

GHIBLI

30:1/40:1

Airless pneumatic pump
for spray painting



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

A	WARNINGS	2
B	WORKING PRINCIPLE	3
C	TECHNICAL DATA	3
D	DESCRIPTION OF THE EQUIPMENT	5
E	TRANSPORT AND UNPACKING	7
F	CONDITIONS OF GUARANTEE	8
G	SAFETY RULES	8
H	SETTING-UP	9
I	WORKING	11
J	CLEANING AT THE END OF THE WORK	11
K	ROUTINE MAINTENANCE	12
L	MANUAL RESET OF THE PNEUMATIC MOTOR	13
M	DISASSEMBLY OF THE PNEUMATIC MOTOR	13
N	DISASSEMBLY OF THE PUMPING GROUP	14
O	PROBLEMS AND SOLUTION	15
SPARE PARTS		
P	COMPLETE PNEUMATIC MOTOR PUMP GHIBLI SPLIT VERSION 30:1/40:1 BASE VERSION	18
Q	COMPLETE PNEUMATIC MOTOR PUMP GHIBLI SPLIT VERSION 30:1/40:1 TROLLEY AND WALL VERSION	20
R	COMPLETE PUMPING PUMP GHIBLI 30:1 / 40:1 GALVANIZED AND STAINLESS STEEL VERSION	22
S	AIR REGULATION - TROLLEY AIRLESS VERSION RIF. 96250	25
T	AIR REGULATION - WALL AIRLESS VERSION RIF. 96250/1	26
U	AIR REGULATION - TROLLEY AIR ASSISTED AIRLESS VERSION RIF. 96262	27
V	AIR REGULATION - WALL AIR ASSISTED AIRLESS VERSION RIF. 96262/1	28
W	COMPLETE FILTER SPLIT GHIBLI 30:1/40:1	30
X	PAINT SUCTION SYSTEM	32
Y	COMPLETE TROLLEY	33
Z	WALL SUPPORT GHIBLI 30:1/40:1 RIF. 91200/1	34
AA	ACCESSORIES	35
AB	ATEX CERTIFICATION	38
	CERTIFICATE OF CONFORMITY	41

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

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



A WARNINGS

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

	<ul style="list-style-type: none"> • 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.
	<ul style="list-style-type: none"> • It indicates an accident risk or serious damage to equipment if this warning is not followed.
	<p>FIRE AND EXPLOSION HAZARD</p> <ul style="list-style-type: none"> • Solvent and paint fumes in work area can ignite or explode. • To help prevent fire and explosion: <ul style="list-style-type: none"> - 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.
	<ul style="list-style-type: none"> • 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.
	<ul style="list-style-type: none"> • 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.
	<ul style="list-style-type: none"> • It indicates important recommendations about disposal and recycling process of products in accordance with the environmental regulations.
	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> - (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.
	<ul style="list-style-type: none"> • 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.

C TECHNICAL DATA

	GHIBLI 30:1	GHIBLI 40:1
Maximum delivery	3,8 l/m	2,8 l/m
Maximum infeed air pressure	7 bar	6,5 bar
Max. working pressure	210 bar	260 bar
*Airfeed inlet	1/2" GAS (F)	1/2" GAS (F)
Material entry	3/4" GAS C (M)	3/4" GAS C (M)
Material exit	3/8" GAS C (F)	3/8" GAS C (F)
Air consumption	3 bar 400 l/m	3 bar 400 l/m
	5 bar 800 l/m	5 bar 800 l/m
	7 bar 850 l/m	6,5 bar 850 l/m
Sound pressure level	< 80 dB (A)	< 80 dB (A)
Motor diameter	180 mm (4 1/4")	180 mm (4 1/4")
Piston stroke	102 mm (4")	102 mm (4")
c.c. Cycle	60	45
N° cycles per minute	60	60
N° cycles per liter	16	22
Seals	PTFE + Polietilene	PTFE + Polietilene
Weight	25 kg	25 kg
Height	930 mm	930 mm
Width	450 mm	450 mm
Depth	450 mm	450 mm

*N.B. The pump is supplied with a bayonet connection.

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.

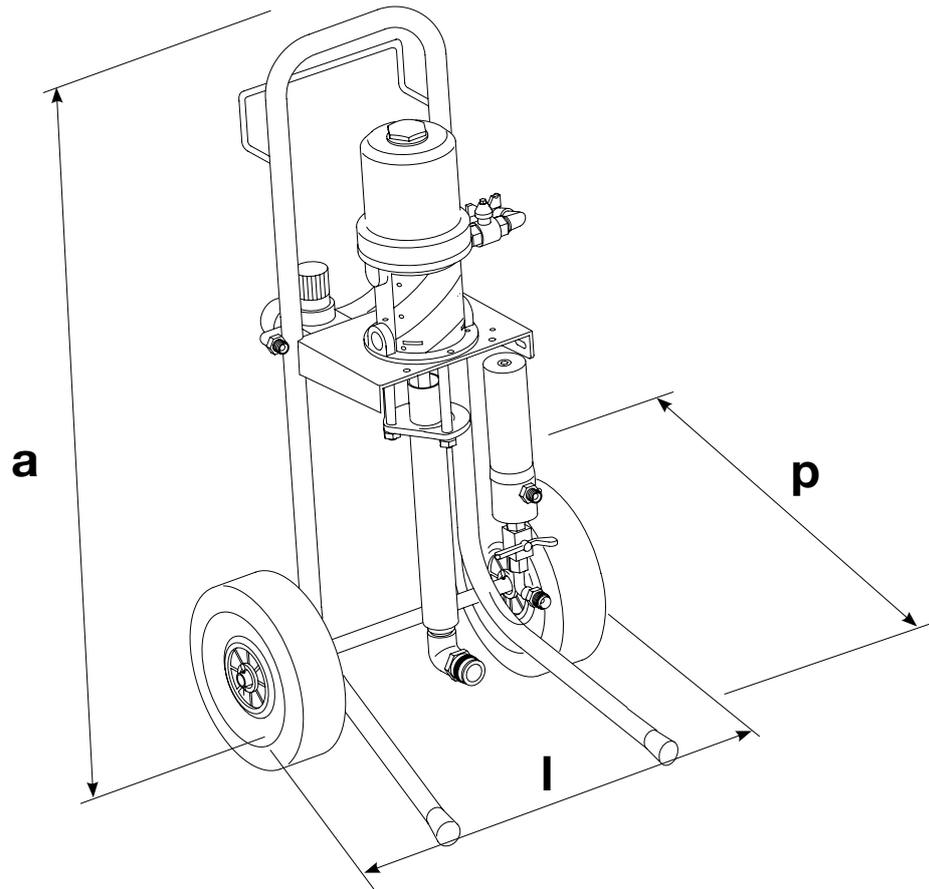


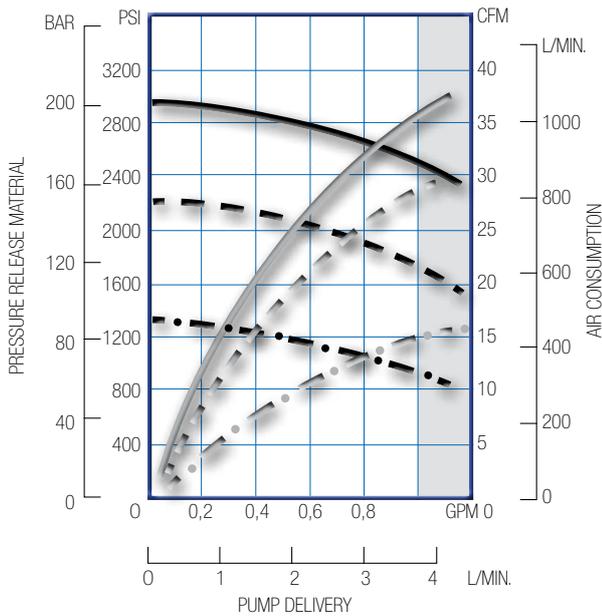
Fig. 1C

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.

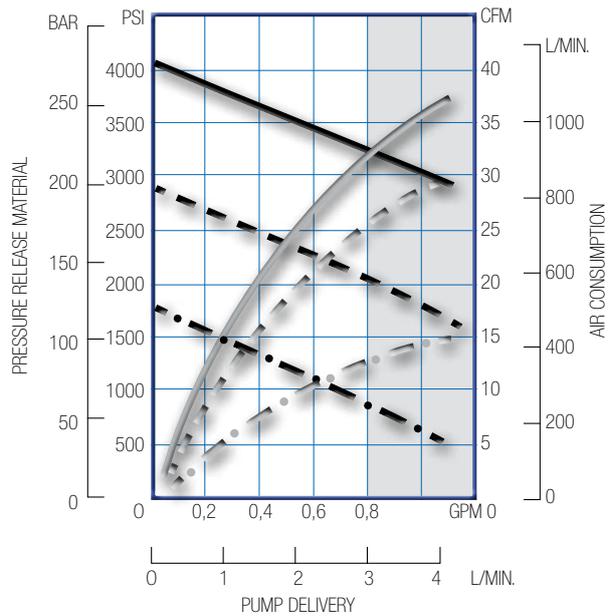
GHIBLI 40:1

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)



BLACK CURVE: PRESSURE RELEASE MATERIAL
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D DESCRIPTION OF THE EQUIPMENT

