



Variable Flow Pond Pumps

Ideal for filters and watercourses

Instruction Manual

IMPORTANT: Please read this instruction manual carefully before using this product. Keep the manual safe for future reference.



Thank you for purchasing a pondXpert pond pump. Specifically designed to move large volumes of water from your pond to a filter or watercourse. A solids handling pump like this can suck in large particulate waste without blocking, and put it straight into a filter. To ensure that this product is safely and correctly used and at its optimal performance, please read this instruction booklet carefully before use.

Attention

1. Keep out of the reach of children.
2. A drip loop should be installed in the cable, to ensure that water cannot travel down it and into an electrical socket.
3. An RCD (of which the rated working current is not over 30mA) must be installed when using the pump, and the power socket must be connected to an earth.

4. This pump can be run 'dry' or submersed under the water.
5. The device must not be used to pump any flammable liquids or water with a temperature higher than 35° C.

6. Always disconnect the power supply when handling, servicing or maintaining the pump.
7. Do not attempt to unplug the pump or disconnect from the power supply with wet hands.
8. Do not carry or retrieve the pump from the pond by pulling the electrical cable.

9. The power cable cannot be replaced. If the power cable becomes damaged near to the pump body it cannot be replaced, and electricals are sealed inside the unit to make them waterproof.

Pump - Electrical Safety

Further, more detailed information regarding the electrical installation of this product can be found on page 8 of this instruction manual.



Features

- Wired control box to easily adjust flow rates (1% to 100%).
- Permanent magnet brushless motor drives, for DC adaptive variable frequency, high efficiency and long life.
- Energy saving motor for large water volumes and high pressure.
- Ceramic impeller shaft with high rub resistance and long life.
- Fully epoxy sealed motor for waterproofing, safety and reliability.
- Steady and quiet performance.

Usage

Suitable for outdoor ornamental garden ponds only. Can be run continuously, 24 hours per day.

1. The device can be placed at the bottom of the pond. One end of the hose should be connected to the pump outlet, and the other end will feed water either to a filter or water course. Hose clips (not supplied) should be used to fasten the hose to the hosesails.
2. The direction of the outlet is adjustable. If necessary, loosen the locking nut and adjust the outlet to the direction you need. Then tighten the locking nut by hand.

3. Connect the pump cable to the control box using the connector pins on the plug. Push the pins into the connector, then tighten the screw sleeve to secure this into position.

Maintenance

Regularly inspect and clean the pump housing to make sure it has not accumulated too much dirt and leaves. Visibly reduced pump flow is a strong indicator that either the pump cage is nearly completely blocked, or the filter it is attached to is blocked, and needs cleaning, or new mechanical filter media.

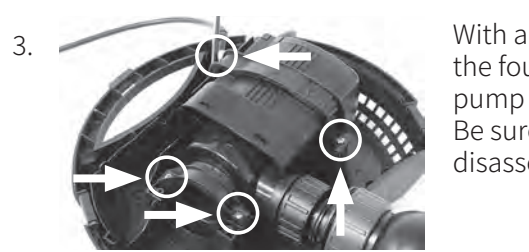


1. Cleaning and Replacing Impeller Assembly

- a. Disconnect all power supplies before inspection or service to avoid possible electrical shock.
- b. Disconnect pump from tubing and remove from water.
- c. Unclip the four locking clips to loosen upper housing.



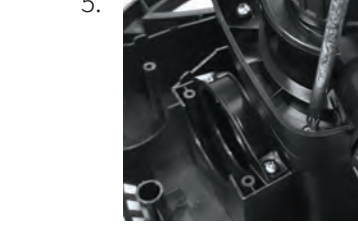
Remove the stepped hosetail and ball joint by loosening the large plastic nut by hand.



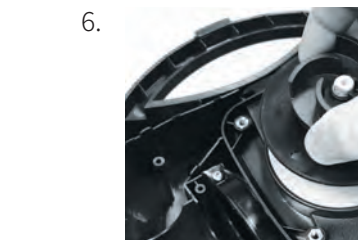
With a Phillips screwdriver remove the four screws and two brackets from pump body to lower housing. Be sure not to lose any screws during disassembly.



