



 **CHAIN
HEADWAY**



**LEMMA
MACHINE TOOLS CATALOG**

INNOVATION

正河源創立於1991年

致力於切削領域及整合金屬切削方案為客戶解決加工上的問題

近30年來我們累積了應用上的實務經驗，了解客戶需求提供最佳應用方案予客戶，為客戶提高生產率。誠信一直是正河源發展的基石，對於客戶及供應商的密切合作秉持誠實守信原則，遵循國際標準，朝向高精度、高效率、高創新發展，不斷追求技術上的突破，擁有完整的整合優勢及合作經驗，以誠信原則及務實的態度為客戶提供是好的服務。

Chain Headway was established in 1991

We commitment to the cutting offerings and integrated metal cutting solution to enhancing our customer productivity.

We have accumulated know-how and high level of process more than 30 years, to understand our customer needs and provide them a better solution to increase their productivity. Integrity has always been the cornerstone of Chain Headway, process reliability, efficiency and the highest productivity for customer and supplier are therefore guaranteed. We constantly pursuing on technological breakthroughs. Chain Headway offers cutting-edge solutions and innovative products. Our main goal is to provide good faith and pragmatic manner to our customer.



I
V
E



RELIABLE

STABILITY





企業品牌架構

自2013年起正河源透過識別整合以創造企業品牌最大的價值，希望在正河源服務宗旨 - 快速解決客戶的加工需求下更能在企業形象、品牌識別、產品包裝、展覽形象上整體展現出正河源的核心理念。

正河源機械配件有限公司CHAIN-HEADWAY以CC做為主要企業識別，其中綠色的C代表著正河源的生命象徵著繁榮，意謂著開始及暢通，橘色C代表著客戶CUSTOMER的忠誠、尊貴，意謂著雙方的合作關係暢通無阻的生命力及忠誠，以二者「環環相扣」結合，希望與顧客建立緊密的合作關係，打造全新的服務品質，成為顧客信賴的夥伴。

Corporate Brand Architecture

Since 2013 onwards Chain Headway hoped to identify integration by using the corporate brand in order to create the most valued brand, in hoping that Chain Headway service purpose - can quickly resolve customer processing needs & can show more the corporate image, brand identity, product packaging, exhibitions that will show the whole image of Chain Headway core philosophy. Chain Headway Machinery Parts Corp., Ltd. -CHAIN HEADWAY use CC as the main corporate identity, including the green C represents Chain Headway life symbolizes prosperity, which means the start and smooth, orange C represents CUSTOMER loyalty, honor, means the cooperation between the two sides unimpeded vitality and loyalty to both 「chain」 combination, hoping to establish a close working relationship with customers, create all-new service quality to be served as customers trusted partner.

全產品線的完整服務

Full Service of All Product Lines

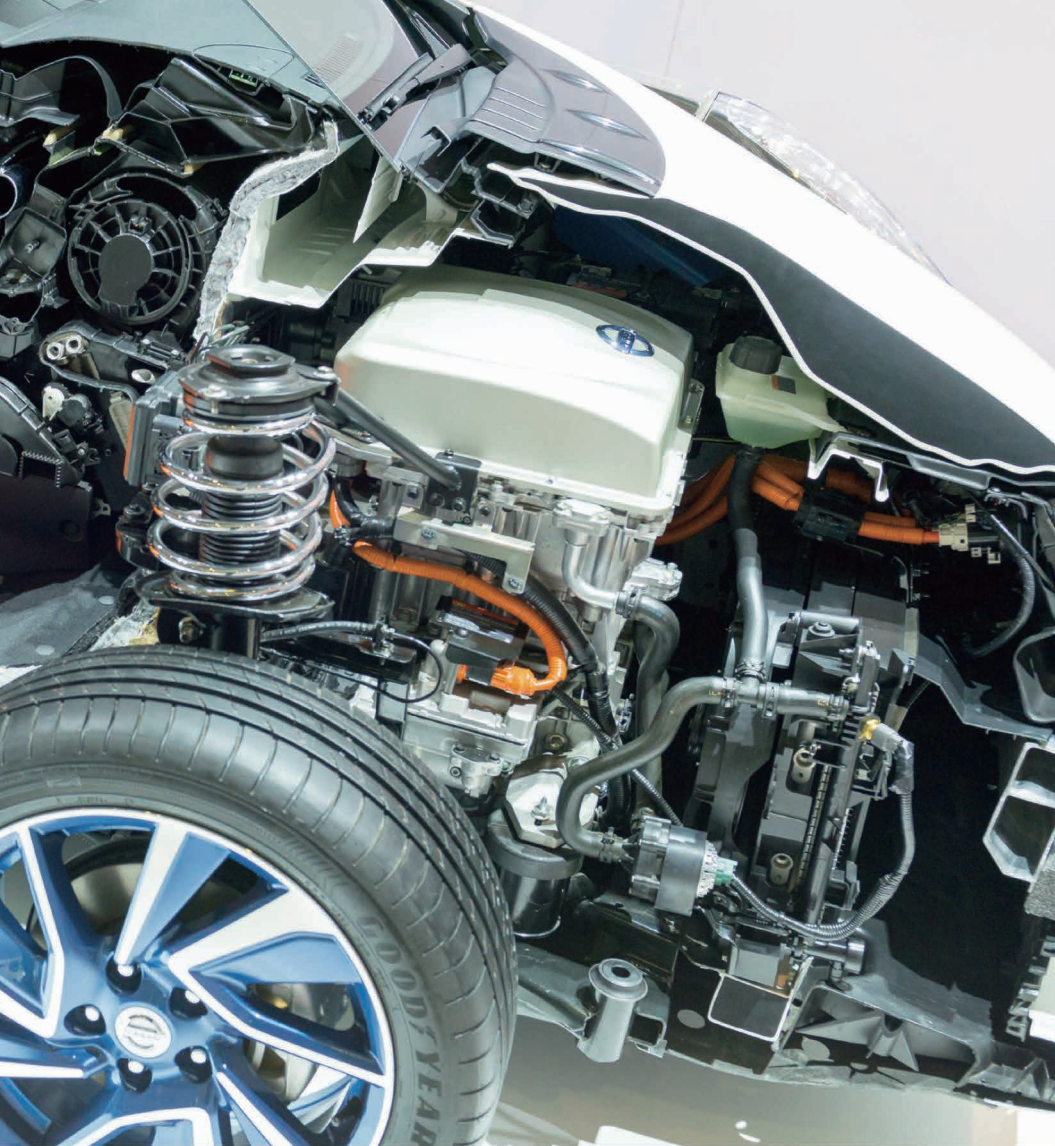
正河源銷售的高性能優質工具產品多達22000多種，其類別含蓋如下：

Chain Headway provides high-performance products more than 22,000 kinds of high-quality tool, which covers the following categories:



精密刀桿
Tool Holder

輔助工具
Supporting Tool



INDUSTRY



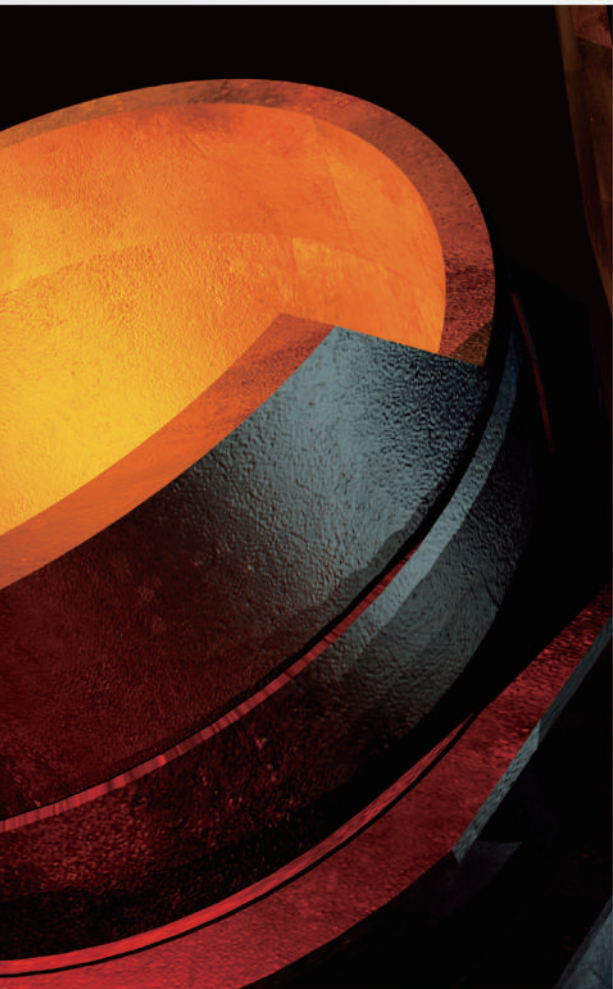
為您量身打造的產業

正河源銷售多達22000多件的產品，也提供客製化產品的服務解決任何加工需求。我們有專業人員可提供最佳的整合方案為客戶創造最大的生產效益。正河源提供切削整合方案及創新研發的產品來幫助客戶在這千變萬化的產業中取得先機。

An Industry Tailored For You

With over 22,000 products, we are able to customize production to suit any manufacturing needs. Our specialists are trained to identify and integrate your tooling systems in order to optimize production. Chain-Headway offer cutting-edge solutions and innovative products that will help your company succeed in an ever-changing industry.

FULL CUSTOMER SERVICE TRAINING&CONSULTING



Cutting



切削系統

正河源在切削領域累積了多年的實務經驗，因此，針對不同之客戶皆可提供專業的工藝方案為客戶在最短時間內克服加工上的難題。

Chain Headway have accumulated many years of practical experience in the field of cutting, so we can provide professional work for different customers. The art solution allows customers to overcome the processing problems in the shortest time.

Clamping



夾治具系統

整合現有夾具治資源及與歐洲配合零點定位系統，可將夾治具與機台床台做為快速更換的連接，提升機台稼動率，更是邁向自動化的前哨戰。

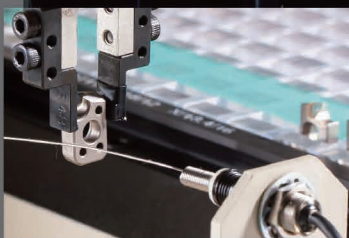
Integrating the existing fixture management resources and cooperating with the zero positioning system in Europe, the fixture and the machine bed can be used as a quick-change connection to increase the utilization rate of the machine, and it is an out-of-war battle for automation.

全面性服務 Total Solution

客製化服務 Customized Service

金屬切削領域切削方式千變萬化，要找到特殊加工或合適之加工刀具與刀片相當不易，為解決以上問題其最有效之方式就是找到合適的合作夥伴，而正河源就是您最佳的夥伴，正河源在專業的客製化服務已經長達20年之久，多年來累積了許多實際案例，我們相信一定能成為您事業上的好夥伴且提供您全面性的規劃，正河源相信從幫助規劃到生產一定能提高到最高效益。

The cutting method in the field of metal cutting is ever-changing. It is quite difficult to find special machining or suitable machining tools and inserts. The most effective way to solve the above problems is to find a suitable partner, and Chain Headway is your best partner. Chain Headway is in Professional customized service has been for 20 years. Many practical cases have been accumulated over the years. We believe that we can be a good partner in your business and provide you with comprehensive planning. Chain Headway believes that from planning to production can improve to the highest efficiency.



客戶需求

Customer demand



專業研發團隊

Professional R&D team

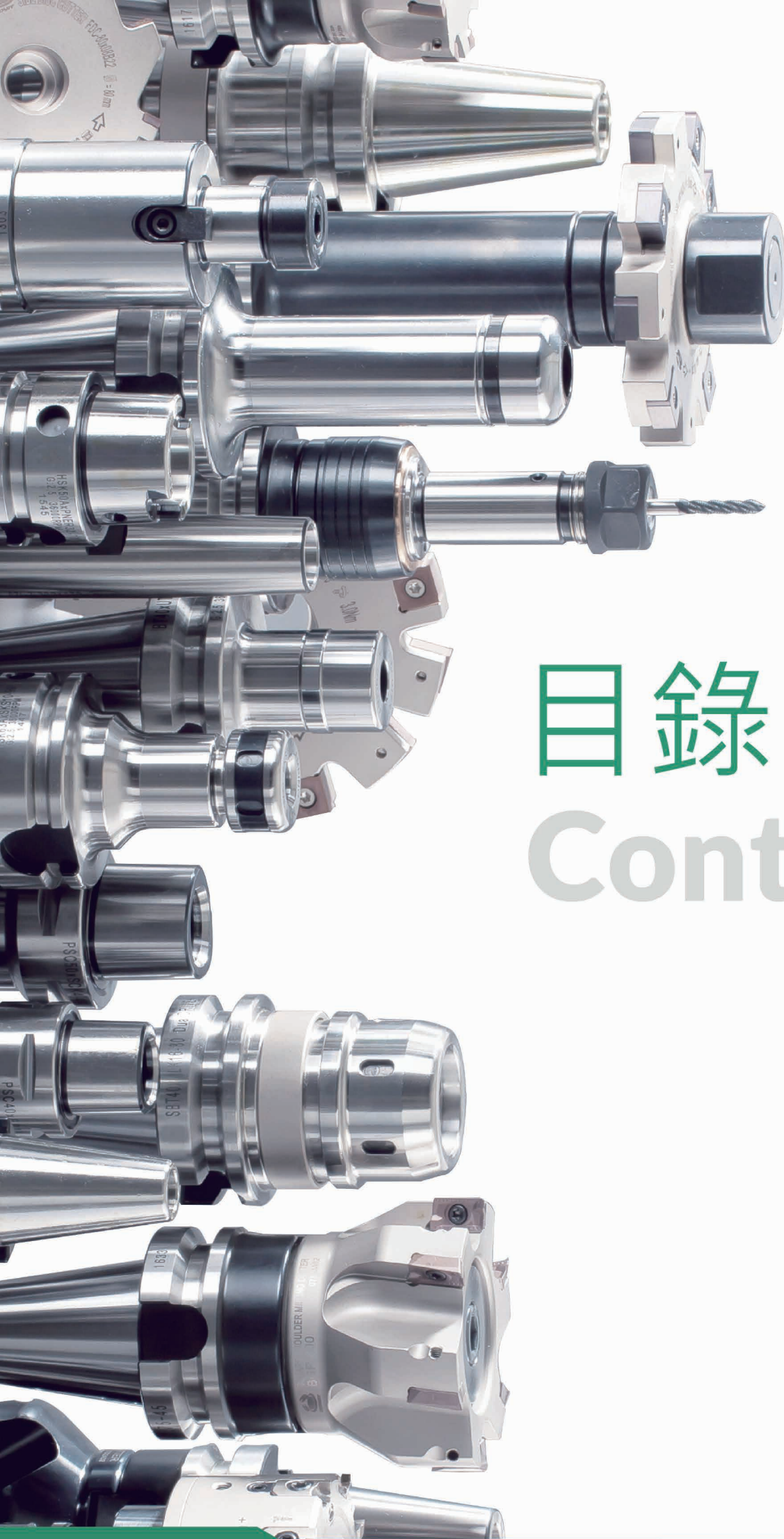


專業製造團隊

Professional manufacturing team

測試與完成

Testing and completion































































目錄

Content

目錄索引

INDEX

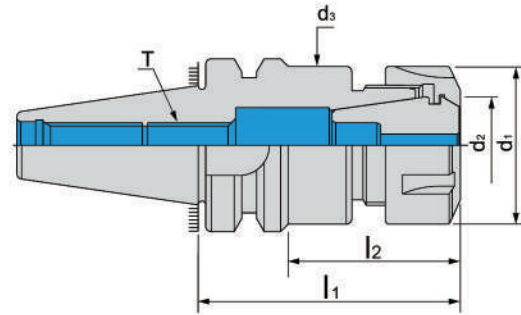
產品 Product	頁數 Page	產品 Product	頁數 Page	產品 Product	頁數 Page
 BT/ER 立銑刀夾頭 Collet Chuck	12	 TPL 實用型直柄伸縮攻牙器 Practical Straight Shank Tapper	38	 ER 扳手 Spanner	61
 ER 彈性筒夾 Collet	14	 TCS 扭力絲攻筒夾 Quick Change Tapping Collet	39	 CHW-V 角固式油壓精密虎鉗 Hydraulic & Angle Lock Vise	62
 BT/MLC 直式筒夾銑床夾頭 Multi-Lock Milling Chuck	21	 ER 鋼性攻牙筒夾 Rigid Tap Collet	42	 LM-VE-P 倍力式虎鉗 Mechanical Power Vise	63
 SSC 直式彈性筒夾 Straight Shank Collet	21	 SMB 超微米精磨頭 Super Micron Finish Boring Head	47	 LM-OKV 迷你虎鉗 Mini Vise	65
 BT/MTA 斜柄鑽頭套筒 Morse Taper Adapter	22	 CK 擴孔頭刀桿 Boring Head Shank	48	 SC-68 標準型注油式替換頂尖 Grease-Injected Center Device	66
 BT/MTB 斜柄鑽頭套筒 Morse Taper Adapter	23	 SCK 等徑延長桿 Extension Constant Diameter	49	 SC-66 自動可調式插式頂尖 Automatic Adjustable Inserted Center	67
 BT/FMB 平面銑刀柄 Mill Arbor(Type FMB)	24	 C/BS 直柄擴孔頭刀柄 Straight Boring Holder	49	 SC-69 標準型注油式替換頂尖 Oil Injection Rotary Center(Standard type)	68
 BT/FMB-BG 平面銑刀柄 (加斜度柄) Mill Arbor(Extension Type)	25	 SCK 可調整式雙刃粗擴孔頭 Indexable Twin-Bit Rough Boring Head	50	 MRC-MT 車床頂尖 (標準型) Lathe Centers(Standard)	68
 BT/SCA 側銑刀柄 Side Cutter Adapter	26	 NBH 精密精磨孔頭 Precision Boring Head	51	 SC-60 強力型重負荷迴轉頂尖 Super-load Heavy Cutting Center	69
 BT/SLN-JIS 側固式立銑刀柄 (JIS 型) Side Lock End Mill Holder(JIS Type)	27	 RBH/NBH/BST 擴孔頭刀柄 Boring Head Shank	51	 SC-67 固定替換式插式頂尖 Fixed Interchangeable Insert Center	70
 C/SL 直柄側固式延長小徑刀柄 Straight Extension Side Lock Holder	29	 NBH 精密擴孔套裝組 Precision Boring Head Set	52	 LM 萬向磁性表座 Universal Arm Magnetic Base	71
 SPU 鑽夾頭 Drill Chuck Adapter	30	 SBJ 高精密擴孔頭 Boring Head For Finishing	53	 LM-DH 刀具設定機 Tool Pre-setter	72
 BT/SPU 直結式鑽夾頭 Drill Chuck Adapter	31	 CBH/DP 減震精磨頭 Damping Finish Boring Head	55	 萬能夾具組 Clamping Kit	74
 NT/SPU 直結式鑽夾頭 Drill Chuck Adapter	31	 BT 研磨螺栓拉頭 Pull Studs For Polish	56	 GP 虎鉗平行板 Vise Parallel Set	75
 BT/SPH 強力型直結式鑽夾頭刀桿 Drill Chuck Adapter	32	 BT/HS 研磨螺栓拉頭 Pull Studs For Polish	57	 LM-SG 快速鑽頭研磨機 Fast Drill Re-sharpening Machine	76
 BT/LHC 扭力型液壓刀桿 Torque Hydraulic Toolholder	34	 MAZAK 研磨螺栓拉頭 Pull Studs For Polish	57	 LM-SG 快速端銑刀研磨機 Fast End Mill Re-sharpening Machine	78
 HSK(A)/LHC 扭力型液壓刀桿 Torque Hydraulic Toolholder	34	 BT/CAT/DAT 鑽刀座 Tool Holder Locking Device	58	 LM-SG-SD 快速鑽頭研磨機 Fast Drill Re-sharpening Machine	80
 HYC 液壓筒夾 Hydraulic Collet	35	 HSK 鑽刀座 Tool Holder Locking Device	58	 LM-SG 圓棒切斷研磨機 Rounded Bar Cut Off Re-sharpening Machine	82
 STH/CX 同步補償剛性攻牙器 Synchro Tapping Holder	36	 PS 拉頭專用扳手 Spanner For Pull Stud	59		
 STH/CX 同步補償剛性攻牙器 (加長型) Synchro Tapping Holder	36	 ME 備心式尋邊器 Mechanical Edge Finder	60		
 BT/TPH 攻牙刀桿 Tapping Holder	37	 CME 備心式尋邊器 Mechanical Edge Finder	60		
 BT 快換式伸縮 / 扭力攻牙刀桿 Change Tapping Chuck	38	 SR 迴轉式尋邊器 (精密型) Touch Point Sensor	61		



BT/ER 立銑刀夾頭

BT/ER COLLET CHUCK

DIN-ISO-15488



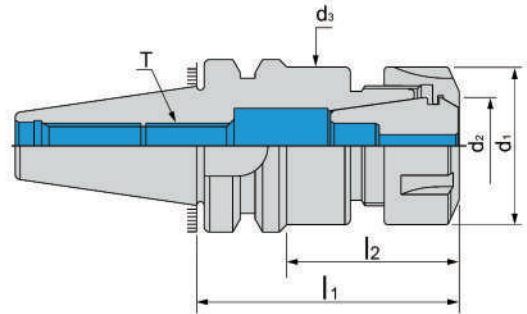
規格 Spec.	l_1	l_2	d_1	d_2	d_3	T	夾持範圍 Clamping Range	重量 (KGS) Weight
BT30 x ER16A-70	70	40	28	16	28	M10x1.5P	Ø1-Ø10	0.57
BT30 x ER16A-100	100	70	28	16	28	M10x1.5P	Ø1-Ø10	0.70
BT30 x ER16A-120	120	93	28	16	28	M10x1.5P	Ø1-Ø10	0.95
BT30 x ER20A-70	70	45	34	20	34	M12x1.75P	Ø1-Ø13	0.61
BT30 x ER20A-100	100	63	34	20	34	M12x1.75P	Ø1-Ø13	0.80
BT30 x ER20A-135	135	110	34	20	34	M12x1.75P	Ø1-Ø13	1.15
BT30 x ER25-70	70	46	42	25	42	M16x2.0P	Ø1-Ø16	0.68
BT30 x ER25-135	135	111	42	25	42	M16x2.0P	Ø1-Ø16	1.47
BT30 x ER32-100	100	78	50	32	45	M16x2.0P	Ø2-Ø20	1.04
BT30 x ER40-80	80	58	63	40	53	M16x2.0P	Ø3-Ø26	0.94
BT40 x ER16A-70	70	40	28	16	28	M10x1.5P	Ø1-Ø10	1.16
BT40 x ER16A-100	100	63	28	16	28	M10x1.5P	Ø1-Ø10	1.29
BT40 x ER16A-125	125	88	28	16	28	M10x1.5P	Ø1-Ø10	1.36
BT40 x ER16A-150	150	113	28	16	28	M10x1.5P	Ø1-Ø10	1.57
BT40 x ER16A-180	180	143	28	16	28	M10x1.5P	Ø1-Ø10	1.54
BT40 x ER20A-70	70	40	34	20	34	M12x1.75P	Ø1-Ø13	1.19
BT40 x ER20A-100	100	63	34	20	34	M12x1.75P	Ø1-Ø13	1.40
BT40 x ER20A-135	135	98	34	20	34	M12x1.75P	Ø1-Ø13	1.69
BT40 x ER20A-150	150	113	34	20	34	M12x1.75P	Ø1-Ø13	1.78
BT40 x ER25-70	70	40	42	25	42	M16x2.0P	Ø1-Ø16	1.24
BT40 x ER25-100	90	70	42	25	42	M16x2.0P	Ø1-Ø16	1.52
BT40 x ER25-125	125	95	42	25	42	M16x2.0P	Ø1-Ø16	1.86
BT40 x ER25-150	150	115	42	25	42	M16x2.0P	Ø1-Ø16	2.11
BT40 x ER32-70	70	40	50	32	45	M16x2.0P	Ø2-Ø20	1.28
BT40 x ER32-100	100	70	50	32	45	M16x2.0P	Ø2-Ø20	1.70
BT40 x ER32-150	150	118	50	32	45	M16x2.0P	Ø2-Ø20	2.49
BT40 x ER40-80	80	53	63	40	60	-	Ø3-Ø26	1.49
BT40 x ER40-100	100	73	63	40	60	M20x2.0P	Ø3-Ø26	1.90
BT40 x ER40-120	120	93	63	40	60	M20x2.0P	Ø3-Ø26	2.45
BT40 x ER40-150	150	123	63	40	60	M20x2.0P	Ø3-Ø26	3.05



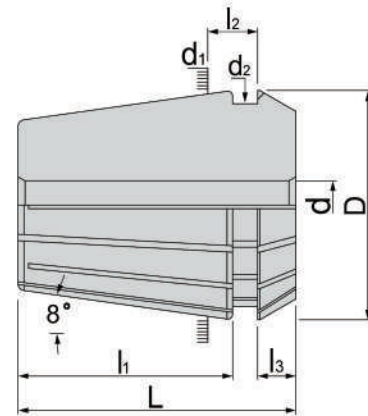
BT/ER 立銑刀夾頭

BT/ER COLLET CHUCK

DIN-ISO-15488



規格 Spec.	l_1	l_2	d_1	d_2	d_3	T	夾持範圍 Clamping Range	重量 (KGS) Weight
BT50 x ER16A-70	70	29	28	16	28	M10x1.5P	Ø1-Ø10	4.10
BT50 x ER16A-90	90	47	28	16	28	M10x1.5P	Ø1-Ø10	4.16
BT50 x ER16A-105	105	57	28	16	28	M10x1.5P	Ø1-Ø10	4.19
BT50 x ER16A-135	135	87	28	16	28	M10x1.5P	Ø1-Ø10	4.19
BT50 x ER16A-150	150	102	28	16	28	M10x1.5P	Ø1-Ø10	4.46
BT50 x ER16A-165	165	117	28	16	28	M10x1.5P	Ø1-Ø10	4.36
BT50 x ER20A-70	70	29	34	20	34	M12x1.75P	Ø1-Ø13	4.09
BT50 x ER20A-90	90	47	34	20	34	M12x1.75P	Ø1-Ø13	4.18
BT50 x ER20A-105	105	57	34	20	34	M12x1.75P	Ø1-Ø13	4.28
BT50 x ER20A-135	135	87	34	20	34	M12x1.75P	Ø1-Ø13	4.37
BT50 x ER20A-150	150	102	34	20	34	M12x1.75P	Ø1-Ø13	4.47
BT50 x ER20A-165	165	117	34	20	34	M12x1.75P	Ø1-Ø13	4.55
BT50 x ER20A-200	200	152	34	20	34	M12x1.75P	Ø1-Ø13	4.74
BT50 x ER25-70	70	29	42	25	42	M16x2.0P	Ø1-Ø16	4.16
BT50 x ER25-105	105	57	42	25	42	M16x2.0P	Ø1-Ø16	4.45
BT50 x ER25-135	135	87	42	25	42	M16x2.0P	Ø1-Ø16	4.57
BT50 x ER25-165	165	117	42	25	42	M16x2.0P	Ø1-Ø16	4.89
BT50 x ER25-200	200	-	42	25	42	M16x2.0P	Ø1-Ø16	5.22
BT50 x ER32-80	80	39	50	32	50	M16x2.0P	Ø2-Ø20	4.21
BT50 x ER32-100	100	57	50	32	50	M16x2.0P	Ø2-Ø20	4.47
BT50 x ER32-120	120	72	50	32	50	M16x2.0P	Ø2-Ø20	4.90
BT50 x ER32-150	150	102	50	32	50	M16x2.0P	Ø2-Ø20	5.01
BT50 x ER32-200	200	152	50	32	50	M16x2.0P	Ø2-Ø20	5.71
BT50 x ER32-250	250	-	50	32	50	M16x2.0P	Ø2-Ø20	5.80
BT50 x ER40-80	80	39	63	40	63	M20x2.0P	Ø3-Ø26	4.26
BT50 x ER40-100	100	57	63	40	63	M20x2.0P	Ø3-Ø26	4.71
BT50 x ER40-120	120	72	63	40	63	M20x2.0P	Ø3-Ø26	5.05
BT50 x ER40-135	135	87	63	40	63	M20x2.0P	Ø3-Ø26	5.36
BT50 x ER40-150	150	-	63	40	63	M20x2.0P	Ø3-Ø26	5.68
BT50 x ER40-200	200	-	63	40	63	M20x2.0P	Ø3-Ø26	7.00



特點 Feature

- 材質 :SUJ2。(高碳軸承鋼：在熱處理後，具有堅韌的硬度與韌性，更好的耐磨耗性，且彈性佳使用壽命更長)
- 硬度 :HRC46°
- 表面粗糙度 RZ2.5 以內
- 同心度按 DIN 標準規範全數檢驗，共計有三種精度等級，普通級 0.02mm、A 級 0.01mm 及 UP 級 0.005mm
- UP 級建議配合 HSP 螺帽使用，其穩定性更好
- 用於夾持鑽頭、螺絲攻、銑刀、鉸刀等工具
- 具有彈性伸縮的功能、應用範圍廣、附變化性
- 訂購時請告知所需精度等級

- Steel:SUJ2(High-carbon bearing steel : After heat treatment, it has hardness and toughness, better grinding quality, good flexibility, and longer using life span.)
- HRC46°
- Surface roughness : within RZ2.5.
- The concentricity is totally examined according to DIN norm. There are three kinds of classes for precision : general class 0.02mm, A class 0.01mm, and UP class 0.005mm.
- UP class is recommended to be used with HSP clamping nut. It will have better stability.
- It is used for the cutting tools like drills, taps ,mills, and reamers , etc.
- It has flexibility and can be applied widely and variably.
- Please inform the required precision when ordering.

