



巨輪興股份有限公司

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油壓楔型舉升器 操作說明

LSW



中文 : C1~C4

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：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。



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)。



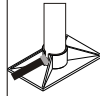
警告事項：系統操作壓力絕不可超過最低壓力元件之值最低值。系統中應加裝壓力錶藉以監測系統中的壓力並了解使用狀態。



警告事項：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：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。



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。



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。

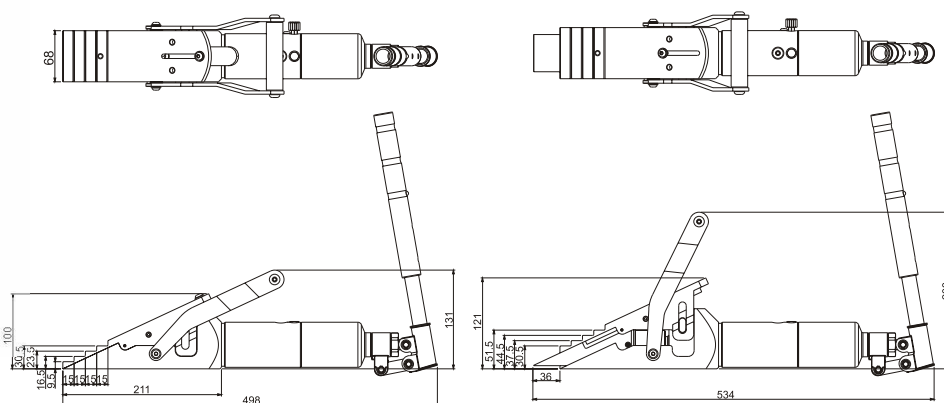
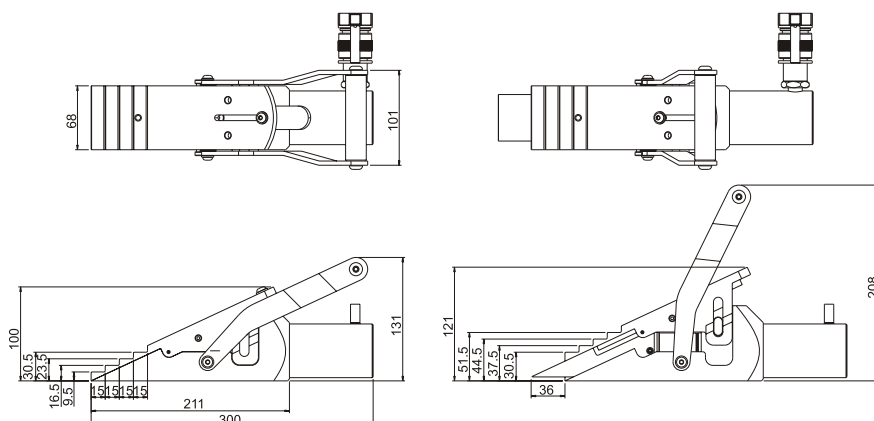


警告事項：當零件出現裂痕或損壞時，應立即以SUN RUN 零件更換。正確標準的零件可防止人員或設備損傷。SUN RUN零件經特別設計可完全適用並適用產品標稱的額定荷載或壓力。



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。

2. 規範



尺寸
Dimension(mm)

選配SLW-C2-16階梯墊塊
Optional LSLW-C2-16 Stepped Block



SLW-C1-16
安全墊塊
Safety Block



Control Manifolds

Control Manifold to control two or four lifting wedges simultaneously.

型號	最大撐開力	最小空隙	每階最大舉升	最大舉升高	使用階梯墊塊 最大舉升高	總油量	重量
Model No .	Max.Lifting Force	Minimum clearance Gap	Max. Lift per Stage	Max. Lift Ht.	Max. Lift Ht. Using stepped block	Oil Capacity	Weight
	ton (kN)	(mm)	(mm)	(mm)	(mm)	(cc)	(kg)
LSW-16	16ton(157kN)	9.9mm	21.1mm	51.3mm	69.1mm	78	7
LSW-161	16ton(157kN)	9.9mm	21.1mm	51.3mm	69.1mm	152	7

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。

適用性

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：

- 已爆裂或不當的管線。
- 過度磨損、扭曲或其他損害。
- 漏油。
- 主軸刮傷。
- 搖桿萬向頭或調整螺栓功能異常。
- 零件鬆脫。
- 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



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OPERATING INSTRUCTIONS

Manual hydraulic Vertical Lifting Wedge

LSW



English : E1~E4

中文
English
Ver.16

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



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).