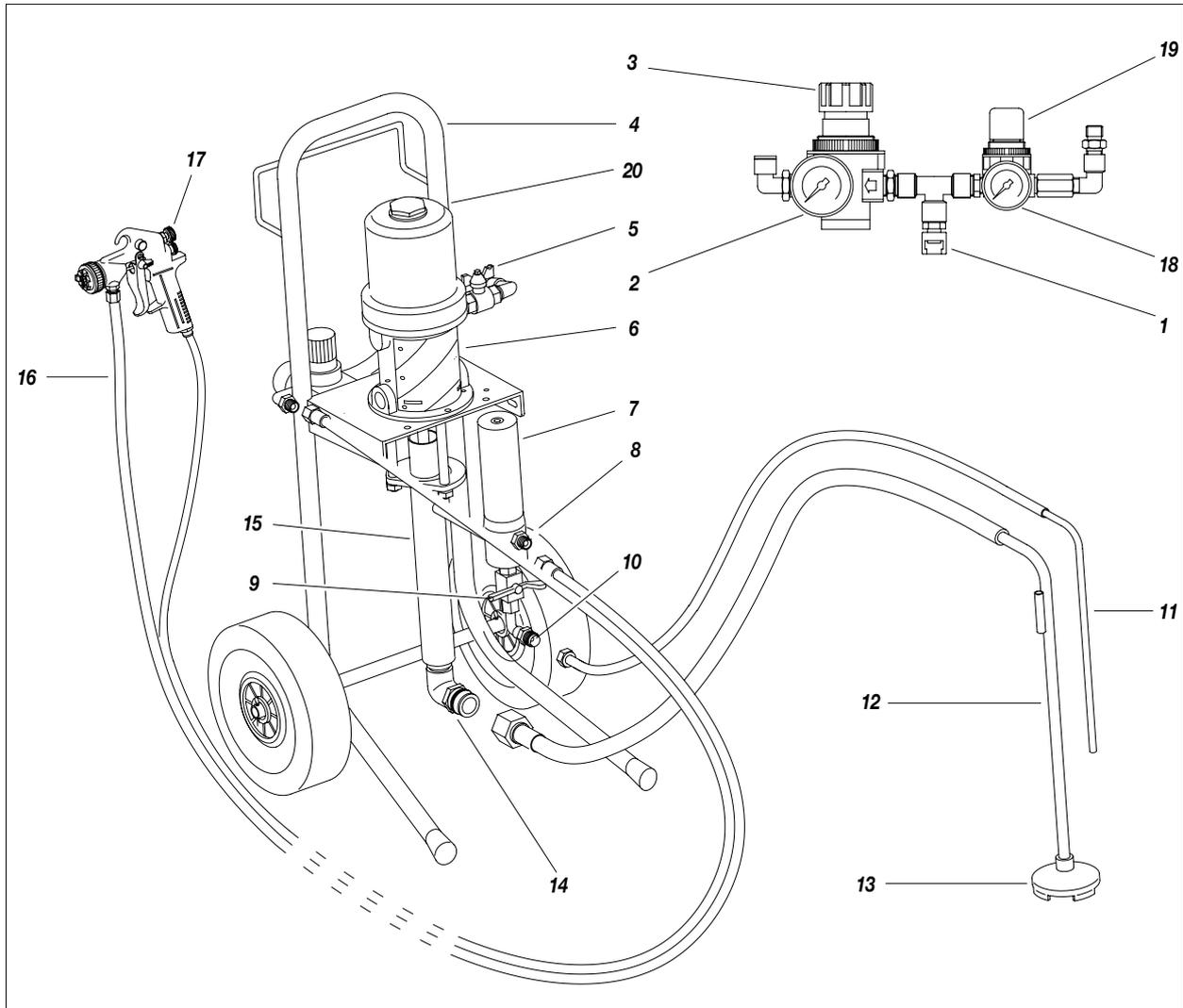


Fig. 1D

Pos.	Description
1	Compressed air inlet
2	Manometer reading air pressure alim. pump
3	Feed air pressure regulator. pump
4	Trolley transport equipment
5	Valve opening and closing air alim. pump
6	Pneumatic motor pump
7	High pressure filter material outlet
8	High pressure filter out material
9	Recirculating cock
10	Recirculation pipe fitting fixing
11	Fluid recirculation pipe

Pos.	Description
12	Material suction pipe
13	Material suction filter
14	Fitting pipe fitting intake
15	Material pumping group
16	Air-material flexible pipe
17	Air-mix spray technology
18	Atomizing air pressure gauge reading
19	Atomizing air pressure regulator
20	Cable grounding with gripper
21	AT250 Gun
22	L91 Gun

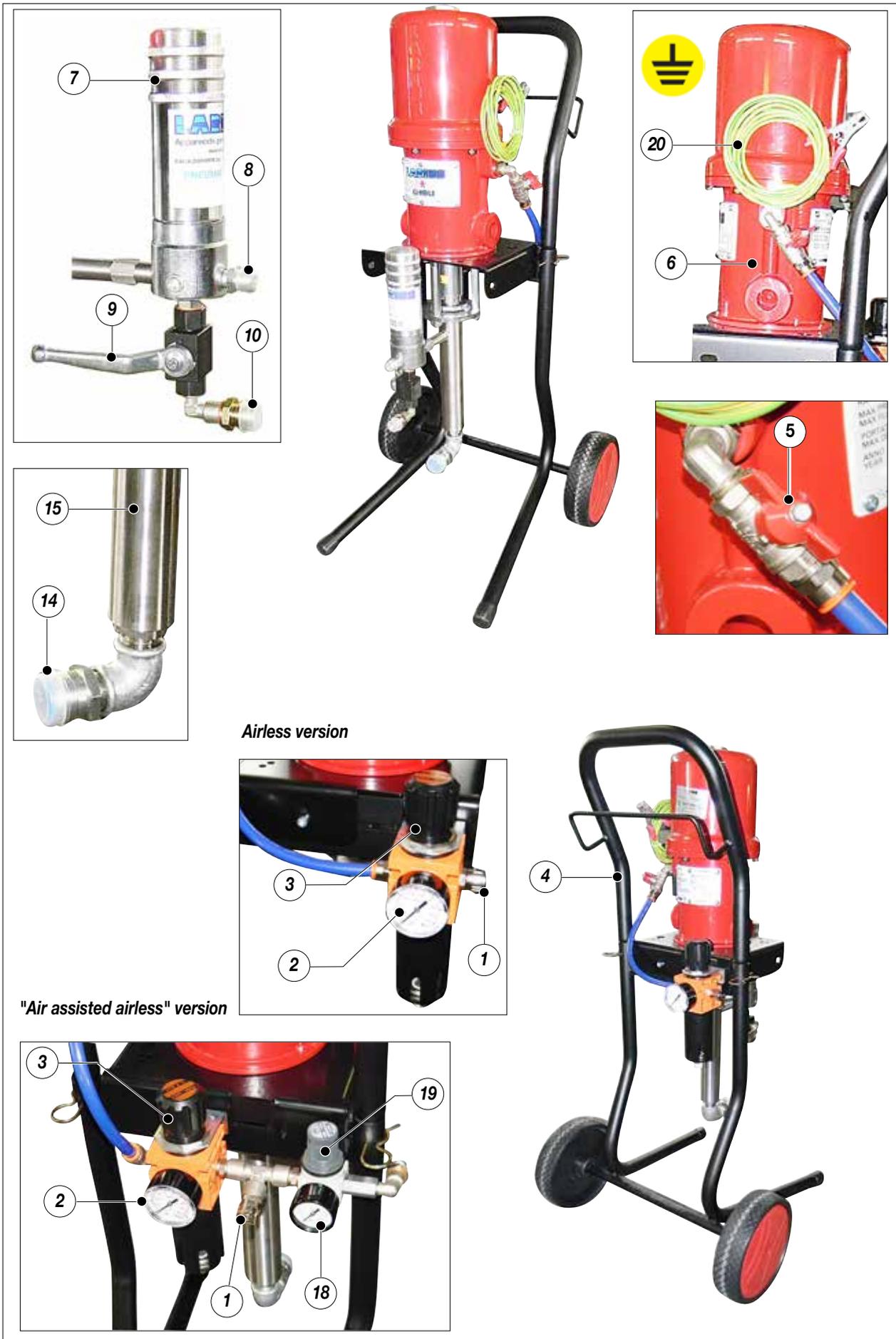


Fig. 2D



Fig. 3D

E TRANSPORT AND UNPACKING

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



F CONDITIONS OF GUARANTEE

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

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



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



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



Always check 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 (**H1**) with an internal diameter no lower than 10 mm.

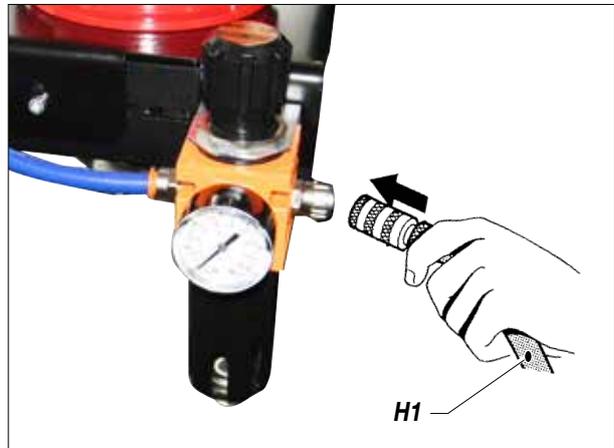


Fig. 1H

CONNECTION OF SUCTION AND RECIRCULATING PIPES

- Connect the suction and recirculating pipes to the pump. The suction hose can be locked finger tight (**H1**). Use a spanner to tighten the recirculating pipe (**H2**). In both cases do not use sealant agents for fitting threads.

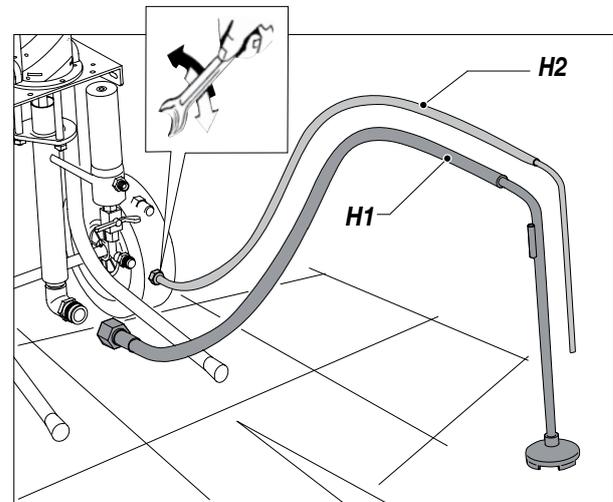


Fig. 2H



CONNECTION OF SUCTION AND RECIRCULATING PIPES

AIRLESS version

- Connect the high pressure flexible hose (**H3**) 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 ASSISTED AIRLESS" version

For the "AIR ASSISTED AIRLESS" version, connect tube (**H3**), as well as the air supply hose (**H4**), to the air reducer unit (**H5**).

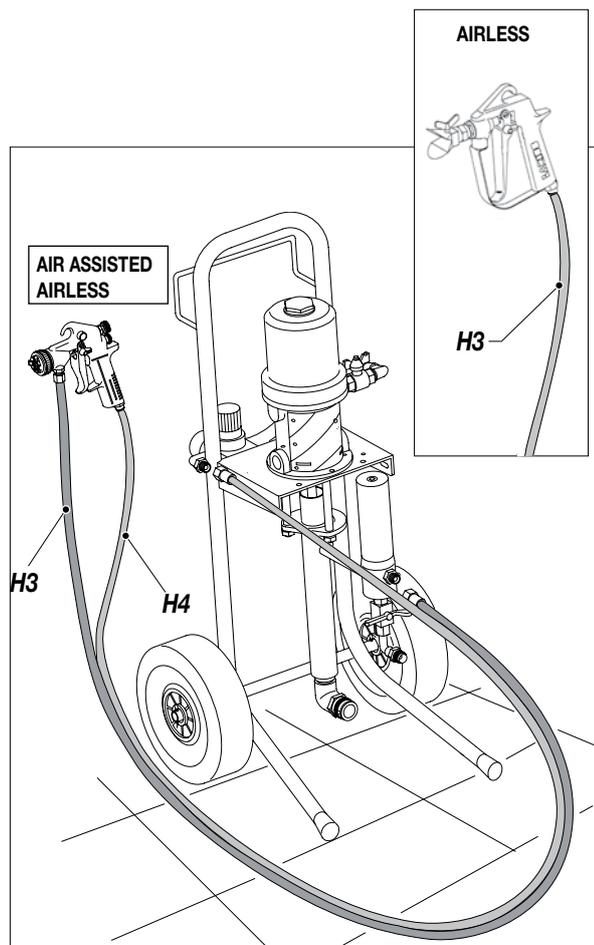


Fig. 3H



Fig. 4H

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 (**H1**) into the tank of the washing.
- Insert the recirculating pipe (**H2**) into a container (*a metal container is suggested*).

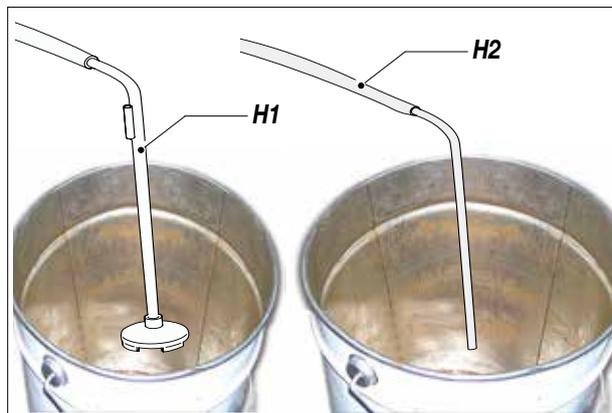


Fig. 5H

- Open the recirculating cock (**H6**).

