

MINIPEGASO



II 2 G c IIB T4



OPERATING AND MAINTENANCE INSTRUCTIONS

LARIUS[®]

ENGLISH

CE



PNEUMATIC DOUBLE DIAPHRAGM PUMP









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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.

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.

| | |
|---|---|
|  | <p>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. Keep children and animals away from work area. Comply with all safety standards.</p> |
|  | <p>It indicates an accident risk or serious damage to equipment if this warning is not followed.</p> |
|  | <p>FIRE AND DANGER OF EXPLOSIONS Flammable fumes, such as solvent and paint fumes, may burst into flames or explode. To prevent the risks of fire or explosion:</p> <ul style="list-style-type: none"> - ONLY use this equipment in a well ventilated area. Earth all the equipment located in the work area. - Eliminate all sources of sparks, such as pilot flames, cigarettes, portable electric torches, synthetic clothing (potential static arc) etc. - Connect the equipment and all the conductive devices in the working area to ground. - Use only conductive airless hoses and connect them to ground. - Do not use trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in pressurised aluminium equipment. Using these substances may cause a dangerous chemical reaction with the possibility of explosion. - Do not form connections or switch light switches on or off if the air contains inflammable fumes. <p>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.</p> |
|  | <p>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.</p> |
|  | <p>Report any risk of chemical reaction or explosion if this warning has not been given. There is a risk of injury or serious lesion related to contact with the jet from the spray gun. If this should occur, IMMEDIATELY contact a doctor, indicating the type of product injected. Do not spray before the guard has been placed over the nozzle and the trigger on the spray gun. Do not put your fingers in the spray gun nozzle. Once work has been completed, before carrying out any maintenance, complete the decompression procedure explained in this manual.</p> |
|  | <p>It indicates important recommendations about disposal and recycling process of products in accordance with the environmental regulations.</p> |
|  | <p>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 earthed and that it complies with safety standards. The high-pressure fluid that comes out of the gun or from possible leaks may cause injections into the body. To prevent the risks of fire or injection:</p> <ul style="list-style-type: none"> - Use the safety lock of the gun trigger when you are not spraying. - Do not place your hands or fingers on the gun nozzle. Do not attempt to stop leaks with your hands, body or anything else. - Do not aim the gun at yourself or anyone else. - Do not spray without the special nozzle protection. - Release the system pressure after spraying and before any maintenance operation. - Do not use components whose operating pressure is lower than the maximum system pressure. - Do not allow children to use the equipment. - Pay the utmost attention to possible recoil when pulling the gun trigger. <p>If the high-pressure fluid penetrates the skin, the wound may appear to be just a "simple cut", but may actually be a very serious injury. Immediately medicate the injured part.</p> |
|  | <p>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.</p> |

A WORKING PRINCIPLE

The **LARIUS MINIPEGASO** double-membrane pneumatic pump is composed of two chambers, which are alternately in suction and delivery through the action of the two Teflon membranes. The alternate movement is obtained by means of an inversion device fed with compressed air.

The **MINIPEGASO** pump is used in all processes requiring a high rate of productivity, the use of dense materials and aggregates, and when the treated fluid must not come into contact with the pump components.

ADVANTAGES OF USING MINIPEGASO

- Higher productivity and maximum capacity to convey the product (hoses up to 30 metres in length).
- Powerful and ultra silent compressor.
- The pumping hose is easy to replace in just a few minutes without having to use any tools (large material hopper of 50-litre capacity,

- removable from the carriage without having to use any tools).
- Funnel-shaped hopper: facilitates the filling operations, dropping of the material into the pump and maintaining the material flow in the pump.
- Hopper constructed of non-stick material to facilitate the cleaning and maintenance operations.
- Gentle start of material flow: pulling the gun trigger the pump flow and pressure start and as soon as the trigger is released they stop.
- Atomization air is delivered only when the trigger is pulled.
- No risk of product contamination since isolated from the pumping device.
- Excellent uniformity of finish: no sudden material charges.

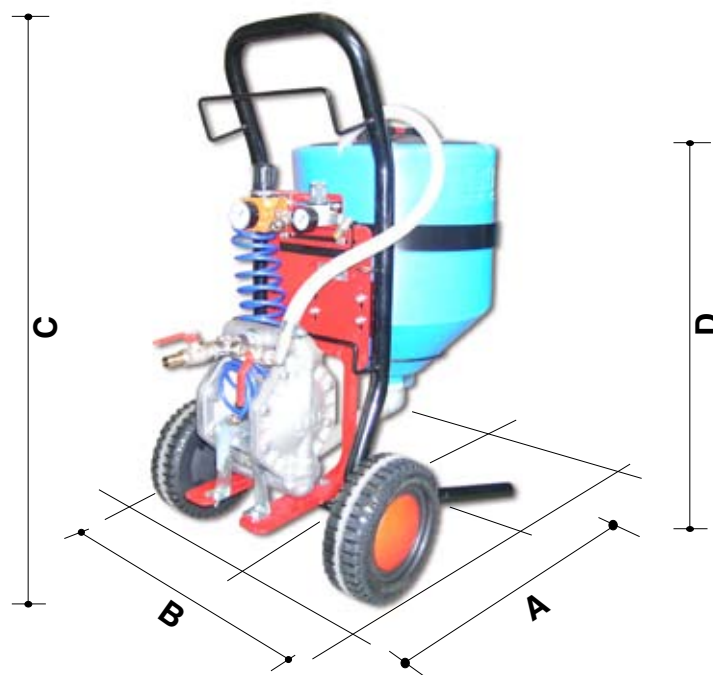


| Application materials | Application materials |
|-----------------------|-----------------------|
| Acoustics | Cement sealants |
| Stucco | Cement adhesives |
| Fibre coatings | Granular plasters |
| Fillers | Cement plasters |
| Water proofing | Filling plasters |
| Soundproofing mortars | Silicate paints |

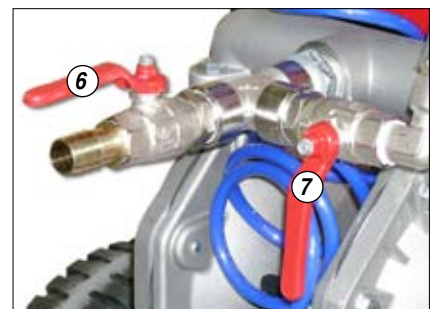
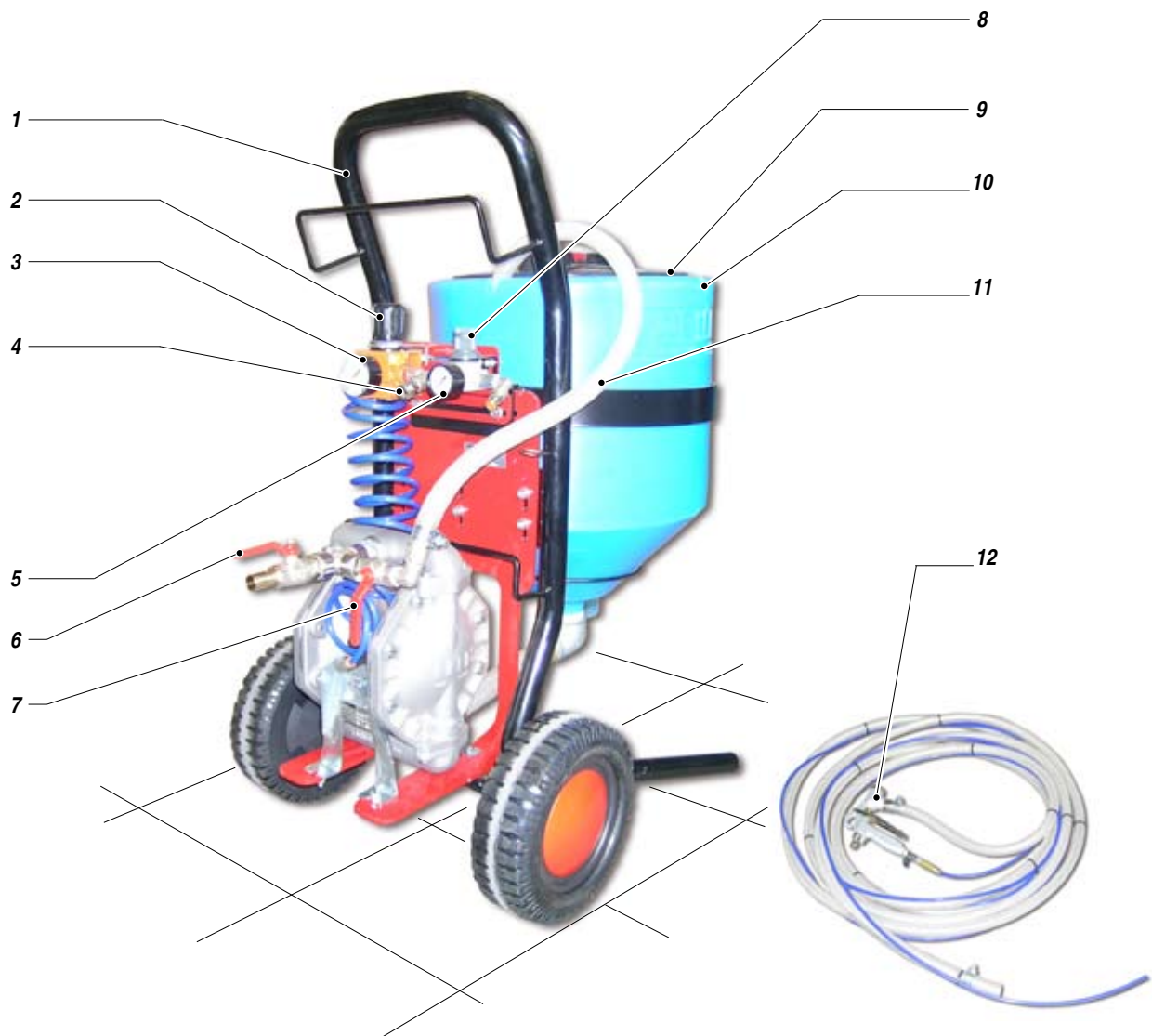
B TECHNICAL DATA

