REV. 11 - 02/2024
Manuale Cod. 150088

SAMOA®

LEADING THROUGH INNOVATION

EN

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# GHIBLI 30:1 / 40:1

## Pneumatic pump

INSTRUCTIONS MANUAL


| | |
|---|---|
| IT | https://www.larius.com/wp-content/uploads/GHIBLI3040_I.pdf |
| EN | https://www.larius.com/wp-content/uploads/GHIBLI3040_GB.pdf |
| DE | https://www.larius.com/wp-content/uploads/GHIBLI3040_D.pdf |
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| RU | https://www.larius.com/wp-content/uploads/GHIBLI3040_RU.pdf |

| | |
|---|---|
| 96050 | GHIBLI 30:1 Pneumatic pump |
| 96056 | GHIBLI 30:1 Stainless steel pneumatic pump |
| 96055 | GHIBLI 40:1 Pneumatic pump |
| 96057 | GHIBLI 40:1 Stainless steel pneumatic pump |

**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.

# GHIBLI 30:1 / 40:1

Airless pneumatic pumps for spray painting

INDEX



**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 **SAMOA.** 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.
- 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, IMMEDIATELY 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.
- **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.

# B WORKING PRINCIPLE

***GHIBLI 30:1 and 40:1*** pumps are pneumatic pumps for high pressure painting without the use of compressed air (AIRLESS). The stainless steel version is particularly suitable for use with water-based paints. The Ghibli pump is essentially comprised of an air motor and a structure known as the "Material Pumping Unit", or simply the "Pumping Unit".
In the pneumatic motor, compressed air causes the vertical reciprocating movement of the motor piston; this movement is transmitted through a connecting rod to the material pumping piston.
This allows for the material to be aspirated and pushed towards the outlet. The unit comes complete with a transportation trolley, a high-pressure material filter, an air supply regulator for the pump, a material suction tube (complete with filter) and a recirculation tube.
The ratio 30:1 or 40:1 means that the outlet pressure of material is 30 or 40 times higher than the pump feed air pressure.

| | MATERIAL | CODE | TROLLEY | SUCTION SYSTEM | FILTER | HOSE | GUN | NOZZLE INCLUDED |
|---|---|---|---|---|---|---|---|---|
| GHIBLI 30:1 | Carbon steel | 96105 | • | • | • | - | - | - |
| | | K96135 | • | • | • | Cod. 14061 | Cod. 21800 | 11-40 /13-40 Air-controlled airless nozzles |
| | | K91480 | • | • | • | Cod. 14061 | Cod. 21801 | 13-40 TSC reversible airless nozzle |
| | Stainless steel | 96107 | • | • | • | - | - | - |
| | | K96137 | • | • | • | Cod. 14061 | Cod. 21800 | 11-40 /13-40 Air-controlled airless nozzles |
| | | K91482 | • | • | • | Cod. 14061 | Cod. 21801 | 13-40 TSC reversible airless nozzle |
| GHIBLI 40:1 | Carbon steel | 96041 | • | • | • | - | - | - |
| | | K96041 | • | • | • | Cod. 14061 | Cod. 21800 | 11-40 /13-40 Air-controlled airless nozzles |
| | | K91041 | • | • | • | Cod. 14061 | Cod. 21801 | 13-40 TSC reversible airless nozzle |
| | Stainless steel | 96108 | • | • | • | - | - | - |
| | | K96108 | • | • | • | Cod. 14061 | Cod. 21800 | 11-40 /13-40 Air-controlled airless nozzles |
| | | K91108 | • | • | • | Cod. 14061 | Cod. 21801 | 13-40 TSC reversible airless nozzle |

# C TECHNICAL DATA

| | GHIBLI 30:1 | GHIBLI 40:/1 |
|---|---|---|
| Pump pressure ratio | 30:1 | 40:1 |
| Air pressure range | 3 - 7 bar // 40 - 100 psi | 3 - 7 bar // 40 - 100 psi |
| Max. fluid outlet pressure | 210 bar / 3,000 psi | 280 bar / 4,000 psi |
| Delivery per cycle | 60 cc | 45 cc |
| Air inlet thread | 3/8" BSPP (F) | 3/8" BSPP (F) |
| Fluid outtlet thread | 1/4" BSPT(M) | 1/4" BSPT(M) |
| Fluid inlet thread | M36X2 (M) | M36X2 (M) |
| Air consumption at 60 cycles/min | 3 bar 500 l/m | 3 bar 500 l/m |
| | 5 bar 840 l/m | 5 bar 840 l/m |
| | 7 bar 1,200 l/m | 7 bar 1,200 l/m |
| Sound pressure level | < 80 dB (A) | < 80 dB (A) |
| Air motor diameter and piston stroke | 4 1/4" - 4" // 108 mm - 100 mm | 4 1/4" - 4" // 108 mm - 100 mm |
| Max. delivery at 60 cycles/min | 3.6 l/min | 2.7 l/min |
| Seals material | PTFE + PE 1000 | PTFE + PE 1000 |
| Pump cylinder tube material | AISI 303 / Carbon steel | AISI 303 / Carbon steel |
| Piston material | AISI 420B | AISI 420B |
| Weight | 25 kg | 25 kg |
| Height (A) | 930 mm | 930 mm |
| Width (B) | 450 mm | 450 mm |
| Depth (C) | 450 mm | 450 mm |

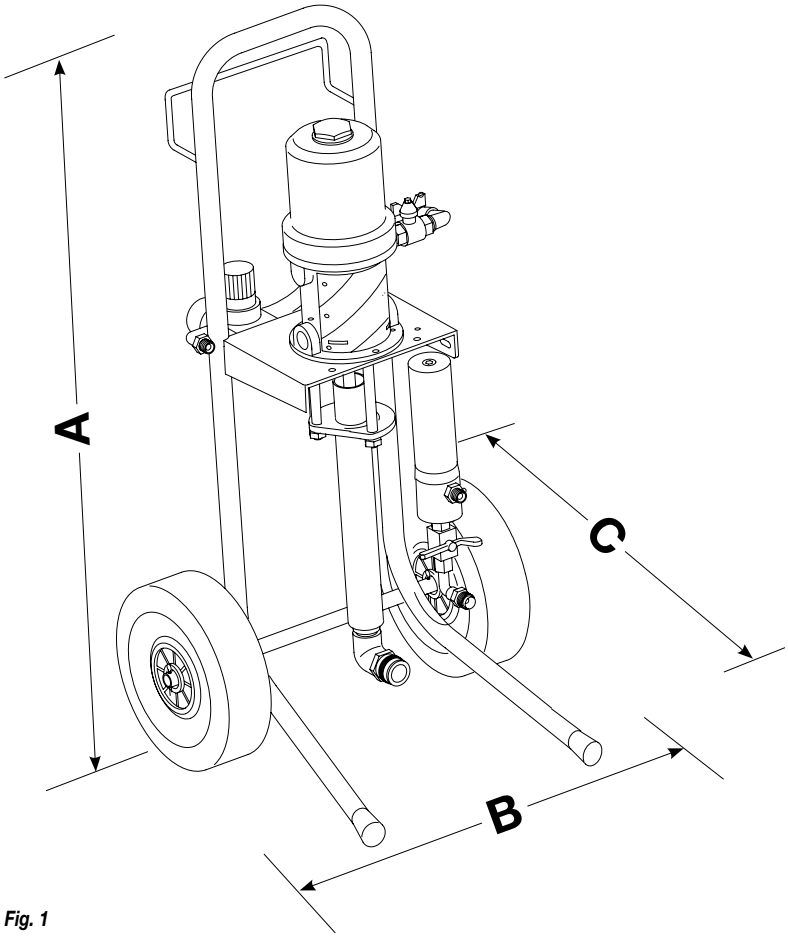


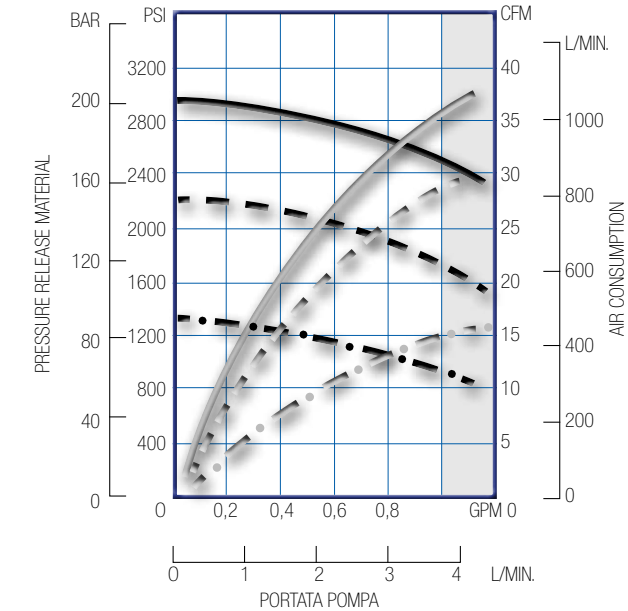

*Fig. 1*

**Parts of the pump in contact with the material**
Pumping group: galvanised carbon steel and aluminium or stainless steel (based on the versions)
Sealing balls: stainless steel AISI 420B
Gaskets: PTFE + polyethylene
**Other parts of the pump**
Motor casing and motor piston: aluminium
Pneumatic motor piston rod: stainless steel
Trolley structure: painted sheet metal

**Always observe these instructions carefully when evaluating the product compatibility and in case of disposal of some parts of the pump no more usable, in order to meet the environmental regulations on recycling process.**

## *GHIBLI 30:1*

The pump can operate continuously when the flow is limited to the white area. Outside of this area, the speed must be intermittent.

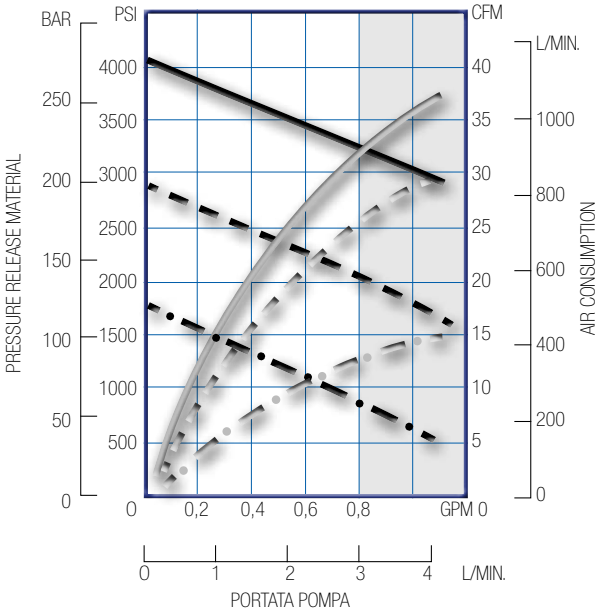



BLACK CURVE: PRESSURE RELEASE MATERIAL
GRAY CURVE: AIR CONSUMPTION

7 bar (100 psi) 5 bar (70 psi) 3 bar (40 psi)

## *GHIBLI 40:1*

The pump can operate continuously when the flow is limited to the white area. Outside of this area, the speed must be intermittent.




BLACK CURVE: PRESSURE RELEASE MATERIAL
GRAY CURVE: AIR CONSUMPTION

7 bar (100 psi) 5 bar (70 psi) 3 bar (40 psi)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# D DESCRIPTION OF THE EQUIPMENT

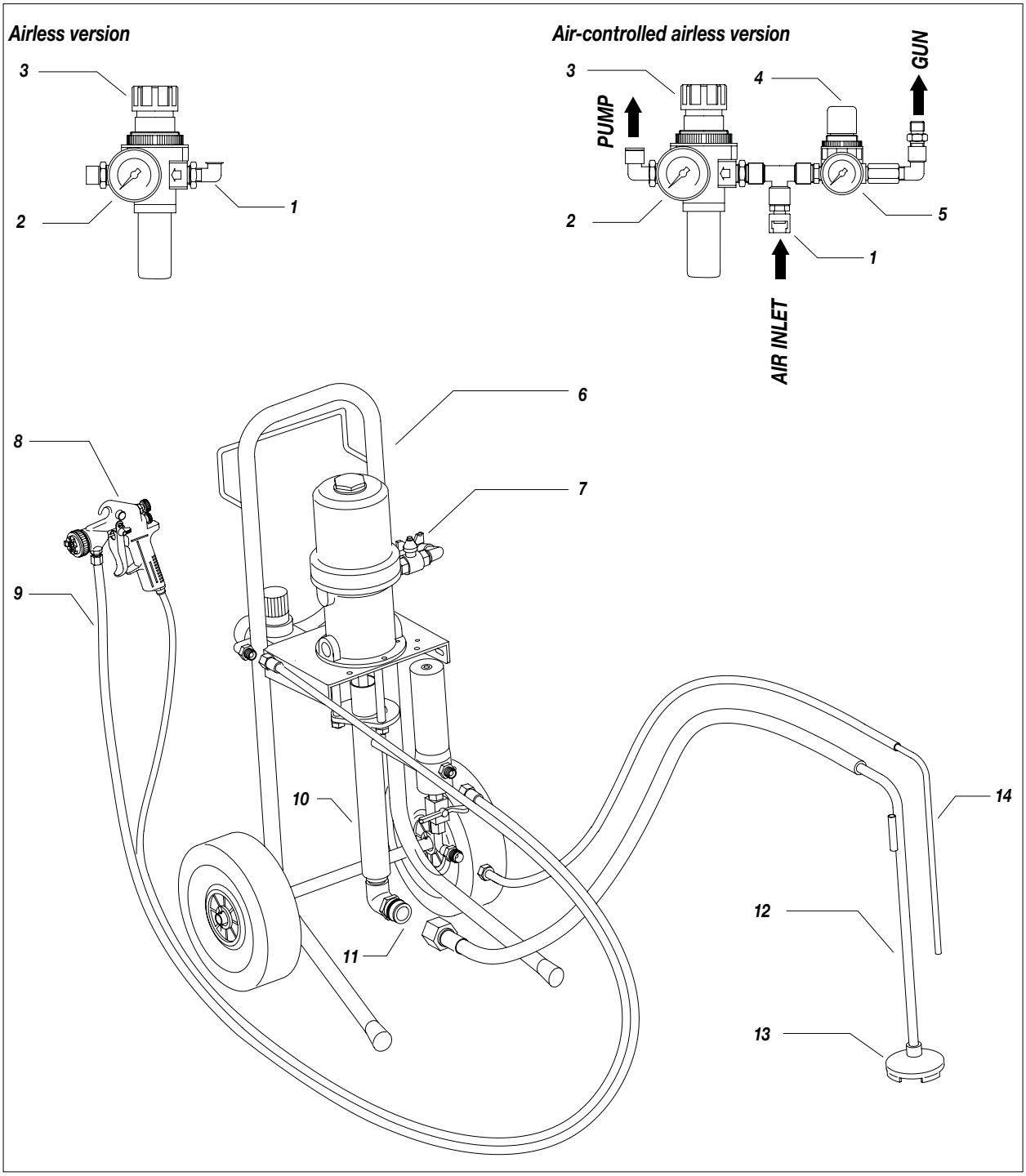



*Fig. 1*

| Pos. | Description |
|---|---|
| 1 | Compressed air inlet |
| 2 | Manometer reading air pressure alim. pump |
| 3 | Feed air pressure regulator. pump |
| 4 | Atomizing air pressure regulator |
| 5 | Atomizing air pressure manometer |
| 6 | Trolley transport equipment |
| 7 | Valve opening and closing air alim. pump |

| Pos. | Description |
|---|---|
| 8 | Air-mix spray technology |
| 9 | Air-material flexible pipe |
| 10 | Material pumping group |
| 11 | Fitting pipe fitting intake |
| 12 | Material suction pipe |
| 13 | Material suction filter |
| 14 | Fluid recirculation pipe |

