

# OUNI

優 薩 國 際





About

## 關於優薩



Office 台中公司

**OUNI** 創立於2014年10月，並於2016年底因應客戶需求擴大經營增設彰化廠區。專業於研發機床相關零組件，我們擁有完善的機台設備與量測儀器，以精密的設備、專業的技術、嚴格的品管及迅速的效率，堅持為客戶做到最好。

自創立以來，一直堅持以品質第一服務至上為準則，為解決客戶的需求，

**OUNI** 致力於產品品質提升與技術研發不遺餘力，不斷創新研發，增進各種加工技術，陸續開發多樣產品，努力達到客戶要求的品質。

### 產品範圍

迴轉油壓缸、中空動力夾頭、夾頭法蘭、軸(徑)向鎖定螺帽、工具機主軸專用拉爪、噴水頭、精密鑽夾頭、刀桿(BT、HSK系列).....等等



Factory 彰化廠區



Employee training 教育訓練



Service team 服務團隊



Lathe車床



Grinding研磨



Test檢驗



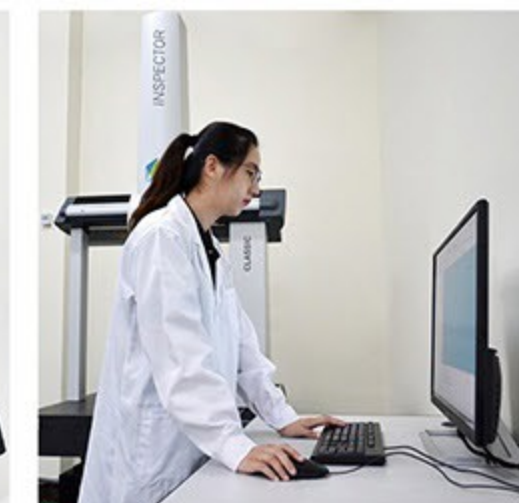
Detection檢測



Accuracy量測



Detection檢測



Research研發



Process planning製程規劃



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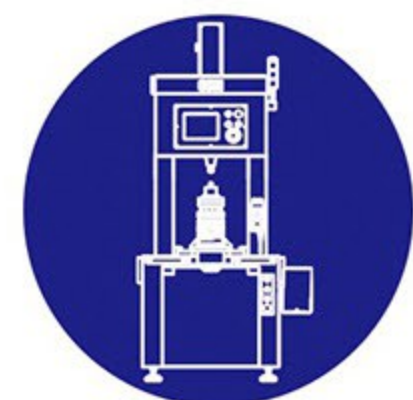
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A  
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## 夾頭系統

### Chuck Tool





## Multi Keyless Drill Chucks

Keyless Drill Chucks for portable drills

- ◆適用在手工具，電動工具，氣動工具上。
- ◆使用時不需扳手 就可以鎖緊。
- ◆沿用歐洲設計款式。
- ◆好用，耐用，方便。
- ◆可部分客戶設計製造。
- ◆It can be used on hand tools, power tools and pneumatic tools.
- ◆It can be locked without wrench.
- ◆European design style.
- ◆Easy to use, durable and convenient.
- ◆It could be customize.

NO.	Model 型號	Size 尺寸	Capacity 夾持量	Thread Mount 組接型式
A000007420	100010	10M	0.5-10	3/8-24UNF
A000007421	100020	13M	0.5-13	3/8-24UNF
A000007422	100030	10SM	0.5-10	1/2-20UNF
A000007423	100040	13SM	0.5-13	1/2-20UNF

## Stainless Steel Drill Chuck

不鏽鋼系列  
Key Type Taper & Thread Mount  
錐孔 & 螺紋



- ◆所有零件採用不鏽鋼材質。
- ◆特殊設計，轉動順暢。
- ◆所有料件都經過化學表面處理。
- ◆在高酸性、高鹼性或高濕度的環境下使用不易腐蝕(生鏽)。
- ◆外殼弧角設計不勾破手套，降低操作人員安全風險。
- ◆Stainless material is applied to each component.
- ◆Special design: working smoothly.
- ◆Chemical surface treatment is made for each component.
- ◆Anti-corrosion(anti-rust)even if used in the environment of high acidity, high alkalinity or high humidity.
- ◆Radius design on sleeve: it would not rip the glove; therefore, minimize the risk of operator safety.
- Smooth appearance: being convenient for users.

NO.	Model 型號	Size 尺寸	Capacity 夾持量		Taper & Thread Mount No. DIN or Jacobs 組接型式	length(mm)長度		Outer Dia (mm) 外徑	Weight (g) 重量	Key Size 適用扳手	
			mm 公制	inch 英制		open 三爪(開)	Closed (關)			SUS303	SUS420J2
A000007357	101010	4MTP	0.3-4	1/64-5/32	JT0	28	35	22	50	T0-03	-
A000007358	101020	6MTP	0.3-6.5	1/64-1/4	JT1	40.5	49	28.5	125	T1-03	T1-20
A000007359	101030	6MTH	0.3-6.5	1/64-1/4	3/8-24UNF	40.5	49	28.5	130	T1-03	T1-20
A000007360	101040	10MTP	0.3-10	1/64-3/8	JT2S	51	63	39	250	T2-03	T2-20
A000007361	101050	10MTP	0.3-10	1/64-3/8	D13	57	69	37	250	-	-
A000007362	101060	10MTP	0.3-10	1/64-3/8	D15	57	69	37	250	-	-
A000007363	101070	10MTH	0.3-10	1/64-3/8	3/8-24UNF	51	63	39	250	T2-03	T2-20
A000007364	101080	13MTP	0.3-13	1/64-1/2	JT6	63	77	45	420	T2-103	T2-120
A000007365	101090	13MTH	0.3-13	1/64-1/2	1/2-20UNF	63	77	45	420	T2-103	T2-120
A000007366	101100	16MTP	0.3-16	1/64-5/8	JT6	78	93	55	725	T3-03	T3-20
A000007367	101110	16MTH	0.3-16	1/64-5/8	1/2-20UNF	78	93	55	725	T3-03	T3-20

NO.	Model 型號	Size 尺寸	Pilot Size 板手大小	Weight(g) 重量	Used on 適用夾頭
A000007368	102010	T0-03	Ø3.2	16	4MTP
A000007369	102020	T1-03	Ø4.0	40	6MTP, 6MTH
A000007370	102030	T1-20	Ø 3.2	40	4MTP
A000007371	102040	T2-03	Ø5.5	45	10MTP, 10MTH, 6HTP
A000007372	102050	T2-20	Ø5.5	45	10MTP, 10MTH, 6HTP
A000007373	102060	T2-103	Ø6.5		13MTP, 13MTH, 10HTP
A000007374	102070	T2-120	Ø6.5		13MTP, 13MTH, 10HTP
A000007375	102080	T3-03	Ø8		16MTP, 13MTH, 16HTP, 16MTH
A000007376	102090	T3-20	Ø8		16MTP, 13MTH, 16HTP, 16MTH





## Keyless Taper Mount(錐孔) Special Heavy duty model 特重型系列

Titanium jaws  
鍍鈦



- ◆ 十分高精密之設計，適用於CNC及綜合切削機。所有構成部分皆經過電鍍及表面熱處理且在嚴格品質管制之下。
- ◆ 夾爪採用鈦合金鍍膜，可使夾爪更耐磨耐用及確保精度。
- ◆ Extremely high accuracy and precision design, suitable for CNC machines and machine center. All parts are ground, heat treated, surface treated and under specific QC condition. The clamping three jaws adopt high tech Titanium.
- ◆ The benefit of adopting Titanium is to increase the intensity and wear-resistance.

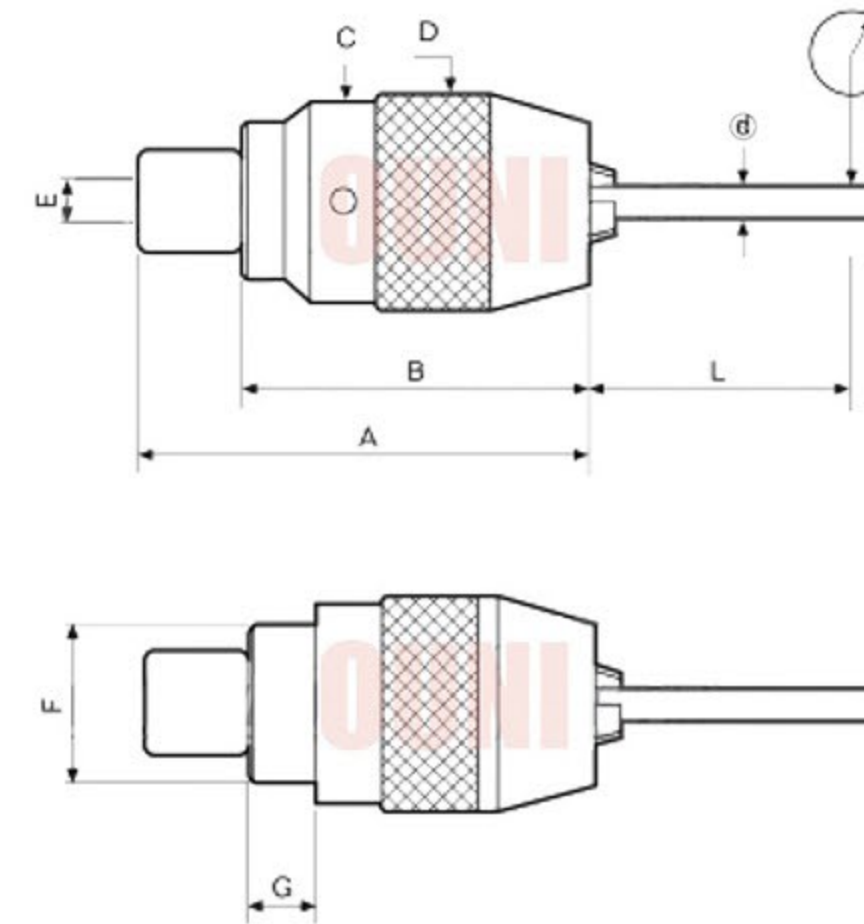
NO.	Model 型號	Size 尺寸	Capacity 夾持量		Thread Mount No. DIN or Jacobs 錐孔組裝型式	Length(mm)長度		Outer Dia (mm) 外徑	Weight(g) 重量
			mm 公制	inch 英制		open 三爪(開)	Closed (關)		
A000007257	103010	3S	0.3-3	1/64-1/8	JT0	44	48.5	24	110
A000007258	103020	3S	0.3-3	1/64-1/8	JT1	44	48.5	24	110
A000007259	103030	6S	0.3-6.5	1/64-1/4	JT1	62	68	33	300
A000007260	103040	6S	0.3-6.5	1/64-1/4	B10	62	68	33	300
A000007261	103050	8S	0.3-8	1/64-5/16	JT1	68	76	38	425
A000007262	103060	8S	0.3-8	1/64-5/16	JT2S	68	76	38	425
A000007263	103070	8S	0.3-8	1/64-5/16	B10	68	76	38	425
A000007264	103080	8S	0.3-8	1/64-5/16	B12	68	76	38	425
A000007265	103090	10S	0.3-10	1/64-3/8	JT2S	80	92	43	625
A000007266	103100	10S	0.3-10	1/64-3/8	JT33	80	92	43	625
A000007267	103110	10S	0.3-10	1/64-3/8	B10	80	92	43	625
A000007268	103120	10S	0.3-10	1/64-3/8	B12	80	92	43	625
A000007269	103130	10S	0.3-10	1/64-3/8	JT2	80	92	43	625
A000007270	103140	10S	0.3-10	1/64-3/8	B16	80	92	43	625
A000007271	103150	13S	0.3-13	1/64-1/2	JT2	90	102	50	1000
A000007272	103160	13S	0.3-13	1/64-1/2	JT33	90	102	50	1000
A000007273	103170	13S	0.3-13	1/64-1/2	JT6	90	102	50	1000
A000007274	103180	13S	0.3-13	1/64-1/2	B12	90	102	50	1000
A000007275	103190	13S	0.3-13	1/64-1/2	B16	90	102	50	1000
A000007276	103200	16s	3-16	1/8-5/8	JT6	97	110	57	1320
A000007277	103210	16s	3-16	1/8-5/8	JT3	97	110	57	1320
A000007278	103220	16s	3-16	1/8-5/8	B16	97	110	57	1320
A000007279	103230	16s	3-16	1/8-5/8	B18	97	110	57	1320
A000007280	103240	16s	3-16	1/8-5/8	JT33	97	110	57	1320



## Tool Shank Type(帶刀柄式) Heavy duty & Special Heavy duty model 重型及特重型系列

Titanium jaws  
鍍鈦

- ◆ 擁有可搭配不同刀柄座規格之多重選擇；當您使用於綜合切削機時，它能讓您迅速地更換。
- ◆ Multi-choices of mounting specification offers quick changeover on machine center.



Type	φd 直徑 mm	L 長度 mm	S Type
6S	3	35	0.05
	4	50	
	6		
8S	4	35	0.05
	6	50	
	8		
10S	5	35	0.05
	6	58	
	10		
13S	6	55	0.05
	10	75	
	13		
16S	6	55	0.05
	10	80	
	16		

Keyless Drill Chuck Run Out Table  
Keyless 鑽夾頭同心度檢驗表

NO.	Model 型號	Type 規格	Capacity 夾持量		Male Taper 錐柄型式	A	B	C	D	E	F	G	Weight (g) 重量	Spanner NO. 適用勾板手
			mm 公制	inch 英制										
A000007347	104010	6S	0.3-6.5	1/64-1/4	MT2	78	54	32	33	M6 P1.0	26.5	7.5	300	105010
A000007348	104020	8S	0.3-8	1/64-5/16	MT2	85	60.5	36	37.5	M6 P1.0	30	10	400	105020
A000007349	104030	10S	0.3-10	1/64-3/8	MT2	95	70	41	43	M6 P1.0	34	13	650	105030
A000007350	104040	13S	0.3-13	1/64-1/2	MT3	107.5	80.5	48	50	M8 P1.25	38	15	960	105040
A000007351	104050	16S	3-16	1/8-5/8	MT3	112	85	54	57	M8 P1.25	43	16	1250	105050



組接示意圖

## Hook wrench(勾板手系列) Hook wrench model

NO.	Model 型號	Type 規格	Weight (g) 重量
A000007352	105010	6S	70
A000007353	105020	8S	82
A000007354	105030	10S	105
A000007355	105040	13S	120
A000007356	105050	16S	110







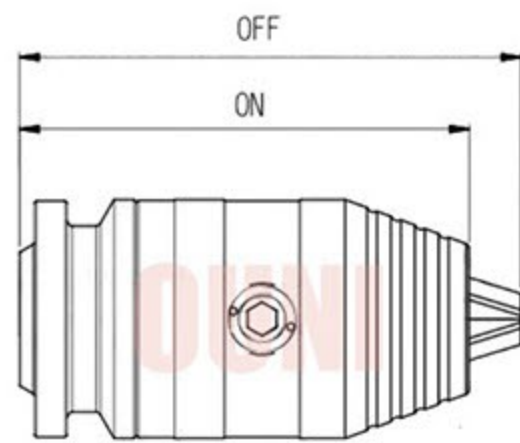
**Stainless Steel Drill Chuck 不鏽鋼系列**  
Keyless Taper & Thread Mount  
錐孔 & 螺紋

NO.	Model 型號	Size 尺寸	Capacity 夾持量		Taper & Thread Mount No. DIN or Jacobs 組接型式	length(mm)長度		Outer Dia (mm) 外徑	Weight (g) 重量
			mm 公制	inch 英制		open 三爪(開)	Closed (關)		
A000007377	106010	3S	0.3-3	1/64-1/8	JT0	44	50	30	110
A000007378	106020	3S	0.3-3	1/64-1/8	JT1	44	48.5	24	110
A000007379	106030	6S	0.3-6.5	1/64-1/4	JT1	62	68	33	300
A000007380	106040	8S	0.3-8	1/64-5/16	JT1	68	76	38	425
A000007381	106050	10S	0.3-10	1/64-3/8	JT2S	80	92	43	625
A000007382	106060	13S	0.3-13	1/64-1/2	JT6	90	102	50	1000
A000007383	106070	16S	3.0-16	1/8-5/8	JT6	97	110	57	1320



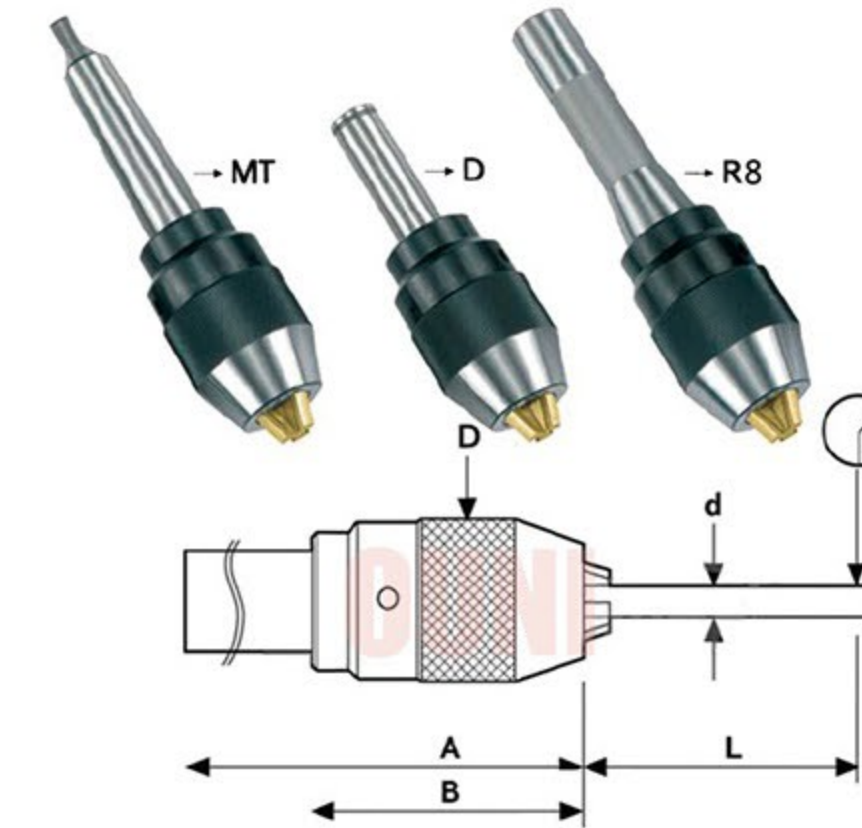
**Hex Key Drill Chuck 齒輪式夾頭**  
Titanium jaws  
鍍鈦

- ◆ 適合中高低轉速使用。
- ◆ 輕鬆夾緊鉗頭、絲攻紋刀、銑刀。
- ◆ 夾緊力可達1200-cm。
- ◆ 鍍鈦爪設計，增加耐磨功能。
- ◆ Arbor structure makes its performance perfect for drilling press and machine center.
- ◆ Fine components ensure the tolerance and accuracy well.
- ◆ The benefit of titanium jaws is to increase the intensity and wear-resistance.



NO.	Model 型號	Type 規格	Capacity 夾持量		Taper Mount No. DIN or Jacobs 組接型式	length(mm)長度	
			mm 公制	inch 英制		open 三爪(開)	Closed (關)
A000007384	107010	8GHK	0.3-8	1/64-5/16	JT1	76	80.5
A000007385	107020	13GHK	0.3-13	1/64-1/2	JT6	94	105
A000007386	107030	13GHK	0.3-13	1/64-1/2	JT4	112	122.5
A000007387	107040	16GHK	1.5-16	1/16-5/8	JT6	104	115
A000007388	107050	16GHK	1.5-16	1/16-5/8	JT4	121.5	132.5

**Arbor Type(連柄一體式) Titanium jaws 鍍鈦**  
Special Heavy duty model 特重型系列



- ◆ 附有夾頭柄結構之設計，使得它更適於銑床及綜合切削機且有更趨於完美之表現。精密的機械工學和堅固耐用的組成確保了耐力及精度。
- ◆ 夾爪採用高科技的鈦合金鍍膜，可使夾爪更耐磨耐用及確保精度。
- ◆ Designed together with arbor structure makes its performance perfect for drilling press and machine center. Precisely machined and ground components ensure the tolerance and accuracy.
- ◆ The clamping three jaws adopt high tech Titanium. The benefit of adopting Titanium is to increase the intensity and wear-resistance.

MT：莫氏錐度柄

NO.	Model 型號	Type 規格	Capacity 夾持量		Male Taper No. DIN or Jacobs 錐柄組接型式	length(mm)長度			Weight (g) 重量	Spanner NO. 適用勾板手
			mm 公制	inch 英制		A	B	D(mm) 外徑		
A000007306	108010	8S	0.3-8	1/64-5/16	MT2	142	61	37	400	11004
A000007307	108020	10S	0.3-10	1/64-3/8	MT2	151	70	43	700	11007
A000007308	108030	13S	0.3-13	1/64-1/2	MT2	162	81	50	1010	11010
A000007309	108040	13S	0.3-13	1/64-1/2	MT3	180	81	50	1140	11010
A000007310	108050	13S	0.3-13	1/64-1/2	MT4	206	81	50	1490	11010
A000007311	108060	16S	3-16	1/8-5/8	MT3	186	85	57	1445	11013
A000007312	108070	16S	3-16	1/8-5/8	MT4	210	85	57	1770	11013

D：直柄

NO.	Model 型號	Type 規格	Capacity 夾持量		Male Taper No. DIN or Jacobs 錐柄組接型式	length(mm)長度			Weight (g) 重量	Spanner NO. 適用勾板手
			mm 公制	inch 英制		A	B	D(mm) 外徑		
A000007313	108080	3S	0.3-3	1/64-1/8	D12	88.5	38.5	24	140	
A000007314	108090	6S	0.3-6.5	1/64-1/4	D16	104	54	33	334	11001
A000007315	108100	8S	0.3-8	1/64-5/16	D20	121	61	37	510	11004
A000007316	108110	13S	0.3-13	1/64-1/2	D20	141	81	50	1030	11010
A000007317	108120	13S	0.3-13	1/64-1/2	D25	160	81	50	1190	11010
A000007318	108130	13S	0.3-13	1/64-1/2	D32	162	81	50	1405	11010
A000007319	108140	16S	3-16	1/8-5/8	D20	145	85	57	1330	11013
A000007320	108150	16S	3-16	1/8-5/8	D25	165	85	57	1480	11013
A000007321	108160	16S	3-16	1/8-5/8	D32	167	85	57	1700	11013

R8：不規則柄

NO.	Model 型號	Type 規格	Capacity 夾持量		Male Taper No. DIN or Jacobs 錐柄組接型式	length(mm)長度			Weight (g) 重量	Spanner NO. 適用勾板手
			mm 公制	inch 英制		A	B	D(mm) 外徑		
A000007322	108170	13S	0.3-13	1/64-1/2	R8	184	81	50	1260	11010
A000007323	108180	16S	3-16	1/8-5/8	R8	188	85	58	1530	11013



## Hex Key Drill Chuck 齒輪式夾頭



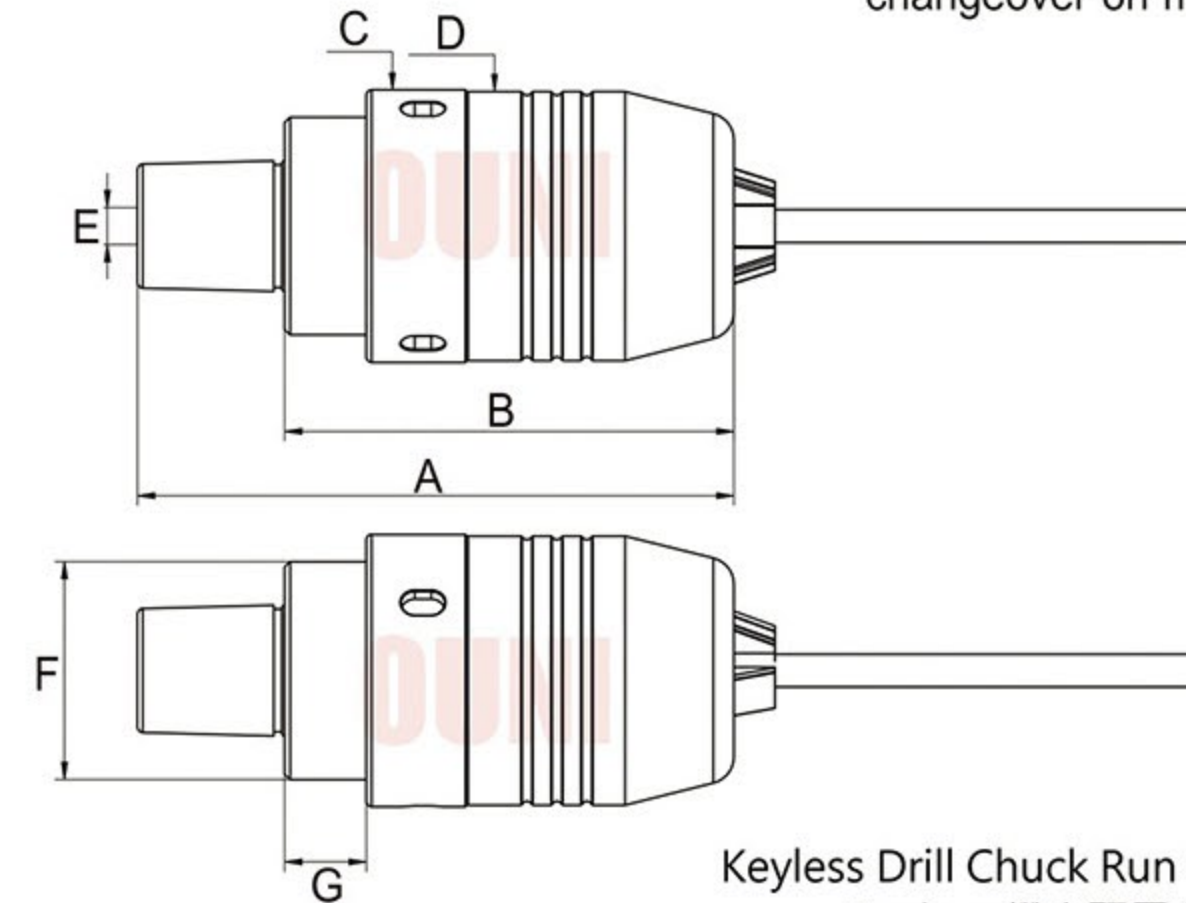
NO.	Model 型號	Type 規格	A	B	C	ØD	E	ØF	ØG	ØH	I	J
A000007389	109010	GHK8S	MT3	26.5	15	4x12L	69.5	38	48	37	M8	4
A000007390	109020	GHK13S	MT3	26.5	15	4x12L	89.8	38	48	50	M8	6
A000007391	109030	GHK16S	MT3	26.5	15	4x12L	95	38	48	50	M8	8



## Safe Lock Keyless Chuck

Keyless Drill Chucks for portable drills

- ◆ 自鎖防鬆設計。
- ◆ 高精度及高扭力。
- ◆ 擁有可搭配不同刀柄座規格之多重選擇；當您使用於綜合切削機時，它能讓您迅速地更換。
- ◆ Self lock for chuck design.
- ◆ Hi Precision and Hi Torque.
- ◆ Multi-choices of mounting specification offers quick changeover on machine center.



