



LoW

Silent Spa Circulation Pump Installation, Operation & Maintenance Manual

Oxygen Code: 106.07.138 | 0.30 HP (0.22 kW) | 1-1/2" FBT (Ø50)



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OXYGON — Karamaouna St., N. Rysio, 57001 Thessaloniki, Greece
Tel: +30 2312 208 240 | info@oxygen.gr | www.oxygen.gr

Table of Contents

1. Safety Warnings
2. Package Contents
3. Product Overview
4. Technical Specifications
5. Installation
6. Pipe Assembly
7. Electrical Connection
8. Controls Prior to Start-Up & Start-Up
9. Operation
10. Maintenance & Cleaning
11. Troubleshooting
12. Spare Parts & Accessories
13. Warranty

1. Safety Warnings

CAUTION — READ BEFORE INSTALLATION

Read this entire manual carefully before installing or operating the pump. Failure to follow the safety instructions may result in serious injury, property damage or death. Keep this manual in a safe place for future reference.

RISK OF ELECTRIC SHOCK

Disconnect the power supply before any installation or maintenance work. The electrical connection must be carried out exclusively by a licensed electrician in accordance with the national wiring code. The pump must be protected by a residual current device (GFCI/RCD) with a rated tripping current not exceeding 30 mA. Connect only to a grounding-type receptacle protected by a GFCI. To protect against the risk of electric shock, do not time the pump, cord or plug in water or other liquid.

GROUNDING REQUIRED

The pump must be connected to a properly grounded power supply. Wires used as equipotential bonding conductors shall have a cross-section between 2.5 mm² and 6 mm² and be fitted with a suitable terminal. If the supply cord is damaged, it must be replaced immediately by the manufacturer, its service agent or a similarly qualified person to avoid a hazard.

WATER SAFETY & DRY RUNNING

THE PUMP MUST NEVER OPERATE DRY. Dry running destroys the mechanical seal and impeller and voids the warranty. The hydromassage assembly must be equipped with a system that prevents the pump from starting if the minimum water level is not present. Parts containing live parts (except SELV parts supplied at <12 V) must be inaccessible to a person in the spa.

INTENDED USE

The LoW pump is intended exclusively for the recirculation of clean water in fixed-installed spa / hydromassage baths, at a maximum water temperature of 50°C. It is NOT suitable for swimming-pool duty. For indoor, household use only. Do not use with chemicals, solvents, sludge or abrasive liquids. The maximum total head is 4.5 m.

This appliance complies with EN 60335-2-60. It is not intended for use by young children or infirm persons unless they have been adequately supervised by a responsible person to ensure that they can use the appliance safely. Young children should be supervised so that they do not play with the appliance. For warranty terms, see Section 13 — Warranty.

Important Safety Instructions

Read and follow all instructions.

To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

Risk of electric shock: connect only to a grounding-type receptacle protected by a ground-fault circuit interrupter (GFCI). Contact a qualified electrician if you cannot verify that the receptacle is GFCI-protected.

Do not bury the supply cord. Locate the cord to minimise abuse from lawnmowers, hedge trimmers and other equipment.

In case the running parts will injure people, do not run the electric pump before the pipeline has been connected.

To reduce the risk of electric shock, replace a damaged cord immediately and do not use an extension cord; provide a properly located outlet.

This pump is for use with a SPA; it is not suitable for a swimming pool. Do not install within an outer enclosure or beneath the skirt of a hot tub unless so marked.

For indoor and household use only. Class I appliance — permanently connect to fixed wiring; the rating label must remain visible after installation.

Means for disconnection (contact separation of at least 3 mm in all poles) must be incorporated in the fixed wiring in accordance with the wiring rules.

The electrical installation must follow the reference national wiring rules; any installation and maintenance must be executed by professional, qualified personnel.

The maximum total head is 4.5 m.

Save these instructions.

2. Package Contents

On receipt, inspect the packaging and confirm that all items below are present and undamaged. Report any transport damage to the carrier and to Oxygen immediately.