| | MINIPEGASO | | |
|--|--|--|---|
| Supply | Compressed air | | |
| Material hose lenght | from 0 to 30 mt (based on the viscosity and density of the materials used) | | |
| Material hose sizes | ø19X25 Standard | | |
| Maximum water flow rate | 40 L/m | | |
| Weight | 47 Kg with hose and gun | | |
| Lenght | (A) 100 cm | | |
| Width | (B) 55 cm | | |
| Total height | (C) 95 cm | | |
| Loading height | (D) 80 cm | | |
| Maximum fluid pressure | 7 bar | | |
| Maximum air pressure | 7 bar | | |
| Acoustic level | Max. 50 db (A) | | |
| Tank capacity | 50 l | | |
| Gunes: Turbo gun Tex gun Hopper gun | Max. air pressure 8 bar/ 116 psi 8 bar/ 116 psi 8 bar/ 116 psi | Max. fluid pressure 20 bar/ 290 psi 10 bar/ 145 psi 10 bar/ 145 psi | *Set of nozzles 3-4-6-8-10-12 mm 4-6-8 mm 4-6-8 mm |
| Main water-based application materials | Products with grain size up to 2-3 mm Acoustics, stucco, fibre coatings, cement adhesives and sealants, cement plasters and filling plasters, etc. | | |
| Spray gun air consumption | Max 300 lt/min | | |
| Pump air consumption | Max 190 lt/min | | |

*The maximum nozzle sizes are approximately: they vary based on the viscosity and density of the product.
CEMENT MATERIALS USABLE WITH RESIN-BASED BINDERS



C DESCRIPTION OF THE EQUIPMENT







| POS. | Description |
|------|-----------------------------|
| 1 | Trolley |
| 2 | Air pressure gauge for pump |
| 3 | Manometer low pressure |
| 4 | Air intake for pump feed |
| 5 | Gun air pressure gauge |
| 6 | Product delivery valve |


| POS. | Description |
|------|------------------------------|
| 7 | Recirculation valve |
| 8 | Gun pressure adjustment knob |
| 9 | Cover |
| 10 | Tank |
| 11 | Product recycling hose |
| 12 | Gun |

D 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. |
|---|--|

E 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 STOP ENGINE 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.


- 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.



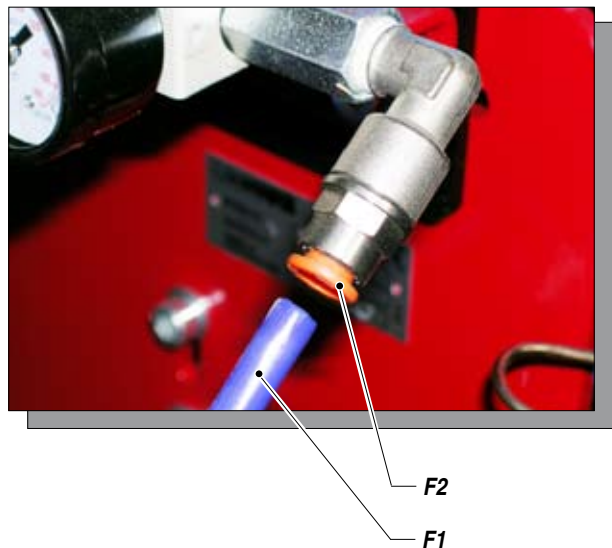
TAKE PROPER SAFETY MEASURES FOR THE PROTECTION OF HEARING IN CASE OF WORK NEAR THE PLANT.

- MAKE SURE THAT YOU KNOW HOW TO STOP THE MACHINE IN CASE OF NEED. WE ALSO RECOMMENDED THAT INEXPERT USERS ARE TRAINED ON PROPER AND SAFE USE BEFORE STARTING.
- KEEP UNAUTHORISED PERSONNEL AWAY FROM THE MACHINE, ESPECIALLY IF THE PRODUCT TO BE USED IS TOXIC.
- IF NECESSARY, USE WARNING SIGNALS TO KEEP ANY PERSONS PRESENT AT A SAFE DISTANCE.
- CHECK THAT THERE IS SOMEBODY CLOSE BY WHO CAN HEAR YOU IN THE EVENT OF ANY ACCIDENT.

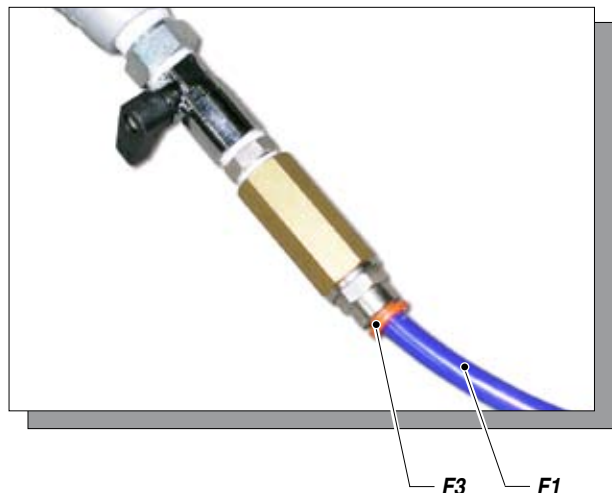
F SETTING-UP

CONNECTION OF THE FLEXIBLE HOSE TO THE GUN

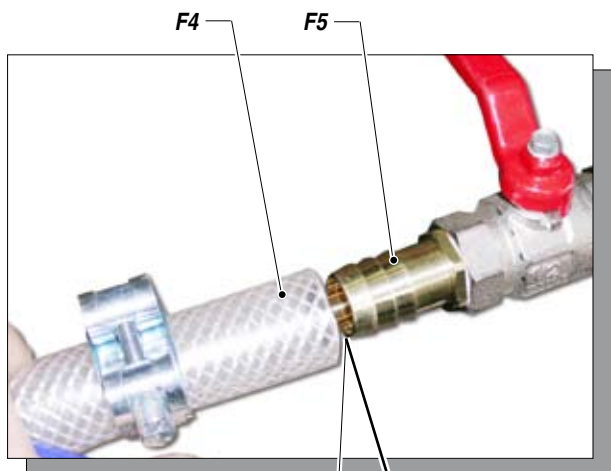
- Connect the flexible hose (F1) to the gun air pressure gauge coupling (F2) of the pump.



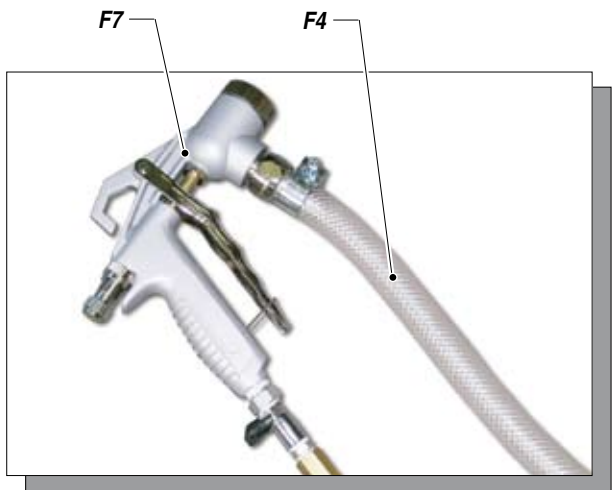
- Connect the flexible hose (F1) to the gun coupling (F3).



- Connect the flexible product delivery hose (F4) to the delivery coupling (F5) of the pump. Tighten the metal clamp (F6).



