Ed. 004 | 11 - 11

GHIBLI 24:1

PNEUMATIC PUMP FOR EXTRUSION

OPERATING AND MAINTENANCE INSTRUCTION

LARIUS®

PAINT SPRAYING EQUIPMENT

ENGLISH

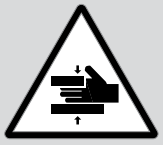
CE

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

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.

English

PNEUMATIC PUMP FOR EXTRUSION

					
Read this operator's manual carefully before using the equipment. An improper use of this machine can cause injuries to people or things.	It indicates an accident risk or serious damage to equipment if this warning is not followed.	It indicates a fire or explosion risk if this warning is not followed.	It indicates wound and finger squashing risk due to movable parts in the equipment.	It is obligatory to wear suitable clothing as gloves, goggles and face shield.	It indicates important recommendations about disposal andrecycling process of products in accordance with the environmental regulations.

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 WORKING PRINCIPLE

GHIBLI 24:1 DE is a high pressure pneumatic pump used for extrusion and transferring of high viscosity products.
The pump is essentially constituted of an air motor and of a structure called "material pumping group" or simply "pumping group".
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 ending with a shovel plate alowing to suck very viscous products.

The ratio 24:1 means that the outlet pressure of material is 24 times higher than the pump feed air pressure.

B TECHNICAL DATA

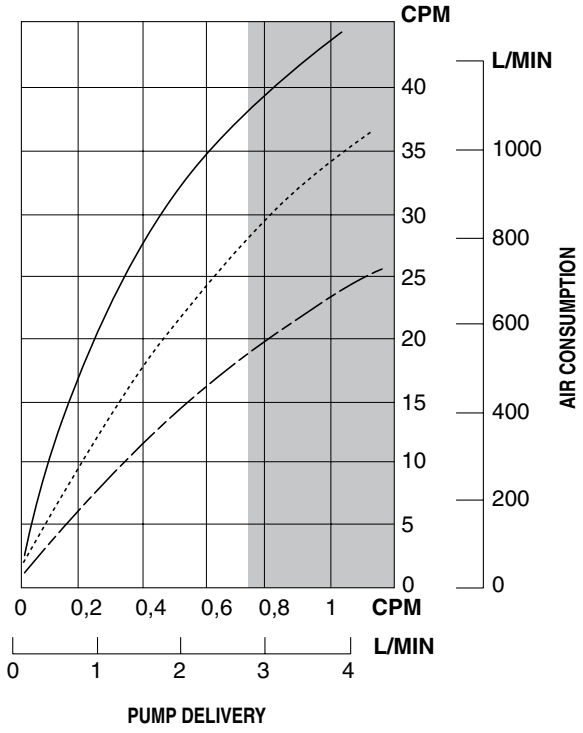
	GHIBLI 24:1 DE
PUMP FEED AIR PRESSURE	3-7 bar
MAXIMUM PRESSURE OF THE PRODUCT	168 bar
*FEED AIR INLET	1/2" GAS (F)
MAXIMUM DELIVERY	4 l/min (6,4 cpm)
CYCLES PER LITRE	15
MAXIMUM CYCLES PER MINUTE	60
MATERIAL OUTLET [CONICAL GAS (F)]	3/4" GAS CON. (F)
NOISE PRESSURE LEVEL	<80 dB (A)

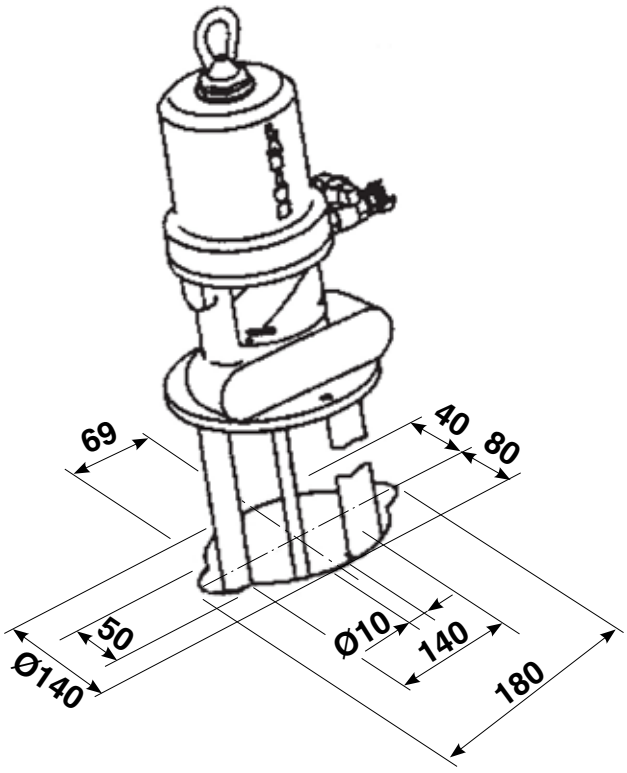
***N.B.** The pump is supplied with a bayonet connection.

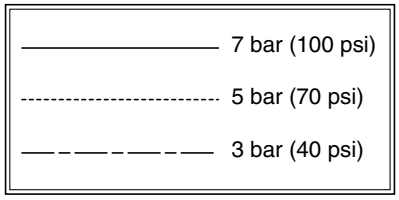
Parts of the pump in contact with the material
Pumping group: galvanized carbon steel
Sealing balls: stainless steel AISI 420B
Gaskets: Teflon, Viton

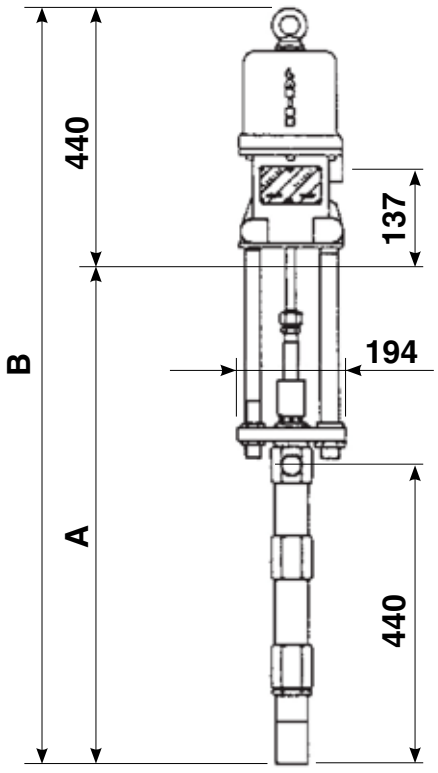
Other parts of the pump
Motor casing and motor piston: aluminium

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.



