

# DALI

# OPERATING AND MAINTENANCE INSTRUCTIONS



**LARIUS**<sup>®</sup>  
PAINT SPRAYING EQUIPMENT

ENGLISH

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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.

# LARIUS

## ELECTRIC DIAPHRAGM PUMP

|  |      |  |      |
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|   |   |   |  |   |
|---|---|---|--|---|
|    |            |  |  |    |
| 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 is obligatory to wear suitable clothing as gloves, goggles and face shield.       | It indicates important recommendations about disposal and recycling 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

The **LARIUS DALÌ** unit is defined as an “electric diaphragm pump”. An electric diaphragm pump is used for high pressure paint spraying without air (known as “airless”).

The pump is powered by an electric (internal combustion) motor coupled with a cam shaft. The shaft acts on the hydraulic piston as it pumps oil from the hydraulic case and sends the suction diaphragm into fibrillation. When the diaphragm moves, it creates

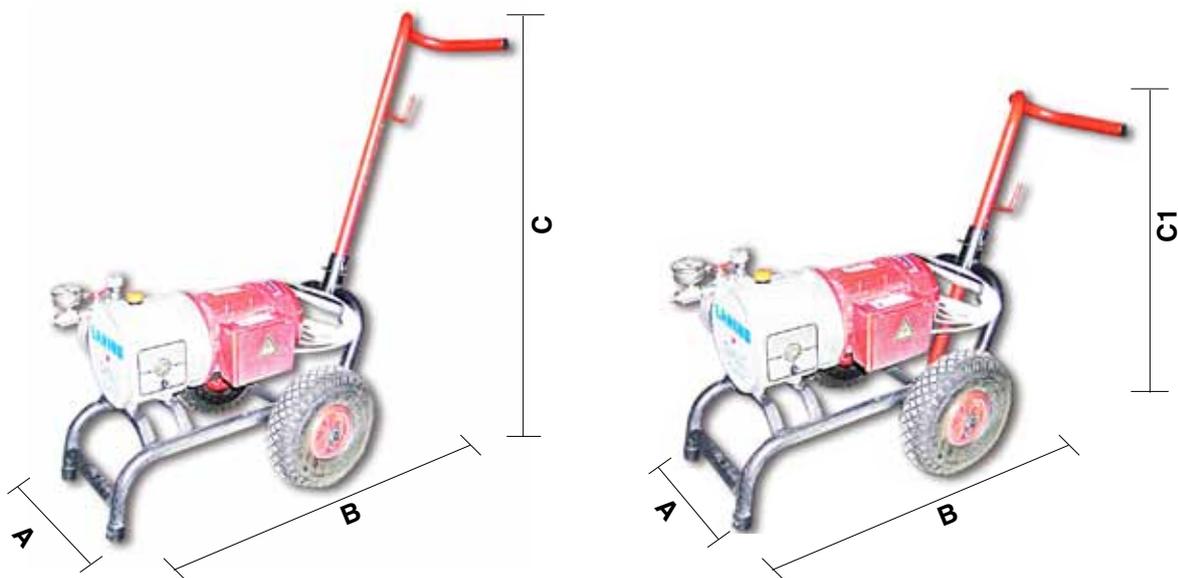
a vacuum. The product is sucked up, pushed towards the pump outlet and sent to the guns through the flexible hose. A hydraulic valve on the hydraulic case head allows setting and checking the pressure of the paint product at the pump outlet. A second hydraulic safety valve to avoid over-pressure, ensures total equipment reliability.

## B TECHNICAL DATA

|   | DALÌ                               |
|---|------------------------------------|
| SUPPLY (single-phase, Three-phase internal combustion supply, petrol-diesel)* | 220V 50Hz / 110V 60Hz<br>380V 50Hz |
| MOTOR POWER Mono-threephase<br>Internal combustion                            | 1,1 kW<br>3 HP                     |
| MAX. WORKING PRESSURE   | 200 bar 2900 psi                   |
| MAX. DELIVERY   | 4 L/min                            |
| MATERIAL OUTLET   | M16 x 1,5 (M)                      |
| WEIGHT  | 38 Kg                              |
| LEVEL OF THE SOUND PRESSURE   | ≤ 65dB(A)                          |
| LENGTH  | (A) 1100 mm                        |
| WIDTH   | (B) 500 mm                         |
| MAXIMUM HEIGHT  | (C) 1000 mm                        |
| MINIMUM HEIGHT  | (C1) 710 mm                        |

\*Available on request with special voltages

PARTS OF THE PUMP IN CONTACT WITH THE MATERIAL Stainless Steel AISI 420B, Teflon, Aluminium.



## C DESCRIPTION OF THE EQUIPMENT



| POS. | Description                    |
|------|--------------------------------|
| 1    | Carriage                       |
| 2    | Electric / combustion motor    |
| 3    | High pressure manometer        |
| 4    | Setting valve                  |
| 5    | Hydraulic oil filling cap      |
| 6    | Hydraulic body                 |
| 7    | Colour body                    |
| 8    | Suction and recirculation tube |
| 9    | High pressure feed tube        |

| POS. | Description                        |
|------|------------------------------------|
| 10   | LARIUS AT 250 gun                  |
| 11   | Fast clean                         |
| 12   | Tools box                          |
| 13   | Recirculation valve                |
| 14   | Recirculation pipe connection      |
| 15   | Feed tube connection               |
| 16   | Adjustable handle                  |
| 17   | Tank (for "vertical Dalì" version) |

## 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 the product is compatible with the materials composing the equipment (pump, spray gun, flexible hose and accessories) with which it can come into contact. Never use paints or solvents containing Halogen Hydrocarbons (as the Methylene Chloride).**



**If these products come into contact with aluminium parts can provoke dangerous chemical reactions with risk of corrosion and explosion.**



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



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

### Electrical safety precautions

- Check the "ON/OFF" switch is on the "OFF" position before connecting the cable to the mains.
- Never carry a plugged-in equipment.
- Disconnect the equipment before storing it and before performing any maintenance operation or replacing of accessories.
- Do not carry the equipment neither unplug it by pulling the electric cable. Protect the cable from heat, oil and sharp edges.
- When the tool is used outdoors, use only an extension cable suited for outdoor use and so marked.



**Never attempt to tamper with the calibre of instruments.**

- Take care when the pumping rod is moving. Stop the machine whenever someone is within its vicinity.
- Repairs of the electrical equipment should only be carried out by skilled personnel, otherwise considerable danger to the user may result.

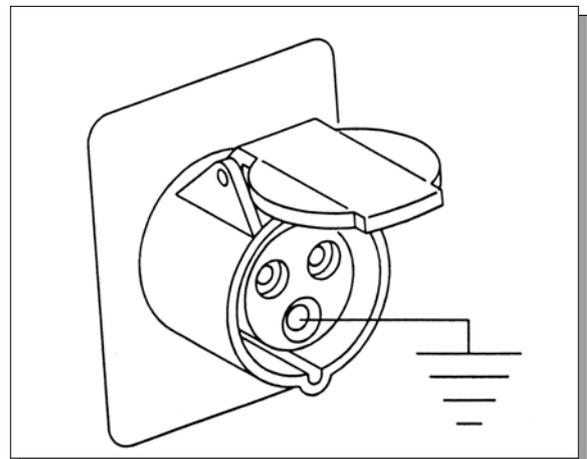
## F SETTING-UP

### CONNECTION OF THE FLEXIBLE HOSE TO THE GUN

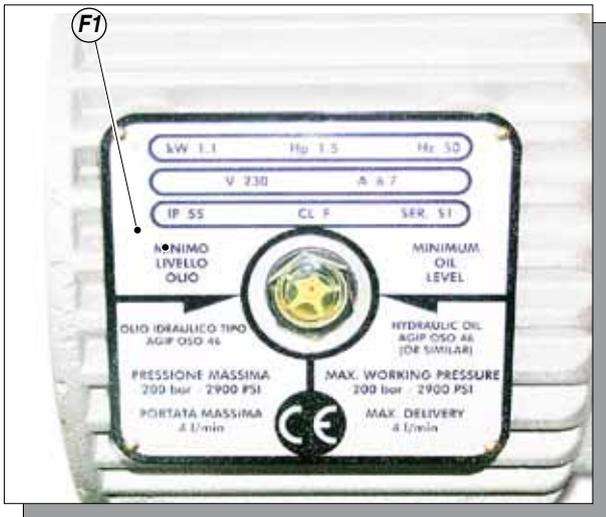
- Connect the high pressure flexible hose to the pump and to the gun, ensuring to tighten the fittings (*the use of two wrenches is suggested*). **NEVER** use sealants on fittings' threads.
- It is recommended to use the hose provided with the standard kit (*ref. 35017*). **NEVER** use a damaged or a repaired flexible hose.

### CHECK ON POWER SUPPLY

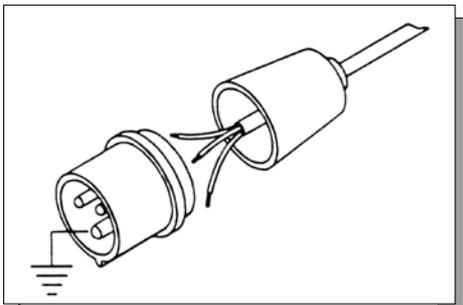
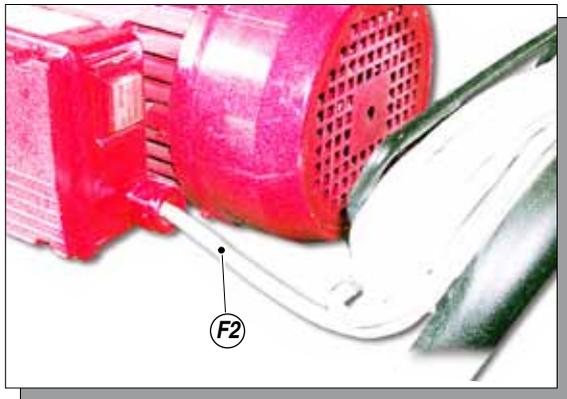
- Check the plant is earthed.



- Check the mains voltage corresponds to the equipment's rating (F1).



