

PondMAX

WATERGARDENING TO THE MAX

HIGH FLOW WATERFALL PUMP

INSTRUCTION MANUAL



DATE
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US:888.868.1185
CAN:888.855.4551

MODEL
PX4500
PX4500A

WELCOME TO THE WORLD OF **PONDMAX™**.
YOU MADE THE RIGHT CHOICE INVESTING IN THIS
QUALITY PRODUCT. **THANK YOU AND ENJOY.**

TECHNICAL SPECIFICATIONS

DESCRIPTION	PX4500	PX4500A
MAX WATER FLOW (GPH)	4500	4500
MAX HEAD (FT)	21	21
POWER CONSUMPTION (W)	200W	200W*
VOLTS	120	120
IP RATING	IPX8	IPX8
FREQUENCY (HZ) AC	60	60
CABLE LENGTH (FT)	32	32
OUTLET BSP THREAD (INCH)	2	2
RECOMMENDED TUBING (INCH)	2	2
PRODUCT ORDER CODE	22PX245	22PX246

* SUBJECT TO VARIATION ACCORDING TO LOAD.

DESIGN HIGHLIGHTS

This PondMAX High Flow Waterfall Pump has been manufactured with advanced technology to provide you with the best quality equipment for your pond or water feature. Visit our website to view our range of pond filtration, outdoor/underwater lighting, water treatments and general accessories.

- **Adjustable Speed Technology (PX4500A Only)** - Three speeds to adjust the flow per application.
- **Open Vane Impeller** - Handles particles size up to 6mm of sediment.
- **Long Life Impeller** - Ceramic shaft is wear resistant and self-lubricated by water
- **Energy Efficient** - Exceptional low power consumption to water flow ratio.
- **Eco Friendly** - Exceptional low dB noise rating with low mechanical vibration.
- **Compatibility** - Suitable for fresh water submersible applications.

HIGH FLOW WATERFALL PUMP

BENEFITS

suitable for filtration, waterfalls and circulation in bodies of water, such as outdoor garden ponds, fresh water aquariums, aquaculture and indoor or outdoor water fountains.

- Your pump has a single moving part (impeller assembly) enabling easy cleaning and maintenance.
- The pump has intelligent circuitry that analyses the speed and torque of the motor. It will increase and decrease the energy usage to maximise efficiency. The soft start nature of the motor helps to avoid sudden pressure surges causing pipes to blow off. The intelligent system will change the motor speed to maximise the flow of water when hot, due to the 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 Filtration & Waterfall Pumps are heavy-duty rated and design for continuous use.



IMPORTANT SAFEGUARDS

Please read the operating instructions and familiarise yourself with the equipment before placing it into 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 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. If there is any damage of the equipment, it must not be used and should be placed out of reach of children.
- For your own safety, disconnect the pump from the power supply before any maintenance of any equipment is performed. This includes maintenance to the tank or pondliner. Always unplug the pump from the power supply when not in use.
- Never pull the cable to disconnect the plug from the power supply - Grasp the plug and pull to disconnect.
- If required, have a qualified electrician install a weatherproof power supply point near to the pond or water-feature (within the cable length of the appliance).
- Be sure the equipment is submerged completely in the water. The depth should not be greater than 6ft.
- 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.
- Always use a properly grounded power supply that is connected to a GFCI with a rated residual operating current not exceeding 30mA.
- To avoid an electric shock, do not attach the plug to the power supply socket with wet hands. On installation, the drip loop method should be used to prevent water from traveling down the cable and onto the plug or power supply. If the plug does get wet, do not unplug the cable. Immediately disconnect the circuit breaker that supplies power to the power supply point. Then unplug and examine the plug, and power supply point, for presence of water. If the power point has become wet, you should consult an electrician before using the power point again.
- 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 95°F (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 authorized service centre or place of purchase if a fault occurs, (regular maintenance is not considered repair and is required by the 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. The depth should not be greater than 6ft.
- The pump is designed to be used in a garden pond, fountain or freshwater aquarium. 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, and chemicals such as solvent or gasoline.
- PondMAX High Flow 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. Large tubing size is strongly recommended to deliver adequate water flow to cool the pump. 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. It is strongly recommended not to select a pump that is too large for the application requirements. The flow rate through the pump needs to maintain more than half of the rated max flow.