Keyless Drill Chuck Run Out Table  
Keyless 鑽夾頭同心度檢驗表

Type	φd 直徑 mm	L 長度 mm	S Type ↗
6S	3	35	0.05
	4		
	6	50	
8S	4	35	0.05
	6		
	8	50	
10S	5	35	0.05
	6		
	10	58	
13S	6	55	0.05
	10		
	13	75	
16S	6	55	0.05
	10		
	16	80	

NO.	Model 型號	Type 規格	Capacity 夾持量		Male Taper 錐柄型式	A	B	C	D	E	F	G	Weight (g) 重量	Spanner NO. 適用勾板手
			mm 公制	inch 英制										
A000007821	110010	6S	0.3-6.5	1/64-1/4	MT2	78	54	32	33	M6 P1.0	26.5	7.5	300	105010
A000007822	110020	8S	0.3-8	1/64-5/16	MT2	85	60.5	36	37.5	M6 P1.0	30	10	400	105020
A000007823	110030	10S	0.3-10	1/64-3/8	MT2	95	70	41	43	M6 P1.0	34	13	650	105030
A000007824	110040	13S	0.3-13	1/64-1/2	MT3	109.5	82.5	50	49.4	M8 P1.25	40	15	960	105040
A000007825	110050	16S	3-16	1/8-5/8	MT3	112	85	54	57	M8 P1.25	43	16	1250	105050



組接示意圖

## Hook wrench(勾板手系列)

### Hook wrench model

NO.	Model 型號	Type 規格	Weight (g) 重量
A000007352	105010	6S	70
A000007353	105020	8S	82
A000007354	105030	10S	105
A000007355	105040	13S	120
A000007356	105050	16S	110







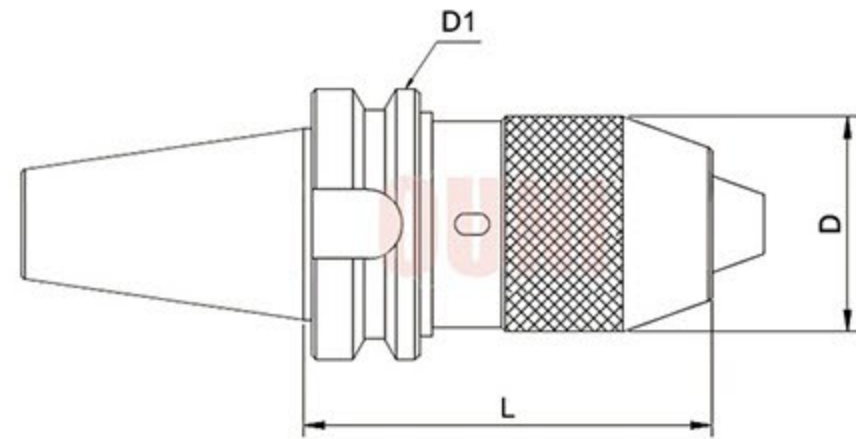




## BT CHU CNC Drill Chuck

### BT直結式鑽夾頭

- ◆ 適用於傳統銑床或其他提供BT主軸介面之工作母機作鑽孔加工。
- ◆ 比普通夾頭多三倍夾持力。
- ◆ 鑽頭不會鬆脫掉落。
- ◆ 比普通夾頭多出兩倍精準。
- ◆ 可替換式的夾頭。
- ◆ The product can be adapted for the general lathe or the drilling processing whose machines center can supply with BT spindle.
- ◆ 3 times better clamping capacity, comparing to keyed drill chucks.
- ◆ The drill bit won' t be loosen or falling off.
- ◆ Twice precision than the keyer drill chucks.
- ◆ The drill chuck is interchangeable.



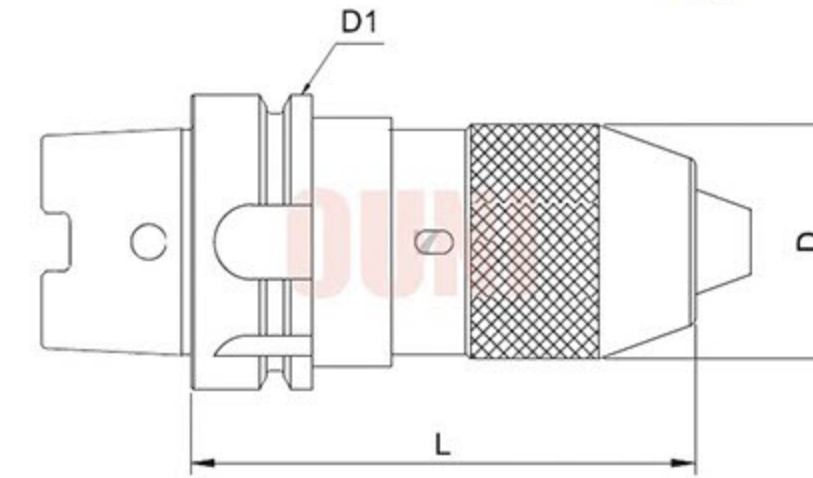
NO.	Model 型號	TYPE 規格	L	D	D1	Spanner NO.	
A000007180	200010	BT30xOPU8-75	75	37	46	105030	
A000007181	200020	BT30xOPU13-90	90	50		105040	
A000007182	200030	BT40xOPU8-85	85	37	63	105030	
A000007183	200040	BT40xOPU13-95	95	50		105040	
A000007184	200050	BT40xOPU13-130	130				57
A000007185	200060	BT40xOPU13-150	150	105050			
A000007186	200070	BT40xOPU16-120	120	57	100	105040	
A000007187	200080	BT50xOPU13-110	110	50			
A000007188	200090	BT50xOPU13-150	150				57
A000007189	200100	BT50xOPU16-110	110	105050			
A000007190	200110	BT50xOPU16-130	130				
A000007191	200120	BT50xOPU16-145	145				



## HSK CHU CNC Drill Chuck

### HSK直結式鑽夾頭

- ◆ 比普通夾頭多三倍夾持力。
- ◆ 鑽頭不會鬆脫掉落。
- ◆ 比普通夾頭多出兩倍精準。
- ◆ 可替換式的夾頭。
- ◆ 3 times better clamping capacity, comparing to keyed drill chucks.
- ◆ The drill bit won' t be loosen or falling off.
- ◆ Twice precision than the keyer drill chucks.
- ◆ The drill chuck is interchangeable.

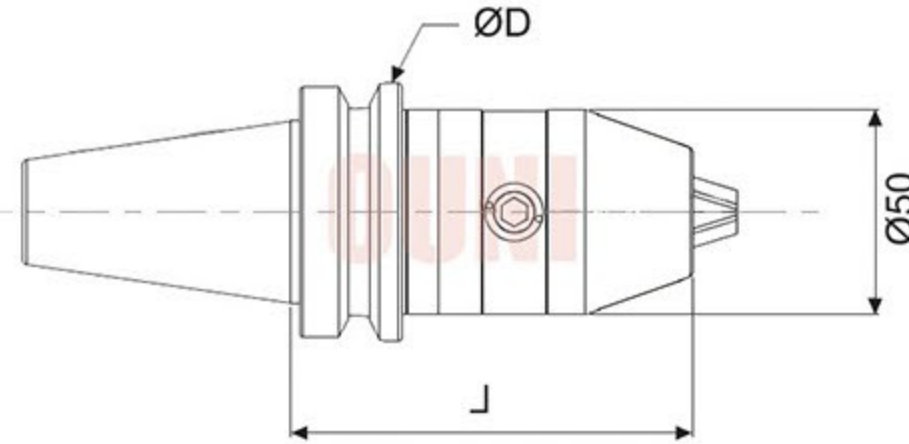


NO.	Model 型號	TYPE 規格	L	D	D1	Spanner NO.
A000007206	201010	HSK50AxOPU13-110	110	50	50	11010
A000007207	201020	HSK63AxOPU13-145	145	50	63	11010
A000007208	201030	HSK100AxOPU13-120	120	50	100	11010





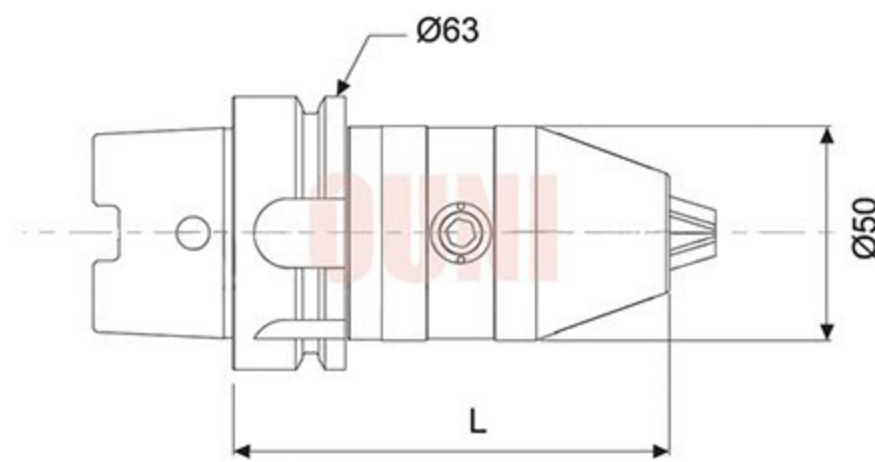
BT Hex Key Drill Chuck  
BT齒輪式夾頭



NO.	Model 型號	TYPE 規格	夾持量 Capacity		L	ØD
			mm	inch		
A000007209	202010	BT40xGPU13-98	0.3-13	3/64-1/2	98	63
A000007210	202020	BT40xGPU16-103	1.5-16	1/16-5/8	103	63
A000007211	202030	BT50xGPU13-109	0.3-13	3/64-1/2	109	100
A000007212	202040	BT50xGPU16-114	1.5-16	1/16-5/8	114	100



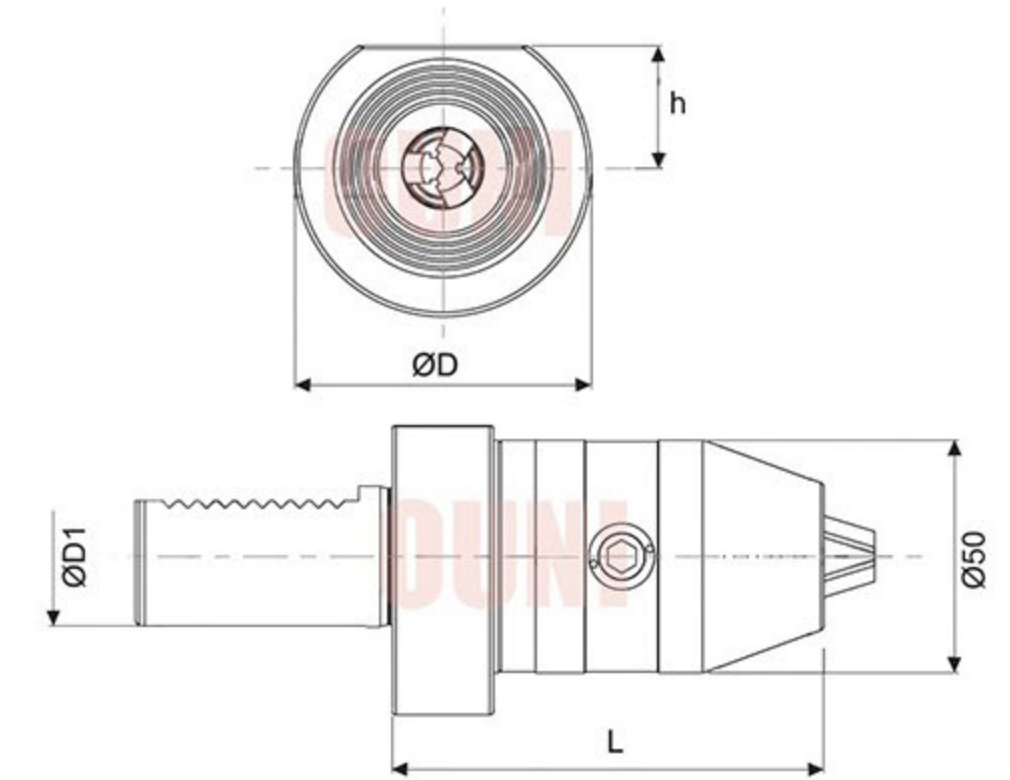
HSK Hex Key Drill Chuck  
HSK齒輪式夾頭



NO.	Model 型號	TYPE 規格	夾持量 Capacity		L
			mm	Inch	
A000007217	203010	HSK63AxGPU13-105	0.3-13	3/64-1/2	105
A000007218	203020	HSK63AxGPU16-110	1.5-16	1/16-5/8	110

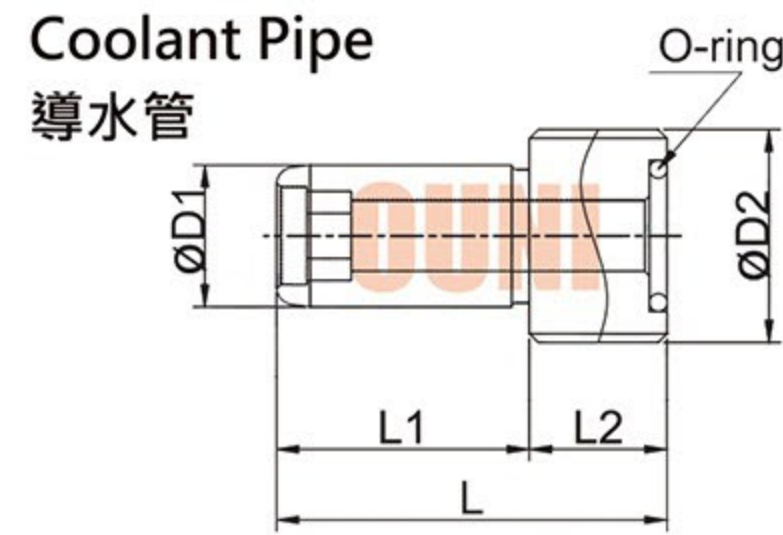


VDI Hex Key Drill Chuck  
VDI齒輪式夾頭



NO.	Model 型號	TYPE 規格	夾持量 Capacity		L	ØD	h	ØD1
			mm	inch				
A000007219	204010	VDI30xGPU16-93	0.3-13	3/64-1/2	93	68	28	30
A000007220	204020	VDI30xGPU16-98	1.5-16	1/16-5/8	98	68	28	30
A000007221	204030	VDI40xGPU13-93	0.3-13	3/64-1/2	93	83	32	40
A000007222	204040	VDI40xGPU16-98	1.5-16	1/16-5/8	98	83	32	40

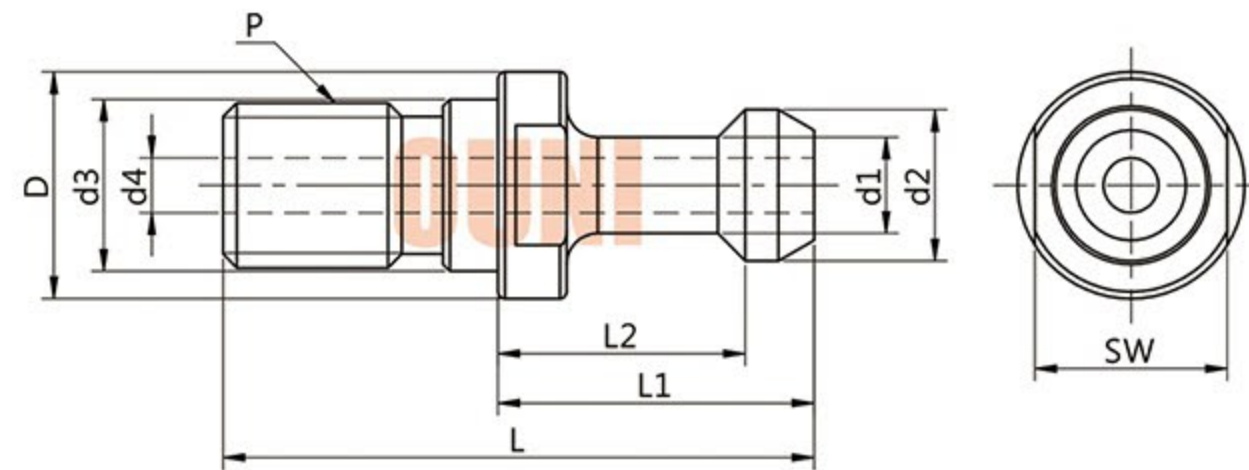




NO.	Model 型號	TYPE 規格	ØD1	ØD2	L	L1	L2	O-ring
G000009332	221010	HSK32	6	M10x1.0	26	20.5	5.5	P4
G000009333	221020	HSK40	8	M12x1.0	29.5	22	7.5	P6
G000009334	221030	HSK50	10	M16x1.0	33	23.5	9.5	P9
G000009335	221040	HSK63	12	M18x1.0	36.5	25	11.5	P11
G000009336	221050	HSK80	14	M20x1.5	40	25.5	13.5	P12
G000009337	221060	HSK100	16	M24x1.5	44	28.5	15.5	P15



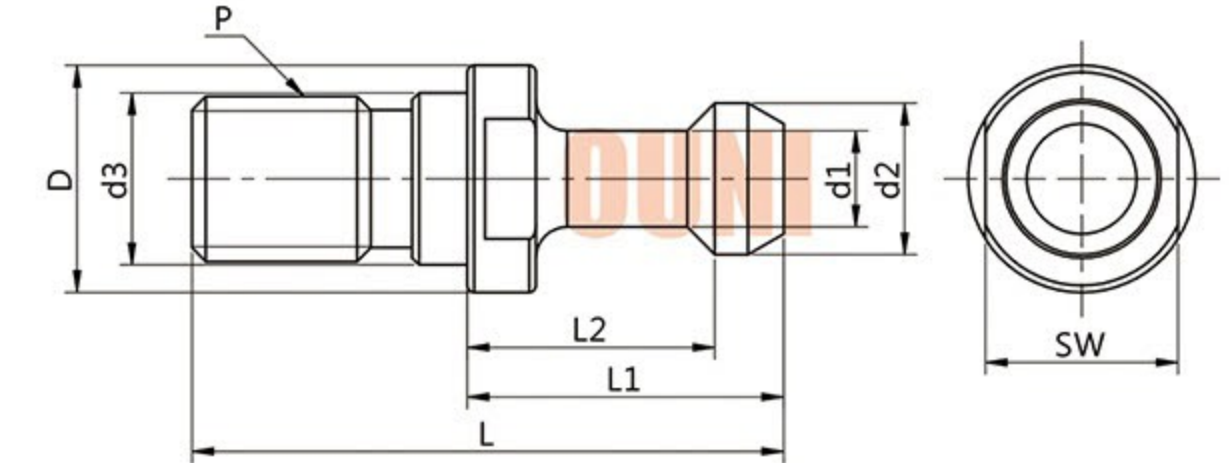
BT Coolant Thru-Hole Models  
Pull Stud  
BT水孔型拉栓



NO.	Model 型號	TYPE 規格	T	W	L	L1	ØD1	ØD2	ØD3	ØD4	G
G000009338	222010	BT40-45°	Ø4	19	60	35	15	10	23	17	M16
G000009339	222020	BT40-60°	Ø4								
G000009340	222030	BT40-90°	Ø4								
G000009341	222040	BT50-45°	Ø7	30	85	45	23	17	38	25	M24
G000009342	222050	BT50-60°	Ø7								
G000009343	222060	BT50-90°	Ø7								



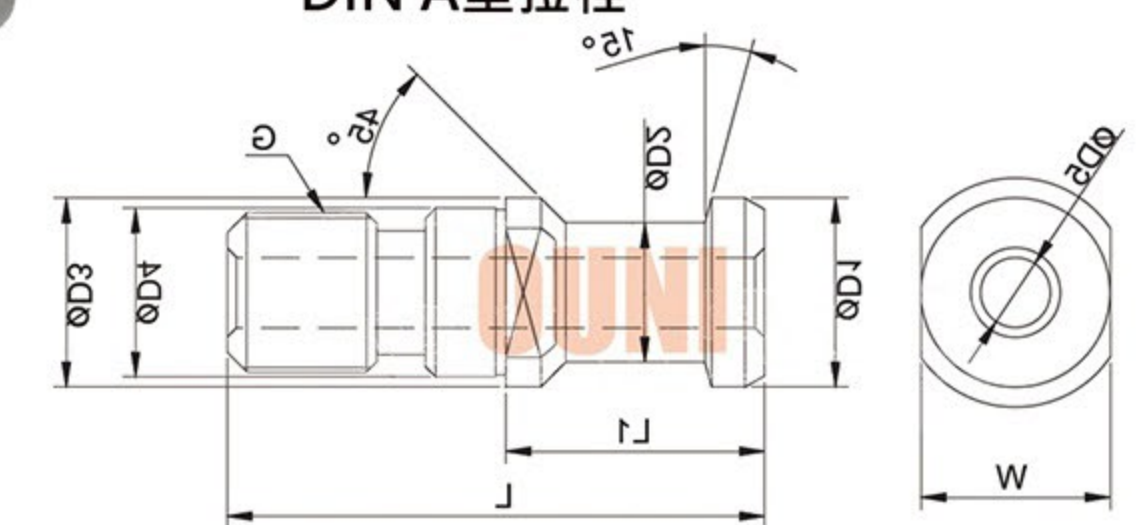
BT Threading Ground Models  
Pull Stud  
BT磨牙型



NO.	Model 型號	TYPE 規格	W	L	L1	ØD1	ØD2	ØD3	ØD4	G
G000009344	223010	BT30-45°G	13	43	23	11	7	16.5	12.5	M12
G000009345	223020	BT40-45°G	19	60	35	15	10	23	17	M16
G000009346	223030	BT50-45°G	30	85	45	23	17	38	25	M24
G000009347	223040	BT30-60°G	13	43	23	11	7	16.5	12.5	M12
G000009348	223050	BT40-60°G	19	60	35	15	10	23	17	M16
G000009349	223060	BT50-60°G	30	85	45	23	17	38	25	M24
G000009350	223070	BT30-90°G	13	43	23	11	7	16.5	12.5	M12
G000009351	223080	BT40-90°G	19	60	35	15	10	23	17	M16
G000009352	223090	BT50-90°G	30	85	45	23	17	38	25	M24



DIN A Type Pull Stud  
DIN A型拉栓

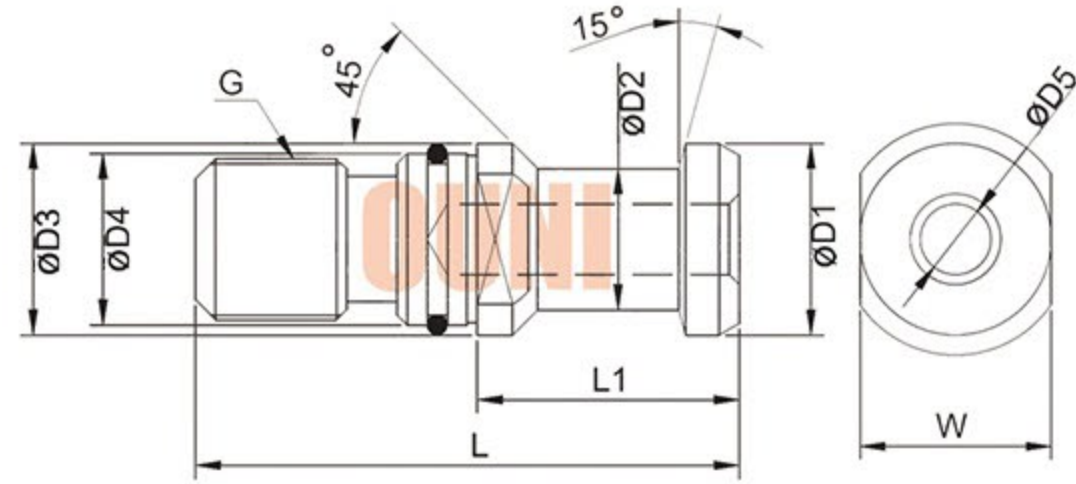


NO.	Model 型號	TYPE 規格	W	L	L1	ØD1	ØD2	ØD3	ØD4	ØD5	G
G000009353	224010	DIN 30A	14	44	24	13	9	17	13	-	M12
G000009354	224020	DIN 40A	19	54	26	19	14	23	17	7	M16
G000009355	224030	DIN 40-A-L	19	54	29	19	14	23	17	7	M16
G000009356	224040	DIN 50A	30	74	34	28	21	36	25	11.5	M24





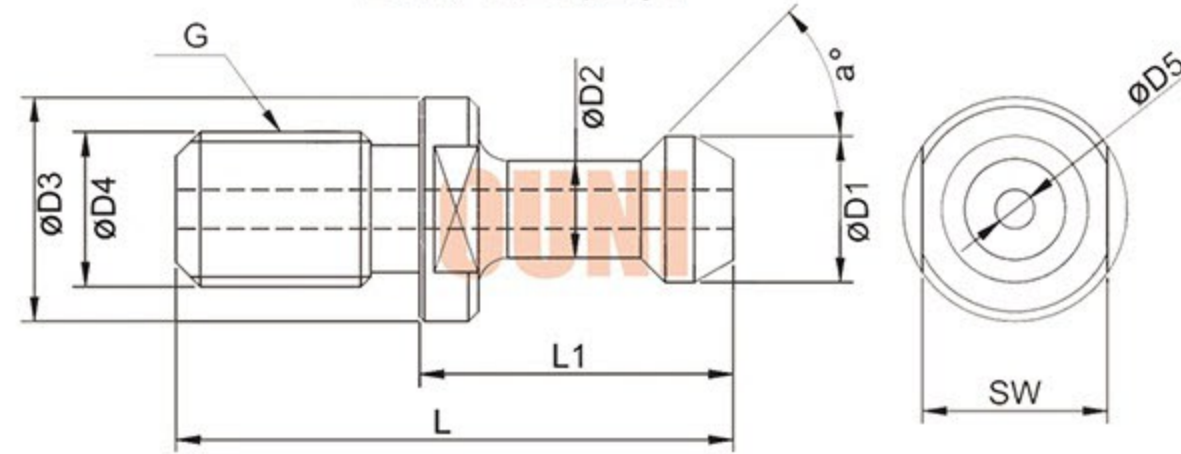
DIN B Type Pull Stud  
DIN B型拉栓



NO.	Model 型號	TYPE 規格	W	L	L1	ØD1	ØD2	ØD3	ØD4	ØD5	G
G000009357	225010	DIN 30B	14	44	24	13	9	17	13	-	M12
G000009358	225020	DIN 40B	19	54	26	19	14	23	17	7	M16
G000009359	225030	DIN 50B	30	74	34	28	21	36	25	11.5	M24



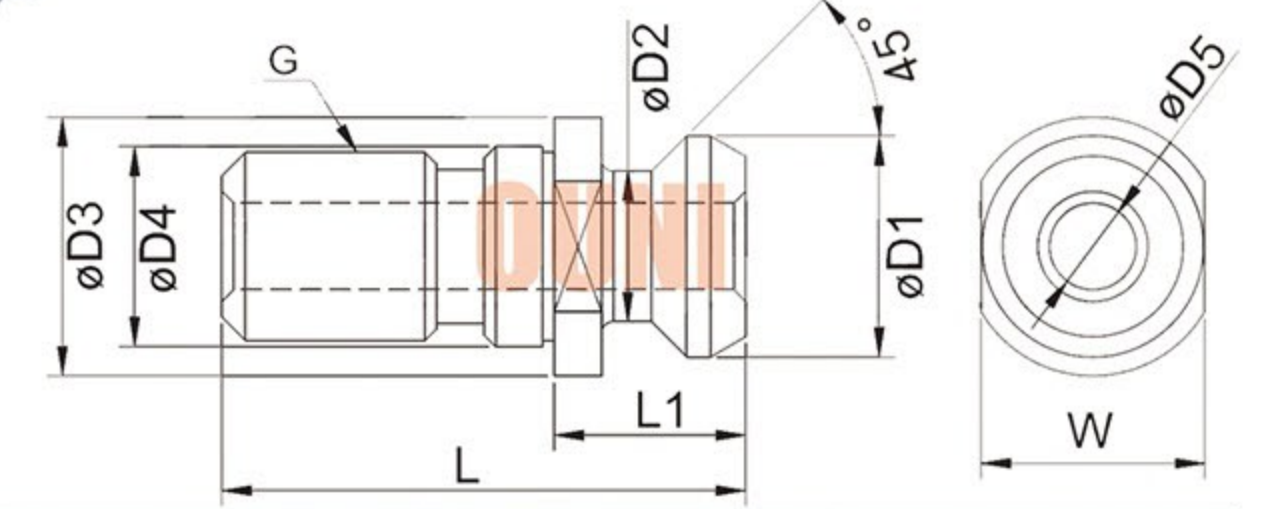
DIN R Type Pull Stud  
DIN R型拉栓



NO.	Model 型號	TYPE 規格	SW	L	L1	ØD1	ØD2	ØD3	ØD4	ØD5	G
G000009360	226010	DIN 40-R	19	57	32	15	10	23	16	4	M16XP2.0