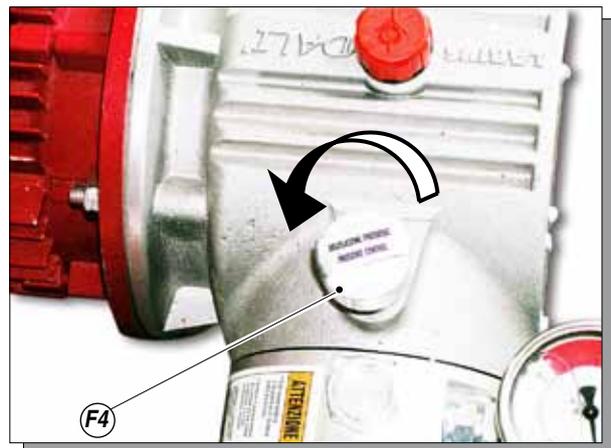
- The supply cable (F2) is provided without plug. Use a plug which guarantees the plant earthing. Only a technician or a skilled person should perform the connection of the plug to the electric cable.



Should anyone use an extension cable between the tooling and the socket, it must have the same characteristics as the cable supplied (minimum diameter of the wire 2.5 mm<sup>2</sup>) with a maximum length of 50 mt. Higher lengths and lower diameters can provoke excessive voltage falls and also an anomalous working of the equipment.

#### CONNECTION OF THE TOOLING TO THE POWER SUPPLY

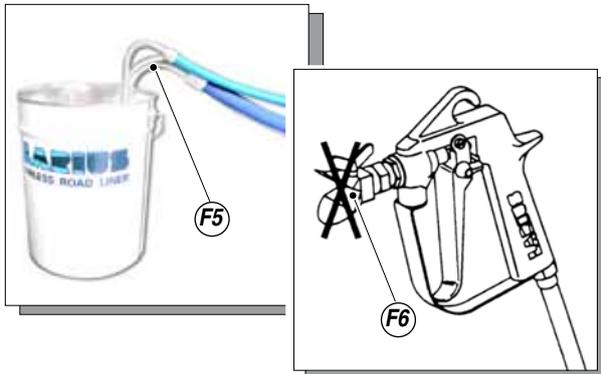
- Check the ON/OFF switch (F3) is on the "OFF" position (0) before connecting the cable to the mains.
- Place the pressure control knob (F4) on the "MIN" position (turn counterclockwise).



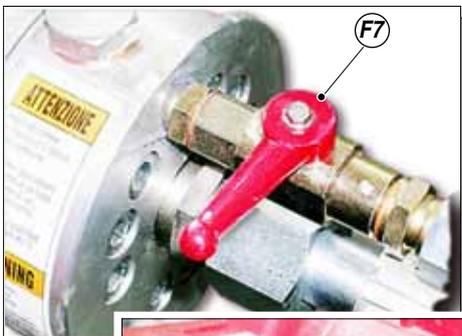
#### WASHING OF THE NEW EQUIPMENT

- The equipment has already been adjusted at our factory with light mineral oil left inside the pumping group as protection. Therefore, wash with diluent before sucking the product.

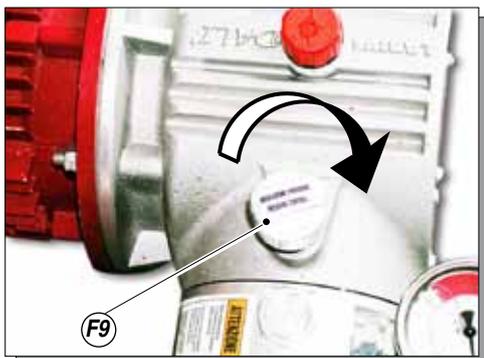
- Lift the suction pipe and dip it into the solvent tank (F5).
- Ensure the gun (F6) is without nozzle.



- Open the re-circulation tap (F7).  
Turn the unit ON-OFF switch (F8) on the "ON" position (I).



- Rotate the pressure setting knob (F9) slightly clockwise so that the machine operates at minimum power.



- Point the gun at a container keeping the trigger pressed (so as to drain the oil inside) till a clean solvent comes out. Now, release the trigger.
- Remove the suction pipe and take away the solvent tank.
- Point the gun at the solvent tank and press the trigger so as to recover the residual solvent.
- As the pump idles, press the ON/OFF switch (F8) on the position "OFF" (0) to stop the tooling.



**Absolutely avoid to spray solvents indoors. In addition, it is recommended to keep away from the pump in order to avoid the contact between the solvent fumes and the electric motor.**

- Now the machine is ready. Should you use water paints, besides the solvent wash, a wash with soapy and then clean water is suggested.
- Insert the gun trigger lock and assemble the nozzle.

#### PREPARATION OF THE PAINT

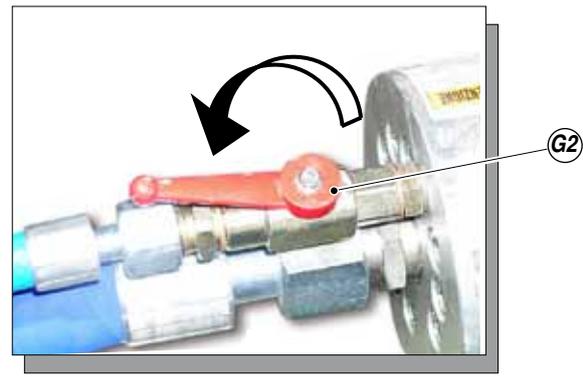
- Make sure the product is suitable to be used with a spray gun.
- Mix and filter the product before using it. For filtration, use **CLOSE-MESH (ref.214)** and **LARGE-MESH (ref.215) LARIUS METEX** braids.



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

Never use products containing halogen hydrocarbons (as *methylene chloride*). If these products come into contact with aluminium parts of the equipment, can provoke dangerous chemical reactions with risk of explosion.

## G WORKING



### START OF THE PAINTING OPERATIONS

- Use the tooling after performing all the **SETTING UP** operations above described.
- Dip the suction pipe (**G1**) into the product tank.
- Open the re-circulation valve (**G2**).
- Press the **ON/OFF** switch of the equipment and turn a little the pressure control knob (**G3**) clockwise, so as the machine works at the idle speed.
- Make sure the product recycles from the return tube (**G4**).
- Close the re-circulation valve.
- At this point the machine will continue to suck the paint product until the delivery hose is completely full. Afterwards, the product will re-circulate automatically.

### SPRAY ADJUSTMENT

- Slowly turn clockwise the pressure control knob to reach the pressure value in order to ensure 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 overthickness 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 gun and the support to be painted and also keep yourselves perpendicular to it.



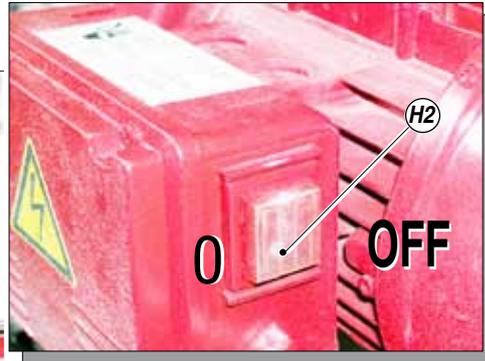
**NEVER** point the spray gun at yourselves or at other people. The contact with the casting can use serious injuries. In case of injuries caused by the gun casting, seek immediate medical advice specifying the type of the product injected.



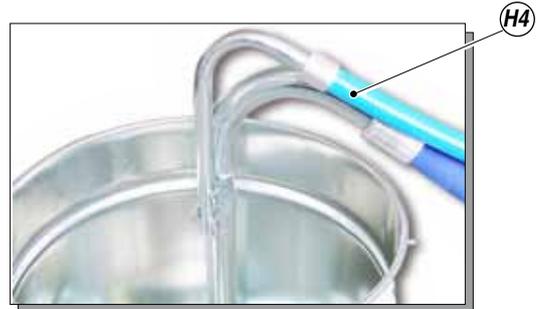
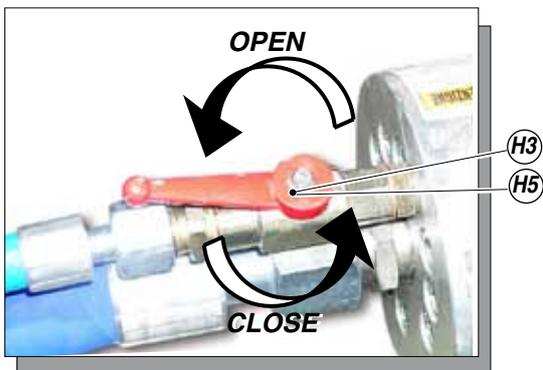
The drain valve is a safety valve too. When working at the maximum pressure available, releasing the gun trigger sudden increases of pressure can occur. In this case, the drain valve opens automatically eliminating part of the product from the recirculating tube. Then it closes so as to go back to the first working conditions.

## H CLEANING AT THE END WORK

- Reduce pressure to the minimum (turn counterclockwise the pressure control knob (H1)).



- Press the ON/OFF switch (H2) placed on the box of the electric motor, to stop the equipment.
- Make sure the solvent recycles the washing fluid from the return tube (H4).
- First release the residual pressure from the gun by holding it pointed down towards the paint container, then open the re-circulation valve (H3).



- Close the re-circulation valve (H5).
- Point the gun at the product tank and, keeping the trigger pressed, release the remaining product till a clean solvent comes out. Now, release the trigger.
- Lift again the suction pipe and remove the solvent tank.
- Now point the gun at the solvent tank and press the trigger so as to recover the residual solvent.
- As the pump starts idling, press the ON/OFF switch to stop the equipment.
- In case of long storage, we recommend you to suck and to leave light mineral oil inside the pumping group and the flexible hose.
- Lift the suction pipe and replace the product tank with that of the solvent (ensure it is compatible with the product being used).
- Unscrew the gun nozzle (do not forget to clean it with solvent!).
- Turn the ON-OFF switch (H2) on the ON position and rotate the pressure setting knob (H1) slightly clockwise.



Follow the washing procedure before using again the equipment.

# I ROUTINE MAINTENANCE

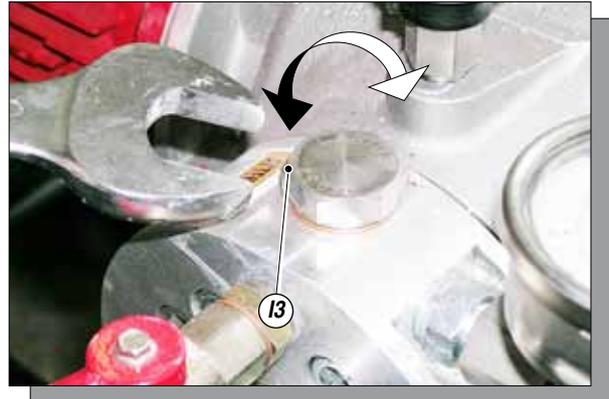
## TOP UP HYDRAULIC OIL

With each start up, check the hydraulic oil level by looking through the gauge (11) on the side of the hydraulic body. If necessary, use “AGIP OSO 46 type hydraulic oil” to top up the level.