規格 Spec.	尺寸範圍 Size Range	L	l ₁	l ₂	l ₃	D	d ₁	d ₂	重量 (KGS) Weight
ER11	1~7.0	18	13.5	3.8	2.5	11.5	11	9.5	0.01
ER16	1~10.0	27.5	20.8	6.26	4	17	16	13.8	0.03
ER20	1~13.0	31.5	23.9	6.36	4.8	21	20	17.4	0.04
ER25	2~16.0	34	25.9	6.66	5	26	25	22	0.06
ER32	2~20.0	40	30.9	7.16	5.5	33	32	29.2	0.10
ER40	3~26.0	46	34.9	7.66	7	41	40	36.2	0.25



精度 (普通級) Accuracy : 0.02mm

ER11

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER11-1	1~0.5	0.02
ER11-1.5	1.5~1	0.02
ER11-2	2~1.5	0.02
ER11-2.5	2.5~2	0.02
ER11-3	3~2.5	0.02
ER11-3.5	3.5~3	0.02
ER11-4	4~3.5	0.02
ER11-4.5	4.5~4	0.02
ER11-5	5~4.5	0.02
ER11-5.5	5.5~5	0.02
ER11-6	6~5.5	0.02
ER11-6.5	6.5~6	0.02
ER11-7	7~6.5	0.02

ER16

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER16-1	1~0.5	0.02
ER16-1.5	1.5~1	0.02
ER16-2	2~1.5	0.02
ER16-2.5	2.5~2	0.02
ER16-3	3~2	0.02
ER16-3.5	3.5~2.5	0.02
ER16-4	4~3	0.02
ER16-4.5	4.5~3.5	0.02
ER16-5	5~4	0.02
ER16-5.5	5.5~4.5	0.02
ER16-6	6~5	0.02
ER16-6.5	6.5~5.5	0.02
ER16-7	7~6	0.02
ER16-7.5	7.5~6.5	0.02
ER16-8	8~7	0.02
ER16-8.5	8.5~7.5	0.02
ER16-9	9~8	0.02
ER16-9.5	9.5~8.5	0.02
ER16-10	10~9	0.02

ER20

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER20-1	1~0.5	0.02
ER20-1.5	1.5~1	0.02
ER20-2	2~1.5	0.02
ER20-2.5	2.5~2	0.02
ER20-3	3~2	0.02
ER20-3.5	3.5~2.5	0.02
ER20-4	4~3	0.02
ER20-4.5	4.5~3.5	0.02
ER20-5	5~4	0.02
ER20-5.5	5.5~4.5	0.02
ER20-6	6~5	0.02
ER20-6.5	6.5~5.5	0.02
ER20-7	7~6	0.02
ER20-7.5	7.5~6.5	0.02
ER20-8	8~7	0.02
ER20-8.5	8.5~7.5	0.02
ER20-9	9~8	0.02
ER20-9.5	9.5~8.5	0.02
ER20-10	10~9	0.02
ER20-10.5	10.5~9.5	0.02
ER20-11	11~10	0.02
ER20-11.5	11.5~10.5	0.02
ER20-12	12~11	0.02
ER20-12.5	12.5~11.5	0.02
ER20-13	13~12	0.02

ER25

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER25-1	1~0.5	0.02
ER25-1.5	1.5~1	0.02
ER25-2	2~1.5	0.02
ER25-2.5	2.5~2	0.02
ER25-3	3~2	0.02
ER25-3.5	3.5~2.5	0.02
ER25-4	4~3	0.02
ER25-4.5	4.5~3.5	0.02
ER25-5	5~4	0.02
ER25-5.5	5.5~4.5	0.02
ER25-6	6~5	0.02
ER25-6.5	6.5~5.5	0.02

ER25

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER25-7	7~6	0.02
ER25-7.5	7.5~6.5	0.02
ER25-8	8~7	0.02
ER25-8.5	8.5~7.5	0.02
ER25-9	9~8	0.02
ER25-9.5	9.5~8.5	0.02
ER25-10	10~9	0.02
ER25-10.5	10.5~9.5	0.02
ER25-11	11~10	0.02
ER25-11.5	11.5~10.5	0.02
ER25-12	12~11	0.02
ER25-12.5	12.5~11.5	0.02
ER25-13	13~12	0.02
ER25-13.5	13.5~12.5	0.02
ER25-14	14~13	0.02
ER25-14.5	14.5~13.5	0.02
ER25-15	15~14	0.02
ER25-15.5	15.5~14.5	0.02
ER25-16	16~15	0.02

ER32

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER32-2	2~1.5	0.02
ER32-2.5	2.5~2	0.02
ER32-3	3~2	0.02
ER32-3.5	3.5~2.5	0.02
ER32-4	4~3	0.02
ER32-4.5	4.5~3.5	0.02
ER32-5	5~4	0.02
ER32-5.5	5.5~4.5	0.02
ER32-6	6~5	0.02



精度 (普通級) Accuracy : 0.02mm

ER32

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER32-6.5	6.5~5.5	0.02
ER32-7	7~6	0.02
ER32-7.5	7.5~6.5	0.02
ER32-8	8~7	0.02
ER32-8.5	8.5~7.5	0.02
ER32-9	9~8	0.02
ER32-9.5	9.5~8.5	0.02
ER32-10	10~9	0.02
ER32-10.5	10.5~9.5	0.02
ER32-11	11~10	0.02
ER32-11.5	11.5~10.5	0.02
ER32-12	12~11	0.02
ER32-12.5	12.5~11.5	0.02
ER32-13	13~12	0.02
ER32-13.5	13.5~12.5	0.02
ER32-14	14~13	0.02
ER32-14.5	14.5~13.5	0.02
ER32-15	15~14	0.02
ER32-15.5	15.5~14.5	0.02
ER32-16	16~15	0.02
ER32-16.5	16.5~15.5	0.02
ER32-17	17~16	0.02
ER32-17.5	17.5~16.5	0.02
ER32-18	18~17	0.02
ER32-18.5	18.5~17.5	0.02
ER32-19	19~18	0.02
ER32-19.5	19.5~18.5	0.02
ER32-20	20~19	0.02

ER40

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER40-3	3~2	0.02
ER40-3.5	3.5~2.5	0.02
ER40-4	4~3	0.02
ER40-4.5	4.5~3.5	0.02
ER40-5	5~4	0.02
ER40-5.5	5.5~4.5	0.02
ER40-6	6~5	0.02
ER40-6.5	6.5~5.5	0.02
ER40-7	7~6	0.02
ER40-7.5	7.5~6.5	0.02
ER40-8	8~7	0.02
ER40-8.5	8.5~7.5	0.02
ER40-9	9~8	0.02
ER40-9.5	9.5~8.5	0.02
ER40-10	10~9	0.02
ER40-10.5	10.5~9.5	0.02
ER40-11	11~10	0.02
ER40-11.5	11.5~10.5	0.02
ER40-12	12~11	0.02
ER40-12.5	12.5~11.5	0.02
ER40-13	13~12	0.02
ER40-13.5	13.5~12.5	0.02
ER40-14	14~13	0.02
ER40-14.5	14.5~13.5	0.02
ER40-15	15~14	0.02
ER40-15.5	15.5~14.5	0.02
ER40-16	16~15	0.02
ER40-16.5	16.5~15.5	0.02

ER40

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER40-17	17~16	0.02
ER40-17.5	17.5~16.5	0.02
ER40-18	18~17	0.02
ER40-18.5	18.5~17.5	0.02
ER40-19	19~18	0.02
ER40-19.5	19.5~18.5	0.02
ER40-20	20~19	0.02
ER40-20.5	20.5~19.5	0.02
ER40-21	21~20	0.02
ER40-21.5	21.5~20.5	0.02
ER40-22	22~21	0.02
ER40-22.5	22.5~21.5	0.02
ER40-23	23~22	0.02
ER40-23.5	23.5~22.5	0.02
ER40-24	24~23	0.02
ER40-24.5	24.5~23.5	0.02
ER40-25	25~24	0.02
ER40-25.5	25.5~24.5	0.02
ER40-26	26~25	0.02



精度 (A 級) Accuracy : 0.01mm

ER11-A

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER11-1-A	1~0.5	0.01
ER11-1.5-A	1.5~1	0.01
ER11-2-A	2~1.5	0.01
ER11-2.5-A	2.5~2	0.01
ER11-3-A	3~2.5	0.01
ER11-3.5-A	3.5~3	0.01
ER11-4-A	4~3.5	0.01
ER11-4.5-A	4.5~4	0.01
ER11-5-A	5~4.5	0.01
ER11-5.5-A	5.5~4.5	0.01
ER11-6-A	6~5.5	0.01
ER11-6.5-A	6.5~6	0.01
ER11-7-A	7~6.5	0.01

ER16-A

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER16-1-A	1~0.5	0.01
ER16-1.5-A	1.5~1	0.01
ER16-2-A	2~1.5	0.01
ER16-2.5-A	2.5~2	0.01
ER16-3-A	3~2	0.01
ER16-3.5-A	3.5~2.5	0.01
ER16-4-A	4~3	0.01
ER16-4.5-A	4.5~3.5	0.01
ER16-5-A	5~4	0.01
ER16-5.5-A	5.5~4.5	0.01
ER16-6-A	6~5	0.01
ER16-6.5-A	6.5~5.5	0.01
ER16-7-A	7~6	0.01
ER16-7.5-A	7.5~6.5	0.01
ER16-8-A	8~7	0.01
ER16-8.5-A	8.5~7.5	0.01
ER16-9-A	9~8	0.01
ER16-9.5-A	9.5~8.5	0.01
ER16-10-A	10~9	0.01

ER20-A

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER20-1-A	1~0.5	0.01
ER20-1.5-A	1.5~1	0.01
ER20-2-A	2~1.5	0.01
ER20-2.5-A	2.5~2	0.01
ER20-3-A	3~2	0.01
ER20-3.5-A	3.5~2.5	0.01
ER20-4-A	4~3	0.01
ER20-4.5-A	4.5~3.5	0.01
ER20-5-A	5~4	0.01
ER20-5.5-A	5.5~4.5	0.01
ER20-6-A	6~5	0.01
ER20-6.5-A	6.5~5.5	0.01
ER20-7-A	7~6	0.01
ER20-7.5-A	7.5~6.5	0.01
ER20-8-A	8~7	0.01
ER20-8.5-A	8.5~7.5	0.01
ER20-9-A	9~8	0.01
ER20-9.5-A	9.5~8.5	0.01
ER20-10-A	10~9	0.01
ER20-10.5-A	10.5~9.5	0.01
ER20-11-A	11~10	0.01
ER20-11.5-A	11.5~10.5	0.01
ER20-12-A	12~11	0.01
ER20-12.5-A	12.5~11.5	0.01
ER20-13-A	13~12	0.01

ER25-A

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER25-1-A	1~0.5	0.01
ER25-1.5-A	1.5~1	0.01
ER25-2-A	2~1.5	0.01
ER25-2.5-A	2.5~2	0.01
ER25-3-A	3~2	0.01
ER25-3.5-A	3.5~2.5	0.01
ER25-4-A	4~3	0.01
ER25-4.5-A	4.5~3.5	0.01
ER25-5-A	5~4	0.01
ER25-5.5-A	5.5~4.5	0.01
ER25-6-A	6~5	0.01
ER25-6.5-A	6.5~5.5	0.01

ER25-A

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER25-7-A	7~6	0.01
ER25-7.5-A	7.5~6.5	0.01
ER25-8-A	8~7	0.01
ER25-8.5-A	8.5~7.5	0.01
ER25-9-A	9~8	0.01
ER25-9.5-A	9.5~8.5	0.01
ER25-10-A	10~9	0.01
ER25-10.5-A	10.5~9.5	0.01
ER25-11-A	11~10	0.01
ER25-11.5-A	11.5~10.5	0.01
ER25-12-A	12~11	0.01
ER25-12.5-A	12.5~11.5	0.01
ER25-13-A	13~12	0.01
ER25-13.5-A	13.5~12.5	0.01
ER25-14-A	14~13	0.01
ER25-14.5-A	14.5~13.5	0.01
ER25-15-A	15~14	0.01
ER25-15.5-A	15.5~14.5	0.01
ER25-16-A	16~15	0.01

ER32-A

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER32-2-A	2~1.5	0.01
ER32-2.5-A	2.5~2	0.01
ER32-3-A	3~2	0.01
ER32-3.5-A	3.5~2.5	0.01
ER32-4-A	4~3	0.01
ER32-4.5-A	4.5~3.5	0.01
ER32-5-A	5~4	0.01
ER32-5.5-A	5.5~4.5	0.01
ER32-6-A	6~5	0.01



精度 (A 級) Accuracy : 0.01mm

ER32-A

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER32-6.5-A	6.5~5.5	0.01
ER32-7-A	7~6	0.01
ER32-7.5-A	7.5~6.5	0.01
ER32-8-A	8~7	0.01
ER32-8.5-A	8.5~7.5	0.01
ER32-9-A	9~8	0.01
ER32-9.5-A	9.5~8.5	0.01
ER32-10-A	10~9	0.01
ER32-10.5-A	10.5~9.5	0.01
ER32-11-A	11~10	0.01
ER32-11.5-A	11.5~10.5	0.01
ER32-12-A	12~11	0.01
ER32-12.5-A	12.5~11.5	0.01
ER32-13-A	13~12	0.01
ER32-13.5-A	13.5~12.5	0.01
ER32-14-A	14~13	0.01
ER32-14.5-A	14.5~13.5	0.01
ER32-15-A	15~14	0.01
ER32-15.5-A	15.5~14.5	0.01
ER32-16-A	16~15	0.01
ER32-16.5-A	16.5~15.5	0.01
ER32-17-A	17~16	0.01
ER32-17.5-A	17.5~16.5	0.01
ER32-18-A	18~17	0.01
ER32-18.5-A	18.5~17.5	0.01
ER32-19-A	19~18	0.01
ER32-19.5-A	19.5~18.5	0.01
ER32-20-A	20~19	0.01

ER40-A

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER40-3-A	3~2	0.01
ER40-3.5-A	3.5~2.5	0.01
ER40-4-A	4~3	0.01
ER40-4.5-A	4.5~3.5	0.01
ER40-5-A	5~4	0.01
ER40-5.5-A	5.5~4.5	0.01
ER40-6-A	6~5	0.01
ER40-6.5-A	6.5~5.5	0.01
ER40-7-A	7~6	0.01
ER40-7.5-A	7.5~6.5	0.01
ER40-8-A	8~7	0.01
ER40-8.5-A	8.5~7.5	0.01
ER40-9-A	9~8	0.01
ER40-9.5-A	9.5~8.5	0.01
ER40-10-A	10~9	0.01
ER40-10.5-A	10.5~9.5	0.01
ER40-11-A	11~10	0.01
ER40-11.5-A	11.5~10.5	0.01
ER40-12-A	12~11	0.01
ER40-12.5-A	12.5~11.5	0.01
ER40-13-A	13~12	0.01
ER40-13.5-A	13.5~12.5	0.01
ER40-14-A	14~13	0.01
ER40-14.5-A	14.5~13.5	0.01
ER40-15-A	15~14	0.01
ER40-15.5-A	15.5~14.5	0.01
ER40-16-A	16~15	0.01
ER40-16.5-A	16.5~15.5	0.01

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER40-17-A	17~16	0.01
ER40-17.5-A	17.5~16.5	0.01
ER40-18-A	18~17	0.01
ER40-18.5-A	18.5~17.5	0.01
ER40-19-A	19~18	0.01
ER40-19.5-A	19.5~18.5	0.01
ER40-20-A	20~19	0.01
ER40-20.5-A	20.5~19.5	0.01
ER40-21-A	21~20	0.01
ER40-21.5-A	21.5~20.5	0.01
ER40-22-A	22~21	0.01
ER40-22.5-A	22.5~21.5	0.01
ER40-23-A	23~22	0.01
ER40-23.5-A	23.5~22.5	0.01
ER40-24-A	24~23	0.01
ER40-24.5-A	24.5~23.5	0.01
ER40-25-A	25~24	0.01
ER40-25.5-A	25.5~24.5	0.01
ER40-26-A	26~25	0.01



精度 (UP 級) Accuracy : 0.005mm

ER11-UP

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER11-1-UP	1~0.5	0.005
ER11-1.5-UP	1.5~1	0.005
ER11-2-UP	2~1.5	0.005
ER11-2.5-UP	2.5~2	0.005
ER11-3-UP	3~2.5	0.005
ER11-3.5-UP	3.5~3	0.005
ER11-4-UP	4~3.5	0.005
ER11-4.5-UP	4.5~4	0.005
ER11-5-UP	5~4.5	0.005
ER11-5.5-UP	5.5~5	0.005
ER11-6-UP	6~5.5	0.005
ER11-6.5-UP	6.5~6	0.005
ER11-7-UP	7~6.5	0.005

ER16-UP

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER16-1-UP	1~0.5	0.005
ER16-1.5-UP	1.5~1	0.005
ER16-2-UP	2~1.5	0.005
ER16-2.5-UP	2.5~2	0.005
ER16-3-UP	3~2	0.005
ER16-3.5-UP	3.5~2.5	0.005
ER16-4-UP	4~3	0.005
ER16-4.5-UP	4.5~3.5	0.005
ER16-5-UP	5~4	0.005
ER16-5.5-UP	5.5~4.5	0.005
ER16-6-UP	6~5	0.005
ER16-6.5-UP	6.5~5.5	0.005
ER16-7-UP	7~6	0.005
ER16-7.5-UP	7.5~6.5	0.005
ER16-8-UP	8~7	0.005
ER16-8.5-UP	8.5~7.5	0.005
ER16-9-UP	9~8	0.005
ER16-9.5-UP	9.5~8.5	0.005
ER16-10-UP	10~9	0.005

ER20-UP

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER20-1-UP	1~0.5	0.005
ER20-1.5-UP	1.5~1	0.005
ER20-2-UP	2~1.5	0.005
ER20-2.5-UP	2.5~2	0.005
ER20-3-UP	3~2	0.005
ER20-3.5-UP	3.5~2.5	0.005
ER20-4-UP	4~3	0.005
ER20-4.5-UP	4.5~3.5	0.005
ER20-5-UP	5~4	0.005
ER20-5.5-UP	5.5~4.5	0.005
ER20-6-UP	6~5	0.005
ER20-6.5-UP	6.5~5.5	0.005
ER20-7-UP	7~6	0.005
ER20-7.5-UP	7.5~6.5	0.005
ER20-8-UP	8~7	0.005
ER20-8.5-UP	8.5~7.5	0.005
ER20-9-UP	9~8	0.005
ER20-9.5-UP	9.5~8.5	0.005
ER20-10-UP	10~9	0.005
ER20-10.5-UP	10.5~9.5	0.005
ER20-11-UP	11~10	0.005
ER20-11.5-UP	11.5~10.5	0.005
ER20-12-UP	12~11	0.005
ER20-12.5-UP	12.5~11.5	0.005
ER20-13-UP	13~12	0.005

ER25-UP

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER25-2-UP	2~1.5	0.005
ER25-2.5-UP	2.5~2	0.005
ER25-3-UP	3~2	0.005
ER25-3.5-UP	3.5~2.5	0.005
ER25-4-UP	4~3	0.005
ER25-4.5-UP	4.5~3.5	0.005
ER25-5-UP	5~4	0.005
ER25-5.5-UP	5.5~4.5	0.005
ER25-6-UP	6~5	0.005
ER25-6.5-UP	6.5~5.5	0.005
ER25-7-UP	7~6	0.005
ER25-7.5-UP	7.5~6.5	0.005
ER25-8-UP	8~7	0.005
ER25-8.5-UP	8.5~7.5	0.005
ER25-9-UP	9~8	0.005
ER25-9.5-UP	9.5~8.5	0.005
ER25-10-UP	10~9	0.005
ER25-10.5-UP	10.5~9.5	0.005
ER25-11-UP	11~10	0.005
ER25-11.5-UP	11.5~10.5	0.005
ER25-12-UP	12~11	0.005
ER25-12.5-UP	12.5~11.5	0.005
ER25-13-UP	13~12	0.005
ER25-13.5-UP	13.5~12.5	0.005
ER25-14-UP	14~13	0.005
ER25-14.5-UP	14.5~13.5	0.005
ER25-15-UP	15~14	0.005
ER25-15.5-UP	15.5~14.5	0.005
ER25-16-UP	16~15	0.005

ER32-UP

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER32-2-UP	2~1.5	0.005
ER32-2.5-UP	2.5~2	0.005
ER32-3-UP	3~2	0.005
ER32-3.5-UP	3.5~2.5	0.005
ER32-4-UP	4~3	0.005
ER32-4.5-UP	4.5~3.5	0.005
ER32-5-UP	5~4	0.005
ER32-5.5-UP	5.5~4.5	0.005
ER32-6-UP	6~5	0.005



精度 (UP 級) Accuracy : 0.005mm

ER32-UP

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER32-6.5-UP	6.5~5.5	0.005
ER32-7-UP	7~6	0.005
ER32-7.5-UP	7.5~6.5	0.005
ER32-8-UP	8~7	0.005
ER32-8.5-UP	8.5~7.5	0.005
ER32-9-UP	9~8	0.005
ER32-9.5-UP	9.5~8.5	0.005
ER32-10-UP	10~9	0.005
ER32-10.5-UP	10.5~9.5	0.005
ER32-11-UP	11~10	0.005
ER32-11.5-UP	11.5~10.5	0.005
ER32-12-UP	12~11	0.005
ER32-12.5-UP	12.5~11.5	0.005
ER32-13-UP	13~12	0.005
ER32-13.5-UP	13.5~12.5	0.005
ER32-14-UP	14~13	0.005
ER32-14.5-UP	14.5~13.5	0.005
ER32-15-UP	15~14	0.005
ER32-15.5-UP	15.5~14.5	0.005
ER32-16-UP	16~15	0.005
ER32-16.5-UP	16.5~15.5	0.005
ER32-17-UP	17~16	0.005
ER32-17.5-UP	17.5~16.5	0.005
ER32-18-UP	18~17	0.005
ER32-18.5-UP	18.5~17.5	0.005
ER32-19-UP	19~18	0.005
ER32-19.5-UP	19.5~18.5	0.005
ER32-20-UP	20~19	0.005

ER40-UP

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER40-3-UP	3~2	0.005
ER40-3.5-UP	3.5~2.5	0.005
ER40-4-UP	4~3	0.005
ER40-4.5-UP	4.5~3.5	0.005
ER40-5-UP	5~4	0.005
ER40-5.5-UP	5.5~4.5	0.005
ER40-6-UP	6~5	0.005
ER40-6.5-UP	6.5~5.5	0.005
ER40-7-UP	7~6	0.005
ER40-7.5-UP	7.5~6.5	0.005
ER40-8-UP	8~7	0.005
ER40-8.5-UP	8.5~7.5	0.005
ER40-9-UP	9~8	0.005
ER40-9.5-UP	9.5~8.5	0.005
ER40-10-UP	10~9	0.005
ER40-10.5-UP	10.5~9.5	0.005
ER40-11-UP	11~10	0.005
ER40-11.5-UP	11.5~10.5	0.005
ER40-12-UP	12~11	0.005
ER40-12.5-UP	12.5~11.5	0.005
ER40-13-UP	13~12	0.005
ER40-13.5-UP	13.5~12.5	0.005
ER40-14-UP	14~13	0.005
ER40-14.5-UP	14.5~13.5	0.005
ER40-15-UP	15~14	0.005
ER40-15.5-UP	15.5~14.5	0.005
ER40-16-UP	16~15	0.005
ER40-16.5-UP	16.5~15.5	0.005

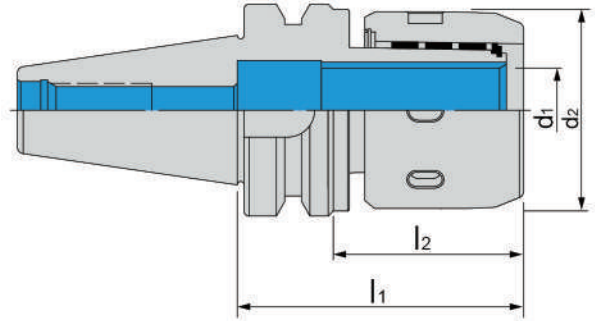
ER40-UP

規格 Spec.	夾持範圍 Clamp Range	精度等級 Precision
ER40-17-UP	17~16	0.005
ER40-17.5-UP	17.5~16.5	0.005
ER40-18-UP	18~17	0.005
ER40-18.5-UP	18.5~17.5	0.005
ER40-19-UP	19~18	0.005
ER40-19.5-UP	19.5~18.5	0.005
ER40-20-UP	20~19	0.005
ER40-20.5-UP	20.5~19.5	0.005
ER40-21-UP	21~20	0.005
ER40-21.5-UP	21.5~20.5	0.005
ER40-22-UP	22~21	0.005
ER40-22.5-UP	22.5~21.5	0.005
ER40-23-UP	23~22	0.005
ER40-23.5-UP	23.5~22.5	0.005
ER40-24-UP	24~23	0.005
ER40-24.5-UP	24.5~23.5	0.005
ER40-25-UP	25~24	0.005
ER40-25.5-UP	25.5~24.5	0.005
ER40-26-UP	26~25	0.005



BT/MLC 直式筒夾銑床夾頭

BT/MLC MULTI-LOCK MILLING CHUCK



特點 Feature

- 開槽：此款刀桿內孔分割 6 槽以防止滑動並加大夾持力
- 另有套裝可選購

- Slitting: Designed to keep away oil and contaminants while increasing clamping power.
- Available in a set.

規格 Spec.	l_1	l_2	d_1	d_2	夾持範圍 Clamping Range	重量 (KGS) Weight
BT30 x MLC20-75	75	70	20	55	Ø6~Ø20	1.18
BT30 x MLC20-90	90	70	20	55	Ø6~Ø20	1.37
BT40 x MLC20-80	80	70	20	55	Ø6~Ø20	1.78
BT40 x MLC32-90	90	75	32	73	Ø6~Ø32	2.18
BT50 x MLC20-105	105	70	20	55	Ø6~Ø20	4.50
BT50 x MLC32-110	110	75	32	73	Ø6~Ø32	5.17
BT50 x MLC42-110	110	90	42	95	Ø6~Ø42	5.74

- 附扳手 Attaches the spanner.

※ 注意：銑刀裝置入筒夾需超過筒夾有效夾持長度，以避免因非完全夾持，導致筒夾損壞、變形

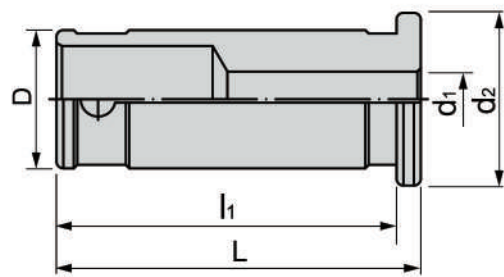
Note: To avoid the improper clamping (no clamp at all) & damage and deformation for collet, it should exceed the effective length of collet when installing the cutter on to collet.



直式彈性筒夾

STRAIGHT SHANK COLLET

精度 Accuracy : <0.02mm



特點 Feature

- 偏擺精度小於 0.02mm
- 限定夾持與孔徑相同之刀具柄徑
- 筒夾不具備彈性收縮範圍，強調夾持力
- 刀具置入筒夾必須超過內孔有效夾持長度，以達到有效夾持

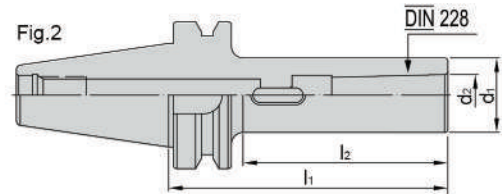
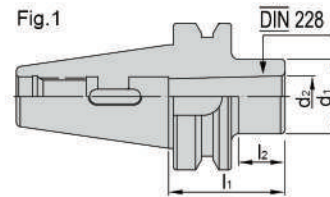
- Precision : within 0.02mm.
- Definition clamp and aperture same shank of tool diameter.
- The collet doesn't have the contraction scope, the emphasis chucking power.
- In the cutting tool posts the collet to surpass the hole effective clamp length, achieves the effective clamp.

規格 Spec.	D	筒夾孔徑 d_1	d_2	L	l_1	重量 (KGS) Weight
SSC20	20	3, 4, 5, 6, 8, 10, 12, 16	25	52.5	49	0.10
SSC32	32	6, 8, 10, 12, 16, 20, 25	37.5	64.6	59.6	0.30
SSC42	42	3, 4, 5, 6, 8, 10, 12, 16, 20, 25, 32	48	75	69	0.60



BT 斜柄鑽頭套筒 BT MORSE TAPER ADAPTER

DIN-228-B

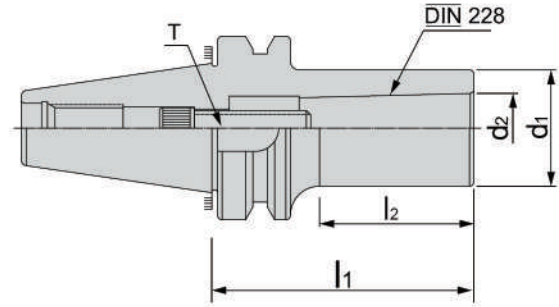


規格 Spec.	l_1	l_2	d_1	d_2	Fig.	重量 (KGS) Weight
BT30 x MTA1-45	45	20	25	12.065	1	0.48
BT30 x MTA1-105	105	78	25	12.065	2	0.80
BT30 x MTA2-60	60	35	32	17.78	1	0.55
BT30 x MTA2-120	120	95	32	17.78	2	0.90
BT30 x MTA3-80	80	56	40	23.825	1	0.73
BT40 x MTA1-45	45	15	25	12.065	1	1.07
BT40 x MTA1-120	120	83	25	12.065	2	1.41
BT40 x MTA2-50	50	20	32	17.78	1	1.10
BT40 x MTA2-120	120	88	32	17.78	2	1.80
BT40 x MTA3-70	70	38	40	23.825	1	1.20
BT40 x MTA3-135	135	102	40	23.825	2	1.85
BT40 x MTA4-95	95	63	48	31.267	1	1.42
BT40 x MTA4-165	165	133	48	31.267	2	2.41
BT50 x MTA1-45	45	2	25	12.065	1	3.95
BT50 x MTA1-120	120	74	25	12.065	2	4.06
BT50 x MTA1-180	180	132	25	12.065	2	4.32
BT50 x MTA2-60	60	17	32	17.78	1	3.98
BT50 x MTA2-135	135	89	32	17.78	2	4.24
BT50 x MTA2-180	180	132	32	17.78	2	5.00
BT50 x MTA3-65	65	22	40	23.825	1	4.02
BT50 x MTA3-150	150	107	40	23.825	2	4.61
BT50 x MTA3-180	180	132	40	23.825	2	4.91
BT50 x MTA4-95	95	52	48	31.267	1	4.20
BT50 x MTA4-180	180	132	48	31.267	2	5.50
BT50 x MTA5-105	105	62	63	44.399	1	4.30



BT 斜柄鑽頭套筒 BT MORSE TAPER ADAPTER

DIN-6364



特點 Feature

- 用於夾持莫式錐度、尾端附內螺紋的切削刀具或是延長桿

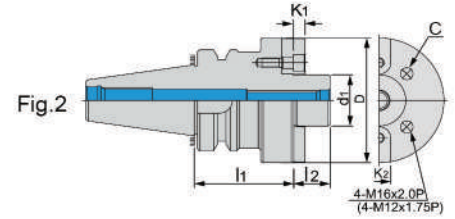
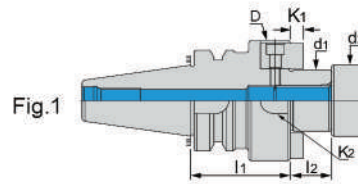
- Use in supporting on both sides not-like the taper, end to attach the box thread the cutting tool perhaps lengthens the pole.

