



LEADING THROUGH INNOVATION

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GHIBLI

FOR SANITATION

30:1 INOX

SE 9000



IT

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EN

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**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

Airless pneumatic pumps for sanitation

















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

Thank you for choosing a **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.

	<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.
	FIRE AND EXPLOSION HAZARD <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 USE

SANITIZING PRODUCTS SPRAYING EQUIPMENT

The spraying of liquids under high pressure allows you covering large surfaces with sanitizing agents, thus reducing the presence of bacteria, fungi and viruses.

By using high pressure pumps, spraying is more effective, thus allowing the treatment of a larger surface with lower fluid consumption compared to other low pressure systems.

The manufacturer offers you a wide range of high pressure spraying equipment, all manufactured for intensive use, with different technologies to best adapt to the operators' needs:

Piston pumps:

- Compressed air drive, ATEX-certified. Its use with flammable fluids and in a potentially explosive atmosphere is recommended.
- Electric drive.
- Independent system, with petrol engine, without a connection to external power sources.

Diaphragm pumps:

- Electric drive
- Independent system, with petrol engine, without a connection to external power sources. For outdoor use.

SANITIZING FLUID APPLICATIONS ON:

- Office buildings, public bodies
- Industrial sheds, factories, logistics centers
- Shopping centers, cinemas, theaters and restaurants
- Bus, railway and airport stations
- Trains, planes, coaches, cars and rental vans
- Hospitals and health centers
- Barracks, warehouses and prisons
- Stadiums and sports halls
- Roads and parking areas

FLUIDS:

Diluted solutions of the most common disinfectants:

- Sodium hypochlorite (bleach), maximum 1%
- Paracetic acid (cleaning vinegar), maximum 1%
- Hydrogen peroxide (hydrogen peroxide)
- Quaternary ammonium compounds (5% ammonia)
- Ethanol and other alcoholic compounds ⁽¹⁾

(1): use of ATEX pumps if the composition makes the liquid flammable.



C WORKING PRINCIPLE

GHIBLI 30:1 pumps for sanitation are pneumatic pumps for high pressure sanitation 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 means that the outlet pressure of material is 30 times higher than the pump feed air pressure.

D TECHNICAL DATA

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

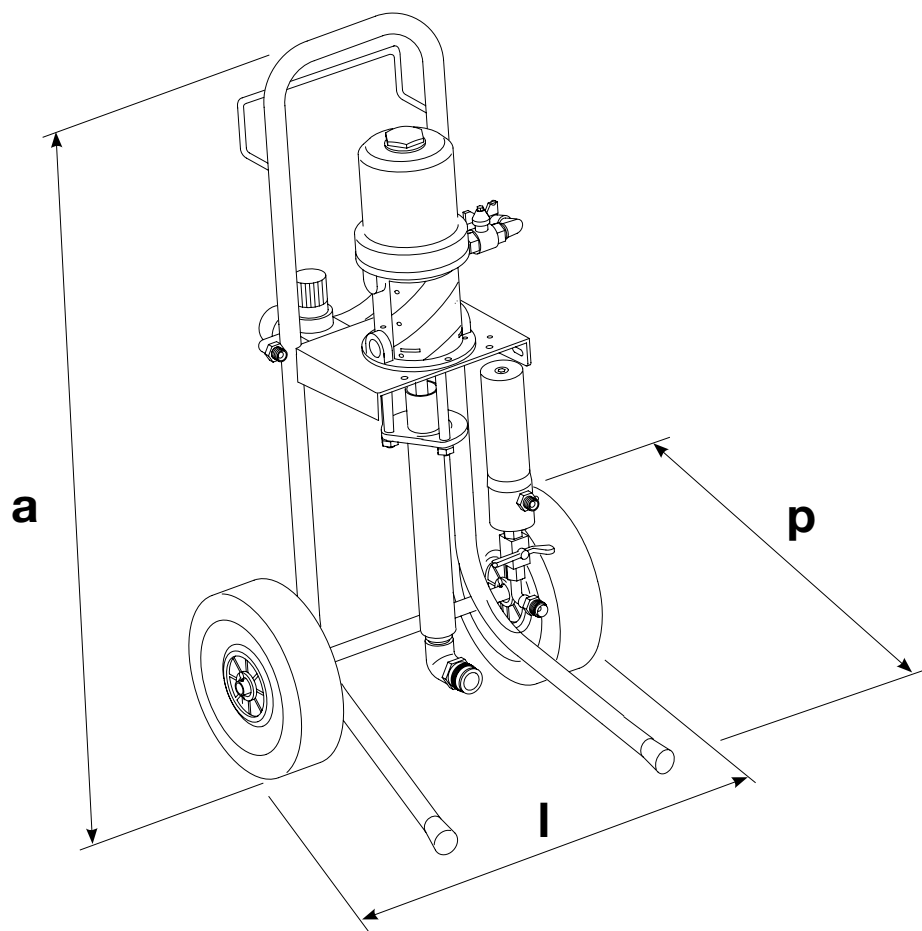
Trolley structure: painted sheet metal

Use on medium and large surfaces.

- Trolleyed pump; it can supply two utilities simultaneously.
- Possibility to adjust the fluid pressure..
- It can be used with 200l bins, 1000l IBCs and small tins.
- Self-priming pump.
- Select suction accessories, the hose and gun in the accessories section
- Version with 50l PVC tank is available.

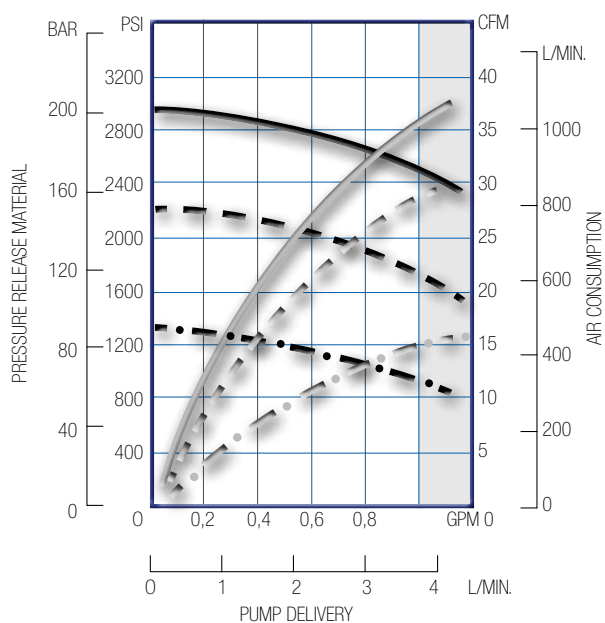
HIGH PRESSURE PUMP.

USE ONLY RECOMMENDED ACCESSORIES.



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.



