



**INSTRUCTIONS AND MANUAL**  
**W07807      X07807**  
**2 SPEED HAND PUMP 7500 cc**



**LARZEP, S.A.**  
Avenida Urtiaga, 6  
48269 MALLABIA, SPAIN  
**Tel.** +34 943 171200  
**Fax.** +34 943 174166  
**e-mail:** [sales@larzep.com](mailto:sales@larzep.com)  
[www.larzep.com](http://www.larzep.com)

**LARZEP AUSTRALIA PTY. LTD.**  
104 Wedgewood Road,  
HALLAM, VIC. 3803 AUSTRALIA  
**Tel.** +61 (3) 9796 3744  
**Fax.** +61 (3) 9796 5964  
**e-mail:** [sales@larzep.com.au](mailto:sales@larzep.com.au)  
[www.larzep.com.au](http://www.larzep.com.au)

**LARZEP GB LTD.**  
3 Commerce Way - Leighton Buzzard  
BEDS LU7 4RW UNITED KINGDOM  
**Tel.** +44 1525 377819  
**Fax.** +44 1525 851990  
**e-mail:** [sales@larzep.co.uk](mailto:sales@larzep.co.uk)  
[www.larzep.co.uk](http://www.larzep.co.uk)

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## 1. BEFORE USING THE EQUIPMENT AND SECURITY



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 sufficient length.
- ❖ Block loads mechanically once the movement has been completed and avoid operating underneath them.
- ❖ Use all the cylinder's useful support surface, both on the head and the base. Be prepared to use tilting heads if applying lateral loads.



Do not exposure 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 the 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 plug 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.
- ❖ 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.
- ❖ 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.

## 2. 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

### 3. TECHNICAL FEATURES

The "W" Hand Pumps are compact, light and portable used to power single acting-cylinders, they operate horizontally or vertically, with pump head downwards.

All models with pressure relief valve.

The two speeds pumps are recommended for applications where the cylinder plunger must move rapidly, also for larger cylinder hook-ups where greater oil capacity is required.

All pumps have 3/8"-18 NPT female ports.

The "X" models are automatic two-speed pumps with a 4-way control valve for operation of double acting- cylinders. Internal pressure relief valves for overload protection.

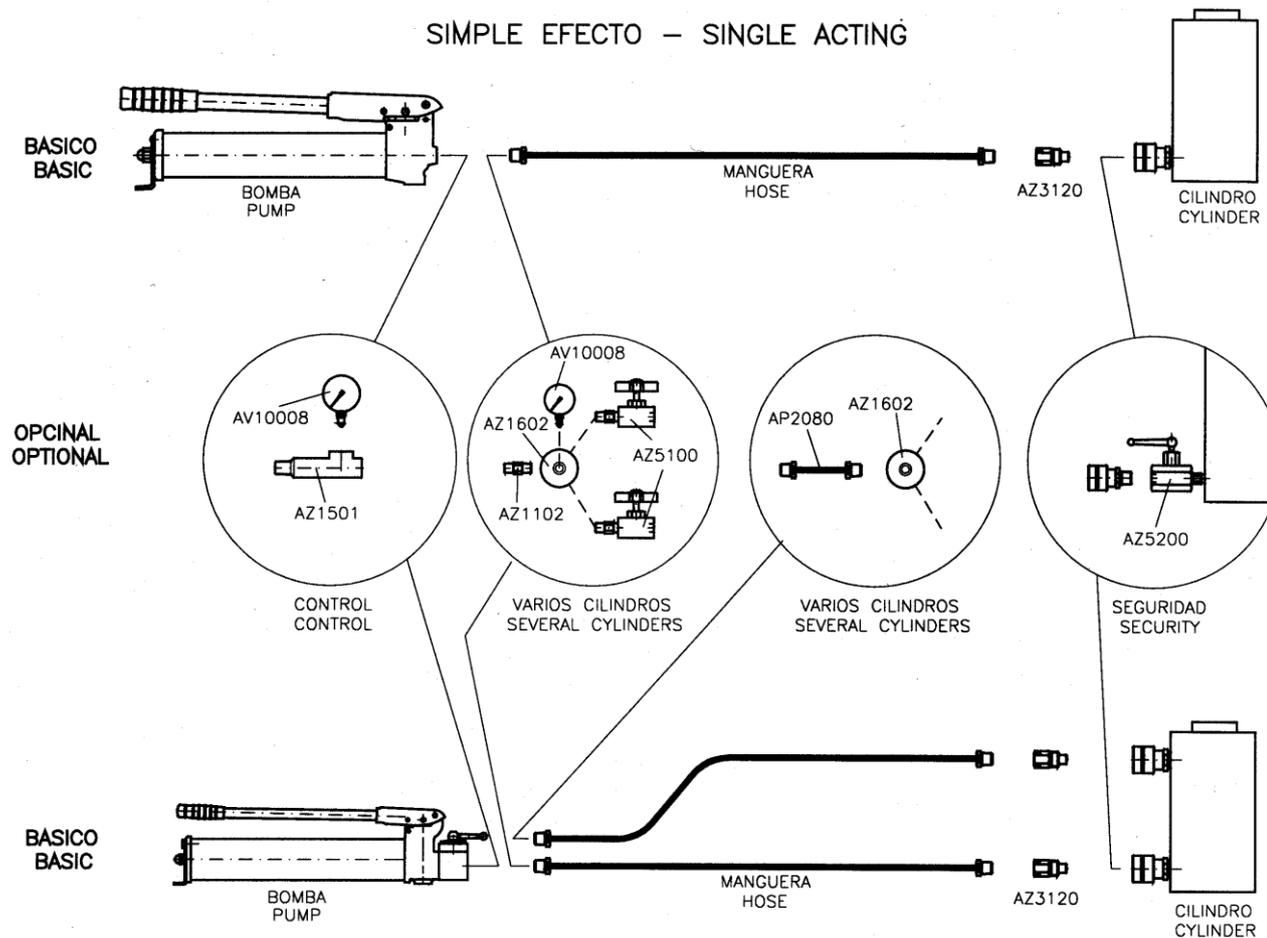
Two-speed operation for high tonnage cylinders where oil capacity and fast economical cycle time is needed.

