

ARIUS * jolly

Jolly Electric piston pump

R

on trolley with accessories K 56500

iolly

EN

on frame with accessories K 56501



Manuale Cod. 150165

This manual is to be considered as an English language translation of the original manual in Italian. The manufacturer shall bear no responsibility for any damages or inconveniences that may arise due to the incorrect translation of the instructions contained within the original manual in Italian.

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







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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 WARNINGS

The table below provides the meaning of the symbols used in this manual in relation to using, earthing, operating, maintaining, and repairing of this equipment.

- Read this operator's manual carefully before using the equipment.
- An improper use of this machine can cause injuries to people or things.
- Do not use this machine when under the influence of drugs or alcohol.
- Do not modify the equipment under any circumstances.
- Use products and solvents that are compatible with the various parts of the equipment, and read the manufacturer's warnings carefully.
- See the Technical Details for the equipment given in the Manual.
 Check the equipment for worn parts once a day. If any worn parts are found, replace them using ONLY original spare parts.
- Check the equipment for worn parts once a day. If ar
 Keep children and animals away from work area.
- Comply with all safety standards.
- It indicates an accident risk or serious damage to equipment if this warning is not followed. FIRE AND EXPLOSION HAZARD • Solvent and paint fumes in work area can ignite or explode. • To help prevent fire and explosion: - Use equipment ONLY in well ventilated area. - Eliminate all ignition sources, such as pilot lights, cigarettes and plastic drop cloths (potential static arc). - Ground equipment and conductive objects. - Use only grounded hoses. - Do not use trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in pressurized aluminium equipment. Such use can cause serious chemical reaction and equipment rupture, and result in death, serious injury, and property damage - Do not form connections or switch light switches on or off if the air contains inflammable fumes. If electrical shocks or discharges are encountered the operation being carried out using the equipment must be stopped immediately. Keep a fire extinguisher at hand in the immediate vicinity of the work area. • It indicates wound and finger squashing risk due to movable parts in the equipment. Tenersi lontano dalle parti in movimento. Do not use the equipment without the proper protection. Before any inspection or maintenance of the equipment, carry out the decompression procedure explained in this manual, and prevent any risk of the equipment starting unexpectedly. • Report any risk of chemical reaction or explosion if this warning has not been given. • (IF PROVIDED) There is a risk of injury or serious lesion related to contact with the jet from the spray gun. If this should occur, IMME-DIATELY contact a doctor, indicating the type of product injected. • (IF PROVIDED) Do not spray before the guard has been placed over the nozzle and the trigger on the spray gun. • (IF PROVIDED) Do not put your fingers in the spray gun nozzle. Once work has been completed, before carrying out any maintenance, complete the decompression procedure. • It indicates important recommendations about disposal and recycling process of products in accordance with the environmental regulations. Mark any clamps attached to earth cables. Use ONLY 3-wire extension cords and grounded electrical outlets. Before starting work make sure that the electrical system is grounded and that it complies with safety standards. High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. À To help prevent injection, always: - (IF PROVIDED) Engage trigger lock when not spraying. (IF PROVIDED) Do not put your hand over the spray tip. Do not stop or deflect leaks with your hand, body or other. - (IF PROVIDED) Do not point gun at anyone or at any part of the body. (IF PROVIDED) Never spray without tip guard. _ Do pressure relief if you stop spraying or being servicing sprayer and before any maintenance operations. Do not use components rated less than sprayer Maximum Working Pressure. Never allow children to use this unit (IF PROVIDED) Brace yourself; gun may recoil when triggered. If high pressure fluid pierces your skin, the injury might look like "just a cut", but it is a serious wound! Get immediate medical attention. • It is obligatory to wear suitable clothing as gloves, goggles and face shield. . Wear clothing that complies with the safety standards in force in the country in which the equipment is used. • Do not wear bracelets, earrings, rings, chains, or anything else that may hinder the operator's work. Do not wear clothing with wide sleeves, scarves, ties, or any other piece of clothing that could get tangled up in moving parts of the equipment during the work, inspection, or maintenance cycles.





WORKING PRINCIPLE B

The LARIUS JOLLY unit is defined "electric piston pump".

An electric piston pump is used for high pressure painting without air (from this process derives the term "airless").

The pump is controlled by an electric 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" piston. The piston movement produces a "vacuum".

The product is sucked, pushed towards the pump outlet and then sent to the gun through the flexible hose.

A electronical device placed next to the reduction gear casing, allows to adjust and control the pressure of the material coming out of the pump.

When the pump reaches the set value, the motor stops and starts again when the value decreases.

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

INDICATIONS OF USE

To ensure correct operation of the airless electric piston equipment the "minimum power requirements" must be respected. The use

of power that is less than that indicated may compromise the integrity and the correct operation of the equipment. The use of electric cables with a diameter of at least 2.5mm² is

JOLLY minimum 4,0 kW single-phase •

recommended; ensure system grounding on the motor generator.

PAINT

Use special paint for airless applications

NOZZLE

Pair the nozzle with the type of work to be carried out in order to optimise the finishing quality and the speed of application. The nozzle is identified through the numbers printed on it: the first number indicates the diameter of the mouth while the second number indicates the spraying angle.





Version on FRAME

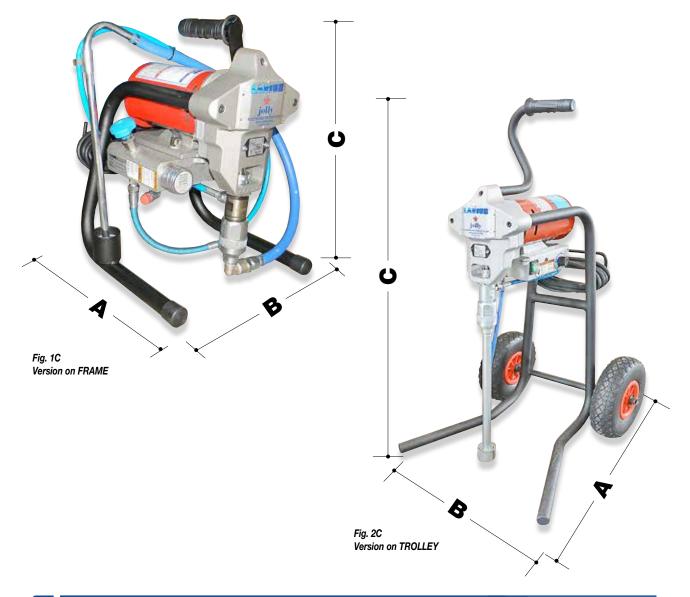
Fields of application	Applications materials		
Indoor	Lacquer	Paints	
Outdoor	Waterborne	Emulsions	
Industrial buildings	Acrylic	Impregnants	
Industrial constructions	Primer	Antirust	
Redeveloping	Enamels	Primer	
Roofing	Fixative		



C TECHNICAL DATA

JOLLY	Versione su TELAIO	Versione su CARRELLO
SUPPLY (single-phase)*	230Vac - 50Hz	230Vac - 50Hz
Motordrive supply	minimo 4Kw asincrono	minimo 4Kw asincrono
Motor power	0,65 Kw	0,65 kW
Max working pressure	210 bar	210 bar
Max. delivery	1,8 L/min	1,8 L/min
Material outlet	M16 x 1,5 (M)	M16 x 1,5 (M)
Ma. dimension of the gun nozzle	0,019"	0,019"
Weight	15 Kg	16 Kg
Sound pressure level	≤ 80dB(A)	≤ 80dB(A)
Length	(A) 450 mm	(A) 580 mm
Width	(B) 460 mm	(B) 540 mm
Height	(C) 550 mm	(C) 995 mm

*Available on request with special voltages PARTS OF THE PUMP IN CONTACT WITH THE MATERIAL Stainless Steel AISI 420B, PTFE, Aluminium







D DESCRIPTION OF THE EQUIPMENT

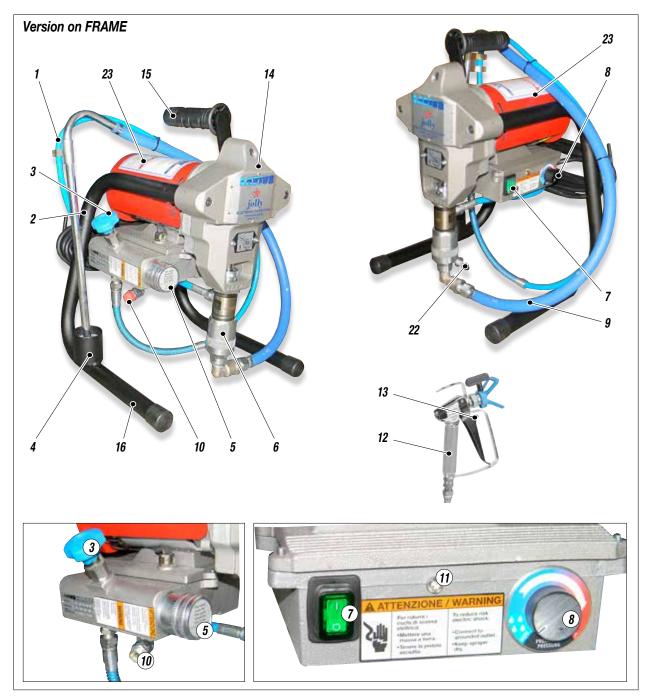


Fig. 1D

Pos.	Description	Pos.	Description
1	Recirculation tube	9	Suction product pipe
2	Output product recirculation	10	Coupling for product delivery
3	Safety-recirculation valve	11	Alarms indicator light
4	Suction filter	12	Airless manual gun
5	Plug filter	13	Trigger safety clamp
6	Pumping group	14	Reduction box
7	ON/OFF switch	15	Handle/Handgrip
8	Potentiometer for adjusting the operating pressure	16	Frame







Fig. 2D

Pos.	Description	Pos	Description
17	Trolley	21	Product delivery tube coupling
18	Suction tube	22	Unlocking manual device
19	Recirculation hose	23	Electric motor
20	Wheel	24	Product delivery tube





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.