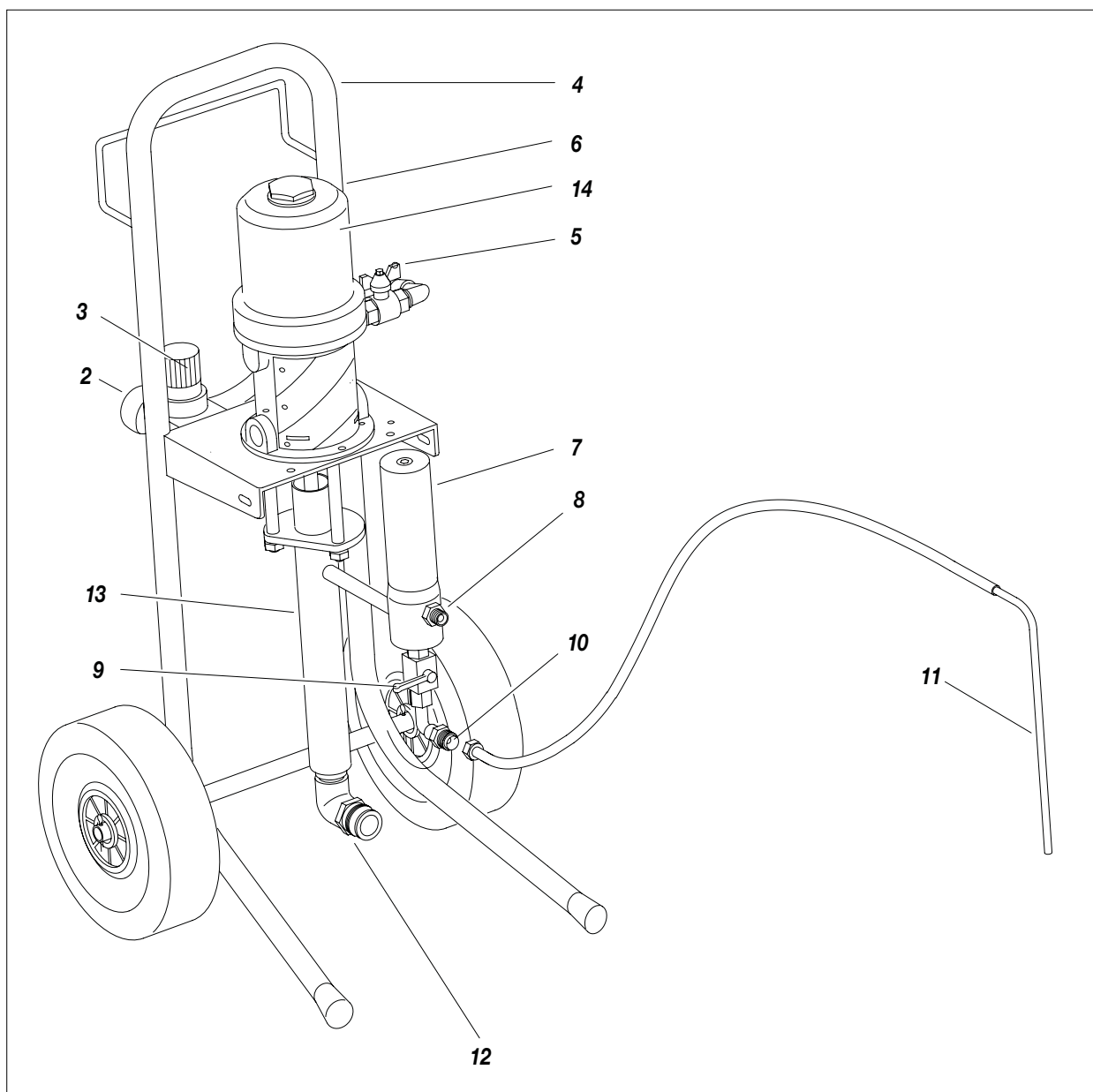
BLACK CURVE: PRESSURE RELEASE MATERIAL
GRAY CURVE: AIR CONSUMPTION

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



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.

E DESCRIPTION OF THE EQUIPMENT



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 product outlet

Pos.	Description
8	High pressure filter out product
9	Recirculating cock
10	Recirculation pipe fitting fixing
11	Fluid recirculation pipe
12	Fitting pipe fitting intake
13	Material pumping group
14	Pneumatic motor

NOTE

*The machine is supplied only with the recirculation pipe.
As for the accessories supplied, see the specific chapter.*



F 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.

G 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.



LIMITED 90-DAY WARRANTY



Each LARIUS sanitizing sprayer is supported by a 90-day warranty for the replacement of only the components.
No return.

H 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 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 products containing Halogen Hydrocarbons (as the Methylene Chloride, in percentage greater than 1%). 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.

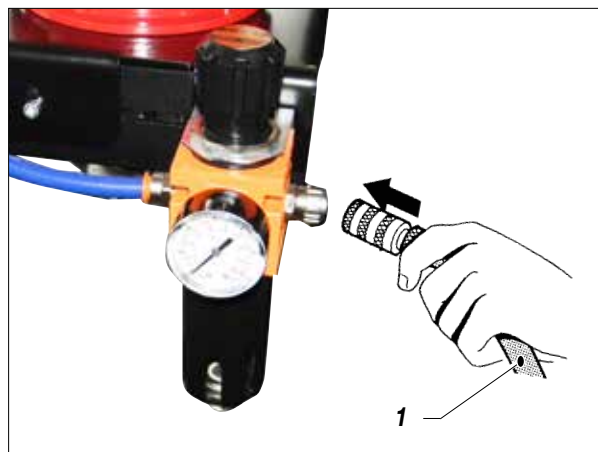


Take proper safety measures for the protection of hearing in case of work near the plant.

I SETTING-UP

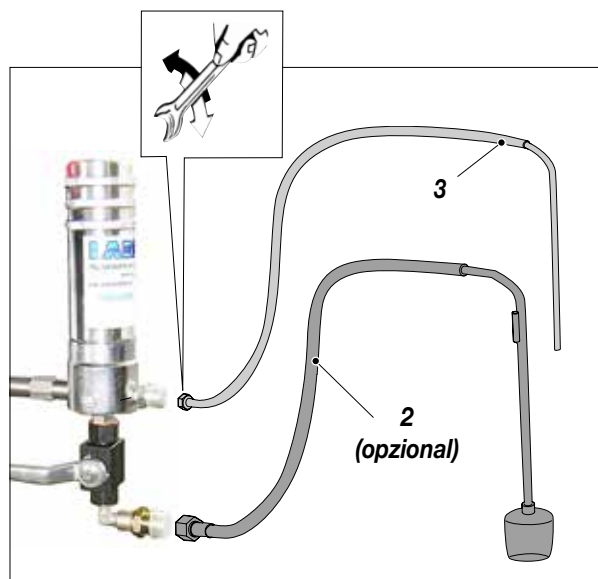
CONNECTION TO THE FEED AIR

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



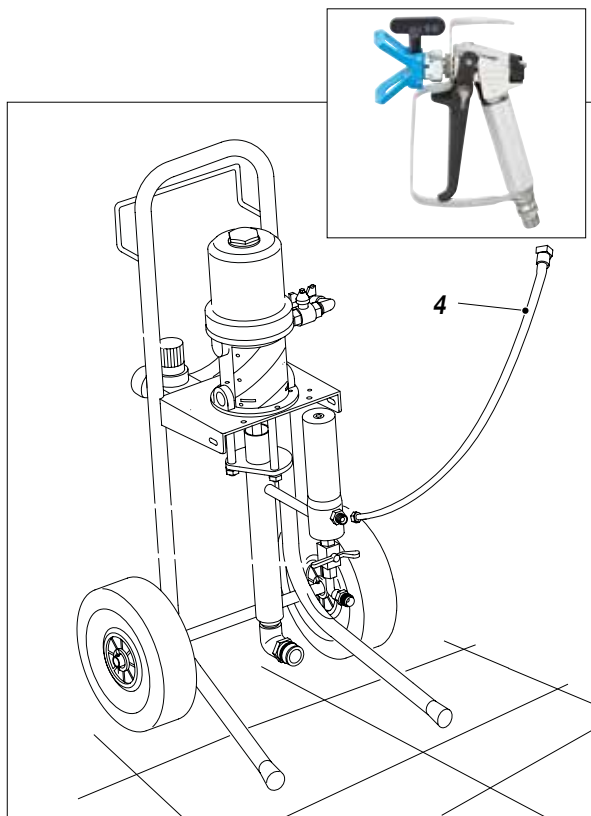
CONNECTION OF SUCTION AND RECIRCULATING PIPES

- Connect the suction and recirculating pipes to the pump. The optional suction pipe (2) (not supplied; see accessories) can be tightened with the use of your hands, while to tighten the recirculation pipe (3), use a wrench. In both cases, do not use thread sealants on the fittings.



CONNECTION OF SUCTION AND RECIRCULATING PIPES

- Connect the high pressure flexible hose (4) (not supplied; see accessories) 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.



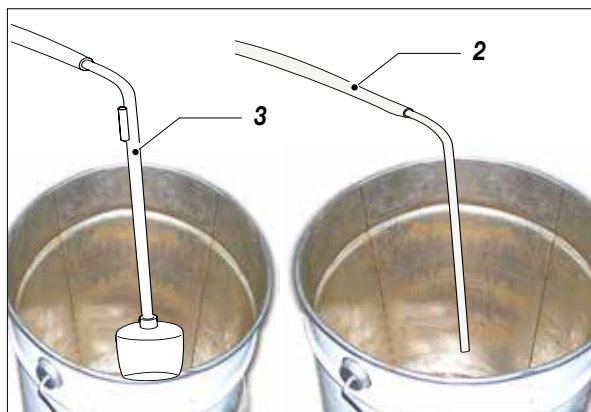
- Open the recirculating cock (5).



