SUN RUN

法蘭螺栓用油壓工具

Hydraulic Tool for flange working or bolt

巨輪興股份有限公司 CHU LUN SING CO.,LTD.

SC200101-1

『創新・品質・服務』
——— 巨輪興的承諾與堅持

1978年，本公司以巨輪企業行之商號創立於高雄縣橋頭鄉，主要營運項目為油壓千斤頂及各類油壓手工具的開發、生產、銷售及維修服務。創業以來，始終堅持以『研發為基石、品質即命脈、服務為根本』的理念，提供客戶性能優異的產品及完善的專業服務，20 餘年來深獲國內外業界的肯定與信任。

為落實企業永續經營的願景，公司在全體同仁長期努力與客戶的熱情支持下，終於在2000年新世紀來臨之際，完成新廠落成遷入啓用及擴大公司組織，同時以全新的企業體制—巨輪興有限公司，持續為滿足客戶需求而努力。

本著創業初衷之熱忱和經歷千錘百鍊的豐富經驗，在不斷改善製造流程，嚴格監控每一生產環節中，巨輪興有限公司將以國際品質的實力，伴隨客戶共創未來。

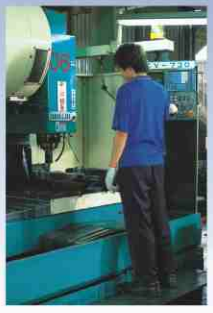
In 1978, our company was established with the name – Chu Lun Co. in Chiao Tou Hsiang. The scope of supply is inclusive of the R&D, manufacturing, sales business and after-service of the hydraulic jacks and the versatile hydraulic hand tools. Sticking to the philosophy of "R&D as foundation, quality as lifeline and service as basis", we provides the clients with the most outstanding products and comprehensive after-service system. Over 20 years effort and development, we have gained the trust and credibility from domestic and international industries.

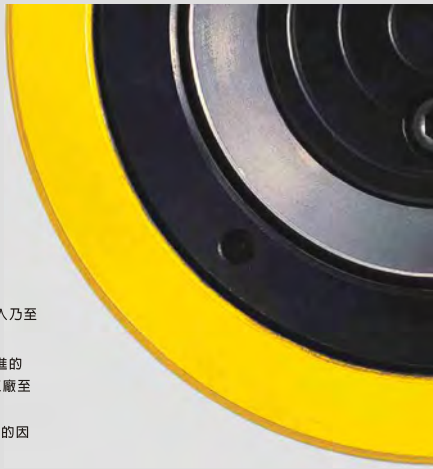
To reach the vision of long-term operation goal, we have setup a newly expansion plant and enlarged the organization structure under the staff's hard work and the clients' strong support in the threshold of year 2000. The overall revolutionized operation under the new brand name – CHU LUN SING CO. LTD .We will do everything satisfy to our customers continuously.

Chu Lun Sing's ultimate goal is to invite our clients together to create the new future and to present the internationalized recognized products by his tenacity, abundant experiences, continuing improvements on manufacturing progress and stringent quality control system.

Service

elopment





巨輪興對於所做的每個環節都給予品質上的承諾：從原料的購入乃至客戶的售後服務，並且通過ISO9001:2015國際認證。

ISO9001:2015要求承諾管理、執行、產品研發、生產及持續改進的一系列標準化，此認證標章即證明巨輪興已執行並維持記錄自工廠至客戶，包含檢測、處理、訓練等所有文件。

ISO9001要求定期內部和外部稽核以確認所有足以影響品質控制的因素得以監控，這些都是無論過去或未來我們對客戶的保證。

SUN RUN's promise to quality is evident in everything we do, from raw material receipt to how we support our customers years after they purchase our goods.

We are registered to ISO9001:2015 international quality standard. ISO 9001:2015requires compliance with standards for management, administration, product development, manufacturing and continual improvement.

Our registration verifies that SUN RUN has adopted and maintains documentation for processes ranging from factory to customers, inspection, handling, and training. ISO 9001 also requires periodic internal and external audits to ensure all aspects of work affecting quality control are monitored. This always has been, and will continue to be. That's our guarantee to you.

巨輪興油壓缸符合美國機械工程協會(American Society of Mechanical Engineers) ASME B30.1標準：

1.於典型材料降服強度下，油壓缸有至少2:1的安全係數：

2.油壓缸設計為：

A.於額定荷重110%時，全揚程操作10次以上

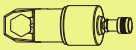
B.於額定荷重150%時，以90%揚程操作3次，操作完成後再以額定荷重100%及全揚程狀況下檢視其功能是否正常；是否有漏油情況

SUN RUN hydraulic cylinder almost with the criteria set forth in the American Society of Mechanical Engineers standard ASME B30.1 ：

1. Cylinder are designed to have minimum of a 2-to-1 safety factor on on typical material yield strength; and/or
2. Cylinder design is
   A. operated through a minimum of 10 cycles of full travel at 110% of rated load, and
   B. Pressurized 3 times at 150% of pressure with the cylinder extended to approximately 90% of full stroke, after which the cylinder must be functional at rated load for full stroke and free of leaks.

※本型錄內容僅供參考，如與實品不符，請以實品為準
※本公司保留產品規格樣式變更或停用之權利

NSC
Series



Capacity:
5-90 ton

Bolt Range:
M6-M48

Hex.Nut Range:
10-75 mm

Maximum Operating Pressure:
700 bar

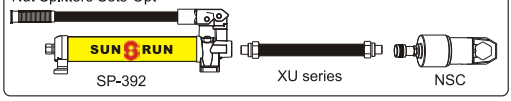
NSC 螺帽破壞器

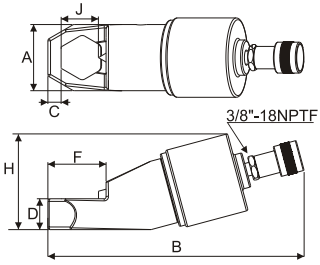
- 特殊設計工具鋼刀可精確劈開螺母至某一部份而不至損壞螺牙。
- 適用性廣泛，包括卡車維修、管路工程、槽罐清理、石化工業、鋼鐵建築、採礦..等。
- 可重新研磨重型刀頭。
- 單動，彈簧回縮油壓缸。
- 頭部特殊角度，適用各作業。
- 整體的設計，使用方便。

Hydrualic Nut Splitter

※Specially designed "tool steel" cutter blade penetrates the nut to the precise point where it cracks, stopping short of the bolt threads.
※Applications include servicing trucks, piping industry, tank cleaning, petrochemical, steel construction and mining.
※Heavy-duty chisels can be reground.
※Sing-acting, spring return cylinder.
※Unique angled head allows flush access.
※Compact and ergonomic design, easy to use.

螺帽破壞器組-建議選配
Nut Splitters Sets-Opt





型號 Model No.	六角螺帽 Hex. Nut Range		螺栓 Bolt Range		能力 Capacity	總油量 Oil Capacity	尺寸 Dimensions(mm)							重量 Weight
	(in)	(mm)	(in)	(mm)	(ton)	(cm^3)	A	B	C	D	F	H	J	(kg)
NSC-1319	0.50-0.75	13-19	0.31-0.50	M8-M12	5	15	40	200	6	19	28	48	21	1.1
NSC-1924	0.75-0.94	19-24	0.50-0.63	M12-M16	10	20	55	227	8	25	38	71	25	2.0
NSC-2432	0.94-1.13	24-32	0.63-0.88	M16-M22	15	60	66	260	10	31	49	76	33	3.4
NSC-3241	1.13-1.56	32-41	0.88-1.13	M22-M27	20	80	75	286	15	35	66	89	43	6.2
NSC-4150	1.56-2.00	41-50	1.13-1.38	M27-M33	35	155	96	325	21	45	73	109	54	11.7
NSC-5060	2.00-2.25	50-60	1.38-1.50	M33-M39	50	240	106	366	27	54	92	126	60	15.4
NSC-6075	2.38-2.88	60-75	1.50-1.88	M39-M48	90	492	156	367	27	75	110	180	78	38.9

FSA 法蘭定心器

- 法蘭定心器適用於管路法蘭結或例行性維修的對位或重新校正。
- 附裝在法蘭錯位位置可提供簡便推拉動作使法蘭達到正確的對位。
- 定心器可在不需其他動力支援下安全、快速地矯正扭曲、旋轉錯位。
- 適用於大部份的 ANSI、API、BS及DIN規格法蘭。
- 不需吊索、吊勾或提升齒輪輔助。
- 可安裝或使用於任何方位(水平安裝或垂直安裝)
- 方便提攜、輕量的設計即使在外地也容易搬運使用。

FSA Series

Minimum Bolt Siz:
16-31.5 mm

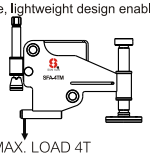
Flange Wall Thickness:
16-31.5 mm

Capacity:
1-10 ton (10-90kN)

Maximum Operating Pressure:
700 bar (Just for SFA-9TE)

Hydraulic Fixed Flange Alignment Tool

※The Flange Alignment tools can be used to align or re-align flange joints during pipework construction, commissioning or during routine maintenance.
※The tool is attached to the flange joint where misalignment is at its greatest and then simply push and pull the flanges into correct alignment (exceot SFA-9TE).
※The Flange Alignment tools rectify twist and rotational misalignment quickly, safely and without the need for an external power source.
※Appropriate for use on most ANSI, API, BS and DIN flanges.
※No slings, hooks or lifting gear required.
※Can be installed and used in any position (horizontally or vertically).
※Portable, lightweight design enables easy transport and use, even in remote locations.

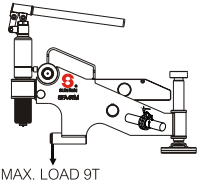


MAX. LOAD 4T

FSA-4TM

適用於中型法蘭
機械式固定/ 旋轉法蘭定心器

For use on medium diameter, medium pressure flanges.
Mechanical Fixed Flange and Rotational Alignment Tool.

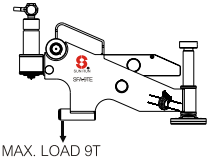


MAX. LOAD 9T

FSA-9TM

適用於大型法蘭
機械式固定/ 旋轉法蘭定心器

For use on larger diameter, higher pressure f langes.
Mechanical Fixed Flange and Rotational Alignment Tool.

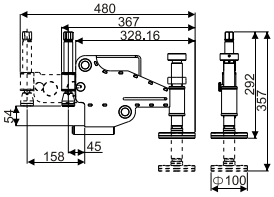


MAX. LOAD 9T

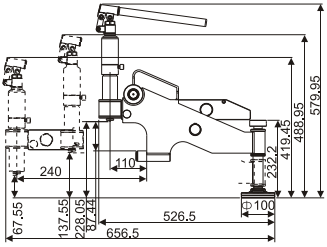
FSA-9TE

適用於大型法蘭
油壓式固定/ 旋轉法蘭定心器

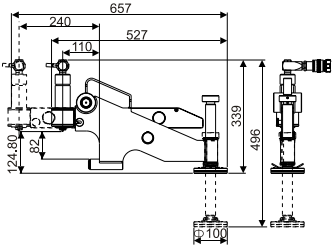
For use on larger diameter, higher pressure flanges.
Hydraulic Fixed Flange and Rotational Alignment Tool.



FSA-4TM



FSA-9TM



FSA-9TE

型號 Model Number	最大舉升力 Max. Lifting Force (kN/ ton)	最小螺栓尺寸 Min. Bolt Size (in/mm)	法蘭厚度(含法蘭墊片) Flange wall Thickness (including gap between flanges) (in/ mm)	重量 Wt. (kg)
FSA-4TM	40/ 4	0.95/ 24	1.18-5.23/ 30-133	8.6
FSA-9TM	90/ 10	1.40/ 35.5	3.66-9.00/ 93-228	16.5
FSA-9TE	90/ 10	1.40/ 35.5	3.66-9.00/ 93-228	16.5

標準配件
Equipped fitting

收納箱
Stock Box

固定帶
Fixed belt

SWR&SWRM
Series

Maximum Spread Force:
14 ton

Tip Clearance / Max. Spread: [1)]
6 / 81 mm

Maximum Operating Pressure:
700 bar

1)Using Stepped block.

SWR-40 & SWRM-8 法蘭撐開器

Hydraulic Spreader

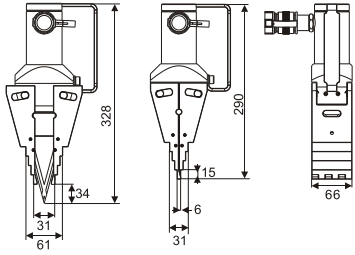
- 僅需0.24(6mm)的間隙。
- 自動回縮。
- 獨特連結設計：無首階彎曲及防滑設計。

※Only requests an access gap of 0.24" (6mm).
※Automatic mechanical retraction.
※Unique interlocking : no first step bending and risk of slipping out of joint.

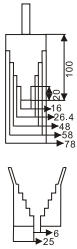
型號 Model No.	最大撐開力 Max.Spread Force ton (kN)	尖端空隙 Tip clearance mm	最大撐開 Max. Spread mm	總油量 Oil Capacity c.c	重量 Weight kg
SWR-40	14 (125)	6	81	78	7.1
SWR-401	14.5 (145)	6	81	152	8.0
SWRM-8	8 (72)	6	81	—	6.5

尺寸
Dimension(mm)

SWR-40



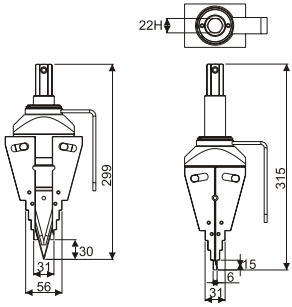
標準配件
Equipped fitting



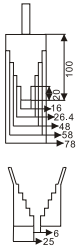
SWRSB1
安全墊塊
Safety Block

SWRFSB
階梯墊塊
Stepped Block

SWRM-8



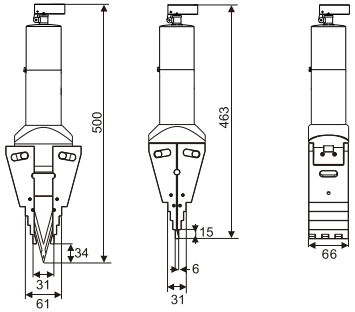
標準配件
Equipped fitting



SWRSB1
安全墊塊
Safety Block

SWRFSB
階梯墊塊
Stepped Block

SWR-401



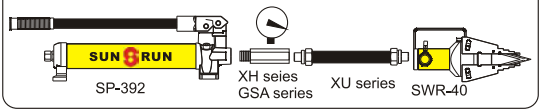
SWR系列簡易安裝示意圖 Simple Install for SWR series

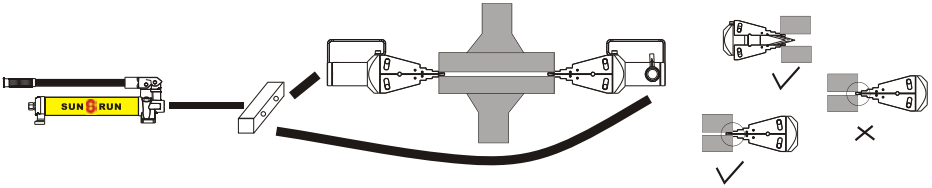
手控分流閥

可同步並使SWR-40呈180°分散於法蘭結位置

For simultaneously and even spreading of flange joints, 180°apart with SWR-40

法蘭撐開組-建議選配 Flange Spreader Sets-Optional





SWF-5 法蘭撐開器

Hydraulic Spreader

- 平行切口。
- 完全金屬結構。

※Jaws open parallel.
※Complete metal structure.

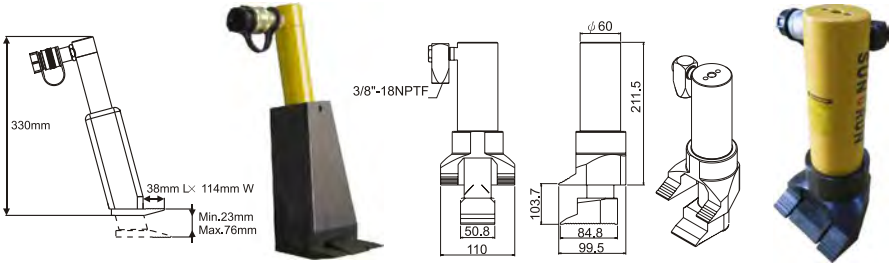
型號 Model No.	能力 Capacity	撐開距離 Spread (Min./Max.)	總油量 Oil Capacity	重量 Weight
SWF-5	5 ton	23/76mm	81.9cm³	6.2kg
SWF-10ST	10 ton	3.7/103.7mm	160cm³	6.35kg

SWF Series

Capacity: **5 ton**

Tip Clearance / Max. Spread: **23 / 76 mm**

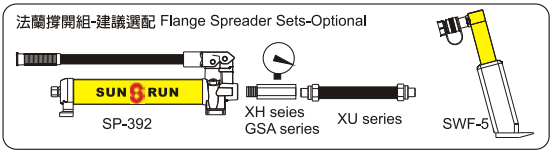
Maximum Operating Pressure: **700 bar**

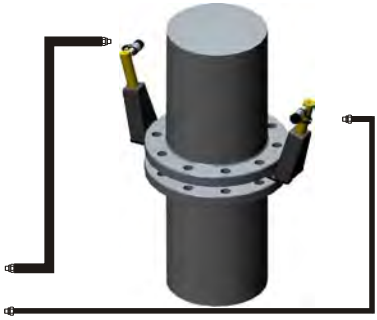


SWF-5

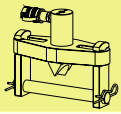
SWF-10ST

法蘭撐開組-建議選配 Flange Spreader Sets-Optional





SFS Series



Capacity:
5-10 ton

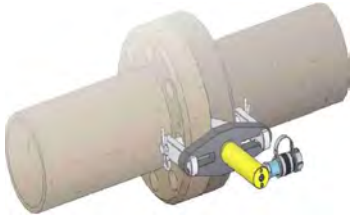
Maximum Operating Pressure:
700 bar

SFS 法蘭分離器

- 易於攜帶操作，經濟性考量設計
- 可調式尖端寬度 70 - 216mm ，應用範圍廣
- 搭配單動、彈簧回縮 RSC-系統千斤頂，操作簡單、快速

Hydraulic Flange Spreader

※Lightweight, ergonomic design for ease of use.
※Adjustable jaw widths from 70 - 216 mm for a wide range of applications.
※Single-acting, spring return RSC-Series cylinder for fast trouble-free operation.