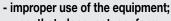
The disposal of packaging materials is a customer's competence and must be performed in accordance with the regulations in force in the country where the plant is installed and used. It is nevertheless sound practice to recycle packaging materials in an environment-friendly manner as much as possible.

F CONDITIONS OF GUARANTEE



The conditions of guarantee do not apply in the following situations:

- improper washing and cleaning of components causing malfunction, wear or damage to the equipment or any of its parts;



- use that does not conform with applicable national legislation;

incorrect or faulty installation;
modifications, interventions and maintenance that have not been authorised by the manufacturer;
use of non-original spare parts or parts that do not correspond to the specific model;

- total or partial non-compliance with the instructions provided.

G SAFETY RULES

- THE EMPLOYER SHALL TRAIN ITS EMPLOYEES ABOUT ALL THOSE RISKS STEMMING FROM ACCIDENTS, ABOUT THE USE OF SAFETY DEVICES FOR THEIR OWN SAFE-TY 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 PRO-PERLY.
- 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 ME-DICAL 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 PERFOR-MING ANY CHECK OR PART REPLACEMENT OF THE EQUIPMENT.
- NEVER MODIFY ANY PART IN THE EQUIPMENT. CHECK REGULARLY THE COMPONENTS OF THE SYSTEM. RE-PLACE THE PARTS DAMAGED OR WORN.





- TIGHTEN AND CHECK ALL THE FITTINGS FOR CONNEC-TION BETWEEN PUMP, FLEXIBLE HOSE AND SPRAY GUN BEFORE USING THE EQUIPMENT.
- ALWAYS USE THE FLEXIBLE HOSE SUPPLIED WITH STAN-DARD 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 CARE-FULLY. DO NOT PULL THE FLEXIBLE HOSE TO MOVE THE EQUIPMENT. NEVER USE A DAMAGED OR A REPAIRED FLEXIBLE HOSE.



The high speed 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.



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 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.



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 considerabledanger to the user may result.

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H PIPE CONNECTION

CONNECTING THE FLEXIBLE HOSE TO THE GUN

 Connect the high pressure flexible hose (H1) to the pump (H2) and to the gun (H3) ensuring to tighten the fittings (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 (*ref. 18036*).

NEVER use a damaged or a repaired flexible hose.

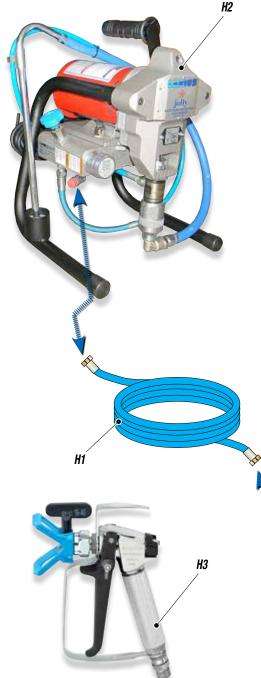
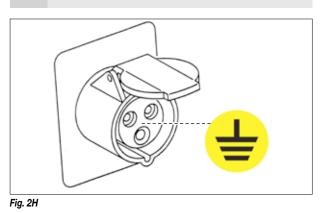


Fig. 1H

CHECK ON POWER SUPPLY



Make sure that the electrical system is earthed and complies with regulations.



- Check the mains voltage corresponds to 230 Vac 50Hz.
- The supply electric cable (H4) of the equipment is provided without the plug. Use a plug which guarantees the plant earthing. Only a technician or a skilled person should perform the connection of the plug to the electric cable.



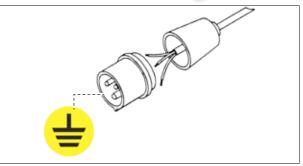


Fig. 3H



Should anyone use an extension cable between the unit and the socket, it must have the same characteristics as the cable supplied (*minimum diameter of the wire* 2.5 mm^2) with a maximum length of 50 mt. Higher lengths and lower diameters can cause excessive voltage falls and a bad operation of the equipment.





CONNECTING THE EQUIPMENT TO THE POWER SUPPLY

- Check that the switch (H5) is on the "OFF" (0) position before connecting the cable to the mains.
- Place the pressure control knob (H6) on the "MIN" position (*turn counterclockwise*).

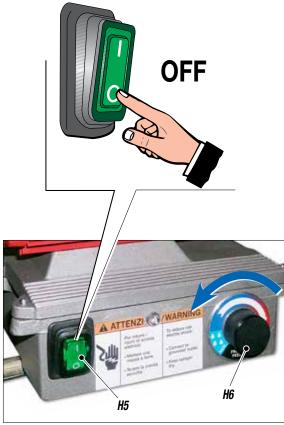
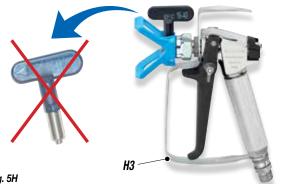


Fig. 4H

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.
- Ensure the gun (H3) is without nozzle.

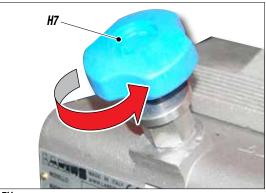


- Lift the suction group and dip it into the tank containing the washing liquid.
- Press the equipment main switch (H5) on pos. "ON" (I).



Fig. 6H

• Open the recirculation-safety valve (H7).





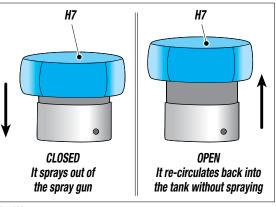
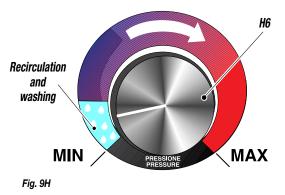


Fig. 5H



 Turn the pressure regulating knob (H6) clockwise to the position "RECIRCULATION AND WASHING" (see drops) so that the machine idles.

AMOA Grou



 Visually check that the washing liquid starts to re-circulate within the tank (H8).



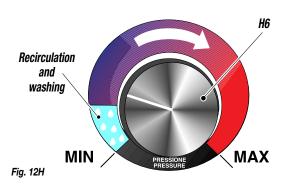
Fig. 10H

- Turn the pressure adjustment handle (H6) counterclockwise to stop the pump.
- Close the recirculating-safety valve (**H7**).



Fig. 11H

 Turn pressure regulating knob (H6) slightly clockwise so that the machine idles.



• Point the gun (H3) into a collecting tank (H8) keeping the trigger pressed (so as to drain the oil inside) till a clean solvent comes out. Now, release the trigger.

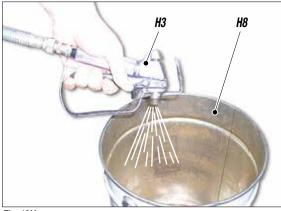


Fig. 13H

- Remove the suction pipe (H9) and take away the solvent tank (H8).
- Point the gun into the solvent tank (**H8**) and press the trigger so as to recover the residual solvent.
- As the pump idles, press the "OFF" (0) switch to stop the unit.



Never spray solvents indoor. In addition, it is recommended to keep far 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, beside washing with the solvent, it is suggested to wash with soap and and clean water.
- Insert the gun trigger lock and fix the nozzle.

PREPARATION OF THE PAINT

- Make sure the product is suitable to be used with a spray gun.
- Mix and filter the product before using it. For filtration, use CLOSE-MESH (ref. 214) and LARGE-MESH (ref. 215) LARIUS METEX braids.



Make sure the product to be used is compatible with the materials employed for manufacturing the equipment (*stainless steel and aluminium*). For further information, 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, they can cause dangerous chemical reactions with risk of explosion.