INSTALLATION - FILTER & WATERFALL PLUMBING GUIDE

- When used to supply water to a biological filter, cascade or waterfall, ensure to use large enough tubing for the flow rate required.
- For best results, use the tubing size recommended in the table under “specifications” at the beginning of this manual. Larger tubing size is always recommended for high flow rate pumps. Select the hose tail required for your tubing size and evaluate which step on the hosetail will be used.
- If you are using 2 inch hose and you are connecting it to a 1.5” - 2” hosetail, remember to saw off the smaller size connection (I.E.: 1.5” step). Otherwise it will create an unnecessary restriction in the plumbing system.
- Now connect the tubing to the hose tail. Remember to use Stainless Steel hose clamps to fasten the hose on to the hosetail. This is to ensure that the pipe does not blow off later or leak at this point in the plumbing system.
- Direct the hose in your desired direction. Connect tubing to the outlet.
- Place the pump in desired location. Ensure the pump is on a stable surface that is free of sludge, sand and other debris.
- Do not place the pump directly on the pond floor or in mud. It is recommended to place the pump on a raised surface.

The PX4500A has an adjustable flow rate so you can reduce the flow.

- On the PX4500A model the flow adjuster dial is on the back of the pump. It must be set to one of the three settings to work. Turn the flow adjuster dial to adjust the speed of the motor and the flow capacity.
- Manual operation mode is enabled when the arrow on the dial is aligned with one of the numbers 1, 2 or 3, three (3) being the highest flow rate and one (1) being the lowest.
- DO NOT PLACE THE ARROW BETWEEN TWO SETTINGS, THE PUMP WILL NOT WORK.

HIGH FLOW WATERFALL PUMP

CLEANING

Begin by ensuring that the mains power supply is disconnected before attempting any maintenance or adjustment of the unit or the water body. Remove the unit from the water. If your unit is connected to a filter, the filters and sponges will clog up over time. Please clean regularly (at least once a month) to maintain maximum water flow. Failure to maintain the unit will result in a burnt out motor and other damage.

All PondMAX high flow pumps are water cooled, if the pump becomes restricted, or blocked, it will overheat and could cause permanent damage. When the flow starts to reduce, 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 impeller is necessary to ensure longer life. Take note, the centre of the impeller ceramic shaft is hollow. It is paramount that this hollow core is kept clear of any blockage. This is a colling channel for the motor.

1. Clean the housing and pump with a suitable brush, taking care to clean off sludge, algae and debris.
2. To maintain the impeller of the pump, remove the impeller cover screws to separate the impeller cover from the pump motor body.
3. Lift out the impeller assembly. Take care not to break ceramic shaft. The black disc behind the blades is part of the entire impeller assembly. Clean the impeller with clean water, vinegar and a suitable brush taking note to remove fine sediment on and around the back end of the impeller. Inspect the impeller assembly for damage or cracking and replace if necessary. Reassemble the impeller into the motor.
4. Next replace the o-ring. This is easier to do once the impeller is in place. You can then hold the impeller in place with one hand while using your other hand to stretch the o-ring over the plate and into the groove.
5. Once the o-ring is in place, replace the impeller cover taking care that the o-ring stays in place. Then reinstall the screws.

If you need additional support contact your local dealer for help and warranty support.