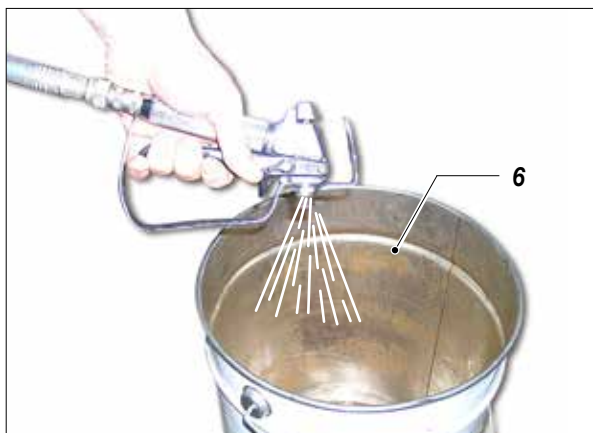
- Set the pump feed pressure at about 3 bar and open the air passage valve.
- The pump will start working and will drain oil from the recirculating pipe. Close the recirculating cock (5) as soon as the clean liquid has come out.

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 (3) (not supplied; see accessories) into the tank of the washing.
- Insert the recirculating pipe (2) into a container (a metal container is suggested).



- Lift the tank's suction tube (3).
- Lean the spray gun against the rim of the container (6) and drain the residual oil pressing the trigger. Release the trigger as soon as the clean liquid comes out.
- As an accelerated working of the pump (the pump "idles") appears, close the air passage valve.



PREPARATION OF THE SANITATION LIQUID

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



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.

J 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) supplied (rif. 16325) to facilitate the sliding of the piston inside the seal packing and to interpose the oil within the air.

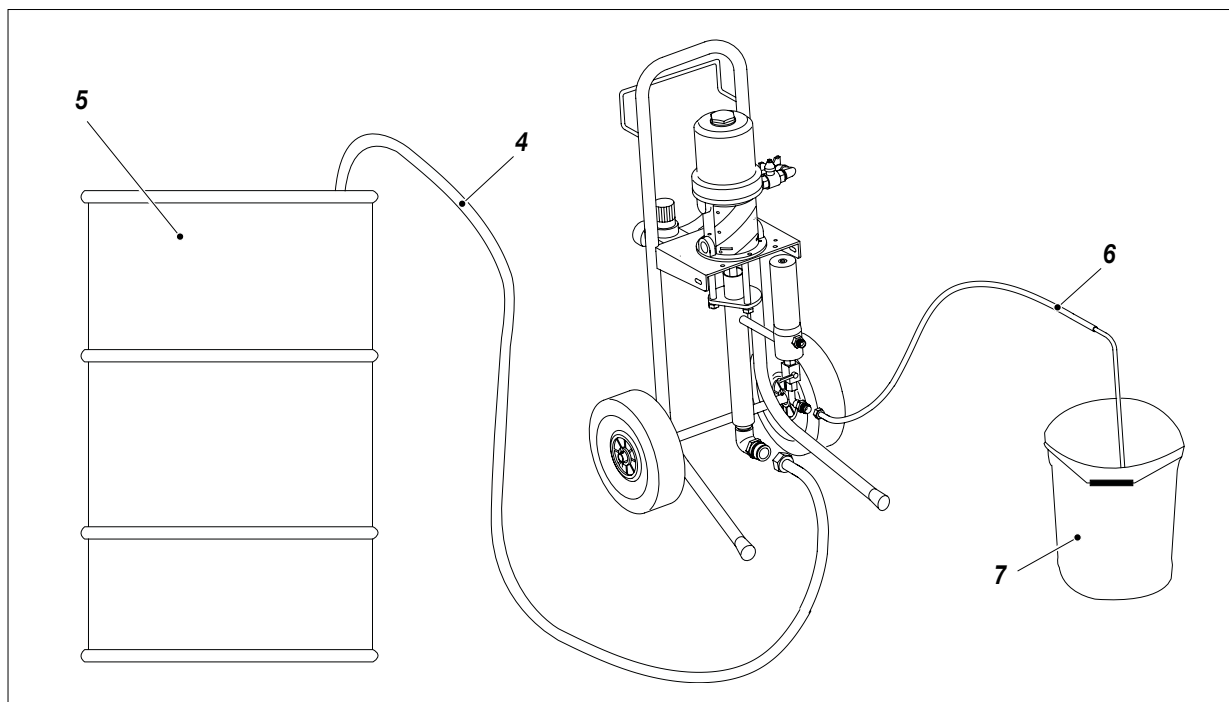


At the start of each working day, make sure that the ring nut is filled with hydraulic oil (ref. 16325); the oil facilitates the sliding of the piston and prevents any material which may have leaked out of the seals from drying once the equipment has been shut off.

- Fix the atomization nozzle (2) on the spray gun (3).



- Immerse the suction tube (4) in the container (5) of the product and the recirculation tube (6) in a bucket (7).



- Open the recirculating cock.
- Set the pump feed pressure (8) at about 3-4 bar and open the air passage valve (9).



- 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.
- In order to avoid overthick ness of product, 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 treated 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.

K 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 the 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 recovery bucket and press the trigger so as to recover the clean solvent left inside the pump.
- Remove the nozzle from the spray gun and wash it thoroughly.
- Dip the suction hose into the tank of the washing (*ensure it is compatible with the product being used*).
- Insert the recirculating hose into a container.
- 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 product comes out.
- Lift the liquid tank's suction tube.
- Point the gun against the collection container and press the trigger to expel the residual product.
- 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.



Clean with water after each use.
Do not leave the sanitizing product on the equipment or in containers.



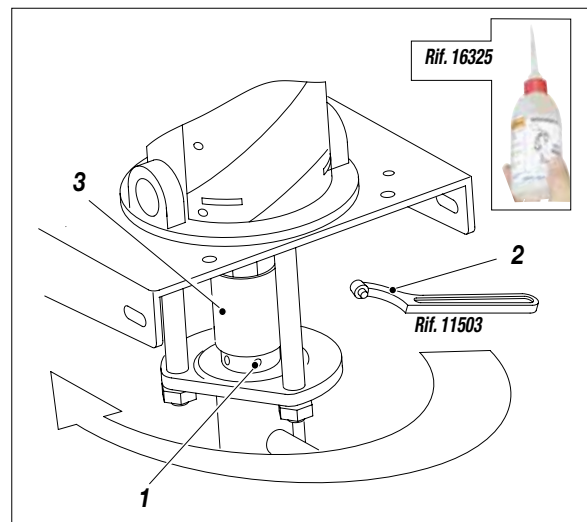
Store possible dangerous fluids in proper containers. Their disposal must be performed in accordance with the regulations in force about the industrial waste goods.

L ROUTINE MAINTENANCE



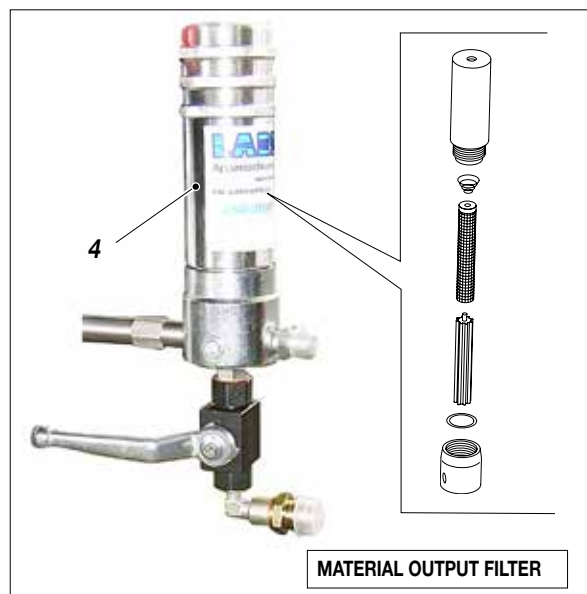
Always close the compressed air supply and release the pressure in the plant before performing any check or maintenance of the pump.