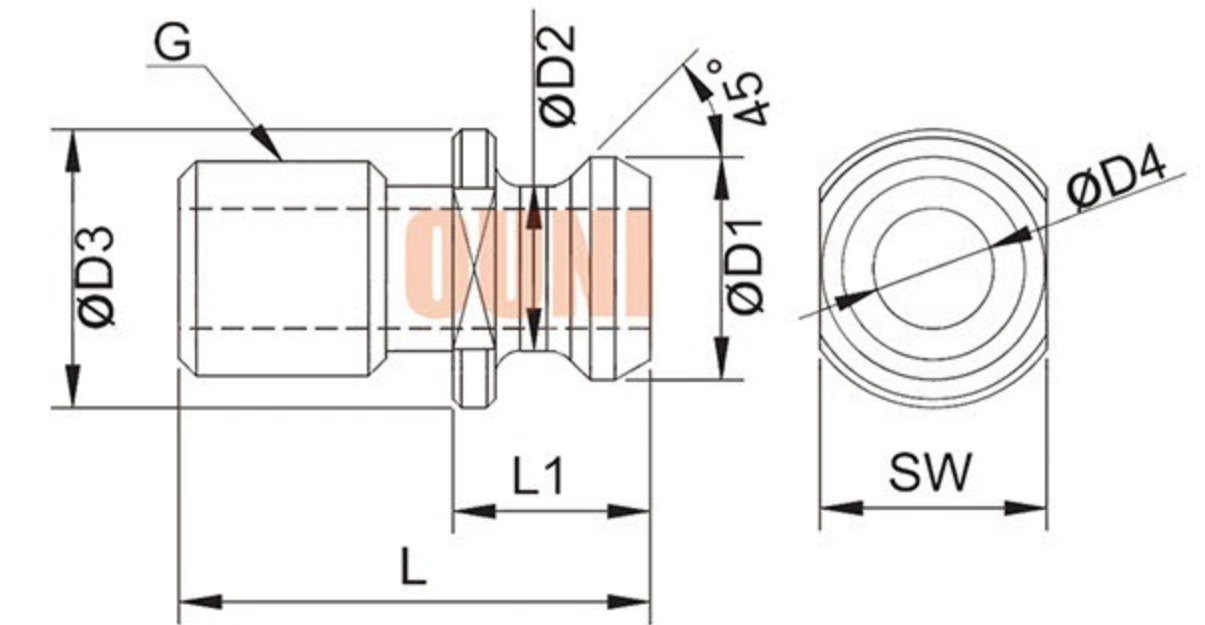
ISO A / ISO B Type Pull Stud  
ISO A型/ ISO B型拉栓



NO.	Model 型號	TYPE 規格	W	L	L1	ØD1	ØD2	ØD3	ØD4	ØD5	G
G000009361	227010	ISO 40-A	19	54	26	19	14	23	17	7	M16
G000009362	227020	ISO 50-A	30	74	34	28	21	36	25	11.5	M24
G000009363	227030	ISO 40-B	19	44.5	46.4	18.8	12.95	22.5	17	7.3	M16
G000009364	227040	ISO 50-B	30	65.5	25.5	29.1	19.6	37	25	11.5	M24



CAT Standard Models Pull Stud  
CAT標準型拉栓



NO.	Model 型號	TYPE 規格	SW	L	L1	ØD1	ØD2	ØD3	ØD4	G
G000009365	228010	CAT40	0.75	1.5	0.64	0.74	0.49	0.94	0.281	5/8"-11
G000009366	228020	CAT50	1.25	2.3	1	1.14	0.82	1.44	0.468	1"-8



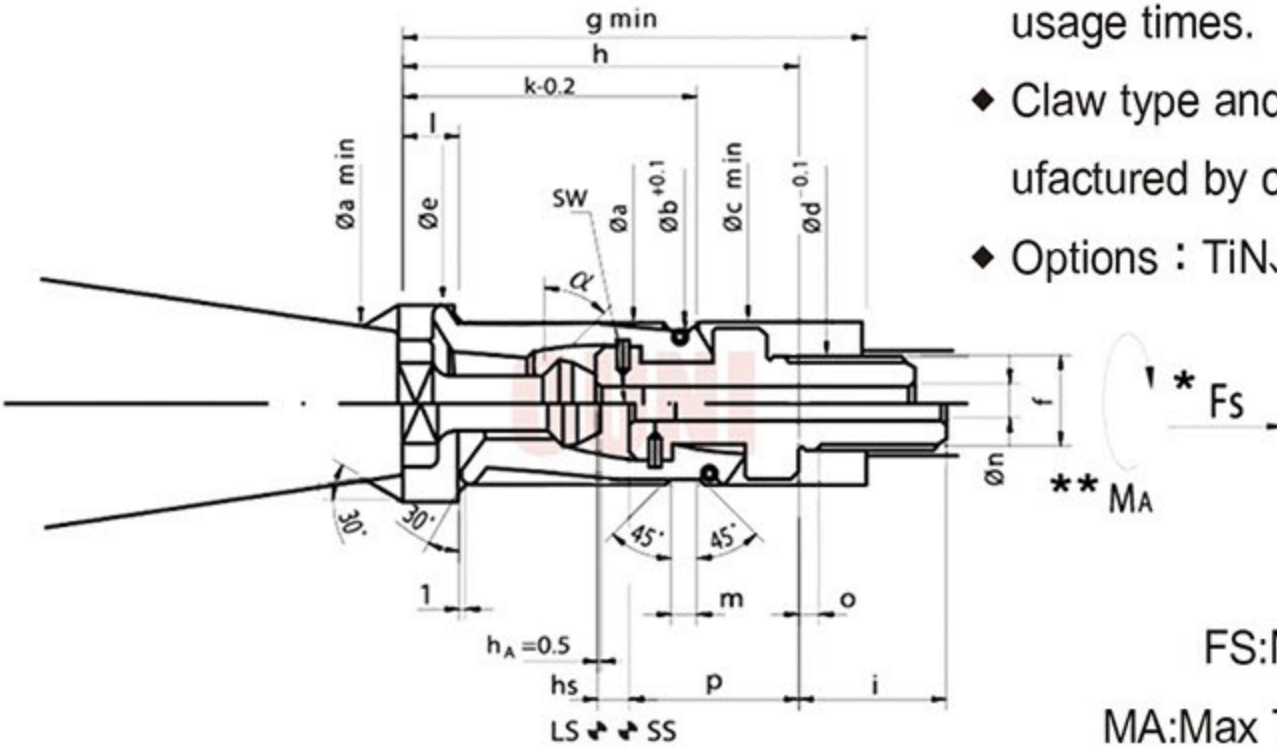




## BT Pull stud type clamping units 四瓣爪



- ◆ 適合在主軸上搭配使用。
- ◆ 嚴選適合鋼材，強度，耐用，尺寸要求。
- ◆ 耐用循環次數在200萬使用次數設計。
- ◆ 爪型及拉力可依客戶需求設計製造。
- ◆ 可訂製選項：TiN、皮膜。
- ◆ Suitable for use on spindles.
- ◆ Strictly selected for steel, strength, durability, size requirements.
- ◆ Durable cycle times are designed for 2 million usage times.
- ◆ Claw type and tension can be designed and manufactured by customers.
- ◆ Options : TiN, Zinc phosphate.



FS:Max.Clamping Force 最大拉刀力  
MA:Max Tightening Torque 最大鎖緊扭矩

NO.	Model 型號	Type 規格	$\alpha \pm 15^\circ$	a	b	c	d	e	f	g min	h
G000000087	300010	BT30-45°	45°								
G000000088	300020	BT30-60°	60°	19	17.8	19.5	10	24	M10x 1.5P	50	47
G000002743	300030	BT30-90°	90°								
G000000089	300050	BT40-45°	45°								
G000000090	300060	BT40-60°	60°	28	26.4	28.5	16	35	M16x 1.5P	82	70
G000000091	300070	BT40-90°	90°								
G000000092	300080	BT50-45°	45°								
G000000093	300090	BT50-60°	60°	43	40.4	43.5	22	54	M22x 1.5P	98	90
G000000094	300100	BT50-90°	90°								
G000002744	300110	BT60-45°	45°								
G000000095	300120	BT60-60°	60°	62	58.6	62.5	30	77	M30x 1.5P	130	125
G000002745	300130	BT60-90°	90°								

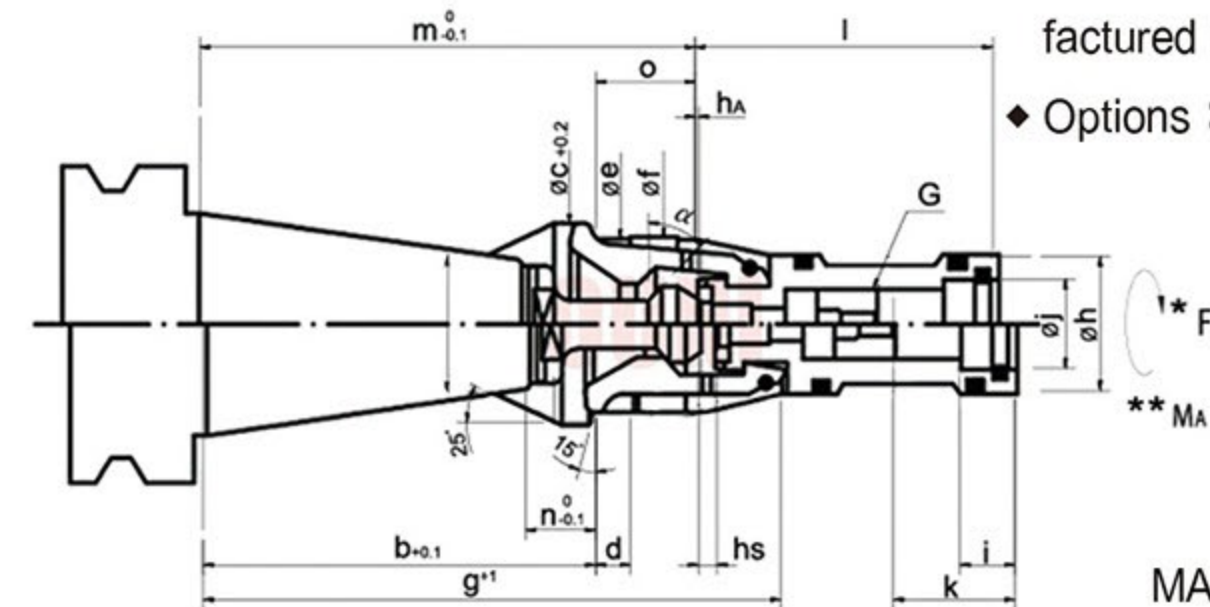
NO.	Model 型號	Type 規格	i	k	l	m	n	o	p	hs	Fs max. kN	MA Nm	SW mm
G000000087	300010	BT30-45°											
G000000088	300020	BT30-60°	20°	37	7.5	3.5	3.0	3.0	20.5	4.0	10	30	5
G000002743	300030	BT30-90°											
G000000089	300050	BT40-45°											
G000000090	300060	BT40-60°	26°	52	10.0	4.5	6.0	3.5	33.0	5.5	18	65	6
G000000091	300070	BT40-90°											
G000000092	300080	BT50-45°											
G000000093	300090	BT50-60°	35°	69	16.0	5.0	9.5	4.5	37.0	8.5	35	160	10
G000000094	300100	BT50-90°											
G000002744	300110	BT60-45°											
G000000095	300120	BT60-60°	40°	96	23.0	6.5	16.0	5.0	49.5	11.5	70	450	17
G000002745	300130	BT60-90°											

C-01

## OTT Pull stud type clamping units 四瓣爪



- ◆ 適合在主軸上搭配使用。
- ◆ 嚴選適合鋼材，強度，耐用，尺寸要求。
- ◆ 耐用循環次數在200萬使用次數設計。
- ◆ 爪型及拉力可依客戶需求設計製造。
- ◆ 可訂製選項：TiN、皮膜。
- ◆ Suitable for use on spindles.
- ◆ Strictly selected for steel, strength, durability, size requirements.
- ◆ Durable cycle times are designed for 2 million usage times.
- ◆ Claw type and tension can be designed and manufactured by customers.
- ◆ Options : TiN, Zinc phosphate.



FS:Max.Clamping Force 最大拉刀力  
MA:Max Tightening Torque 最大鎖緊扭矩

No.	Model 型號	Type 規格	$\alpha \pm 15^\circ$	a	b	c	d	e	f	g	h	i	$\phi_j$
G000000096	301010	BT30-45°	45°	19.5	59	27	5	22.5	23	91	19	10	12
G000000097	301020	BT40-45°	45°										
G000000098	301030	BT40-60°	60°	27.6	79.5	40	7	34	34.5	117	27	11	18
G000000099	301040	BT40-90°	90°										
G000000100	301050	BT50-45°	45°										
G000000101	301060	BT50-60°	60°	43.0	116.5	56	8	49	49.5	163	40	12	20
G000000102	301070	BT50-90°	90°										
G000000103	301080	CAT40	45°	27.6	79.5	40	7	34	34.5	117	27	11	18
G000000104	301090	CAT50	45°	43.0	116.5	56	8	49	49.5	163	40	12.2	20
G000000105	301100	DIN40	15°	27.6	79.5	40	7	34	34.5	117	27	11	18
G000000106	301110	DIN50	15°	43.0	116.5	56	8	49	49.5	163	40	12.2	20

No.	Model 型號	Type 規格	k	l	m	n	o	ha	hs	G	Fs max. kN	MA Nm
G000000096	301010	BT30-45°	23	57.5	71.4	10.6	11.4	1.0	3.2	M10*1.25P	10	30
G000000097	301020	BT40-45°										
G000000098	301030	BT40-60°	24.5	60.3	100.35	14.10	20.20	0.65	3.7	M14*1.5P	18	65
G000000099	301040	BT40-90°										
G000000100	301050	BT50-45°										
G000000101	301060	BT50-60°	31.5	68.8	146.75	14.70	29.25	1.00	4.2	M16*1.5P	35	160
G000000102	301070	BT50-90°										
G000000103	301080	CAT40	24.5	77.55	84.5	11.20	3.40	1.60	2.9	M14*1.5P	18	65
G000000104	301090	CAT50	31.5	87.8	127	14.9	9.45	1.05	3.8	M16*1.5P	35	160
G000000105	301100	DIN40	24.5	66.5	94.2	11.20	14.10	0.65	3.8	M14*1.5P	18	65
G000000106	301110	DIN50	31.5	79.6	135.6	14.9	18.05	1.05	3.5	M16*1.5P	35	160

C-02

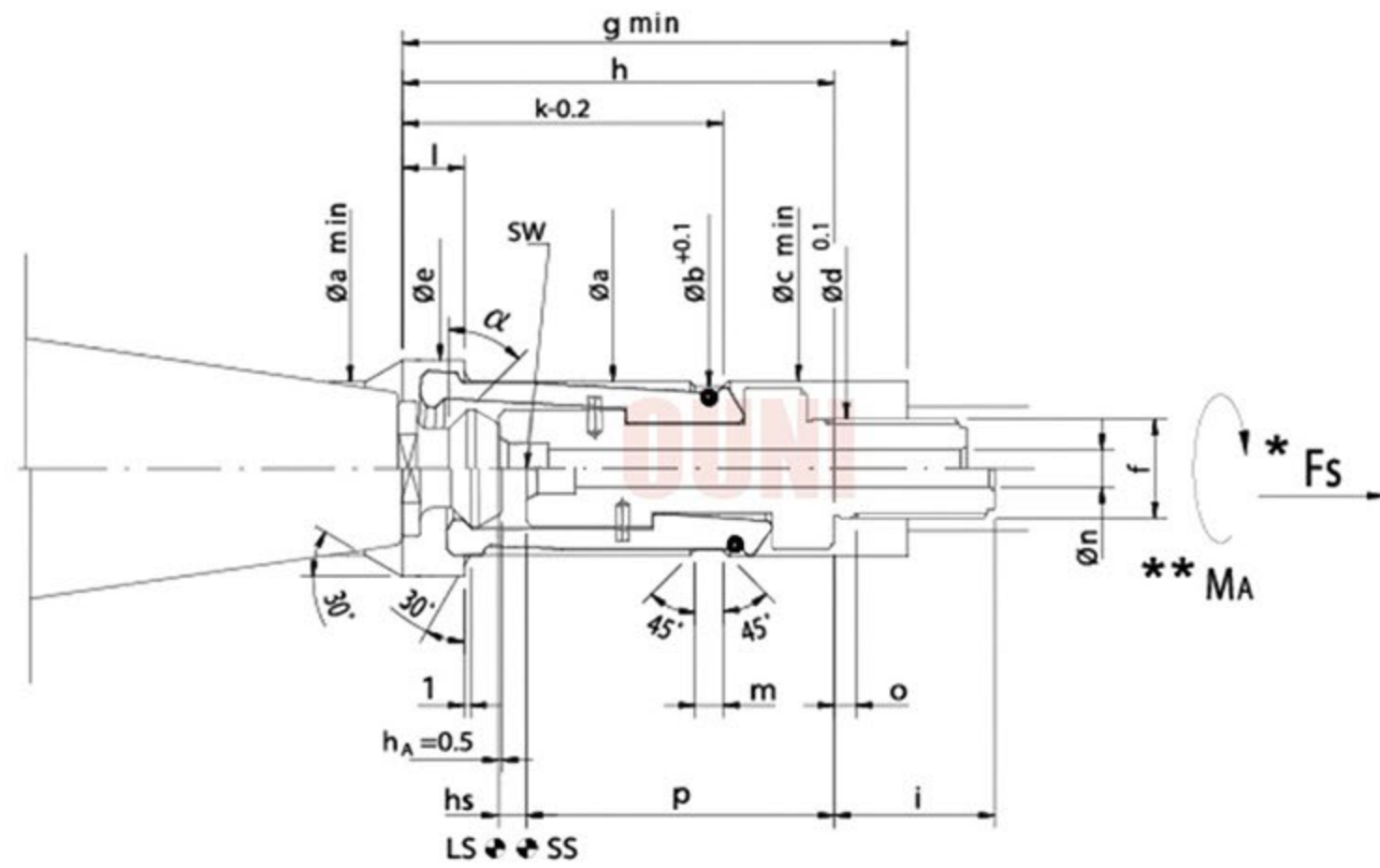


## CAT Pull stud type clamping units

### CAT 主軸夾爪



- ◆ 適合在主軸上搭配使用。
- ◆ 嚴選適合鋼材，強度，耐用，尺寸要求。
- ◆ 耐用循環次數在200萬使用次數設計。
- ◆ 爪型及拉力可依客戶需求設計製造。
- ◆ 可訂製選項：TiN、皮膜。
- ◆ Suitable for use on spindles.
- ◆ Strictly selected for steel, strength, durability, size requirements.
- ◆ Durable cycle times are designed for 2 million usage times.
- ◆ Claw type and tension can be designed and manufactured by customers.
- ◆ Options : TiN, Zinc phosphate.



FS:Max.Clamping Force 最大拉刀力  
MA:Max Tightening Torque 最大鎖緊扭矩

NO.	Model 型號	Type 規格	$\alpha \pm 15^\circ$	$a_{H7}$	b	c	d	e	f	$g_{min}$	h
G000002578	302010	CAT30	45°	19	17.8	19.5	10	24	M10x1.5P	50	47
G000002579	302020	CAT40	45°	28	26.4	28.5	16	35	M16x1.5P	82	70
G000002580	302030	CAT50	45°	43	40.4	43.5	22	54	M22x1.5P	98	90

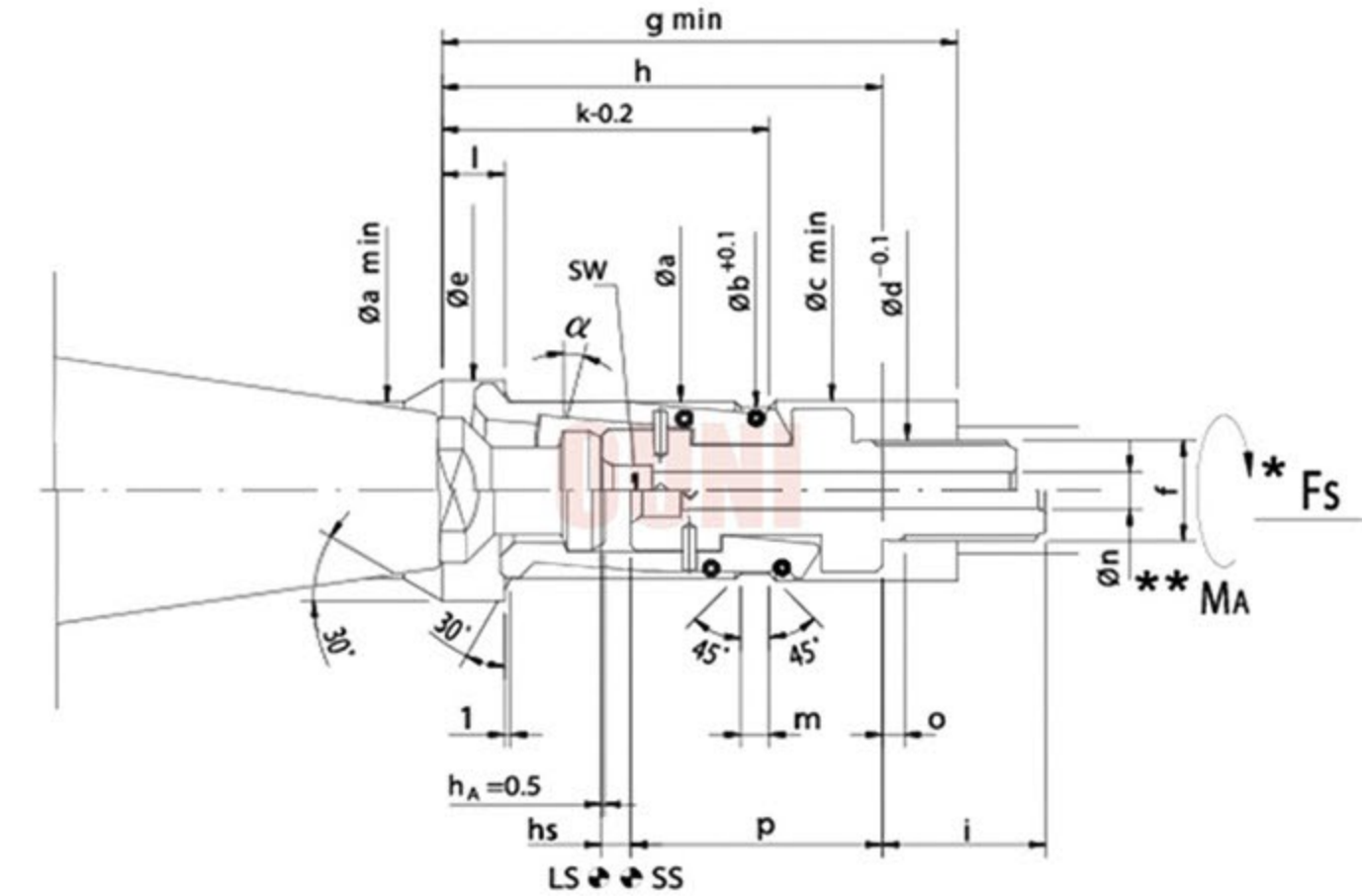
NO.	Model 型號	Type 規格	i	k	l	m	n	o	p	hs	Fs max. kN	MA Nm	SW mm
G000002578	302010	CAT30	20	37	7.5	3.5	3.0	3.0	32.7	3.0	10	30	5
G000002579	302020	CAT40	26	52	10.0	4.5	6.0	3.5	50	4.5	18	65	8
G000002580	302030	CAT50	35	69	16.0	5.0	9.5	4.5	58	7.0	35	160	10

## DIN69872 Pull stud type clamping units

### DIN69872 主軸夾爪



- ◆ 適合在主軸上搭配使用。
- ◆ 嚴選適合鋼材，強度，耐用，尺寸要求。
- ◆ 耐用循環次數在200萬使用次數設計。
- ◆ 爪型及拉力可依客戶需求設計製造。
- ◆ 可訂製選項：TiN、皮膜。
- ◆ Suitable for use on spindles.
- ◆ Strictly selected for steel, strength, durability, size requirements.
- ◆ Durable cycle times are designed for 2 million usage times.
- ◆ Claw type and tension can be designed and manufactured by customers.
- ◆ Options : TiN, Zinc phosphate.



FS:Max.Clamping Force 最大拉刀力  
MA:Max Tightening Torque 最大鎖緊扭矩

NO.	Model 型號	Type 規格	$\alpha \pm 15^\circ$	$A_{H7}$	b	c	d	e	f	$g_{min}$	h
G000002574	303010	DIN30	15°	19	17.8	19.5	10	24	M10x1.5P	50	47
G000002575	303020	DIN40	15°	28	26.4	28.5	16	35	M16x1.5P	82	70
G000002576	303030	DIN50	15°	43	40.4	43.5	22	54	M22x1.5P	98	90
G000002577	303040	DIN60	15°	62	58.6	62.5	30	77	M30x1.5P	130	125

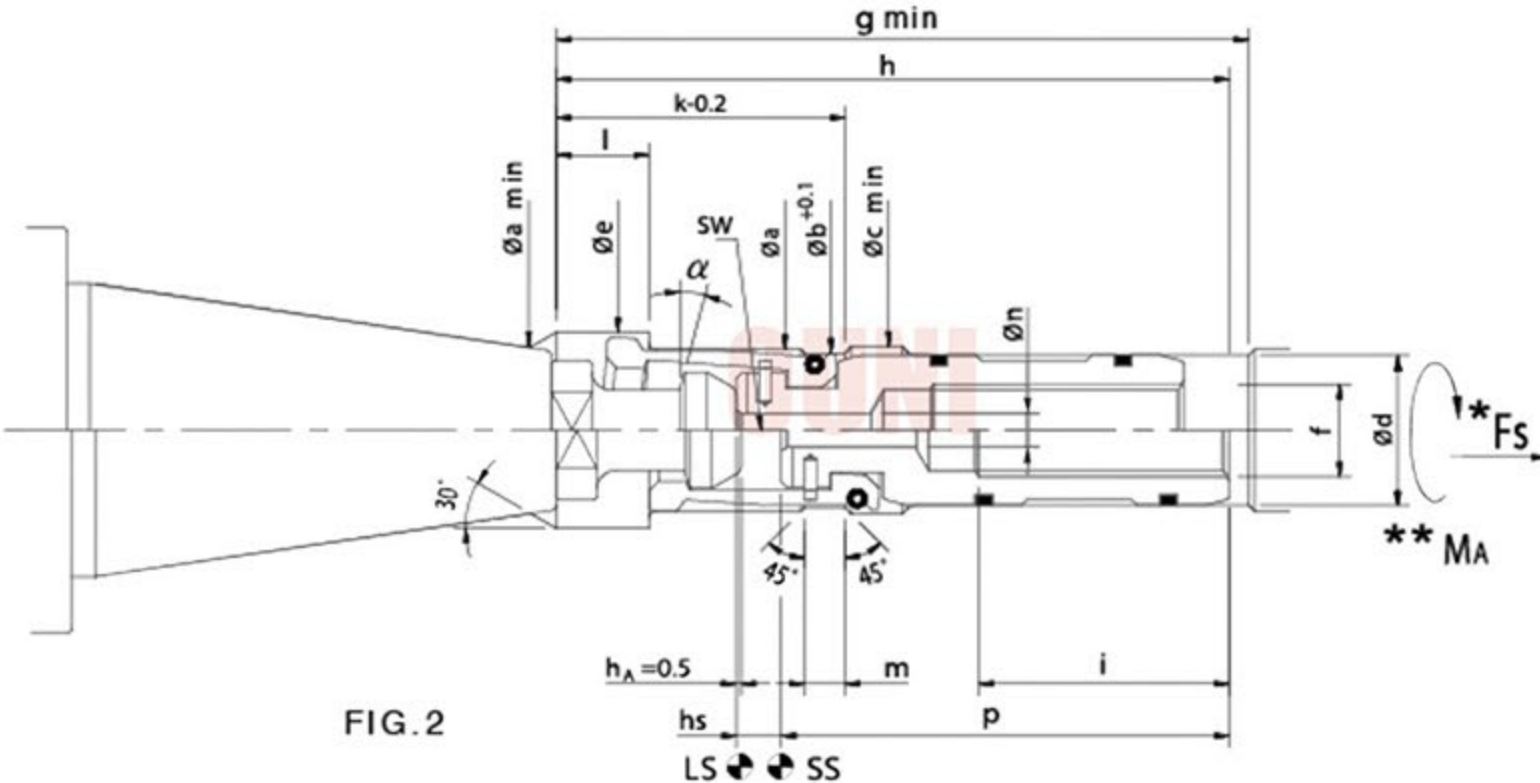
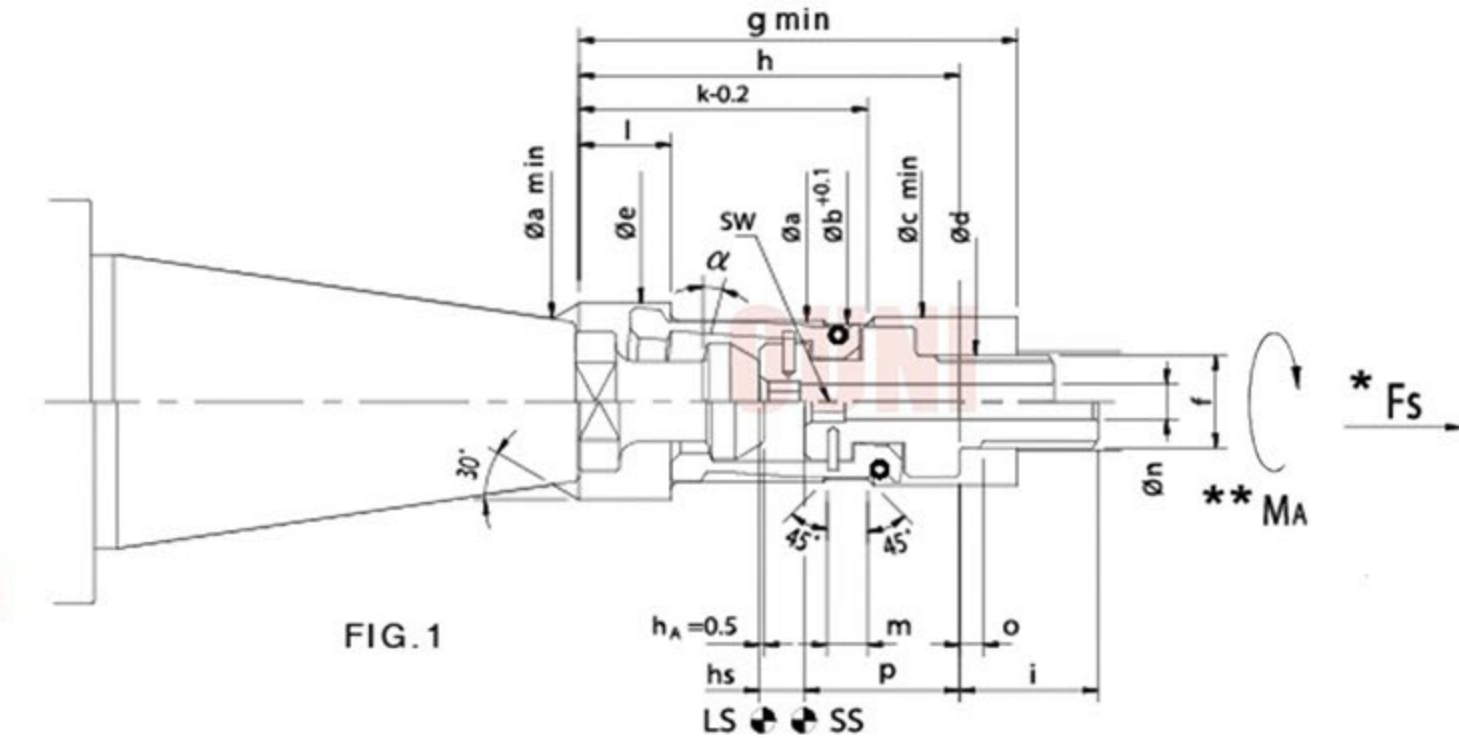
  