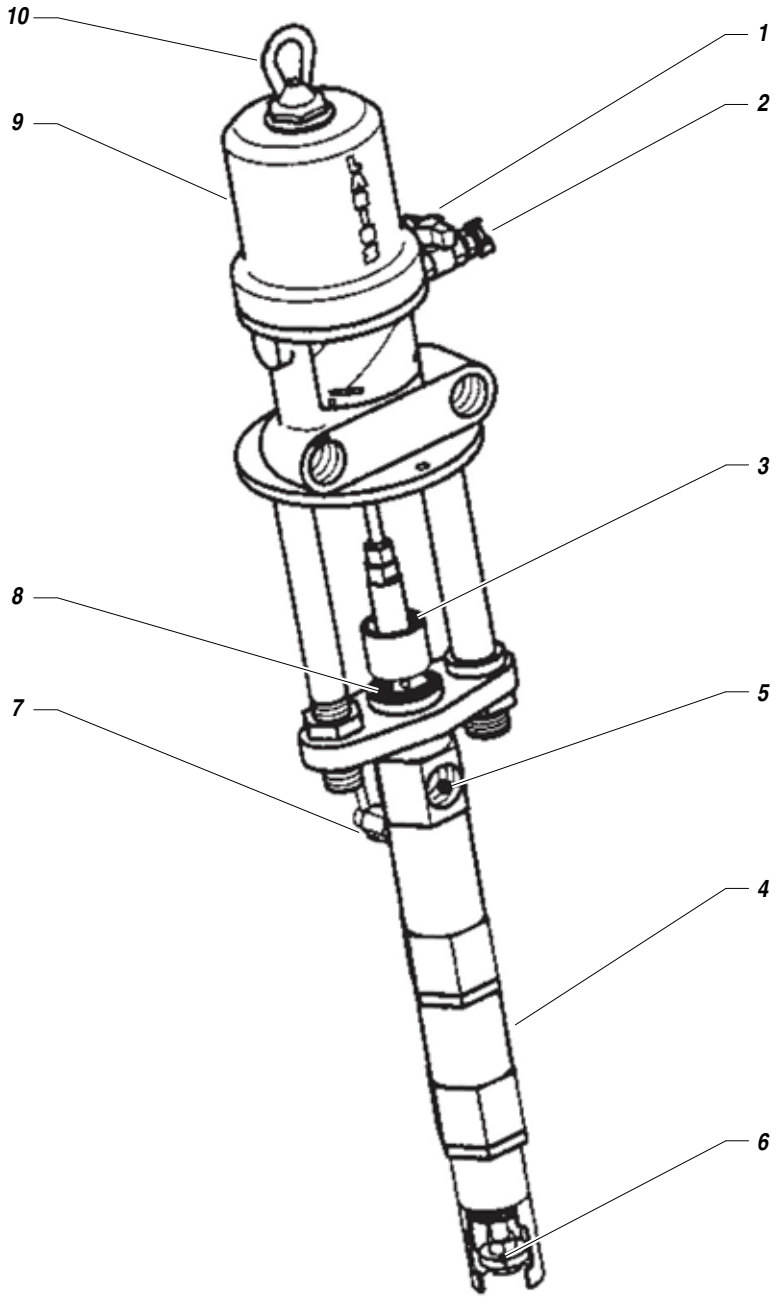






Pump	A	B	Weight
Long	870	1310	20 Kg
Medium	640	1080	19 Kg

C DESCRIPTION OF THE EQUIPMENT



POS.	*Description*
1	Opening - Closing valve for air passage
2	Pump feed air inlet
3	Wet cup
4	Material pumping group
5	Material outlet

POS.	*Description*
6	Material shovel plate
7	Bleeder valve
8	Upper packing nut
9	Pneumatic motor
10	Eyebolt to fasten the pump for transport

D TRANSPORT AND UNPACKING

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

E SAFETY RULES

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

  THE BEHAVIOUR OF THE EMPLOYEES SHALL STRICTLY COMPLY WITH THE ACCIDENT PREVENTION AND ALSO ENVIRONMENTAL REGULATIONS IN FORCE IN THE COUNTRY WHERE THE PLANT IS INSTALLED AND USED.

Read carefully and entirely the following instructions before using the product. Please save these instructions in a safe place.

The unauthorised tampering/replacement of one or more parts composing the machine, the use of accessories, tools, expendable materials other than those recommended by the Manufacturer can be a danger of accident.
The Manufacturer will be relieved from tort and criminal liability.

- KEEP YOUR WORK PLACE CLEAN AND TIDY. DISORDER WHERE YOU ARE WORKING CREATES A POTENTIAL RISK OF ACCIDENTS.
- ALWAYS KEEP PROPER BALANCE AVOIDING UNUSUAL STANCE.
- BEFORE USING THE TOOL, ENSURE THERE ARE NOT DAMAGED PARTS AND THE MACHINE CAN WORK PROPERLY.
- ALWAYS FOLLOW THE INSTRUCTIONS ABOUT SAFETY AND THE REGULATIONS IN FORCE.
- KEEP THOSE WHO ARE NOT RESPONSIBLE FOR THE EQUIPMENT OUT OF THE WORK AREA.
- **NEVER** EXCEED THE MAXIMUM WORKING PRESSURE INDICATED.
- **NEVER** POINT THE SPRAY GUN AT YOURSELVES OR AT OTHER PEOPLE. THE CONTACT WITH THE CASTING CAN CAUSE SERIOUS INJURIES.
- IN CASE OF INJURIES CAUSED BY THE GUN CASTING, SEEK IMMEDIATE MEDICAL ADVICE SPECIFYING THE TYPE OF THE PRODUCT INJECTED. **NEVER** UNDERVALUE A WOUND CAUSED BY THE INJECTION OF A FLUID.
- ALWAYS 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.

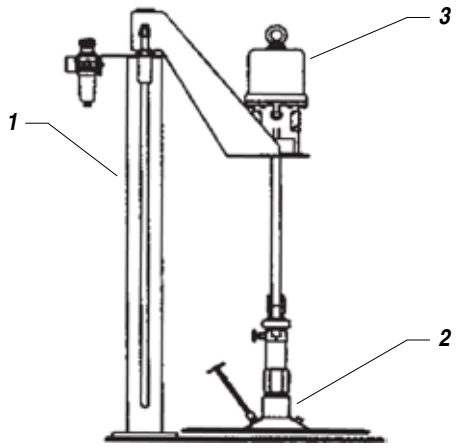
Avoid approaching too much to the pump piston rod when the pump is working or under pressure. A sudden movement of the piston rod can cause wounds or finger squashing.

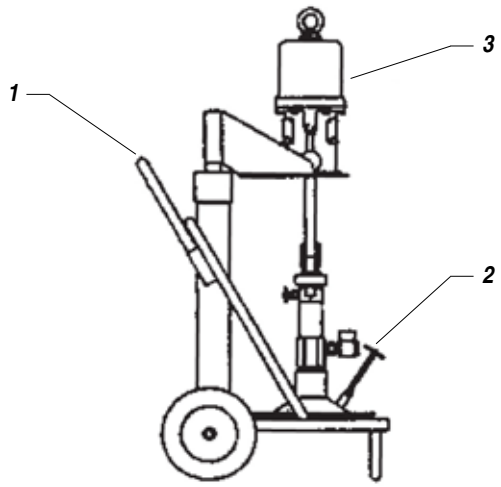
IF THE PRODUCT TO BE USED IS TOXIC, AVOID INHALATION AND CONTACT BY USING PROTECTION GLOVES, GOGGLES AND PROPER FACE SHIELDS.