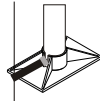
WARNING : The system operating pressure must not exceed the pressure rating of the lowest rated component in the system. Install pressure gauges in the system to monitor operating pressure. It is your window to what is happening in the system.



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



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.



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.



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.



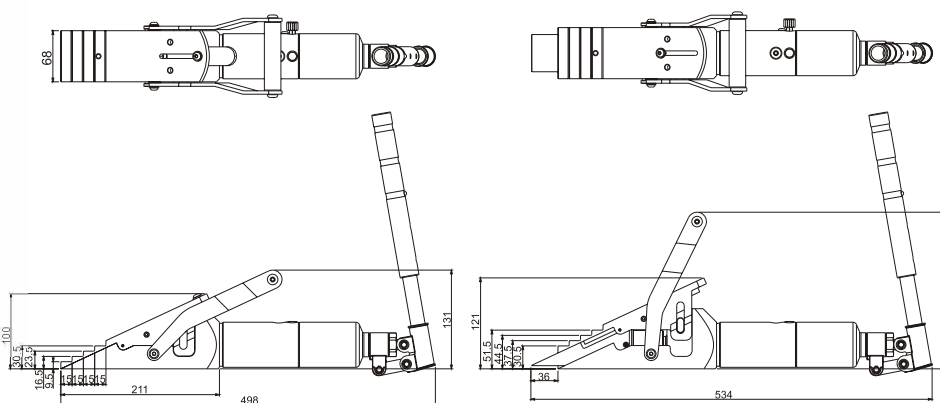
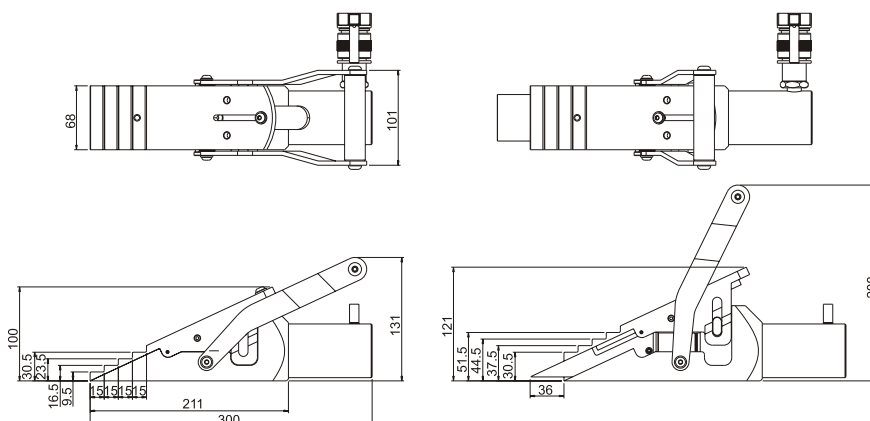
WARNING: Immediately replace worn or damaged parts with genuine SUN RUN parts. SUN RUN parts are designed to fit properly and withstand rated loads.



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.



LSW-16



尺寸
Dimension(mm)

選配 LSLW-C2-16 階梯墊塊
Optional LSLW-C2-16 Stepped Block



SLW-C1-16
安全墊塊
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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
Erratic Action	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.
Ram dose not advance	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.
Ram only extends partially and stops	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.
Ram advance slowly	1.Pump not working correctly 2.Leaking seals	1.Rework pump. 2.Replace seals.
Ram advances but doesn't hold pressure	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.
Jack leaks oil	1.Worn or damaged seals	1.Replace seals
Ram will not retract or retracts slowly	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.