NO.	Model 型號	Type 規格	i	k	l	m	n	o	p	hs	Fs max. kN	MA Nm	SW mm
G000002574	303010	DIN30	20	37	7.5	3.5	3	3.0	19.5	4.0	10	30	5
G000002575	303020	DIN40	26	52	10.0	4.5	6	3.5	40.0	4.5	18	65	8
G000002576	303030	DIN50	35	69	16.0	5.0	9.5	4.5	48.0	8.5	35	160	10
G000002577	303040	DIN60	40	96	23.0	6.5	16	5.0	74.5	11.65	70	450	17



## ISO Pull stud type clamping units ISO 主軸夾爪

- ◆ Suitable for use on spindles.
- ◆ Strictly selected for steel, strength, durability, size requirements.
- ◆ Durable cycle times are designed for 2 million usage times.
- ◆ Claw type and tension can be designed and manufactured by customers.
- ◆ Options : TiN, Zinc phosphate.
- ◆ 適合在主軸上搭配使用。
- ◆ 嚴選適合鋼材，強度，耐用，尺寸要求。
- ◆ 耐用循環次數在200萬使用次數設計。
- ◆ 爪型及拉力可依客戶需求設計製造。
- ◆ 可訂製選項：TiN、皮膜。



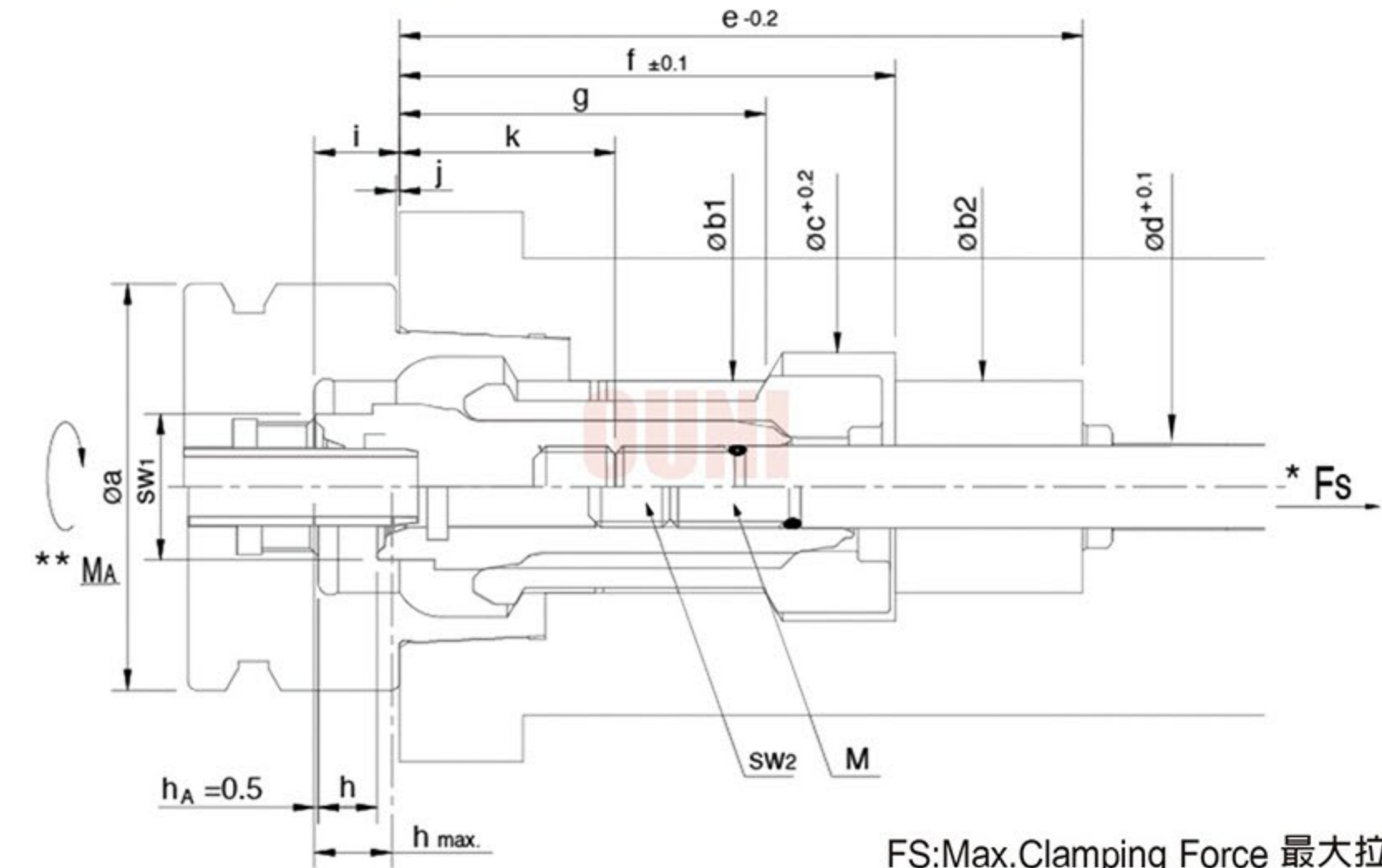
FS:Max.Clamping Force 最大拉刀力

NO.	Model 型號	Type 規格	圖號 Fig	$\alpha$ $\pm 15^\circ$	$A_{H7}$	b	c	d	e	f	$g_{min}$	h	
G000002581	304010	ISO-25	1	15°	14	13.4	14.5	8	17.0	M8*1.0P	38	32.7	
G000002582	304020	ISO-25	2					13		M8*1.25P	60	58	
NO.	Model 型號	Type 規格	i	k	l	m	n	o	p	hs	Fs max. $\times N$	MA Nm	SW mm
G000002581	304010	ISO-25	12.0	25	8.0	3.5	3.0	2.0	13.5	3.5	4	12	3
G000002582	304020	ISO-25	22.0					-	38.8				

## HSK Griper HSK 主軸夾爪



- ◆ 一體式結構，容易安裝。
- ◆ 嚴選適合鋼材，耐用。
- ◆ 特殊設計，作動可靠。
- ◆ 使用在HSK系列刀桿高速運轉時，平衡穩定。
- ◆ 可訂製選項：TiN、CrN、DLC、鋁鈦鎢、皮膜。
- ◆ Integrated Structure: Easy to be installed.
- ◆ High rigidity. High durability.
- ◆ Special Design: High Reliability.
- ◆ Suitable for high-speed machine center. To make HSK Tool-Holders steady.
- ◆ Options : TiN, CrN, DLC, ArtiCo, Zinc phosphate.



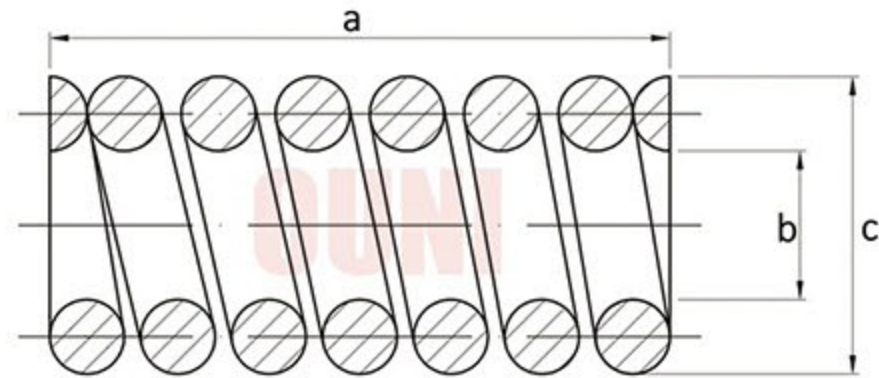
FS:Max.Clamping Force 最大拉刀力  
MA:Max Tightening Torque 最大鎖緊扭矩

NO.	Model 型號	Type 規格	a	$b1_{H10}$	c	$b2_{H6}$	d	e	f	g	M	h
G000002583	305010	HSK32	32	17	22.5	17	6.6	62.5	43	30	M6x1.0P	5.1
G000002584	305020	HSK40	40	21	26.5	21	8.6	78	58	44	M8x1.25P	5.6
G000002585	305030	HSK50	50	26	33.0	26	10.6	84	61	45	M10x1.5P	6.4
G000002586	305040	HSK63	63	34	41.6	34	14.6	94	68	52	M14x1.5P	7.4
G000002587	305050	HSK80	80	42	50	42	16.6	98	72	56	M16x1.5P	8.3
G000002588	305060	HSK100	100	53	63	53	18.4	124	93	70	M16x1.5P	9.15
NO.	Model 型號	Type 規格	i	j	k	$h_{max}$	Fs max. $\times N$	MA Nm	SW1 mm	SW2 mm	最高轉速 Max. RPM	
G000002583	305010	HSK32	8.5	0.5	19.5	7.5	5	10	12	3	57,000	
G000002584	305020	HSK40	8.5	0.5	27.0	8	6.8	15	15	4	45,000	
G000002585	305030	HSK50	10.5	0.5	26.5	9	11	20	18	4	37,000	
G000002586	305040	HSK63	10.5	0.5	31.5	10	18	30	24	5	29,000	
G000002587	305050	HSK80	13	0.5	29	11	28	30	27	6	20,000	
G000002588	305060	HSK100	13	0.5	34.5	12.5	45	50	36	6	15,000	

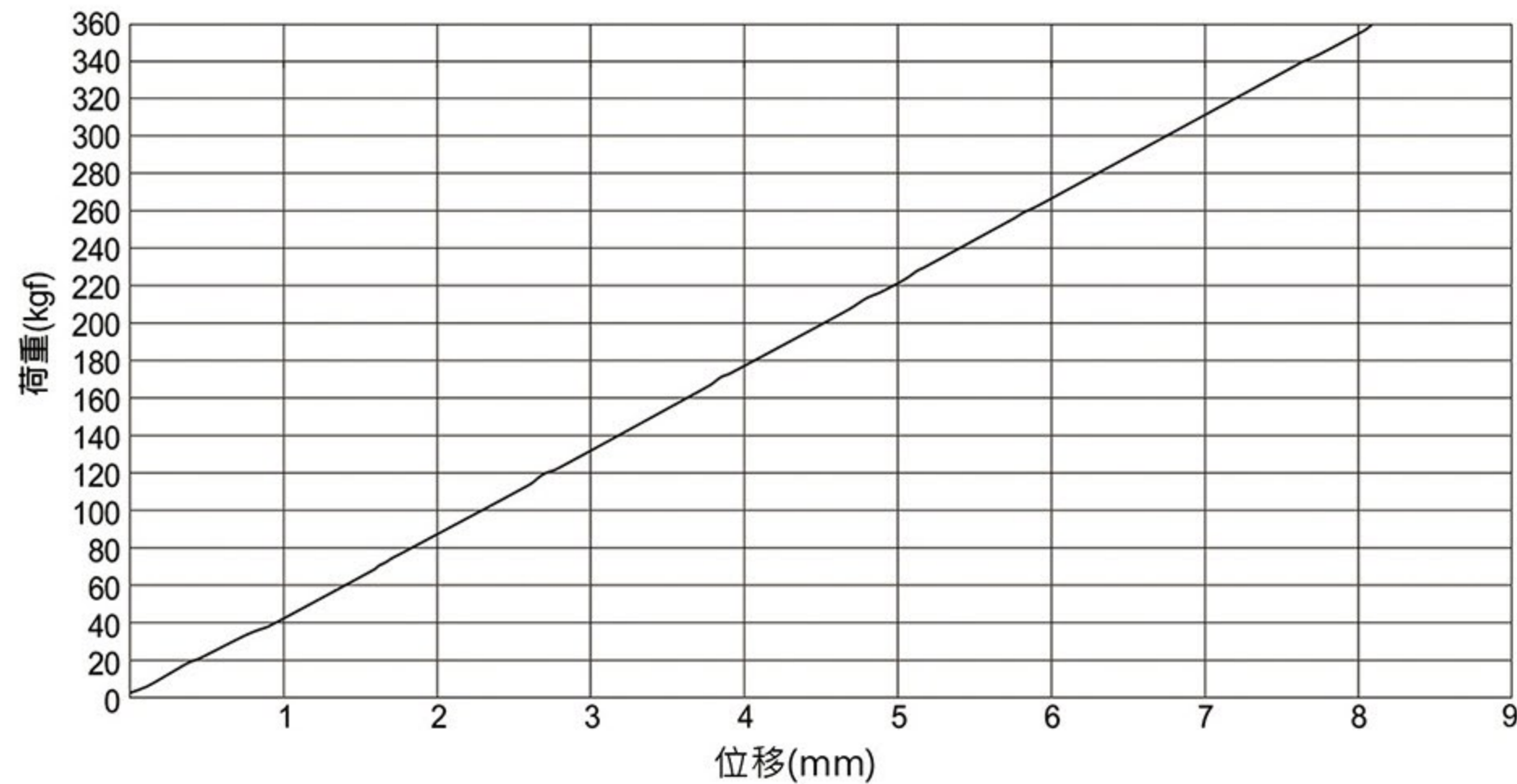


## Wire Springs 彈簧

- ◆ 一體成型式設計，組裝、維護簡單。
- ◆ 彈簧外徑小，可提供極大的彈簧載荷。
- ◆ 載荷穩定，高安全性操作。
- ◆ 尺寸可依客戶指定製造。
- ◆ One-piece design, easy to assemble and maintain.
- ◆ The small outer diameter of the spring provides great spring load.
- ◆ Stable load and high safety operation.
- ◆ Dimensions can be manufactured according to customer's specifications.



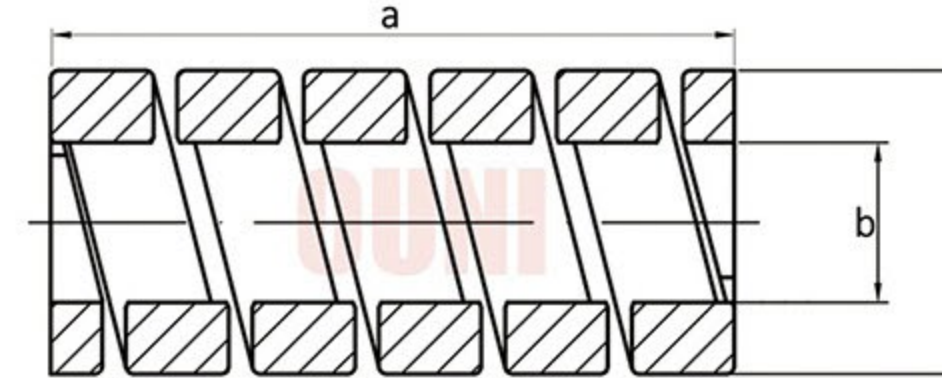
NO.	Model 型號	Free Length 自由長	內徑	外徑
G000003243	306010	50±0.2	12.15±0.1	24±0.1



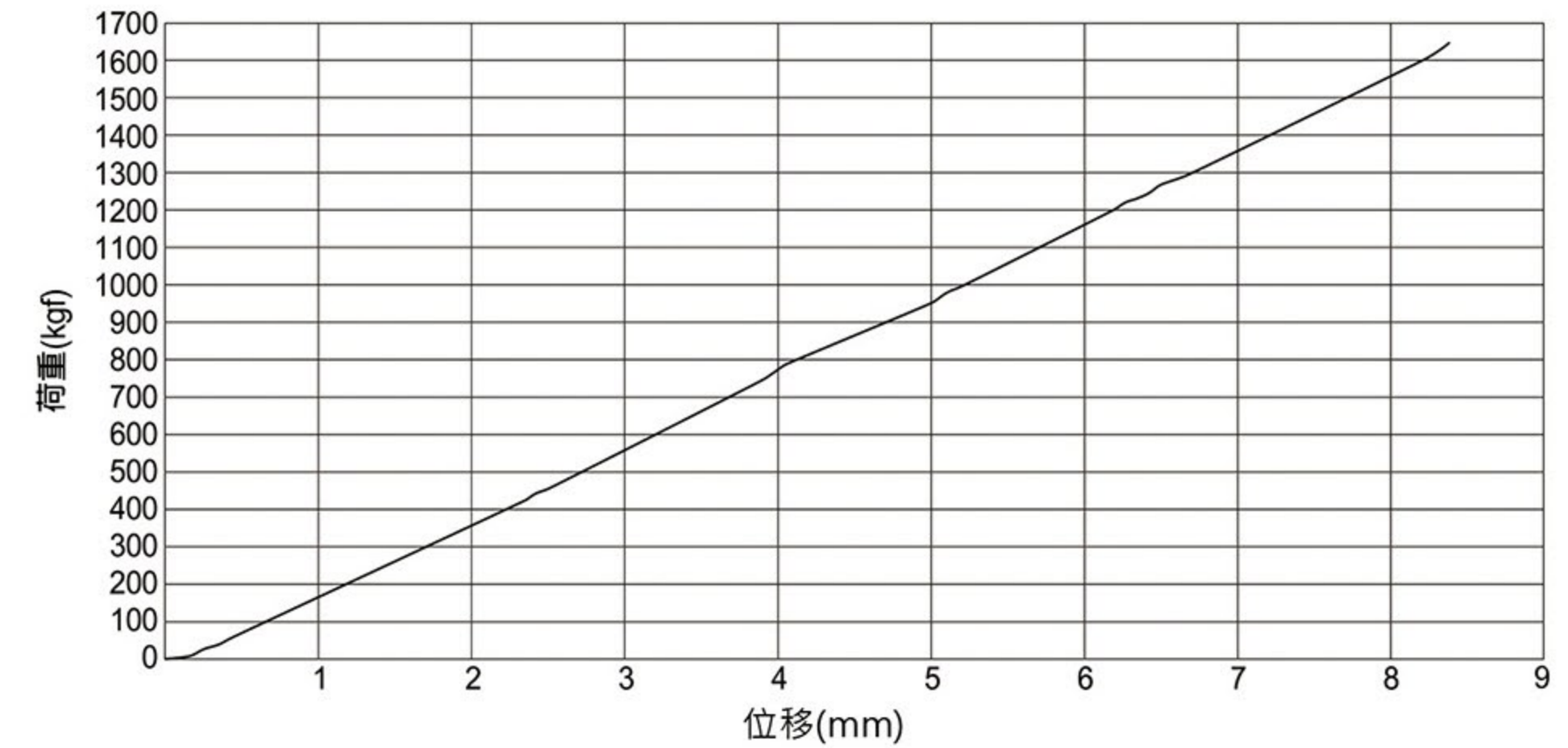
C-07

## Coil Springs 扁線彈簧

- ◆ 一體成型式設計，組裝、維護簡單。
- ◆ 彈簧外徑小，可提供極大的彈簧載荷。
- ◆ 載荷穩定，高安全性操作。
- ◆ 內孔徑可依客戶指定尺寸加工。
- ◆ One-piece design, easy to assemble and maintain.
- ◆ The small outer diameter of the spring provides great spring load.
- ◆ Stable load and high safety operation.
- ◆ Dimensions can be manufactured according to customer's specifications.



NO.	Model 型號	Free Length 自由長	內徑	外徑
G000003244	307010	88.5±0.2	20.2±0.1	39.3±0.1



C-08

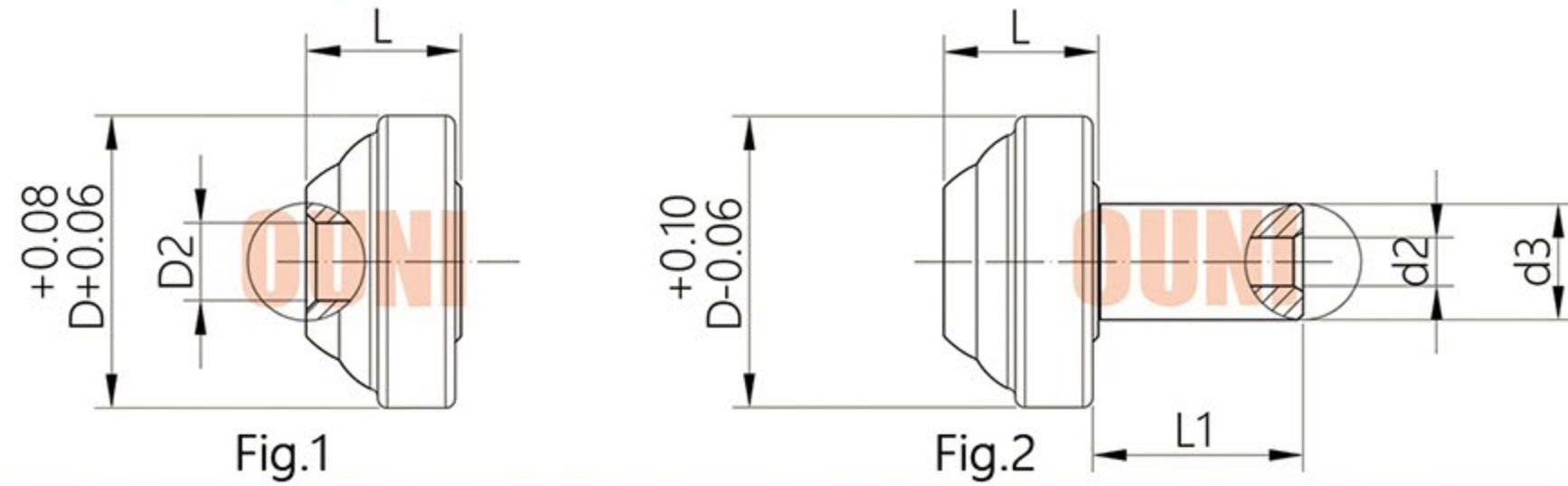


## Spray Nozzle Series Press Fit Type 噴水頭 壓配型

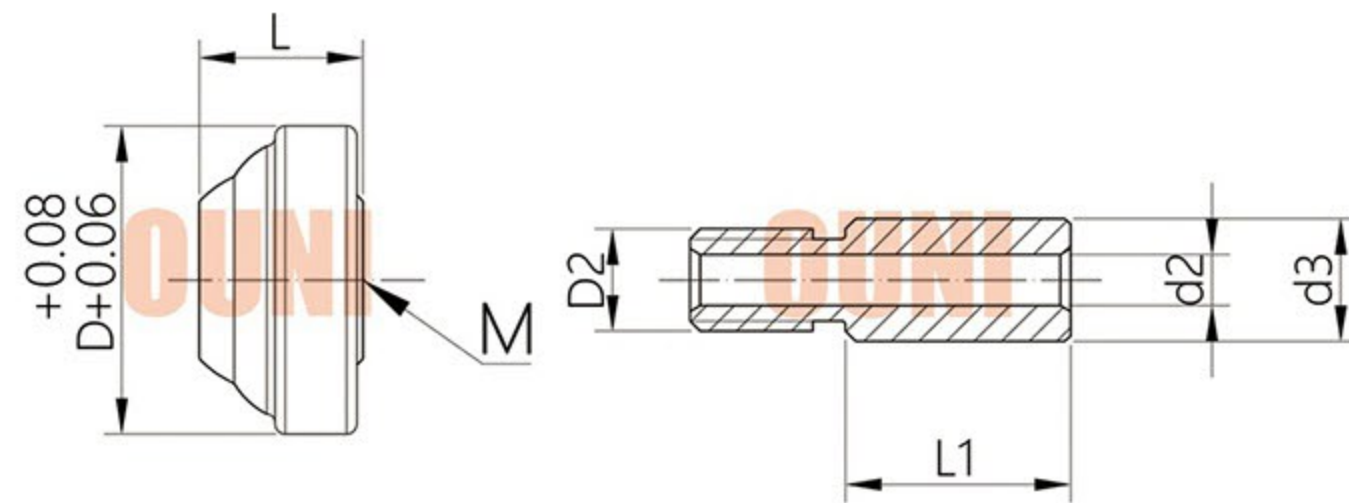


- ◆ 可任意調整噴水口角度，有效對應低、中、高冷卻液液壓，正確噴向瞄準點。
- ◆ 適用於綜合切削機、銑床、車床等各式工具機。
- ◆ 可提高加工效率及精度外，亦有助於延長工具使用壽命和減少成本消耗。

- ◆ The Coolant Spray Nozzle could easily adjust its direction and spray precisely. When the coolants correspond with three pressures-low, medium and high pressures, it can precisely aim at workpiece.
- ◆ They are suitable for CNC Machine Center, CNC Lathes, CNC Milling Machine, Grinding Machine and so on.
- ◆ The products can enhance the processing efficiency and accuracy. Also it is helpful for extending the lifetime of tools and decreasing the cost.