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

F TYPICAL INSTALLATION

GHIBLI PUMP 24 :1 DE is usually supplied complete with shovel plate and fastened on a double post ram (*see illustration*). The double post ram allows to suck the product directly from the drum and to replace the drum quickly. The shovel plate, fastened at the base of the pump, compresses the material ensuring a constant flow of product. In addition, it protects the material not yet sucked in against powder and moisture and also against drying which is caused by the contact with air.





Pos.	Code	Description
1	510500	Double post ram
2	510776	Shovel plate for 200 litres drums
3	96870	GHIBLI pump 24:1
4	510600	Double post ram mounted on trolley
5	510770	Shovel plate for 30 litres drums
6	96805	Medium GHIBLI pump 24:1

G SETTING-UP

PUMP FASTENING ON THE RAM
For the correct fastening of the pump on the ram, use the holes placed on the base of the pneumatic motor.

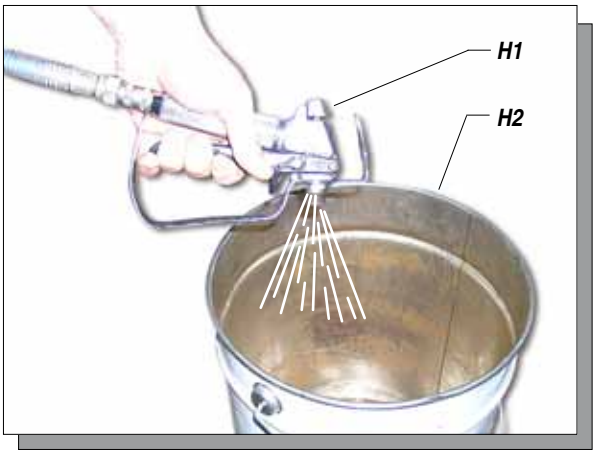
CONNECTION TO THE FEED AIR
For pump feed use a hose with an internal diameter no lower than 10 mm.

Install at the pump inlet an air pressure regulator *(it is suggested complete with condensate filter and lubricator).* The outlet pressure of the material is 24 times the inlet pressure of the pump feed air. Therefore, it is extremely important to adjust the value of the feed air pressure.

CONNECTION OF THE MATERIAL OUTLET HOSE
Connect the high pressure hose at the outlet of the pump.
It is recommended to tighten the fittings.

- In case of difficult suction of the pump, slowly open the bleeder valve and close it when some material comes out.

- The pump has been adjusted at our factory with light mineral oil and a part of it could be left inside the pumping element. Point the spray gun (**H1**) or the delivery valve at the tank (**H2**) and drain the product left inside the pump till the material to be used has come out.



H WORKING

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

Always avoid working the machine with the vacuum pump: this operation could damage the pneumatic motor and the seals.

- Dip the material pumping hose into the product tank *(if the pump is fixed on the double post ram, follow the procedure described in the manual of use and maintenance of the double post ram)*.

- Make the compressed air flow into the pump. It is advisable to adjust air pressure to minimum necessary for its continuous working.

- When the product chamber is full, pump will start working and then will stop. Pump will start working again any time the trigger of the spray gun is pressed or the delivery valve is open.

- In case of long inactivity during the use with the plant *(for example, all night long at the end of the working day)*, ensure the product you are using can be left inside the pump and the different pipes without drying.
  In this case, it is enough to stop the air supply to the pump and drain the residual pressure in the circuit acting on the delivery valve or on the pump bleeder valve.

I CLEANING AT THE END OF THE WORK

By "cleaning at the end of the work" is meant the cleaning to carry out in case of use with a different product or if a long period of storage is foreseen.

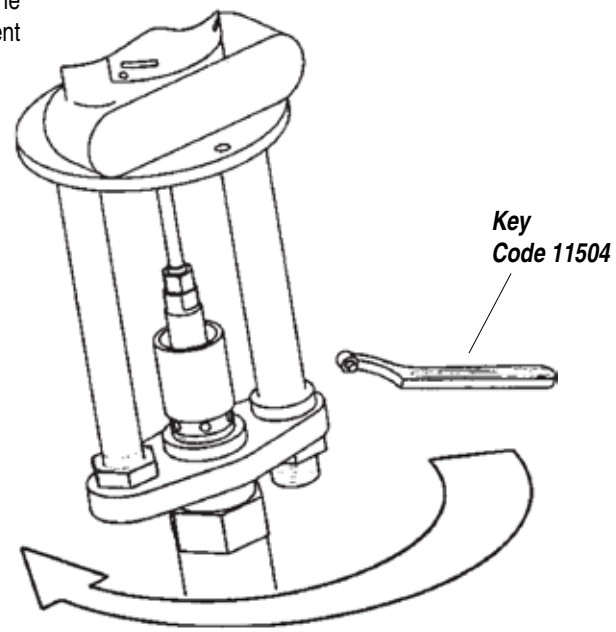
- Stop the air supply to the pump.
- Dip the material pumping hose into the washing solvent tank *(check its chemical compatibility with the product being used)*.
- Make compressed air flow into the pump. It is advisable to adjust the air pressure to the minimum value necessary to its continuous working.
- Point the spray gun or the delivery valve at a container and drain all the product left inside the pump till a clean solvent comes out.
- Now, stop the air supply to the pump and drain the residual pressure.
- In case of long inactivity, the operations of sucking and leaving light mineral oil inside the pumping element are suggested.

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

J 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.
- To tighten the packing nut use wrench supplied *(code. 11504)*. 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.
- To prevent the product from drying up on the piston rod, refill the packing nut with lubricant.
- Check periodically the air supply to the pump. Ensure the air is always clean and lubricated.



K PROBLEMS AND SOLUTION

Problem	Possible cause	Solution
• **The pump does not start**	• Feed air not sufficient; • Outlet product line clogged; • Dried product inside the pumping element; • Pneumatic motor blocked in the cycle reversal position; • Parts failure of the pneumatic motor;	• Check on the air supply line. Increase the diameter of the feed hose; • Clean. Disconnect the outlet hose of the product, feed the pump at the minimum pressure and verity if the pump starts without the outlet hose; • Disassemble the pumping group and clean; • Reduce feed air pressure; • Manually reset the pneumatic motor; • Disassemble the motor and verify;
• **Accelerate working and no pressure of the pump**	• There is no product; • The pump sucks air; • Feed air not sufficient; • Gaskets of the pumping rod worn; • Suction valve worn or partially clogged; • Outlet valve worn or partially clogged;	• Add the product; • Open the bleeder valve. For the ram version, read the instructions contained in the relevant manual; • Increase feed air pressure; • Replace the lower gaskets; • Disassemble the suction valve. Clean and/or replace, if possible, the parts worn; • Disassemble the outlet valve. Clean and/or replace, if possibile, the parts worn;
• **The pump works, but the flow of product is not sufficient**	• Suction valve worn or partially clogged; • Outlet product line clogged; • The feed air pressure is too low;	• Disassemble the suction valve. Clean and/or replace, if possible, the parts worn; • Clean. Disconnect the outlet hose of the product, feed the pump at the minimum pressure and verity if delivery increases without the outlet hose; • 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.

