm)



MODEL	øD	L	L2	ød	□ SQ	TAP	STD	訂購編號 Order No.	
ER20	20.7	31.5	18	3.5	2.7	M3	DIN	ER20C-3.5x2.7	
				3.5	2.7	M5	DIN	ER20C-3.5x2.7	
				4	3.2	M4	ISO	ER20C-4x3.2	
				4	3.2	M5	ISO	ER20C-4x3.2	
				4.5	3.55	M6	ISO	ER20C-4.5x3.55	
				5	4	M5	ISO	ER20C-5x4	
				5.5	4.5	M7	DIN	ER20C-5.5x4.5	
				6	5	M5	DIN	ER20C-6x5	
				6	5	M6	DIN	ER20C-6x5	
				6	5	M8	DIN	ER20C-6x5	
				6.3	5	M6	ISO	ER20C-6.3x5	
				6.3	5	M8	ISO	ER20C-6.3x5	
				7	5.6	M7	DIN	ER20C-7x5.6	
				7	5.6	M9	DIN	ER20C-7x5.6	
				7	5.6	M10	DIN	ER20C-7x5.6	
				22	8	6.3	M8	ISO	ER20C-8x6.3
					8	6.3	M10	ISO	ER20C-8x6.3
					9	7.1	M12	ISO	ER20C-9x7.1
			25		10	8	M10	DIN	ER20C-10x8
				10	8	M10	ISO	ER20C-10x8	
11	9	M14		DIN	ER20C-11x9				
11.2	9	M14		ISO	ER20C-11.2x9				
12	9	M12	DIN	ER20C-12x9					
12	9	M16	DIN	ER20C-12x9					

• (10µm)

MODEL	øD	L	L2	ød	□ SQ	TAP	STD	訂購編號 Order No.	
ER25	25.7	34	18	3.5	2.7	M3	DIN	ER25C-3.5x2.7	
				3.5	2.7	M5	DIN	ER25C-3.5x2.7	
				4	3.2	M4	ISO	ER25C-4x3.2	
				4	3.2	M5	ISO	ER25C-4x3.2	
				4.5	3.55	M6	ISO	ER25C-4.5x3.55	
				5	4	M5	ISO	ER25C-5x4	
				5.5	4.5	M7	DIN	ER25C-5.5x4.5	
				6	5	M5	DIN	ER25C-6x5	
				6	5	M6	DIN	ER25C-6x5	
				6	5	M8	DIN	ER25C-6x5	
				6.3	5	M6	ISO	ER25C-6.3x5	
				6.3	5	M8	ISO	ER25C-6.3x5	
				7	5.6	M7	DIN	ER25C-7x5.6	
				7	5.6	M9	DIN	ER25C-7x5.6	
				7	5.6	M10	DIN	ER25C-7x5.6	
				22	8	6.3	M8	ISO	ER25C-8x6.3
					8	6.3	M10	ISO	ER25C-8x6.3
					9	7.1	M12	ISO	ER25C-9x7.1
			25		10	8	M10	DIN	ER25C-10x8
				10	8	M10	ISO	ER25C-10x8	
11	9	M14		DIN	ER25C-11x9				
11.2	9	M14		ISO	ER25C-11.2x9				
12	9	M12		DIN	ER25C-12x9				
12	9	M16		DIN	ER25C-12x9				
12.5	10	M16		ISO	ER25C-12.5x10				
14	11.2	M18		ISO	ER25C-14x11.2				
14	11.2	M20	ISO	ER25C-14x11.2					
16	12.5	M22	ISO	ER25C-16x12.5					

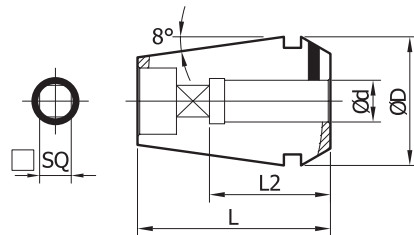
• (10µm)

# SPARE PARTS

## E R 止水攻牙筒夾

### ER Sealing Tap Collet

MODEL	øD	L	L2	ød	□ SQ	TAP	STD	訂購編號 Order No.							
ER32	32.7	40	18	4	3.2	M4	ISO	ER32C-4x3.2							
				4	3.2	M5	ISO	ER32C-4x3.2							
				4.5	3.55	M6	ISO	ER32C-4.5x3.55							
				5	4	M5	ISO	ER32C-5x4							
				5.5	4.5	M7	DIN	ER32C-5.5x4.5							
				6	5	M5	DIN	ER32C-6x5							
				6	5	M6	DIN	ER32C-6x5							
				6	5	M8	DIN	ER32C-6x5							
				6.3	5	M6	ISO	ER32C-6.3x5							
				6.3	5	M8	ISO	ER32C-6.3x5							
				7	5.6	M7	DIN	ER32C-7x5.6							
				7	5.6	M9	DIN	ER32C-7x5.6							
			7	5.6	M10	DIN	ER32C-7x5.6								
			22	32.7	40	18	8	6.3	M8	ISO	ER32C-8x6.3				
							8	6.3	M10	ISO	ER32C-8x6.3				
							9	7.1	M12	ISO	ER32C-9x7.1				
							10	8	M10	DIN	ER32C-10x8				
							10	8	M10	ISO	ER32C-10x8				
							11	9	M14	DIN	ER32C-11x9				
			25	32.7	40	18	11.2	9	M14	ISO	ER32C-11.2x9				
							12	9	M12	DIN	ER32C-12x9				
							12	9	M16	DIN	ER32C-12x9				
							12.5	10	M16	ISO	ER32C-12.5x10				
							14	11.2	M18	ISO	ER32C-14x11.2				
							14	11.2	M20	ISO	ER32C-14x11.2				
							16	12.5	M22	ISO	ER32C-16x12.5				
							18	14.5	M22	DIN	ER32C-18x14.5				
							18	14.5	M24	DIN	ER32C-18x14.5				
							28	32.7	40	18	20	16	M27	DIN	ER32C-20x16
											20	16	M27	ISO	ER32C-20x16
20	16	M30									ISO	ER32C-20x16			
20	16	M30	ISO	ER32C-20x16											



• (10µm)

MODEL	øD	L	L2	ød	□ SQ	TAP	STD	訂購編號 Order No.							
ER40	40.7	46	18	6	5	M5	DIN	ER40C-6x5							
				6	5	M6	DIN	ER40C-6x5							
				6	5	M8	DIN	ER40C-6x5							
				6.3	5	M6	ISO	ER40C-6.3x5							
				6.3	5	M8	ISO	ER40C-6.3x5							
				7	5.6	M7	DIN	ER40C-7x5.6							
				7	5.6	M9	DIN	ER40C-7x5.6							
				7	5.6	M10	DIN	ER40C-7x5.6							
				22	40.7	46	18	8	6.3	M8	ISO	ER40C-8x6.3			
								8	6.3	M10	ISO	ER40C-8x6.3			
								9	7.1	M12	ISO	ER40C-9x7.1			
								10	8	M10	DIN	ER40C-10x8			
			10					8	M10	ISO	ER40C-10x8				
			11					9	M14	DIN	ER40C-11x9				
			25	40.7	46	18	11.2	9	M14	ISO	ER40C-11.2x9				
							12	9	M12	DIN	ER40C-12x9				
							12	9	M16	DIN	ER40C-12x9				
							12.5	10	M16	ISO	ER40C-12.5x10				
							14	11.2	M18	ISO	ER40C-14x11.2				
							14	11.2	M20	ISO	ER40C-14x11.2				
							16	12.5	M22	ISO	ER40C-16x12.5				
							33	40.7	46	18	18	14.5	M22	DIN	ER40C-18x14.5
											18	14.5	M24	DIN	ER40C-18x14.5
											20	16	M27	DIN	ER40C-20x16
											20	16	M27	ISO	ER40C-20x16
											22	18	M30	DIN	ER40C-22x18
			25	20	M33	DIN					ER40C-25x20				
			25	20	M36	ISO	ER40C-25x20								

• (10µm)

# ER 端面出水攻牙筒夾 ER Jet Coolant Tap Collet

MODEL	øD	L	L2	ød	□ SQ	TAP	STD	訂購編號 Order No.
ER16	16.7	27.5	18	3.5	2.7	M3	DIN	ER16J-3.5x2.7
				3.5	2.7	M5	DIN	ER16J-3.5x2.7
				4.5	3.55	M6	ISO	ER16J-4.5x3.55
				6	5	M5	DIN	ER16J-6x5
				6	5	M6	DIN	ER16J-6x5
				6	5	M8	DIN	ER16J-6x5
				7	5.6	M7	DIN	ER16J-7x5.6
				7	5.6	M9	DIN	ER16J-7x5.6
			7	5.6	M10	DIN	ER16J-7x5.6	
			22	8	6.3	M8	ISO	ER16J-8x6.3
8	6.3	M10	ISO	ER16J-8x6.3				

• (10µm)

MODEL	øD	L	L2	ød	□ SQ	TAP	STD	訂購編號 Order No.
ER20	20.7	31.5	18	4.5	3.55	M6	ISO	ER20J-4.5x3.55
				6	5	M5	DIN	ER20J-6x5
				6	5	M6	DIN	ER20J-6x5
				6	5	M8	DIN	ER20J-6x5
				7	5.6	M7	DIN	ER20J-7x5.6
				7	5.6	M9	DIN	ER20J-7x5.6
				7	5.6	M10	DIN	ER20J-7x5.6
			22	8	6.3	M8	ISO	ER20J-8x6.3
			8	6.3	M10	ISO	ER20J-8x6.3	
			9	7.1	M12	ISO	ER20J-9x7.1	
			25	10	8	M10	DIN	ER20J-10x8
			10	8	M10	ISO	ER20J-10x8	

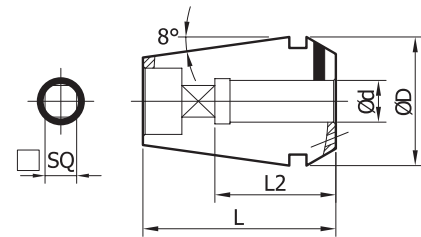
• (10µm)

MODEL	øD	L	L2	ød	□ SQ	TAP	STD	訂購編號 Order No.
ER25	25.7	34	18	4.5	3.55	M6	ISO	ER25J-4.5x3.55
				6	5	M5	DIN	ER25J-6x5
				6	5	M6	DIN	ER25J-6x5
				6	5	M8	DIN	ER25J-6x5
				7	5.6	M7	DIN	ER25J-7x5.6
				7	5.6	M9	DIN	ER25J-7x5.6
				7	5.6	M10	DIN	ER25J-7x5.6
			22	8	6.3	M8	ISO	ER25J-8x6.3
			8	6.3	M10	ISO	ER25J-8x6.3	
			9	7.1	M12	ISO	ER25J-9x7.1	
			25	10	8	M10	DIN	ER25J-10x8
			10	8	M10	ISO	ER25J-10x8	
			11	9	M14	DIN	ER25J-11x9	
			12	9	M12	DIN	ER25J-12x9	
			12	9	M16	DIN	ER25J-12x9	
			14	11.2	M18	ISO	ER25J-14x11.2	
14	11.2	M20	ISO	ER25J-14x11.2				

• (10µm)

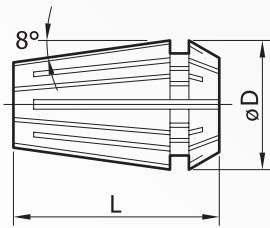
MODEL	øD	L	L2	ød	□ SQ	TAP	STD	訂購編號 Order No.
ER32	32.7	40	18	4.5	3.55	M6	ISO	ER32J-4.5x3.55
				6	5	M5	DIN	ER32J-6x5
				6	5	M6	DIN	ER32J-6x5
				6	5	M8	DIN	ER32J-6x5
				7	5.6	M7	DIN	ER32J-7x5.6
				7	5.6	M9	DIN	ER32J-7x5.6
				7	5.6	M10	DIN	ER32J-7x5.6
			22	8	6.3	M8	ISO	ER32J-8x6.3
			8	6.3	M10	ISO	ER32J-8x6.3	
			9	7.1	M12	ISO	ER32J-9x7.1	
			25	10	8	M10	DIN	ER32J-10x8
			10	8	M10	ISO	ER32J-10x8	
			11	9	M14	DIN	ER32J-11x9	
			12	9	M16	DIN	ER32J-12x9	
			14	11.2	M18	ISO	ER32J-14x11.2	
			14	11.2	M20	ISO	ER32J-14x11.2	
			16	12.5	M22	ISO	ER32J-16x12.5	
			28	18	14.5	M22	DIN	ER32J-18X14.5
			18	14.5	M24	DIN	ER32J-18X14.5	
			20	16	M27	DIN	ER32J-20x16	
20	16	M27	ISO	ER32J-20x16				
20	16	M30	ISO	ER32J-20x16				