REFERENCE	SPEEDS	USABLE OIL	OIL DISPLACEMENT PER STROKE	PRESSURE RATING	WEIGHT
			1º STAGE/ 2º STAGE	1º STAGE/ 2º STAGE	
<b>W07807</b>	2	7500 CC	120,5 / 4,6	20 / 700	24,9 Kg
<b>X07807</b>	2	7500 CC	120,5 / 4,6	20 / 700	26,3 Kg

### 4. START UP

#### INSTALACION – INSTALATION

##### SIMPLE EFECTO – SINGLE ACTING



##### DOBLE EFECTO – DOUBLE ACTING

- Unpack and visually check all the components, making sure that there are no oil leaks, loose or damaged plugs, 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.
- Check the correct installation and perfect functioning of the device with a load, in accordance with the procedure outlined below:

### **SINGLE ACTING INSTALLATION**

1. Place the distributor valve in central position.
2. Pump manually; with the oil filling plug opened, several times to allow the entry of air in the pump and make easier the suction
3. Close the plug by turning clockwise manually. You do not need to close too tightly.
4. Place the distributor valve in advance position and 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 feed movement, and when the device comes into contact with the load, an internal large piston relief valve will be automatically triggered and only the oil supplied by the small piston will be available up to 700 kg/cm<sup>2</sup>, 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 moving the lever.
8. Keep pumping until you obtain the maximum pressure (700 kg/cm<sup>2</sup>). In this way you will be able to check the correct functioning of the internal 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 (central position), in order to check the correct functioning of the pump's check valve.
10. To retract the cylinder, place the distributor valve in return movement. 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, ST, 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.
11. In cylinders without a mechanical limit switch (SSR, ST, 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.
12. Repeat the process as many times as necessary until you is comfortable handling the device.
13. 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.

### **DOUBLE ACTING INSTALLATION**

1. The connection of the couplers is, if possible, even more important here, since a bad connection will not only prevent the device from functioning, it may also generate excessive pressure build-up that may cause the break of the cylinder. Take note of which hose connects to the advance chamber and which to the return chamber.
2. All double action LARZEP cylinders are equipped with a mechanical end of stroke capable of withstanding the nominal pressure. You can therefore carry out the test described in the previous section. If you are working with another type of cylinder and are not 100% sure, do not carry out this test.
3. Turn the control of the distributing valve to the central position and pump a few times to fill the internal channels with oil.
4. Turn the lever to one side and pump. Oil will flow through the hose connected to the side to which the valve lever is rotated. If this hose is connected to the cylinder's thrust chamber, the piston will move forward. The oil in the return chamber will flow freely through the other hose to the pump tank. Flow is supplied by both the large and small pistons until the cylinder reaches the load.
5. Continue pumping until you reach the mechanical end of stroke. At this moment an internal large piston relief valve will be triggered, and only the oil supplied by the small piston will be available. Subject the installation to pressure to check for leaks.
6. Stop pumping and check (preferably using a pressure gauge) that the installation maintains the pressure level.
7. Turn the valve lever to the other side and pump. Oil will flow to the return chamber and the piston will move back. The oil in the advance chamber will flow freely back to the tank.
8. Repeat the processes as many times as necessary until you are comfortable handling the device.
9. 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.