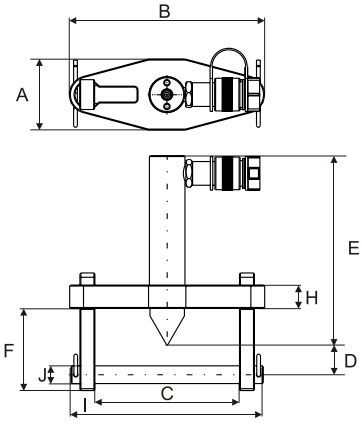


法蘭撐開對照表
Flange Spreader Matching Chart

ASA Rating (bar)	管尺寸 Pipe Size (mm)	
	SFS-56	SFS-109
10	127-508	558-1066
20	63-355	406-711
27	63-304	355-609
35	63-254	304-508
62	12-152	203-406
103	12-88	101-203
172	12-63	76-101

標準配件
Equipped fitting

收納箱
Stock Box



相關法蘭撐開器工具也可參考SWR-Series
移動楔獨特連結設計:無摩擦力、平滑且平行。降低法蘭和撐開臂的損壞風險。

Wedge Spreaders
Friction-free,smooth and parallel wedge movement with unique interlock wedge design. Eliminates flange damage and risk of spreading arm failure.

法蘭撐開器選配
Flange Spreader Sets-Optional

Hydraulic Hand Pump

XH seies
GSA series

XU series

型號 Model Number	能力 Capa-city (ton)	揚程 Stroke (mm)	總油量 Oil Cap. (mm)	法蘭厚度 Max. Flange Thickness (mm)	螺栓尺寸 Stud Size (mm)	撐開距 Standard Wedge (mm)	尺寸 Dimensions (mm) A	B	C Min.	C Max.	D	E	F	H	I	J	重量 Wt. (kg)
SFS-56	5	38	24.6	2 x 57	19-28	3-28	76	209	70	155	32	196	88	25	206	19	11.5
SFS-109	10	54	78.7	2 x 92	31-41	3-28	108	279	104	216	50	152	114	38	273	31	18.1

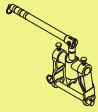
SMG 法蘭撐開器

- 適用於間隙最少在2.0mm (0.08")較小型或較低壓的法蘭結面。
- 具有6.8T (68kN) 撐開力。
- 可反轉兩側，提供最佳使用範圍。
- 獨特的雙角度楔型設計，不因撐開距離而減少力量。

Mini-Gap Flange Spreader

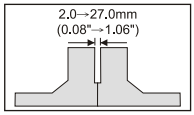
※For use on smaller, lower pressure flange joints with a minimum access gap of 2.0mm (0.08").
※The tool will provide 6.8T (68kN) of spreading force.
※Reversible leg design giving greater range of applications.
※Unique double angled wedge produces great spreading force without reducing spreading distance.
※Robust lightweight tool.

SMG Series



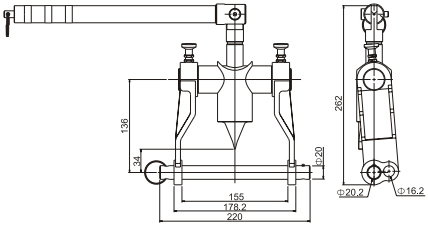
Capacity:
7 ton

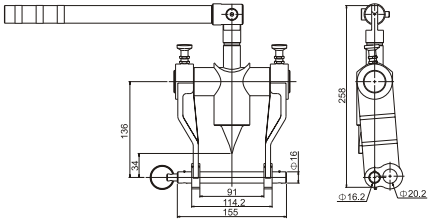
Spreading distance:
2.0-27.0mm



Equipped fitting
標準配件

收納箱
Stock Box





型號 Model Number	能力 Capacity (kN/ ton)	撐開距離 Spreading distance (mm)	重量 Wt. (kg)	適用範圍 Range of application											
				BS10 Flanges		ASME B16.47 Flanges (含焊頸及盲邊); (Including weld neck and blind flagne);		ASME B16.5 Flanges (焊頸); (weld neck);		ASME B16.5 Flanges (焊槽); (Socket welded);		ANSI reducing application Flanges (含牙及滑道); (Including threaded and slip on flange);		ANSI orifice application Flanges (含焊頸,牙及滑道); (Including weld neck, thread and slip on flange);	
				等級 Class	範圍 Range	等級 Class	範圍 Range	等級 Class	範圍 Range	等級 Class	範圍 Range	等級 Class	範圍 Range	等級 Class	範圍 Range
SMG-7TM	68/ 7	2.0-27.0	11.5	H	0.5~24"	150	26~60"	150	2~48"	150	2~3"	150	2~48"	300	1~20"
				J	0.5~24"	300	26~60"	300	3/4~48"	300	3/4~3"	300	3/4~48"		
				K	0.5~20"										
				R	0.5~20"										
				S	0.5~16"										
				T	0.5~13"										

TSB
Series

Nomainal Pipe Size:
1/2-4 inch

Maximum Bending:
90°

Maximum Operating Pressure:
700 bar

TSB 油壓彎管器

- 彎管平滑不易產生皺褶。
- 套件包含油缸、油管及手動、氣動或電動泵。
- 套件亦可選配不含油壓系統的配件。
- 彎管軸頭及面板採用熱處理強力鋁合金製。
- 所有套件均含堅固耐用的收納箱、角度板及軸頭定位插銷。

Hydraulic Pipe Bender Sets

※Make smooth, wrinkle-free bends.
※Sets include cylinder, hose and manual, air or electric pump.
※Sets are also available without hydraulics.
※Bending shoes and bending frame are lightweight, heat-treated aluminum.
※All sets include sturdy steel storage case, angle indicator for accurate bending and Shoe Lock Pin.

型 號 Model Number	手動泵浦 Hand Pump	氣動泵浦 Air Pump	電動泵浦 Electric Pump	油缸 Cylinder	鐵箱 Steel Case	墊塊 Saddle
TSB-202X	–	–	–	–	TSB-202-CA1	TSB202-A07
TSB-202N	–	–	–	RSR-3014	TSB-202-CA1	TSB202-A07
TSB-202B	–	–	SPE-554TQJ	RSR-3014	TSB-202-CA1	TSB202-A07

型 號 Model Number	面板組 Frame Assembly	支撐軸桿組 Pivot Pin (2* incl)	支撐輪 Pivot Shoes (2* incl)	定位插銷組 Lock Pin	壓管軸頭 One Shot Bending Shoe	選購角度板 Optic Angle Gauge
TSB-202X	TSB202-A-A3	TSB202-A-A2	TSB202-A02	TSB202-A-A1	TSB202-AA2G (1-1/4") TSB202-AA2C (3") TSB202-AA2F (1-1/2") TSB202-AA2B (3-1/2") TSB202-AA2E (2") TSB202-AA2A (4") TSB202-AA2D (2-1/2")	TSB202-A11
TSB-202N	TSB202-A-A3	TSB202-A-A2	TSB202-A02	TSB202-A-A1		TSB202-A11
TSB-202B	TSB202-A-A3	TSB202-A-A2	TSB202-A02	TSB202-A-A1		TSB202-A11

TSB-202

Φ1-1/4"~4"

管件尺寸 Nominal pipe size (In) -管外徑 -O.D (in) / (mm)	管壁厚度 Wall thickness (in)-(mm)	管件等級 Schedule Pipe ※ (mm)	彎管內部彎度 Pipe bend Radius (in)	 壓管軸頭 One shot	壓管軸頭 One shot
1-1/4	0.140-3.6	40	6-7/16	Yes	TSB202-AA2G (1-1/4")
-1.66 / 42.2	0.191-4.9	80		Yes	
	0.250-6.4	160		Yes	
	0.342-8.7	DEH		SS	
1-1/2	0.145-3.7	40	7-5/16	Yes	TSB202-AA2F (1-1/2")
-1.9 / 48.3	0.200-5.1	80		Yes	
	0.281-7.1	160		Yes	
	0.400-10.2	DEH		SS	
2	0.154-3.9	40	8-5/16	Yes	TSB202-AA2E (2")
-2.375 / 60.3	0.218-5.5	80		Yes	
	0.343-8.7	160		Yes	
2-1/2	0.203-5.2	40	9-1/2	Yes	TSB202-AA2D (2-1/2")
-2.875 / 73.0	0.276-7.0	80		Yes	
	0.375-9.5	160		Yes	
3	0.216-5.5	40	11-1/4	Yes	TSB202-AA2C (3")
-3.5 / 88.9	0.300-7.6	80		Yes	
3-1/2	0.226-5.7	40	15-1/2	Yes	TSB202-AA2B (3-1/2")
-4.0 / 101.6	0.318-8.1	80		Yes	
4	0.237-6.0	40	17-3/4	Yes	TSB202-AA2A (4")
-4.5 / 114.3	0.337-8.6	80		Yes	

※ 管件等級：40=標準；80=稍厚；160=雙層厚 (只適用於中鋼管)；DEH=超級雙層厚 (較 160再稍厚一些)

※ SS：可使用萬向軸頭彎曲更多樣式

※ Schedule pipe：40=Standard；80=Extra heavy；160=Double extra heavy (mild steel pipe only)；DEH=Double extra heavy (Slightly thicker than 160)

※ SS：Can be bent by using wider spacing for swivel shoes.

SBT 螺栓拉伸器

- 通用ANSI, API 法蘭均可適用。
- 質輕易攜帶。
- 可快速取出架橋、六角筒，便於工作替換。
- 鍍鎳保護，延長使用壽命。
- 強化油封設計增強可靠度。
- 維修簡易、方便。

Hydraulic Bolt Tensioner

※Fit all Standard flanges including ANSI and API Flanges.
※Lightweight and easily handled design.
※Quick-Release bridge and Hex. Socket design-for fast change over.
※Electro-less nickel plating prolongs tool life and reduces on-the-job maintenance.
※Improved seal design offer increased reliability.
※Simple and easy to maintain.

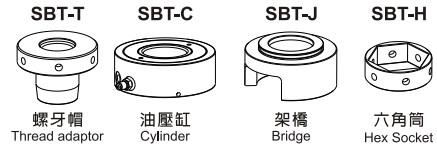
SBT Series

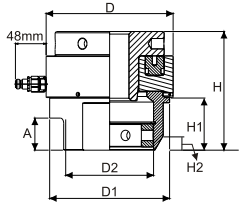
Capacity: 30-465 ton

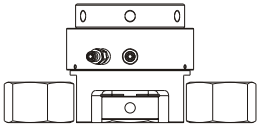
Stroke: 8-10mm

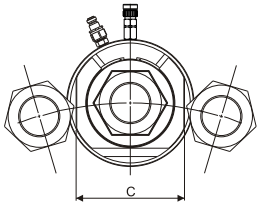
Bolt Range: M20-M150 3/4"-5-3/4"

Maximum Operating Pressure: 1500 bar









型 號 Model		SBT-20	SBT-35	SBT-50	SBT-60	SBT-90	SBT-130	SBT-160	SBT-200	SBT-250	SBT-310
螺栓尺寸 Bolt dimension (ϕ *pitch)	公制 Metric	M20*2.5	M27*3	M36*4	M42*4.5	M45*4.5	M60*5.5	M72*6	M80*6	M100*6	M125*6
		M22*2.5	M30*3.5	M39*4	M45*4.5	M48*5	M64*6	M76*6	M85*6	M110*6	M130*6
		M24*3	M33*3.5	M42*4.5	M48*5	M52*5	M68*6	M80*6	M90*6	M120*6	M140*6
		M27*3	M36*4	M45*4.5	M52*5	M56*5.5	M72*6		M95*6	M125*6	M150*6
						M60*5.5	M76*6		M100*6		
螺牙尺寸 Threads (ϕ in-)	英制 imperial	3/4"-10	1"-8	1-3/8"-6	1-1/2"-6	1-3/4"-5	2-1/2"-4	2-3/4"-4	3-1/4"-4	3-3/4"-4	5"-4
		7/8"-9	1-1/8"-7	1-1/2"-6	1-3/4"-5	2"-4-1/2	2-3/4"-4	3"-4	3-1/2"-4	4"-4	5-1/4"-4
		1"-8	1-1/4"-7	1-3/4"-5	2"-4-1/2	2-1/4"-4-1/2			3-3/4"-4	4-1/4"-4	5-1/2"-4
			1-3/8-6							4-1/2"-4	5-3/4"-4
										4-3/4"-4	
最大壓力 Max. Pressure	(bar)	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
	(psi)	21756	21756	21756	21756	21756	21756	21756	21756	21756	21756
油壓面積 Hydraulic area	(cm^2)	20	35	50	60	90	130	160	200	250	310
	(in^2)	3.1	5.43	7.75	9.3	13.95	20.15	24.8	31	38.75	48.05
最大油壓荷重 Max.hydraulic load	(kN)	300	525	750	900	1350	1950	2400	3000	3750	4650
	(lbf)	67443	118025	168606	202328	303492	438377	539541	674426	843032	1045360
揚 程 Piston stroke	(mm)	8	8	8	8	8	8	10	10	10	10
D (mm)		86	109	128	144	170	198	220	244	300	340
H (mm)		105	116	128	140	154	185	190	203	235	268
H1 (mm)		30	40	49	54	65	82	86	106	131	156
H2 (mm)		5.2	5.2	10.39	10.39	13.86	22.52	22.52	22.52	22.52	25.11
D1 (mm)		74	97	116	133	154	187	203	232	272	313
D2 (mm)		56	73	90	102	114	137	145	180	223	260
A (mm)		26	31	38	40	42	50	50	60	73	86
C (mm)		66	83	100	118	134	167	175	210	253	293
重 量 Weight	(kg)	3	4.8	7.5	11	17.3	25	33	39	56	77

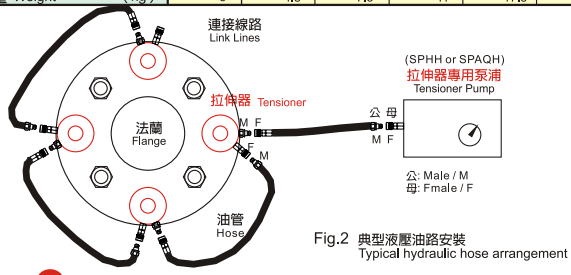


Fig.2 典型液壓油路安裝
Typical hydraulic hose arrangement

型 號 Model		SBT-20		SBT-35		SBT-50		SBT-60		SBT-90		SBT-130		SBT-160		SBT-200		SBT-250		SBT-310	
換算表 Chart																					
psi	bar	lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN	lbf	kN
1000	69	3100	14	5425	24	7750	34	9300	41	13950	62	20150	90	24800	110	31000	138	38750	172	48050	214
2000	138	6200	28	10850	48	15500	69	18600	83	27900	124	40300	179	49600	221	62000	276	77500	345	96100	427
3000	207	9300	41	16275	72	23250	103	27900	124	41850	186	60450	269	74400	331	93000	414	116250	517	144150	641
4000	276	12400	55	21700	97	31000	138	37200	165	55800	248	80600	359	99200	441	124000	552	155000	689	192200	855
5000	345	15500	69	27125	121	38750	172	46500	207	69750	310	100750	448	124000	552	155000	689	193750	862	240250	1069
6000	414	18600	83	32550	145	46500	207	55800	248	83700	372	120900	538	148800	662	186000	827	232500	1034	288300	1282
7000	483	21700	97	37975	169	54250	241	65100	290	97650	434	141050	627	173600	772	217000	965	271250	1207	336350	1496
8000	552	24800	110	43400	193	62000	276	74400	331	111600	496	161200	717	198400	883	248000	1103	310000	1379	384400	1710
9000	621	27900	124	48825	217	69750	310	83700	372	125550	558	181350	807	223200	993	279000	1241	348750	1551	432450	1924
10000	689	31000	138	54250	241	77500	345	93000	414	139500	621	201500	896	248000	1103	310000	1379	387500	1724	480500	2137
11000	758	34100	152	59675	265	85250	379	102300	455	153450	683	221650	986	272800	1213	341000	1517	426250	1896	528550	2351
12000	827	37200	165	65100	290	93000	414	111600	496	167400	745	241800	1076	297600	1324	372000	1655	465000	2068	576600	2565
13000	896	40300	179	70525	314	100750	448	120900	538	181350	807	261950	1165	322400	1434	403000	1793	503750	2241	624650	2779
14000	965	43400	193	75950	338	108500	483	130200	579	195300	869	282100	1255	347200	1544	434000	1931	542500	2413	672700	2992
15000	1034	46500	207	81375	362	116250	517	139500	621	209250	931	302250	1344	372000	1655	465000	2068	581250	2586	720750	3206
16000	1103	49600	221	86800	386	124000	552	148800	662	223200	993	322400	1434	396800	1765	496000	2206	620000	2758	768800	3420
17000	1172	52700	234	92225	410	131750	586	158100	703	237150	1055	342550	1524	421600	1875	527000	2344	658750	2930	816850	3634
18000	1241	55800	248	97650	434	139500	621	167400	745	251100	1117	362700	1613	446400	1986	558000	2482	697500	3103	864900	3847
19000	1310	58900	262	103075	459	147250	655	176700	786	265050	1179	382850	1703	471200	2096	589000	2620	736250	3275	912950	4061
20000	1379	62000	276	108500	483	155000	689	186000	827	279000	1241	403000	1793	496000	2206	620000	2758	775000	3447	961000	4275
21000	1448	65100	290	113925	507	162750	724	195300	869	292950	1303	423150	1882	520800	2317	651000	2896	813750	3620	1009050	4488
22000	1517	68200	303	119350	531	170500	758	204600	910	306900	1365	443300	1972	545600	2427	682000	3034	852500	3792	1057100	4702