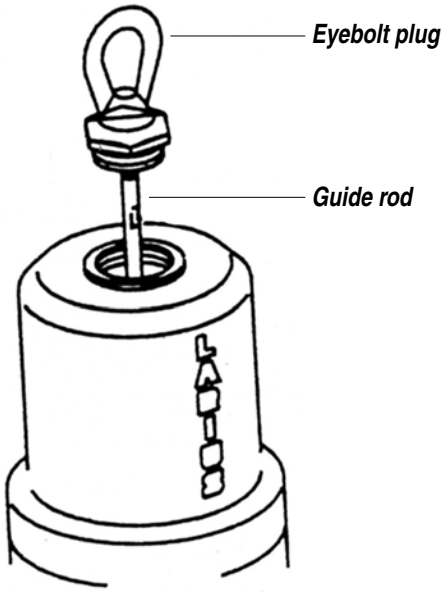
Always close the compressed air supply and release the pressure in the plant before performing any check or replacement of parts of the pump.

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 (*see on page 2*). 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 eyebolt plug and pull it upwards together with the guide rod so allowing the manual release of the stroke reversal group.
- Screw again the plug.



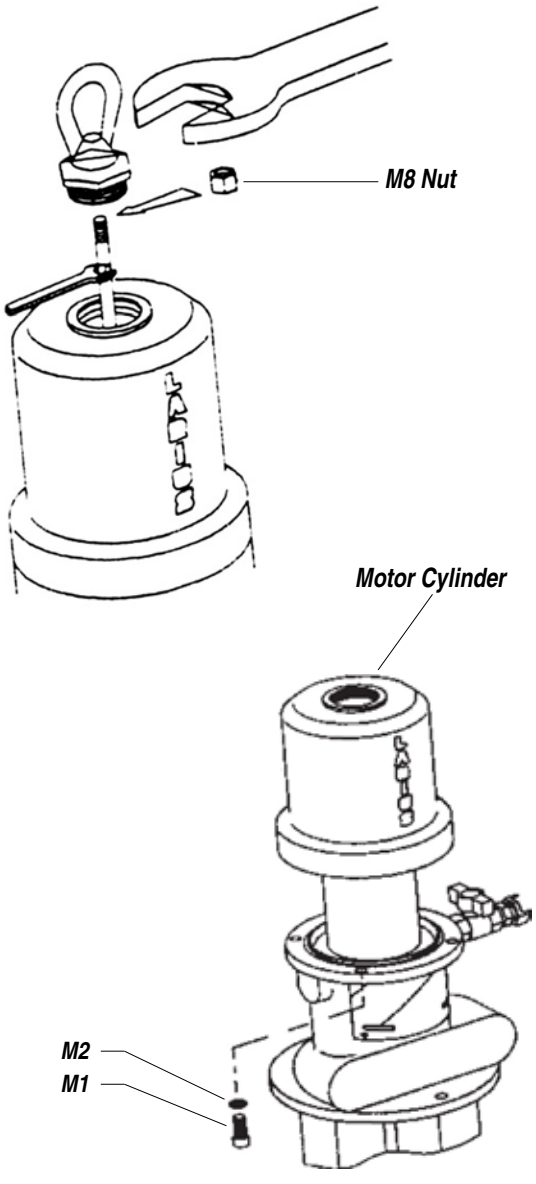
M DISASSEMBLY OF THE PNEUMATIC MOTOR

Close the compressed air supply to the pump and release the residual pressure in the plant.

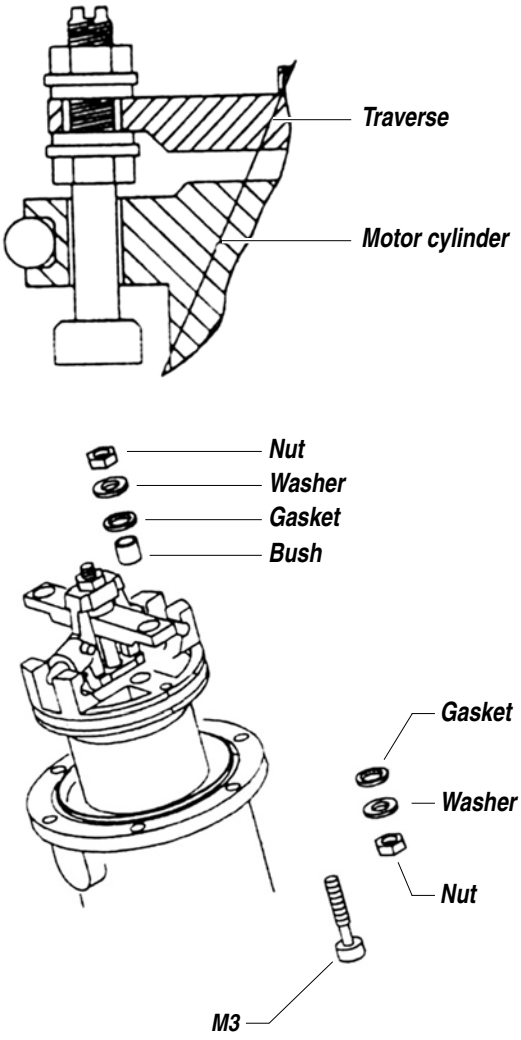
- Unscrew the eyebolt plug and pull it upwards together with the guide rod.
- Hold the guide rod and remove the plug (*using two wrenches*).

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

- Remove the screws (**M1**) and the washers (**M2**).



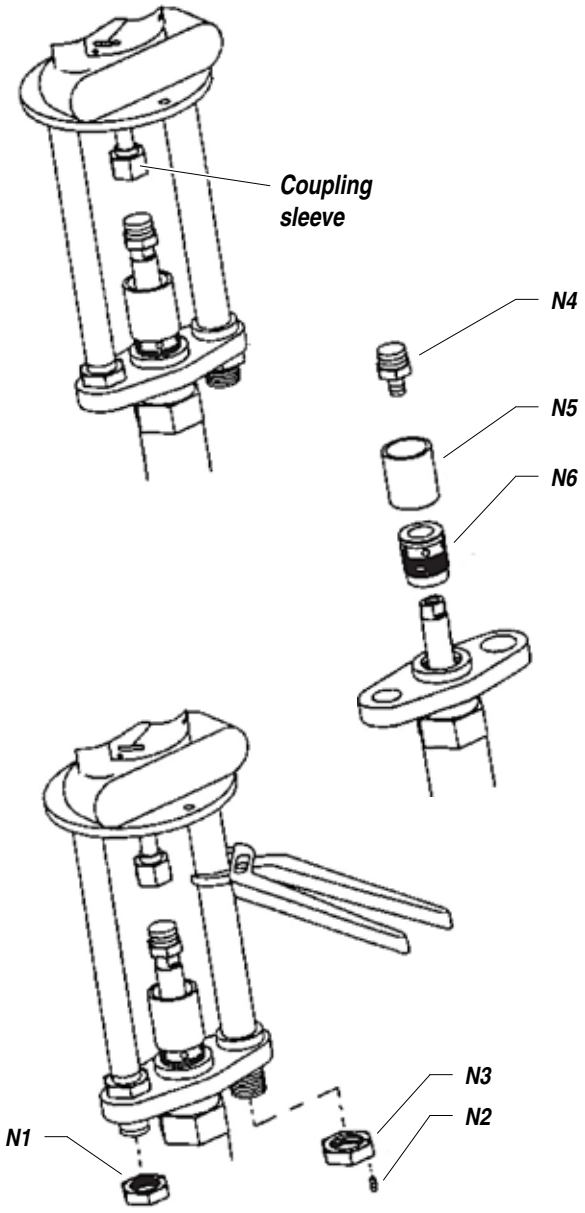
- Carefully extract the motor cylinder fom the pump.
- Check the condition of each part of the motor.
- For any eventual replacement of the screws (**M3**) of the traverse, for their reassembly and correct adjustment see the drawing below and the exploded view on page 14.