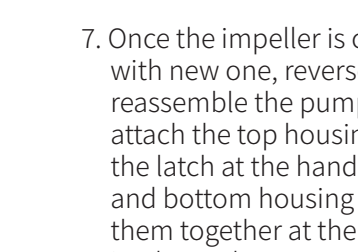
Remove the screw holding the power cord strain relief clip.



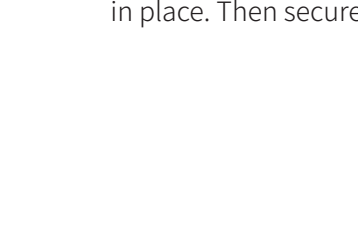
To access the impeller assembly, remove four screws from pump impeller housing.



Carefully pull the impeller out of its chamber. Inspect and clean the impeller and chamber using water and a damp cloth or sponge. A vinegar mixture may help remove hard deposits. If the impeller is damaged, replace with a new impeller.



Once the impeller is cleaned or replaced with new one, reverse the steps to reassemble the pump and housing. Tip to attach the top housing, start by securing the latch at the handle first. Align the top and bottom housing sections and squeeze them together at the handle to latch them in place. Then secure the four clips.



Reattach the plumbing and return the pump back to the pond. Plug the pump back in and observe the operation to make sure it is working properly.



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Product Features & Operating Instructions

LED Protection Mode

To protect the LED Screen after 30 seconds without touch the LED changes from micro bright to the screen saver mode; Press any button to return to normal.

Memory Function

Control Panel stores the last setting used. It will return to this setting when re-connected.

Fault Code Description

Error Code	Root Cause	Trouble shooting
E1	Low water protection	Fill water.
E2	Out-of-Step	Pump start error. Replug the pump.
E3	Overvoltage protection	Make sure and fix power source in accordance with the proper voltage supply.
E4	Low voltage protection	Make sure and fix power source in accordance with the proper voltage supply.
E5	Phase loss or Rotor blocking protection	Check and make sure the plug in good connection to the power source. Check and make sure the rotor/impeller is not blocked by any dirt. Pull out the plug and wash and clean the rotor/impeller part. Wait until the display on the LCD is off. Replug the pump.
E6	Overcurrent protection	Pull out the Plug. Wait until the display on the LCD is off. Replug in and restart the pump.



Auto-Off Function

Should your pond or water reservoir become too shallow for the pump to operate correctly sensors built into the pump will detect this. After a period of two minutes unless this situation is rectified, the pump will switch off automatically to prevent motor damage.

Methods of Use

Your pump must always be immersed in water before it is switched on. The pump can be submersed or run externally. In 'dry' use water flow should be connected to the water intake hose. As the name implies an external pump sits outside of the pond in a dry location.

Safe Operation Conditions

The pump maximum operating depth is 2.0 meters. Pump can handle solid particles up to 10mm. Pump can be used in salt or freshwater conditions.

Performance Parameters Table

Model No.	Max Power Watts	Max Flow (L/H)	Max Head (Mtr)	Min Flow (L/H)	Min Power Watts	Hose Tail Fittings
5000	43W	5000	4.0m	2800	24W	20/25/32/38
10000	92W	10000	5.6m	4400	30W	20/25/32/38
20000	205W	20000	7.5m	9700	52W	20/25/32/38

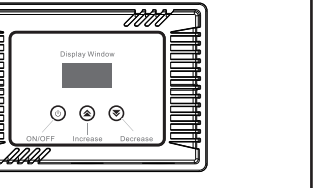
All pumps voltage: AC220-240V 50/60Hz. 2m power cord to LCD controller unit then 10m power cord to pump.



Digital Control Unit

Required pump flow rate can be selected by use of the LCD control unit. Use buttons to turn the flow rate up or down as required.

1. When power is on, the power light is illuminated, and the display window shows --- when the pump is stopped. If the pump is in normal running mode, the display window shows the current actual power. Press the increase key or the decrease key to adjust the pump power from 1 to 100% performance. The display reverts to the current actual power after 3 seconds.
2. Press the ON/OFF key to start or turn off the pump, press the increase key or decrease key to adjust the power from 1 to 100% performance.
3. The power rating displayed on the window will alter when you press the increase or decrease key to adjust the pump performance 1 to 100%.



