AQUA FORTE®

User Manual

EC-Serie

POND PUMP

Contents

1. Introduction

You have purchased a high quality device that is designed to be silent, energy saving, long lasting and easy to use.

This information belongs exclusively to, and is inextricably linked to the AquaForte EC-Serie 3500/5000/6500/8000/10000 pumps. Without written permission it is not permitted to make any change to the pump or the accompanying documentation.

1.1. Purpose of this manual

The purpose of this manual is to help users understand the features and functions of the pond pump, and to provide guidance on how to use it safely and effectively.

The manual includes all relevant information on:

- Safety *(on page 5)* provides important information on how to use the product safely, including warnings and precautions that users should be aware of.
- Product specifications *(on page 5)* describes the dimensions, features and other relevant information about the product.
- Installation guidance *(on page 6)* provides step-by-step instructions on how to install the product, including information on electrical connections, and positioning.
- Operation *(on page 6)* explains how to use the product, including how to set the temperature, how to turn it on and off, and how to adjust the settings.
- Maintenance *(on page 7)* provides guidance on how to keep the product in good working order, including information on cleaning and regular maintenance tasks.
- Troubleshooting *(on page 11)* provides advice on how to identify and fix common problems that may arise with the product.

Overall, the product manual is an essential resource for anyone who owns or operates a pond pump. By following the instructions and guidance provided in the manual, users can ensure that they can get the most out of their investment.

1.2. Target audience

A pond pump is an important investment for pond owners who want to keep their ponds clean or introduce a water feature.

1.3. Intended and non-intended use

⚠ CAUTION

Safety Hazard
Make sure that the pond pump is installed according to the procedures described in this manual.

A pond pump is a device that keeps the water in your pond healthy, and it can be used to create different water features. However, it is important to understand both the intended and non-intended uses of a pond pump for this purpose. In all deviating situations, the manufacturer or an authorized dealer must be consulted in advance.

1.3.1. Intended Use

A pond pump serves several intended purposes:

- pumping dirty water to a pond filter;
- creating water features such as fountains and waterfalls;
- circulating pond water for better oxygen levels.

1.3.2. Non-Intended Use

While a pond pump can be a great way to improve pond water quality, there are also some non-intended uses that should be avoided. For example, a pond pump should not be used in highly polluted water as this will decrease the pump performance.

Additionally, a pond pump should not be used in pools.

Finally, a pond pump should not be used to pump any other liquids than freshwater.

By understanding both the intended and non-intended uses of a pond pump, you can ensure that you are using the device in the most efficient and cost-effective way possible.

1.4. Reading guide

This manual contains important warnings and notes that highlight information relevant to the user:

⚠ WARNING

This section warns that there is a safety hazard.
Indicates a hazardous situation that could result in serious injury or death and/or serious damage to the product or environment if the safety instructions are not followed.

⚠ CAUTION

This section warns of a possibly hazardous situation.
Indicates a hazardous situation that could result in minor or moderate injury and/or damage to the product or environment if the safety instructions are not followed.

Information that is considered important but is not injury-related (e.g., information related to property damage).

Information that's useful for future use.

Information that is relevant to the context or understanding of the user.

Tips and tricks to make usage easier or more convenient.

1.5. Warranty

This product comes with a 24 month general product warranty starting at the date of purchase.

The warranty covers any defects in materials or workmanship under normal use and maintenance. If a defect arises during the warranty period, you should contact your dealer immediately.

To make a warranty claim, you must provide proof of purchase, the defective product and a description of the problem. The warranty does not cover damage caused by improper installation, unintended use, abuse, or neglect. It also does not cover normal wear and tear, or any damage caused by acts of nature such as lightning.

Any damage caused by calcium/limescale is **not** covered by the warranty!

This warranty is the sole and exclusive warranty for this pond pump. We make no other warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose. In no event shall we be liable for any incidental, consequential, or special damages arising out of or in connection with the use or inability to use this product, even if we have been advised of the possibility of such damages.