公制螺栓及六角對邊對照 Metric Bolt

螺紋 Bolt	M	6	8	10	12	14	16	18	20	22	24	27	30	33	36	39	42	45	48	52	56	60	64	68
六角對邊 Hexagon	mm	10	13	17	19	22	24	27	30	32	36	41	46	50	55	60	65	70	75	80	85	90	95	100
厚度 Thickness	mm	5	6.5	8	10	11	13	15	16	18	19	22	24	26	29	31	34	36	38	42	45	48	51	54

螺紋 Bolt	M	72	76	80	85	90	95	100	105	110	115	120	125	130	140	150
六角對邊 Hexagon	mm	105	110	115	120	130	135	145	150	155	165	170	180	185	200	210
厚度 Thickness	mm	58	61	64		72		84								

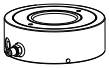
英制螺栓及六角對邊對照 Imperial Bolt

螺紋 Bolt		3/8	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 3/8	1 1/2	1 5/8	1 3/4	1 7/8	2
六角對邊 hexagon	mm	17	22	27	32	36	41	46	50	55	60	65	70	75	80
厚度 Thickness	mm	9.5	12.5	15.8	19	22	25	28	32	35	38	41	44	47	50
六角對邊 Hexagon	in	11/16	7/8	1-1/16	1 1/4	1 7/16	1 5/8	1 13/16	2	2 3/16	2 3/8	2 9/16	2 3/4	2 15/16	3 1/8
厚度 Thickness	in	3/8	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 3/8	1 1/2	1 5/8	1 3/4	1 7/8	2

螺紋 Bolt		2 1/4	2 1/2	2 3/4	3	3 1/4	3 1/2	3 3/4	4	4 1/4	4 1/2	4 3/4	5	5 1/4	5 1/2
六角對邊 Hexagon	mm	90	100	108	118	127	137	146	156	165	175	184	194	203	213
厚度 Thickness	mm	57	63	70	76										
六角對邊 Hexagon	in	3 1/2	3 7/8	4 1/4	4 5/8	5	5 3/8	5 3/4	6 1/8	6 1/2	6 7/8	7 1/4	7 5/8	8	8 3/8
厚度 Thickness	in	2 1/4	2 1/2	2 3/4	3										

螺紋 Bolt		5 3/4	6
六角對邊 Hexagon	mm	222	232
厚度 Thickness	mm		
六角對邊 Hexagon	in	8 3/4	9 1/8
厚度 Thickness	in		

SBT-C



油壓缸
Cylinder

SBT-J

架橋
Bridge

SBT-T

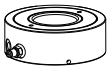
螺牙帽
Thread adaptor

SBT-H

六角筒
Hex Socket

型號 Model Number	螺栓尺寸 Bolt dimension	油壓缸型號 Cylinder Model	架橋型號 Bridge Model	螺牙帽型號 Thread adaptor Model	六角筒型號 Hex. Socket Model
SBT-20 M20-2.5	M20*2.5	SBT-20C	SBT-20J	SBT-20T M20-2.5	SBT-20H 30
SBT-20 M22-2.5	M22*2.5			SBT-20T M22-2.5	SBT-20H 32
SBT-20 M24-3	M24*3			SBT-20T M24-3	SBT-20H 36
SBT-20 M27-3	M27*3			SBT-20T M27-3	SBT-20H 41
SBT-20 3/4"-10	3/4"-10			SBT-20T 3/4"-10	SBT-20H 32
SBT-20 7/8"-9	7/8"-9			SBT-20T 7/8"-9	SBT-20H 36
SBT-20 1"-8	1"-8			SBT-20T 1"-8	SBT-20H 41
SBT-35 M27-3	M27*3	SBT-35C	SBT-35J	SBT-35T M27-3	SBT-35H 41
SBT-35 M30-3.5	30*3.5			SBT-35T M30-3.5	SBT-35H 46
SBT-35 M33-3.5	M33*3.5			SBT-35T M33-3.5	SBT-35H 50
SBT-35 M36-4	M36*4			SBT-35T M36-4	SBT-35H 55
SBT-35 1"-8	1"-8			SBT-35T 1"-8	SBT-35H 41
SBT-35 1-1/8"-7	1-1/8"-7			SBT-35T 1-1/8"-7	SBT-35H 46
SBT-35 1-1/4"-7	1-1/4"-7			SBT-35T 1-1/4"-7	SBT-35H 50
SBT-35 1-3/8"-6	1-3/8"-6			SBT-35T 1-3/8"-6	SBT-35H 55
SBT-50 M36-4	M36*4	SBT-50C	SBT-50J	SBT-50T M36-4	SBT-50H 55
SBT-50 M39-4	M39*4			SBT-50T M39-4	SBT-50H 60
SBT-50 M42-4.5	M42*4.5			SBT-50T M42-4.5	SBT-50H 65
SBT-50 M45-4.5	M45*4.5			SBT-50T M45-4.5	SBT-50H 70
SBT-50 1-3/8"-6	1-3/8"-6			SBT-50T1-3/8"-6	SBT-50H 55
SBT-50 1-1/2"-6	1-1/2"-6			SBT-50T 1-1/2"-6	SBT-50H 60
SBT-50 1-3/4"-5	1-3/4"-5			SBT-50T 1-3/4"-5	SBT-50H 70
SBT-60 M42-4.5	M42*4.5	SBT-60C	SBT-60J	SBT-60T M42-4.5	SBT-60H 65
SBT-60 M45-4.5	M45*4.5			SBT-60T M45-4.5	SBT-60H 70
SBT-60 M48-5	M48*5			SBT-60T M48-5	SBT-60H 75
SBT-60 M52-5	M52*5			SBT-60T M52-5	SBT-60H 80
SBT-60 1-1/2"-6	1-1/2"-6			SBT-60T 1-1/2"-6	SBT-60H 60
SBT-60 1-3/4"-5	1-3/4"-5			SBT-60T 1-3/4"-5	SBT-60H 70
SBT-60 2"-4.5	2"-4.5			SBT-60T 2"-4.5	SBT-60H 80
SBT-90 M45-4.5	M45*4.5	SBT-90C	SBT-90C	SBT-90T M45-4.5	SBT-90H 70
SBT-90 M48-5	M48*5			SBT-90T M48-5	SBT-90H 75
SBT-90 M52-5	M52*5			SBT-90T M52-5	SBT-90H 80
SBT-90 M56-5.5	M56*5.5			SBT-90T M56-5.5	SBT-90H 85
SBT-90 M60-5.5	M60*5.5			SBT-90T M60-5.5	SBT-90H 90
SBT-90 1-3/4"-5	1-3/4"-5			SBT-90T 1-3/4"-5	SBT-90H 70
SBT-90 2"-4.5	2"-4.5			SBT-90T 2"-4.5	SBT-90H 80
SBT-90 2-1/4"-4.5	2-1/4"-4.5	SBT-130C	SBT-130J	SBT-90T 2-1/4"-4.5	SBT-90H 90
SBT-130 M60-5.5	M60*5.5			SBT-130T M60-5.5	SBT-130H 90
SBT-130 M64-6	M64*6			SBT-130T M64-6	SBT-130H 95
SBT-130 M68-6	M68*6			SBT-130T M68-6	SBT-130H 100
SBT-130 M72-6	M72*6			SBT-130T M72-6	SBT-130H 105
SBT-130 M76-6	M76*6			SBT-130T M76-6	SBT-130H 110
SBT-130 2-1/2"-4	2-1/2"-4			SBT-130T 2-1/2"-4	SBT-130H 100
SBT-130 2-3/4"-4	2-3/4"-4			SBT-130T 2-3/4"-4	SBT-130H 108
SBT-160 M72-6	M72*6	SBT-160C	SBT-160J	SBT-160T M72-6	SBT-160H 105
SBT-160 M76-6	M76*6			SBT-160T M76-6	SBT-160H 110
SBT-160 M80-6	M80*6			SBT-160T M80-6	SBT-160H 115
SBT-160 2-3/4"-4	2-3/4"-4			SBT-160T 2-3/4"-4	SBT-160H 108
SBT-160 3"-4	3"-4			SBT-160T 3"-4	SBT-160H 118

SBT-C



油壓缸
Cylinder

SBT-J

架橋
Bridge

SBT-T

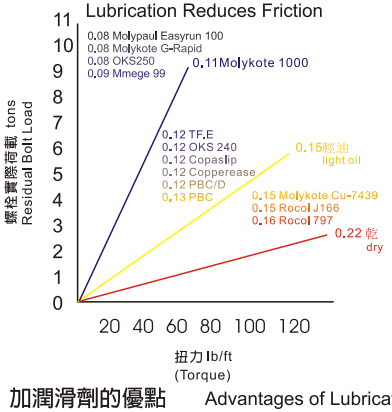
螺牙帽
Thread adaptor

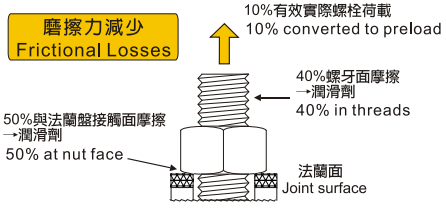
SBT-H

六角筒
Hex Socket

型號 Model Number	螺栓尺寸 Bolt dimension	油壓缸型號 Cylinder Model	架橋型號 Bridge Model	螺牙帽型號 Thread adaptor Model	六角筒型號 Hex. Socket Model
SBT-200 M80-6	M80*6	SBT-200C	SBT-200J	SBT-200T M80-6	SBT-200H 115
SBT-200 M85-6	M85*6			SBT-200T M85-6	SBT-200H 120
SBT-200 M90-6	M90*6			SBT-200T M90-6	SBT-200H 130
SBT-200 M95-6	M95*6			SBT-200T M95-6	SBT-200H 135
SBT-200 M100-6	M100*6			SBT-200T M100-6	SBT-200H 145
SBT-200 3-1/4"-4	3-1/4"-4			SBT-200T 3-1/4"-4	SBT-200H 127
SBT-200 3-1/2"-4	3-1/2"-4			SBT-200T 3-1/2"-4	SBT-200H 137
SBT-200 3-3/4"-4	3-3/4"-4			SBT-200T 3-3/4"-4	SBT-200H 146
SBT-250 M100-6	M100*6	SBT-250C	SBT-250J	SBT-250T M100-6	SBT-250H 145
SBT-250 M110-6	M110*6			SBT-250T M110-6	SBT-250H 155
SBT-250 M120-6	M120*6			SBT-250T M120-6	SBT-250H 170
SBT-250 M125-6	M125*6			SBT-250T M125-6	SBT-250H 180
SBT-250 3-3/4"-4	3-3/4"-4			SBT-250T 3-3/4"-4	SBT-250H 146
SBT-250 4"-4	4"-4			SBT-250T 4"-4	SBT-250H 156
SBT-250 4-1/4"-4	4-1/4"-4			SBT-250T 4-1/4"-4	SBT-250H 165
SBT-250 4-1/2"-4	4-1/2"-4			SBT-250T 4-1/2"-4	SBT-250H 175
SBT-250 4-3/4"-4	4-3/4"-4			SBT-250T 4-3/4"-4	SBT-250H 184
SBT-310 M125-6	M125*6	SBT-310C	SBT-310J	SBT-310T M125-6	SBT-310H 180
SBT-310 M130-6	M130*6			SBT-310T M130-6	SBT-310H 185
SBT-310 M140-6	M140*6			SBT-310T M140-6	SBT-310H 200
SBT-310 M150-6	M150*6			SBT-310T M150-6	SBT-310H 210
SBT-310 5"-4	5"-4			SBT-310T 5"-4	SBT-310H 194
SBT-310 5-1/4"-4	5-1/4"-4			SBT-310T 5-1/4"-4	SBT-310H 203
SBT-310 5-1/2"-4	5-1/2"-4			SBT-310T 5-1/2"-4	SBT-310H 213
SBT-310 5-3/4"-4	5-3/4"-4			SBT-310T 5-3/4"-4	SBT-310H 222

加上潤滑劑能減少摩擦的產生
Lubrication Reduces Friction





當將扭矩鎖緊時，接觸的摩擦點(螺牙面和法蘭接觸的面)都需使用潤滑劑。
Friction points should always be lubricated when using the torque tightening method.

加潤滑劑的優點

1.減少摩擦力。
2.增加螺栓使用壽命。
3.裝置螺栓的成功率提高。
4.提高扭矩轉換率。

Advantages of Lubrication

1.Reduces the friction during tightening.
2.Increases bolt service life.
3.Decreases bolt failure during installation.
4.Higher friction results in less conversion of torque to preload.

SES 單層式彈簧回縮螺栓拉伸器

- 此類型螺栓拉伸器適用於10.9等級的螺栓。
- 主軸會其自動的回縮。
- 安全斷裂裝置。
- 鍍鎳表面塗層，延長使用壽命。
- 不佔使用空間，容易攜帶操作。
- 快速裝卸螺帽。

★亦可依客戶訂製

SES
Series

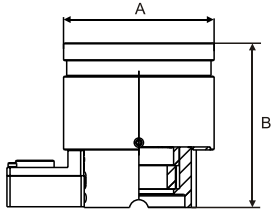
Capacity:
200-2880 kN

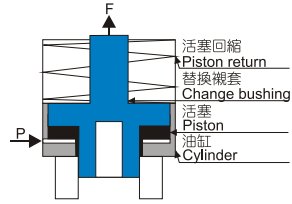
Bolt Range:
M20-M72
3/4"-3"

Maximum Operating Pressure:
1500 bar

Single -Stage, Spring return, Hydraulic Bolt Tensioner

※SES-series single stage for 10.9
※Automatic piston return : return of the piston into end position after pre-tensioning.
※Safety fracture device : In case of wrong use or failure the safety fracture device keeps uncontrolled energy inside the tool - the safety for the staff increases significantly..
※Nickel coating which prevents a corrosion of the components.
※Design for using not occupy space and easily handle design.
※Quick-Release the stud's nut is wound down against the joint face.
★User can order suitable reservoir.





型號 Model	荷重 Pre-load force		螺紋 Thread		六角對邊 A/F -width		A		本身高 Height B	
	(kN)	(lbs)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)
SES-M20	200	44962	M20	3/4	30	1 1/4	65	2.6	121	4.8
SES-M24	290	65195	M24	7/8	36	1 7/16	78	3.1	130	5.1
SES-M27	380	85427	M27	1	41	1 5/8	86	3.4	119	4.7
SES-M30	460	103412	M30	1 1/8	46	1 13/16	97	3.8	131	5.2
SES-M33	570	128141	M33	1 1/4	50	2 13/16	106	4.2	136	5.4
SES-M36	670	150622	M36	1 3/8	55	2 3/16	117	4.6	152	6.0
SES-M39	800	179847	M39	1 1/2	60	2 3/8	125	4.9	138	5.4
SES-M42	920	206824	M42	1 5/8	65	2 9/16	134	5.3	143	5.6
SES-M45	1080	242794	M45	1 3/4	70	2 3/4	148	5.8	147	5.8
SES-M48	1220	274267	M48	1 7/8	75	2 15/16	158	6.2	171	6.7
SES-M52	1450	325973	M52	2	80	3 1/8	170	6.7	163	6.4
SES-M56	1680	377679	M56	2 1/4	85	3 1/2	181	7.1	181	7.1
SES-M64	2210	496828	M64	2 1/2	95	3 7/8	210	8.3	195	7.7
SES-M72	2880	647450	M72	3	105	4 5/8	239	9.4	203	8.0

SMSK 雙層式彈簧回縮螺栓拉伸器

- 此類型螺栓拉伸器適用於10.9等級的螺栓。
- 主軸會其自動的回縮。
- 安全斷裂裝置。
- 鍍鎳表面塗層，延長使用壽命。
- 不佔使用空間，容易攜帶操作。
- 快速裝卸螺帽。

★亦可依客戶訂製

SMSK
Series

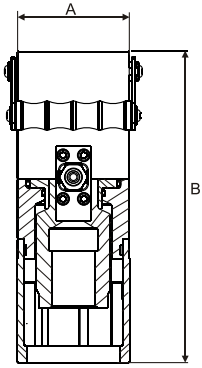
Capacity:
200-2880 kN

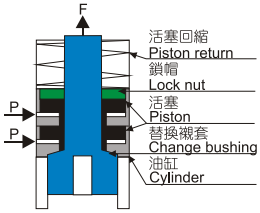
Bolt Range:
M20-M72
3/4"-3"

Maximum Operating Pressure:
1500 bar

Multi-stage, Spring return, Hydraulic Bolt Tensioner

※SMSK-series single stage for 10.9
※Automatic piston return : return of the piston into end position after pre-tensioning.
※Safety fracture device : In case of wrong use or failure the safety fracture device keeps uncontrolled energy inside the tool - the safety for the staff increases significantly.
※Nickel coating which prevents a corrosion of the components.
※Design for using not occupy space and easily handle design.
※Quick-Release the stud's nut is wound down against the joint face.
★User can order suitable reservoir.





