

Dear client,

Congratulations on your purchase of this **FLOTEC** product. Like all **FLOTEC** products, it has been developed with the help of the latest technologies and manufactured with the most advanced electrical/electronic parts.

Take the time to read the instructions carefully before using this appliance.

Thank you!



Contents

Ch. 1	Features	GB 1
Ch. 2	Limitations	GB 1
Ch. 3	Installation	GB 2
Ch. 4	Electric Connection - Start-up	GB 3
Ch. 5	Maintenance and troubleshooting	GB 3
Appendix	Figures	pg. 73

Warnings for the safety of individuals and objects.

Carefully follow the instructions marked with the following symbols.



DANGER

Keep the technical equipment out of the reach of children!



DANGER
Electric shock
risk

Warns that the failure to follow the directions given may cause electric shock.



DANGER

Warns that the failure to follow the directions given could cause serious risk to individuals or objects.



WARNING

This sign warns the operator that the failure to follow an instruction may damage the pump and/or the system.

Ch. 1 Features

WARNING: Read this manual carefully before installing this pump.

This sign warns the operator that the failure to follow an instruction may damage the pump and/or the system.

Carefully store this manual. If problems arise, contact the Customer Assistance Service. Please verify that the pump has been used correctly and that the cause of the problem is not imputable to its operation.

Every electropump is carefully tested and packed during its assembly.

On receiving the pump, check that the pump has not been damaged during transportation. If the pump is damaged, immediately inform the dealer within 8 days from the date of purchase.

Ch. 2 Limitations

FLOTEC BIOX series electropumps are suitable to pump dirty water containing suspended solid particles. These pumps can be used both for permanent and temporary installations and in particular to empty collection basins containing dirty or waste waters.



WARNING

The pump cannot be used for sea water and inflammable, corrosive, explosive or dangerous liquids.



WARNING

Verify that the electropump never runs without liquids.



DANGER
Electric shock
risk

Make sure people do not come into contact with water when the pump is connected to the mains.

Technical Data	BIOX 200/8 AUTO	BIOX 300/10 AUTO	BIOX 400/12 AUTO
Mains voltage / frequency	230 V ~ 50 Hz	230 V ~ 50 Hz	230 V ~ 50 Hz
Absorbed power	900 Watt	1300 Watt	1600 Watt
Type of protection / Insulation class	IP 68 / F	IP 68 / F	IP 68 / F
Delivery fitting	47,80 mm (1"1/2 M)	59,61 mm (2" M)	59,61 mm (2" M)
Maximum flow rate	15.000 l/h	21.000 l/h	27.000 l/h
Maximum head	9 m	11 m	12 m
Maximum depth of immersion	7 m	7 m	7 m
Power cable	10 m H07 RNF	10 m H07 RNF	10 m H07 RNF
Weight	9,8 Kg	11,2 Kg	11,3 Kg
Maximum dimension of pumped solid particles	40 mm	40 mm	40 mm
Maximum temperature of the pumped fluid in continuous mode	40° C	40° C	40° C
Maximum number of starts per hour, uniformly distributed	30	30	30
Minimum priming level (A)*	123 mm	123 mm	123 mm
Minimum suction level (B)*	45 mm	45 mm	45 mm
Connection level (C)*	370 mm	400 mm	400 mm
Stop level (D)*	250 mm	300 mm	300 mm

Sound pressure level (Lpa) equal to or less than 70 dB(A)

Sound emission values obtained in conformity with the EN 12639 standard

(*) These data refer to Fig. 1. Measurements are expressed in millimetres.

The minimum priming level corresponds to a condition in which the delivery mouth is completely submersed.

(See Fig. 1 - Reference A).

If these pumps are used in continuous mode for ponds with fish, it is necessary to check them at regular intervals of 6 months (if the water contains aggressive substances). It is also advisable to check the maximum dimension of particles recommended for the pump and take the necessary measures to prevent the fish from being sucked into the pump.

Ch. 3 Installation



DANGER
Electric shock
risk

When installing, please ensure electropump is disconnected from electrical supply. Pumps in this series are not suitable for use in a swimming pool and the relevant cleaning and servicing operations.



DANGER

To prevent possible injuries to people, avoid inserting hands into the mouth of the pump if this is connected to the mains.

The pumps of this series are not suitable to be used for swimming pools.



DANGER

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

Use the handle provided to transport or lift the pump.

