

# K-2

# OPERATING AND MAINTENANCE INSTRUCTION



# LARIUS®

PAINTING EQUIPMENT

ENGLISH










# LARIUS®

## HIGH PRESSURE PAINTING EQUIPMENT

INTRODUCTION.....	p.1	<b>O</b> CHARGING THE BATTERY .....	p.12
<b>A</b> WORKING PRINCIPLE .....	p.2	<b>P</b> CLEANING AND/OR REPLACEMENT OF	
<b>B</b> TECHNICAL DATA.....	p.2	THE PRESSURE TRANSMITTER .....	p.13
<b>C</b> DESCRIPTION OF THE EQUIPMENT.....	p.3	<b>Q</b> COMPLETE PRESSURE CONTROL	
<b>D</b> CONTROLS DESCRIPTION .....	p.4	DEVICE REF. 16350.....	p.14
<b>E</b> TRANSPORT AND UNPACKING .....	p.5	<b>R</b> COMPLETE PUMPING REF. 16100.....	p.16
<b>F</b> SAFETY RULES.....	p.5	<b>S</b> FILTER GROUP .....	p.18
<b>G</b> SETTING-UP.....	p.6	<b>T</b> RECIRCULATING-SAFETY VALVE	
<b>H</b> WORKING .....	p.8	GROUP REF.16400.....	p.19
<b>I</b> CLEANING AT THE END OF THE WORK .....	p.9	<b>U</b> DRIVE ASSEMBLY.....	p.20
<b>J</b> ROUTINE MAINTENANCE .....	p.9	<b>V</b> SUCTION SYSTEM.....	p.22
<b>L</b> PROBLEMS AND SOLUTIONS .....	p.10	<b>W</b> 50L TANK.....	p.23
<b>M</b> CORRECT PROCEDURE OF		<b>Z</b> ACCESSORIES.....	p.24
DECOMPRESSION.....	p.11		
<b>N</b> REPLACEMENT OF THE PUMPING			
GROUP'S GASKETS .....	p.12		

				
Read this operator's manual carefully before using the equipment. An improper use of this machine can cause injuries to people or things.	It indicates an accident risk or serious damage to equipment if this warning is not followed.	It indicates a fire or explosion risk if this warning is not followed.	It is obligatory to wear suitable clothing as gloves, goggles and face shield.	It indicates important recommendations about disposal and recycling process of products in accordance with the environmental regulations.

**WE ADVISE THE USE OF THIS EQUIPMENT ONLY BY PROFESSIONAL OPERATORS.  
ONLY USE THIS MACHINE FOR USAGE SPECIFICALLY MENTIONED IN THIS MANUAL.**

Thank you for choosing a **LARIUS S.R.L.** product.  
As well as the product purchased,  
you will receive a range of support services  
enabling you to achieve the results desired,  
quickly and professionally.

## A WORKING PRINCIPLE

The unit **LARIUS K-2** is defined “*piston pump*”. This pump is used for high pressure painting without air (*from this process derives the term “airless”*).

The pump is controlled by an motor coupled with a reduction gear. A cam shaft and a connecting rod allow to obtain the reciprocating motion necessary to the working of the “*pumping group*” diaphragm. The piston movement produces a “depression”.

The product is sucked, pushed towards the pump outlet and then sent to the gun through the flexible hose. A mechanical device allows to adjust and control the pressure of the material coming out of the pump.

A safety valve avoiding overpressure, guarantees the total reliability of the equipment.

## B DATI TECNICI

	K-2
MOTOR POWER	1 kW (1,3 Hp)
TRACTION ENGINE POWER	0,6 kW (0,8 Hp)
MAX. WORKING PRESSURE	200 bar
MAX. DELIVERY	2 L/min
SUPPLY	24 V
WEIGHT	185 Kg
WEIGHT WITH BATTERIES	260 Kg
LENGTH	(A) 1800 mm
WIDTH	(B) 1100 mm
HEIGHT	(C) 800 mm



**C DESCRIPTION OF THE EQUIPMENT**

English



POS.	Description
1	Pressure control knob
2	Reduction casting
3	Suction Tube
4	High pressure hose
5	Airless gun
6	Product tank
7	Suction filter

POS.	Description
8	High pressure manometer
9	Airless manual gun
10	Trigger safety clamp
11	Battery charger
12	Drain valve
13	Recirculation tube

## D CONTROLS DESCRIPTION

**D1) Steerage lever.**

Pulling the lever the straight only "mode" will be unlocked allowing the machine to run.

**D2) Internal gun operating lever.**

Pulling the lever the gun placed at the internal side will spray.

**D3) Pull the lever to release the motors brake.**

**D4) LED**

Indicates whether the power to the panel is on or off.

**D5) Key-operated selector switch**

Used to switch on machine.

**D6) Indicator**

Indicates the charge in the electrical battery.

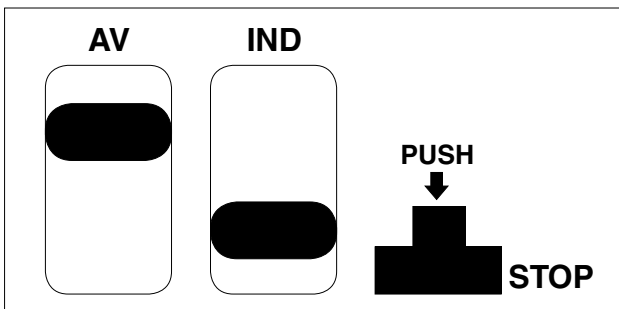
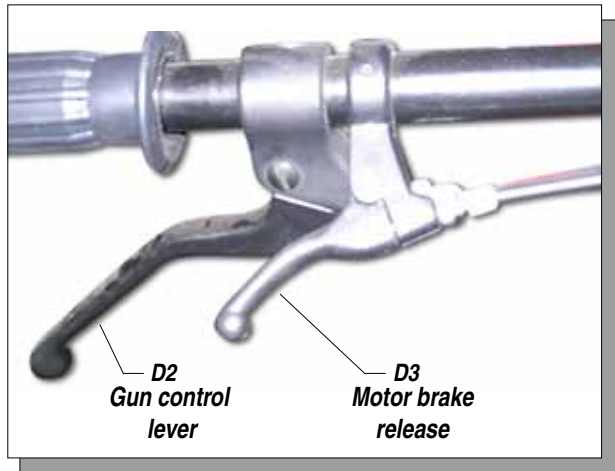
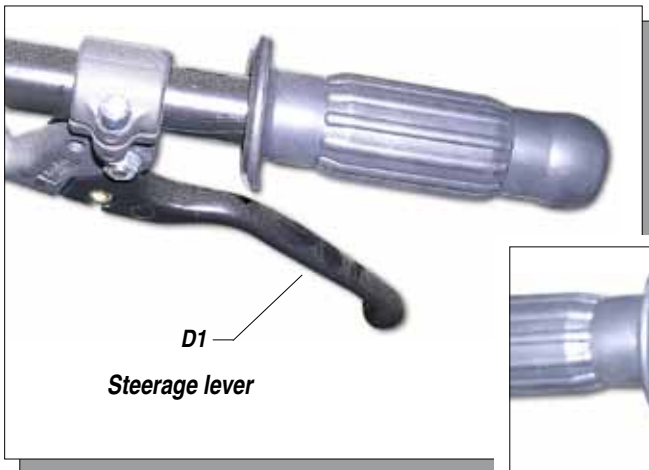
**D7) Adjustment knob**

Used to progressively adjust the machine's running speed.

**D8) Direction selector**

Allows the user to select the machine's advancement direction; stops the machine's movement if pressed..

**D9) Speed**





## E TRANSPORT AND UNPACKING

- The packed parts should be handled as indicated in the symbols and markings on the outside of the packing.
- Before installing the equipment, ensure that the area to be used is large enough for such purposes, is properly lit and has a clean, smooth floor surface.
- The user is responsible for the operations of unloading and handling and should use the maximum care so as not to damage the individual parts or injure anyone. To perform the unloading operation, use only qualified and trained personnel (*truck and crane operators, etc.*) and also suitable hoisting equipment for the weight of the installation or its parts. Follow carefully all the safety rules. The personnel must be equipped with the necessary safety clothing.
- The manufacturer will not be responsible for the unloading operations and transport to the workplace of the machine.
- Check the packing is undamaged on receipt of the equipment. Unpack the machine and verify if there has been any damage due to transportation. In case of damage, call immediately **LARIUS** and the Shipping Agent. All the notices about possible damage or anomalies must arrive timely within 8 days at least from the date of receipt of the plant through Registered Letter to the Shipping Agent and to **LARIUS**.
- The disposal of packaging materials is a customer's competence and must be performed in accordance with the regulations in force in the country where the plant is installed and used. It is nevertheless sound practice to recycle packaging materials in an environment-friendly manner as much as possible.

## F SAFETY RULES

- THE EMPLOYER SHALL TRAIN ITS EMPLOYEES ABOUT ALL THOSE RISKS STEMMING FROM ACCIDENTS, ABOUT THE USE OF SAFETY DEVICES FOR THEIR OWN SAFETY AND ABOUT THE GENERAL RULES FOR ACCIDENT PREVENTION IN COMPLIANCE WITH INTERNATIONAL REGULATIONS AND WITH THE LAWS OF THE COUNTRY WHERE THE PLANT IS USED.

THE BEHAVIOUR OF THE EMPLOYEES SHALL STRICTLY COMPLY WITH THE ACCIDENT PREVENTION AND ALSO ENVIRONMENTAL REGULATIONS IN FORCE IN THE COUNTRY WHERE THE PLANT IS INSTALLED AND USED.