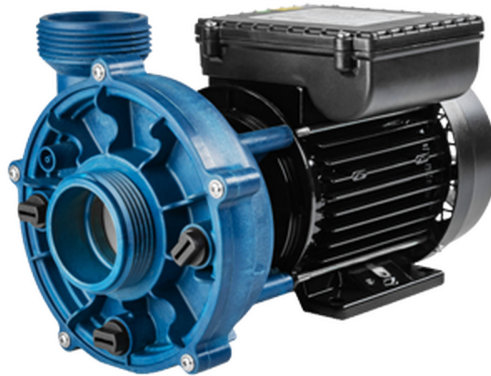
- 1 × LoW silent spa circulation pump (motor + wet end)
- 2 × union connectors 1-1/2" FBT (Ø50) with O-rings
- 1 × set of mounting screws
- 1 × Installation, Operation & Maintenance manual

Keep the original packaging until installation is complete and the pump has been tested.

3. Product Overview

The LoW is a single-stage centrifugal pump designed to operate with compact spa / hydromassage equipment with low-noise running. It is equipped with a total-emptying system that prevents the discharge of residual liquid at each stop. Built from top-quality materials, every unit is subjected to strict hydraulic and electrical testing before shipment.

The pump is intended for clean water at a maximum temperature of 50°C (liquid temperature range 4°C to 50°C). Storage temperature: -10°C to +50°C; relative air humidity 95% max. The supply voltage and frequency are shown on the pump nameplate (220-240 V~ / 50-60 Hz, single-phase).



LoW silent spa circulation pump

4. Technical Specifications

Performance Ratings

Supply	Speed (rpm)	Power (kW / HP)	Qmax (m³/h / L/min)	Hmax (m)	Curve
220-240 V / 50 Hz	1400	0.22 / 0.30	15.6 / 260	4.5	Curve 1
220-240 V / 60 Hz	1700	0.22 / 0.30	15.6 / 260	4.5	Curve 1
220-240 V / 50 Hz (reduced)	1400	0.18 / 0.25	13.2 / 220	3.2	Curve 2

Qmax is the theoretical maximum flow; the usable operating range is shown in the performance curves. The standard rating (Oxygen code 106.07.138) is 0.30 HP / 0.22 kW.

Common Characteristics

Oxygen Code	106.07.138
Type	Single-stage centrifugal, silent circulation
Application	Fixed-installed spa / hydromassage bath (indoor)
Supply	220-240 V~ / 50-60 Hz, single-phase (see nameplate)
Motor protection	Built-in thermal protection (single-phase)
Insulation / Class	Class I appliance
Connections	1-1/2" FBT (Ø50)
Max total head	4.5 m
Max water temperature	50 °C (liquid 4-50 °C)
Storage temperature	-10 °C to +50 °C
Relative air humidity	95% max
Reference standard	EN 60335-2-60
Special feature	Total-emptying system (no residual liquid)