I OPERATION

START OF THE PAINTING OPERATIONS

- Use the equipment only after performing all the **SETTING UP** operations described above.
- Dip the suction pipe (I1) into the product tank.

Version on FRAME



Fig. 1I



• Open the recirculating-safety valve (12) (turn clockwise so as the pin slides on the cam track).

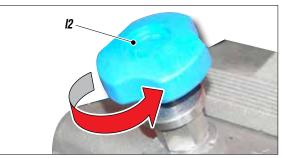
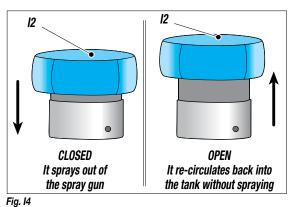
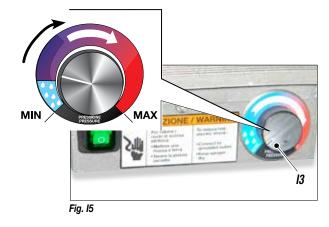


Fig. 3l



• Press the switch "**ON**" (*I*) of the equipment and turn slightly the pressure control knob clockwise (**I3**), so as the machine works at the idle speed.



Make sure the product recycles from the recirculation tube (14).





Fig. 2l





• Close the recirculating-safety valve (12) (turn clockwise to release the valve).

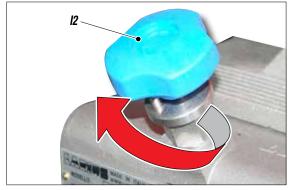


Fig. 7l

- The machine will continue to suck the product till the flexible hose is full up to the set pressure. Then it will automatically stop.
- Adjust the operation pressure with the knob (13).

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 towards yourselves or other people. The contact with the casting can cause serious injuries.



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



Recirculating-safety valve: when working at the maximum pressure available, releasing the gun trigger can cause sudden increases of pressure. In this case, the recirculating-safety valve opens automatically discharging part of the product from the recirculating tube.

Then it closes so as to go back to the previous working conditions.

PROCEDURE TO UNLOCK THE SUCTION GROUP BALL

Should the ball of the suction group be blocked, the unit does not suck the product anymore.

Procedere to manually release the ball as follows:

• Press several times the suitable device (15).

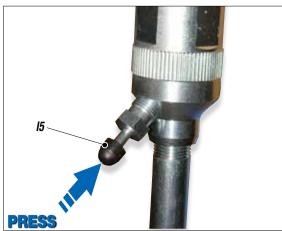


Fig. 8I

ALARMS

• Flashing lamp (I6) for alarms:

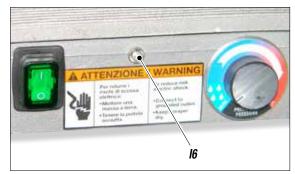


Fig. 9l

For all alarms, the machine shuts down and signals the type of abnormality by means of a series of flashes.

As for alarm No. 6, light signalling through a series of uninterrupted flashes is provided without machine shut-down. The operator must, however, immediately connect the unit to an adequate grounding system.

LARIUS assumes no responsibility for failure to comply with this requirement.





LED	ALLARMI - ALARMS WARNMELDUNGEN - ALARME		
	Corrente Massima Superata Maximum Current Exceeded Max. Strom Überschritten Maximum Courant Dépassée		
2	SURRISCALDAMENTO HEAD CONTROL OVERHEATING HEAD CONTROL ÜBERHITZUNG HEAD CONTROL SURCHAUFFAGE HEAD CONTROL		
3	MOTORE IN CORTO CIRCUITO MOTOR SHORT CIRCUIT MOTOR IN KURZSCHLUSS MOTEUR COURT-CIRCUITÉ		
4	TENSIONE DI ALIMENTAZIONE ALTA HIGH VOLTAGE FEEDING CURRENT HOHE VERSORGUNGSSPANNUNG TENSION D'ALIMENTATION À L'ENTRÉE TROP ÉLEVÉE		
5	TENSIONE DI ALIMENTAZIONE BASSA Low Voltage Feeding Current Niedrige Versorgungsspannung Tension d'Alimentation à l'entrée trop faible		
	Mancanza connessione a terra No Earthing Keine Erdung Pas de Mise à terre		
6	Continuous flashing indicates a lack of grounding connection while the machine continues to work. The operator must, however, immediately connect the unit to an adequate grounding system. LARIUS assumes no responsi- bility for failure to comply with this requirement.		
1	SENSORE DI PRESSIONE GUASTO		
7	PRESSURE SENSOR FAULT DRUCKKNOPFANSCHLUSS DEFEKT CAPTEUR DE PRESSION EN PANNE		
	BLOCCO RICIRCOLO (DOPO 15 MIN.)		

J CLEANING AT THE END OF THE WORK

- Reduce pressure to the minimum (turn counterclockwise the pressure control knob) (**J1**).
- Press the switch (**J2**) placed on the box of the electric motor, to stop the equipment.





- Release the residual pressure by holding down the trigger of the gun and pointing it into a container.
- Open the recirculating-safety valve (**J3**) to release the pressure in the circuit.

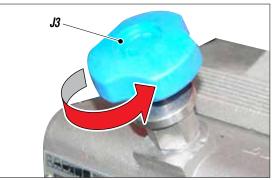


Fig. 2J

- Lift the suction pipe and replace the product container with the solvent tank (ensure it is compatible with the product being used).
- Unscrew the gun nozzle (remember to clean it with solvent).
- Press the switch (J2) ON and slightly turn the pressure control knob (J1) clockwise so as the machine works till the motor starts.
- Make sure the solvent recycles the washing liquid from the recirculation tube.
- Close the recirculating-safety valve (J3).
- Point the gun (J4) into the product container (J5) and, keeping the trigger pressed, release the remaining product till a clean solvent comes out. Now, release the trigger.

RECYCLING STOP (AFTER 15 MIN.)

ARRET RECYCLAGE (APRÈS 15 MIN.)

ABSCHALTUNG DES RUCKLAUFS (NACH 15 MIN.)





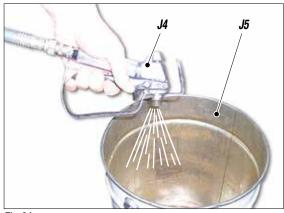


Fig. 3J

- Lift again the suction pipe and remove the solvent tank.
- Now point the gun into 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.

K GENERAL MAINTENANCE



Before performing any maintenance operation, discharge the pressure in the pumping unit (open the drain valve).

DAILY

- Clean the filters;
- · Clean the nozzles;
- Clean the painting circuit with a suitable product.

PERIODICALLY

- Check the pumping gaskets tightening (if the product draws, replace the gaskets);
- Clean the mobile parts from the varnish deposits (spray guns, etc.);
- Check that the tubes and all the fittings are correctly tightened.

L 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 supplied (ref. 11503).

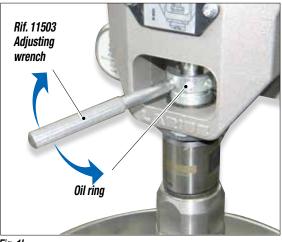


Fig. 1L



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

Use the lubricant supplied (*ref. 16340*) to allow an easy sliding of the piston inside the gasket group.
 Daily top up the packing nut.







M WARNING PLATES





Art. 16859



Art. 16858

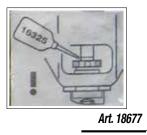




Art. 56524



AIL: 10032





IGNORARE LE AVVERTENZE Può risultare molto Pericoloso.



 Do not change the pressure switch setting.

 Changing the setting may cause hazardous pressure and poor sprayer performance.

IGNORING THIS WARNING CAN RESULT IN SERIOUS INJURY.

Art. 16854





N CORRECT PROCEDURE OF DECOMPRESSION

• Insert the gun clamp (N1).

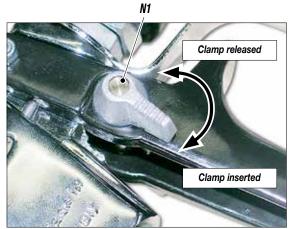
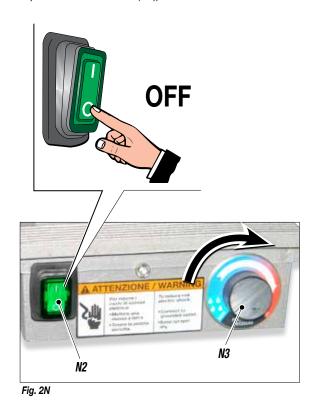


Fig. 1N

- Move the switch (N2) to the OFF position to stop the equipment.
- Reduce pressure to the minimum (turn counterclockwise the pressure control knob (N3)).



• Disconnect the power supply cable (N4).