**Read carefully and entirely the following instructions before using the product. Please save these instructions in a safe place**



**The unauthorised tampering/replacement of one or more parts composing the machine, the use of accessories, tools, expendable materials other than those recommended by the manufacturer can be a danger of accident.**

**The manufacturer will be relieved from tort and criminal liability.**

- KEEP YOUR WORK PLACE CLEAN AND TIDY. DISORDER WHERE YOU ARE WORKING CREATES A POTENTIAL RISK OF ACCIDENTS.
- ALWAYS KEEP PROPER BALANCE AVOIDING UNUSUAL STANCE.
- BEFORE USING THE TOOL, ENSURE THERE ARE NOT DAMAGED PARTS AND THE MACHINE CAN WORK PROPERLY.
- ALWAYS FOLLOW THE INSTRUCTIONS ABOUT SAFETY AND THE REGULATIONS IN FORCE.
- KEEP THOSE WHO ARE NOT RESPONSIBLE FOR THE EQUIPMENT OUT OF THE WORK AREA.
- **NEVER** EXCEED THE MAXIMUM WORKING PRESSURE INDICATED.
- **NEVER** POINT THE SPRAY GUN AT YOURSELVES OR AT OTHER PEOPLE. THE CONTACT WITH THE CASTING CAN CAUSE SERIOUS INJURIES.
- IN CASE OF INJURIES CAUSED BY THE GUN CASTING, SEEK IMMEDIATE MEDICAL ADVICE SPECIFYING THE TYPE OF THE PRODUCT INJECTED. **NEVER** UNDERVALUE A WOUND CAUSED BY THE INJECTION OF A FLUID.
- ALWAYS DISCONNECT THE SUPPLY AND RELEASE THE PRESSURE IN THE CIRCUIT BEFORE PERFORMING ANY CHECK OR PART REPLACEMENT OF THE EQUIPMENT.
- NEVER MODIFY ANY PART IN THE EQUIPMENT. CHECK REGULARLY THE COMPONENTS OF THE SYSTEM. REPLACE THE PARTS DAMAGED OR WORN.

- TIGHTEN AND CHECK ALL THE FITTINGS FOR CONNECTION BETWEEN PUMP, FLEXIBLE HOSE AND SPRAY GUN BEFORE USING THE EQUIPMENT.
- ALWAYS USE THE FLEXIBLE HOSE SUPPLIED WITH STANDARD KIT. THE USE OF ANY ACCESSORIES OR TOOLING OTHER THAN THOSE RECOMMENDED IN THIS MANUAL, MAY CAUSE DAMAGE OR INJURE THE OPERATOR.
- THE FLUID CONTAINED IN THE FLEXIBLE HOSE CAN BE VERY DANGEROUS. HANDLE THE FLEXIBLE HOSE CAREFULLY. DO NOT PULL THE FLEXIBLE HOSE TO MOVE THE EQUIPMENT. NEVER USE A DAMAGED OR A REPAIRED FLEXIBLE HOSE.



The high speed of travel of the product in the hose can create static electricity through discharges and sparks. It is suggested to earth the equipment.

The pump is earthed through the earth cable of the supply. The gun is earthed through the high pressure flexible hose. All the conductors near the work area must be earthed.

- NEVER SPRAY OVER FLAMMABLE PRODUCTS OR SOLVENTS IN CLOSED PLACES.
- NEVER USE THE TOOLING IN PRESENCE OF POTENTIALLY EXPLOSIVE GAS.



Always check the product is compatible with the materials composing the equipment (*pump, spray gun, flexible hose and accessories*) with which it can come into contact. Never use paints or solvents containing halogen hydrocarbons (*as the methylene chloride*).

If these products come into contact with aluminium parts can provoke dangerous chemical reactions with risk of corrosion and explosion.



IF THE PRODUCT TO BE USED IS TOXIC, AVOID INHALATION AND CONTACT BY USING PROTECTION GLOVES, GOGGLES AND PROPER FACE SHIELDS



TAKE PROPER SAFETY MEASURES FOR THE PROTECTION OF HEARING IN CASE OF WORK NEAR THE PLANT.

**Electrical safety precautions**

- Check the "ON/OFF" switch is on the "OFF" position before connecting the cable to the mains.
- Never carry a plugged-in equipment.
- Disconnect the equipment before storing it and before performing any maintenance operation or replacing of accessories.
- Do not carry the equipment neither unplug it by pulling the electric cable. Protect the cable from heat, oil and sharp edges.
- When the tool is used outdoors, use only an extension cable suited for outdoor use and so marked.



Never attempt to tamper with the calibre of instruments.

- Take care when the pumping rod is moving. Stop the machine whenever someone is within its vicinity.
- Repairs of the electrical equipment should only be carried out by skilled personnel, otherwise considerable danger to the user may result.

**G SETTING-UP**

**CONNECTION OF THE FLEXIBLE HOSE TO THE GUN**

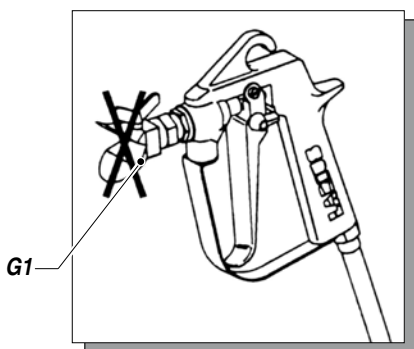
- Connect the high pressure flexible hoses to the pump and the guns tightening the fittings strongly (*the use of two wrenches is suggested*). **NEVER** use sealants on fittings threads. It is **ADVISED** to mount a high pressure manometer at the pump outlet (*see on page "Accessories"*) to read the product pressure.
- It is recommended to use the hose provided with the standard kit. **NEVER** use a damaged or a repaired flexible hose.



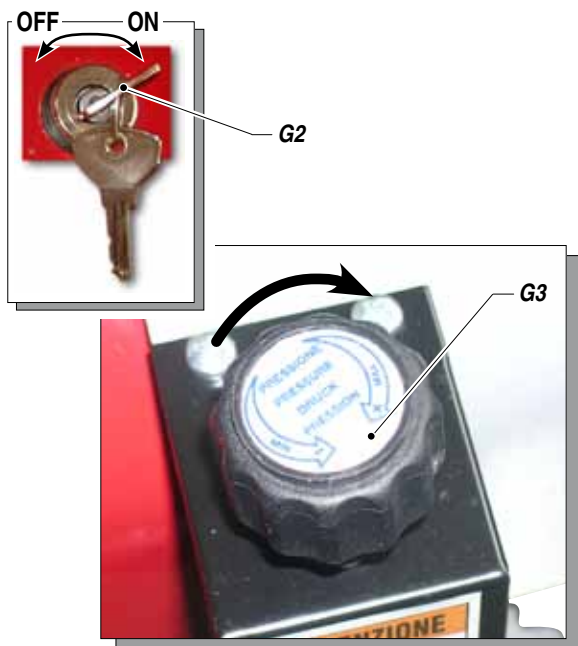


### WASHING OF THE NEW EQUIPMENT

- The equipment has already been adjusted at our factory with light mineral oil left inside the pumping group as protection. Therefore, wash with diluent before sucking the product.
- Lift the suction pipe and dip it into the solvent tank.
- Ensure the gun (G1) is without nozzle.

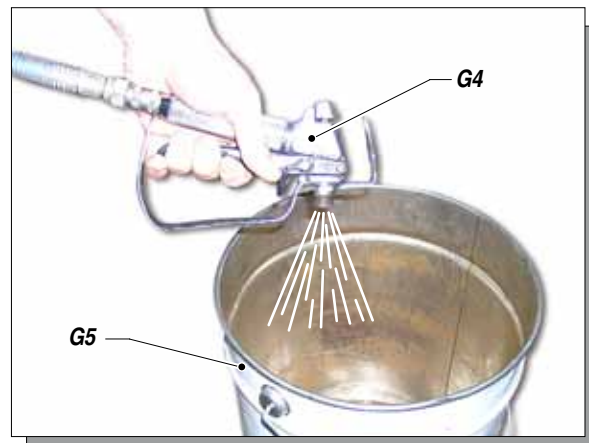


- Turn the key (G2) of the equipment to the ON (I) position.
- Turn clockwise the pressure control knob (G3) so as the machine works at idle speed.



- Point the gun (G4) at a container (G5) keeping the trigger pressed (so as to drain the oil inside) till a clean solvent comes out. Now, release the trigger.

- Remove the suction pipe and take away the solvent tank.



- Point the gun at the solvent tank and press the trigger so as to recover the residual solvent.
- As soon as the pump starts to over-rev turn the key to the OFF (0) position to switch off the equipment.



**Absolutely avoid to spray solvents indoors. In addition, it is recommended to keep away from the pump in order to avoid the contact between the solvent fumes and the electric motor.**

- Now the machine is ready. Should you use water paints, besides the solvent wash, a wash with soapy and then clean water is suggested.
- Insert the gun trigger lock and assemble the nozzle.

### PREPARATION OF THE PAINT

- Make sure the product is suitable to be used with a spray gun.



**The use of non-compliant products causes damage to the machine thus annulling the guarantee (only use specific filtered paints for airless applications).**



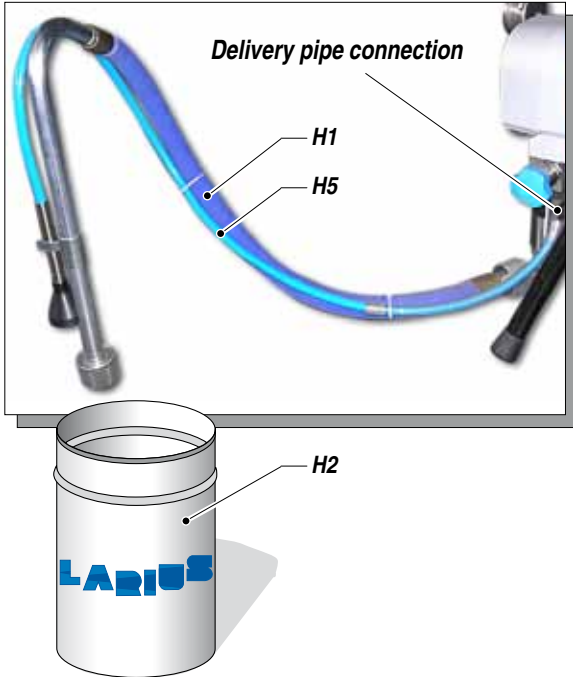
**Make sure the product to be used is compatible with the materials employed for manufacturing the equipment (stainless steel and aluminium). Because of that, please contact the supplier of the product.**

Never use products containing halogen hydrocarbons (as methylene chloride). If these products come into contact with aluminium parts of the equipment, can provoke dangerous chemical reactions with risk of explosion.