Dimensions

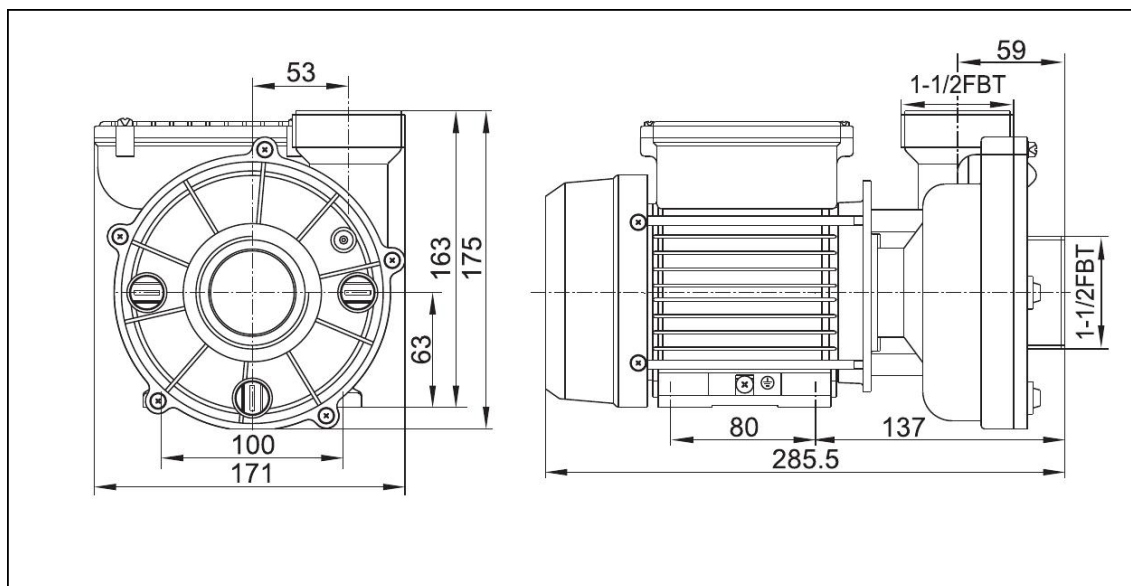


Fig. 1 — Overall dimensions (front and side views), mm

Total length L	285.5 mm
Wet-end length	137 mm
Motor / base length	80 mm
Discharge offset	59 mm
Overall height	175 mm
Volute height	163 mm
Base to shaft axis	63 mm
Base width	171 mm
Mounting-hole spacing	100 mm
Inlet top width	53 mm
Connections	1-1/2" FBT (Ø50)

Performance Curves

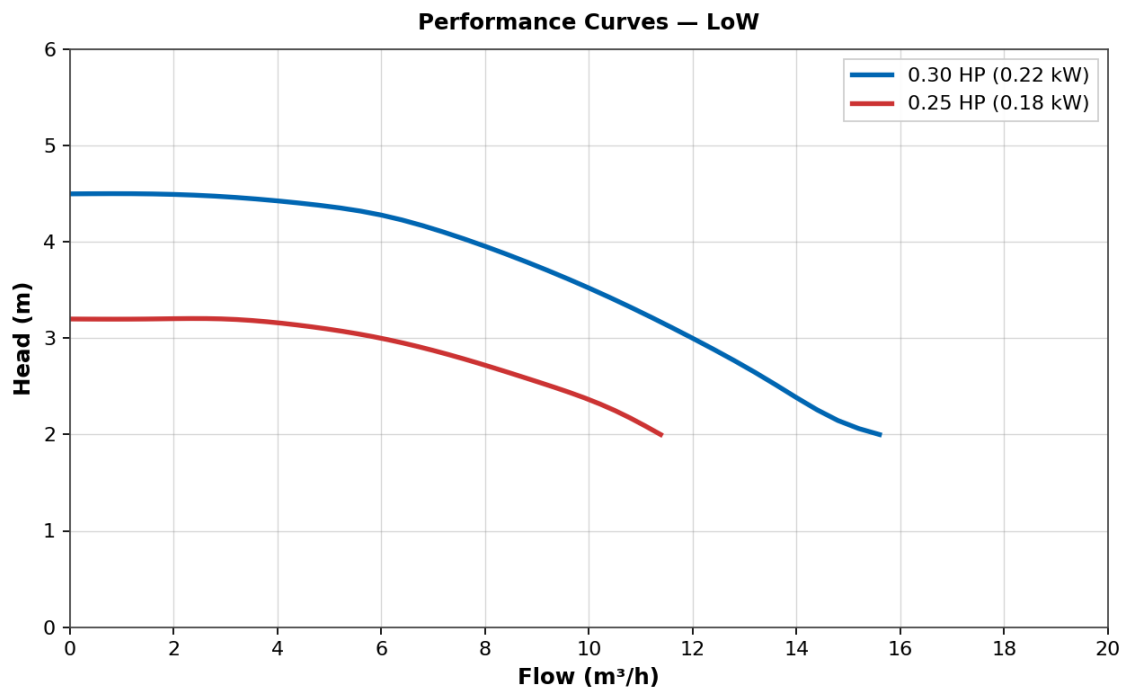


Fig. 2 — Performance curves: Curve 1 (0.30 HP) and Curve 2 (0.25 HP)

5. Installation

These instructions ensure correct installation and optimum performance of the pump. Read them together with the wiring diagram; otherwise overloads may be produced in the motor. Oxygen declines responsibility for any damage caused by not following these instructions.

The pump should be installed horizontally, securing it with screws through the holes in the supports to prevent undesirable noise and vibration.

Keep the suction pipe as short as possible.

Install the pump below the minimum water level of the spa so that it remains flooded during operation (see Fig. 3).

The rating label must remain visible after installation.

Parts containing live parts (except SELV parts supplied at <12 V) must be inaccessible to a person in the spa.

