



INSTRUCTION & MAINTENANCE SHEET
SINGLE ACTING ALUMINIUM HAND PUMPS
WA20507, WA21107



LARZEP, S.A.

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DECLARATION OF CONFORMITY

DECLARACION DE CONFORMIDAD

E LARZEP, S.A.
Dirección: Avda. Urtiaga, 6
48269 Mallabia ESPAÑA
Declaramos bajo nuestra exclusiva responsabilidad la conformidad de los productos a los que refiere esta declaración, con las disposiciones de la directiva:
2006/42/CE

DECLARATION DE CONFORMITE

F Nous, LARZEP, S.A.
Adresse: Avda. Urtiaga, 6
48269 Mallabia SPAIN
Déclarons sous notre seule responsabilité que les produits auxquels se réfère cette déclaration sont conformes aux dispositions des Directives:
2006/42/EC

DECLARAÇÃO DE CONFORMIDADE

P Nós, LARZEP, S.A.
Endereço: Avda. Urtiaga, 6
48269 Mallabia SPAIN
Declaramos, sob nossa única responsabilidade, que os seguintes produtos, incluídos nesta declaração estão em conformidade com o disposto na Directiva:
2006/42/EC

ÖVERENSSTEMMELSEERKLÄRING

DK Vi, LARZEP, S.A.
Adresse: Avda. Urtiaga, 6
48269 Mallabia SPAIN
Erklærer på eget ansvar, at følgende produkter som er omfattet af denne erklæringen, er i overensstemmelse med bestemmelserne i Direktiv: 2006/42/EC

ERKLÆRING OM OVERENSSTEMMELSE

N Vi, LARZEP, S.A.
Adresse: Avda. Urtiaga, 6
48269 Mallabia SPAIN
Erklærer på eget ansvar, at følgende produkter som dekkes af denne erklæringen, er i overensstemmelse med bestemmelserne i Direktiv: 2006/42/EC

ÜBEREINSTIMMUNGSERKLÄRUNG

D Wir, LARZEP, S.A.
Anschrift: Avda. Urtiaga, 6
48269 Mallabia SPAIN
Erklären auf eigene Verantwortung, daß folgende Produkte, auf die sich diese Erklärung bezieht, mit den Bedingungen der Direktiven, 2006/42/EC übereinstimmen.

Tipo, Type, Typ, Tyyppi.

SM / SAM / SH / SAH / SP / SMP / SPR / SX / SMX / STR / SAT / SATM / STX / SL / SSR / T / TE / TD / D / DDR / DDA / DH / DAH / DM / DI / JM / JP / JH

W / WA / WP / X / Z / ZR / HAM / HAE / HAZ / HAG / HAS / HFM / HFE / WI / HAP / HAB / HAT

AP / AR / AZ / AV / AVD / AVT / AT / ATH / AY

CK / CC / CN / FU / FV / FZ / FA / CY / CT / C / AA / AU / BS / LAS / LAX / PH / CB / CH / CM

A / AB / AC / AF / B / DLG / F / HN / HL / VA / VB / VC / VZ / EC / EE / EM / EZ / CA

Mallabia, ESPAÑA 2015 / 03 / 27

Lugar y fecha, place and date, lieu et date, plats och datum, paikka ja päivämäärä, udstedelsessted og-dato, ort und datum, plaats en datum, local e data, luogo e data.

DECLARATION OF CONFORMITY

GB We, LARZEP, S.A.
Address: Avda. Urtiaga, 6
48269 Mallabia SPAIN
Declare under our sole responsibility that the following products to which this declaration relates conform with the provisions of Directives:
2006/42/EC

DICHIARAZIONE DI CONFORMITÀ

I Noi, LARZEP, S.A.
Indirizzo: Avda. Urtiaga, 6
48269 Mallabia SPAIN
Dichiariamo sotto la nostra esclusiva responsabilità che i prodotti ai quali questa dichiarazione si riferisce sono conformi quanto previsto dalle Direttive:
2006/42/EC

VAATIMUSTEMUKAISUUSVAKUUTUS.

FIN Me, LARZEP, S.A.
Osoite: Avda. Urtiaga, 6
48269 Mallabia SPAIN
Vakuutamme yksinomaan omalla vastuullamme, että seuraavat tuotteet, joihin tämä vakuutus liittyy, ovat seuraavien Direktiivien vaatimusten mukaisia:
2006/42/EC

VERKLARINGVAN OVEREENKOMST.