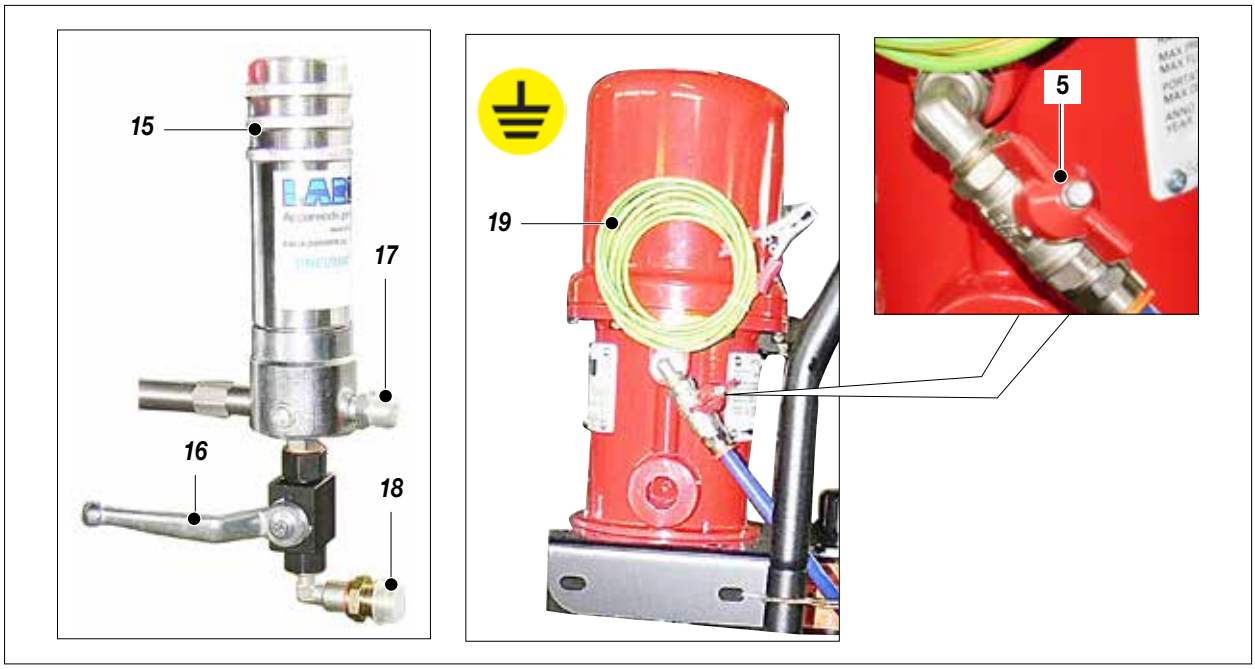



*Fig. 2*

| Pos. | Description |
|---|---|
| 15 | High pressure filter material outlet |
| 16 | Recirculating cock |
| 17 | High pressure filter out material |

| Pos. | Description |
|---|---|
| 18 | Recirculation pipe fitting fixing |
| 19 | Cable grounding with gripper |

# 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 the manufacturer 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 the manufacturer.
- 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;**
**- improper use of the equipment;**
**- 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

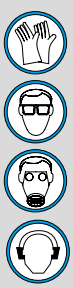
- THE EMPLOYER SHALL TRAIN ITS EMPLOYEES ABOUT ALL THOSE RISKS STEMMING FROM ACCIDENTS, ABOUT THE USE OF SAFETY DEVICES FOR THEIR OWN SAFETY AND ABOUT THE GENERAL RULES FOR ACCIDENT PREVENTION IN COMPLIANCE WITH INTERNATIONAL REGULATIONS AND WITH THE LAWS OF THE COUNTRY WHERE THE PLANT IS USED.
- THE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

**Read carefully and entirely the following instructions before using the product. Please save these instructions in a safe place.**
**The unauthorised tampering/replacement of one or more parts composing the machine, the use of accessories, tools, expendable materials other than those recommended by the manufacturer can be a danger of accident.**
**The manufacturer will be relieved from tort and criminal liability.**

- KEEP YOUR WORK PLACE CLEAN AND TIDY. DISORDER WHERE YOU ARE WORKING CREATES A POTENTIAL RISK OF ACCIDENTS.
- ALWAYS KEEP PROPER BALANCE AVOIDING UNUSUAL STANCE.
- BEFORE USING THE TOOL, ENSURE THERE ARE NOT DAMAGED PARTS AND THE MACHINE CAN WORK PROPERLY.
- ALWAYS FOLLOW THE INSTRUCTIONS ABOUT SAFETY AND THE REGULATIONS IN FORCE.
- KEEP THOSE WHO ARE NOT RESPONSIBLE FOR THE EQUIPMENT OUT OF THE WORK AREA.
- **NEVER** EXCEED THE MAXIMUM WORKING PRESSURE INDICATED.
- **NEVER** POINT THE SPRAY GUN AT YOURSELVES OR AT OTHER PEOPLE. THE CONTACT WITH THE CASTING CAN CAUSE SERIOUS INJURIES.
- IN CASE OF INJURIES CAUSED BY THE GUN CASTING, SEEK IMMEDIATE MEDICAL ADVICE SPECIFYING THE TYPE OF THE PRODUCT INJECTED. **NEVER** UNDERVALUE A WOUND CAUSED BY THE INJECTION OF A FLUID.
- ALWAYS DISCONNECT THE SUPPLY AND RELEASE THE PRESSURE IN THE CIRCUIT BEFORE PERFORMING ANY CHECK OR PART REPLACEMENT OF THE EQUIPMENT.
- NEVER MODIFY ANY PART IN THE EQUIPMENT. CHECK REGULARLY THE COMPONENTS OF THE SYSTEM. REPLACE THE PARTS DAMAGED OR WORN.
- TIGHTEN AND CHECK ALL THE FITTINGS FOR CONNECTION BETWEEN PUMP, FLEXIBLE HOSE AND SPRAY GUN BEFORE USING THE EQUIPMENT.
- ALWAYS USE THE FLEXIBLE HOSE SUPPLIED WITH STANDARD KIT.
- THE USE OF ANY ACCESSORIES OR TOOLING OTHER THAN THOSE RECOMMENDED IN THIS MANUAL, MAY CAUSE DAMAGE OR INJURE THE OPERATOR.
- THE FLUID CONTAINED IN THE FLEXIBLE HOSE CAN BE VERY DANGEROUS. HANDLE THE FLEXIBLE HOSE CAREFULLY. DO NOT PULL THE FLEXIBLE HOSE TO MOVE THE EQUIPMENT. NEVER USE A DAMAGED OR A REPAIRED FLEXIBLE HOSE.
- NEVER SPRAY OVER FLAMMABLE PRODUCTS OR SOLVENTS IN CLOSED PLACES.
- NEVER USE THE TOOLING IN PRESENCE OF POTENTIALLY EXPLOSIVE GAS.

**The high speed of travel of the product in the hose can create static electricity through discharges and sparks. It is suggested to earth the equipment.**
**The pump is earthed through the earth cable of the supply.**
**The gun is earthed through the high pressure flexible hose.**
**All the conductors near the work area must be earthed.**

**Always check that 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.**
**Avoid approaching too much to the pump piston rod when the pump is working or under pressure. A sudden movement of the piston rod can cause wounds or finger squashing.**



**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.**

# H SETTING-UP

### CONNECTION TO THE FEED AIR

• For pump feed use a hose ***(1)*** with an internal diameter no lower than 10 mm.

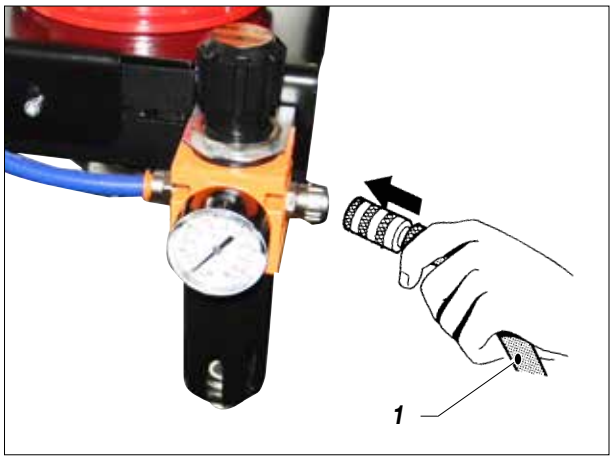



*Fig. 1*

### CONNECTION OF SUCTION AND RECIRCULATING PIPES

• Connect the suction and recirculating pipes to the pump. The suction hose can be locked finger tight ***(1)***. Use a spanner to tighten the recirculating pipe ***(2)***. In both cases do not use sealant agents for fitting threads.

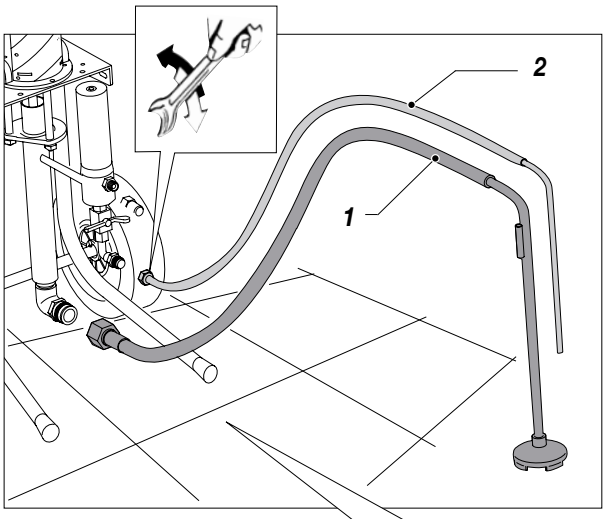



*Fig. 2*

### CONNECTION OF FLEXIBLE HIGH PRESSURE PIPES

**AIRLESS version**

• Connect the high pressure flexible hose ***(3)*** to the pump and to the spray gun, paying attention to tighten the fittings strongly (*the use of two spanners is suggested*). Do not use sealant agents for fitting threads.

• Make sure the spray gun is without the atomization nozzle.

**"AIR-CONTROLLED AIRLESS" version**

For the "AIR-CONTROLLED AIRLESS" version, connect tube ***(3)***, as well as the air supply hose ***(4)***, to the air reducer unit ***(5)***.

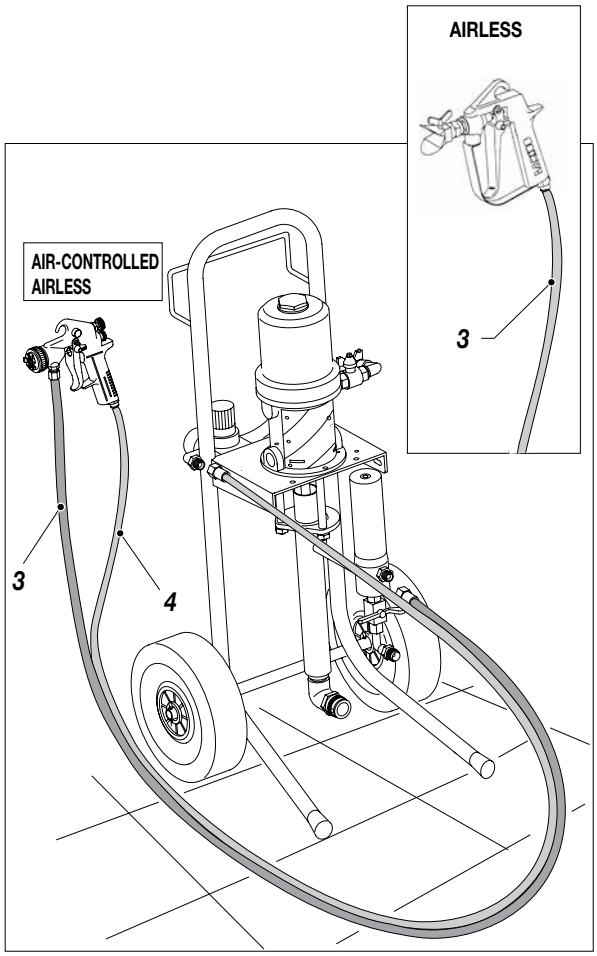



*Fig. 3*

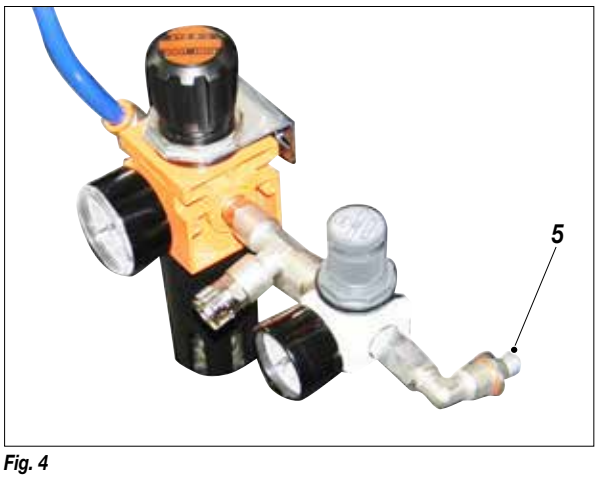



*Fig. 4*

**WASHING OF THE BRAND-NEW EQUIPMENT**

• The equipment has been tested at our plant with light mineral oil left inside of the pumping element as protection. Therefore, before sucking the product, carry out a washing using a diluent.

• Dip the suction hose ***(1)*** into the tank of the washing.

• Insert the recirculating pipe ***(2)*** into a container (*a metal container is suggested*).

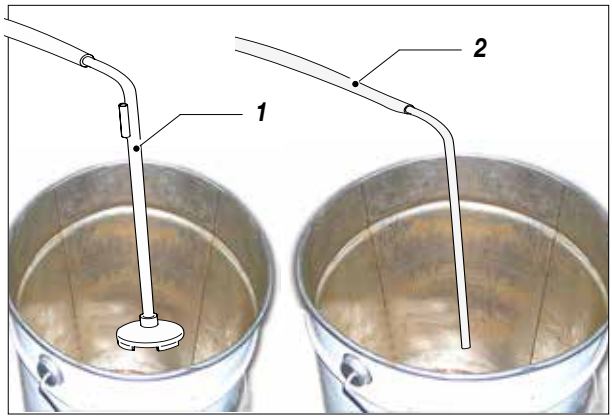



*Fig. 5*

• Open the recirculating cock ***(6)***.

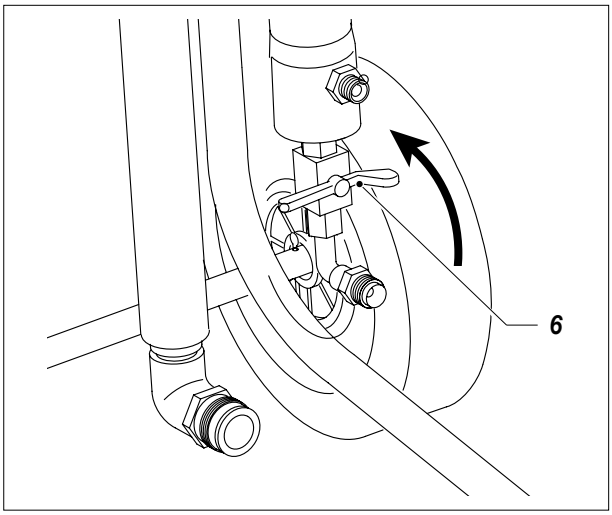



*Fig. 6*

• Set the pump feed pressure at about 3 bar and open the air passage valve.

• The pump will start working and will drain oil from the recirculating pipe. Close the recirculating cock as soon as the clean solvent has come out.

• Lift the solvent tank's suction tube.

• Lean the spray gun against the rim of the container ***(7)*** and drain the residual oil pressing the trigger. Release the trigger as soon as the clean solvent comes out.

• Point the spray gun at the tank of the solvent and press the trigger so as to recover the clean solvent left inside the pump.

• As an accelerated working of the pump (*the pump "idles"*) appears, close the air passage valve.

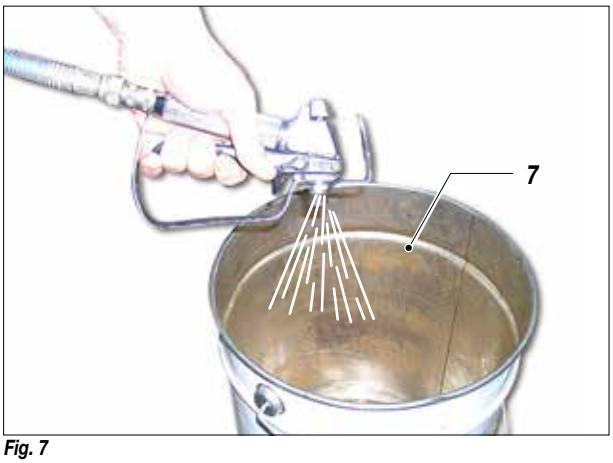



*Fig. 7*

**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. For this reason, please contact the supplier of the product.**

# I WORKING

- Use the tooling after performing all the SETTING UP operations above described

**Check all the fittings for connection of the different components *(pump, flexible hose, spray gun, etc.)* before using the equipment.**

- Use the supplied lubricant ***(1)*** to facilitate the sliding of the piston inside the seal packing and to interpose the oil within the air.