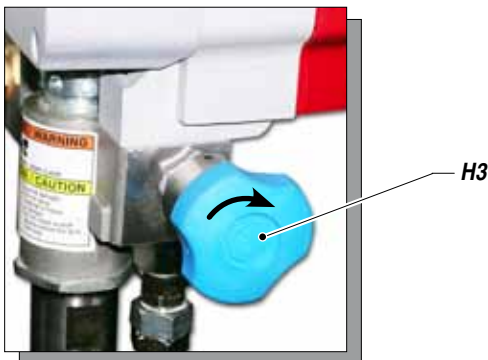
# H WORKING

## START OF THE PAINTING OPERATIONS

- Use the tooling after performing all the **SETTING UP** operations above described.
- Dip the suction pipe (H1) into the product tank (H2).



- Open the safety- relief valve (H3) (turn clockwise so as the pin slides on the cam track).



- Press the switch **ON (I)** of the equipment and turn a little the pressure control knob (H4) clockwise, so as the machine works at the idle speed.



- Make sure the product recycles from the return tube (H5).
- Close the drain valve (turn clockwise till the valve has released).
- Now the machine carries on sucking the product till the flexible hose is full, up to the gun. Then it will stop automatically.

## SPRAY ADJUSTMENT

- Slowly turn clockwise the pressure control knob to reach the pressure value in order to ensure a good atomization of the product.
- An irregular and marked spray on the sides indicates a low working pressure. On the contrary, a too high pressure causes a high fog ("overspray") and waste of product.
- In order to avoid overthickness of paint, let the gun advance sideways (right-left) when spraying.
- Always paint with regular parallel bands coats.
- Keep a safety and constant distance between the gun and the support to be painted and also keep yourselves perpendicular to it.



**NEVER point the spray gun at yourselves or at other people. The contact with the casting can cause serious injuries.**

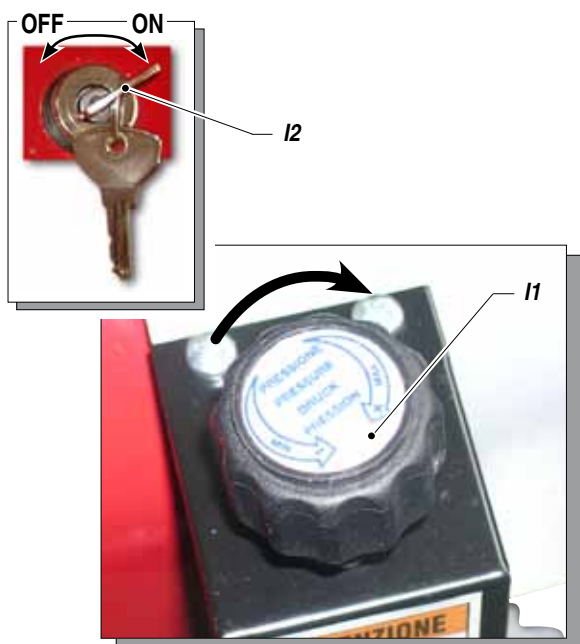
**In case of injuries caused by the gun casting, seek immediate medical advice specifying the type of the product injected.**



**The drain valve is a safety valve too. When working at the maximum pressure available, releasing the gun trigger sudden increases of pressure can occur. In this case, the drain valve opens automatically eliminating part of the product from the recirculating tube. Then it closes so as to go back to the first working conditions.**

## I CLEANING AT THE END OF THE WORK

- Reduce pressure to the minimum (*turn counterclockwise the pressure control knob (I1)*).
- Turn the key (I2) placed on the box of the electric motor, to stop the equipment.



- Open the safety valve to release the pressure in the circuit.
- Lift the suction pipe and replace the product tank with that of the solvent (*ensure it is compatible with the product being used*).
- Unscrew the gun nozzle (*do not forget to clean it with solvent*).
- Turn the key (I2) ON (I) and turn a little the pressure control knob (I1) clockwise so as the machine works till the motor starts.
- Make sure the solvent recycles the washing fluid from the return tube.
- Close the safety valve.
- Point the gun at the product tank and, keeping the trigger pressed, release the remaining product till a clean solvent comes out. Now, release the trigger.
- Lift again the suction pipe and remove the solvent tank.
- Now point the gun at the solvent tank and press the trigger so as to recover the residual solvent.
- As the pump starts idling, press the switch OFF (0) to stop the equipment.

- In case of long storage, we recommend you to suck and to leave light mineral oil inside the pumping group and the flexible hose.



Follow the washing procedure before using again the equipment.

## J ROUTINE MAINTENANCE

### CHECK ON THE PACKING NUT

Daily check the packing nut is tight in order to avoid wastes but not excessively to prevent the piston from seizing and the gaskets from wearing.

- For tightening, use the wrench (J1) supplied (*ref. 11503*).



ALWAYS DISCONNECT THE POWER SUPPLY AND RELEASE THE PRESSURE IN THE PUMPING GROUP (*open the drain valve*) BEFORE TIGHTENING THE PACKING NUT.

- Use the lubricant (J2) supplied (*ref. 16325*) to allow an easy sliding of the piston inside the gasket group.  
Daily top up the packing nut.



## **L** PROBLEMS AND SOLUTIONS

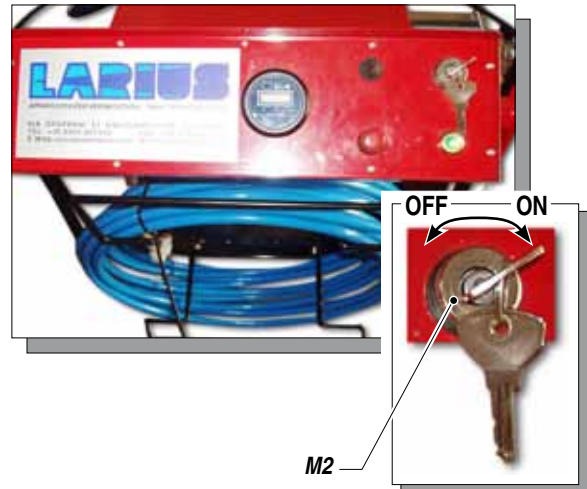
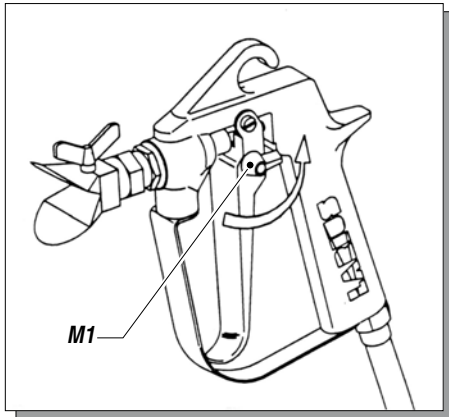
<b>Problem</b>	<b>Cause</b>	<b>Solution</b>
<ul style="list-style-type: none"> <li>• <b>The equipment does not start</b></li> </ul>	<ul style="list-style-type: none"> <li>• Lack of voltage;</li> <li>• Breakdown of pressure transmitter;</li> <li>• Breakdown of motor electric control box;</li> <li>• The product is solidified inside the pump;</li> </ul>	<ul style="list-style-type: none"> <li>• Check the correct connection to the power supply;</li> <li>• Verify and replace it, if necessary;</li> <li>• Verify and replace it, if necessary;</li> <li>• Open the drain valve to release pressure in the circuit and stop the machine. Disassemble the pumping group and the pressure transmitter and clean;</li> </ul>
<ul style="list-style-type: none"> <li>• <b>The equipment does not suck the product</b></li> </ul>	<ul style="list-style-type: none"> <li>• Suction filter clogged;</li> <li>• Suction filter too fine;</li> <li>• The equipment sucks air;</li> </ul>	<ul style="list-style-type: none"> <li>• Clean or replace it;</li> <li>• Replace it with a larger-mesh filter (<i>with very dense products, remove the filter</i>);</li> <li>• Check the suction pipe;</li> </ul>
<ul style="list-style-type: none"> <li>• <b>The equipment sucks but does not reach the pressure desired</b></li> </ul>	<ul style="list-style-type: none"> <li>• Lack of product;</li> <li>• The equipment sucks air;</li> <li>• The drain valve is open;</li> <li>• The gaskets of the pumping group are worn;</li> <li>• Suction or delivery valve dirty;</li> </ul>	<ul style="list-style-type: none"> <li>• Add the product;</li> <li>• Check the suction pipe;</li> <li>• Close the drain valve;</li> <li>• Replace the gaskets;</li> <li>• Disassemble the pumping group;</li> </ul>
<ul style="list-style-type: none"> <li>• <b>When pressing the trigger, the pressure lowers considerably</b></li> </ul>	<ul style="list-style-type: none"> <li>• Nozzle too big or worn;</li> <li>• The product is too dense;</li> <li>• The filter of the gun-butt is too fine;</li> </ul>	<ul style="list-style-type: none"> <li>• Replace it with a smaller one;</li> <li>• Dilute the product, if possible;</li> <li>• Replace it with a larger-mesh filter;</li> </ul>
<ul style="list-style-type: none"> <li>• <b>The pressure is normal but the product is not atomized</b></li> </ul>	<ul style="list-style-type: none"> <li>• The nozzle is partially clogged;</li> <li>• The product is too dense;</li> <li>• The filter of the gun-butt is too fine;</li> </ul>	<ul style="list-style-type: none"> <li>• Clean or replace it;</li> <li>• Dilute the product, if possible;</li> <li>• Replace it with a larger-mesh filter;</li> </ul>
<ul style="list-style-type: none"> <li>• <b>The atomization is imperfect</b></li> </ul>	<ul style="list-style-type: none"> <li>• The nozzle is worn;</li> </ul>	<ul style="list-style-type: none"> <li>• Replace it;</li> </ul>
<ul style="list-style-type: none"> <li>• <b>When releasing the trigger of the gun, the equipment does not stop (<i>the motor runs slowly and the piston rod keeps on going up and down</i>)</b></li> </ul>	<ul style="list-style-type: none"> <li>• The gaskets of the pumping group are worn;</li> <li>• Suction or delivery valve dirty;</li> <li>• Drain valve defective;</li> </ul>	<ul style="list-style-type: none"> <li>• Replace the gaskets;</li> <li>• Disassemble the pumping group and clean;</li> <li>• Verify and replace it, if necessary;</li> </ul>



Always close the air compressed supply and unload the plant pressure before performing any check or replacement of pump parts (see "*correct procedure of decompression*").

## M CORRECT PROCEDURE OF DECOMPRESSION

- Insert the gun clamp (M1).
- Turn the key (M2) to the **OFF (0)** position to stop the equipment.



