

Thank you for choosing this Pond Air Pump Set from pondXpert. You can be reassured that you have made a great choice. Your Pond Air Pump will provide many years of service improving the water conditions in your pond.

BEFORE USING THIS PRODUCT, PLEASE READ THESE INSTRUCTIONS CAREFULLY AND FAMILIARIZE YOURSELF WITH THE UNIT. PLEASE KEEP THESE INSTRUCTIONS IN A SAFE PLACE FOR FUTURE REFERENCE.

**TECHNICAL SPECIFICATIONS**

<b>PUMP MODEL</b>	<b>210</b>	<b>450</b>
<b>RECOMMENDED POND SIZE</b>	<b>1500 Litres</b>	<b>3000 Litres</b>
<b>MAXIMUM OPERATING DEPTH</b>	<b>1.5m (5')</b>	
<b>AIR FLOW RATE</b>	<b>210 LPH</b>	<b>450 LPH</b>
<b>POWER</b>	<b>3.3W</b>	<b>6W</b>
<b>VOLTS</b>	<b>230</b>	
<b>FREQUENCY</b>	<b>50Hz</b>	
<b>AIR STONES</b>	<b>x 2</b>	
<b>CABLE LENGTH</b>	<b>3m</b>	
<b>AIR TUBING SIZE (ID. X LENGTH)</b>	<b>2 x 5m Length (4mm internal dia./6mm external)</b>	
<b>DESCRIPTION OF ACCESSORIES</b>	<b>1 x Air Pump 2 x Airstones 2 x Air Tube 2 x Replacements Membranes/Diaphragms</b>	
<b>PRODUCT CODE</b>	<b>PXAIRC0210</b>	<b>PXAIRC0450</b>

**DESIGN HIGHLIGHTS**

- Quiet operation - outer industrial plastic casing and air baffle for exceptional low noise rating.
- Robust design - excellent heat dissipation, which assists with durability and extends pump life.
- Great air flow and strong air pressure for smaller pond and water feature applications.
- No oil lubrication needed.
- Easy maintenance - replaceable internal rubber diaphragms and air filter.
- Continuous rated - designed to operate 24/7.

**BENEFITS INCLUDE**

The pondXpert Aeration Kits have been manufactured with advanced technology to provide you with the best quality aeration for smaller scale ponds or water features. Visit our website to view our range of pond filtration, outdoor/underwater lighting, water treatments and general accessories. pondXpert Aeration Kits are suitable for many different applications including aquariums and small scale fish pond/water garden applications. Aeration is a very effective method of enhancing pond fish habitats, improving water quality, reducing algae, and removing phosphorus. Aeration can also break down unwanted bacteria, help with mosquito problems, and remove foul odors from an aquarium or pond -- all by circulating the water and adding dissolved oxygen.



**IMPORTANT SAFEGUARDS**

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

- Any damage to the equipment or unmerited operation can potentially bring dangers to the surrounding precincts. If there is any damage of the equipment, it must not to be used. The equipment should be placed out of reach of children.
- For your own safety, completely disconnect all electrical appliances before any maintenance of equipment is attempted on/in the tank or body of water. Always unplug the air pump from the power supply when not in use. Never pull the cable to disconnect the plug from the power supply. Care should be taken to ensure the power cable is situated to avoid a tripping hazard.
- Cutting the cable may void your warranty.
- If required, have a qualified electrician install a weatherproof power supply point in reach of the water feature (within the cable length of the appliance). For applications within the US or Canada- make sure to plug the pump into an electrical outlet with a (GCFI) Ground Fault Circuit Interrupter.
- To prevent electric shocks, 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 into power supply. If the plug does get wet, do not unplug the cable. Immediately disconnect the circuit breaker.
- Do not submerge air pump directly in water. The distance from air pump to the water's edge, should not be less than 6ft/1.8 m.
- Do not operate the appliance if any components of the system, such as the power cable, have been damaged. Check appliance and components of the kit for defects regularly.
- Do not install or store the appliance where it will be exposed to extreme hot or cold temperatures. Do not use in ambient temperatures above 95°F/35°C
- Do not attempt to repair the electrical appliance yourself. Return to an authorized dealer or place of purchase if a fault occurs. Regular maintenance is not considered a repair (e.g. replacing the diaphragms and air filter is required by user).