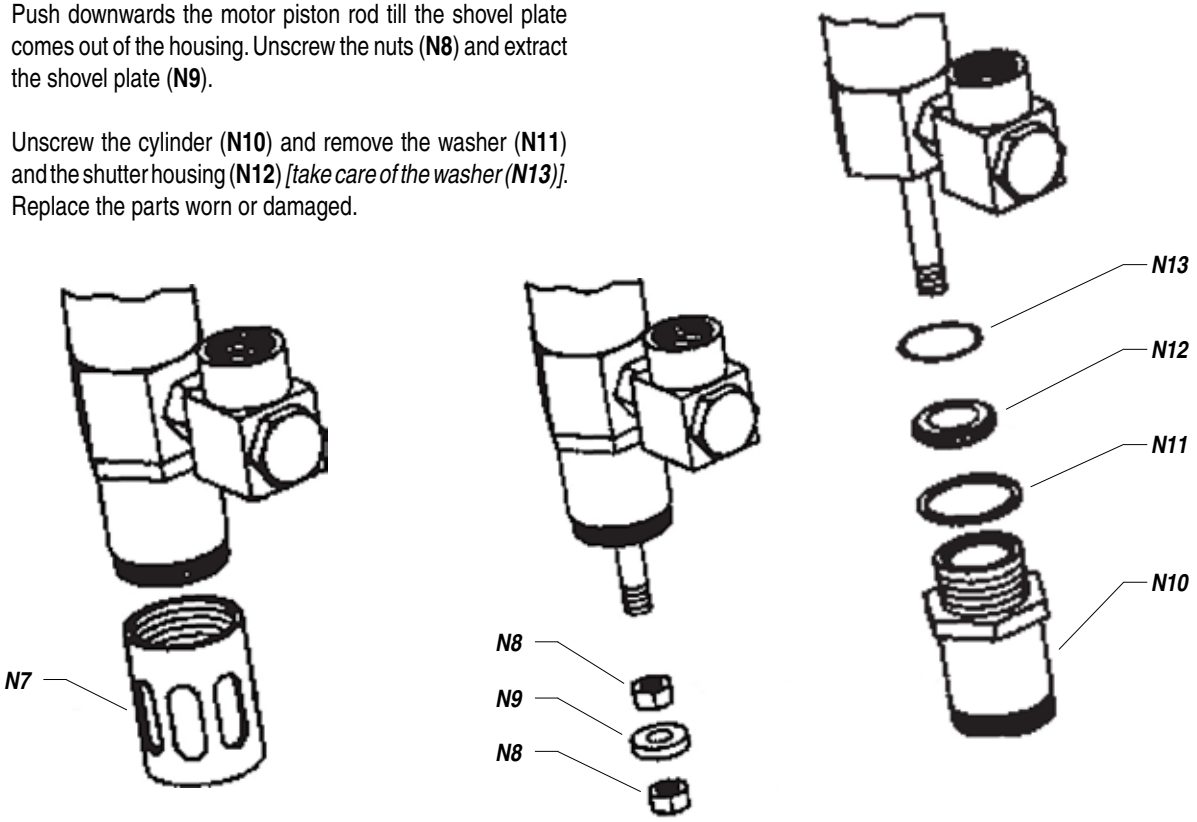
N DISASSEMBLY OF THE PUMPING GROUP

Always close the compressed air supply and release the pressure in the plant beforecarrying out the disassembly of the pumping group. In case the product being used is toxic, follow the procedure of cleaning described on page 8 to avoid the contact with the product during the disassembly of the pumping group.

- Disconnect the high pressure hose at the outlet of the pump.
- Unscrew the coupling sleeve so as to disconnect the pumping group from the motor.
- Unscrew the nut (**N1**), the security dowel (**N2**) and the nut(**N3**) *[it is suggested to hold the support tube with pliers when unscrewing the nut (**N3**)]*.
- Unscrew the fitting(**N4**) from the piston rod.
- Remove the cup (**N5**) and unscrew the packing nut (**N6**).



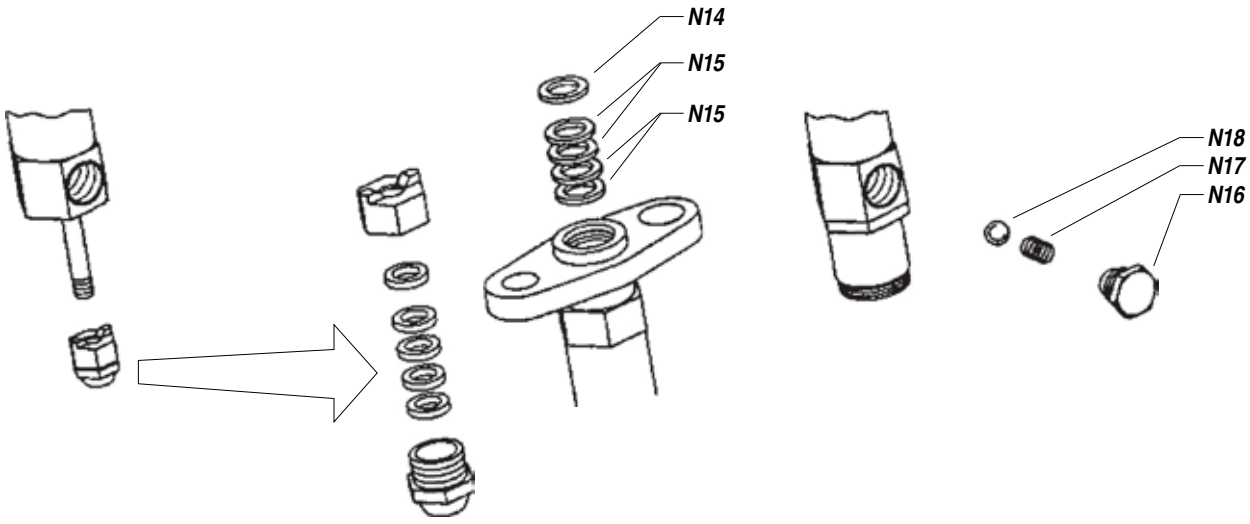
- Unscrew the injection tube (**N7**).
- Push downwards the motor piston rod till the shovel plate comes out of the housing. Unscrew the nuts (**N8**) and extract the shovel plate (**N9**).
- Unscrew the cylinder (**N10**) and remove the washer (**N11**) and the shutter housing (**N12**) *[take care of the washer (**N13**)]*. Replace the parts worn or damaged.