- Open the drain valve (M3) to release the residual pressure always clockwise.



### WARNING:

If the equipment is still under pressure after performing the operations above described because of the nozzle or the flexible hose clogged, proceed as follows:

- Loosen very slowly the gun nozzle.
- Release the clamp.
- Point the gun at the container of the product and press the trigger to release pressure.
- Loosen very slowly the fitting of connection from the flexible hose to the gun.
- Clean or replace the flexible hose and the nozzle.



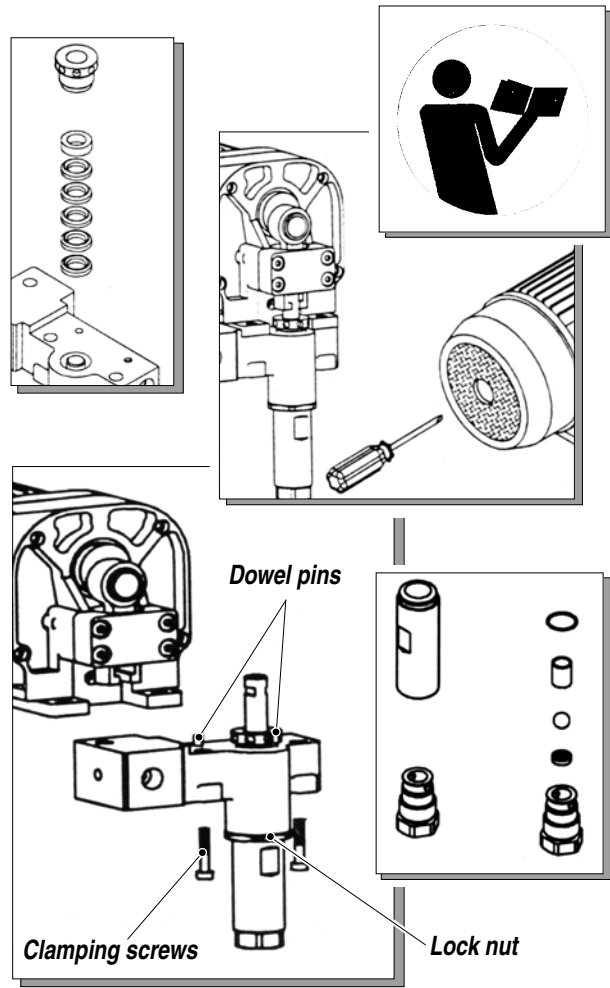
## N REPLACEMENT OF THE PUMPING GROUP'S GASKETS

- Carry out this operation after cleaning the tooling.



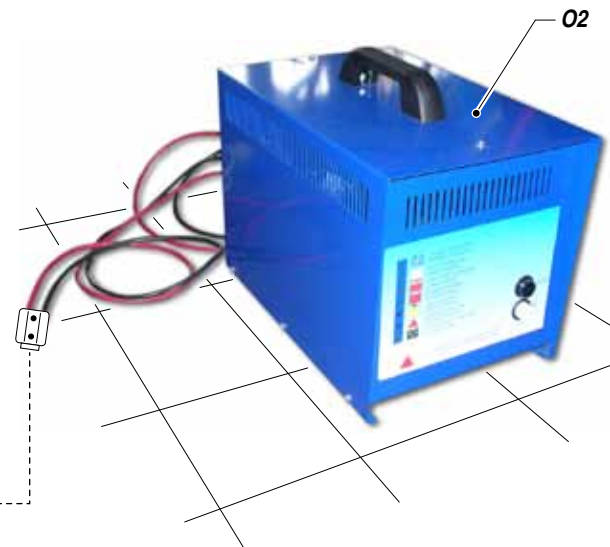
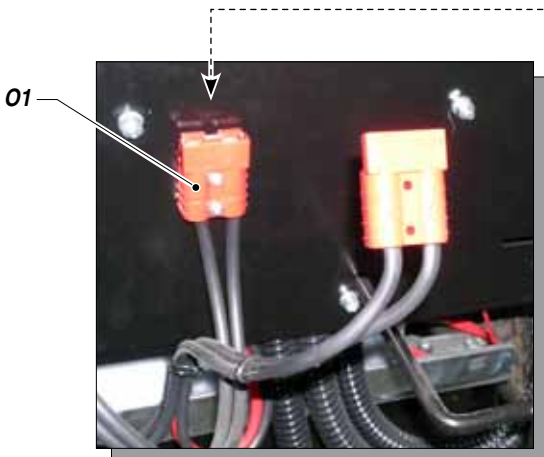
**Always disconnect the power supply and release pressure before going on with the operations (follow the "correct procedure of decompression").**

- Disconnect the pumping group by unscrewing the two fastening screws.
- Using a screwdriver, turn the motor till the piston rod is on its stroke lowest point.
- Extract the pumping group from the housing paying attention to the dowel pins.
- Unscrew the rigid suction pipe from the pumping group by loosening the locknut;
- Unscrew the upper packing nut;
- Unscrew the suction valve and clean and/or replace its parts, if necessary;
- Extract the piston rod from the bottom;
- Disassemble the piston rod and replace the gaskets group if worn;
- If necessary, remove the upper gaskets for their replacement;
- See the exploded view of the pumping group for the correct assembly.



## O CHARGING THE BATTERY

- Pull out the plug (O1);
- Connect the battery charger cables (O2) to the socket (O1);
- Switch on the battery charger (O2) and wait until the machines battery is completely charged.



**The batteries must be recharged at least once a month in order to prevent them from deteriorating.**

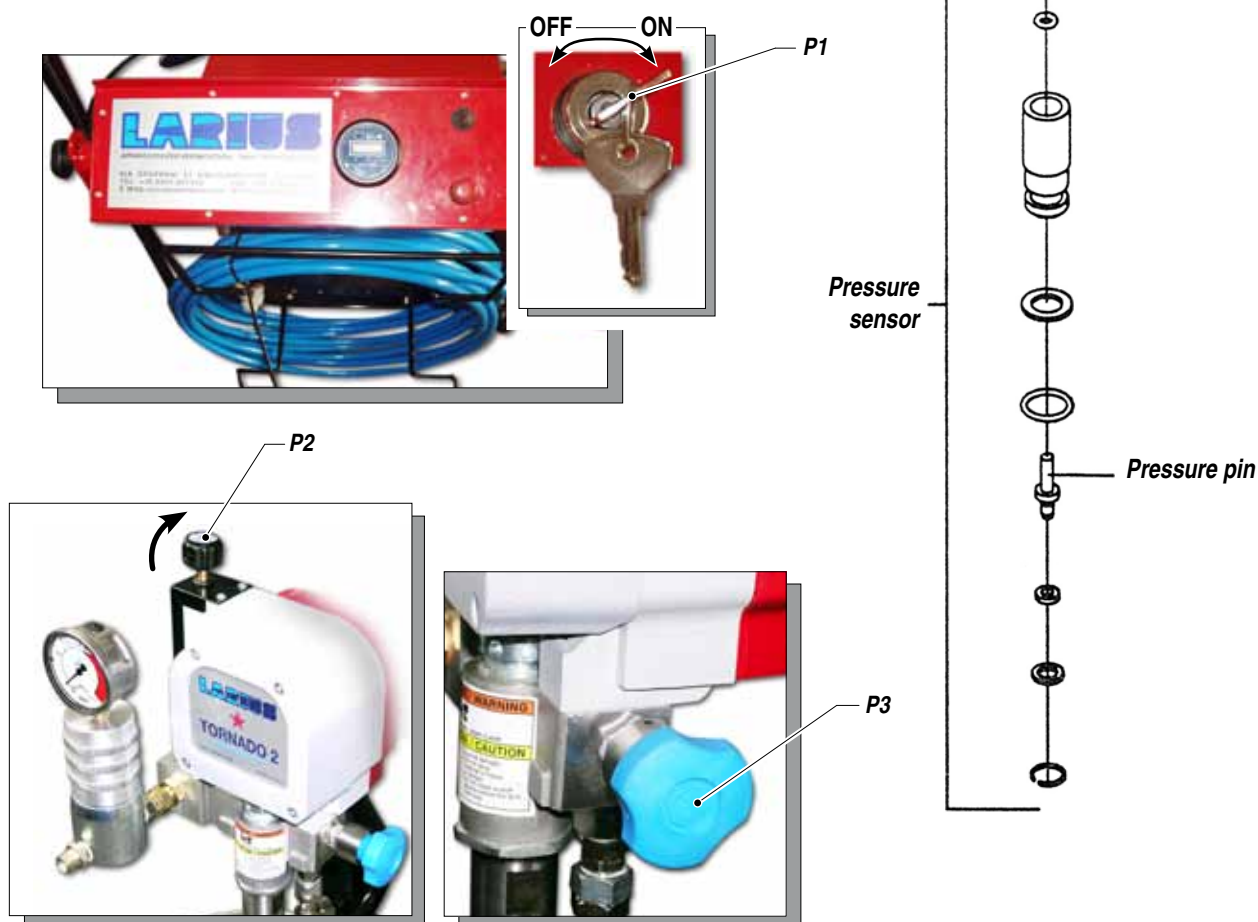
## P CLEANING AND/OR REPLACEMENT OF THE PRESSURE TRANSMITTER

### CHECK ON THE PRESSURE TRANSMITTER

Before evaluating if the cause of the malfunction is due to the pressure transmitter or to the electric control box, proceed as follow:

- Check the correct connection to the power supply.
- Make sure that the key (P1) is on the **ON (I)** position.
- Turn a little the pressure control knob (P2) clockwise till the electric motor starts.
- In case, after these checks, the tooling does not start, verify the pressure transmitter.
- Make sure the equipment does not suck materials (*remove the product tank*).
- Open the drain valve (P3).
- Disassemble the pumping group as shown on the previous chapter.