型號 Model	荷重 Pre-load force		螺紋 Thread		六角對邊 A/F -width		A		本身高 Height B	
	(kN)	(lbs)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(In)
SMSK-M20	200	44962	M20	3/4	30	1 1/4	47	1.9	169	6.7
SMSK-M24	290	65195	M24	7/8	36	1 7/16	60	2.4	200	7.9
SMSK-M27	380	85427	M27	1	41	1 5/8	65	2.6	210	8.3
SMSK-M30	460	103412	M30	1 1/8	46	1 13/16	72	2.8	204	8.0
SMSK-M33	570	128141	M33	1 1/4	50	2 13/16	79	3.1	216	8.5
SMSK-M36	670	150622	M36	1 3/8	55	2 3/16	83	3.3	250	9.8
SMSK-M39	800	179847	M39	1 1/2	60	2 3/8	91	3.6	265	10.4
SMSK-M42	920	206824	M42	1 5/8	65	2 9/16	98	3.9	272	10.7
SMSK-M45	1080	242794	M45	1 3/4	70	2 3/4	106	4.2	273	10.7
SMSK-M48	1220	274267	M48	1 7/8	75	2 15/16	112	4.4	290	11.4
SMSK-M52	1450	325973	M52	2	80	3 1/8	123	4.8	336	13.2
SMSK-M56	1680	377679	M56	2 1/4	85	3 1/2	131	5.2	356	14.0
SMSK-M64	2210	496828	M64	2 1/2	95	3 7/8	150	5.9	357	14.1
SMSK-M72	2880	647450	M72	3	105	4 5/8	168	6.6	406	16.0

剖面圖示 sectional drawing

扭力順序

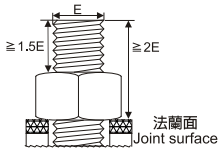
一般使用一個扳手鎖一個螺栓，這樣容易造成"單點負荷"和"荷載分散"。為避免這些情況發生建議依下列圖示使用：

Torque Procedure

When torque it is common to tighten only one bolt at a time, this can result in Point Loading and Load Scatter. To avoid this, torqueis applied in stages following a prescribed pattern:

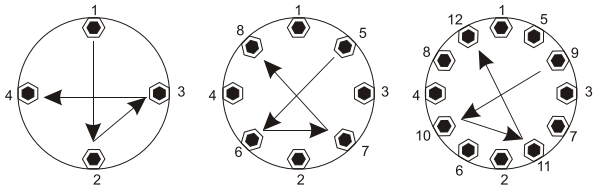
製造者所提供的使用壓力和扭力值範圍即最大安全限度。最佳的操作範圍即此數值的80%。

Manufacturer's rating of pressure and torque are maximum safe limits. Good practice encourages using only 80% of these ratings!



螺栓最少突出1.5個螺栓直徑高度

Min. protrusion 1.5 x Bolt Diameter



步驟1：用螺絲扳手將螺帽鎖緊至法蘭面並確認螺栓至少突出直徑1.5倍，以供螺栓和拉伸器咬合。
步驟2：如上圖所示依序鎖緊1/3的螺栓。
步驟3：再依圖示鎖緊剩下的2/3螺栓。
步驟4：最後如上圖最後鎖緊剩下所有的螺栓。
步驟5：所有螺栓運行方式皆以順時針方向來操作。

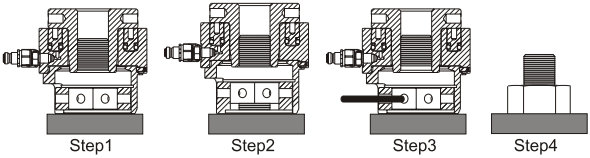
Step1：Spanner tight the nut firmly seated against the joint surface and check minimum protruding length 1.5 bolt diameter extend above nut to engage the tensioner.
Step2：Tighten each bolt to one-third of the final required torque following the pattern as shown above.
Step3：Increase the torque to two-thirds following the pattern shown above.
Step4：Increase the torque to full torque following the pattern shown above.
Step5：Perform one final pass on each bolt working clockwise from bolt 1, at the full final torque.

拉伸操作

並聯的螺栓允許同步拉伸工具透過一個高壓油管和單泵系統依序連接。如此可確保每座拉伸器都是精準相同的荷載並提供相對的法蘭面均勻相同的夾持力。

Tension Operation

Tensioning permits the simultaneous tightening of multiple bolts; the tools are connected in sequence via a high-pressure hose assembly to a single pump unit. This ensure tool develops the exact same load and provides a uniform clamping force across the joint.



步驟1：先將拉伸器安裝在螺栓上。
步驟2：操作適當的油壓。
步驟3：將螺帽轉下接近法蘭節表面。
步驟4：洩壓並移除油壓工具。

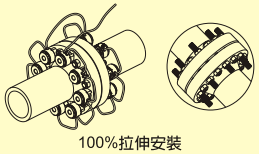
Step1：The bolt Tensioner is fitted over the stud.
Step2：Hydraulic pressure is applied to the tensioner which then stretches the stud.
Step3：The stud's nut is wound down against the joint face.
Step4：Pressure is released and the tool removed.

小於100%的拉伸

不是所有情況都適合使用同步方式連接；如此一來至少需使用兩階段壓力。當已拉伸的螺栓再次被鎖緊時，螺栓的荷載力會減少。

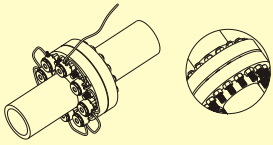
Less than 100%Tensioning

Not all applications allow for the simultaneous fit of a tensioning device on each bolt, in these cases at least two tensioning pressure are applied. This is to account for a load loss in those bolts already tensioned as the next sets are tightened.



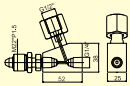
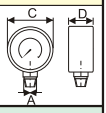
100%拉伸安裝

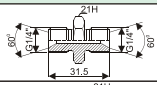
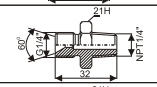
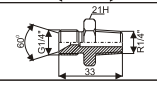
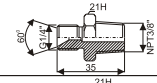
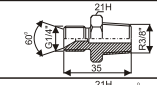
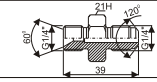
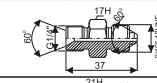
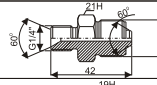
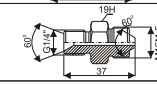
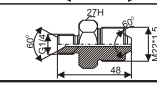
Set-up using a 100% tensioning procedure

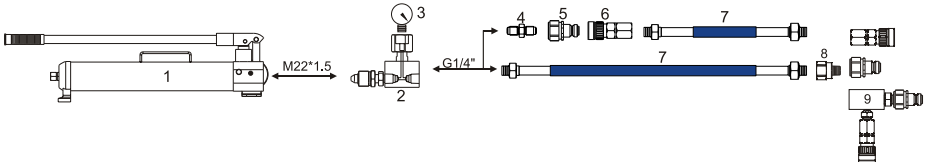


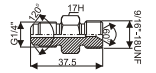
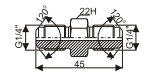
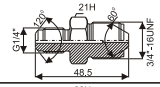
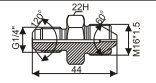
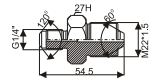
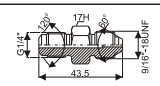
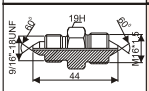
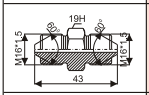
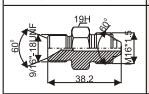
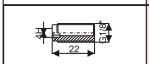
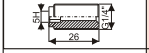
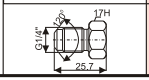
50%拉伸安裝

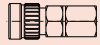
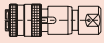
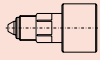
Set-up using a 50% tensioning procedure

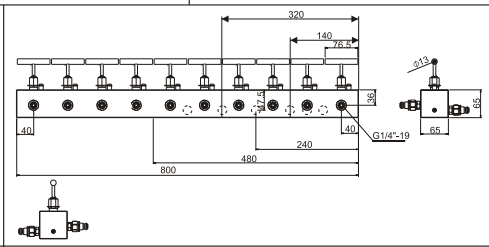
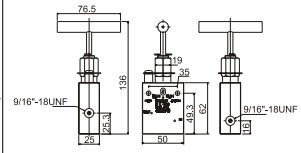
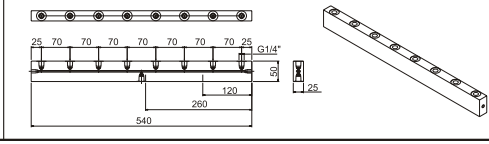
編號 Item	品名 Product	型號 Model	規範&尺寸 Descrition & Dimension (mm) A Male	B Female	C	D	
1	手動泵浦 Hand Pump	請參閱頁109 (see page 109)	—	—	—	—	
2	錶接頭 Gauge Adapter 	GSAH-M22A	M22*1.5	G1/4"	G1/2"	—	最大工作壓力：3000 bar Max. W.P：3000 bar 
3	充油式壓力錶 Gauge 	XHO4LM4G1B XHO4LM4G1.6B XHO4LM4G2.5B	G1/2"	—	100	30	範圍 Press. Range 1000bar 1600bar 2500bar 

4	立布 Nipple 最大工作壓力: Max. W.P. : 3000bar		兩端尺寸 Dimension	End one	End two
		SBTN-G146G146I		G1/4"外螺紋 60°內錐面 	G1/4"外螺紋 60°內錐面 G1/4" male thread with 60° internal cone
		SBTN-G146N14M			NPT 1/4"外螺紋 NPT 1/4" male thread
		SBTN-G146R14M			R1/4"外螺紋 R1/4" male thread
		SBTN-G146N38M			NPT 3/8" 外螺紋 NPT 3/8" male thread
		SBTN-G146R38M			R 3/8" 外螺紋 R 3/8" male thread
		SBTN-G146G1412E			G1/4" 外螺紋 120°外錐面 G1/4" male thread with 120° external cone
		SBTN-G1469166E			9/16"-18UNF 外螺紋 60° 外錐面 9/16"-18UNF male thread with 60° external cone
		SBTN-G146346E			3/4"-16UNF 外螺紋 60° 外錐面 3/4"-16UNF male thread with 60° external cone
		SBTN-G146M166E			M16*1.5 外螺紋 60° 外錐面 M16*1.5 male thread with 60° external cone
		SBTN-G146M226E		G1/4" male threadwith 60° internal cone 	M22*1.5 外螺紋 60° 外錐面 M22*1.5 male thread with 60° external cone



編號 Item	品名 Product	型號 Model	兩端尺寸 Dimension (mm)		
				End one	End two
4	立布 **Nipple** 新、舊品號變更表 **Old model change to new model** 舊 **Old model** SBT-14BSPMM SBT-14BSPMMT SBT-916-14BSPMM 新 **New model** SBTN-G1412G1412E SBTN-G14129166I SBTN-G14129166E	**SBTN-G14129166I**		G1/4" 外螺紋 120° 外錐面 G1/4" male thread with 120° external cone 	9/16"-18UNF 外螺紋 60° 內錐面 9/16"-18UNF male thread with 60° internal cone
		SBTN-G1412G1412E		G1/4" 外螺紋 120° 外錐面 G1/4" male thread with 120° external cone 	G1/4" 120° 外錐面 G1/4" male thread with 120° external cone
		SBTN-G1412346E		G1/4" 外螺紋 120° 外錐面 G1/4" male thread with 120° external cone 	3/4"-16UNF 外螺紋 60° 外錐面 3/4"-16UNF male thread with 60° external cone
		SBTN-G1412M166E		G1/4" 外螺紋 120° 外錐面 G1/4" male thread with 120° external cone 	M16*1.5 外螺紋 60° 外錐面 M16*1.5 male thread with 60° external cone
		SBTN-G1412M226E		G1/4" 外螺紋 120° 外錐面 G1/4" male thread with 120° external cone 	M22*1.5 外螺紋 60° 外錐面 M22*1.5 male thread with 60° external cone
		SBTN-G14129166E		G1/4" 外螺紋 120° 外錐面 G1/4" male thread with 120° external cone 	9/16"-18UNF 外螺紋 60° 外錐面 9/16"-18UNF male thread with 60° external cone
		**SBTN-9166M166E**		9/16"-18UNF 外螺紋 60° 外錐面 9/16"-18UNF male thread with 60° external cone	M16*1.5 外螺紋 60° 外錐面 M16*1.5 male thread with 60° external cone
		**SBTN-M16M166E**		M16*1.5 外螺紋 60° 外錐面 M16*1.5 male thread with 60° external cone	M16*1.5 外螺紋 60° 外錐面 M16*1.5 male thread with 60° external cone
		**SBTN-9166IM166E**		9/16"-18UNF 外螺紋 60° 內錐面 9/16"-18UNF male thread with 60° internal cone	M16*1.5 外螺紋 60° 外錐面 M16*1.5 male thread with 60° external cone
		**SBTN-G18M**		G1/8" 外全牙 G1/8" male, fully thread	
		**SBTN-G14M**		G1/4" 外全牙 G1/4" male, fully thread	
		**SBTN-G1412**		G1/4" 外螺紋 120° 外錐面 G1/4" male thread with 120° external cone	

編號 Item	品名 Product	型號 Model	規範&尺寸 Descrition & Dimension (mm) Connect	Length	Diam.	Hexagon key handle	Wgt. (g)	Rec. Torque (N.m)	
5	快速立布 **Quick Nipple** 	**SBT-CE116-M** 	G1/4"	38.0	25.4	22	60	40-50	材質：高強度、鍍鋅鋼　最大工作壓：150MPa 最小爆破壓：300MPa　流量(0.4Mpa壓力)：6.0L/min Material：Hardened, zinc chromate plated steel Max. W.P：150MPa　Min. B.P：300MPa Flow at 0.4MPa pressure：6.0L/min
		**SBT-CE125-M** 	G1/4"	38.0	25.4	22	60	40-50	材質：高強度、鍍鋅鋼　最大工作壓：200MPa 最小爆破壓：400MPa　流量(0.4Mpa壓力)：5.8L/min Material：Hardened, zinc chromate plated steel Max. W.P：200MPa　Min. B.P：400MPa Flow at 0.4MPa pressure：5.8L/min
		**SBT-CE135-M** 	M16*1.5	55.3	25.0	22	125	40-50	材質：高強鋼、染黑處理　最大工作壓：300MPa 最小爆破壓：600MPa　流量(0.4Mpa壓力)：4.6L/min Material：Hardened black finish stell Max. W.P：300MPa　Min. B.P：600MPa Flow at 0.4MPa pressure：4.6L/min
		**SQB-4H** 	M22*1.5	75.0	39.0		400	40-50	材質：高強鋼、鍍鎳處理　最大工作壓：200MPa 最小爆破壓：400MPa　流量(0.4Mpa壓力)：5.8L/min Material：Hardened ,nickel chromate plated steel Max. W.P：200MPa　Min. B.P：400MPa Flow at 0.4MPa pressure：5.8L/min
6	母接頭 **Coupler** 	**SBT-CE116-F** 	G1/4"	61.3	28.0	24	165	40-50	材質：高強度、鍍鋅鋼　最大工作壓：150MPa 最小爆破壓：300MPa　流量(0.4Mpa壓力)：6.0L/min Material：Hardened, zinc chromate plated steel Max. W.P：150MPa　Min. B.P：300MPa Flow at 0.4MPa pressure：6.0L/min
		**SBT-CE125-F** 	G1/4"	64.3	30.0	24	210	40-50	材質：高強度、鍍鋅鋼　最大工作壓：200MPa 最小爆破壓：400MPa　流量(0.4Mpa壓力)：5.8L/min Material：Hardened, zinc chromate plated steel Max. W.P：200MPa　Min. B.P：400MPa Flow at 0.4MPa pressure：5.8L/min
		**SBT-CE135-F** 	M16*1.5	64.0	30.0	22	210	40-50	材質：高強鋼、染黑處理　最大工作壓：300MPa 最小爆破壓：600MPa　流量(0.4Mpa壓力)：4.6L/min Material：Hardened black finish stell Max. W.P：300MPa　Min. B.P：600MPa Flow at 0.4MPa pressure：4.6L/min
		**SQB-4R** 	M22*1.5	80.0	43.0	22	350	40-50	材質：高強度、鍍鎳處理　最大工作壓：200MPa 最小爆破壓：400MPa　流量(0.4Mpa壓力)：5.8L/min Material：Hardened, nickel chromate plated steel Max. W.P：200MPa　Min. B.P：400MPa Flow at 0.4MPa pressure：5.8L/min

