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# 手動液壓千斤頂-附爪型 操作說明

## SHL



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中文 : C1~C5

中文  
English  
Ver.18

## 1. 安全預防措施



不遵守以下的注意事項和警告將引起設備損失及人員傷害。



**重要事項：**未滿18歲人員不得擅自操作。操作SUN RUN油壓設備前請先仔細閱讀並了解相關操作手冊、安全事項和警告事項。操作人員負有油壓設備週邊之人員及環境之安全責任。



**警告事項：**為確保避免人員傷害和設備作業損失，請確認所有油壓設備及週邊配件，使用最大壓力為 700 bar(10,000psi)。



**警告事項：**操作人員於使用期間為避免傷害，需全程配戴安全防護措施。



**警告事項：**不得使用油壓設備作為支撐重物使用。當液(油)壓缸作為負載頂昇設備時，僅可頂昇，不可用來支撐重物使用。當完成頂升作用後，需使用機械性工具來固定支撐。



**警告事項：**必須使用硬性物體來支撐重物。慎選能承受重物的鋼鐵或木塊來支撐荷載。不要在頂升或持壓使用中將液(油)壓缸當做墊塊使用。



**危險事項：**為避免人員傷害，請於操作過程中手、腳遠離液(油)油壓缸和液壓設備。



**警告事項：**禁止超載使用。超載使用易造成設備損害及人員損傷。液(油)壓缸設計最大使用壓力為 700 bar (10,000psi)。



**危險事項：**千萬不可將溢流(安全)閥的壓力值設定高於泵浦的額定壓力。超載的壓力值可能引起設備損壞及人員損傷。尤其千萬不可拆除溢流(安全)閥。



**警告事項：**系統操作壓力絕不可超過最低壓力元件之值最低值。系統中應加裝壓力錶藉以監測系統中的壓力並了解使用狀態。



**警告事項：**避免損壞油壓管。捲收油管時，避免油管強烈彎曲或打結。使用彎曲或打結油管易引起背壓。強烈彎曲或打結的油管亦易引起內部損壞或提早油管老化。



**千萬不要重壓油管。**劇烈的撞擊會造成油管內鋼絲網損壞。使用受損的油管可能導致油管破裂。



**重要事項：**千萬不要利用油管來提攜其他油壓設備(例如:小型油壓缸、泵浦..等)。



**危險事項：**液(油)壓設備應遠離火或熱源。高溫會軟化包裝和密封材料，導致液壓油洩漏；高溫同時也會造成油管材質與包裝變質。為確保最好狀態，不要將液(油)壓設備暴露於 65°C(150°F)高溫。在電焊場所時亦應注意防止電焊火花噴到油管。



**危險事項：**不要用手對油管施加壓力(包括拉或舉高) 高壓下洩漏的液壓油會穿透皮膚造成嚴重傷害。當液壓油侵入皮膚請立即就診。

## 1. 安全預防措施



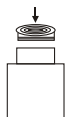
**警告事項：**液(油)壓缸只能在已連接好的液壓油路中使用；快速接頭尚未確實連接時禁止使用或加壓，否則高壓情況下接頭的油封及鋼珠會高速噴出造成人員傷亡。