NO.	Model 型號	D	D2	L	L1	d2	d3	Fig.
G00000107	309010	∅15	∅4	8	-	-	-	1
G000002777	309020	∅12	∅2.5	7	-	-	-	1
G00000108	309030	∅15	-	8	6	∅3	∅6	2
G00000110	309040	∅12	-	7	7	∅2.5	∅6	2

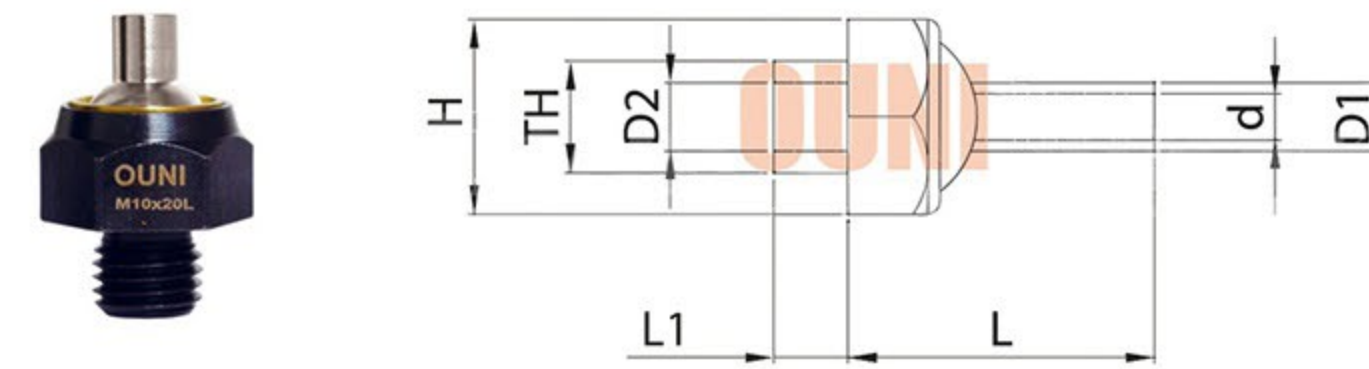


NO.	Model 型號	D	D2	M	L	d2	d3	L1 (可訂製)
G00000111	309050	∅15	M5x0.8	M5x0.8	8	∅2.5	∅6	11
G000002773	309060	∅14	M5x0.8	M5x0.8	8	∅2.5	∅6	11

## Spray Nozzle Series Thread Mount Type 噴水頭 螺紋型

- ◆ 可任意調整噴水口角度，有效對應低、中、高冷卻液液壓，提升刀具冷卻效率。
- ◆ 適用於綜合切削機、銑床、車床等各式工具機。
- ◆ 可提高加工效率及精度外，亦有助於延長工具使用壽命和減少成本消耗。

- ◆ The Coolant Spray Nozzle could easily adjust its direction and spray precisely. When the coolants correspond with three pressures-low, medium and high pressures, it can improve cooling efficiency of tools.
- ◆ They are suitable for CNC Machine Center, CNC Lathes, CNC Milling Machine, Grinding Machine and so on.
- ◆ The products can enhance the processing efficiency and accuracy. Also it is helpful for extending the lifetime of tools and decreasing the cost.



NO.	Model 型號	Thread mount 螺紋組接	L	L1	D1	D2	d	H
G000002649	310010	PT 1/8	20	10	6	5	4	17
G000002650	310020	PT 1/8	40					
G000002651	310030	PT 1/8	60					
G000002652	310040	PT 1/4	20	10	6	5	4	17
G000002653	310050	PT 1/4	40					
G000002654	310060	PT 1/4	60					
G000002655	310070	PT 3/8	30	13	8	10	6	24
G000002656	310080	PT 3/8	50					
G000002657	310090	PT 3/8	70					
G000002658	310100	PT 1/2	40	18	10	12	8	32
G000002659	310110	PT 1/2	60					
G000002660	310120	PT 1/2	80					
G000003049	310280	M10*1.25P	18.2	8.5	6	4.5	4.5	17
G000002661	310130	M10*1.25P	20	8	6	5	4	17
G000002662	310140	M10*1.25P	40					
G000002663	310150	M10*1.25P	60					
G000002664	310160	M20*1.5P	30	13	8	10	6	24
G000002665	310170	M20*1.5P	50					
G000002666	310180	M20*1.5P	70					
G000002667	310190	M24*2.0P	40	18	10	12	8	31
G000002668	310200	M24*2.0P	60					
G000002669	310210	M24*2.0P	80					
G000002670	310220	NPT 1/4	20	10	6	5	4	17
G000002671	310230	NPT 1/4	40					
G000002672	310240	NPT 1/4	60					
G000002673	310250	NPT 3/8	30	13	8	10	6	24
G000002674	310260	NPT 3/8	50					
G000002675	310270	NPT 3/8	70					

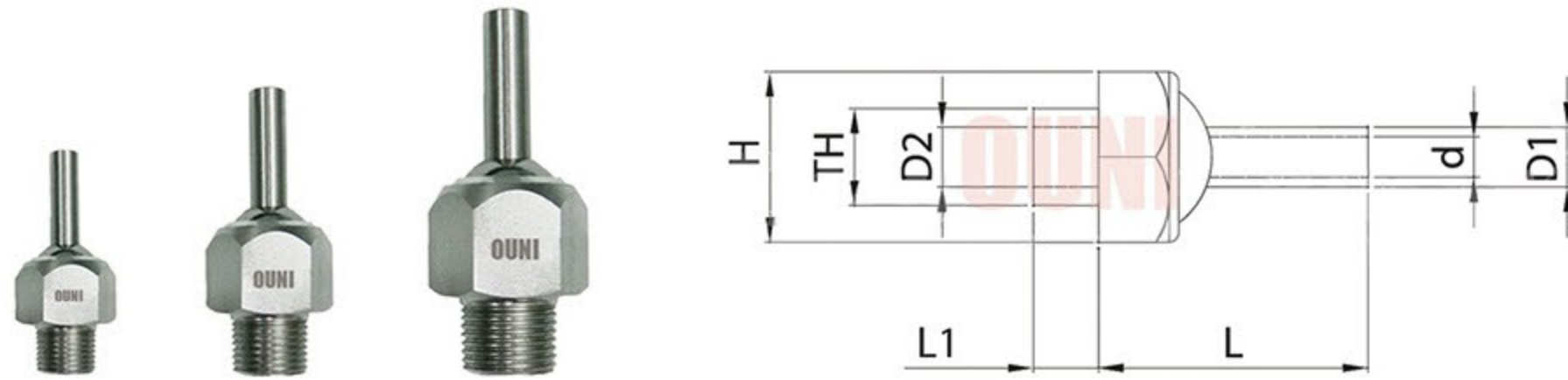


## Spray Nozzle Series Thread Mount Type 噴水頭 螺紋型

### Stainless Type 不鏽鋼

- ◆ 可任意調整噴水口角度，有效對應低、中、高冷卻液液壓，提升刀具冷卻效率。
- ◆ 適用於綜合切削機、銑床、車床等各式工具機。
- ◆ 可提高加工效率及精度外，亦有助於延長工具使用壽命和減少成本消耗。

- ◆ The Coolant Spray Nozzle could easily adjust its direction and spray precisely. When the coolants correspond with three pressures-low, medium and high pressures, it can improve cooling efficiency of tools.
- ◆ They are suitable for CNC Machine Center, CNC Lathes, CNC Milling Machine, Grinding Machine and so on.
- ◆ The products can enhance the processing efficiency and accuracy. Also it is helpful for extending the lifetime of tools and decreasing the cost.



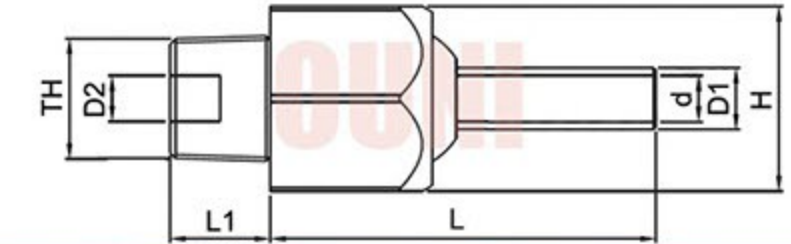
NO.	Model 型號	Thread mount 螺紋組接	L	L1	D1	D2	d	H
G000002676	311010	PT 1/8	20	10	6	5	4	17
G000002677	311020	PT 1/8	40					
G000002678	311030	PT 1/8	60					
G000002679	311040	PT 1/4	20	10	6	5	4	17
G000002680	311050	PT 1/4	40					
G000002681	311060	PT 1/4	60					
G000002682	311070	PT 3/8	30	13	8	10	6	24
G000002683	311080	PT 3/8	50					
G000002684	311090	PT 3/8	70					
G000002685	311100	PT 1/2	40	18	10	12	8	32
G000002686	311110	PT 1/2	60					
G000002687	311120	PT 1/2	80					
G000002688	311140	M10*1.25P	20	8	6	5	4	17
G000002689	311150	M10*1.25P	40					
G000002690	311160	M10*1.25P	60					
G000002691	311170	M20*1.5P	30	13	8	10	6	24
G000002692	311180	M20*1.5P	50					
G000002693	311190	M20*1.5P	70					
G000002694	311200	M24*2.0P	40	18	10	12	8	31
G000002695	311210	M24*2.0P	60					
G000002696	311220	M24*2.0P	80					
G000002697	311230	NPT 1/4	20	10	6	5	4	17
G000002698	311240	NPT 1/4	40					
G000002699	311250	NPT 1/4	60					
G000002700	311260	NPT 3/8	30	13	8	10	6	24
G000002701	311270	NPT 3/8	50					
G000002702	311280	NPT 3/8	70					

## Spray Nozzle Series Leak Lock Type 噴水頭 止漏型

### Alloy Steel Type 合金鋼

### Stainless Type 不鏽鋼

- ◆ 特殊設計可立即停止供給切削液。
- ◆ 出水不延遲，可延長刀具使用壽命。
- ◆ Special design for avoiding oil leaking.
- ◆ Not delaying spraying fluid which prolongs the longevity of the tool holders.



### Alloy Steel Type 合金鋼

NO.	Model 型號	Thread mount 螺紋組接	L	L1	D1	D2	d	H
G000002703	312010	PT 1/8	40	10	6	6	4	17
G000002704	312020	PT 1/8	60					
G000002705	312030	PT 1/4	40					
G000002706	312040	PT 1/4	60	13	8	10	6	24
G000002707	312050	PT 3/8	30					
G000002708	312060	PT 3/8	50					
G000002709	312070	PT 3/8	70	10	6	6	4	17
G000002710	312080	NPT 1/4	40					
G000002711	312090	NPT 1/4	60					
G000002712	312100	NPT 3/8	30	13	8	10	6	24
G000002713	312110	NPT 3/8	50					
G000002714	312120	NPT 3/8	70					
G000002715	312130	M10*1.25P	40	10	6	6	4	17
G000002716	312140	M10*1.25P	60					
G000002717	312150	M20*1.5P	30					
G000002718	312160	M20*1.5P	50	13	8	10	6	24
G000002719	312170	M20*1.5P	70					

### Stainless Type 不鏽鋼

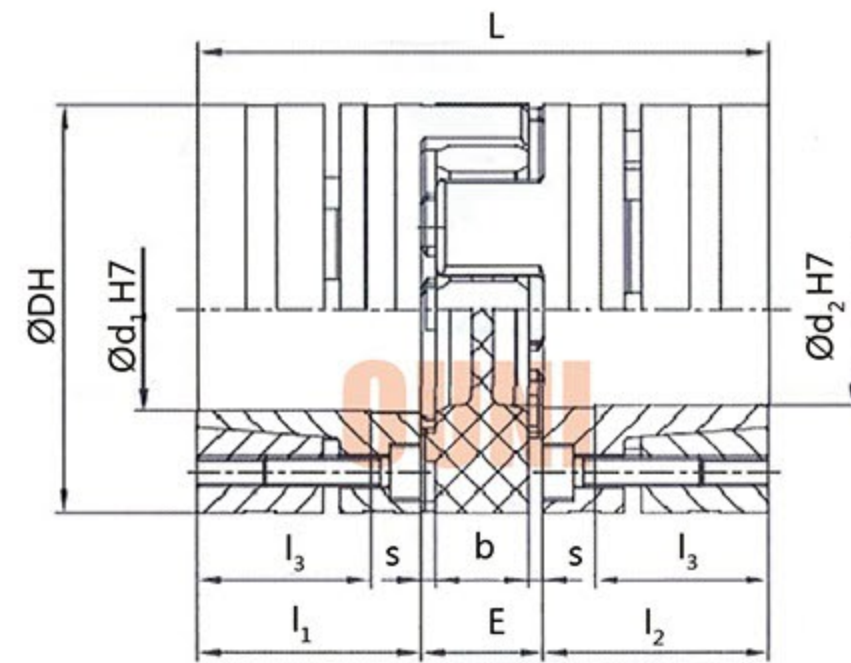
NO.	Model 型號	Thread mount 螺紋組接	L	L1	D1	D2	d	H
G000002720	312180	PT 1/8	40	10	6	6	4	17
G000002721	312190	PT 1/8	60					
G000002722	312200	PT 1/4	40					
G000002723	312210	PT 1/4	60	13	8	10	6	24
G000002724	312220	PT 3/8	30					
G000002725	312230	PT 3/8	50					
G000002726	312240	PT 3/8	70	10	6	6	4	17
G000002727	312250	NPT 1/4	40					
G000002728	312260	NPT 1/4	60					
G000002729	312270	NPT 3/8	30	13	8	10	6	24
G000002730	312280	NPT 3/8	50					
G000002731	312290	NPT 3/8	70					
G000002732	312300	M10*1.25P	40	10	6	6	4	17
G000002733	312310	M10*1.25P	60					
G000002734	312320	M20*1.5P	30					
G000002735	312330	M20*1.5P	50	13	8	10	6	24
G000002736	312340	M20*1.5P	70					



## Shaft Coupling 脹緊式聯軸器



- ◆ 脹緊套膜式，有較高夾緊力。
- ◆ 同心度準，運轉平穩。
- ◆ 安裝拆卸容易。
- ◆ The expansion sleeve has a high clamping force.
- ◆ Smooth operation.
- ◆ Easy to install and disassemble.

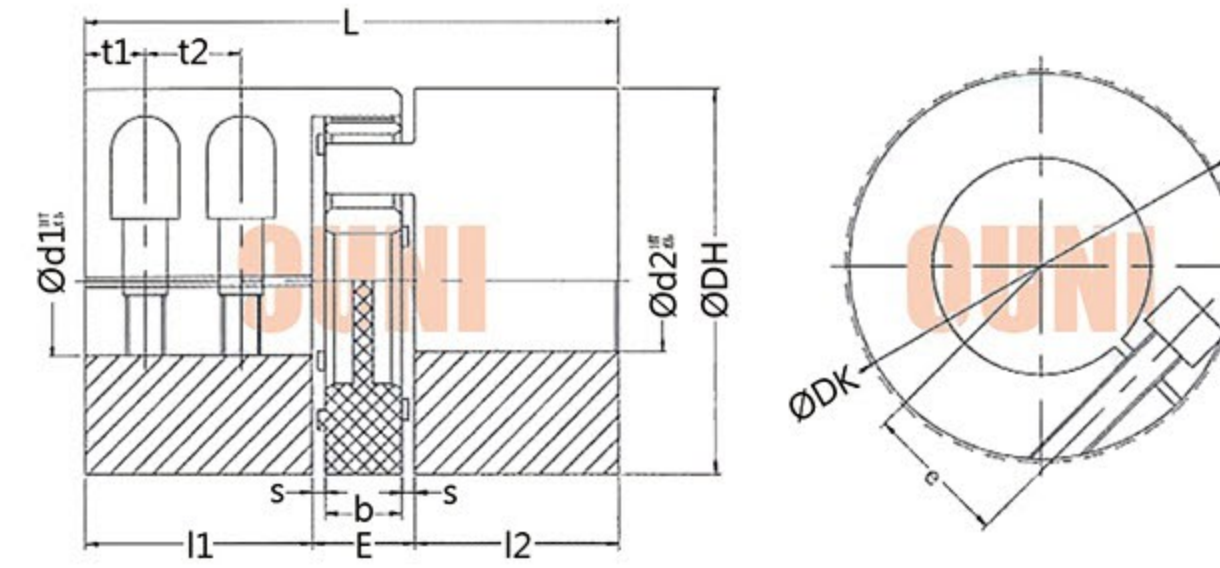


NO.	Model 型號	Type 型式	系列	材質	D <sub>H</sub>	內徑範圍	L	l <sub>1</sub> :l <sub>2</sub>	l <sub>3</sub>	E	b	s	T <sub>kn</sub> /T <sub>kmax</sub> 扭矩(Nm)	最大轉速 (min <sup>-1</sup> )	(Nm) 旋緊轉矩	固鎖 螺牙
G000002639	317010	HW6	19	合金鋼	40	12~20	66	25	18	16	12	2.0	21/42	3000	4.1	M4
G000002641	317030		24	合金鋼	55	12~18	78	30	22	18	14	2.0	75/150	24000	8.5	M5
G000002643	317050		28	合金鋼	65	19~38	90	35	27	20	15	2.5	200/400	24000	8.5	M5
G000002645	317070		38	合金鋼	80	22~48	114	45	35	24	18	23.0	405/81	18000	14	M6
G000002647	317090		42	合金鋼	95	22~60	126	50	35	26	20	3.0	560/1120	12000	35	M8

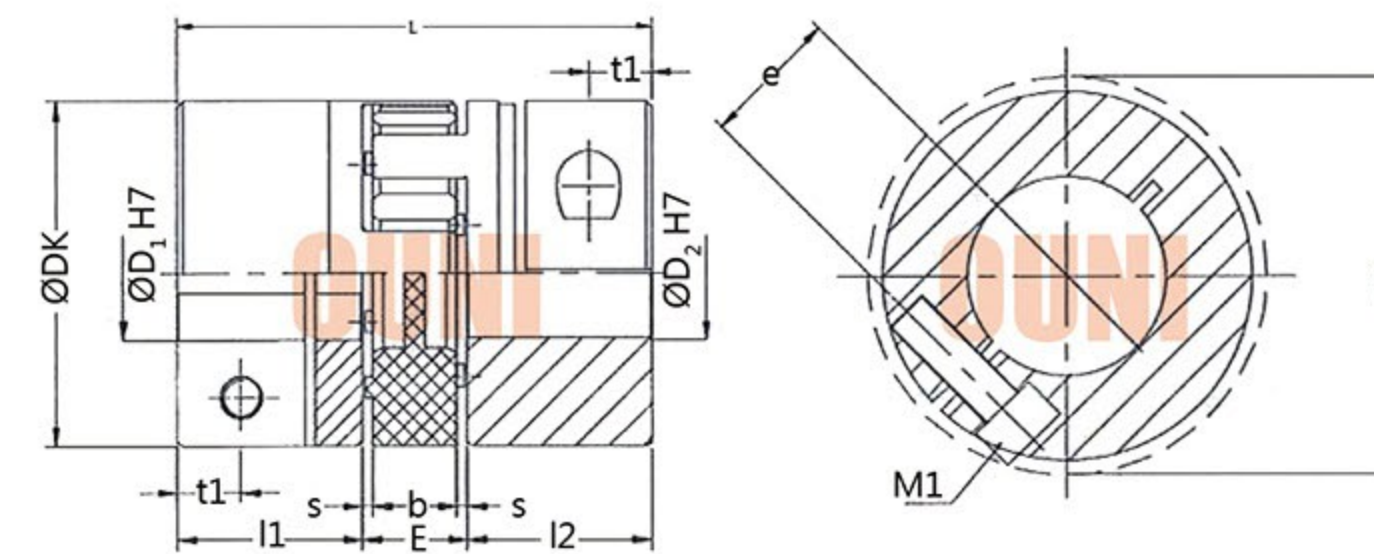
## Shaft Coupling 側固式聯軸器



- ◆ 同心度準，運轉平穩。
- ◆ 安裝拆卸容易。
- ◆ 鋁材質，抗電磁干擾。
- ◆ Smooth operation.
- ◆ Easy to install and disassemble.
- ◆ Aluminum material, anti-electromagnetic interference.



NO.	Model 型號	Type 型式	系列	D <sub>H</sub>	內徑範圍	L	l <sub>1</sub> :l <sub>2</sub>	E	b	s	T <sub>kn</sub> /T <sub>kmax</sub> 扭矩(Nm)	最大轉速 (min <sup>-1</sup> )	固鎖 螺牙	(Nm) 旋緊轉矩	t <sub>1</sub>	t <sub>2</sub>	e	ØD <sub>K</sub>
G000003251	318010	HW2	24	55	15~28	78	30	18	14	2	75/150	6950	M5	7.5	8	14	20	56.5
G000003252	318020		28	65	15~38	90	35	20	15	2.5	200/400	5850	M6	12	9.5	16	23	66.5
G000003253	318030		38	80	20~45	114	45	24	18	2.5	405/810	4750	M8	30	13	20	30	81.6



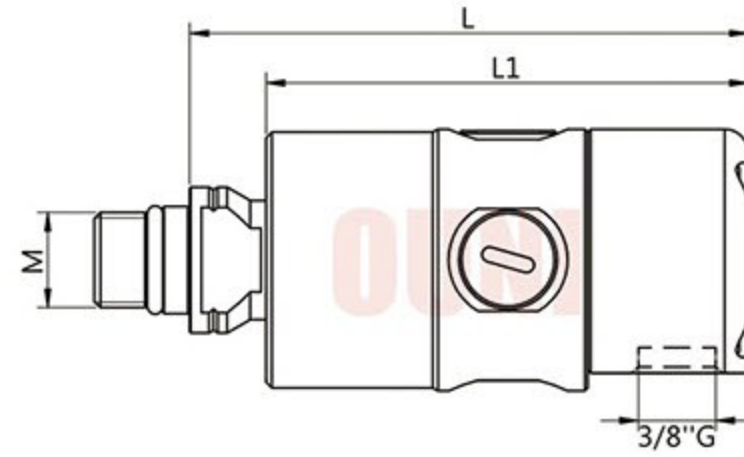
NO.	Model 型號	Type 型式	系列	D <sub>H</sub>	內徑範圍	l <sub>1</sub> :l <sub>2</sub>	E	b	s	L	T <sub>kn</sub> /T <sub>kmax</sub> 扭矩(Nm)	最大轉速 (min <sup>-1</sup> )	固鎖 螺牙	(Nm) 旋緊轉矩	t <sub>1</sub>	e	ØD <sub>K</sub>
G000003255	318050	HW 2.5	19	40	8~24	25	16	12	2	66	21/42	9550	M6	12	11	15	46
G000003256	318060		24	55	15~28	30	18	14	2	78	75/150	6950	M6	12	11	20	57.5
G000003257	318070		28	65	15~38	35	20	15	2.5	90	200/400	5850	M8	30	12	25	73
G000003258	318080		38	80	20~45	45	24	18	3	114	405/810	4750	M8	30	16	30	83.5



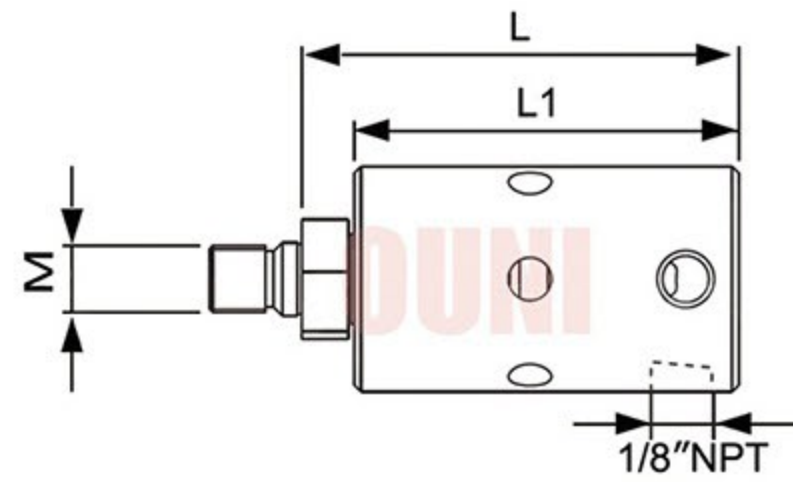
# Spindle Clamping Systems

## Rotary Joint

冷卻水迴轉接頭



NO.	Model 型號	L	L1	M
G000009367	313020	94	81	M16xP15-LH

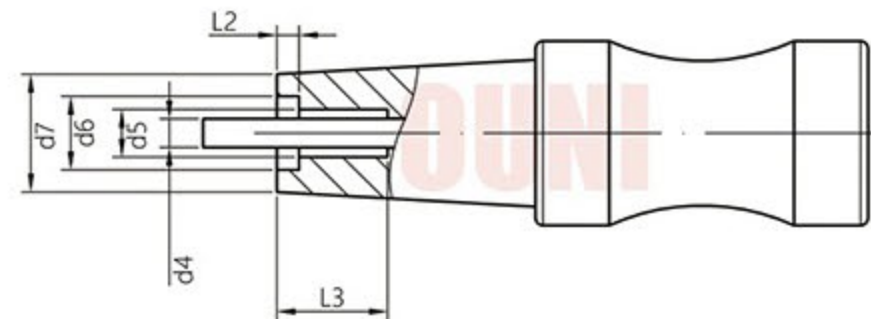


NO.	Model 型號	L	L1	M
G000002742	313010	66	58	M10xp1

## Spray Nozzle Punch

壓配型噴水頭沖子

- ◆輔助噴水頭正確安裝。
- ◆Auxiliary Spray Nozzle is installed correctly.



\*使用方法請參考Z-11。  
\*please refer to the page Z-11.

NO.	Model 型號	d4	d5	d6	d7	L2	L3	Used on 適用噴水頭
G000002774	314010	Ø3.9	Ø6.5	Ø10	Ø16	3	15	J0101,J0102,J0108
G000002775	314020	Ø2.4	Ø6.5	Ø8	Ø13	3	10	J0104,J0105
G000002776	314030	0	Ø6.5	Ø10	Ø15	3	15	J0109



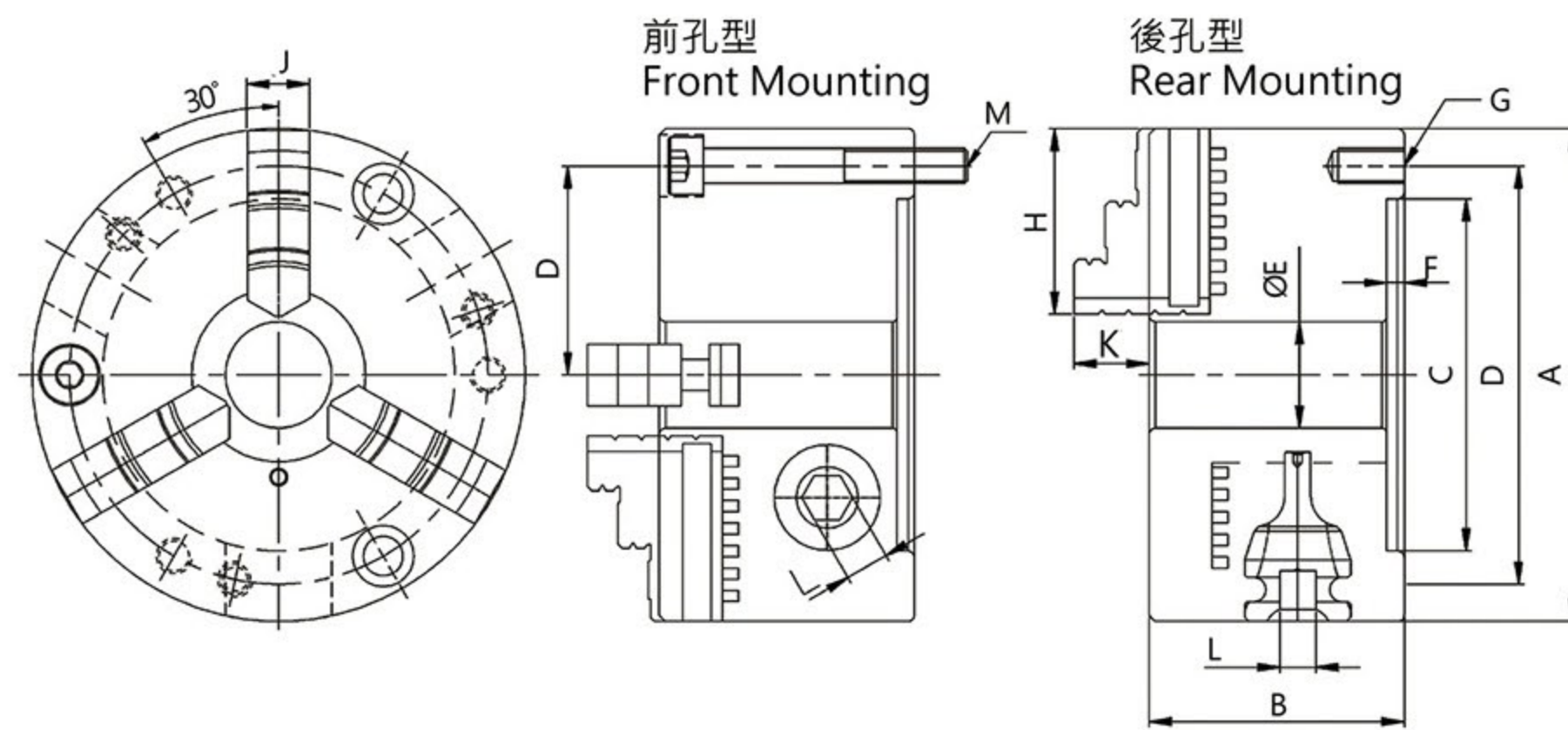




## Stainless Steel 3-Jaw scroll chucks 不鏽鋼三爪夾頭

- ◆全採用不鏽鋼材質(SUS420)。
- ◆特殊設計，轉動順暢。
- ◆所有料件都經過表面硬化處理。
- ◆在高酸性、高鹼性或高濕度的環境下使用不易腐蝕(生鏽)。

- ◆ Made of stainless steel(SUS420).
- ◆ Special design, smooth rotation.
- ◆ All parts are hardened surface treated.
- ◆ Use in high acidity, high alkali or high humidity environment not easy to corrode (rust).