• (10µm)



# SPARE PARTS

## E R 標準筒夾 (英制) ER Standard Collet (inch)



MODEL	øD	L	HP 級 (6µm)		AA 級 (10µm)		一般級 Normal	
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range
ER8	8.5 (8.5)	13.6 (13.5)	ER8-1/16" HP	0.043"-0.063"	ER8-1/16" AA	0.043"-0.063"	-	-
			ER8-1/8" HP	0.105"-0.125"	ER8-1/8" AA	0.105"-0.125"	-	-
			ER8-3/16" HP	0.168"-0.188"	ER8-3/16" AA	0.168"-0.188"	-	-

• øD x L = 8.5 x 13.6 (HP/AA) | øD x L = 8.5 x 13.5 (A/ 一般級 Normal)

MODEL	øD	L	HP 級 (3µm)		AA 級 (6µm)		一般級 Normal (20µm)	
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range
ER11	11.3 (11.5)	18 (18)	ER11-1/16" HP	0.043"-0.063"	ER11-1/16" AA	0.043"-0.063"	ER11-1/16"	0.043"-0.063"
			ER11-3/32" HP	0.074"-0.094"	ER11-3/32" AA	0.074"-0.094"	ER11-3/32"	0.074"-0.094"
			ER11-1/8" HP	0.105"-0.125"	ER11-1/8" AA	0.105"-0.125"	ER11-1/8"	0.105"-0.125"
			ER11-5/32" HP	0.137"-0.156"	ER11-5/32" AA	0.137"-0.156"	ER11-5/32"	0.137"-0.156"
			ER11-3/16" HP	0.168"-0.188"	ER11-3/16" AA	0.168"-0.188"	ER11-3/16"	0.168"-0.188"
			ER11-7/32" HP	0.199"-0.219"	ER11-7/32" AA	0.199"-0.219"	ER11-7/32"	0.199"-0.219"
			ER11-1/4" HP	0.23"-0.25"	ER11-1/4" AA	0.23"-0.25"	ER11-1/4"	0.23"-0.25"

• øD x L = 11.3 x 18 (HP/AA) | øD x L = 11.5 x 18 (A/ 一般級 Normal)

MODEL	øD	L	HP 級 (3µm)		AA 級 (6µm)		一般級 Normal (20µm)	
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range
ER16	17 (17)	27.5 (27)	ER16-1/16" HP	0.043"-0.063"	ER16-1/16" AA	0.043"-0.063"	-	-
			ER16-3/32" HP	0.074"-0.094"	ER16-3/32" AA	0.074"-0.094"	ER16-3/32"	0.074"-0.094"
			ER16-1/8" HP	0.086"-0.125"	ER16-1/8" AA	0.086"-0.125"	ER16-1/8"	0.086"-0.125"
			ER16-5/32" HP	0.117"-0.156"	ER16-5/32" AA	0.117"-0.156"	ER16-5/32"	0.117"-0.156"
			ER16-3/16" HP	0.148"-0.188"	ER16-3/16" AA	0.148"-0.188"	ER16-3/16"	0.148"-0.188"
			ER16-7/32" HP	0.179"-0.219"	ER16-7/32" AA	0.179"-0.219"	ER16-7/32"	0.179"-0.219"
			ER16-1/4" HP	0.21"-0.25"	ER16-1/4" AA	0.21"-0.25"	ER16-1/4"	0.21"-0.25"
			ER16-9/32" HP	0.242"-0.281"	ER16-9/32" AA	0.242"-0.281"	ER16-9/32"	0.242"-0.281"
			ER16-5/16" HP	0.273"-0.313"	ER16-5/16" AA	0.273"-0.313"	ER16-5/16"	0.273"-0.313"
			ER16-11/32" HP	0.304"-0.344"	ER16-11/32" AA	0.304"-0.344"	ER16-11/32"	0.304"-0.344"
			ER16-3/8" HP	0.336"-0.375"	ER16-3/8" AA	0.336"-0.375"	ER16-3/8"	0.336"-0.375"
			-	-	ER16-13/32" AA	0.367"-0.406"	-	-

• øD x L = 17 x 27.5 (HP/AA) | øD x L = 17 x 27 (A/ 一般級 Normal)

MODEL	øD	L	HP 級 (3µm)		AA 級 (6µm)		一般級 Normal (20µm)	
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range
ER20	21 (21)	31.5 (31)	ER20-1/8" HP	0.086"-0.125"	ER20-1/8" AA	0.086"-0.125"	ER20-1/8"	0.086"-0.125"
			-	-	-	-	ER20-5/32"	0.117"-0.156"
			ER20-3/16" HP	0.148"-0.188"	ER20-3/16" AA	0.148"-0.188"	ER20-3/16"	0.148"-0.188"
			-	-	-	-	ER20-7/32"	0.179"-0.219"
			ER20-1/4" HP	0.21"-0.25"	ER20-1/4" AA	0.21"-0.25"	ER20-1/4"	0.21"-0.25"
			-	-	-	-	ER20-9/32"	0.242"-0.281"
			ER20-5/16" HP	0.273"-0.313"	ER20-5/16" AA	0.273"-0.313"	ER20-5/16"	0.273"-0.313"
			-	-	-	-	ER20-11/32"	0.304"-0.344"
			ER20-3/8" HP	0.336"-0.375"	ER20-3/8" AA	0.336"-0.375"	ER20-3/8"	0.336"-0.375"
			-	-	-	-	ER20-13/32"	0.367"-0.406"
			ER20-7/16" HP	0.399"-0.438"	ER20-7/16" AA	0.399"-0.438"	ER20-7/16"	0.399"-0.438"
ER20-1/2" HP	0.46"-0.5"	ER20-1/2" AA	0.46"-0.5"	ER20-1/2"	0.46"-0.5"			

• øD x L = 21 x 31.5 (HP/AA) | øD x L = 21 x 31 (A/ 一般級 Normal)

# E R 標準筒夾 (英制)

## E R Standard Collet (inch)

MODEL	øD	L	HP 級 (3µm)		AA 級 (6µm)		一般級 Normal (20µm)			
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range		
ER25	26 (26)	34 (35)	ER25-1/8"	HP	0.086"-0.125"	ER25-1/8"	AA	0.086"-0.125"	ER25-1/8"	0.086"-0.125"
			-	-	-	-	-	ER25-5/32"	0.117"-0.156"	
			ER25-3/16"	HP	0.148"-0.188"	ER25-3/16"	AA	0.148"-0.188"	ER25-3/16"	0.148"-0.188"
			-	-	-	-	-	ER25-7/32"	0.179"-0.219"	
			ER25-1/4"	HP	0.21"-0.25"	ER25-1/4"	AA	0.21"-0.25"	ER25-1/4"	0.21"-0.25"
			-	-	-	-	-	ER25-9/32"	0.242"-0.281"	
			ER25-5/16"	HP	0.273"-0.313"	ER25-5/16"	AA	0.273"-0.313"	ER25-5/16"	0.273"-0.313"
			-	-	-	-	-	ER25-11/32"	0.304"-0.344"	
			ER25-3/8"	HP	0.336"-0.375"	ER25-3/8"	AA	0.336"-0.375"	ER25-3/8"	0.336"-0.375"
			-	-	-	-	-	ER25-13/32"	0.367"-0.406"	
			ER25-7/16"	HP	0.399"-0.438"	ER25-7/16"	AA	0.399"-0.438"	ER25-7/16"	0.399"-0.438"
			-	-	-	-	-	ER25-15/32"	0.429"-0.468"	
			ER25-1/2"	HP	0.46"-0.5"	ER25-1/2"	AA	0.46"-0.5"	ER25-1/2"	0.46"-0.5"
			ER25-9/16"	HP	0.523"-0.563"	ER25-9/16"	AA	0.523"-0.563"	ER25-9/16"	0.523"-0.563"
ER25-5/8"	HP	0.586"-0.625"	ER25-5/8"	AA	0.586"-0.625"	ER25-5/8"	0.586"-0.625"			

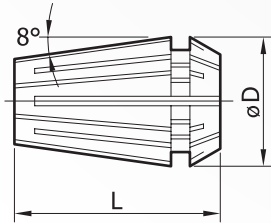
• øD x L = 26 x 34 (HP/AA) | øD x L = 26 x 35 (A/一般級 Normal)

MODEL	øD	L	HP 級 (3µm)		AA 級 (6µm)		一般級 Normal (20µm)			
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range		
ER32	33	40	ER32-1/8"	HP	0.086"-0.125"	ER32-1/8"	AA	0.086"-0.125"	ER32-1/8"	0.086"-0.125"
			-	-	-	-	-	ER32-5/32"	0.117"-0.156"	
			ER32-3/16"	HP	0.148"-0.188"	ER32-3/16"	AA	0.148"-0.188"	ER32-3/16"	0.148"-0.188"
			-	-	-	-	-	ER32-7/32"	0.179"-0.219"	
			ER32-1/4"	HP	0.21"-0.25"	ER32-1/4"	AA	0.21"-0.25"	ER32-1/4"	0.21"-0.25"
			-	-	-	-	-	ER32-9/32"	0.242"-0.281"	
			ER32-5/16"	HP	0.273"-0.313"	ER32-5/16"	AA	0.273"-0.313"	ER32-5/16"	0.273"-0.313"
			-	-	-	-	-	ER32-11/32"	0.304"-0.344"	
			ER32-3/8"	HP	0.336"-0.375"	ER32-3/8"	AA	0.336"-0.375"	ER32-3/8"	0.336"-0.375"
			-	-	-	-	-	ER32-13/32"	0.367"-0.406"	
			ER32-7/16"	HP	0.399"-0.438"	ER32-7/16"	AA	0.399"-0.438"	ER32-7/16"	0.399"-0.438"
			-	-	-	-	-	ER32-15/32"	0.429"-0.468"	
			ER32-1/2"	HP	0.46"-0.5"	ER32-1/2"	AA	0.46"-0.5"	ER32-1/2"	0.46"-0.5"
			-	-	-	-	-	ER32-17/32"	0.492"-0.531"	
			ER32-9/16"	HP	0.523"-0.563"	ER32-9/16"	AA	0.523"-0.563"	ER32-9/16"	0.523"-0.563"
			ER32-5/8"	HP	0.586"-0.625"	ER32-5/8"	AA	0.586"-0.625"	ER32-5/8"	0.586"-0.625"
			ER32-11/16"	HP	0.648"-0.688"	ER32-11/16"	AA	0.648"-0.688"	ER32-11/16"	0.648"-0.688"
ER32-3/4"	HP	0.711"-0.75"	ER32-3/4"	AA	0.711"-0.75"	ER32-3/4"	0.711"-0.75"			
-	-	-	ER32-13/16"	AA	0.773"-0.813"	-	-			

SPARE PARTS

# SPARE PARTS

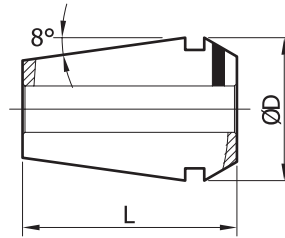
## ER 標準筒夾 (英制) ER Standard Collet (inch)