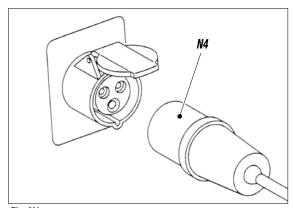


Fig. 3N

- Release the gun clamp (**N1**), point the gun into the tank of the product and press the trigger to release pressure. At the end of the operation, insert the gun clamp.
- Open clockwise the recirculating-safety valve (N5) to release the residual pressure.

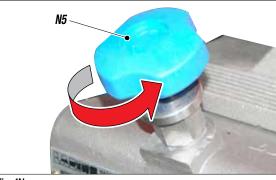


Fig. 4N

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 into 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.





O REPLACEMENT OF THE PUMPING GROUP'S GASKETS

• It is recommended to perform this operation after having cleaned the equipment.



Always disconnect the power supply and discharge pressure before performing the following operations (follow the "correct procedure of decompression").

• Use a 19 mm spanner to unscrew the ring nut (**O1**) on the feeding pipe in order to make the operation easier.



Fig. 10

• Release the plastic covering (O2).





 Use a screwdriver (O3) to turn the motor(O4) until the piston stem is at the bottom of its stroke and then move the rod accordingly to remove it.

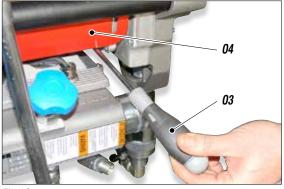


Fig. 30

Remove the locking pin (05) using pliers (06).



Fig. 40

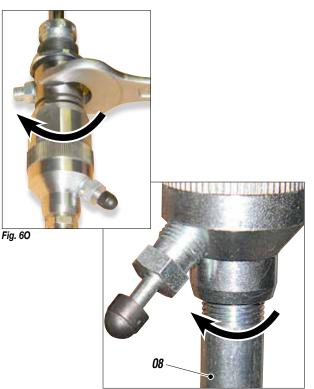
•

Unscrew the fixing ring nut (**O7**), to the end of the thread using a 45 mm spanner.





• Unscrew the suction casing using a 32 mm spanner as illustrated. If necessary, remove the suction pipe (**O8**) by means of a 19 mm spanner before performing other operations.







- Disconnect the pumping group by unscrewing the fastening nut (wrench 45).
- Unscrew the pumping group from the housing.

You can now work easily as the pump casing has been freed.

• Grip the complete pump unit (**O9**) in a vice (**O10**) (as shown).

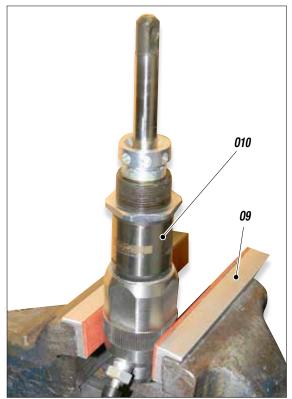


Fig. 70

 Slacken the ring nut (O11) by two full turns using the special pin (O12) supplied.

Turn anticlockwise as shown.

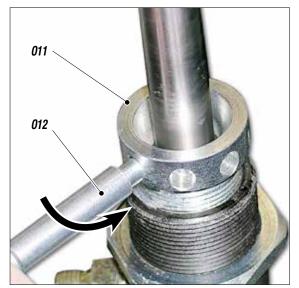
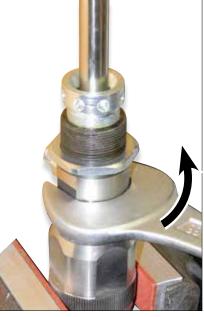


Fig. 80



Use a 36 mm spanner to unscrew the pump unit as shown.

Fig. 90

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• Remove the pump unit (**O13**) from the foot valve (**O14**) as shown.

Inspect the two parts separately.

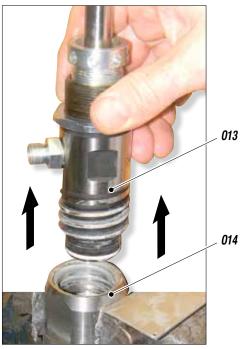


Fig. 100

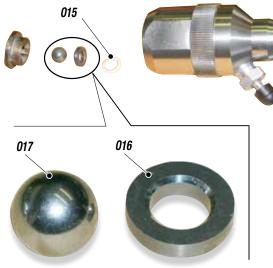
PIT STOP MAINTENANCE The replacement of upper and lower will take about 25 minutes.





REPLACING THE FOOT VALVE SEALS

- Replace the PTFE gasket (O15) located under the ball housing (O16).
- Check that the surfaces of the ball housing (**O16**) and the ball (**O17**) are not damaged. If necessary, replace them both.
- Fit them again using the component sequence as shown.



Unscrew the gasket ring nut (O20) completely.
 All the gaskets in the unit must be replaced at the same time to ensure a correct operation of the equipment.

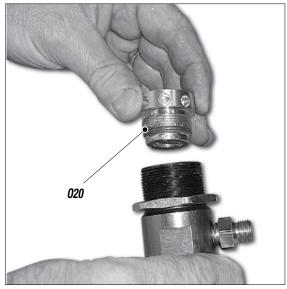


Fig. 130

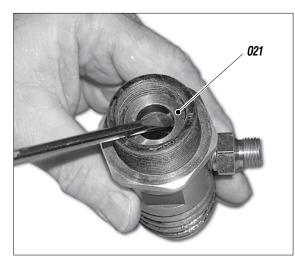
• Remove the upper stainless steel female ring (**O21**) as shown.

Fig. 110

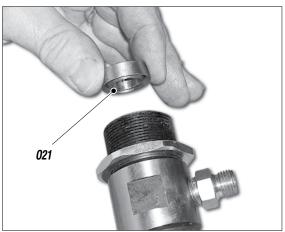
REPLACING THE PUMP UNIT HOUSING UPPER GASKET

• Remove the piston stem (**O18**) from the pump unit housing (**O19**) as shown.





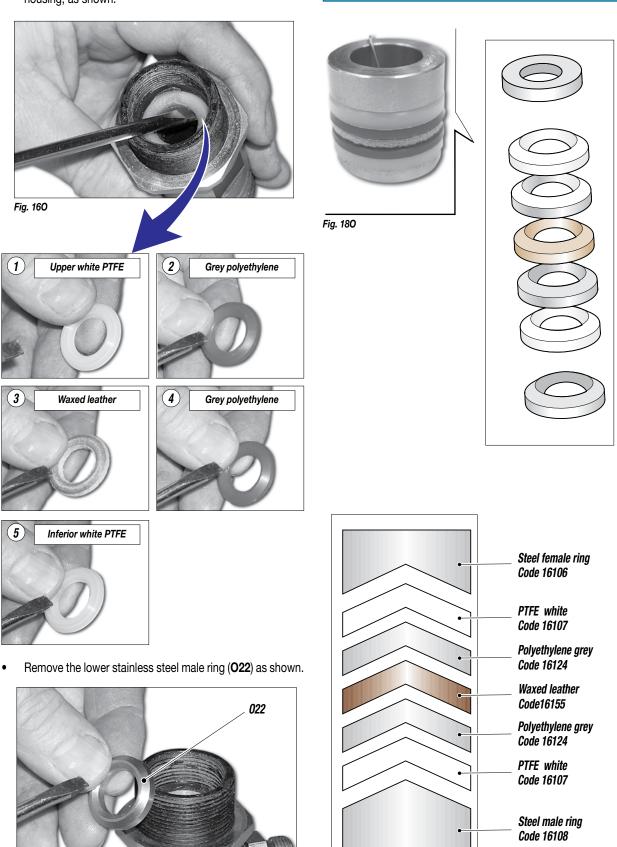








• Remove the kit of gaskets contained inside the pump unit housing, as shown.



• Fit the new gasket kit according to the component sequence shown in the picture.

Fig. 170

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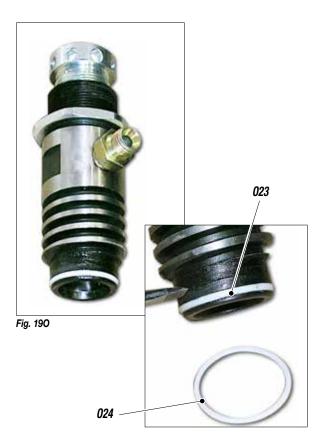
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• Remove the PTFE O-ring (023) and replace it with a new one (024).



REPLACING THE PUMP UNIT STEM GASKET

• Secure the stem (O19) in a vice as shown.

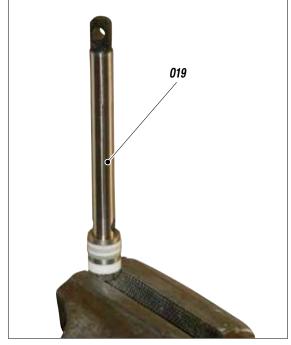


Fig. 200

- Use a 10 mm spanner to unscrew and remove the stem (O19) as indicated.
- Remove the complete gasket kit (**O25**) from the stem (**O19**), as shown, in order to replace it.