Class I appliances must be permanently connected to fixed wiring; parts with electrical components (except remote-control devices) must be located or fixed so that they cannot fall into the spa.

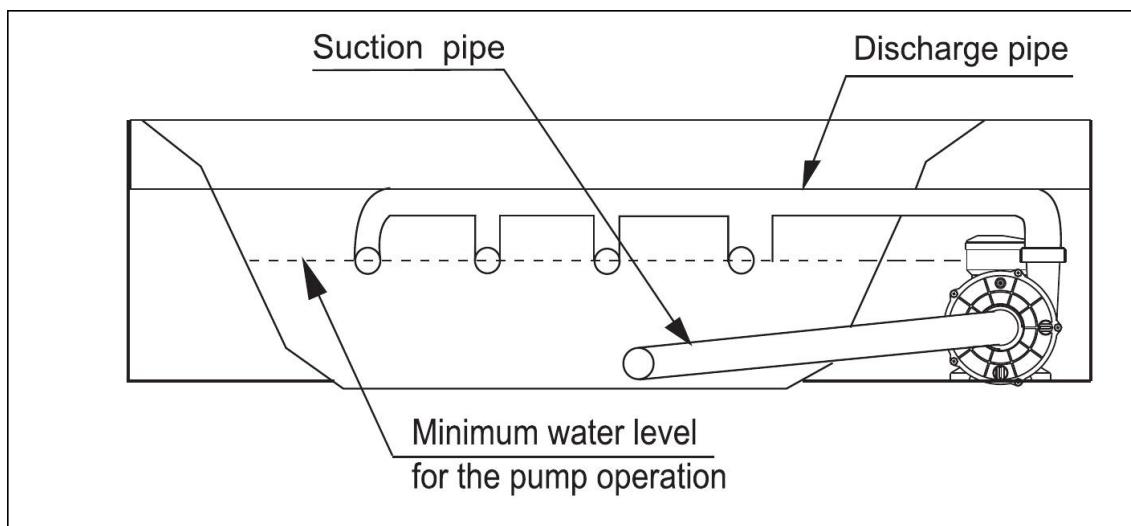


Fig. 3 — Installation diagram: suction and discharge pipes; minimum water level for pump operation

6. Pipe Assembly

The suction and discharge pipes should have a diameter equal to or greater than the intake tapping of the pump.

Avoid traps, as, in addition to affecting efficiency, they impede total overall emptying.

The suction and discharge pipes should not rest on the pump in any case.

Seal all connectors and unions well. Avoid any dripping onto the motor, which would unfailingly damage it.

7. Electrical Connection

QUALIFIED PERSONNEL ONLY

The electrical connection must be carried out by qualified staff strictly in accordance with EN 60335-2-60. Disconnect the supply before wiring.

The electrical installation must have a multiple-separation system with contacts opening at least 3 mm.

For continued protection against electric shock, the unit is to be mounted to its base in accordance with the installation instructions.

System protection must be based on a residual current device (RCD) with a rated tripping current not exceeding 30 mA. The supply cable must comply with EMC standards.

Single-phase motors have built-in thermal protection.

Ensure the earth cable is correctly connected, and that the equipotential connection between the spa and the pump is correctly made.

Equipotential bonding conductors must have a cross-section between 2.5 mm² and 6 mm² and be fitted with a suitable terminal receptacle.

8. Controls Prior to Start-Up & Start-Up

Controls Prior to Initial Start-Up

Verify that the pump shaft turns freely.

Check that the mains voltage and frequency agree with the nameplate.

The hydromassage assembly should be equipped with a system to prevent the pump from starting if a minimum water level is not present.

Check the rotating direction of the motor, which must agree with that indicated on the fan cover.

If the motor does not start, refer to the troubleshooting table (Section 11).

THE PUMP SHOULD NEVER OPERATE DRY.

Start-Up

Start the pump electrically only when the suction and discharge pipes are connected to the corresponding inlets and outlets. Check that there is no obstacle in the pipes.

Apply voltage to the motor and suitably adjust the jets to obtain the desired flow.

9. Operation

The LoW pump recirculates the spa water quietly and continuously. Ensure the spa is filled and the suction inlet is fully submerged before starting.

Point the jets away from the suction inlet so that air is not drawn into the pump suction.