MODEL	øD	L	HP 級 (3µm)		AA 級 (6µm)		一般級 Normal (20 µm)			
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range		
ER40	41	46	ER40-1/8"	HP	0.086"-0.125"	ER40-1/8"	AA	0.086"-0.125"	ER40-1/8"	0.086"-0.125"
			-	-	-	-	-	ER40-5/32"	0.117"-0.156"	
			ER40-3/16"	HP	0.148"-0.188"	ER40-3/16"	AA	0.148"-0.188"	ER40-3/16"	0.148"-0.188"
			-	-	-	-	-	ER40-7/32"	0.179"-0.219"	
			ER40-1/4"	HP	0.21"-0.25"	ER40-1/4"	AA	0.21"-0.25"	ER40-1/4"	0.21"-0.25"
			-	-	-	-	-	ER40-9/32"	0.242"-0.281"	
			ER40-5/16"	HP	0.273"-0.313"	ER40-5/16"	AA	0.273"-0.313"	ER40-5/16"	0.273"-0.313"
			-	-	-	-	-	ER40-11/32"	0.304"-0.344"	
			ER40-3/8"	HP	0.336"-0.375"	ER40-3/8"	AA	0.336"-0.375"	ER40-3/8"	0.336"-0.375"
			-	-	-	-	-	ER40-13/32"	0.367"-0.406"	
			ER40-7/16"	HP	0.399"-0.438"	ER40-7/16"	AA	0.399"-0.438"	ER40-7/16"	0.399"-0.438"
			-	-	-	-	-	ER40-15/32"	0.429"-0.468"	
			ER40-1/2"	HP	0.46"-0.5"	ER40-1/2"	AA	0.46"-0.5"	ER40-1/2"	0.46"-0.5"
			-	-	-	-	-	ER40-17/32"	0.492"-0.531"	
			ER40-9/16"	HP	0.523"-0.563"	ER40-9/16"	AA	0.523"-0.563"	ER40-9/16"	0.523"-0.563"
			-	-	-	-	-	ER40-19/32"	0.554"-0.594"	
			ER40-5/8"	HP	0.586"-0.625"	ER40-5/8"	AA	0.586"-0.625"	ER40-5/8"	0.586"-0.625"
			-	-	-	-	-	ER40-21/32"	0.617"-0.656"	
			ER40-11/16"	HP	0.648"-0.688"	ER40-11/16"	AA	0.648"-0.688"	ER40-11/16"	0.648"-0.688"
			-	-	-	-	-	ER40-23/32"	0.679"-0.719"	
ER40-3/4"	HP	0.711"-0.75"	ER40-3/4"	AA	0.711"-0.75"	ER40-3/4"	0.711"-0.75"			
ER40-13/16"	HP	0.773"-0.813"	ER40-13/16"	AA	0.773"-0.813"	-	-			
ER40-7/8"	HP	0.836"-0.875"	ER40-7/8"	AA	0.836"-0.875"	ER40-7/8"	0.836"-0.875"			
ER40-1"	HP	0.961"-1"	ER40-1"	AA	0.961"-1"	ER40-1"	0.961"-1"			

# ER 止水型筒夾 (英制)

## ER Sealing Collet (inch)



MODEL	øD	L	HP 級 (3µm)		AA 級 (6µm)		一般級 Normal			
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range		
ER11	11.2 (11.5)	18 (18)	ER11C-1/8"	HP	0.125"	ER11C-1/8"	AA	0.125"	-	-
			ER11C-3/16"	HP	0.188"	ER11C-3/16"	AA	0.188"	-	-
			ER11C-1/4"	HP	0.25"	ER11C-1/4"	AA	0.25"	-	-

• øD x L = 11.2 x 18 (HP/AA) | øD x L = 11.5 x 18 (一般級 Normal)

MODEL	øD	L	HP 級 (3µm)		AA 級 (6µm)		一般級 Normal (15 µm)			
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range		
ER16	16.7 (17)	27.5 (27)	ER16C-1/8"	HP	0.125"	ER16C-1/8"	AA	0.125"	ER16C-1/8"	0.125"
			-	-	-	-	-	ER16C-5/32"	0.156"	
			ER16C-3/16"	HP	0.188"	ER16C-3/16"	AA	0.188"	ER16C-3/16"	0.188"
			-	-	-	-	-	ER16C-7/32"	0.219"	
			ER16C-1/4"	HP	0.25"	ER16C-1/4"	AA	0.25"	ER16C-1/4"	0.25"
			-	-	-	-	-	ER16C-9/32"	0.281"	
			ER16C-5/16"	HP	0.313"	ER16C-5/16"	AA	0.313"	ER16C-5/16"	0.313"
			-	-	-	-	-	ER16C-11/32"	0.344"	
ER16C-3/8"	HP	0.375"	ER16C-3/8"	AA	0.375"	ER16C-3/8"	0.375"			

• øD x L = 16.7 x 27.5 (HP/AA) | øD x L = 17 x 27 (一般級 Normal)

MODEL	øD	L	HP 級 (3µm)		AA 級 (6µm)		一般級 Normal (15 µm)			
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range		
ER20	20.7 (21)	31.5 (31)	ER20C-1/8"	HP	0.125"	ER20C-1/8"	AA	0.125"	ER20C-1/8"	0.125"
			-	-	-	-	-	ER20C-5/32"	0.156"	
			ER20C-3/16"	HP	0.188"	ER20C-3/16"	AA	0.188"	ER20C-3/16"	0.188"
			-	-	-	-	-	ER20C-7/32"	0.219"	
			ER20C-1/4"	HP	0.25"	ER20C-1/4"	AA	0.25"	ER20C-1/4"	0.25"
			-	-	-	-	-	ER20C-9/32"	0.281"	
			ER20C-5/16"	HP	0.313"	ER20C-5/16"	AA	0.313"	ER20C-5/16"	0.313"
			-	-	-	-	-	ER20C-11/32"	0.344"	
			ER20C-3/8"	HP	0.375"	ER20C-3/8"	AA	0.375"	ER20C-3/8"	0.375"
			-	-	-	-	-	ER20C-13/32"	0.406"	
ER20C-7/16"	HP	0.438"	ER20C-7/16"	AA	0.438"	ER20C-7/16"	0.438"			
ER20C-1/2"	HP	0.5"	ER20C-1/2"	AA	0.5"	ER20C-1/2"	0.5"			

• øD x L = 20.7 x 31.5 (HP/AA) | øD x L = 21 x 31 (一般級 Normal)

# SPARE PARTS

## E R 止水型筒夾 (英制)

### ER Sealing Collet (inch)

MODEL	øD	L	HP 級 (3µm)		AA 級 (6µm)		一般級 Normal (15 µm)			
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range		
ER25	25.7 (26)	34 (35)	ER25C-1/8"	HP	0.125"	ER25C-1/8"	AA	0.125"	ER25C-1/8"	0.125"
			-	-	-	-	-	ER25C-5/32"	0.156"	
			ER25C-3/16"	HP	0.188"	ER25C-3/16"	AA	0.188"	ER25C-3/16"	0.188"
			-	-	-	-	-	ER25C-7/32"	0.219"	
			ER25C-1/4"	HP	0.25"	ER25C-1/4"	AA	0.25"	ER25C-1/4"	0.25"
			-	-	-	-	-	ER25C-9/32"	0.281"	
			ER25C-5/16"	HP	0.313"	ER25C-5/16"	AA	0.313"	ER25C-5/16"	0.313"
			-	-	-	-	-	ER25C-11/32"	0.344"	
			ER25C-3/8"	HP	0.375"	ER25C-3/8"	AA	0.375"	ER25C-3/8"	0.375"
			-	-	-	-	-	ER25C-13/32"	0.406"	
			ER25C-7/16"	HP	0.438"	ER25C-7/16"	AA	0.438"	ER25C-7/16"	0.438"
			-	-	-	-	-	ER25C-15/32"	0.468"	
			ER25C-1/2"	HP	0.5"	ER25C-1/2"	AA	0.5"	ER25C-1/2"	0.5"
ER25C-9/16"	HP	0.563"	ER25C-9/16"	AA	0.563"	ER25C-9/16"	0.563"			
ER25C-5/8"	HP	0.625"	ER25C-5/8"	AA	0.625"	ER25C-5/8"	0.625"			

• øD x L = 25.7 x 34 (HP/AA) | øD x L = 26 x 35 (一般級 Normal)

MODEL	øD	L	HP 級 (3µm)		AA 級 (6µm)		一般級 Normal (20 µm)			
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range		
ER32	32.7 (33)	40 (40)	ER32C-1/8"	HP	0.125"	ER32C-1/8"	AA	0.125"	-	-
			-	-	-	-	-	ER32C-5/32"	0.156"	
			ER32C-3/16"	HP	0.188"	ER32C-3/16"	AA	0.188"	ER32C-3/16"	0.188"
			-	-	-	-	-	ER32C-7/32"	0.219"	
			ER32C-1/4"	HP	0.25"	ER32C-1/4"	AA	0.25"	ER32C-1/4"	0.25"
			-	-	-	-	-	ER32C-9/32"	0.281"	
			ER32C-5/16"	HP	0.313"	ER32C-5/16"	AA	0.313"	ER32C-5/16"	0.313"
			-	-	-	-	-	ER32C-11/32"	0.344"	
			ER32C-3/8"	HP	0.375"	ER32C-3/8"	AA	0.375"	ER32C-3/8"	0.375"
			-	-	-	-	-	ER32C-13/32"	0.406"	
			ER32C-7/16"	HP	0.438"	ER32C-7/16"	AA	0.438"	ER32C-7/16"	0.438"
			-	-	-	-	-	ER32C-15/32"	0.468"	
			ER32C-1/2"	HP	0.5"	ER32C-1/2"	AA	0.5"	ER32C-1/2"	0.5"
			-	-	-	-	-	ER32C-17/32"	0.531"	
			ER32C-9/16"	HP	0.563"	ER32C-9/16"	AA	0.563"	ER32C-9/16"	0.563"
ER32C-5/8"	HP	0.625"	ER32C-5/8"	AA	0.625"	ER32C-5/8"	0.625"			
ER32C-11/16"	HP	0.688"	-	-	-	ER32C-11/16"	0.688"			
ER32C-3/4"	HP	0.75"	ER32C-3/4"	AA	0.75"	ER32C-3/4"	0.75"			

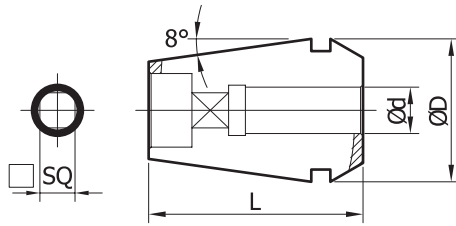
• øD x L = 32.7 x 40 (HP/AA) | øD x L = 33 x 40 (一般級 Normal)

MODEL	øD	L	HP 級		AA 級		一般級 Normal (20µm)	
			訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range	訂購編號 Order No.	夾持範圍 Range
ER40	41	46	-	-	-	-	ER40C-1/4"	0.25"
			-	-	-	-	ER40C-5/16"	0.313"
			-	-	-	-	ER40C-3/8"	0.375"
			-	-	-	-	ER40C-7/16"	0.438"
			-	-	-	-	ER40C-1/2"	0.5"
			-	-	-	-	ER40C-9/16"	0.563"
			-	-	-	-	ER40C-5/8"	0.625"
			-	-	-	-	ER40C-11/16"	0.688"
			-	-	-	-	ER40C-3/4"	0.75"
			-	-	-	-	ER40C-7/8"	0.875"
			-	-	-	-	ER40C-1"	1"



# ER 攻牙筒夾 (英制)

## ER Tap Collet (inch)



MODEL	øD	L	ød	□ SQ	TAP	STD	訂購編號 Order No.
ER16	17	27	6	4.5	1/4"U	JIS	ER16-6x4.5
			6.1	5	5/16"U		ER16-6.1x5
			7	5.5	3/8"U		ER16-7x5.5
			8	6.2	7/16"U		ER16-8x6.2

MODEL	øD	L	ød	□ SQ	TAP	STD	訂購編號 Order No.
ER20	21	31	6	4.5	1/4"U	JIS	ER20-6x4.5
			6.1	5	5/16"U		ER20-6.1x5
			7	5.5	3/8"U		ER20-7x5.5
			8	6.2	7/16"U		ER20-8x6.2
			9	7.1	1/2"U		ER20-9x7.1

MODEL	øD	L	ød	□ SQ	TAP	STD	訂購編號 Order No.
ER25	26	35	6	4.5	1/4"U	JIS	ER25-6x4.5
			6.1	5	5/16"U		ER25-6.1x5
			7	5.5	3/8"U		ER25-7x5.5
			8	6.2	7/16"U		ER25-8x6.2
			9	7.1	1/2"U		ER25-9x7.1
			10.5	8	9/16"U		ER25-10.5x8
			12	9	5/8"U		ER25-12x9

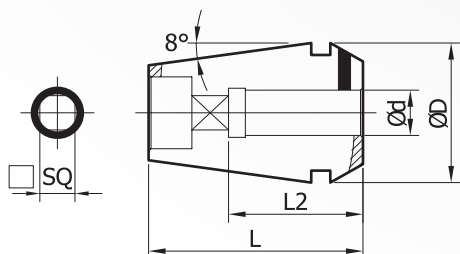
MODEL	øD	L	ød	□ SQ	TAP	STD	訂購編號 Order No.
ER32	33	40	6	4.5	1/4"U	JIS	ER32-6x4.5
			6.1	5	5/16"U		ER32-6.1x5
			7	5.5	3/8"U		ER32-7x5.5
			8	6.2	7/16"U		ER32-8x6.2
			9	7.1	1/2"U		ER32-9x7.1
			10.5	8	9/16"U		ER32-10.5x8
			12	9	5/8"U		ER32-12x9
			14	11	3/4"U		ER32-14x11
			17	13	7/8"U		ER32-17x13