**警告事項：**頂昇荷載前，請確保油壓裝置平穩。油壓缸必須放在平穩可支撐重物的基座上。若情況許可，可使用油壓缸基座來增加穩定性。千萬不可使用焊接或其他方法將油壓缸與所使用的基礎面(支撐座)連接一起。



避免荷載不直接作用在油壓缸的主軸中心上。偏心荷載易導致油壓缸和主軸受損。此外，重物亦可能因傾斜而滑落，引發潛在危險。



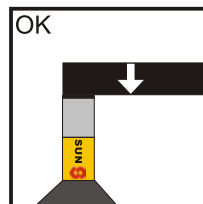
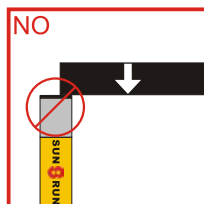
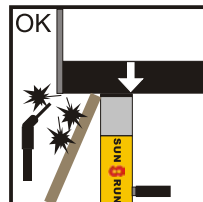
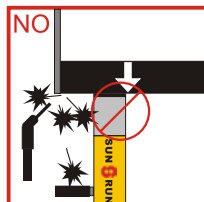
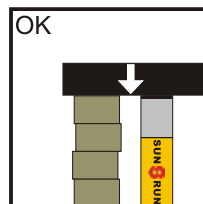
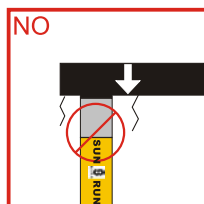
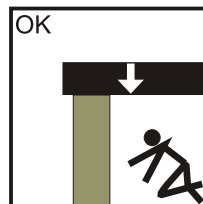
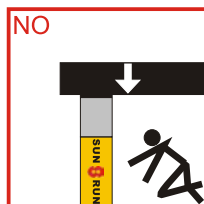
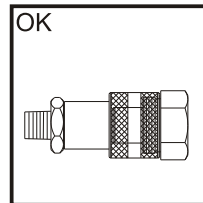
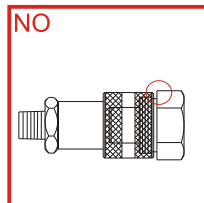
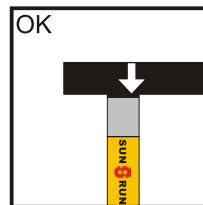
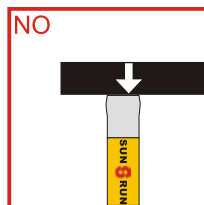
將荷載平均的分布在墊塊表面。傾斜墊塊可消除偏荷載。當無使用螺牙連接其他附件時，一定要使用墊塊以保護主軸。



**警告事項：**當零件出現裂痕或損壞時，應立即以**SUN RUN** 零件更換。正確標準的零件可防止人員或設備損傷。**SUN RUN**零件經特別設計可完全適用並適用產品標稱的額定荷載或壓力。



**重要事項：**液壓設備必需由合格的液壓技工進行維修。需要修理時，請連繫就近的**SUN RUN**服務據點並使用**SUN RUN** 液壓油保固方為有效。



適用範圍：  
手動液壓千斤頂-附爪型

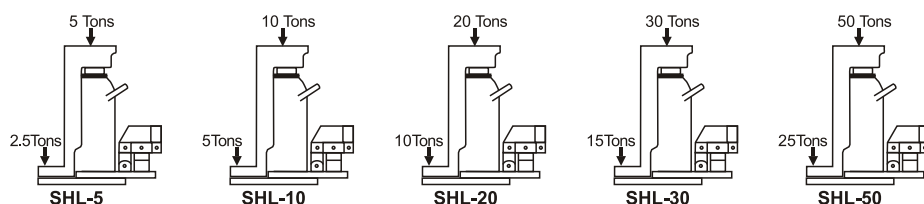
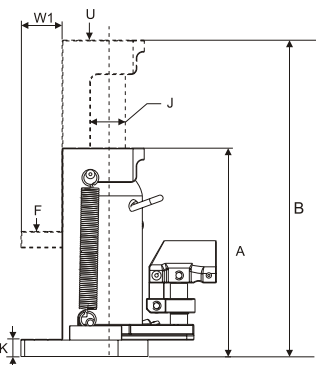
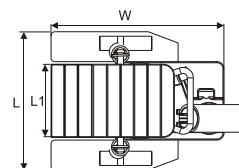
適用型號系列：SHL-05S, SHL-10S, SHL-10B, SHL-20S,  
SHL-20B SHL-30S, SHL-50S

## 2. 規範

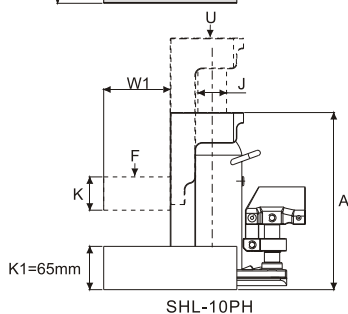
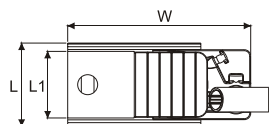
Load Return  
重力回縮