*Fig. 1*

**At the start of each working day, make sure that the ring nut is filled with hydraulic oil *(ref. 16340)*; the oil facilitates the sliding of the piston and prevents any material which may have leaked out of the seals from drying once the equipment has been shut off.**

- Fix the atomization nozzle on the spray gun. Select the right nozzle according to the characteristics of the material to be used and to the type of work to be performed.
- Dip the suction and recirculating pipes into the tank of the product.
- Open the recirculating cock.
- Set the pump feed pressure at about 3-4 bar and open the air passage valve.
- Allow the product to circulate for a few seconds. Then close the recirculating cock. The pump will keep on working until the high pressure flexible hose is full of product up to the spray gun. Then the pump will stop automatically.
- Increase pump feed pressure so as to reach a pressure value to guarantee 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 overthick ness 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 spray gun and the support to be painted and keep yourselves perpendicular to it.

**Never point the spray gun at your selves or at other people. The contact with the cating can cause serious injuries.**

## J CLEANING AT THE END OF THE WORK

- Lift the suction hose from the tank of the product.
- Reduce the pump feed pressure to about 3-4 bar and open te recirculating cock so as to recover the product left inside the equipment.
- Close the air passage valve for pump feed.
- Point the spray gun at the tank of the solvent and press the trigger so as to recover the clean solvent left inside the pump.
- Remove the nozzle from the spray gun (*Do not forget to clean it using a solvent!*).
- Dip the suction hose into the tank of the washing solvent *(ensure it is compatibile with the product being used).*
- Insert the recirculating hose into a container *(a metal container is recommended)*.
- Open the recirculating cock.
- Open the air passage valve in order to start up the pump.
- Close the recirculating cock as soon as a clean solvent comes out.
- Lift the solvent tank's suction tube.
- Point the spray gun at the tank of the solvent and press the trigger so as to recover the clean solvent left inside the pump.
- As an accelerated working of the pump *(the pump "idles")* appears, close the air passage valve .
- In case of long storage, we recommend you to suck and to leave light mineral oil inside the pumping group and the flexible hose.
- In this case, please follow the washing procedure described on page 8 before using the tooling.

**Store possible dangerous fluids in proper containers. Their disposal must be performed in accordance with the regulations in force about the industrial waste goods.**

## K ROUTINE MAINTENANCE

**Always close the compressed air supply and release the pressure in the plant before performing any check or maintenance of the pump.**

- Check periodically *(and every time the pump is operated after a long storage)* the packing nut is not loosened, causing otherwise the coming out of the product.

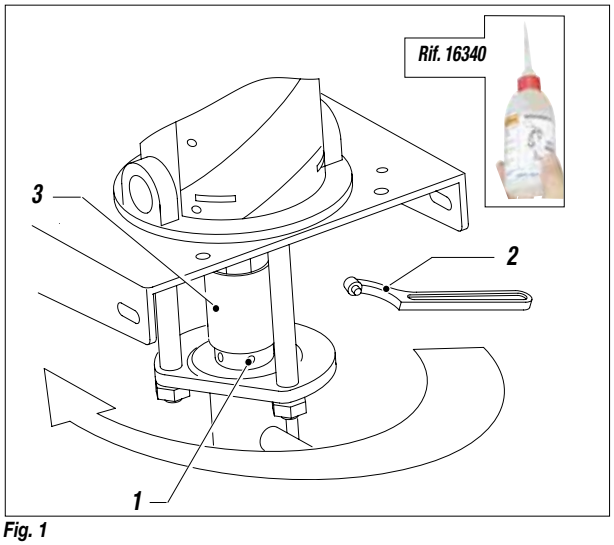


*Fig. 1*

To tighten the packing nut ***(1)*** use wrench supplied ***(2)***. The packing nut must be tightened so as to avoid wastes of product, but not excessively to avoid the seizure of the pumping piston and the wear of seals. In case of persistent coming out of product, replace the seals.

- Remove and clean the material suction filter ***(4).***

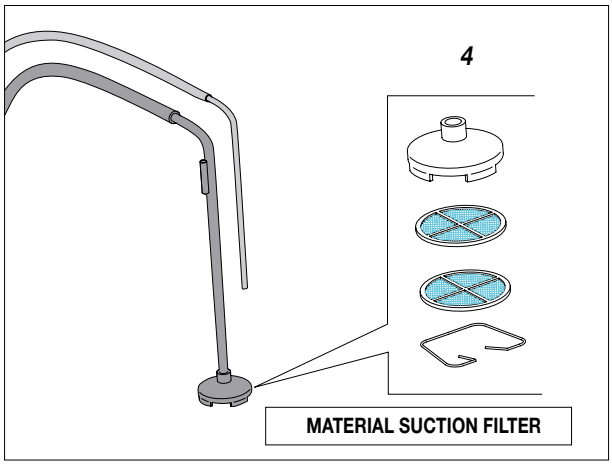



*Fig. 2*

**At the start of each working day, make sure that the ring (3) nut is filled with hydraulic oil (*ref. 16340*); the oil facilitates the sliding of the piston and prevents any material which may have leaked out of the seals from drying once the equipment has been shut off.**

- Remove and clean the high pressure filter for material outlet ***(5)***.
- Check periodically the air supply to the pump. Ensure the air is always clean and lubricated.

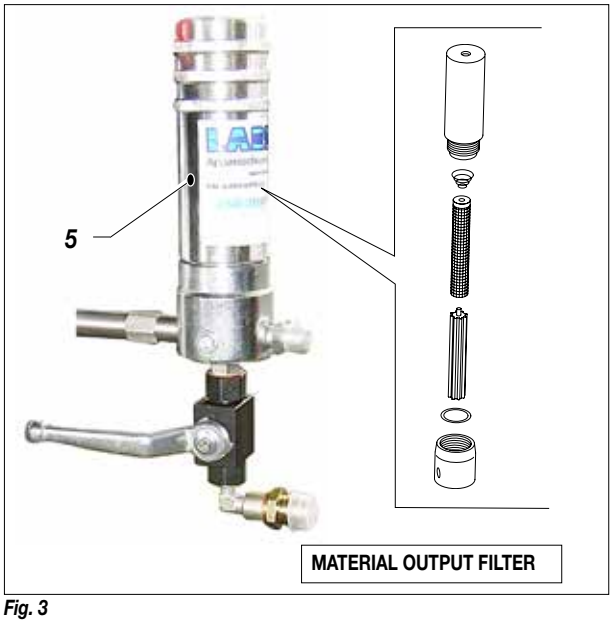



*Fig. 3*

# L MANUAL RESET OF THE PNEUMATIC MOTOR

- The feed air pressure of the pump must never be higher than the maximum value indicated in the technical data. Exceed this value can block the valves of the pneumatic motor in the intermediate position of the cycle reversal.
- To start again a blocked motor, close the air supply and release pressure in the plant. This operation should allow the recovery of the valves.
- In case the motor is blocked, proceed as follows:

  - Close the air supply to the pump and release the residual pressure in the plant;

  - unscrew the motor cap ***(1)*** and pull it upward along with the guide rod ***(2)*** so as to manually trigger the stroke inversion unit;

  - screw again the plug.

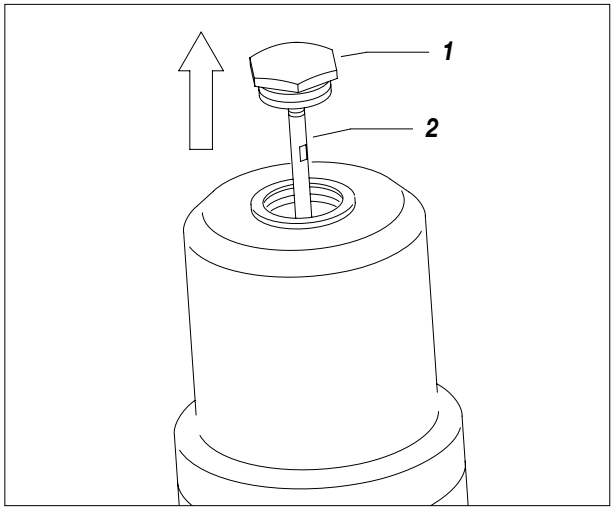



*Fig. 1*

# M DISASSEMBLY OF THE PNEUMATIC MOTOR

- Close the compressed air supply to the pump and release the residual pressure in the plant.
- Unscrew the motor cap ***(1)*** and pull it upwards together with the guide rod ***(2)***.
- Hold the guide rod ***(2)*** and remove the plug ***(1)*** *(using two wrenches).*

**Replace immediately the plug *(1)* with a usual M8 *(3)* nut before the guide rod slides into the cylinder.**

- Remove the screws ***(4)*** and the washers ***(5).***
- Carefully extract the motor cylinder ***(6)*** fom the pump.
- Check the condition of each part of the motor.

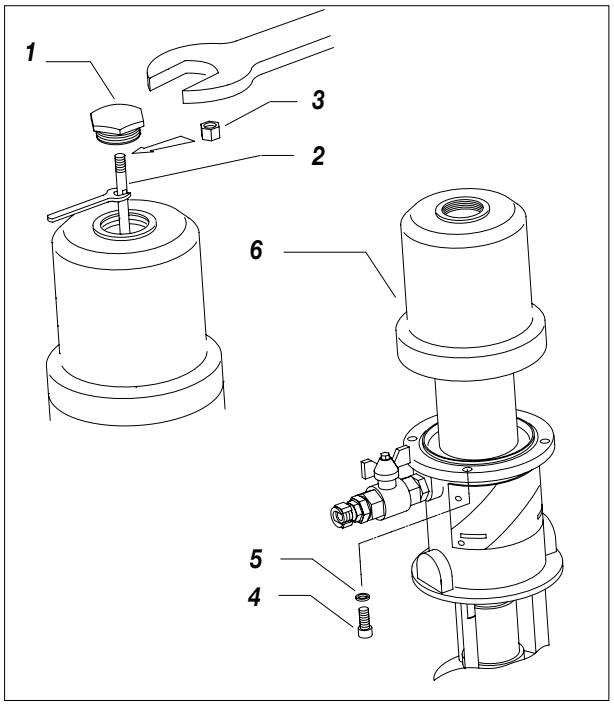



*Fig. 1*

- For any eventual replacement of the screws ***(7)*** of the traverse ***(8)***, for their reassembly and correct adjustment.

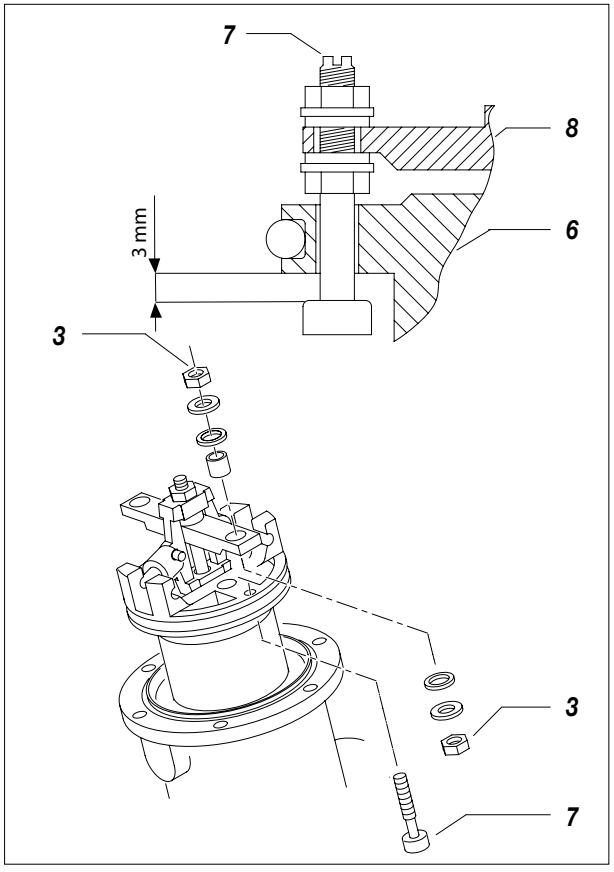



*Fig. 2*

# N DISASSEMBLY OF THE PUMPING GROUP

- Follow the end of work cleaning procedure before disassembling the pumping unit.
- Remove the suction tube, the recirculation tube, the high-pressure tube that connects to the spray gun and the compressed air supply line's connection tube
- ❶ Unscrew the high pressure filter unit from the pump.
- ❷ Unscrew the nuts ***(1)***.

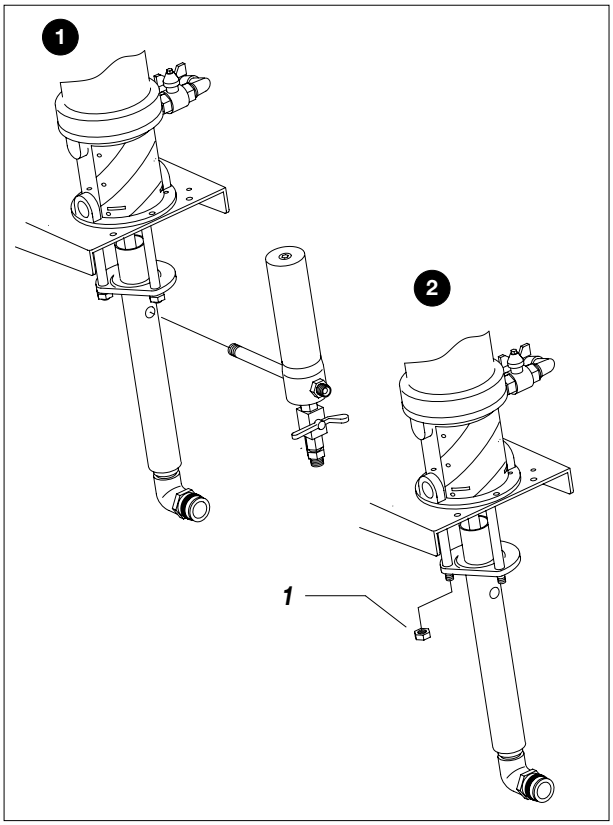



*Fig. 1*

- ❸ Pull the pumping unit towards yourself so that the split pin ***(2)*** can be extracted (*leaving the air valve open will facilitate this operation*).
- ❹ At this point, unscrew the piston rod from the pneumatic motor so that the entire pumping unit can be removed.
- ❺ Unscrew the suction elbow and suction valve. Clean and/or replace the specific parts wherever necessary.
- ❻ Unscrew the seal compression ring.
- ❼ Extract the piston rod from below.
- Remove the piston rod and replace the worn seals.
- Remove the upper seals for replacement, if necessary.
- See the diagram below the drawings for the correct reassembly procedure.