規格 Spec.	莫式錐度 MT	l ₁	l ₂	d ₁	d ₂	T	適用鑽頭	重量 (KGS) Weight
BT30 x MTB1-45	1	45	20	25	12.065	M6x1.0P	Ø10~Ø14	0.50
BT30 x MTB2-60	2	60	36	32	17.78	M10x1.5P	Ø16~Ø22	0.58
BT40 x MTB1-45	1	45	13	25	12.065	M6x1.0P	Ø10~Ø14	1.10
BT40 x MTB2-45	2	45	13	32	17.78	M10x1.5P	Ø15~Ø22	1.10
BT40 x MTB2-185	2	185	148	32	17.78	M10x1.5P	Ø15~Ø22	1.90
BT40 x MTB3-75	3	75	45	40	23.825	M12x1.75P	Ø24~Ø32	1.30
BT40 x MTB3-90	3	90	53	40	23.825	M12x1.75P	Ø24~Ø32	1.40
BT40 x MTB3-120	3	120	83	40	23.825	M12x1.75P	Ø24~Ø32	1.80
BT40 x MTB3-180	3	180	143	40	23.825	M12x1.75P	Ø24~Ø32	2.40
BT40 x MTB4-100	4	100	67	48	31.267	M16x2.0P	Ø32~Ø50	1.59
BT40 x MTB4-120	4	120	87	48	31.267	M16x2.0P	Ø32~Ø50	1.80
BT40 x MTB4-180	4	180	147	48	31.267	M16x2.0P	Ø32~Ø50	2.60
BT50 x MTB1-45	1	45	6	25	12.065	M6x1.0P	Ø10~Ø14	4.05
BT50 x MTB2-45	2	45	5	32	17.78	M10x1.5P	Ø16~Ø22	4.02
BT50 x MTB3-60	3	60	12	40	23.825	M12x1.75P	Ø24~Ø32	4.11
BT50 x MTB3-250	3	250	-	34	23.825	M12x1.75P	Ø24~Ø32	6.70
BT50 x MTB3-300	3	300	-	34	23.825	M12x1.75P	Ø24~Ø32	7.60
BT50 x MTB3-350	3	350	-	34	23.825	M12x1.75P	Ø24~Ø32	8.38
BT50 x MTB3-400	3	400	-	34	23.825	M12x1.75P	Ø24~Ø32	9.30
BT50 x MTB4-75	4	75	32	48	31.267	M16x2.0P	Ø32~Ø50	4.20
BT50 x MTB5-120-M20	5	120	77	63	44.399	M20x2.5P	Ø40	4.57
BT50 x MTB5-120-M24	5	120	77	63	44.399	M24x3.0P	Ø40	4.60



BT/FMB 平面銑刀柄

BT/FMB FACE MILL ARBOR(TYPE FMB)



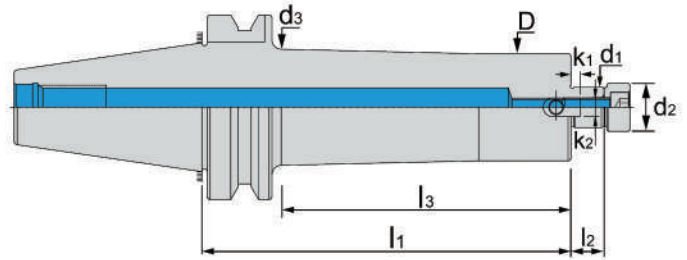
FMB 為公制規格 FMB is mm Size

規格 Spec.	l ₁	l ₂	D	d ₁	d ₂	k ₁	k ₂	C	Fig.	重量 (KGS) Weight
BT30 x FMB16-50	50	16	46	16	-	5	8	-	1	-
BT30 x FMB22-45	45	19	48	22	26	4.8	10	-	1	0.82
BT30 x FMB22-60	60	19	48	22	26	4.8	10	-	1	1.00
BT30 x FMB27-45	45	20	60	27	31.5	5.8	12	-	1	1.05
BT30 x FMB27-60	60	20	60	27	31.5	5.8	12	-	1	1.30
BT30 x FMB32-45	45	22	78	32	41	6.8	14	-	1	1.58
BT40 x FMB16-50	50	16	63	16	-	5	8	-	1	-
BT40 x FMB16-90	90	16	63	16	-	5	8	-	1	-
BT40 x FMB22-45	45	19	48	22	26	4.8	10	-	1	1.38
BT40 x FMB22-60	60	19	48	22	26	4.8	10	-	1	1.57
BT40 x FMB22-100	100	19	48	22	26	4.8	10	-	1	2.17
BT40 x FMB22-150	150	19	48	22	26	4.8	10	-	1	2.86
BT40 x FMB22-200	200	19	48	22	26	4.8	10	-	1	3.58
BT40 x FMB27-45	45	20	60	27	31.5	5.8	12	-	1	1.58
BT40 x FMB27-60	60	20	60	27	31.5	5.8	12	-	1	1.89
BT40 x FMB27-90	90	20	60	27	31.5	5.8	12	-	1	2.61
BT40 x FMB27-105	105	20	60	27	31.5	5.8	12	-	1	2.93
BT40 x FMB32-45	45	22	78	32	41	6.8	14	-	1	2.12
BT40 x FMB32-60	60	22	78	32	41	6.8	14	-	1	2.10
BT40 x FMB40-60	60	25	80	40	48	8.3	16	-	1	2.80
BT50 x FMB16-50	50	16	100	16	-	5	8	-	1	-
BT50 x FMB16-90	90	16	100	16	-	5	8	-	1	-
BT50 x FMB22-45	45	19	48	22	26	4.8	10	-	1	4.15
BT50 x FMB22-90	90	19	48	22	26	4.8	10	-	1	4.68
BT50 x FMB22-150	150	19	48	22	26	4.8	10	-	1	5.35
BT50 x FMB22-200	200	19	48	22	26	4.8	10	-	1	6.02
BT50 x FMB22-250	250	19	48	22	26	4.8	10	-	1	6.64
BT50 x FMB22-300	300	19	48	22	26	4.8	10	-	1	9.40
BT50 x FMB22-350	350	19	48	22	26	4.8	10	-	1	10.5
BT50 x FMB22-400	400	19	48	22	26	4.8	10	-	1	10.88
BT50 x FMB27-50	50	20	60	27	31.5	5.8	12	-	1	4.41
BT50 x FMB27-90	90	20	60	27	31.5	5.8	12	-	1	5.09
BT50 x FMB27-150	150	20	60	27	31.5	5.8	12	-	1	6.30
BT50 x FMB27-200	200	20	60	27	31.5	5.8	12	-	1	7.42
BT50 x FMB27-250	250	20	60	27	31.5	5.8	12	-	1	8.43
BT50 x FMB32-50	50	22	78	32	41	6.8	14	-	1	4.69
BT50 x FMB32-90	90	22	78	32	41	6.8	14	-	1	5.96
BT50 x FMB40-50	50	25	89	40	48	8.3	16	-	1	5.20
BT50 x FMB40-90	90	25	89	40	48	8.3	16	-	1	6.00
BT50 x FMB40-105	105	25	89	40	48	8.3	16	-	1	7.20
BT50 x FS40F-75	75	26	110	40	-	8.3	16	PCD Ø66.7	2	6.00
BT50 x FS60F-75	75	25	138	60	-	12.5	25.4	PCD Ø101.6	2	8.49



BT/FMB 平面銑刀柄 (加長斜度柄)

BT/FMB FACE MILL ARBOR(EXTENSION TYPE)



特點 Feature

- 平面銑刀配合部位 (d1) · 軸系公差 h6
- 整支通孔 · 利於出水及抗震

- d1 tolerance is h6.
- The tool holder is through-hole, which is better for water to get through vibration resistance.

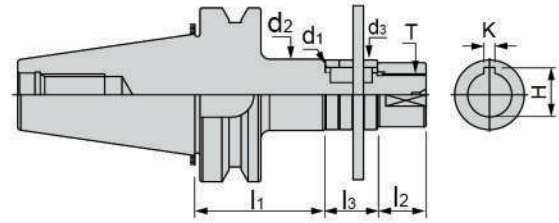
FMB 為公制規格 FMB is mm Size

規格 Spec.	l ₁	l ₂	l ₃	D	d ₁	d ₂	d ₃	k ₁	k ₂	重量 (KGS) Weight
BT40 x FMB22-150BG	150	19	118	48	22	31.75	51	4.25	10	2.95
BT40 x FMB22-200BG	200	19	168	48	22	31.75	51	4.25	10	3.68
BT40 x FMB22-250BG	250	19	218	48	22	31.75	51	4.25	10	4.38
BT40 x FMB22-300BG	300	19	-	48	22	31.75	51	4.25	10	5.40
BT50 x FMB22-100BG	100	19	-	58	22	31.75	62.5	4.25	10	6.00
BT50 x FMB22-150BG	150	19	107	58	22	31.75	62.5	4.25	10	6.17
BT50 x FMB22-200BG	200	19	157	58	22	31.75	62.5	4.25	10	7.30
BT50 x FMB22-250BG	250	19	207	58	22	31.75	62.5	4.25	10	9.40
BT50 x FMB22-300BG	300	19	257	58	22	31.75	62.5	4.25	10	10.24
BT50 x FMB22-350BG	350	19	307	58	22	31.75	62.5	4.25	10	10.3
BT50 x FMB22-400BG	400	19	352	58	22	31.75	62.5	4.25	10	11.4
BT50 x FMB22-450BG	450	19	402	58	22	31.75	62.5	4.25	10	12.3
BT50 x FMB22-500BG	500	19	452	58	22	31.75	62.5	4.25	10	13.7
BT50 x FMB22-600BG	600	19	-	58	22	31.75	62.5	4.25	10	17.2
BT50 x FMB27-150BG	150	20	107	60	27	31.5	78	5.8	12	6.82
BT50 x FMB27-200BG	200	20	157	60	27	31.5	78	5.8	12	8.50
BT50 x FMB27-250BG	250	20	207	60	27	31.5	78	5.8	12	9.50
BT50 x FMB27-300BG	300	20	257	60	27	31.5	78	5.8	12	10.4
BT50 x FMB27-350BG	350	20	307	60	27	31.5	78	5.8	12	11.4
BT50 x FMB27-400BG	400	20	352	60	27	31.5	78	5.8	12	12.4
BT50 x FMB27-450BG	450	20	402	60	27	31.5	78	5.8	12	13.4
BT50 x FMB27-500BG	500	20	452	60	27	31.5	78	5.8	12	14.4
BT50 x FMB32-150BG	150	22	107	78	32	41	85	6.8	14	7.00
BT50 x FMB32-200BG	200	22	157	78	32	41	85	6.8	14	8.50
BT50 x FMB32-250BG	250	22	207	78	32	41	85	6.8	14	9.50
BT50 x FMB32-300BG	300	22	257	78	32	41	85	6.8	14	10.5
BT50 x FMB32-350BG	350	22	307	78	32	41	85	6.8	14	11.5
BT50 x FMB32-400BG	400	22	352	78	32	41	85	6.8	14	12.5
BT50 x FMB32-450BG	450	22	402	78	32	41	85	6.8	14	13.5
BT50 x FMB32-500BG	500	22	460	80	32	41	96	6.8	14	14.5



BT/SCA 側銑刀柄 BT/SCA SIDE CUTTER ADAPTER

螺帽類型 DIN-2082-1 NUT FORM DIN-2082-1
軸襯類型 DIN-2084-B BUSH FORM DIN-2084-B

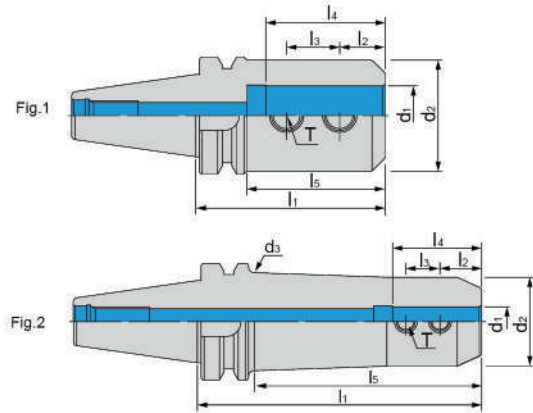


規格 Spec.	l ₁	l ₂	l ₃	d ₁	d ₂	d ₃	K	H	T	重量 (KGS) Weight
BT30 x SCA10-60	60	12	35	10	18	18	-	-	M8 x 1.25P	0.80
BT30 x SCA16-60	60	16	30	16	26	26	4	17.7	M14 x 1.5P	0.78
BT30 x SCA22-60	60	22	30	22	34	34	6	24.3	M20 x 1.5P	1.20
BT30 x SCA22-75	75	22	30	22	34	34	6	24.3	M20 x 1.5P	1.18
BT40 x SCA16-60	60	16	30	16	26	26	4	17.7	M14 x 1.5P	1.42
BT40 x SCA22-60	60	22	30	22	34	34	6	24.3	M20 x 1.5P	1.60
BT40 x SCA22-75	75	22	30	22	34	34	6	24.3	M20 x 1.5P	1.83
BT40 x SCA22-120	120	22	30	22	34	34	6	24.3	M20 x 1.5P	2.19
BT40 x SCA27-75	75	28	30	27	41	40	7	30	M24 x 1.5P	2.10
BT40 x SCA27-120	120	28	30	27	41	40	7	30	M24 x 1.5P	2.50
BT40 x SCA32-90	90	32	30	32	47	46	8	35.5	M30 x 1.5P	2.72
BT40 x SCA22.22-75	75	22	30	22.22	34	34	3.18	24.6	M20 x 1.5P	1.70
BT40 x SCA22.22-120	120	22	30	22.22	34	34	3.18	24.6	M20 x 1.5P	2.00
BT40 x SCA25.4-75	75	28	30	25.4	41	40	6.35	28.4	M24 x 1.5P	2.17
BT40 x SCA25.4-120	120	28	30	25.4	41	40	6.35	28.4	M24 x 1.5P	2.67
BT40 x SCA31.75-90	90	32	30	31.75	47	47	7.93	34.8	M30 x 1.5P	2.60
BT50 x SCA22-90	90	22	30	22	34	34	6	24.3	M20 x 1.5P	4.40
BT50 x SCA22-135	135	22	30	22	34	34	6	24.3	M20 x 1.5P	4.70
BT50 x SCA27-90	90	28	30	27	41	40	7	30	M24 x 1.5P	4.60
BT50 x SCA27-135	135	28	30	27	41	40	7	30	M24 x 1.5P	5.00
BT50 x SCA32-90	90	32	30	32	47	46	8	35.5	M30 x 1.5P	5.44
BT50 x SCA32-135	135	32	30	32	47	46	8	35.5	M30 x 1.5P	6.16
BT50 x SCA40-90	90	40	30	40	55	55	10	43.7	M36 x 2.0P	5.00
BT50 x SCA40-135	135	40	30	40	55	55	10	43.7	M36 x 2.0P	6.00
BT50 x SCA22.22-90	90	22	30	22.22	34	34	3.18	24.6	M20 x 1.5P	4.40
BT50 x SCA22.22-135	135	22	30	22.22	34	34	3.18	24.6	M20 x 1.5P	4.70
BT50 x SCA25.4-90	90	28	30	25.4	41	40	6.35	28.4	M24 x 1.5P	5.05
BT50 x SCA25.4-135	135	28	30	25.4	41	40	6.35	28.4	M24 x 1.5P	5.58
BT50 x SCA31.75-90	90	32	30	31.75	47	46	7.93	34.8	M30 x 1.5P	4.70
BT50 x SCA31.75-135	135	32	30	31.75	47	46	7.93	34.8	M30 x 1.5P	5.20
BT50 x SCA38.1-90	90	40	30	38.1	55	55	9.525	42.4	M36 x 2.0P	4.90
BT50 x SCA38.1-135	135	40	30	38.1	55	55	9.525	42.4	M36 x 2.0P	5.90



BT/SLN 側固式立銑刀柄 (JIS 型)

BT/SLN SIDE LOCK END MILL HOLDER (JIS TYPE)



特點 Feature

- 預設定動平衡 G6.3 8000rpm(削平處理)
- 不分孔徑皆為兩只鎖固螺絲

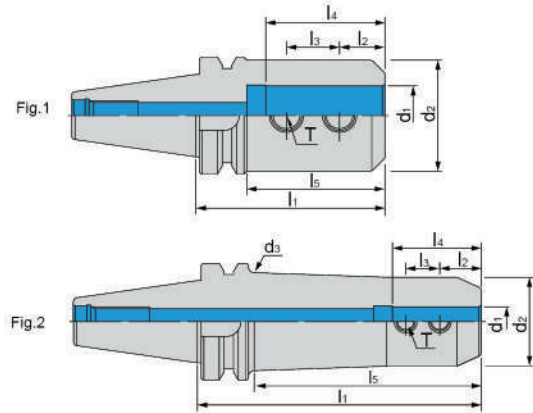
- The pre-balance can reach G6.3 8000rpm.
- With two side-lock screw.

規格 Spec.	l_1	l_2	l_3	l_4	l_5	d_1	d_2	d_3	T	Fig.	重量 (KGS) Weight
BT40 x SLN 6-75JIS	75	12	10	35	45	6	25	-	M6 x 1.0P	1	1.17
BT40 x SLN 6-150JIS	150	12	10	35	113	6	25	30	M6 x 1.0P	2	1.50
BT40 x SLN 8-75JIS	75	14	12	35	45	8	28	-	M8 x 1.25P	1	1.21
BT40 x SLN 8-150JIS	150	14	12	35	113	8	28	33	M8 x 1.25P	2	1.50
BT40 x SLN10-75JIS	75	15	14	39	45	10	35	-	M10 x 1.5P	1	1.35
BT40 x SLN10-150JIS	150	15	14	39	118	10	35	40	M10 x 1.5P	2	1.50
BT40 x SLN12-75JIS	75	20	16	44	45	12	42	-	M10 x 1.5P	1	1.50
BT40 x SLN12-150JIS	150	20	16	44	118	12	42	47	M10 x 1.5P	2	1.70
BT40 x SLN16-75JIS	75	22	18	47	45	16	48	-	M10 x 1.5P	1	1.58
BT40 x SLN16-150JIS	150	22	18	47	120	16	48	53	M10 x 1.5P	2	2.75
BT40 x SLN20-90JIS	90	25	20	55	60	20	50	-	M12 x 1.75P	1	1.77
BT40 x SLN20-150JIS	150	25	20	55	120	20	52	57	M12 x 1.75P	2	1.80
BT40 x SLN25-90JIS	90	24	25	58	60	25	50	-	M12 x 1.75P	1	1.72
BT40 x SLN32-100JIS	100	24	28	63	73	32	60	-	M16 x 2.0P	1	2.08
BT40 x SLN40-105JIS	105	28	28	68	78	40	72	62.6	M16 x 2.0P	2	-
BT50 x SLN 6-75JIS	75	12	10	35	27	6	25	-	M6 x 1.0P	1	4.04
BT50 x SLN 8-75JIS	75	14	12	35	27	8	28	-	M8 x 1.25P	1	4.06
BT50 x SLN10-75JIS	75	15	14	39	32	10	35	-	M10 x 1.5P	-	3.90
BT50 x SLN12-90JIS	90	20	16	44	42	12	42	-	M10 x 1.5P	-	4.35
BT50 x SLN12-165JIS	165	20	16	44	124	12	42	47	M10 x 1.5P	2	5.05
BT50 x SLN16-90JIS	90	22	18	47	42	16	48	-	M10 x 1.5P	1	4.53
BT50 x SLN16-150JIS	150	22	18	47	102	16	48	53	M10 x 1.5P	2	4.98
BT50 x SLN16-165JIS	165	22	18	47	117	16	48	53	M10 x 1.5P	2	5.50



BT/SLN 側固式立銑刀柄 (JIS 型)

BT/SLN SIDE LOCK END MILL HOLDER (JIS TYPE)



特點 Feature

- 預設定動平衡 G6.3 8000rpm(削平處理)
- 不分孔徑皆為兩只鎖固螺絲

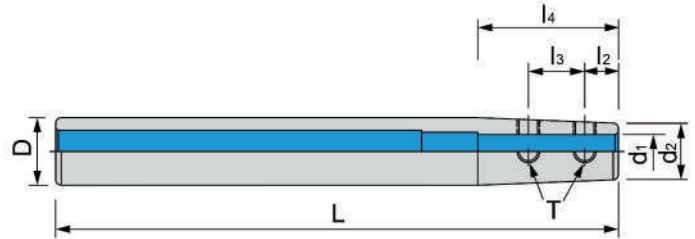
- The pre-balance can reach G6.3 8000rpm.
- With two side-lock screw.

規格 Spec.	l_1	l_2	l_3	l_4	l_5	d_1	d_2	d_3	T	Fig.	重量 (KGS) Weight
BT50 x SLN20-90JIS	90	25	20	55	49	20	50	-	M12 x 1.75P	1	4.53
BT50 x SLN20-150JIS	150	25	20	55	102	20	50	57	M12 x 1.75P	2	5.98
BT50 x SLN20-165JIS	165	25	20	55	117	20	50	57	M12 x 1.75P	2	5.67
BT50 x SLN20-210JIS	210	25	20	55	162	20	50	57	M12 x 1.75P	2	6.40
BT50 x SLN25-100JIS	100	24	25	58	59	25	50	-	M12 x 1.75P	1	4.58
BT50 x SLN25-150JIS	150	24	25	58	102	25	50	57	M12 x 1.75P	2	5.48
BT50 x SLN25-165JIS	165	24	25	58	117	25	50	57	M12 x 1.75P	2	5.55
BT50 x SLN25-210JIS	210	24	25	58	169	25	50	57	M12 x 1.75P	2	6.25
BT50 x SLN25-250JIS	250	24	25	58	202	25	50	60	M12 x 1.75P	2	7.10
BT50 x SLN32-105JIS	105	24	28	63	64	32	60	-	M16 x 2.0P	1	4.89
BT50 x SLN32-150JIS	150	24	28	63	102	32	50	60	M16 x 2.0P	2	7.48
BT50 x SLN32-165JIS	165	24	28	63	117	32	60	65	M16 x 2.0P	1	6.22
BT50 x SLN32-210JIS	210	24	28	63	162	32	50	60	M16 x 2.0P	2	6.34
BT50 x SLN32-250JIS	250	24	28	63	207	32	50	60	M16 x 2.0P	2	7.50
BT50 x SLN32-300JIS	300	24	28	63	257	32	60	65	M16 x 2.0P	2	9.30
BT50 x SLN40-115JIS	115	30	32	85	74	40	90	-	M20 x 2.0P	1	6.60
BT50 x SLN42-120JIS	120	30	32	85	79	42	90	-	M20 x 2.0P	1	6.73
BT50 x SLN42-210JIS	210	30	32	85	-	42	70	75	M20 x 2.0P	2	7.80
BT50 x SLN50-120JIS	120	35	35	90	82	50	90	-	M20 x 2.0P	1	5.28
BT50 x SLN50.8-120JIS	120	33.9	35.78	90	82	50.8	90	-	M20 x 2.0P	1	6.61



C/SL 直柄側固式延長小徑刀柄

C/SL STRAIGHT EXTENSION SIDE LOCK HOLDER



特點 Feature

- 材質採用抗震性優越的鎳鉻鉬合金鋼
- 孔徑差 H5

-Steel : SNCM-220
- d1 is H5.

規格 Spec.	L	l ₂	l ₃	l ₄	D	d ₁	d ₂	T	重量 (KGS) Weight
C8-SL03-110	110	6	10	25	8	3	7.5	M3x0.5P-3L	0.08
C8-SL04-110	110	6	10	25	8	4	8	M3x0.5P-3L	0.08
C10-SL03-150	150	6	10	25	10	3	9	M3x0.5P-3L	0.11
C10-SL04-150	150	6	10	25	10	4	9	M4x0.7P-3L	0.08
C10-SL06-150	150	6	10	25	10	6	-	M4x0.7P-3L	0.10
C12-SL04-150	150	6	10	25	12	4	9	M4x0.7P-3L	0.13
C12-SL06-150	150	6	10	25	12	6	10	M4x0.7P-3L	0.12
C16-SL04-150	150	6	10	25	16	4	10	M4x0.7P-4L	0.22
C16-SL04-200	200	6	10	25	16	4	10	M4x0.7P-4L	0.18
C16-SL06-150	150	6	10	25	16	6	13	M4x0.7P-3L	0.20
C16-SL06-200	200	6	10	25	16	6	13	M4x0.7P-4L	0.25
C16-SL08-150	150	6	10	25	16	8	15	M4x0.7P-3L	0.15
C16-SL08-200	200	6	10	25	16	8	15	M4x0.7P-4L	0.21
C20-SL06-150	150	6	10	25	20	6	13	M4x0.7P-4L	0.29
C20-SL06-200	200	6	10	25	20	6	13	M4x0.7P-4L	0.38
C20-SL08-150	150	6	10	25	20	8	15	M6x1.0P-4L	0.29
C20-SL08-200	200	6	10	25	20	8	15	M6x1.0P-6L	0.38
C20-SL10-150	150	6	10	25	20	10	17	M6x1.0P-6L	0.27
C20-SL10-200	200	6	10	25	20	10	17	M6x1.0P-4L	0.34
C20-SL12-150	150	6	10	25	20	12	19	M6x1.0P-4L	0.18
C20-SL12-200	200	6	10	25	20	12	19	M6x1.0P-6L	0.28
C32-SL06-150	150	6	10	25	32	6	13	M6x1.0P-8L	0.21
C32-SL08-150	150	6	10	25	32	8	15	M6x1.0P-6L	0.21
C32-SL10-150	150	6	10	25	32	10	17	M6x1.0P-8L	0.22
C32-SL12-150	150	6	10	25	32	12	19	M6x1.0P-5L	0.22



SPU 鑽夾頭

SPU DRILL CHUCK INTEGRATED TYPE



Fig.1

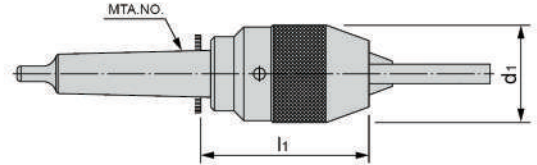
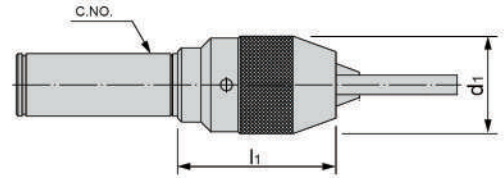


Fig.2



特點 Feature

- 一體式設計，可避免鑽頭夾具脫落的危險
- 適合使用夾持鑽頭加工
- 操作方便，使用勾扳手可直接鎖緊
- The integration design, may avoid the danger which the drilling attachment falls off.
- Suits the use clamp drill bit processing.
- The ease of operation, the use cancels the spanner to be possible to lock directly.

規格 Spec.	NO.	l ₁	d ₁	夾持範圍 Clamp Range		扳手 Wrench	Fig.	重量 (KGS) Weight
				mm	inch			
MTA3xSPU13-80	MTA3	80	50	0.5~13	1/50~1/2	H-130	1	1.30
MTA4xSPU13-80	MTA4	80	50	0.5~13	1/50~1/2	H-130	1	1.65
C20xSPU13-80	C20	80	50	0.5~13	1/50~1/2	H-130	2	1.20
C25xSPU13-80	C25	80	50	0.5~13	1/50~1/2	H-130	2	1.30
C32xSPU13-80	C32	80	50	0.5~13	1/50~1/2	H-130	2	1.50

- 附扳手 Attaches the spanner.

注意事項 Notice

本產品之最大優點為簡單容易操作、快速方便、安全性極高，當使用本產品時，為了減少意外事故發生，延長產品壽命，必須遵守以下列舉的基本事項：夾持長度 (l₁) 應將鑽頭柄插入到底或至少爪長 (L) 的 2/3

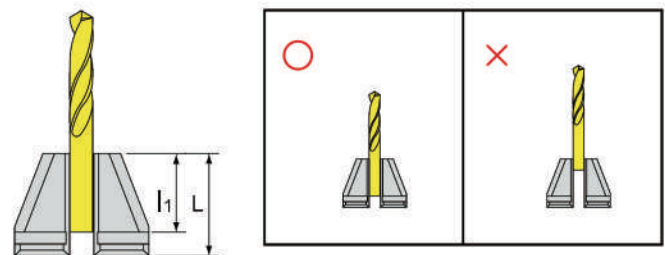
The most advantage for this product is easy to operate, item saving and high safety. Please abide by following to avoid the accidents & extend the product life when in use.

The shank of drill (clamping length l₁) should be inserted into the bottom fully. Or at least 2/3 length of L.

* 以下為各種規格夾爪長度及夾持量

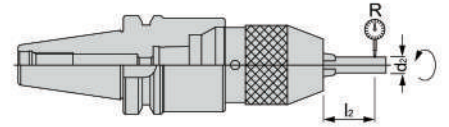
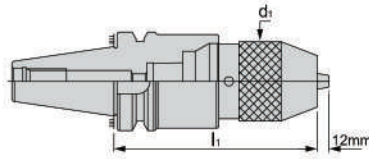
規格 Spec.	夾爪長度 L(mm)	夾持量 l ₁ (mm) 至少
3mm (1/8")	14	9
6.5mm (1/4")	20	13
8mm (5/16")	26	17
10mm (3/8")	26	17
13mm (1/2")	28	19
16mm (5/8")	30	20

範例 Example





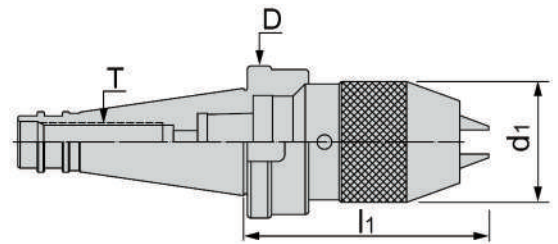
BT/SPU 直結式鑽夾頭 BT/SPU DRILL CHUCK ADAPTER



規格 Spec.	l_1	l_2	d_1	d_2	夾持範圍 Clamping Capacity	R	重量 (KGS) Weight
BT40 x SPU13-100	100	75	50	13	1~13mm	0.04	2.04
BT50 x SPU13-100	100	75	50	13	1~13mm	0.04	4.74



直結式鑽夾頭 DRILL CHUCK INTEGRATED TYPE



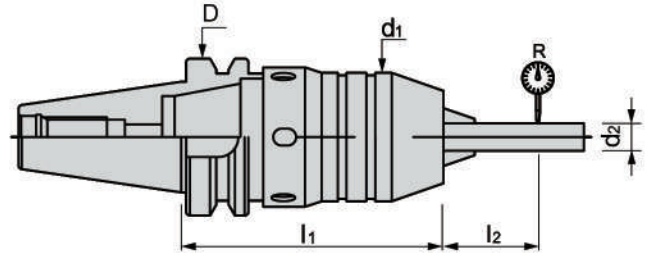
規格 Spec.	l_1	D	d_1	T	重量 (KGS) Weight
NT30xSPU13-100	100	49	50	M12 x 1.75P	1.50
NT40xSPU13-90	90	63	50	M16 x 2.0P	1.85
NT50xSPU13-120	120	97.5	50	M24 x 3.0P	3.80

- 附扳手 Attaches the spanner.



BT/SPH 強力型直結式鑽頭刀桿

BT/SPH DRILL CHUCK ADAPTER INTEGRATED TYPE



特點 Feature

- 能增加鑽夾頭的堅固性及精準性，於使用綜合加工中心機的換刀系統
 - 刀柄和鑽夾頭結為一體，即使是作重切削的加工，鑽夾頭也不會脫落
 - 即使機器主軸立即停止，刀具也不會因此脫落
 - 超過長時間的使用，此夾頭仍保持高精度
- Designed to maximize drill chuck rigidity and precision on machine centers with automatic tool changer.
 - The shank and Universal Drill Chuck are combined as one body, so that the Drill Chuck will not be fallen out when heavy cutting is being performed.
 - The drill will not be dropped out when the main spindle of machine instantly stops.
 - High precision can be maintained over a long period of time.

規格 Spec.	l ₁	l ₂	D	d ₁	d ₂	夾持範圍 Clamping Range		R	重量 (KGS) Weight
						mm	inch		
BT30 x SPH08-80	83	55	46	38	6	1~8	1/24~5/16	0.04	2.20
BT30 x SPH13-100	102	80	46	50	8	1~13	1/24~1/2	0.04	2.50
BT40 x SPH08-85	87	55	63	38	6	1~8	1/24~5/16	0.04	2.40
BT40 x SPH13-105	102	80	63	50	8	1~13	1/24~1/2	0.04	2.18
BT40 x SPH16-110	119	80	63	57	10	3~16	1/8~5/8	0.04	3.00
BT50 x SPH13-115	115	80	100	50	8	1~13	1/24~1/2	0.04	4.88
BT50 x SPH16-120	120	80	100	57	10	3~16	1/8~5/8	0.04	6.00

- 附扳手 Attaches the spanner.