## CLEANING THE COMPRESSION VALVE

When the compression valve (13) must be removed, clean it with specific solvents depending on the type of paint used and refit all parts by inverting the removal order.

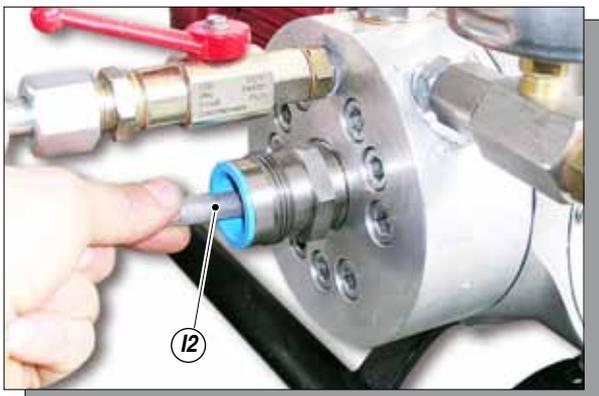


Assemble the components in the correct order.

## RELEASE THE SUCTION VALVE

If the pump malfunctions, release the suction valve fitted on the head of the pump in the following way:

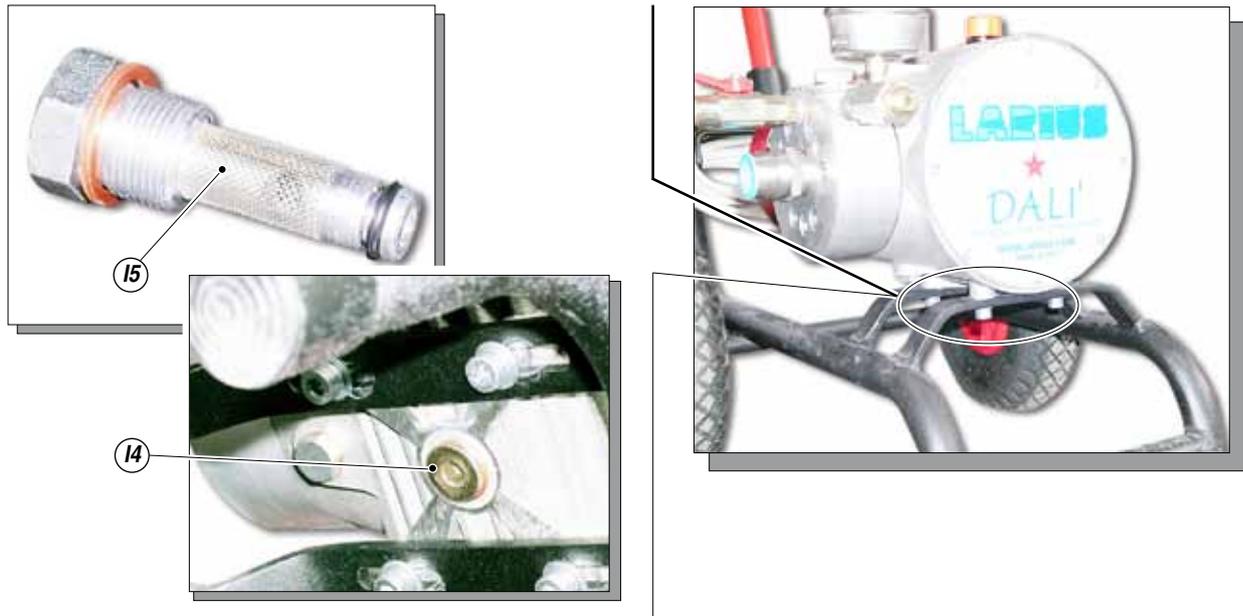
- Remove the suction hose fitting and release the valve by inserting a rigid rod (12) with a diameter of no more than 15 mm.



## REPLACING HYDRAULIC OIL

After operating for 100 hours, replace the oil in the pump;

- Discharge the waste oil through the **plug (14)** fitted at the bottom of the pump casing.
- Clean the seals on the cap and replace it if worn.
- Remove and clean the filter (15) on the side of the pump casing; if necessary, replace the filter and the respective seals.
- Clean and, if necessary, replace the worn seals (15).
- Replace the plug (14).
- Fill the pump with the recommended oil until it reaches the maximum level.
- Then, substitute the oil every 250 hours.



### CLEANING THE MOTOR COOLING FAN GUARD

Clean the motor cooling fan protection guard (16) periodically to ensure the best cooling.



## L WARNING PLATE

|   |   |
|---|---|
| <br><i>Apparecchi per verniciatura</i>   | <br>Paint spraying units  |
| <br><b>ATTENZIONE</b><br><b>UTILIZZARE GRUPPI ELETTROGENI<br/>         CON ALTERNATORE ASINCRONO</b> | <br><b>WARNING</b><br><b>USE POWER UNITS WITH<br/>         ASYNCHRONOUS ALTERNATOR</b> |
| <a href="http://www.larius.com">http: www.larius.com</a>  | e-mail <a href="mailto:larius@larius.com">larius@larius.com</a>   |

## M PROBLEMS AND SOLUTIONS

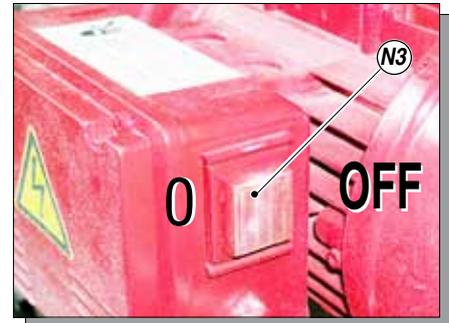
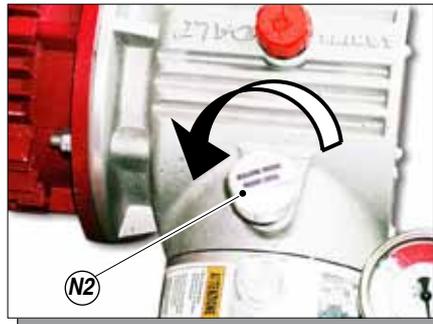
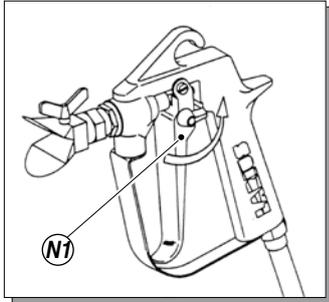
| Problem  | Cause   | Solution  |
|--|---|---|
| <ul style="list-style-type: none"> <li>The equipment does not start</li> </ul>   | <ul style="list-style-type: none"> <li>Lack of voltage;</li> <li>Considerable drops in mains voltage;</li> <li>ON-OFF switch disconnected;</li> <li>Setting valve faulty pressure;</li> <li>Breakdown of motor electric control box;</li> <li>The product is solidified inside the pump;</li> </ul> | <ul style="list-style-type: none"> <li>Check the correct connection to the power supply;</li> <li>Check the extension cable;</li> <li>Ensure the ON-OFF switch is on the "ON" position and turn clockwise the pressure control knob;</li> <li>Verify and replace it, if necessary;</li> <li>Verify and replace it, if necessary;</li> <li>Open the drain valve to release pressure in the circuit and stop the machine. Remove the compression valve and clean it;</li> </ul> |
| <ul style="list-style-type: none"> <li>The equipment does not suck the product</li> </ul>  | <ul style="list-style-type: none"> <li>Suction filter clogged;</li> <li>Suction filter too fine;</li> <li>The equipment sucks air;</li> </ul>   | <ul style="list-style-type: none"> <li>Clean or replace it;</li> <li>Replace it with a larger-mesh filter (<i>with very dense products, remove the filter</i>);</li> <li>Check the suction pipe;</li> </ul>   |
| <ul style="list-style-type: none"> <li>The equipment suck but does not reach the pressure desired</li> </ul>   | <ul style="list-style-type: none"> <li>Lack of product;</li> <li>The equipment sucks air;</li> <li>The drain valve is open;</li> <li>Suction or delivery valve dirty;</li> </ul>  | <ul style="list-style-type: none"> <li>Add the product;</li> <li>Check the suction pipe;</li> <li>Close the drain valve;</li> <li>Disassemble the colour body group;</li> </ul>   |
| <ul style="list-style-type: none"> <li>When pressing the trigger, the pressure lowers considerably</li> </ul>  | <ul style="list-style-type: none"> <li>Nozzle too big or worn;</li> <li>The product is too dense;</li> <li>The filter of the gun-butt is too fine;</li> </ul>   | <ul style="list-style-type: none"> <li>Replace it with a smaller one;</li> <li>Dilute the product, if possible;</li> <li>Replace it with a larger-mesh filter;</li> </ul>   |
| <ul style="list-style-type: none"> <li>The pressure is normal but the product is not atomized.<br/>Leakage from the seal-tightening screw</li> </ul> | <ul style="list-style-type: none"> <li>The nozzle is partially clogged;</li> <li>The product is too dense;</li> <li>The filter of the gun-butt is too fine;</li> </ul>  | <ul style="list-style-type: none"> <li>Clean or replace it;</li> <li>Dilute the product, if possible;</li> <li>Replace it with a larger-mesh filter;</li> </ul>   |
| <ul style="list-style-type: none"> <li>The atomization is imperfect</li> </ul>   | <ul style="list-style-type: none"> <li>The nozzle is worn;</li> </ul>   | <ul style="list-style-type: none"> <li>Replace it;</li> </ul>   |



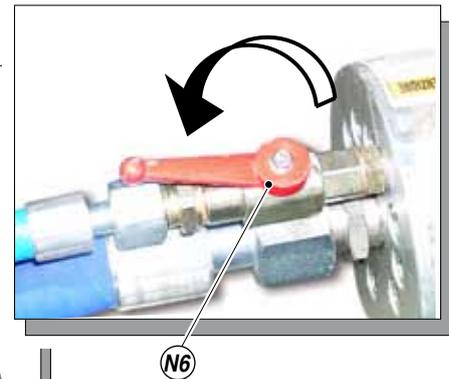
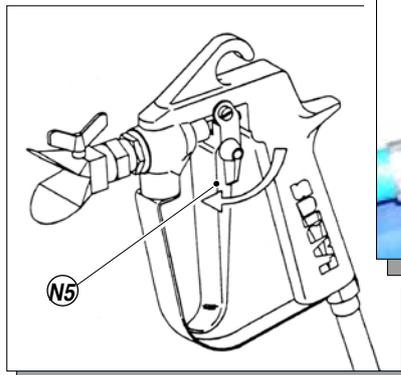
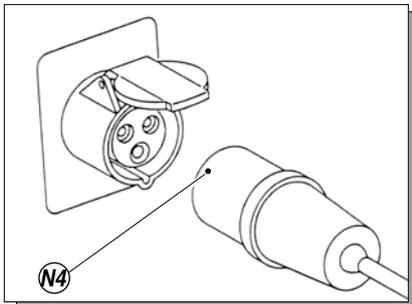
Always close the air compressed supply and unload the plant pressure before performing any check or replacement of pump parts (see "correct procedure of decompression").