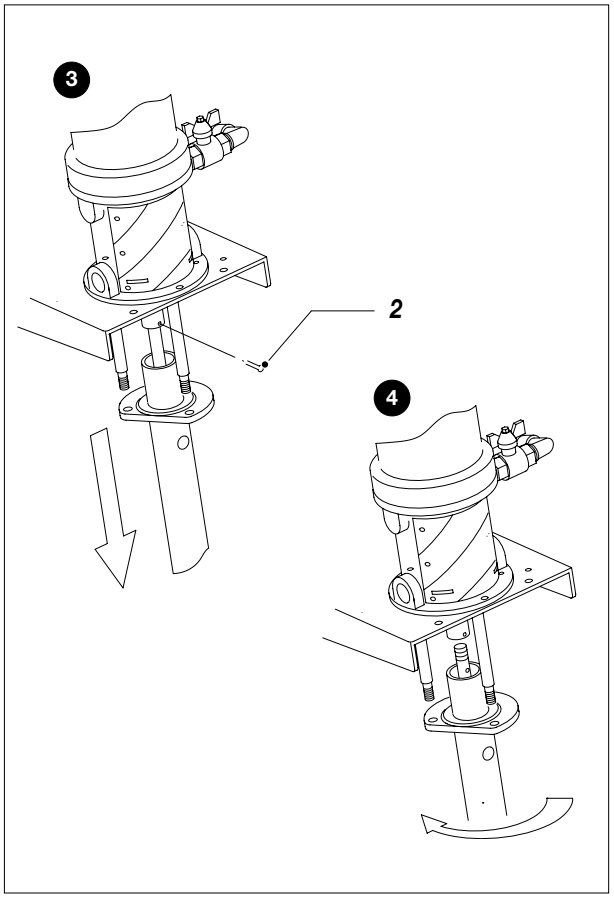



*Fig. 2*

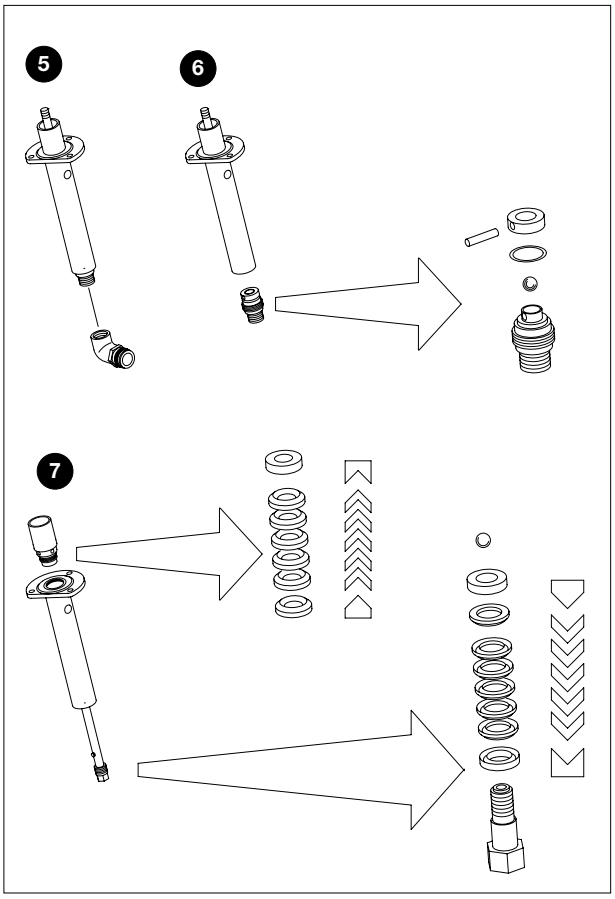



*Fig. 3*

# TROUBLESHOOTING

| Problem | Cause | Solution |
|---|---|---|
| **The pump does not start** | Feed air not sufficient; | Check on the air supply line. Increase the diameter of the feed hose; |
| | Outlet product line clogged; | - Open the recirculation tap to check whether the pump starts up. Unscrew the high pressure filter and clean/ replace the filter sieve. Clean/replace the spray gun's filter.<br>- Clean. Disconnect the outlet product pipe. Feed pump at minimum pressure and check if the pump starts without the outlet pipe; |
| | Clogged product intake line; | Clean the suction filter; |
| | Dried product inside the pumping element; | Disassemble the pumping group and clean; |
| | Pneumatic motor blocked in the cycle reversal position; | - Reduce feed air pressure;<br>- Consult the paragraph "**Manual reset of the pneumatic motor**"; |
| | Parts failure of the pneumatic motor; | Disassemble the motor and verify; |

| Problem | Cause | Solution |
|---|---|---|
| **Accelerate working and no pressure of the pump** | There is no product; | Check the flexible suction tube; |
| | The pump sucks air; | Controllare il tubo di aspirazione flessibile; |
| | Gaskets of the pumping rod worn; | Replace the lower gaskets; |
| | Suction valve worn or partially clogged; | Disassemble the suction valve. Clean and/or replace, if possible, the parts worn; |
| | Suction filter clogged; | Clean/replace the suction filter's two disks; |
| | Suction filter too fine; | Remove the fine disk, leaving only the larger one inside; |
| | Exit valve is worn | Disassemble the exit valve. Clean and/or replace, if possible, the parts worn; |
| **The pump functions, but doesn't stop when the chamber is full (the pump continues slowly, increasing and/or decreasing)** | Pumping rod seals worn; | Replace the lower seals; |
| | Suction valve worn or partially clogged; | Disassemble the suction valve. Clean and/or replace, if possible, the parts worn; |
| | Delivery valve worn or partially obstructed; | Disassemble the delivery valve and clean/replace any worn parts; |
| | Upper gaskets worn. | Tighten the packing nut. |
| **The pump works, but the flow of product is not sufficien** | Suction valve worn or partially clogged; | Disassemble the suction valve. Clean and/or replace, if possible, the parts worn; |
| | Outlet product line clogged; | Clean. disconnect the outlet hose of the product, feed the pump at the minimum pressure and verity if delivery increases without the outlet hose; |
| | The feed air pressure is too low; | Increase air pressure; |
| **Waste of product from the wet cup** | Upper gaskets worn. | Tighten the packing nut. In case of persistent waste of product, replace the upper gaskets of the pumping element. |
| **The equipment does not suck the product** | Suction filter clogged; | Clean or replace it; |
| | Suction filter too fine; | Replace it with a larger-mesh filter (with very dense products, remove the filter); |
| | The equipment sucks air; | Check the suction pipe; |
| **The pressure of the material is signi ficantly reduced when the trigger is pressed** | The spray gun's nozzle is too large or worn; | Replace it with a smaller one; |
| | The spray gun's filter and the material output filter's sieve are too fine; | Replace them with filters of a larger mesh size; |

**Always close the compressed air supply and release the pressure in the plant before performing any check or replacement of parts of the pump.**

# SPARE PARTS

**P** Complete pneumatic motor pump Ghibli BASE 30:1 / 40:1
pag. 16

**Q** Complete pneumatic motor pump Ghibli for TROLLEY/WALL 30:1 / 40:1
pag. 18

**W** Complete filter split galvanized and stainless steel version
pag. 28

**R** Complete pumping pump Ghibli split version and stainless steel 30:1 / 40:1
pag. 20

**Y** Complete trolley
pag. 31

**S-T** Air regulation group AIRLESS version (trolley and wall version)
pag. 23-24

**X** Paint suction system
pag. 30

**U-V** Air regulation group AIR-CONTROLLED AIRLESS version (for trolley and wall version)
pag. 25-26

**Z** Wall support
pag. 32

# P COMPLETE PNEUMATIC MOTOR PUMP GHIBLI 30:1 / 40:1 BASE PUMP VERSION

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

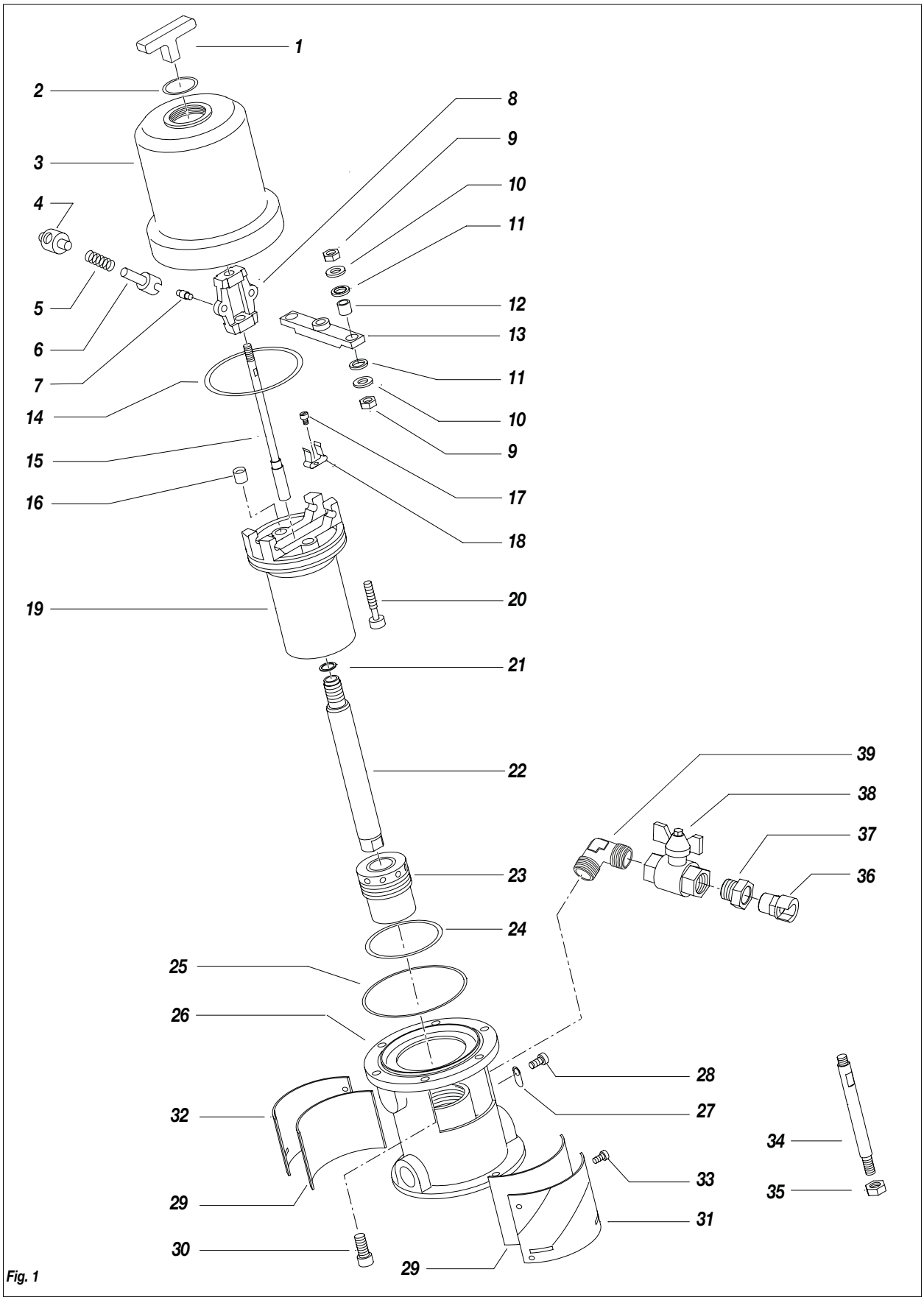



*Fig. 1*

| Pos. | Code | Description | Q. ty |
|---|---|---|---|
| - | 96550/1 | Complete motor base pump 30:1 | - |
| - | 96551/1 | Complete motor base pump 40:1 | - |
| 1 | 91602 | Base pump plug | 1 |
| 2 | 95075 | O-ring | 1 |
| 3 | 96003 | Motor cylinder | 1 |
| 4 | 96005 | Roller | 2 |
| 5 | 96006 | Spring | 2 |
| 6 | 96007 | Fork | 2 |
| 7 | 96024 | Fork pin | 2 |
| 8 | 96008 | Rocker lever | 1 |
| 9 | 4108 | Nut | 4 |
| 10 | 32024 | Washer | 4 |
| 11 | 96111 | Gasket | 4 |
| 12 | 96112 | Bush | 2 |
| 13 | 96110 | Crosspiece | 1 |
| 14 | 96012 | O-ring | 1 |
| 15 | 96010 | Guide rod | 1 |
| 16 | 96009 | Valve | 2 |
| 17 | 96025 | Screw M4 | 2 |
| 18 | 96011 | Crosspiece guide spring | 2 |
| 19 | 96013 | Motor piston | 1 |

| Pos. | Code | Description | Q. ty |
|---|---|---|---|
| 20 | 96027 | Complete screw valve | 2 |
| 21 | 33031 | Washer | 1 |
| 22 | 96016 | Piston rod | 1 |
| 23 | 96017 | Bush | 1 |
| 24 | 96020 | O-ring | 1 |
| 25 | 96018 | O-ring | 1 |
| 26 | 96021 | Motor support | 1 |
| 27 | 96210 | Earthing plate | 1 |
| 28 | 96211 | Screw M6 | 1 |
| 29 | 96022/1 | Gasket | 2 |
| 30 | 96031 | Screw M8 | 6 |
| 31 | 96022 | Front plate | 1 |
| 32 | 96032 | Back plate vers. 30:1 | 1 |
| | 96036 | Back plate vers 40:1 | 1 |
| 33 | 96028 | Screw M4 | 12 |
| 34 | 96072 | Tie rod | 3 |
| 35 | 96080 | Nut M10 | 3 |
| 36 | 10103 | Bayonet fitting | 1 |
| 37 | 96261 | Reduction | 1 |
| 38 | 96253 | Valve | 1 |
| 39 | 96213 | Elbow | 1 |

## MOTOR GASKET KIT - CODE 40050

| Pos. | Description | Q. ty |
|---|---|---|
| 2 | OR ring | 1 |
| 10 | Washer | 4 |
| 11 | Gasket | 4 |
| 14 | OR ring | 1 |
| 16 | Valve | 2 |
| 20 | Complete screw valve | 2 |
| 24 | OR ring | 1 |
| 25 | OR ring | 1 |

## MOTOR MOVEMENT INVERSION DEVICE VEGA-GHIBLI - CODE 40401

| Pos. | Description | Q. ty |
|---|---|---|
| 5 | Spring | 2 |
| 6 | Fork | 2 |
| 7 | Fork pin | 2 |

## FELT GASKET KIT - CODE 40052

| Pos. | Description | Q. ty |
|---|---|---|
| 29 | Felt gasket | 2 |

# Q COMPLETE PNEUMATIC MOTOR PUMP GHIBLI 30:1 / 40:1 TROLLEY AND WALL PUMP VERSION

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

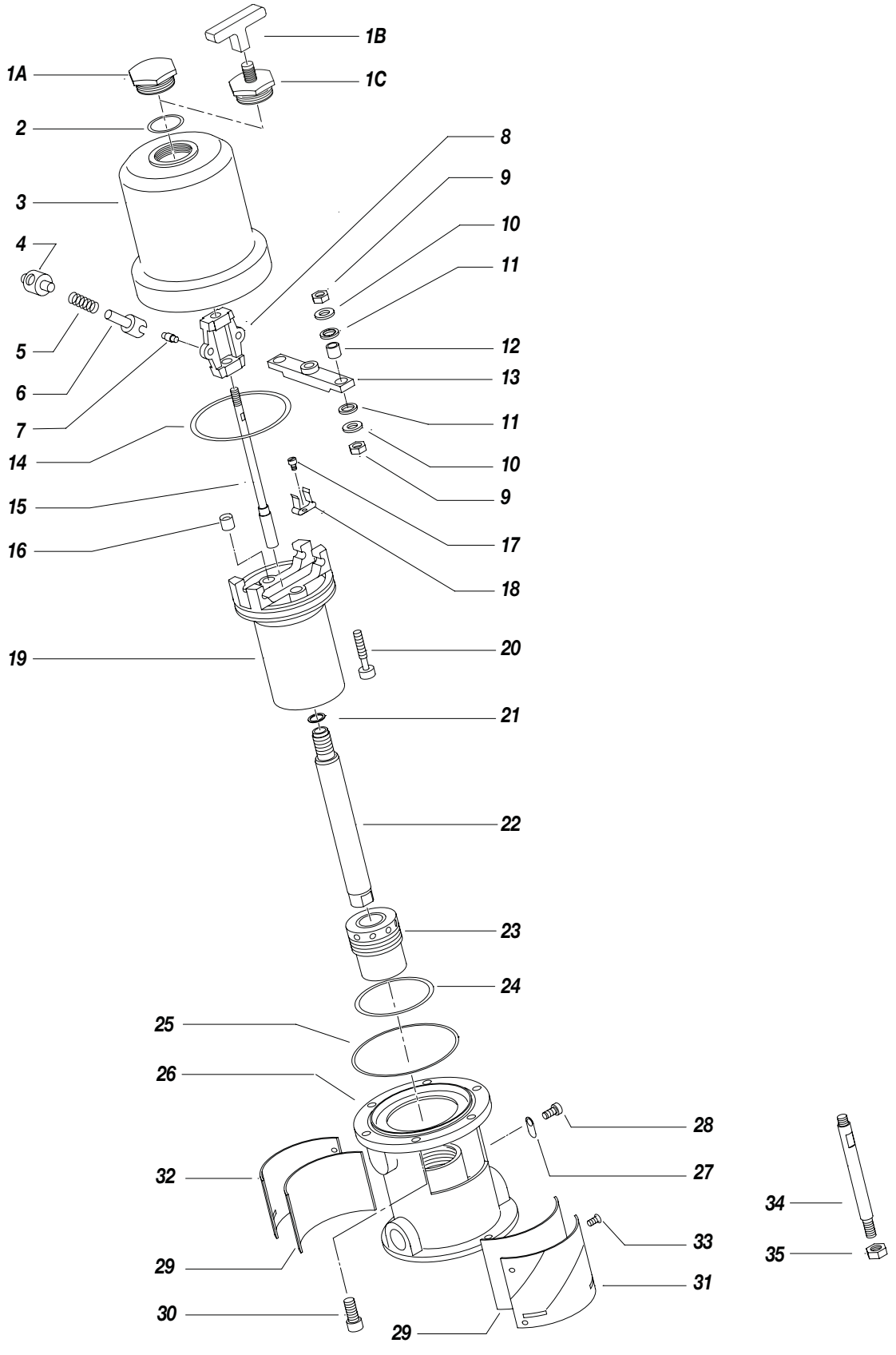



*Fig. 1*

## PUMP COMPLETE MOTOR VERSION 30:1

| Code | Description |
|---|---|
| 96550 | Complete motor trolley version |
| 96550/2 | Complete motor wall version |

