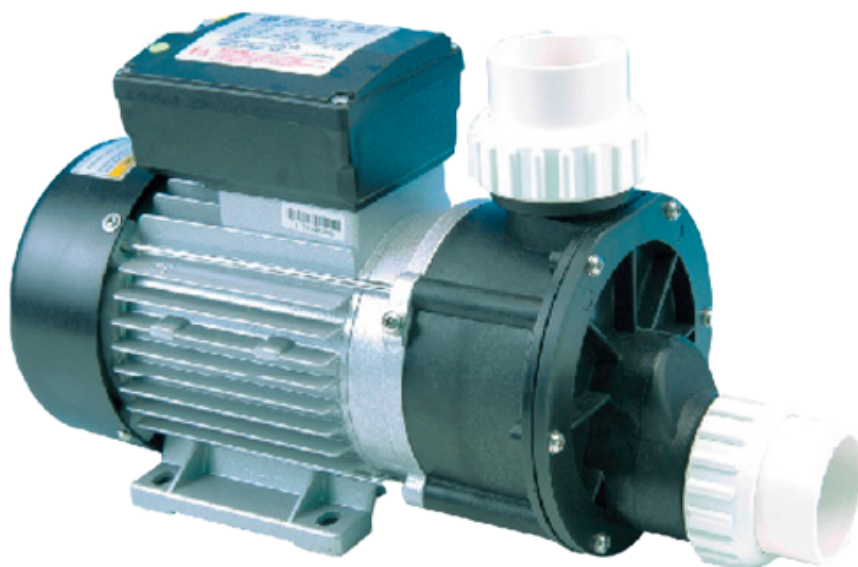




WHIRLPOOL

Hydromassage / Whirlpool Bath & Spa Pump Series (0.50-2.0 HP) Installation, Operation & Maintenance Manual

Oxygen Codes: 106.07.151 / 152 / 153 / 154 / 155 / 156 | (0.50 / 0.75 / 1.00 / 1.20 / 1.50 / 2.00 HP)



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1. Safety Warnings

CAUTION — BEFORE INSTALLATION

Read this entire manual carefully before installing or operating the pump. Failure to follow the safety instructions may cause serious injury, electric shock, or damage to property and voids the warranty. Save these instructions for future reference. For indoor use only.

RISK OF ELECTRIC SHOCK

Disconnect the power supply before any installation or maintenance work. The electrical connection must be carried out exclusively by a qualified electrician in accordance with EN 60335-2-60. The unit must be connected only to a grounding-type receptacle protected by a ground-fault circuit interrupter (GFCI/RCD) with a rated tripping current not exceeding 30 mA.

GROUNDING REQUIRED

The pump must be connected to a grounded power supply. If you are not certain that a grounding system is present, contact a licensed electrician. Wires serving as equipotential bonding conductors must have a cross-sectional area between 2.5 mm² and 6 mm² and be fitted with a suitable terminal.

WATER SAFETY & DRY RUNNING

Never operate the pump without water. 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 a minimum water level is not present. Do not permit children to use this product unless closely supervised.

INTENDED USE

The Whirlpool pump is intended exclusively for circulating clean freshwater in fixed-installed hydromassage baths and spas at a maximum water temperature of 50°C. It is NOT suitable for a swimming pool spa, seawater, chemicals, hydrocarbons, sludge, or abrasive/aggressive liquids. This appliance is not intended for use by persons with reduced physical, sensory or mental capabilities without supervision.

This product complies with EN 60335-2-60 (particular requirements for whirlpool baths and whirlpool spas) as well as the European Directives 2014/35/EU (Low Voltage) and 2014/30/EU (Electromagnetic Compatibility). For warranty terms, see Section 12 — Warranty & Contact.

2. Package Contents

On receipt, check that the package is complete and undamaged. Report any transport damage to the carrier immediately.

Whirlpool series pump — 1 pc

Union set 1½" FBT (Ø50) with O-rings — new hose module for suction and discharge

Mounting screws for fixing to the tub shelf

Air-switch tubing (where supplied with the bathtub)

Installation & user manual

Always use the new hose/union module supplied together with the bathtub. The old hose module cannot be reused.

3. General Product Description

The Whirlpool series are single-stage centrifugal pumps designed to operate with compact hydromassage equipment (whirlpool baths and spas). They circulate the water and drive the hydromassage jets. The pumps are equipped with a total drain (self-emptying) system that prevents the retention of residual liquid after each stop.