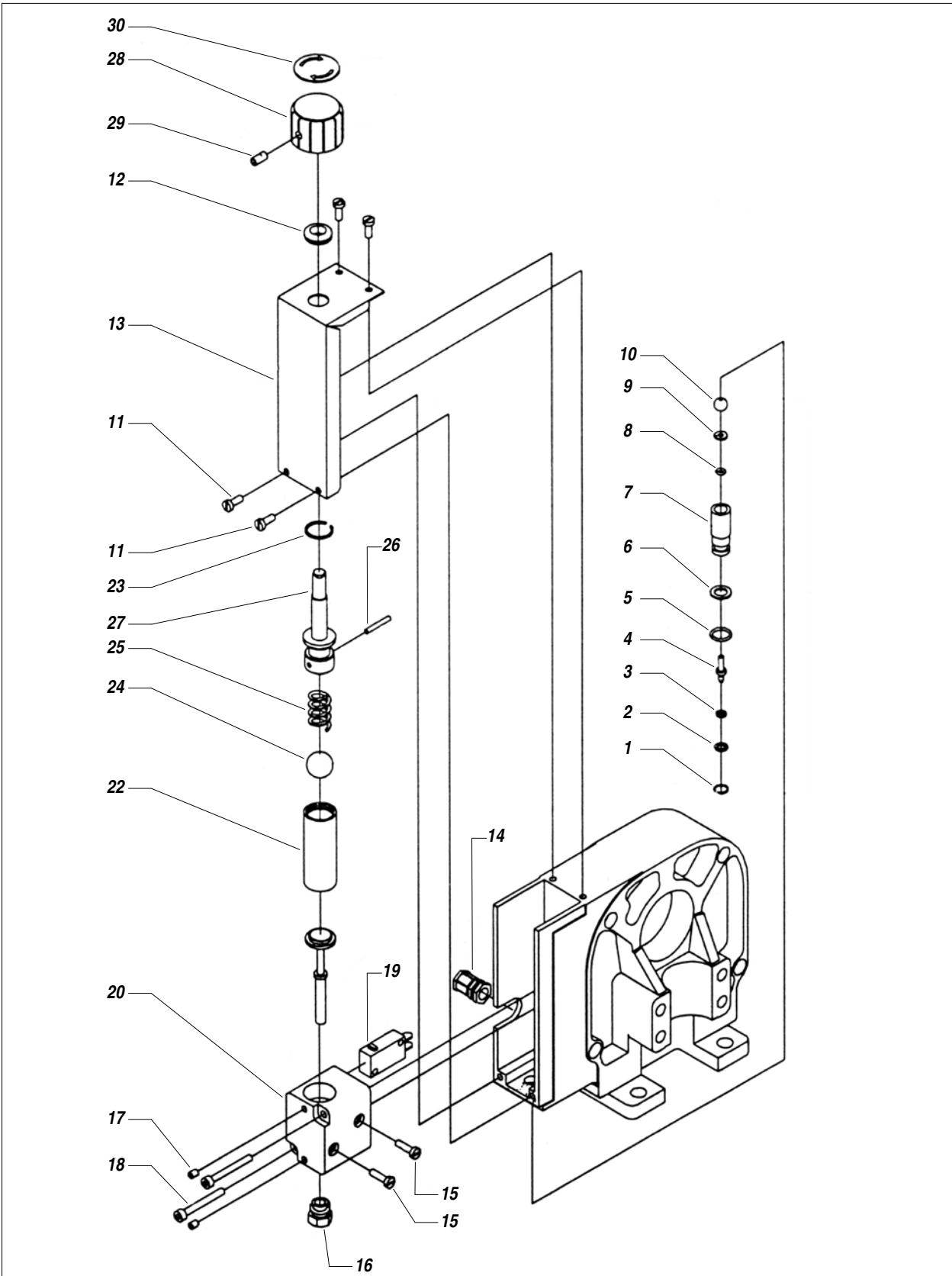
- Remove the pressure sensor from its housing and check if the pin can move. If necessary, clean thoroughly.
- Check the seals (O-ring and teflon ring): if worn or "pinched", replace them.
- Disassemble the supporting block and check the microswitch operates properly by using a tester. If damaged, replace it.
- Reassemble the whole unit centering the block with the fastening screws.
- Reassemble the whole unit and start again the machine following the procedure indicating.
- If the machine **does not start**, check the electrical connections and the motor electric control box: if damaged, replace it.



**Q COMPLETE PRESSURE CONTROL DEVICE REF. 16350**

**WARNING:** always indicate code and quantity for each part required.

English

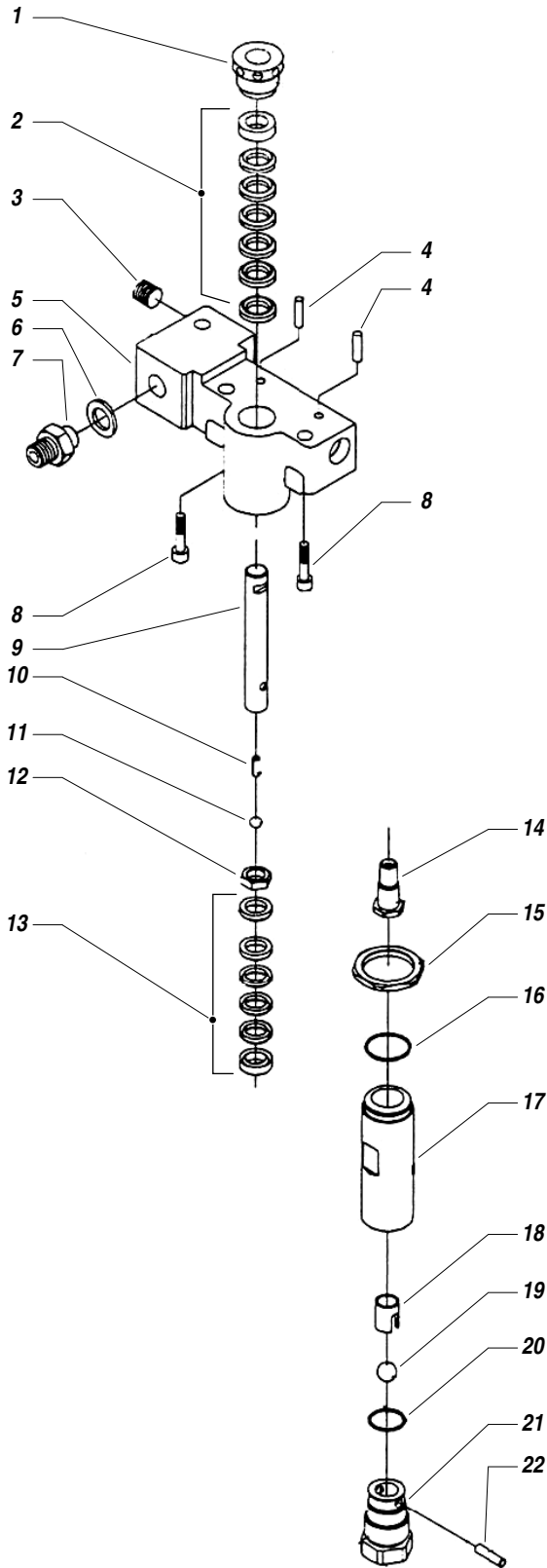


Pos.	Code	Description	Pos.	Code	Description
1	16336	Elastic ring	16	16307	Bush
2	16335	Washer	17	22059	Dowel
3	11955	Gasket	18	16310	Screws
4	16334	Pin	19	16313	Microswitch
5	9287	O-ring	20	16311	Support box
6	16333	Antiextrusion ring	21	16306	Control rod
7	16331	Sensor	22	16304	Quill
8	16332	Gas-ring	23	81017	Elastic ring
9	4077	O-ring	24	4060	Ball
10	96090	Ball	25	16303	Spring
11	96028	Screws	26	16309	Pin
12	16037	Gasket	27	16315	Adjusting pin
13	16042	Cover	28	16301	Knob
14	16280	Cable fastener	29	95210	Dowel
15	16312	Screws	30	16308	Label

**R COMPLETE PUMPING REF.16100**

**WARNING:** always indicate code and quantity for each part required.

English



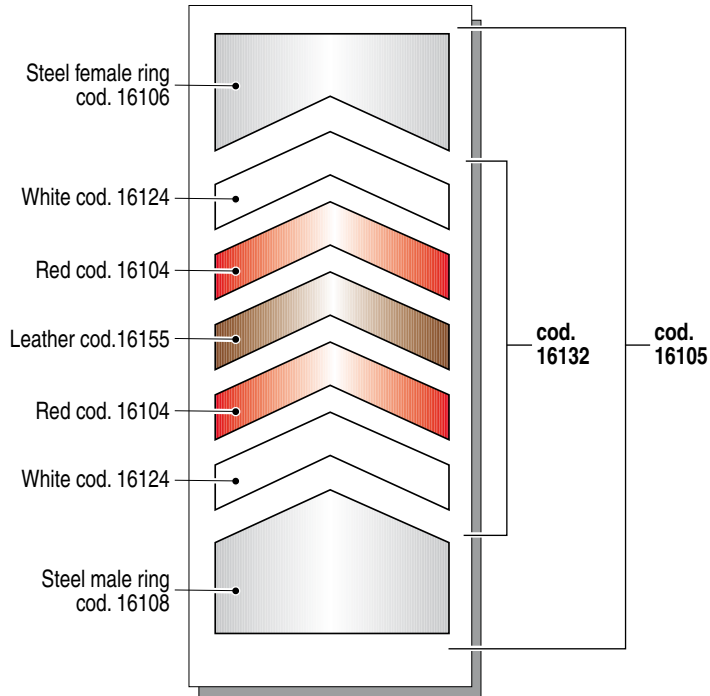
Pos.	Code	Description
1	16109	Packing nut
2**	16105	Complete upper seals
3	96205	Dowel
4	16033	Assembly pins
5	16101	Pumping case
6	33007	Screws
7	33006	Piston rod
8	16111	Screws
9	16110	Piston rod
10	91010	Elastic pin
11**	16130	Ball
12	16113	Nut
13**	16115	Complete lower seals
14	16128	Union
15	16127	Lock nut
16**	16126	O-ring
17	16112	Pumping cylinder
18	98466	Ball guide
19**	16120	Ball
20**	16121	O-ring
21	16129	Foot valve
22	16122	Pin