編號 Item	品名 Product	型號 Model	規範&尺寸 Descrition & Dimension (mm)			
			兩端尺寸 End one	兩端尺寸 End two	內部材質：聚氧化亞甲基(POM) 外罩透明PA	Inner core: Polyoxymethylene (POM) Outer cover Polyamide (PA)
7	油管 **Hose** 	**HSBT-5/4**	G1/4" Male 公	G1/4" Male 公	4層高張力金屬網 內徑:5.0mm, 外徑:11.2mm 工作壓力:1800bar,爆破壓力:4500bar 最小彎曲半徑:150mm 重量:0.26 kg/m	4layers of high-tensile steel wire ID:5.0mm, OD:11.2mm W.P. :1800bar, B.P. :4500bar Min. Bend: 150mm Wgt.:0.26 kg/m
		HSBT-5/6	G1/4" Male 公	G1/4" Male 公	6層高張力金屬網 內徑:4.8mm, 外徑:13.2mm 工作壓力:2500bar,爆破壓力:6250bar 最小彎曲半徑:200mm 重量:0.45 kg/m	6layers of high-tensile steel wire ID:4.8mm, OD:13.2mm W.P. :2500bar, B.P. :6250bar Min. Bend: 200mm Wgt.:0.45 kg/m
		HSBT-4/8	G1/4" Male 公	G1/4" Male 公	8層高張力金屬網 內徑:4.0mm, 外徑:12.8mm 工作壓力:3200bar,爆破壓力:8000bar 最小彎曲半徑:175mm 重量:0.54 kg/m	8layers of high-tensile steel wire ID:4.0mm, OD:12.8mm W.P. :3200bar, B.P. :8000bar Min. Bend: 175mm Wgt.:0.54 kg/m
8	轉接頭 **Adapter** 	**SBTA-M16G14**	公端 **Male Thread** M16*1.5	母端 **Female Connect** G1/4"	工作壓力：3000 bar Max. W.P: 3000bar	
9	T型墊塊/十字墊塊 **Tee Block / Cross Block** 	**SBT-14BSP3W**	3 孔,G1/4"三通閥 3-G1/4"-Female port		尺寸Dimension (mm) 50 X 38 (L X W)	最大工作壓力：3000 bar Max. W.P: 3000bar
		SBT-14BSP4W	4 孔,G1/4"四通閥 4-G1/4"-Female port		尺寸Dimension (mm) 50 X 50 (L X W)	最大工作壓力：3000 bar Max. W.P: 3000bar
10	華司 **Washer** 	**SBT-XW14**	外徑：20.57mm 內徑：13.74mm 厚度：2mm(以黑色尼龍為準) O.D： 20.57mm, I.D：13.74mm Depth：2mm(measure by black nylon)		最大工作壓力：3000 bar 材質：內圈尼龍， 外圈S45C鋼表面鍍鋅	Max. W.P：3000 bar Material：Nylon inside， Outer zinc plated S45C steel.
		SBT-XW38	外徑：23.8mm 內徑：17.28mm 厚度：2mm(以黑色尼龍為準) O.D： 23.8mm, I.D：17.28mm Depth：2mm(measure by black nylon)			
		SBT-XWM12	外徑：28.58mm 內徑：21.54mm 厚度：2.5mm(以黑色尼龍為準) O.D： 28.58mm, I.D：21.54mm Depth：2.5mm(measure by black nylon)			
11	手控分流閥 **Premounted Manifold** 	**SBT-V82** 手控雙分流閥 2 control bars	其功能為分流閥，可同步控制2~6個單動油壓缸，所有通孔栓塞為 G1/4"-19 最大工作壓力：2500 bar Functions as split-flow valve to control 2~6 single-acting cylinders simultaneously. All ports G1/4"-19. Max. W.P: 2500bar			
		SBT-V83 手控三分流閥 3 control bars				
		SBT-V84 手控四分流閥 4 control bars				
		SBT-V86 手控六分流閥 6 control bars				
		SBT-V810 手控雙分流閥 10 control bars				
12	針閥 **Needle Valve** 	**SV-86**	9/16"-18UNF母接頭 可控制油壓，亦可當作暫時維持的關閉閥 最大工作壓力： 60000psi/ 4135 bar 9/16"-18UNF female ports. To control hydraulic speed and also be used as shut-off valve for temporary holding. Max. W.P: 60000psi/ 4135bar			
13	多通閥 **Manifold** 	手控雙分流閥 **SBT-14BSP12** 2 control ports	其功能為分流閥，可同步控制2~8個單動油壓缸，所有通孔栓塞為 G1/4"-19 最大工作壓力：2500 bar Functions as split-flow valve to control 2~8 single-acting cylinders simultaneously. All ports G1/4"-19. Max. W.P: 2500bar			
		手控四分流閥 **SBT-14BSP14** 4 control ports				
		手控八分流閥 **SBT-14BSP18** 8 control ports				

SULF 超高壓液壓單動，超薄型油壓缸

- 扁平設計適用於窄小空間作業需求。
- 重力回縮。
- 主軸頂部具可傾斜3度傾斜墊塊。
- 揚程超載時，具洩油警告裝置。

High Pressure Single-Acting, Low Height, Flat Cylinder

※Compact and flat design for use where in a narrow space.
※Single-Acting,load return.
※The piston can be used up to 3 deg of the inclination.
※When the piston is protruded over stroke, the oil leaks.

SULF
Series

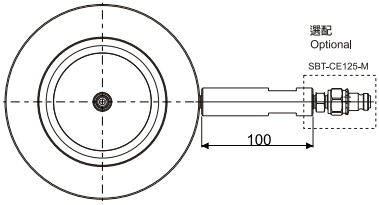
Capacity:
100-300 ton

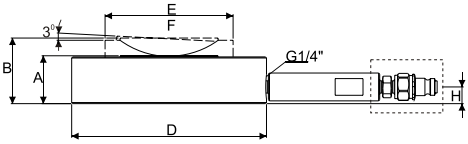
Stroke:
10-20mm

Maximum Operating Pressure:
2000 bar

SULF100-10

SULF150-15





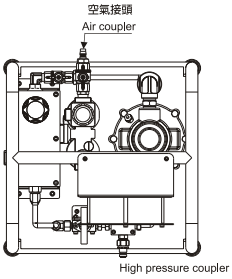
型 號 Model Number	能力 Cylinder Capacity (kN)	揚程 Stroke (mm)	受壓面積 Eff. Area (cm^2)	總油量 Oil capacity (cm^3)	本身高 Collapsed Height A(mm)	伸長總高 Extended Height B(mm)	外徑 O.D D(mm)	內徑 Cylinder Bore Diam. E(mm)	主軸直徑 Plunger Diam. F(mm)	底部油孔位置 Base to Adv. Port H(mm)	重量 Weight (kg)
SULF100-10	1000	10	50.2	50	41	51	120	80	80	17	3.5
SULF100-15		15	50.2	75	46	61	120	80	80	17	3.9
SULF150-10	1500	10	78.5	79	41	51	150	100	100	17	5.7
SULF150-15		15	78.5	118	46	61	150	100	100	17	6.1
SULF200-10	2000	10	103.8	104	43	53	175	115	115	19	8.1
SULF200-15		15	103.8	156	48	63	175	115	115	19	8.5
SULF200-20		20	103.8	208	53	73	175	115	115	19	9.0
SULF300-10	3000	10	153.9	154	47	57	210	140	140	23	12.8
SULF300-15		15	153.9	231	52	67	210	140	140	23	13.2

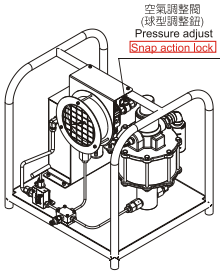
SPAQH 超高壓框架型氣動泵浦

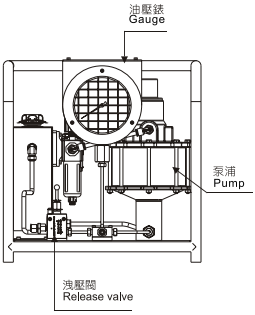
High Pressure Frame Air Pump

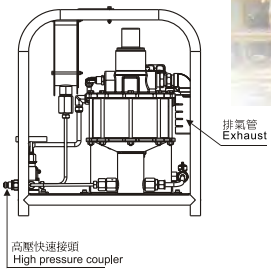
- 具三點組合、濾水調壓、自動潤滑、洩壓閥。
- 具過濾器，過濾雜質保護機體。
- 不銹鋼底座及框架。
- 便於提攜。

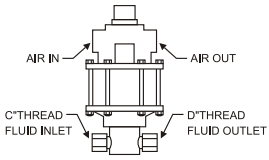
※Air units (F.R.L.Unit) provide filter、regulator and lubricate
※Input filter which provide protect.
※Steel base and frame.
※Easy to carry.











型 號 Model Number	壓縮比 Compress Ratio	出油量 Output oil (cm^3/per stroke)	工作壓力 Work press. (bar)	使用空壓 Air press. (Kgf/cm^2)	儲油箱 Equipped reservoir ★ (c.c)	重量 Weight (kg)	外型尺寸 Dimensions C	D	(mm)
SPAQH-130-1500	1:310	1.2	1500	5~7	5600	25	1/4PT-19	9/16-18UNF	400*400*420
SPAQH-180-1500	1:300	5.0	1500	5~7					
SPAQH-180-2400	1:610	2.4	2400	5~7					

★ 油箱可以需求訂製 ※Reservoir will be changed by user.
※ 重量及外型尺寸依油箱改變 ※Weight and dimension will be changed by reservoir alter.

SPHH 超高壓手動泵浦

- 手動泵浦內含安全閥設計，避免超壓引起損壞。

High Pressure Manual Pump

※Manual Pump include internal pressure relief valve for overload protection.

SPHH-1612 SPHH-1630

選配
Optional
G=充油式壓力錶
Pressure Gauge

其他選配說明

假如您需加裝4口方向閥來操作雙動油壓缸，請依下列規範字尾增加編號。

加裝4口方向閥 ：型號D

案例：

SPHH-1612 選配4口方向閥，訂購型號改為 SPHH-1612D
相關技術資詢請與SUN RUN取得聯繫。

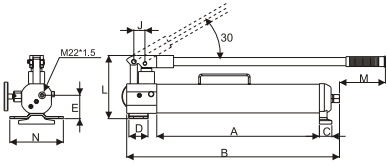
Optional Features

To add optional features to your pump, add the follow suffixes to the end of the model number.

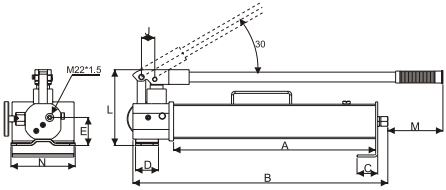
4 ways control Valve : Model D

Example :

SPHH-1612 with 4 ways control valve, order: SPHH-1612D.Technical specifications for these features are available from SUN RUN.



SPHH -1612, 2012, 2512
SPHH -1620, 2020, 2520



SPHH-1630, 2030, 2530

型 號 Model Number	泵浦類型 Pump Type	有效油量 Usable Oil Capacity	輸出壓力 Pressure Rating		輸出油量 Oil Displacement per Stroke		行程 Piston Stroke	外型尺寸 Dimensions(mm)									重量 Weight
			1st stage	2nd stage	1st stage	2nd stage											
		(cm^3)	(bar)		(cm^3)		(mm)	A	B	C	D	E	J	L	M	N	(kg)
SPHH-1612	雙 速 Two-Speed	1200	14	1600	15.5	1.2	16.65	425	556	32.5	50	61	29	165	120	140	9.0
SPHH-2012		1200	14	2000	15.5	0.9	16.65	425	556	32.5	50	61	29	165	120	140	9.0
SPHH-2512		1200	14	2500	15.5	0.7	16.65	425	556	32.5	50	61	29	165	120	140	9.0
SPHH-1620		2200	14	1600	15.5	1.2	16.65	425	556	32.5	50	61	29	165	120	140	11.0
SPHH-2020		2200	14	2000	15.5	0.9	16.65	425	556	32.5	50	61	29	165	120	140	11.0
SPHH-2520		2200	14	2500	15.5	0.7	16.65	425	556	32.5	50	61	29	165	120	140	11.0
SPHH-1630		3000	14	1600	15.5	1.2	16.65	440	556	45.0	50	61	29	165	120	140	13.0
SPHH-2030		3000	14	2000	15.5	0.9	16.65	440	556	45.0	50	61	29	165	120	140	13.0
SPHH-2530		3000	14	2500	15.5	0.7	16.65	440	556	45.0	50	61	29	165	120	140	13.0

SPE-200RINC- 超高壓電動泵浦

- 無刷馬達噪音更低、體積輕巧。適合於配套螺栓拉伸器、造船、風電等現場作業。
- 特殊馬達研發，產品更耐久，使用壽命更延長。
- 外部調壓更易操作。
- 壓力到達則馬達自動停止且持壓。
- 高低壓二段式自動切換，系統效率高。

High Pressure Hydraulic Electric Pump

※The adoption of a brushless motor reduces the noise remarkably. Lightweight, compact, and easy to transport .Ideal for site work such as bolt rensioner work, shipyard and civil engineering construction.
※The durability has been improved while the performances are maintained.
※Equipped pressure switch more easy to control.
※Motor auto stop working and hold pressure as reach setting pressure .
※Automatic high-low pressure switching for improved work efficiency.

SPE-200RINC-

*壓力錶以及壓力開關為SPE-200RINC-專用，如需搭配其它系列產品混用請諮詢本公司。

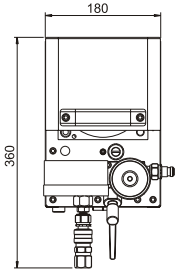
*The pressure gauge and switch are excusive to the SPE-200RINC- series. Consult us when them with other series.

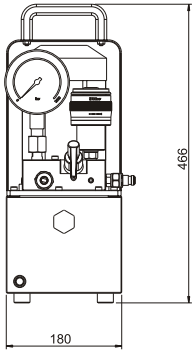
電泵型號選擇：Custom build your Electric Pump:

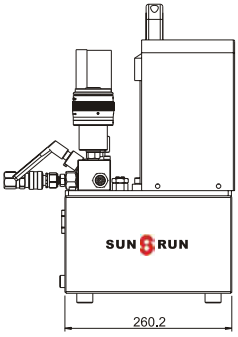
SPE-200RINC-2143C

1 2 3 4 5 6

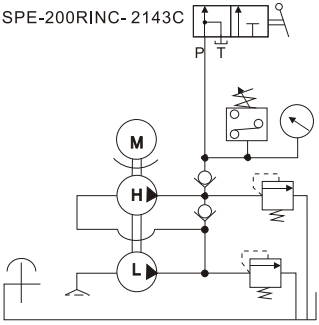
1.馬達 200RI=0.625HP(0.5kw)	1.Voltage 200RI=0.625HP(0.5kw)
2.電壓/安培 1=110V/12A 2=220V/7A	2.Voltage/A 1=110V/12A 2=220V/7A
3.相數 1=1ph	3.Phase 1=1ph
4.油箱 4=4L	4.Reservoir 4=4L
5.閥門樣式 3=手動三口二位控制閥	5.Valve 3=3way/ 2position Manual Valve
6.配件 C=線控裝置 G=油壓錶	6.fitting C=Remote control G=Pressure Gauge







SPE-200RINC- 2143C



型 號 Model Number	馬達 Motor	最大使用壓力 Max.Pressure	輸出壓力 Pressure Rating (psi)/(bar)		輸出油量 Output flow rate (L/min)		重量(含油) Weight (include oil)
	kW(hp)	(psi)/(bar)	1st stage	2nd stage	1st stage	2nd stage	(kg)
SPE-200RINC-	0.5(1.5)	29,000(2000)	435(30)	29,000(2000)	2	0.1	19

SPE-2000RI- 電動油壓泵浦

- 採用高效能軸心活塞式泵浦，可有效於壓力變換時減少能量損失。
- 壓力開關及安全閥，雙安全機制預防超壓使用。
- 可外部調壓，出廠已預設壓力上限確保系統超荷使用。
- 附易讀值油位計。
- 全罩式散熱馬達，可適用於戶外操作環境。

SPE-2000RI-
Series

Reservoir Capacity:	22L
Flow at rated pressure:	0.35-1.08 L
Motor Size:	1.5、3.7kW (2、5 hp)
Maximum Operating Pressure:	1600-2000 bar

High Pressure Hydraulic Electric Pump

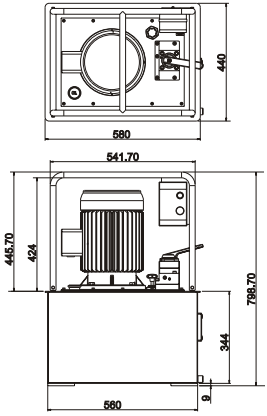
※Pump adopting a high-performance axial piston system and greatly reducing the change in the discharge volume caused by the pressure fluctuation.
※Equipped with a double safe mechanism of the safety valve and the pressure switch to prevent an overload.
※User adjustable external relief valve with a factory set upper limit prevents system overload.
※Easy to read integrated oil level sight glass.
※Totally enclosed fan-cooled motors are ideal for outdoor use in many environments.