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.



At the start of each working day, make sure that the ring (3) 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.

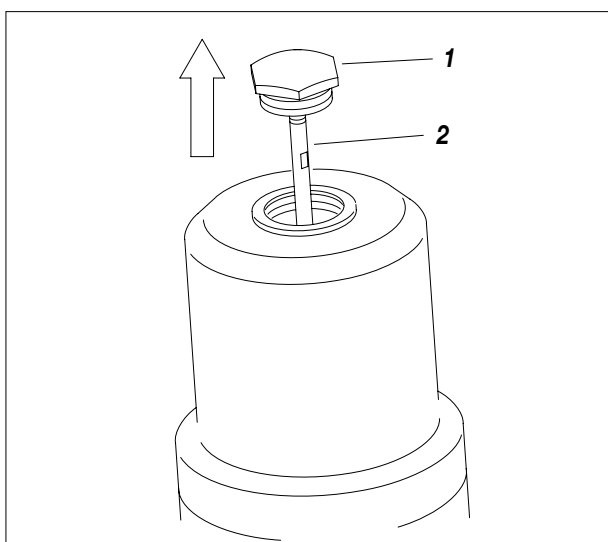
- Remove and clean the high pressure filter for material outlet (4).



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

M 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.



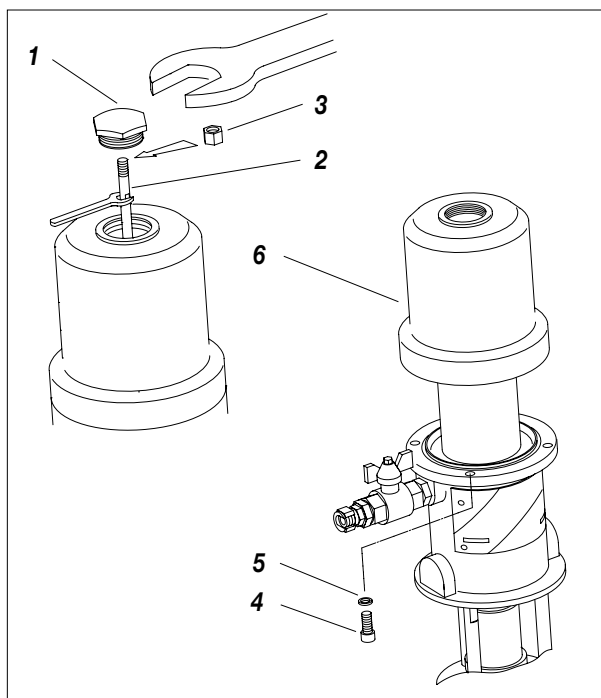
N SMONTAGGIO DEL MOTORE PNEUMATICO

- 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).

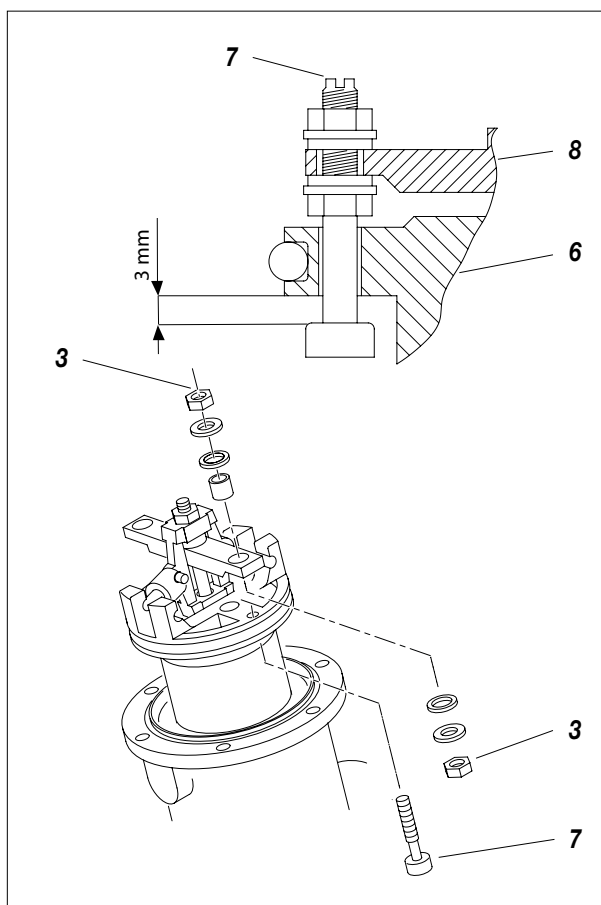


Replace immediately the plug (1) with a usual N8 (N3) nut before the guide rod slides into the cylinder.

- Remove the screws (4) and the washers (5).
- Carefully extract the motor cylinder (6) from the pump.

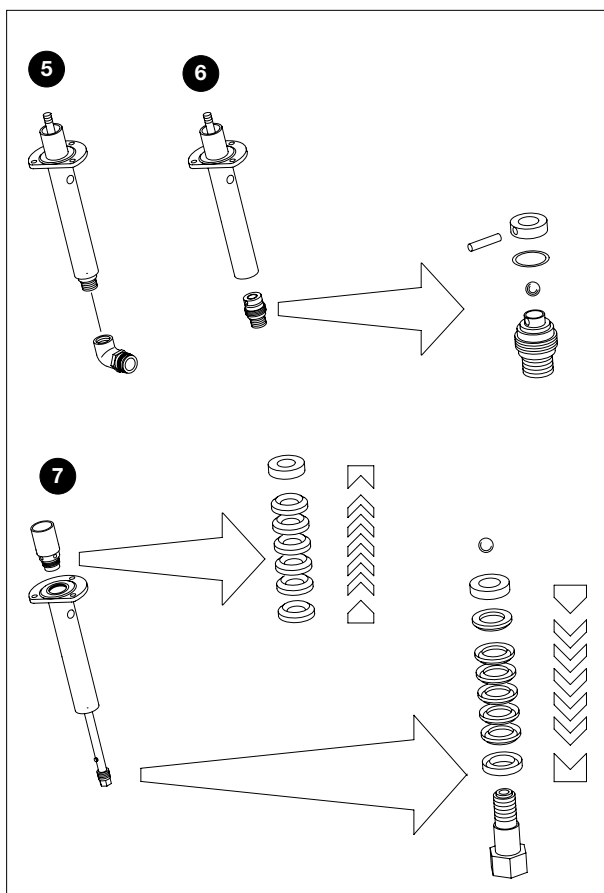
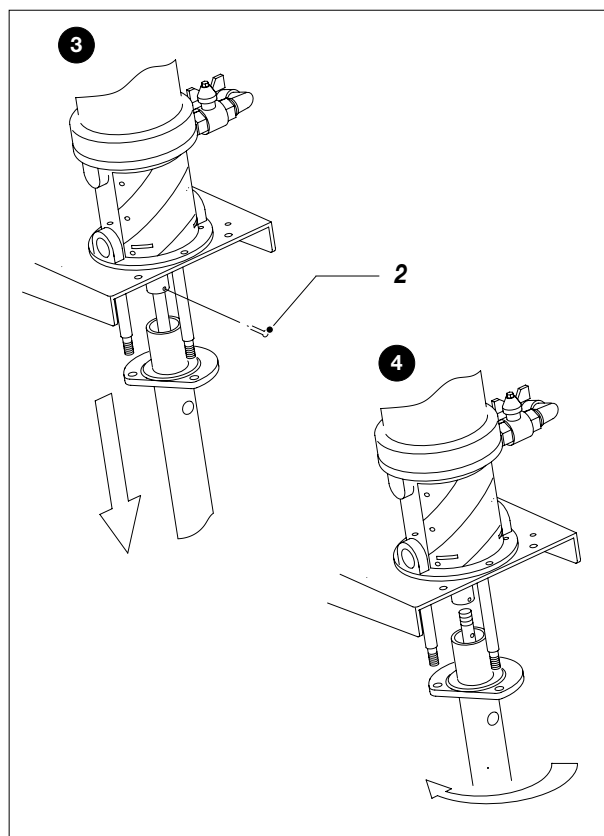
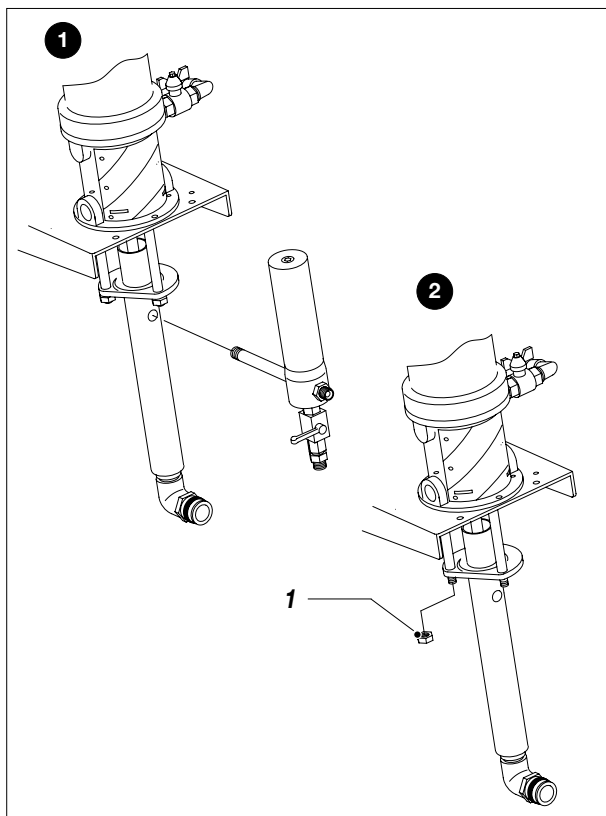