\* Complete gasket kit cod. 16555

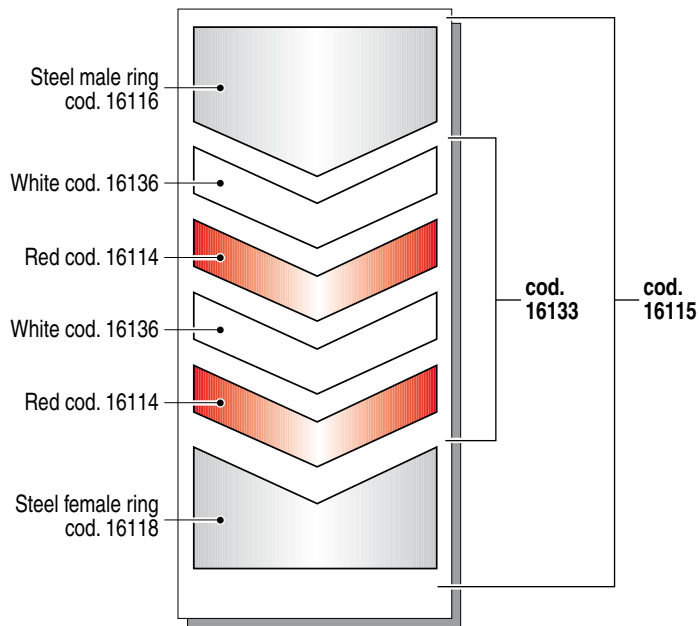
\*\* Pumping maintenance kit cod. 40116



System of assemblage



Upper seals

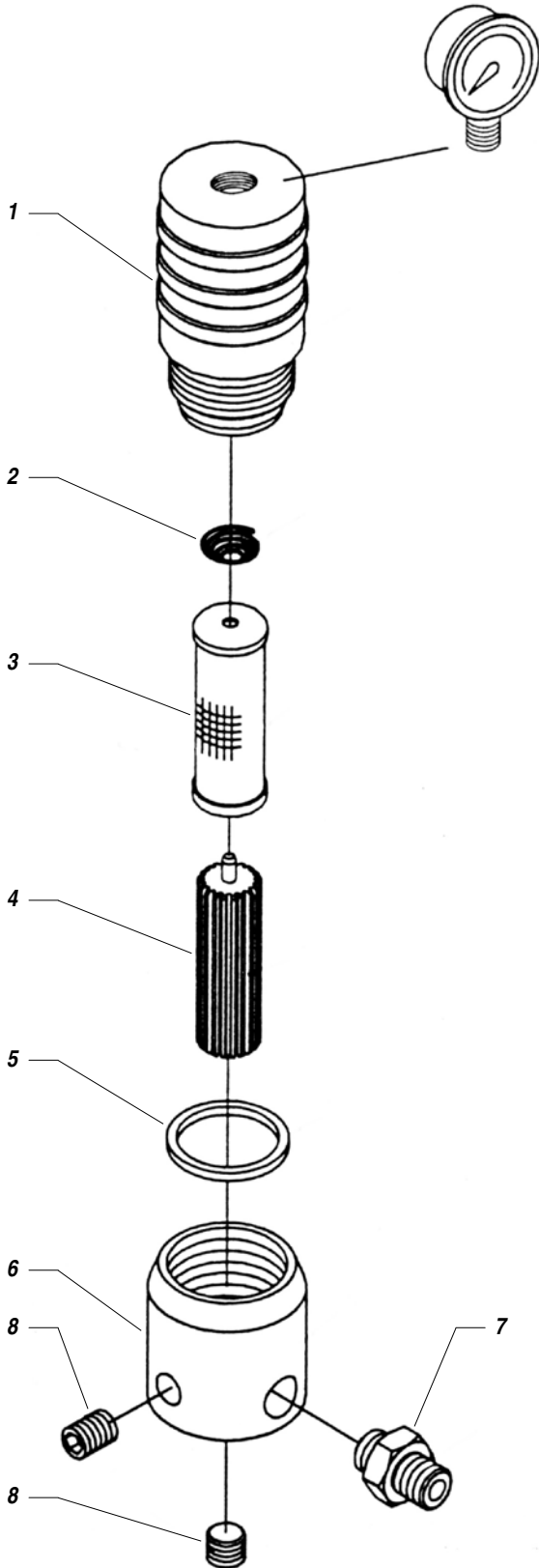


Lower seals

**S FILTER GROUP**

**WARNING:** always indicate code and quantity for each part required.

English



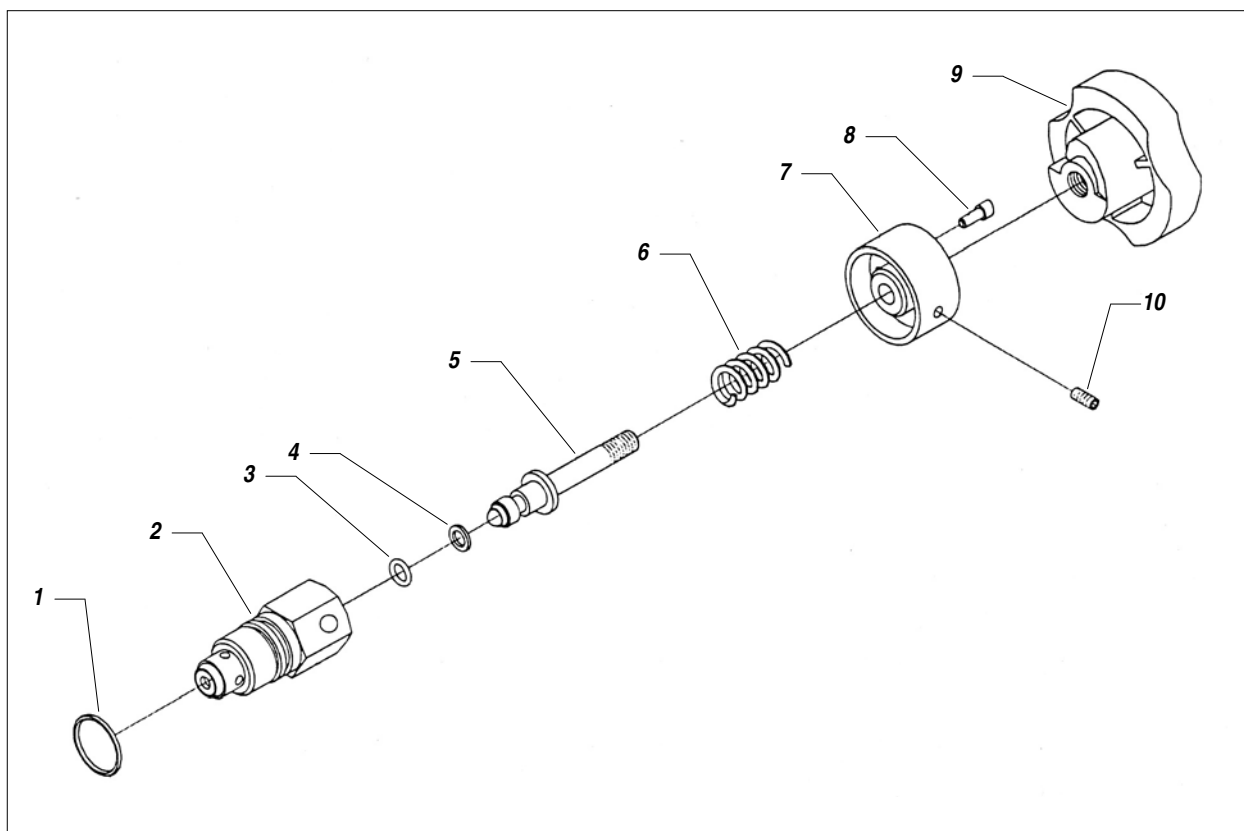
Manometer 0-400 bar code 33008



Pos.	Code	Description
1	16201	Filter tank
2	96202	Spring
3	16205	Standard sieve
3	16204	Standard sieve 100
3	16203	Standard sieve 200
4	16202	Sieve support
5	96203	Gasket
6	96204	Filter base
7	96206	Union
8	96205	Dowel

## T RECIRCULATING-SAFETY VALVE GROUP REF. 16400

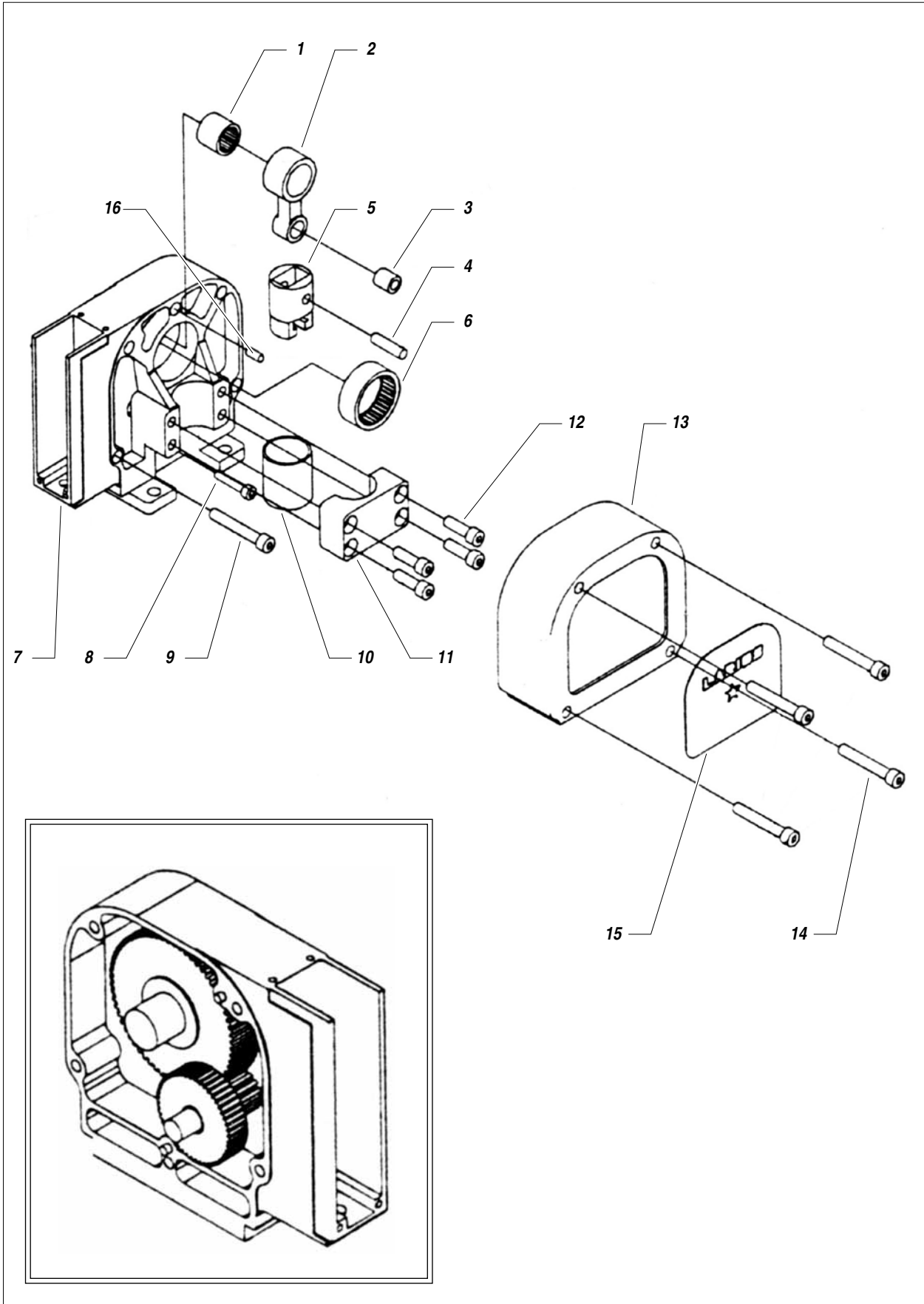
**WARNING:** always indicate code and quantity for each part required.