電泵型號選擇：Custom build your Electric Pump:

SPE-2000RI5-2 6 3 20 3 □
1 2 3 4 5 6 7

1.馬達 2000RI2=2HP(1.5kw) 2000RI5=5HP(3.7kw)	1.Voltage 2000RI2=2HP(1.5kw) 2000RI5=5HP(3.7kw)
2.電壓 2=220V-4P	2.Voltage 2=220V
3.Hz 5=50Hz 6=60Hz	3.Hz 5=50Hz 6=60Hz
4.相數 3=3ph	4.Phase 3=3ph
5.油箱 20=20L	5.Reservoir 22=22L
6.閥門樣式 3=手動三口控制閥 (最大工作壓力2000bar) 4=手動四口控制閥 (最大工作壓力1600bar)	6.Valve 3=3way Manual Valve (Max.Operating Pressure 2000bar) 4=4way Manual Valve (Max.Operating Pressure 1600bar)
7.選配 C=線控裝置 W=輪子	7.Optional C=Remote control W=Wheel

選配
Optional

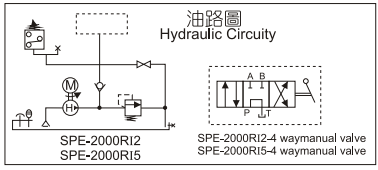


SPE-2000RI2-263223

Model Number 型 號	Motor 馬達 kW /(hp)	Insulation 絕緣	Flow Rate H.P/L.P 輸出流量 高壓/低壓 (L/min) 50Hz	60Hz	Pressure Rating 輸出壓力 (bar)	Rpm 轉速 50Hz	60Hz	Weight (22L tank no oil) 重量 (kg)
SPE-2000RI2	1.5 /(2)	E lass Totally enclosed fan-cooled E級 全閉外扇	8.3/ 0.35	10/ 0.42	2000	1500	1800	110
SPE-2000RI5	3.7 /(5)		—/ 0.9	—/ 1.08				130

※型錄標示重量及尺寸為22L空油箱範例，其他油箱高度及重量依實品略有不同。
Product weight and reservoir high will be changed by different reservoir.
Catalog sample is 22L no oil reservoir.

電動泵浦基本閥型 BASIC PUMP VALVE	適用油壓缸 Used with cylinder		閥作用 Valve Function		
手動三口方向閥 Manual 3 way Valve	●		●	●	●
手動四口方向閥 Manual 4 way Valve		●	●	●	●



SMX 方頭驅動液壓扳手

- 雙防逆轉卡爪裝置，高效能荷載。
- 360度旋轉調整反作用力承受臂。
- 單向棘輪可確保無需手持和其他工具的操作。
- 採高科技航空材質，鋁鈦合金及高強度合金鋼製造。
- 特殊防銹表面處理。
- 最小操作半徑。
- 具油壓超壓釋放安全裝置。

扭力精度：+/-3%　重複精度：100%

選配安全握把
Opt Removable handle

鋼質護套
Steel boot

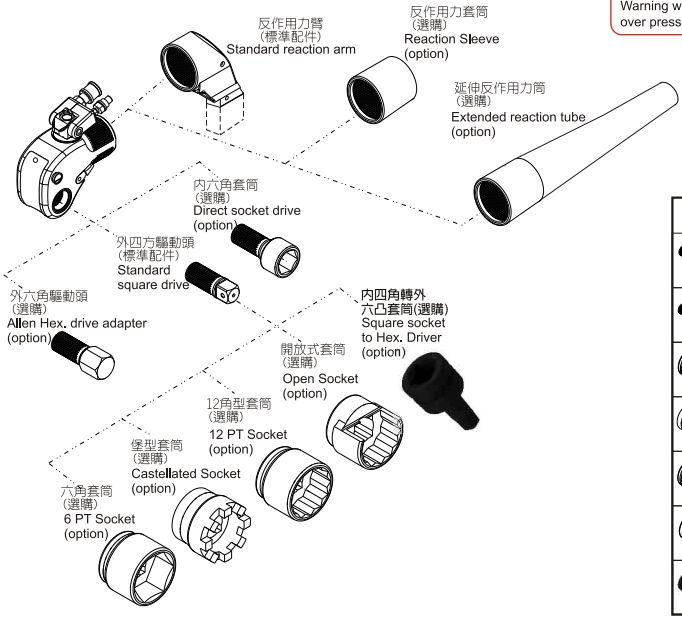
按鈕式快速替換方形驅動頭
Button change square driver

Square Drive Wrenches
Lightweight High Power Wrench for Sockets or Allen-key

※Dual Pawl Mechanism-Heavy duty.
※360 degree Reaction Arm-Easy to working in any position.
※One-way Ratchet-the only way to assure hands-free and multi-tool operation.
※Aviation material Body housing-Aluminum-Titanium alloy and high strength steel.
※Anti-Rust Finish-Special surface treatment.
※Small Operating Radius.
※"Drop Hole" will protect over pressure operating.
Torquet Accuracy：+／-3%
Repeatability：100%

防逆卡爪-防止棘輪逆轉
Reaction Pawl-
Prevent ratchet reverse

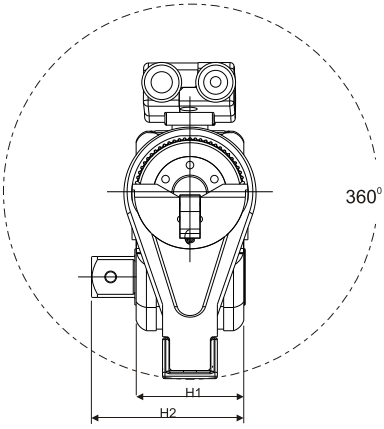
預防接頭連接不正確或超壓使用時，以流出液壓油為警告作用。
Warning wrong coupler connect or over pressure which leaking oil.

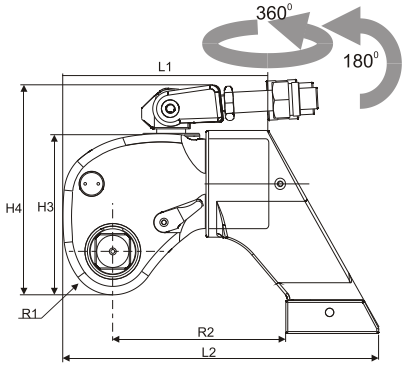


	訂購型號 How to build Torque Wrench drive and socket
	型號 DS 內六角套筒尺寸 Model DS Hex. Socket size Example: SMX-3DS1-13/16"
	型號 AH 外六角驅動尺寸 Model AH Hex. Drive size Example: SMX-3AH32mm
	6PTS-驅動軸尺寸-內六角套筒尺寸 6PTS-Drive size-Socket size Example: 6PTS-1"-50
	CS-驅動軸尺寸-套筒尺寸 CS-Drive size Socket size Example: CS-1"-2-3/4"
	12PTS-驅動軸尺寸-內十二套筒尺寸 12PTS-Drive size-Socket size Example: 12TPS-1"-50
	OPS-驅動軸尺寸-套筒尺寸 OPS-Drive size-Socket size Example: OPS-1"-6PT50
	SMX-4F內四角套筒-外六角驅動軸尺寸 SMX-4F Square socket Hex. Drive Example: SMX-4F1"-6M22mm

型 號 Model No.	驅動頭 Square Drive	最小扭力 Min. Torque		最大扭力 Max. Torque		螺栓範圍 Bolt size	重量 Weight	
		(lbf.ft)	(N.m)	(lbf.ft)	(N.m)	(mm)	(lb)	(kg)
SMX-1N	3/4"	201	273	1409	1911	16~36	5.29	2.40
SMX-3	1"	475	645	3328	4512	22~48	11.34	5.35
SMX-5	1-1/2"	810	1099	5672	7690	27~56	19.50	9.08
SMX-8	1-1/2"	1136	1540	6951	10780	30~64	28.20	13.97
SMX-10	1-1/2"	1670	2264	11688	15847	36~72	35.90	16.00
SMX-20	2-1/2"	2864	3883	20049	27183	42~90	66.98	30.41
SMX-25	2-1/2"	3659	4961	25611	34725	48~100	85.90	39.00
SMX-35	2-1/2"	5376	7289	37632	51022	64~120	95.15	43.20

型 號 Model No.	驅動頭 Square Drive	L1		L2		H1		H2		H3		H4		R1		R2	
		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
SMX-1N	3/4"	5.62	143	7.52	191	2.17	55.0	2.95	75.0	3.96	100.5	5.76	146.3	1.12	28.5	4.02	102.0
SMX-3	1"	6.35	161	9.58	243	2.63	66.8	3.70	94.0	4.87	123.7	6.52	165.7	1.29	33.0	5.26	133.7
SMX-5	1-1/2"	8.22	209	10.63	270	3.14	80.0	4.80	122.0	5.86	149.0	7.62	193.5	1.53	39.0	5.47	139.0
SMX-8	1-1/2"	8.74	222	11.57	294	3.54	90.0	5.11	130.0	6.57	167.0	8.61	218.6	1.85	47.0	6.02	153.0
SMX-10	1-1/2"	9.56	243	14.52	369	3.93	100.0	5.67	144.0	7.34	186.6	9.08	230.7	1.95	49.7	10.26	202.0
SMX-20	2-1/2"	12.20	310	15.24	387	4.72	120.0	7.20	183.0	8.66	220.0	10.71	272.0	2.32	59.0	7.32	186.0
SMX-25	2-1/2"	12.99	330	16.06	408	5.38	136.6	7.83	198.9	9.72	247.0	11.77	299.0	2.59	66.0	7.79	198.0
SMX-35	2-1/2"	13.89	353	21.22	539	5.81	147.8	8.62	218.7	10.90	276.9	12.35	313.9	2.98	75.7	12.68	322.1

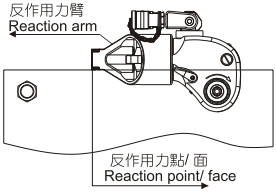


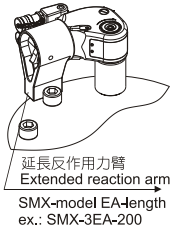


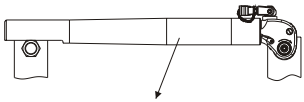
反作用力臂細齒定位
Reaction arm
small tooth orientation

固定掣子
Fixed Button

棘輪細齒傳動
Small tooth driver

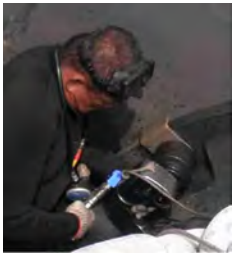


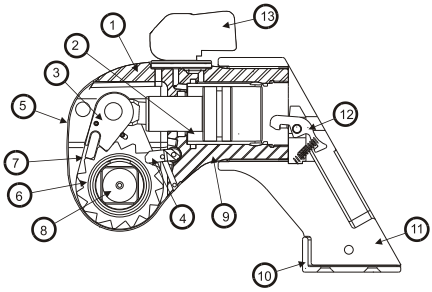




SMX 扭力扳手換算表 SMX Series Torque Conversion Chart

工作壓力 Work pressure		SMX-1N			SMX-3			SMX-5			SMX-8			SMX-10			SMX-20			SMX-25		
psi	bar	lbf.ft	kgf.m	N.m	lbf.ft	kgf.m	N.m	lbf.ft	kgf.m	N.m	lbf.ft	kgf.m	N.m	lbf.ft	kgf.m	N.m	lbf.ft	kgf.m	N.m	lbf.ft	kgf.m	N.m
1450	100	201	28	273	475	66	645	810	112	1099	1136	157	1540	1670	231	2264	2864	396	3883	3659	506	4961
1740	120	242	33	328	571	79	774	972	134	1318	1363	188	1848	2004	277	2717	3437	475	4660	4391	607	5953
2031	140	282	39	382	666	92	902	1134	157	1538	1590	220	2156	2338	323	3169	4010	554	5437	5122	708	6945
2321	160	322	45	437	761	105	1031	1296	179	1758	1817	251	2464	2672	369	3622	4583	634	6213	5854	809	7937
2611	180	362	50	491	856	118	1160	1459	202	1977	2044	283	2772	3006	416	4075	5155	713	6990	6586	911	8929
2901	200	403	56	546	951	131	1289	1621	224	2197	2272	314	3080	3339	462	4528	5728	792	7766	7318	1012	9921
3191	220	443	61	601	1046	145	1418	1783	246	2417	2499	345	3388	3673	508	4980	6301	871	8543	8049	1113	10913
3481	240	483	67	655	1141	158	1547	1945	269	2637	2726	377	3696	4007	554	5433	6874	950	9320	8781	1214	11906
3771	260	524	72	710	1236	171	1676	2107	291	2856	2953	408	4004	4341	600	5886	7447	1030	10096	9513	1315	12898
4061	280	564	78	764	1331	184	1805	2269	314	3076	3180	440	4312	4675	646	6339	8020	1109	10873	10245	1416	13890
4351	300	604	84	819	1426	197	1934	2431	336	3296	3407	471	4620	5009	693	6792	8592	1188	11650	10976	1518	14882
4641	320	644	89	874	1521	210	2063	2593	358	3515	3635	503	4928	5343	739	7244	9165	1267	12426	11708	1619	15874
4931	340	685	95	928	1616	223	2192	2755	381	3735	3862	534	5236	5677	785	7697	9738	1346	13203	12440	1720	16866
5221	360	725	100	983	1712	237	2321	2917	403	3955	4089	565	5544	6011	831	8150	10311	1426	13980	13172	1821	17858
5511	380	765	106	1037	1807	250	2449	3079	426	4175	4316	597	5852	6345	877	8603	10884	1505	14756	13903	1922	18850
5802	400	805	111	1092	1902	263	2578	3241	448	4394	4543	628	6160	6679	923	9055	11457	1584	15533	14635	2023	19843
6092	420	846	117	1147	1997	276	2707	3403	471	4614	4770	660	6468	7013	970	9508	12029	1663	16310	15367	2125	20835
6382	440	886	122	1201	2092	289	2836	3565	493	4834	4998	691	6776	7347	1016	9961	12602	1742	17086	16099	2226	21827
6672	460	926	128	1256	2187	302	2965	3727	515	5054	5225	722	7084	7681	1062	10414	13175	1822	17863	16830	2327	22819
6962	480	966	134	1310	2282	316	3094	3889	538	5273	5452	754	7392	8015	1108	10866	13748	1901	18640	17562	2428	23811
7252	500	1007	139	1365	2377	329	3223	4051	560	5493	5679	785	7700	8349	1154	11319	14321	1980	19416	18294	2529	24803
7542	520	1047	145	1420	2472	342	3352	4213	583	5713	5906	817	8008	8683	1200	11772	14893	2059	20193	19026	2630	25795
7832	540	1087	150	1474	2567	355	3481	4376	605	5932	6133	848	8316	9017	1247	12225	15466	2138	20969	19757	2732	26787
8122	560	1128	156	1529	2662	368	3610	4538	627	6152	6361	879	8624	9350	1293	12678	16039	2217	21746	20489	2833	27780
8412	580	1168	161	1583	2757	381	3739	4700	650	6372	6588	911	8932	9684	1339	13130	16612	2297	22523	21221	2934	28772
8702	600	1208	167	1638	2853	394	3868	4862	672	6592	6815	942	9240	10018	1385	13583	17185	2376	23299	21953	3035	29764
8992	620	1248	173	1693	2948	408	3997	5024	695	6811	7042	974	9548	10352	1431	14036	17758	2455	24076	22684	3136	30756
9282	640	1289	178	1747	3043	421	4125	5186	717	7031	7269	1005	9856	10686	1477	14489	18330	2534	24853	23416	3237	31748
9572	660	1329	184	1802	3138	434	4254	5348	739	7251	7496	1036	10164	11020	1524	14941	18903	2613	25629	24148	3339	32740
9863	680	1369	189	1856	3233	447	4383	5510	762	7470	7724	1068	10472	11354	1570	15394	19476	2693	26406	24880	3440	33732
10153	700	1409	195	1911	3328	460	4512	5672	784	7690	7951	1099	10780	11688	1616	15847	20049	2772	27183	25611	3541	34725





工作壓力 Work pressure		SMX-35		
psi	bar	lbf.ft	kgf.m	N.m
1450	100	5376	743	7289
1740	120	6451	892	8747
2031	140	7526	1041	10204
2321	160	8601	1189	11662
2611	180	9677	1338	13120
2901	200	10752	1486	14578
3191	220	11827	1635	16035
3481	240	12902	1784	17493
3771	260	13977	1932	18951
4061	280	15053	2081	20409
4351	300	16128	2230	21866
4641	320	17203	2378	23324
4931	340	18278	2527	24782
5221	360	19353	2676	26240
5511	380	20429	2824	27697
5802	400	21504	2973	29155
6092	420	22579	3122	30613
6382	440	23654	3270	32071
6672	460	24729	3419	33528
6962	480	25804	3568	34986
7252	500	26880	3716	36444
7542	520	27955	3865	37902
7832	540	29030	4014	39359
8122	560	30105	4162	40817
8412	580	31180	4311	42275
8702	600	32256	4459	43733
8992	620	33331	4608	45190
9282	640	34406	4757	46648
9572	660	35481	4905	48106
9863	680	36556	5054	49564
10153	700	37632	5203	51022