## **5. MAINTENANCE**

### **Checking the oil level.**

- ❖ With the pump in vertical position, unscrew or pry off the plug. Check the level on the dip stick.
- ❖ 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.
- ❖ Filter the oil before filling up the pump.
- ❖ Once the equipment is being used the areas exposed to wear and oxidation must be cleaned and greased.

**BREAK DOWNS AND REPARATIONS**

**THE CYLINDER DOESN'T REACH WORKING PRESSURE.**

- ❖ Relief valve decalibrated (12) \_\_\_\_ *Calibrate the valve.*
- ❖ Retention ball valve failure (20) \_\_\_\_ *Clean the seat and replace the ball.*
- ❖ Closing ball valve failure (22) \_\_\_\_ *Clean the seat and replace the ball.*
- ❖ Pressure seal damaged (26) \_\_\_\_ *Replace the seal.*
- ❖ Cylinder pressure seal damaged (see cylinder) \_\_\_\_ *Replace the seal.*

**THE CYLINDER DOESN'T RETRACT**

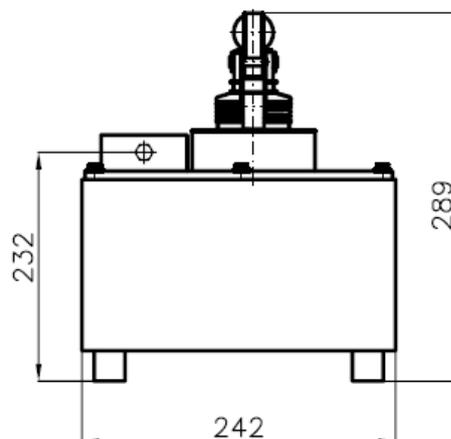
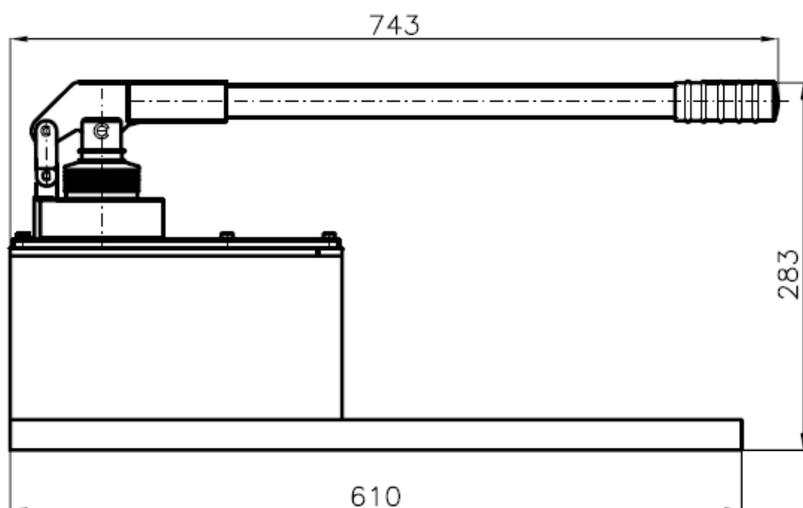
- ❖ Too much oil in the tank \_\_\_\_ *Check the level.*