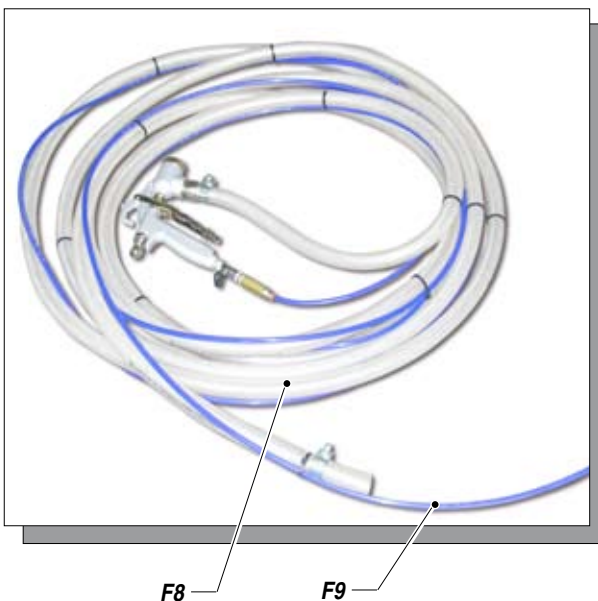
- Connect the flexible product delivery hose (F4) to the gun (F7).



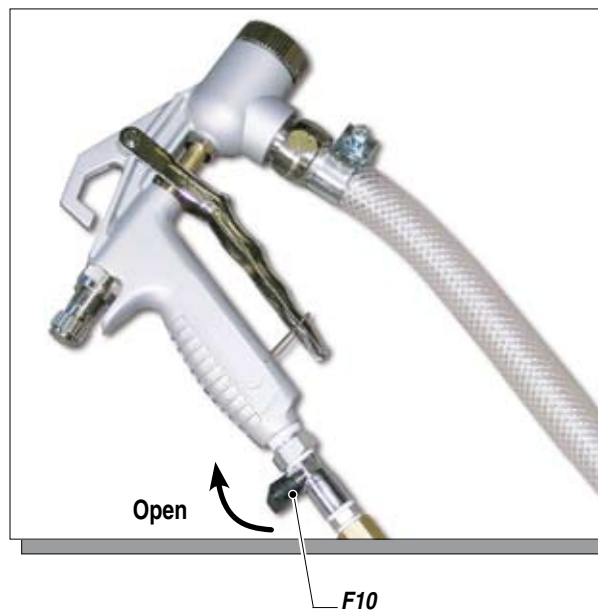
NEVER use sealants on fittings' threads.
It is recommended to use the hose provided with the standard kit.
NEVER use a damaged or a repaired flexible hose.

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.
- Clean the hoses (F8) and (F9) with a blast of compressed air before connecting them.



- Check that the atomization air is open.
- Turn the atomization air delivery adjustment knob (F10) clockwise.



- Rotate the pressure setting knob (F11) slightly clockwise so that the machine operates at minimum power.



- Point the spray gun into the collection container and hold the trigger down (in order to expel the oil contained) until clean liquid flows out. Now, release the trigger.
- Aim the gun against the cleaning liquid bucket and pull the trigger to recover the left-over solvent.
- Close the pressure setting knob (F11).

Do not set the pump to work without product, because this could spoil its gaskets.

Absolutely do not spray cleaning liquids in closed environments and stand with the gun away from the pump in order to prevent contact with the cleaning liquid vapours.

- Now the machine is ready. When water-based paint has been used, in addition to washing using the cleaning liquid, we recommend washing with soapy water and then clean water.

PREPARING THE PRODUCT TO BE APPLIED

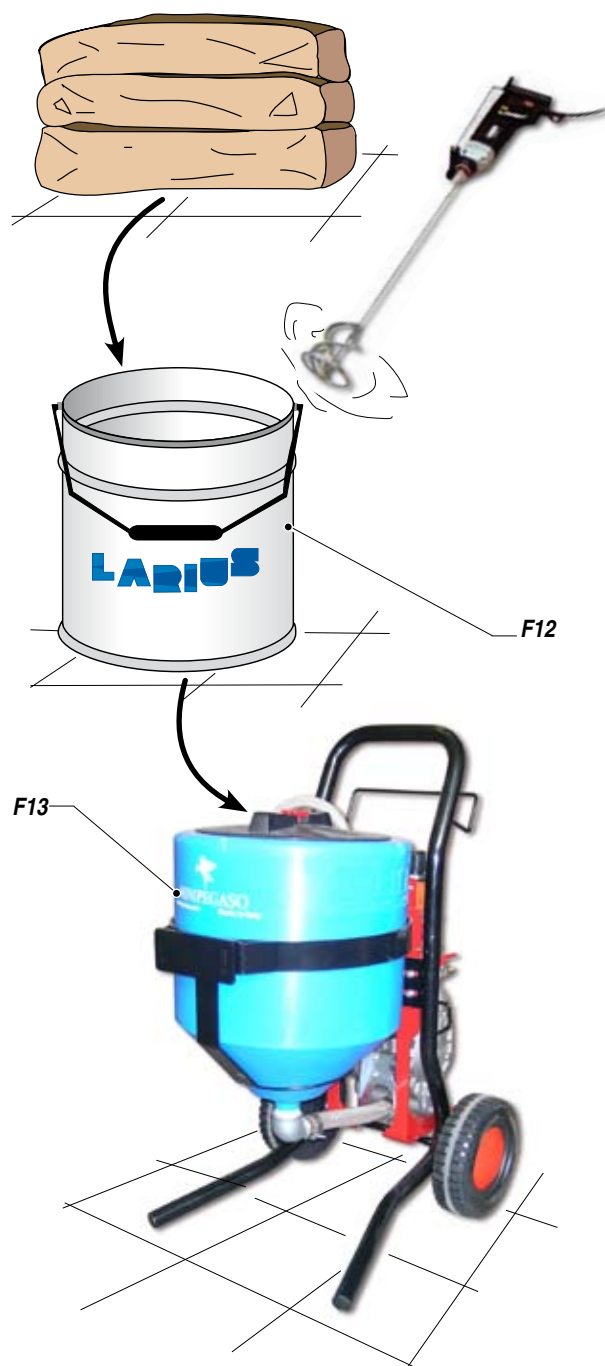
- Make sure the product is suitable to be used with a spray gun.
- Mix the product in a container (F12) before introducing it into the tank (F13).



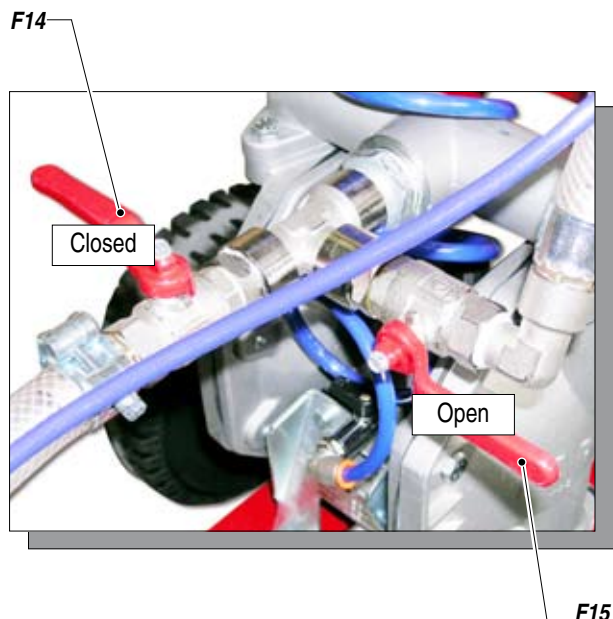
Make sure the product to be used is compatible with the materials employed for manufacturing the equipment (stainless steel, aluminium and carbon steel). Because of that, please contact the supplier of the product.

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.

- Introduce the ready mixed product into the tank (F13).



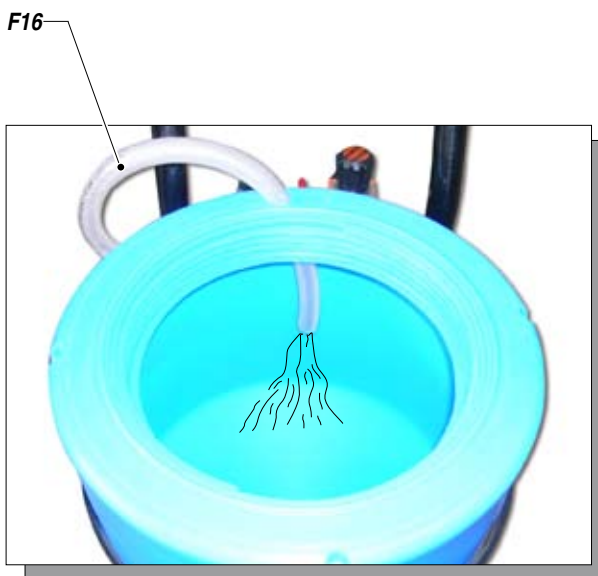
- After introducing the product into the tank (F13), close the product delivery valve (F14) on the gun and open the recirculation valve (F15).



