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MANUFACTURER OF AERATORS & FOUNTAINS



LAKE BED AERATION INSTALLATION / OWNERS MANUAL

120V/240V 60Hz North American model
220-240V 50Hz European / Australian model

AERATION EXPECTATIONS

- Stable and improved oxygen levels from the surface of water body to the bottom
- Consistent temperature from the surface of the water body to the bottom
 - Reduction of bottom oxygen-depleting muck and foul odors
 - Increased area for healthy aerobic bacteria growth
 - Elimination of oxygen related fish kills

SAFETY FIRST

Please read these instructions before using this aeration system. Failure to follow the recommendations in this owner's manual may result in *personal injury or death* and will void the manufacturer's warranty.

WARNING! An improper connection to the Lake Bed Aerator System and grounding conductor can result in electrical shock, injury or death!

For maximum safety, it is highly recommended that a Ground Fault circuit Interrupter (GFCI) protected circuit is used for the power supply.

Always connect the aeration compressor cabinet to a properly grounded outlet. If your outlet is questionable, have it checked by a qualified electrician. The 120V cabinets have a ground fault interrupter (GFCI) outlet.

DROWNING DANGER!

Using an aeration system during freezing conditions in an ice-covered lake will cause large holes in the ice. The ice around these areas is extremely thin. Injury or death may result if people fall through the ice in these locations. Aqua Control strongly recommends that these areas and the associated dangers be clearly posted in multiple locations around the lake, pond or marina. The owner will assume all responsibility for using the Aqua Control Aeration System during winter months.

WARNING!

- Install the compressor cabinet at a safe distance from flooding and out of standing water areas.
- Keep the compressor cabinet at a safe distance from direct contact with irrigation or sprinkler heads.
- Unplug the electrical cord from the outlet prior to any maintenance.
- Do not attempt any unspecified activity that is not listed in this manual or directly requested by an authorized Aqua Control representative or distributor.
- Do not operate aeration system if unusual noises or odors are detected. Disconnect power cord from outlet and contact your distributor to correct any problems.
- This appliance is not intended for use by young children or infirm persons unless they have been adequately supervised by a responsible person to ensure that they can use the appliance safely. Children should be supervised to ensure that they do not play with the appliance.
- Refer to these directions as needed in order to ensure the safe operation of the system.
- Failure to follow these instructions can result in injury or death and will void the warranty.

INITIAL INSPECTION

UPON RECEIVING YOUR ORDER – OPEN AND INSPECT PRODUCT IMMEDIATELY

Product damaged in delivery

The Aqua Control aeration system was properly packed and accepted by the freight carrier for shipment. It is their responsibility to deliver the system in perfect condition.

Apparent damage or loss

If upon delivery, the equipment or container indicates DAMAGE IN TRANSIT, such goods should be refused until the transportation company's agent has noted such damage on the freight bill. A copy of this bill should be given to you, noting the nature and extent of the damage. If any part of shipment is LOST IN TRANSIT, have that shortage noted on the freight bill by their agent.

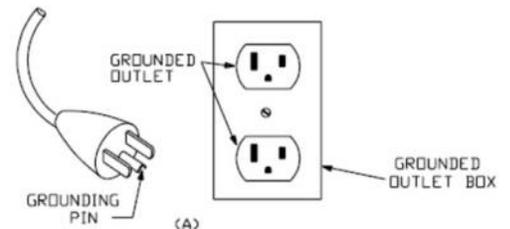
Concealed damage

If damage is discovered that was not apparent upon delivery, notify the transportation company immediately to inspect damaged equipment. The inspector should provide a "CONCEALED BAD ORDER" report. Inspections must be requested within seven (7) days of delivery. Do not move damaged goods from the original point of delivery. Retain all original packing/containers for inspection. File a "FULL VALUE REPLACEMENT" claim against the transportation company.

MAINTENANCE SAFETY

Only use parts that are supplied or approved by Aqua Control. Use of other parts may result in poor performance that could create a hazardous situation and will void the warranty.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified person in order to avoid a hazard.



Unplug the system and refer servicing to a qualified electrician for any of the following conditions:

- When compressor fan, outlet or other electrical components need service.
- If the cabinet is producing unusual noises or odors.
- After any accidental flooding prior to start-up.