注意事項 Notice

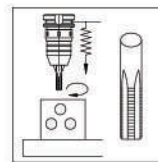
本產品之最大優點為簡單容易操作、快速方便、安全性極高，當使用本產品時，為了減少意外事故發生，延長產品壽命，必須遵守以下列舉的基本事項：夾持長度 (l₁) 應將鑽頭柄插入到底或至少爪長 (L) 的 2/3。

The most advantage for this product is easy to operate, item saving and high safety. Please abide by following to avoid the accidents & extend the product life when in use. The shank of drill (clamping length L₁) should be inserted into the bottom fully. Or at least 2/3 length of L.

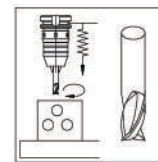
以下為各種規格爪長度及夾持量

Following table is the specification for clamping length & volume

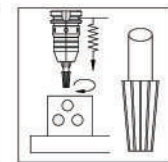
規格 Spec.	夾爪長度 L(mm)	夾持量 L ₁ (mm) 至少
3mm (1/8")	14	9
6.5mm (1/4")	20	13
8mm (5/16")	26	17
10mm (3/8")	26	17
13mm (1/2")	28	19
16mm (5/8")	30	20



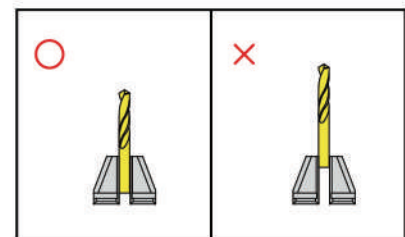
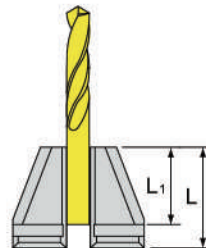
○可攻牙
○Able to tap



○可銑
○Able to mill



○可絞孔
○Able to ream



LHC

液壓刀桿系列

- 提高刀具100%的壽命
- 加工表面無振紋
- 一般六角扳手快速換刀
- Up to 100% tool life.
- Excellent vibration damping for perfect surfaces.
- Convincingly simple handling using an Allen key means no additional investment cost for peripheral equipment.

Hydraulic

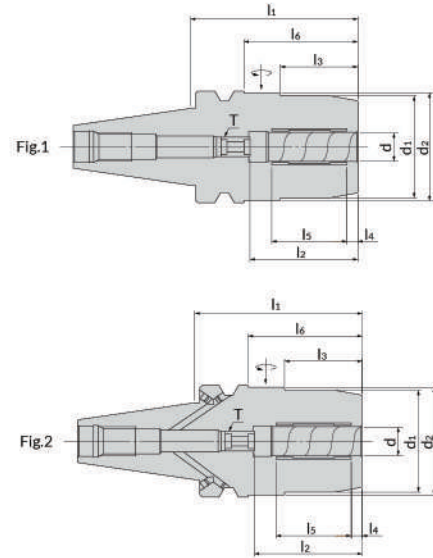


GERMANY



BT/LHC 扭力型液壓刀桿 BT/LHC TORQUE HYDRAULIC TOOLHOLDER

NEW

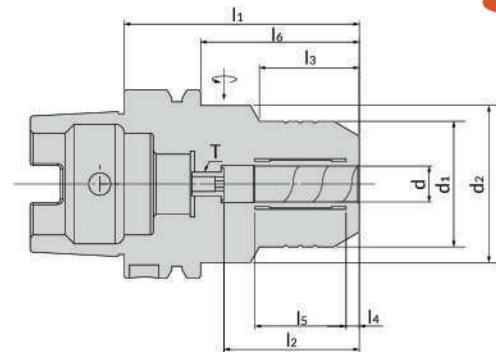


規格 Spec.	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	d	d ₁	d ₂	T	扳手 Wrench	扭力值 (N.m) Torque	Fig.	重量 (KGS) Weight
BT30-LHC12-69	69	46	32	4.5	47	23	12	42	44.5	M8X1.0P	PT5	110	1	0.60
BT30-LHC20-90	90	51	50	5	68	39	20	42	44.5	M8X1.0P	PT5	400	1	0.90
BT40-LHC12-58	58	46	-	4.5	31	31	12	42	-	M8X1.0P	PT5	110	2	1.20
BT40-LHC16-72	72.5	51	-	5	37	45.5	16	49.25	-	M8X1.0P	PT5	350	2	1.30
BT40-LHC20-72	72.5	51	-	5	37	45.5	20	49.25	-	M8X1.0P	PT5	520	2	1.40
BT50-LHC20-83	83.5	51	-	5	37	45.5	20	49.25	-	M8X1.0P	PT5	520	2	4.10
BT50-LHC32-90	90	61	-	6	44	52	32	72	-	M8X1.0P	PT6	900	2	4.60



HSK/LHC 扭力型液壓刀桿 HSK/LHC TORQUE HYDRAULIC TOOLHOLDER

NEW



規格 Spec.	l ₁	l ₂	l ₃	l ₄	l ₅	l ₆	d	d ₁	d ₂	T	扳手 Wrench	扭力值 (N.m) Torque	重量 (KGS) Weight
HSK63A-LHC12-80	80	46	34	4.5	31	54	12	42	52.5	M8X1.0P	PT5	110	1.25
HSK63A-LHC16-80	80	51	-	5	37	54	16	52.5	-	M8X1.0P	PT5	350	1.30
HSK63A-LHC20-80	80	51	-	5	37	54	20	52.5	-	M8X1.0P	PT5	520	1.32
HSK100A-LHC20-90	90	51	-	5	37	61	20	52.5	-	M8X1.0P	PT5	520	2.80

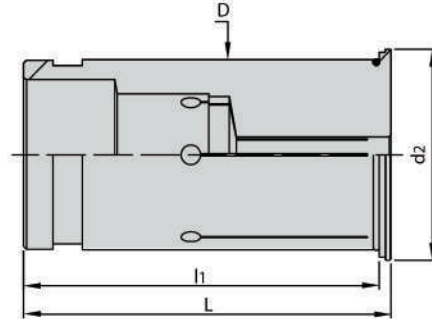
●-接單生產 Made to order.



HYC 液壓套筒

HYC Hydraulic COLLET

精度 Accuracy : 5µm



特點 Feature

- 筒夾具有深冷處理

- Collet have sub-zero treatment.

規格 Spec.	L	l ₁	D	d ₂	重量 (KGS) Weight
HYC12	47	45	12	16.5	-
HYC20	52.5	50.5	20	24	-
HYC32	62.5	60.5	32	35.5	-

HYC12

規格 Spec.	夾持範圍 Range
HYC12-03	3
HYC12-04	4
HYC12-05	5
HYC12-06	6
HYC12-08	8

HYC20

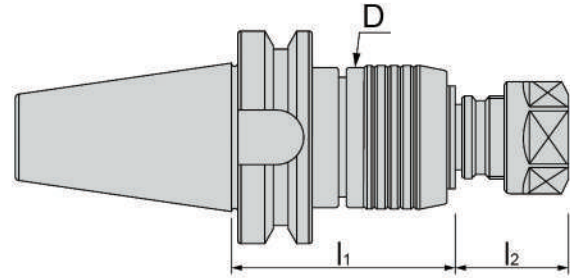
規格 Spec.	夾持範圍 Range
HYC20-03	3
HYC20-04	4
HYC20-05	5
HYC20-06	6
HYC20-07	7
HYC20-08	8
HYC20-09	9
HYC20-10	10
HYC20-11	11
HYC20-12	12
HYC20-13	13
HYC20-14	14
HYC20-15	15
HYC20-16	16

HYC32

規格 Spec.	夾持範圍 Range
HYC32-06	6
HYC32-08	8
HYC32-10	10
HYC32-12	12
HYC32-14	14
HYC32-16	16
HYC32-18	18
HYC32-20	20
HYC32-25	25



STH-CX 同步補償剛性攻牙器 STH-CX SYNCHRO TAPPING HOLDER



特點 Feature

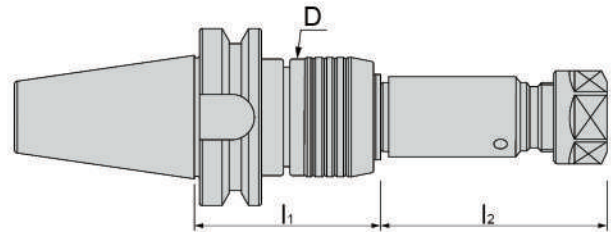
- 有效消除背隙與過大扭力
- 提升攻牙質量
- 延長絲錐壽命
- 無中心出水

- Effectively eliminate backlash and excessive torque.
- Tapping enhance the quality.
- Extend tap life.
- Without coolant hole.

規格 Spec.	l ₁	l ₂	D	攻牙能力 Capacity	伸縮長度 Length Comp		螺帽 Nut	重量 (KGS) Weight
					縮 (-) Comp	伸 (+) Tens		
BT30xSTH16E-CX	70	25	43.4	M3~M12	-	1	ER16	0.82
BT40xSTH20E-CX	75	35	43.4	M3~M17	-	1	ER20	1.52
BT50xSTH20E-CX	90	35	43.4	M3~M17	-	1	ER20	-
BT50xSTH32E-CX	105	40	60	M10~M24	-	1	ER32	4.90



STH-CX 同步補償剛性攻牙器 (加長型) STH-CX SYNCHRO TAPPING HOLDER



特點 Feature

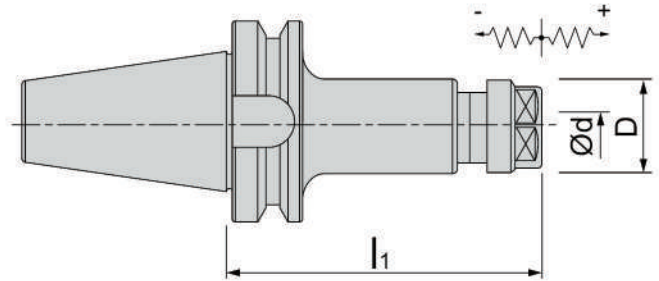
- 有效消除背隙與過大扭力
- 提升攻牙質量
- 延長絲錐壽命
- 無中心出水

- Effectively eliminate backlash and excessive torque.
- Tapping enhance the quality.
- Extend tap life.
- Without coolant hole.

規格 Spec.	l ₁	l ₂	D	攻牙能力 Capacity	伸縮長度 Length Comp		螺帽 Nut	重量 (KGS) Weight
					縮 (-) Comp	伸 (+) Tens		
BT30xSTH16E-70-CX	70	70	43.4	M3~M12	-	1	ER16	-
BT40xSTH20E-70-CX	75	70	43.4	M3~M17	-	1	ER20	-
BT50xSTH20E-70-CX	90	70	43.4	M3~M17	-	1	ER20	-
BT50xSTH32E-70-CX	105	70	60	M10~M24	-	1	ER32	-



BT-TPL 攻牙刀桿 BT-TPL TAPPING HOLDER



規格 Spec.	l ₁	D	Ød 夾持範圍 Clamp Range	攻牙能力 Capacity	伸縮長度 Length Comp		筒夾 Collet	重量 (KGS) Weight
					縮 (-) Comp	伸 (+) Tens		
BT30xTPL16-80	80	28	Ø0.5~Ø10.0	M3~M12	3	8	ER16	-
BT30xTPL20-80	80	34	Ø1.0~Ø13.0	M3~M17	3	8	ER20	0.66
BT40xTPL16-80	80	28	Ø0.5~Ø10.0	M3~M12	3	8	ER16	-
BT40xTPL20-80	80	34	Ø1.0~Ø13.0	M3~M17	3	8	ER20	1.24
BT40xTPL32-100	100	50	Ø2.0~Ø20.0	M3~M27	3	10	ER32	-
BT50xTPL16-100	100	28	Ø0.5~Ø10.0	M3~M10	3	8	ER16	-
BT50xTPL20-100	100	34	Ø1.0~Ø13.0	M3~M12	3	8	ER20	-
BT50xTPL32-100	100	50	Ø2.0~Ø20.0	M3~M27	3	10	ER32	-

範例 Example



攻牙刀桿
Tapping Holder



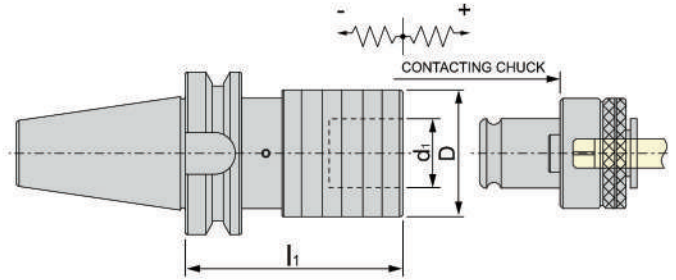
剛性攻牙筒夾
Rigid Tap Collet



絲攻
Tap



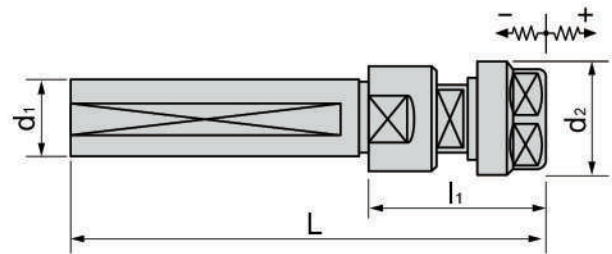
快換式伸縮 / 扭力攻牙刀桿 QUICK CHANGE TAPPING CHUCK



規格 Spec.	攻牙能力 Capacity	絲攻夾頭形式 Tapper Collet Chuck Type	伸縮長度 Length Comp		D	d ₁	l ₁	重量 (KGS) Weight
			縮 (-) Comp	伸 (+) Tens				
BT30x312-68	M3~M14	TCS-1B	7.5	7.5	36	19	68	0.64
BT40x312-73	M3~M14	TCS-1B	7.5	7.5	36	19	73	1.25
BT40x822-94	M8~M24	TCS-2B	12.5	12.5	53	31	94	1.74
BT40x1638-157	M14~M36	TCS-3B	20	20	78	48	157	3.89
BT50x312-84	M3~M14	TCS-1B	7.5	7.5	36	19	84	4.00
BT50x822-103	M8~M24	TCS-2B	12.5	12.5	53	31	103	4.50
BT50x1638-200	M14~M36	TCS-3B	20	20	75	48	200	7.27



TPL 實用型直柄伸縮攻牙器 TPL PRACTICAL STRAIGHT SHANK TAPPER



特點 Feature

- 穩定性高

- High stability.

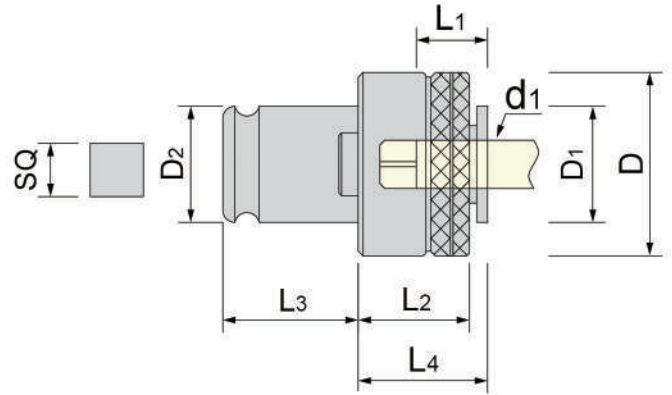
規格 Spec.	L	l ₁	d ₁	d ₂	筒夾 Collet	攻牙能力 Capacity	伸縮量 Stretch Size		重量 (KGS) Weight
							伸 (+) elongation	縮 (-) shorten	
TPL-20	125	45	20	34	ER20	M3~M17	8mm	3mm	0.36
TPL-32	145	65	32	50	ER32	M3~M27	10mm	5mm	1.32



TCS 扭力絲攻筒夾

TCS QUICK CHANGE TAPPING COLLET

TSC-1B



※ 訂購前請先確認 d_1 及 SQ 尺寸 Before ordering, please make sure the size of d_1 and SQ.

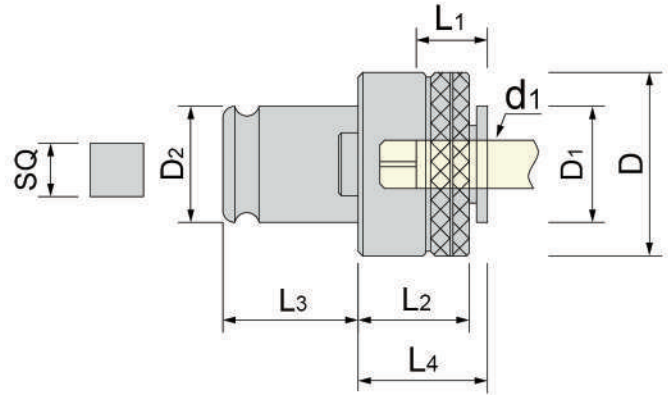
規格 Spec.	d_1	SQ	適用規範 Standard		D	D_1	D_2	L_1	L_2	L_3	L_4	重量 (KGS) Weight
TCS1B-2.5-2	2.5	2	M1.M2	ISO529	32	19	19	17	25	21.5	25	0.18
TCS1B-3-2.5	3	2.5	M3.5	ISO529/2283								
TCS1B-3.15-2.5	3.15		M2	JIS								
TCS1B-3.15-2.5	3.15	2.5	M3	ISO529								
			M4	ISO529/2283								
TCS1B-3.5-2.7	3.5	2.7	M3	DIN371								
			M4.5.M5	DIN376								
TCS1B-4-3.15	4	3.15	M4	ISO529								
TCS1B-4-3.2	4	3.2	M5	ISO529/2283								
			M3	JIS								
TCS1B-4.5-3.4	4.5	3.4	M4	DIN371								
TCS1B-4.5-3.55		3.55	M6	DIN376								
TCS1B-5-4	5	4	M4.5	ISO529								
			M6	ISO529/2283								
TCS1B-5-4	5	4	M4.M4.5	JIS								
TCS1B-5.5-4.5	5.5	4.5	M5	ISO529								
TCS1B-6-4.5	6		M5.M5.5	JIS								
TCS1B-6-4.9	6	4.9	M6	ISO529								
			M4.5.M5.M6	DIN371								
TCS1B-6.1-5	6.1	5	M8	DIN376								
TCS1B-6.2-5	6.2		M8	JIS								
TCS1B-6.3-5	6.3		M6	ISO529								
TCS1B-7-5.5	7	5.5	M8	ISO529/2283								
			M10.M9	JIS								
			UNC3/8	JIS								
TCS1B-8-6	8	6	M10	DIN376								
			M11	JIS								
			UNC7/16	JIS								
TCS1B-8-6.2	8	6.2	PT1/8	JIS								
TCS1B-8-6.3	8	6.3	M8	DIN371								
			M8	ISO529								
TCS1B-8-6.3	8	6.3	M10	ISO529/2283								
TCS1B-8.5-6.5	8.5	6.5	M12	JIS								
TCS1B-9-7	9	7	UNC1/2	JIS								
			M12	DIN376								
TCS1B-9-7.1	9	7.1	M9	ISO529								
			M12	ISO529/2283								
TCS1B-10-8	10	8	M10	DIN371								
			M10	ISO529								
TCS1B-10.5-8	10.5	8	M14.M15	JIS								
TCS1B-11-9	11	9	UNC9/16	JIS								
			M14	DIN376								
TCS1B-11-2-9	11.2	9	PT1/4	DIN376								
TCS1B-11-2-9	11.2	9	M14	ISO529/2283								



TCS 扭力絲攻筒夾

TCS QUICK CHANGE TAPPING COLLET

TSC-2B



※ 訂購前請先確認 d_1 及 SQ 尺寸 Before ordering, please make sure the size of d_1 and SQ.

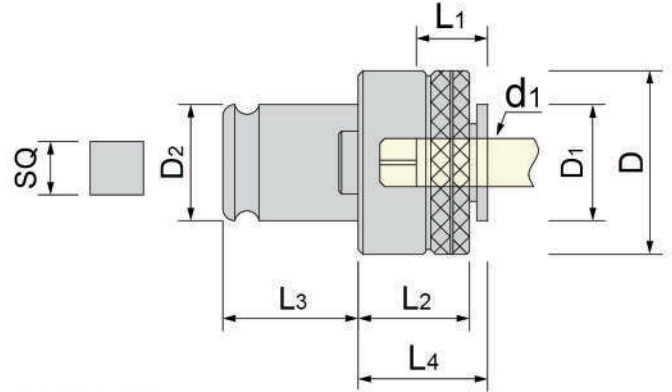
規格 Spec.	d_1	SQ	適用規範 Standard		D	D_1	D_2	L_1	L_2	L_3	L_4	重量 (KGS) Weight		
TCS2B-6-4.5	6	4.5	M6	JIS	50	30	31	30	31	35.5	33	0.55		
TCS2B-6-4.9			UNC1/4										M4.5.M5.M6	DIN371
TCS2B-6.2-5	6.2	5	M8	JIS										
TCS2B-6.3-5	6.3		M6	ISO529										
TCS2B-7-5.5	7	5.5	M8	ISO529/2283										
TCS2B-8-6			8	6									M10.M9	JIS
TCS2B-8-6.2													UNC3/8	DIN376
TCS2B-8-6.3	M10	DIN376												
TCS2B-8.5-6.5	8.5	6.5	M11	JIS										
TCS2B-9-7			UNC7/16										PT1/8	
TCS2B-9-7.1	9	7	M8	DIN371										
TCS2B-10-8			10	8									M8	ISO529
TCS2B-10.5-8													M10	ISO529/2283
TCS2B-11-9	11	9											M12	JIS
TCS2B-11.2-9			UNC1/2	DIN376										
TCS2B-12-9	12	10	M9	ISO529										
TCS2B-12.5-10			12.5	10									M12	ISO529/2283
TCS2B-14-11													14	11
TCS2B-14-11.2	ISO529													
TCS2B-15-12	M14.M15	JIS												
TCS2B-16-12	16	12	UNC9/16	JIS										
TCS2B-16-12.5			M14		DIN376									
TCS2B-17-13	17	13	M14	ISO529/2283										
TCS2B-18-14			18	14	UNC5/8	JIS								
TCS2B-18-14.5					DIN376									
TCS2B-19-15	M16	ISO529/2283												
TCS2B-14-11	14	11	M18	JIS										
TCS2B-15-12			UNC3/4		DIN376									
TCS2B-16-12			PT3/8		ISO529/2283									
TCS2B-17-13	17	13	M18	JIS										
TCS2B-18-14			M20	DIN376										
TCS2B-18-14.5	18	14.5	M22	ISO529/2283										
TCS2B-19-15			UNC7/8	JIS										
TCS2B-18-14	18	14	M24	ISO529/2283										
TCS2B-18-14.5			PT1/2	JIS										
TCS2B-19-15	19	15	M22.M24	DIN376										
TCS2B-19-15			M24.M25	JIS										



TCS 扭力絲攻筒夾

TCS QUICK CHANGE TAPPING COLLET

TSC-3B



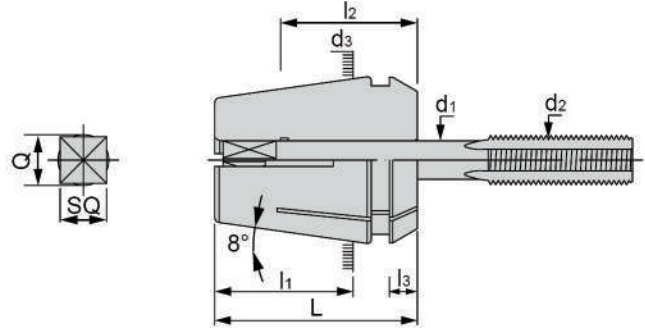
※ 訂購前請先確認 d_1 及 SQ 尺寸 Before ordering, please make sure the size of d_1 and SQ.

規格 Spec.	d_1	SQ	適用規範 Standard		D	D_1	D_2	L_1	L_2	L_3	L_4	重量 (KGS) Weight
TCS3B-10.5-8	10.5	8	M14.M15 UNC9/16	JIS	72	47	48	44	41	55.5	45	1.58
TCS3B-11-9	11	9	M14	DIN376								
TCS3B-11.2-9	11.2		PT1/4	JIS								
TCS3B-12-9	12	10	M14	ISO529/2283								
TCS3B-12.5-10	12.5		UNC5/8	JIS								
TCS3B-14-11	14	11	M16	DIN376								
			JIS									
TCS3B-14-11.2	14	11.2	M18	ISO529/2283								
TCS3B-15-12	15	12	M18	JIS								
TCS3B-16-12	16		M20	DIN376								
TCS3B-16-12.5	16	12.5	M18.M20	ISO529/2283								
TCS3B-17-13	17	13	M22	JIS								
TCS3B-18-14	18		UNC7/8	ISO529/2283								
TCS3B-18-14.5	18	14	M24	JIS								
TCS3B-19-15	19	15	PT1/2	DIN376								
TCS3B-20-15	20		M22.M24	JIS								
TCS3B-20-16	20	16	M27.M26	DIN376								
TCS3B-21-17	21	17	UNC1	ISO529/2283								
TCS3B-22-18	22		M27	JIS								
TCS3B-22.4-18	22.4	18	M27.M30	DIN376								
TCS3B-23-17	23	19	M28	ISO529/2283								
TCS3B-24-19	24		M30	JIS								
TCS3B-25-19	25	20	PT3/4	ISO529/2283								
TCS3B-25-20	25		M32	JIS								
TCS3B-26-21	26	21	UNC1-1/4	DIN376								
			M33	ISO529/2283								
TCS3B-28-21	28	22	M33	JIS								
TCS3B-28-22	28		M36	DIN376								



ER 鋼性攻牙筒夾

ER RIDID TAP COLLET



- 材質 :SUJ-2
- 斜度 :8°
- 硬度 :HRC46°
- 表面粗糙度 RZ2.5 以內

- Steel:SUJ - 2
- Taper:8°
- HRC46°
- Surface Roughness:RZ 2.5

特點 Feature

- 利用溝槽的差異，有效而穩固地夾住螺絲攻，決不打滑！專利在案
- 適合切削中心機的剛性攻牙加工，或是其他攻牙機械
- 當訂 JIS、DIN、ISO 或其他尺寸，訂購前請校對四角孔需核對 SQ，而圓孔則需對 d1
- 可降低使用攻牙器的成本

- Differences in the use of the trench, effectively and securely grip the screw attack, never slipping! Patents documented.
- Suitable for machining centers rigid tapping, tapping, or other mechanical.
- When set JIS, DIN, ISO or other sizes, please proofread before ordering to be together right corner Kong SQ, and holes need for d1.
- Tapping can reduce the cost of using.

規格 Spec.	L	l ₁	l ₂	l ₃	d ₁ 範圍 Range	d ₃	攻牙能力 Capacity	重量 (KGS) Weight
ER16-TP	27.5	17.5	18	4.0	1~7	16	M3~M12	0.02
	27.5	17.5	22	4.0	8~10	16	M3~M12	0.02
ER20-TP	31.5	20.7	18	4.8	1~7	20	M3~M17	0.04
	31.5	20.7	22	4.8	8~10	20	M3~M17	0.04
	31.5	20.7	25	4.8	10.5~13	20	M3~M17	0.04
ER25-TP	34	23	18	5.0	1~7	25	M3~M22	0.06
	34	23	22	5.0	8~10	25	M3~M22	0.06
	34	23	25	5.0	10.5~16	25	M3~M22	0.06
ER32-TP	40	27.34	18	5.5	1~7	32	M3~M27	0.14
	40	27.34	22	5.5	8~10	32	M3~M27	0.14
	40	27.34	25	5.5	10.5~16	32	M3~M27	0.14
	40	27.34	28	5.5	17~20	32	M3~M27	0.14
ER40-TP	46	31.4	18	7	1~7	40	M3~M27	0.24
	46	31.4	22	7	8~10	40	M3~M27	0.24
	46	31.4	25	7	10.5~16	40	M3~M27	0.24
	46	31.4	28	7	17~20	40	M3~M27	0.24



ER 鋼性攻牙筒夾

ER RIDID TAP COLLET

ER16

規格 Spec.	絲攻柄徑 Shank diameter of taper d ₁	使用絲攻範圍 Tapping range d ₂	
ER16-2.24TP	2.24	M3	ISO - 529
ER16-2.5TP	2.5	M3.5 M3.5	DIN - 376 ISO - 529
ER16-2.8TP	2.8	M4	DIN - 376
ER16-3.15TP	3.15	M3 M4	ISO - 529 ISO - 529
ER16-3.5TP	3.5	M3 M3 M5	DIN - 352 DIN - 371 DIN - 376
ER16-3.55TP	3.55	M3.5 M4.5	ISO - 529 ISO - 529
ER16-4TP	4	M3 M3.5 M3.5 M4 M5	JIS DIN - 352 DIN - 371 ISO - 529 ISO - 529
ER16-4.5TP	4.5	M4 M4 M6 M6	DIN - 362 DIN - 371 DIN - 376 ISO - 529
ER16-5TP	5	M4 M4.5 M5	JIS JIS ISO - 529
ER16-5.5TP	5.5	M5 M5.5	JIS JIS
ER16-6TP	6	M5 M5 M6 M6 M6 M8 M8	DIN - 352 DIN - 371 JIS DIN - 352 DIN - 371 DIN - 352 DIN - 376
ER16-6.2TP	6.2	M7 M8	JIS JIS
ER16-6.3TP	6.3	M6 M8	ISO - 529 ISO - 529
ER16-7TP	7	M9 M10 M10 M10	JIS JIS DIN - 352 DIN - 376
ER16-8TP	8	M8 M8 M10 M11	DIN - 371 ISO - 529 ISO - 529 JIS
ER16-8.5TP	8.5	M12	JIS
ER16-9TP	9	M12 M12 M12	DIN - 352 DIN - 376 ISO - 529
ER16-10TP	10	M10 M10	DIN - 371 ISO - 529

ER20

規格 Spec.	絲攻柄徑 Shank diameter of taper d ₁	使用絲攻範圍 Tapping range d ₂	
ER20-2.24TP	2.24	M3	ISO - 529
ER20-2.5TP	2.5	M3.5 M3.5	DIN - 376 DIN - 529
ER20-2.8TP	2.8	M4	DIN - 376
ER20-3.15TP	3.15	M3 M4	ISO - 529 ISO - 529
ER20-3.5TP	3.5	M3 M3 M5	DIN - 352 DIN - 371 DIN - 376
ER20-3.55TP	3.55	M3.5 M4.5	ISO - 529 ISO - 529
ER20-4TP	4	M3 M3.5 M3.5 M4 M5	JIS DIN - 352 DIN - 371 ISO - 529 ISO - 529
ER20-4.5TP	4.5	M4 M4 M6 M6	DIN - 362 DIN - 371 DIN - 376 ISO - 529
ER20-5TP	5	M4 M4.5 M5	JIS JIS ISO - 529
ER20-5.5TP	5.5	M5 M5.5	JIS JIS
ER20-6TP	6	M5 M5 M6 M6 M6 M8 M8	DIN - 352 DIN - 371 JIS DIN - 352 DIN - 371 DIN - 352 DIN - 376
ER20-6.2TP	6.2	M7 M8	JIS JIS
ER20-6.3TP	6.3	M6 M8	ISO - 529 ISO - 529
ER20-7TP	7	M9 M10 M10 M10	JIS JIS DIN - 352 DIN - 376
ER20-8TP	8	M8 M8 M10 M11	DIN - 371 ISO - 529 ISO - 529 JIS
ER20-8.5TP	8.5	M12	JIS
ER20-9TP	9	M12 M12 M12	DIN - 352 DIN - 376 ISO - 529
ER20-10TP	10	M10 M10	DIN - 371 ISO - 529
ER20-10.5TP	10.5	M14 M15	JIS JIS
ER20-11TP	11	M14 M14	DIN - 352 DIN - 376
ER20-11.2TP	11.2	M14	ISO - 529
ER20-12TP	12	M16 M16	DIN - 352 DIN - 376
ER20-12.5TP	12.5	M16 M16	JIS ISO - 529
ER20-13TP	13	M17	JIS



