

www.larius.com

OPERATING AND MAINTENANCE INSTRUCTIONS Manuale Cod. 150101

CE

 \wedge





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.







Δ		<u> </u>
A	AVVERTENZE	р. З
В	WORKING PRINCIPLE	p. 4
С	TECHNICAL DATA	p. 4
D	DESCRIPTION OF THE EQUIPMENT	p. 5
Е	TRANSPORT AND UNPACKING	p. 8
F	CONDITIONS OF GUARANTEE	p. 6
G	SAFETY RULES	p. 6
Η	SETTING-UP	p. 8
	WORKING	p.10
J	CLEANING AT THE END OF THE WORK	p.11
Κ	ROUTINE MAINTENANCE	p.12
L	WARNING PLATE	p.13
Μ	CORRECT PROCEDURE OF DECOMPRESSION	p.14
Ν	PROBLEMS AND SOLUTIONS	p.15
	SPARE PARTS	
0	COMPLETE HYDRAULIC BODY	p.16
Ρ	PETROL ENGINE	p.18
Q	COMPLETE COLOUR BODY	p.20
R	SUCTION SYSTEM	p.23
S	TROLLEY	p.24
Т	ACCESSORIES	p.26
	DECLARATION OF CONFORMITY	p.31

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. mentionally blank page





WARNINGS Α

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

- Read this operator's manual carefully before using the equipment.
 An improper use of this machine can cause injuries to people or things.
- Do not use this machine when under the influence of drugs or alcohol.
- Do not modify the equipment under any circumstances.
- Use products and solvents that are compatible with the various parts of the equipment, and read the manufacturer's warnings carefully.
 - See the Technical Details for the equipment given in the Manual.
 Check the equipment for worn parts once a day. If any worn parts are found, replace them using ONLY original spare parts.
 - Keep children and animals away from work area.
 - Comply with all safety standards.

	• It indicates an accident risk or serious damage to equipment if this warning is not followed.
 € ⊗ ⊗ € € 1 	 FIRE AND EXPLOSION HAZARD Solvent and paint fumes in work area can ignite or explode. To help prevent fire and explosion: Use equipment ONLY in well ventilated area. Eliminate all ignition sources, such as pilot lights, cigarettes and plastic drop cloths (potential static arc). Ground equipment and conductive objects. Use only grounded hoses. Do not use trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in pressurized aluminium equipment. Such use can cause serious chemical reaction and equipment rupture, and result in death, serious injury, and property damage. Do not form connections or switch light switches on or off if the air contains inflammable fumes. If electrical shocks or discharges are encountered the operation being carried out using the equipment must be stopped immediately. Keep a fire extinguisher at hand in the immediate vicinity of the work area.
	 It indicates wound and finger squashing risk due to movable parts in the equipment. Tenersi lontano dalle parti in movimento. Do not use the equipment without the proper protection. Before any inspection or maintenance of the equipment, carry out the decompression procedure explained in this manual, and prevent any risk of the equipment starting unexpectedly.
	 Report any risk of chemical reaction or explosion if this warning has not been given. (IF PROVIDED) There is a risk of injury or serious lesion related to contact with the jet from the spray gun. If this should occur, IMME-DIATELY 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.
\mathbf{O}	• It indicates important recommendations about disposal and recycling process of products in accordance with the environmental regulations.
	 Mark any clamps attached to earth cables. Use ONLY 3-wire extension cords and grounded electrical outlets. Before starting work make sure that the electrical system is grounded and that it complies with safety standards. High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. To help prevent injection, always: (IF PROVIDED) Engage trigger lock when not spraying. (IF PROVIDED) Do not put your hand over the spray tip. Do not stop or deflect leaks with your hand, body or other. (IF PROVIDED) Do not point gun at anyone or at any part of the body. (IF PROVIDED) Never spray without tip guard. Do pressure relief if you stop spraying or being servicing sprayer and before any maintenance operations. Do not use components rated less than sprayer Maximum Working Pressure. Never allow children to use this unit (IF PROVIDED) Brace yourself; gun may recoil when triggered. If high pressure fluid pierces your skin, the injury might look like "just a cut", but it is a serious wound! Get immediate medical attention.
	 It is obligatory to wear suitable clothing as gloves, goggles and face shield. Wear clothing that complies with the safety standards in force in the country in which the equipment is used. Do not wear bracelets, earrings, rings, chains, or anything else that may hinder the operator's work. Do not wear clothing with wide sleeves, scarves, ties, or any other piece of clothing that could get tangled up in moving parts of the equipment during the work, inspection, or maintenance cycles.