## N CORRECT PROCEDURE OF DECOMPRESSION

- Insert the gun clamp (N1).
- Move the ON/OFF switch (N2) to the OFF position (0) to stop the equipment.
- Set the valve (N3) at its minimum pressure setting (turn anticlockwise).



- Disconnect the power supply cable (N4).



- Release the gun clamp (N5). Point the gun at the tank of the product and press the trigger to release pressure. At the end of the operation, insert the gun clamp.
- Open the re-circulation valve (N6) to release residual pressure.



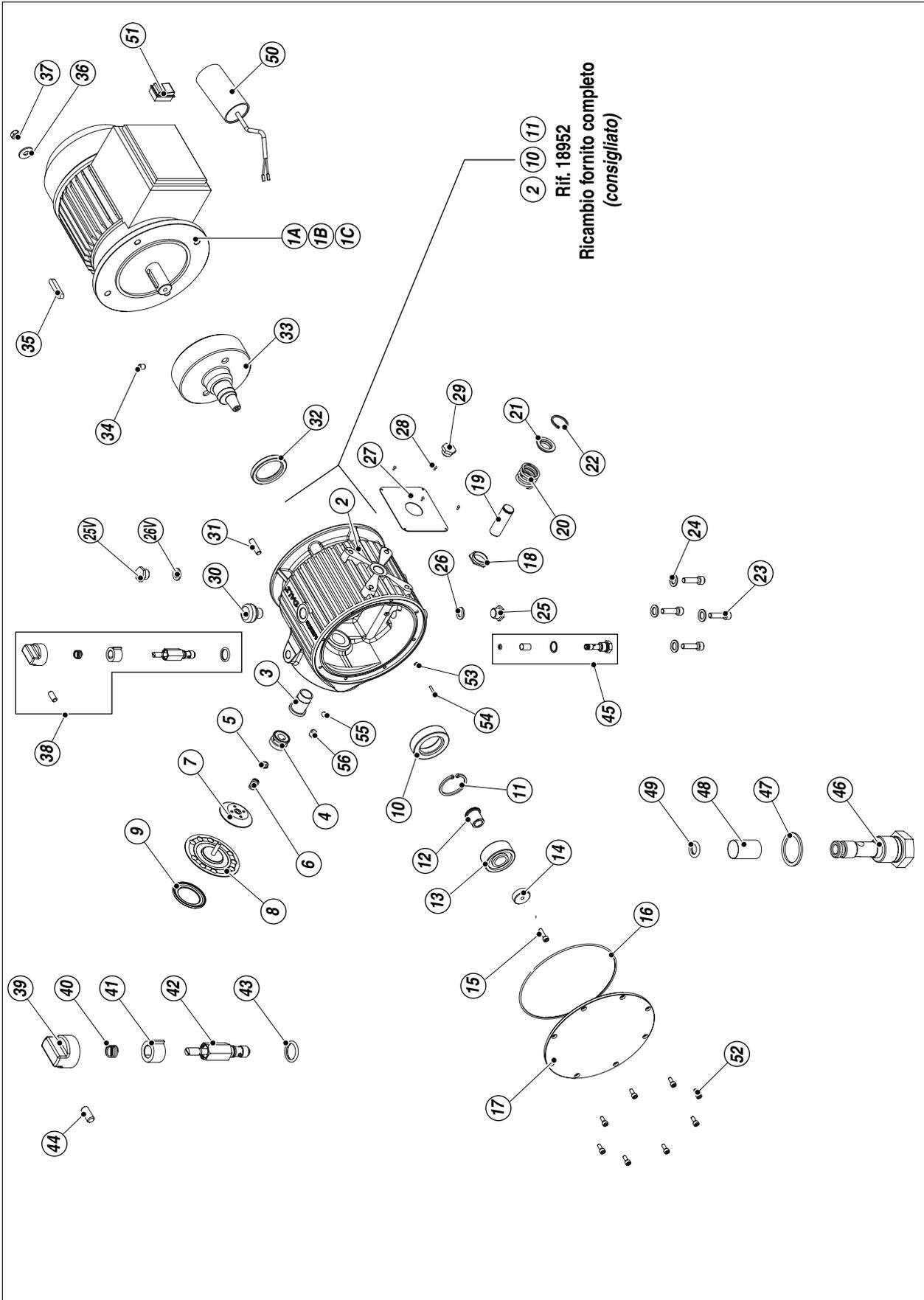
### WARNING :

If the equipment is still under pressure after performing the operations above described because of the nozzle or the flexible hose clogged, proceed as follows:

- Loosen very slowly the gun nozzle.
- Release the clamp.
- Point the gun at the container of the product and press the trigger to release pressure.
- Loosen very slowly the fitting of connection from the flexible hose to the gun.
- Clean or replace the flexible hose and the nozzle.

# 0 COMPLETE HYDRAULIC BODY

English



| Pos. | Code    | Description                                       | Pos. | Code     | Description                                   |
|------|---------|---|------|----------|---|
| 1A   | 18925   | Electric motor mono-phase 220V<br>50Hz complete   | 27   | 18931    | Identification plate 110V 60Hz                |
| 1B   | 18926   | Electric motor mono-phase 110V<br>60Hz complete   | 27   | 18932    | Petrol identification plate                   |
| 1C   | 18924   | Electric motor three-phases 380V<br>50Hz complete | 27   | 18933    | Identification plate 380V 50Hz                |
| 2**  | 18901   | Hydraulic body                                    | 28   | 34020    | Rivet   |
| 3**  | 32018   | Cylinder liner                                    | 29   | 32007    | Oil inspection window                         |
| 4    | 32033   | Piston insert                                     | 30   | 32108    | Plug  |
| 5**  | 91026   | Nut   | 31   | 81012    | Spline  |
| 6**  | 33002/3 | Spring  | 32   | 18909/1  | Corteco                                       |
| 7**  | 18937   | Oil distributor                                   | 33   | 18947    | Eccentric flywheel                            |
| 8**  | 33002/1 | Diaphragm   | 34   | 81009    | Dowel   |
| 9    | 18936   | Diaphragm insert                                  | 35   | 18919    | Tab   |
| 10** | 31125   | Bearing   | 36   | 33005    | Washer  |
| 11** | 81020   | Elastic ring                                      | 37   | 18903    | Nut   |
| 12   | 18906   | Bushing   | 38   | 32150    | <b>Complete pressure regulation<br/>valve</b> |
| 13   | 32026   | Bearing   | 39   | 32017    | Knob  |
| 14   | 32027   | Cover   | 40   | 32017/2  | Spring  |
| 15   | 32029   | Screw   | 41   | 32016    | Retainer                                      |
| 16   | 18908   | OR  | 42   | 32155    | Valve body                                    |
| 17   | 18907   | Cover   | 43   | 32014    | OR  |
| 18** | 32041   | Check nut   | 44   | 32017/1C | Dowel   |
| 19   | 32019   | Piston  | 45   | 12475    | Oil filter assembly                           |
| 20   | 32022   | Spring  | 46   | 12461    | Filter  |
| 21   | 32021   | Spring cap  | 47   | 32010    | Copper washer                                 |
| 22   | 32020   | Elastic ring                                      | 48   | 258      | Filter sieve 60 MESH                          |
| 23   | 96031   | Screw   | 49   | 32012    | OR  |
| 24   | 32024   | Washer  | 50   | 18928    | Motor condenser 220V 50Hz                     |
| 25   | 32108   | Plug  | 50   | 18929    | Motor condenser 110V 60Hz                     |
| 25V* | 32108   | Plug  | 51   | 18938    | Switch  |
| 26   | 33010   | Washer  | 52   | 32032    | Screw   |
| 26V* | 33010   | Washer  | 53*  | 5059     | Washer  |
| 27   | 18910   | Identification plate 220V 50Hz                    | 54*  | 18567    | Screw   |
|      |         |   | 55*  | 91915    | Ball  |
|      |         |   | 56   | 18946    | Dowel   |