MODEL	øD	L	ød	□ SQ	TAP	STD	訂購編號 Order No.
ER40	41	46	6	4.5	1/4"U	JIS	ER40-6x4.5
			6.1	5	5/16"U		ER40-6.1x5
			7	5.5	3/8"U		ER40-7x5.5
			8	6.2	7/16"U		ER40-8x6.2
			9	7.1	1/2"U		ER40-9x7.1
			10.5	8	9/16"U		ER40-10.5x8
			12	9	5/8"U		ER40-12x9
			14	11	3/4"U		ER40-14x11
			17	13	7/8"U		ER40-17x13
			20	15	1"U		ER40-20x15

SPARE PARTS

# SPARE PARTS

## E R 止水攻牙筒夾 (英制) ER Sealing Tap Collet (inch)



SPARE PARTS

MODEL	øD	L	L2	ød	□ SQ	TAP	STD	訂購編號 Order No.
ER16	16.7	27.5	18	2.8	2.1	No.8-32	DIN	ER16C-2.8x2.1
				2.8	2.1	No.2-56	DIN	ER16C-2.8x2.1
				2.8	2.1	No.3-48	DIN	ER16C-2.8x2.1
				2.8	2.1	No.8-36	DIN	ER16C-2.8x2.1
				3.5	2.7	No.5-40	DIN	ER16C-3.5x2.7
				3.5	2.7	No.5-44	DIN	ER16C-3.5x2.7
				4	3.2	No.12-24	ISO	ER16C-4x3.2
				4	3.2	No.12-28	ISO	ER16C-4x3.2
				4.5	3.55	No.8-32	ISO	ER16C-4.5x3.55
				4.5	3.55	No.3-36	ISO	ER16C-4.5x3.55
				4.5	3.55	1/4"-20	ISO	ER16C-4.5x3.55
				4.5	3.55	1/4"-28	ISO	ER16C-4.5x3.55
				5	4	No.10-24	ISO	ER16C-5x4
				5	4	No.10-32	ISO	ER16C-5x4
				5.5	4.5	No.12-24	ISO	ER16C-5.5x4.5
				5.5	4.5	No.12-28	ISO	ER16C-5.5x4.5
				6	5	5/16"-18	DIN	ER16C-6x5
				6	5	No.10-32	DIN	ER16C-6x5
			6	5	No.10-24	DIN	ER16C-6x5	
			6	5	No.12-28	DIN	ER16C-6x5	
			6.3	5	5/16"-18	ISO	ER16C-6.3x5	
			6.3	5	5/16"-24	ISO	ER16C-6.3x5	
			6.3	5	1/4"-20	ISO	ER16C-6.3x5	
			6.3	5	1/4"-28	ISO	ER16C-6.3x5	
			7	5.6	3/8"-16	DIN	ER16C-7x5.6	
			7	5.6	3/8"-24	DIN	ER16C-7x5.6	
			7	5.6	1/4"-20	DIN	ER16C-7x5.6	
			7	5.6	1/4"-28	DIN	ER16C-7x5.6	
			7.1	5.6	3/8"-16	ISO	ER16C-7.1x5.6	
			7.1	5.6	3/8"-24	ISO	ER16C-7.1x5.6	
			8	6.3	7/16"-24	ISO	ER16C-8x6.3	
			8	6.3	7/16"-20	ISO	ER16C-8x6.3	
8	6.3	5/16"-18	ISO	ER16C-8x6.3				
9	7.1	1/2"-13	ISO	ER16C-9x7.1				
9	7.1	1/2"-20	ISO	ER16C-9x7.1				

• (10µm)

MODEL	øD	L	L2	ød	□ SQ	TAP	STD	訂購編號 Order No.
ER20	20.7	31.5	18	3.5	2.7	No.5-40	DIN	ER20C-3.5x2.7
				3.5	2.7	No.5-44	DIN	ER20C-3.5x2.7
				4	3.2	No.12-24	ISO	ER20C-4x3.2
				4	3.2	No.12-28	ISO	ER20C-4x3.2
				4.5	3.55	No.8-32	ISO	ER20C-4.5x3.55
				4.5	3.55	No.3-36	ISO	ER20C-4.5x3.55
				4.5	3.55	1/4"-20	ISO	ER20C-4.5x3.55
				4.5	3.55	1/4"-28	ISO	ER20C-4.5x3.55
				5	4	No.10-24	ISO	ER20C-5x4
				5	4	No.10-32	ISO	ER20C-5x4
				5.5	4.5	No.12-24	ISO	ER20C-5.5x4.5
				5.5	4.5	No.12-28	ISO	ER20C-5.5x4.5
				6	5	5/16"-18	DIN	ER20C-6x5
				6	5	No.10-32	DIN	ER20C-6x5
				6	5	No.10-24	DIN	ER20C-6x5
				6	5	No.12-28	DIN	ER20C-6x5
				6.3	5	5/16"-18	ISO	ER20C-6.3x5
				6.3	5	5/16"-24	ISO	ER20C-6.3x5
			6.3	5	1/4"-20	ISO	ER20C-6.3x5	
			6.3	5	1/4"-28	ISO	ER20C-6.3x5	
			7	5.6	3/8"-16	DIN	ER20C-7x5.6	
			7	5.6	3/8"-24	DIN	ER20C-7x5.6	
			7	5.6	1/4"-20	DIN	ER20C-7x5.6	
			7	5.6	1/4"-28	DIN	ER20C-7x5.6	
			7.1	5.6	3/8"-16	ISO	ER20C-7.1x5.6	
			7.1	5.6	3/8"-24	ISO	ER20C-7.1x5.6	
			8	6.3	7/16"-24	ISO	ER20C-8x6.3	
			8	6.3	7/16"-20	ISO	ER20C-8x6.3	
			8	6.3	5/16"-18	ISO	ER20C-8x6.3	
			9	7.1	1/2"-13	ISO	ER20C-9x7.1	
			9	7.1	1/2"-20	ISO	ER20C-9x7.1	
			10	8	3/8"-16	ISO	ER20C-10x8	
10	8	3/8"-24	ISO	ER20C-10x8				
11.2	9	9/16"-12	ISO	ER20C-11.2x9				
11.2	9	9/16"-18	ISO	ER20C-11.2x9				
12	9	5/8"-11	DIN	ER20C-12x9				
12	9	5/8"-18	DIN	ER20C-12x9				

• (10µm)

MODEL	øD	L	L2	ød	□ SQ	TAP	STD	訂購編號 Order No.			
ER25	25.7	34	18	3.5	2.7	No.5-40	DIN	ER25C-3.5x2.7			
				3.5	2.7	No.5-44	DIN	ER25C-3.5x2.7			
				4	3.2	No.12-24	ISO	ER25C-4x3.2			
				4	3.2	No.12-28	ISO	ER25C-4x3.2			
				4.5	3.55	No.8-32	ISO	ER25C-4.5x3.55			
				4.5	3.55	No.3-36	ISO	ER25C-4.5x3.55			
				4.5	3.55	1/4"-20	ISO	ER25C-4.5x3.55			
				4.5	3.55	1/4"-28	ISO	ER25C-4.5x3.55			
				5	4	No.10-24	ISO	ER25C-5x4			
				5	4	No.10-32	ISO	ER25C-5x4			
				5.5	4.5	No.12-24	ISO	ER25C-5.5x4.5			
				5.5	4.5	No.12-28	ISO	ER25C-5.5x4.5			
				6	5	5/16"-18	DIN	ER25C-6x5			
				6	5	No.10-32	DIN	ER25C-6x5			
				6	5	No.10-24	DIN	ER25C-6x5			
				6	5	No.12-28	DIN	ER25C-6x5			
				6.3	5	5/16"-18	ISO	ER25C-6.3x5			
				6.3	5	5/16"-24	ISO	ER25C-6.3x5			
			6.3	5	1/4"-20	ISO	ER25C-6.3x5				
			6.3	5	1/4"-28	ISO	ER25C-6.3x5				
			7	5.6	3/8"-16	DIN	ER25C-7x5.6				
			7	5.6	3/8"-24	DIN	ER25C-7x5.6				
			7	5.6	1/4"-20	DIN	ER25C-7x5.6				
			7	5.6	1/4"-28	DIN	ER25C-7x5.6				
			7.1	5.6	3/8"-16	ISO	ER25C-7.1x5.6				
			7.1	5.6	3/8"-24	ISO	ER25C-7.1x5.6				
			22			22	8	6.3	7/16"-24	ISO	ER25C-8x6.3
							8	6.3	7/16"-20	ISO	ER25C-8x6.3
							8	6.3	5/16"-18	ISO	ER25C-8x6.3
							9	7.1	1/2"-13	ISO	ER25C-9x7.1
							9	7.1	1/2"-20	ISO	ER25C-9x7.1
							10	8	3/8"-16	ISO	ER25C-10x8
							10	8	3/8"-24	ISO	ER25C-10x8
							11.2	9	9/16"-12	ISO	ER25C-11.2x9
							11.2	9	9/16"-18	ISO	ER25C-11.2x9
						12	9	5/8"-11	DIN	ER25C-12x9	
12	9	5/8"-18				DIN	ER25C-12x9				
12.5	10	5/8"-11				ISO	ER25C-12.5x10				
12.5	10	5/8"-18				ISO	ER25C-12.5x10				
14	11.2	3/4"-10				ISO	ER25C-14x11.2				
14	11.2	3/4"-16				ISO	ER25C-14x11.2				
16	12.5	7/8"-9				ISO	ER25C-16x12.5				
16	12.5	7/8"-14				ISO	ER25C-16x12.5				

• (10µm)

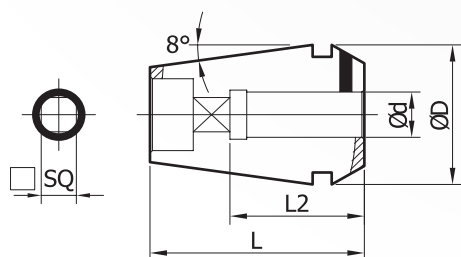
MODEL	øD	L	L2	ød	□ SQ	TAP	STD	訂購編號 Order No.			
ER32	32.7	40	18	4	3.2	No.12-24	ISO	ER32C-4x3.2			
				4	3.2	No.12-28	ISO	ER32C-4x3.2			
				4.5	3.55	No.8-32	ISO	ER32C-4.5x3.55			
				4.5	3.55	No.3-36	ISO	ER32C-4.5x3.55			
				4.5	3.55	1/4"-20	ISO	ER32C-4.5x3.55			
				4.5	3.55	1/4"-28	ISO	ER32C-4.5x3.55			
				5	4	No.10-24	ISO	ER32C-5x4			
				5	4	No.10-32	ISO	ER32C-5x4			
				5.5	4.5	No.12-24	ISO	ER32C-5.5x4.5			
				5.5	4.5	No.12-28	ISO	ER32C-5.5x4.5			
				6	5	5/16"-18	DIN	ER32C-6x5			
				6	5	No.10-32	DIN	ER32C-6x5			
				6	5	No.10-24	DIN	ER32C-6x5			
				6	5	No.12-28	DIN	ER32C-6x5			
				6.3	5	5/16"-18	ISO	ER32C-6.3x5			
				6.3	5	5/16"-24	ISO	ER32C-6.3x5			
				6.3	5	1/4"-20	ISO	ER32C-6.3x5			
				6.3	5	1/4"-28	ISO	ER32C-6.3x5			
			7	5.6	3/8"-16	DIN	ER32C-7x5.6				
			7	5.6	3/8"-24	DIN	ER32C-7x5.6				
			7	5.6	1/4"-20	DIN	ER32C-7x5.6				
			7	5.6	1/4"-28	DIN	ER32C-7x5.6				
			7.1	5.6	3/8"-16	ISO	ER32C-7.1x5.6				
			7.1	5.6	3/8"-24	ISO	ER32C-7.1x5.6				
			22			22	8	6.3	7/16"-24	ISO	ER32C-8x6.3
							8	6.3	7/16"-20	ISO	ER32C-8x6.3
							8	6.3	5/16"-18	ISO	ER32C-8x6.3
							9	7.1	1/2"-13	ISO	ER32C-9x7.1
							9	7.1	1/2"-20	ISO	ER32C-9x7.1
							10	8	3/8"-16	ISO	ER32C-10x8
							10	8	3/8"-24	ISO	ER32C-10x8
							11.2	9	9/16"-12	ISO	ER32C-11.2x9
							11.2	9	9/16"-18	ISO	ER32C-11.2x9
						12	9	5/8"-11	DIN	ER32C-12x9	
						12	9	5/8"-18	DIN	ER32C-12x9	
						12.5	10	5/8"-11	ISO	ER32C-12.5x10	
12.5	10	5/8"-18				ISO	ER32C-12.5x10				
14	11.2	3/4"-10				ISO	ER32C-14x11.2				
14	11.2	3/4"-16				ISO	ER32C-14x11.2				
16	12.5	7/8"-9				ISO	ER32C-16x12.5				
16	12.5	7/8"-14				ISO	ER32C-16x12.5				
25						25	10	8	3/8"-16	ISO	ER32C-10x8
			10	8	3/8"-24		ISO	ER32C-10x8			
			11.2	9	9/16"-12		ISO	ER32C-11.2x9			
			11.2	9	9/16"-18		ISO	ER32C-11.2x9			
			12	9	5/8"-11		DIN	ER32C-12x9			
			12	9	5/8"-18		DIN	ER32C-12x9			
			12.5	10	5/8"-11		ISO	ER32C-12.5x10			
			12.5	10	5/8"-18		ISO	ER32C-12.5x10			
			14	11.2	3/4"-10		ISO	ER32C-14x11.2			
			14	11.2	3/4"-16		ISO	ER32C-14x11.2			
28			28	16	12.5	7/8"-9	ISO	ER32C-16x12.5			
				16	12.5	7/8"-14	ISO	ER32C-16x12.5			
				20	16	1.1/8"-7	ISO	ER32C-20x16			
				20	16	1.1/8"-12	ISO	ER32C-20x16			
				20	16	1.1/8"-14	ISO	ER32C-20x16			
				20	16	1.1/8"-18	ISO	ER32C-20x16			