GROUNDING INSTRUCTIONS

This product must be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. This product is equipped with a cord having a grounding wire with an appropriate grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.

WARNING – Improper installation of the grounding plug can result in electric shock. When repair or replacement of the cord or plug is required, do not connect the grounding wire to either flat blade terminal. The wire with insulation having an outer surface that is green with or without yellow stripes is the grounding wire.

Check with a qualified electrician or serviceperson when the grounding instructions are not completely understood, or when in doubt as to whether the product is properly grounded. Do not modify the plug provided; if it does not fit the outlet, have the proper outlet installed by a qualified electrician. Products for use on a nominal 120 volt circuit have a grounding plug similar to the plug in the illustration. Only connect the product to an outlet having the same configuration as the plug. Do not use an adapter with this product.

SYSTEMS MATERIAL LIST

Upon receipt, inspect to ensure that all of the components are included. If your aeration system has experienced damage from shipping, promptly report the damage to the carrier that provided delivery. Verify that you have received the following equipment:

Compressor(s): Located inside the cabinet. The compressor is 115v or 230v single phase and includes a power cord with a three-pronged plug that should be plugged into a Class A GFCI receptacle box.

AirPod Diffuser Base: Flexible membrane tube or disc diffuser(s) are incorporated onto their own base that is weighted by the factory for easy sinking and installation.

AnchorLine Self-Weighted Air Supply Tubing: Used to supply air from the shore-mounted compressor to the diffuser pad(s), it runs along the pond or lake bottom and can be buried or left exposed. Made of high-density PVC composite, it is compatible with included insert fittings and common PVC glue. Heavy wall thickness provides protection from punctures or kinking.

Remote Manifold (Optional): Used when the LBA compressor is located long distances from the water's edge. This remote manifold allows a single 1" – 1½" underground line to feed up to 6 AirPod diffusers.

INSTALLATION TOOLS & MATERIALS

For quick, easy and professional installations, the following tools and materials are required:

- Length of thin nylon rope – length needs to be twice the depth of the pond
- Utility razor knife
- Flat head screwdriver
- Shovel, if self-weighted tubing is buried prior to entering the pond

COMPRESSOR / CABINET INSTALLATION

- Remove cabinet from shipping container
- Cabinet comes equipped with heavy-duty polymer base. Designed to rest on ground.
- Locate cabinet near pond and out of flood zone.

AIRPOD DIFFUSER ASSEMBLY

The Diffuser comes partially assembled for you. The following steps still need completion:



- **Hand tighten all fittings only, do not over tighten**
- Screw in 6" riser tubes
- Screw on four Membrane Diffuser Tubes (or two Membrane Disc Diffusers) to the 6" riser tubes

AIRPOD DIFFUSER PLACEMENT – FOR EACH DIFFUSER

IMPORTANT:

Correct placement of the diffuser is critical. The ability of the aeration system to affect your pond/lake is dependent upon the position of the diffuser. It should be close to the deepest portion of the pond. It is not recommended for the self-weighted tubing to be attached to the compressor(s) prior to installing all of the tubing for each diffuser. Attaching the tubing to the compressor(s) and then placing the tubing in the pond may place excessive stress on the compressor(s) and the connectors.