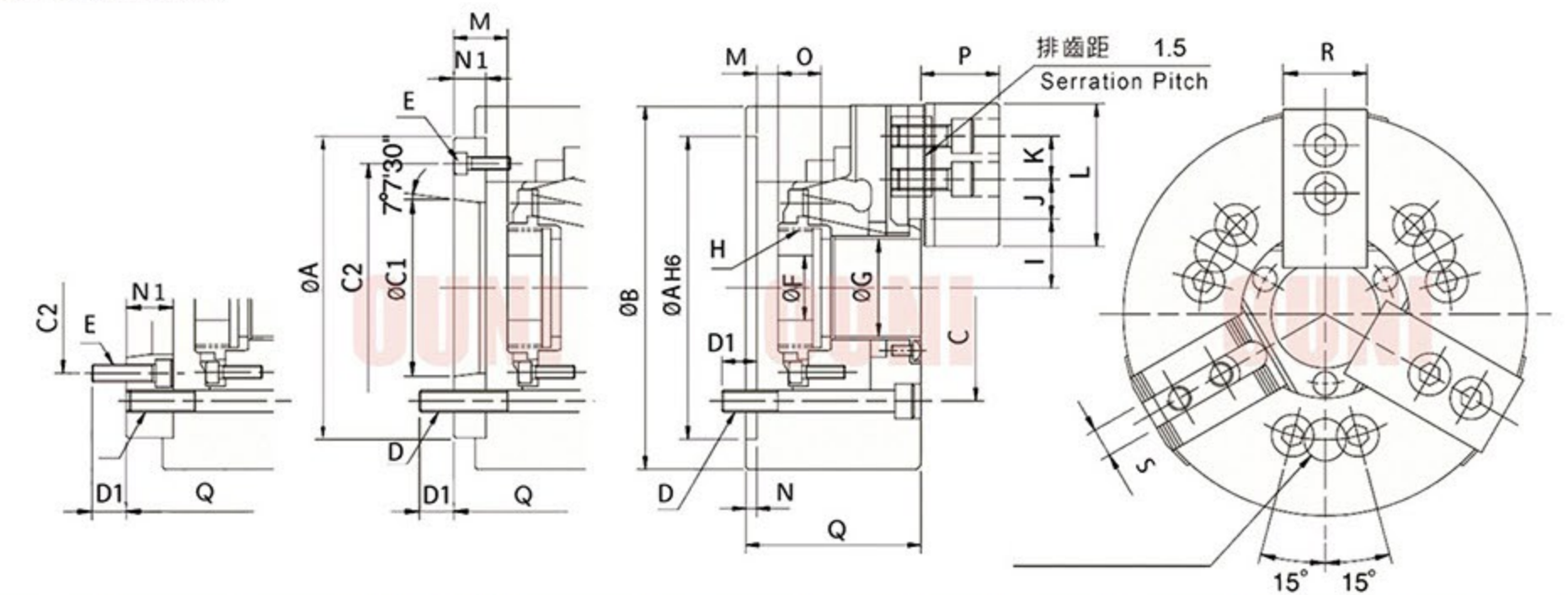
Model 型號	A	B	C	D	E	F	G	H	J	K	L	M	Max. Speed 最高迴轉速 r.p.m. (min <sup>-1</sup> )	Max. Gripping Diameter 把握範圍		Weight 淨重(kg)
														外徑把握 O.D.Clamping	內徑把握 I.D.Clamping	
3SSC-03	85	45	60	73	16	3.5	3-M6x1P	35	11	15	10	3-M6X50L	2500	Ø2- Ø70	Ø24- Ø64	1.5
3SSC-04	112	58	80	95	24	4.5	3-M8x1.25P	42	14	17	10	3-M8X60L	2500	Ø3- Ø90	Ø32- Ø84	3.3
3SSC-05	132	60	100	115	32	4.5	3-M8x1.25P	50	16	20	10	3-M8X65L	2500	Ø3- Ø110	Ø35- Ø100	4.6
3SSC-06	167	66	130	147	45	5	3-M10x1.5P	65	19	23	10	3-M10X70L	2000	Ø4- Ø160	Ø48- Ø150	7.9



## Thru-hole power chuck 中空動力夾頭

- ◆楔形三爪大貫通孔徑。
- ◆摺動面均經硬化及精密研磨，並直接潤滑。
- ◆高剛性結構及高夾持精度。
- ◆F值為連結螺帽未車製螺牙時之孔徑。
- ◆Hmax值為連結螺帽可車製螺牙之最大規格，但可依實際需求訂製。

- ◆ It's a WEDGE-HOOK type 3-jaw with the large through-hole.
- ◆ Matching surfaces of all parts hardened,ground and lubricated directly.
- ◆ Construction of high rigidity and high clamping accuracy.
- ◆ F value is the hole diameter of blank draw nut, H is the maximum thread specification, and it could be customize.



Model 型號	Plunger stroke 夾心行程(mm)	Jaw stroke(Dia) 爪行程直徑(mm)	Chucking Dia 夾持直徑(mm)		Max. D.B. pull 最大夾持力 KN(kgf)	Max. clamping force 最大夾持力 KN(kgf)	Max. speed 最高迴轉數 min <sup>-1</sup> (r.p.m)	l kg·m <sup>2</sup>	Weight 重量(kg)	Weight 重量(kg)(+3HA)	Matching cyl. 適用螺絲缸	Max. pressure 最大使用壓力 Mpa(kgf/cm <sup>2</sup> )	
			Max.	Min.									
3HC-05	A4	10	5.4	135	12	17.1(1750)	35.8(3650)	7000	0.02	6.7	7.5	TR-536	2.5(25)
3HC-06	A5	12	5.5	168	15	21.5(2200)	56.8(5800)	6000	0.06	11.9	13.7	TR-646	2.3(23)
	A6	16	7.4	210	13	34.3(3500)	85.8(8750)	5000	0.18	22.5	25.4	TR-852	2.7(27)
3HC-08	A5	16	7.4	210	13	34.3(3500)	85.8(8750)	5000	0.18	22.5	23.6	TR-852	2.7(27)
	A6	19	8.8	254	31	42.6(4380)	110.7(11300)	4200	0.33	34.5	41.5	TR-1075	2.9(29)
3HC-10	A6	19	8.8	254	31	42.6(4380)	110.7(11300)	4200	0.33	34.5	40	TR-1075	2.9(29)

Model 型號	A	B	C	C1	C2	D	D1	E	F	G	H max.	I max.	I min.	J max.	J min.
3HC-05	110	135	82.6	-	-	3~M10X1.5P	15	-	12	33	M40x1.5P	26.5	23.8	19.8	7.8
	A4	110	135	63.51	96	3~M10X1.5P	15	3~M6X1.0P	12	33	M40x1.5P	26.5	23.8	19.8	7.8
3HC-06	140	168	104.8	-	-	6-M10X1.5P	16	-	20	45	M55x2.0P	31.9	29.2	23.5	10
	A5	140	168	104.8	116	6-M10X1.5P	16	3~M6X1.0P	20	45	M55x2.0P	31.9	29.2	23.5	10
3HC-08	170	210	133.4	-	-	6-M12X1.75P	20	-	52	60	M60x2.0P	38.7	35	30	15
	A5	170	210	133.4	104.8	6-M12X1.75P	18	6~M10X1.5P	30	52	M60x2.0P	38.7	35	30	15
3HC-10	A6	170	210	133.4	150	6-M12X1.75P	18	3~M6X1.0P	30	52	M60x2.0P	38.7	35	30	15
	220	254	171.4	-	-	6-M16X2.0P	22	-	45	75	M85x2.0P	51.2	46.8	33.7	14.2
3HC-10	A6	220	254	171.4	133.4	6-M16X2.0P	18	6~M12X1.75P	45	75	M85x2.0P	51.2	46.8	33.7	14.2
	A8	220	254	171.4	139.72	190	6-M16X2.0P	24	3~M8X1.25P	45	75	M85x2.0P	51.2	46.8	33.7

Model 型號	K	L	M max.	M min.	N	N1	O	P	Q	R	S	T	U	
3HC-05	14	62	1	-9	4	-	20	31	60	25	10	-	-	
	A4	14	62	16	6	-	15	-	31	71	25	10	-	
3HC-06	20	73	12.5	0	5	-	19	37	81	31	12	6-M10X1.5P	145	
	A5	20	73	27.5	15	-	15	19	37	91	31	12	6-M10X1.5P	145
3HC-08	25	95	15.5	-2	5	-	-	38	91	35	14	6-M10X1.5P	180	
	A5	25	95	38.5	21	-	23	20.5	38	109	35	14	6-M10X1.5P	180
3HC-10	A6	25	95	32.5	15	-	17	20.5	38	103	35	14	6-M10X1.5P	180
	30	110	10.5	-10	5	-	25	43	100	42	16	6-M12X1.75P	225	
3HC-10	A6	30	110	28.5	8	-	25	25	43	120	42	16	6-M12X1.75P	225
	A8	30	110	35.5	15	-	18	25	43	113	42	16	6-M12X1.75P	225

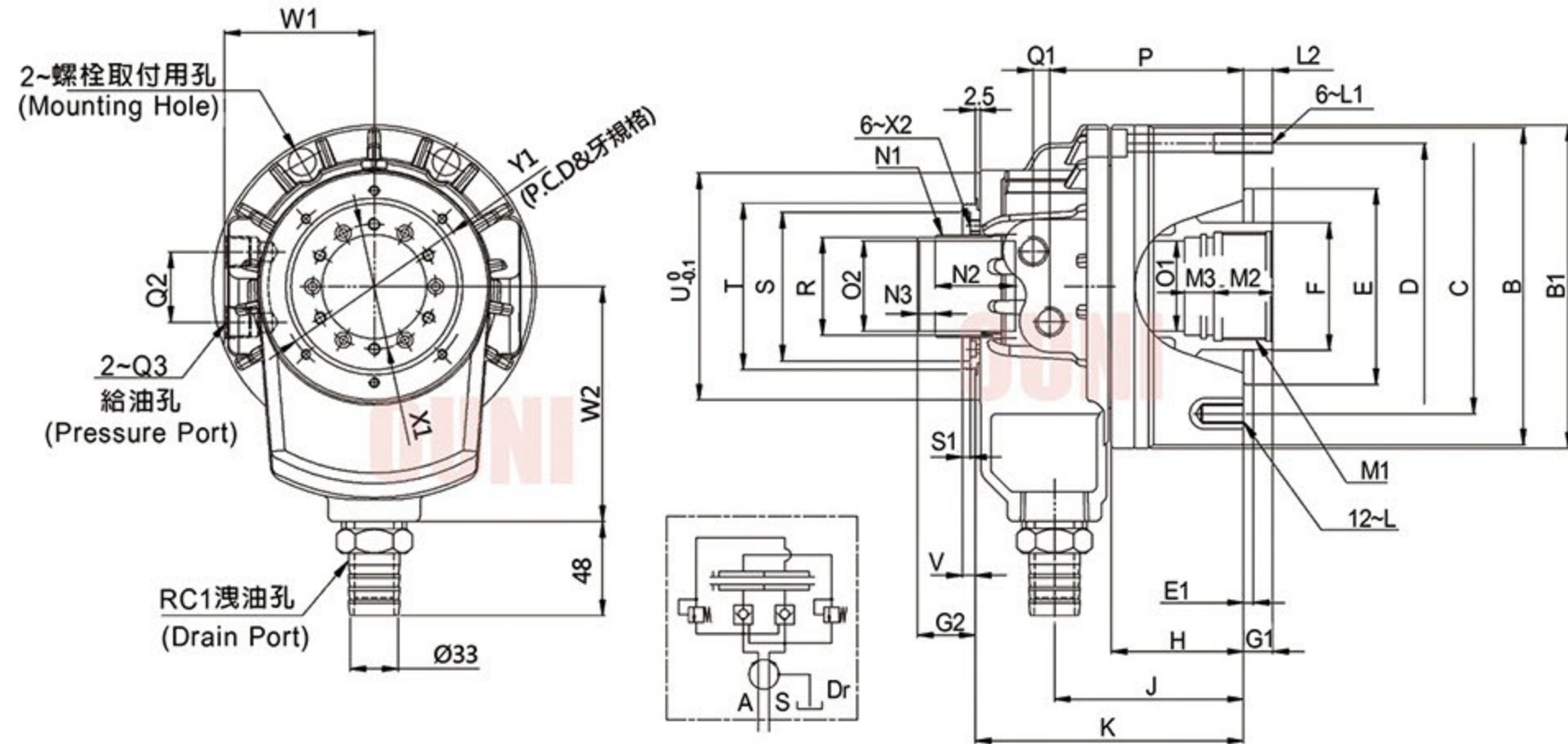


# Lathes Component



## Through-hole rotary hydraulic cylinder 超薄型中空迴轉油壓缸

- ◆ 內建逆止閥自鎖機構及壓力洩壓閥。
- ◆ 安裝時可由後端鎖固之。
- ◆ Built-in safety check valves and pressure relief valves.
- ◆ Can screw it from the rear end of the cylinder when mounting.



Model 型號	Eff. Piston (Dia) 活塞直徑 (mm)	Piston stroke 行程 (mm)	Eff. Piston area cm <sup>2</sup> 活塞面積 (cm <sup>2</sup> )		Max. Draw Bar Force 最大推(拉)力 kgf(kN)		Max. pressure 最高使用壓力 Mpa(kgf/cm <sup>2</sup> )	Max. speed 最高迴轉數 r.p.m. (min-1)	Moment of inertia 慣性矩 I kg . m <sup>2</sup>	Weight 淨重 (kg)	Total oil leakage 總洩流量 (lit/min)	
			Extend 伸側	Retract 拉側	Push Side 推側力	Pull Side 拉側力						
TR-428	90	10	46.8	50.7	1742(17.1)	1881(18.4)	4.0 (40.8)	8000	0.013	6	3.0	
TR-536	105	15	70.8	66.5	2690(26.3)	2520(24.6)		8000	0.013	6.9		
TR-646	128		105	93	3990(39.0)	3530(34.5)		7000	0.019	9.2		
TR-646C	125	99.1	88	3765(36.9)	3344(32.7)	7000		0.019	9.2			
TR-852	145	22	137	127	4922(48.2)	4558(44.6)		6300	0.057	12.5		3.9
TR-1075	170	25	171	157	5630(63)	5910(58.0)		5500	0.07	17		4.2
TR-1881K	180	25	188.5	173.6	7166(70.2)	6599(64.6)	4800	0.09	21	4.3		

Model 型號	A I.D.	B	B1	C	D	E h7	E1	F	G1 max.	G1 min.	G2 max.	G2 min.	H	J	K	L	L1	L2	M1	M2	M3
TR-428	90	126	132	100	-	80		44	9	-1	34	24	60	91	131.5	12~M8X20	-	-	M33X1.5		25
TR-536	105	138	143	115	125	100		48	15	0	40	25	63.5	99.5	134		M8X70		M42X1.5		
TR-646	128	162	165	130	147	100		65	15	0		29	67.5	97	137.5			15	M55X2.0		
TR-646C	125	162	165	140	140	120	5	65	15	0	44	29	67.5	97	137.5	12~M10X20	M8X75		M55X2.0		30
TR-852	145	185	184	170	165	130		70	21	-1		22	68.5	98	138				M60X2.0		
TR-1075	170	215	212	190	190	160		95	25	0	49	24	77	113	163				M85X2.0		35
TR-1881K	180	225	229	205	205	168		100	23	-2	55	30	86	130	184.5	12~M12X24	M10X90	16	M90X2.0		

Model 型號	N1	N2	N3	O1 H8	O2 H8	P	Q1	Q2	Q3	R g7	S H7	S1	T	U	V	W1	W2	X1	X2	Y1	RC1
TR-428	M34X1.5	27		30	28	94	8	30	PT1/4	32	53		59	98	5.5	60	109	44	M5X6	88.5	
TR-536	M44X1.5	27		38	36	95.5		30	PT1/4	42	64		74	98	6	66	109	55	M5X5	MSX6	
TR-646	M52X1.5	29		50	46	99.5				52	76		85	116	6.5	76.5	120	64	M6X6	98	
TR-646C	M52X1.5	29		50	46	99.5	8.5			52	76		85	116	6.5	76.5	120	64	M6X6	M5X6	
TR-852	M58X1.5	30	9	55	52	100		36	PT3/8	56	85	4	96	128	7	80	130	73	M6X7	110 M6X8	1"
TR-1075	M84X2.0	33		80	75	115.5	10	40	PT1/2	81	108		121	164	6.5	95	160	98	M6X8	155 M6X10	
TR-1881K	M89X2.0	38	10.5	85	81	144	11	40	PT1/2	85.8	115		126	175	11	105	174	103	M6X10	166 M6X10	



量測設備  
Measuring Equipment





## 主軸綜合測試機

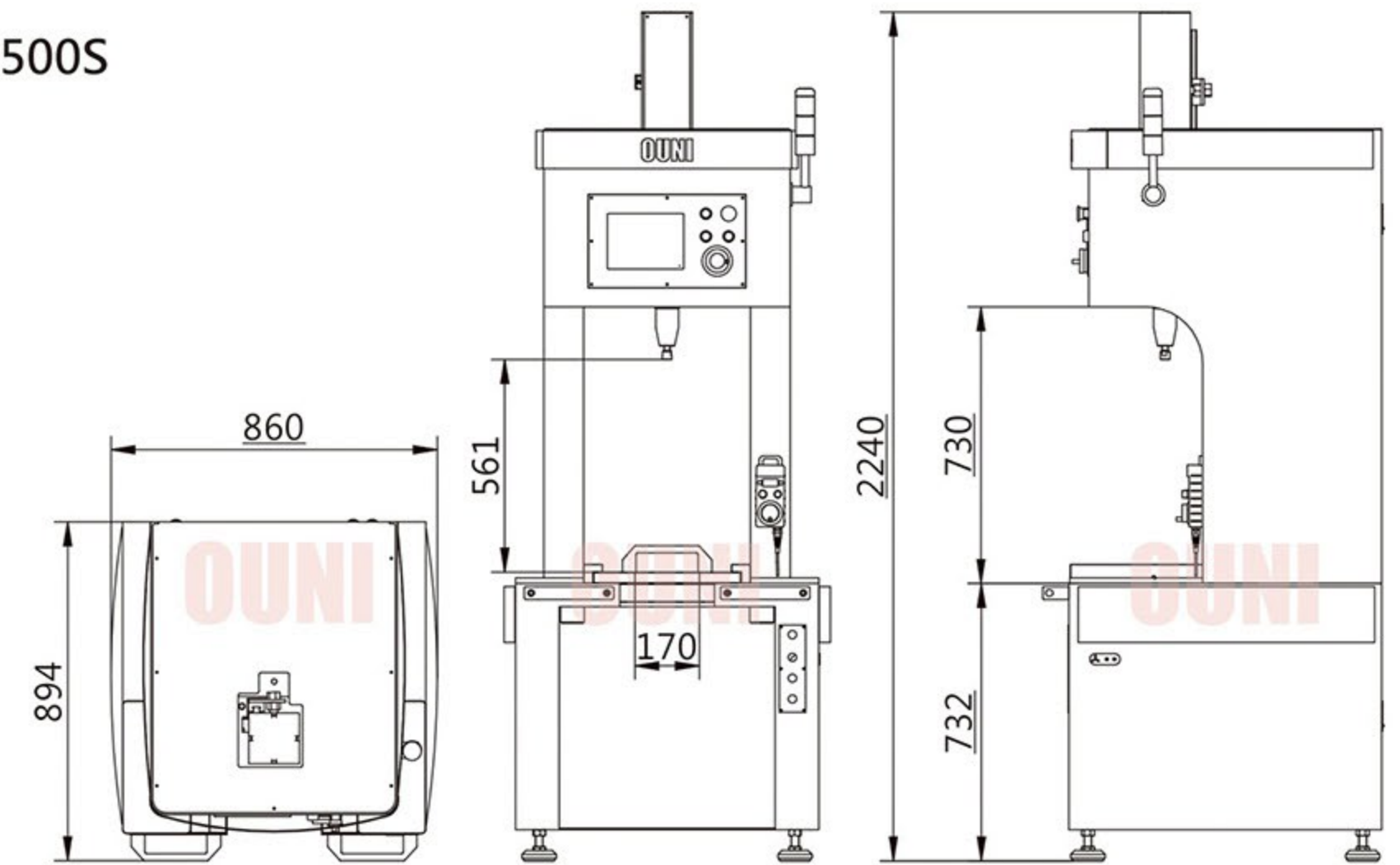
Spindle comprehensive testing machine

- ◆ 推力行程可依需求設定。
- ◆ 動力機構伺服機電傳動。
- ◆ 沖頭更換簡易彈性互換。  
可設定多組測試模式。多組測試模組記憶。
- ◆ 保護裝置：a.過行程保護 b.扭力過載保護。
- ◆ 功能：拉力位置、推力位置、拉力、推力、精度檢測、彈簧力測試、彈力衰減測試。
- ◆ The thrust stroke can be set according to requirements.
- ◆ Power mechanism servo electromechanical transmission. The punch is replaced with a simple elastic interchange.
- ◆ Multiple sets of test modes can be set. Multiple sets of test module memory.
- ◆ Protection device: a. Over-travel protection b. Torque overload protection.
- ◆ Function: Pull position, thrust position, tension, thrust, accuracy detection, spring force test. Elastic attenuation test.

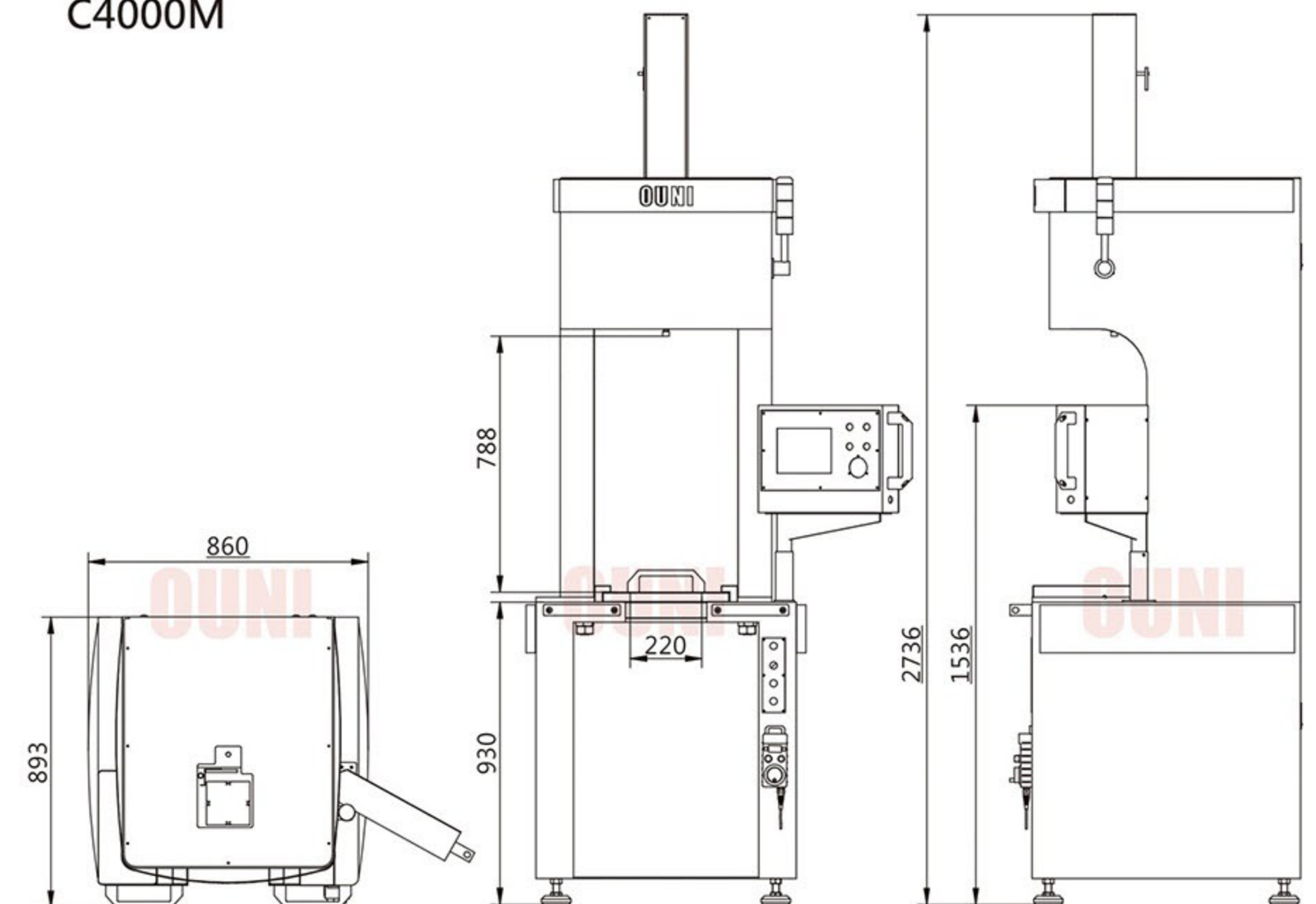


NO.	Model 型號.	電壓 Voltage	出力(kg)	尺寸 cm	重量 kg
G000003936	C2500S	220V/380V	2500kg	80cm*90cm*225cm	(約)800kg
G000003937	C4000M	220V/380V	3500kg	80cm*90cm*275cm	(約)850kg

## C2500S



## C4000M









## Dynamic Balance Standard Formula List 動平衡標準公式列表

Balance Grade	G0.4	G1	G2.5	G6.3	G16	G40	G100	G250	G630	G1600	G4000	
Precision	exw(mm/s)	0.4	1	2.5	6.3	16	40	100	250	630	1600	4000
Required	exw(μm*rpm)	38320	9549	23875	60165	152800	382000	954900	2387500	6016500	15280000	38200000