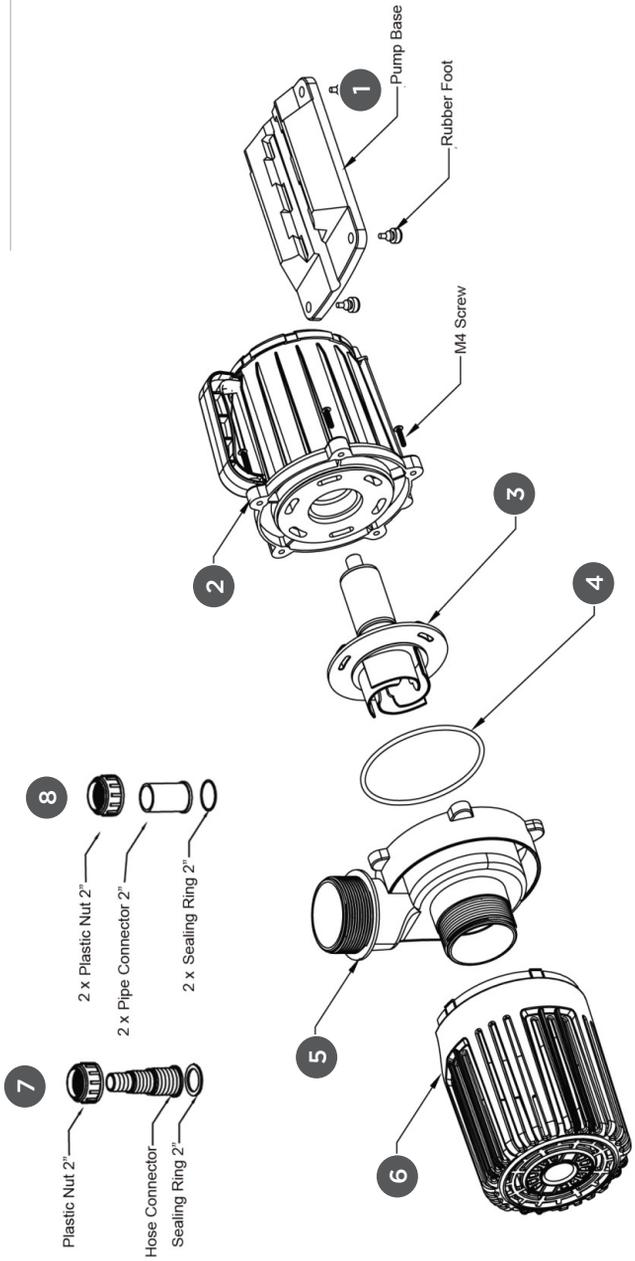
EXPLODED VIEW



IMPORTANT

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

1. Pump Base
2. Pump Body
3. Impeller Assembly
4. Impeller O-Ring
5. Impeller Cover
6. Front Cage
7. Hose Tail
8. 2" Pipe Connector



HIGH FLOW WATERFALL PUMP

TROUBLESHOOTING

Problem	Reason	Solution
Water Pump Not Working	No Power	Check that the electrical supply has power and the plug is connected.
	Impeller is blocked with sludge or limescale	Clean the impeller assembly as per the instructions.
	Running without sufficient water	Submerge the equipment underwater then plug in. Refill if necessary.
	Blocked impeller chamber or ceramic shaft is broken	Clean the impeller. Check for ware. Replace if necessary.
Water Pump is noisy	Blockage in pump	Clear the blockage.
	Impeller & shaft worn out	Replace impeller assembly.
	Impeller broken	Replace impeller assembly.
	Water valve closed on the outlet	Open the valve and allow water to flow.
	Pump inlet is blocked	Clear all blockages

SPARE PARTS (NOTE: THESE ARE THE MOST USED)

DESCRIPTION	PX4500	PX4500A
IMPELLER ASSEMBLY & ORING	31PX145	31PX145
IMPELLER COVER	31PX045	31PX045
FRONT CAGE	31PX245	31PX245

LIMITED WARRANTY

This product is warranted to the initial purchaser to be free of defects in materials and workmanship at the time of initial purchase and for a period of 3 years for PondMAX Waterfall Pumps. Some parts are consumable and may need to be replaced as part of ongoing product maintenance and are not covered entirely by this Warranty. The impeller assembly is a consumable part and has a 1-year warranty. In the event this product malfunctions within 3 years from the date of purchase, the sole obligation of PondMAX USA (hereinafter referred to as PondMAX) will be to repair the unit or replace with an equivalent new or factory refurbished unit at PondMAX discretion, subject to the following condition:

- The malfunction is proved attributable to a defect in materials or workmanship, including repairs performed under this warranty. Malfunction for any other reason-including but not limited to misuse, negligence, accident, or tampering with parts, incorrect wiring, or improper installation-will not be remedied under this warranty.
- PondMAX specifically does not guarantee chemical compatibility, and expressly does not warrant units from any problems caused by chemical attack or failure due to incompatibility of fluid being circulated by pump.
- All warranty repairs must be performed by PondMAX or a PondMAX authorized company.
- Purchaser must retain the purchase receipt and present it with this certificate as proof of ownership and entitlement to warranty repairs. Unauthorized repairs will not be compensated by PondMAX, and are not the responsibility of PondMAX, and if such repairs damage the product, such damages are not remedied under this warranty.
- Purchaser shall bear all shipping, packing and insurance costs and all other costs, excluding labor and parts necessary to effectuate repairs under this warranty.
- This warranty is in lieu of all other express warranties which now or hereafter might otherwise arise with respect to this product. Any and all limited warranties, including the warranties of merchantability and fitness for particular purpose, shall have no greater duration than the duration period of the express written warranty applicable to this product, and shall terminate automatically the expiration of such duration period. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. No action shall be brought for breach of any implied or express warranty after one year subsequent to the expiration of the duration period of the express written warranty.
- Incidental and consequential damages caused by malfunction, defect, or otherwise, and with respect to breach of any express or implied warranty, are not the responsibility of PondMAX, and, to the extent permitted by law, are hereby excluded for property damage, loss of livestock and, to the extent not unconscionable, for personal injury damage.
- Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.
- This warranty does not apply to any malfunction arising out of any application of this product other than normal use, unless such application is upon request specifically approved in writing by PondMAX.
- The provisions of this warranty are severable and if any provision shall be deemed invalid, the remaining provisions shall remain in full force and effect.
- Rights under this warranty are not assignable without the express prior consent in writing by PondMAX and, regardless of the terms of such consent in writing, such assignee shall have no greater rights than his assignor had against.

**Please consult your retailer for quality original PondMAX replacement parts.
Visit www.pondmax.com for your nearest dealer.
888.868.1185 sales@pondmax.com**