## PUMP COMPLETE MOTOR VERSION 40:1

| Code | Description |
|---|---|
| 96551 | Complete motor trolley version |
| 96551/2 | Complete motor wall version |

| Pos. | Code | Description | Q. ty |
|---|---|---|---|
| 1A | 96001 | Plug trolley version | 1 |
| 1B | 91602 | Plug base pump and wall version | 1 |
| 1C | 91603 | Plug base pump and wall version | 1 |
| 2 | 95075 | OR ring | 1 |
| 3 | 96003 | Motor cylinder | 1 |
| 4 | 96005 | Roller | 2 |
| 5 | 96006 | Spring | 2 |
| 6 | 96007 | Fork | 2 |
| 7 | 96024 | Fork pin | 2 |
| 8 | 96008 | Rocker lever | 1 |
| 9 | 4108 | Nut | 4 |
| 10 | 32024 | Washer | 4 |
| 11 | 96111 | Gasket | 4 |
| 12 | 96112 | Bush | 2 |
| 13 | 96110 | Crosspiece | 1 |
| 14 | 96012 | O-ring | 1 |
| 15 | 96010 | Guide rod | 1 |
| 16 | 96009 | Valve | 2 |
| 17 | 96025 | Screw M4 | 2 |

| Pos. | Code | Description | Q. ty |
|---|---|---|---|
| 18 | 96011 | Crosspiece guide spring | 2 |
| 19 | 96013 | Motor piston | 1 |
| 20 | 96027 | Complete screw valve | 2 |
| 21 | 33031 | Washer | 1 |
| 22 | 96016 | Piston rod | 1 |
| 23 | 96017 | Bush | 1 |
| 24 | 96020 | O-ring | 1 |
| 25 | 96018 | O-ring | 1 |
| 26 | 96021 | Motor support | 1 |
| 27 | 96210 | Earthing plate | 1 |
| 28 | 96211 | Screw M6 | 1 |
| 29 | 96022/1 | Gasket | 2 |
| 30 | 96031 | Screw M8 | 6 |
| 31 | 96022 | Front plate | 1 |
| 32 | 96032 | Back plate vers. 30:1 | 1 |
| | 96036 | Back plate vers 40:1 | 1 |
| 33 | 96028 | Screw M4 | 12 |
| 34 | 96072 | Tie rod | 3 |
| 35 | 96080 | Nut M10 | 3 |

## MOTOR GASKET KIT - CODE 40050

| Pos. | Description | Q. ty |
|---|---|---|
| 2 | OR ring | 1 |
| 11 | Gasket | 4 |
| 14 | OR ring | 1 |
| 16 | Valve | 2 |
| 20 | Complete screw valve | 2 |
| 24 | OR ring | 1 |
| 25 | OR ring | 1 |

## MOTOR MOVEMENT INVERSION DEVICE VEGA-GHIBLI - CODE 40401

| Pos. | Description | Q. ty |
|---|---|---|
| 5 | Spring | 2 |
| 6 | Fork | 2 |
| 7 | Fork pin | 2 |

## FELT GASKET KIT - CODE 40052

| Pos. | Description | Q. ty |
|---|---|---|
| 29 | Felt gasket | 2 |

# R COMPLETE PUMPING PUMP GHIBLI GALVANIZED AND STAINLESS STEEL VERSION 30:1 / 40:1

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

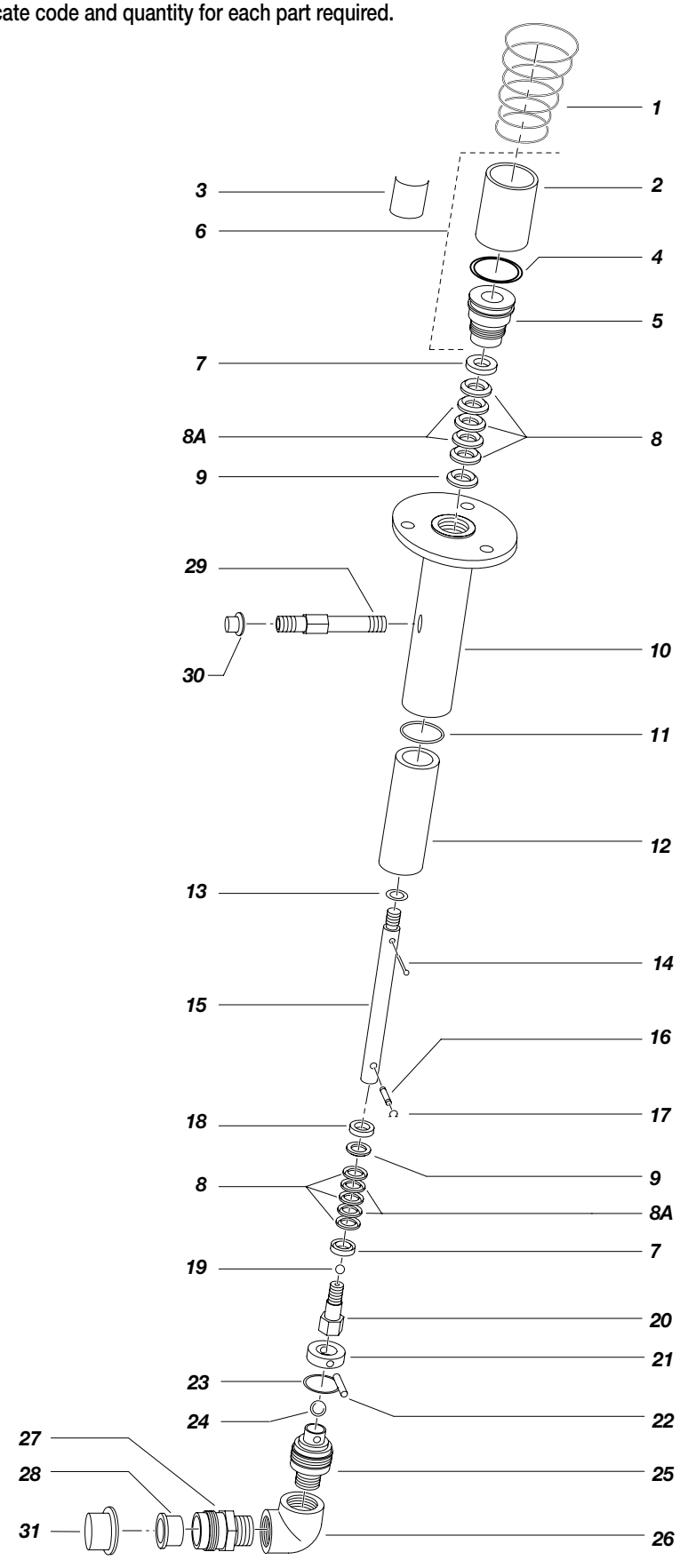



*Fig. 1*

## GALVANIZED 30:1 SPLIT VERSION Code 96070

| Pos. | Code | Description | Q.ty |
|---|---|---|---|
| - | **96070** | **Complete pumping** | - |
| 1 | 96023 | Spring | 1 |
| 2 | 91001/1 | Oil tank | 1 |
| 3 | 96233 | 'Oil' label | 1 |
| 4 | 3429 | O-ring | 1 |
| 5 | 98501 | Gaskets ring nut | 1 |
| 6 | 96075 | Complete tank | 1 |
| 7 | 98358 | V female ring | 2 |
| 8 | 96074 | PTFE gasket | 6 |
| 8A | 96071 | Polyethylene gasket | 4 |
| 9 | 98360 | V male ring | 2 |
| 10 | 98353 | Pumping group | 1 |
| 11 | 96083 | Gasket | 1 |
| 12 | 98350 | Sleeve | 1 |
| 13 | 96073 | O-ring | 1 |
| 14 | 3323 | Split pin | 1 |
| 15 | 98356 | Piston rod | 1 |
| 16 | 98362 | Ball stop pin | 1 |
| 17 | 96087 | Elastic ring | 2 |
| 18 | 96089 | Washer | 1 |
| 19 | 96090 | Ball ø 5/16" | 1 |
| 20 | 98367 | Piston valve | 1 |
| 21 | 98368 | Ring | 1 |
| 22 | 98370 | Ball stop pin | 1 |
| 23 | 96093 | O-ring | 1 |
| 24 | 96094 | Ball ø 1/2" | 1 |
| 25 | 98373 | Suction valve | 1 |
| 26 | 95089 | Elbow | 1 |
| 27 | 96098 | Suction hose fitting | 1 |
| 28 | 96099 | Inlet sleeve | 1 |
| 29 | 98378 | Filter fitting | 1 |
| 30 | 110 | Plug | 1 |
| 31 | 100 | Plug | 1 |

## GALVANIZED 40:1 SPLIT VERSION Code 96500

| Pos. | Code | Description | Q.ty |
|---|---|---|---|
| - | **96500** | **Complete pumping** | - |
| 1 | 96023 | Spring | 1 |
| 2 | 91001/1 | Oil tank | 1 |
| 3 | 96233 | 'Oil' label | 1 |
| 4 | 3429 | O-ring | 1 |
| 5 | 98506 | Gaskets ring nut | 1 |
| 6 | 96502 | Complete tank | 1 |
| 7 | 98406 | V female ring | 2 |
| 8 | 96512 | PTFE gasket | 6 |
| 8A | 96513 | Polyethylene gasket | 4 |
| 9 | 98408 | V male ring | 2 |
| 10 | 98403 | Pumping group | 1 |
| 11 | 96083 | Gasket | 1 |
| 12 | 98416 | Sleeve | 1 |
| 13 | 96073 | O-ring | 1 |
| 14 | 3323 | Split pin | 1 |
| 15 | 98404 | Piston rod | 1 |
| 16 | 96507 | Ball stop pin | 1 |
| 17 | 96087 | Elastic ring | 2 |
| 18 | 96508 | Washer | 1 |
| 19 | 96090 | Ball ø 5/16" | 1 |
| 20 | 96509 | Piston valve | 1 |
| 21 | 96092 | Ring | 1 |
| 22 | 98370 | Ball stop pin | 1 |
| 23 | 96093 | O-ring | 1 |
| 24 | 96094 | Ball ø 1/2" | 1 |
| 25 | 98373 | Suction valve | 1 |
| 26 | 95089 | Elbow | 1 |
| 27 | 96098 | Suction hose fitting | 1 |
| 28 | 96099 | Inlet sleeve | 1 |
| 29 | 98378 | Filter fitting | 1 |
| 30 | 110 | Plug | 1 |
| 31 | 100 | Plug | 1 |

## SPARE PART KIT VERSION 30:1 - Cod. 40055

| Pos. | Description |
|---|---|
| 7 | V female ring |
| 8 | PTFE gasket |
| 8A | Polyethylene gasket |
| 9 | V male ring |
| 14 | Split pin |

| Pos. | Description |
|---|---|
| 17 | Elastic ring |
| 19 | Ball ø 5/16'' |
| 23 | OR ring |
| 24 | Ball ø 1/2'' |

## SPARE PART KIT VERSION 40:1 - Cod. 40060

| Pos. | Description |
|---|---|
| 7 | V female ring |
| 8 | PTFE gasket |
| 8A | Polyethylene gasket |
| 9 | V male ring |
| 14 | Split pin |

| Pos. | Description |
|---|---|
| 17 | Elastic ring |
| 19 | Ball ø 5/16'' |
| 23 | OR ring |
| 24 | Ball ø 1/2'' |

## STAINLESS STEEL 30:1 SPLIT VERSION Cod. 98340

| Pos. | Code | Description | Q. ty |
|---|---|---|---|
| - | **98340** | **Complete pumping** | - |
| 1 | 96023 | Spring | 1 |
| 2 | 91001/1 | Oil tank | 1 |
| 3 | 96233 | 'Oil' label | 1 |
| 4 | 3429 | O-ring | 1 |
| 5 | 98501 | Gaskets ring nut | 1 |
| 6 | 96075 | Complete tank | 1 |
| 7 | 98358 | V female ring | 2 |
| 8 | 96074 | PTFE gasket | 6 |
| 8A | 96071 | Polyethylene gasket | 4 |
| 9 | 98360 | V male ring | 2 |
| 10 | 98353 | Pumping group | 1 |
| 11 | 96083 | Gasket | 1 |
| 12 | 98350 | Sleeve | 1 |
| 13 | 96073 | O-ring | 1 |
| 14 | 3323 | Split pin | 1 |
| 15 | 98356 | Piston rod | 1 |
| 16 | 98362 | Ball stop pin | 1 |
| 17 | 96087 | Elastic ring | 2 |
| 18 | 98364 | Washer | 1 |
| 19 | 96090 | Ball ø 5/16" | 1 |
| 20 | 98367 | Piston valve | 1 |
| 21 | 98368 | Ring | 1 |
| 22 | 98370 | Ball stop pin | 1 |
| 23 | 96093 | O-ring | 1 |
| 24 | 96094 | Ball ø 1/2" | 1 |
| 25 | 98373 | Suction valve | 1 |
| 26 | 98374 | Elbow | 1 |
| 27 | 98376 | Suction hose fitting | 1 |
| 28 | 96099 | Inlet sleeve | 1 |
| 29 | 98378 | Filter fitting | 1 |
| 30 | 110 | Plug | 1 |
| 31 | 100 | Plug | 1 |

## STAINLESS STEEL 40:1 SPLIT VERSION Cod. 98400

| Pos. | Code | Description | Q. ty |
|---|---|---|---|
| - | **98400** | **Complete pumping** | - |
| 1 | 96023 | Spring | 1 |
| 2 | 91001/1 | Oil tank | 1 |
| 3 | 96233 | 'Oil' label | 1 |
| 4 | 3429 | O-ring | 1 |
| 5 | 98506 | Gaskets ring nut | 1 |
| 6 | 96502 | Complete tank | 1 |
| 7 | 98406 | V female ring | 2 |
| 8 | 96512 | PTFE gasket | 6 |
| 8A | 96513 | Polyethylene gasket | 4 |
| 9 | 98408 | V male ring | 2 |
| 10 | 98403 | Pumping group | 1 |
| 11 | 96083 | Gasket | 1 |
| 12 | 98413 | Sleeve | 1 |
| 13 | 96073 | O-ring | 1 |
| 14 | 3323 | Split pin | 1 |
| 15 | 98404 | Piston rod | 1 |
| 16 | 98410 | Ball stop pin | 1 |
| 17 | 96087 | Elastic ring | 2 |
| 18 | 98412 | Washer | 1 |
| 19 | 96090 | Ball ø 5/16" | 1 |
| 20 | 98415 | Piston valve | 1 |
| 21 | 98368 | Ring | 1 |
| 22 | 98370 | Ball stop pin | 1 |
| 23 | 96093 | O-ring | 1 |
| 24 | 96094 | Ball ø 1/2" | 1 |
| 25 | 98373 | Suction valve | 1 |
| 26 | 98374 | Elbow | 1 |
| 27 | 98376 | Suction hose fitting | 1 |
| 28 | 96099 | Inlet sleeve | 1 |
| 29 | 98378 | Filter fitting | 1 |
| 30 | 110 | Plug | 1 |
| 31 | 100 | Plug | 1 |

## SPARE PART KIT VERSION 30:1 - COD. 40055

| Pos. | Description |
|---|---|
| 7 | V female ring |
| 8 | PTFE gasket |
| 8A | Polyethylene gasket |
| 9 | V male ring |
| 14 | Split pin |

| Pos. | Description |
|---|---|
| 17 | Elastic ring |
| 19 | Ball ø 5/16'' |
| 23 | OR ring |
| 24 | Ball ø 1/2'' |

## SPARE PART KIT VERSION 40:1 - COD. 40060

| Pos. | Description |
|---|---|
| 7 | V female ring |
| 8 | PTFE gasket |
| 8A | Polyethylene gasket |
| 9 | V male ring |
| 14 | Split pin |

| Pos. | Description |
|---|---|
| 17 | Elastic ring |
| 19 | Ball ø 5/16'' |
| 23 | OR ring |
| 24 | Ball ø 1/2'' |