- Check the condition of each part of the motor.
- For any eventual replacement of the screws (7) of the traverse (8), for their reassembly and correct adjustment.



0 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 (1).
- 3** Pull the pumping unit towards yourself so that the split pin (2) 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.



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;	<ul style="list-style-type: none"> - 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;
	Pneumatic motor blocked in the cycle reversal position;	<ul style="list-style-type: none"> - Reduce feed air pressure; - Consult the paragraph "Manual reset of the pneumatic motor";
	Parts failure of the pneumatic motor;	Disassemble the motor and verify;
	There is no product;	Check the flexible suction tube;
	The pump sucks air;	Controllare il tubo di aspirazione flessibile;
Accelerate working and no pressure of the pump	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;
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.

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SPARE PARTS

Q

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

S

Complete filter split galvanized 30:1
pag. 24

R

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

T

Air regulation group AIRLESS version (trolley and wall version)
pag. 26

V

Complete trolley
pag. 28

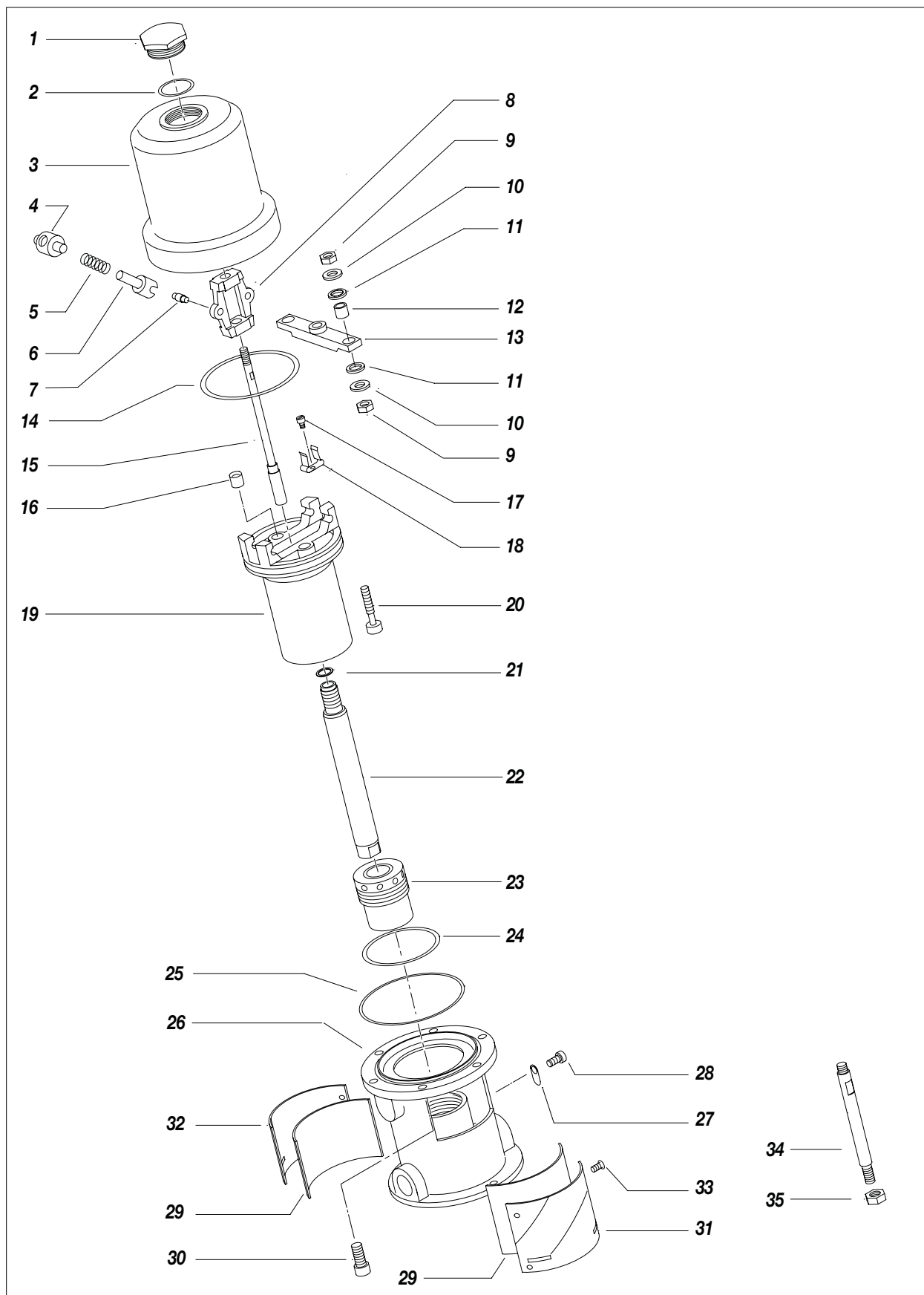
U

Product recirculation system
pag. 27



Q COMPLETE PNEUMATIC MOTOR PUMP GHIBLI 30:1 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