- Turn the pressure adjustment knob (F11) clockwise to start the pump.



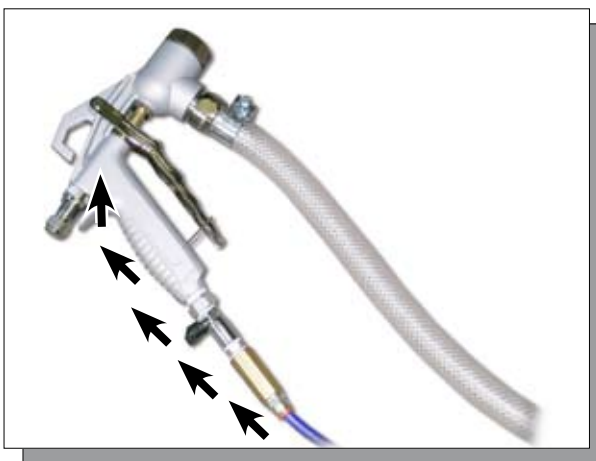
- If the product has properly been mixed, you should see it come out of the recirculation hose (F16). If the product does not recirculate it means that it is too dense and it must be further diluted until obtaining the correct recirculation flow; let the product recirculate for a short time. At this point, the machine is ready to start working.



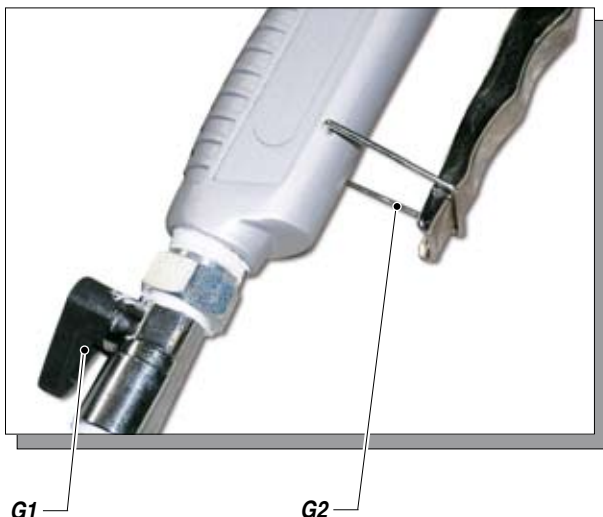
G WORKING



Before starting the pump, it is important to send a small amount of atomization air to the gun.

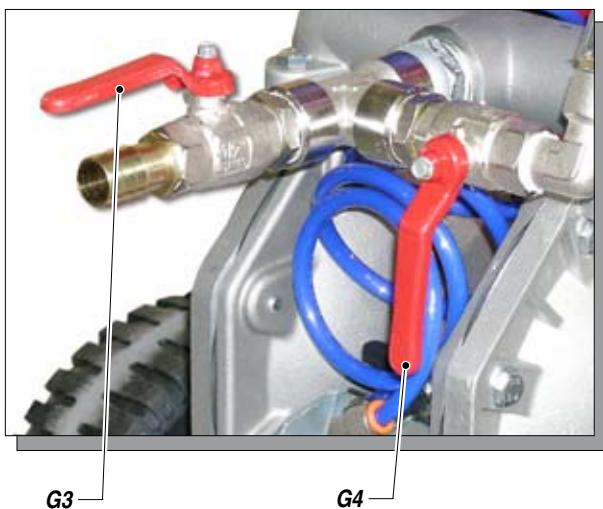


Hold the cock (G1) slightly open, thus preventing the product from returning to the atomization air delivery circuit and clogging the gun and the air delivery hose. Insert the block (G2) to allow the air to escape when filling the delivery hose with product for the first time.



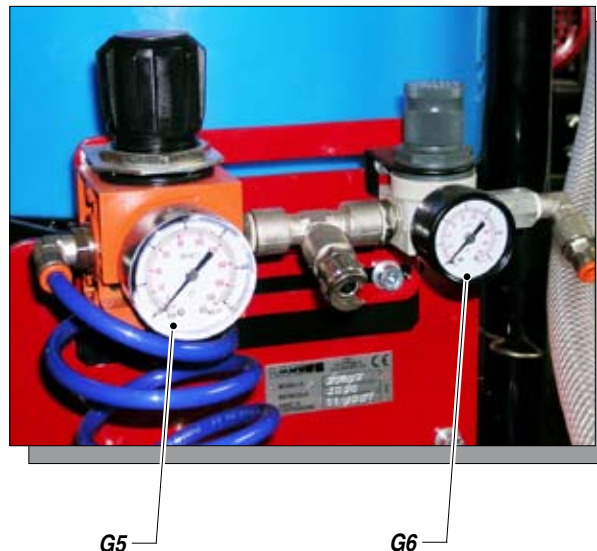
STARTING THE SPRAYING OPERATIONS

- Use the tooling after performing all the **SETTING UP** operations above described.
- Open the product delivery valve (**G3**) to the gun and close the recirculation valve (**G4**).
- At this point, the product will flow until reaching the gun and you can start working.



SPRAY ADJUSTMENT

- The product application nozzle can be adjusted according to need by varying the pump operating pressure (**G5**) and the atomization pressure (**G6**) until reaching the necessary operating conditions.



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.

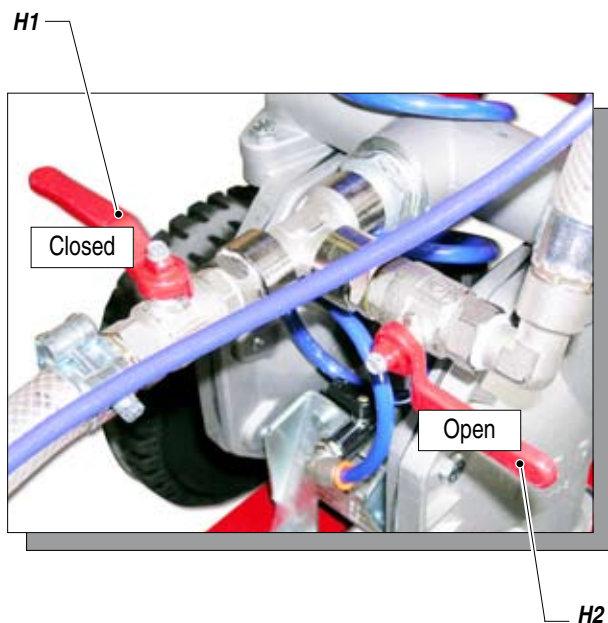
H MAINTENANCE

CLEANING AFTER SPRAY PAINTING OR A PRODUCT CHANGE



Before cleaning the pump it is important to send a small amount of atomization air to the gun. Hold the cock slightly open, thus preventing the product from returning to the atomization air delivery circuit and clogging the gun and the air delivery hose. Insert the block to allow the air to escape when filling the delivery hose with product for the first time.

- Introduce water into the pump tank.
- Close the delivery valve (**H1**) and open the recirculation valve (**H2**).



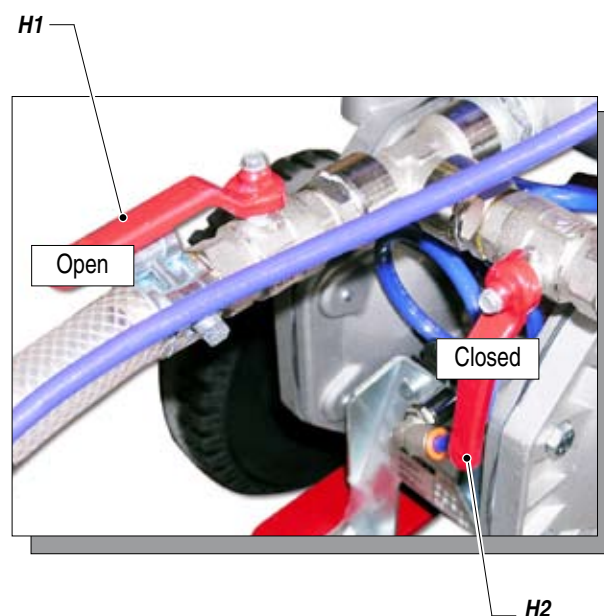
- Turn the pressure adjustment knob (**H3**) clockwise to start the pump.



- Insert the recirculation hose (**H4**) in the product collection receptacle.