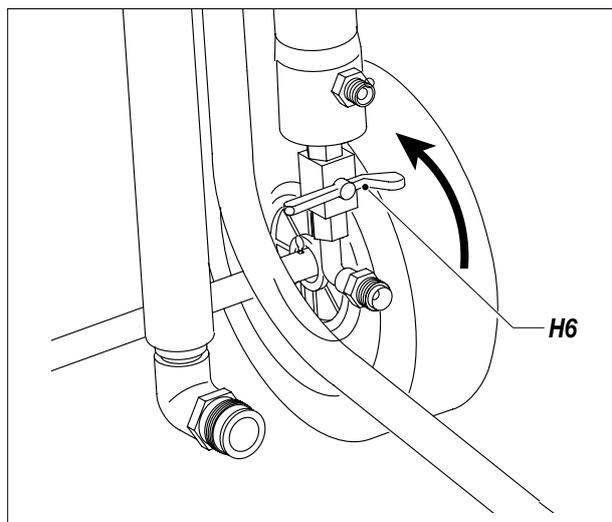


Fig. 6H

- 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 (**H7**) 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.

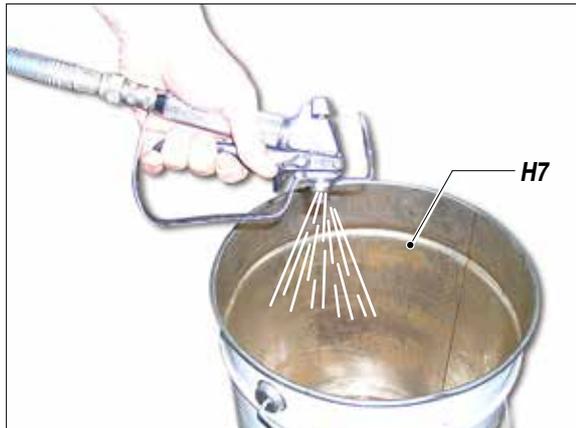


Fig. 7H

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 (**I1**) to facilitate the sliding of the piston inside the seal packing and to interpose the oil within the air.



Fig. 11



At the start of each working day, make sure that the ring nut is filled with hydraulic oil (ref. 16325); 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 compatible 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.

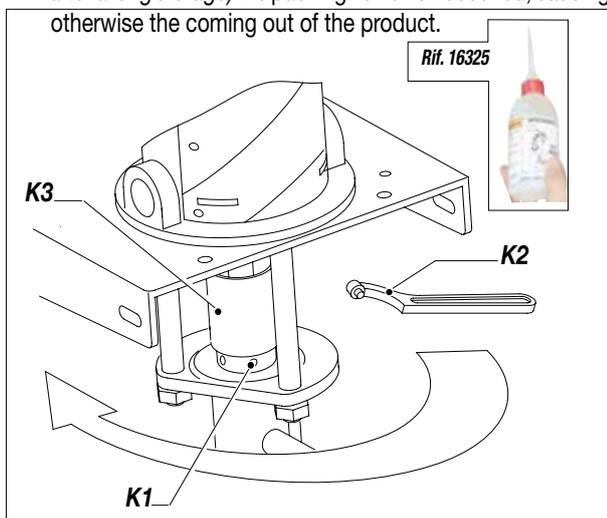


Fig. 1K

To tighten the packing nut (**K1**) use wrench supplied (**K2**). 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 (**K4**).

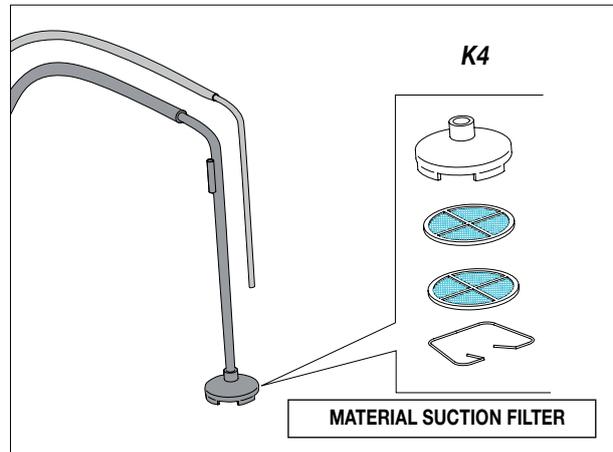


Fig. 2K

- Remove and clean the high pressure filter for material outlet (**K5**).

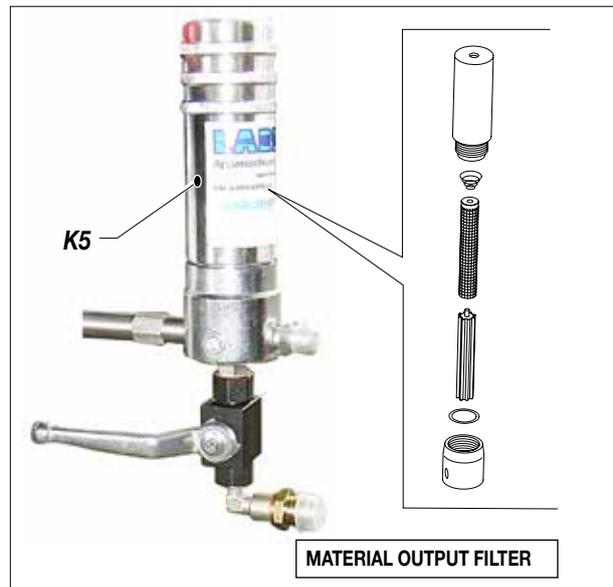


Fig. 3K



At the start of each working day, make sure that the ring (**K3**) nut is filled with hydraulic oil (*ref. 16325*); 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.

- Check periodically the air supply to the pump. Ensure the air is always clean and lubricated.



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 (**L1**) and pull it upward along with the guide rod (**L2**) so as to manually trigger the stroke inversion unit;
 - screw again the plug.

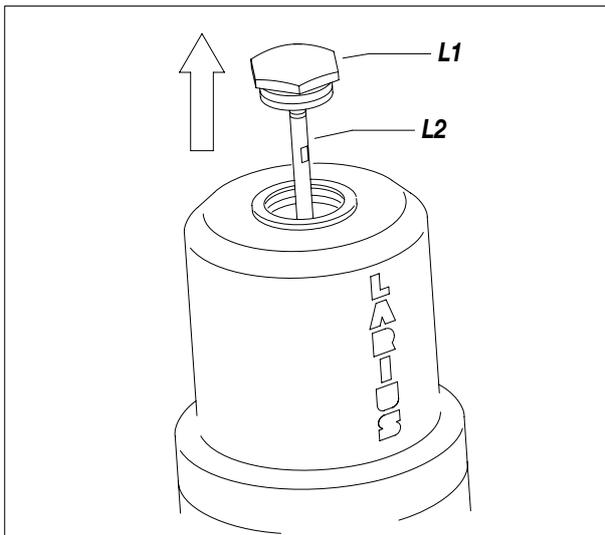


Fig. 1L

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 (**M1**) and pull it upwards together with the guide rod (**M2**).
- Hold the guide rod (**M2**) and remove the plug (**M1**) (using two wrenches).



Replace immediately the plug (**M1**) with a usual **M8 (M3)** nut before the guide rod slides into the cylinder.

- Remove the screws (**M4**) and the washers (**M5**).
- Carefully extract the motor cylinder (**M6**) from the pump.

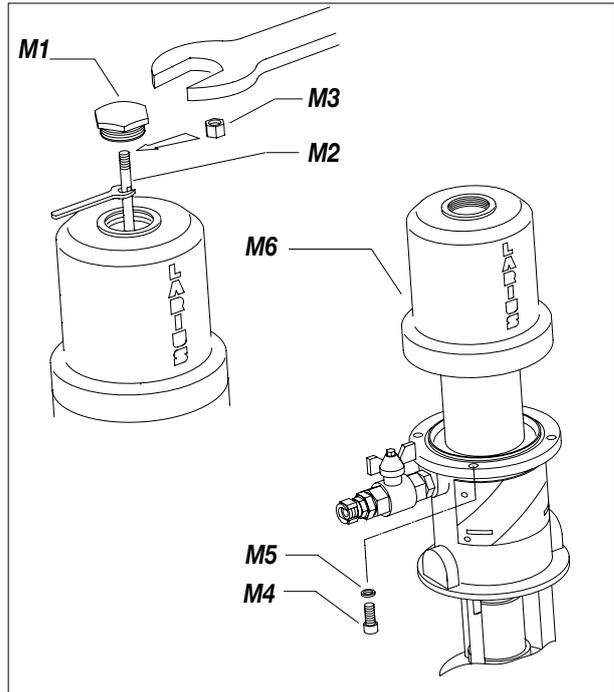


Fig. 1M

- Check the condition of each part of the motor.
- For any eventual replacement of the screws (**M7**) of the traverse (**M8**), for their reassembly and correct adjustment.

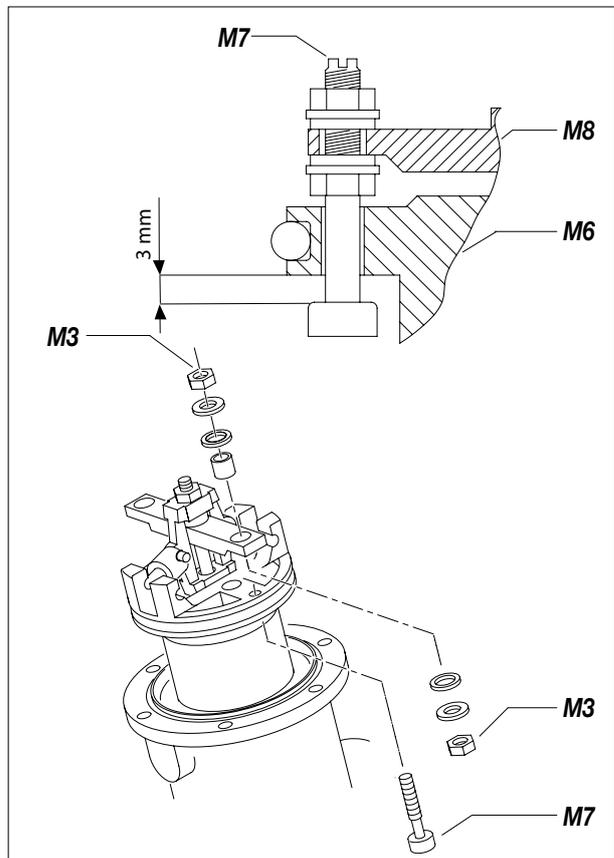


Fig. 2M



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
- **1** Unscrew the high pressure filter unit from the pump.
- **2** Unscrew the nuts (**N1**).
- **3** Pull the pumping unit towards yourself so that the split pin (**N2**) can be extracted (*leaving the air valve open will facilitate this operation*).
- **4** At this point, unscrew the piston rod from the pneumatic motor so that the entire pumping unit can be removed.
- **5** Unscrew the suction elbow and suction valve. Clean and/or replace the specific parts wherever necessary.
- **6** Unscrew the seal compression ring.
- **7** 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.