• (10µm)

SPARE PARTS

# SPARE PARTS

## E R 止水攻牙筒夾 (英制) ER Sealing Tap Collet (inch)

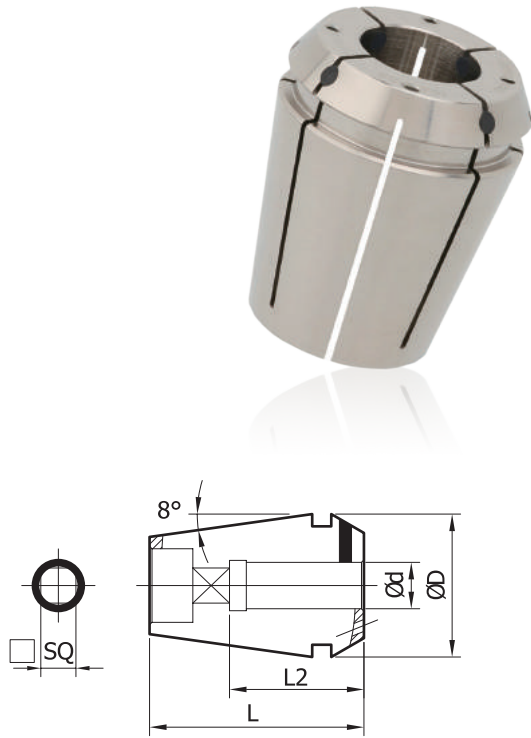


MODEL	øD	L	L2	ød	□ SQ	TAP	STD	訂購編號 Order No.	
ER40	40.7	46	18	6	5	5/16"-18	DIN	ER40C-6x5	
				6	5	No.10-32	DIN	ER40C-6x5	
				6	5	No.10-24	DIN	ER40C-6x5	
				6	5	No.12-28	DIN	ER40C-6x5	
				6.3	5	5/16"-18	ISO	ER40C-6.3x5	
				6.3	5	5/16"-24	ISO	ER40C-6.3x5	
				6.3	5	1/4"-20	ISO	ER40C-6.3x5	
				6.3	5	1/4"-28	ISO	ER40C-6.3x5	
				7	5.6	3/8"-16	DIN	ER40C-7x5.6	
				7	5.6	3/8"-24	DIN	ER40C-7x5.6	
				7	5.6	1/4"-20	DIN	ER40C-7x5.6	
				7	5.6	1/4"-28	DIN	ER40C-7x5.6	
				7.1	5.6	3/8"-16	ISO	ER40C-7.1x5.6	
				7.1	5.6	3/8"-24	ISO	ER40C-7.1x5.6	
			22	8	6.3	7/16"-24	ISO	ER40C-8x6.3	
				8	6.3	7/16"-20	ISO	ER40C-8x6.3	
				8	6.3	5/16"-18	ISO	ER40C-8x6.3	
				9	7.1	1/2"-13	ISO	ER40C-9x7.1	
				9	7.1	1/2"-20	ISO	ER40C-9x7.1	
				25	10	8	3/8"-16	ISO	ER40C-10x8
					10	8	3/8"-24	ISO	ER40C-10x8
					11.2	9	9/16"-12	ISO	ER40C-11.2x9
					11.2	9	9/16"-18	ISO	ER40C-11.2x9
					12	9	5/8"-11	DIN	ER40C-12x9
			12		9	5/8"-18	DIN	ER40C-12x9	
			12.5		10	5/8"-11	ISO	ER40C-12.5x10	
			12.5		10	5/8"-18	ISO	ER40C-12.5x10	
			14		11.2	3/4"-10	ISO	ER40C-14x11.2	
			14		11.2	3/4"-16	ISO	ER40C-14x11.2	
			33	16	12.5	7/8"-9	ISO	ER40C-16x12.5	
				16	12.5	7/8"-14	ISO	ER40C-16x12.5	
				20	16	1.1/8"-7	ISO	ER40C-20x16	
				20	16	1.1/8"-12	ISO	ER40C-20x16	
25	20	1.3/8"-6		ISO	ER40C-25x20				
			20	1.3/8"-12	ISO	ER40C-25x20			

• (10µm)

# E R 端面出水攻牙筒夾 (英制)

## ER Jet Coolant Tap Collet (inch)



MODEL	øD	L	L2	ød	□ SQ	TAP	STD	訂購編號 Order No.
ER25	16.7	27.5	18	4.5	3.55	M6	ISO	ER25J-4.5x3.55
				6	5	M5	DIN	ER25J-6x5
				6	5	M6	DIN	ER25J-6x5
				6	5	M8	DIN	ER25J-6x5
				7	5.6	M7	DIN	ER25J-7x5.6
				7	5.6	M9	DIN	ER25J-7x5.6
			22	7	5.6	M10	ISO	ER25J-7x5.6
				8	6.3	M8	ISO	ER25J-8x6.3
				8	6.3	M10	ISO	ER25J-8x6.3
				9	7.1	M12	ISO	ER25J-9x7.1
				10	8	M10	DIN	ER25J-10x8
				10	8	M10	ISO	ER25J-10x8
			25	11	9	M14	DIN	ER25J-11x9
				12	9	M12	DIN	ER25J-12x9
				12	9	M16	DIN	ER25J-12x9
				14	11.2	M18	ISO	ER25J-14x11.2
14	11.2	M20	ISO	ER25J-14x11.2				

• (10µm)

MODEL	øD	L	L2	ød	□ SQ	TAP	STD	訂購編號 Order No.
ER16	16.7	27.5	18	3.5	2.7	M3	DIN	ER16J-3.5x2.7
				3.5	2.7	M5	DIN	ER16J-3.5x2.7
				4.5	3.55	M6	ISO	ER16J-4.5x3.55
				6	5	M5	DIN	ER16J-6x5
				6	5	M6	DIN	ER16J-6x5
				6	5	M8	DIN	ER16J-6x5
			22	7	5.6	M7	DIN	ER16J-7x5.6
				7	5.6	M9	DIN	ER16J-7x5.6
				7	5.6	M10	DIN	ER16J-7x5.6
				8	6.3	M8	ISO	ER16J-8x6.3
				8	6.3	M10	ISO	ER16J-8x6.3

• (10µm)

MODEL	øD	L	L2	ød	□ SQ	TAP	STD	訂購編號 Order No.
ER20	20.7	31.5	18	4.5	3.55	M6	ISO	ER20J-4.5x3.55
				6	5	M5	DIN	ER20J-6x5
				6	5	M6	DIN	ER20J-6x5
				6	5	M8	DIN	ER20J-6x5
				7	5.6	M7	DIN	ER20J-7x5.6
				7	5.6	M9	DIN	ER20J-7x5.6
			22	7	5.6	M10	DIN	ER20J-7x5.6
				8	6.3	M8	ISO	ER20J-8x6.3
				8	6.3	M10	ISO	ER20J-8x6.3
				9	7.1	M12	ISO	ER20J-9x7.1
			25	10	8	M10	DIN	ER20J-10x8
				10	8	M10	ISO	ER20J-10x8

• (10µm)

MODEL	øD	L	L2	ød	□ SQ	TAP	STD	訂購編號 Order No.	
ER32	20.7	31.5	18	4.5	3.55	M6	ISO	ER32J-4.5x3.55	
				6	5	M5	DIN	ER32J-6x5	
				6	5	M6	DIN	ER32J-6x5	
				6	5	M8	DIN	ER32J-6x5	
				7	5.6	M7	DIN	ER32J-7x5.6	
				7	5.6	M9	DIN	ER32J-7x5.6	
			22	7	5.6	M10	DIN	ER32J-7x5.6	
				8	6.3	M8	ISO	ER32J-8x6.3	
				8	6.3	M10	ISO	ER32J-8x6.3	
				9	7.1	M12	ISO	ER32J-9x7.1	
			25	10	8	M10	DIN	ER32J-10x8	
				10	8	M10	ISO	ER32J-10x8	
				11	9	M14	DIN	ER32J-11x9	
				12	9	M16	DIN	ER32J-12x9	
				14	11.2	M18	ISO	ER32J-14x11.2	
				14	11.2	M20	ISO	ER32J-14x11.2	
				16	12.5	M22	ISO	ER32J-16x12.5	
				28	18	14.5	M22	DIN	ER32J-18X14.5
					18	14.5	M24	DIN	ER32J-18X14.5
					20	16	M27	DIN	ER32J-20x16
20	16	M27	ISO		ER32J-20x16				
20	16	M30	ISO	ER32J-20x16					

• (10µm)

# SPARE PARTS

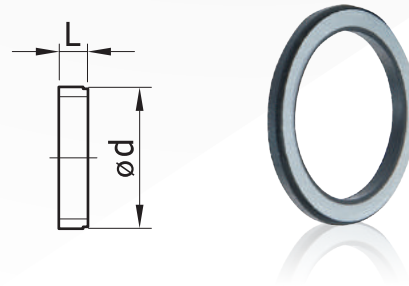
## 止水環

### Sealing Disk

SPARE PARTS

Model	øD	L	配合螺帽	配合筒夾	訂購編號 Order No.
HER16	12.6	2	CAP-HER16MC CAP-HER16C	ER16-HP	HER16-1 R
					HER16-1.5 R
					HER16-2 R
					HER16-2.5 R
					HER16-3 R
					HER16-3.5 R
					HER16-4 R
					HER16-4.5 R
					HER16-5 R
					HER16-5.5 R
					HER16-6 R
					HER16-6.5 R
					HER16-7 R
					HER16-7.5 R
HER16-8 R					
HER16-8.5 R					
HER16-9 R					
HER16-9.5 R					
HER16-10 R					

Model	øD	L	配合螺帽	配合筒夾	訂購編號 Order No.
HER20	15.8	2	CAP-HER20C	ER20-HP	HER20-2 R
					HER20-2.5 R
					HER20-3 R
					HER20-3.5 R
					HER20-4 R
					HER20-4.5 R
					HER20-5 R
					HER20-5.5 R
					HER20-6 R
					HER20-6.5 R
					HER20-7 R
					HER20-7.5 R
					HER20-8 R
					HER20-8.5 R
					HER20-9 R
					HER20-9.5 R
					HER20-10 R
					HER20-10.5 R
HER20-11 R					
HER20-11.5 R					
HER20-12 R					
HER20-12.5 R					
HER20-13 R					



Model	øD	L	配合螺帽	配合筒夾	訂購編號 Order No.
HER25	20.2	2	CAP-HER25C	ER25-HP	HER25-2 R
					HER25-2.5 R
					HER25-3 R
					HER25-3.5 R
					HER25-4 R
					HER25-4.5 R
					HER25-5 R
					HER25-5.5 R
					HER25-6 R
					HER25-6.5 R
					HER25-7 R
					HER25-7.5 R
					HER25-8 R
					HER25-8.5 R
					HER25-9 R
					HER25-9.5 R
HER25-10 R					
HER25-10.5 R					
HER25-11 R					
HER25-11.5 R					
HER25-12 R					
HER25-12.5 R					
HER25-13 R					
HER25-13.5 R					
HER25-14 R					
HER25-14.5 R					
HER25-15 R					
HER25-15.5 R					
HER25-16 R					