Spring Return  
彈簧回縮



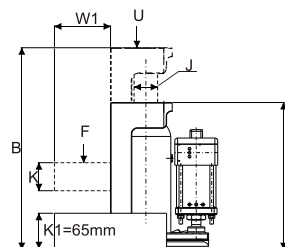
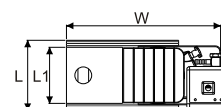
型號 Model Number	頂部荷重 Top Cap. U (ton)	爪部荷重 Toe-Lift Cap. F (ton)	揚程 Stroke (mm)	本身高 Coll Height A (mm)	伸長總高 Ext. Height B (mm)	主軸直徑 Plunger Dia. J (mm)	底座尺寸 Base Dimensions L x W (mm)	爪高 Height K(mm)	爪塊尺寸 Toe-Lift Base L1 x W1 (mm)	總重 Weight (kg)
SHL-05S	5	2.5	110	230	340	32	152 X 200.5	16	78 X 47	8.5
SHL-10S	10	5	135	277	412	42	185 X 235	22	98 X 55	20.0
SHL-10B	10	5	75	211	286	42	220 X 238	22	130 X 52	18.15
SHL-20S	20	10	150	317	467	55	220 X 240	25	132 X 48	31.5
SHL-20B	20	10	73	239	312	55	220 X 242	25	132 X 46	24.9
SHL-30S	30	15	150	335	486	62	265 X 272	28	149 X 60	44.0
SHL-50S	50	25	150	370	520	85	340 X 354	40	190 X 75	88.5
SHL-10P	10	5	134	266	400	42	125 X 275	50	100 X 100	20.0
SHL-10PH	10	5	134	266	400	42	125 X 275	50	100 X 100	20.0



SHL-10P



SHL-10PH



SHL-10P



### 3.操作

#### 重要事項: 千萬不要僅用搖柄座提攜千斤頂

舉昇荷重時:

荷重物完全位於附爪頂中心或下爪根部。

警告事項!

千萬不可僅使用附爪尾端荷重。荷重時需將附爪下爪完全插入使用。

重要事項!

當使用附爪舉昇時需確認附爪楔形頭位置防止圓柱彎折。

將洩壓閥鈕旋至閉鎖位置。

將手搖柄上下動作。

荷重回縮:

慢慢放鬆洩壓閥至放鬆位置；放鬆愈多洩壓愈快。

回縮停止後請務必將洩壓閥旋至閉鎖位置。

### 4.預防維修

重要事項：

液壓工具最大損壞原因屬髒污染最為嚴重。保持千斤頂乾淨及填充優質液壓油，防止外來異質進入液壓系統。

假若千斤頂曾遭雨、雪或砂石污染，務必於再次使用前清理過才可使用。

4.1 當千斤頂無使用時請務必回縮主軸和泵浦系統。收藏千斤頂的地方需妥善保護慎防腐蝕、潮溼、沙塵或其他有害物質。

4.2 每次使用前先目視檢視千斤頂。假若發生下列情形請立即採取修正防護措施：

- a. 已爆裂或不當的管線。
- b. 過度磨損、扭曲或其他損害。
- c. 漏油。
- d. 主軸刮傷。
- e. 搖桿萬向頭或調整螺栓功能異常。
- f. 零件鬆脫。
- g. 經改裝或調整的配備。