ER 鋼性攻牙筒夾

ER RIDID TAP COLLET

ER25

規格 Spec.	絲攻柄徑 Shank diameter of taper d ₁	使用絲攻範圍 Tapping range d ₂	
ER25-2.24TP	2.24	M3	ISO - 529
ER25-2.5TP	2.5	M3.5 M3.5	DIN - 376 ISO - 529
ER25-2.8TP	2.8	M4	DIN - 376
ER25-3.15TP	3.15	M3 M4	ISO - 529 ISO - 529
ER25-3.5TP	3.5	M3 M3 M5	DIN - 352 DIN - 371 DIN - 376
ER25-3.55TP	3.55	M3.5 M4.5	ISO - 529 ISO - 529
ER25-4TP	4	M3 M3.5 M3.5 M4 M5	JIS DIN - 352 DIN - 371 ISO - 529 ISO - 529
ER25-4.5TP	4.5	M4 M4 M6 M6	DIN - 362 DIN - 371 DIN - 376 ISO - 529
ER25-5TP	5	M4 M4.5 M5	JIS JIS ISO - 529
ER25-5.5TP	5.5	M5 M5.5	JIS JIS
ER25-6TP	6	M5 M5 M6 M6 M6 M8 M8	DIN - 352 DIN - 371 JIS DIN - 352 DIN - 371 DIN - 352 DIN - 376
ER25-6.2TP	6.2	M7 M8	JIS JIS
ER25-6.3TP	6.3	M6 M8	ISO - 529 ISO - 529
ER25-7TP	7	M9 M10 M10 M10	JIS JIS DIN - 352 DIN - 376
ER25-8TP	8	M8 M8 M10 M11	DIN - 371 ISO - 529 ISO - 529 JIS
ER25-8.5TP	8.5	M12	JIS
ER25-9TP	9	M12 M12 M12	DIN - 352 DIN - 376 ISO - 529
ER25-10TP	10	M10 M10	DIN - 371 ISO - 529
ER25-10.5TP	10.5	M14 M15	JIS JIS
ER25-11TP	11	M14 M14	DIN - 352 DIN - 376
ER25-11.2TP	11.2	M14	ISO - 529
ER25-12TP	12	M16 M16	DIN - 352 DIN - 376
ER25-12.5TP	12.5	M16	JIS

規格 Spec.	絲攻柄徑 Shank diameter of taper d ₁	使用絲攻範圍 Tapping range d ₂	
ER25-12.5TP	12.5	M16	ISO - 529
ER25-13TP	13	M17	JIS
ER25-14TP	14	M18 M18 M18 M20	JIS DIN - 352 DIN - 376 ISO - 529
ER25-15TP	15	M20	JIS
ER25-16TP	16	M20 M20 M22	DIN - 352 DIN - 376 ISO - 529

ER32

規格 Spec.	絲攻柄徑 Shank diameter of taper d ₁	使用絲攻範圍 Tapping range d ₂	
ER32-2.24TP	2.24	M3	ISO - 529
ER32-2.5TP	2.5	M3.5 M3.5	DIN - 376 ISO - 529
ER32-2.8TP	2.8	M4	DIN - 376
ER32-3.15TP	3.15	M3 M4	ISO - 529 ISO - 529
ER32-3.5TP	3.5	M3 M3 M5	DIN - 352 DIN - 371 DIN - 376
ER32-3.55TP	3.55	M3.5 M4.5	ISO - 529 ISO - 529
ER32-4TP	4	M3 M3.5 M3.5 M4 M5	JIS DIN - 352 DIN - 371 ISO - 529 ISO - 529
ER32-4.5TP	4.5	M4 M4 M6 M6	DIN - 362 DIN - 371 DIN - 376 ISO - 529
ER32-5TP	5	M4 M4.5 M5	JIS JIS ISO - 529
ER32-5.5TP	5.5	M5 M5.5	JIS JIS
ER32-6TP	6	M5 M5 M6 M6 M6 M8 M8	DIN - 352 DIN - 371 JIS DIN - 352 DIN - 371 DIN - 352 DIN - 376
ER32-6.2TP	6.2	M7 M8	JIS JIS
ER32-6.3TP	6.3	M6 M8	ISO - 529 ISO - 529
ER32-7TP	7	M9 M10 M10 M10	JIS JIS DIN - 352 DIN - 376
ER32-8TP	8	M8 M8 M10 M11	DIN - 371 ISO - 529 ISO - 529 JIS
ER32-8.5TP	8.5	M12	JIS



ER 鋼性攻牙筒夾 ER RIDID TAP COLLET

ER32

規格 Spec.	絲攻柄徑 Shank diameter of taper d ₁	使用絲攻範圍 Tapping range d ₂	
ER32-9TP	9	M12 M12 M12	DIN - 352 DIN - 376 ISO - 529
ER32-10TP	10	M10 M10	DIN - 371 ISO - 529
ER32-10.5TP	10.5	M14 M15	JIS JIS
ER32-11TP	11	M14 M14	DIN - 352 DIN - 376
ER32-11.2TP	11.2	M14	ISO - 529
ER32-12TP	12	M16 M16	DIN - 352 DIN - 376
ER32-12.5TP	12.5	M16 M16	JIS ISO - 529
ER32-13TP	13	M17	JIS
ER32-14TP	14	M18 M18 M18 M18 M20	JIS DIN - 352 DIN - 376 ISO - 529 ISO - 529
ER32-15TP	15	M20	JIS
ER32-16TP	16	M20 M20 M22	DIN - 352 DIN - 376 ISO - 529
ER32-17TP	17	M22	JIS
ER32-18TP	18	M22 M22 M24 M24 M24	DIN - 352 DIN - 376 DIN - 352 DIN - 736 ISO - 529
ER32-19TP	19	M24 M25	JIS JIS
ER32-20TP	20	M26 M27	JIS JIS

ER40

規格 Spec.	絲攻柄徑 Shank diameter of taper d ₁	使用絲攻範圍 Tapping range d ₂	
ER40-2.24TP	2.24	M3	ISO - 529
ER40-2.5TP	2.5	M3.5 M3.5	DIN - 376 ISO - 529
ER40-2.8TP	2.8	M4	DIN - 376
ER40-3.15TP	3.15	M3 M4	ISO - 529 ISO - 529
ER40-3.5TP	3.5	M3 M3 M5	DIN - 352 DIN - 371 DIN - 376
ER40-3.55TP	3.55	M3.5 M4.5	ISO - 529 ISO - 529
ER40-4TP	4	M3 M3.5 M3.5 M4 M5	JIS DIN - 352 DIN - 371 ISO - 529 ISO - 529
ER40-4.5TP	4.5	M4 M4 M6 M6	DIN - 352 DIN - 371 DIN - 376 ISO - 529
ER40-5TP	5	M4 M4.5 M5	JIS JIS ISO - 529

規格 Spec.	絲攻柄徑 Shank diameter of taper d ₁	使用絲攻範圍 Tapping range d ₂	
ER40-5.5TP	5.5	M5 M5.5	JIS JIS
ER40-6TP	6	M5 M5 M6 M6 M6 M8 M8	DIN - 352 DIN - 371 JIS DIN - 352 DIN - 371 DIN - 352 DIN - 376
ER40-6.2TP	6.2	M7 M8	JIS JIS
ER40-6.3TP	6.3	M6 M8	ISO - 529 ISO - 529
ER40-7TP	7	M9 M10 M10 M10 M10	JIS JIS DIN - 352 DIN - 352 DIN - 376
ER40-8TP	8	M8 M8 M10 M11	DIN - 371 ISO - 529 ISO - 529 JIS
ER40-8.5TP	8.5	M12	JIS
ER40-9TP	9	M12 M12 M12	DIN - 352 DIN - 376 ISO - 529
ER40-10TP	10	M10 M10	DIN - 371 ISO - 529
ER40-10.5TP	10.5	M14 M15	JIS JIS
ER40-11TP	11	M14 M14	DIN - 352 DIN - 376
ER40-11.2TP	11.2	M14	ISO - 529
ER40-12TP	12	M16 M16	DIN - 352 DIN - 376
ER40-12.5TP	12.5	M16 M16	JIS ISO - 529
ER40-13TP	13	M17	JIS
ER40-14TP	14	M18 M18 M18 M18 M20	JIS DIN - 352 DIN - 376 ISO - 529 ISO - 529
ER40-15TP	15	M20	JIS
ER40-16TP	16	M20 M20 M22	DIN - 352 DIN - 376 ISO - 529
ER40-17TP	17	M22	JIS
ER40-18TP	18	M22 M22 M24 M24 M24	DIN - 352 DIN - 376 DIN - 352 DIN - 376 ISO - 529
ER40-19TP	19	M24 M25	JIS JIS
ER40-20TP	20	M26 M27	JIS JIS

Boring Head

SMB特點

搭配MCK系列刀桿並可與CK系統刀桿相容，另有PSC三角錐結構可與BT-PSC刀桿結合，並採模組化設計，連結不同長度之延長桿，解決加工需求並有更多的搭配性。

微調單位:每刻度移動量為0.01mm。

替換式刀座設計，可模組化組合使用。

Suitable for combining with MCK series of tool holders as well as CK series of tool holders. Another PSC structure can be combined with BT-PSC arbor, The modular design connects the extension rods of different lengths to solve the processing needs and has more matching. Micro-adjustment unit: each unit is 0.01mm. The insert seat has an exchangeable design and can be used after combination.



SIC-1



SIC-2



SIC-3

SIC刀座，可完全包覆住心軸，提升穩固性。三種尺寸刀座，可加大搪孔範圍，搪孔範圍 $\varnothing 25 \sim \varnothing 203 \text{mm}$ 。2號及3號刀座，皆能做背搪加工，1號刀座僅SMB53、SMB68、SMB100，才能做背搪加工。

SIC insert holder can be completely coated to live spindle and enhance stability. Three type insert holder can increase the range of Boring, boring range $\varnothing 25$ to $\varnothing 203 \text{mm}$. SIC-2 and SIC-3 insert holder can do back boring processing, SIC-1 insert holder can do back boring processing only SMB53、SMB68、SMB100.

Feature

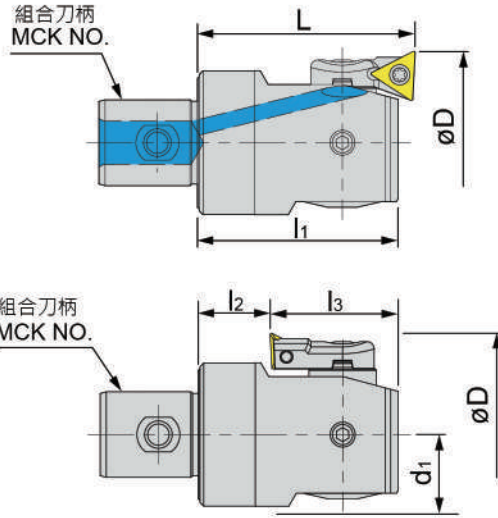


SMB 超微米精搪頭

SMB SUPER MICRON EXCHANGEABLE FINISH BORING HEAD



台灣精品 2009
TAIWAN EXCELLENCE



搪孔範圍 ø25~203 Boring Range	精度 0.01mm Accuracy	最高轉速 8000 Max. rpm
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特點 Feature

- 精搪孔專用
- 微調單位：每刻度移動量為 $\phi 0.01\text{mm}$
- 搪頭內藏式出水孔，可以有效沖刷屑片，提高加工效果
- 替換式刀座設計，可模組化組合使用
- 組合搭配 MCK 系列刀桿或是共容於 CK 系列刀桿

- For finish boring.
- Micro-adjustment unit : each unit is 0.01 mm.
- The insert seat is designed to have a coolant holes at sides ,which can remove the metal chips effectively and raise the manufacturing effect.
- The insert seat has an exchangeable design and can be used after combination.
- Suitable for combining with MCK series of tool holders as CK series of tool holders.

規格 Spec.	øD 搪孔範圍 Boring Range(正搪)				øD 搪孔範圍 Boring Range(背搪)					組合刀柄 Mck No.	刀片座 Insert Holder	刀片 Insert	重量 (KGS) Weight
	Min.	Max.	L	l ₁	Min.	Max.	l ₂	l ₃	d ₁				
SMB 20	20	26	32.5	29.5	-	-	10.5	19.5	10	CK 1	SIB20-1/SIC20-1	TB..0601 TP..0802	0.07
	25	31	32.5	29.5	30	31	10.5	19.5	10	CK 1	SIB20-2/SIC20-2		0.07
	30	36	32.5	29.5	30	36	10.5	19.5	10	CK 1	SIB20-3/SIC20-3		0.07
SMB 25	25	33	35.5	32.5	-	-	11.5	21	12.5	CK 2	SIB25-1/SIC25-1	TB..0601 TP..0802	0.12
	32	40	35.5	32.5	36	40	11.5	21	12.5	CK 2	SIB25-2/SIC25-2		0.12
	39	47	35.5	32.5	39	47	11.5	21	12.5	CK 2	SIB25-3/SIC25-3		0.12
SMB 32	32	42	40	35	-	-	10	25	16	CK 3	SIB32-1/SIC32-1	TB..0601 TP..0802	0.21
	41	51	40	35	46	51	10	25	16	CK 3	SIB32-2/SIC32-2		0.21
	50	60	40	35	50	60	10	25	16	CK 3	SIB32-3/SIC32-3		0.21
SMB 41	41	54	47	43	-	-	14	29	20	CK 4	SIB41-1/SIC41-1	TB..0601 TP..0802	0.40
	50	63	47	43	53	63	14	29	20	CK 4	SIB41-2/SIC41-2		0.40
	61	74	47	43	61	74	14	29	20	CK 4	SIB41-3/SIC41-3		0.40
SMB 53	53	70	57	53	62	70	19	34	25.5	CK 5	SIB53-1/SIC53-1	TP..0902 TC..1102	1.10
	65	82	57	53	65	82	19	34	25.5	CK 5	SIB53-2/SIC53-2		1.10
	78	95	57	53	78	95	19	34	25.5	CK 5	SIB53-3/SIC53-3		1.10
SMB 68	68	100	71	67.2	80	100	22	45.2	32.5	CK 6	SIB68-1/SIC68-1	TP..0902 TC..1102	1.74
	94	126	71	67.2	94	126	22	45.2	32.5	CK 6	SIB68-2/SIC68-2		1.74
	118	150	71	67.2	118	150	22	45.2	32.5	CK 6	SIB68-3/SIC68-3		1.74
SMB100	100	153	71	67.2	112	153	22	45.2	45.5	CK 6	SIB68-1/SIC68-1	TP..0902 TC..1102	2.46
	126	179	71	67.2	126	179	22	45.2	45.5	CK 6	SIB68-2/SIC68-2		2.46
	150	203	71	67.2	150	203	22	45.2	45.5	CK 6	SIB68-3/SIC68-3		2.46

- 標準配備附為 SIB □□ -1 刀片座，SIB/C □□ -2、SIB/C □□ -3 需另購
 -Standard marting part SIB □□ -1, SIB/C □□ -2, SIB/C □□ -3 is ordered separately



CK 搪孔頭刀桿 CK BORING HEAD SHANK

細牙
Fine Teeth



Fig.1

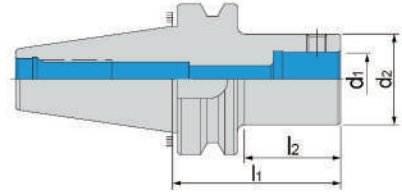
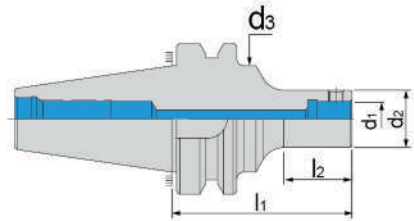


Fig.2



特點 Feature

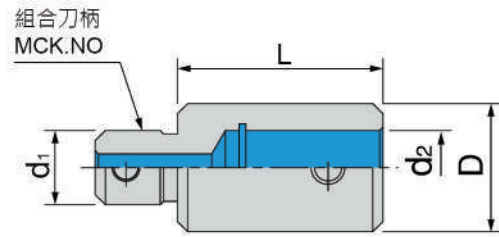
- 內孔公差 H6
- 整支通孔，利於出水及抗震
- 可共用並互容於大多數 "CK" 系列
- 側邊鎖固螺絲與鍵槽呈 90 度，確保搪孔切削完畢時的相對位置
- 鎖固時請使用螺絲防卡油防止因搪孔加工扭力過大，導致螺絲卡死難以拆卸組裝

- Internal tolerance is H6.
- The tool holder is through-one, which is better for water to get through and vibration resistance.
- Sharing and mutual tolerance in most of the "CK" series.
- Side of the locking screw and keyway was 90 degrees, to ensure that the relative position of the conclusion of the boring cutting.
- Locking screw preventing oil to prevent excessive torque due to boring processing, resulting in death is difficult to remove the assembly screws card."

規格 Spec.	l ₁	l ₂	d ₁	d ₂	d ₃	側邊螺絲 Screw	Fig.	重量 (KGS) Weight
BT30-CK1-70L	70	40	11	19	-	M4-0.5P-5L	1	0.50
BT30-CK2-80L	80	50	14	24	-	M5-0.5P-6.5L	1	0.60
BT30-CK3-80L	80	50	18	31	-	M6-0.75P-8L	1	0.70
BT30-CK4-70L	70	40	22	39	-	M8-0.75P-11L	1	0.80
BT30-CK5-60L	60	30	28	50	-	M10-1.0P-14L	1	0.80
BT30-CK6-60L	60	30	36	64	-	M12-1.0P-18L	1	1.00
BT40-CK1-75L	75	40	11	19	-	M4-0.5P-5L	1	1.00
BT40-CK2-85L	85	50	14	24	-	M5-0.5P-6.5L	1	1.10
BT40-CK3-95L	95	60	18	31	-	M6-0.75P-8L	1	1.20
BT40-CK4-85L	85	50	22	39	-	M8-0.75P-11L	1	1.30
BT40-CK4-130L	130	95	22	39	-	M8-0.75P-11L	1	1.90
BT40-CK5-75L	75	40	28	50	-	M10-1.0P-14L	1	1.30
BT40-CK6-65L	65	30	36	64	-	M12-1.0P-18L	1	1.30
BT50-CK1-115L	115	40	11	19	31	M4-0.5P-5L	2	4.00
BT50-CK2-110L	110	65	14	24	-	M5-0.5P-6.5L	1	3.90
BT50-CK3-125L	125	80	18	31	-	M6-0.75P-8L	1	4.10
BT50-CK4-115L	115	70	22	39	-	M8-0.75P-11L	1	4.30
BT50-CK5-105L	105	60	28	50	-	M10-1.0P-14L	1	4.50
BT50-CK5-180L	180	135	28	50	-	M10-1.0P-14L	1	5.50
BT50-CK6-95L	95	50	36	64	-	M12-1.0P-18L	1	4.50
BT50-CK6-170L	170	125	36	64	-	M12-1.0P-18L	1	6.30



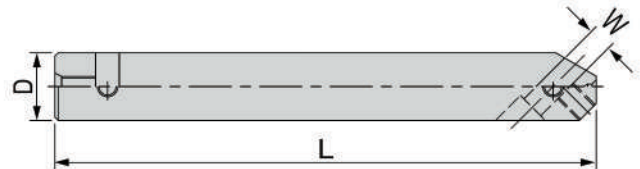
SCK 等徑延長桿 SCK EXTENSION CONSTANT DIAMETER



規格 Spec.	L	D	d ₁	d ₂	側邊螺絲 Screw	重量 (KGS) Weight
SCK1-1-30L	30	19	11	11	M4-0.5P-5L	0.07
SCK2-2-30L	30	24	14	14	M5-0.5P-6.5L	0.10
SCK3-3-30L	30	31	18	18	M6-0.75P-8L	0.15
SCK4-4-45L	45	39	22	22	M8-0.75P-11L	0.40
SCK5-5-60L	60	50	28	28	M10-1.0P-14L	0.80
SCK6-6-60L	60	64	36	36	M12-1.0P-18L	1.40



直柄搪孔頭刀柄 STRAIGHT BORING HOLDER

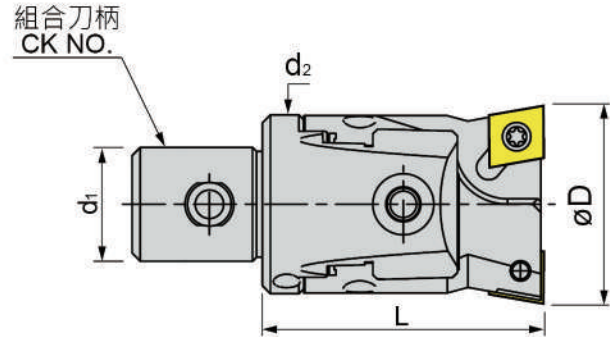


規格 Spec.	搪孔角度 Boring Angle	øD 搪孔範圍 Boring Range		L	D	側邊固定螺絲 Screw	W	重量 (KGS) Weight
		Min.	Max.					
C16-BS150	90°	18	28	150	16	M5x0.8P-5L	6	0.24
	30°							
C20-BS200	90°	22	36	200	20	M6x1.0P-6L	8	0.50
	30°							
C25-BS250	90°	28	45	250	25	M6x1.0P-6L	8	1.00
	30°							
C32-BS300	90°	36	58	300	32	M8x1.25P-10L	10	1.88
	30°							



SCK 可調式雙刃粗搪孔頭

SCK ROUGHING TWIN ADJUSTMENT BORING HEAD



搪孔範圍
ø24~220
Boring Range

精度
0.2mm
Accuracy

特點 Feature

- 雙刃微調同時移動 · 適用於大進給 (F) 切削

- Both inserts with a fine adjustment and simultaneous movement, suited to big feeding (F) cutting.

規格 Spec.	øD 搪孔範圍 Boring Range		組合刀柄 Mck No.	L	d ₁	d ₂	鎖固螺絲 Screw	鎖固扳手 Wrench	扭力值 (N.m) Torque	刀片 Insert	螺絲 Screw	扳手 Wrench	扭力值 (N.m) Torque	重量 (KGS) Weight
	Min.	Max.												
SCK2430-C	24	30	CK2	34	14	22	M4	PL3	3.0	CC..0602	M2.5-6.45-3.7-43	T8	1.4	0.19
SCK2940-C	29	40	CK2	42	14	27	M5	PL4	4.0	CC..09T3	M4-10-5.7-60	T15	3.0	0.19
SCK3950-C	39	50	CK3	45	18	32	M5	PL4	5.0	CC..09T3	M4-10-5.7-60	T15	3.0	0.19
SCK4965-C	49	65	CK4	56	22	42	M6	PL5	6.0	CC..1204	M5-11-7.5-60	T20	5.0	0.10
SCK6382-C	63	82	CK5	66	28	54	M8	PL6	10.0	CC..1204	M5-11-7.5-60	T20	5.0	0.20
SCK80102-C	80	102	CK6	86	36	68	M10	PL8	12.0	CC..1204	M5-11-7.5-60	T20	5.0	2.30
SCK100125-C	100	125	MCK7	100	46	85	M10	PL8	12.0	CC..1204	M5-11-7.5-60	T20	5.0	4.00
SCK125160-C	125	160	MCK7	100	46	110	M10	PL8	12.0	CC..1204	M5-11-7.5-60	T20	5.0	6.16
SCK160220-C	160	220	MCK7	100	46	145	M10	PL8	12.0	CC..1204	M5-11-7.5-60	T20	5.0	8.10

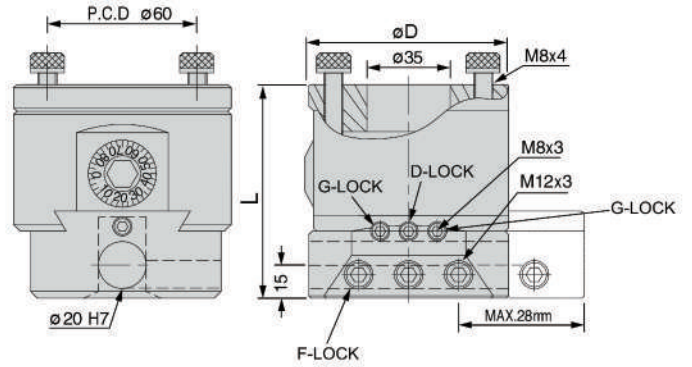


CCMT 刀片適用粗搪、重及斷續切削。

CCMT inserts are suitable for rough boring, heavy and interrupted cutting.



NBH 精密精搪孔頭 NBH PRECISION BORING HEAD

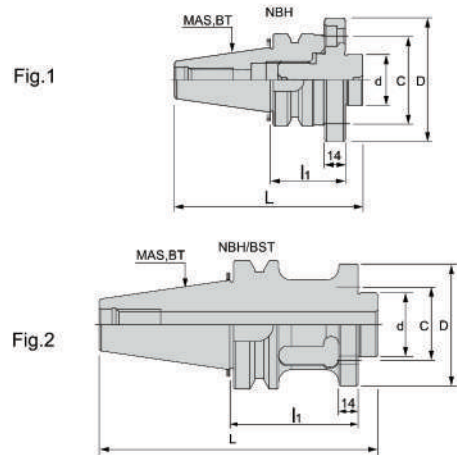


搪孔範圍 ø8~280 Boring Range	精度 0.01mm Accuracy	最高轉速 8000 Max. rpm
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規格 Spec.	øD 搪孔範圍 Boring Range		微調行程 Stroke	精度 Win Feed	刀具孔徑 Tooling Dia	組合刀柄	L	D	重量 (KGS) Weight
	Min.	Max.							
NBH2084S	8	280	28	0.01	Ø20	NBH	83	84	3.26



搪孔刀柄 (RBH、NBH、BST) BORING HEAD SHANK (RBH、NBH、BST)



規格 Spec.	L	li	D	d h7	C	Fig.	重量 (KGS) Weight
BT40xNBH2084A	155.4	51	84	35	PCD.Ø60 4-M8x1.25P	1	1.70
BT50xNBH2084A	170.8	57	84	35		1	3.50
NT30xNBH2084	109	14	84	35		2	3.60
NT40xNBH2084	136	14	84	35		2	4.00
NT50xNBH2084	168	14	84	35		2	6.30



NBH 精密精搪孔套裝組

NBH PRECISION BORING HEAD SET



Fig.1



Fig.2



Fig.3



Fig.4

規格 Spec.	內容物 Contents							Fig.	重量 (KGS) Weight
	搪刀頭 Boring Head	刀具 Tools	螺絲 Screw	扳手 Wrench	扭力值 (N.m) Torque	扳手 Wrench	數量 Qty		
NT30-NBH2084S-3P-SET	NBH2084S	SBJ-2012-53	M2.5-6.0-3.5-60	T8K	1.2	PT4	1	1	6.20
NT40-NBH2084S-3P-SET									6.60
NT50-NBH2084S-3P-SET		SBJ-2025-96	M3-8.0-4.0-43	T9K	1.4	PT6			8.90
BT40-NBH2084S-3P-SET									8.00
BT50-NBH2084S-3P-SET									SBJ-L20-20

規格 Spec.	內容物 Contents							Fig.	重量 (KGS) Weight		
	搪刀頭 Boring Head	刀具 Tools	刀片 Insert	螺絲 Screw	扳手 Wrench	扭力值 (N.m) Torque	扳手 Wrench			數量 Qty	
NT30-NBH2084S-3P-SET	NBH2084S	SBJ-2012-53	TPGT090204L	M2.5-6.0-3.5-60	T8K	1.2	PT4	1	2	6.40	
NT40-NBH2084S-3P-SET			RM4030(10片)							6.80	
NT50-NBH2084S-3P-SET		SBJ-2025-96	TPGT110304L	M3-8.0-4.0-43	T9K	1.4	PT6			9.10	
BT40-NBH2084S-3P-SET										RM4030(10片)	8.50
BT50-NBH2084S-3P-SET										SBJ-L20-20	10.1

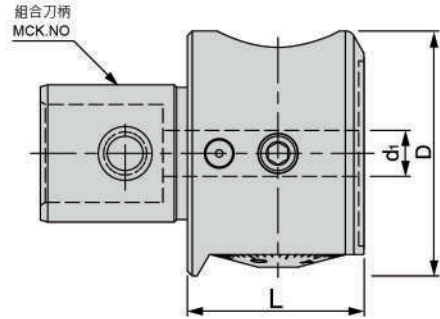
規格 Spec.	內容物 Contents							Fig.	重量 (KGS) Weight
	搪刀頭 Boring Head	刀具 Tools	螺絲 Screw	扳手 Wrench	扭力值 (N.m) Torque	扳手 Wrench	數量 Qty		
NT30-NBH2084S-8P-SET	NBH2084S	SBJ-2008-32	M2-5.0-2.7-60	T6K	0.6	PT4	1	3	7.30
NT40-NBH2084S-8P-SET		SBJ-2010-40							7.70
NT50-NBH2084S-8P-SET		SBJ-2012-53							10.0
BT40-NBH2084S-8P-SET		SBJ-2016-68	8.70						
BT50-NBH2084S-8P-SET		SBJ-2020-83	M3-8.0-4.0-43	T9K	1.4	PT6			11.19
		SBJ-2025-96							-
		SBJ-2030-115							-
		SBJ-L20-20							-

規格 Spec.	內容物 Contents							Fig.	重量 (KGS) Weight	
	搪刀頭 Boring Head	刀具 Tools	刀片 Insert	螺絲 Screw	扳手 Wrench	扭力值 (N.m) Torque	扳手 Wrench			數量 Qty
NT30-NBH2084S-8P-SET	NBH2084S	SBJ-2008-32	TBGT060102L	M2-5.0-2.7-60	T6K	0.6	PT4	1	4	7.50
NT40-NBH2084S-8P-SET		SBJ-2010-40	RM4030							7.80
NT50-NBH2084S-8P-SET		SBJ-2012-53	TPGT090204L	M2.5-6.0-3.5-60	T8K	1.2	PT4			10.2
BT40-NBH2084S-8P-SET		SBJ-2016-68	RM4030							9.00
BT50-NBH2084S-8P-SET		SBJ-2020-83	TPGT110304L	M3-8.0-4.0-43	T9K	1.4	PT6			11.19
		SBJ-2025-96								-
		SBJ-2030-115								-
		SBJ-L20-20								-



SBJ 高精密搪孔頭

SBJ BORING HEAD FOR FINISHING



搪孔範圍 ø6~50 Boring Range	精度 0.01mm Accuracy	最高轉速 8000 Max. rpm
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特點 Feature

- 採用特殊表面處理，加強防鏽效果
- 搭配 16mm 柄徑的小徑搪刀，並搭配不同切削刀具，達成多樣化的組合，以利客戶加工使用
- 微調單位：每刻度移動量為 0.01mm，另有副尺可做更精確之調整，搪孔範圍 Ø6~Ø50mm
- With special coating treatment, to strengthen the anti-corrosion effect.
- With 16mm shank trails Boring, with different cutting tools can be reached a variety of combinations, in order to facilitate customers choice of tool.
- Micro-adjustment until: each unit is 0.01mm. Available is a sub-dial for finer adjustment, boring range Ø6~Ø50mm.