1		高強度鋁合金本體 7075 AQ高強力鋁合金實心素材及特殊防銹表面處理。	High-strength Aluminum Alloy Housing SMX series housing processed from solid block of 7075 AQ Aluminum and anti-rust finish-special surface treatment.
2		強力活塞組 合金鋼活塞及單油封設計往復動作耐磨、不洩漏、不易變形。	Strong piston Assembly Smooth leak proof functioning of enclosed alloy steel piston and single seal provides required torque.
3		驅動片 防鎖死。	Driving Segment Ensures tool will never lock up.
4		防逆卡齒-防鎖死裝置 具可推進、防止倒退設計。可吸收反彈衝擊裝置。	Anti-Back & Lock Allows hands free working.
5		雷刻扭力數據 雷射雕刻扭力扳手數據	Laser Engraved Torque Chart Two sided shroud is laser engraved with the torque chart for the SMX series.
6		細齒驅動爪及棘輪組件 強度高、精度大、速度快。	Multi-Tooth Driving & Ratchet Assembly Strong strength, high accuracy and best speed.
7		驅動片 強力合金鋼材質延長使用壽命。可配合工具最小R角。	Drive Plate High strength alloy drive plate for maximum life. Allows small nose radius for the tool.
8		四方驅動軸 按鈕式拆裝驅動軸更便利。	Square Driving "Push through" Square Drive that easily pushes through to switch from loosens to tighten.
9		本體可做為反作用力臂 可不使用反作用力臂只以本體當作反作用力臂使用。	Direct Housing Reaction Allows use without reaction arm.
10		鋼製反作用力護套 可替換式護套對於使用反作用力臂更經濟實惠。	Steel Reaction Boot Replaceable pad allowing on site change over. Protects costly replacement of reaction arm.
11		長型反作用力臂 使用範圍更廣泛。	Long Length Reaction Arm Long length reaction arm allows multi positioning. Allows taking reaction on most applications.
12		反作用力臂移除按鈕 內建卡榫式按鈕，可防止力臂意外脫落。	Reaction Arm Release Button Housed within the reaction arm as a safety feature, protecting the arm from accidental disengagement.
13		360°*180° 出入油口萬向旋轉	360°*180° Swivel-Hose-Free Operation

SRX 雙動六角中空液壓扳手

- 機身可作為反作力承受臂。
- 內有特殊耐磨銅套，防止磨損卡死。
- 具油壓超壓釋放安全裝置。

輸出精度：+/-3%　重複精度：100%

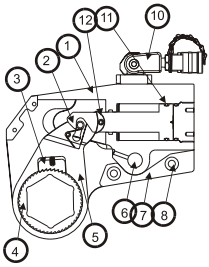
Double-Acting, Hexagon Cassette Wrenches
Lightweight, Low Profile & Slim Nose Radius

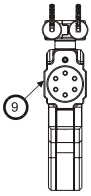
※Tool body can be Reaction Arm, easy to work.
※Bronze bushing anti galling.
※"Drop Hole" will protect over pressure operating.

Output Accuracy：+／-3%　Repeatability：100%

選配安全握把
Opt Removable handle

單插銷連結
One plug to connect



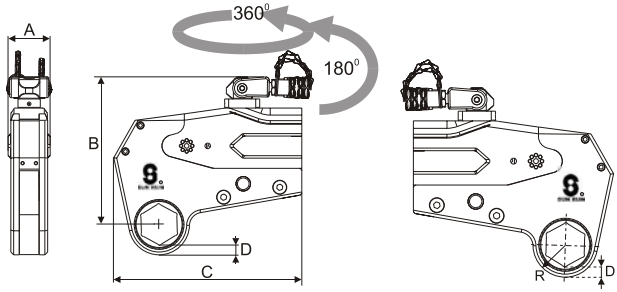


1		高強度輕量合金鋼本體 油缸及連接體均由高強力合金鋼製成。表面防銹處理。	High Strength Body Cylinder and Link Body are manufactured from high grade and strength alloy. Rust-resistant surface finish.
2		強力主軸組 合金鋼活塞及完全密合勾頭設計往復動作耐磨、不洩漏、不易變形。	Engagement Plunger Smooth leak proof functioning of enclosed alloy steel piston and engaged hook head.
3		防鎖死驅動片 可防扳手鎖死及可吸收反彈衝擊力量。	Never Lock Drive Segment Never lock drive segment does not let the wrench lock and thus eliminates the requirement of a ratchet release mechanism.
4		細齒棘輪組件 強度高、精度大、速度快。	Multi Tooth Ratchet Assembly Strong strength, high accuracy and best speed.
5		驅動片 單一驅動片，強力合金鋼材質延長使用壽命。可配合工具最小R角。	Drive Plate Single piece high strength alloy drive plate for maximum life. Allows small nose radius for the tool.
6		鋼製單一連接插銷 單一插銷連結缸體及連接體，不需額外特殊工具。	Steel Link Pin One simple pin for cassette link to cylinder engagement without using any additional or special tool.
7		同軸反作用襯墊 作用反作用力時可確保不變形。	In-line Reaction Pad This ensures torsion free reaction during use.
8		鋼質同心插銷 確保二面側板對等且受力均等。	Steel Alignment Pin Ensure equal load distribution between the 2 side plates.
9		缸體及連接體同扁平面設計 缸體與連接體同寬，適用於任何扁平空間。	Completely Flat Design Cylinder & Link Equal width of cylinder and link ensures tool sits flat on flange surface. Allows use in most confined areas.
10		360°*180°出入油口萬向旋轉	360°*180° Swivel-Hose-Free Operation
11		活塞油封 耐高溫油封更可確保使用壽命。	Piston Seal High temperature Polyurethane seals ensure years of maintenance free operation.
12		防滾磨裝置 避免活塞磨耗。	Sliders Reduce friction and prevent wear on the piston.

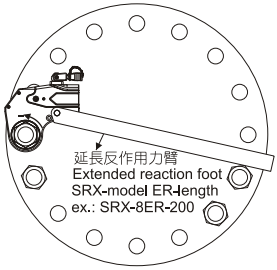
缸體
Cylinder

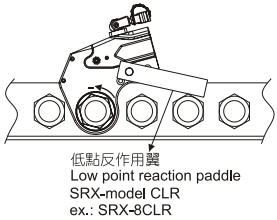
連接體
Link

型 號 Model Number	六角頭 Hex. Size		最小扭力 Min. Torque		最大扭力 Max. Torque		重量 Weight (kg)		外型尺寸 Dimensions(mm)			
	(in)	(mm)	(lbf.ft)	(N.m)	(lbf.ft)	(N.m)	缸體 Cylinder	連接體 Link	A	B	C	D
SRX-2	1-1/4~2-3/8"	30~60	192	260	2178	2994	1.99	1.48~1.85	32.0	148.8~156.8	168.0~175.5	9.1~11.7
SRX-4	1-5/8~3-1/8"	41~80	395	535	4732	6504	3.35	3.05~3.95	41.4	172.9~189.2	204.4~220.8	12.7~13.7
SRX-8	1-7/8~4-1/8"	50~105	830	1125	10689	14692	6.64	6.25~8.60	52.5	210.4~235.4	268.1~283.9	13.7~19.5
SRX-16	2-3/4~4-5/8"	70~115	1560	2115	16854	23165	8.50	11.98~14.16	64.0	245.7~258.3	326.7~344.7	19.5~23.0
SRX-32	3-1/8~6-1/8"	80~155	3220	4365	37566	51632	16.1	25.10~30.36	82.5	287.6~313.1	422.5~442.5	23.0~26.0



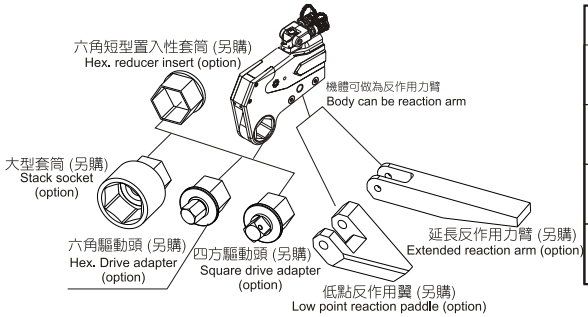
螺栓直徑 Bolt Dia. M	螺母對邊 Across flat mm	螺栓直徑(英制) Bolt Dia. (Imp.) in	螺母對邊(英制) Across flat (Imp.) in	SRX-2			SRX-4			SRX-8			SRX-16			SRX-32		
				連接體型號 Link model	R (mm)	D (mm)	連接體型號 Link model	R (mm)	D (mm)	連接體型號 Link model	R (mm)	D (mm)	連接體型號 Link model	R (mm)	D (mm)	連接體型號 Link model	R (mm)	D (mm)
20	30	3/4	1-1/4	SRX-2L 30	26.6	9.1												
22	32			SRX-2L 32	26.6	9.1												
24	36	7/8	1-7/16	SRX-2L 36	33.5	10.4												
27	41	1	1-5/8	SRX-2L 41	34.4	10.4	SRX-4L 41	36.8	12.7									
30	46	1-1/8	1-13/16	SRX-2L 46	37.2	10.4	SRX-4L 46	39.5	12.7									
33	50	1-1/4	2	SRX-2L 50	40.6	11.7	SRX-4L 50	42.3	12.7	SRX-8L 50	43.3	13.7						
36	55	1-3/8	2-3/16	SRX-2L 55	43.7	11.7	SRX-4L 55	45.2	12.7	SRX-8L 55	45.9	13.7						
39	60	1-1/2	2-3/8	SRX-2L 60	46.6	11.7	SRX-4L 60	47.9	12.7	SRX-8L 60	48.9	13.7						
42	65	1-5/8	2-9/16				SRX-4L 65	51.7	13.7	SRX-8L 65	52.5	13.7						
45	70	1-3/4	2-3/4				SRX-4L 70	54.8	13.7	SRX-8L 70	54.5	13.7	SRX-16L 70	60.3	19.5			
48	75	1-7/8	2-15/16				SRX-4L 75	57.3	13.7	SRX-8L 75	57.2	13.7	SRX-16L 75	63.1	19.5			
52	80	2	3-1/8				SRX-4L 80	60.1	13.7	SRX-8L 80	59.9	13.7	SRX-16L 80	66.0	19.5	SRX-32L 80	72.0	25.0
56	85									SRX-8L 85	67.2	17.5	SRX-16L 85	69.0	19.5	SRX-32L 85	75.0	25.0
60	90	2-1/4	3-1/2							SRX-8L 90	70.1	18.0	SRX-16L 90	71.8	19.5	SRX-32L 90	78.0	25.0
64	95									SRX-8L 95	73.5	18.0	SRX-16L 95	79.3	21.0	SRX-32L 95	80.5	25.0
68	100	2-1/2	3-7/8							SRX-8L 100	76.4	18.0	SRX-16L 100	80.0	21.0	SRX-32L 100	83.5	25.0
72	105	2-3/4	4-1/4							SRX-8L 105	80.5	19.5	SRX-16L 105	82.0	21.0	SRX-32L 105	87.5	26.5
76	110												SRX-16L 110	85.0	21.0	SRX-32L 110	91.3	26.5
80	115												SRX-16L 115	90.0	23.0	SRX-32L 115	94.9	26.5
	117	3	4-5/8													SRX-32L 117	94.9	26.5
85	120															SRX-32L 120	96.5	26.5
	125	3-1/4	5													SRX-32L 125	100.5	26.5
90	130															SRX-32L 130	102.5	26.5
95	135	3-1/2	5-3/8													SRX-32L 135	108.0	28.5
	140															SRX-32L 140	110.0	28.5
100	145	3-3/4	5-3/4													SRX-32L 145	113.0	28.5
105	150															SRX-32L 150	116.0	28.5
110	155	4	6-1/8													SRX-32L 155	119.0	28.5





SRX 扭力扳手換算表 SRX Series Torque Conversion Chart

工作壓力 Work pressure		SRX-2				SRX-4				SRX-8	
		1-1/4" to 1-13/16" 30 to 46mm	1-1/4" to 1-13/16" 30 to 46mm	1-7/8" to 2-3/8" 47 to 60mm	1-7/8" to 2-3/8" 47 to 60mm	1-5/8" to 2-9/16" 41 to 65mm	1-5/8" to 2-9/16" 41 to 65mm	2-3/4" to 3-1/8" 70 to 80mm	2-3/4" to 3-1/8" 70 to 80mm	1-7/8" to 3-1/8" 50 to 80mm	1-7/8" to 3-1/8" 50 to 80mm
psi	bar	lbf.ft	N.m	lbf.ft	N.m	lbf.ft	N.m	lbf.ft	N.m	lbf.ft	N.m
1450	100	284	384	315	428	581	788	685	929	1269	1720
1740	120	340	461	379	513	697	945	822	1115	1523	2064
2031	140	397	538	442	599	813	1103	959	1301	1776	2409
2321	160	454	615	505	684	929	1260	1097	1487	2030	2753
2611	180	510	692	568	770	1046	1418	1234	1673	2284	3097
2901	200	567	769	631	855	1162	1575	1371	1858	2538	3441
3191	220	624	846	694	941	1278	1733	1508	2044	2792	3785
3481	240	680	923	757	1026	1394	1890	1645	2230	3045	4129
3771	260	737	999	820	1112	1510	2048	1782	2416	3299	4473
4061	280	794	1076	883	1198	1626	2205	1919	2602	3553	4817
4351	300	851	1153	946	1283	1743	2363	2056	2788	3807	5161
4641	320	907	1230	1009	1369	1859	2520	2193	2973	4060	5505
4931	340	964	1307	1073	1454	1975	2678	2330	3159	4314	5849
5221	360	1021	1384	1136	1540	2091	2835	2467	3345	4568	6193
5511	380	1077	1461	1199	1625	2207	2993	2604	3531	4822	6537
5802	400	1134	1538	1262	1711	2323	3150	2741	3717	5075	6881
6092	420	1191	1614	1325	1796	2440	3308	2878	3903	5329	7226
6382	440	1247	1691	1388	1882	2556	3465	3015	4088	5583	7570
6672	460	1304	1768	1451	1967	2672	3623	3153	4274	5837	7914
6962	480	1361	1845	1514	2053	2788	3780	3290	4460	6091	8258
7252	500	1418	1922	1577	2138	2904	3938	3427	4646	6344	8602
7542	520	1474	1999	1640	2224	3020	4095	3564	4832	6598	8946
7832	540	1531	2076	1703	2309	3137	4253	3701	5018	6852	9290
8122	560	1588	2153	1766	2395	3253	4410	3838	5203	7106	9634
8412	580	1644	2230	1830	2481	3369	4568	3975	5389	7359	9978
8702	600	1701	2306	1893	2566	3485	4725	4112	5575	7613	10322
8992	620	1758	2383	1956	2652	3601	4883	4249	5761	7867	10666
9282	640	1815	2460	2019	2737	3717	5040	4386	5947	8121	11010
9572	660	1871	2537	2082	2823	3834	5198	4523	6133	8375	11354
9863	680	1928	2614	2145	2908	3950	5355	4660	6319	8628	11698
10153	700	1985	2691	2208	2994	4066	5513	4797	6504	8882	12043



訂購型號
How to build Torque Wrench drive and socket

連接體型號-H 六角對邊尺寸
Link model -H Hex. Across size
Example: SRX-8L95-H85

型號 HH 外六角驅動尺寸-內六角套筒尺寸
Model HH Hex. Drive size -Hex. Socket size
Example: SRX-8HH75-90

型號 HS 外六角驅動尺寸 -外四角驅動尺寸
Model HS Hex. Drive size -Square drive size
Example: SRX-4HS46-1"

型號 HHM 外六角驅動尺寸 -外六角驅動尺寸
Model HHM Hex. Drive size -Hex. Drive size
Example: SRX-4HHM41-27