Do not run the pump dry, even momentarily.

Stop the pump before draining the spa; the total-emptying system evacuates residual water automatically at each stop.

10. Maintenance & Cleaning

Before maintenance and cleaning, make sure the power supply is cut off. Oxygen pumps for hydromassage facilities do not require any special maintenance or programming. If the pump will be idle for a long period, it is recommended to disassemble, clean and store it in a dry, well-ventilated place.

Cleaning Procedure

Fill the spa / bathtub with water up to the level position of the nozzle.

Operate the pump for 2-3 minutes.

Exhaust the water of the spa after the pump has stopped; the pump empties automatically after correct installation.

Disconnect the power supply before any cleaning or maintenance.

Keep the motor and its ventilation grille free of dust and obstructions.

Periodically check the unions and connections for leaks and reseal if necessary.

If the supply cord is damaged it must be replaced by the manufacturer, its service agent or a similarly qualified person to avoid a hazard.

Do not use aggressive solvents to clean the plastic housing.

11. Troubleshooting

Symptom	Possible cause	Check / Remedy
Pump does not turn	No power to pump	Verify incoming power to the pump.
Pump does not turn	No power to pump	Check that the circuit breaker is on.
Pump does not turn	No power to pump	Check that the GFCI/RCD is operating properly and not tripped.
Pump does not turn	No power to pump	Check that the air switch is plugged in.
Pump does not turn	Air switch disconnected	Check that the air-switch hose is connected to the pump.
Pump does not turn	Air switch disconnected	Check that the air-switch hose is connected to the actuator button on the tub deck.
Pump does not turn	Thermal protection tripped	Allow the motor to cool; verify supply voltage and adequate ventilation.
Pump not pumping properly	Blockage or leak	Ensure the jets are pointed away from the suction inlet so air is not forced into the pump suction.
Pump not pumping properly	Blockage or leak	Check whether the in-tub suction inlet is blocked or covered.
Pump not pumping properly	Blockage or leak	Check for any debris in the pump housing.
Pump not pumping properly	Blockage or leak	Check for a leak in the piping or the pump.
Pump not pumping properly	Low voltage	Verify that the proper voltage is applied to the pump.
Pump not pumping properly	Low voltage	Check that no extension cord is being used.

12. Spare Parts & Accessories

Use only genuine Oxygen spare parts. When ordering, quote the Oxygen code 106.07.138 and the model designation (LoW). Contact Oxygen service for availability.

Item	Description
Mechanical seal	Shaft seal assembly for the wet end
Impeller	Speed-matched impeller
Union set 1-1/2" FBT	2 × Ø50 unions with O-rings
O-ring / gasket kit	Housing and union seals
Run capacitor	Motor start/run capacitor
Air switch	Pneumatic air switch with hose

Spare-part codes are assigned on request.

13. Warranty

Oxygen warrants the LoW pump against defects in materials and workmanship for the statutory warranty period from the date of purchase, under normal use and correct installation in accordance with this manual.

The warranty covers manufacturing defects only.

Dry running, incorrect electrical connection, use outside the stated limits (water temperature, pressure, chemicals), unauthorised modification or transport damage are excluded.

Keep proof of purchase; warranty claims must be accompanied by the model designation (LoW) and Oxygen code 106.07.138.

Material recycling must be carried out in accordance with the applicable regulations. Do not dispose of the appliance as unsorted municipal waste — use separate collection facilities.

Contact Information

Company	OXYGON — Karavasilis Stergios & Sia EE
Headquarters	Karamaouna St., N. Rysio, 57001 Thessaloniki, Greece
Phone	+30 2312 208 240
Mobile	+30 6945 157 589
email	info@oxygen.gr
website	www.oxygen.gr
Romania Branch	Str. Constelatiei 1 Bis, Voluntari, 077191, Bucharest
Romania Phone	+40 753 380 848
Romania Email	info@oxygen.ro

ISO Certifications

9001:2015 Quality Management <i>EUROCERT</i>	14001:2015 Environmental Management <i>BQV</i>	45001:2018 Health & Safety <i>BQV</i>
22301:2019 Business Continuity <i>EUROCERT</i>	46001:2019 Water Efficiency <i>BQV</i>	

Recycling of materials must be carried out in accordance with applicable regulations.