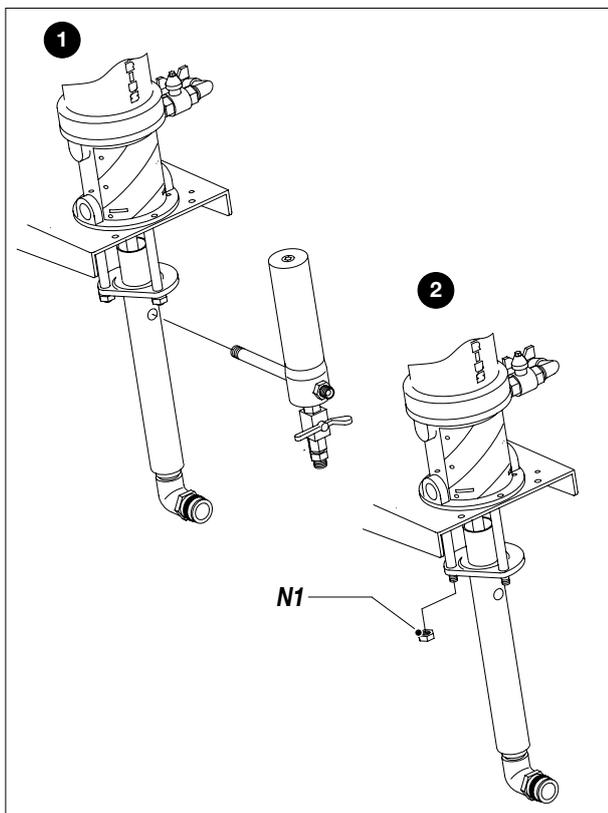


Fig. 1N

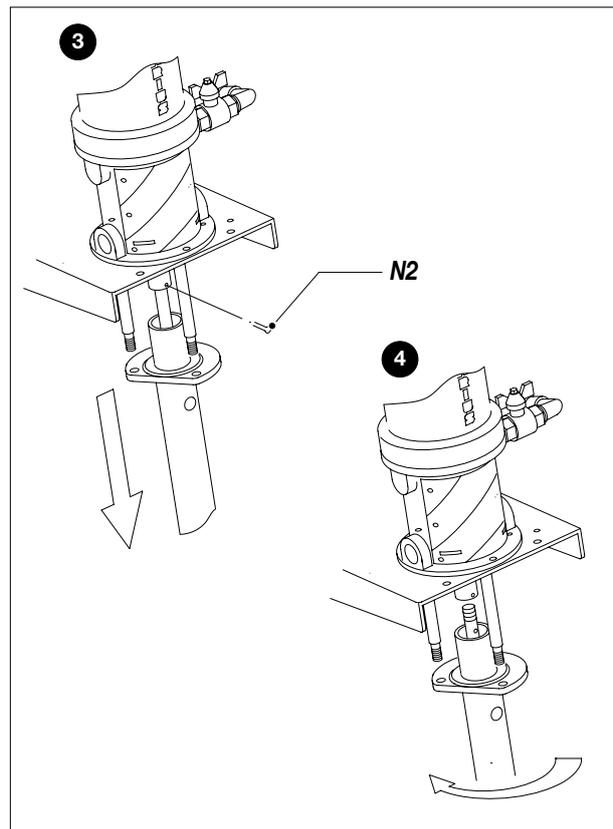


Fig. 2N

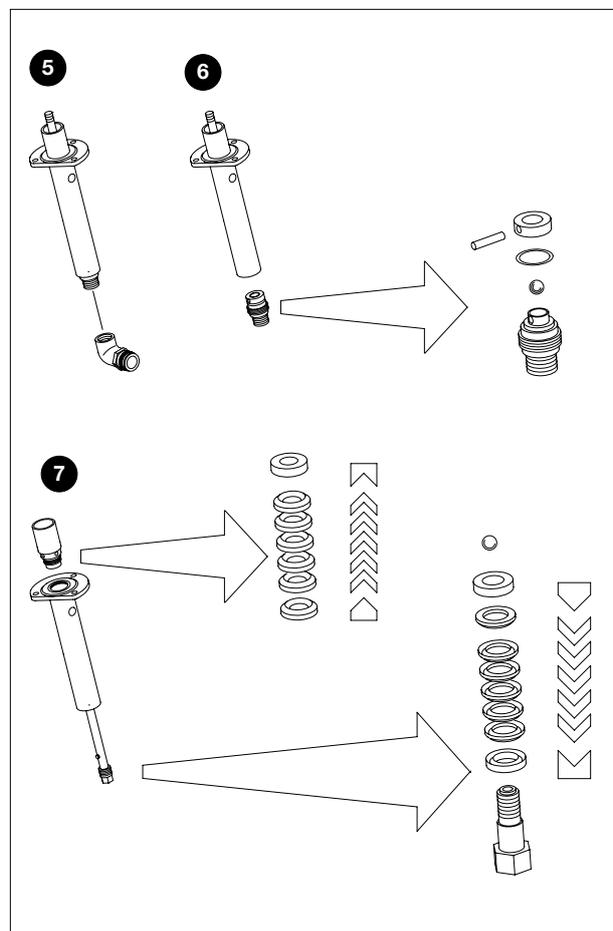


Fig. 3N



0 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. - 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; - Consult the paragraph " Manual reset of the pneumatic motor ";
	Parts failure of the pneumatic motor;	Disassemble the motor and verify;
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.



Problem	Cause	Solution
The pump works, but the flow of product is not sufficient	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 verify 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 significantly 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. 18

Q Complete pneumatic motor pump Ghibli for TROLLEY/WALL 30:1 / 40:1 pag. 20

W Complete filter split galvanized and stainless steel version pag. 30

R Complete pumping pump Ghibli split version and stainless steel 30:1 / 40:1 pag. 22



S-T Air regulation group AIRLESS version (trolley and wall version) pag. 26-28

U-V Air regulation group AIR ASSISTED AIRLESS version (for trolley and wall version) pag. 28-29



Y Complete trolley pag. 33

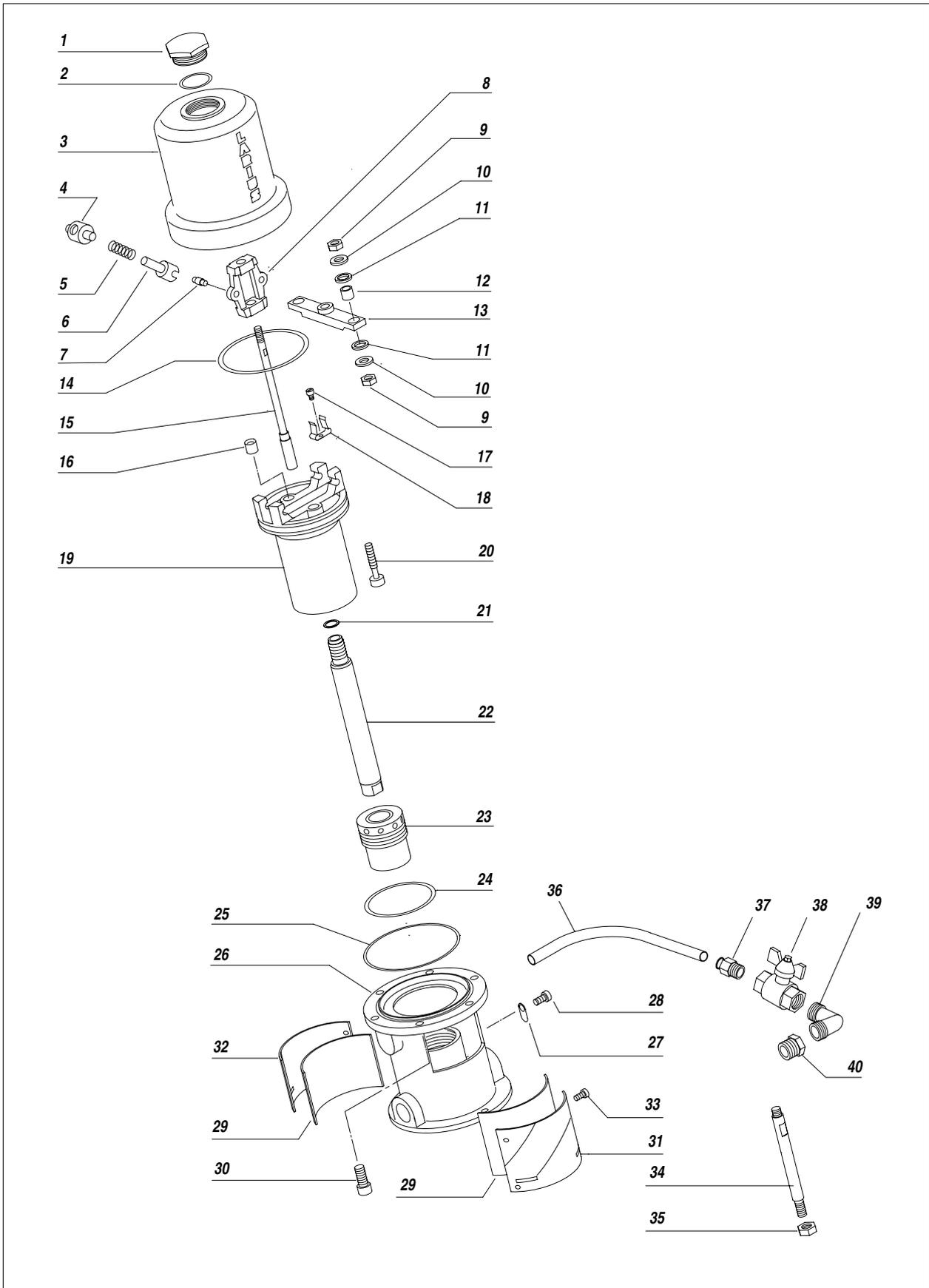
X Paint suction system pag. 32

Z Wall support pag. 34



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

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





BASE PUMP COMPLETE MOTOR

Code	Description
96550/1	Complete motor base pump 30:1
96551/1	Complete motor base pump 40:1

Pos.	Code	Description	Q. ty
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
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 MOVEMENT INVERSION DEVICE VEGA-GHIBLI - CODE 40401