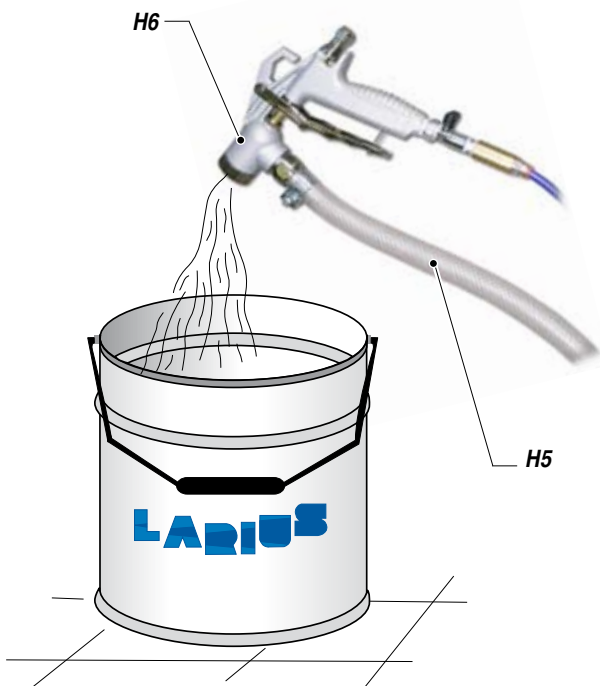


- Slowly start the pump until all the liquid in the tank and the pump has drained out. Repeat this operation several times until complete cleaning.
- Close the recirculation valve (**H1**) and open the delivery valve (**H2**).

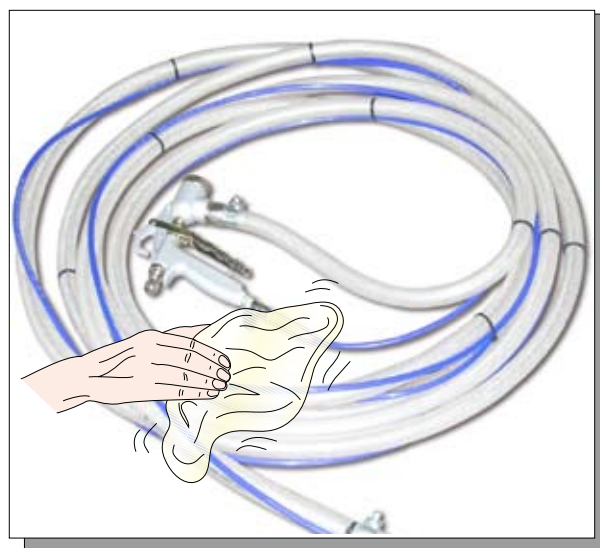


- Place the recirculation hose back into the tank.
- Slowly start the pump.

- Spray into a receptacle to clean the hose (H5) and the gun (H6). Repeat this operation several times until complete cleaning.



- If necessary, change the cleaning liquid and repeat the operation several times until all the product residues have been removed.
- Clean the outside of the hose and the gun.



- Detach the hose from the gun.
- Dismantle the gun and clean the nozzles.



- 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.

I PROBLEMS AND SOLUTIONS

| Problem | Cause | Solution |
|--|---|---|
| <ul style="list-style-type: none"> The equipment does not start | <ul style="list-style-type: none"> The feed air is insufficient; The product outfeed line is clogged; The product infeed line is clogged; The membrane has ruptured; The drive valve has locked; | <ul style="list-style-type: none"> Check the air supply line. Increase the feed hose diameter; Clean. Detach the product outfeed hose. Power the pump at minimum pressure and check if the pump starts without the outfeed hose; Check the hose and the intake filter. Clean; Replace the membrane; Press the reset buttons located at the sides of the valve; |
| <ul style="list-style-type: none"> The pump operates at accelerated speed and does not aspirate the product | <ul style="list-style-type: none"> Lack of product; The equipment sucks air; The "balls" do not close perfectly; | <ul style="list-style-type: none"> Add the product; Check the suction pipe; Remove and clean and/or replace the balls and ball seats; |
| <ul style="list-style-type: none"> The pump keeps on stalling | <ul style="list-style-type: none"> The feed air is insufficient. | <ul style="list-style-type: none"> Check the air supply line. Increase the feed hose diameter; Check that the parts of the air feed circuit guarantee a sufficient flow rate (the quick-couplings cause pressure drops). |

For proper removal and refitting of the pump parts, refer to the exploded diagrams according to the model.



Always close the compressed air supply and release the pressure in the system before checking or replacing the pump parts.

L DESCRIPTION FOR EXPLOSIVE AREAS

These safety instructions refer to installation, use and maintenance of low-pressure transfer membrane pumps of the Larius 2 and Larius 4 series for use in potentially explosive areas with the presence of gas or vapours (*area 1*).



These instructions must be followed in addition to the warnings given in the user and maintenance manual.



The Larius 2 and Larius 4 series membrane pumps are Class II equipment for use in areas with the presence of gas or vapours (*Category 2 G, Class IIB*). They have been designed and constructed in accordance with ATEX Directive 94/9/EC and the European standards: EN 1127-1, EN 13463-1ed EN 13463-5.

TECHNICAL FEATURES

Low pressure transfer double diaphragm pumps series Larius 2 and Larius 4.

Environment temperature: -10°C÷+50°C


Max. fluid temperature [°C]: 60°C

Max. air temperature [°C]: 30°C

| LOW PRESSURE TRANSFER DOUBLE DIAPHRAGM PUMPS | SERIE 2 LARIUS | SERIE 4 LARIUS |
|--|----------------|----------------|
| PRESSURE RATIO | 1:1 | 1:1 |
| PUMP FEEDING AIR PRESSURE [bar] | 1÷7 | 2÷8 |
| PUMP FEEDING AIR INLET | 1/4" GAS | 1/4" GAS |
| MAX. FLUID DELIVERY [l/min.] | 21 | 40 |
| MAX. AIR CONSUMPTION [l/min.] | 120 | 190 |

MARKING

Low pressure double diaphragm transfer pumps series Larius 2 and Larius 4.

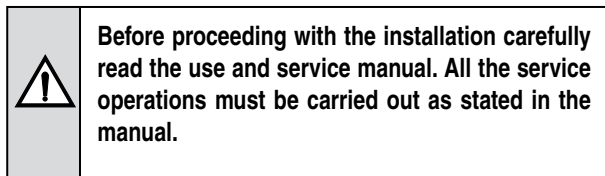
CE  II 2 G c IIB T4 Tamb: -10°C ÷ + 50°C Tmax. fluido: 60°C Tech. File: LARIUS 2-4/ATEX/05

| | |
|-----------------|--|
| II = | Group II (surface) |
| 2 = | Category 2 (zone 1) |
| G = | Explosion hazardous environment with presence of gas, fog and vapour |
| c = | Manufacturing safety "c" |
| T4 = | Class of temperature T5 |
| - 10°C ÷ + 50°C | Environment temperature |
| 60°C | Maximum fluid temperature |
| xxxxx/AA | Serial number xxxxx = PROGRESSIVE/ year = AA |

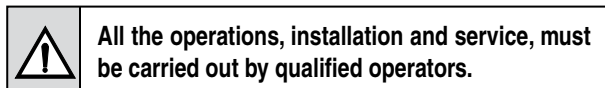
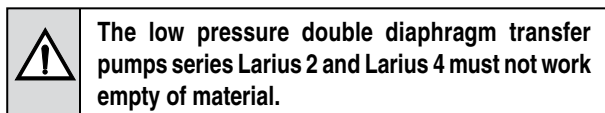
Relation between hazardous areas, products and categories

| DANGEROUS AREA | | CATEGORIES AS PER RULES 94/9/CE |
|--------------------|--------|---------------------------------|
| Gas, vapour or fog | Zone 0 | 1G |
| Gas, vapour or fog | Zone 1 | 2G or 1G |
| Gas, vapour or fog | Zone 2 | 3G, 2G or 1G |

SAFETY INSTRUCTIONS FOR INSTALLATIONS IN HAZARDOUS AREAS



- The low pressure double diaphragm transfer pumps series Larius 2 and Larius 4 must be connected to the ground with a suitable connector anti-release and anti-rotation.
- Gas and vapour of flammable liquids must belong to the group IIB and compatible with class temperature T4.
- According with the nature of the operations and products, the operator must regularly check the presence of deposit, the cleaning, the wearing and the correct pump's functioning.
- It is advisable that a filter will be placed at the suction of the material to prevent solid parts entering the pump.
- The pipes used to connect suction and delivery must be metallic, or plastic with metallic braid or plastic with fabric braid with suitable earthing cable.
- According to duties it is recommended the control of diaphragms and replacement.
- The air feeling the pump needs to be filtered and originated by a safe area.



EXAMPLE OF INSTALLATION



The picture shows a typical example of installation of a Larius double diaphragm pump.