## 5. 疑難解答

狀況	原因	解決
不規律動作	1.系統內存有空氣 2.液壓油黏度太高 3.液壓缸內部漏油 4.液壓缸有阻塞	1.將千斤頂正放並將主軸回縮，放鬆洩壓閥將空氣排出，靜置約10秒。 2.更換黏度較低的液壓油。 3.更換不良的油封。檢查是否其他過度磨損或污染阻塞。 4.檢查是否有髒污、沈澱的雜質或洩漏。或是斷裂、毀損零件、老化油封。
千斤頂無法舉昇(前進)	1.洩壓閥呈開放狀態 2.液壓油不足 3.系統內氣閥問題 4.超荷載	1.關閉洩壓閥 2.加滿油 3.將系統內空氣疏通(排出) 4.荷載使用正確的千斤頂
千斤頂只能揚昇部份	1.液壓油不足 2.主軸活塞阻塞	1.加滿油 2.檢查是否有髒污、沈澱的雜質或洩漏。或是斷裂、毀損零件、老化油封
千斤頂揚昇緩慢	1.泵浦無法正常運作 2.油封洩漏	1.重新啟動泵浦 2.更換油封
千斤頂可舉昇但無法持壓	1.液壓缸油封漏油 2.檢查泵浦閥門是否正常運作 3.過載裝置洩漏或是不正確調整	1.更換油封 2.清理或更換閥門 3.更換或調整過載閥
千斤頂漏油	1.油封問題	1.更換油封
千斤頂無法回縮或回縮速度緩慢	1.洩壓閥呈關閉狀態 2.液壓缸內部損壞 3.液壓油過滿	1.開啟洩壓閥 2.請將千斤頂送回就近液壓專業維修廠維修 3.將液壓油倒出至適當油位

# 出廠證明暨保固書

產品名稱：

型 號：

序 號：

出廠日期： / /

保固期間： / / ~ / /

該產品經公司嚴格品質管制,並測試合格出廠,本產品自驗收合格日起保固一年,如非人為使用不當或天然不可抗拒之災害,本公司免費維修,如非以上之原因本公司將酌收材料成本負責維修。

公司：巨輪興股份有限公司

負責人：蘇明益

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# OPERATING INSTRUCTIONS

## Manual hydraulic Jack with Toe-lift **SHL**



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English : E1~E5

中文  
English  
Ver.18

## 1. SAFETY PRECAUTIONS



Fail to comply with the following cautions and warnings could cause equipment damage and personal injury.



**IMPORTANT :** Minimum age of the operator must be 18 years. The operator must have read and understood all instructions, safety issues, cautions and warnings before starting to operate the SUN RUN equipment. The operator is responsible for this activity towards other persons.



**WARNING :** To avoid personal injury and possible equipment damage, make sure all hydraulic components withstand the maximum pressure of 700 bar (10,000psi).



**WARNING:** Always wear safety glasses. The operator must take precaution against injury due to failure of the tool or workpiece.



**WARNING:** Stay clear of loads supported by hydraulics. A cylinder, when used as a load lifting device, should never be used as a load holding device. After the load has been raised or lowered, it must always be blocked mechanically.



**WARNING:** USE ONLY RIGID PIECES TO HOLD LOAD. Carefully select steel or wood blocks that are capable of supporting the load. Never use a hydraulic cylinder as a shim or spacer in any lifting or pressing application.



**DANGER:** To avoid personal injury keep hands and feet away from cylinder and workpiece during operation.



**WARNING :** Do not overload equipment. Overloading causes equipment failure and possible personal injury. The cylinders are designed for a max. Pressure of 700 bar (10,000psi).



**DANGER: NEVER** set the relief valve to a higher pressure than the maximum rated pressure of the pump. Higher settings may result in equipment damage and/or personal injury. Do not remove relief valve.



**WARNING :** The system operating pressure must not exceed the pressure rating of the lowest rated component in the system. Install pressure gauges in the system to monitor operating pressure. It is your window to what is happening in the system.



**CAUTION:** Avoid sharp bends and kinks that will cause severe back-up pressure in hoses. Bends and kinks lead to premature hose failure.



**DO NOT** drop heavy objects on hose. A sharp impact may cause internal damage to hose wire strands. Applying pressure to a damaged hose may cause it to rupture.



**IMPORTANT:** Do not lift hydraulic equipment by the hoses or couplers. Use the carrying handle or other means of safe transport.



**CAUTION :** KEEP HYDRAULIC EQUIPMENT AWAY FROM FLAMES AND HEAT. Excessive heat will soften packings and seals, resulting in fluid leaks. Heat also weakens hose materials and packings. For optimum performance do not expose equipment to temperatures of 65°C (150°F) or higher. Protect hoses and cylinders from weld spatter.