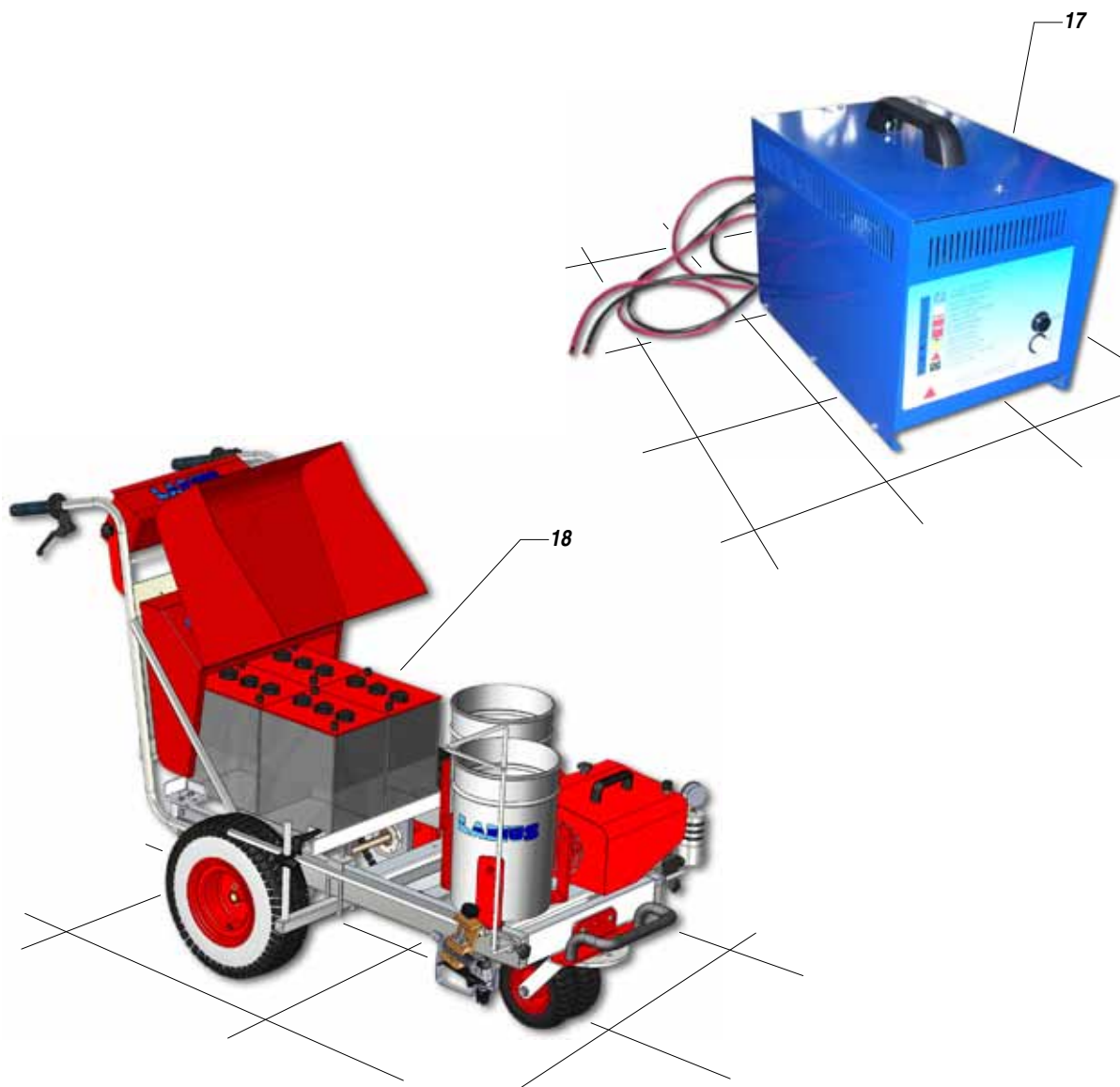


Pos.	Code	Description
1	4033	O-ring
2	16415	Valve housing
3	53007/3	O-ring
4	16419	Antiextrusion ring
5	16420	Material rod
6	16410	Spring
7	46409	Bush
8	16408	Dowel
9	16405	Knob
10	90018	Dowel

U DRIVE ASSEMBLY

English



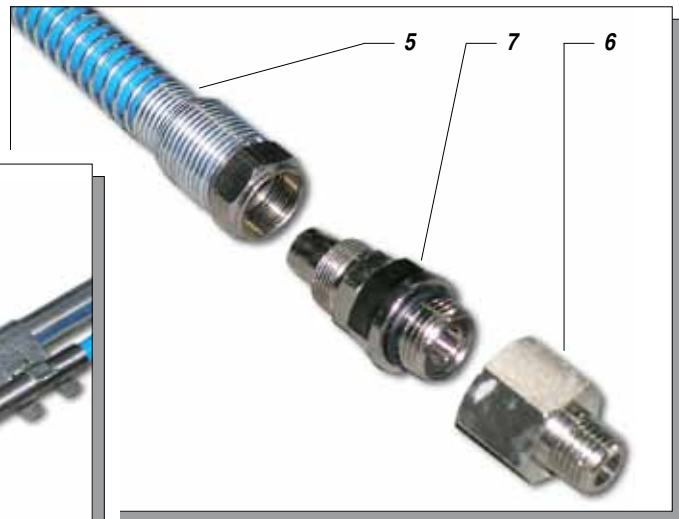
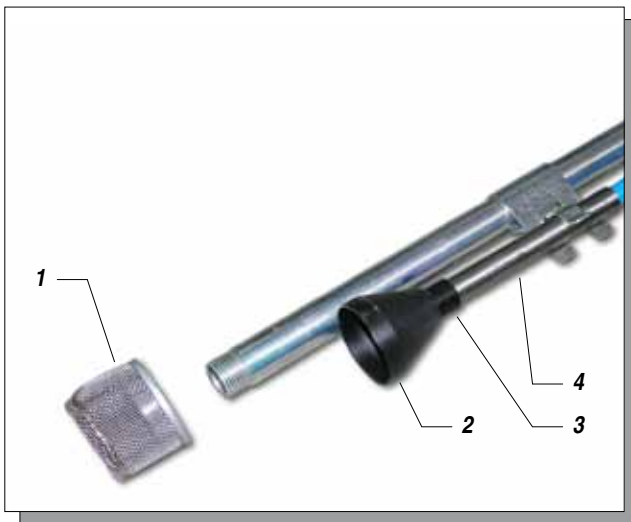
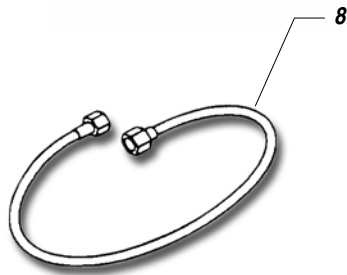
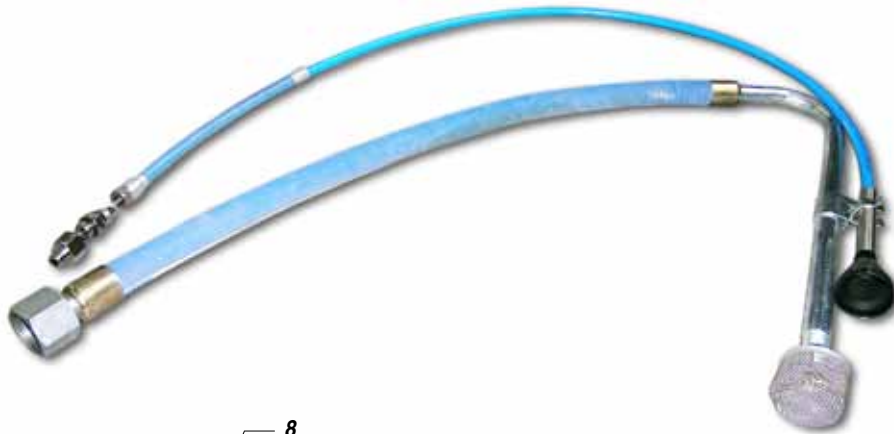


Pos.	Code	Description	Pos.	Code	Description
1	16024	Bearing	10	16027	Bushing
2	16025	Connecting rod	11	16030	Closing bracket
3	16040	Bush	12	81032	Screws
4	16026	Pin	13	16031	Cover
5	16028	Pad	14	16036	Screw
6	16019	Bearing	15	16045	Tornado label
7	8029	Screw	16	16023	Dowel
8	16029	Gearcase	17	4605	Battery charger
9	95623	Screw	18	19461	Batteries 6V 240Ah