# S AIR REGULATION - TROLLEY AIRLESS VERSION Ref. 96250

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

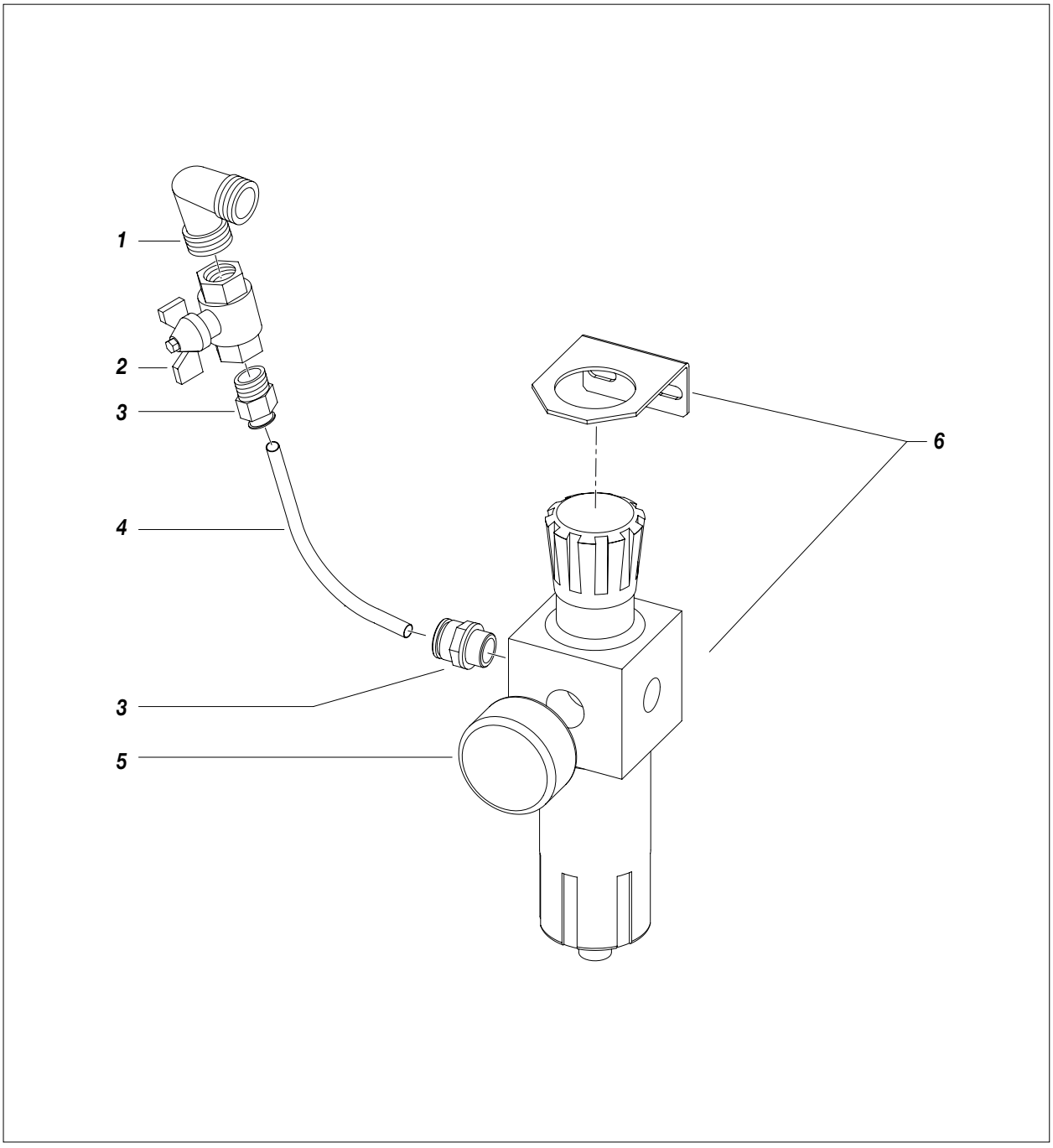



*Fig. 1*

| Pos. | Code | Description | Q. ty |
|---|---|---|---|
| - | **96250** | **Complete group** | - |
| 1 | 96214 | Elbow | 1 |
| 2 | 91101 | Valve | 1 |
| 3 | 96215 | Rapid coupling 3/8 Tube Ø 12 | 2 |

| Pos. | Code | Description | Q. ty |
|---|---|---|---|
| 4 | 96217 | Tubo 12/10mm - 0,5m | 1 |
| 5 | 96259 | Manometer | 1 |
| 6 | 91107 | FR group | 1 |

# T AIR REGULATION - WALL AIRLESS VERSION Ref. 96250/1

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

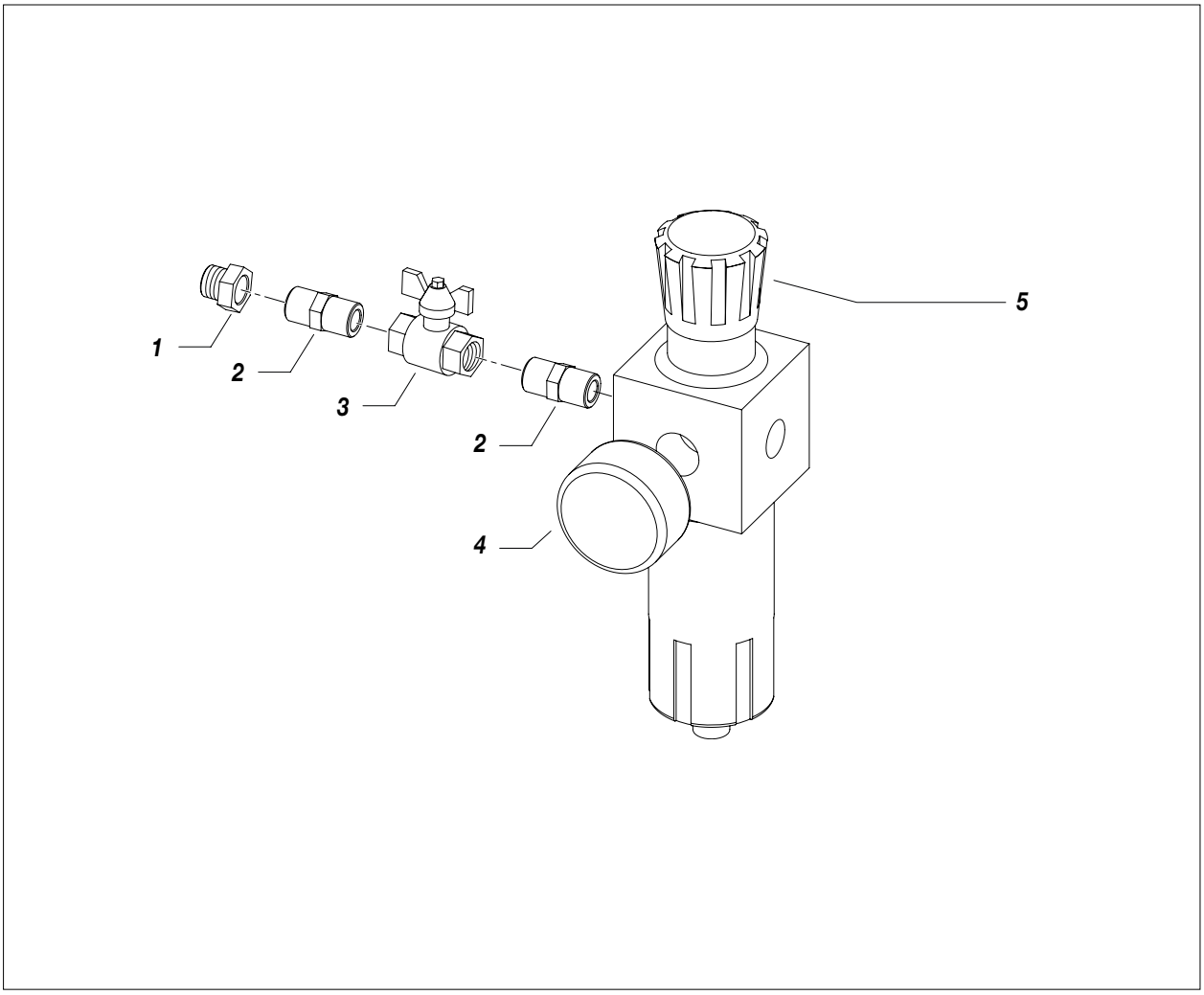



*Fig. 1*

| Pos. | Code | Description | Q. ty |
|---|---|---|---|
| - | **96250/1** | **Complete group** | - |
| 1 | 96261 | Reduction | 1 |
| 2 | 91020 | Adattatore 3/8 mm CON | 2 |

| Pos. | Code | Description | Q. ty |
|---|---|---|---|
| 3 | 91101 | Valve | 1 |
| 4 | 96259 | Manometer | 1 |
| 5 | 91107 | FR group | 1 |

# U AIR REGULATION - AIR-CONTROLLED AIRLESS TROLLEY VERSION Rif. 96262

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

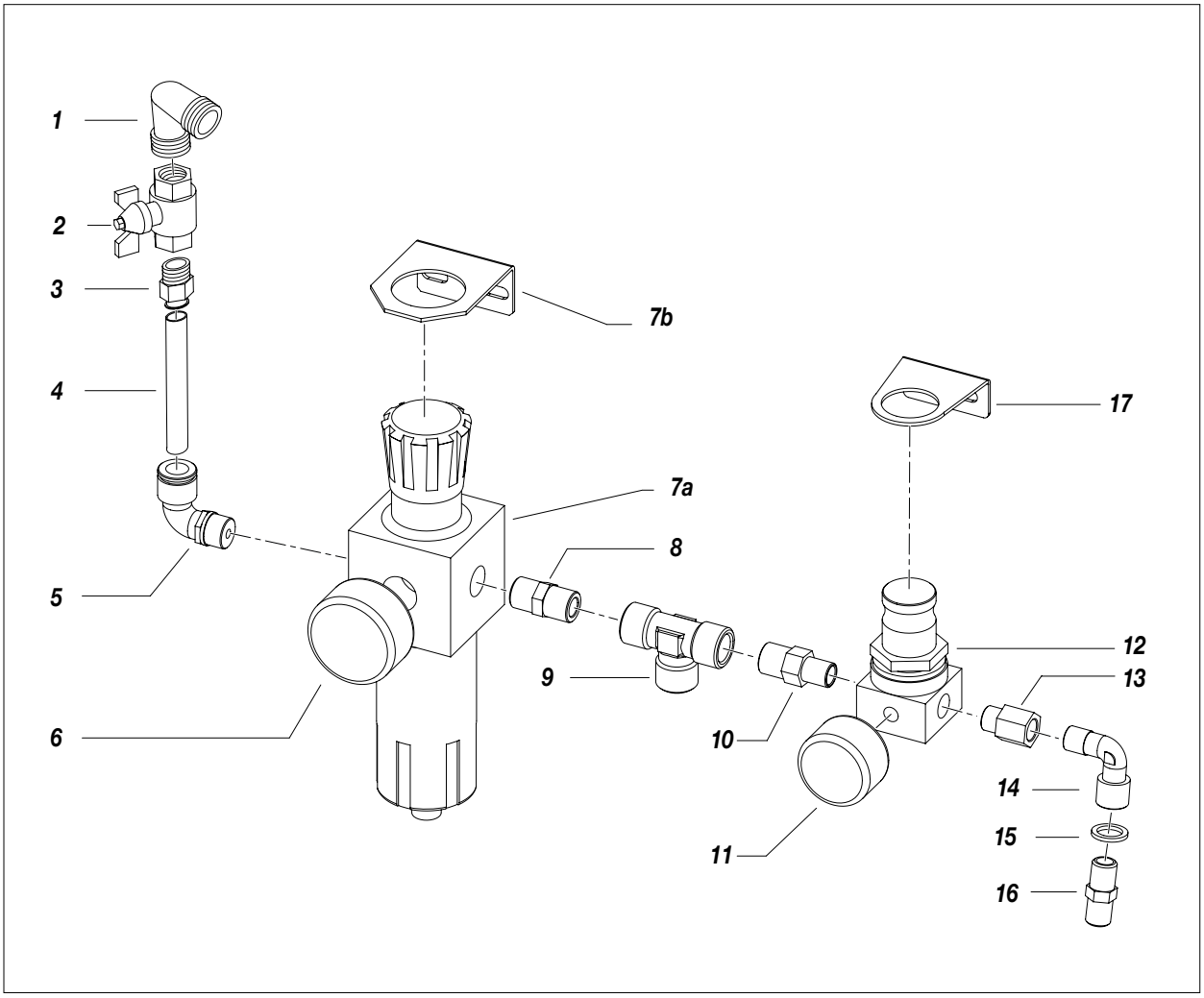



*Fig. 1*

| Pos. | Code | Description | Q. ty |
|---|---|---|---|
| | **96262** | **Complete group** | - |
| 1 | 96214 | Elbow | 1 |
| 2 | 91101 | Valve | 1 |
| 3 | 96215 | Tube connector | 1 |
| 4 | 96217 | Tube Ø 12/10 mm (0,5 m) | 1 |
| 5 | 96216 | Rapid coupling 3/8 Tube Ø 12 | 1 |
| 6 | 96259 | Manometer | 1 |
| 7a+7b | 91107 | RL 3/8 group + bracket | 1 |
| 8 | 91020 | Adapter 3/8 mm CON | 1 |

| Pos. | Code | Description | Q. ty |
|---|---|---|---|
| 9 | 3379 | T female fitting 3/8 | 1 |
| 10 | 3560 | Adapter 3/8 1/4 mm CON-CON | 1 |
| 11 | 8167 | Manometer | 1 |
| 12 | 3344 | Air regulator | 1 |
| 13 | 8055/1 | Adapter 1/4 MF | 1 |
| 14 | 5255 | Elbow MF 1/4 | 1 |
| 15 | 33012 | Copper gasket 1/4 | 1 |
| 16 | 3289 | Adapter 1/4 mm | 1 |
| 17 | 510510 | Bracket for manometer | 1 |

# V AIR REGULATION - AIR-CONTROLLED AIRLESS WALL VERSION Rif. 96262/1

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

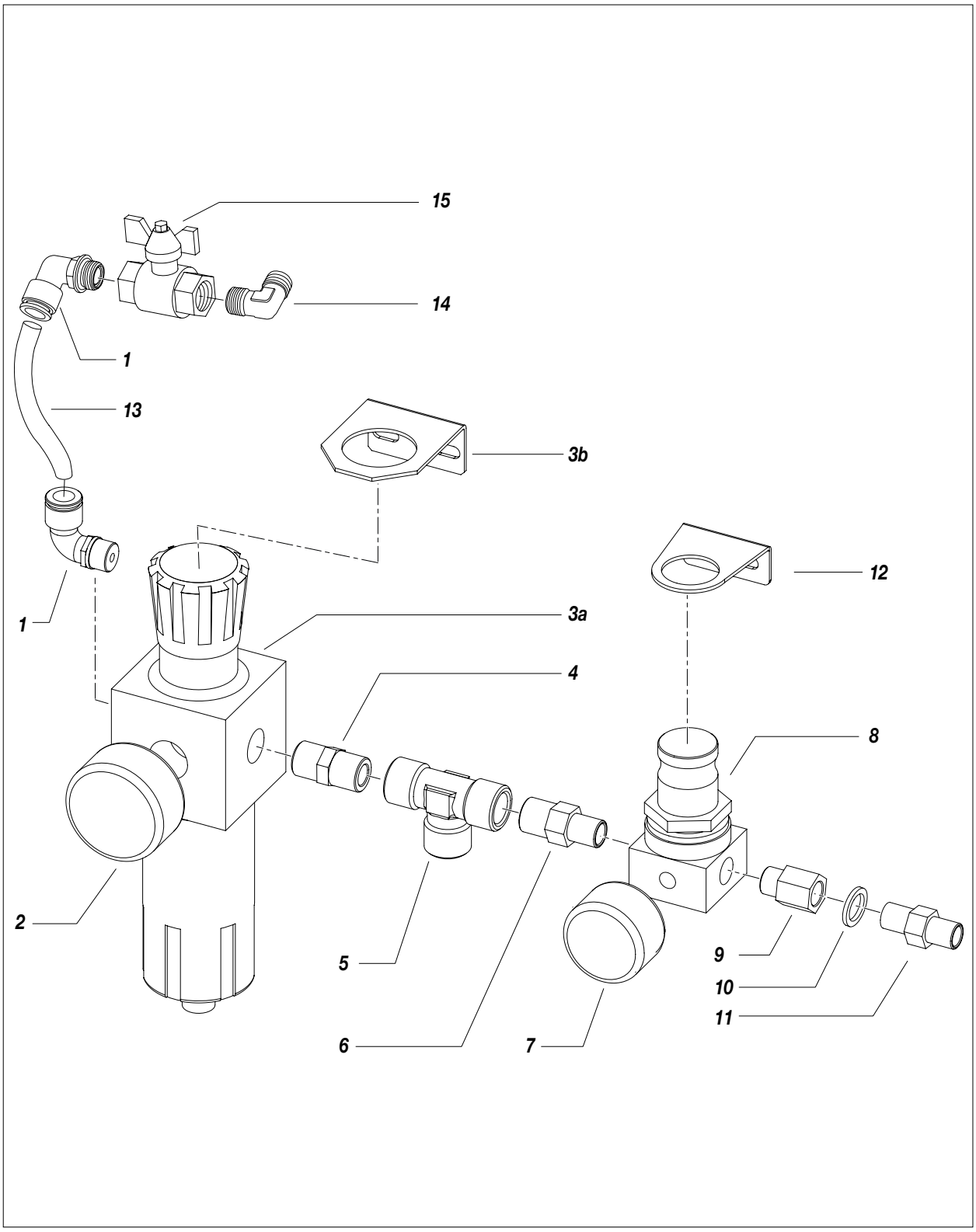



*Fig. 1*

| Pos. | Code | Description | Q. ty |
|---|---|---|---|
| | **96262/1** | **Complete group** | - |
| 1 | 96216 | Rapid coupling 3/8 Tube Ø 12 | 2 |
| 2 | 96259 | Manometer | 1 |
| 3a+3b | 91107 | RL 3/8 group + bracket | 1 |
| 4 | 91020 | Adapter 3/8 mm CON | 1 |
| 5 | 3379 | T female fitting 3/8 | 1 |
| 6 | 3560 | Adapter 3/8 1/4 mm CON-CON | 1 |
| 7 | 8167 | Manometer | 1 |
| 8 | 3344 | Air regulator | 1 |
| 9 | 8055/1 | Adapter 1/4 MF | 1 |
| 10 | 33012 | Copper gasket 1/4 | 1 |
| 11 | 3289 | Adapter 1/4 mm | 1 |
| 12 | 510510 | Bracket for manometer | 1 |
| 13 | 96217 | Tube Ø 12/10 mm (0,5 m) | 1 |
| 14 | 96214 | Elbow | 1 |
| 15 | 91101 | Valve | 1 |

