



MIRA

Pool Pump Series with Prefilter Installation, Operation & Maintenance Manual

Oxygen Codes: 1-ph: 106.07.169 / 170 / 171 / 172 / 173 | 3-ph: 106.07.179 / 180 / 181 / 182 / 183 | (1.0 / 1.5 / 2.0 / 2.5 / 3.0 HP)



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1. Safety Warnings

WARNING — BEFORE INSTALLATION

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

ELECTRIC SHOCK HAZARD

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 Electrical Code. The pump must be protected by a residual current device (RCD/GFCI) with a rated current of ≤ 30 mA.

EARTHING REQUIRED

The pump must be connected to an earthed power supply. If you are not certain that an earthing system is present, contact a licensed electrician. If the power cable becomes damaged, it must be replaced immediately by a qualified technician to avoid hazard.

WATER SAFETY & DRY RUNNING

Never operate the pump without water. Dry running destroys the mechanical seal and the impeller and voids the warranty. Make sure the prefilter is completely filled with water before start-up (priming).

INTENDED USE

The MIRA pump is intended exclusively for the filtration of freshwater in private swimming pools. Use with chemicals, hydrocarbons, sludge, solvents, as well as with water at a temperature $> 50^{\circ}\text{C}$, is prohibited. For salt water there is a separate MIRA Sea Water series.

The product complies with standard EN 60335-2-41 as well as with European Directives 2014/35/EU (Low Voltage) and 2014/30/EU (Electromagnetic Compatibility). For the warranty terms, see Section 12 — Warranty & Contact.

2. Package Contents

On delivery, check carefully that the package includes all of the following. In the event of missing items or damage in transit, contact the Oxygen Service Department immediately.

- MIRA pool pump with integrated prefilter
- Transparent prefilter lid with rubber gasket
- Strainer basket (screen for collecting large particles)
- 2 union fittings 2" (FBT) for inlet and outlet
- Union fitting sealing gaskets (O-rings)
- Power cable with plug (1-Ph version)
- Installation and operation manual (this document)
- Oxygen warranty certificate

3. General Product Description

The MIRA series comprises latest-generation self-priming pool pumps, manufactured from reinforced thermoplastic material with high resistance to UV and pool chemicals. They incorporate a large prefilter with a transparent lid that allows visual inspection without removal.

Main Features

- Self-priming operation (automatic start-up without the need for manual filling after the first time)
- Large prefilter with transparent lid and high-capacity strainer basket
- Asynchronous motor, IP55 rated, with thermal protection (TP)
- Insulation class F (resistant to high temperature)
- Capable of operating at water temperatures up to 50°C
- High energy efficiency — low consumption
- Easy maintenance — basket removal without tools

4. Technical Specifications

Single-phase Variants (230V)

Oxygen Code	Power (HP)	Power (kW)	Qmax (m³/h)	Hmax (m)
106.07.169	1.0	0.75	22.8	13
106.07.170	1.5	1.10	25.2	17
106.07.171	2.0	1.50	27.9	19
106.07.172	2.5	1.85	28.8	21
106.07.173	3.0	2.20	32.4	23

Three-phase Variants (400V)