Built of top-quality materials and fitted with a high-quality, wear-resistant mechanical seal, each unit is subjected to strict hydraulic and electrical control and is carefully verified before shipment. The series is available in six power variants from 0.50 to 2.0 HP, all single-phase 230V / 50Hz, air-switch operated.

Product family	Hydromassage / whirlpool bath & spa circulation pump
Number of variants	6 (0.50 / 0.75 / 1.00 / 1.20 / 1.50 / 2.00 HP)
Operation	Air-switch operated, flooded suction
Water type	Clean freshwater only
Installation	Fixed-installed bath / spa, indoor use only

4. Technical Specifications

The following values refer to operation at 50 Hz. Maximum flow (Qmax) is measured at zero head and maximum head (Hmax) at zero flow. Intermediate operating points are shown in Section 6 — Performance Curves.

Whirlpool Series Variants (50 Hz)

Oxygen Code	Power (HP)	Power (kW)	Qmax (m ³ /h)	Hmax (m)
106.07.151	0.50	0.37	11	9
106.07.152	0.75	0.55	15	12
106.07.153	1.00	0.75	18	12
106.07.154	1.20	0.90	21	13
106.07.155	1.50	1.10	23	16
106.07.156	2.00	1.50	26	16

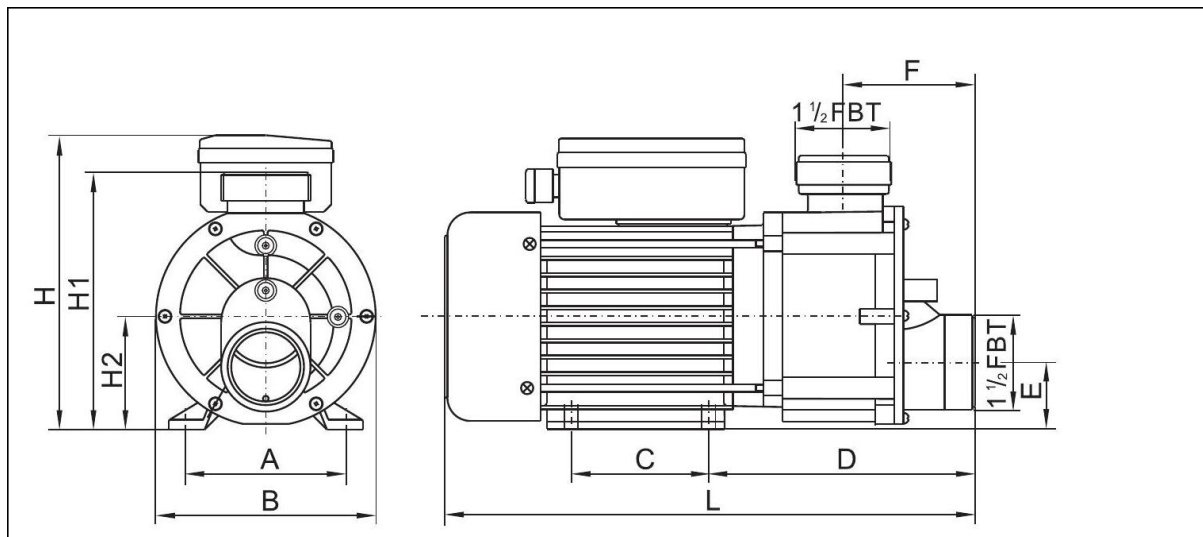
Common Characteristics

Pump type	Single-stage centrifugal, hydromassage / whirlpool
Inlet / outlet connections	1½" FBT (Ø50)
Power supply	230V / 50Hz, single-phase
Motor protection	Built-in thermal protection (single-phase)
Insulation / protection	Class I (earthed)
Max. water temperature	50°C
Max. inlet water pressure	0.15 MPa (1.5 bar)
Storage temperature	-10°C to +50°C
Relative air humidity	95% max.
Reference standard	EN 60335-2-60

All variants are single-phase 230V. The pump is air-switch operated and features a total drain system that empties residual water after each stop.

5. Dimensions

Dimensions of the Whirlpool series in millimetres (mm). The overall length (L) and body size vary with the power group, as shown in the table below.