The control box is weather/rain proof and be kept outside (never submerged). Some kind of weather protection is recommended.

Pump Performance Data

MODEL	5000	Voltage	230V/50Hz	MODEL	10000	Voltage	230V/50Hz	MODEL	20000	Voltage	230V/50Hz
LEVEL %	Power(W)	Flow Rate (L/H)	Max Head (M)	LEVEL %	Power(W)	Flow Rate (L/H)	Max Head (M)	LEVEL %	Power(W)	Flow Rate (L/H)	Max Head (M)
100	43	5000	4.0	100	92	10000	5.6	100	205	20000	7.5
90	40	4600	3.8	90	85	7800	5.5	90	190	18000	7.1
80	38	4200	3.7	80	79	7200	5.3	80	175	17400	6.7
70	37	4300	3.6	70	72	7200	5.0	70	159	16800	6.3
60	36	4200	3.4	60	69	6900	4.7	60	143	16100	5.8
50	34	4000	3.3	50	60	6000	4.4	50	128	15300	5.4
40	32	3800	3.1	40	54	6200	4.1	40	114	14500	4.9
30	29	3700	3.0	30	48	6000	3.8	30	96	13500	4.5
20	28	3500	2.7	20	41	5300	3.4	20	80	12400	3.7
10	25	3300	2.6	10	36	4900	3.0	10	66	11000	3.1
1	24	2800	2.3	1	30	4400	2.7	1	52	9700	2.6



Safety and Electrical Connections

This unit is designed for outdoor use only. Take care to ensure that you can easily lift your pump out of the water for routine maintenance. If this is necessary or if in any doubt about wiring to the mains supply contact a qualified electrician or your local electricity authority.

Always disconnect all equipment in the pond before starting to handle, maintain, repair or install any pond equipment. The pump is electrically operated so great care must be taken during installation and operation. The following electrical and safety guidelines must be carefully followed.

Pump - Electrical Safety

Each pump is supplied with a 8metre length of 3 core electrical cable which is attached to the Control Unit via a plug-in connector. A 2m length of permanently attached power cable runs from the connector to the mains supply.

The wires in the mains electrical lead are coloured in accordance with the following code:
BLUE - Neutral (marked with an "N" in most terminal connections)
BROWN - LIVE (marked with an "L" in most terminal connections)
GREEN/YELLOW - EARTH (marked "E" or ⚡ in most terminal connections)

1st January 2005 revised Building Regulations for England and Wales installing this product in the garden is classified as 'notifiable'. The Regulations now require you to tell your local authority building control department that you intend to install this product before installation. Your local authority will let you know how you can get your installation approved

The termination to the mains supply should be permanent, inside a dry weatherproof enclosure, through a double pole switched fused spur with a minimum contact gap of 3mm - (disconnected) to BS 3676 - and fitted with a 3 or 5 amp fuse. Exposed cable runs should be sensibly positioned, and protected if necessary, by armoured conduit. A 10mA or 30mA Residual Current Circuit Breaker (RCD) MUST be fitted to the mains supply.



Permanent installations to the mains supply (hard wiring) must comply with the regulations of the local electricity authority which may stipulate the use of metal or plastic conduit to protect the cable.

If in any doubt about wiring to the mains supply contact a qualified electrician or your local electricity authority.

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Limited Warranty

This product is guaranteed for a period of 36 months (excluding rotor assembly) from the date of purchase for material or manufacturing defects. The guarantee covers the substitution of defective parts. However, the guarantee is considered null and void in the case of improper use, improper handling or negligence on the part of the buyer. If your pondXpert pump fails please take it back to the retail outlet from where it was purchased. You will be required to take your receipt / proof of purchase with you. This does not affect your statutory rights.



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Your appliance contains valuable materials which can be recovered or recycled. Leave it at a local civic waste collection point.

SIZE: A5=148X210mm