B WORKING PRINCIPLE

The *LARIUS DALÍ* 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.

C DATI TECNICI

	DALI'				
Max. delivery	4 lt./m				
Supply (single-phase, three-phase internal combustion supply, petrol-diesel)*	220V 50Hz/110V 60Hz/380V 50Hz				
Motor power	mono-threephase 1,1 kW				
	internal combustion 3 HP				
Max. working pressure	200 bar 2900 psi				
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				
Height (C)	min. 710 mm				
	max. 1000 mm				

*N.B. Available on request with special voltages

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







D DESCRIPTION OF THE EQUIPMENT



Fig. 1D

Pos.	Description	Pos.	Description
1	Carriage	10	LARIUS AT 250 gun
2	Electric / combustion motor	11	Fast clean
3	Feed tube connection	12	Tools box
4	Setting valve	13	Recirculation valve
5	Hydraulic oil filling cap	14	Recirculation pipe connection
6	Hydraulic body	15	Product suction tube connection
7	Colour body	16	Adjustable handle
8	Suction and recirculation tube	17	Tank (for "vertical Dalì" version)
9	High pressure feed tube		





E TRANSPORT AND UNPA-CKING

- The packed parts should be handled as indicated in the symbols and markings on the outside of the packing.
- Before installing the equipment, ensure that the area to be used is large enough for such purposes, is properly lit and has a clean, smooth floor surface.
- The user is responsible for the operations of unloading and handling and should use the maximum care so as not to damage the individual parts or injure anyone.

To perform the unloading operation, use only qualified and trained personnel (truck and crane operators, etc.) and also suitable hoisting equipment for the weight of the installation or its parts.

Follow carefully all the safety rules.

The personnel must be equipped with the necessary safety clothing.

- The manufacturer will not be responsible for the unloading operations and transport to the workplace of the machine.
- Check the packing is undamaged on receipt of the equipment. Unpack the machine and verify if there has been any damage due to transportation.

In case of damage, call immediately **LARIUS** and the Shipping Agent. All the notices about possible damage or anomalies must arrive timely within 8 days at least from the date of receipt of the plant through Registered Letter to the Shipping Agent and to **LARIUS**.

 The disposal of packaging materials is a customer's competence and must be performed in accordance with the regulations in force in the country where the plant is installed and used. It is nevertheless sound practice to recycle packaging materials in an environment-friendly manner as much as possible.

F CONDITIONS OF GUARANTEE

- The conditions of guarantee do not apply in the following situations:
- improper washing and cleaning of components causing malfunction, wear or damage to the equipment or any of its parts;
- improper use of the equipment;
- use that does not conform with applicable national legislation;



- incorrect or faulty installation;
- modifications, interventions and maintenance that have not been authorised by the manufacturer;
- use of non-original spare parts or parts that do not correspond to the specific model;
- total or partial non-compliance with the instructions provided.

G SAFETY RULES

- THE EMPLOYER SHALL TRAIN ITS EMPLOYEES ABOUT ALL THOSE RISKS STEMMING FROM ACCIDENTS, ABOUT THE USE OF SAFETY DEVICES FOR THEIR OWN SAFE-TY 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 PRO-PERLY.
- 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 PERFOR-MING 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 CONNEC-TION 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 CARE-FULLY. 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 SOL-VENTS 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 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.



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



If the product to be used is toxic, avoid inhalation and contact by using protection gloves, goggles and proper face shields.

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 considerabledanger to the user may result.





H SETTING-UP

COLLEGAMENTI DI TUBO FLESSIBILE E PISTOLA

- 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).
- It is recommended to use the hose provided with the standard kit (ref. 35017).



NEVER use sealants on fittings' threads. NEVER use a damaged or a repaired flexible hose.

COLLEGAMENTO DELL'ALIMENTAZIONE ELETTRICA

• Check the plant is earthed.



Fig. 1H

• Check the mains voltage corresponds to the equipment's rating (H1).



Fig. 2H

• The supply cable (**H2**) 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.



Fig. 3H





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 mm2*) 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 (H3) is on the "OFF" position before connecting the cable to the mains.
- Place the pressure control knob (H4) on the "MIN" position (*turn counterclockwise*).











Fig. 6H

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 (H5).
- Ensure the gun (H6) is without nozzle.
- Open the re-circulation tap (H7). Turn the unit ON-OFF switch (H8) on the "ON" position.



Rotate the pressure setting knob (H4) 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,



Fig. 9H

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 (H3) on the position "OFF" 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) LA-**RIUS 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.