1. Uncoil the roll of self-weighted tubing along the shoreline of your pond. Make sure the tubing has no twists, kinks or tangles to make it easier to install the diffuser. For lengths exceeding 100' (30m), multiple rolls of tubing must be connected with the factory supplied double-ended hose barbs. In some installs, it may be preferable to unroll only one roll of tubing at a time and place additional rolls in a boat.
2. Anchor one end of the tubing to a location near the compressor. Do not attach tubing to the compressor at this time.
3. Attach each roll of tubing using the double-ended hose barbs and clamps until the diffuser placement site has been reached. If necessary, plug the end of the tubing to avoid water entering the tubing and attach a float to the end of the tubing for ease of locating to continue installation.
4. Once all the rolls of self-weighted tubing are installed, attach the tubing to the hose barb on the diffuser.
5. Locate the two holes at the end of the diffuser opposite the check valve / hose barb assembly. Thread rope through these two holes and center the rope. This rope will be used to lower each diffuser to the pond bottom. **The minimum rope length must be twice the depth of the water.** Hold both ends of the rope and keeping the top of the diffuser (where the membranes are located) upright, lower the diffuser to the pond bottom. When the diffuser is positioned on the pond bottom, release one end of the rope and pull the rope up to the surface of the water.
6. Repeat steps 1 – 5 for each diffuser.
7. Once the diffuser(s) installation is complete and you are back on shore, attach the anchored end of the self-weighted tubing to the compressor.
8. Follow the “**System Start-Up Procedures**” below.
9. You may test each diffuser individually upon installation however; at least two valves at the compressor cabinet should be at least partially open to ensure that excessive pressure is not sent to the diffuser being tested. This could result in damaged tube membranes.
10. If desired, trench or cover the exposed self-weighted tubing with rocks or dirt.
****NOTE:** For winter operation in freezing conditions, the self-weighted tubing on shore must be buried below the frost line and the exposed compressor hose must be insulated with hot water heater pipe insulation found in any home improvement or hardware store. If the self-weighted tubing is not buried below the frost line, it must run downhill without any dips. Atmospheric air contains water and as it compresses during winter, it will enter the exposed tubing. If there are any dips in the line, this water will pool and eventually freeze, blocking the air supply line completely.

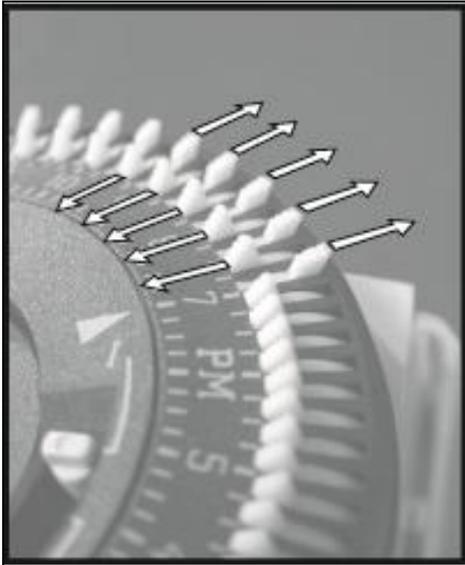
SYSTEM START-UP PROCEDURES

The purpose of the Lake Bed Aeration System is to circulate the pond's entire water column. This circulation will increase and maintain oxygen levels and eliminate drastic temperature fluctuations. The efficiency of the AirPro / AirEco can initially create problems if the following start-up procedures are not followed. Improper start-up may result in an unintentional fish kill.

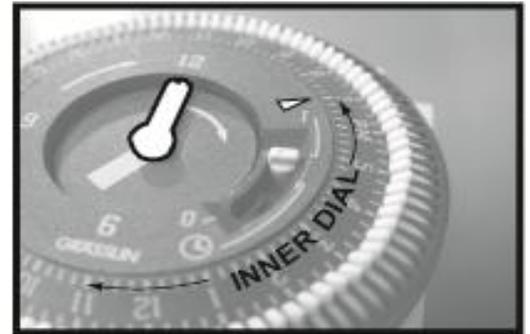
- Turn on the system and operate for 15 minutes.
- Turn off the system for the remainder of the day.
- Restart the system the next day and operate for 30 minutes.
- Turn the system off for the rest of the day.
- Each day double the operating time from the previous day until the system is running continuously. This should take approximately eight (8) days.

TIMER SETTING

Pull the clear cover straight out to remove. Please review the following instructions for proper operation.

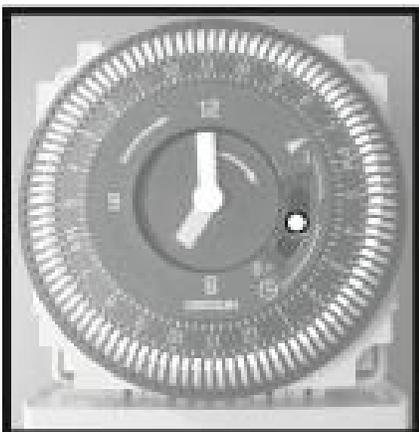


The time switch is set by pushing the pins to the inside or outside of the ring. Each pin represents 15 minutes. By pushing the pins to the outside, the lake bed aerator is turned on. By pushing the pins to the inside, the lake bed aerator is turned off.