# 止水環 Sealing Disk

Model	øD	L	配合螺帽	配合筒夾	訂購編號 Order No.
HER32	26.2	2	CAP-HER32C	ER32-HP	HER32-2 R
					HER32-2.5 R
					HER32-3 R
					HER32-3.5 R
					HER32-4 R
					HER32-4.5 R
					HER32-5 R
					HER32-5.5 R
					HER32-6 R
					HER32-6.5 R
					HER32-7 R
					HER32-7.5 R
					HER32-8 R
					HER32-8.5 R
					HER32-9 R
					HER32-9.5 R
					HER32-10 R
					HER32-10.5 R
					HER32-11 R
					HER32-11.5 R
HER32-12 R					
HER32-12.5 R					
HER32-13 R					
HER32-13.5 R					
HER32-14 R					
HER32-14.5 R					
HER32-15 R					
HER32-15.5 R					
HER32-16 R					
HER32-16.5 R					
HER32-17 R					
HER32-17.5 R					
HER32-18 R					
HER32-18.5 R					
HER32-19 R					
HER32-19.5 R					
HER32-20 R					

Model	øD	L	配合螺帽	配合筒夾	訂購編號 Order No.
HER16	12.6	2	CAP-HER16MC CAP-HER16C	ER16-HP	HER16-1/8" R
					HER16-3/16" R
					HER16-1/4" R
					HER16-5/16" R
					HER16-3/8" R

Model	øD	L	配合螺帽	配合筒夾	訂購編號 Order No.
HER32	26.2	2	CAP-HER32C	ER32-HP	HER32-1/8" R
					HER32-3/16" R
					HER32-1/4" R
					HER32-5/16" R
					HER32-3/8" R
					HER32-1/2" R
					HER32-5/8" R
HER32-3/4" R					

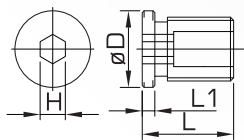
SPARE PARTS

# SPARE PARTS

## 螺栓 BOLT

### 調整螺絲 應用於油壓 (HY) 刀把

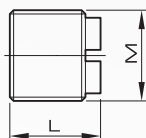
ADJUST SCREW  
APPLY TO HY HOLDER



Order No. 訂購編號	L	L1	øD	H
HY06-M5	14.5	2	6	2.5
HY08-M6	14.5	2	8	2.5
HY14-M8	14.5	2	11.5	4
HY18-M12	14.5	2	15.5	4
HY25-M16	14.5	2	24.5	4

### 調整螺絲 應用於ER刀把

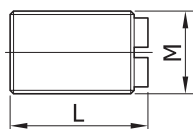
ADJUST SCREW  
APPLY TO ER HOLDER



Order No. 訂購編號	L	M
ER-M8	10	M8x1.0
ER-M11	12	M11x1.0
ER-M14	12	M14x1.0
ER-M18	12	M18x1.5
ER-M22	12	M22x1.5
ER-M28	12	M28x1.5
ER-M36	12	M36x1.5

### 出水型調整螺絲 應用於 ER刀把

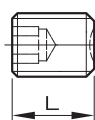
COLLANT TYPE SCREW  
APPLY TO ER HOLDER



Order No. 訂購編號	L	M
ER-M8C	20	M8x1.0
ER-M11C	20	M11x1.0
ER-M14C	20	M14x1.0
ER-M18C	20	M18x1.5
ER-M22C	20	M22x1.5
ER-M28C	20	M28x1.5
ER-M36C	20	M36x1.5

### 鎖緊螺絲 應用於 SLE刀把

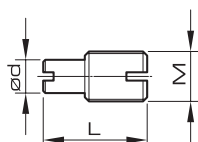
SET SCREW  
APPLY TO SLE HOLDER



Order No. 訂購編號	L
SLA-M6	10
SLA-M8	10
SLA-M10	12
SLA-M12	16
SLA-M16	16
SLA-M20	20

### 調整螺絲 應用於 PFK刀把

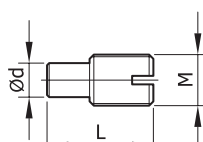
ADJUST SCREW  
APPLY TO PFK HOLDER



Order No. 訂購編號	ød	L	M
PFK-M8	6	25	M8x1.0
PFK-M12	8	25	M12x1.0
PFK-M18	14	33	M18x1.5
PFK-M28	24	30	M28x1.5

### 出水型調整螺絲 應用於 PFK刀把

COOLANT TYPE SCREW  
APPLY TO PFK HOLDER



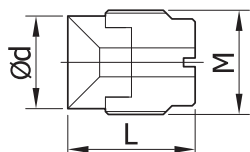
Order No. 訂購編號	ød	L	M
PFK-M8C	6	25	M8x1.0
PFK-M12C	8	25	M12x1.0
PFK-M18C	14	33	M18x1.5
PFK-M28C	24	30	M28x1.5



# 螺栓 BOLT

## 出水型調整螺絲 應用於 PFC刀把

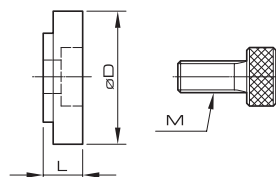
COOLANT TYPE SCREW  
APPLY TO PFC HOLDER



Order No. 訂購編號	ød	L	M
PFC20-M18C	16	22	M8x1.5
PFC25-M22C	20	27	M22x1.5
PFC32-M28C	26	32	M28x1.5

## 鎖緊螺栓 應用於 FMA,FMB 刀把

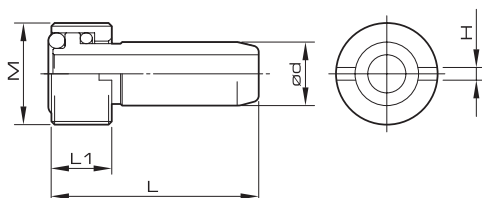
BOLT APPLY TO FMA,FMB HOLDER



Order No. 訂購編號	L	øD	M
FMSP-16	12	20	M18X1.25
FMSP-22	15	28	M10X1.5
FMSP-27	16	33	M12X1.75
FMSP-32	20	40	M16X2
FMSP-40	25	50	M20X2.5

## 中心出水管 應用於 HSK刀把

COOLANT PIPE  
APPLY TO HSK SHANK  
TOOL HOLDER

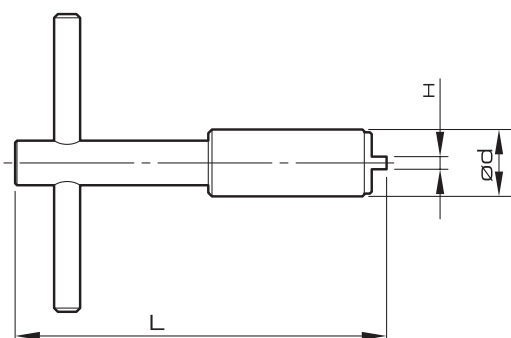


Order No. 訂購編號	M	ød	L	L1	H
HSK50P	M16XP1.0	10	32.6	9.5	4
HSK63P	M18XP1.0	12	36.2	10.4	5
HSK100P	M24XP1.0	16	43.9	15.4	6

SPARE PARTS

## 扳手 應用於中心出水管

SPANNER  
APPLY TO COOLANT PIPE

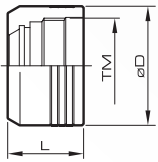


Order No. 訂購編號	L	ød	H
PHS-HSK50P	97.9	16	3.9
PHS-HSK63P	98.4	18	5.9

# SPARE PARTS

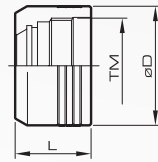
## 螺帽 NUT

### HER螺帽 HER NUT



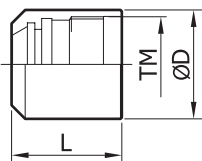
Order No. 訂購編號	øD	L	TM	SPANNER 使用扳手
CAP-HER16	30	23.4	TM22x1.5	PHS-HER16-R030
CAP-HER20	32	24.6	TM26x1.5	PHS-HER20-R032
CAP-HER25	40	25.6	TM32x1.5	PHS-HER25-R040
CAP-HER32	50	26.9	TM40x1.5	PHS-HER32-R050

### HER-C止水型螺帽 HER COOLANT TYPE NUT



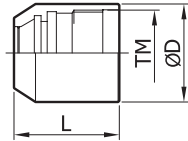
Order No. 訂購編號	øD	L	TM	SPANNER 使用扳手
CAP-HER16C	30	26.4	TM22x1.5	PHS-HER16-R030
CAP-HER20C	32	27.6	TM26x1.5	PHS-HER20-R032
CAP-HER25C	40	28.9	TM32x1.5	PHS-HER25-R040
CAP-HER32C	50	30.1	TM40x1.5	PHS-HER32-R050

### THER 小徑螺帽 THER HIGH SPEED NUT



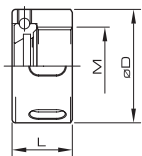
Order No. 訂購編號	øD	L	TM	SPANNER 使用扳手
CAP-THER11	16	16.2	TM14x0.75	PHS-THER11-R016
CAP-THER16	22	21	TM20x1.0	PHS-THER16-R022

### THER-C 止水型小徑螺帽 THER-C COOLANT TYPE HIGH SPEED NUT



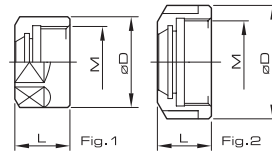
Order No. 訂購編號	鎖緊範圍 Clamping Range	øD	L	M	SPANNER 使用扳手
CAP-THER11C	3,4,5,6,7	16	18.7	TM14x0.75	PHS-THER11-R016
CAP-THER16C	1-10	22	23.9	TM20x1.0	PHS-THER16-R022

### ER鋼珠螺帽 ER BALL BEARING NUT



Order No. 訂購編號	normal 一般精密型	for high speed 高速加工用	øD	L	M	SPANNER 使用扳手
CAP-ER11B	CAP-ER11BR	23.5	12	M14x0.75	PHS-ER11B	
CAP-ER16B	CAP-ER16BR	32	17	M22x1.5	PHS-ER16B	
CAP-ER20B	CAP-ER20BR	36	19	M25x1.5	PHS-ER20B	
CAP-ER25B	CAP-ER25BR	43	20	M32x1.5	PHS-ER25	
CAP-ER32B	CAP-ER32BR	51	22.3	M40x1.5	PHS-ER32	
CAP-ER40B	-	63	25.3	M50x1.5	PHS-ER40	

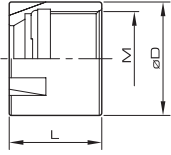
### ER螺帽 ER NUT



Order No. 訂購編號	øD	L	M	FIG	SPANNER 使用扳手
CAP-ER11	19	11.5	M14x0.75	1	PHS-ER11
CAP-ER16	28	17	M22x1.5	1	PHS-ER16
CAP-ER20	34	19	M25x1.5	1	PHS-ER20
CAP-ER25	42	20	M32x1.5	2	PHS-ER25
CAP-ER32	50	23	M40x1.5	2	PHS-ER32
CAP-ER40	63	26	M50x1.5	2	PHS-ER40
CAP-ER50	78	35.3	M64x2.0	2	PHS-ER50

## M型ER小徑螺帽

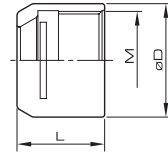
ER SLIM TYPE NUT



Order No. 訂購編號	øD	L	M	SPANNER 使用扳手
CAP-ER11M	16	12	M13x0.75	PHS-ER11M
CAP-ER16M	22	18	M19x1.0	PHS-ER16M
CAP-ER20M	28	19	M24x1.0	PHS-ER20M
CAP-ER25M	35	20	M30x1.0	PHS-ER25M

## MS型ER小徑高速螺帽

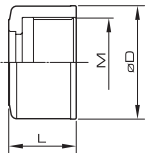
ER HIGH SPEED SLIM TYPE NUT



Order No. 訂購編號	øD	L	M	SPANNER 使用扳手
CAP-ER11MS	16	11.3	M13x0.75	PHS-ER11MS
CAP-ER16MS	22	17	M19x1.0	PHS-ER16MS
CAP-ER20MS	28	19	M24x1.0	PHS-ER20MS
CAP-ER25MS	35	23	M30x1.0	PHS-ER25MS

## PFK高速全圓螺帽

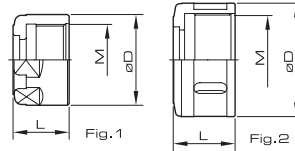
PFK HIGH SPEED FULL ROUND NUT



Order No. 訂購編號	øD	L	M	SPANNER 使用扳手
CAP-PFK10S	27.5	17	M21.5x1.0	PHS-R275
CAP-PFK16S	40	24	M32x1.5	PHS-HER25-R040