TRAVERSE SCREWS KIT - COD. 40401

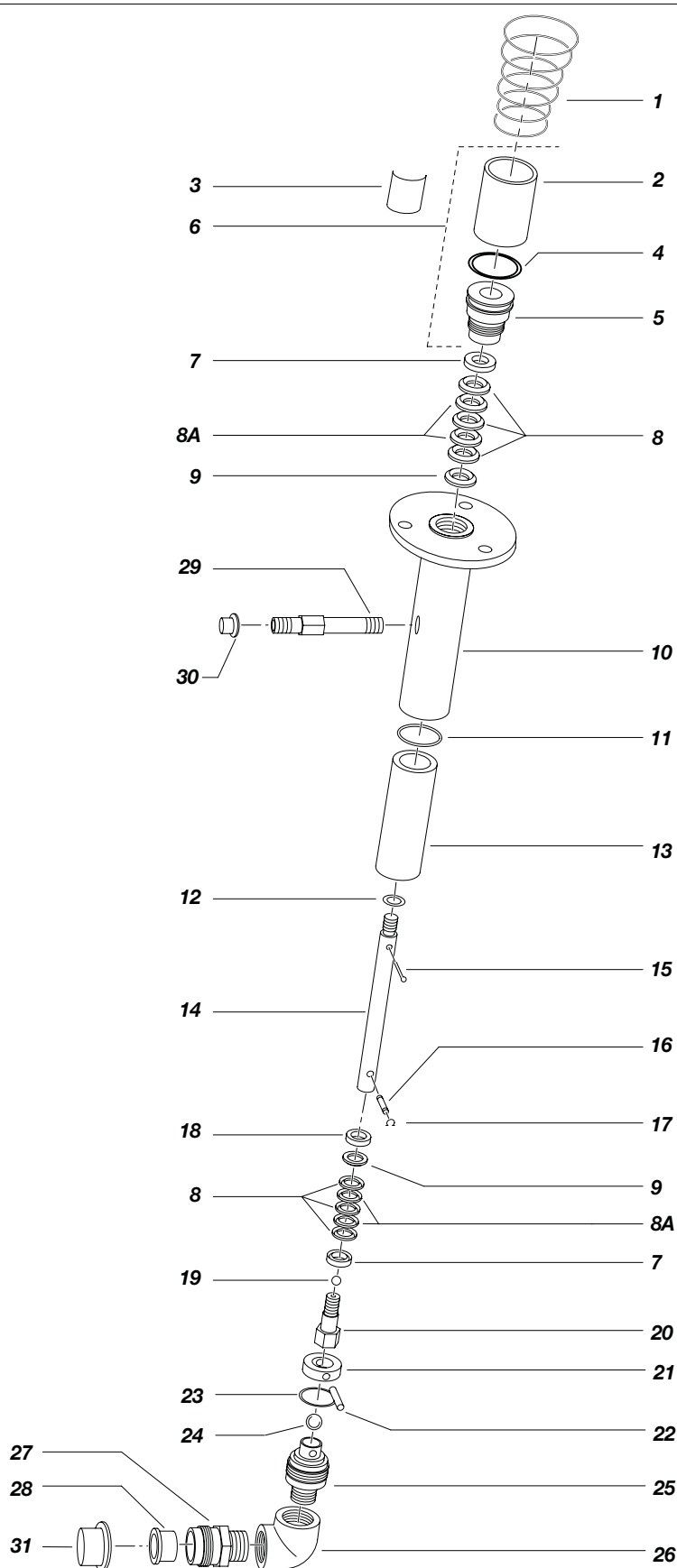
Pos.	Description
9	Nut
10	Washer
11	Gasket
12	Bush
16	Valve
20	Complete screw valve

MOTOR GASKETS KIT COD. 40050

Pos.	Description
11	Gasket
16	Valve
20	Complete screw valve
24	OR ring

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

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



STAINLESS STEEL 30:1 SPLIT VERSION Cod. 98340

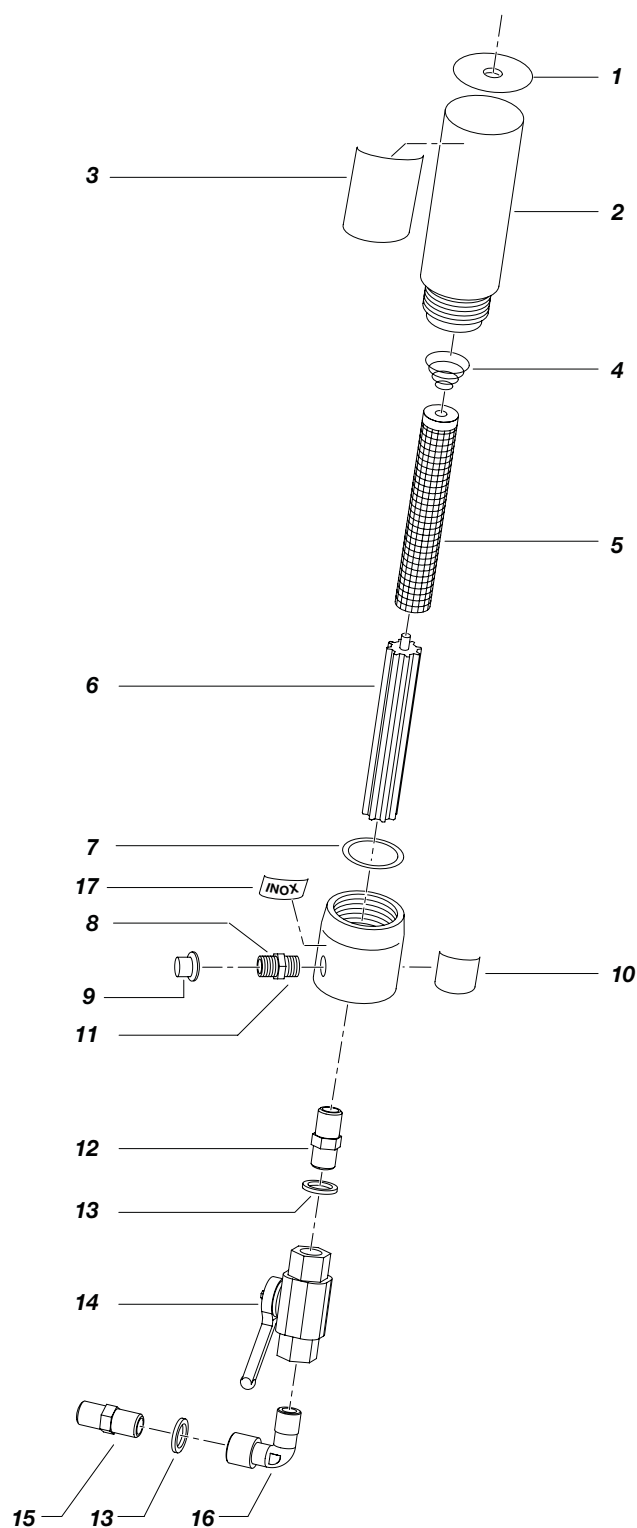
Pos.	Code	Description	Q. ty
-	98340	Complete pumping	-
1	96023	Spring	1
2	91001/1	Oil tank	1
3	96233	'Oil' label	1
4	3429	O-ring	1
5	98501	Gaskets ring nut	1
6	96075	Complete tank	1
7	98358	V female ring	2
8	96074	PTFE gasket	6
8A	96071	Polyethylene gasket	4
9	98360	V male ring	2
10	98353	Pumping group	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