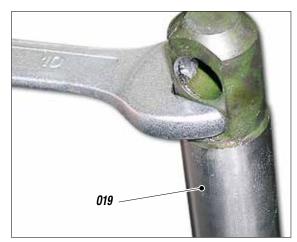
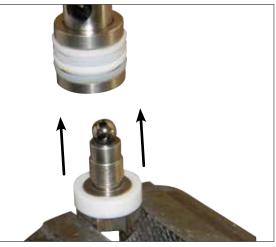


Fig. 210





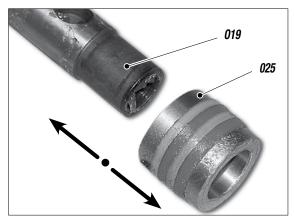


Fig. 230

• Fit the new gasket kit according to the component sequence shown in the picture. Check the scraper for wear (*Ref. 18648*). Replace if necessary.









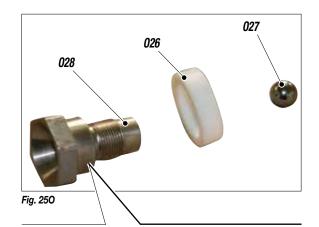


R





- Replace the scraper ring (**O26**) of the valve piston, as shown in the picture.
- Check the surfaces of the ball (O27) and ball housing (P28), and replace both if damaged.





• Assemble the components as shown.

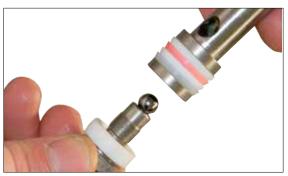


Fig. 260

• Lubricate the gaskets (**029**) and the stem. Vaseline is recommended for this task.

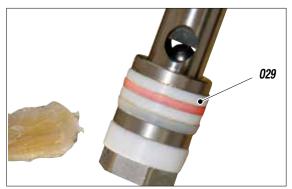


Fig. 270

Si Ci

Steel male ring Code 18644

PTFE white Code 16117

Polyurethane red Code 16114

PTFE White Code 16117

Polyethylene grey Code 16136

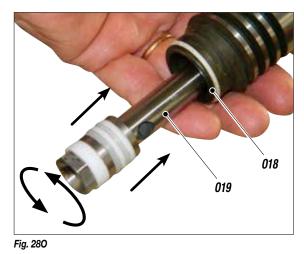
Steel female ring Code 18645

PTFE scraper ring Code 18648





 Insert the stem (O19) into the housing (O18) while rotating it in order to allow it to slide more easily and to avoid damaging the upper gaskets.



• Use a 36 mm spanner to screw the pump unit (O10).

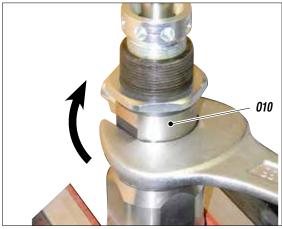


Fig. 310

- Make the piston stem (**O19**) completely slide.
- Lubricate the O-ring (**O30**) (*Ref. 16126*) with grease, as shown. Vaseline is recommended for this task.

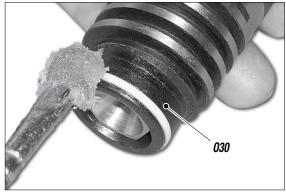


Fig. 290

• Put liquid PTFE on the first two spirals (**O31**) and (**O32**) to avoid the two components coupled as shown from unscrewing.

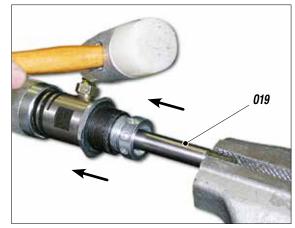
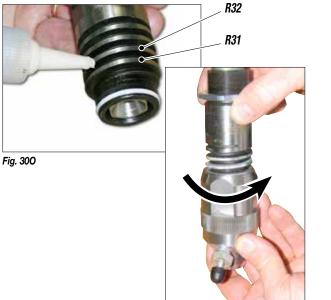


Fig. 320

 Use the pin (O12) supplied to tighten the gasket ring nut (O11).

Close until it is completed tightened, without forcing.



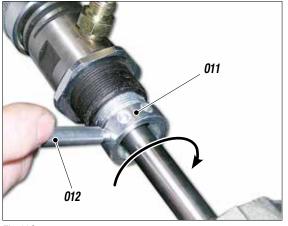


Fig. 330





CORRECT POSITIONING OF THE PUMP UNIT

Once the unit has been refitted, proceed as follows:

- Check the position of the rod, which should be positioned at its lower stopping point.
- Put the pump unit (**O10**) inside the reduction cover (**O33**) as shown.



- Screw the pump unit onto the front template, making sure that the end of the stem is aligned with the rod groove (O34).
- Align the two holes (*rod* + *stem*) and insert the stopping pin (**O35**) inside the rod (**O34**).
- Check that the closing spring (**O36**) in the rod (**O34**) is aligned with the pin housing when closed (as shown).



- Fig. 350
- Screw the pump unit (O10) inside the reduction cover.

• Use a gauge to measure the gap between the base of the template and the tightening groove.



The reference value (see drawing) must be 18 mm. The maximum tolerance accepted for correct operation is 21 mm maximum and 16 mm minimum.

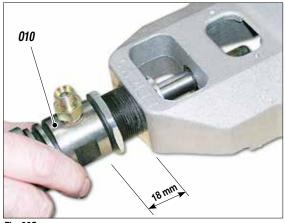
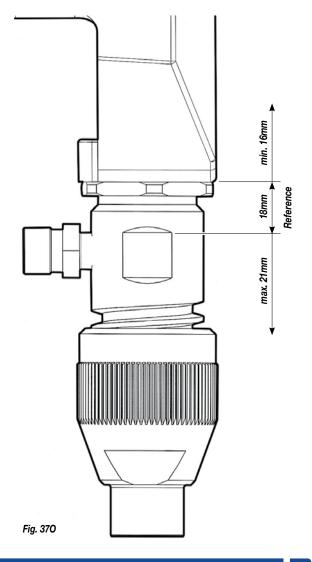


Fig. 360







 Once the unit has been correctly positioned, tighten the lock nut (O37) hard against the front template. To tighten, use a 45 mm spanner.



Fig. 380

• Close the inspection cover (O2) again.



Fig. 390

Fit the suction pipe (**O38**).
 Put PTFE tape or liquid PTFE over the threaded part before screwing it onto the foot valve.

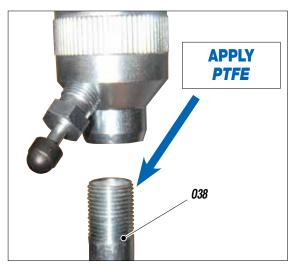


Fig. 400



For correct reassembly, see the drawing of the pump unit, and follow disassembly operations in reverse order.

REPLACEMENT OF THE BALL RELEASE GROUP SEAL

In case there is a loss of material from the ball release group (O39), it is necessary to replace the gasket (O40) as shown.



Fig. 410

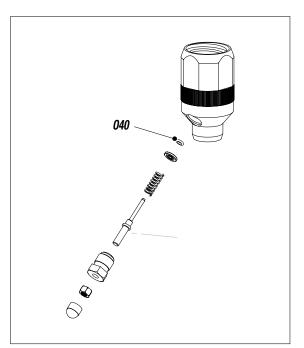


Fig. 420





P TROUBLESHOOTING

Problem	Cause	Solution
The equipment does not start	Lack of voltage;	Check the correct connection to the power supply;
	Considerable drops in mains voltage;	Check the extension cable;
	On/Off switch disconnected;	Ensure the On/Off switch is on the "on" position and turn clockwise the pressure control knob;
	Breakdown of pressure transmitter;	Verify and replace it, if necessary;
	Breakdown of motor electric control box;	Verify and replace it, if necessary;
	The line of material coming out of the pump is already under pressure;	Open the drain valve to release pressure in the circuit;
	The product is solidified inside the pump;	Open the drain valve to release pressure in the circuit and stop the machine. Di- sassemble the pumping group and the pressure transmitter and clean;
The equipment does not suck the	Suction filter clogged;	Clean or replace it;
product	Suction ilter too fine;	Replace it with a larger-mesh filter (with very dense products, remove the filter);
	The equipment sucks air;	Check the suction pipe;
	Ball is blocked;	Press the manual unlocking device;
The equipment sucks but does not reach the pressure desired	Lack of product;	Add the product;
reach the pressure desired	The equipment sucks air;	Check the suction pipe;
	The recirculating-safety valve is open;	Close the recirculating-safety valve;
	The gaskets of the pumping group are worn;	Replace the gaskets;
	Suction or delivery valve dirty;	Disassemble the pumping group;
When pressing the trigger, the pres-	Nozzle too big or worn;	Replace it with a smaller one;
sure lowers considerably	The product is too dense;	Dilute the product, if possible;
	The filter of the gun-butt is too fine;	Replace it with a larger-mesh filter;
The pressure is normal but the pro-	The nozzle is partially clogged;	Clean or replace it;
duct is not atomized Leakage from the seal-tightening	The product is too dense	Dilute the product, if possible;
screw	The filter of the gun-butt is too fine;	Replace it with a larger-mesh filter;
The atomization is imperfect	The nozzle is worn;	Replace it;
When releasing the trigger of the	The gaskets of the pumping group are worn;	Replace the gaskets;
gun, the equipment does not stop (the motor runs slowly and the piston rod moves up and down)	Suction or delivery valve dirty;	Disassemble the pumping group and clean;
	Recirculating-safety valve defective;	Verify and replace it, if necessary;

