

# ***PondMAX***<sup>®</sup>

WATERGARDENING TO THE MAX

## **SOLAR WATERFEATURE PUMP**

**INSTRUCTION MANUAL**



**AQUATEC**  
EQUIPMENT

DATE  
SEPT 2018 v1.0

**HOTLINE 1300 AQUATEC**

MODEL  
PS3500



**CONGRATULATIONS** ON YOUR PURCHASE OF THIS PRODUCT BY **PONDMAX**, THE ANSWERS FOR YOUR WATERGARDEN MADE EASY.

### TECHNICAL SPECIFICATIONS

DESCRIPTION	PS3500
MAX WATER FLOW IN FULL SUN	3400L/H
MAX PUMP HEAD IN FULL SUN	3.0M
MAX PUMP POWER CONSUMPTION	50W
MAX PUMP VOLTAGE	18V
LOW WATER LEVEL CUT OFF	YES
ELECTRICAL CURRENT TYPE	DC
SOLAR PANEL MAX POWER	2 X 35W
CABLE LENGTH	5M
STEPPED HOSETAIL OUTLET Ø	25 / 32 / 40
RECOMMENDED TUBING SIZE ID	32MM
RECOMMENDED FOR	OUTDOOR
PRODUCT ORDER CODE	02PS001

\* SUBJECT TO VARIATION ACCORDING TO LOAD.

### DESIGN HIGHLIGHTS

The PondMAX DC Solar Pumps have been manufactured with advanced technology to provide you with the best quality Solar pumps for your waterfeature. Visit our website to view our range of outdoor/underwater lighting and water gardening accessories.

- Advanced Low voltage pump motor design with DC current, brushless motor.
- Low water level cutout - will automatically cut power to the pump on low water level.
- Long life Impellor Design - Ceramic shaft is wear resistant and self-lubricated by water.
- Energy Efficient - Runs directly off energy from the sun via the solar panel.
- Eco Friendly - Exceptional low dB noise rating with low mechanical vibration.
- Tool-less Assembly for Easy maintenance. No special tools required.
- Easy to install due to the Plug and Play plug design and Extra Low Voltage Electrical system.

# PS3500 SOLAR PUMP INSTRUCTIONS

## BENEFITS

PondMAX DC Solar Pumps are suitable for use in many different applications including water fountains, water features and bird baths. Your pump has a single moving part (an impeller set) enabling easy cleaning and maintenance.

- The Pumps have intelligent circuitry that analyses the water level alongside the pump and will sense a low water state, thus minimising motor burnout, due to electrical heat, through lack of water flow through the motor.
- The motor and electrical components are totally encapsulated in epoxy resin, ensuring safe operation under water.
- The pump has a robust bearing and shaft design so no oil/grease lubrication is required.
- PondMAX DC Solar Pumps are continuous rated therefore are designed not to demand short breaks for cooling purposes.



## IMPORTANT SAFEGUARDS

Please read these instructions and familiarize yourself with the equipment before placing it in service. Correct and safe use of the system requires strict compliance with the safety instructions. For safety reasons persons less than 16 years of age or people that are not familiar with these instructions should not use this equipment.

- Any damage to the equipment or unmerited operation will bring dangers to the surrounding precincts. So if there is any damage of the equipment, it must not to be used.
- For your own safety, disconnect from the power supply before any maintenance of any equipment is attempted on the tank or water body. Always unplug the pump from the Solar Panel when not in use. Never pull the cable to disconnect the plug - Grasp the plug and pull to disconnect.
- Be sure the Pump is submerged completely in the water. The depth should not be greater than 2m.
- Do not operate the pump if the appliance or any components of the system, such as the power cable, have been damaged. Check appliance for defects regularly.
- Do not cut the cable as this will result in voiding your warranty.
- Do not install or store the appliance where it will be exposed to extreme hot or cold temperatures. Do not use in water above 35°C.
- Care should be taken to arrange the power cable so that it cannot be accidentally tripped over or pulled.
- Do not attempt to repair the electrical appliance yourself. Return to an authorised service centre or place of purchase if a fault occurs, (regular maintenance is not considered repair and is required by user