SRX 扭力扳手換算表 SRX Series Torque Conversion Chart

工作壓力 Work pressure		SRX-8		SRX-16				SRX-32			
		3-3/8" to 4-1/8" 85 to 105mm	3-3/8" to 4-1/8" 85 to 105mm	2-3/4" to 3-15/16" 70 to 100mm	2-3/4" to 3-15/16" 70 to 100mm	4-1/8" to 4-5/8" 105 to 115mm	4-1/8" to 4-5/8" 105 to 115mm	3-1/8" to 4-1/2" 80 to 115mm	3-1/8" to 4-1/2" 80 to 115mm	4-11/16" to 6-1/8" 120 to 155mm	4-11/16" to 6-1/8" 120 to 155mm
psi	bar	lbf.ft	N.m	lbf.ft	N.m	lbf.ft	N.m	lbf.ft	N.m	lbf.ft	N.m
1450	100	1548	2099	2293	3109	2441	3309	4734	6418	5440	7376
1740	120	1858	2519	2752	3731	2929	3971	5681	7702	6528	8851
2031	140	2167	2938	3210	4353	3417	4633	6628	8986	7616	10326
2321	160	2477	3358	3669	4975	3905	5295	7574	10269	8704	11801
2611	180	2787	3778	4128	5596	4394	5957	8521	11553	9792	13277
2901	200	3096	4198	4586	6218	4882	6619	9468	12837	10880	14752
3191	220	3406	4618	5045	6840	5370	7281	10415	14120	11968	16227
3481	240	3715	5037	5504	7462	5858	7943	11361	15404	13057	17702
3771	260	4025	5457	5962	8084	6346	8604	12308	16688	14145	19177
4061	280	4335	5877	6421	8706	6835	9266	13255	17971	15233	20653
4351	300	4644	6297	6879	9327	7323	9928	14202	19255	16321	22128
4641	320	4954	6717	7338	9949	7811	10590	15149	20539	17409	23603
4931	340	5263	7136	7797	10571	8299	11252	16095	21823	18497	25078
5221	360	5573	7556	8255	11193	8787	11914	17042	23106	19585	26553
5511	380	5883	7976	8714	11815	9275	12576	17989	24390	20673	28029
5802	400	6192	8396	9173	12436	9764	13238	18936	25674	21761	29504
6092	420	6502	8815	9631	13058	10252	13900	19883	26957	22849	30979
6382	440	6812	9235	10090	13680	10740	14561	20829	28241	23937	32454
6672	460	7121	9655	10549	14302	11228	15223	21776	29525	25025	33929
6962	480	7431	10075	11007	14924	11716	15885	22723	30808	26113	35404
7252	500	7740	10495	11466	15546	12204	16547	23670	32092	27201	36880
7542	520	8050	10914	11924	16167	12693	17209	24617	33376	28289	38355
7832	540	8360	11334	12383	16789	13181	17871	25563	34659	29377	39830
8122	560	8669	11754	12842	17411	13669	18533	26510	35943	30465	41305
8412	580	8979	12174	13300	18033	14157	19195	27457	37227	31553	42780
8702	600	9288	12593	13759	18655	14645	19856	28404	38510	32641	44256
8992	620	9598	13013	14218	19276	15134	20518	29351	39794	33729	45731
9282	640	9908	13433	14676	19898	15622	21180	30297	41078	34817	47206
9572	660	10217	13853	15135	20520	16110	21842	31244	42361	35905	48681
9863	680	10527	14273	15593	21142	16598	22504	32191	43645	36993	50156
10153	700	10837	14692	16052	21764	17086	23166	33138	44929	38081	51632

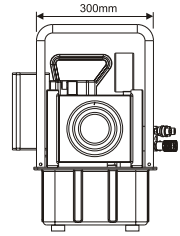
SPE-554 電動油壓/扭力扳手泵浦

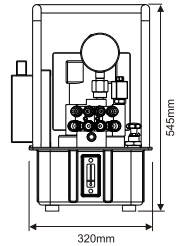
- 外部調壓。
- 內置釋放閥保護裝置。
- SPE-554TQ系列：適用於液壓扭力扳手工具。
- SPE-554TQJ系列：適用於各類液壓舉升工具(參考56頁)。
  選配八孔1/4"口徑同步分流器(含公母快速接頭及防塵蓋)，
- 可4組扳手同步作業。
- 馬達空轉可設定20、40、60秒後自動停止並洩壓。
- 安全啓動裝置：停止後需再按啓動鈕才可使用。
  氣冷式油溫冷卻系統。

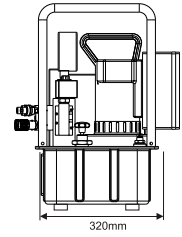
Hydraulic Electric/Torque Wrench Pump

※External adjustable pressure regulator.
※Retract side internal relief valve protects tool.
※SPE-554TQ series: just use with Hydraulic Torque Wrench.
※SPE-554TQJ series: just use with Hydraulic lift applications.
※Opt eight 1/4" ports (include female and male couplers with dust cap), that can synchronize work for 4 hydraulic wrench.
※It can be set automatic stop moving as motor idle running till 20、40、60 seconds and pressure release.
※Safety start: After stopping, need to press another start button to continue.
※Heat Exchanger Kit: Design air cooling to avoid pump overheating and costly repair from long work periods.

SPE-554TQ







電泵型號選擇：Custom build your Electric/Torque Wrench Pump:

SPE-554TQ 1 5 1 8 2 O
0 1 2 3 4 5 6

0.樣式
TQ=扭力扳手專用
TQJ=一般舉升適用

0.Type
TQ= just use in Torque Wrench
TQJ= using in lift applications

1.電壓
1=115V
2=230V

1.Voltage
1=115V
2=230V

2.Hz
5=50Hz / 60Hz

2.Hz
5=50Hz / 60Hz

3.相數
1=單相

3.Phase
1=single phase

4.油箱 (Lx0.26=gal)
8=8L(2.1gal)
20=20L(5.2gal)
★亦可依客戶訂製

4.Reservoir (Lx0.26=gal)
8=8L(2.1gal)
20=20L(5.2gal)
★User can order suitable reservoir.

5.多通閥(含1/4"公-母快速接頭)
1=1座及1公-1母快速接頭
2=1座及2公-2母快速接頭(標準件)
3=1座及3公-3母快速接頭
4=1座及4公-4母快速接頭

5.Manifold (include 1/4" male-female coupler)
1=1 manifold with 1 male and 1 female coupler
2=1 manifold with 2 male and 2 female couplers (standard)
3=1 manifold with 3 male and 3 female couplers
4=1 manifold with 4 male and 4 female couplers

6.選配
W=輪子
O=冷卻系統
G=油壓錶

6.Optional
W=Wheel
O=Cool system
G=Pressure Gauge

型 號 Model Number	轉速 Rpm	噪音值 dBA at Idle and 700bar	馬達 Motor kW (hp)	安培 Amp at 700bar	流量 Flow rate @115VAC(L/min) 0 (bar)	50 (bar)	350 (bar)	700 (bar)	油箱 Oil tank (L)	可用油量 Usable oil (L)	重量(含油) Weight (with oil) (kg)
SPE-554	12000	80	0.84 (1-1/8)	25 /110V 13 /230V	11.3	7.1	1.2	0.9	8	7	32

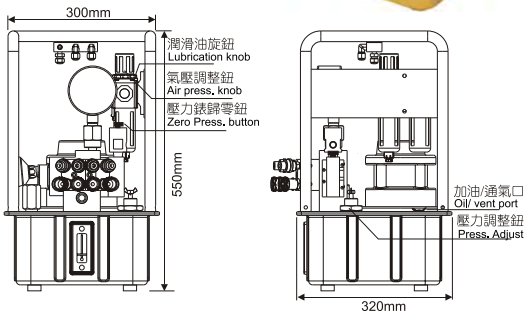
SPA-554 氣動油壓/扭力扳手泵浦

- 4hp強力馬達。
- 空氣驅動。
- 最大輸出壓力:700bar
- 二段式高效能泵浦。
- 外部調壓。
- 內建式回油釋放閥保護油壓工件。
- 選配八孔1/4"口徑同步分流器 (含公母快速接頭及防塵蓋), 可4組扳手同步作業。
- 適用於液壓扭力扳手工具。
- 氣動遙控5M。

氣動遙控線
Pneumatic remote
SPA554TQ-A-A1

Hydraulic Air/Torque Wrench Pump

※ Powerful 4 hp motor starts under load.
※ Use where air is the preferred source of power.
※ Max. Pressure : 700bar
※ Two speed high performance pump.
※ External adjustable pressure regulator.
※ Retract side internal relief valve protects tool
※ Opt eight 1/4" ports (include female and male couplers with dust cap), that can synchronize work for 4 hydraulic wrench.
※ Use for Hydraulic torque Wrench
※ Pneumatic remote control with 5M cord.



選配
Optional
G=充油式壓力錶
Pressure Gauge

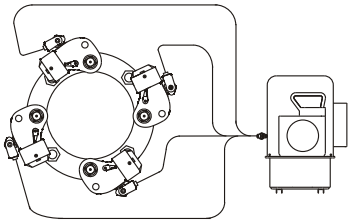
型 號 Model Number	使用空壓 Air Supply Req'd	轉速 Rpm	噪音值 dBA at Idle and 700bar	馬達 Motor (hp)	流量 Flow rate (L/min) 0 (bar)	70 (bar)	350 (bar)	700 (bar)	油箱 Oil tank (L)	重量 (含油) Weight (with oil) (kg)
SPA-554TQ	1.4M³/min @6 bar	3,000	75	4	7.4	1.3	1.1	0.9	8	38.5

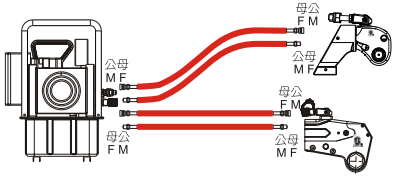
扳手專用雙併雙色油管
Torque Wrench twice Hoses

- SUN RUN XU22W 系列扳手專用雙併油管適用於任何油壓扭力扳手。

※ Use SUN RUN XU22W series torque wrench hoses with every model torque wrench to ensure the integrity of your hydraulic system.

型 號 Model Number	管徑 Tube Dia (in)	長度 Length (ft)	(m)	兩端尺寸 Hose End (in)		工作壓力 W.P (bar)	爆破壓力 B.P (bar)
XU22W-6M2NM2NM	1/4	20	6	1/4	1/4	700	2800
XU22W-12M2NM2NM	1/4	40	12	1/4	1/4	700	2800



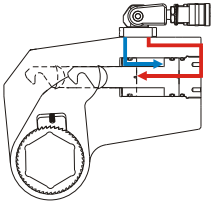


基礎安裝

安裝A. 1台油壓扳手專用泵浦+1台四方驅動頭油壓扳手+套筒+2條油管
安裝B. 1台油壓扳手專用泵浦+1台中空型油壓扳手+2條油管
安裝C. 1台油壓扳手專用泵浦+1~4台四方驅動頭油壓扳手(+套筒)或
1~4台中空型油壓扳手
+2~8條油管

Basic System Set-up

A. 1 Hydraulic Torque Wrench using Electric Pump+1 Square Drive Wrench +Socket+2 hoses
B. 1 Hydraulic Torque Wrench using Electric Pump+1 Low Profile Wrench +2 hoses
C. 1 Hydraulic Torque Wrench using Electric Pump+1~4 Square Drive Wrench (+Socket) or
1~4Low Profile Wrench
+2~8 hoses



油路方式
Oil Path

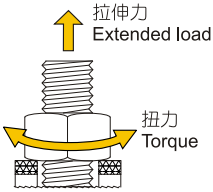
進油
Advance

回油
Return

扳手扭力計算公式
Wrench Torque Formula

T =F ×r
扭力 =力量 ×力距
Torque=Force×Lever Arm Length

Ex. :
1000kN×60mm=60000 N.m



螺栓拉伸力-扭力計算公式
Bolt Load- Torque Formula

T=K×D×N
T：扭力
K：摩擦係數
D：螺栓直徑
N：螺栓拉伸力=截面積×降伏強度×降伏比

T：Torque
K：Friction Factor
D：Bolt O.D
N：Bolt extended Load=Stress area×Yield strength×Percent of Yield

Ex.：M16

$N=\underbrace{0.7854\times(16-0.9382\times2)^2}_{\text{截面積 Stress area } mm^2}\times\underbrace{896}_{\text{降伏強度 Yield strength } N/mm^2}\times\underbrace{80\%}_{\text{降伏比 Percent of Yield}}/1000=112N$

$T=\underbrace{0.14}_{\text{摩擦係數 Friction Factor}}\times\underbrace{16}_{\text{螺栓直徑 Bolt O.D mm}}\times\underbrace{112N}_{\text{螺栓拉伸力 Bolt Load}}=252N.m$

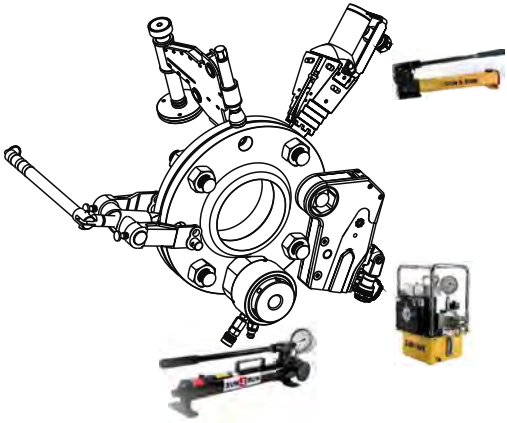
Bolt grade 螺栓等級 (強度區分)	Tension strength 抗拉強度 RM(N/mm²)	Yield strength(90%) 降伏點(耐力) Rp0.2(N/mm²)	μ=0.1:Low friction application 低摩擦係數 μ=0.15:Normal friction application 一般摩擦係數 μ=0.2:High friction application 高摩擦係數 Tightening moment 力值 N.m														
6.8	600	480	μ=0.1	110	160	220	300	390	570	770	1050	1350	1740	2160	2690	3250	4180	5190
			μ=0.15	150	200	290	400	500	740	1000	1370	1760	2280	2820	3530	4250	5490	6800
			μ=0.2	170	240	340	460	590	870	1180	1610	2060	2690	3320	4160	5000	6470	8020
8.8	800	640	μ=0.1	150	210	300	410	520	760	1030	1400	1790	2320	2880	3590	4330	5570	6920
			μ=0.15	200	270	390	530	670	990	1340	1820	2340	3040	3760	4170	5660	7320	9070
			μ=0.2	230	320	450	630	780	1160	1570	2140	2750	3580	4430	5550	6670	8630	10700
B.7 (≦2-1/2")	min. 860	min. 720	μ=0.1	180	250	350	470	600	880	1190	1610	2080	2690	3330	4150	5010	6440	8000
			μ=0.15	230	320	450	610	770	1140	1550	2100	2700	3520	4350	5450	6550	8450	10490
			μ=0.2	270	370	530	720	910	1340	1820	2480	3180	4140	5120	6420	7710	9980	12370
10.9	1000	900	μ=0.1	220	310	440	600	760	1110	1510	2050	2640	3410	4230	5280	6360	8180	10160
			μ=0.15	290	400	570	780	980	1450	1970	2680	3430	4460	5530	6920	8320	10740	13330
			μ=0.2	340	470	670	920	1150	1710	2310	3150	4040	5260	6500	8150	9790	12670	15710
12.9	1200	1080	μ=0.1	260	370	510	700	890	1300	1770	2400	3080	3990	4950	6170	7440	9570	11890
			μ=0.15	340	470	670	920	1150	1700	2300	3130	4020	5220	6470	8090	9740	12570	15590
			μ=0.2	400	550	780	1080	1340	2000	2700	3680	4720	6150	7610	9540	11460	14830	18380
			M	**16**	**18**	**20**	**22**	**24**	**27**	**30**	**33**	**36**	**39**	**42**	**45**	**48**	**52**	**56**

Bolt grade 螺栓等級 (強度區分)	Tension strength 抗拉強度 RM(N/mm²)	Yield strength(90%) 降伏點(耐力) Rp0.2(N/mm²)	μ=0.1:Low friction application 低摩擦係數 μ=0.15:Normal friction application 一般摩擦係數 μ=0.2:High friction application 高摩擦係數 Tightening moment 力值 N.m														
6.8	600	480	μ=0.1	6440	7320	8520	9920	10170	10460	11720	13250	14690	16540	19650	20900	23780	25570
			μ=0.15	8480	9620	11230	13100	13470	13880	15580	17660	19620	22130	26360	28080	31980	34430
			μ=0.2	10010	11350	13270	15510	15960	16460	18510	21000	23350	26370	31450	33530	38210	41160
8.8	800	640	μ=0.1	8590	9760	11360	13220	13560	13950	15620	17670	19590	22060	26200			
			μ=0.15	11300	12830	14970	17470	17960	18510	20780	23550	26160	29510	35150			
			μ=0.2	13350	15140	17690	20680	21280	21950	24670	28000	31140	35150	41930			
B.7 (≦2-1/2")	min. 860	min. 720	μ=0.1	9930	11280	13130	15290	15680	16130	18060	20430	22650	25510				
			μ=0.15	13060	14830	17310	20200	20770	21400	24020	27250	30250	34120				
			μ=0.2	15430	17500	20460	23910	24610	25380	28530	32380	36000	40650				
10.9	1000	900	μ=0.1	12610	14330	16680	19420	19920									
			μ=0.15	16600	18840	21990	25660	26380									
			μ=0.2	19600	22240	25990	30370	31260									
12.9	1200	1080	μ=0.1	14760	16770	19520											
			μ=0.15	19430	22050	25730											
			μ=0.2	22940	26020	30410											
			M	**60**	**64**	**68**	**72**	**76**	**80**	**85**	**90**	**95**	**100**	**110**	**115**	**120**	**125**

Nominal thread size [mm] 公稱尺寸 [mm]

The data above is based on bolts lubricated to manufacturer's specifications. Due to a variation in friction, we recommend in extreme cases to check with the bolt manufacturer, as this chart represents a guideline only.

上述資料根據製造商在螺栓具潤滑狀態下提供，由於摩擦差異，
我們建議與螺栓製造廠取得確認，本換算表僅依標準規範製作。



Testing Laboratory 1658

Calibration Laboratory 3605

Android

ios

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