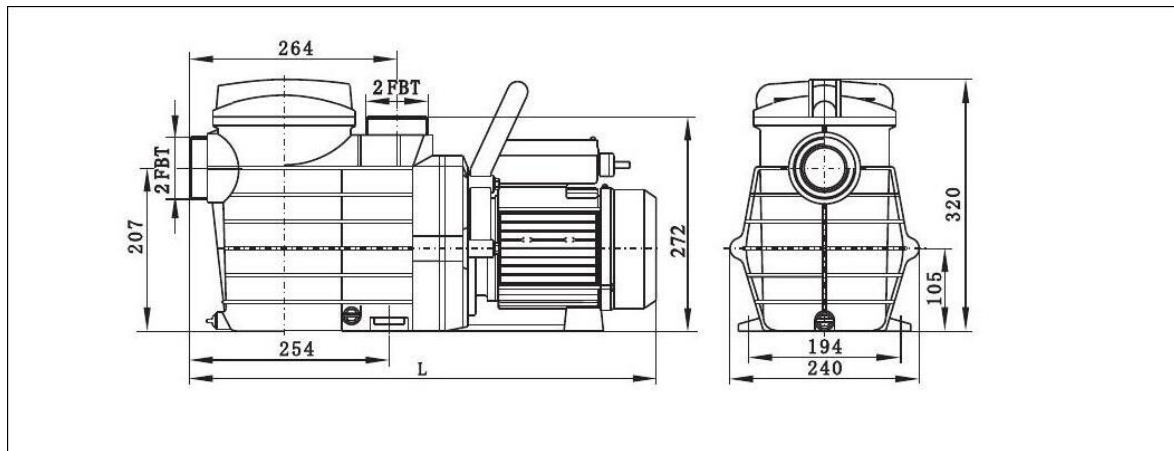
Oxygen Code	Power (HP)	Power (kW)	Qmax (m³/h)	Hmax (m)
106.07.179	1.0	0.75	22.8	13
106.07.180	1.5	1.10	25.2	17
106.07.181	2.0	1.50	27.9	19
106.07.182	2.5	1.85	28.8	21
106.07.183	3.0	2.20	32.4	23

Common Specifications

Pump type	Self-priming with prefilter
Inlet/outlet connections	2" FBT
Maximum water temperature	50°C
Storage temperature	-10°C to +50°C
Ambient relative humidity	≤ 95%
Protection rating	IP55
Insulation class	F
Thermal protection (TP)	Integrated
Body material	Reinforced thermoplastic, UV-resistant
Impeller material	Noryl (PPO)
Mechanical seal	Ceramic / Graphite
Supply voltage 1-Ph	230V / 50Hz
Supply voltage 3-Ph	400V / 50Hz

5. Dimensions

Dimensions of all MIRA variants in millimetres (mm).



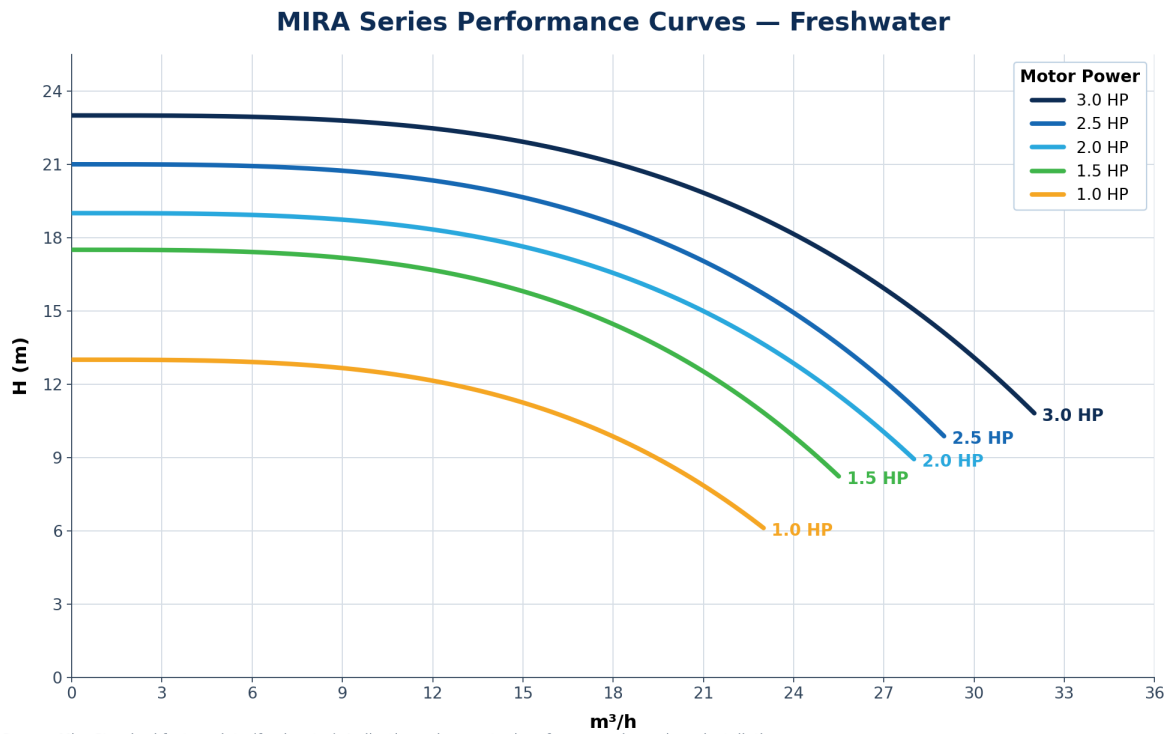
Dimensions of the MIRA pump body (side and front view).