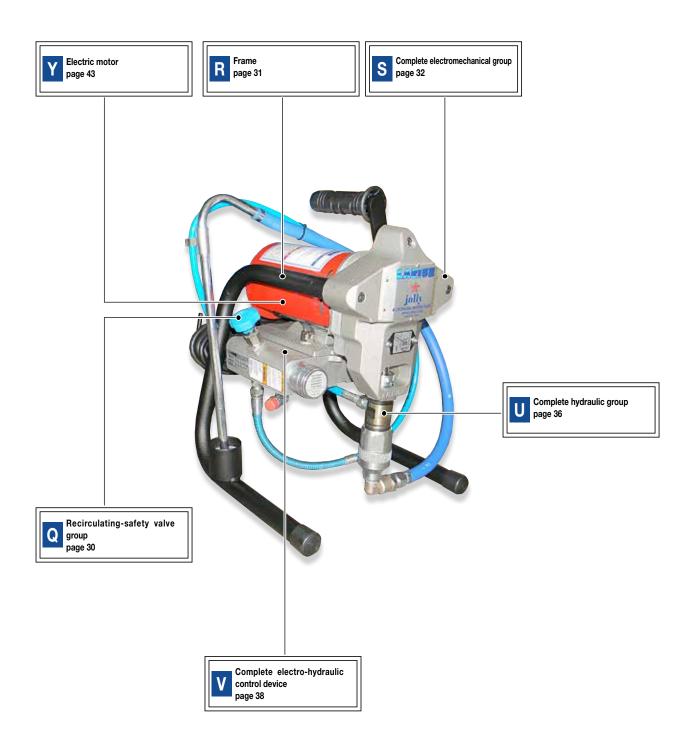


Always disconnect the equipment and discharge the pressure before performing any check or replacement of pump parts (see "correct procedure of decompression").





SPARE PARTS version on frame









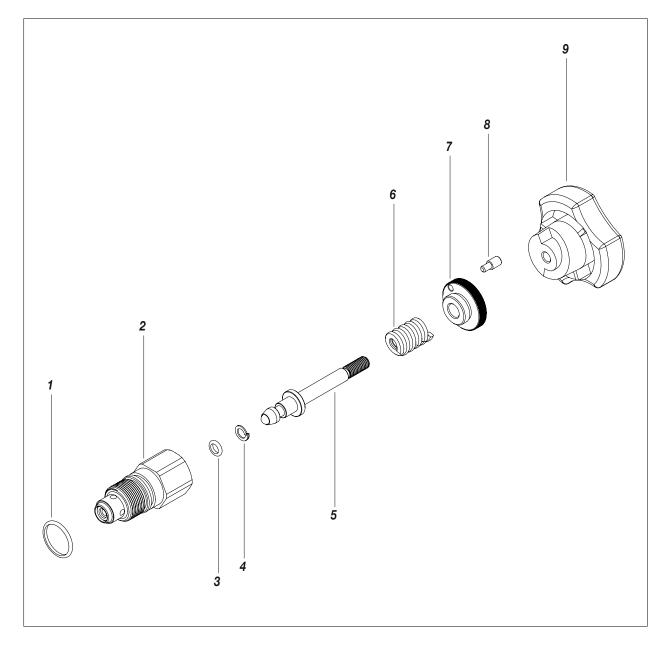






Q RECIRCULATING-SAFETY VALVE GROUP REF. 56563 FOR ALL VERSIONS

WARNING: Always indicate code and quantity for each part required



Pos.	Code	Description
-	56563	Recirculating-safety valve group
1	4033	0R 2062
2	16415	Valve housing
3	53007/3	OR 2018
4	16419	Ring BK 2018

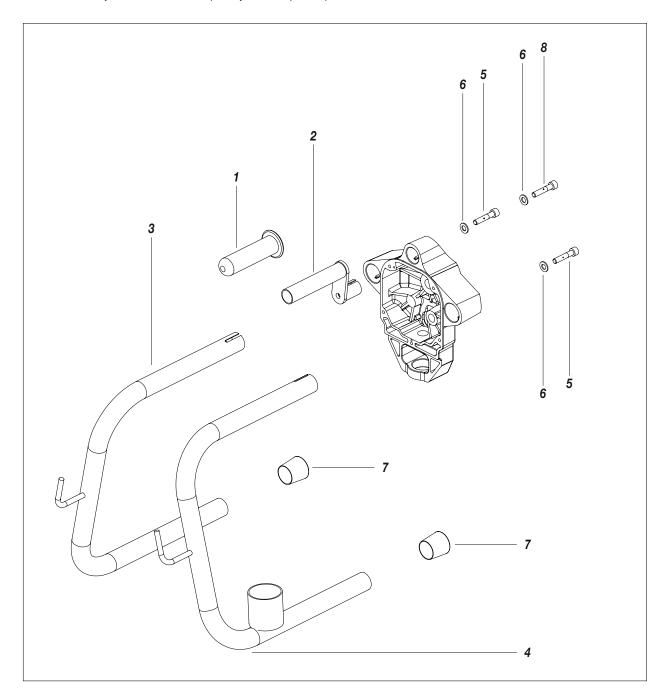
Pos.	Code	Description
5	16420	Complete rod
6	16410	Spring
7	16409	Clamping ring
8	16408	Pin
9	16405	Knob





R FRAME REF. 56564

WARNING: Always indicate code and quantity for each part required.



Pos.	Code	Description
-	56564	Frame unit
1	21654	Handle
2	50526	Handgrip
3	56527	Right frame-tube
4	56528	Left frame-tube

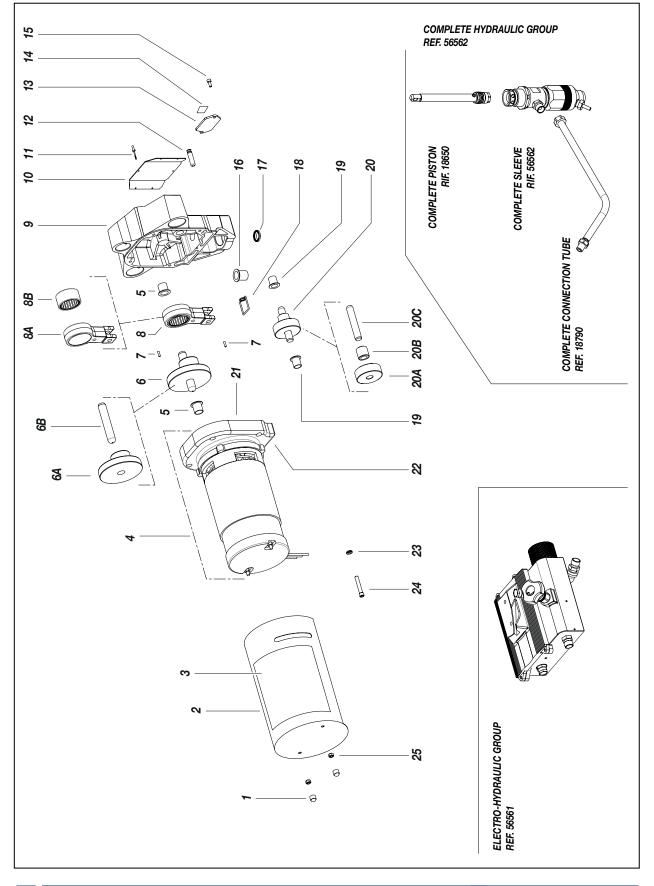
Pos.	Code	Description
5	37406	Screw
6	34009	Washer
7	37403	Foot
8	37177	Screw





S COMPLETE ELECTRO-MECHANICAL GROUP REF. 56560 FOR ALL VERSIONS

WARNING: Always indicate code and quantity for each part required.