# W COMPLETE FILTER SPLIT GHIBLI PUMP 30:1/40:1

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

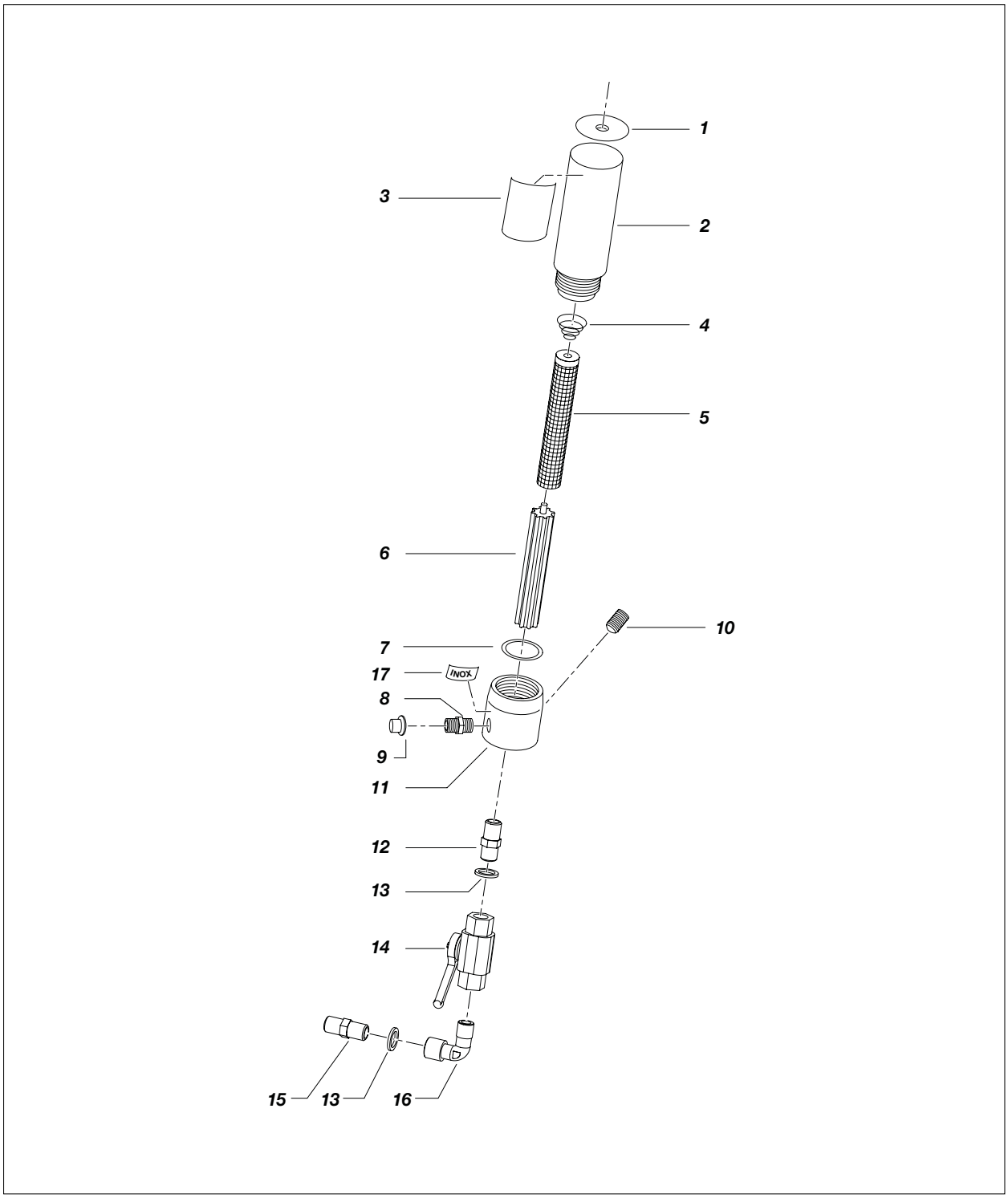



*Fig. 1*

## STAINLESS STEEL 30:1/40:1 VERSION

| Pos. | Code | Description | Q. ty |
|---|---|---|---|
| | **98388** | **Complete filter M16x1,5** | - |
| | **98388/1** | **Complete filter 1/4''** | - |
| 1 | 10107 | Warning label | 1 |
| 2 | 98384 | Filter tank | 1 |
| 3 | 96002 | Trolley and wall label 30:1 | 1 |
| | 96131 | Trolley and wall label 40:1 | 1 |
| 4 | 96202 | Sieve spring | 1 |
| 5 | 95221 | Filter sieve 200M | 1 |
| | 95220 | Filter sieve 100M | 1 |
| | 95219 | Filter sieve 60M | 1 |
| 6 | 96207 | Sieve support | 1 |
| 7 | 96203 | O-ring | 1 |
| 8 | 98383 | Nipple vers. Airless GAS M16x1,5 | 1 |
| | 3110 | Nipple vers.Air-controlled airless 1/4'' | 1 |
| 9 | 110 | Tappo per M16x1,5 | 1 |
| | 104 | Tappo per Gj 1/4'' | 1 |
| 10 | 98386 | Hex socket set screw | 1 |
| 11 | 98380 | Filter base | 1 |
| 12 | 3110 | Adapter 1/4 con-cil | 1 |
| 13 | 32012 | Copper gasket 1/4 | 2 |
| 14 | 98325 | Ball valve1/4 | 1 |
| 15 | 96065 | Adapter 1/4 - M20x2 | 2 |
| 16 | 98377 | Elbow MF 1/4 | 1 |
| 17 | 10112 | 'INOX' label | 1 |

## GALVANIZED 30:1/40:1 VERSION

| Pos. | Code | Description | Q. ty |
|---|---|---|---|
| | **96220** | **Complete filter M16x1,5** | - |
| | **96220/1** | **Complete filter 1/4''** | - |
| 1 | 10107 | Warning label | 1 |
| 2 | 96201 | Filter tank | 1 |
| 3 | 96002 | Trolley and wall label 30:1 | 1 |
| | 96131 | Trolley and wall label 40:1 | 1 |
| 4 | 96202 | Sieve spring | 1 |
| 5 | 95221 | Filter sieve 200M | 1 |
| | 95220 | Filter sieve 100M | 1 |
| | 95219 | Filter sieve 60M | 1 |
| 6 | 96207 | Sieve support | 1 |
| 7 | 96203 | O-ring | 1 |
| 8 | 96206 | Nipple vers. Airless GAS M16x1,5 | 1 |
| | 96208 | Nipple vers.Air-controlled airless 1/4'' | 1 |
| 9 | 110 | Tappo per M16x1,5 | 1 |
| | 104 | Tappo per Gj 1/4'' | 1 |
| 10 | 96205 | Hex socket set screw | 1 |
| 11 | 96204 | Filter base | 1 |
| 12 | 96208 | Adapter 1/4 con-cil | 1 |
| 13 | 33012 | Copper gasket 1/4 | 2 |
| 14 | 33013/1 | Ball valve1/4 | 1 |
| 15 | 33015 | Adapter 1/4 - M20x2 | 2 |
| 16 | 5255 | Elbow MF 1/4 | 1 |

# X PAINT SUCTION SYSTEM
## - SPLIT VERSION Rif. 16610
## - STAINLESS STEEL VERSION Rif. 16611

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

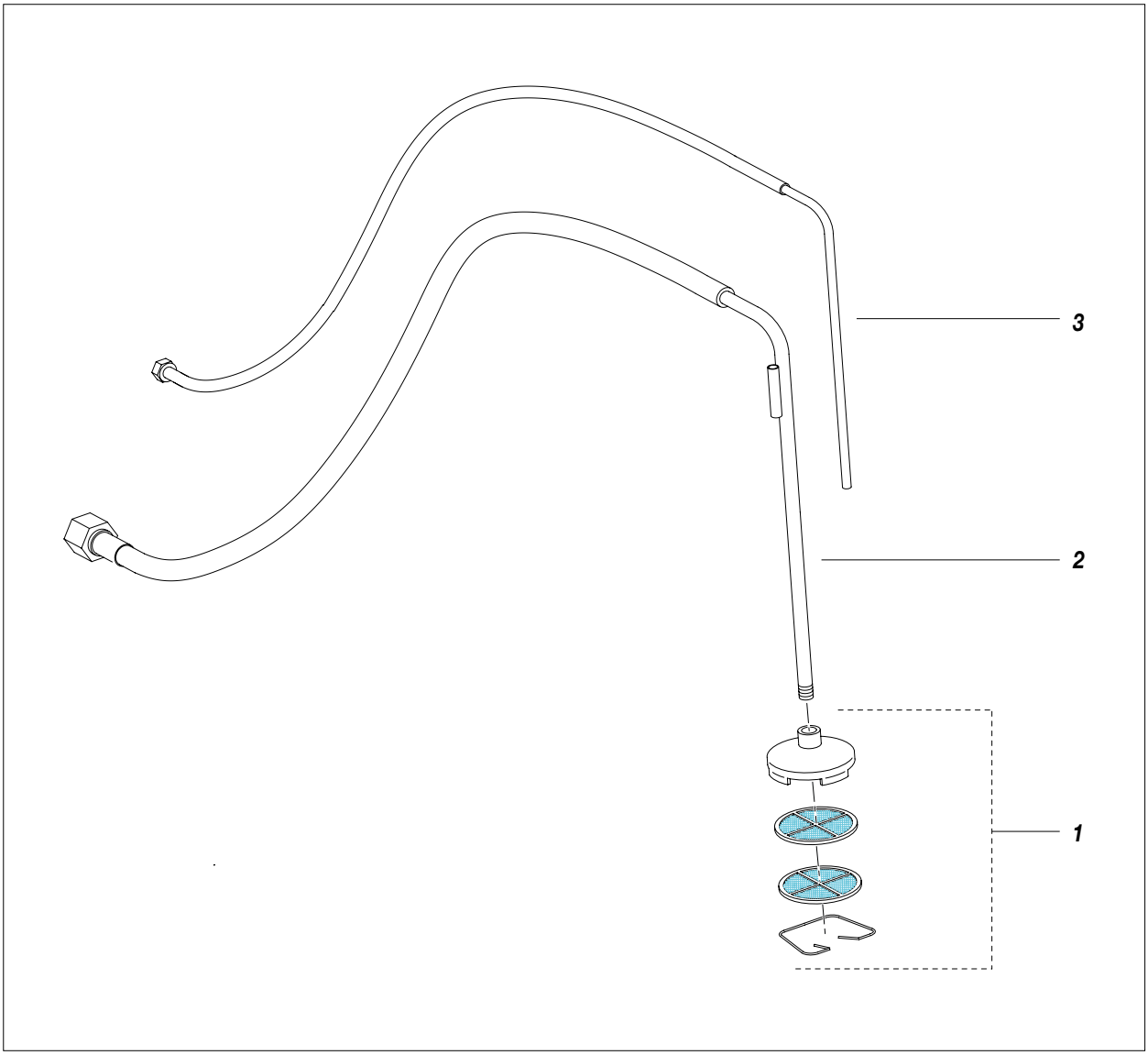



*Fig. 1*

| Pos. | Code | Description | Q. ty |
|---|---|---|---|
| | **16610** | **Paint suction system with suction pipes SPLIT VERSION** | - |
| 1 | 35020 | Bottom filter assembly | 1 |
| 2 | 16608 | Suction pipe complete with filter with Split version | 1 |
| 3 | 16609 | Recirculating pipe Split version | 1 |

| Pos. | Code | Description | Q. ty |
|---|---|---|---|
| | **16611** | **Paint suction system with suction pipes in STAINLESS STEEL** | - |
| 1 | 35020 | Bottom filter assembly | 1 |
| 2 | 16612 | Suction pipe complete with filter with suction device in stainless steel | 1 |
| 3 | 16613 | Recirculating pipe stainless steel | 1 |

# Y COMPLETE TROLLEY

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

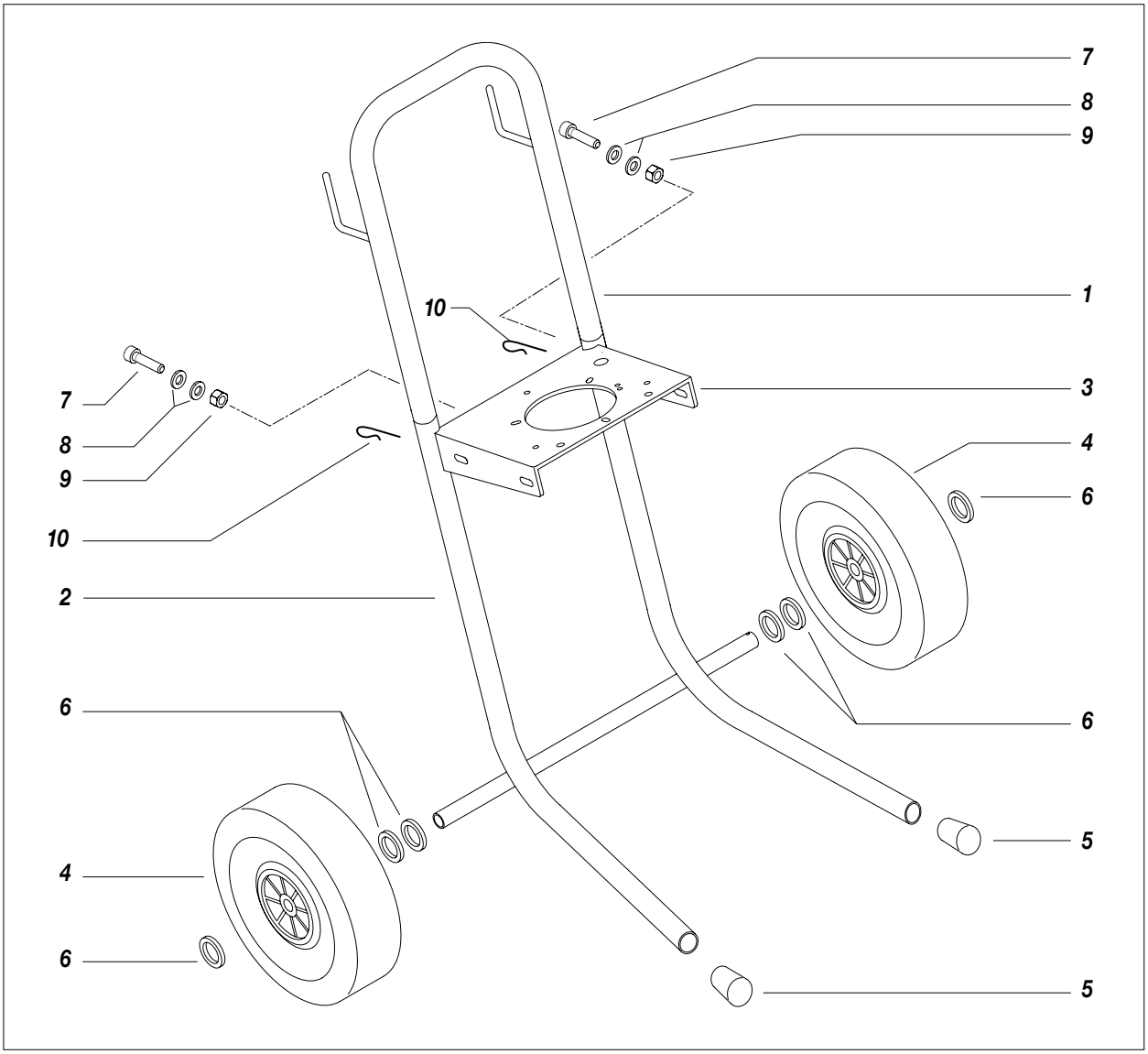



*Fig. 1*

| Pos. | Code | Description | Q. ty |
|---|---|---|---|
| | **96320** | **Complete trolley** | |
| 1 | 16271 | Trolley handle | 1 |
| 2 | 16272 | Trolley frame | 1 |
| 3 | 16954 | Trolley bracket | 1 |
| 4 | 91023 | Wheel | 2 |
| 5 | 37403 | Plug | 2 |

| Pos. | Code | Description | Q. ty |
|---|---|---|---|
| 6 | 91047 | Wheel washer | 6 |
| 7 | 8029 | Screw | 2 |
| 8 | 95063 | Washer | 4 |
| 9 | 91026 | Nut | 2 |
| 10 | 84007 | Split pin | 2 |