## PFK螺帽

PFK NUT



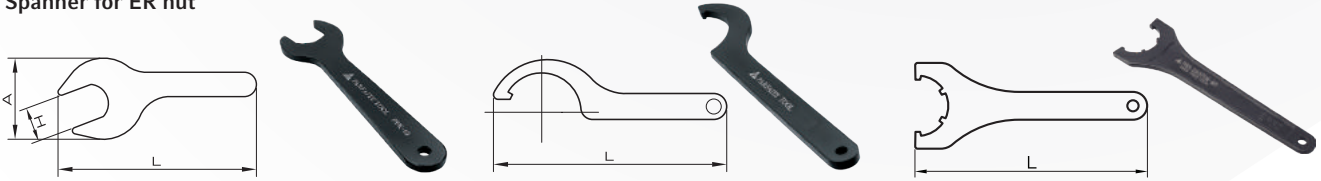
Order No. 訂購編號	D	L	M	FIG	SPANNER 使用扳手
CAP-PFK6	19.5	15	M15.5x1.0	1	PHS-PFK6
CAP-PFK10	27.5	17	M21.5x1.0	1	PHS-PFK10
CAP-PFK16	40	24	M32x1.5	2	PHS-ER25
CAP-PFK25	55	30	M45x1.5	2	PHS-ER32

# SPARE PARTS

## 螺帽扳手

### ER螺帽扳手

Spanner for ER nut



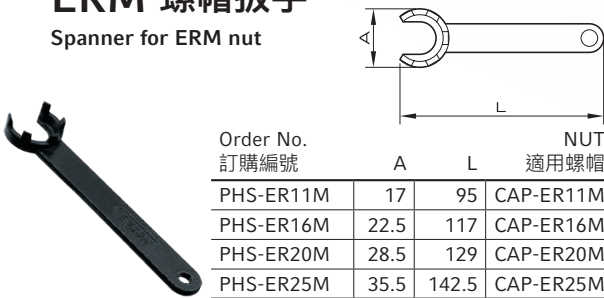
Order No. 訂購編號	A	H	L	NUT 適用螺帽
PHS-ER11	40	17	120	CAP-ER11
PHS-ER16	53	25	140	CAP-ER16
PHS-ER20	60	30	160	CAP-ER20

Order No. 訂購編號	L	NUT 適用螺帽
PHS-ER25	170	CAP-ER25
PHS-ER32	205	CAP-ER32
PHS-ER40	241	CAP-ER40

Order No. 訂購編號	L	NUT 適用螺帽
PHS-ER25UM/RD	170	CAP-ER25
PHS-ER32UM/RD	205	CAP-ER32
PHS-ER40UM/RD	241	CAP-ER40

### ERM 螺帽扳手

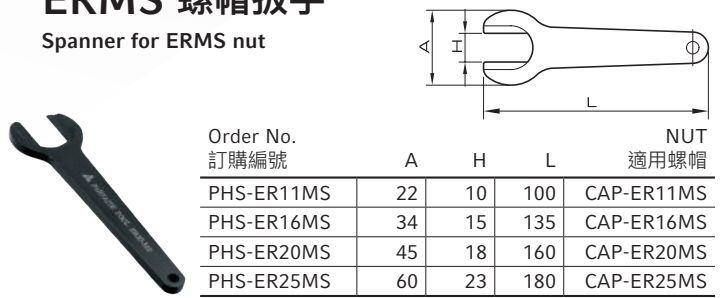
Spanner for ERM nut



Order No. 訂購編號	A	L	NUT 適用螺帽
PHS-ER11M	17	95	CAP-ER11M
PHS-ER16M	22.5	117	CAP-ER16M
PHS-ER20M	28.5	129	CAP-ER20M
PHS-ER25M	35.5	142.5	CAP-ER25M

### ERMS 螺帽扳手

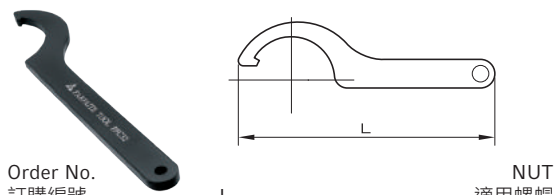
Spanner for ERMS nut



Order No. 訂購編號	A	H	L	NUT 適用螺帽
PHS-ER11MS	22	10	100	CAP-ER11MS
PHS-ER16MS	34	15	135	CAP-ER16MS
PHS-ER20MS	45	18	160	CAP-ER20MS
PHS-ER25MS	60	23	180	CAP-ER25MS

### ERB/ERBR 螺帽扳手

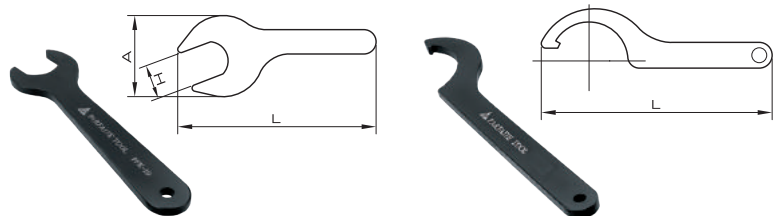
Spanner for ERB/ERBR nut



Order No. 訂購編號	L	NUT 適用螺帽
PHS-ER11B	107	CAP-ER11B/CAP-ER11BR
PHS-ER16B	136	CAP-ER16B/CAP-ER16BR
PHS-ER20B	171	CAP-ER20B/CAP-ER20BR
PHS-ER25	170	CAP-ER25B/CAP-ER25BR
PHS-ER32	205	CAP-ER32B/CAP-ER32BR
PHS-ER40	241	CAP-ER40B/CAP-ER40BR

### PFK 螺帽扳手

Spanner for PFK nut



Order No. 訂購編號	A	H	L	FIG	NUT 適用螺帽
PHS-PFK6	39	18.1	152.8	1	CAP-PFK6
PHS-PFK10	50	25.5	174.5	1	CAP-PFK10
PHS-ER25	-	-	170	2	CAP-PFK16
PHS-ER32	-	-	205	2	CAP-PFK25

## 刀把扳手

### ISO 刀把扳手

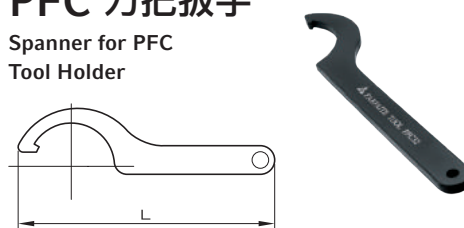
Spanner for ISO  
Tool Holder



Order No. 訂購編號	H	L	TOOL HOLDER 適用刀把
PHS-ISO20	24	140	ISO20
PHS-ISO25	27	145	ISO25
PHS-ISO30	31	210	ISO30

### PFC 刀把扳手

Spanner for PFC  
Tool Holder



Order No. 訂購編號	L	TOOL HOLDER 適用刀把
PHS-ER32	205	PFC20
PHS-PFC32	242.8	PFC32

# 扳手 SPANNER



一體式全圓螺帽雙向扳手  
Two-way Roller Bearing Wrench

Order No. 訂購編號	For NUT 適用螺帽
PHS-20-RO160	CAP-THER11
PHS-20-RO220	CAP-THER16 / CAP-THER16C
PHS-20-RO300	CAP-HER16 / CAP-HER16C
PHS-20-RO320	CAP-HER20 / CAP-HER20C
PHS-20-RO400	CAP-HER25 / CAP-HER25C / CAP-PFK16S
PHS-20-RO500	CAP-HER32 / CAP-HER32C



一體式全圓螺帽單向扳手  
One-way Roller Bearing Wrench

Order No. 訂購編號	For NUT 適用螺帽
PHS-10-TW275	CAP-PFK10S
PHS-10-TW300	CAP-HER16 / CAP-HER16C
PHS-10-TW400	CAP-HER25 / CAP-HER25C / CAP-PFK16S
PHS-10-TW500	CAP-HER32 / CAP-HER32C



雙向替換接頭  
Two-way Roller Bearing Head

Order No. 訂購編號	For NUT 適用螺帽	FOR Torque Wrench 適用扭力扳手
PHS-2H-DRO160	CAP-THER11	PHS-TW-712-2DW (9X12)
PHS-2H-DRO220	CAP-THER16 / CAP-THER16C	PHS-TW-712-3DW (9X12)
PHS-2H-DRO300	CAP-HER16 / CAP-HER16C	PHS-TW-723-5DW (14X18)
PHS-2H-DRO320	CAP-HER20 / CAP-HER20C	PHS-TW-723-5DW (14X18)
PHS-2H-DRO400	CAP-HER25 / CAP-HER25C / CAP-PFK16S	PHS-TW-723-5DW (14X18)
PHS-2H-DRO500	CAP-HER32 / CAP-HER32C	PHS-TW-723-5DW (14X18)



單向替換接頭  
One-way Roller Bearing Head

Order No. 訂購編號	For NUT 適用螺帽	FOR Torque Wrench 適用扭力扳手
PHS-1H-TW275	CAP-PFK10S	PHS-TW-712-3DW (9X12)
PHS-1H-TW300	CAP-HER16 / CAP-HER16C	PHS-TW-712-3DW (9X12)
PHS-1H-TW400	CAP-HER25 / CAP-HER25C / CAP-PFK16S	PHS-TW-723-5DW (14X18)
PHS-1H-TW500	CAP-HER32 / CAP-HER32C	PHS-TW-723-5DW (14X18)



扳手轉接頭  
Wrench Adapter

Order No. 訂購編號	For NUT 適用螺帽	FOR Torque Wrench 適用扭力扳手
PHS--3H-TW0912	9x12 →14x18	PHS-TW-723-5DW (14X18)
PHS--3H-TW1418	14x18 →9x12	PHS-TW-712-3DW (9X12)

# SPARE PARTS

## 扭力扳手

### TORQUE WRENCH

#### 扭力扳手(接頭四方形)

Torque Wrench (Square Type)

Order No. 訂購編號	TORQUE RANGE 調整範圍	SQUARE 接頭尺寸	L 全長
PHS-TW-712-2DW	4~20 N.m	9X12	315
PHS-TW-712-3DW	10~60 N.m	9X12	315
PHS-TW-723-5DW	20~140 N.m	14X18	430



SPARE PARTS

#### 替換接頭

Wrench Head

搭配 PHS-TW-712-3DW 扭力扳手 (9X12)

FOR PHS-TW-712-3DW

Order No. 訂購編號	For NUT 適用螺帽
PHS-ER11-712	CAP-ER11
PHS-PFK6-712	CAP-PFK6



搭配 PHS-TW-723-5DW 扭力扳手 (14X18)

FOR PHS-TW-723-5DW

Order No. 訂購編號	FIG	For NUT 適用螺帽
PHS-PFK10-723	3	CAP-PFK10
PHS-ER16-723	3	CAP-ER16
PHS-ER20-723	3	CAP-ER20
PHS-ER16B-723	2	CAP-ER16B(BR)/ER20B(BR)
PHS-ER25UM/RD-723	1	CAP-ER25
PHS-PFK16-723	2	CAP-ER25B(BR)/PFK16
PHS-ER32UM/RD-723	1	CAP-ER32
PHS-PFK25-723	2	CAP-ER32B(BR)/PFK25/PFC20
PHS-ER40UM/RD-723	1	CAP-ER40
PHS-ER40B-723	2	CAP-ER40(B)(BR)
PHS-PFC32-723	2	PFC32

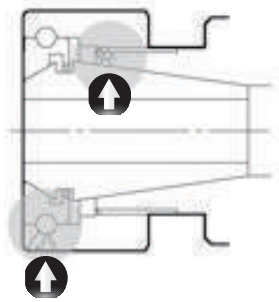


## 鎖緊力的限制

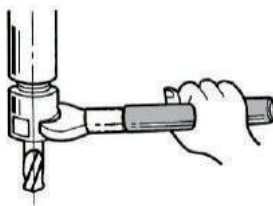
控制鎖緊力的大小，是正確使用刀把的重要關鍵，太大或太小都應盡量避免；鎖緊扭力太大會造成螺帽與刀把的損壞，太小則無法適當鎖緊刀具；鎖緊扭力大小可由扭力扳手去控制。

## Tightening Force

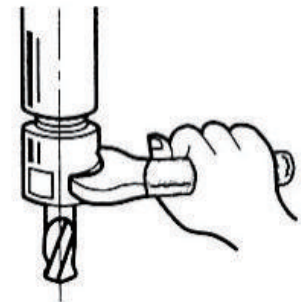
Controlling the tightening force is important when assembling tool holder. Over tightening force damages nut and tool holder; but, less force can not clamp the tool tightly. Torque wrench can adjust the tightening force to ensure the best result.



可能會產生裂痕的部位  
Position can be cracked.



自行將扳手加長，造成鎖緊扭力過大  
Standard with an extension lever causes the over tightening force.



正確方式(使用標準扳手)  
Recommended as with a standard wrench.