- Extract the shutter complete group from the rod *(disassemble the shutter group and replace the gaskets - when reassembling refer to the exploded views on pages 14 and 16)*.
- Extract the piston rod from the bottom.
- Remove the gasket (**N14**) and the gaskets (**N15**) (only in case of the their replacement). When reassembling refer to the exploded views on page 14 and 16.

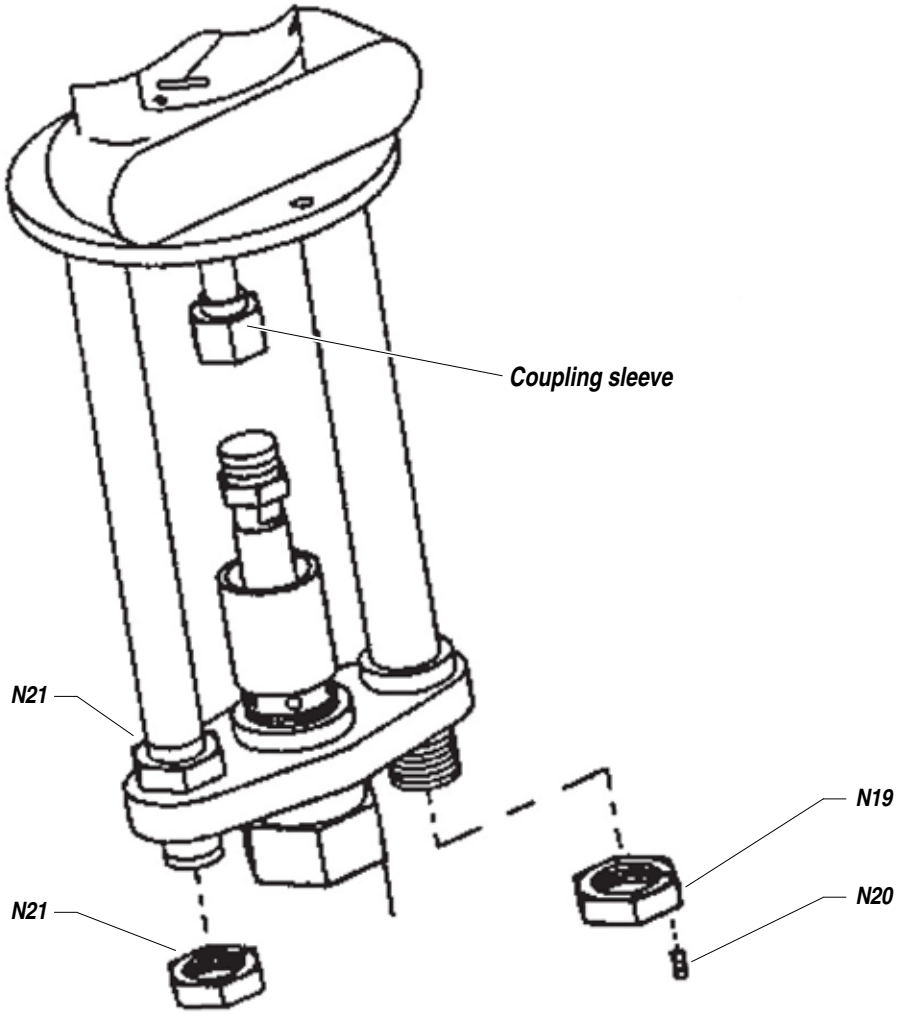
Disassembly of the outlet valve:

- Unscrew the plug (**N16**) and take out the spring (**N17**) and the ball (**N18**) *(replace the parts worn)*.
- Reassemble the pumping group following the procedure above described in the reserve order.



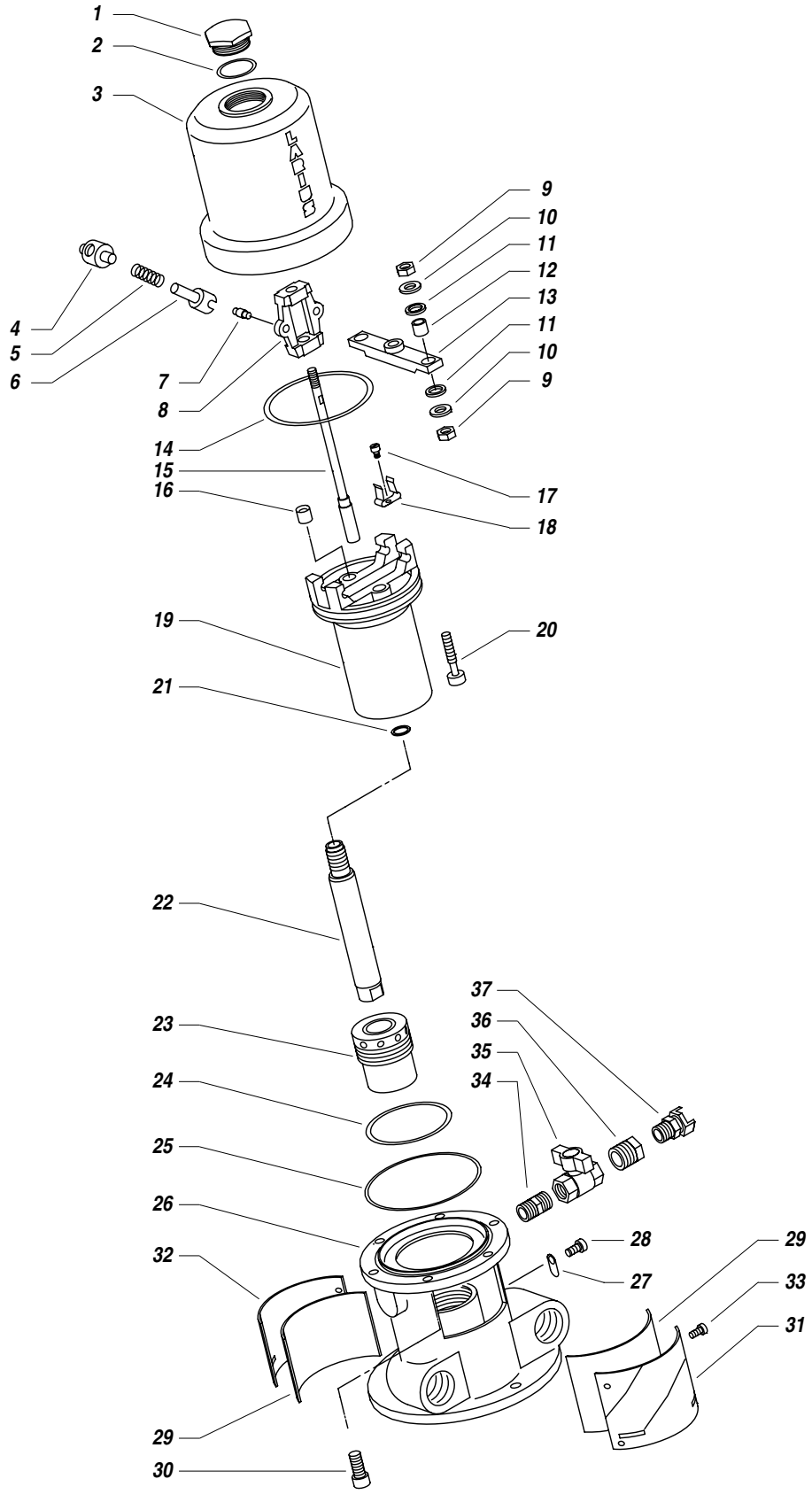
When fastening the pumping group to the pneumatic motor it is essential to observe the alignment and the correct centering. In order to obtain these conditions, proceed as follows:

- Screw the coupling sleeve without forcing.
- Tighten the nut (**N19**) *[and lock the dowel (**N20**)]*.
- Set the two nuts (**N21**) so as to align perfectly the housing.
- Tighten the two nuts (**N21**) and the coupling sleeve.



O EXPLODED VIEW OF PNEUMATIC MOTOR

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



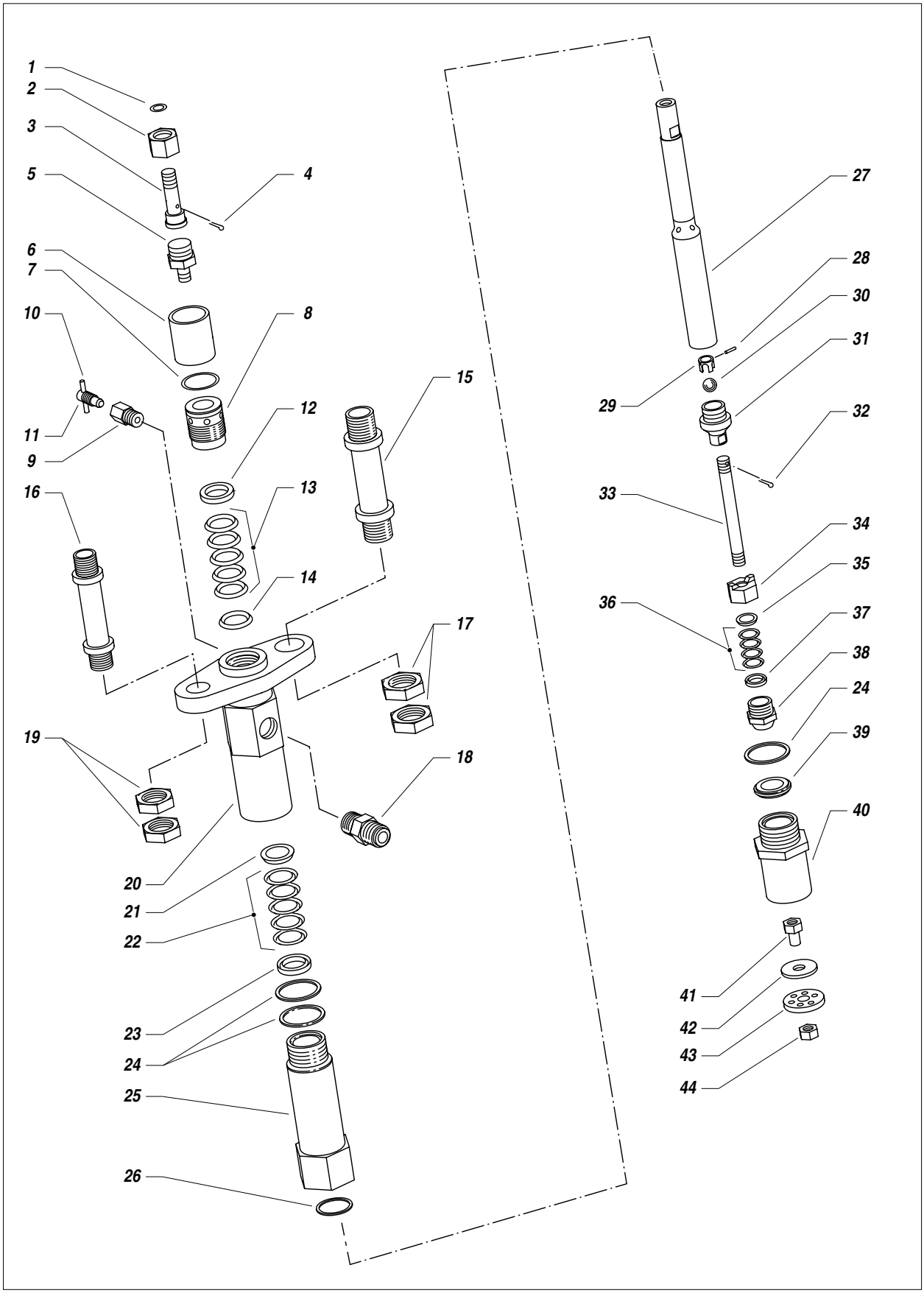
Pos.	Code	Description	Q.ty	Pos.	Code	Description	Q.ty
	96816	**Complete motor**	-	**19**	96013	Motor piston	1
1	96001	Plug	1	**20 ****	96027	Complete valve screw	2
2	95075	O-Ring	1	**21**	33031	Washer	1
3	96003	Motor cylinder	1	**22**	96016	Piston rod	1
4	96005	Roller	2	**23**	96017	Complete bush	1
5	96006	Spring	2	**24***	96020	O-Ring	1
6	96007	Fork	2	**25**	96018	O-Ring	1
7	96024	Fork pin	2	**26**	96704	Motor support	1
8	96008	Rocker	1	**27**	96210	Ground plate	1
9**	4108	Nut	4	**28**	96211	Screw	2
10**	32024	Washer	4	**29**	96022/1	Felt gasket	2
11 **	96111	Gasket	4	**30**	96031	Screw	6
12**	96112	Bush	2	**31**	96022	Front name plate	1
13	96110	Traverse	1	**32**	96898	Back name plate	1
14*	96012	O-Ring	1	**33**	96028	Screw	12
15	96010	Guide rod	1	**34**	96252	Nipple	1
16 **	96009	Rubber valve	2	**35**	96253	Ball valve	1
17	96025	Screw	2	**36**	96261	Reduction	1
18	96011	Traverse guide spring	2	**37**	10103	Bayonet connection 3/8"	1

***Motor gaskets kit Code 40050**
****Traverse screws kit Code 40401**

English

P EXPLODED VIEW OF PUMPING STANDARD GROUP

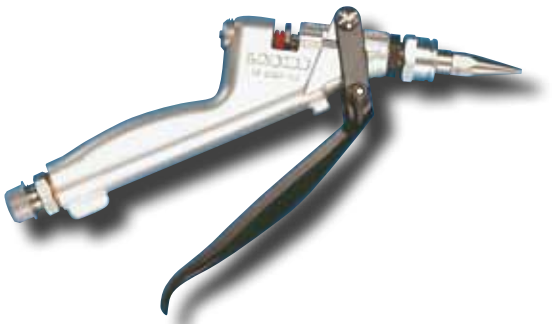
WARNING: always indicate code and quantity for each part required.