2. Safety

This manual does not include site and/or country specific regulations, the installer of the drum filter is responsible for following the local rules and regulations.

We have provided important safety messages in this manual and on your device. Read all safety information and instructions. Failure to observe the safety information and instructions may result in electric shock, fire and serious injury. Keep all safety information and instructions for future reference.

2.1. Warnings

⚠ DANGER

Electrical hazard

- BEFORE cleaning the product, shut off the power!
- Normal users MUST NEVER attempt to service or open the product cover!
- If the device is malfunctioning, contact your nearest dealer or service center.

⚠ CAUTION

- Packing parts (e.g. plastic bags) may be dangerous. Therefore, store away from children, domestic animals and anyone incapable of understanding the dangers. This device is not a toy.
- Never leave the device unattended.

Service and/or disposal MUST be carried out by people with proven expertise.

2.2. Safety information

- Repairs may only be carried out by a trained service technician. If repairs are required, please contact the nearest after-sales service centre. Any repairs should be performed in strict accordance with this manual.
- Don't block the product inlet and/or outlet.
- In order to increase efficiency:
    - Do not use the pump in highly polluted water.
- In case of storm/lightning, disconnect the main power supply to prevent any damage caused by lightning.
- Switch off the product during installation of and/or repairs to the product.

3. Product specifications

This pond pump should not be used in water with a temperature above 35°C.

Model	Voltage	Wattage	Max. Depth	Max. Head
EC-Serie 3500	220-240VAC 50Hz	16W	1.5m	2.0m
EC-Serie 5000	220-240VAC 50Hz	26W	1.5m	3.0m
EC-Serie 6500	220-240VAC 50Hz	38W	1.5m	3.5m
EC-Serie 8000	220-240VAC 50Hz	50W	1.5m	4.0m
EC-Serie 10000	220-240VAC 50Hz	68W	1.5m	4.5m

Related parameters are subject to adjustment periodically for technical improvement without further notice. For more details please refer to the nameplate of the product.

4. Installation guidance

⚠ WARNING

Safety hazard
Do not pump flammable liquids.

⚠ CAUTION

- Do not let the pump run dry: This could cause damage to the motor.
- Do not connect the pump to any other voltage than that shown on the rating lable of the pump.
- Do not use the power cord coiled to avoid induction problems.
- Always submerge the pump first and then plug in the power cable.
- The water temperature should not exceed 35°C.
- Do not let the pump freeze in wintertime.

The power socket used for the pump must be equipped with a leakage current protecting device. The leakage current shall not exceed 30 mA.

The pond pump can be installed in a wet or a dry setup.

4.1. Wet setup

Never place the pump in a muddy area or directly on a sandy pond bottom.

The pump must be fully submerged.

1. Connect your tubing to the pump outlet.
2. Place the pump under water on a small pedestal, such as a stone.
3. Ensure that the pump is fully submerged.

4.2. Dry setup

In a dry setup the pump must be under the water level as it is not self-priming.

1. Remove the external strainer house.
2. Connect your tubing to the pump fittings.
3. Place the pump in the desired location.
4. Ensure that the pump is fully below the water level.

5. Operation

⚠ CAUTION

Do not let the pump run when not submerged in water or positioned fully below the water level, as this may damage the pump.

A clogged or dirty intake screen will greatly reduce performance. If the pump is used on a dirty surface, raise it slightly to reduce the amount of debris contacting the intake.

5.1. Starting the pump

1. Check that the pump is placed correctly:
    - For a wet setup, the pump must be fully submerged.
    - For a dry setup, the pump must be placed fully under the water level.
2. Form a drip loop on the power cable and plug it into the outlet.