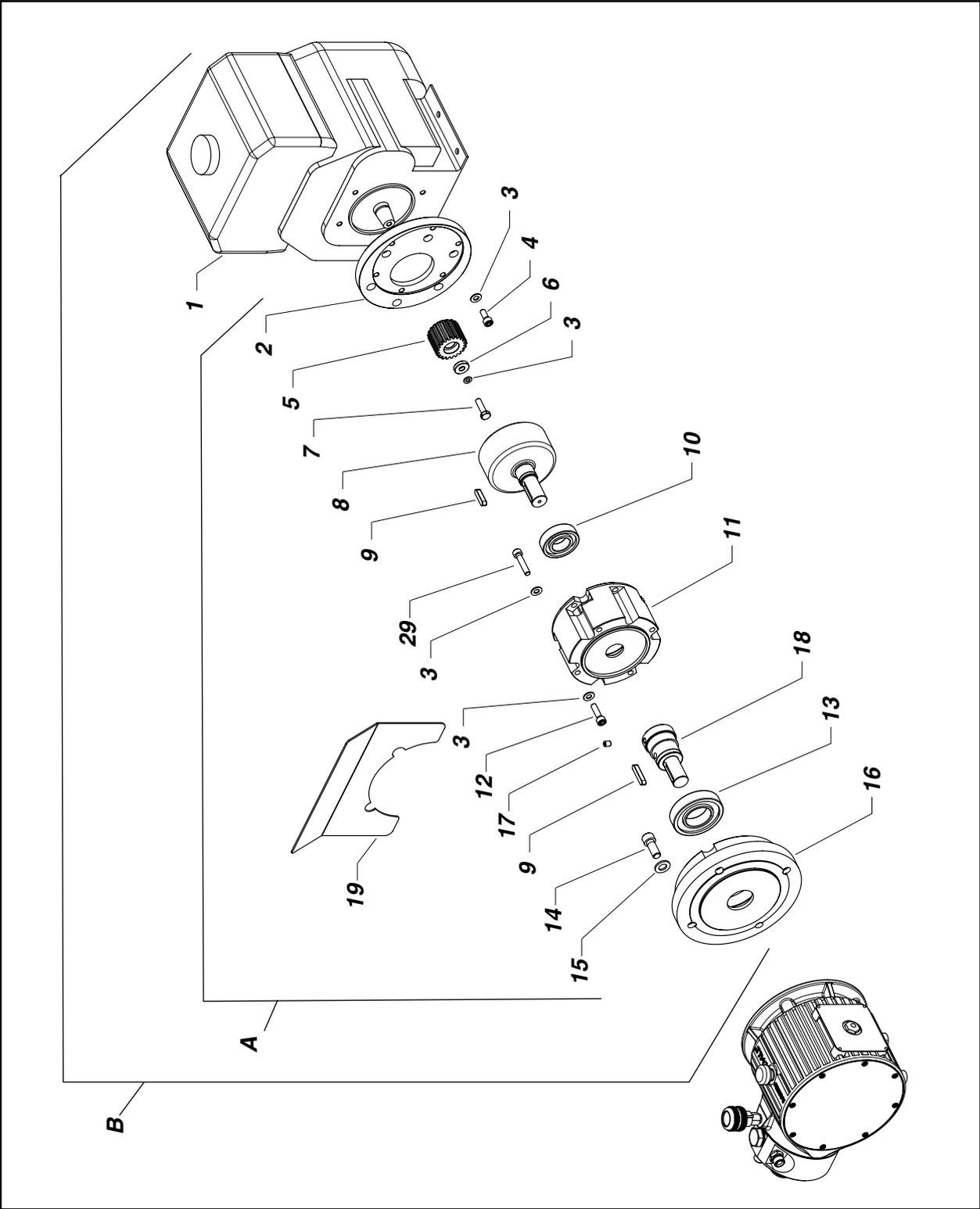
\* Only in the vertical configuration

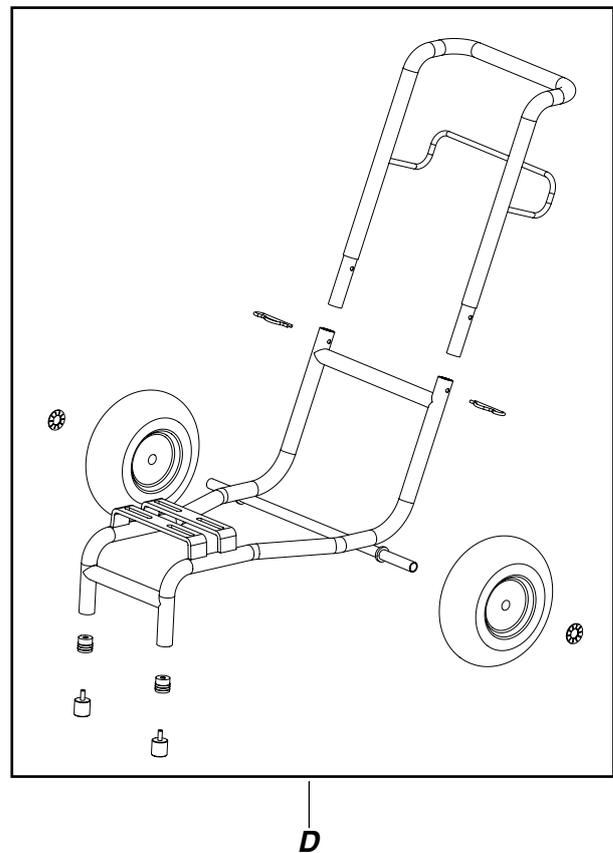
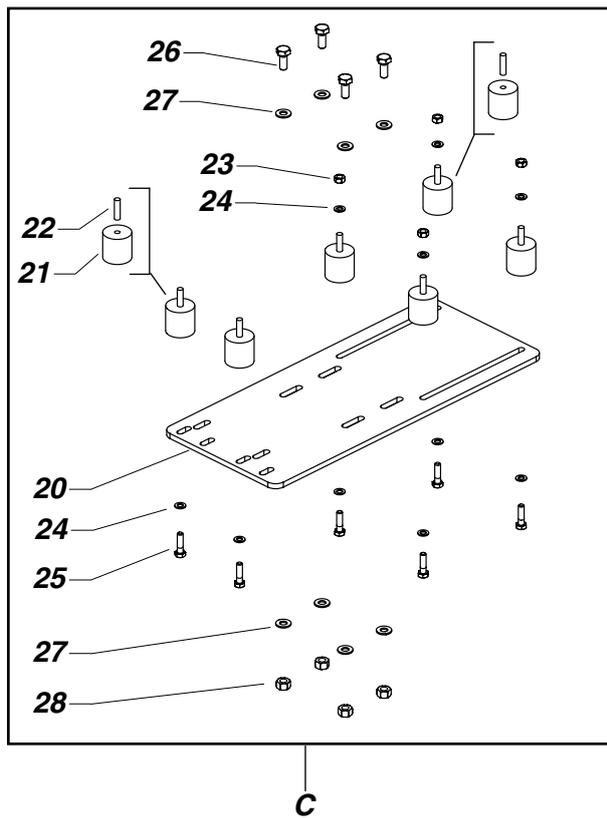
\*\*Pos. 2-3-10-11-18 spare supplied complete (*recommended*) - Ref. 18952

\*\*Pos. 5-6-7-8 complete diaphragm - Ref. 18904

**P DALÌ PETROL - DALÌ LINER**

English

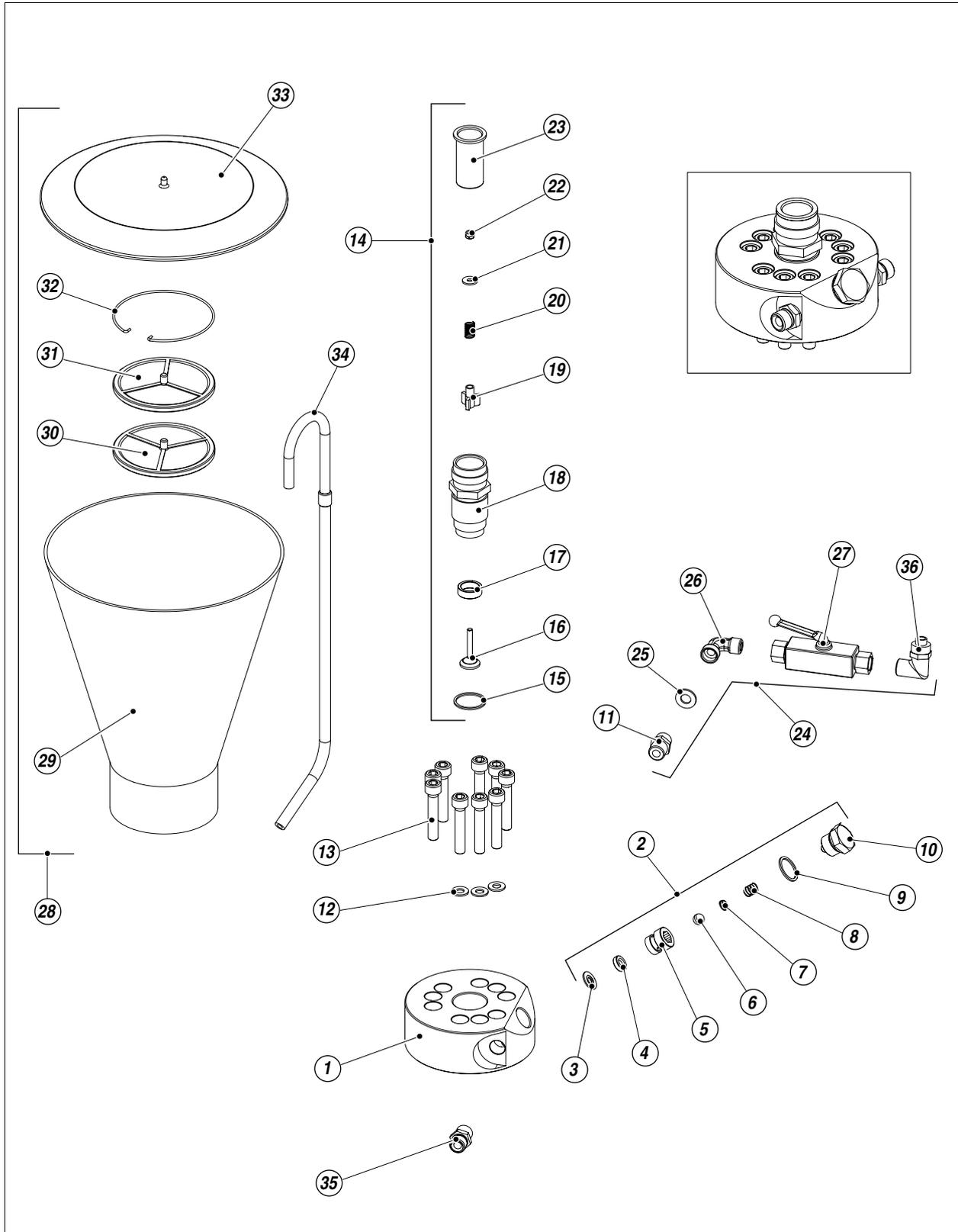




| Pos.         | Code  | Description   | Pos.      | Code  | Description      |
|--------------|-------|---|-----------|-------|------------------|
| <b>A</b>     | 18260 | Complete gearbox – petrol membrane version              | <b>13</b> | 18267 | Bearing          |
| <b>B+C+D</b> | 18340 | Complete gearbox kit – Dali petrol version with trolley | <b>14</b> | 18344 | Screw            |
| <b>B+C</b>   | 18347 | Complete Dali liner kit                                 | <b>15</b> | 95114 | Washer           |
| <b>1</b>     | 4415  | Motor   | <b>16</b> | 18268 | Hydraulic flange |
| <b>2</b>     | 18261 | Flange motor  | <b>17</b> | 81009 | Dowel            |
| <b>3</b>     | 34009 | Washer  | <b>18</b> | 18269 | Reduction        |
| <b>4</b>     | 96031 | Screw   | <b>19</b> | 18264 | Plating guard    |
| <b>5</b>     | 18262 | Pinion  | <b>20</b> | 18254 | Fixing plate     |
| <b>6</b>     | 18263 | Washer  | <b>21</b> | 81107 | Vibration damper |
| <b>7</b>     | 8385  | Screw   | <b>22</b> | 18942 | Threaded pin     |
| <b>8</b>     | 18265 | Toothed bell  | <b>23</b> | 52017 | Nut              |
| <b>9</b>     | 18919 | Tab   | <b>24</b> | 32024 | Washer           |
| <b>10</b>    | 42255 | Bearing   | <b>25</b> | 34008 | Screw            |
| <b>11</b>    | 18266 | Gearbox cone  | <b>26</b> | 95156 | Screw            |
| <b>12</b>    | 34008 | Screw   | <b>27</b> | 81033 | Washer           |
|              |       |   | <b>28</b> | 95158 | Nut              |
|              |       |   | <b>29</b> | 7059  | Screw            |