WORKING





Fig. 3l

START OF THE PAINTING OPERATIONS

- Use the tooling after performing all the SETTING UP operations above described.
- Dip the suction pipe (I1) into the product tank.
- Open the re-circulation valve (12).
- Press the ON/OFF switch of the equipment and turn a little the pressure control knob (I3), so as the machine works at

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.

the idle speed.

- Make sure the product recycles from the return tube (I4).
- 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.



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.



CLEANING AT THE END WORK J

Reduce pressure to the minimum (turn counterclockwise the pressure control knob (J1)).





First release the residual pressure from the gun by holding it pointed down towards the paint container, then open the re-circulation valve (J3).



- 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 (J2) on the ON position and rotate the pressure setting knob (J1) slightly clockwise.
- Make sure the solvent recycles the washing fluid from the return tube (J4).
- Close the re-circulation valve (J3) .
- 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.



Follow the washing procedure before using again the equipment.





K ROUTINE MAINTENANCE

TOP UP HYDRAULIC OIL

With each start up, check the hydraulic oil level by looking through the gauge (K1) on the side of the hydraulic body. If necessary, use to top up the level:

AGIP DICREA 150 type hidraulic oil









Fig. 4K



Assemble the components in the correct order.

REPLACING HYDRAULIC OIL

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

- Discharge the waste oil through the plug (K4) fitted at the • bottom of the pump casing.
- Clean the seals on the cap and replace it if worn. •
- Remove and clean the filter (K5) on the side of the pump casing; if necessary, replace the filter and the respective seals.
- Clean and, if necessary, replace the worn seals (K5). •
- Replace the plug (K4).
- Fill the pump with the recommended oil until it reaches the maximum level.

AGIP DICREA 150 type hidraulic oil

Then, substitute the oil every 250 hours. •

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 (K2) with a diameter of no more than 15 mm.



CLEANING THE COMPRESSION VALVE

When the compression valve (K3) must be removed, clean it with specific solvents depending on the type of paint used and refit all parts by inverting the removal order.







CLEANING THE MOTOR COOLING FAN GUARD

Clean the motor cooling fan protection guard (K6) periodically to ensure the best cooling.



Fig. 8K

L WARNING PLATE







CORRECT PROCEDURE OF DECOMPRESSION Μ

- Insert the gun clamp (M1).
- Move the ON/OFF switch (M2) to the OFF position to stop the equipment.
- Set the valve (M3) at its minimum pressure setting (turn counterclockwise).



Fig. 1M



М2

MЗ

Disconnect the power supply cable (M4). .



- Release the gun clamp (M5). 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 (M6) to release residual pressure.

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.





N PROBLEMS AND SOLUTIONS

Problem	Cause	Solution		
The equipment does not start	Lack of voltage;	Check the correct connection to the power supply;		
	Considerable drops in mains voltage;	Check the extension cable;		
	ON-OFF switch disconnected;	Ensure the ON-OFF switch is on the "ON" position and turn clockwise the pressure control knob;		
	Setting valve faulty pressure;	Verify and replace it, if necessary;		
	Breakdown of motor electric control box;	Verify and replace it, if necessary;		
	The product is solidified inside the pump;	Open the drain valve to release pressure in the circuit and stop the machine. Remove the compression valve and clean it;		
The equipment does not suck the	Suction filter clogged;	Clean or replace it;		
product	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 equipment suck but does not	Lack of product;	Add the product;		
reach the pressure desired	The equipment sucks air;	Check the suction pipe;		
	The drain valve is open;	Close the drain valve;		
	Suction or delivery valve dirty;	Disassemble the colour body group;		
When pressing the trigger, the pres-	Nozzle too big or worn;	Replace it with a smaller one;		
sure lowers considerably	The product is too dense;	Dilute the product, if possible;		
	The filter of the gun-butt is too fine;	Replace it with a larger-mesh filter;		
The pressure is normal but the pro-	The nozzle is partially clogged;	Clean or replace it;		
duct is not atomized. Leakage from	The product is too dense;	Dilute the product, if possible;		
are sear-agricening serew	The filter of the gun-butt is too fine;	Replace it with a larger-mesh filter;		
The atomization is imperfect	The nozzle is worn;	Replace it;		



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").