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.

## PRODUCT SPECIFIC SAFEGUARDS

- Be sure the air pump itself is not submerged in water.
- The air pump is designed to be used in garden pond or aquarium applications. It is not to be used in any other manner or purpose. Do not use the pump in, or in conjunction with, any chemicals such as a solvent or gasoline or flammable gases. The pump is designed to pump clean atmospheric air only.
- Every air pump may eventually "wander" or "creep" due to its own vibration. Avoid this by placing it on an entirely level and flat plane. We recommend securing it with some wire or cable tie to anchor the bottom of the air pump.
- **pondXpert** air pumps are cooled by air flowing through the inside of the motor body chamber. If the air flow becomes restricted it will overheat and could cause permanent damage to the electrical components internally. In the event that the tubing provided isn't long enough, keep in mind that large tubing size is strongly recommended to deliver adequate flow over longer distances.

## INSTALLATION & MAINTENANCE

The Aeration Kit is designed for oxygen enrichment via the provided air stones and the airline. For your convenience the **pondXpert** Aeration Kits include, but are not limited to the following:

1. 2" round air stones (x2)
2. Clear airline tubing (x2)
3. Spare rubber diaphragm set (for future maintenance)

Start by removing entire contents from aeration kit carton. Next unroll the clear airline tubing needed for your application. Tubing can easily be cut to any length using cutters or a knife. (NOTE: Always use the minimum amount of tubing needed for your application, so as not to put needless pressure on the air pump which could cause premature failure.)

Now locate the two air stones and push one of the ends of each airline tubing roll, onto the plastic ports on both air stones. Then connect the remaining ends of each roll directly onto each of the two ports on air pump.

Place the air stones in the water and if desired, weigh down the airline with suitable weights (e.g. fishing weights, rocks, aquatic plants, etc.) to avoid flotation. For best results air stones should be far enough apart to allow the maximum amount of water movement in the pond or water feature. It is also recommended that the air pump should be at least 6ft/2m away from the water's edge; this ensures that there is no intake of moisture.

This is reduces friction loss within the tubing itself. The air pump air filter needs to be cleaned regularly to prevent the pump becoming clogged with dust, causing the airflow to reduce. In this event motor burnout is not a warrantable event.

- Never leave the air pump running without sufficient counter pressure (air stones). This may potentially cause the rubber diaphragms to wear or tear prematurely. The overall performance will also be greatly reduced.
- The **pondXpert PA** air pumps are designed to operate at a maximum depth of 4ft/1.5m of water. Greater depth will increase diaphragm wear.
- As with all air pumps, wear and tear will inevitably occur over time. **pondXpert** air pump diaphragm assemblies are easy to replace. Only use original **pondXpert** parts and accessories for the unit. Check the diaphragm replacement instructions and detailed diagrams later on in this manual.

The air pump is considered weatherproof but must be mounted above the water level of pond or water feature at all times. If possible, mount pump in a cool, shaded location for long-lasting results.

Once the airline is connected onto pump and air stones are in desired location within the pond or water feature. Go ahead and locate the two blue plastic check valves within the box. These check valves are designed to prevent water from entering the pump through the airline, in the event that system is turned off or if pump was to fail. NOTE:

The air pump is considered weatherproof but must be mounted above the water level of pond or water feature at all times. If at all possible, mount pump in a cool, shaded location for minimal temperature operation, resulting in long-lasting results and satisfaction.