Pos.	Code	Description	Q.ty	Pos.	Code	Description	Q.ty
-	**96830**	**Medium complete pumping element**	-	**21**	96876	Male ring for middle gaskets	1
				22*	**96877**	**Package of middle gaskets**	1
-	**96950**	**Long complete pumping element**	-	**23**	96878	Female ring for middle gaskets	1
				24*	96883	Gasket seal	3
1	96073	O-Ring	1	**25**	96897	Housing for lower gaskets	1
2	96860	Connection sleeve	1	**26***	96889	Gasket for suction valve	1
3	96712	Medium joining extension cable	1	**27**	96874	Piston rod	1
3	96803	Long joining extension cable	1	**28**	96880	Ball clamp pin	1
4	3323	Split pin	1	**29**	96879	Ball guide	1
5	96820	Connection part for the motor	1	**30**	4060	Ball 5/8"	1
6	91001/1	Lubricant container cup	1	**31**	96045	Connector for suction valve	1
7	3429	O-Ring	1	**32***	96882	Split pin	1
8	96864	Packing nut	1	**33**	96885	Stem for material injection	1
9	95721/2	Bushing for discharge cap	1	**34**	96845	Gasket blocking nut	1
10	95721/1	Drainage plug	1	**35**	98460	Male ring for blocking lower gaskets	1
11	95721/3	Elastic pin	1				
12	96868	Female ring for upper gaskets	1	**36***	**96869**	**Complete lower seals**	1
13*	**96867**	**Complete upper seals**	1	**37**	98462	Female ring for blocking lower gaskets	1
14	96866	Male ring for upper gaskets	1				
15	96925	1” tie-rod for medium pump	1	**38**	96887	Suction valve	1
15	96808	1” tie-rod for long pump	1	**39**	96853	Suction valve seat	1
16	96905	3/4” tie-rod for medium pump	1	**40**	96894	Material entry cylinder	1
16	96806	3/4” tie-rod for long pump	1	**41**	95939	Follower plate guide bush	1
17	96842	Seal 1"	2	**42**	96891	Follower plate end stop	1
18	3144	Material outlet pipe fitting 1/2"	1	**43**	96892	Follower plate	1
19	96839	Seal 3/4"	2	**44**	96893	Closing nut	1
20	96895	Housing for upper gaskets	1				

***Gasket kit - Code 40273**

Q ACCESSORIES



Art. 17500: manual revolving SPRAY GUN EXT 85 M16x1,5
Available fittings:
Rif. 17519 Fixed fitting 3/8"
Rif. 17520 Fixed fitting 1/4"
Rif. 17521 Fixed fitting M16X1,5

Art. 11702: Manual SPRAY GUN LA 95 for pneumatic sealing
Art. 11700: Manual SPRAY GUN LA 95 for sealing

Art. 11750: SPRAY GUN LA 95 inox for automatic sealing

SPRAY GUN NOZZLE FOR EXTRUSION
Art. 17531: 1,5 mm
Art. 17532: 2,0 mm
Art. 17533: 2,5 mm

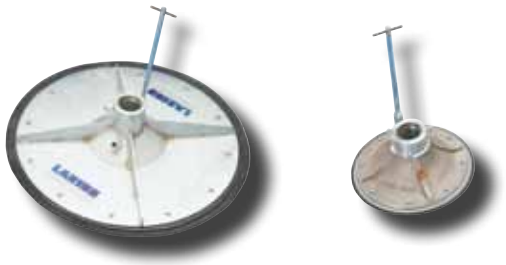
Art. 40273 - GASKETS KIT

PNEUMATIC HOIST
complete with compressed air regulators and pressure gauges.
Art. 510500: Pneumatic hoist for drums from 30 to max 200 litres with double-effect single cylinder.
Art. 510600: Pneumatic hoist for drums from 30 to max 60 litres with trolley and double-effect single cylinder.
Art. 510650: Pneumatic light hoist for drums for max 30 litres drums with double-effect single cylinder.
Art. 510090: Twin column pneumatic hoist for max 60 litres drums with double-effect cylinders.
Art. 510000: Twin column pneumatic hoist for max 200 litres drums with double-effect cylinders.

Art. 7000: High pressure REGULATOR for recirculation
Art. 7030: High pressure REGULATOR
Art. 7050: REGULATOR for mastics

Art. 7130: Automatic REGULATOR
for mastics 10-130bar

UGELLO PISTOLA EXT 85
Art. 8848: Nozzle for trimming
Art. 8830: Joint nozzle
Art. 8824: ø 6 nozzle
Art. 8822: ø 8 nozzle
Art. 8826: ø 10 nozzle
Art. 8828: ø 12 nozzle
Art. 8846: Flat two-sided delivery nozzle
Art. 8832: Double spatula two-sided delivery nozzle
Art. 8838: Flat one-side delivery nozzle
Art. 8836: Triple spatula four-sided delivery nozzle
Art. 8834: Double spatula four-sided delivery nozzle



EXTRUSION DISCS
Art. 510776: Extrusion disc with single flat gasket for lt.200 drums series Ghibli 24:1-Nova 55:1
Art. 510770: Extrusion disc with single flat gasket for lt.30 drums series Ghibli 24:1

EXTRUSION REGULATORS KIT
Art. 40403: Low pressure flow regulator
Art. 40404: Low pressure flow regulator for dense products
Art. 40340: Regulator kit for high pressure recirculation Rif. 7000
Art. 40342: High pressure flow regulator kit Rif. 7030
Art. 40341: Regulator kit for mastics Rif. 7050
Art. 40343: Gaskets kit for pneumatic regulator Rif. 7130

PNEUMATIC PUMPS FOR EXTRUSION

OMEGA 28:1 **Rif. 7458**
OMEGA 40:1 **Rif. 7470**

TWIN COLUM HOIST + extrusion disc
Rif. K500010 GHIBLI 24:1

VEGA 45:1 Long split version **Rif. 91950**
VEGA 45:1 Medium split version **Rif. 91951**

NOVA 55:1 **Rif. 95900**

TWIN COLUM HOIST + extrusion disc
Rif. K500050 OMEGA 28:1
Rif. K500070 OMEGA 40:1
Rif. K500040 NOVA 55:1

VEGA 5:1 Vinyl glue **Rif. 91550**

MANUFACTURER:

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