規格 Spec.	øD 搪孔範圍 Boring Range		D	微調行程 Stroke	精度 Accuracy	d.	L	組合刀柄 Mck No.	重量 (KGS) Weight
	Min.	Max.							
SBJ10	6	22	39	2	0.01	10	28.5	CK4/MCK4	0.25
SBJ12	6	32	50	3.5	0.01	12	36	CK5/MCK5	0.50
SBJ16	6	50	63.5	6	0.01	16	45	CK6/MCK6	1.00

範例 Example

1. SBJ16+SBJ1612-53



2. SBJ16+SBJ-16-10K+ST10-W6-110L +SEB12N TP08



3. SBJ16+AC1606-35+CBJ0603-15



4. SBJ16+C16-CBR30+SEB28N TP09



Feature



DP減震系列特點

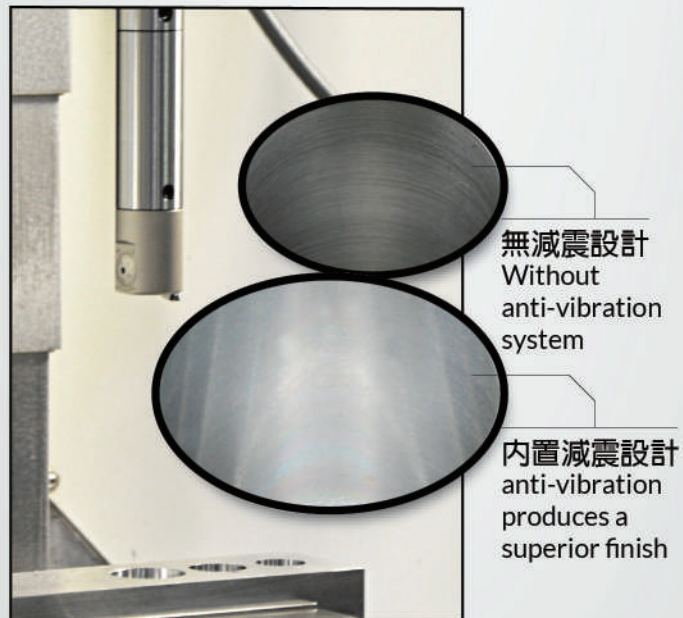


本產品應用在加工深度為柄徑的4~8倍長效果最好。減震器與搪孔頭的結合，一體式的結構，當搪孔加工時可與一般MCK/CK刀桿結合，得到更大的加工有效長與更好的加工表面精度。

具有多種規格，所有規格均具有中心出水功能。使用雙邊對稱定位接合，可使減震效果更好。

For most efficient results use for 4D~8D machining. Adjust the scale of each grid to a diameter of 0.002mm. The integrated damper and extension with generic MCK/CK arbors achieve wider cuts and better accuracy.

No matter the specifications or the desired function the coolant runs through the spindle. The bilateral symmetry joint allows for almost zero vibration.



使用減震系列產品，對於長懸伸刀具加工時，可有效改善工件表面粗糙度、提高金屬切除率、延長刀具使用壽命。

The CBH/DP is most efficient cutting deeply. It enhances the workpiece's surface finish and has a longer life.

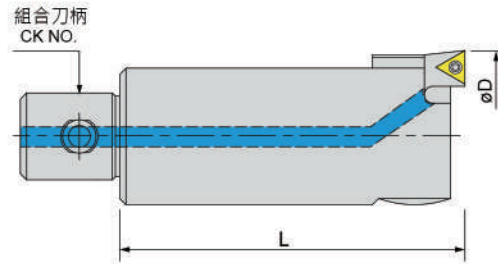
Anti-Vibration



CBH/DP 減震精搪頭

CBH/DP DAMPING FINISH BORING HEAD

Anti-Vibration



搪孔範圍 ø20~102 Boring Range	精度 0.01mm Accuracy	最高轉速 6000 Max. rpm
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規格 Spec.	øD 搪孔範圍 Boring Range		組合刀柄 Ck No.	L	使用刀片 Insert	螺絲 Screw	扳手 Wrench	扭力值 (N.m) Torque	重量 (KGS) Weight
	Min.	Max.							
CBH20DP-90L-TP08	20	26	CK1	90	TP.0802	M2-5.0-3.1-60	T6	0.6	0.22
CBH25DP-90L-TP08	25	33	CK2	90	TP.0802	M2-5.0-3.1-60	T6	0.6	0.39
CBH32DP-100L-TP08	32	42	CK3	100	TP.0802	M2-5.0-3.1-60	T6	0.6	0.71
CBH40DP-110L-TP08	40	55	CK4	110	TP.0802	M2-5.0-3.1-60	T6	0.6	1.27
CBH52DP-140L-TP08	52	75	CK5	140	TP.0802	M2-5.0-3.1-60	T6	0.6	2.72
CBH68DP-175L-TP08	68	102	CK6	175	TP.0802	M2-5.0-3.1-60	T6	0.6	5.70
CBH68DP-175L-TP09	68	102	CK6	175	TP.0902	M2.5-6.0-3.5-60	T8	1.2	5.70
CBH68DP-175L-TC11	68	102	CK6	175	TC..1102	M2.5-6.0-3.5-60	T8	1.2	5.70



BT 研磨螺栓拉頭 BT PULL STUDS FOR POLISH



Fig.1

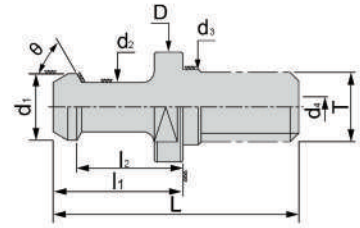
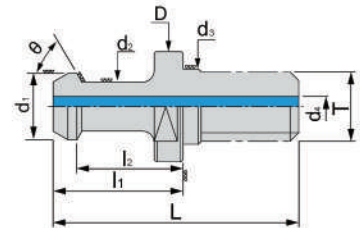


Fig.2



特點 Feature

- 外徑研磨加工以兩頂心孔做研磨牙級的中心點，減少累計公差，減少偏擺

- The outer diameter abrasive machining does by two intelligences grinds does a lot of talking the level central poin, reduces the accumulation common difference, reduction beats.

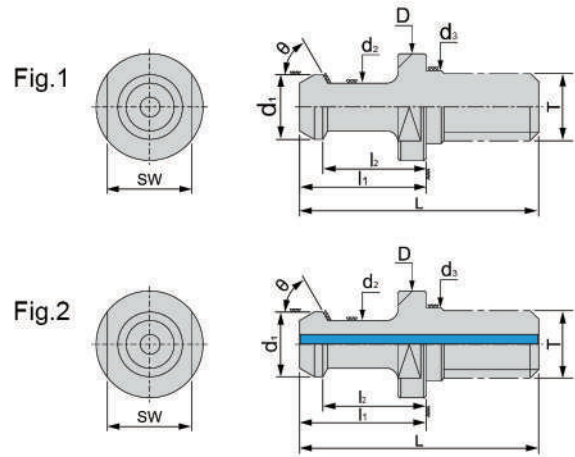
規格 Spec.	L	l ₁	l ₂	D	d ₁	d ₂	d ₃	d ₄	SW	T	Fig.	θ	重量 (KGS) Weight
BT30-45°-G	43	23	18	16.5	11	7	12.5	-	13	M12x1.75P	1	45°	0.05
BT30-60°-G	43	23	18	16.5	11	7	12.5	-	13	M12x1.75P	1	60°	0.05
BT30-90°-G	43	23	18	16.5	11	7	12.5	-	13	M12x1.75P	1	90°	0.05
BT40-45°-G	60	35	28	23	15	10	17	-	19	M16x2.0P	1	45°	0.10
BT40-60°-G	60	35	28	23	15	10	17	-	19	M16x2.0P	1	60°	0.10
BT40-90°-G	60	35	28	23	15	10	17	-	19	M16x2.0P	1	90°	0.10
BT50-45°-G	85	45	35	38	23	17	25	-	30	M24x3.0P	1	45°	0.28
BT50-60°-G	85	45	35	38	23	17	25	-	30	M24x3.0P	1	60°	0.28
BT50-90°-G	85	45	35	38	23	17	25	-	30	M24x3.0P	1	90°	0.27
BT30-45°-HG (2x3)	43	23	18	16.5	11	7	12.5	2x3	13	M12x1.75P	2	45°	0.03
BT30-60°-HG (2x3)	43	23	18	16.5	11	7	12.5	2x3	13	M12x1.75P	2	60°	0.03
BT40-45°-HG (4)	60	35	28	23	15	10	17	4	19	M16x2.0P	2	45°	0.07
BT40-60°-HG (4)	60	35	28	23	15	10	17	4	19	M16x2.0P	2	60°	0.07
BT40-90°-HG (4)	60	35	28	23	15	10	17	4	19	M16x2.0P	2	90°	0.07
BT40-45°-HG (5)	60	35	28	23	15	10	17	5	19	M16x2.0P	2	45°	0.07
BT40-60°-HG (5)	60	35	28	23	15	10	17	5	19	M16x2.0P	2	60°	0.07
BT50-45°-HG (7)	85	45	35	38	23	17	25	7	30	M24x3.0P	2	45°	0.25
BT50-60°-HG (7)	85	45	35	38	23	17	25	7	30	M24x3.0P	2	60°	0.25
BT50-90°-HG (7)	85	45	35	38	23	17	25	7	30	M24x3.0P	2	90°	0.25

★ 中心給水規格 (4)&(7) 可以通過 3mm&6mm 六角扳手

★ Center coolant specification (4) & (7) can use with the hex wrench 3mm & 6mm



BT-HS 研磨螺栓拉頭 BT-HS PULL STUDS FOR POLISH



特點 Feature

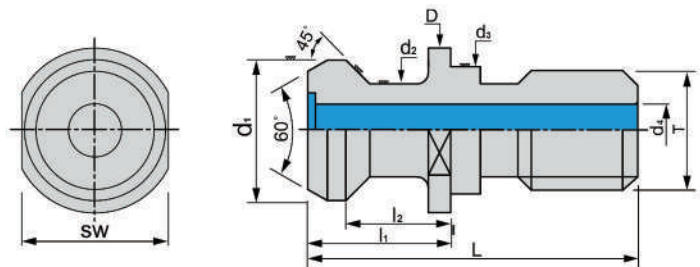
- HS 系列硬度可達到 HRC60°
- 外徑研磨加工以兩頂心孔做研磨牙級的中心點，減少累計公差，減少偏擺

- HS series degree of hardness may achieve HEC60°.
- The outer diameter abrasive machining does by two intelligences grinds does a lot of talking the level central poin, reduces the accumulation common difference, reduction beats.

規格 Spec.	L	l ₁	l ₂	D	d ₁	d ₂	d ₃	SW	T	θ	Fig.	重量 (KGS) Weight
BT30- 45° -HS	43	23	18	16.5	11	7	12.5	13	M12x1.75P	45°	1	0.03
BT30- 60° -HS	43	23	18	16.5	11	7	12.5	13	M12x1.75P	60°	1	0.03
BT40- 45° -HS	60	35	28	23	15	10	17	19	M16x2.0P	45°	1	0.08
BT40- 45° -HS-W	60	35	28	23	15	10	17	19	M16x2.0P	45°	2	0.08



MAZAK 研磨螺栓拉頭 MAZAK PULL STUDS FOR POLISH



特點 Feature

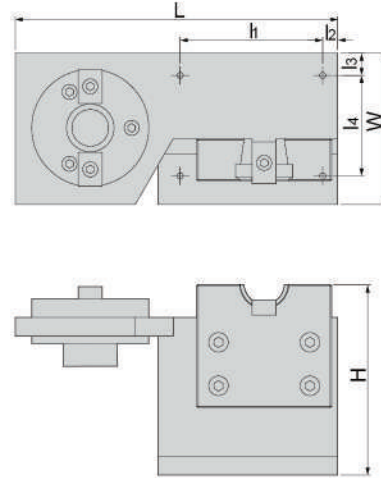
- 外徑研磨加工以兩頂心孔做研磨牙級的中心點，減少累計公差，減少偏擺

- The outer diameter abrasive machining does by two intelligences grinds does a lot of talking the level central poin, reduces the accumulation common difference, reduction beats.

規格 Spec.	L	l ₁	l ₂	D	d ₁	d ₂	d ₃	d ₄	SW	T	重量 (KGS) Weight
MAZAK-BT40-G	44.1	19.1	14	22	18.8	12.45	17	7	19	M16x2.0P	0.05
MAZAK-BT50-G	65.2	25.2	17.58	37	28.95	20.83	25	10	30	M24x3.0P	0.19
MAZAK-CAT40-G	41.1	16.1	11	22	18.8	12.45	17	7	19	M16x2.0P	0.05



BT 鎖刀座 BT TOOL HOLDER LOCKING DEVICE



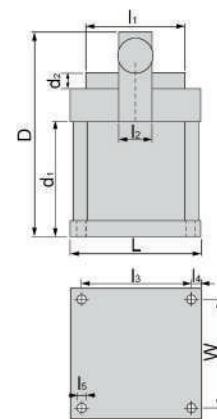
- 不可敲擊 - Don't use hammer.

規格 Spec.	L	l ₁	l ₂	l ₃	l ₄	H	W	重量 (KGS) Weight
LD-BT30	210	95	10	15	67	130	100	4.47
LD-BT40	210	95	10	15	67	130	100	3.94
LD-BT50	275	113	20	24	105	200	150	7.06

- 本體為鑄鐵 - The body is Cast Steel.



HSK 鎖刀座 (HSK 有鍵槽刀桿) HSK TOOL HOLDER LOCKING DEVICE

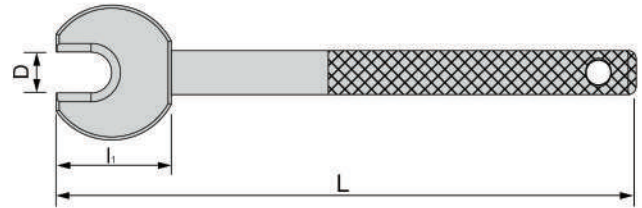


- 不可敲擊 - Don't use hammer.

規格 Spec.	L	l ₁	l ₂	l ₃	l ₄	l ₅	D	d ₁	d ₂	W	重量 (KGS) Weight
HD-HSK63A	100	76.5	25	84	8	7	157	89	12	84	3.00
HD-HSK100A	125	115	25	101	12	9	208	115	12	101	7.00



拉頭專用扳手 SPANNER FOR PULL STUD



規格 Spec.	L	l ₁	D	重量 (KGS) Weight
PS-BT30	140	25	7.5	0.20
PS-BT40	162	35	11	0.36
PS-BT50	190	40	18	0.48
PS-MAZAK-BT40	185	36	13	0.36
PS-MAZAK-BT50	195	41	20.9	0.44

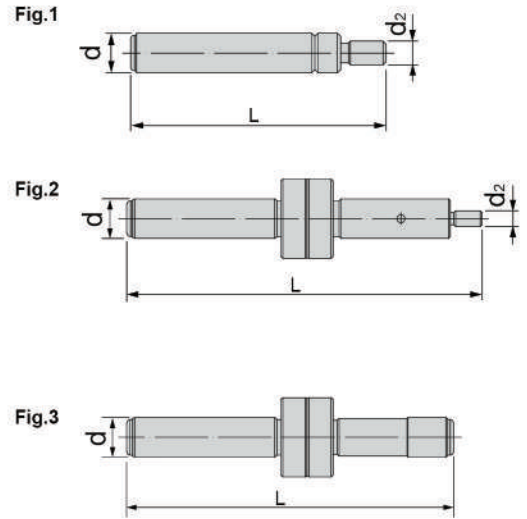
範例 Example





偏心式尋邊器 MECHANICAL ENGE FINDER

精度 Accuracy : 0.002mm



特點 Feature

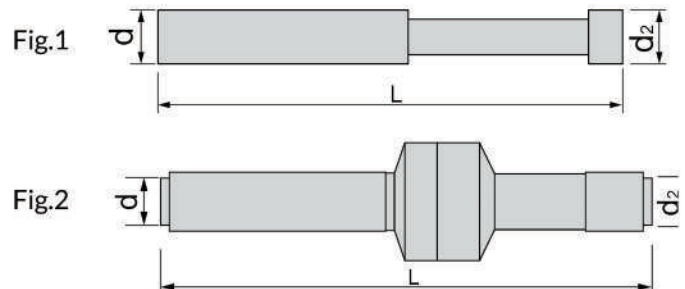
- ME420 特別設計 4mm 測頭，提供小孔徑及偏窄溝槽測量使用
- 配合轉速 400~600rpm.
- MIN.(4mm) can be tested mini hole for your workpiece.
- Within 400-600rpm.

規格 Spec.	L	d	d ₂	Fig.	重量 (KGS) Weight
ME - 610	65	10	Ø6	1	0.03
ME - 420	90	10	Ø4	2	0.06
ME - 1020	82.8	10	Ø10	3	0.06



CME 偏心式尋邊器 CME MECHANICAL ENGE FINDER

精度 Accuracy : 0.002mm



特點 Feature

- 配合轉速 400~600rpm
- 陶瓷測頭不導磁
- Within 400-600rpm.
- Non-magnetic ceramic side head.

規格 Spec.	L	d	d ₂	Fig	重量 (KGS) Weight
CME - 1010	86	10	Ø10	1	0.04
CME - 1020	90	10	Ø10	2	0.08



SR 迴轉式尋邊器 (精密型) SR TOUCH POINT SENSOR

精度 Accuracy: 0.005mm



SR-10S



SR-10L



CSR-10S



CSR-10L

Fig.1

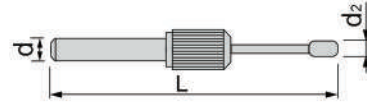


Fig.2



特點 Feature

- 配合轉速 800~1000rpm
- 陶瓷測頭不導磁

- Within 800-1000rpm.
- Non-magnetic ceramic side head.

規格 Spec.	L	d	d ₂	Fig.	重量 (KGS) Weight
SR-10S (單支)	95	Ø10	Ø5	1	0.06
SR-10L (單支)	145			2	0.09
SR-10T	整組 (2支裝) A set (two pieces)				0.27
CSR-10S (單支)	95	Ø10	Ø5	1	0.04
CSR-10L (單支)	145			2	0.08
CSR-10T	整組 (2支裝) A set (two pieces)				0.26



ER 扳手 ER SPANNER

DIN-6499
DIN-ISO-15488



Fig.1

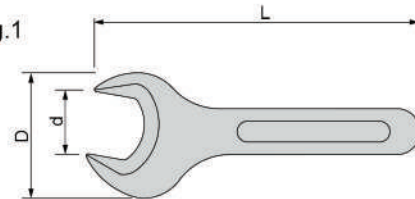
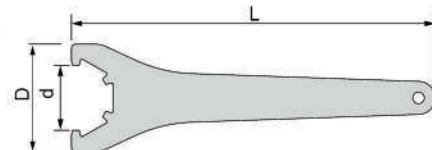


Fig.2



特點 Feature

- 材質 SCM-4 鉗口經過熱處理

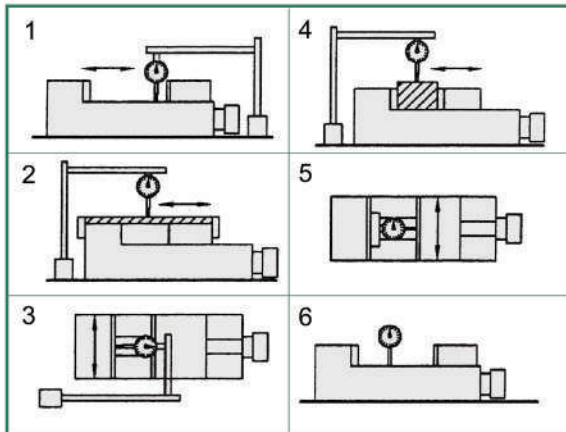
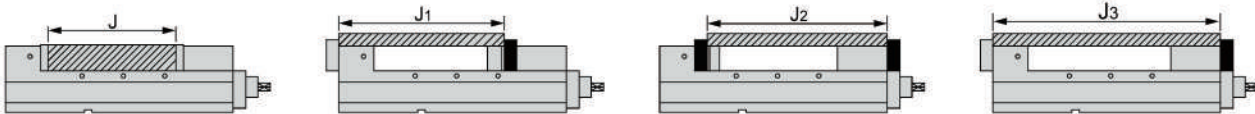
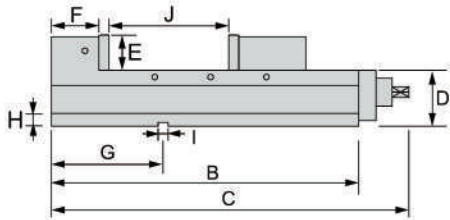
- Steel:SCM-4

規格 Spec.	螺帽外徑 Nut Dia	L	D	d	重量 (KGS) Weight
ER11-A	19	120	40	17	0.10
ER16-A	28	140	53	25	0.15
ER20-A	34	160	60	30	0.20
ER25UM/RD	42	206	65	37	0.22
ER32UM/RD	50	253	75	46.5	0.30
ER40UM/RD	63	289	90	58	0.50



CHW-_V 角固式油壓精密虎鉗

CHW-_V HYDRAULIC&ANGLE LOCK VISE



※ 精度測定方法 Accuracy Testing Standard

NO	檢查事項 Item	JIS 規格 1 級 JIS Grade 1	驗證許可 Guaranteed
1	虎鉗底部與滑動面之平行度 Surface of vise bed parallel to bottom of vise body.	0.020 100mm	0.010 100mm
2	虎鉗大開口工件之平行度 Max opening test block parallel to bottom of vise body.	0.050 100mm	0.030 100mm
3	虎鉗底部鍵槽與虎口板之直角度測定 Keyways on bottom of vise bed square to clamping surface of jaw plate.	0.020 100mm	0.015 100mm
4	工作夾緊後之平行度 Top of rectangular test block clamped tightly by jaw parallel to bottom of vise body.	0.030 100mm	0.020 100mm
5	兩虎口板相互平行度 Both jaw plate parallel.	0.020 100mm	0.020 100mm
6	虎鉗側立與工作台面之直角度 Vise side-lock on bottom slide way square.	0.020 100mm	0.010 100mm

特點 Feature

- 強而有力材質 | 虎鉗本台使用球狀石墨化鑄鐵 (FCD60-60kgs/mm²) 抗張力強，耐磨性高，不易變形
- 虎鉗本台滑動面均經硬化熱處理 HRC45 以上，可保持長久耐磨性及精度

- Rigid material-vise body of ductile iron FCD60 JIS (equal to GGG60) with 60 kgs/mm² or 80000 psi tensile strength.
- Vise bed flame with harden treatment up to HRC45° and up takes up wear and maintain for long.

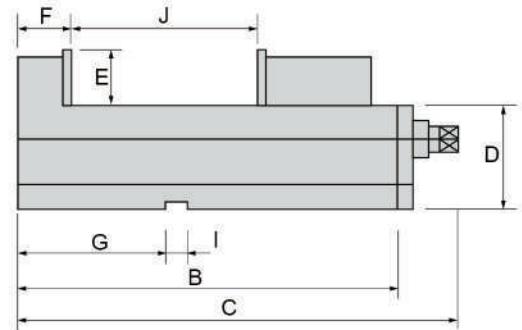
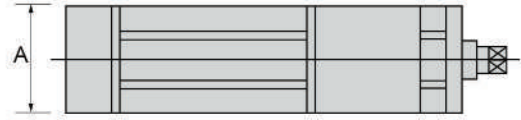
規格 Spec.	A	B	C	D	E	F	G	I	J	J ₁	J ₂	J ₃	夾持力 Power	重量 (KGS) Weight
CHW-100V	101	340	470	85	48	80	125	16	125	190	230	320	4000kgf	27.0
CHW-130V	131	405	535	95	55	85	150	18	180	240	290	380	5000kgf	40.0
CHW-160V	161	495	625	105	58	100	165	18	240	320	360	470	5500kgf	58.0
CHW-200V	201	570	700	110	63	108	190	18	280	360	420	540	6900kgf	87.0



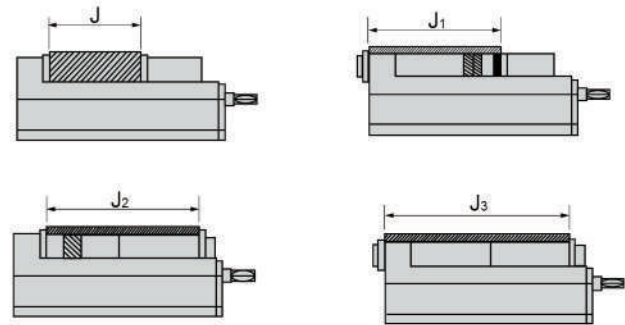
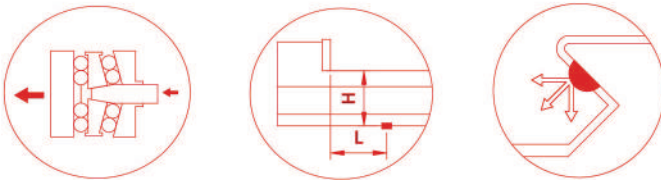
LM-VE-_P 倍力式虎鉗

LM-VE-_P MECHANICAL POWER VISE

PAT.



範例 Example

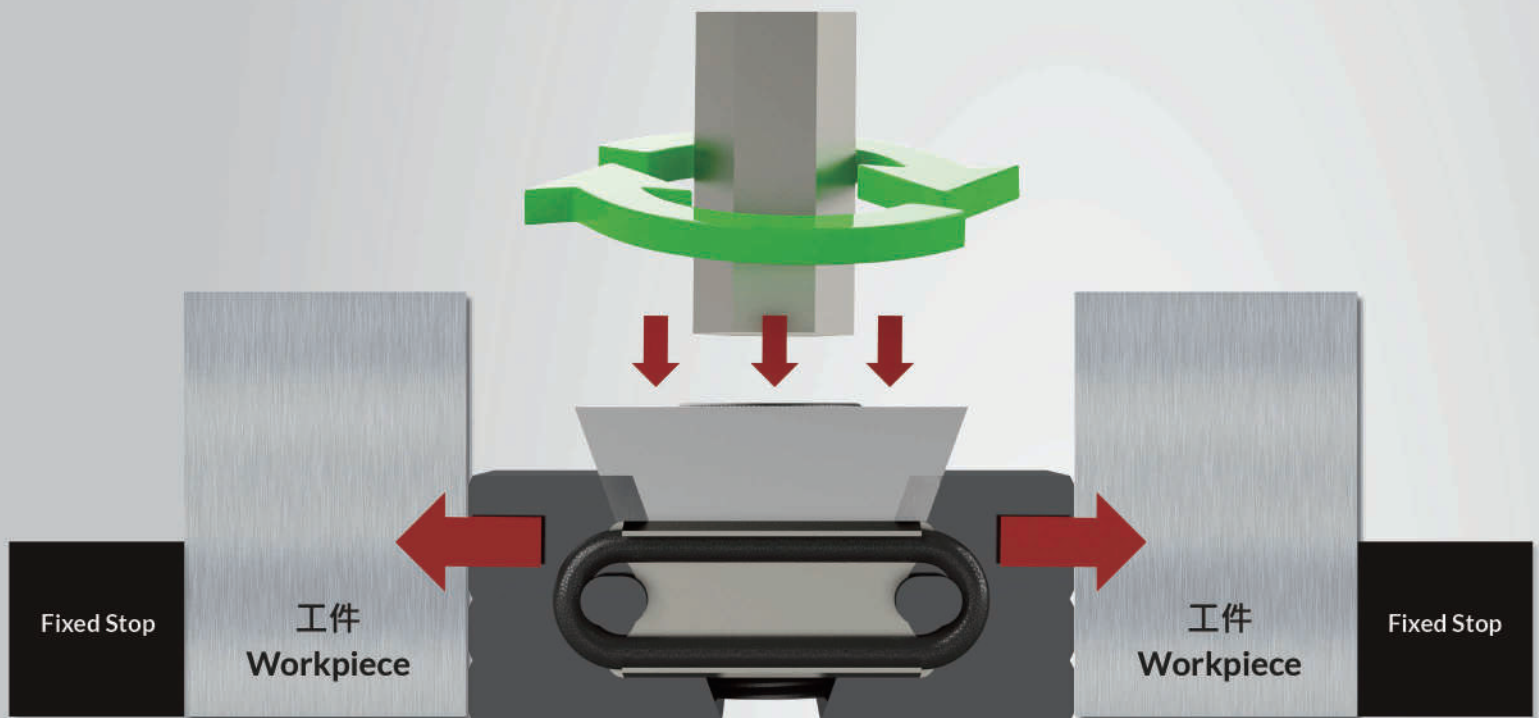


特點 Feature

- 倍力式增壓機構
- 總長度較短、大開口、轉動扳手較省力

- Mechanical power structure.
- The total length is short, the big aperture, to rotate the spanner to reduce effort.

規格 Spec.	A	B	C	D	E	F	G	I	J	J ₁	J ₂	J ₃	夾持力 Power	重量 (KGS) Weight
LM-VE-100P	101	340	470	85	48	80	125	16	145	190	230	320	4000kgf	27.0
LM-VE-130P	131	405	535	95	55	85	150	18	220	240	290	380	4500kgf	40.0
LM-VE-160P	161	495	625	105	58	100	165	18	300	320	360	470	5200kgf	58.0
LM-VE-200P	201	570	700	110	63	108	190	18	340	360	420	540	6250kgf	87.0



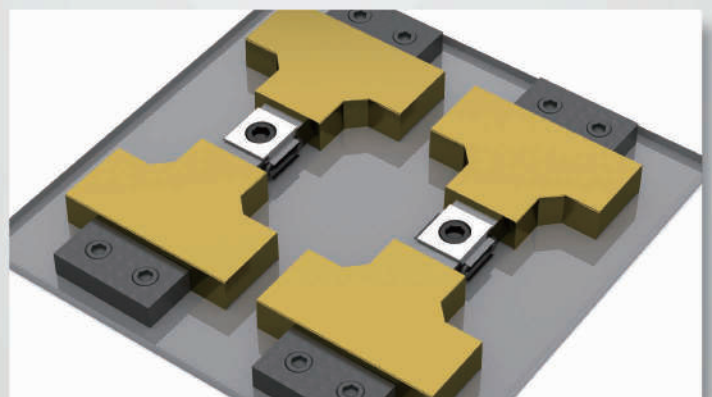
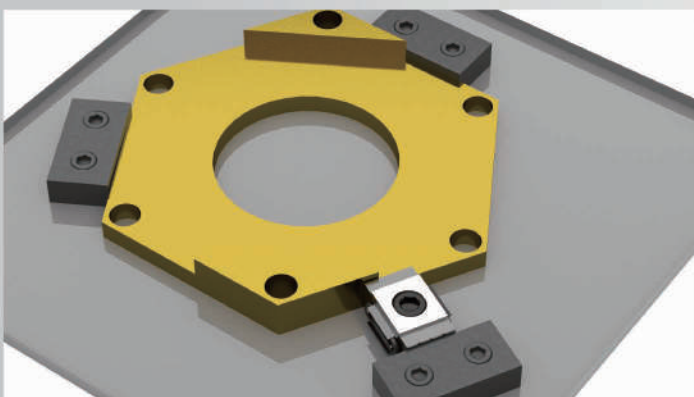
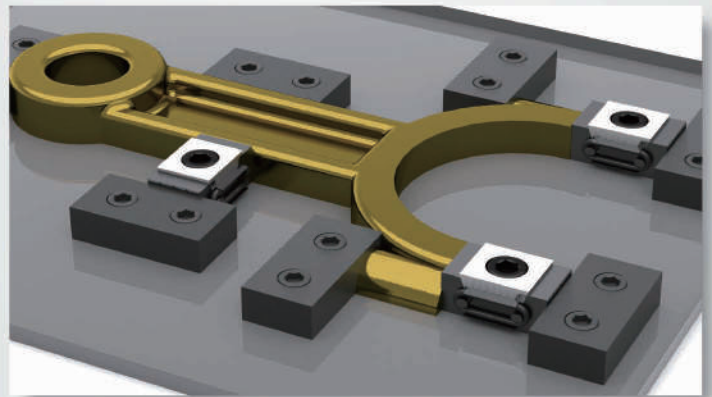
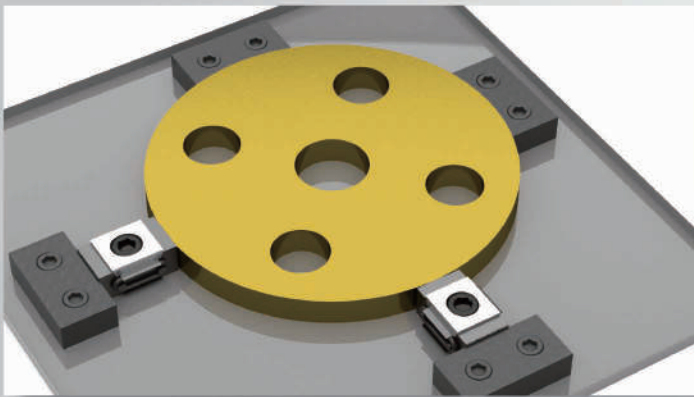
特點

運用六角板手輕鬆鎖固之設計結構。
Designed with a hexagonal wrench for easy locking.