**V SUCTION SYSTEM**

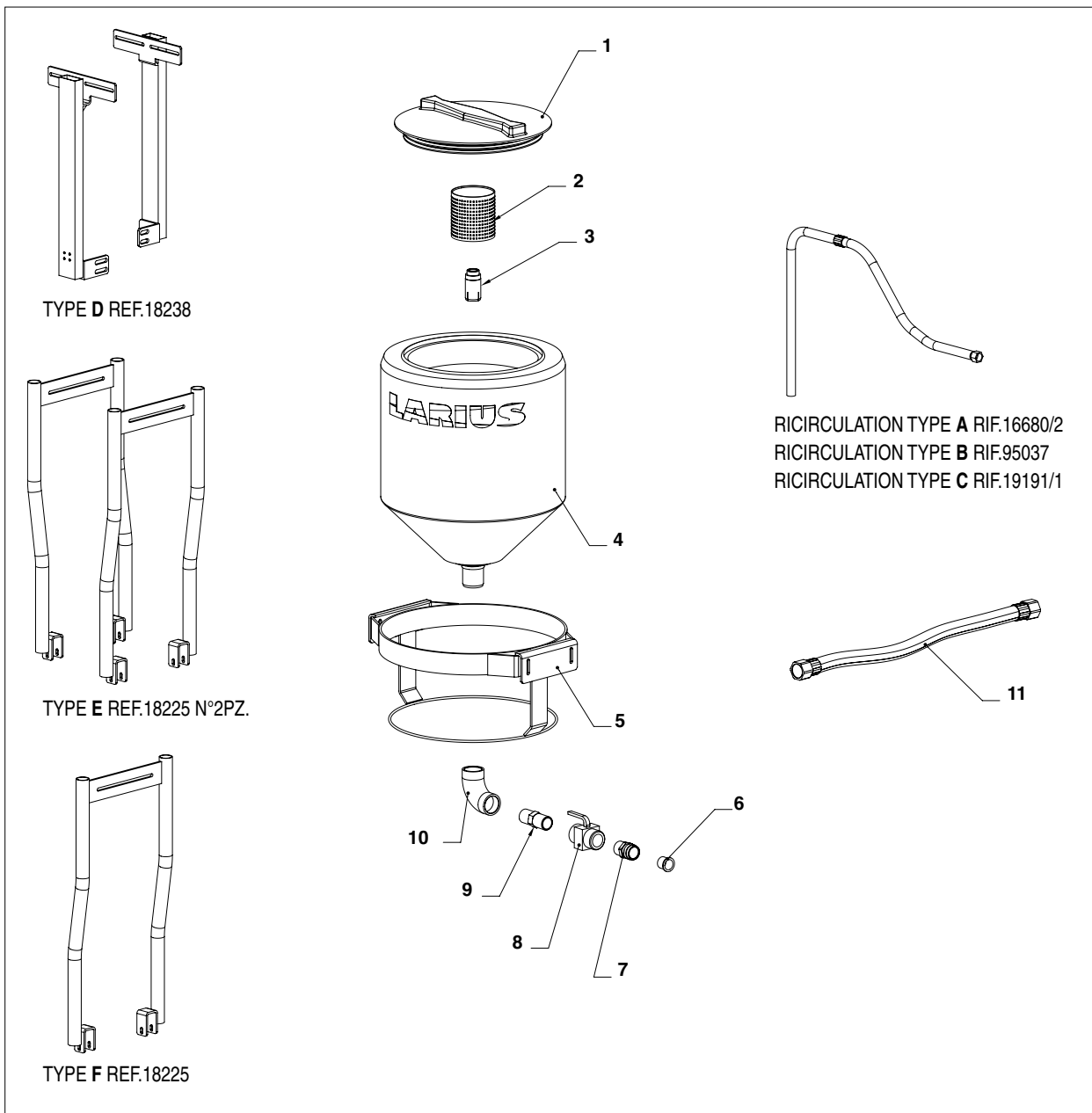
English



Pos.	Codice	Description	Pos.	Codice	Description
1	16802	Filter	6	22028	Female extension 3/8" - male 1/4"
2	18351	Dispersion bell	7	16058	Pipe fitting
3	18352	Breaker flux	8	18026	Delivery compensation hose length 15 mt
4	18353	Bell pipe			
5	18608	Pipe fitting with spring			

**W 50L TANK**

English



Pos.	Code	Description
1	18249/1	Cover
2	85014	Stainless stell fine drum filter
3	18231	Union
4	18249	Tank 50L
5	18246	Support
6	96099	Seal
7	95032	Union
8	30532	Tap
9	8375	Union
10	20833	Elbow connector
11	18223/1	Suction tube

Type Liner	Type	Type Ricirculation
LARIETTE LINER	Type E	Type A
3000 LINER	Type F	Type A
DALì LINER	Type D	Type A
DRAGON LINER	Type D	Type B
EVEREST	Type D	Type B
K2	Type D	Type C

**Z ACCESSORIES**

English



**Code 11250:** AT 250 1/4"  
**Code 11200:** AT 250 M16x1,5



**Code 270:** FILTER 100 MESH  
**Code 271:** FILTER 60 MESH



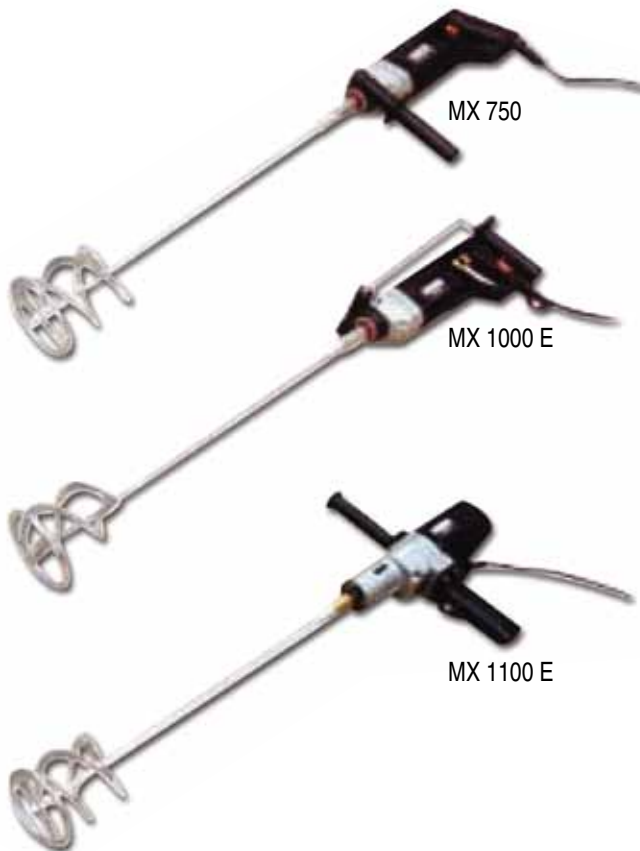
**Code 16205:** FILTRO 60 MESH  
**Code 16204:** FILTRO 100 MESH  
**Code 16203:** FILTRO 200 MESH



**Code 85014:** FILTER 40 MESH - **Code 85012:** FILTER 20 MESH  
**Code 37215:** FILTER 40 MESH inox - **Code 37216:** FILTER 20 MESH inox



PISTON GUNSTOCK FILTERS  
**Code 11039:** Green (30M) - **Code 11038:** White (60M)  
**Code 11037:** Yellow (100M) - **Code 11019:** Red (200M)



MX 750

MX 1000 E

MX 1100 E

**Code 217550:** MX 750 - **Code 217560:** MX 1000 E - **Code 217570:** MX 1100 E

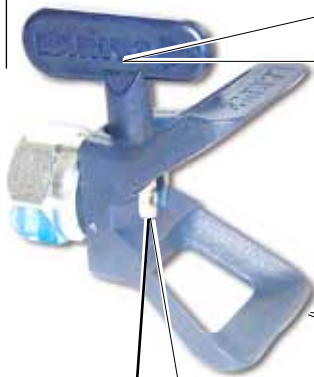


**Code 18026:** 1/4" - 15 mt  
ANTIPULSATION HOSE



MANUAL GUN LX-T  
**Code 14310:** NOZZLE 4 mm  
**Code 14311:** NOZZLE 6 mm  
**Code 14312:** NOZZLE 8 mm

**SUPER FAST-CLEAN**



**SUPER FAST-CLEAN TIP**

Nozzles code		
SFC07-20	SFC19-60	SFC29-80
SFC07-40	SFC21-20	SFC31-40
SFC09-20	SFC21-40	SFC31-60
SFC09-40	SFC21-60	SFC31-80
SFC11-20	SFC23-20	SFC33-40
SFC11-40	SFC23-40	SFC33-60
SFC13-20	SFC23-60	SFC33-80
SFC13-40	SFC25-20	SFC39-40
SFC13-60	SFC25-40	SFC39-60
SFC15-20	SFC25-60	SFC39-80
SFC15-40	SFC27-20	SFC43-40
SFC15-60	SFC27-40	SFC43-60
SFC17-20	SFC27-60	SFC43-80
SFC17-40	SFC27-80	SFC51-40
SFC17-60	SFC29-20	SFC51-60
SFC19-20	SFC29-40	SFC51-80
SFC19-40	SFC29-60	

**Code 18280: GASKET**



**Code 18270: SUPER FAST-CLEAN base UE 11/16x16**



PLA 1/4"  
+ FAST-CLEAN REVERSIBLE TIP INCLUDED  
**Code 11420-11425-11430: cm 130-180-240**

PLA M16x1,5  
+ FAST-CLEAN REVERSIBLE TIP INCLUDED  
**Code 11421-11426-11431: cm 130-180-240**



**PAINT ROLLER TELESCOPIC**

**Code 16988:** Roller cover for rough surfaces

**Code 16997:** Roller cover for smooth surfaces

**Code 16998:** Roller cover for very smooth surfaces

**Code 16999:** Roller cover for semi-rough surface

**Code 16780:** Extension 120 - 195 cm

Due to a constant product improvement programme, the factory reserves the right to modify technical details mentioned in this manual without prior notice.

## LINE STRIPERS



LARIETTE 2000 Ref. 4220



3000 LINER Ref. 4300



STORM 4000 Ref. 4400



VIKING LINER Ref. 4800



EVEREST Ref. 4750

PRODUTOR:

# LARIUS®

23801 CALOLZIOCORTE - LECCO - ITALY - Via Stoppani, 21  
Tel. (39) 0341/62.11.52 - Fax (39) 0341/62.12.43  
E-mail: [larius@larius.com](mailto:larius@larius.com) - Internet <http://www.larius.com>



DIRECT LINE

CUSTOMERS TECHNICAL SERVICE

Tel. (39) 0341/621256  
Fax (39) 0341/621234