NL Wij, LARZEP, S.A.
Adres: Avda. Urtiaga, 6
48269 Mallabia SPAIN
Verklaren geheel onder eigen verantwoordelijkheid dat de volgende producten, waarop deze verklaring heeft in overeenstemming zijn met de bepalingen van Richtlijn: 2006/42/EC

FÖRSÄKRAN OM ÖVERESSTÄMMELSE

S Vi, LARZEP, S.A.
Address: Avda. Urtiaga, 6
48269 Mallabia SPAIN
Försäkrar under eget ansvar att följande produkter som omfattas av denna försäkran är i överensstämmelse med villkoren i Direktiv: 2006/42/EC

LARZEP, S.A.

Nombre y firma, name and signature, nom et signature, namn och underskrift, nimi ja nimikirjoitus, navn og underskrift, name und unterskrift, naàm en handtekening, nome e assinatura, nome e firma.



ESSENTIAL SAFETY INSTRUCTIONS



The correct union of a pump to a cylinder via a hydraulic hose constitutes a machine designed for lifting, pulling, folding and retaining operations, etc., that, due to its high thrust capacity requires safe use in order to eliminate the risk of accidents.

Read the instructions manual carefully and practise using the equipment before application.

Use protective equipment such as safety goggles, boots and gloves.



Goggles



Boots



Gloves



Choose the most suitable model for the application from the wide range available, and make sure that it will not exceed 80% of its nominal capacity during normal operation.

Define stable zones for applying the load and safety zones for operators, separating them through the use of hoses of enough length.

Block loads mechanically once the movement has been completed and avoids operating underneath them.

Use the entire cylinder's useful support surface, both on the head and the base. Be prepared to use tilting saddles if applying side loads.



Do not expose the equipment to intense heat sources (welding).

Remove loads before carrying out maintenance operations and always work in clean, well-lit areas.

Include control elements (pressure gauges) in the installation in order to enable the operator to monitor the pressure in the system and ensure that the equipment's nominal capacity is never exceeded. Be prepared to use safety valves and accessories if safety criteria demand it.

The pump controls should be activated manually, as should the connections between elements equipped with couplers.

Once you have finished using the device, check that it has not been damaged, clean it and protect it ready for storage.

Clean the couplers before connecting and make sure the connections are perfect (first insert as far as the coupler will go and then screw in by hand). A bad connection may result in improper functioning and may even generate a safety hazard.

Install the device in such a way as to ensure that the hoses are not subjected to sharp or forced bends or thrust actions that may cause them to break.

Check oil level in reservoir before operating pump.

Do not modify the device (welded parts, lengthening drive levers, etc.) without consulting the manufacturer.

Do not use the hoses for transporting the device. Use the handles on the cylinders (when appropriate) and set the pump lever to the transportation position.

When filling the pump with oil, always use Larzep hydraulic oil or another oil of similar characteristics. Fill only to the indicated level and remember that the cylinder piston should be back.

Before starting operation, check that the installation is correct, the operator position is safe and the working zone is out of bounds to all personnel. The operator must keep the body to the side of the pump, away from the line of force of the handle.

In all cases, the operator should have received adequate training regarding the handling of the device and logical safety criteria associated with the movement of heavy loads.

WARRANTY

LARZEP, S.A. guarantees its products against all design and manufacturing defects during two years from the date of purchase. This guarantee does not include the ordinary wear of both metal and non-metal parts, abuse, using the equipment beyond its rated capacity and any wear or damage incurred as a result of using a hydraulic fluid which is not recommended by **LARZEP, S.A.**

Please note that if the equipment is disassembled or serviced by anyone other than an authorized service dealer or by **LARZEP, S.A.**, this guarantee is rendered null and void.

In the event of a warranty claim, return the equipment, to **LARZEP, S.A.** or the authorized dealer which sold you the hydraulic equipment, **LARZEP, S.A.** will repair or replace the faulty equipment, whichever is deemed most appropriate. **LARZEP, S.A.** shall not be held liable for any consequential damages or losses, which may occur as a result of faulty equipment



CYLINDER-HAND PUMP INSTRUCTIONS

Unpack and visually check all the components, making sure that there are no oil leaks, loose or damaged couplers, damaged threads, etc. Never use components that are damaged or appear to be in poor condition.

Assemble the device in accordance with the instructions given in the diagram, first checking that you have all the necessary material.

Apply 2 rounds of teflon around all 3/8" NPT male threads of the system, in the thread direction, leaving the first wire of the thread free of tape to prevent the tape breaking.
Tightening Torque: 100 Nm.

Check the correct installation and perfect functioning of the device without load, in accordance with the procedure outlined below:

WARNING: The plastic shipping plug is used to trap any residue oil from leaking out of port during shipment. Do not operate pump with the plastic shipping plug installed, oil may expel if pump is operated with this plug installed.