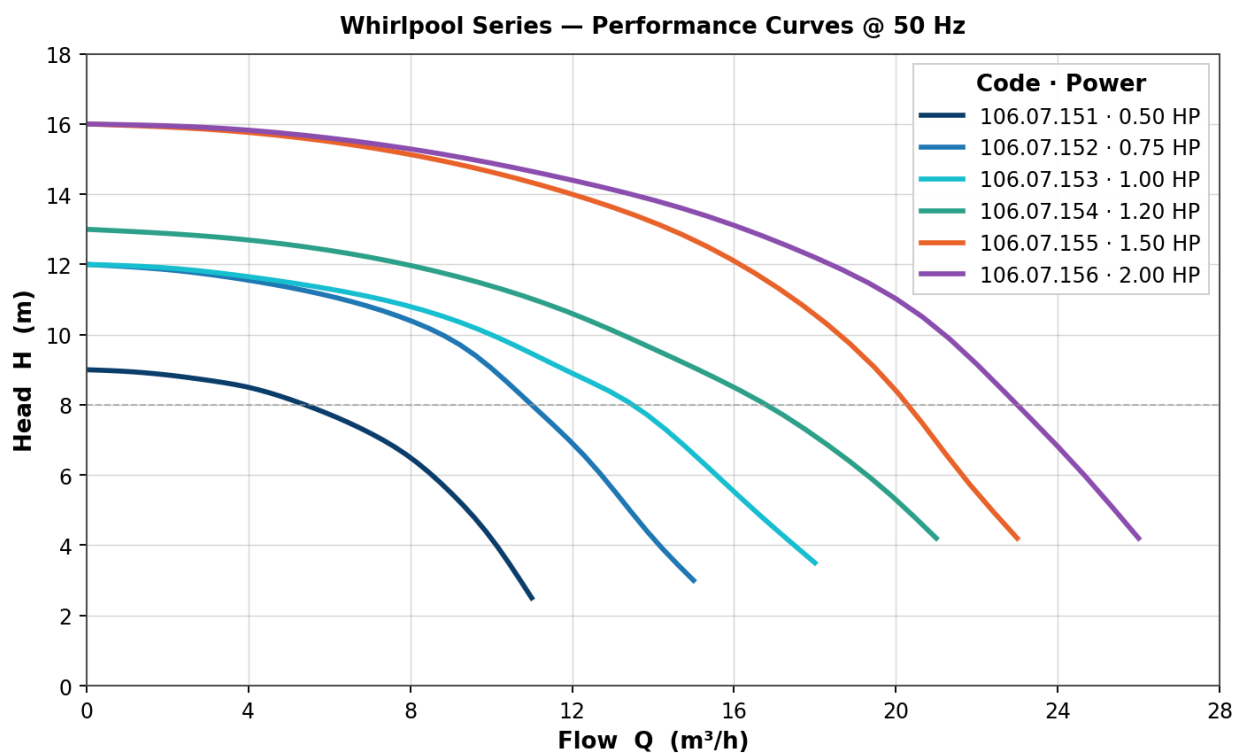
Whirlpool pump dimensions — front view (left) and side view (right). Suction and discharge connections 1½" FBT.

Dimension Table by Power Group (mm)

Dimension (mm)	0.50 HP	0.75-1.20 HP	1.50-2.00 HP
A	100	112	121
B	153	156	187
C	80	90	90
D	164	172	218
E	33	44	48
F	89	86	120
L — overall length	317	347	402
H — overall height	191	205	210
H1	168	179	211
H2 — shaft centre height	63	74	90

6. Performance Curves

The curves below show the relationship between head (H) and flow (Q) for each variant of the Whirlpool series at 50 Hz. The data is derived from the factory performance chart and is indicative — actual operating point depends on the hydromassage circuit and installation. The dashed line marks a typical working head of $H = 8$ m.



Q-H performance curves of the Whirlpool series at 50 Hz (6 variants).

7. Installation

Correct installation is ensured by following these instructions and the wiring diagram; otherwise overloads may be produced in the motor. We decline responsibility for any damage caused by not following these instructions.

Install the pump level. Follow the dimensions and position shown in Section 5 and the installation diagram.

Fix the pump with screws on the tub shelf, using silent blocks to reduce noise and vibration. Sticking or bonding the pump is forbidden.

Leave a minimum clearance of 20 mm between the motor and the surrounding structure to speed up cooling — the pump becomes hot in operation.

Keep the suction pipe as short as possible. The suction pipe diameter must be equal to or larger than that of the discharge pipe to avoid head loss and improve efficiency.

The suction and discharge pipes must not rest above the pump in any case.