### SETTING OF THE BALANCE SERIES IS ACCORDING TO ISO 1940 STANDARD

THE FORMULA AS FOLLOWS:

$$U = M \times e$$

$$U = \frac{G \times M}{n} \times 9549$$

$$G = \frac{n \times U}{9549 \times M}$$

G=UNBALANCE SERIES

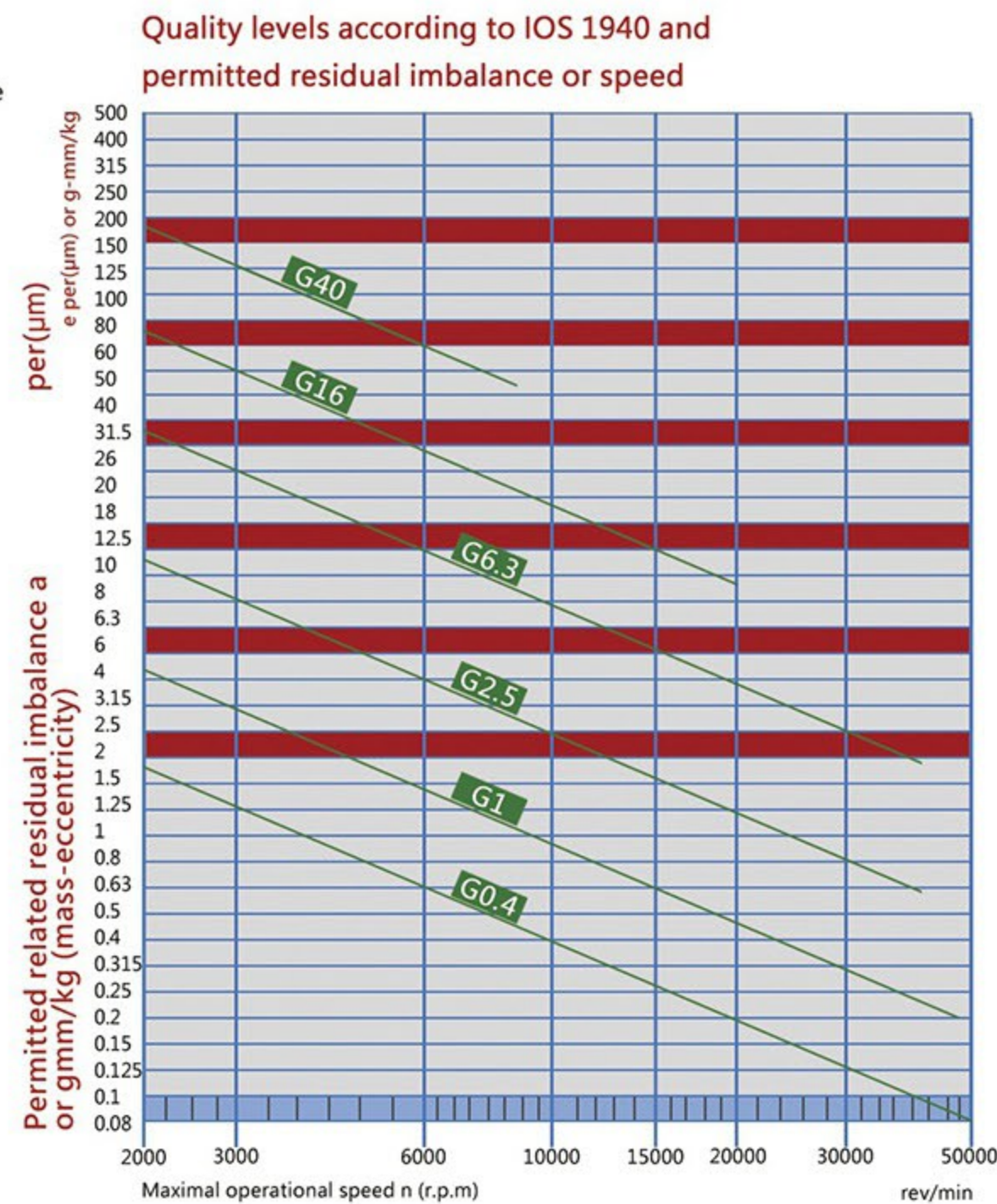
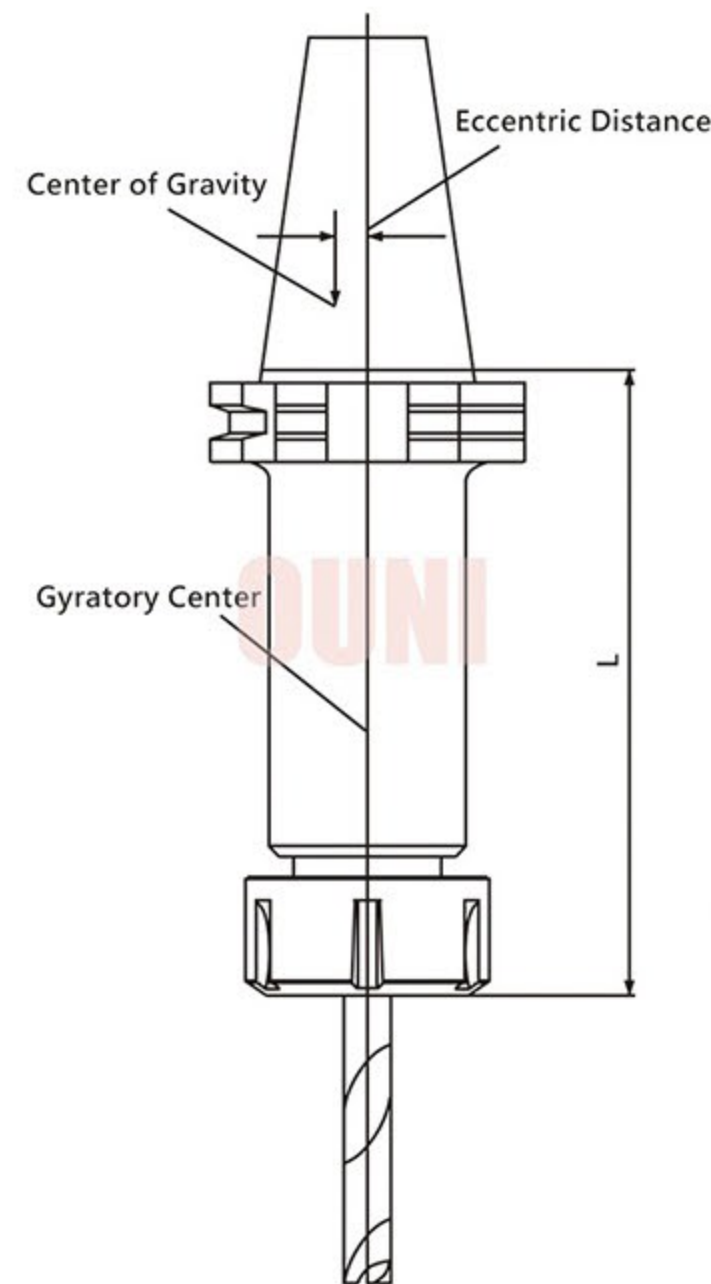
U=UNBALANCE (g-mm)

e=ECCENTRIC DISTANCE(mm)

M=ROTER WEIGHT(kg)

n=rpm

9549=CONSTANT

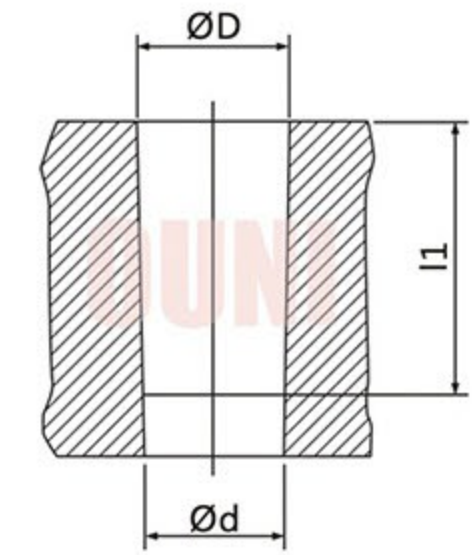


## JACOBS TAPER

Type	D	d	l1
JT0	6.35	5.802	11.112
JT1	9.754	8.469	16.669
JT2S	13.94	12.386	19.05
JT2	14.199	12.386	22.225
JT33	15.85	14.237	25.4
JT6	17.17	15.852	25.4
JT3	20.599	18.951	30.956
JT4	28.55	26.346	42.069
JT5	35.89	33.422	47.625

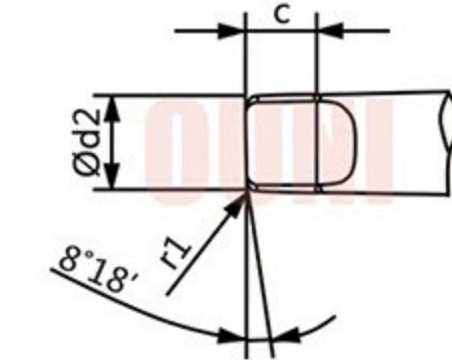
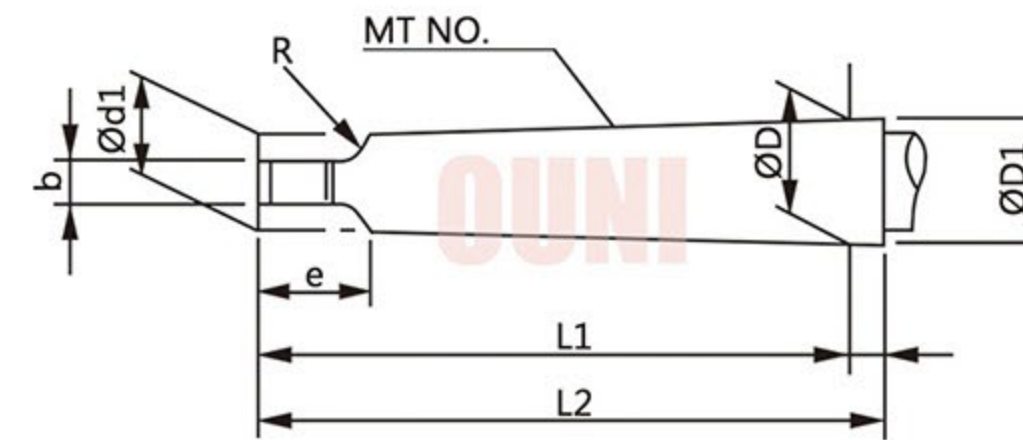
## DIN238

Type	D	d	l1
B6	6.35	5.85	10
B10	10.094	9.4	14.5
B12	12.065	11.1	18.5
B16S	15.608	14.5	21.5
B16	15.733	14.5	24
B18S	17.431	16.2	25
B18	17.18	16.2	32
B22	21.793	19.8	40.5
B24	23.825	21.3	50.5



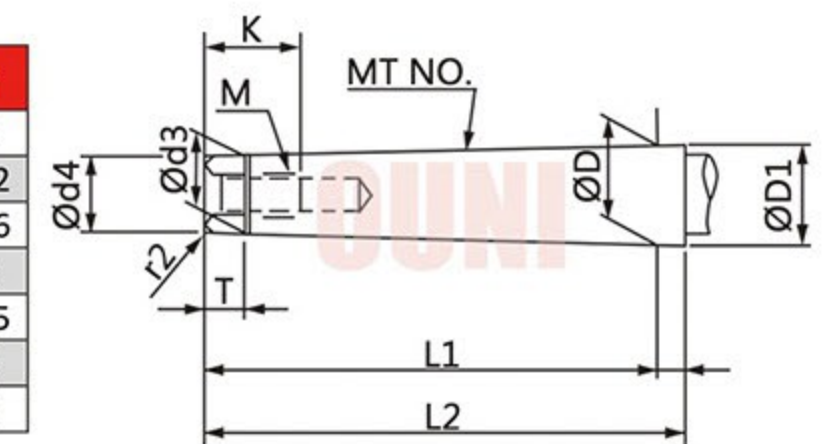
## DIN228" A TANG TYPE"

Type	φD	a	φD1	φd1	φd2	L1	L2	b	c	e	R	r1
MT0	9.045	3	9.2	6.1	6	5.6	59.5	3.9	6.5	10.5	4	1
MT1	12.65	3.5	12.2	9	8.7	62	65.5	5.2	8.5	13.5	5	1.2
MT2	17.78	5	18	14	13.5	75	80	6.3	10	16	6	1.6
MT3	23.825	5	24.1	19.1	18.5	94	99	7.9	13	20	7	2
MT4	31.267	6.5	31.6	25.2	24.5	117.5	124	11.9	16	24	8	2.5
MT5	44.399	6.5	44.7	36.5	35.7	149.5	156	15.9	19	29	10	3
MT6	63.348	8	63.8	52.4	51	210	218	19	27	40	13	4



## DIN228" B DRAW BAR TYPE"

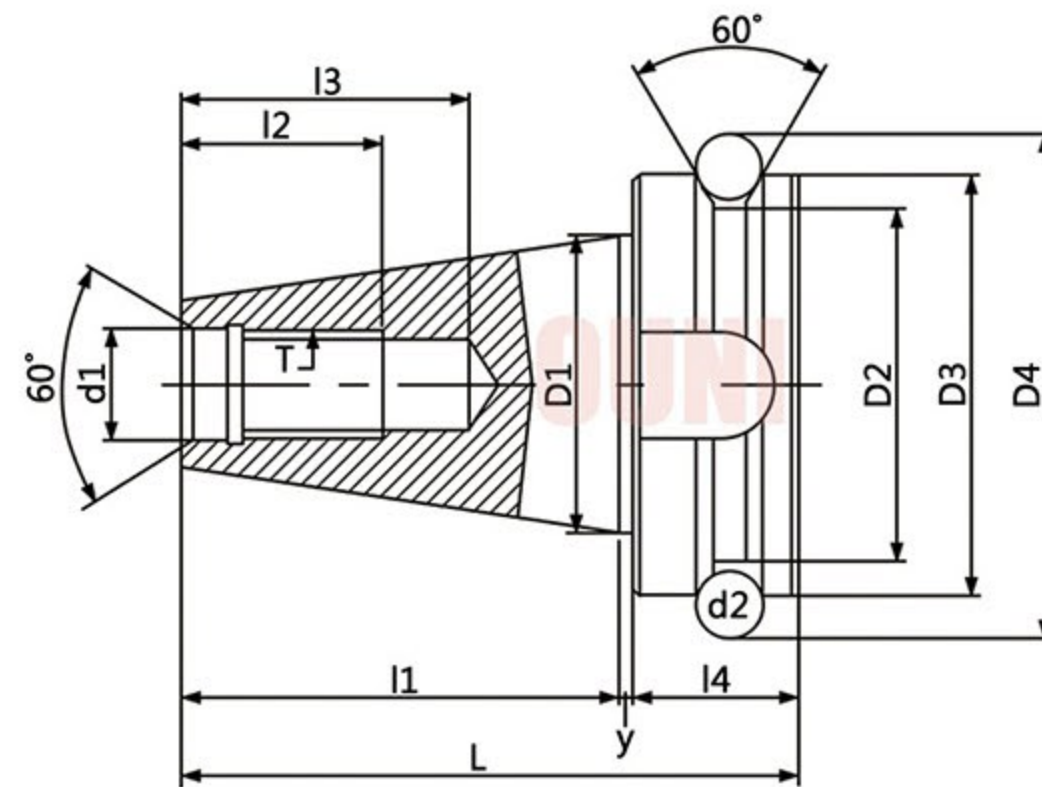
Type	φD	a	φD1	φd3	φd4	L1	L2	T	r2	M	K	r
MT0	9.045	3	9.2	6.4	6	50	53	4	0.2	---	---	1
MT1	12.065	3.5	12.2	9.4	9	53.5	57	5	0.2	M6	16	1.2
MT2	17.18	5	18	14.6	14	64	69	5	0.2	M10	24	1.6
MT3	23.825	5	24.1	19.8	19	81	86	7	0.6	M12	28	2
MT4	31.267	6.5	31.6	25.9	25	102.5	109	9	1	M16	32	2.5
MT5	44.399	6.5	44.7	37.6	35.7	129.5	136	10	2.5	M20	40	3
MT6	63.348	8	63.8	53.9	51	182	190	16	4	M24	50	4





## JIS B 6339

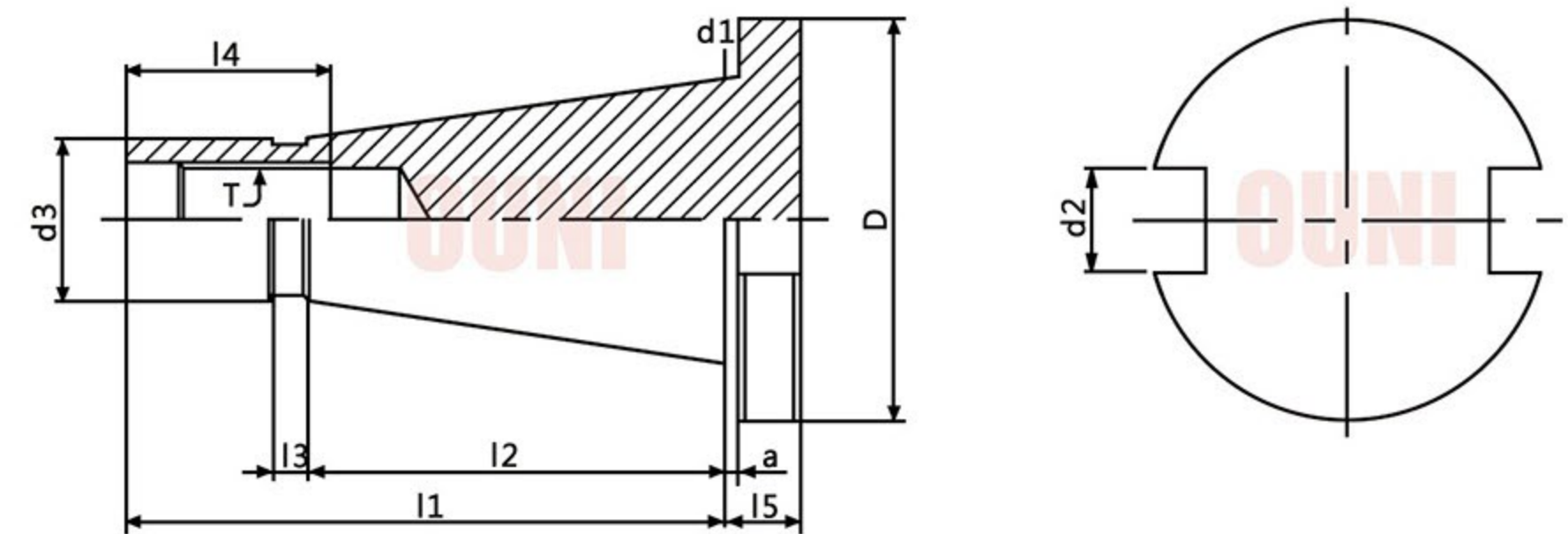
- ◆ 如適合於中心止水標準，可選配。
- ◆ 柄徑出廠前動平衡值為G6.3，依客戶需求亦可提供G2.5之柄徑。
- ◆ 柄徑標準：JIS MAS-403
- ◆ 椎度公差小於AT3
- ◆ 基本材質：JIS-SCM415
- ◆ 硬度大於HRC 56 滲碳深度大於0.8mm
- ◆ 真圓度小於0.8 $\mu$ m
- ◆ 標面粗糙度：Ra小於0.5 $\mu$ m
- ◆ If it is suitable for center coolant standard, it can be ordered.
- ◆ The shank has pre-balance at G6.3, and can provide precision balance at G2.5, made by request.
- ◆ Shank body standard:JIS MAS 403.
- ◆ Taper tolerance AT3.
- ◆ Basic Material : JIS-SCM415.
- ◆ Hardness HRC56 Carbon depth 0.8mm.
- ◆ Roundness 0.8 $\mu$ m.
- ◆ Surface roughness:Ra 0.5 $\mu$ m.



Mount type	D3 <sub>h8</sub>	D1	D4	D2	d1 <sub>H8</sub>	d2	L	l1 <sub>±0.2</sub>	l2 <sub>min.</sub>	l3 <sub>min.</sub>	l4	y <sub>±0.4</sub>	T <sub>6H</sub>
BT30	46	31.75	56.14	38	12.5	8	70.4	48.4	34	24	20	2	M12x1.75P
BT40	63	44.45	75.679	53	17	10	92.4	65.4	43	30	25	2	M16x2.0P
BT50	100	69.85	119.02	85	25	15	139.8	101.8	62	45	35	3	M24x3.0P

## DIN 2080

- ◆ 柄徑標準：DIN-2080
- ◆ 椎度公差小於AT3
- ◆ 基本材質：JIS-SCM415
- ◆ 硬度大於HRC 56 滲碳深度大於0.8mm
- ◆ 真圓度小於0.8 $\mu$ m
- ◆ 標面粗糙度：Ra小於0.5 $\mu$ m
- ◆ Shank body standard:DIN-2080.
- ◆ Taper tolerance AT3.
- ◆ Basic Materance: JIS-SCM415.
- ◆ Hardness HRC56 Carbon depth 0.8mm.
- ◆ Roundness 0.8 $\mu$ m.
- ◆ Surface roughness:Ra 0.5 $\mu$ m.

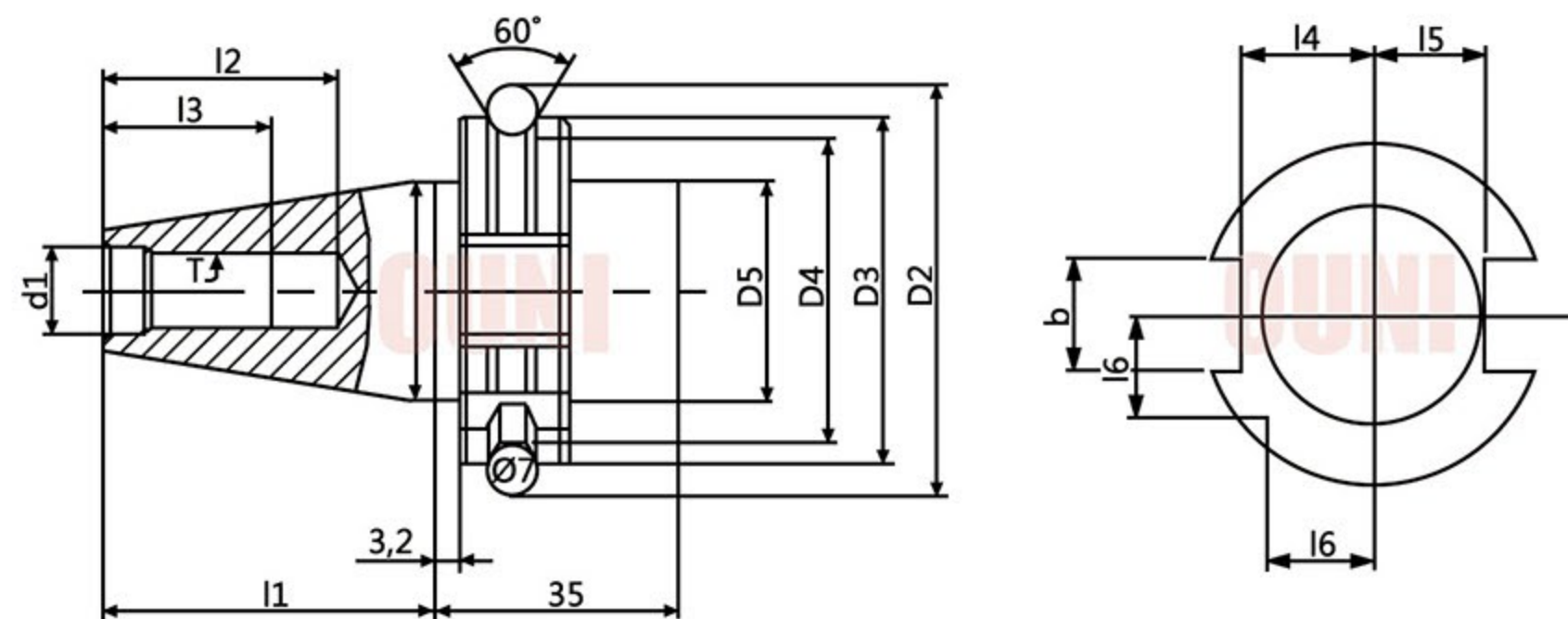


Mount type	D <sub>0</sub> <sub>-0.4</sub>	d1	D2 <sub>H12</sub>	d3 <sub>max.</sub>	a <sub>±0.5</sub>	l1	l2	l3z	l4 <sub>min.</sub>	l5 <sub>-0.15</sub>	T
BT30	50	31.75	16.1	17.11	1.6	68.4	48.4	3	24	8	1/2"-12W,M12x1.75P,1/2"-13UNC
BT40	63	44.45	16.1	25.00	1.6	93.4	65.4	5	32	10	5/8"-11W,M16x2.0P
BT50	97.5	69.85	25.7	39.29	3.2	126.8	101.8	8	47	12	1"-8W,M24x3.0P



## DIN 69871

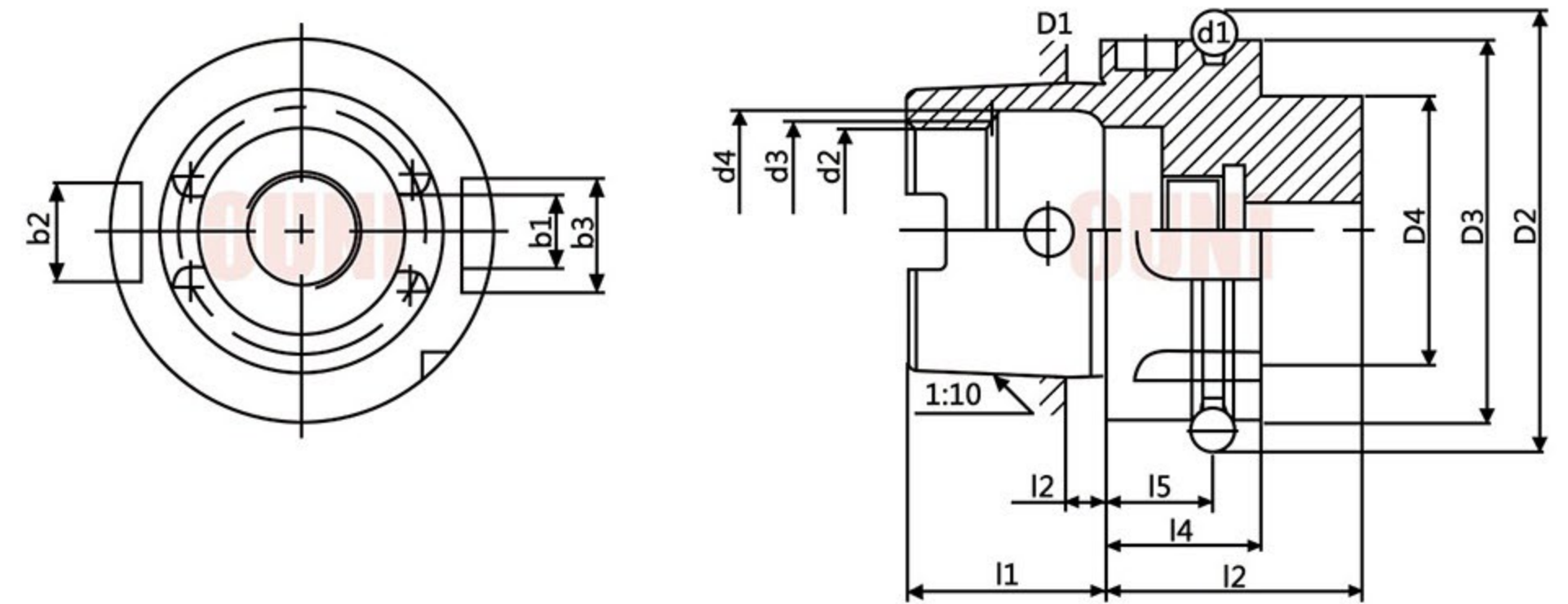
- ◆ 如適合於中心止水標準(DIN-69871-AD or B)，可選配。
- ◆ 柄徑出廠前動平衡值為G6.3，依客戶需求亦可提供G2.5之柄徑。
- ◆ 柄徑標準：DIN-69871
- ◆ 椎度公差小於AT3
- ◆ 基本材質：JIS-SCM415
- ◆ 硬度大於HRC 56 滲碳深度大於0.8mm
- ◆ 真圓度小於0.8 $\mu$ m
- ◆ 標面粗糙度：Ra小於0.5 $\mu$ m
- ◆ If it is suitable for center coolant standard(DIN-69871-AD or B), it can be ordered.
- ◆ The shank has pre-balance at G6.3, and can provide precision balance at G2.5, made by request.
- ◆ Shank body standard: DIN-69871.
- ◆ Taper tolerance AT3.
- ◆ Basic Material: JIS-SCM415.
- ◆ Hardness HRC56 Carbon depth 0.8mm.
- ◆ Roundness 0.8 $\mu$ m.
- ◆ Surface roughness:Ra 0.5 $\mu$ m.



Mount type	D3 0 -0.1	D1	D2 ±0.05	D4 0 -0.5	D5 max.	d1 H7	b H12	l1 0 -0.3	l2 min.	l3 min.	l4 0 -0.4	l5 0 -0.4	l6 0 -0.3	T
BT30	50	31.75	59.30	44.30	45	13	16.1	47.8	33.5	24	19	16.4	15	M12x1.75P
BT40	63.55	44.45	72.30	56.25	50	17	16.1	68.4	42.5	32	25	22.8	18.5	M16x2.0P
BT50	97.50	69.85	107.25	91.25	80	25	25.7	101.75	61.5	47	37.7	35.5	30	M24x3.0P

## DIN 69893 A+C

- ◆ 柄徑出廠前動平衡值為G6.3，依客戶需求亦可提供G2.5之柄徑。
- ◆ 柄徑標準：DIN-69893
- ◆ 椎度公差小於AT3
- ◆ 基本材質：JIS-SCM415
- ◆ 硬度大於HRC 56 滲碳深度大於0.8mm
- ◆ 真圓度小於0.8 $\mu$ m
- ◆ 標面粗糙度：Ra小於0.5 $\mu$ m
- ◆ The shank is pre-balance at G6.3, and can provide precision balance at G2.5, made by request.
- ◆ Shank body standard: DIN-69893.
- ◆ Taper tolerance AT3.
- ◆ Basic Material: JIS-SCM415.
- ◆ Hardness HRC56 Carbon depth 0.8mm.
- ◆ Roundness 0.8 $\mu$ m.
- ◆ Surface roughness:Ra 0.5 $\mu$ m.