DECLARATION OF CONFORMITY

We Larius S.r.l.
Via Stoppani, 21
24032 Calolziocorte (LC)

declare under our sole responsibility that the product

Low pressure transfer double diaphragm pumps - series Larius 2 and Larius 4.


to which this declaration relates complies with the following Directives:

- Directive 94/9/EC (ATEX)

The conformity are under observance of the following standards or standards documents:

- EN 1127-1 - EN 13463-5
- EN 13463-1

Marking

CE  II 2 G c IIB T4 Tamb.: - 10°C ÷ 50°C Tmax. fluido: 60°C
Tech. File: LARIUS 2-4/ATEX /05
Technical file c/o: INERIS (0080)

Calolziocorte- LC

Signature



SPARE PARTS

P Control unit
page 23

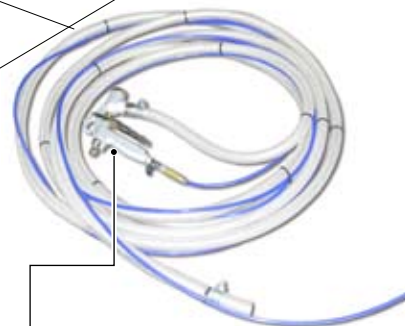
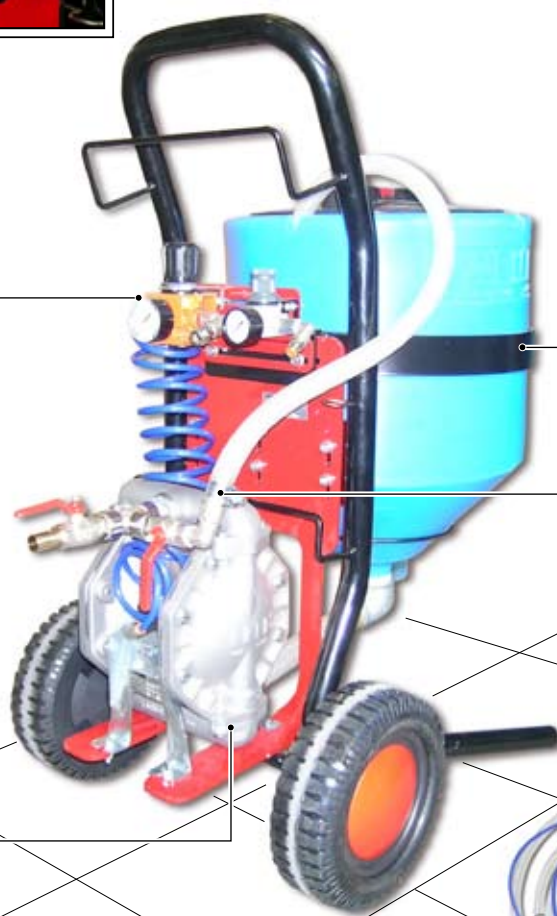