## CLEANING AIR FILTER PAD



**WARNING: Make sure to unplug power prior to performing maintenance on the air pump or any of its accessories. We recommend general maintenance of the unit every 3 months (more or less depending on application).**

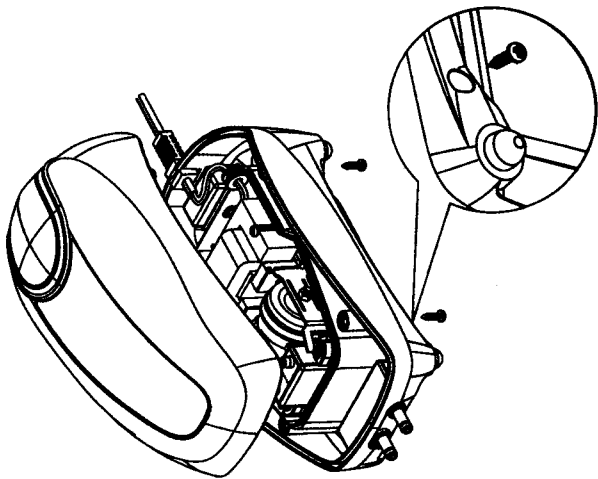
The air filter cartridge on the pump is located on the bottom of pump, near where power cord exits the pump plastic casing. The filter pad can get clogged up in time and needs to be cleaned as part of on-going maintenance. It can easily be removed by flipping the pump over and using a screw driver to pry filter cartridge out of pump casing, using the little hole in cartridge frame. A standard household vacuum cleaner is ideal for the suction of dust and debris caught in the air filter pad or clean in water and make sure to dry completely before reinstallation. Filter cartridge is sealed with an O-ring, make sure not to damage O-ring while disassembling or misplace while cleaning pad.



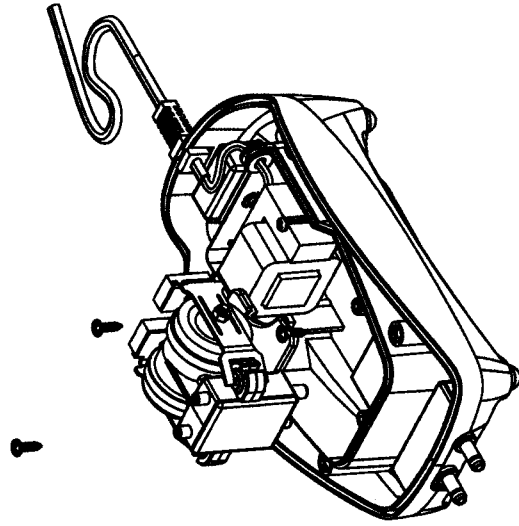
## CHANGING DIAPHRAGMS (MEMBRANES)

If the air flow on the pump has decreased or if there is a "ticking" sound coming from the air pump, the unit must be turned off immediately. This is typically a symptom of the rubber diaphragms wearing out and needing to be replaced. To do this, it is necessary to disassemble the internals of the air pump.

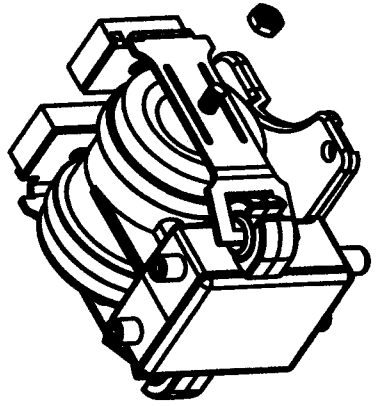
1. Flip the air pump so it's upside down and locate the 4-Phillips screws on the bottom portion of plastic casing and loosen.
2. Once the screws have been removed, go ahead and remove the top section of plastic casing from the bottom and set aside.



3. Now looking at the internals, go ahead and undo the Philips screws that hold the rubber diaphragm and magnet assembly to the bottom portion of plastic casing. Set screws aside in a secure location and firmly apply pressure to lift the rubber diaphragm and magnet assembly off of the base.