## PRODUCT SPECIFIC SAFEGUARDS

- Do not operate the pump without water at any time, permanent damage may occur.
- Be sure the equipment is submerged completely in the water. Do not use this pump in a dry mounted application.
- The pump is designed to be used in a fresh water bird bath or water-feature. It is not to be used in any other manner or purpose. The pump should only be used in clean water. Do not use the pump in, or with, any chemicals such as a solvent or gasoline.
- PondMAX DC Solar Pumps are cooled by water flowing through the inside of the motor body. If the pump flow becomes restricted it will overheat and could cause permanent damage. The pump needs to be cleaned regularly to prevent the pump becoming blocked, thus causing the pump to overheat and burn out. This is not a warrantable event. The flow rate through the pump needs to be strong enough so that a half of the rated max flow is kept running at all times.
- Do not connect the pump to any AC voltage power supply. It is only to be supplied with DC power within the voltage range stated in the specification table.
- The solar panel is made with glass components. Do not drop strike or crush the solar panel. It will break. The solar module should only be cleaned with soft tissue or glass cleaning solutions.
- It is recommended that we should not to select a pump that is too small for the Job required. If in doubt select a bigger model.

## INSTALLATION

The solar pump is designed for outdoor use, and is powered by a solar panel. In order to make the pump work by solar energy, the solar panel needs to be placed in direct sunlight with its solar cells facing the sun as much as possible. The performance of the pump depends on the sunlight intensity and the incident angle at which sunlight strikes the panel surface.

The pump has the build-in function of dry-run protection. The dry-run protection function is provided by two sensor points on one side of the pump housing (referring Diagram). The pump works if both of the points are submerged in water. If either or both points emerge out of water, the pump stops working.

The motor unit of the pump is encapsulated with epoxy resin and does not need lubrication. Regular inspections, cleaning and maintenance of impellor is necessary to ensure longer life.

In the centre of the impellor you may notice a small hole opening that protrudes through the ceramic shaft from front to back. It is paramount that this portal is kept unblocked at all times. This is a cooling channel for the motor.



# PS3500 SOLAR PUMP INSTRUCTIONS

## ASSEMBLING THE SOLAR PANEL

- Install the solar panel in garden lawn or soft ground by jabbing the spike (2) into the ground. Adjust the orientation of the panel to face the panel towards the sun and then tighten the screw on the back of the panel to secure.
- Make sure to keep the pump fully submerged in water while the pump is in operation.
- The solar pump should now operate.

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## CLEANING INSTRUCTIONS

Begin by ensuring that the power supply is disconnected from the solar panel before attempting any maintenance or adjustment of the unit. Remove the unit from the water. The filter will clog up over time.

Please clean regularly (at least once a month) to ensure strong water flow. Failure to maintain the unit will result in a burnt out motor and other damage. All PondMAX DC Solar Pumps are water cooled, if pump becomes restricted, or blocked, it will overheat and could cause permanent damage. When the flow starts to be reduced, check and clean if necessary.

The motor unit of the pump is encapsulated with epoxy resin and does not need lubrication. Regular inspections, cleaning and maintenance of impellor is necessary to ensure longer life

1. Disconnect the tubing/fountain kit from off the pump.
2. Press on the bottom of the filter housing, and meanwhile move the filter housing apart from the pump.
3. Turn the impeller cover together with flow valve clockwise to the end and then carefully pull the impeller cover, together with flow valve, apart from the pump.
4. Lift out the impellor assembly. (Take care not to break ceramic shaft.) Clean the impellor with clean water and a suitable brush taking note to remove fine sediment on and around the back end of the impellor. Replace the impellor if necessary.
5. Clean the housing and pump with a suitable brush, taking care to clean off sludge, algae and debris.
6. Assemble the pump in reverse sequence.
7. Reconnect the pump as before.

*\*Be careful not to drop the ceramic shaft while cleaning the impeller, it breaks easily.*

## IMPORTANT NOTES:

It is important to ensure that this is carried out regularly as the cooling path inside the motor will become clogged. If the impellor assembly becomes worn or damaged it should be replaced (available from your dealer or special orders). Failure to do so may cause serious damage to pump. Inspect for signs for wear and tear. The impellor set is a wearing consumable part.

## EXPLODED VIEW



### IMPORTANT

These accessories and attachments are recommended for use with your PondMAX product only. The use of other accessories or attachments might present a risk of injury to persons. Only use the accessory or attachment for its stated purpose.