1. Release the pump drive lever by removing the hook from the lever-holder housing.
2. Pump manually with the drive screw open (rotate a few times to loosen) in order to fill the pump's internal circuit with oil.
3. Close the drive screw by turning clockwise manually. You do not need to close too tightly.
4. Now pump using the drive lever. First, fill the hose with oil. The number of strokes required will depend on the length of the hose and the flow supplied by the pump piston. With two-speed pumps, the large piston will be activated during the load-free movement for rapid advance, and when the device comes into contact with the load, the pump automatically transfers over to the second stage and only the oil supplied by the small piston will be available up to 700 kg/cm², which is the maximum pressure for the device.
5. Once the hose is full of oil, the cylinder piston will start to advance.
6. If the cylinder has a mechanical limit switch capable of withstanding the maximum device pressure, continue pumping until the limit switch is reached.
7. If any control elements (pressure gauges) are available, you will be able to see how the pressure increases along with the effort required to move the lever.
8. Keep pumping until you obtain the maximum pressure (700 kg/cm²). In this way you will be able to check the correct functioning of the safety valve and the absence of oil leaks in the installation.
9. Maintain pressure in the installation for a short period of time (1 minute) without pumping, in order to check the correct functioning of the pump's check valve.
10. Gently open the pump's drive screw (by turning anticlockwise) in order to protect the fall of the pressure gauge needle. Do not force the drive screw open. The cylinder will not move back more quickly because the screw is looser. A couple of turns will be enough.
11. If the cylinder has a return spring (SM, SMP, SMX, SH, TE, T, SAM, SAH, SATM, CY, KC) the piston will move back automatically. The return speed may be slow in some applications. In this case, we recommend the use of double effect cylinders. In the case of load return cylinders (SP, SPR, SX, SL, SSR, STR, STX, SAT), you will need to push the piston back using more or less force, depending on the size and position of the cylinder.
12. In cylinders without a mechanical end of stroke (SSR, STR, STX) this type of test cannot be carried out. If you do not have a test bench, you will have to test the installation using the actual load in the application. This operation should be carried out with extreme care by experienced personnel and maximum safety measures should be applied.
13. Repeat the processes as many times as necessary until you are comfortable handling the device.
14. If using close or check valves, or working with various cylinders via flow distributors, remember to take into consideration the effect these accessories may have on the functioning of the device, and establish an operating procedure in order to avoid unwanted effects.
15. These pumps can be operated in horizontal and vertical position. When using the hand pump in the vertical position it is imperative to place the hand pump with pump head facing down towards the earth and the pump handle facing upwards towards the sky.

MAINTENANCE

- Oil level check.
 - Check oil level regularly. Drain oil and refill with Larzep oil every 12 months. If pump is used in dirty environments, change the oil more often. Filter the oil before filling up the pump
 - This check must be carried out with the cylinder fully retracted. Excessive amount of oil in the tank will lead to internal pressures which will hamper the function of the pump.
 - Remove vent/fill cap from reservoir and fill the reservoir only to level mark shown on pump.
 - Remove air from the system if necessary. For that: close release valve; position hand pump at higher elevation than tool and the tool with the coupler higher than the moving end; fully advance the tool, open release valve to retract tool several times to expel the trapped air in pump circuit. Repeat the above steps as necessary until all of the air is expelled from pump's hydraulic circuit. Re-check oil level after removing air.
 - Return vent/fill cap to proper position.
- Once the equipment is being used the areas exposed to wear and oxidation must be cleaned and greased.

The pumps must always be handled and repaired by qualified personnel.

BREAK DOWNS AND REPARATIONS

- THE CYLINDER DOES NOT AVANCE
 - Lack of oil in the tank ____ Check the oil and fill the tank.
 - Release valve is open ____ Close the release valve.
 - Load is too heavy ____ Do not attempt to lift more than ratted tonnage.
 - Couplers not fully inserted ____ Check couplers.
 - Air trapped in the system ____ Remove air from the system.
 - Admission ball valve failure ____ Clean the seat and replace the ball.
 - Closing ball valve failure ____ Clean the seat and replace the ball.

- THE CYLINDER DOES NOT REACH WORKING PRESSURE
 - Relief valve no calibrated ____ Calibrate the valve.
 - Retention ball valve failure ____ Clean the seat and replace the ball.
 - Closing ball valve failure ____ Clean the seat and replace the ball.
 - Pressure seal damaged ____ Replace the seal.
 - Cylinder pressure seal damaged (see cylinder) ____ Replace the seal.