# Q COMPLETE COLOUR BODY

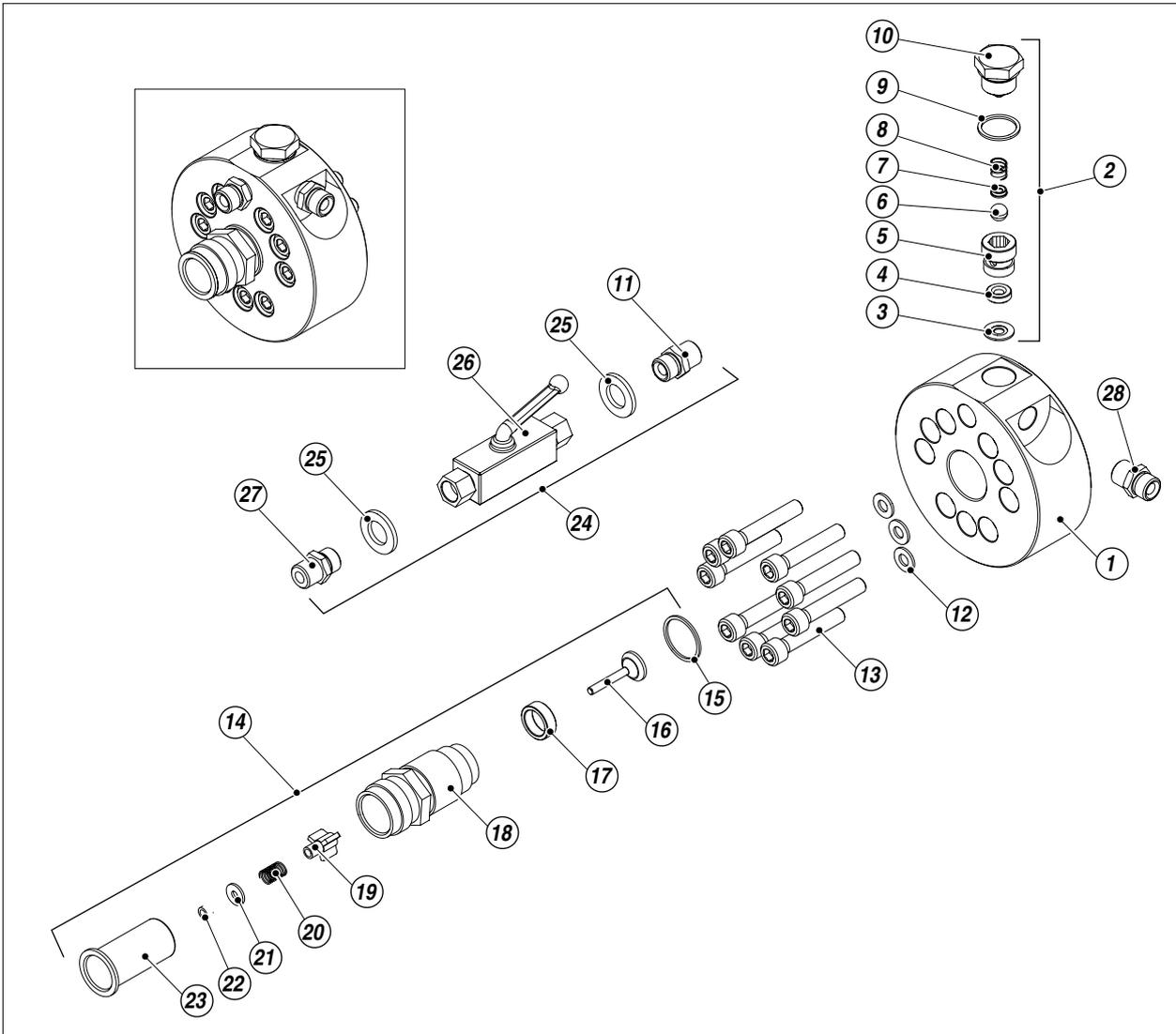
## VERTICAL VERSION



| Pos. | Code         | Description                | Pos. | Code         | Description                         |
|------|--------------|----------------------------|------|--------------|-------------------------------------|
| 1    | 18951        | Vertical colour body       | 19   | 33021        | Shutter guide                       |
| 2    | <b>33033</b> | <b>Valve assembly</b>      | 20   | 33022        | Spring                              |
| 3    | 33026        | Gasket                     | 21   | 33023        | Washer                              |
| 4    | 33027/2      | Ball seat                  | 22   | 33024        | Nut                                 |
| 5    | 33027/1      | Valve housing              | 23   | 33025        | Seal sleeve                         |
| 6    | 33028        | Ball                       | 24   | <b>18922</b> | <b>Recirculation valve assembly</b> |
| 7    | 33029        | Spring seat                | 25   | 33012        | Washer                              |
| 8    | 53006/1      | Spring                     | 26   | 18614        | Elbow                               |
| 9    | 33031        | Gas-ring                   | 27   | 33013        | Cock                                |
| 10   | 33032        | Check nut                  | 28   | <b>35101</b> | <b>Tank assembly</b>                |
| 11   | 33011        | Union                      | 29   | 35103        | Tank                                |
| 12   | 33005        | Washer                     | 30   | 35006        | Close filter                        |
| 13   | 33004        | Screw                      | 31   | 35007        | Large filter                        |
| 14   | <b>33017</b> | <b>Complete valve body</b> | 32   | 35008        | Spring ring                         |
| 15   | 33018        | Gas-ring                   | 33   | 55000        | Cover                               |
| 16   | 33019        | Conical shutter            | 34   | 18569        | Recirculation tube                  |
| 17   | 33020/1      | Spear valve seat           | 35   | 95284        | Union                               |
| 18   | 33020        | Valve body                 | 36   | 4011         | Union                               |

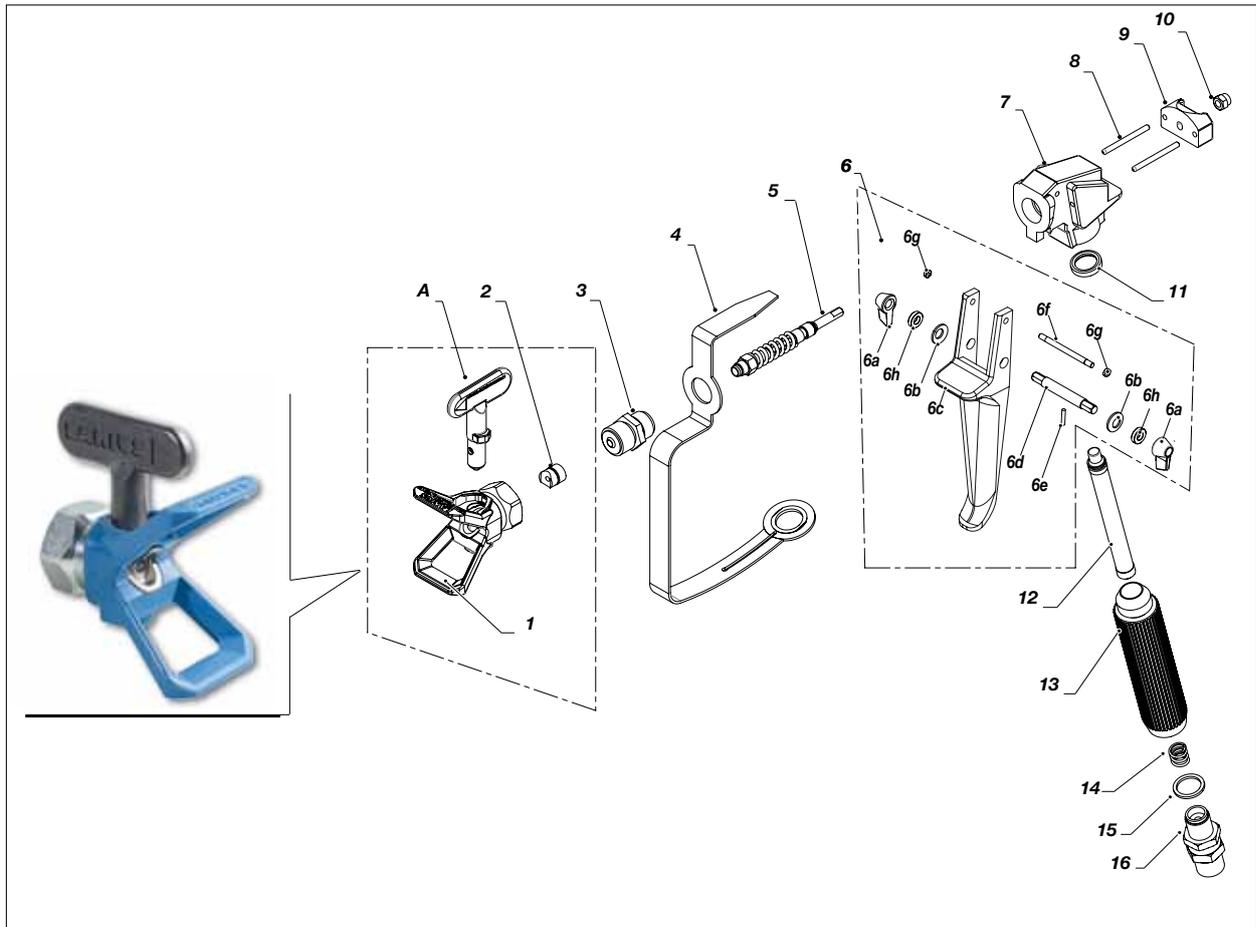
HORIZONTAL VERSION

English



| Pos. | Code         | Description                | Pos. | Code         | Description                         |
|------|--------------|----------------------------|------|--------------|-------------------------------------|
| 1    | 18915        | Standard colour body       | 15   | 33018        | Gas-ring                            |
| 2    | <b>33033</b> | <b>Valve assembly</b>      | 16   | 33019        | Conical shutter                     |
| 3    | 33026        | Gasket                     | 17   | 33020/1      | Spear valve seat                    |
| 4    | 33027/2      | Ball seat                  | 18   | 33020        | Valve body                          |
| 5    | 33027/1      | Valve housing              | 19   | 33021        | Shutter guide                       |
| 6    | 33028        | Ball                       | 20   | 33022        | Spring                              |
| 7    | 33029        | Spring seat                | 21   | 33023        | Washer                              |
| 8    | 53006        | Spring                     | 22   | 33024        | Nut                                 |
| 9    | 33031        | Gas-ring                   | 23   | 33025        | Seal sleeve                         |
| 10   | 33032        | Plug                       | 24   | <b>18922</b> | <b>Recirculation valve assembly</b> |
| 11   | 33011        | Union                      | 25   | 33012        | Washer                              |
| 12   | 33005        | Washer                     | 26   | 33013        | Cock                                |
| 13   | 33004        | Screw                      | 27   | 33015        | Union                               |
| 14   | <b>33017</b> | <b>Complete valve body</b> | 28   | 95284        | Union                               |