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

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

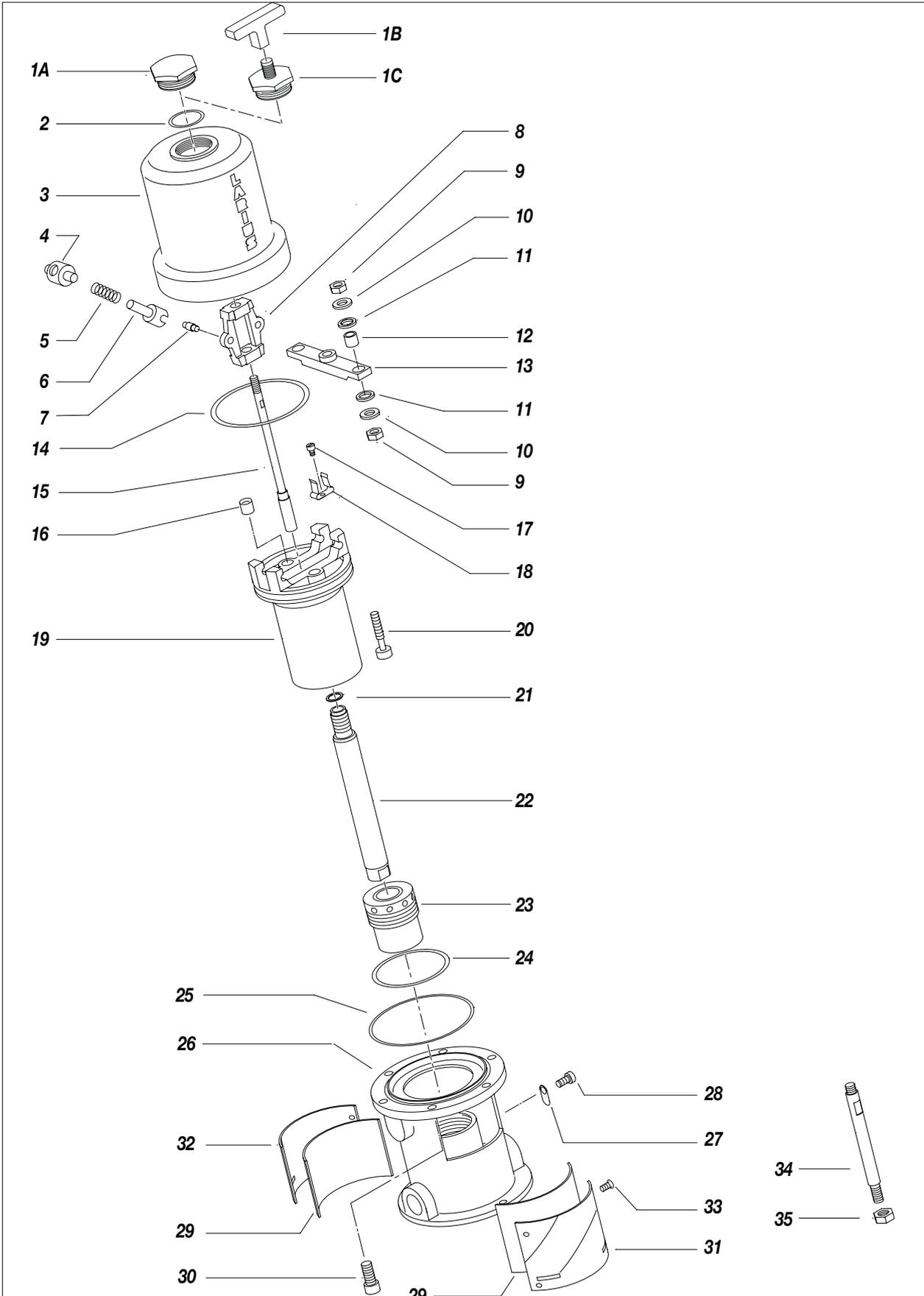
FELT GASKET KIT - CODE 40052

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.




PUMP COMPLETE MOTOR VERSION 30:1

Code	Description
96550	Complete motor trolley version
96550/2	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
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

PUMP COMPLETE MOTOR VERSION 40:1

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

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

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

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

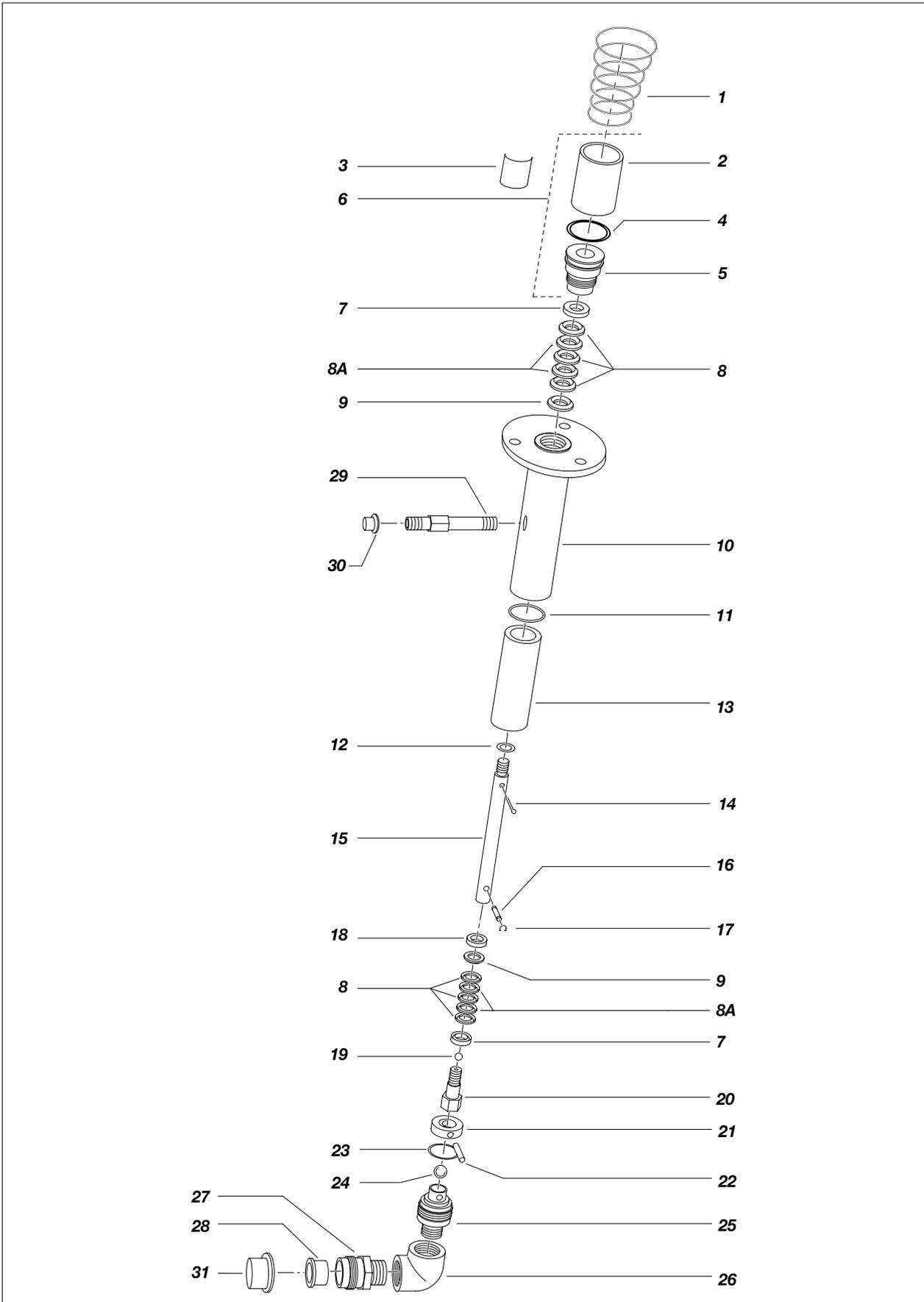
FELT GASKET KIT - CODE 40052

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.





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	Pos.	Description
7	V female ring	17	Elastic ring
8	PTFE gasket	19	Ball ø 5/16"
8A	Polyethylene gasket	23	OR ring
9	V male ring	24	Ball ø 1/2"
14	Split pin		

SPARE PART KIT VERSION 40:1 - Cod. 40060

Pos.	Description	Pos.	Description
7	V female ring	17	Elastic ring
8	PTFE gasket	19	Ball ø 5/16"
8A	Polyethylene gasket	23	OR ring
9	V male ring	24	Ball ø 1/2"
14	Split pin		



STAINLESS STEEL 30:1 SPLIT VERSION Cod.98340

STAINLESS STEEL 40:1 SPLIT VERSION Cod.98400

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

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	Pos.	Description
7	V female ring	17	Elastic ring
8	PTFE gasket	19	Ball ø 5/16"
8A	Polyethylene gasket	23	OR ring
9	V male ring	24	Ball ø 1/2"
14	Split pin		

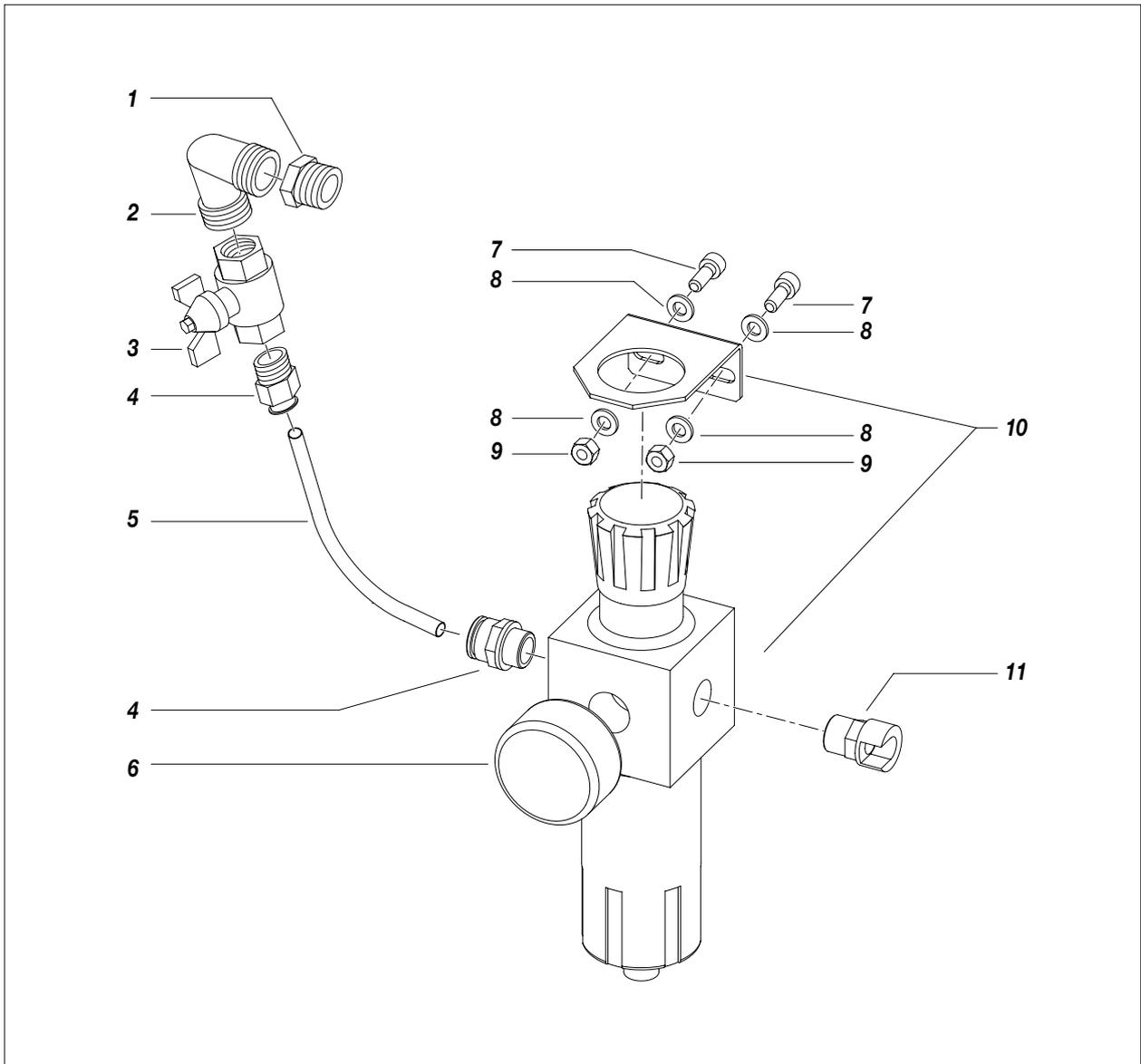
SPARE PART KIT VERSION 40:1 - COD. 40060

Pos.	Description	Pos.	Description
7	V female ring	17	Elastic ring
8	PTFE gasket	19	Ball ø 5/16"
8A	Polyethylene gasket	23	OR ring
9	V male ring	24	Ball ø 1/2"
14	Split pin		