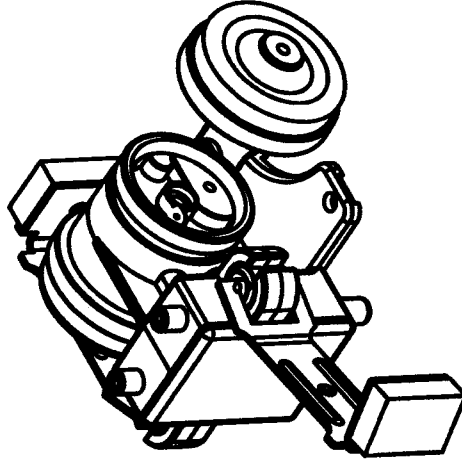


4. Now loosen and remove the nuts on either end of rubber diaphragms.



5. Swing the metal arms that hold the magnet, away from the rubber diaphragms. Release both of the rubber diaphragms from the plastic frame by applying light pressure to the edge of rubber, to fully release them from groove.

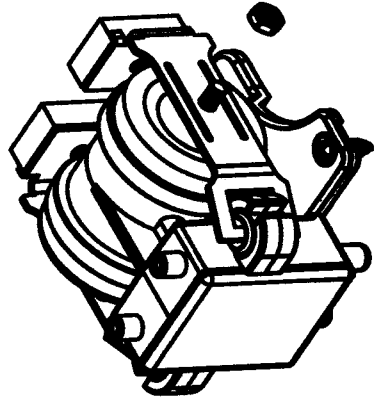
6. Once rubber diaphragms are free from the plastic frame, go ahead and remove screws from each one of the old rubber diaphragms and re-insert onto the new rubber diaphragms.



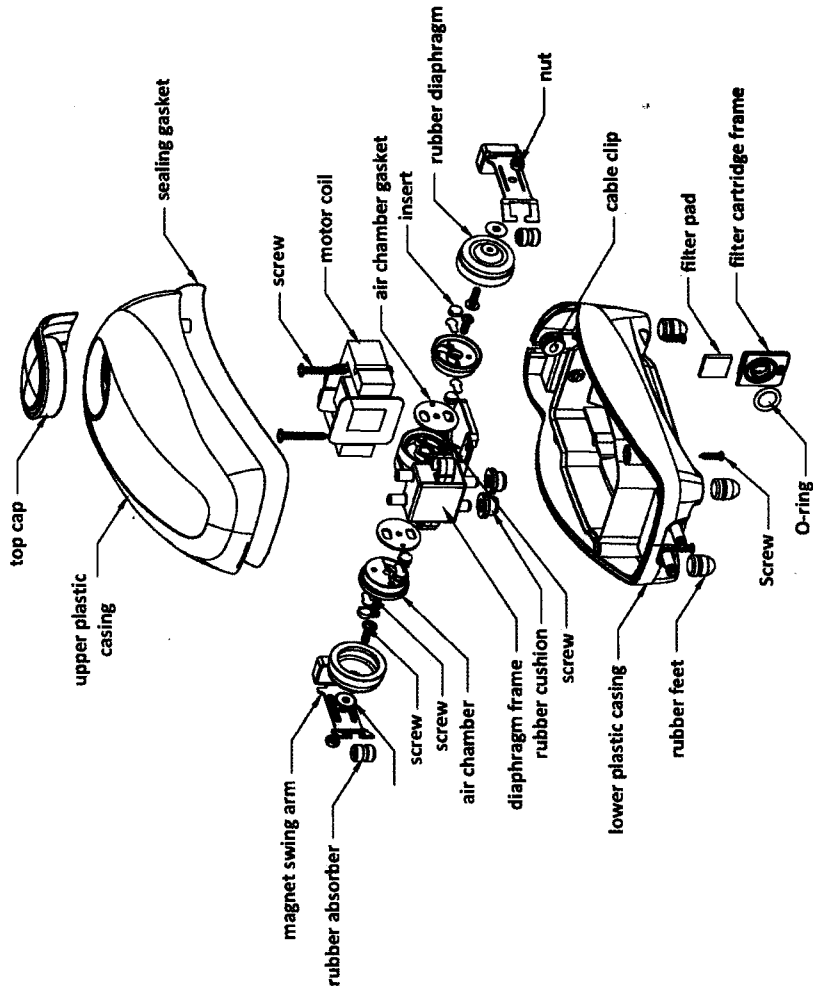
7. Now install both of the new rubber diaphragms onto the plastic frame securely by applying light pressure, until fully seated in plastic groove all the way around rubber.