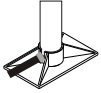


**DANGER:** Do not handle pressurized hoses. Escaping oil under pressure can penetrate the skin causing serious injury. If oil is injected under the skin, see a doctor immediately.

## 1. SAFETY PRECAUTIONS



**WARNING:** Never pressurize uncoupled couplers. Only use hydraulic equipment in a coupled system.



**WARNING: BE SURE SETUP IS STABLE BEFORE LIFTING LOAD.** Cylinders should be placed on a flat surface that can support the load. Where applicable, use a cylinder base for added stability. Do not weld or otherwise modify the cylinder to attach a base or other support.



**Avoid** situations where loads are not directly centered on the cylinder plunger. Off-center loads produce considerable strain on cylinder and plungers. In addition, the load may slip or fall, causing potentially dangerous results.



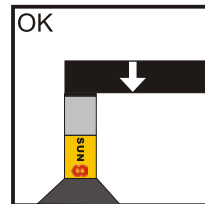
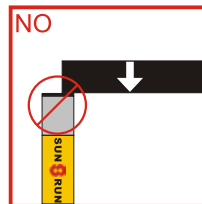
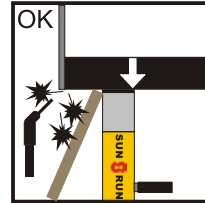
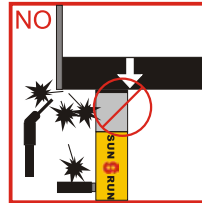
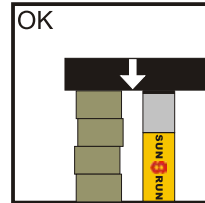
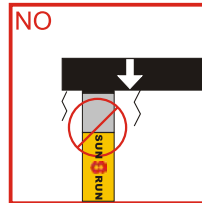
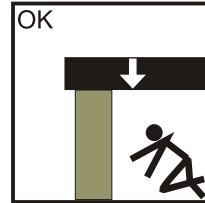
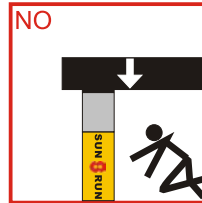
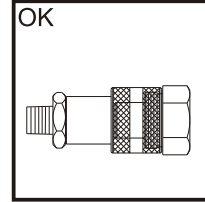
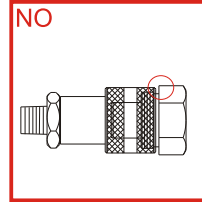
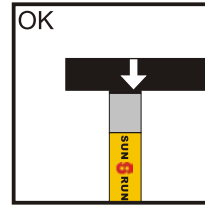
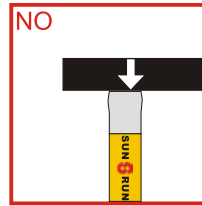
Distribute the load evenly across the entire saddle surface. Always use a saddle to protect the plunger.



**WARNING:** Immediately replace worn or damaged parts with genuine SUN RUN parts. SUN RUN parts are designed to fit properly and withstand rated loads.



**IMPORTANT:** Hydraulic equipment must only be serviced by a qualified hydraulic technician. For repair service, contact the SUN RUN Service Center in your area. To protect your warranty, use only SUN RUN oil.



## 2. SPECIFICATION

Model Number 型 號	Top Cap. 頂部荷重 U (ton)	Toe-Lift Cap. 爪部荷重 F (ton)	Stroke 揚 程 (mm)	Coll Height 本身高 A (mm)	Ext. Height 伸長總高 B (mm)	Plunger Dia. 主軸直徑 J (mm)	Base Dimensions 底座尺寸 L x W (mm)	Height 爪 高 K(mm)	Toe-Lift Base 爪塊尺寸 L1 x W1 (mm)	Weight 總 重 (kg)
SHL-05S	5	2.5	110	230	340	32	152 X 200.5	16	78 X 47	8.5
SHL-10S	10	5	135	277	412	42	185 X 235	22	98 X 55	20.0
SHL-10B	10	5	75	211	286	42	220 X 238	22	130 X 52	18.15
SHL-20S	20	10	150	317	467	55	220 X 240	25	132 X 48	31.5
SHL-20B	20	10	73	239	312	55	220 X 242	25	132 X 46	24.9
SHL-30S	30	15	150	335	486	62	265 X 272	28	149 X 60	44.0
SHL-50S	50	25	150	370	520	85	340 X 354	40	190 X 75	88.5
SHL-10P	10	5	134	266	400	42	125 X 275	50	100 X 100	20.0
SHL-10PH	10	5	134	266	400	42	125 X 275	50	100 X 100	20.0