Features

迷你型虎鉗更換工件及設置快速的特點，可靈活運用因應不同變化設計需求。
LM-OKV to replace the workpiece and set the fast features, can flexibly use the design requirements to adapt to different changes.

適用於不同工作平台 (三軸、四軸、五軸及臥式皆可使用)。
Suitable for different working platforms (three-axis, four-axis, five-axis and horizontal).

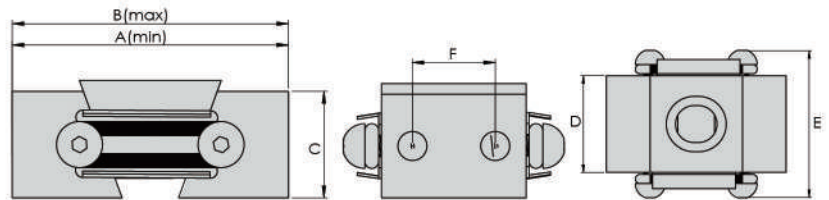




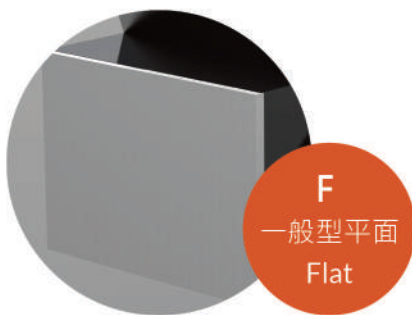
LM-OKV- 迷你型虎鉗

LM-OKV-MINI VISE

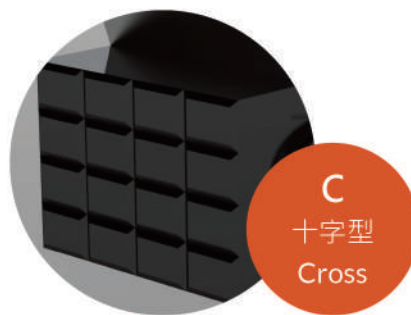
NEW



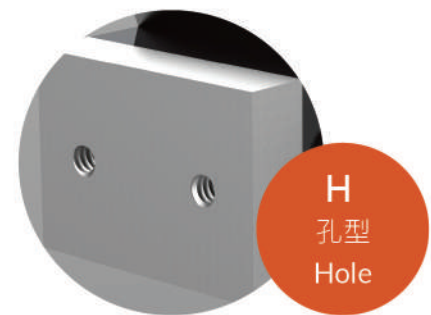
規格 Spec.	形式 Type	行程 Stroke	AB 尺寸範圍 AB Size Range	C	D	E	F	重量 (KGS) Weight
LM-OKV-2425F	一般型平面	1mm	24.5-25.5mm	11	15	21.5	-	-
LM-OKV-3742F		5mm	37-42mm	15	21	32	-	-
LM-OKV-4751F		4mm	47-51mm	22	30	37	-	-
LM-OKV-2425C	十字型	1mm	24.5-25.5mm	11	15	21.5	-	-
LM-OKV-3742C		5mm	37-42mm	15	21	32	-	-
LM-OKV-4751C		4mm	47-51mm	22	30	37	-	-
LM-OKV-3742H	孔型	5mm	37-42mm	15	21	32	12(M5)	-
LM-OKV-4751H		4mm	47-51mm	22	30	37	18(M5)	-



當工件為光滑平面時，使用平面鉗口。
Plane jaws are used when the workpiece is a smooth plane.



十字型產生高摩擦力，確保在任何情況下都能可靠夾緊。
Cross type creates high friction, which ensures reliable clamping in any circumstances.

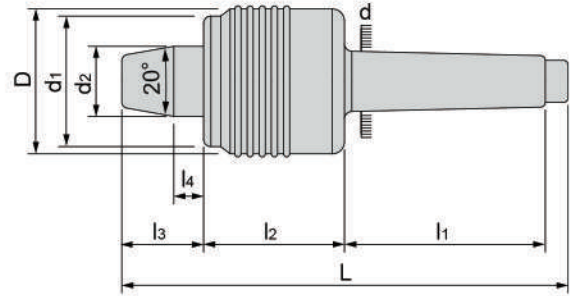


側面附有內螺紋，使其可以快速方便地使用各種附加零件。
Internal threads are attached to the sides, making it quick and easy to use various additional pieces.



SC-68 標準型注油式替換頂尖

SC-68 GREASE-INJECTED CENTER DEVICE (FOR SLIM WORK-PIECE)



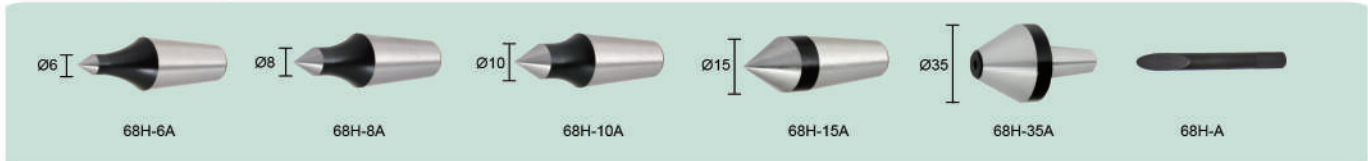
特點 Feature

- 有防水功能·本體易散熱
- 可定期注油增加使用壽命
- 頂尖子採用 SKS2(刀具鋼)
- 頂尖心軸採用 S45C
- 靜態精度 :8μ

- There are waterproof, easy to heat the body.
- Regular oiling can increase the service life.
- Center adoption SKS2 (tool steel).
- Center mandrel using S45C.
- Static accuracy: 8μ.

規格 Spec.	柄徑	內附零件 Included Accessories	rpm	L	l ₁	l ₂	l ₃	l ₄	D	d	d ₁	d ₂	重量 (KGS) Weight
SC-68H-MT4	MT4	G 組	4500	199	96	58	33	13	64	31.267	58	31.6	2.24
SC-68H-MT5	MT5	G 組	4500	226	120	58	33	13	64	44.399	58	31.6	3.10

零件圖 G 組 (頂尖中型) G set in drawing Medium for rotary center

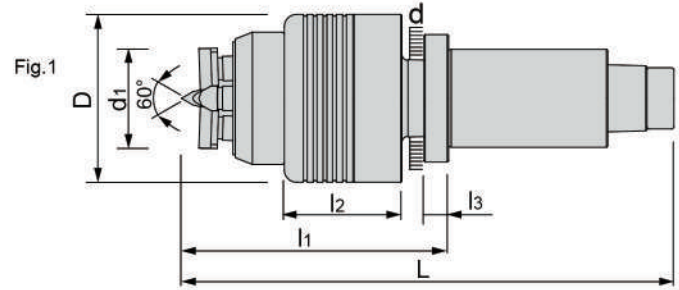




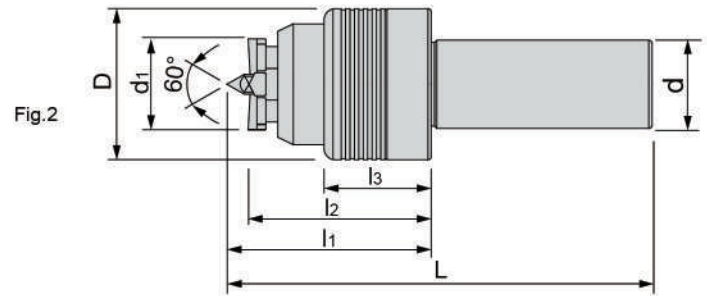
SC-66 自動可調式插式頂尖

SC-66 AUTOMATIC ADJUSTABLE INSERTED CENTER

| SC-66A



| SC-66B



| 特點 Feature

- 工作物不平時頂尖柱可自動調整穩固工作
- 頂尖子及頂尖柱可互換使用

- Working things do not usually tip shaft can be adjusted automatically solid work.
- Center and Center columns are used interchangeably.

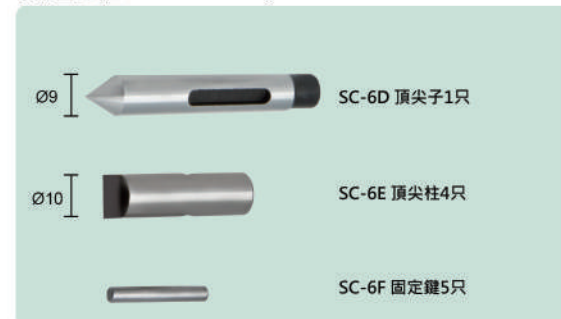
規格 Spec.	柄徑	使用範圍 Range	內附零件 Included Accessories	L	l ₁	l ₂	l ₃	D	d	d ₁	Fig.	重量 (KGS) Weight
SC-66A-MT4	MT4	A 組 Ø10~Ø60 B 組 Ø15~Ø35	零件圖 A 組 零件圖 B 組	203	109	48	10	68.5	31.267	40.5	1	3.29
SC-66B-C40	Ø40				92	82.7	48		40			

零件規格 Spec.	重量 (KGS) Weight
SC-6A	0.02
SC-6B	0.02
SC-6C	0.09
SC-6D	0.03
SC-6E	0.08
SC-6F	0.07

零件圖 A 組 A set in drawing

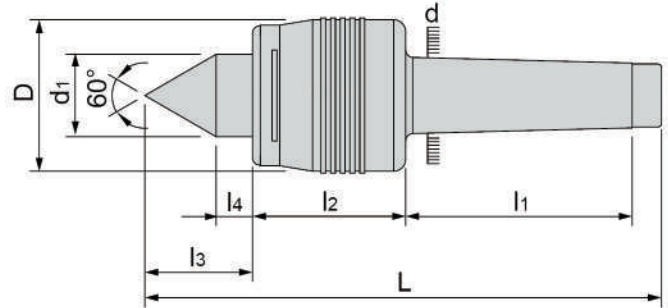


零件圖 B 組 B set in drawing





SC-69 標準型注油式頂尖 SC-69 OIL INJECTION ROTARY CENTER (STANDARD TYPE)



特點 Feature

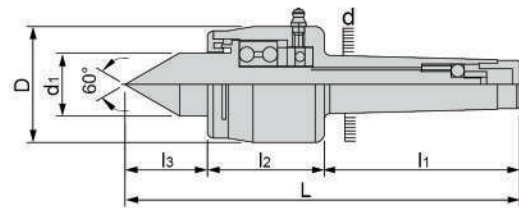
- 有防水功能，本體易散熱
- 可定期注油增加使用壽命
- 頂尖心軸採用 SUJ2
- 靜態精度 :5 μ

- There are waterproof, easy to heat the body
- Regular oiling can increase the service life
- Center mandrel using SUJ2
- Static accuracy: 5 μ

規格 Spec.	柄徑	rpm	L	l ₁	l ₂	l ₃	l ₄	D	d	d ₁	重量 (KGS) Weight
SC-69M-MT4	MT4	4500	210	96	58	42	14.5	64	31.267	31.6	1.86
SC-69M-MT5	MT5	4500	237	120	58	42	14.5	64	44.399	31.6	2.46



MRC-MT 車床頂尖 (標準型) MRC-MT LATHE CENTERS(STANDARD)



特點 Feature

- 有防水功能，本體易散熱
- 可定期注油增加使用壽命
- 頂尖心軸及頂尖子採用 SKS2(刀具鋼)
- 靜態精度 :<5 μ

- There are waterproof, easy to heat the body
- Regular oiling can increase the service life
- Center mandrels and Center sub using SKS2 (tool steel)
- Static accuracy: <5 μ

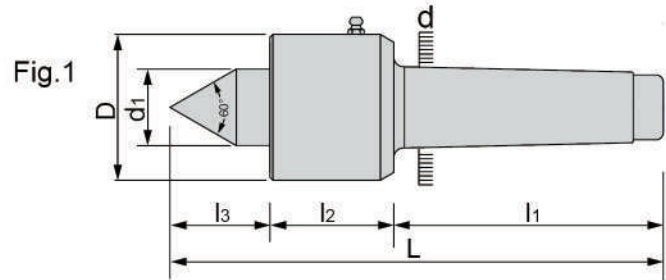
規格 Spec.	柄徑	rpm	L	l ₁	l ₂	l ₃	D	d	d ₁	重量 (KGS) Weight
MRC-MT2	MT2	2800	171	69	52.5	43	49	17.78	35	1.60
MRC-MT3	MT3	2000	192.5	97	52.5	43	49	23.825	35	1.90
MRC-MT4	MT4	1500	213	117.5	52.5	43	49	31.267	35	2.30
MRC-MT5	MT5	1000	251.5	147	52.5	52	59	44.399	45	4.60
MRC-MT6	MT6	800	-	-	-	-	-	63.348	-	-



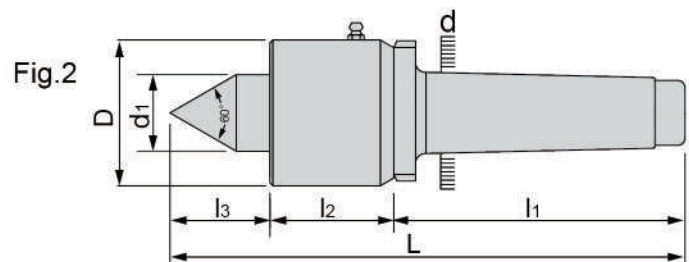
SC-60 強力型重負荷迴轉頂尖

SC-60 SUPER-LOAD HEAVY CUTTING CENTERS

| SC-60H



| SC-60HA



| 特點 Feature

- 剛性強、穩定性佳、適用於長軸心重負荷車削加工
- 靜態精度：5 μ

- The rigidity is strong, the stability is good, is suitable for the major axis grieving load lathe work.
- Static precision: 5 μ .

規格 Spec.	柄徑	rpm	L	l ₁	l ₂	l ₃	D	d	d ₁	徑向力 (KG)	軸向力 (KG)	Fig.	重量 (KGS) Weight
SC-60H-MT4	MT4	5000	205	108	58	44	78	31.267	34.3	1900	1600	1	2.98
SC-60H-MT5	MT5		244	135	64	50	83	44.399	44.2	3000	2200	1	4.02
SC-60HA-MT6	MT6	3000	342	190	75	67	108	63.348	60	5000	3500	2	9.96



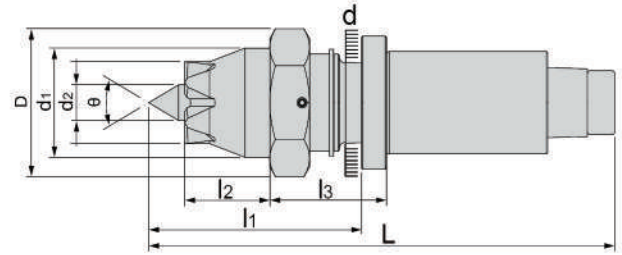
SC-67 固定替換式插式頂尖

SC-67 FIXED INTERCHANGEABLE INSERT CENTER

SC-67A



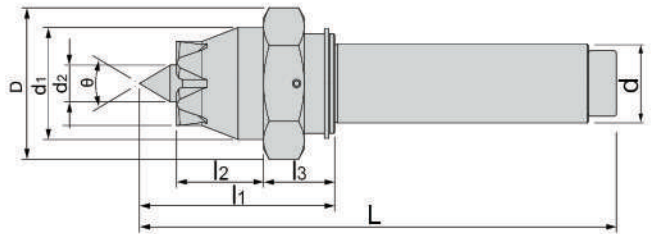
Fig.1



SC-67B

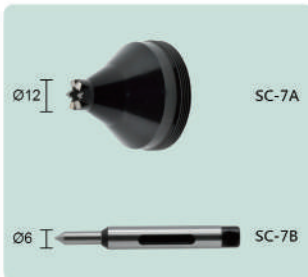


Fig.2

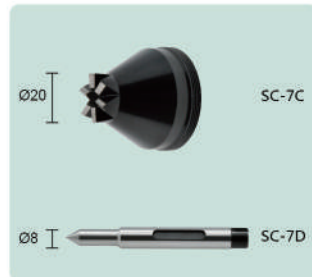


規格 Spec.	柄徑	使用範圍 Range	內附零件 Included Accessories	L	l ₁	l ₂	l ₃	D	d	d ₁	d ₂	Fig.	重量 (KGS) Weight	零件規格 Spec.	重量 (KGS) Weight
SC-67A-MT4	MT4	C組 Ø10~Ø17 D組 Ø12~Ø25 E組 Ø14~Ø30	C組 E組 D組 F組	184.9	84.6	34.3	47	57	31.267	42.7	25	1	2.22	SC-7A	0.18
SC-67B-C30	Ø30	C組 Ø10~Ø17 D組 Ø12~Ø25 E組 Ø14~Ø30	C組 E組 D組											73.9	28
														SC-7C	0.21
														SC-7D	0.42
														SC-7E	0.21
														SC-7F	0.22
														C45xMT4	-

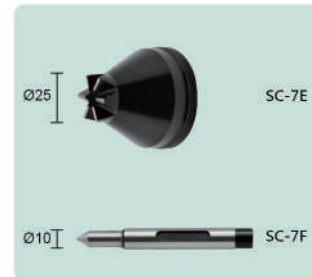
零件圖 C 組 C set in drawing



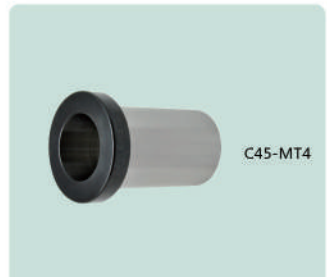
零件圖 D 組 D set in drawing



零件圖 E 組 E set in drawing



零件圖 F 組 F set in drawing





萬向磁性表座 UNIVERSAL ARM MAGNETIC BASE



LM-B080 (標準型)
Magnetic Base



LM-080-A
Standard



LM-M080 (機械式)
Mechanical Arm



LM-100-A
Standard



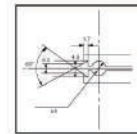
LM-M120 (機械式)
Mechanical Arm



LM-120-A
Standard



LM-H100 (油壓式)
Hydraulic Arm



適用各型量表
Suitable each meter

特點 Feature

- 萬向曲臂設計、方向可任意調整
- 槓桿旋臂上附有微調裝置:Ø8mm 鳩尾槽座
- 適合各式樣之分釐錶、槓桿錶之夾持

- For indicators, can be set in any point on 360°, very quick and convenient in operation.
- On the release lever arm attaches the vernier arrangement: Ø8mm dove tail trough place.
- Suits dial indicator of, supporting on both sides of the releas lever table the various model.

規格 Spec.	磁力 Holding Power	方式 Manner	臂長 Arm Length	磁座尺寸 Base Dimension (mm)			孔徑 Tapped Hold	重量 (KGS) Weight
				長 L	寬 W	高 H		
LM-080-A	80kg	-	-	60	50	55	M8x1.25P	1.05
LM-100-A	100kg	-	-	75	50	55	M8x1.25P	1.15
LM-120-A	120kg	-	-	85	50	55	M8x1.25P	1.32
LM-B080	80kg	-	-	60	50	55	-	1.60
LM-M080	80kg	機械式 Mechanical	340mm	60	50	55	-	1.50
LM-M120	120kg	機械式 Mechanical	340mm	85	50	55	-	2.20
LM-H100	100kg	油壓式 Hydraulic	310mm	75	50	55	-	1.90



LM-DH 刀具設定儀

LM-DH TOOL PRE-SETTER



LM-DH3300R



LM-DH4400R



LM-DH6600R

操作注意事項 Operation Instruction

- 全系列立柱 (Z 軸) 採用超耐磨鋁合金，經特殊處理不易變形，搭配精密線性滑軌，操作簡便、精度更佳
- 全系列立柱 (Z 軸) 配備快速移動裝置，便捷性更加提升
- 全系列 X 軸、Z 軸皆裝置精密光學尺，螢幕顯示精確、易讀

- Made of super wear resistant aluminum alloy, Z-axis column is specially treated and free of deformation Equipped with high precision linear scale, the column is easy to operate with higher accuracy.
- Z-axis column is equipped with rapid traverse for higher moving efficiency.
- Both X-axis and Z-axis are equipped with high precision D.R.O. Values shown on the monitor are more accurate and easy to read.

規格 Spec.	量測範圍 Measurement range		數顯解析度 Resolution	儀器外型尺寸 Machine size (LxWxH)	工具櫃尺寸 (選配) Cabinet size (Optional)	工具櫃重量 Cabinet weight	電源 Power supply	儀器重量 (KGS) Weight
	直徑 D	高度 L						
LM-DH3300R	Ø300	30~300	0.005	650x320x730	700x570x800	60	AC 110V/220V 50Hz/60Hz	49
LM-DH4400R	Ø400	30~400	0.005	760x360x860	700x570x800	60		75
LM-DH6600R	Ø600	30~600	0.005	860x360x1060	800x570x650	60		85

標配 Standard

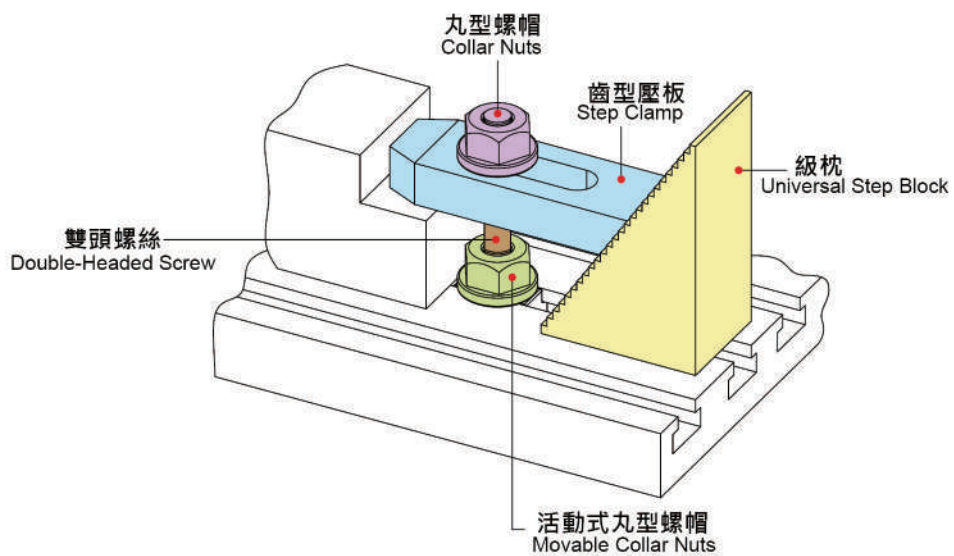
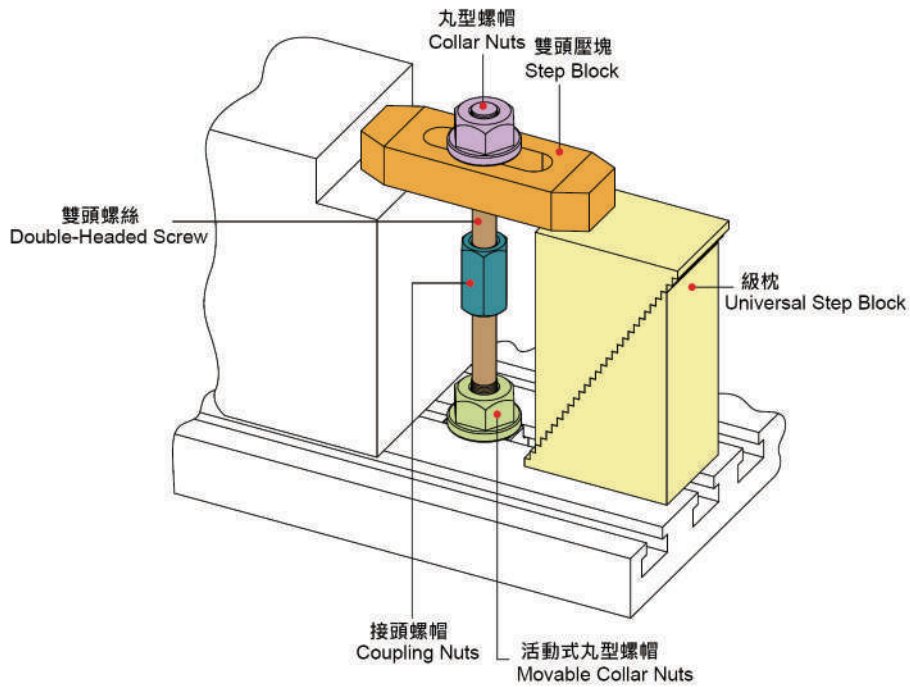
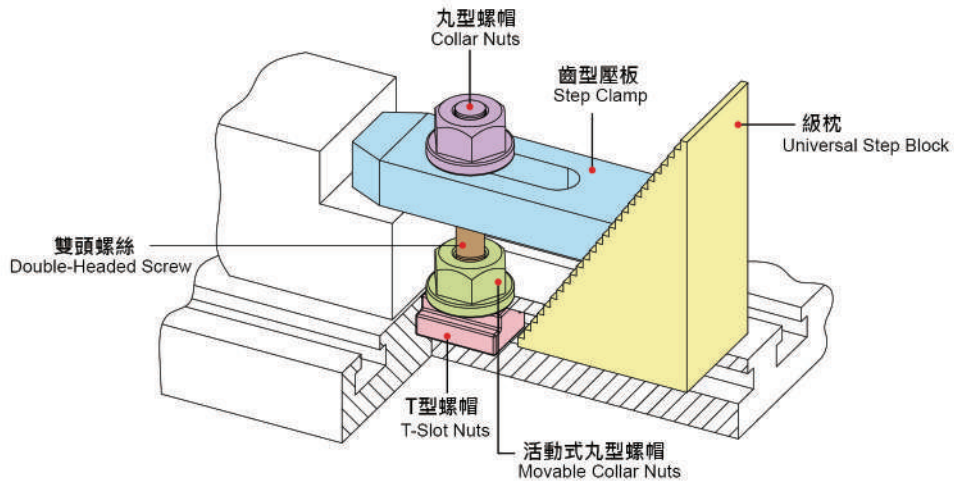
圖示 Fig.					
名稱 Name	測試棒 BT50 (Ø40mm · 長 200mm) X1 支 Test bar BT50 (Ø40mm · length 200mm) *1 pc	百分錶 X2 只 Dial indicator * 2pcs	六角扳手 X1 組 Hex wrench *1set	光學尺 (X 軸、Y 軸) 各一組 linear scale (X axis & Y axis 1 set of each)	

選配 Option

圖示 Fig.		
名稱 Name	工具櫃 Selective accessories Tool cabinet	#50~#30 轉換套筒 #50~#30 convert sleeve

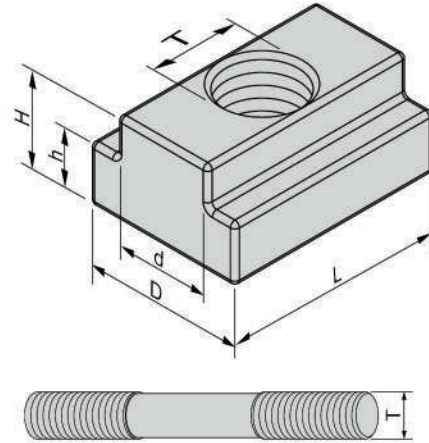


萬能夾具組合圖 CLAMPING KIT





萬能夾具組 CLAMPING KIT



內容物：

- 24 個雙頭螺絲：
- 英制螺絲桿規格長度有：3"、4"、5"、6"、7"、8" 各 4 支
- 公制螺絲桿規格長度有：75、100、125、150、175、200mm 各 4 支
- 6 個 T 型螺帽
- 6 個九型螺帽
- 4 個接頭螺帽
- 12 個級枕
- 6 個齒型壓板

Contents:

- 24 double-headed screws:
- spec. in inch: 3", 4", 5", 6", 7", 8" 4pcs of each or
- spec. in metric: 75, 100, 125, 150, 175, 200mm 4pcs of each.
- 6 T-shot nuts
- 6 Collar nuts
- 4 Coupling nuts
- 12 universal step block
- 6 step clamps

英制 (inch)

規格 Spec.	T	d	H	h	D	L	重量 (KGS) Weight
PK-103A	3/8"-16UNC	7/16"	1/2"	7/32"	11/16"	7/8"	10.2
PK-103B	3/8"-16UNC	1/2"	1/2"	9/32"	7/8"	7/8"	10.2
PK-104A	1/2"-13UNC	9/16"	5/8"	11/32"	7/8"	1"-1/8"	12.36
PK-104B	1/2"-13UNC	5/8"	5/8"	11/32"	1"	1"-1/8"	12.36
PK-105A	5/8"-11UNC	11/16"	3/4"	7/16"	1"-1/8"	1"-7/32"	12.46
PK-105B	5/8"-11UNC	3/4"	3/4"	15/32"	1"-1/4"	1"-7/32"	12.46
PK-206A	3/4"-10UNC	13/16"	1"	9/16"	1"-9/32"	1"-1/2"	18.20
PK-206B	3/4"-10UNC	7/8"	1"-1/8"	9/16"	1"-3/8"	1"-1/2"	18.20

公制 (mm)

規格 Spec.	T	d	H	h	D	L	重量 (KGS) Weight
CK-10	M10 x 1.5P	11.5	12	6.8	17.5	22	10.2
CK-12A	M12 x 1.75P	13.8	16	8	22	28	10.5
CK-12B	M12 x 1.75P	13.8	16	8	22	28	11.4
CK-16A	M16 x 2.0P	17.5	19	11	28	31	13.4
CK-16B	M16 x 2.0P	17.5	19	11	28	31	14.3
CK-20	M20 x 2.5P	21.7	28	14	35	38	29.0
CK-24	M24 x 3.0P	27.5	36	18	44	49	63.0

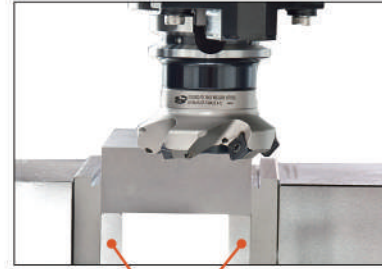


GP 虎鉗平行板

GP VISE PARALLEL SET



範例 Example



虎鉗平行板
VISE PARALLEL SET

規格 Spec.	厚 x 寬 x 長 x 數量	重量 (KGS) Weight	規格 Spec.	厚 x 寬 x 長 x 數量	重量 (KGS) Weight
GP-18	5 x 16 x 100 x 2	10.0	GP-150	8.5 x 14 x 150 x 2	-
	6 x 18 x 100 x 2			8.5 x 16 x 150 x 2	
	8 x 24 x 100 x 2			8.5 x 20 x 150 x 2	
	10 x 30 x 100 x 2			8.5 x 24 x 150 x 2	
	12 x 36 x 150 x 2			8.5 x 30 x 150 x 2	
	14 x 48 x 150 x 2			8.5 x 32 x 150 x 2	
	18 x 60 x 150 x 2			8.5 x 36 x 150 x 2	
	22 x 62 x 150 x 2			8.5 x 40 x 150 x 2	
	15 x 31 x 200 x 2			8.5 x 44 x 150 x 2	



LM-SG 快速鑽頭研磨機

LM-SG FAST DRILL RE-SHARPENING MACHINE



LM-SG-213



LM-SG-830



標準附件 Standard mating parts

- ER 筒夾 2.5、3、4、5、6、7、8、9、10、11、12、13mm 共 12pcs
- CBN 鑽石砂輪 #200x1pcs(HS 鑽石專用)
砂輪規格:LM-GW-B200(B)
- 六角扳手 4mmx5mm 各 1pcs
- ER collets 2.5, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13mm, 12pcs in total.
- CBN Diamond Wheel #200*1pc (For HS diamond use).
Wheel spec: LM-GW-B200(B)
- Hex wrench 4mm*5mm 1pc of each

特殊附件 Special purpose mating parts

- SDC 鑽石砂輪 #400(鎢鋼鑽頭專用)
砂輪規格 :LM-GW-S400(C)
- CBN 鑽石砂輪 #400(4mm 以下專用)
砂輪規格 :LM-GW-B400(A)
- ER 筒夾 2.5、3.5mm~12.5mm 11pcs
- SDC diamond wheel#400 (for tungsten steel drill use)
Wheel spec.: LM-GW-S400(C)
- CBN diamond wheel#400 (for use on below 4mm)
Wheel spec.: LM-GW-B400(A)
- ER Collet 2.5, 3.5~12.5mm, 11pcs in total

標準附件 Standard mating parts

- ER 筒夾 12、13、14、15、16、17、18、19、20、21、22、23、24、25、26mm 共 15pcs
- CBN 鑽石砂輪 #200x1pcs(HS 鑽石專用)
砂輪規格 :LM-GW-B150(J)
- 六角扳手 4mmx5mm 各 1pcs
- ER collets 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23mm, 24mm, 25mm, 26mm, 15pcs in total.
- CBN Diamond Wheel #200*1pc (For HS diamond use).
Wheel spec: LM-GW-B150(J)
- Hex wrench 4mm*5mm 1pc of each

特殊附件 Special purpose mating parts

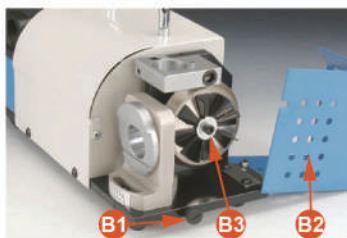
- SDC 鑽石砂輪 #200(鎢鋼鑽頭專用)
砂輪規格 :LM-GW-S200(K)
- ER 筒夾 8~12mm、26~30mm
- SDC diamond wheel#200 (for tungsten steel drill use)
Wheel spec.: LM-GW-S200(K)
- ER Collet 8~12mm, 26~30mm



更換鑽石砂輪步驟

1. 將本機右側旋扭 B1 鬆開，並將側蓋 B2 掀開
2. 用4mm六角扳手逆時鐘方向將螺絲 B3 掀開
3. 更換新鑽石砂輪，再將螺絲鎖上即可
4. 將側蓋 B2 蓋好，並將旋扭 B1 鎖緊

注意! 鑽石砂輪螺絲 B3 未鎖緊，側蓋 B2 未蓋好旋扭 B1 未鎖緊前，不可將電源打開，以免發生危險



Procedures for changing the grinding wheel

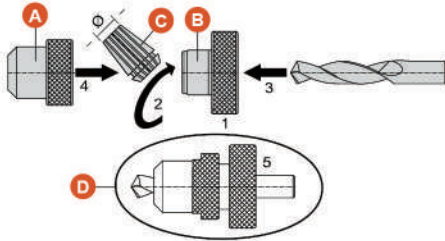
1. Loosen the side knob B1 and open the side cover B2.
2. Use a 4mm hexagon wrench to loosen the screw B3, unscrew it counter-clockwise.
3. Replace a new diamond grinding wheel and tighten the screw after the wheel is installed.
4. Be sure to close the side cover B2 and fasten the side knob B1 properly.