8. Next swing the metal arms that hold the magnet back into position towards the rubber diaphragms, making sure to line up the holes with threads from screws in center of rubber diaphragms.

9. Now install and tighten the nuts on either end of diaphragms. Take care not to overtighten.



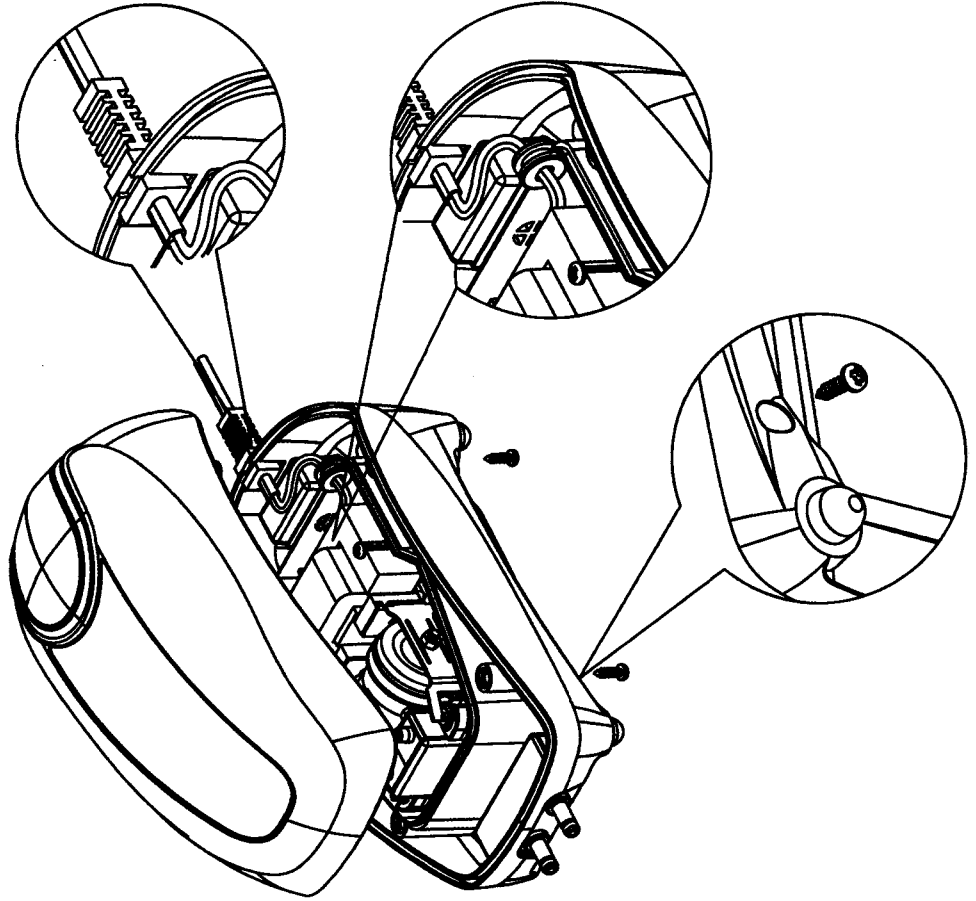
**PARTS BREAKDOWN**



**AVAILABLE REPLACEMENT PARTS**

DESCRIPTION	PXAIRC02100	PXAIRC03000	PXAIRC03000
REPLACEMENT DIAPHRAGM COMPLETE ASSEMBLY			
REPLACEMENT AIR FILTER CARTRIDGE			