## ER刀把螺帽建議鎖緊扭力

Recommended tightening force for ER Collet Chuck

ER 刀把配合螺帽型式 (一般 / B,BR / M,MS)	kgf.cm 公制單位	N.m 牛頓單位
ER11 / B,BR / M,MS	200 / 200 / 120	19.6 / 19.6 / 12
ER16 / B,BR / M,MS	400 / 300 / 180	39.2 / 29.4 / 18
ER20 / B,BR / M,MS	600 / 360 / 230	58.8 / 35 / 23
ER25 / B,BR	600 / 410	58.8 / 40
ER32	700	68.6
ER40	800	78.4



## PFC刀把螺帽建議鎖緊扭力

Recommended tightening force for PFC Collet Chuck

Specification PFC 刀把規格	kgf.cm 公制單位	N.m 牛頓單位
PFC20	420	41.2
PFC32	650	63.7



## PFK刀把螺帽建議鎖緊扭力

Recommended tightening force for PFK Collet Chuck

Specification PFK 刀把規格	(ID) 內徑尺寸	kgf.cm 公制單位	N.m 牛頓單位
PFK6	3 / 4~6	100~200 / 200~300	10~20 / 20~30
PFK10	3 / 4~6 / 8~10	200~300 / 300~400 / 450~550	20~25 / 30~40 / 45~55
PFK16	4~6 / 8~10 / 12	400~500 / 550~650 / 650~750	40~50 / 55~65 / 65~75
PFK25	8~10 / 12	600~700 / 700~850	60~70 / 70~85



## HER刀把螺帽建議鎖緊扭力

Recommended tightening force for HER Collet Chuck

Specification HER 刀把規格	(ID) 內徑尺寸	kgf.cm 公制單位	N.m 牛頓單位
HER16	1.0*	100	10
HER16	1.5~3.5*	250~300	25~30
HER16	4.0~10.0	500~550	50~55
HER20	1.0~3.0*	150~200	15~20
HER20	3.5~5.5*	300~350	30~35
HER20	6.0~9.0	500~550	50~55
HER20	9.5~13.0	700~750	70~75
HER25	1.0~3.0*	250~300	25~30
HER25	3.5~6.5*	350~400	35~40
HER25	7.0~10.0	550~600	55~60
HER25	10.5~16.0	800~900	80~90
HER32	2.0~3.0*	300~350	30~35
HER32	3.5~6.5*	550~600	55~60
HER32	7.5~15.5	1100~1200	110~120
HER32	16.0~20.0	1300~1400	130~140

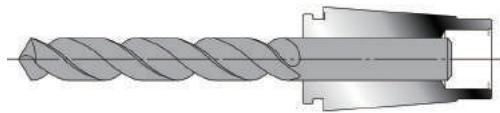


\* 標記的夾持直徑是帶有較短夾持孔的夾緊直徑，其他夾持直徑均為通孔。

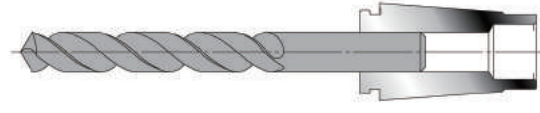
Clamping diameter with \* mark have a shorter clamping length, the rest are full length clamping.




## ER/PFK刀把使用注意事項 Caution for using ER / PFK Collet Chuck

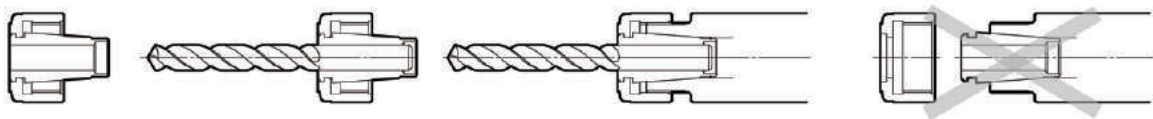


 正確方式  
OK!



 刀具未能確實裝入筒夾中  
Not OK! (Tool is not inserted into bottom.)

## ER/PFK筒夾正確安裝方法 Instruction for setting ER/PFK Collet



①.將筒夾裝入螺帽  
Set PFK Collet into  
PFK Nut

②.置入刀具  
Put tool into PFK  
Collet

③.再鎖入刀把中  
Screw them into tool  
holder

**錯誤!!**  
不可先將筒夾裝入刀把再鎖入螺帽  
ERROR!!  
Do not set PFK Collet into tool holder  
first and then screw the nut.

## PFK筒夾正確取出方法 Instruction for disassembling PFK Collet

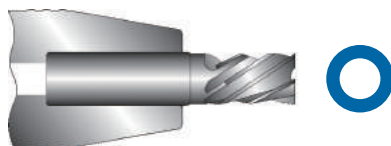


①.將塑膠套套入筒夾中  
Put the puller in PFK Collet

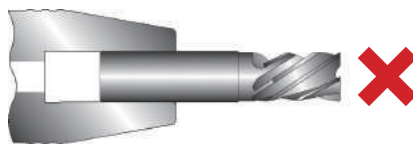
②.取出筒夾  
Take out PFK Collet



## 油壓刀把使用注意事項 Caution for using Hydraulic Chuck



正確使用情形 Correct



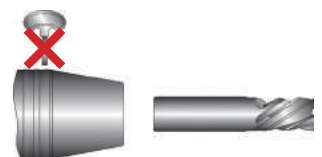
刀具必須推到底，不可有間隙  
Please insert the tool to the bottom.



刀具柄徑公差必須是h6  
The tolerance of tool shank must be H6.



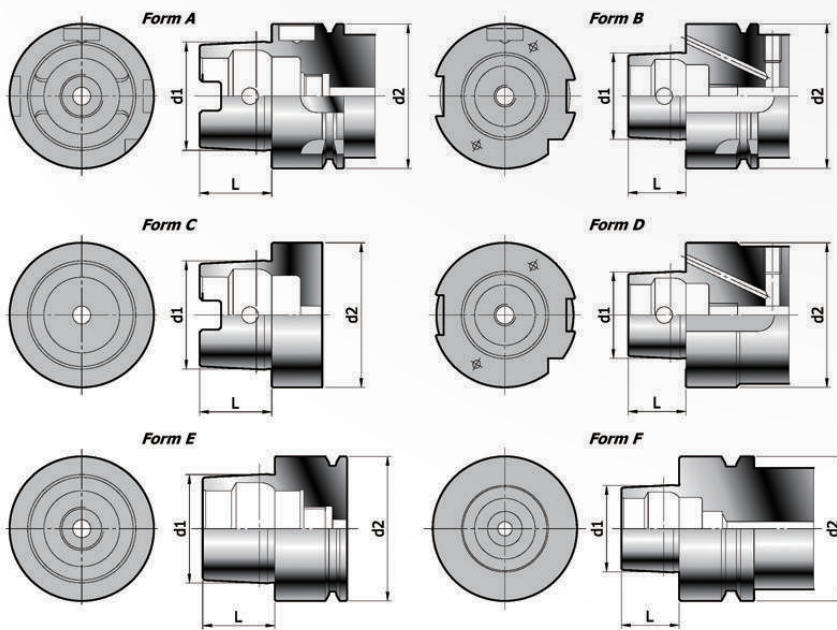
刀具柄徑必須是全圓周，不可有缺口  
The tool shank must be fully cylindrical.



當刀具取出後，請勿作鎖緊的動作，  
否則將導致內襯因油壓擠壓而變形。  
Do Not operate clamp bolt without  
tool in the chuck, or the chuck will be  
damaged.

## DIN 69893 規格

## DIN 69893

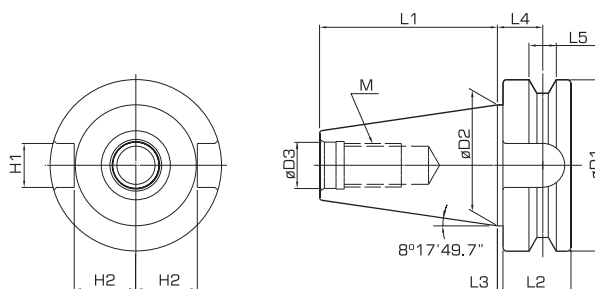


規格 Model	d2 mm	d1 mm	L mm
HSK25 A/C/E	25	19	13
HSK32 A/C/E	32	24	16
HSK40 A/C/E	40	30	20
HSK50 A/C/E	50	38	25
HSK63 A/C/E	63	48	32
HSK80 A/C/E	80	60	40
HSK100 A/C/E	100	75	50

規格 Model	d2 mm	d1 mm	L mm
-	-	-	-
-	-	-	-
HSK40 B/D/F	40	24	16
HSK50 B/D/F	50	30	20
HSK63 B/D/F	63	38	25
HSK80 B/D/F	80	48	32
HSK100 B/D/F	100	60	40

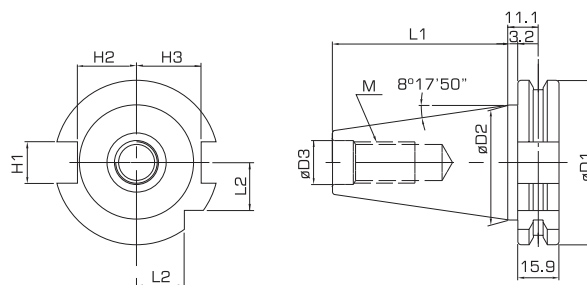
HSK	應用 Typical Applications	存在規格 Exist									DIN文件 DIN	
		25	32	40	50	63	80	100	125	160		
A	General machining, high bending loads and moderate torque, automatic tool change. 一般加工、高扭力承載、中等轉速、自動換刀		★	★	★	★	★	★	★	★		DIN 69893-1 DIN 69063-1
B	Stationary application, moderate bending loads, high torque, special applications, automatic tool change. 固定的應用方式、中扭力承載、高等轉速、自動換刀			★	★	★	★	★	★	★		DIN 69893-2 DIN 69063-2
C	General machining, high bending loads and moderate torque, manual tool change (Ref. Tape A). 一般加工、高扭力承載、中等轉速、手動換刀		★	★	★	★	★	★				DIN 69893-1 DIN 69063-1
D	Stationary application, moderate bending loads, high torque, special applications, manual tool change. (Ref. Tape B) 固定的應用方式、中扭力承載、高等轉速、手動換刀			★	★	★	★	★	★			DIN 69893-2 DIN 69063-2
E	High speed application, light and fast spindles, low bending moments and torque, automatic tool change, easy balance. 高等轉速、高速量切削、低扭力承載、自動換刀、易平衡	★	★	★	★	★						DIN 69893-5 DIN 69063-5
F	Moderate speed application, machining of soft materials low bending moments and torque, automatic tool change, easy balance. 中等轉速、加工軟質材料、低扭力、自動換刀、易平衡				★	★	★					DIN 69893-6 DIN 69063-6

## BT 錐柄規格尺寸 JIS B6339 ( MAS 403 BT )



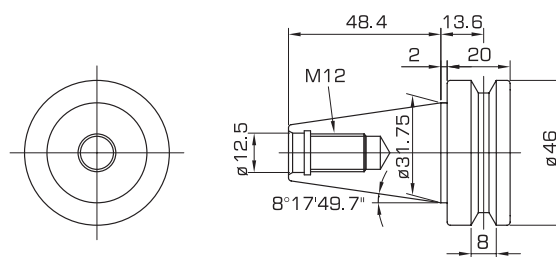
BT NO.	ØD1	ØD2	ØD3	L1	L2	L3	L4	L5	H1	H2	M
BT30	46	31.75	12.5	48.4	20	2	13.6	8	16.1	16.3	M12
BT40	63	44.45	17	65.4	25	2	16.6	10	16.1	22.6	M16
BT50	100	69.85	25	101.8	35	3	23.2	15	25.7	35.4	M24

## SK 錐柄規格尺寸 DIN 69871

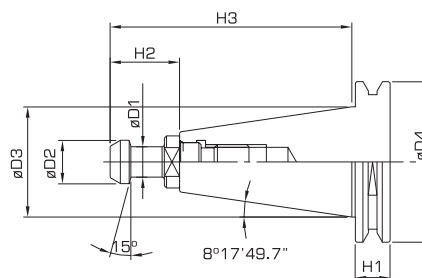


SK NO.	ØD1	ØD2	ØD3	L1	L2	H1	H2	H3	M
SK40	63.55	44.45	17	68.4	18.5	16.1	22.8	25	M16
SK50	97.5	69.85	25	101.75	30	25.7	35.5	37.7	M24

## BT30N 錐柄規格尺寸



## ISO 錐柄規格尺寸



ISO.NO	D1	D2	D3	D4	H1	H2	H3
ISO20	6	9	22.225	33	8	12	45.3
ISO25	7	10	25.4	37	8	16	55.7
ISO30	9	13	31.75	50	15.9	24	71.8