O COMPLETE HYDRAULIC BODY









Pos.	Code	Description	
1 A	18925	Electric motor mono-phase 220V 50Hz complete	
1B	18926	Electric motor mono-phase 110V 60Hz complete	
1C	18924	Electric motor three-phases 380V 50Hz complete	
2**	18901	Hydraulic body	
3**	32018	Cylinder liner	
4	32033	Piston insert	
5 * *	33002/5	Nut	
6**	33002/3	Spring	
7**	18937	Oil distributor	
8**	33002/1	Diaphragm	
9*	18936	Diaphragm insert	
10**	31125	Bearing	
11**	81020	Elastic ring	
12	18906	Bushing	
13	32026	Bearing	
14	32027	Cover	
15	32029	Screw	
16	18908	OR	
17	18907	Cover	
18**	32041	Check nut	
19	32019	Piston	
20	32022	Spring	
21	32021	Spring cap	
22	32020	Elastic ring	
23	96031	Screw	
24	32024	Washer	
25	32108	Plug	
25V*	32108	Plug	
26	33010	Washer	
26V*	33010	Washer	
27	18910	Identification plate 220V 50Hz	
27	18931	Identification plate 110V 60Hz	

Pos.	Code	Description	
27	18932	Petrol identification plate	
27	18933	Identification plate 380V 50Hz	
28	34020	Rivet	
29	32007	Oil inspection window	
30	32108	Plug	
31	81012	Spline	
32	18909/1	Corteco	
33	18947	Eccentric flywheel	
34	81009	Dowel	
35	18919	Tab	
36	33005	Washer	
37	18903	Nut	
38	32150	Complete pressure regulation valve	
39	32017	Knob	
40	32017/2	Spring	
41	32016	Retainer	
42	32155	Valve body	
43	32014	OR	
44	32017/10	Dowel	
45	12475	Oil filter assembly	
46	12461	Filter	
47	32010	Copper washer	
48	258	Filter sieve 60 MESH	
49	32012	OR	
50	18928	Motor condenser 220V 50Hz	
50	18929	Motor condenser 110V 60Hz	
51	18938	Switch	
52	32032	Screw	
53*	5059	Washer	
54*	18567	Screw	
55*	91915	Ball	
56	18946	Dowel	
57	32028	Washer (Typ Grower)	

* 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 PETROL ENGINE





R







Pos.	Code	Description
А	18260	Complete gearbox – petrol membrane version
B+C+D	18340	Complete gearbox kit – Dalì petrol version with trolley
B+C	18347	Complete Dalì liner kit
1	4415	Motor
2	18261	Flange motor
3	34009	Washer
4	96031	Screw
5	18262	Pinion
6	18263	Washer
7	8385	Screw
8	18265	Toothed bell
9	18919	Tab
10	42255	Bearing
11	18266	Gearbox cone
12	34008	Screw
13	18267	Bearing

Pos.	Code	Description
14	18344	Screw
15	95114	Washer
16	18268	Hydraulic flange
17	81009	Dowel
18	18269	Reduction
19	18264	Plating guard
20	18254	Fixing plate
21	81107	Vibration damper
22	18942	Threaded pin
23	52017	Nut
24	32024	Washer
25	34008	Screw
26	95156	Screw
27	81033	Washer
28	95158	Nut
29	7059	Screw





Q COMPLETE COLOUR BODY

VERTICAL VERSION







Pos.	Code	Description	Pos.	Code	Description	
1	18951	Vertical colour body	19	33021	Shutter guide	
2	33033	Valve assembly	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	18922	Recirculation valve assembly	
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	35101	Tank assembly	
11	33011	Union	29	35103	Tank	
12	33005	Washer	30	35006	Close filter	
13	33004	Screw	31	35007	Large filter	
14	33017	Complete valve body	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



Fia	20
ги.	20

Pos.	Code	Description	Pos.	Code	Description
1	18915	Standard colour body	15	33018	Gas-ring
2	33033	Valve assembly	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	18922	Recirculation valve assembly
11	33011	Union	25	33012	Washer
12	33005	Washer	26	33013	Cock
13	33004	Screw	27	33015	Union
14	33017	Complete valve body	28	95284	Union





R SUCTION SYSTEM



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





S TROLLEY ELECTRIC MOTOR



Fig. 1S

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





PETROL ENGINE



Fig. 2S

Pos.	Code	Description
1	12355	Trolley assembly
2	12454	Foot
3	12710	Trolley base
4	37218	Pneumatic wheel
5	91047	Elastic washer

Pos.	Code	Description
6	84007	Split pin
7	12711	Trolley handle
8	12473	Plug











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-1 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









GUN EXTENSION Code 153: cm 30 -Code 153: cm 40 Code 155: cm 60 - Code 158: cm 80 - Code 156: cm 100







DALÌ 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

mentionally blank page









LARIUS srl Via Antonio Stoppani 21 - 23801 Calolziocorte (LC) ITALY TEL. +39 0341 621152 - Fax +39 0341 621243 - larius@larius.com