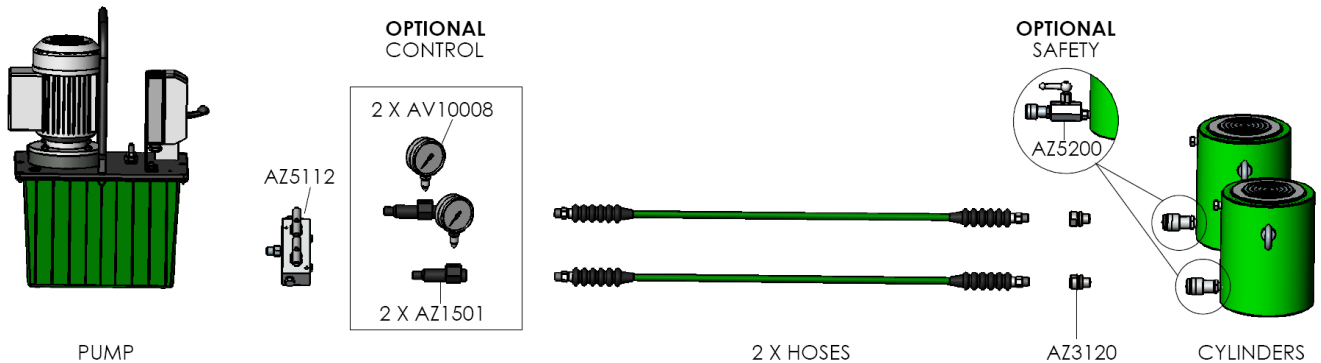
- THE CYLINDER DOES NOT RETRACT
 - Too much oil in the tank ____ Check the level.

Ensure that all the equipment and accessories are suitable for the maximum working pressure.

SINGLE ACTING SYSTEM WITH 1 CYLINDER



SINGLE ACTING SYSTEM WITH 2 CYLINDERS





WA20507, WA21107 PARTS LIST

REF No.	WA20507	WA21107	DESCRIPTION	QTY	REF No.	WA20507	WA21107	DESCRIPTION	QTY
01	6045112	6045000	Pump Housing	1	29	6067026	*	E-Ring	3
02	6067001	6045001	Oil Filter	1	30	6045109	DS2051070	Handle	1
03	*	*	O-Ring	2	31	6067025	6067025	Handle Grip	1
04	6045107	6045003	Tie Rod	1	32	6045026	6045026	Yoke Base	1
05	6045108	6045004	Reservoir	1	33	6045190	6045190	Roll Pin	1
06	6045005	6045005	Tail Base	1	34	6045053	6045053	Steel Ball	2
07	*	*	O-Ring	3	35	6067117	6067117	Inlet Ball Spring	2
08	6067009	6067009	Air Release Screw	1	36	6067013	6067013	Steel Ball	2
09	6045006	6045006	Handle Clip	1	37	6067049	6067049	Outlet Ball Spring	2
10	*	*	O-Ring	1	38	*	*	Copper Washer	2
11	6045008	6045008	Nut	1	39	6067015	6067015	Valve Cover Screw	2
12	6067052	6067052	Steel Ball	5	40	6067034	6067034	Steel Ball	1
13	6067051	6067051	Screw	3	41	6067033	6067033	Spring End Cap	1
14	6045110	6045110	Screw	1	42	6045044	6045044	L.P. Spring	1
15	*	6045170	O-Ring	1	43	6067029	6067029	Overload Cover Screw	1
16	6045171	6045171	Nipple	1	44	6067084	6067084	Cap	2
17	6067050	6067050	Set Screw	1	45	6045164	6045164	Cone Seat	1
18	6045064	6045064	Spring	1	46	6045165	6045165	Cone	1
19	*	*	O-Ring	1	47	6045166	6045166	H.P. Spring	1
20	*	*	Back-Up Ring	1	48	6045189	6045189	Overload Cover Screw	1
21	6045115	6067018	H.P. Piston	1	49	*	*	Release Valve Packing	1
22	6045116	6067019	Snap Ring	1	50	*	*	Washer	1
23	*	*	O-Ring	1	51	6067038	6067038	Release Nut	1
24	*	*	Back-Up Ring	1	52	6067116	6067116	Release Valve Screw	1
25	6045119	6067022	L.P. Piston	1	53	6045077	6045077	Release Knob	1
26	6045023	6045023	Yoke	1	54	6045078	6045078	Screw	1
27	6067028	6067028	Piston Pin	1	55	6045045	6045045	Base Plate	1
28	6067027	6067027	Yoke Pin	1	56	6045046	6045046	Screw	2
					*	JR.WA20507	JR.WA21107	Repair Kit	