Seal all connectors and unions well; avoid any dripping on the motor, which would unfailingly damage it.

Use the new hose module supplied with the bathtub; the old hose module cannot be reused.

Maximum inlet water pressure ≤ 0.15 MPa.

The rating label must be visible after installation.

For indoor use only. Do not install within an outer enclosure or beneath the skirt of a hot tub unless so marked.

8. Electrical Connection

QUALIFIED PERSONNEL ONLY

The electrical connection must be carried out by qualified staff strictly following the EN 60335-2-60 standard. Disconnect the power supply before any work.

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

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

Protect the circuit with 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.

Be sure that the earth cable connection is correctly made.

Equipotential bonding conductors must have a cross-sectional area between 2.5 mm² and 6 mm², fitted with a suitable terminal.

Check the rotating direction of the motor, which should concur with that indicated on the fan cover.

Type Y attachment — a damaged supply cord must be replaced by the manufacturer, its service agent, or a similarly qualified person to avoid a hazard.

9. Controls Prior to Start-Up & Priming

Verify that the pump shaft turns freely.

Check that the mains voltage and frequency are according to the name plate.

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

Start the pump electrically only when the suction and discharge pipes are connected to the corresponding inlets and outlets.

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

If the motor does not start up, refer to the troubleshooting table in Section 11.

NEVER RUN DRY

THE PUMP SHOULD NEVER OPERATE DRY. Ensure the pump body is flooded and the minimum water level is present before every start-up.

10. Maintenance

Our pumps for hydromassage facilities do not require any special maintenance or programming.

If the pump will be idle for a long period of time, it is recommended to disassemble, clean, and store it in a dry, well-ventilated place.

Periodically check that all unions are sealed and that there is no dripping on the motor.

Keep the in-tub suction inlet free of debris.

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.

11. Troubleshooting

If a problem occurs, locate it in the table below before contacting service. Always disconnect the power supply before inspecting the pump.

Symptom	Possible Cause	Check / Solution
Pump does not turn	No power to pump	Check incoming power, circuit breaker, and that the GFCI/RCD is operating. Verify the air switch is plugged in.
Pump does not turn	Air switch disconnected	Check that the air-switch hose is connected to the pump and to the actuator button on the tub deck.
Motor hums but does not start	Seized shaft / low voltage	Verify the shaft turns freely; check that the proper voltage is applied; avoid extension cords.
Pump not pumping properly	Blockage or leak	Point jets away from the suction inlet so air is not forced into the pump; check the in-tub suction inlet for blockage, debris in the pump housing, or leaks in the piping.
Pump not pumping properly	Low voltage	Verify the proper voltage is applied to the pump; check whether an extension cord is being used.
Pump runs but no flow	Air lock / not primed	Bleed the air, ensure the pump body is flooded and the minimum water level is above the pump.
Motor overheats / cuts out	Insufficient cooling or restricted suction	Ensure at least 20 mm clearance around the motor; check the supply voltage; allow the motor to cool; clear any restriction in the suction.
Excessive noise or vibration	Loose mounting / cavitation	Fix the pump with silent blocks; tighten mounting screws; remove any suction restriction causing cavitation.
Water leaking from pump body	Worn mechanical seal / loose unions	Replace the mechanical seal (typically worn by dry running); tighten unions and replace damaged O-rings.
Pump loses prime after stopping	Total-drain system operating	The self-emptying system drains residual water after each stop; seal unions well and fit a check/foot valve if continuous priming is required.
Reduced flow over time	Scale or debris in impeller	Disconnect power and clean the impeller and suction path.
GFCI / RCD trips	Insulation fault or moisture in motor	Have a qualified electrician inspect the motor and wiring for insulation faults or moisture ingress.

12. Warranty & Contact

Oxygen provides a two (2) year warranty from the date of purchase for all manufacturing components of the Whirlpool series, provided the pump is correctly installed in accordance with this manual and used within its specified operating limits.

Excluded from Warranty

Damage from dry running (operation without water).

Damage from exceeding the maximum water temperature (>50°C).

Damage from incorrect installation or electrical connection outside the specifications.

Damage from chemical attack or from use with seawater — the Whirlpool series is for clean freshwater only.

Normal wear of consumable parts such as the mechanical seal and impeller.

Damage from unauthorized repairs or modifications.

For service and spare parts, contact Oxygen quoting the Oxygen code of your pump (106.07.151-156) and the purchase date.

Contact Information

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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.