10. Set the rubber diaphragm and magnet assembly back onto the base of air pump. Now reinstall Phillips screws that hold the magnet and diaphragm assembly to the bottom portion of plastic casing.
11. The power cable should fit snugly back into the recesses of the plastic casing. Do not allow it to be pinched.
12. Complete the operation by fastening all 4-Phillips screws back into their original position underneath the air pump.



Note: If this repair is felt to be too challenging or tools are not available to carry out these steps, please take the unit back to the Authorized Dealer or place of purchase, to request assistance.

## TROUBLESHOOTING

PROBLEM	REASON	SOLUTION
PUMP NOT WORKING	No Power	Confirm that power point is working.
	Bad Motor	Replace the air pump (if applicable).
	Damaged Cable	Inspect the entire length of the air pump cable and look for cuts or damage resulting in exposed copper wire. Replace cable or complete unit.
	Damaged Cable	Inspect the entire length of the air pump cable and look for cuts or damage resulting in exposed copper wire. Replace cable or complete unit.
PUMP WORKING INTERMITTINGLY	Short Circuit/Bad Connection	Inspect the entire length of the lighting system cable and look for cuts or damage resulting in exposed copper wire. Replace cable or complete fixture where the damage is.
	Air Filter Sponge Clogged	Disassemble top of pump per these instructions and check the air filter sponge for discoloration, caused by dust or dirt. Using a household style vacuum cleaner, suck debris out of sponge until visibly clean. And reinstall.
	Bad Diaphragms	Disassemble pump per these instructions and check the diaphragms for excessive wear and tear or possible tearing. If diaphragm is damaged, go ahead and replace before operating the unit again.
	Bad Diaphragms	Disassemble pump per these instructions and check the diaphragms for excessive wear and tear or possible tearing. If diaphragm is damaged, go ahead and replace before operating the unit again.
PUMP WORKING WITH MINIMAL AIR FLOW OR MAKING LOUD NOISES	Air Filter Sponge Clogged	Disassemble top of pump per these instructions and check the air filter sponge for discoloration, caused by dust or dirt. Using a household style vacuum cleaner, suck debris out of sponge until visibly clean. And reinstall.
	Airline is Kinked or Clogged	Inspect the entire length of the airline tubing for possible kinks or debris inside the clear tubing. Replace tubing if damaged or brittle.

## WARRANTY

- This product is warranted to the initial purchaser to be free of defects in materials and manufacture workmanship at the time of initial purchase and for a period of 2 years after. Some parts are consumable (e.g. rubber diaphragm assemblies as well as the air filter cartridge) and may need to be replaced as part of ongoing product maintenance and are not covered by this Warranty. In the event this unit malfunctions within 2 years from the date of purchase, the sole obligation of PondXpert (hereinafter referred to as PondXpert) will be to repair the unit or replace with an equivalent new or factory refurbished unit at PondXpert's discretion, subject to the following condition:
    - The malfunction is proved attributable to a defect in materials or manufacture 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.
  - PondXpert 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 used near this aeration system.
  - All warranty repairs must be performed by PondXpert or a PondXpert authorized company.
  - Purchasers 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 PondXpert, and are not the responsibility of PondXpert, and if such repairs damage the product, such damages are not remedied under this warranty.
  - Purchasers shall bear all on-site labor, shipping, packing and insurance costs and all other costs, excluding in-house 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.
  - 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 PondXpert, 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.
  - 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 PondXpert.
  - 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 PondXpert and regardless of the terms of such consent in writing, such assignee shall have no greater rights than his assignor had against PondXpert.
  - This does not affect your statutory rights.



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

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