N Frame unit
page 20

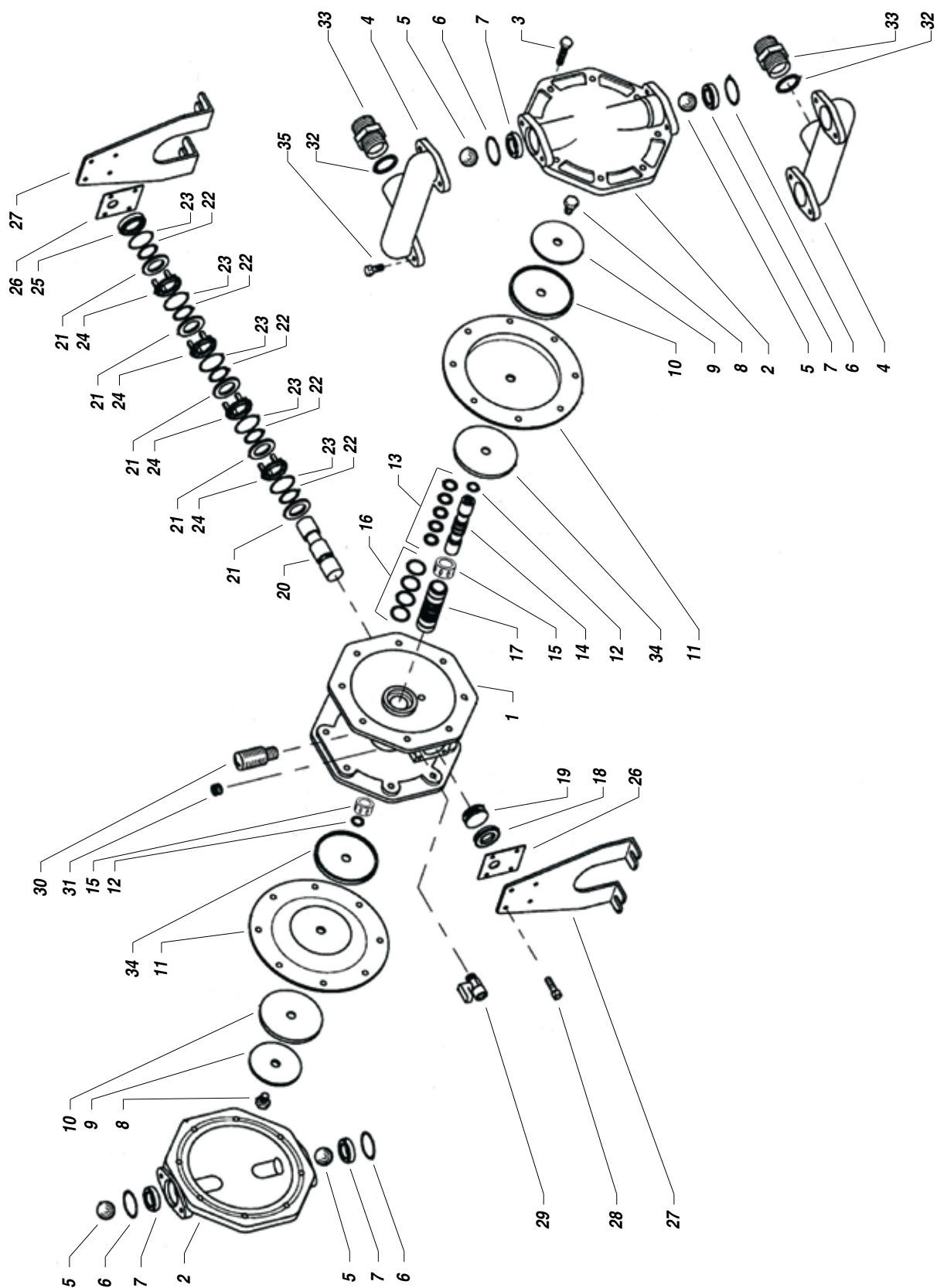
O Delivey unit
page 22

Q Gun unit
page 24

M Complete hydraulic body
page 18



M COMPLETE HYDRAULIC BODY



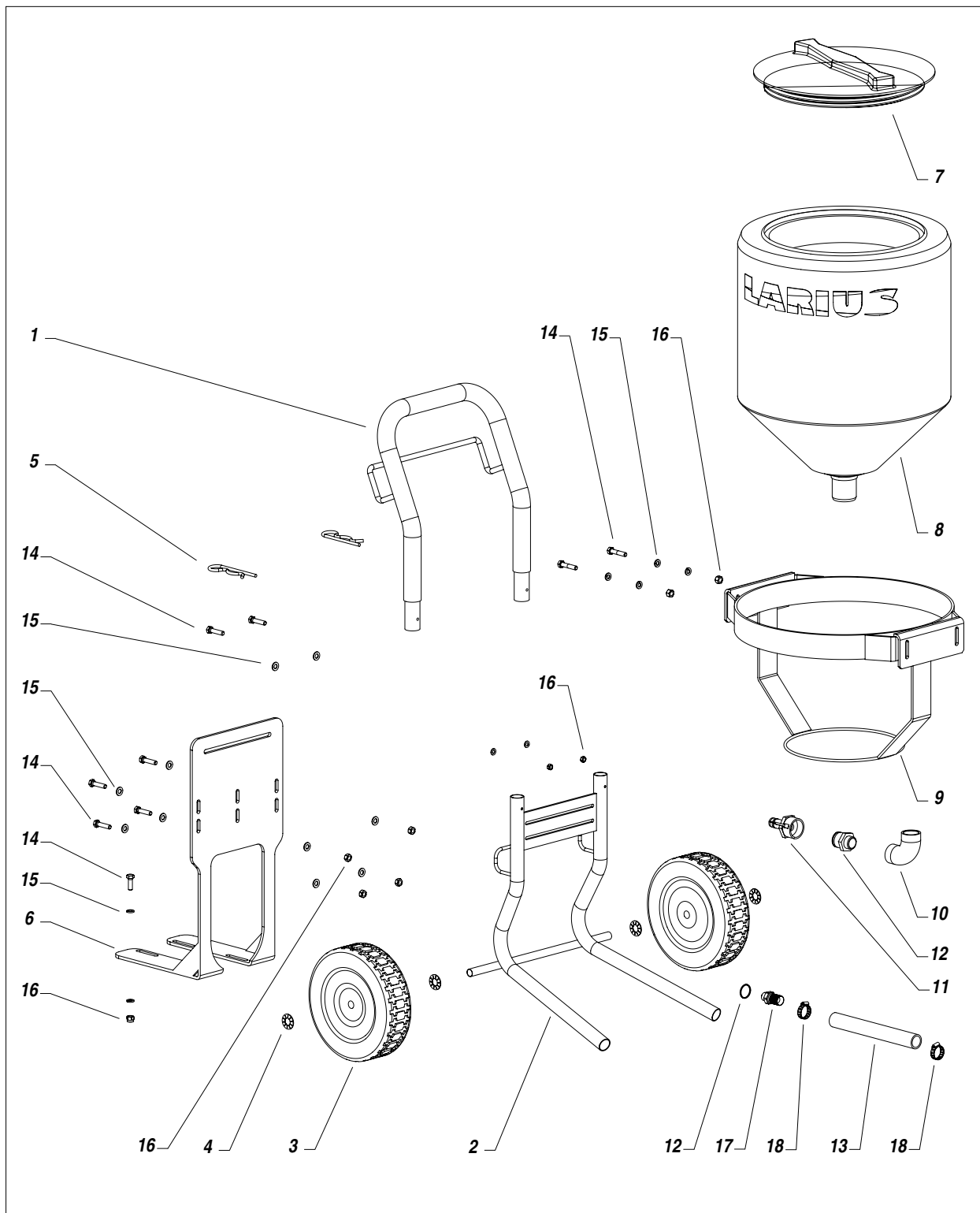
| Pos. | LARIUS 4 Aluminium | LARIUS 4 Inox | Description | Q.ty |
|------|-----------------------|------------------|--------------------------------|------|
| 1 | 8350 | 8350 | Pump body | 1 |
| 2 | 8351 | 8355 | Fluid passage cover | 2 |
| 3 | 8385 | 8385 | Screw | 16 |
| 4 | 8352 | 8356 | Fluid passage sleeve | 2 |
| *5 | 3326 | 3326 | Inox ball | 4 |
| *6 | 8404 | 8404 | O Ring | 4 |
| *7 | 8379 | 8379 | Seat valve | 4 |
| 8 | 8386 | 8357 | Screw | 2 |
| 9 | 8387 | 8358 | Washer | 2 |
| 10 | 8388 | 8359 | External membrane presser disc | 2 |
| **11 | 8353 | 8353 | Membrane | 2 |
| **12 | 91008 | 91008 | O Ring | 2 |
| **13 | 8403 | 8403 | O Ring | 5 |
| 14 | 8399 | 8399 | Membrane push rod | 1 |
| 15 | 8410 | 8410 | Tightening ring nut | 2 |
| 16 | 8402 | 8402 | O Ring | 4 |
| 17 | 8409 | 8409 | Insert for machine body | 1 |
| **18 | 8363 | 8363 | Gasket | 1 |
| 19 | 8364 | 8364 | Piston | 1 |
| 20 | 8365 | 8365 | Piston rod | 1 |
| 21 | 8362 | 8362 | Washer | 5 |
| **22 | 96840 | 96840 | O Ring | 5 |
| **23 | 4026 | 4026 | O Ring | 5 |
| 24 | 8361 | 8361 | Spacer ring | 4 |
| 25 | 8360 | 8360 | Spacer ring | 1 |
| **26 | 8369 | 8369 | Gasket | 2 |
| 27 | 8368 | 8374 | Bracket | 2 |
| 28 | 54004 | 54004 | Screw | 8 |
| 29 | 4004 | 4004 | Ball valve | 1 |
| 30 | 3354 | 3354 | Fitting | 1 |
| 31 | 96205 | 96205 | Plug | 1 |
| 32 | 8406 | 8406 | Washer | 2 |
| 33 | 8407 | 8373 | Nipple | 2 |
| 34 | 8388 | 8388 | Internal membrane presser disc | 2 |
| 35 | 8371 | 8371 | Screw | 8 |

* Kit 40336: Balls and ball seat kit

** Kit 40337: Membrane kit

** Kit 40332: Motor gasket kit

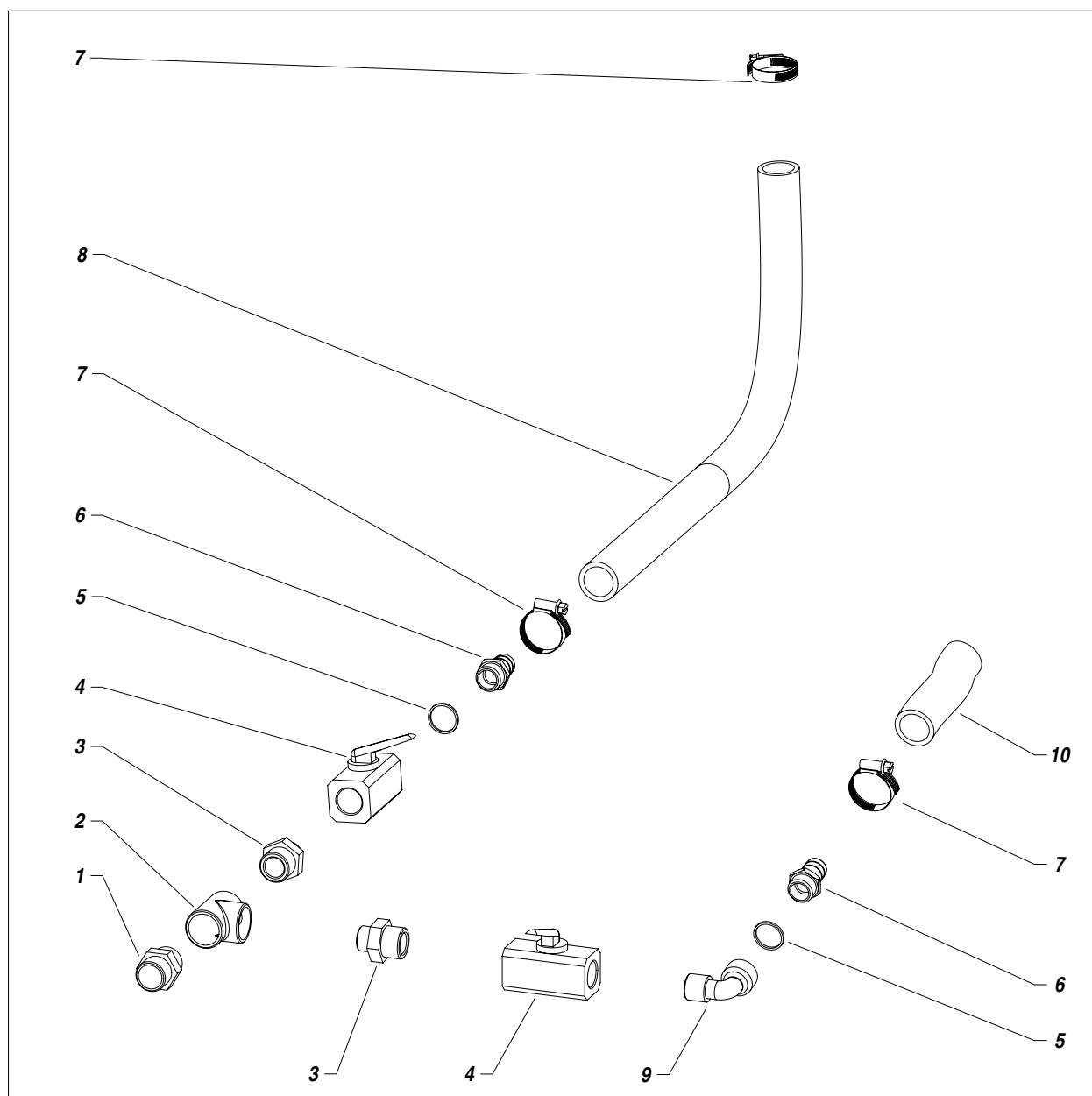
N FRAME UNIT REF.20850



| Pos. | Code | Description | Q.ty |
|------|----------------|------------------|--------|
| - | 20850 | Frame unit | - |
| 1 | 16271/1 SS4 | Trolley handle | 1 |
| 2 | 16272/1 SS4 | Carriage body | 1 |
| 3 | 37238 | Wheel | 2 |
| 4 | 91047 | Flexible washers | 4 |
| 5 | 84007 | Split pin | 2 |
| 6 | 30530 | Support plate l4 | 1 |
| 7 | 18249/1 | Cover tank | 1 |
| 8 | 18249 | Tank 50 l | 1 |
| 9 | 18246 | Support rack | 1 |
| 10 | 20833 | Elbow F-F | 1 |
| 11 | 20807 | Hose tail | 1 |
| 12 | 8406 | Washer | 2 |
| 13 | 30592 | Suction tube | 0.30mt |
| 14 | 39405 | Screw | 12 |
| 15 | 34009 | Washer | 24 |
| 16 | 52017 | Nuts | 12 |
| 17 | 20807/1 | Short hose tail | 1 |
| 18 | 30552 | Hose clamp | 2 |