Pos.	Code	Description
-	56560	Complete electro-mechanical group
1	56572	Nut Cover
2	56522	Motor cover
3	56524	Warning label
4	56575	Electric motor 220V 50Hz
4	56575/1	Electric motor 110V 50Hz
5	18667	Bushing
6	18672	Complete cam
6A	18670	Notched eccentric
6B	18671	Pin
7	4233	Pin
8	18673	Complete coupling rod
8A	18669	Piston rod
8B	18668	Bearing
9	18663	Reduction cover
10	56523	Front plate
11	34021	Rivet Ø 2 mm

Pos.	Code	Description
12	18666	Pin
13	18674	Safety cover
14	18677	Label
15	5378	Screw
16	18664	Rod bushing
17	18685	Ring
18	18665	Spring
19	18681	Transmissione bushing
20	18680	Complete transmission
20A	18676	Notched wheel
20B	18678	Pinion gear
20C	18679	Pin
21	56521	Drive shaft
22	56520	Motor flange
23	34009	Washer
24	8029	Screw
25	33024	Nut





T TROLLEY REF. 56555

WARNING: Always indicate code and quantity for each part required.



Pos.	Codice	Description
1	21654	Handle
2	18631	Handgrip
3	37406	Screw
4	34009	Washer
5	91047	Wheel washer

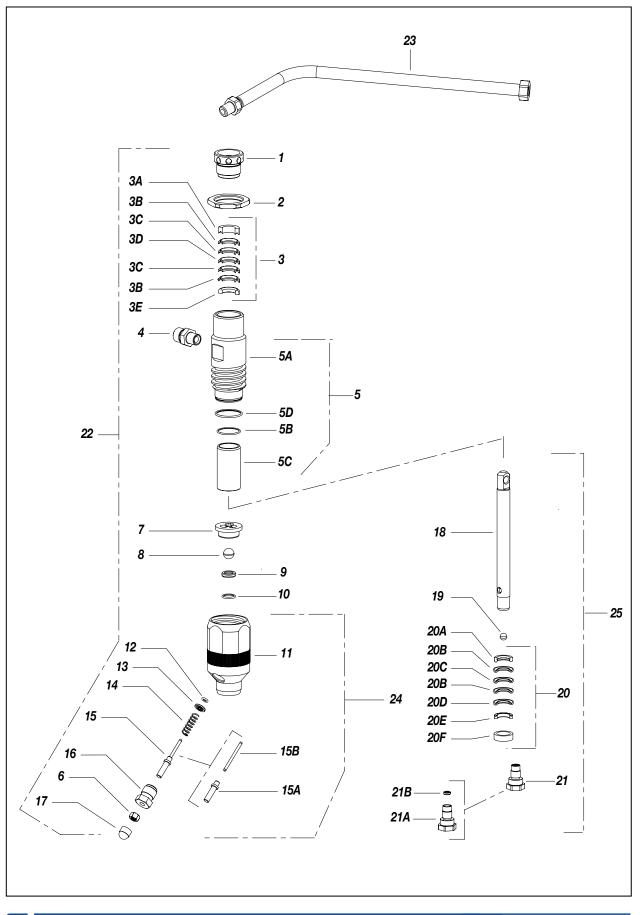
Pos.	Codice	Description
6	37218	Wheel
7	18635	Frame
8	95159	Caps
9	37177	Screw

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U COMPLETE HYDRAULIC GROUP REF. 56562





Pos.	Code	Description
-	56562	Complete hydraulic group
1	16109	Ring packing
2	16127	Locking nut
3	16105	Upper gaskets kit
3A	16106	Ring
3B	16107	PTFE gasket
3C	16124	Polyethylene gasket
3D	16155	Waxed leather gasket
3E	16108	Ring
4	96208/1	Fitting
5	18640	Complete pumping unit
5A	18640/1	Pumping unit
5B	18640/3	ORm
5C	18640/2	Sleeve
5D	16126	OR
6	91026	Nut M6
7	18642	Ball guide
8	33028	Ball ø 11mm
9	91018	Ball housing
10	18643	ORM
11	56536	Foot valve body
12	18553	OR
13	56540	Disk

Pos.	Code	Description
14	9288	Spring
15	56547	Releasing rod complete
15A	56539	Command rod
15B	56537	Releasing rod
16	56538	Guiding bushing
17	56541	Nut M6 stopper
18	18652	Piston rod
19	16130	Ball ø 5/16"mm
20	18651	Lower gaskets kit
20A	18644	Ring
20B	16117	Gasket
20C	16114	Red Gasket
20D	16136	Polyethylene Gasket
20E	18645	Ring
20F	18648	Ring
21	18655	Complete rod valve
21A	18646	Rod valve
21B	7154	Ball housing
22	56565	Complete hydraulic sleeve
23	18790	Complete connection tube
24	56526	Valve body and releasing rod complete
25	18650	Complete hydraulic rod

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Complete pump repair kits COD. 40107

Pos.	Descrizione
3	Upper gaskets kit
5A	Pumping unit
5D	Sleeve
8	Ball ø 11mm
10	ORM
18	Piston rod
19	Ball ø 5/16"mm
20	Lower gaskets kit

Foot valve kit COD. 18854

Pos.	Descrizione
8	Ball ø 11mm
9	Ball housing
10	ORM

Pump maintenance kit COD. 40106

Pos.	Descrizione
3	Upper gaskets kit
5D	Sleeve
8	Ball ø 11mm
10	ORM
18	Piston rod
19	Ball ø 5/16"mm
20	Lower gaskets kit

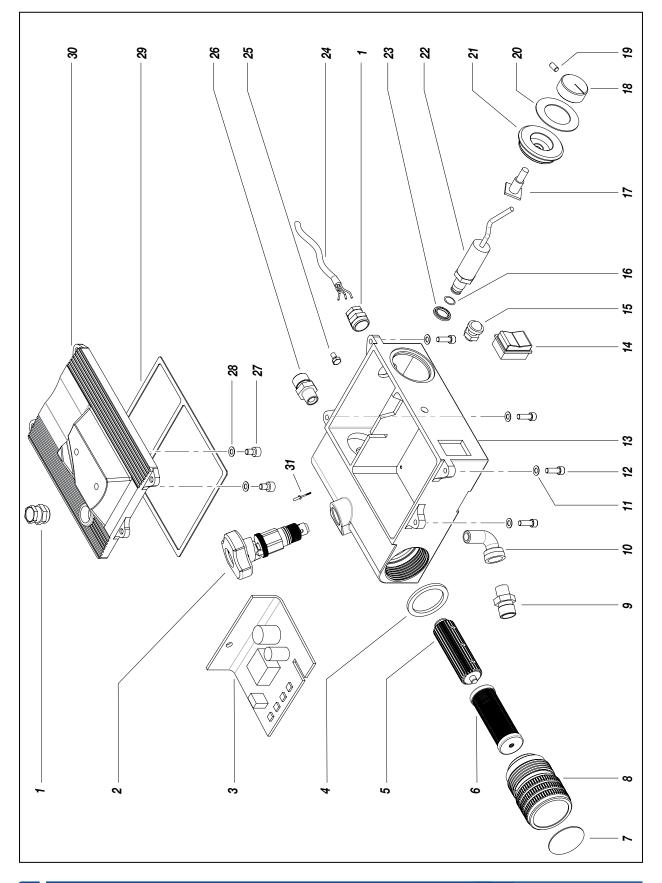
Gasket kit lower + higher COD. 18855

Pos.	Descrizione
3	Upper gaskets kit
20	Lower gaskets kit





V COMPLETE ELECTRO-HYDRAULIC DRIVING GROUP REF. 56561 FOR ALL VERSIONS







Pos.	Code	Description
-	56561	Complete electro-hydraulic group
1	18871	Cable fastener
2	56563	Valve
3	56530	Electronic card
4	56535	Gasket
5	18627	Sieve support
6	16205	Filter sieve
7	18657	Pressure label
8	56534	Filter cap
9	96206	Fitting
10	18614	Fitting
11	5737	Washer
12	4019	Screw
13	56533	Electro-hydraulic box
14	5933	Switch
15	56548	Signal LED

Pos.	Code	Description
16	18689	OR ring
17	18693	Potentiometer
18	20349	Adjusting knob
19	95210	Hex socket set screw
20	18687	Pressure label
21	18682	Plug
22	18692	Pressure sensor
23	18684	Gasket
24	18870	Power cable
25	20245	Screw
26	96208/1	Fitting
27	5727	Screw M6x8
28	32005	Washer ø6
29	18625	Gasket
30	18654	Box cover
31	34021	Rivet



Equipped with:

MATERIAL HOSE 1/4" - M16x1,5 Art. 18007: 15 mt



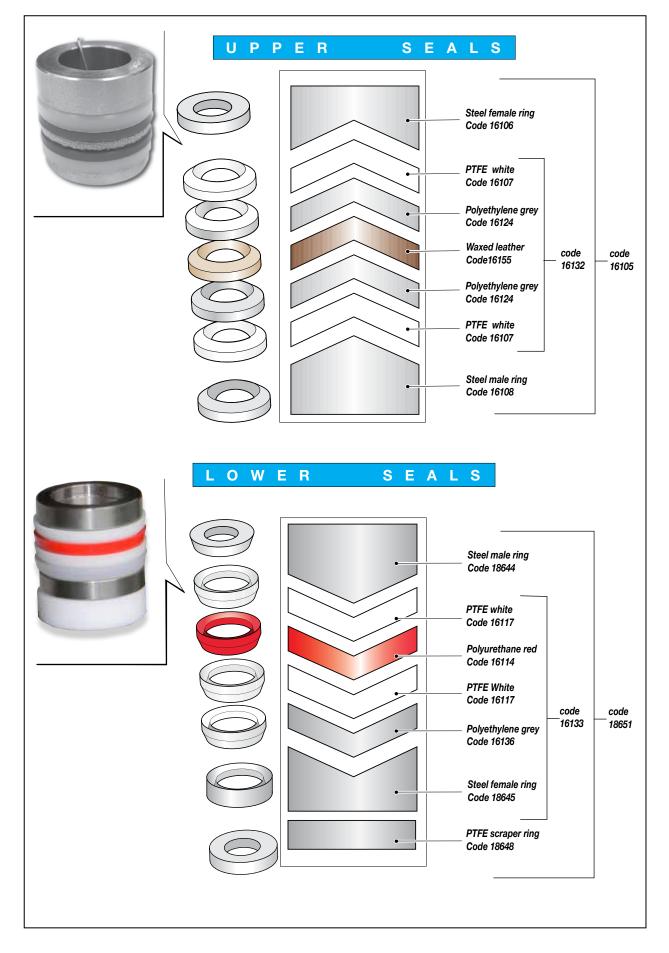
For a 1/4" fitted gun, you need:

ADAPTER Art. 3276





GASKETS ASSEMBLY







W SUCTION AND RECIRCULATION KIT ON FRAME RIF. 56567



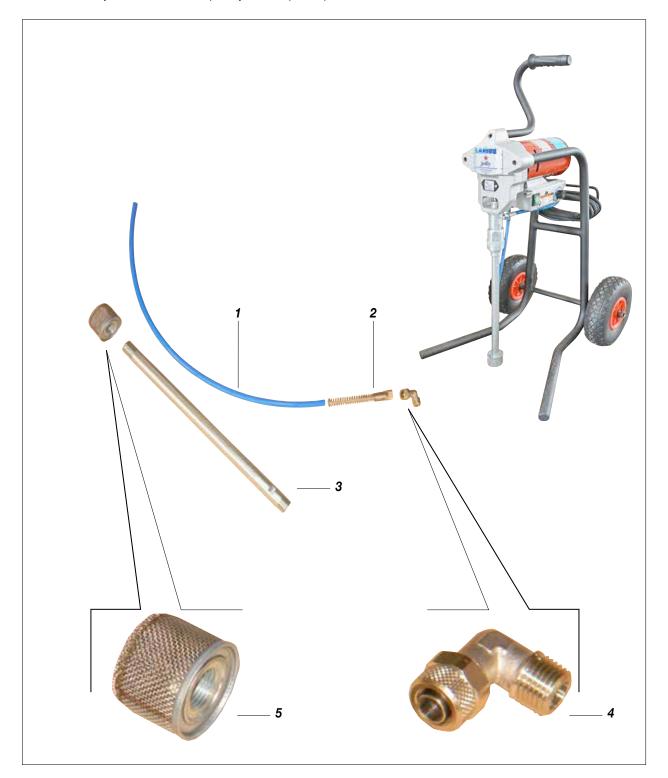
Pos.	Code	Descripton
-	56567	Complete suction-recirculation kit
1	56569	Suction tube
2	8058	Nipple 1/2"
3	8071	asket 1/2"
4	20811	Elbow M-F
5	16802	Filter
6	56542	Filter fitting
7	56573	Reciculation hose
8	18094	Spring

Pos.	Code	Descripton
-	56571	Suction-recirculation group
1	56569	Suction tube
5	16802	Filter
6	56542	Filter fitting
7	56573	Recirculation hose
8	18094	Spring





X SUCTION AND RECIRCULATION GROUP ON TROLLEY RIF. 56568



Pos.	Code	Description
-	56568	Complete suction-recirculation group
1	18170	Rilsan hose
2	16066	Nut with spring
3	8046	Tube

Pos.	Code	Description
4	4011	Fitting
5	16802	Filter





Y ELECTRIC MOTOR

WARNING: Always indicate code and quantity for each part required.

BRUSHES CHECK



DISCONNECT THE POWER SUPPLY BEFORE CHECKING OR REPLACING THE BRUSHES.

- Periodically check the wear of the brushes (at least every 250 working hours).
- Periodically check the perfect connection among all the electrical components (at least every 250 working hours).
- The length of the brush contact must be higher than **7 mm** to guarantee a good working of the rotary group.
- To access the brushes proceed as follows: "A B C D E".







Fig. 2Y



Fig. 3Y



Fig. 4Y



Fig. 5Y















MANUAL GUN MIST-LESS	
Art.	Descripton
21801	L400 complete with Mist-Clean base for Super Fast Clean or Top Spraying Clean tip. Max pressure: 140 bar



PISTON GUNSTOCK FILTERS	
Art.	Descripton
11039	Green (30M)
11038	White (60M)
11037	Yellow (100M)
11019	Red (200M)



HIGH PRESSURE MANOMETER	
Art.	Descripton
147	M16x1,5
150	GJ 1/4"



HIGH PRESSURE HOSE 3/8" M16X1,5 MAX PRESSURE 425 BAR

Art.	Descripton
18063	7,5 mt
18064	10 mt
18065	15 mt



ANTIPULSATIONS HOSE 1/4" -M16X1,5 MAX PRESSURE 250 BAR

Art.	Descripton
35013	5 mt
35014	7,5 mt
35017	10 mt
18026	15 mt



ANTISTATIC HOSE 3/16" M16X1,5 MAX PRESSURE 210 BAR Art. Descripton

6164	5 mt
55050	7,5 mt
35018	10 mt



REPAIR KIT PUMPING UNIT

Art.	Descripton
40107	



FILTER	
Art.	Descripton
270	100 MESH
271	60 MESH



FILTER		
Art.	Descripton	
16205	60 Mesh	
16204	100 Mesh	
16203	200 Mesh	







ELECTRIC MIXERS		
Art.	Descripton	
217550	MX 850 Power 850W	
217560	MX 1100 Power 1080W	
217570	MX 1100E Power 1080W	

TELESCOPIC PAINT ROLLER	
Art.	Descripton
16780	complete with: n. 1 Roller with extra-long fiber n. 1 Roller with long fiber n. 1 Roller with medium fiber Flexible hose mt. 2 3/16 " M16x1,5





GUN EXTENSION	
Art.	Descripton
153	cm 30
153	cm 40
155	cm 60
158	cm 80
156	cm 100

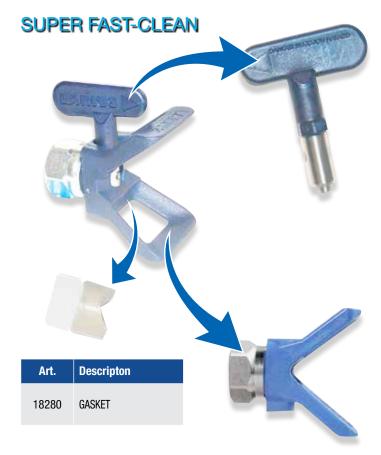


E





TOP-SPRAYING CLEAN					TOP-SPRAYING CLEAN TIP			
				Nozzles codes				
				TSC 7-20		TSC 15-40	TSC 21-60	
				TSC 7-40		TSC 15-60	TSC 23-20	
				TSC 9-20		TSC 17-20	TSC 23-40	
				TSC 9-40		TSC 17-40	TSC 23-60	
				TSC 11-20		TSC 17-60	TSC 27-20	
				TSC 11-40		TSC 19-20	TSC 27-40	
			11 (2)	TSC 13-20		TSC 19-40	TSC 27-60	
			100	TSC 13-40		TSC 19-60	TSC 31-40	
				TSC 13-60		TSC 21-20	TSC 31-60	
				TSC 15-20		TSC 21-40		
					Art.	Descripton		
					18270	SUPER FAST-CLEAN base UE 11/16x16		
Art.	Descripton							
18280	GASKET							



SUPER FAST-CLEAN TIP							
Nozzles codes							
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						

Art.	Descripton	
18270	SUPER FAST-CLEAN base UE 11/16x16	

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