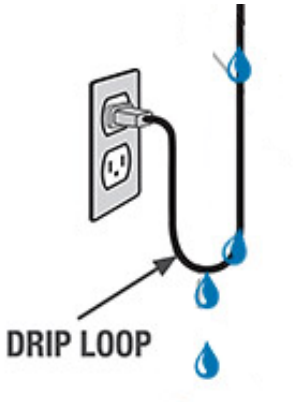

Figure 1. Drip loop

If the pump does not start right away, there is probably air inside the pump and the pipe system, which activates the dry-running protection *(on page 7)*. Pull out the power cable and insert it again a few times. The pump will start working normally.

5.2. Dry-running protection

The pump is equipped with a dry-running protection function.

When the water level is lower than the pump inlet, the pump will automatically stop after 2 minutes. It will try to start again after 30 seconds. If there is still no water, the pump will stop completely. You can reset this by removing the power cable from the power outlet and plugging it back in.

6. Maintenance

⚠ CAUTION

- Always disconnect the power cord from the electrical outlet before handling the pump.
- The pump shaft cannot be removed.

- Monthly maintenance will prolong the pump's life.
- Maintenance should only be carried out by people with proven expertise.

6.1. Cleaning

1. Open the pump cover and remove the pump.

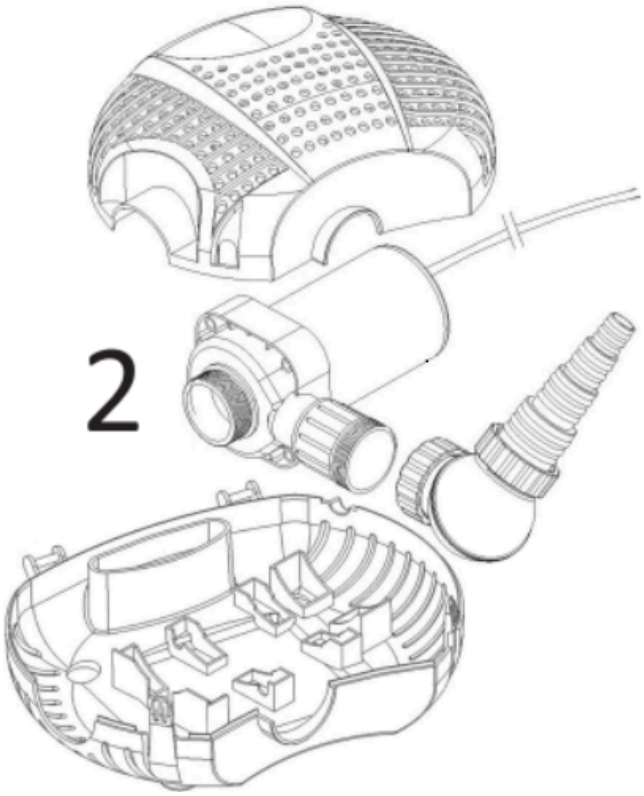

Figure 2. Pump cover

2. Turn the pump house 45° counterclockwise.

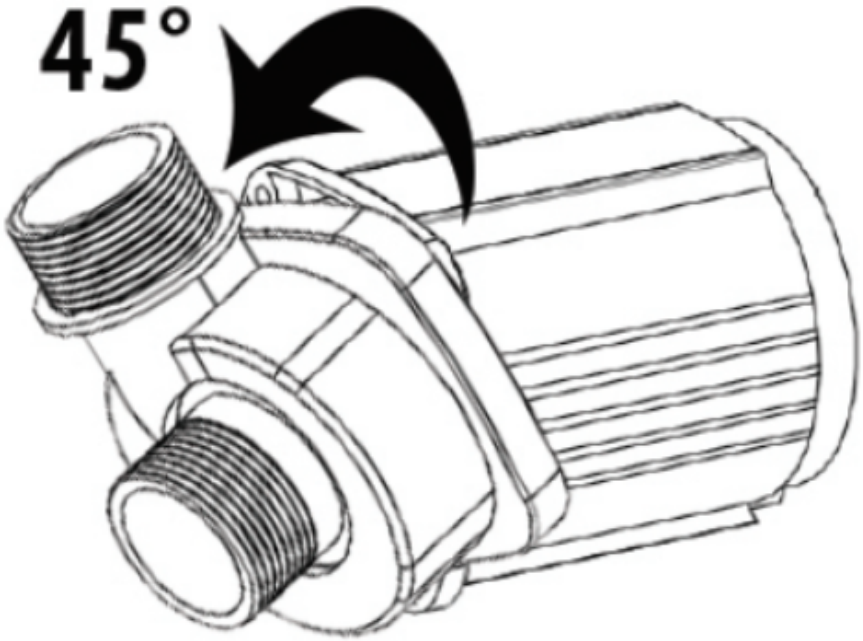

Figure 3. Turn pump house

3. Pull the pump house away from the pump body.

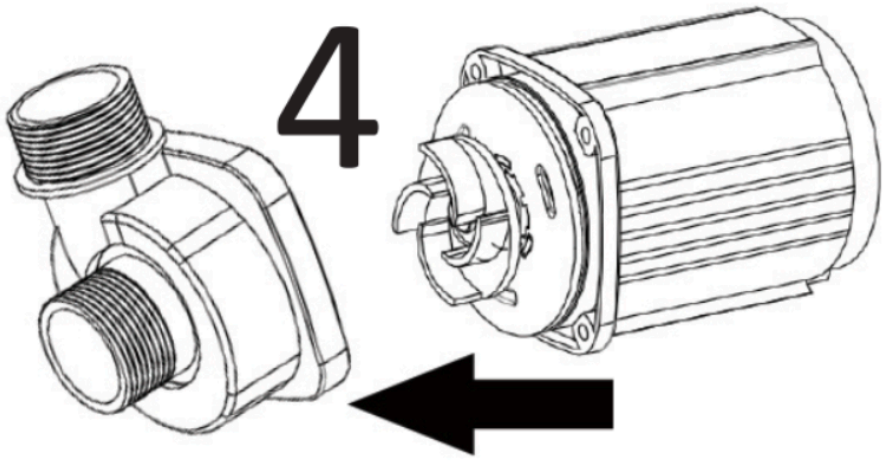

Figure 4. Pump body

4. Remove the rotor from the pump house.

Figure 5. Remove rotor

5. Clean the rotor with water and a brush.

Figure 6. Clean rotor

6. Put the pump body in a vertical position and fill it with a mild lime scale remover (such as cleaning vinegar).