S AIR REGULATION - TROLLEY AIRLESS VERSION Ref. 96250

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



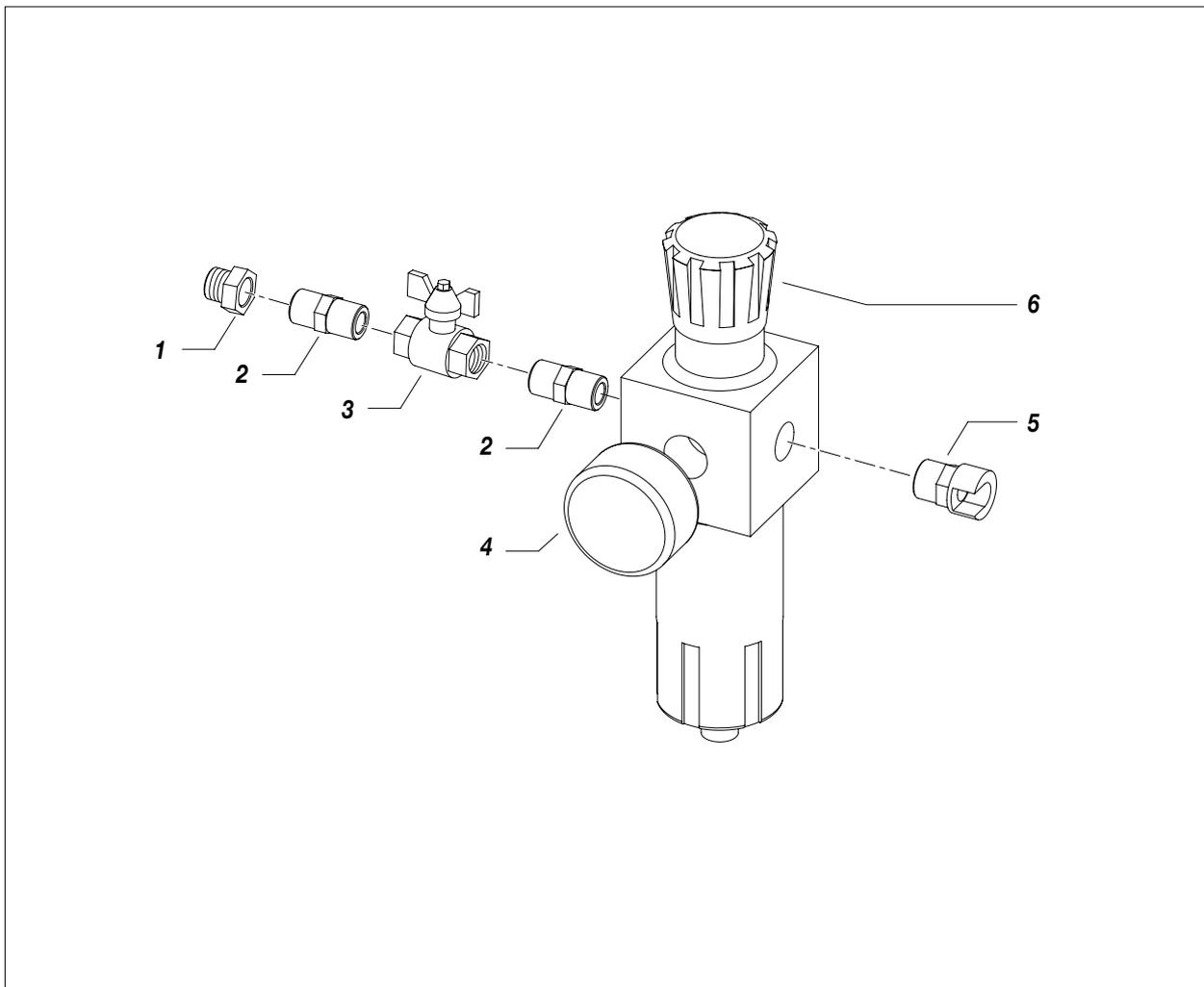
Pos.	Code	Description	Q. ty
-	96250	Complete group	-
1	96261	Reduction	1
2	96214	Elbow	1
3	91101	Valve	1
4	96215	Rapid coupling 3/8 Tube Ø 12	2
5	96217	Tubo 12/10mm - 0,5m	1

Pos.	Code	Description	Q. ty
6	96259	Manometer	1
7	8029	Screw TCE UNI 5931 M6x22	2
8	95063	Washer Ø 6	4
9	91026	UNI 5588 M6 Nut	2
10	91107	FR group	1
11	10103	Bayonet fitting	1



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

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



Pos.	Code	Description	Q. ty
-	96250/1	Complete group	-
1	96261	Reduction	1
2	91020	Adattatore 3/8 mm CON	2
3	91101	Valve	1

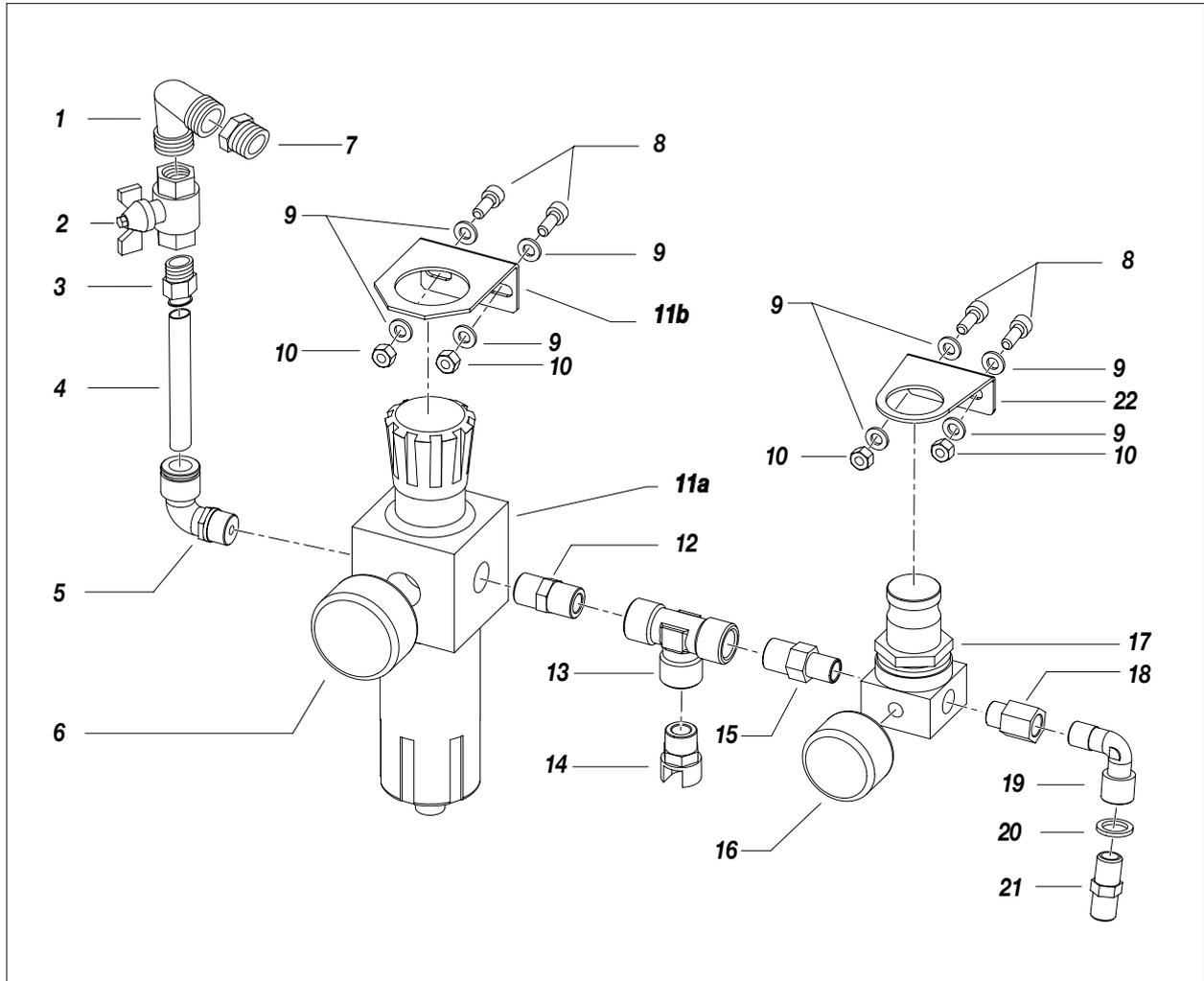
Pos.	Code	Description	Q. ty
4	96259	Manometer	1
5	10103	Bayonet fitting	1
6	91107	FR group	1



U AIR REGULATION - AIR ASSISTED AIRLESS TROLLEY VERSION

Rif. 96262

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



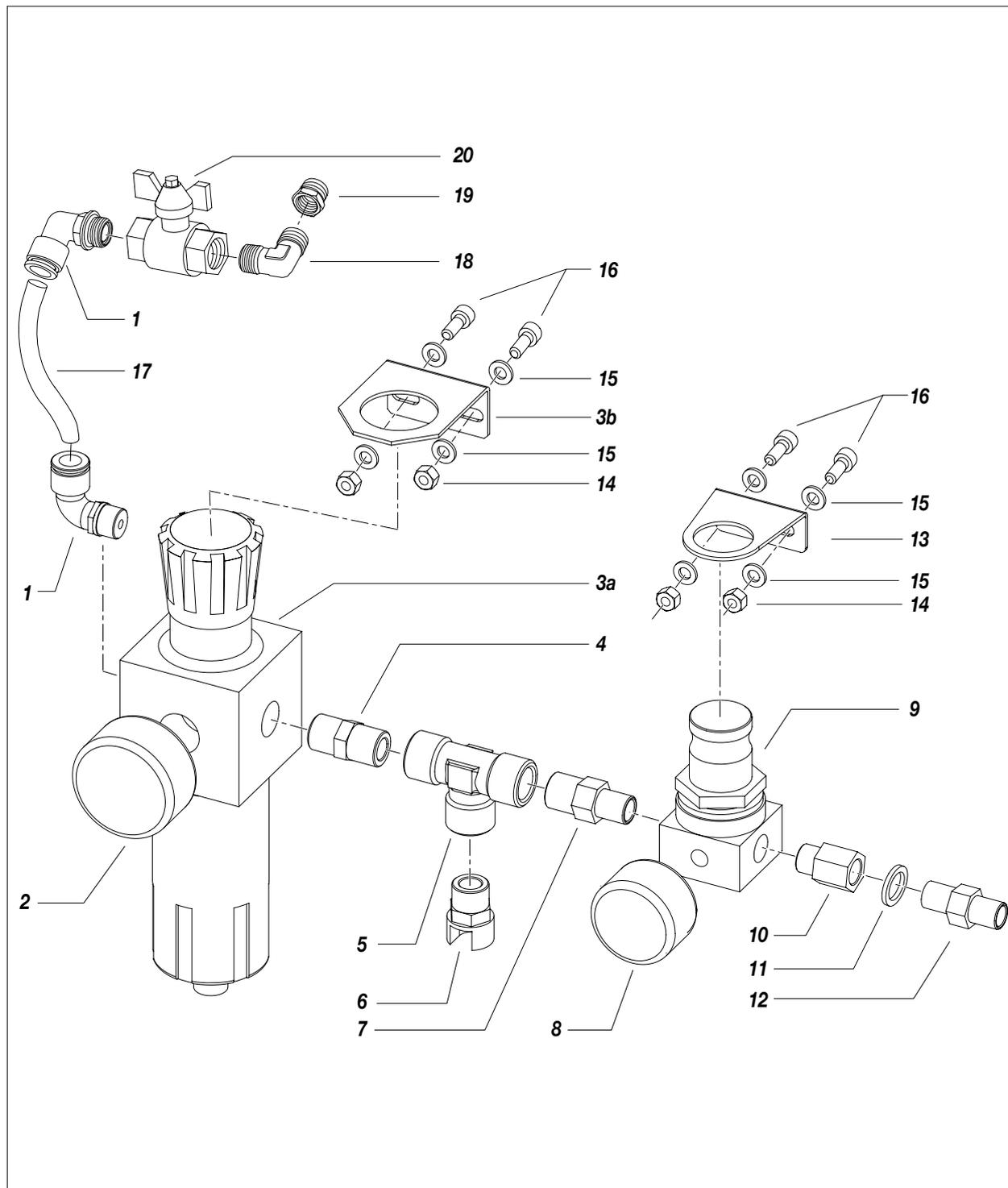
Pos.	Code	Description	Q. ty
	96262	Complete group	-
1	96214	Elbow	1
2	91101	Valve	1
3	96215	Tube connector	1
4	96217	Tube Ø 12/10 mm (0,5 m)	1
5	96216	Rapid coupling 3/8 Tube Ø 12	1
6	96259	Manometer	1
7	96261	Reduction	1
8	8029	Screw TCE UNI5931 M6x22	4
9	95063	Washer Ø 6	8
10	91026	UNI 5588 M6 Nut	4
11a+11b	91107	RL 3/8 group + bracket	1