# R HIGH PRESSURE GUN "AT 250"

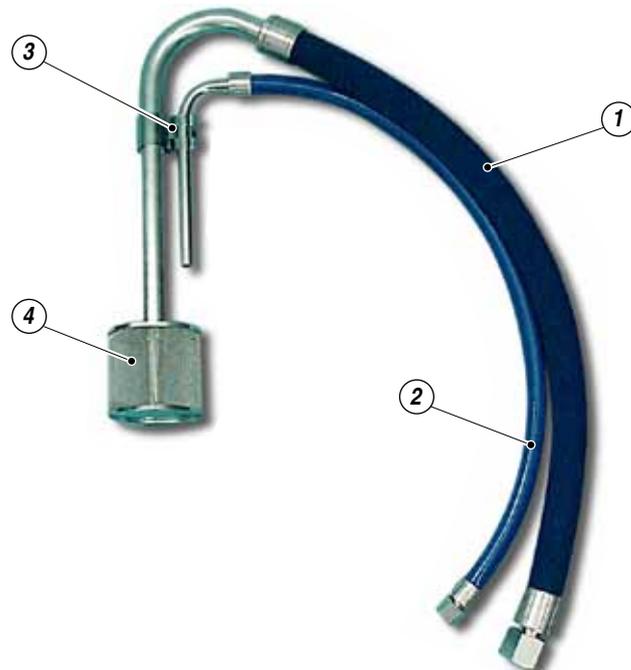


### Components Pos. 5 - 11023 - Linkage

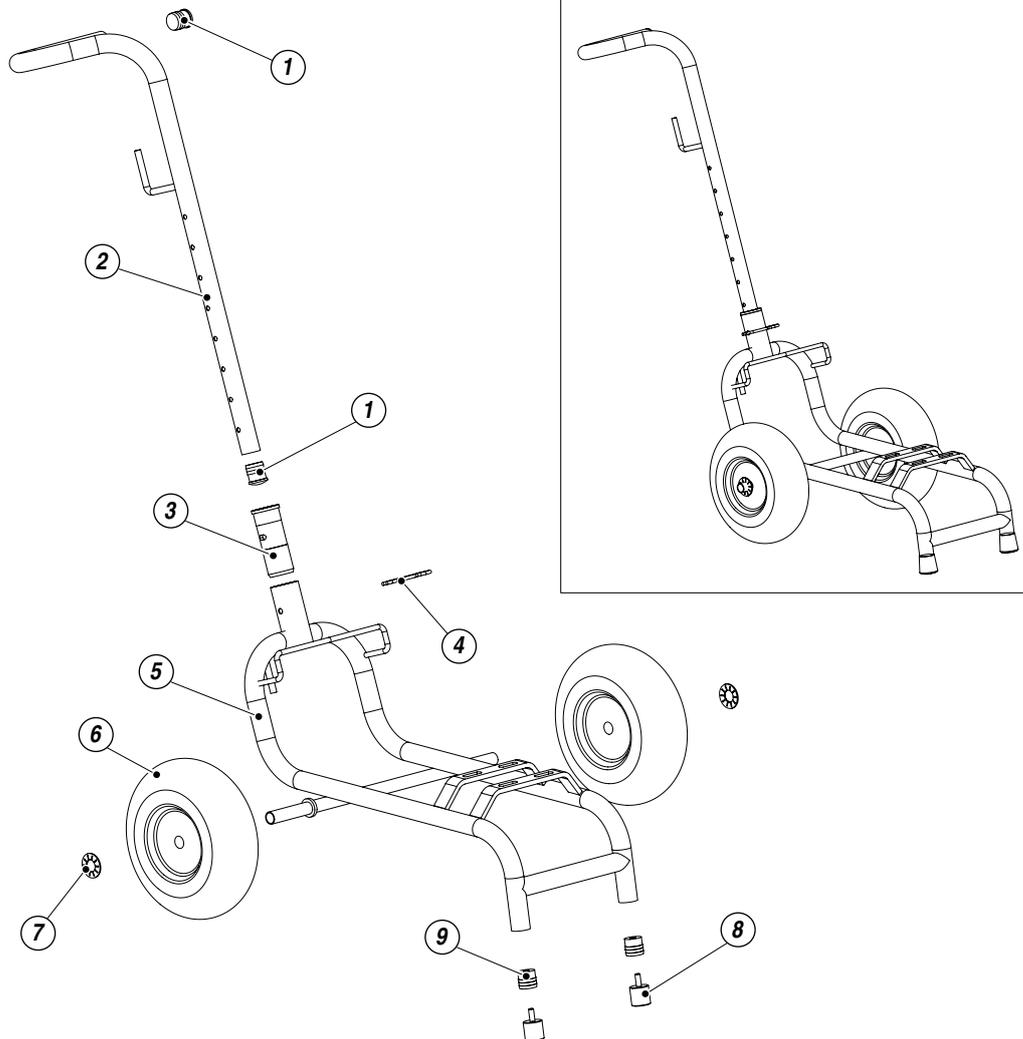
|         |              |
|---------|--------------|
| 11005/3 | Ball         |
| 11204/1 | Ball housing |
| 11205/2 | Spring       |
| 11205/4 | Linkage      |
| 11205/5 | Sleeve       |
| 11205/6 | Ring sleeve  |
| 11205/7 | Bushing      |

| Pos. | Code             | Description                           | Pos. | Code  | Description                |
|------|------------------|---------------------------------------|------|-------|----------------------------|
| A    | See table*       | Nozzle Super Fast Clean               | 6g   | 11027 | Nut M3                     |
| 1    | 18270            | Body Super Fast Clean                 | 6h   | 11016 | Washer                     |
| 2    | 18280            | Gasket Super Fast Clean               | 7    | 11206 | Gun body                   |
| 3    | 11004            | Sleeve                                | 8    | 11207 | Spinet                     |
| 4    | 11006 +<br>11032 | Safety for hand +<br>3 screws TSP 3x8 | 9    | 11208 | Plate                      |
| 5    | 11203            | Complete linkage                      | 10   | 11209 | Self-locking nut M5        |
| 6    | 11008            | Trigger gun                           | 11   | 11020 | Copper gasket              |
| 6a   | 11010            | Safety lever                          | 12   | -     | Filter                     |
| 6b   | 11011            | Brake washer                          | 13   | 11018 | Handgrip                   |
| 6c   | 11009            | Trigger                               | 14   | 11017 | Spring                     |
| 6d   | 11012            | Pin                                   | 15   | 32010 | Copper gasket              |
| 6e   | 11013            | Pin                                   | 16   | 11015 | Articulated joints M16x1,5 |
| 6f   | 11034/1          | Pin                                   |      | 11155 | Articulated joints 1/4"    |

## S SUCTION SYSTEMS



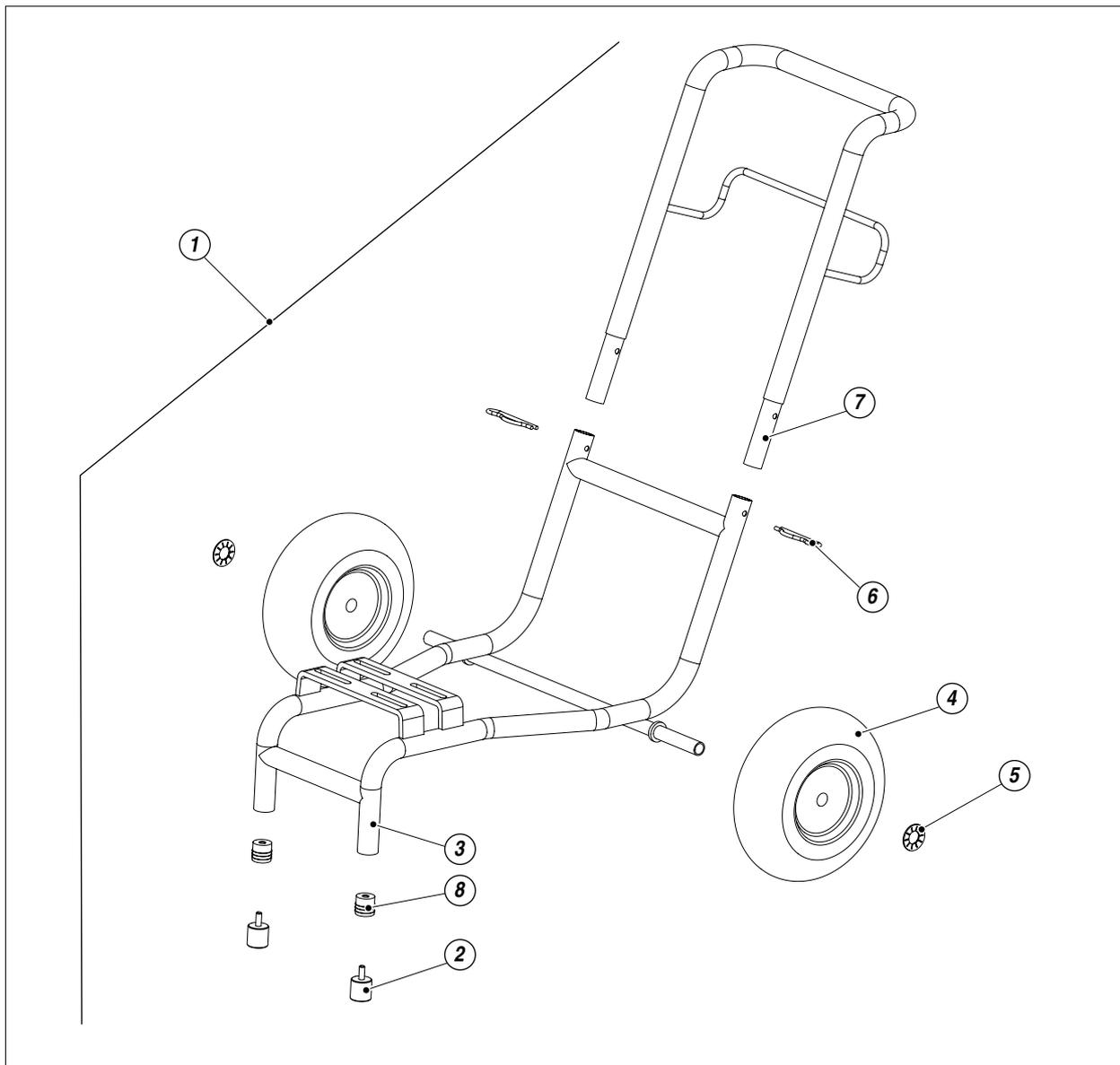
| Pos. | Code         | Description            |
|------|--------------|------------------------|
| -    | <b>85009</b> | <b>Suction systems</b> |
| 1    | 85010        | Suction tube           |
| 2    | 16609        | Recirculation tube     |
| 3    | 18096        | Spring                 |
| 4    | 85012        | Filter of suction      |