**THE CYLINDER DOESN'T AVANCE**

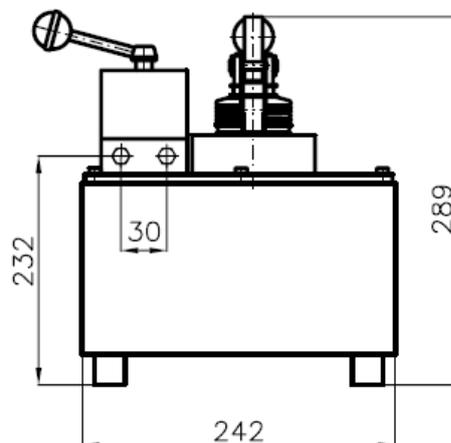
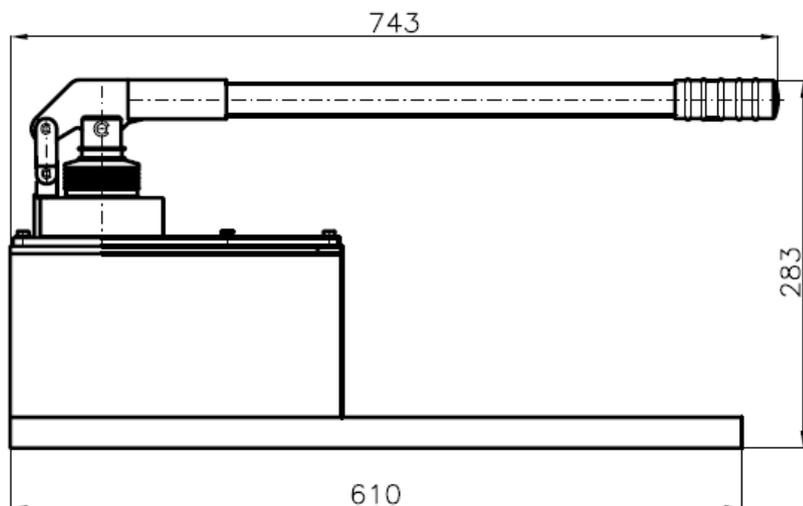
- ❖ Lack of oil in the tank \_\_\_\_ *Check the oil.*
- ❖ Couplers not fully inserted \_\_\_\_ *Check couplers.*
- ❖ Admission ball valve failure (19) \_\_\_\_ *Clean the seat and replace the ball.*
- ❖ Closing ball valve failure (22) \_\_\_\_ *Clean the seat and replace the ball.*

**6. DIMENSIONS**

**W07807**



**X07807**



**7. DECLARATION OF CONFORMITY****DECLARACION DE CONFORMIDAD**

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: 89/392/CEE, 91/368/CEE, 93/44/CEE, 93/68/CEE, 98/37/CEE

**E****DECLARATION OF CONFORMITE**

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: 89/392/EEC, 91/368/EEC, 93/44/EEC, 93/68/EEC, 98/37/EEC

**F****DECLARAÇÃO DE CONFORMIDADE**

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: 89/392/EEC, 91/368/EEC, 93/44/EEC, 93/68/EEC, 98/37/EEC

**P****ÖVERENSSTEMMELSESERKLÆRING**

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 bestemmelsene i Direktiv: 89/392/EEC, 91/368/EEC, 93/44/EEC, 93/68/EEC, 98/37/EEC

**DK****ERKLÆRINGOM OVERENSSTEMMELSE**

Vi, LARZEP, S.A.  
Adresse: Avda. Urtiaga, 6  
48269 Mallabia SPAIN  
Erklærer på eget ansvar, at følgende produkter som dekkes av denne erklæringen, er i overensstemmelse med bestemmelsene i Direktiv: 89/392/EEC, 91/368/EEC, 93/44/EEC, 93/68/EEC, 98/37/EEC

**N****ÜBEREINSTIMMUNGSESKLÄRUNG**

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 89/392/EEC, 91/368/EEC, 93/44/EEC, 93/68/EEC, 98/37/EEC übereinstimmen.

**D**

Tipo, Type, Typ, Tyyppi.

**SM / SH / SP / SMP / SX / SMX / ST / STX / SL / SMA / SHA / SSR / T / TE / TD / D / DH /  
DDR / Z / ZR / W / X / YA / YG / YZ / HM / HE / HG / HZ / HS / WI / CK / CC / CN / FU / FV  
/ FZ / FA / CY / AA / AU / CT / C / KC**

**A / AB / AC / BL / B / AF / F / HN / DLG / DL / DP / VA / VB / VC / VZ / EC / EE / EG / EM /  
EZ / CA / CS**

Mallabia, ESPAÑA 2005 / 04 / 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**

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: 89/392/EEC, 91/368/EEC, 93/44/EEC, 93/68/EEC, 98/37/EEC

**GB****DICHIARAZIONE DI CONFORMITÀ**

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: 89/392/EEC, 91/368/EEC, 93/44/EEC, 93/68/EEC, 98/37/EEC

**I****VAATIMUSTEMUKAISUUSVAKUUTUS.**

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: 89/392/EEC, 91/368/EEC, 93/44/EEC, 93/68/EEC, 98/37/EEC

**FIN****VERKLARINGVAN OVEREENKOMST.**

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: 89/392/EEC, 91/368/EEC, 93/44/EEC, 93/68/EEC, 98/37/EEC

**NL****FÖRSÄKRAN OM ÖVERESSTÄMMELSE**

Vi, LARZEP, S.A.  
Adress: Avda. Urtiaga, 6  
48269 Mallabia SPAIN  
Försäkrar under eget ansvar att följande produkter som omfattas av denna försäkrans är i överensstämmelse med villkoren i Direktiv: 89/392/EEC, 91/368/EEC, 93/44/EEC, 93/68/EEC, 98/37/EEC

**S****LARZEP, S.A.**

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