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		

S COMPLETE FILTER SPLIT GHIBLI PUMP 30:1

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

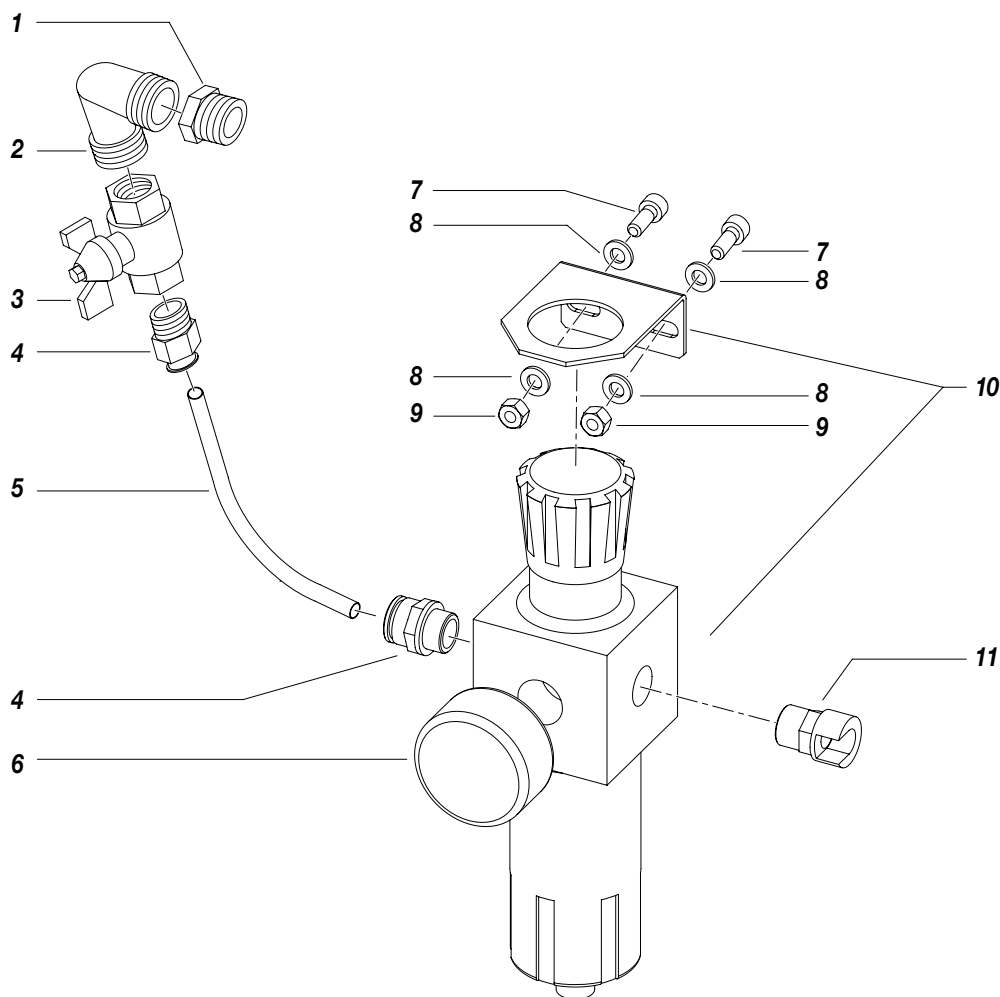


STAINLESS STEEL 30:1 VERSION

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

T AIR REGULATION - TROLLEY AIRLESS VERSION Ref. 96250

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

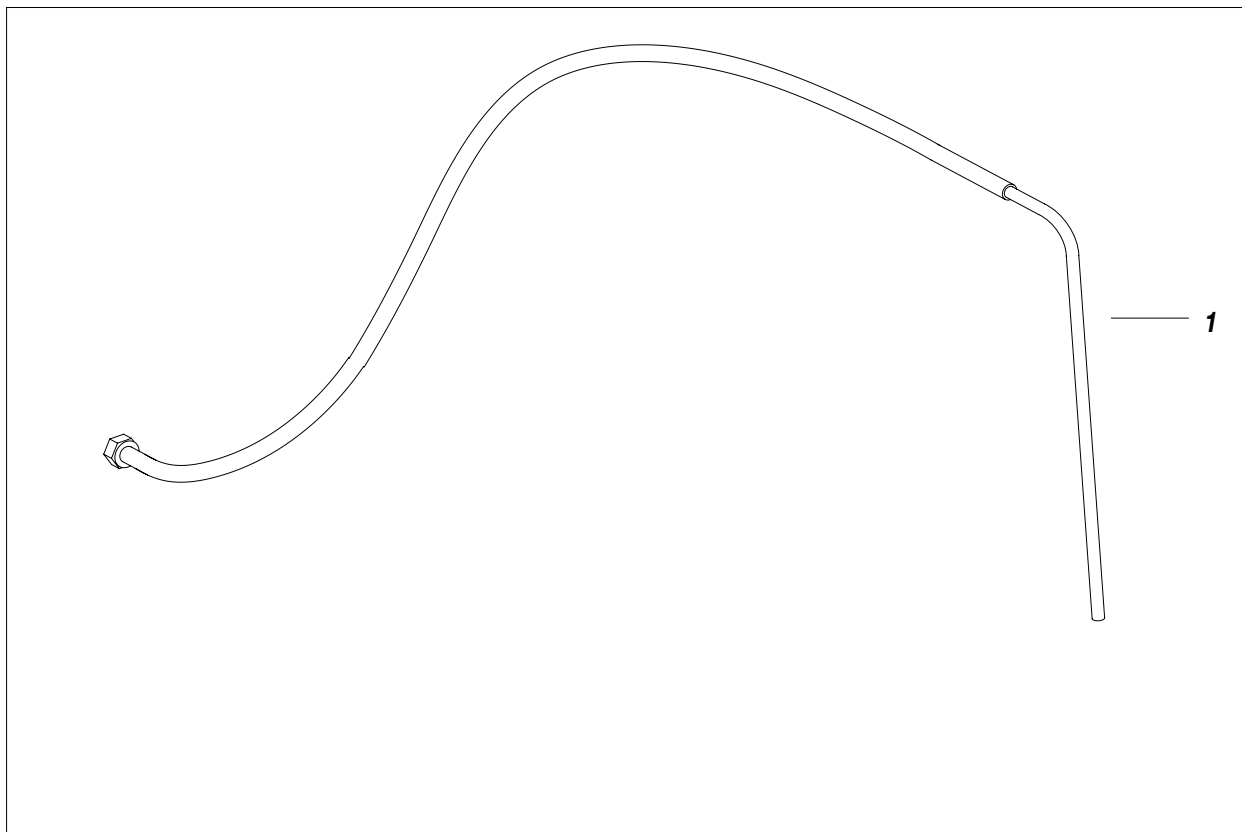


Pos.	Code	Description	Q. ty
-	96250	Complete group	-
1	96261	Reduction	1
2	96214	Elbow	1
3	91101	Valve	1
4	96215	Rapid coupling 3/8 Tube Ø 12	2
5	96217	Tubo 12/10mm - 0,5m	1

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

U PRODUCT RECIRCULATION SYSTEM

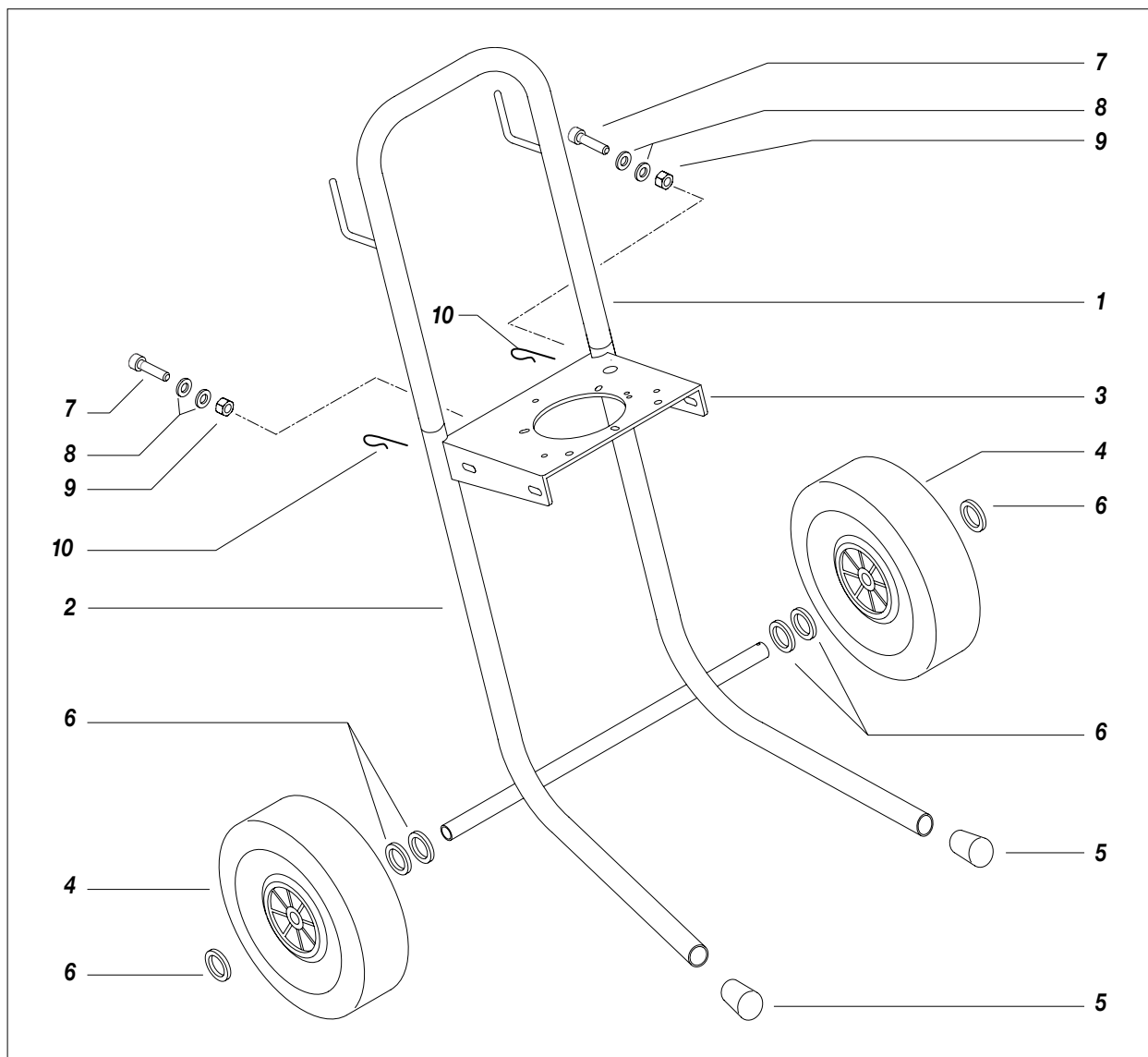
WARNING: always indicate code and quantity for each part required.