- 1 Pump Housing
- 2 Filter Screen
- 3 Impeller Cover
- 4 Impellor and Shaft Assembly
- 5 Motor Body only

- 6 Solar Panels
- 7 Solar Panel Mounting Kit



# PS3500 SOLAR PUMP INSTRUCTIONS

## TROUBLESHOOTING

Problem	Reason	Solution
Water Pump Not Working	No Power	Check that the plug is connected and turned on
	Impellor is blocked with sludge or limescale	Clean the Impellor as per the instructions
	Running without sufficient water	Submerge the equipment underwater then plug in. Refill if necessary.
	Blocked Impellor chamber or ceramic shaft is broken	Clean the Impellor. Check for ware. Replace if necessary.
Water Pump is noisy	Blockage in pump	Clear the blockage
	Impellor & Shaft worn out	Replace Impellor & Shaft
	Impellor broken	Replace Impellor
	Flow adjuster set to minimum	Open the flow adjuster and allow water to flow
	Unit inlet is blocked or the water pump outlet is blocked	Clear all blockages
	The height to which you are pumping is too high for the given model of pump.	Select a bigger model of pump





### IMPORTANT SAFEGUARDS

To guard against injury, basic safety precautions should be observed including, but not limited to the following;

- The pump should only be used in clean water
- Do not use the pump in any solvent or gasoline that is flammable.
- Do not operate the pump without water at any time, permanent damage may occur.
- Do not operate the pump if the pump or any of the components of the pump such as the power cable have been damaged.
- The drip loop method should be used to prevent water from traveling down the cord onto the plug or power point. If the plug does get wet, do not unplug the cord. Disconnect the circuit breaker that supplies power to the power point. Then unplug and examine the plug and power point for presence of water. If the power point has become wet, you should consult an electrician before using the power point again.
- **Warning: Always use a properly grounded power supply that is connected to an RCD with a rated residual operating current not exceeding 30mA as per AS/NZS 3350.2.41:1997.**
- Always unplug the pump from the power supply when not in use or before performing any maintenance on the pump or in the pond. Never pull the cord to disconnect the plug from the power supply. Grasp the plug and pull to disconnect.
- Do not install or store the pump where it will be exposed to extreme hot or cold temperatures.
- Do not cut the cord as this will result in voiding your warranty.
- Keep out of reach of children or pets. This appliance should not be used by children or infirm persons without supervision.
- Care should be taken to arrange the power cord so that it cannot be accidentally tripped over or pulled.
- Do not attempt to repair the pump yourself. Return to an authorised service centre or place of purchase if a fault occurs.
- Do not use in water above 35°C.

### LIMITED WARRANTY

**IMPORTANT: IF USED IN MARINE OR SALTWATER, DUE TO THE HARSH CONDITIONS THE WARRANTY IS VOID.**

- This product comes with a warranty against defects and motor failure (Warranty). The benefits provided in this Warranty are in addition to other rights and remedies available to you under the Australia Consumer Law. The Warranty is provided to the original purchaser of the product on the following terms:
- The Warranty is given by Chemkay Pty Ltd trading as

Aquatec Equipment: PO Box 2087,  
Seville Grove, WA 6112. Tel 1300 552 202 or email sales@  
aquatecequipment.com.

- To make a claim under the Warranty you must return the faulty product to the place of purchase with a valid receipt or proof of purchase.
- **A Warranty claim must be made within 3 years of the date of purchase.**
- If your claim complies with the above terms and the product is not an exhaustible item and no voiding events have occurred, we will (at our sole discretion):
  - repair the product, if possible; or
  - provide a replacement product; or
  - if a replacement product is not available, provide a refund for the purchase price paid.
- You will bear the cost associated with claiming under the Warranty such as the cost of transportation and delivery of the product to and from the place of purchase.
- The product contains a complete Impellor Set, O Ring & UV Globe. These items are exhaustible (Exhaustible Items) and are not covered under the Warranty.
- The Warranty will be void if any of the following events occur, as determined by us, at our sole discretion (Voiding Events):
  - any tampering/removal of warranty/identification labels or electrical components is evident;
  - the defect has arisen due to: an accident, incorrect or inadequate installation, misuse or abuse of the product (including improper maintenance and service), excessive wear and tear, not following manufacturer's guidelines/ instructions, or the product has been used in a manner contrary to the purpose or suitability of the product;
  - the product has been modified without our authority;
  - the defect is caused by power surges/spikes brownouts.
- Loss of livestock, damage to property or personal injury caused by the improper use or abuse of the product will not be covered and the manufacturer excludes all liability for such events, to the extent permitted by law.
- In addition to the Warranty set out above, our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Please consult your retailer for quality original PondMAX replacement parts.

Visit [www.aquatecequipment.com](http://www.aquatecequipment.com) for your nearest stockists.

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