Overall length (L) per variant

Power (HP)	L — Overall length (mm)
1.0 HP	593
1.5 HP	593
2.0 HP	593
2.5 HP	593
3.0 HP	609

6. Performance Curves

The curves below show the relationship between head (H) and flow rate (Q) for each variant of the MIRA series under freshwater conditions. The data is factory data and is indicative — actual performance depends on the installation (pipe length/diameter, bends, valves, filter cleanliness).



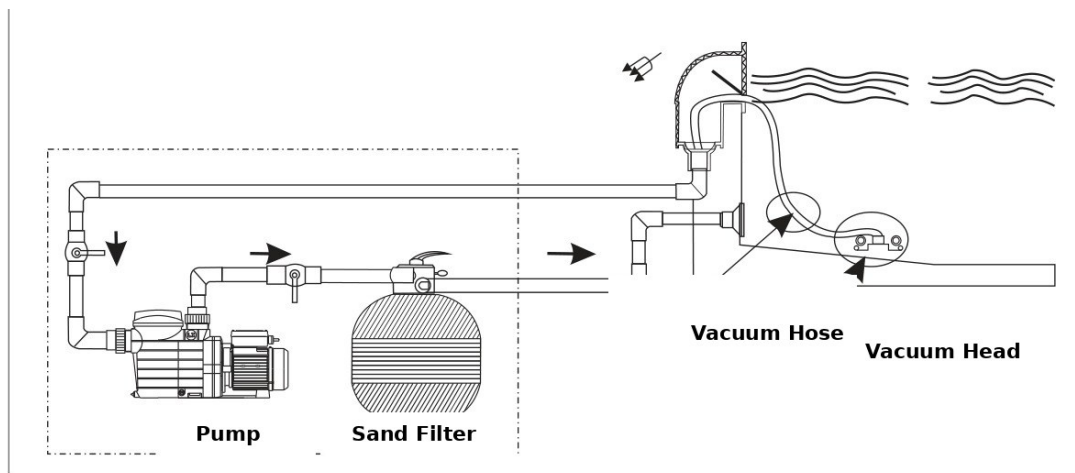
Q-H curves of the MIRA series — freshwater.

7. Installation

Mounting Location

Install the pump below or at the same level as the pool water level (for initial self-priming operation).
The distance from the pool must be ≥ 3 m (National Electrical Regulations).
The installation area must be well ventilated, dry and protected from sun/rain.
The mounting base must be level, stable and able to support the weight of the pump.
Free space for maintenance: at least 400 mm around the pump.

Installation Diagram



Typical installation diagram of the MIRA pump with sand filter and vacuum kit.

Hydraulic Connection

Use pressure-rated PVC pipes with a diameter of ≥ 2 " (DN50) on the suction and discharge sides.
Keep pipe runs and 90° bends to a minimum to reduce pressure losses.
Fit isolation valves on either side of the pump for easy maintenance.
Seal the union fittings with Teflon tape or a liquid sealant suitable for pool water — do not overtighten.
Avoid trapped air in the suction line — install the pipe with a slight slope towards the pump.

8. Electrical Connection

MANDATORY PROTECTION

The pump supply must pass through a residual current device (RCD/GFCI) ≤ 30 mA and be protected by an appropriate fuse/circuit breaker. The installation must be carried out by a licensed electrician.

Recommended Cable Cross-sections

Power	1-Ph (230V)	3-Ph (400V)
1.0 HP	3 × 1.5 mm ²	4 × 1.5 mm ²
1.5 HP	3 × 2.5 mm ²	4 × 1.5 mm ²
2.0 HP	3 × 2.5 mm ²	4 × 2.5 mm ²
2.5 HP	3 × 4.0 mm ²	4 × 2.5 mm ²
3.0 HP	3 × 4.0 mm ²	4 × 2.5 mm ²

Check the mains voltage against the pump nameplate before connection.