To use the pump in permanent installations with rigid pipes, to install a check valve to avoid the fluid being re-circulated once the pump is stopped. The installation of a quick closing fitting in a convenient position facilitates cleaning and maintenance operations.

The dimensions of the collection basin should reduce to the minimum the number of start-ups per hour (see LIMITATIONS – Technical data).

To use the pump for temporary applications, install a flexible pipe and connect it to the pump using a pipe holder. To immerse the pump, use a rope and fix it to the handle.

FLOTEC BIOX pumps have a pre-set floating switch. To change the setting, it is necessary to increase or reduce the length of the floating switch cable by sliding it in the slot on the handle (See Fig. 1).



WARNING Verify that the floating switch stops the pump as soon as the minimum level is reached.



WARNING Make sure that the floating switch is free to move.
(See Fig. 1)

The pumps used in ponds, small lakes, fountains or similar installations or close to them should have a cut-out switch. Contact a specialised electrician.

Ch. 4 Electric Connection - Start-up



WARNING Verify that the voltage and frequency of the electropump shown on the nameplate correspond to those available on the mains.



DANGER
Electric shock
risk

The installer must make sure that the electric system is grounded in accordance with the law in force.



DANGER
Electric shock
risk

Make sure that the electric system has a high-sensitivity circuit breaker $\Delta = 30 \text{ mA}$ (DIN VDE 0100T739).

Instructions for a safe pump start

The power cable should have a minimum section equivalent to that of H07 RN-F. To be able to use the pump outdoors, it is necessary to use cable with a length of 10 m. The plug and connections should be protected by water splashes.

Before using the pump, always inspect it visually (especially power cable and plug). Do not use the pump if it is damaged. If the pump is damaged, have it inspected by the specialised assistance service only.

Make sure that electric connections are protected from inundation.

Protect the plug and the power cable from heat, oil or sharp edges.



DANGER
Electric shock
risk

The power cable must be replaced by qualified personnel only.

Grounding

The plug of the power cable has a double grounding contact, so that grounding can be performed by simply inserting the plug.

Overload protection

FLOTEC BIOX series pumps have a built-in thermal protection switch. The pump stops if an overload condition occurs. The motor restarts automatically after it has cooled down (see point 4 of the Troubleshooting section for information on causes and corrective actions).

To start the pump, insert the plug in a 230 V alternate current socket.

ATTENTION: the pump runs as soon as the floating switch reaches the start-up level.

Ch. 5 Maintenance and troubleshooting

In ordinary conditions, **FLOTEC BIOX** series electropumps do not require any maintenance. It may be necessary to clean the hydraulics or replace the impeller.



DANGER
Electric shock
risk

Make sure the machine is disconnected from electric power supply, before performing maintenance operation.

PROBLEM	POSSIBLE CAUSE	REMEDY
1) THE ELECTROPUMP DOES NOT PUMP WATER, THE MOTOR DOES NOT RUN	1) No electricity. 2) Plug inserted incorrectly. 3) Enabled safety switch. 4) Blocked impeller. 5) Damaged motor or condenser.	2) Verify that voltage is present and that the plug is correctly inserted. 3) Reset the safety switch. If the safety switch is once more enabled, contact a specialised electrician. 4) Remove possible obstructions from the impeller. 5) Contact the Customer Assistance Service.
2) THE PUMP DOES NOT SUPPLY WATER BUT THE MOTOR IS RUNNING	1) Obstructed suction mouth. 2) Blocked check valve. 3) The air vent hole on the pump body may be clogged	1) Clean the suction mouth. 2) Clean or replace the valve. 3) Loose the nut that secures the stainless steel flap of the air vent hole to the pump body; see drawing no. 2 reference A. Remove the stainless steel flap. Clear the hole of any old dirt. Fit the protective flap back in. Screw back in and tighten the nut.
3) THE PUMP SUPPLIES A LIMITED AMOUNT OF WATER	1) Obstructed suction mouth. 2) Obstructed pipe. 3) Worn impeller.	1) Clean the suction mouth. 2) Remove the obstructions 3) Contact the Customer Assistance Service.
4) INTERMITTENT OPERATION	1) Solid particles prevent the free rotation of the impeller. 2) The temperature of the fluid is too high. 3) Voltage out of range. 4) The fluid is too dense. 5) Faulty motor.	1) Remove the foreign particles. 3) Supply the pump in accordance with nameplate data. 4) Dilute the pumped fluid. 5) Contact the Customer Assistance Service.