Pos.	Code	Description	Q. ty
12	91020	Adapter 3/8 mm CON	1
13	3379	T female fitting 3/8	1
14	10103	Bayonet fitting	1
15	3560	Adapter 3/8 1/4 mm CON-CON	1
16	8167	Manometer	1
17	3344	Air regulator	1
18	8055/1	Adapter 1/4 MF	1
19	5255	Elbow MF 1/4	1
20	33012	Copper gasket 1/4	1
21	3289	Adapter 1/4 mm	1
22	510510	Bracket for manometer	1



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

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



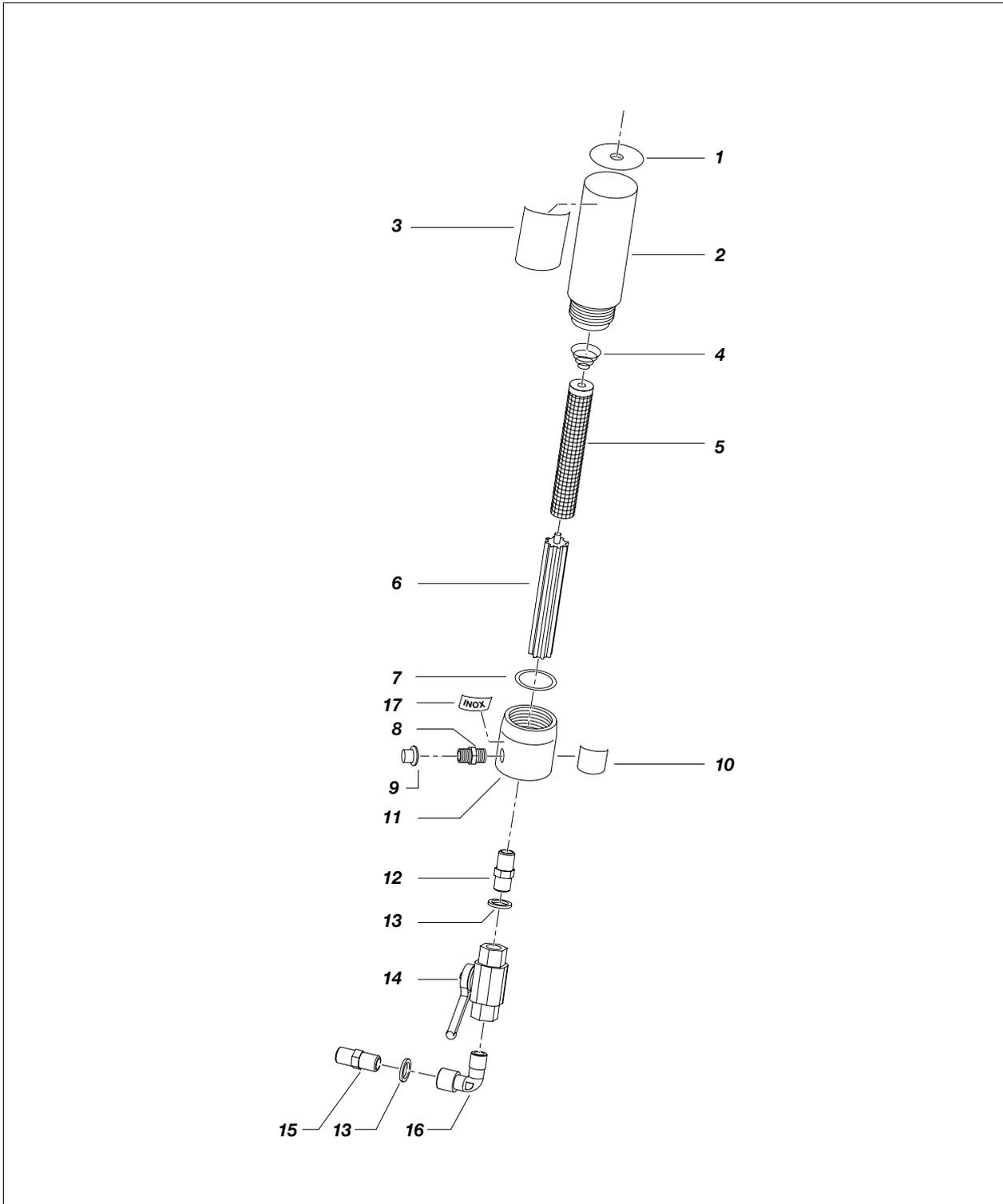


Pos.	Code	Description	Q. ty
	96262/1	Complete group	-
1	96216	Rapid coupling 3/8 Tube Ø 12	2
2	96259	Manometer	1
3a+3b	91107	RL 3/8 group + bracket	1
4	91020	Adapter 3/8 mm CON	1
5	3379	T female fitting 3/8	1
6	10103	Bayonet fitting	1
7	3560	Adapter 3/8 1/4 mm CON-CON	1
8	8167	Manometer	1
9	3344	Air regulator	1
10	8055/1	Adapter 1/4 MF	1
11	33012	Copper gasket 1/4	1
12	3289	Adapter 1/4 mm	1
13	510510	Bracket for manometer	1
14	91026	UNI 5588 M6 Nut	4
15	95063	Washer Ø 6	6
16	91062	Screw TCE UNI5931 M6x22	4
17	96217	Tube Ø 12/10 mm (0,5 m)	1
18	96214	Elbow	1
19	96261	Reduction	1
20	91101	Valve	1



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

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




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 assisted airless 1/4"	1
9	110	Tappo per M16x1,5	1
	104	Tappo per Gj 1/4"	1
10	98386	Rear label	1
11	98380	Filter base	1
12	3110	Adapter 1/4 con-cil	1
13	32012	Copper gasket 1/4	2
14	98325	Ball valve 1/4	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 assisted airless 1/4"	1
9	110	Tappo per M16x1,5	1
	104	Tappo per Gj 1/4"	1
10	96205	Rear label	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 valve 1/4	1
15	33015	Adapter 1/4 - M20x2	2
16	5255	Elbow MF 1/4	1