**T TROLLEY****ELECTRIC MOTOR**

| Pos. | Code         | Description             |
|------|--------------|-------------------------|
| -    | <b>18911</b> | <b>Trolley assembly</b> |
| 1    | 95159        | Plug                    |
| 2    | 18912        | Handle                  |
| 3    | 18914        | Bushing                 |
| 4    | 18902        | Split pin               |
| 5    | 18913        | Trolley frame           |
| 6    | 37218        | Pneumatic wheel         |
| 7    | 91047        | Washer                  |
| 8    | 12454        | Feet                    |
| 9    | 12473        | Plug                    |

## COMBUSTION MOTOR

English



| Pos. | Code  | Description      |
|------|-------|------------------|
| 1    | 12355 | Trolley assembly |
| 2    | 12454 | Foot             |
| 3    | 12710 | Trolley base     |
| 4    | 37218 | Pneumatic wheel  |
| 5    | 91047 | Elastic washer   |
| 6    | 84007 | Split pin        |
| 7    | 12711 | Trolley handle   |
| 8    | 12473 | Plug             |

## U ACCESSORIES



**Art. 11250:** AT 250 1/4"  
**Art. 11200:** AT 250 M16x1,5



**Code 270:** FILTER 100 MESH  
**Code 271:** FILTER 60 MESH



**PISTON GUNSTOCK FILTERS**  
**Code 11039:** Green (30M) - **Code 11038:** White (60M)  
**Code 11037:** Yellow (100M) - **Code 11019:** Red (200M)



**Code 147:** HIGH PRESSURE GAUGE M16x1,5  
**Code 150:** HIGH PRESSURE GAUGE GJ 1/4"



**Code 85014:** FILTER 40 MESH - **Code 85012:** FILTER 20 MESH  
**Code 37215:** FILTER 40 MESH inox - **Code 37216:** FILTER 20 MESH inox



**MANUAL GUN LX-T**  
**Code 14310:** NOZZLE 4 mm  
**Code 14311:** NOZZLE 6 mm  
**Code 14312:** NOZZLE 8 mm



HIGH PRESSURE HOSE 3/8" - M16x1,5 max pressure 425 bar  
**Code 18063:** 7,5 mt  
**Code 18064:** 10 mt  
**Code 18065:** 15 mt



ANTISTATIC HOSE 3/16" - M16x1,5 max pressure 210 bar  
**Code 6164:** 5 mt  
**Code 55050:** 7,5 mt  
**Code 35018:** 10 mt



ANTIPULSATIONS 1/4" - M16x1,5 max pressure 250 bar  
**Code 35013:** 5 mt  
**Code 35014:** 7,5 mt  
**Code 35017:** 10 mt  
**Code 18026:** 15 mt

**SUPER FAST-CLEAN**



**SUPER FAST-CLEAN TIP**

| Nozzles 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 |          |



**Code 18280:** GASKET



**Code 18270:** SUPER FAST-CLEAN base UE 11/16x16



GUN EXTENSION  
**Art. 153:** cm 30 - **Art. 153:** cm 40  
**Art. 155:** cm 60 - **Art. 158:** cm 80 - **Art. 156:** cm 100



PLA 1/4"  
 + BASE SUPER  
 FAST-CLEAN  
**Art. K11420-K11425-K11430:** cm 130-180-240  
 PLA M16x1,5  
 + BASE SUPER  
 FAST-CLEAN  
**Art. K11421-K11426-K11431:** cm 130-180-240



**Art. 16780:** TELESCOPIC PAINT ROLLER  
 complete with:  
 n. 1 Roller with extra-long fiber  
 n. 1 Roller with long fiber  
 n. 1 Roller with medium fiber  
 Flexible hose mt. 2 3/16 " M16x1,5



MX 750

MX 1000 E

MX 1100 E

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



**Code 18241:** GRAVITY HOPPER 50 lt

## DALI VERSIONS

**HORIZONTAL WITHOUT ACCESSORIES**

Ref. 18900: 220V / 50 Hz

Ref. 18920: 110V / 60 Hz

Ref. 18955: 380V / 50 Hz

Ref. 18956: Petrol

**HORIZONTAL WITH ACCESSORIES**

Ref. 18957: 220V / 50 Hz

Ref. 18958: 110V / 60 Hz

Ref. 18959: 380V / 50 Hz

Ref. 18960: Petrol

**VERTICAL WITHOUT ACCESSORIES**

Ref. 18961: 220V / 50 Hz

Ref. 18962: 110V / 60 Hz

Ref. 18963: 380V / 50 Hz

Ref. 18964: Petrol

**VERTICAL WITH ACCESSORIES**

Ref. 18965: 220V / 50 Hz

Ref. 18966: 110V / 60 Hz

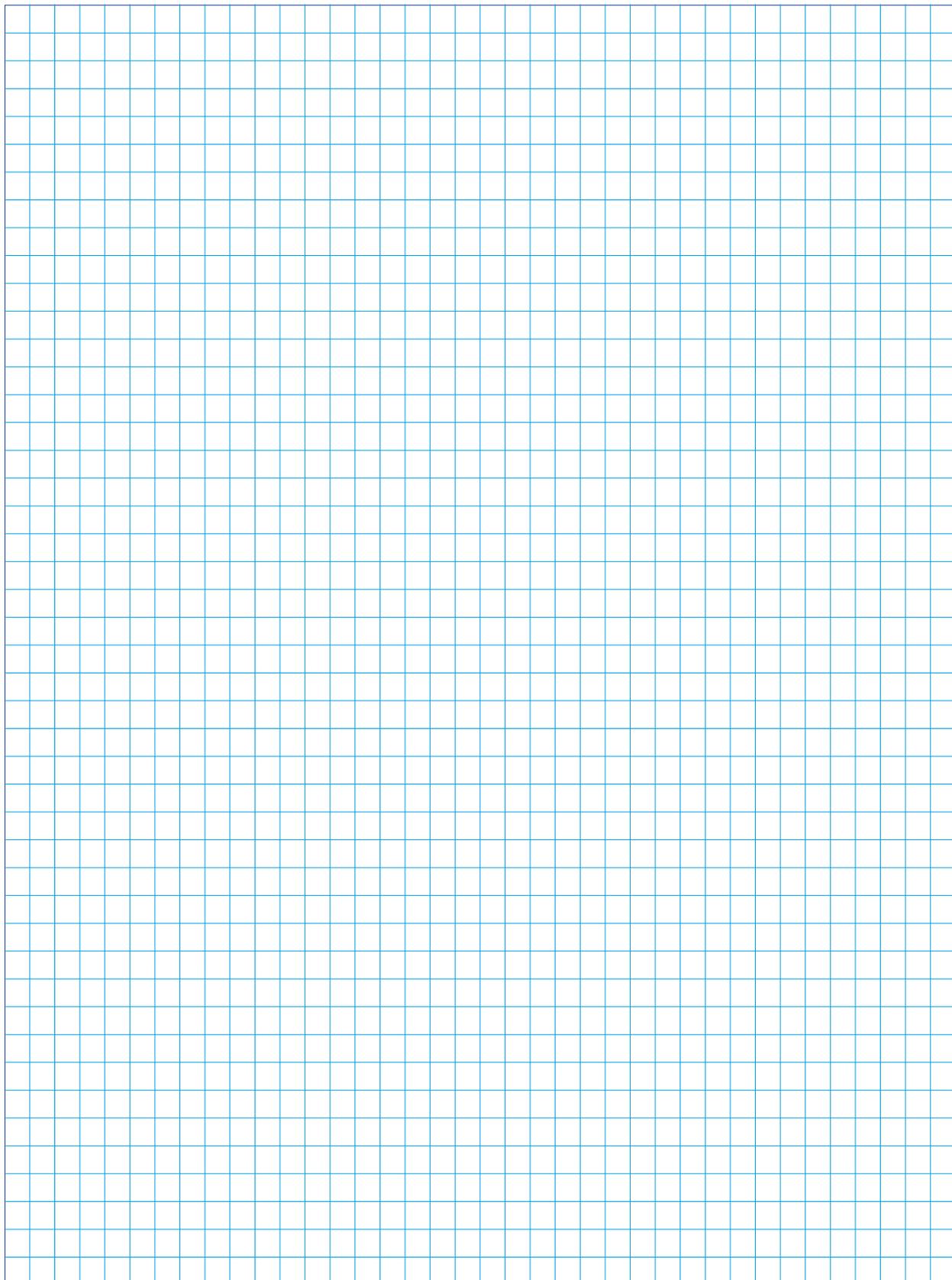
Ref. 18967: 380V / 50 Hz

Ref. 18968: Petrol

# LARIUS

PAINT SPRAYING EQUIPMENT

*L'innovazione.  
Quella vera.*



# AIRLESS DIAPHRAGM PUMPS



MIRO<sup>®</sup> Rif. 21500



VIKING Rif. 18741



GIOTTO Rif. 12450

MANUFACTURER:

# LARIUS

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