### 3.OPERATING INSTRUCTIONS

**IMPORTANT: Do not carry jack by the jacking lever.**

**Lifting a Load:**

Position the load on the toe of the jack.

**WARNING!**

**Do not** lift a load on the end of the toe. Fully engage the load with the toe.

**IMPORTANT!**

When lifting by the toe, wedge the head of the jack on the load to avoid bending the column.

Turn the release valve knob in a clockwise direction until it is snug.

Pump the jacking lever in an up and down motion.

**Lowering a Load:**

Slowly loosen the release valve knob by turning it in a counterclockwise direction. The more the knob is loosened, the faster the load will be lowered.

To stop the jack from lowering a load, tighten the release valve knob by turning it in a clockwise direction.

### 4.PREVENTIVE MAINTENANCE

**IMPORTANT:**

The greatest single cause of failure in hydraulic units is dirt. Keep the jack clean and well lubricated to prevent foreign matter from entering the system.

If the jack has exposed to rain, snow, sand, or grit, it must be cleaned before it is used.

- 4.1 When the jack is not in use, keep the piston and pump rods fully retracted. Store the jack in its base and in a well protected area where it will not be exposed to corrosive vapors, abrasive dust, or any other harmful elements.
- 4.2 Visually inspect the jack before each use. Take corrective action if any of the following problems are found:
  - a. Cracked or damaged housing
  - b. Excessive wear, bending, or other damage
  - c. Leaking hydraulic fluid
  - d. Scored or damaged piston rod
  - e. Incorrectly functioning swivel heads or adjusting screws
  - f. Loose hardware
  - g. Modified or altered equipment

## 5. TROUBLE-SHOOTING GUIDE

Trouble	Cause	Solution
<b>Erratic Action</b>	1.Air in system  2.Viscosity of oil too high 3.Ram sticking or binding  4.Internal leakage in ram	1.With jack sitting on its base and ram retracted, bleed air by opening release valve. Pump for 10 seconds. 2.Change to lower viscosity oil. 3.Look for dirt, gummy deposits, leaks, misalignment, worn parts, or defective packing. 4.Replace worn packing. Look for excessive contamination or wear.
<b>Ram dose not advance</b>	1.Release valve is open 2.Low/no oil reservoir  3.Air-locked system	1.Close release valve. 2.Remove oil plug, fill jack with oil to bottom of oil fill hole, & bleed system. 3.With jack sitting on its base and ram retracted, bleed air by opening release valve & remove oil plug. Pump for 10 seconds.
<b>Ram only extends partially and stops</b>	1.Low oil level in reservoir 2.Piston rod is binding	1.Fill reservoir with oil, & bleed system. 2.Look for dirt, gummy deposits, leaks, misalignment, worn parts, or defective packing.
<b>Ram advance slowly</b>	1.Pump not working correctly 2.Leaking seals	1.Rework pump. 2.Replace seals.
<b>Ram advances but doesn't hold pressure</b>	1.Release valve is open 2.Ram seals are leaking 3.Pump check valve not working 4.Overload valve leaking or not adjusted	1.Close release valve 2.Replace seals. 3.Clean/replace check valve. 4.Replace/adjust overload valve.
<b>Jack leaks oil</b>	1.Worn or damaged seals	1.Replace seals
<b>Ram will not retract or retracts slowly</b>	1.Release valve is closed 2.Reservoir too full 3.Ram damaged internally	1.Open release valve. 2.Drain oil to correct level. 3.Take jack to authorized service center for repair.