Pos.	Codice	Descrizione	Q. tà
1	16613	Recirculating pipe	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

U ACCESSORIES

SUCTION SYSTEM



SE9040



3350/1



SE9041

Code SE9040	Suction tube for 30 lt drums
Code 3350/1	Suction tube for 200 lt drums
Code SE9041	Suction tube for 1000 lt drums

FILTERS MESH

Code 85014	FILTER 40 MESH
Code 85012	FILTER 20 MESH
Code 37215	FILTER 40 MESH inox
Code 37216	FILTER 20 MESH inox



HIGH PRESSURE DELIVERY TUBES

Attacco BSPP 1/4"
 Max pressure 250 bar

Code 18024	Length 15 m
Code 18024/20	Length 20 m
Code 18024/25	Length 25 m
Code 18024/30	Length 30 m



AT250 AIRLESS GUN for sanitation

High pressure spraying gun, max 250 bars.

It includes the spraying nozzle and the 1/4" swivel fitting to connect to the tube.

Code SE9050 Connection BSPP 1/4" Nozzle SFC 13-60

Code SE9050/1 Connection BSPP 1/4" Nozzle TSC 90-40



AT250 PISTON GUNSTOCK FILTERS

Code 11039 Green (30M) upon request

Code 11038 White (60M) supplied

Code 11037 Yellow (100M) supplied

Code 11019 Red (200M) supplied



NOTE: the filter choice depends on the type of machine and of the product to be sprayed.

AT250 GUN EXTENSION



Code 155

Length 60 cm

Code 156

Length 100 cm

PLA AIRLESS GUN for sanitation

1/4" BSPP connection + Super Fast-Clean base

Ideal application lance to reach high and difficult to access places.

With closure at the end of the extension cord to avoid product loss. Lance equipped with Z fitting for nozzle positioning.



Code SE9060 Length 130 cm Nozzle SFC - 13-60

Code SE9061 Length 180 cm Nozzle SFC - 13-60

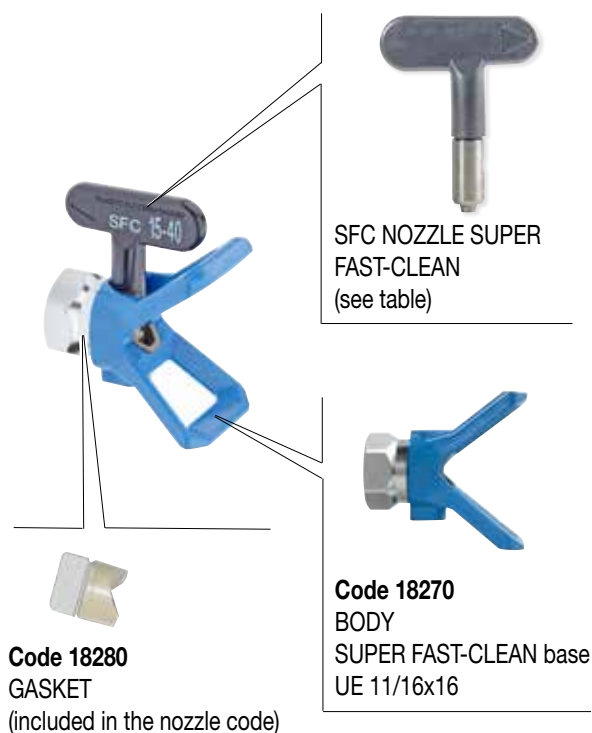
Code SE9062 Length 240 cm Nozzle SFC - 13-60

Code SE9060/1 Length 130 cm Nozzle TSC - 9-40

Code SE9061/1 Length 180 cm Nozzle TSC - 9-40

Code SE9062/1 Length 240 cm Nozzle TSC - 9-40

SUPER FAST-CLEAN NOZZLE



*Cod. nozzle-angle	Ø inch	Ø mm	Filter recom.
SFC07-20	0,007"	0,18	Red 200 M
SFC07-40			
SFC09-20	0,009"	0,23	Yellow 100 M
SFC09-40			
SFC11-20	0,011"	0,28	
SFC11-40			
SFC13-20	0,013"	0,33	
SFC13-40			
SFC13-60	0,015"	0,38	
SFC15-20			
SFC15-40	0,017"	0,43	
SFC15-60			
SFC17-20	0,017"	0,43	
SFC17-40			
SFC17-60	0,019"	0,48	
SFC19-20			
SFC19-40	0,019"	0,48	
SFC19-60			
SFC21-20	0,021"	0,53	
SFC21-40			
SFC21-60	0,023"	0,58	
SFC23-20			
SFC23-40	0,023"	0,58	
SFC23-60			
SFC25-20	0,025"	0,63	
SFC25-40			
SFC25-60	0,027"	0,68	
SFC27-20			
SFC27-40	0,027"	0,68	
SFC27-60			
SFC27-80	0,029"	0,74	
SFC29-20			
SFC29-40	0,029"	0,74	
SFC29-60			
SFC29-80	0,031"	0,79	
SFC31-40			
SFC31-60	0,031"	0,79	
SFC31-80			
* The nozzle code includes the gasket code18280			

* The nozzle code includes the gasket code18280

HIGH PRESSURE GAUGE

Code 150 GJ 1/4"



DOUBLE OUTPUT KIT

BSPP 1/4" connection

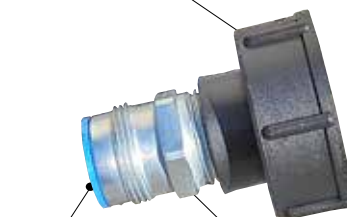
Code SE9070



REDUCTION FOR TANK

Reduction for 1000l tank

Code 200041



Code 69099

Code 98232

ATEX CERTIFICATION

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

AB 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.



The 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 2014/34/UE ATEX Directive, based on the following european standards: EN 1127-1, EN 13463-1 and EN 13463-5.

AC 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							
96050	96056	30:1	3÷7 bar	BSPT 3/4" F	Ball	BSPP 1/4"	210 bar	3,7 l/min

Maximum number of cycles per minute: 60

Room temperature: -20°C to +60°C

Maximum fluid temperature [°C]: 60°C

AD MARKINGS

CE  II 2 G c IIB T6 T_{amb}: -20°C ÷ + 60°C T_{max. fluid}: 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

AE 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.



CE DECLARATION OF CONFORMITY



The manufacturer



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

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 exlusevely 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.

Firma / Signature

Pierangelo Castagna
Managing Director

Calolziocorte, 01 February 2024
Location / Date

AB PUMP FOR SANITATION



Giotto

Cod. SE9020 220V

Cod. SE9021 110V



Giotto with gravity hopper da 50 Lt.

Cod. SE9022 220V

Cod. SE9023 110V



DALI

Cod. SE9030 with hose reel 50 Lt.

Cod. SE9031 with hose reel 30 Lt.

Cod. SE9032 50 Lt.

Cod. SE9033 30 Lt.



ZEUS

Cod. SE9010 110V

Cod. SE9011 220V

Cod. SE9012 Petrol



**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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OPERATING AND MAINTENAINCE MANUAL AVAILABLE IN:		
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	EN	https://www.larius.com/wp-content/uploads/GHIBLI_30_1_SANIFICAZIONE_GB.pdf