X PAINT SUCTION SYSTEM

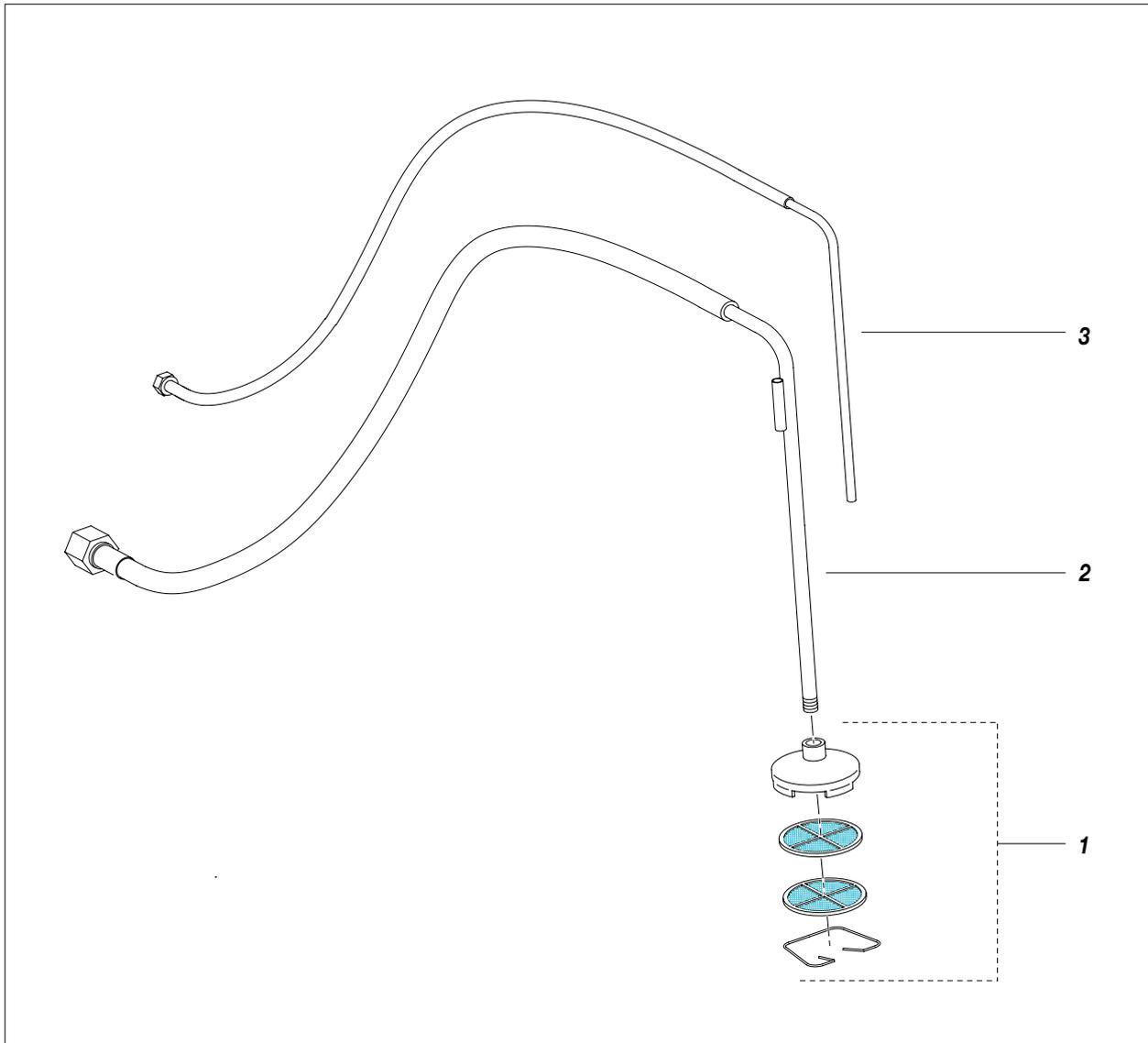
- SPLIT VERSION

Rif. 16610

- STAINLESS STEEL VERSION

Rif. 16611

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



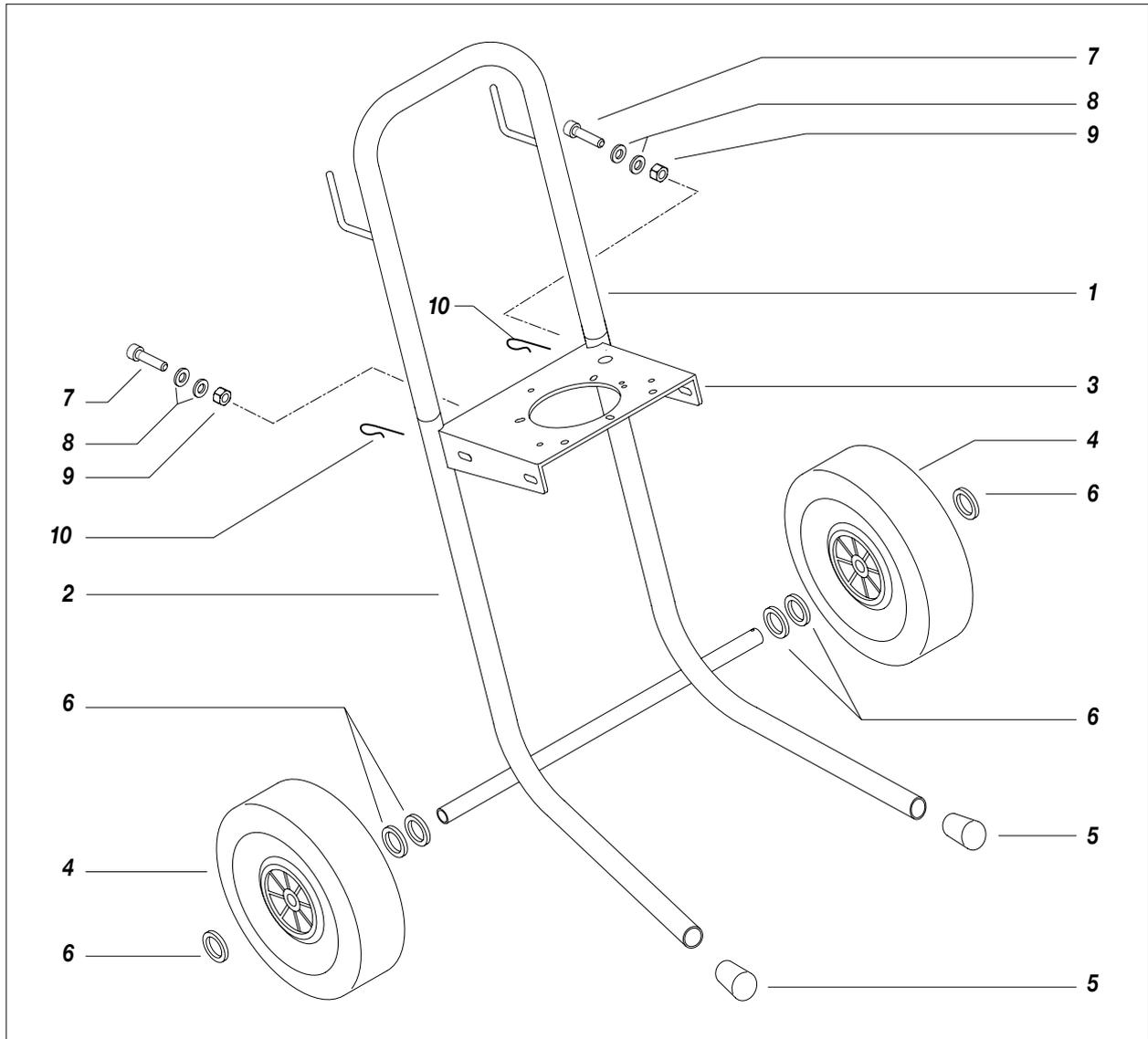
Pos.	Code	Description	Q. ty
	16610	Paint suction system with suction pipes SPLIT VERSION	-
1	35020	Bottom filter assembly	1
2	16608	Suction pipe complete with filter with Split version	1
3	16609	Recirculating pipe Split version	1

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.



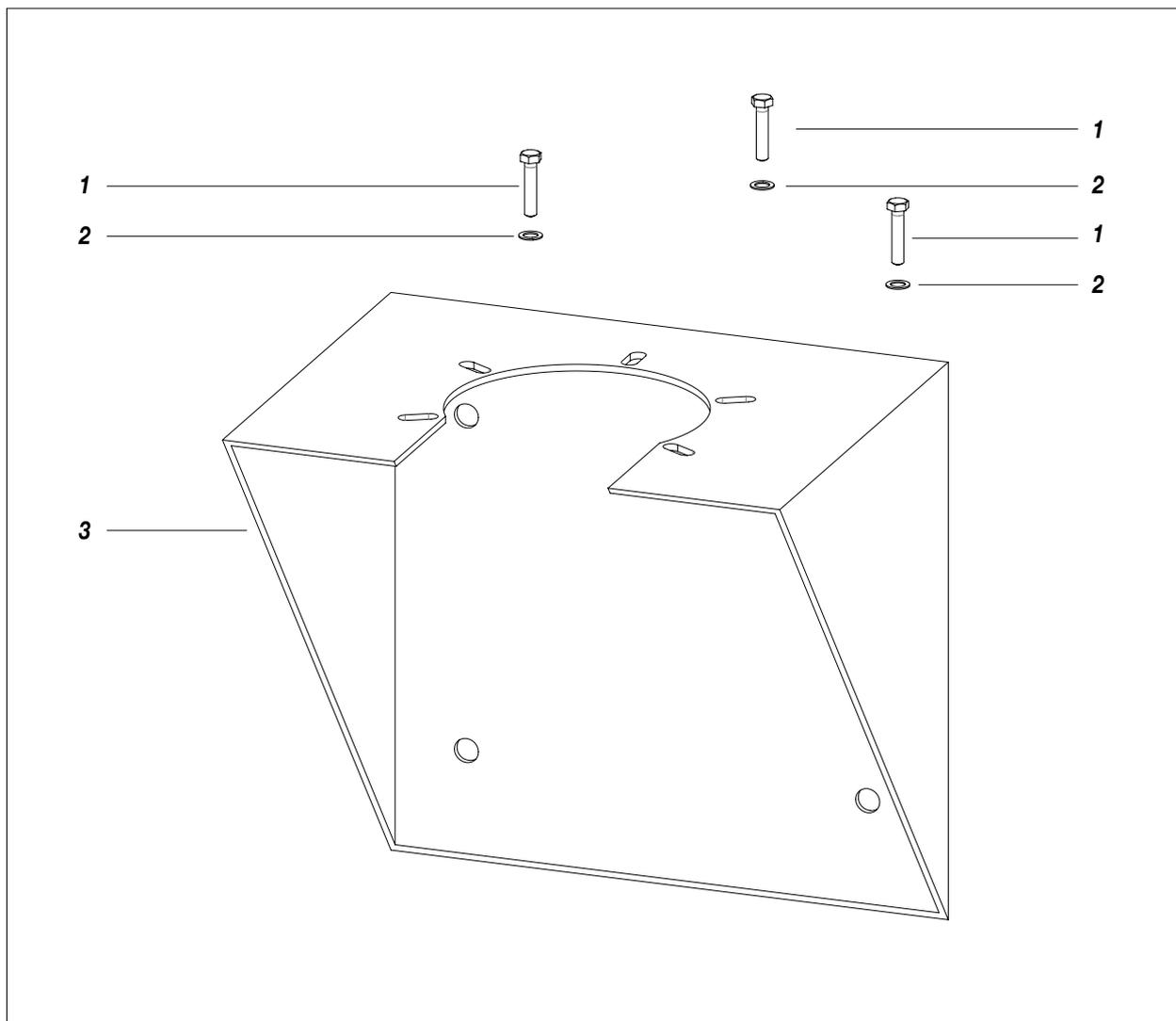
Pos.	Code	Description	Q. ty
	96320	Complete trolley	
1	16271	Trolley handle	1
2	16272	Trolley frame	1
3	16954	Trolley bracket	1
4	91023	Wheel	2
5	37403	Plug	2

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 SUPPORT GHIBLI 30:1/40:1 Rif. 91200/1

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



Pos.	Code	Description	Q.ty
	91200/1	Supporto a parete Ghibli 30:1/40:1	
1	54004	Screw	3
2	95063	Washer	3
3	96038	Wall support	1



AA ACCESSORIES



AT 250 GUN	
Art.	Description
11250	AT 250 1/4"
11200	AT 250 M16x1,5



AT 300 GUN	
Art.	Description
11090	AT 300 1/4"
11000	AT 300 M16x1,5



L91X GUN	
Art.	Description
11131	L91X 1/4"
11130	L91X M16x1,5



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



FILTER	
Art.	Description
95218	Sieve 30M
95219	Sieve 60M
95220	Sieve 100M
95221	Sieve 200M



FITTING WITH MANOMETER	
Art.	Description
147	M16x1,5
150	1/4"



PNEUMATIC MIXER	
Art.	Description
91044	Pneumatic mixer



FLOW REGULATOR	
Art.	Description
7030	HP flow regulator



HEATER	
Art.	Description
6099	Heater



SUPER FAST-CLEAN



SUPER FAST-CLEAN NOZZLE

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



Cod. 18280: GASKET



Cod. 18270: SUPER FAST-CLEAN base UE 11/16x16



LINE FILTER

Art.	Description
96200	Line filter galvanized
98387	Line filter stainless steel



SUCTION SYSTEM

Art.	Description
16610	Suction system
16611	Suction system stainless steel



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



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

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



ANTISTATIC HOSE 3/16" - M16X1,5 MAX PRESSURE 210 BAR

Art.	Description
6164	5 mt
55050	7,5 mt
35018	10 mt



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

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



AB ATEX CERTIFICATION

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 *LARIUS 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.



Larius 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 CHARACTERISTICS

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 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
Gasses, vapours or mists	Zone 0	1G
Gasses, vapours or mists	Zone 1	2G or 1G
Gasses, vapours or mists	Zone 2	3G, 2G or 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 responsibility 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 13463-5
- EN 13463-1

Markings

CE 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)



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 / Marcatatura :



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 chapter 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 conformità alla procedura prevista nella rubrica 3, articolo 13 1) b) ii) della Direttiva.

La documentation technique référencée : GHIBLI/ATX/08 dated 2008-12-15

The technical documentation referenced : GHIBLI/ATX/08 dated 2008-12-15

La documentazione tecnica di riferimento : GHIBLI/ATX/08 dated 2008-12-15

est consignée sous le numéro d'enregistrement :

is consigned under the reference :

è depositata con il numero di registrazione :

n° INERIS-EQEN 021761/19.

no INERIS-EQEN 021761/19.

n° INERIS-EQEN 021761/19.

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

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

Nel quadro di questa registrazione, INERIS non ha esaminato 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



The Directeur Général de l'INERIS,
 Par délégation,

The Chief Executive Officer of INERIS,
 Thierry HOUEIX By delegation,
 Délégué Certification ATEX
 Ex Certification Officer

Il Direttore generale dell' INERIS,
 Per Delega,

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Institut national de l'environnement industriel et des risques

Etablissement public à caractère industriel et commercial / RCS Compagnie B 381 984 924 - Siret 381 984 921 00019 - APE 71206 - TVA Intracom FR 73 381 954 921

IN-1-02348 - Mise en application: 20/04/2014



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 responsibility 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
Machinery safety, basic concepts, general principles of design. Basic terminology, methodology. Technical principles.

This declaration relates exclusively 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

Pierangelo Castagna
Managing Director

Calolziocorte, 15 September 2020
Location / Date



LARIUS srl

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