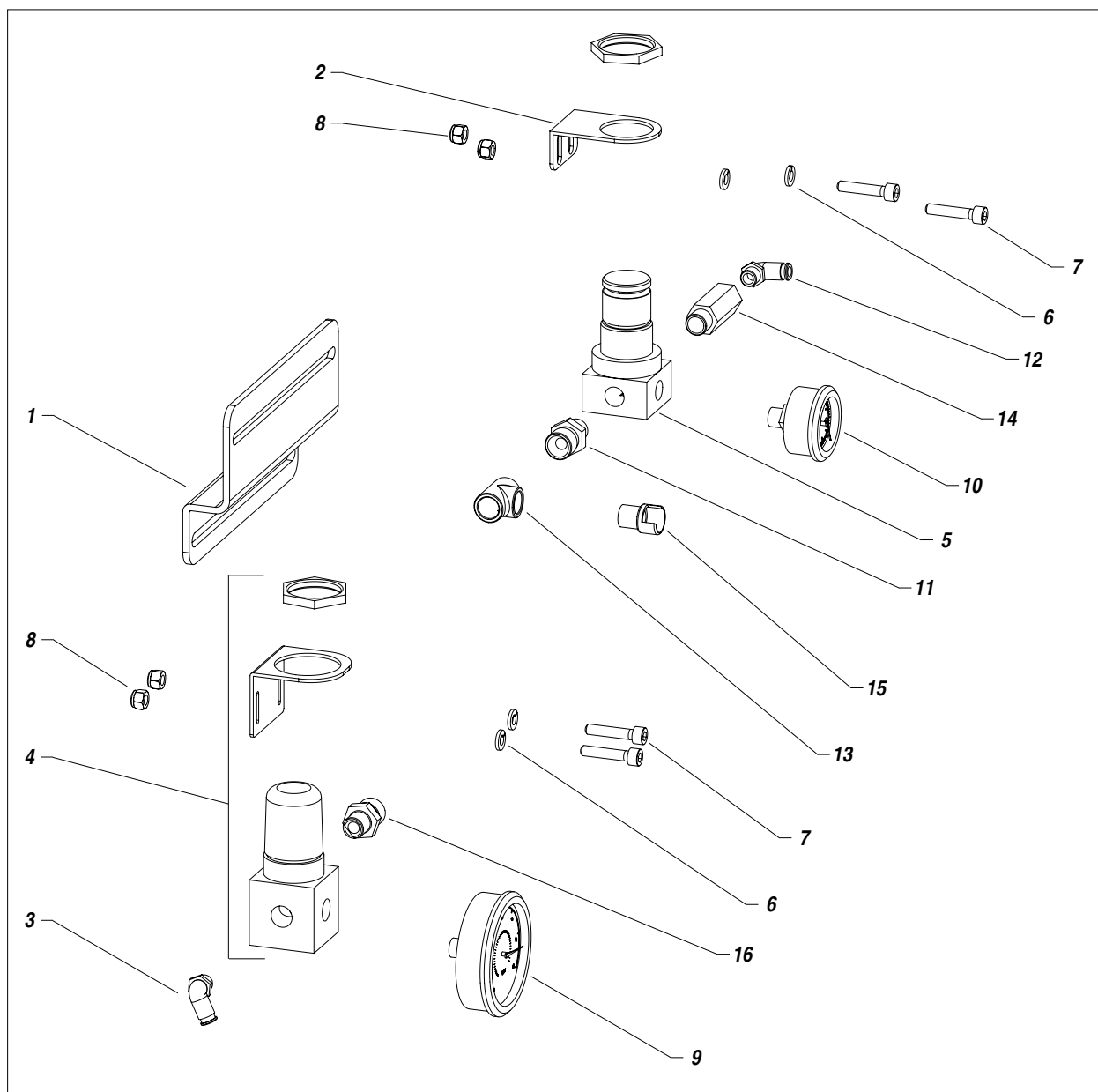
0 DELIVERY UNIT REF.20851

English



| Pos. | Code | Description | Q.ty | Pos. | Code | Description | Q.ty |
|------|--------------|----------------------|------|------|-------|--------------------|-------|
| - | 20851 | Delivery unit | - | 6 | 20809 | Fitting | 2 |
| 1 | 20817 | Reduction M-M | 1 | 7 | 30553 | Tightening clamp | 3 |
| 2 | 20813 | Union T | 1 | 8 | 20835 | Delivery hose | 10mt |
| 3 | 20810 | Reduction M-M | 2 | 9 | 20811 | Union a L M-F | 1 |
| 4 | 20812 | Tap F-F | 2 | 10 | 30528 | Recirculation hose | 2,5mt |
| 5 | 8071 | Washer | 2 | | | | |

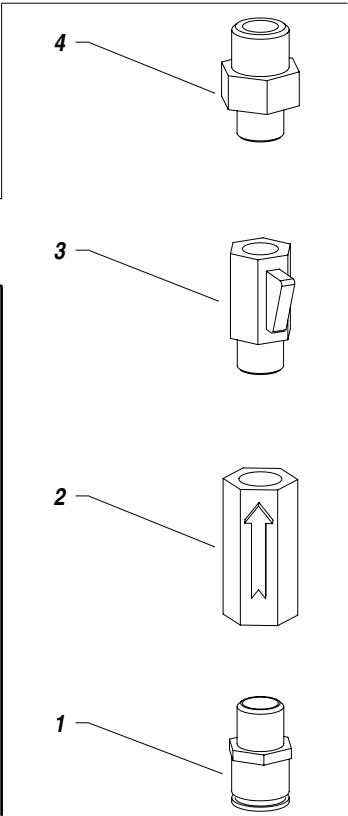
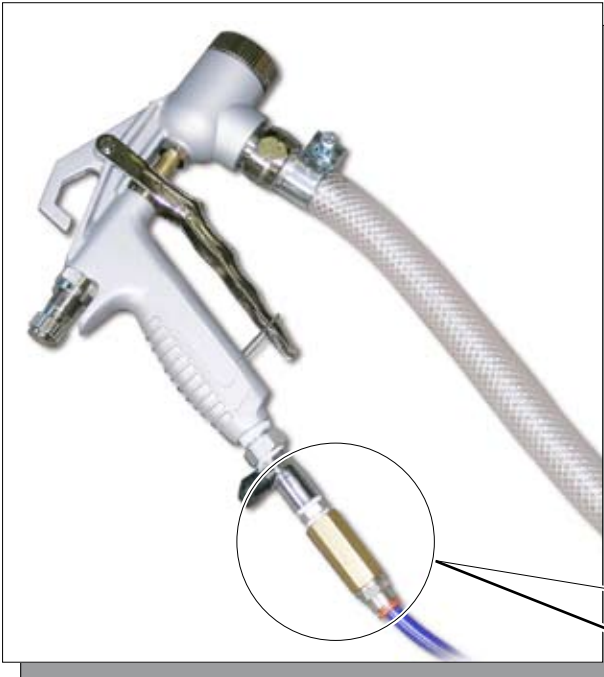
P CONTROL UNIT REF.20852



| Pos. | Code | Description | Q.ty | Pos. | Code | Description | Q.ty |
|------|--------------|-----------------------------|------|------|--------|--------------------|------|
| - | 20852 | Control unit | - | 9 | 96259 | Manometer | 1 |
| 1 | 30531 | Support plate | 1 | 10 | 8167 | Gun pressure gauge | 1 |
| 2 | 510510 | Pressure regulating support | 1 | 11 | 3354 | Union M-M | 2 |
| 3 | 510088 | Union | 1 | 12 | 8063 | Union M-F | 2 |
| 4 | 91736 | Regulator | 1 | 13 | 3358 | Union T FFF | 1 |
| 5 | 3344 | Gun regulator | 1 | 14 | 8055/1 | Connector M-F | 1 |
| 6 | 54003 | Washer | 4 | 15 | 3338 | Quick connection M | 1 |
| 7 | 8037 | Screw | 4 | 16 | 3560 | Union M-M | 1 |
| 8 | 8042 | Self-braking nut | 4 | | | | |

Q GUN UNIT REF. 20853

English



| Pos. | Code | Description | Q.ty |
|------|-------|------------------|------|
| - | 20853 | Gun unit | - |
| 1 | 5313 | Quick-coupling M | 1 |
| 2 | 9902 | Valvula F-F | 1 |
| 3 | 4004 | Tap M-F | 1 |
| 4 | 3563 | Union M-M | 1 |

R ACCESSORIES



EXTENSION

Code 153: cm 30 - Code 155: cm 60 - Code 156: cm 100



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 surfaces

Code 16780: Extension 120 - 195 cm



MX 750

MX 1000 E

MX 1100 E

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

S VERSIONS



PEGASO

Pegaso with Pressure Tex gun **Ref. 30581**

Pegaso with Pressure Tex gun 110 V **Ref. 30595**

Pegaso with Turbo gun **Ref. 30580**

Pegaso with Turbo gun 110 V **Ref. 30591**



GHIBLI 10:1 TEXTURE TURBO GUN
Ref. 30592

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

MANUFACTURER:

LARIUS[®]

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