Attention!

1. Please make sure that the diamond wheel screw B3 is tightened, the side cover B2 is properly closed, and the side knob is fastened before turning ON the machine, in order to prevent any hazard from occurring.
2. The machine has an automatic "power-off" device that will automatically turn the machine off when the cover is opened.

規格 Spec.	研磨範圍 Drill Diameter	先端角 Point Angle	電源 Power	馬達 Motor	轉速 rpm	重量 (KGS) Weight
LM-SG-213	Ø2~Ø13	85°~140°	AC110AC220V(單相)	200W	6000	9.00
LM-SG-830	Ø8~Ø30	85°~140°	AC110AC220V(單相)	450W	4000	27.0

如何完成鑽頭研磨前準備 How to prepare for drill grinding



一. 鑽頭研磨前準備步驟 Procedures for changing the grinding wheel:

1. 首先確認鑽頭直徑，再選擇筒夾 **C** 直徑
2. 將選擇的筒夾以適當角度嵌入筒夾迫緊帽內 **B**
3. 鑽頭插入筒夾內，並伸出約35mm左右，但不可鎖緊
4. 筒夾環 **A** 套入筒夾 **C** 並鎖入筒夾迫緊帽 **B** 然後輕輕鎖入並保持鑽頭可用手旋轉
5. 以上步驟即完成鑽頭研磨前準備 **D**

1. Choose a collet accordingly to **C** the diameter of the drill.
2. Insert the chosen collet into the collet holder **B** at an appropriate angle.
3. Insert the drill through the holder with the tip protruding by 35mm, but do not tighten.
4. Connect the collet nut **A** to the collet **C** which is locked into the collet holder **B**, then slowly tighten it making sure that you can still turn the drill with your hands.
5. Complete the steps 1 to 4 accordingly for grinding.

二. 鑽頭長度及角度定位 Setting the drill length and position its movement for drilling:

1. 先將刻度環 **C1** 向右轉到底後再向左轉至所要研磨之鑽頭尺寸
2. 將ER夾具組 **D** 插入長度設定座 **C2** 內並將直柄嵌入凹槽內
3. 將ER夾具組 **D** 向右旋轉至頂住直柄同時將鑽頭向右旋轉至頂住鑽頭刀刃為止
4. ER螺母 **B** 向右旋轉將鑽頭夾緊
5. 將ER夾具組 **D** 取出確認鑽頭刀刃與ER夾頭之凹槽是否平行，如果沒有平行要重新設定一次

注意！舊鑽頭少於3/4時，其刻度環調大1-2格

1. Turn the scale ring **C1** all the way clockwise then counter-clockwise to the size of the drill to be grinded.
2. Insert the ER collet chuck set **D** into the preset length slot **C2** and push it all the way in.
3. Turn the collet chuck set **D** clockwise until it touches against the pin, and turn the drill clockwise until the cutting edge is felt.
4. Screw the ER collet **B** holder clockwise to tighten the drill.
5. Take out the collet chuck **D** set to make sure the drill's cutting edge is parallel to the slot of the ER clamping nut. If it's not, repeat the above steps.

Attention: For old used drills with which are now 3/4 of its original length, it is advisable to increase the scale ring by 1-2 mm.

三. 鑽頭先端角研磨 Edge grinding:

1. 先ER夾具組 **D** 插入端角研磨座，並將凹槽嵌入直柄內
2. 將ER夾具組之鑽頭 **D** 輕輕接觸砂輪，並做順時鐘、逆時鐘方向之旋轉研磨直到沒有研磨聲音為止即可
3. 將ER夾具組 **D** 取出，轉180°再依上述1、2步驟重複研磨一次即可完成刀刃研磨

1. Insert the ER collet chuck set **D** into the drill edge device, and align the collet chuck with the drill edge device.
2. Slowly insert the drill **D** until it touches the grinding wheel slightly, turn it clockwise and counter-clockwise until the grinding sound disappears.
3. Take out the collet chuck set **D** and turn it 180 degrees, and repeat steps 1 and 2 to finish grinding the two edges of the drill.

四. 鑽頭中心靜點研磨 Center point grinding for drills:

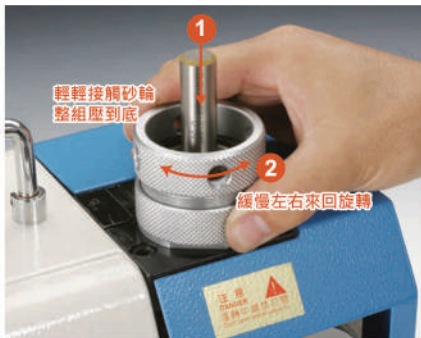
1. 將ER夾具組 **D** 前端直柄對準凹槽插入
2. 將ER夾具組 **D** 上之鑽頭輕輕接觸砂輪並作緩慢進給，壓到底後再作左右旋轉，一直到沒有研磨聲音為止即可
3. 將ER夾具組 **D** 取出，轉180°再依上述1、2步驟重複研磨一次即可完成鑽頭靜點研磨

1. Insert the collet chuck set **D** by aligning it with the drill center point device.
2. Slowly insert the drill **D** until it touches the grinding wheel slightly, turn it clockwise and counter-clockwise until the grinding sound disappears.
3. Take out the collet chuck set **D** and turn it 180 degrees, and repeat steps 1 and 2 to finish the center point grinding

五. 靜點座調整 Adjustment for trimming angles:

1. 靜點倒角要大，將 **E** 螺絲向左 \oplus 微調至所需之大小
2. 靜點倒角要小，將 **E** 螺絲向右 \ominus 微調至所需之大小

1. To obtain a larger or smaller trimming angle, turn the screw counter-clockwise to increase and clockwise to decrease.





LM-SG 快速端銑刀研磨機

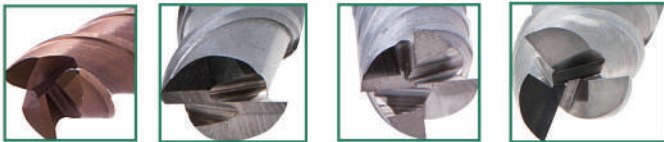
LM-SG FAST END MILL RE-SHARPENING MACHINE



LM-SG-413



LM-SG-1225



標準附件 Standard mating parts

- 一組電源線
- 二支保險絲
- ER 筒夾 4、5、6、7、8、9、10、11、12、13mm 共 10pcs
- 2、3、4 刀夾頭各一組
- SDC 鑽石砂輪 #270(Ø4~5mm 專用) 砂輪規格 :LM-GW-S300(E)
- SDC 鑽石砂輪 #270(Ø6~13mm 專用) 砂輪規格 :LM-GW-S300(G)
- 一隻六角扳手 4mm
- A set of power line
- Two fuses
- ER collets 4, 5, 6, 7, 8, 9, 10, 11, 12, 13mm, 10pcs in total
- 2, 3, 4 chuck for flutes, a set of each
- SDC diamond wheel#270 (for use on dia.4~5mm)
Wheel spec.: LM-GW-S300(E)
- SDC diamond wheel#270 (for use on dia.6~13mm)
Wheel spec.: LM-GW-S300(G)
- A allen wrench of 4mm

特殊附件 Special purpose mating parts

- CBN 鑽石砂輪 #270(Ø4~6mm 專用) 砂輪規格 :LM-GW-B300(D)
- CBN 鑽石砂輪 #270(Ø6~13mm 專用) 砂輪規格 :LM-GW-B300(F)
- CBN diamond wheel#270 (for use on dia.4~6mm)
Wheel spec.: LM-GW-B300(D)
- CBN diamond wheel#270 (for use on dia.6~13mm)
Wheel spec.: LM-GW-B300(F)

標準附件 Standard mating parts

- 一組電源線
- 一支保險絲
- ER 筒夾 12、16、18、20、22、25mm 共 6pcs
- 2、3、4 刀夾頭各一組
- CBN 鑽石砂輪 #150(Ø12~25mm HSS 鑽頭專用) 砂輪規格 :LM-GW-B150(R)
- SDC 鑽石砂輪 #150(Ø12~25mm 鎢鋼鑽頭專用) 砂輪規格 :LM-GW-S150(S)
- 一隻六角扳手 4mm
- A set of power line
- One fuses
- ER collets 12, 16, 18, 20, 22, 25mm, 6pcs in total
- 2, 3, 4 chuck for flutes, a set of each
- CBN diamond wheel#150 (use on dia.12~25mm HSS Drill)
Wheel spec.: LM-GW-B150(R)
- SDC diamond wheel#150 (use on dia.12~25mm Tungsten steel Drill)
Wheel spec.: LM-GW-S150(S)
- A allen wrench of 4mm

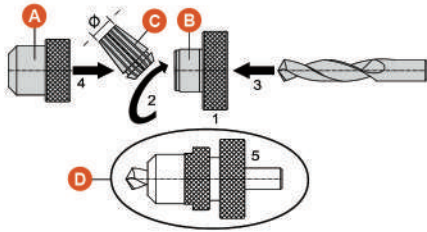
特殊附件 Special purpose mating parts

- CBN 鑽石砂輪 #150(2 刃專用) 砂輪規格 :LM-GW-B150(R)-2T
- SDC 鑽石砂輪 #150(2 刃專用) 砂輪規格 :LM-GW-S150(S)-2T
- ER40-32mm 筒夾 /C32-16、20、25mm 筒夾
- CBN diamond wheel#150 (use on 2T)
Wheel spec.: LM-GW-B150(R)-2T
- SDC diamond wheel#150 (use on 2T)
Wheel spec.: LM-GW-S150(S)-2T
- ER40-32mm collet / C32-16, 20, 25mm collet



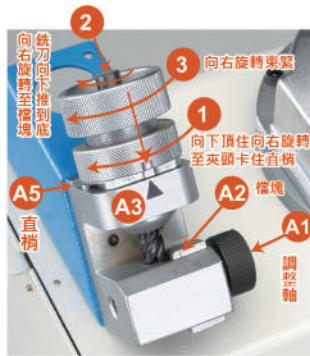
規格 Spec.	研磨範圍 Drill Diameter	先端角 Point Angle	電源 Power	馬達 Motor	轉速 rpm	重量 (KGS) Weight
LM-SG-413	Ø4~Ø13	一番角 6° 一番角 20° 一番角 30°	AC110 AC220V 50/60Hz	3/4HP 450W	6000	17.0
LM-SG-1225	Ø12~Ø25			1000W	4300	31.0

如何完成端銑刀研磨前準備 How to prepare for end mill grinding



一. 端銑刀研磨前準備步驟 Procedures for changing the grinding wheel:

1. 首先確認銑刀直徑，再選擇筒夾 C 直徑
 2. 將選擇的筒夾以適當角度嵌入筒夾迫緊帽內 B
 3. 銑刀插入筒夾內，並伸出約35mm左右，但不可鎖緊
 4. 筒夾環 A 套入筒夾 C 並鎖入筒夾迫緊帽 B 然後輕輕鎖入並保持銑刀可用手旋轉
 5. 以上步驟即完成銑刀研磨前準備 D
1. Choose a collet accordingly to C the diameter of the end mill.
 2. Insert the chosen collet into the collet holder B at an appropriate angle.
 3. Insert the end mill through the holder with the tip protruding by 35mm, but do not tighten.
 4. Connect the collet nut A to the collet C which is locked into the collet holder B, then slowly tighten it making sure that you can still turn the end mill with your hands.
 5. Complete the steps 1 to 4 accordingly for grinding.



二. 端銑刀長度及角度定位 Setting the end mill length and position its movement for drilling:

1. 先將調整軸 A1 以逆時鐘方向轉至檔塊 A2 的刻度線對準所需之尺寸位置
2. 將ER夾具組 1 上的半圓槽對準校刀座上的三角點，直放到底
3. 將ER夾具組 1 向右旋轉至頂住直柄 A5 同時將銑刀過中心之刀刃以順時鐘方向旋轉至頂住檔塊 A2 為止
4. ER螺母 3 以順時鐘方向旋轉，將銑刀輕輕夾緊後取出，再用力旋轉緊



三. 端銑刀刀口研磨切削 End mill grinding cutting tip:

1. 將ER夾具組 H 對準 B1 刀口座之凹槽
 2. 輕輕接觸砂輪做緩慢進給研磨一直到底為止
 3. 將ER夾具組 H 取出換下一個刀刃，並重複1、2的動作，一直到所有刀刃研磨齊為止
1. The ER Group H fixture aligned recesses B1 edge of seat.
 2. Lightly touch the grinding wheel to do to feed slowly so far has been in the end.
 3. The ER Group H fixture replaced remove a blade, and repeat the operation 1,2, until all blade grinding up.



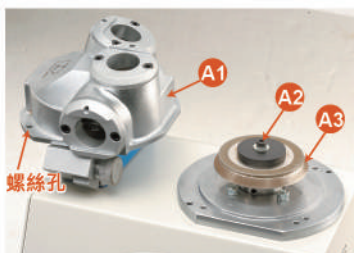
四. 端銑刀後斜角研磨切削 End mill after grinding bevel cutting:

1. 將ER夾具組 H 插入後斜角座 C1 並對準螺絲頭，輕輕將夾具組放入凹槽內並作緩慢進給一直到底為止
 2. 將ER夾具組 H 取出換下一個未研磨刀刃並重複第1動作，一直到所有刀刃研磨齊為止
1. Place the ER Group H fixture after insertion bevel seat C1 and align the screw head, gently set into the groove of the clamp and feed has been slow to make up in the end.
 2. The ER Group H fixture removed and replaced by a non-abrasive blades repeat an action until all blade grinding up.



五. 端銑刀刀刃研磨切削 End mill grinding cutting edge:

1. 將ER夾具組 H 對準L型之凹槽，插入輕輕接觸砂輪做緩慢進給，放到底後並作左和右移動研磨，一直研磨到無聲為止
 2. 將ER夾具組 H 取出換下一個未研磨刀刃並重複第1動作
 3. 一直到所有刀刃研磨齊為止
1. Place the ER Group H fixture alignment of the L-shaped groove, gently insert the contact wheel to do to feed slowly, after the release in the end and make a left and right to move the grinding, polishing has been silent so far to.
 2. Remove the ER group H replaced a jig is not abrasive blades and repeat the first operation.
 3. Keep all blade grinding up.



六. 更換鑽石砂輪步驟 Replacing the diamond wheel step:

1. 用4mm的六角扳手將磨刀機上蓋周圍的三支螺絲以逆時鐘將螺絲 A2 鬆開
 2. 掀開上蓋
 3. 用4mm六角扳手逆時鐘將螺絲 A2 鬆開
 4. 更換新鑽石砂輪 A3 再將螺絲 A2 以順時鐘方向鎖緊即可
 5. 將磨刀機上蓋 A1 蓋好，並將周圍三支螺絲鎖緊即可
1. With a 4mm hex wrench Grinder cover around three screws counter-clockwise to loosen the screws A2
 2. Lifting up the cover
 3. With a 4mm hex wrench counterclockwise to loosen the screw A2
 4. And then replaced with a new diamond wheel A3 to A2 screws clockwise to lock.
 5. The Grinder cover A1 cover, and around three locking to screws.



LM-SG-SD 快速鑽頭研磨機

LM-SG-SD FAST DRILL RE-SHARPENING MACHINE



SG7572P 短刃鑽頭專用研磨機
SG7572P Duanren special drill grinding machine
SG-ESS Drills ドリル



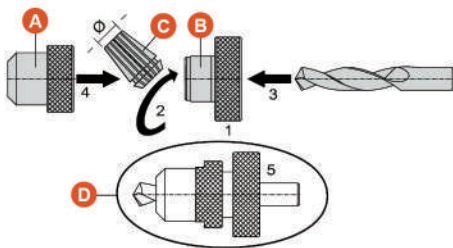
標準附件 Standard mating parts

- 一組電源線
- 一組保險絲
- PER20 筒夾 3、4、5、6、7、8、9、10、11、12 共 10pcs(後夾型)
ER20 筒夾 13 共 1pcs(標準型)
- ER20 夾頭一組
- CBN 鑽石砂輪 #250 砂輪規格 :LM-GW-B250(T)
- CBN 鑽石砂輪 #400 砂輪規格 :LM-GW-B400(M)
- 六角扳手 4mm、5mm 各一支
- A set of power line
- One fuse
- PER20 collets 3, 4, 5, 6, 7, 8, 9, 10, 11, 12mm, 10pcs in total (rear clamping)ER20 collet 13, 1pc (standard)
- ER20 chuck a set
- CBN diamond wheel#250 Wheel spec.: LM-GW-B250(T)
- CBN diamond wheel#400 Wheel spec.: LM-GW-B400(M)
- A allen wrench of 4mm, & 5mm. 1pc of each

特殊附件 Special purpose mating parts

- ER20 筒夾 3.5、4.5、5.5、6.5、7.5、8.5、9.5、10.5、11.5、12.5 共 10pcs
- SDC 鑽石砂輪 #250
砂輪規格 :LM-GW-S250(U)
- SDC 鑽石砂輪 #400
砂輪規格 :LM-GW-S400(V)
- ER20 collet 3.5, 4.5, 5.5, 6.5, 7.5, 8.5, 9.5, 10.5, 11.5, 12.5, 10pcs in total.
- SDC diamond wheel#250
Wheel spec.: LM-GW-S250(U)
- SDC diamond wheel#400
Wheel spec.: LM-GW-S400(V)

如何完成鑽頭研磨前準備 How to prepare for drill grinding



一. 鑽頭研磨前準備步驟 Procedures for changing the grinding wheel:

1. 首先確認鑽頭直徑，再選擇筒夾 **C** 直徑
 2. 將選擇的筒夾以適當角度嵌入筒夾迫緊帽內 **B**
 3. 鑽頭插入筒夾內，並伸出約35mm左右，但不可鎖緊
 4. 筒夾環 **A** 套入筒夾 **C** 並鎖入筒夾迫緊帽 **B** 然後輕輕鎖入並保持鑽頭可用手旋轉
 5. 以上步驟即完成鑽頭研磨前準備 **D**
1. Choose a collet accordingly to **C** the diameter of the drill.
 2. Insert the chosen collet into the collet holder **B** at an appropriate angle.
 3. Insert the drill through the holder with the tip protruding by 35mm, but do not tighten.
 4. Connect the collet nut **A** to the collet **C** which is locked into the collet holder **B**, then slowly tighten it making sure that you can still turn the drill with your hands.
 5. Complete the steps 1 to 4 accordingly for grinding.



二. 更換鑽石砂輪步驟 Procedures for changing the grinding wheel:

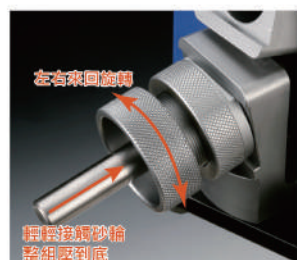
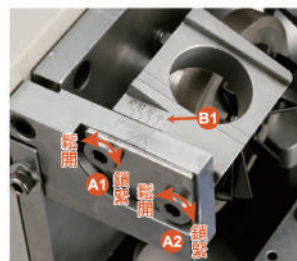
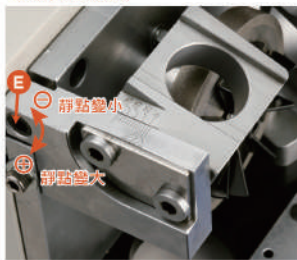
1. 將本機 **B1** 螺絲全鬆開取下，並將砂輪蓋 **B2** 掀開
 2. 用4mm六角扳手逆時鐘方向將螺絲 **B3** 鬆開
 3. 更換新鑽石砂輪，再將螺絲鎖上即可
 4. 將砂輪蓋 **B2** 蓋上，並將螺絲 **B1** 鎖緊
- 注意!** 鑽石砂輪螺絲 **B3** 未鎖緊，砂輪蓋 **B2** 未蓋好，螺絲 **B1** 未鎖緊前，不可將電源打開，以免發生危險

1. Loosen the side knob **B1** and open the side cover **B2**.
2. Use a 4mm hexagon wrench to loosen the screw **B3**, unscrew it counter-clockwise.
3. Replace a new diamond grinding wheel and tighten the screw after the wheel is installed.
4. Be sure to close the side cover **B2** and fasten the side knob **B1** properly.

Attention!

1. Please make sure that the diamond wheel screw **B3** is tightened, the side cover **B2** is properly closed, and the side knob is fastened before turning ON the machine, in order to prevent any hazard from occurring.
2. The machine has an automatic 'power-off' device that will automatically turn the machine off when the cover is opened.

規格 Spec.	研磨範圍 Drill Diameter	先端角 Point Angle	電源 Power	馬達 Motor	轉速 rpm	重量 (KGS) Weight
LM-SG-313-SD	Ø3~Ø13	135°	AC110 AC220V/ 50/60Hz	200W	4500	12.85



三. 鑽頭長度及角度定位 Setting the drill length and position its movement for drilling:

1. 先將刻度環 C1 向右轉到底後再向左轉至所要研磨之鑽頭尺寸
2. 將ER夾具組 D 插入長度設定座 C2 內並將直柄嵌入凹槽內
3. 將ER夾具組 D 向右旋轉至頂住直柄同時將鑽頭向右旋轉至頂住鑽頭刀刃為止
4. ER螺母 B 向右旋轉將鑽頭夾緊
5. 將ER夾具組 D 取出確認鑽頭刀刃與ER夾頭之凹槽是否平行，如果沒有平行要重新設定一次

- 注意! 舊鑽頭少於3/4時，其刻度環調大1-2格
1. Turn the scale ring C1 all the way clockwise then counter-clockwise to the size of the drill to be grinded.
 2. Insert the ER collet chuck set D into the preset length slot C2 and push it all the way in.
 3. Turn the collet chuck set D clockwise until it touches against the pin, and turn the drill clockwise until the cutting edge is felt.
 4. Screw the ER collet B holder clockwise to tighten the drill.
 5. Take out the collet chuck D set to make sure the drill's cutting edge is parallel to the slot of the ER clamping nut. If it's not, repeat the above steps.
- Attention: For old used drills with which are now 3/4 of its original length, it is advisable to increase the scale ring by 1-2 mm.

四. 鑽頭靜點研磨 Static point drill grinding:

1. 靜點倒角要大，將 E 螺絲向順時針 ⊕ 微調至所需之大小
 2. 靜點倒角要小，將 E 螺絲向逆時針 ⊖ 微調至所需之大小
1. To obtain a larger or smaller trimming angle, turn the screw counter-clockwise to increase and clockwise to decrease.

五. 鑽頭排屑溝寬度調整 Bit chip groove width adjustment:

1. 先確認鑽頭尺寸
 2. 核對排屑槽寬度
 3. 將 A1 和 A2 螺絲鬆開
 4. 將靜點座 B1 上的刻度移動至所需尺寸
 5. 再把 A1 和 A2 螺絲鎖緊固定即可做研磨
1. Check the drill size.
 2. Check the Iron filings groove width.
 3. Loosen the screws A1 and A2.
 4. The scale moves static point B1 on the seat to a desired size.
 5. Then A1 and A2 locking screw fixation can do grind.

六. 鑽頭中心靜點研磨 Center point grinding for drills:

1. 將ER夾具組 D 前端直柄對準凹槽插入
 2. 將ER夾具組 D 上之鑽頭輕輕接觸砂輪並作緩慢進給，壓到底後再作左右旋轉，一直到沒有研磨聲音為止即可
 3. 將ER夾具組 D 取出，轉180°再依上述1、2步驟重複研磨一次即可完成鑽頭靜點研磨
1. Insert the collet chuck set D by aligning it with the drill center point device.
 2. Slowly insert the drill D until it touches the grinding wheel slightly, turn it clockwise and counter-clockwise until the grinding sound disappears.
 3. Take out the collet chuck set D and turn it 180 degrees, and repeat steps 1 and 2 to finish the center point grinding.

七. 鑽頭後斜角研磨 After bevel grinding drill:

1. 將ER夾具組 D 前端直柄對準後斜角研磨座之凹槽插入
 2. 將ER夾具組 D 上之鑽頭輕輕接觸砂輪並作緩慢進給，壓到底後再作左右旋轉，一直到沒有研磨聲音為止即可
 3. 將ER夾具組 D 取出，轉180°再依上述1、2步驟重複研磨一次即可完成後斜角研磨
1. Insert the collet chuck set D by aligning it with the drill center point device.
 2. Slowly insert the drill D until it touches the grinding wheel slightly, turn it clockwise and counter-clockwise until the grinding sound disappears.
 3. Take out the collet chuck set D and turn it 180 degrees, and repeat steps 1 and 2 to finish the center point grinding.

八. 鑽頭刀刃研磨 Blade grinding drill:

1. 將ER夾具組 D 前端直柄對準刀刃研磨座之凹槽插入
 2. 將ER夾具組 D 上之鑽頭輕輕接觸砂輪並作緩慢進給，壓到底後再作左右旋轉，一直到沒有研磨聲音為止即可
 3. 將ER夾具組 D 取出，轉180°再依上述1、2步驟重複研磨一次即可完成刀刃研磨
1. Insert the collet chuck set D by aligning it with the drill center point device.
 2. Slowly insert the drill D until it touches the grinding wheel slightly, turn it clockwise and counter-clockwise until the grinding sound disappears.
 3. Take out the collet chuck set D and turn it 180 degrees, and repeat steps 1 and 2 to finish the center point grinding.

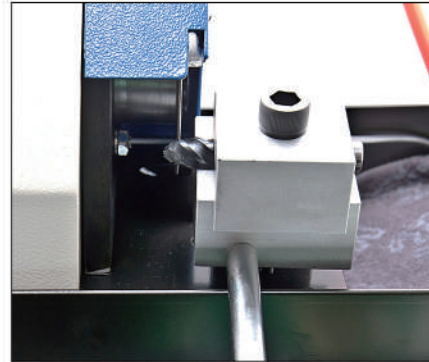


LM-SG 圓棒切斷研磨機

LM-SG ROUNDED BAR CUT OFF RE-SHARPENING MACHINE



範例 Example



標準附件 Standard mating parts

- 一組電源線
- 兩組保險絲
- SDC 鑽石砂輪 #100
砂輪規格 :LM-GW-S100
- 六角扳手 4mm、5mm、10mm 各一支
- 一組握把
- A set of power line
- Two fuse
- SDC diamond wheel#100
Wheel spec.: LM-GW-S100
- A allen wrench of 4mm, 5mm,10mm. 1pc of each
- A set of handle

特殊附件 Special purpose mating parts

- CBN 鑽石砂輪 #80
砂輪規格 :LM-GW-B80(Y)
- CBN diamond wheel#80
Wheel spec.: LM-GW-B80(Y)

選配表 Option

- 水箱 : LM-SG-316-WB
- Water box: LM-SG-316-WB

範例 Example



規格 Spec.	切斷範圍 Cut Range	電源 Power	馬達 Motor	轉速 rpm	重量 (KGS) Weight
LM-SG-316	3mm~16mm	AC110 AC220V 50/60Hz	600w	6000	13.5



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