7. Immerse the rotor in a plastic container filled with the same lime scale remover.
8. Leave both for 24 hours.
9. After 24 hours, rinse off the pump body and rotor with water.

Figure 7. Lime scale remover

10. Reassemble the pump.

7. Troubleshooting

If the pump fails to operate, check the following:

- Check the outlet and try another outlet to ensure the pump is getting electrical power.
- Check the pump outlet and tubing for kinks and obstructions. Algae may block them, please flush out the algae with a garden hose.
- Check the inlet to ensure it is not clogged with debris.
- Remove the pump inlet to access the impeller area. Turn the rotor to ensure it is not broken or jammed.

7.1. Calcium/limescale problems

When you find calcium/limescale deposits inside the motor house this implicates that the pumps become too warm during use. Calcium/limescale expands above temperatures of 55°C. With sufficient flow, the pump is water cooled and cannot reach these temperatures. If, however, the head pressure is too big (too small pipe system, maximum pump head (pressure loss) too big, etc) the flow will be reduced which causes insufficient cooling and by this, calcium deposits. In a worst case scenario the calcium/limescale layer will get so thick that it blocks the rotor and the motor will burn out. You can remove calcium/limescale deposits with commercial de-scaling products or cleaning vinegar.

8. Disposal

When disposing of your old device, please do so safely and properly to protect the environment and comply with local regulations.