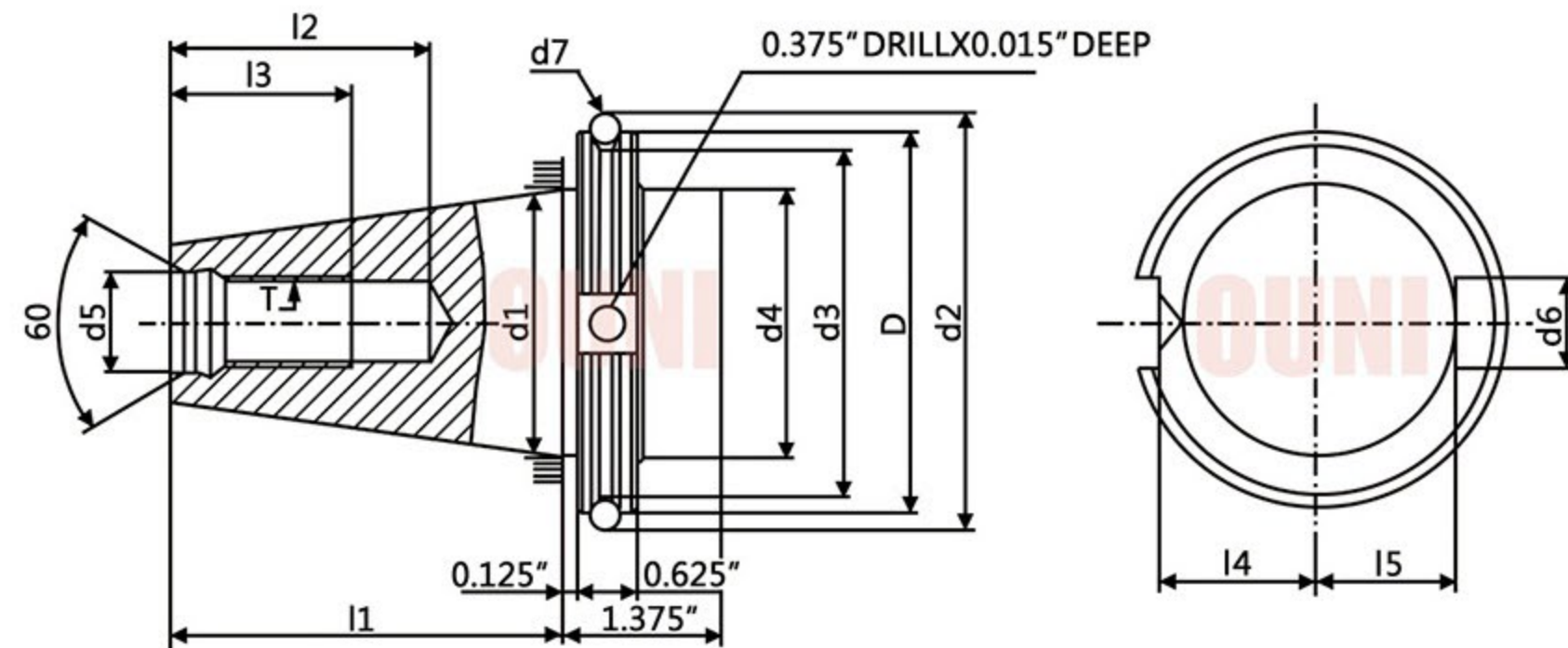


Mount type	D3 h10	D1	d2 H10	d4 H11	d3	D4 max.	D2 0 -0.1	d1	l1 0 -0.2	l2	l3 min.	l4 0 -0.1	l5 ±0.1	b1 ±0.04	b2 H10	b3 H10
HSK32	32	24.007	17	21	19	26	37	4	16	3.2	35	20	16	7.05	7	9
HSK40	40	30.007	21	25.5	23	34	45	4	20	4	35	20	16	8.05	9	11
HSK50	50	38.009	26	32	29	42	59.3	7	25	5	42	26	18	10.54	12	14
HSK63	63	48.010	34	40	37	53	72.3	7	32	6.3	42	26	18	12.54	16	18
HSK100	100	75.013	53	63	58	85	109.75	7	50	10	45	29	20	20.02	20	22



## ASME B5.50

- ◆如適合於中心止水標準(DIN-69871-AD or B)，可選配。
- ◆柄徑出廠前動平衡值為G6.3，依客戶需求亦可提供G2.5之柄徑。
- ◆柄徑標準：ANSI-B5.50
- ◆椎度公差小於AT3
- ◆基本材質：JIS-SCM415
- ◆硬度大於HRC 56 滲碳深度大於0.8mm
- ◆真圓度小於0.8 $\mu$ m
- ◆標面粗糙度：Ra小於0.5 $\mu$ m
- ◆If it is suitable for center coolant standard(DIN-69871-AD or B), it can be ordered.
- ◆The shank has pre-balance at G6.3, and can provide precision balance at G2.5, made by request.
- ◆Shank body standard: ANSI-B5.50
- ◆Taper tolerance AT3.
- ◆Basic Material: JIS-SCM415.
- ◆Hardness HRC56 Carbon depth 0.8mm.
- ◆Roundness 0.8 $\mu$ m.
- ◆Surface roughness:Ra 0.5 $\mu$ m.



Mount type	D ±0.002	d1	D2 ±0.002	d3 ±0.01	d4 mix.	d5 ±0.015 0	d6 ±0.001	d7	l1 ±0.005	l2 min.	l3 ±0.01	l4 0 -0.015	l5 0 -0.01	T UNC28
CAT30	1.812	1.250	2.176	1.531	1.250	0.516	0.645	0.2813	1.875	1.00	0.188	0.735	0.640	0.500-13
CAT40	2.500	1.750	2.863	2.219	1.750	0.641	0.645	0.2813	2.687	1.12	0.188	0.985	0.890	0.625-11
CAT45	3.250	2.250	3.613	2.969	2.250	0.766	0.770	0.2813	3.250	1.50	0.188	1.235	1.140	0.750-10
CAT50	3.875	2.750	4.238	3.594	2.750	1.031	1.020	0.2813	4.000	1.75	0.250	1.485	1.390	1.000-8

## Hex Key Drill Chuck Manual

### 齒輪式夾頭操作須知

#### CAUTION

- ◆Clamping or releasing the cutting tool only at standstill of machine spindle or outside the machine.
- ◆Please spray oil on the surface to prevent corrosion before storing Hex Key Drill Chuck.

#### HOW TO MOUNT

- ◆Hex Key Drill Chuck is clamped by Hex Key on side of the drill chuck actuating a bevel gear. Turn hex key counter clockwise to open the drill chuck, clockwise to close it. Open the jaw of Hex Key Drill Chuck wide enough to insert the cutting tool.(FIG.1)
- ◆Turn Hex Key clockwise to clamp the cutting tool.(FIG.2)
- ◆Hex Key Drill Chuck is ready for work.(FIG.3)
- ◆Please turn Hex Key counter clockwise to release the cutting tool and move the cutting tool.

#### 注意事項

- ◆只在主軸停止或是機器外時才鎖緊/鬆開刀具。
- ◆在貯放齒輪式夾頭之前，請在表面噴上防鏽油來防止生鏽。

#### 裝置固定步驟

- ◆齒輪式夾頭是以六角板手驅動夾頭旁的傘齒輪來夾持刀具；逆轉六角板手可打開三爪；正轉六角板手則可關閉三爪。先將夾頭之三爪開至足以放入刀具。(圖1)
- ◆正轉六角板手使夾頭能夾緊刀具。(圖2)
- ◆齒輪式夾頭可開始加工。(圖3)
- ◆請逆轉六角板手鬆開且移開刀具。

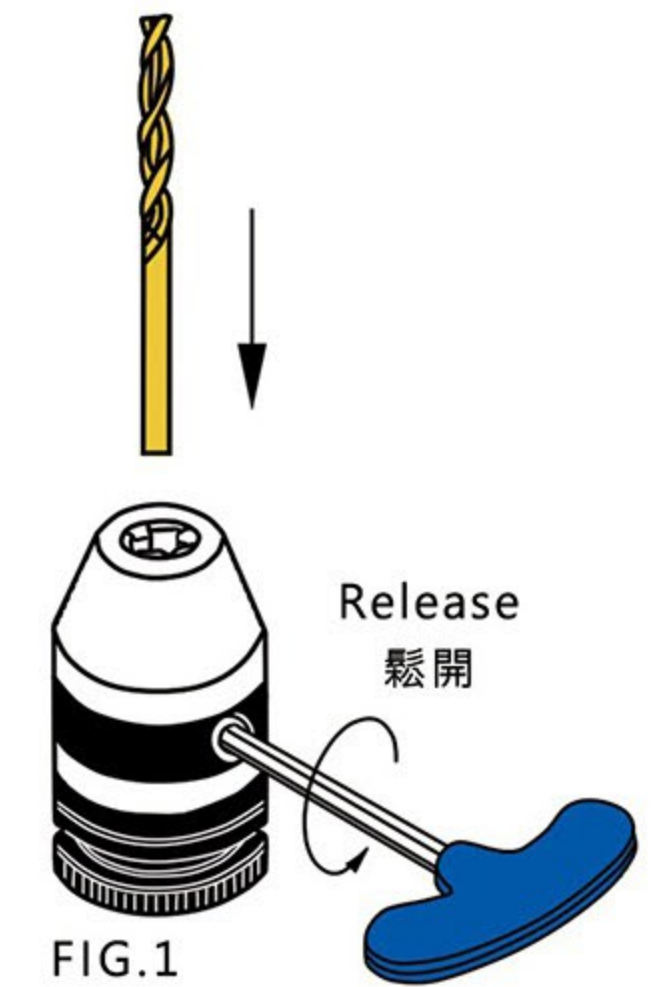


FIG.1

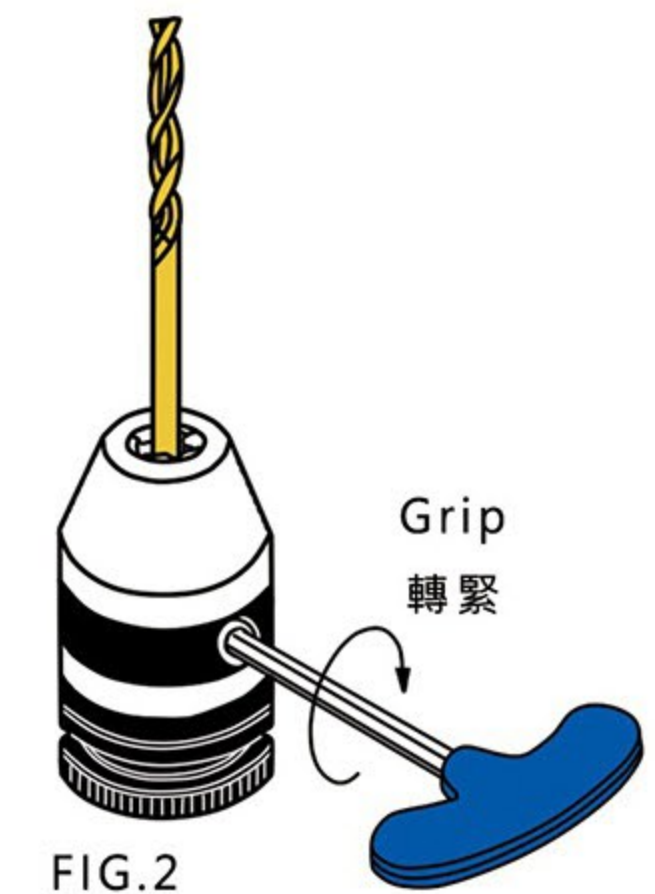


FIG.2

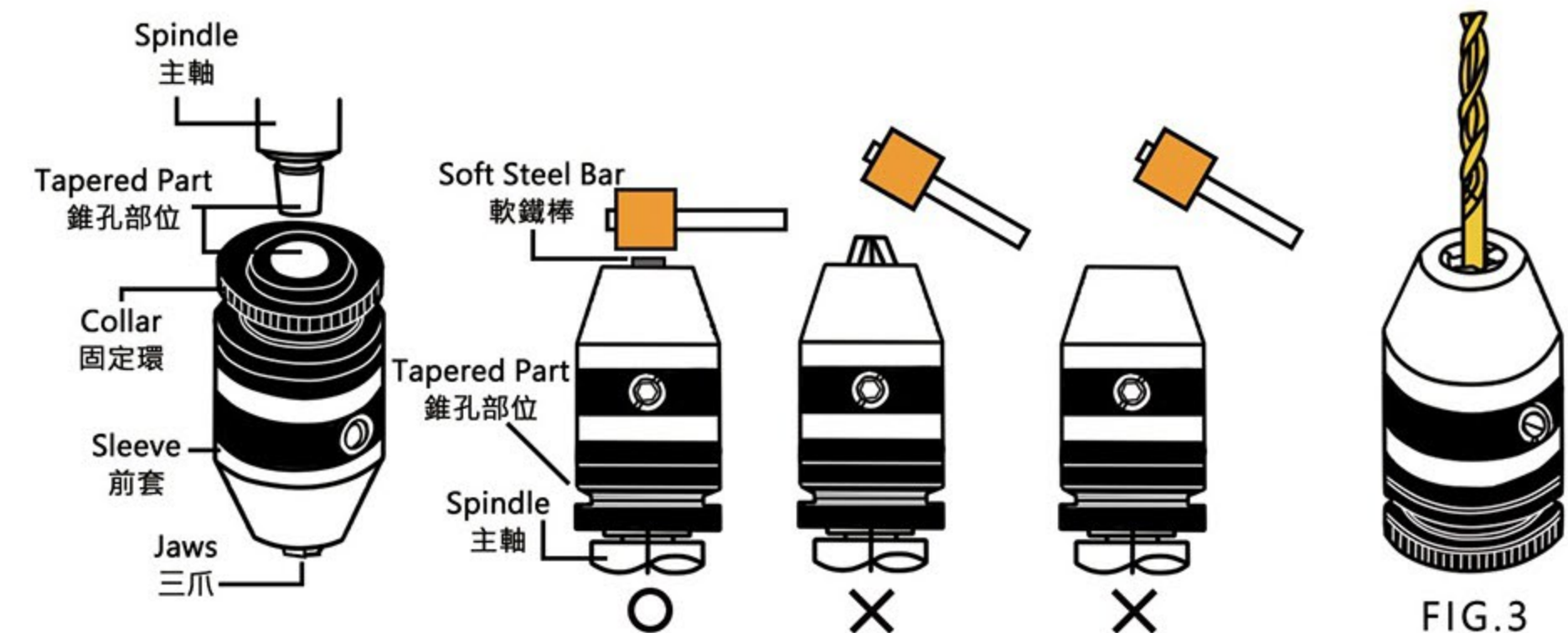


FIG.3



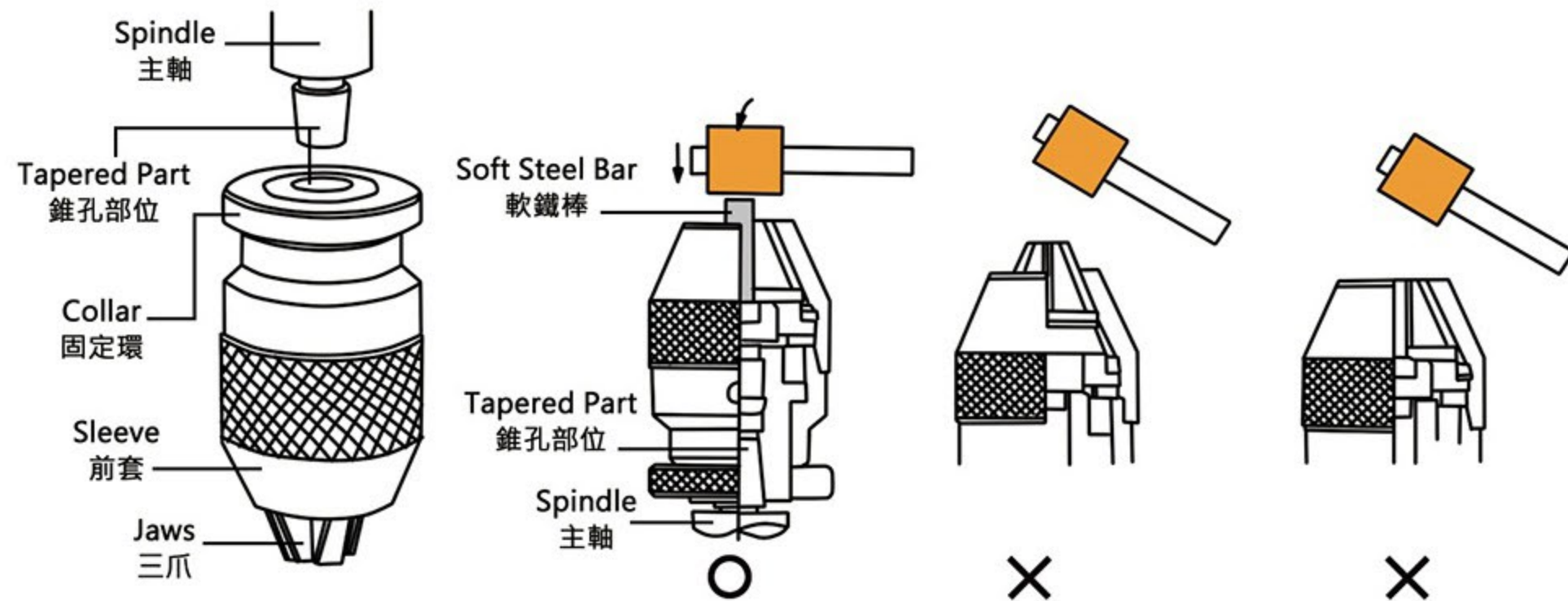
## 自動鑽夾頭操作須知

### 注意事項

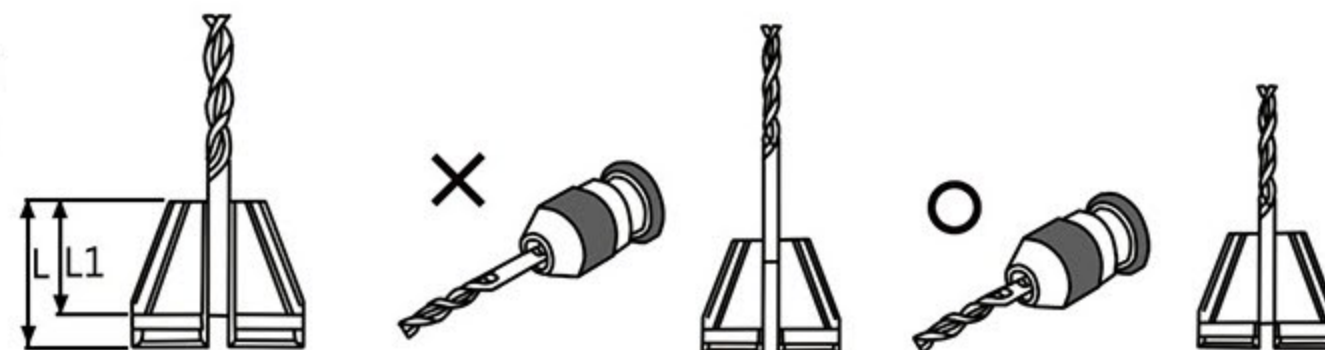
- ◆ 依據此手冊中教導"如何裝置及固定"之步驟,即可正確地完成裝置此夾頭;否則,此夾頭將會鬆開,最後可能造成使用者嚴重地受傷及意外。
- ◆ 開始操作前,檢查並確認三爪是否緊緊的夾住您所使用的工具,錯誤的夾持將會產生夾頭精度有差異、破損或解體。這樣可能造成使用者嚴重地受傷及意外。
- ◆ 手用力地鎖緊夾頭,如果使用一個夾持量較大的夾頭來夾持一個較小尺寸的工具,則此夾頭具備之自動鎖緊的裝置可能會無法夾持,可能會導致工具滑落最後失敗。
- ◆ 此夾頭於加工時,只可正轉,不可逆轉;若逆轉操作將失去功能,夾持之工具將會鬆開,且旋出夾頭外,則可能造成使用者嚴重地受傷及意外。
- ◆ 此夾頭不能使用於有緊急停止裝置的機器,如果機器主軸因緊急狀況而停止轉動,則工具會鬆開且旋出夾頭外,則可能造成使用者嚴重地受傷及意外。
- ◆ 勿觸碰正在轉動中之夾頭或工具,否則將會有危險,會被正在運轉中的機器拖住,一定會造成嚴重地受傷及意外。
- ◆ 主軸還未完全停止前,勿操作夾頭;否則將會有危險,會被正在運轉中的機器拖住,造成嚴重地受傷及意外。
- ◆ 出現某些異常狀況下,如:立即察覺外殼破裂、夾頭損壞或變形,則勿再使用此夾頭,若再使用此種有缺陷夾頭,會造成嚴重地受傷及意外。
- ◆ 切勿作任何再修復、重組甚至重新製造此夾頭之動作,若使用這種重製的夾頭,會造成嚴重地受傷及意外。

### "裝置固定"步驟

- ◆ 夾頭錐部(Tapered part)需用防鏽油清除乾淨,避免灰塵及外來的雜質。
- ◆ 三爪必須縮回至夾頭鼻端的水平線之下。
- ◆ 主軸錐部(Tapered part)或夾頭柄(Arbor)也一定要清乾淨。
- ◆ 將主軸或夾頭柄錐部嵌入夾頭之錐部,嵌入時,注意不要傷到錐部或造成任何裂痕。接著,用木槌捶擊軟鐵棒而將夾頭擊入,注意勿使夾頭從主軸或夾頭柄滑落。
- ◆ 勿直接捶打三爪或前套。



夾持長度(L1)應將鑽頭柄插入到底或至少爪長(L)的2/3。



Z-09

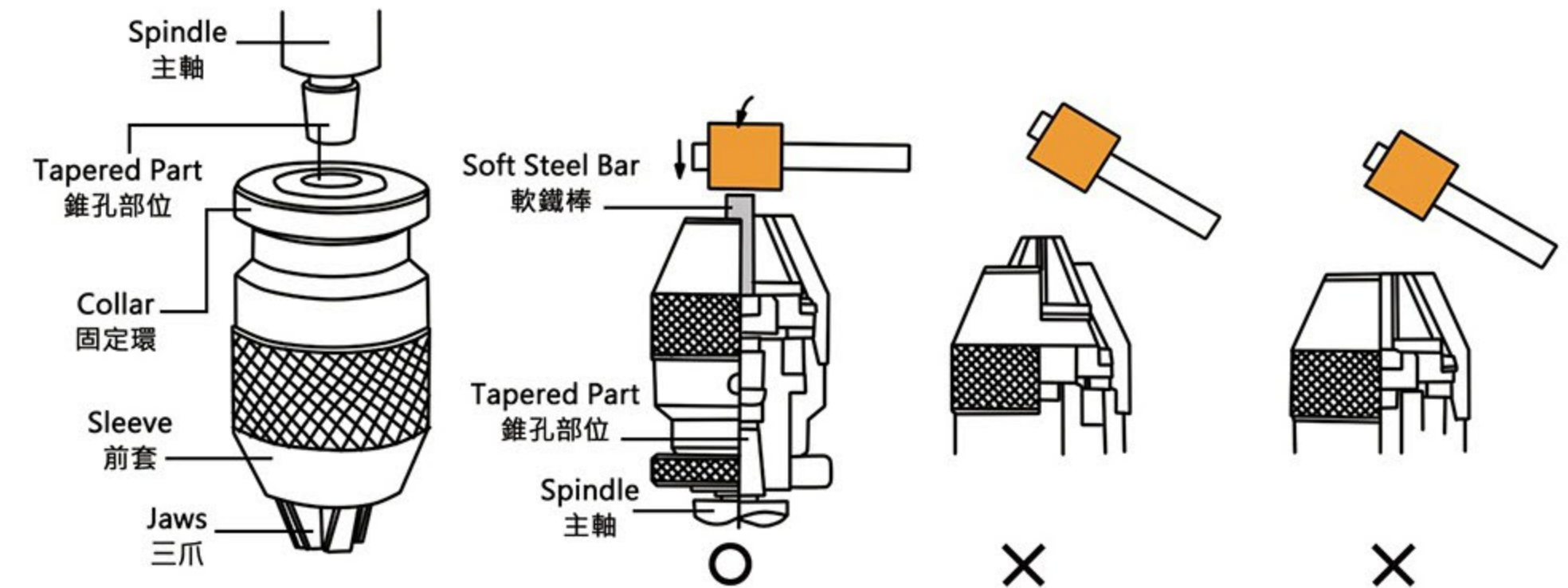
## Keyless Drill Chuck Manual

### CAUTION

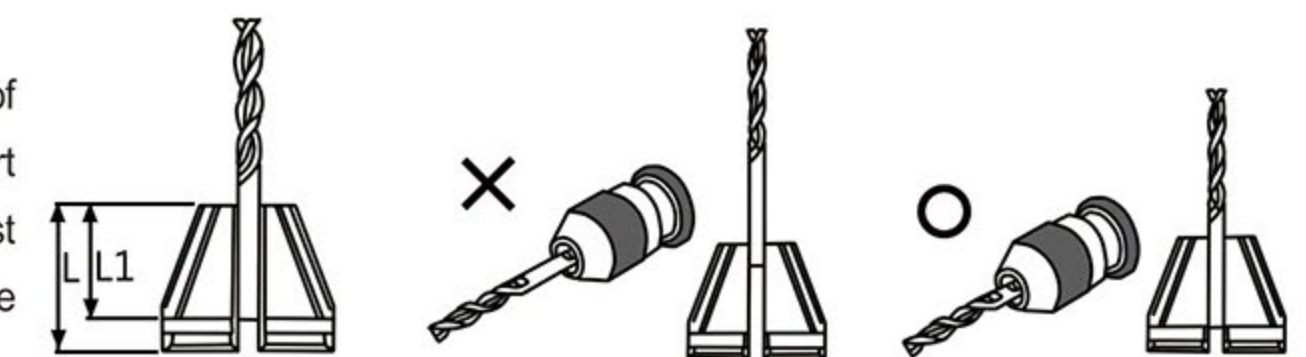
- ◆ Mount the chuck firmly according to "how to mount" in this manual. Otherwise, the chuck might be loosened, which may eventually result in serious bodily injuries or accidents.
- ◆ Check and confirm that the tool is clamped firmly by the three jaws before starting operation. Improper clamping of the tool will cause its abnormal runout, breakage and/or detaching, which may result in serious bodily injuries or accidents.
- ◆ Tighten the chuck strongly by hands. In case of chucking a tool of smaller diameter with a chuck of larger capacity, the automatic tightening mechanism may fail to function properly, which may cause slipping of the tool and eventually its falling down.
- ◆ The chuck cannot be used in CCW rotation. If the chuck is rotated in CCW direction, the tool will be loosened and spin off from the chuck which may cause serious bodily injuries or accidents.
- ◆ The chuck cannot be used to the machine having an emergency stop mechanism. If the machine spindle stops rotating by such emergency stopping, the tool will be loosened and spin off from the chuck, which may cause serious bodily injuries or accidents. (Use our CNC Keyless Chuck or Dream Chuck for the machines having such emergency stop mechanism.)
- ◆ Do not touch the chuck or the tool while being rotated. Otherwise, there will be dangers to be caught by the rotating parts of the machine, which can result in serious bodily injuries or accidents.
- ◆ Do not manipulate the chuck before complete stop of the spindle. Otherwise, there will be dangers to be caught by the rotating parts of the machine, which can result in serious bodily injuries or accidents.
- ◆ Do not use the chuck if some abnormal conditions, like cracks, breakage or transformation are detected thereon. Use of such defective chuck may cause serious bodily injuries or accidents.
- ◆ Do not make any repairing, re-assembling nor remodeling on the chuck. Use of such re-worked chuck may cause serious bodily injuries or accidents.

### How to mount

- ◆ The tapered part of the chuck must well be cleaned off oily material, dust and foreign material.
- ◆ The three jaws must be retracted below the level of the chuck nose.
- ◆ The tapered part of the spindle or the arbor must also well be cleaned.
- ◆ Insert the tapered part of the spindle or the arbor into the tapered part of the chuck, taking care not to make any flaws or damages on any of the tapered parts. And drive the chuck by hammering the edge of the soft steel bar with a wooden hammer, taking care not to let the chuck slip off or fall down from the spindle or the arbor.
- ◆ Do not hammer the jaws nor sleeve.



When you operate, the length of holding capacity (L1) shall insert the drill bit to the bottom or at least insert to 2/3 of the length of three Jaws(L).



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# 專注客戶需求

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彰化工廠：52344彰化縣埤頭鄉永豐村東西路 8 7 號  
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