# Z WALL MOUNTING BRACKET GHIBLI 30:1/40:1 Rif. LA91200/1

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

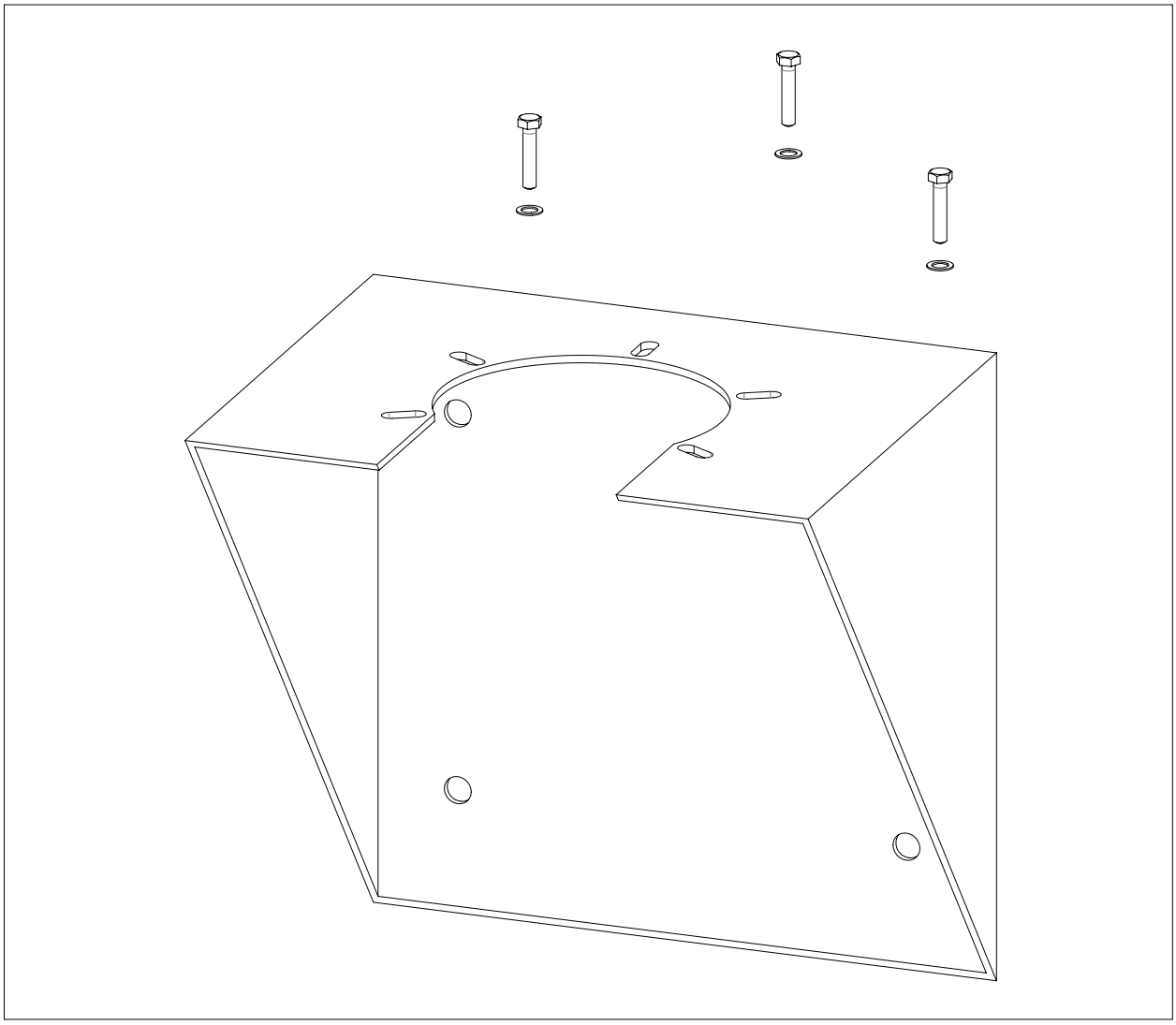


*Fig. 1*

| Code | Description | Q.ty |
|---|---|---|
| LA91200/1 | **Wall mounting bracket** | 1 |

# AA ATEX CERTIFICATE

**Safety instructions for using GHIBLI series pneumatic piston transfer pumps in high risk environments where potentially explosive gasses or vapours are present.**

## DESCRIPTION

These safety instructions refer to the installation, use and maintenance of **GHIBLI** series pneumatic piston transfer pumps in high risk environments where potentially explosive gasses or vapours are present.

**These instructions, along with the indications provided in the user and maintenance manual, must be fully respected.**

**GHIBLI series pneumatic piston pumps are group II mechanical devices for use in areas where gasses classified as iib (*category 2 g*) are present. They are designed and built in accordance with the 94/9/Ec ATEX Directive, based on the following european standards: EN 1127-1, EN 13463-1 and EN 13463-5.**

## TECHNICAL CHARATERISTICS

The main characteristics of the GHIBLI series pneumatic piston pumps are provided in the table below:

| Type | | Rapport | Pressure alimentation | Ø Air Inlet | Input material | Ø Output material | Max. working pressure | Max. flow |
|---|---|---|---|---|---|---|---|---|
| Standard | INOX | | | | | | | |
| 96700 | 96710 | 3:1 | 3÷7 bar | GC 1/2” | Ball | GJ 1” | 21 bar | 45 l/min |
| 96701 | 96755 | 3:1 | 3÷7 bar | GC 1/2” | Ball | GJ 1” | 21 bar | 45 l/min |
| 96705 | 96715 | 3:1 | 3÷7 bar | GC 1/2” | Ball | GJ 1” | 21 bar | 45 l/min |
| 96660 | 96661 | 10:1 | 3÷7 bar | GC 1/2” | Ball | GJ 3/4” | 70 bar | 12 l/min |
| 96665 | 96666 | 10:1 | 3÷7 bar | GC 1/2” | Ball | GJ 3/4” | 70 bar | 12 l/min |
| 96668 | 96667 | 10:1 | 3÷7 bar | GC 1/2” | Ball | GJ 3/4” | 70 bar | 12 l/min |
| 96870 | - | 24:1 | 3÷7 bar | GC 1/2” | shovel plate | GJ 3/4” | 168 bar | 4 l/min |
| 96805 | - | 24:1 | 3÷7 bar | GC 1/2” | shovel plate | GJ 3/4” | 168 bar | 4 l/min |
| 96050 | 96056 | 30:1 | 3÷7 bar | GC 3/4” | Ball | GJ 3/8” | 210 bar | 3,8 l/min |
| 96055 | 96057 | 40:1 | 3÷7 bar | GC 3/4” | Ball | GJ 3/8” | 280 bar | 3 l/min |

**Maximum number of cycles per minute:** 60

**Room temperature:** -20°C to +60°C
**Maximum fluid temperature [°C]:** 60°C

## MARKINGS

CE (Ex) II 2 G c IIB T6 $T_{amb}$: -20°C ÷ + 60°C $T_{max.}$ fluido: 60°C Tech. File: GHIBLI/ATX/08

| | |
|---|---|
| **II =** | Group II (surfaces) |
| **2 =** | Category 2 (zone 1) |
| **G =** | Explosive atmosphere containing gasses, vapours or mists |
| **c =** | Design safety “c” |
| **T6 =** | Temperature class T6 |
| **- 20°C ÷ + 60°C** | Room temperature |
| **60°C** | Maximum process fluid temperature |
| **xxxx/AA** | Serial number or lot number (xxxxx = PROGRESSIVE / year = AA) |

Correspondence between hazardous areas, substances and categories

| HAZARDOUS AREAS | | CATEGORIES ACCORDING TO THE 94/9/CE DIRECTIVE |
|---|---|---|
| Gas, vapori o nebbie | Zona 0 | 1G |
| Gas, vapori o nebbie | Zona 1 | 2G oppure 1G |
| Gas, vapori o nebbie | Zona 2 | 3G, 2G oppure 1G |

## SAFETY INSTRUCTIONS FOR INSTALLATION IN HAZARDOUS AREAS

**Read the indications provided in the user and maintenance manual carefully prior to installation. All of the maintenance operations must be performed according to the indications provided in the manual.**

- The grounding wire for the pumps indicated above must be grounded using an appropriate anti-loosening connection.
- The tubes used to connect the delivery and suction lines must be either metallic, plastic with metallic braid, or plastic with fabric braid and a suitable grounding conductor.
- The pumps must be installed on properly grounded metallic or antistatic drums.
- The gases or vapours of any flammable liquids present must belong to group IIB.
- Based on the type of use and the substances employed, the user must periodically check for any encrustations and must verify the cleanliness, the wear status and the correct functionality of the pump on a regular basis.
- The user must periodically clean the suction filter in order to prevent any solid materials from entering the pump. The air used to power the pump must be filtered and must come from a SAFE AREA.

**GHIBLI series pneumatic piston transfer pump cannot work without material.**

**All of the installation and maintenance operations must be performed by qualified personnel.**

We Larius S.r.l.
Via Stoppani, 21
23801 Calolziocorte (LC)

declare under our sole responsability that the product:

**GHIBLI series pneumatic piston transfer pump.**

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 13463-1
- EN 13463-5

Markings

CE Ex **II 2 G c IIB T6 Tamb.: - 20°C ÷ 60°C Tmax. fluid: 60°C**

Tech. File: **GHIBLI/ATX/08**
Technical dossier kept on file c/o: **INERIS (0080)**

Calolziocorte- LC, 15/12/2008 **Signature (LARIUS)**

INERIS

**Appareil non électrique destiné à être utilisé en atmosphères explosibles**
*Non electrical equipment intended for use in potentially explosive atmospheres*
*Apparecchi destinati ad essere utilizzati in atmosfera potenzialmente esplosiva*

**Directive 2014/34/UE**
*Directive 2014/34/EU / Direttiva 2014/34/UE*

# ACCUSÉ DE RECEPTION D'UN DOSSIER TECHNIQUE
## *ACKNOWLEDGE RECEIPT OF TECHNICAL DOCUMENTATION*
## *AVVISO DI RICEVIMENTO DEL FASCICOLO TECNICO*

Appareil / Equipment / Apparecchiatura :

**PNEUMATIC TRANSFER & EXTRUSION PUMPS**

Type(s)/ Type(s) / Tipo(i) : **Series GHIBLI**

Marquage/ Marking / Marcatura : Ex II 2G

Dépositaire / Applicant / Richiedente : **LARIUS S.r.l.**
Via Stoppani, 21

I- 23801 Calziocorte (LC)

L'INERIS, organisme notifié et identifié sous le numéro 0080, conformément aux articles 17 et 21 de la Directive du Conseil 2014/34/UE du 26 février 2014, accuse réception du dossier conformément à la procédure décrite au chapitre 3, article 13 1) b) ii) de la Directive.

INERIS, notified body and identified under number 0080, in accordance with articles 17 and 21 of Council Directive 2014/34/EU of the 26 february 2014, acknowledges receipt of file according to the procedure described chapiter 3, article 13 1) b) ii) of the Directive.

L'INERIS, organismo notificato e identificato con il n.0080 conformemente agli articoli 17 e 21 della Direttiva 2014/34/UE del Consiglio dell'Unione Europea del 26 febbraio 2014, conferma il ricevimento del fascicolo in conformita alla procedura prevista nella rubrica 3, articolo 13 1) b) ii) della Direttiva.

La documentation technique référencée : GHIBLI/ATX/08 dated 2008-12-15 est consignée sous le numéro d'enregistrement : **n° INERIS-EQEN 021761/19.**

**Dans le cadre de cet enregistrement, l'INERIS n'a pas examiné le contenu de la documentation technique.**

The technical documentation refererenced : GHIBLI/ATX/08 dated 2008-12-15 is consigned under the reference : **no INERIS-EQEN 021761/19.**

**Within the scope of the recording, INERIS did not examine the contain of the technical documentation.**

La documentazione tecnica di riferimento : GHIBLI/ATX/08 dated 2008-12-15 è depositata con il numero di registrazione : **n° INERIS-EQEN 021761/19.**

**Nel quadro di questa registrazione, INERIS non ha examinato il contenuto della documentazione tecnica.**

Date de fin de validité : **2029.03.11**

Validity completion date : **2029.03.11**

Data di fine di validità : **2029.03.11**

Verneuil-en-Halatte, le 2019.03.11

ATMOSPHERES EXPLOSIVES ORGANISME NOTIFIE INERIS NOTIFIED BODY EXPLOSIVE ATMOSPHERES

Le Directeur Général de l'INERIS, Par délégation, **Thierry HOUEIX** Délégué Certification ATEX Ex Certification Officer

The Chief Executive Officer of INERIS, By delegation,

Il Direttore generale dell' INERIS, Per Delega,

IM-142AB - Mise en application : 20/04/2016



Parc Technologique Alata BP 2 F-60550 Verneuil-en-Halatte
tél +33(0)3 44 55 66 77 fax +33(0)3 44 55 66 99 internet www.ineris.fr
Institut national de l'environnement industriel et des risques
Etablissement public à caractère industriel et commercial - RCS Compiègne B 381 984 924 - Siret 381 984 921 00019 - APE 7120B - TVA intracom FR 73 381 984 921

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# CE DECLARATION OF CONFORMITY

## Company

**LARIUS srl**
Via Antonio Stoppani 21 - 23801 Calolziocorte (LC) ITALY
**Tel:** +39 0341 621152
**Fax:** +39 0341 621243

**E-mail:** larius@larius.com

Declares under his owns resonsibility that the product:

## GHIBLI 30:1 40:1

**Airless pneumatic pumps for spray painting**

| | |
|---|---|
| complies with the directives: | **- EC Directive 2006/42 Machinery Directive** |
| furthermore to the harmonized standards: | **- UNI EN ISO 12100-1/-2**<br>**Machinery safety, basic concepts, general principles of design. Basic terminology, methodology. Technical principles.** |

This declaration relates exclusevely to the product in the state in which it was placed on the market, and excludes components or modifications which are added or carried out subsequently by end user.

*Signature*

*Calolziocorte, 08 February 2024*
*Location / Date*

**Pierangelo Castagna**
Managing Director

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**SAMOA INDUSTRIAL, S.A. - HEADQUARTERS**
**SPAIN AND EXPORT MARKETS**
POL. IND. PORCEYO, I-14 - CAMINO DEL FONTÁN, 831
E-33392 GIJÓN (ASTURIAS), SPAIN
TEL.: +34 985 381 488 - FAX: + 34 985 147 213

**SAMOA S.A.R.L.**
**FRANCE**
P.A.E.I. DU GIESSEN
3, RUE DE BRISCHBACH
67750 SCHERWILLER, FRANCE
TEL.: +33 3 88 82 79 62 - FAX: +33 3 88 82 77 88

**SAMOA ITALIA - LARIUS**
**ITALY**
VIA ANTONIO STOPPANI,21
23801 CALOLZIOCORTE (LC) ITALY
Tel.: +39 0341 621152 - Fax: + 39 0341 621242

**SAMOA FLOWTECH GMBH**
GERMANY, AUSTRIA, SWITZERLAND, THE NETHERLANDS AND GREECE
AM OBEREICHHOLZ 4
D - 97828 MARKTHEIDENFELD, GERMANY
TEL.: +49 9391 9826 0 - FAX: +49 9391 98 26 50

**SAMOA LTD.**
**UNITED KINGDOM AND REP. OF IRELAND**
ASTURIAS HOUSE - BARRS FOLD ROAD
WINGATES INDUSTRIAL PARK
WESTHOUGHTON, BL5 3XP, UK
TEL.: +44 1942 850600 - FAX: +44 1942 812160

**SAMOA CORPORATION**
USA AND CANADA
90 MONTICELLO ROAD
WEAVERVILLE, NC 28787, USA
TEL. +1 (828) 645-2290 - FAX: +1 (828) 658 0840


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