Three-phase pumps: check the direction of rotation after the first start-up — if it rotates in reverse, swap two phases.

Earth the pump at an earthing point with a resistance of $\leq 0.2 \Omega$.

Do not use extension cables or cable reels.

9. Pre-start Checks & Priming

Pre-start Checklist

Check that the power supply is compatible with the motor (voltage, frequency, phases).

Confirm that the pump is securely fastened and that there is no stress from the pipework.

Open the isolation valves on the suction and discharge sides.

Remove the transparent lid, fill the prefilter with water up to the top, and close the lid carefully.

Make sure the lid is tightened — a thin film of water should cover the gasket.

Priming Procedure

Start the pump and watch the transparent lid.

Within 1-3 minutes the air in the suction line is expelled and the pump fills completely with water.

If priming is not completed within 5 minutes, stop the pump and check the tightness of the suction line, the prefilter fill level and any blocked components.

Do not run the pump dry for more than 5 minutes.

10. Maintenance

DISCONNECT BEFORE MAINTENANCE

Before any maintenance work, disconnect the power supply at the main switch and close the isolation valves.

Weekly Maintenance

Inspect and clean the strainer basket (or whenever it appears full).
Rinse the basket with clean water — remove any leaves, hair and insects.

Monthly Maintenance

Inspect the prefilter lid gasket — for wear or dryness. Lubricate with a silicone lubricant suitable for contact with water if required.
Inspect the transparent lid for cracks or pressure marks — replace immediately if any are found.
Visually inspect connections and union fittings for leaks.

Annual Maintenance

Complete cleaning of the pump body and prefilter.
Inspect the mechanical seal for leaks.
Check the motor bearings for abnormal vibration or noise.
Professional electrical inspection (insulation resistance, current draw).

Winter Storage (Winterization)

Disconnect the pump from the mains supply.
Fully drain the water from the prefilter and the pump body (using the screw-in drain plug).
Clean the prefilter lid and leave it open for ventilation.
Cover the pump with a waterproof protective cover if it remains outdoors — without obstructing ventilation.

11. Troubleshooting

Problem	Possible Cause	Check / Solution
The pump does not start	No power supply	Check the fuse / circuit breaker / GFCI.
The pump does not start	Incorrect connection (voltage/phases)	Verify against the nameplate.
The pump does not start	Thermal protection has tripped	Wait 10-15 minutes to cool down, check ventilation.
Priming does not occur	Prefilter not filled with water	Remove the lid, fill completely with water.
Priming does not occur	Air leak in the suction line	Check union fittings, seals, inlet valve.
Priming does not occur	Blocked basket or sand filter	Clean the strainer basket, check the filter.
Low flow rate	Blocked strainer basket	Clean the basket.
Low flow rate	Blocked sand filter	Backwash the sand filter.
Low flow rate	Partial air leak	Check the tightness of the lid and the suction union fittings.
Low flow rate	Wrong direction of rotation (three-phase)	Swap 2 phases in the supply.
Excessive noise	Cavitation	Check the pool water level, open the valves fully.
Excessive noise	Foreign object in the basket	Switch off, clean the basket.
Excessive noise	Worn bearings	Repair by an authorised service centre.
Leak at the lid	Defective gasket	Replace the O-ring, lubricate with silicone.
Leak at the lid	Lid not tightened correctly	Retighten by hand — without tools.
Persistent leak from the body	Worn mechanical seal	Replacement of the mechanical seal by an authorised service centre.

12. Warranty & Contact

Oxygen provides a two (2) year warranty from the date of purchase for all manufacturing components of the MIRA series, provided that installation has been carried out correctly in accordance with this manual and in accordance with the company's warranty terms.

Excluded from the warranty

Damage caused by dry running.

Damage caused by exceeding the maximum water temperature (>50°C) or use in salt water (a separate Sea Water series is available).

Damage caused by incorrect installation or an electrical connection outside the specifications.

Damage caused by chemical attack (e.g. over-chlorination, non-approved chemicals).

Damage caused by frost (improper winterization).

Wear of the strainer basket and O-rings (consumables).

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.