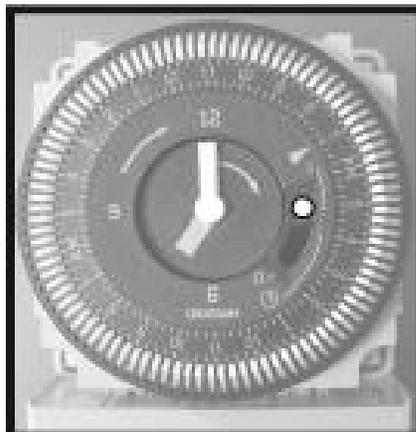


Turn the minute hand shown in white with black outline, clockwise until the current time is aligned with the triangle shown in white with black outline on the inner dial. The hour and the minute dial will show the current time. Snap the clear cover back onto the timer.

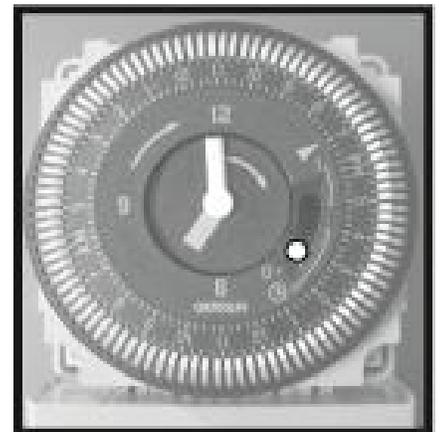
There are three positions for the power switch below shown in white circle highlight outlined in black.



Use timer settings mode
(center position)



Always on position
(top position)



Off position
(bottom position)

WINTER OPERATION & PRECAUTIONS

The AirPro / AirEco System is designed to operate year-round. However, certain precautions need to be taken during the winter months.

DANGER! If you choose to operate your aeration system through the winter, be sure to follow these instructions for safe and proper operation:

- Operating in freezing conditions on an ice-covered pond will cause large open water areas to remain at the boil sites. In addition, the ice thickness around these open areas will be much thinner than the ice over the remainder of the pond. Injury or fatality may result from people, snowmobiles, etc. falling through the ice. Aqua Control strongly recommends that this danger of thin ice around the boil area be clearly posted in various areas. Owner assumes all responsibility for operating aeration systems during winter months.

(winter operation & precautions cont.)

- To prevent the risk of cooling the entire water column in the pond, the Diffuser(s) should be moved to a shallower portion of the pond (typically one-half of the depth of the original placement) and operated there until spring thaw. Moving the diffuser to shallower water allows warmer water to remain in the lower regions of the pond and prevent the water from becoming too cold for fish.
- The self-weighted tubing on shore must be buried below the frost line or insulated. It should also be sloping downhill without any dips in the line. (Reference #7 of AirPod Diffuser Placement Section for full instructions)

If you choose to turn off the system for the winter:

- Simply unplug the system; no other equipment preparation is required.
- In the spring when the system is re-started, airlines may still contain ice inside the line. If this occurs, pour one cup of denatured alcohol into each frozen line to melt the ice, allowing the compressor to push air through the line until heat generated by the compressor melts the remaining ice.
- In the spring, it will be necessary to follow the standard start-up procedures to prevent a possible fish kill.

MAINTENANCE & TROUBLESHOOTING

Keep cabinet air inlets and outlets free of debris and weed growth for proper ventilation.

If the System Does Not Operate

- Press and re-set the GFCI electrical receptacle located inside the cabinet. If the compressor(s) does not operate, check to make sure the timer is set properly. To set timer, review page 5 of this document. If timer is set properly and pump is still not operating, flip up the white manual override toggle located near center / right on timer. If pump still does not operate, contact your distributor or the factory for further assistance.

NOTE: Before performing any maintenance and troubleshooting, unplug the system.

If the size or appearance of the surface boil has decreased from initial installation, perform one or more of the following:

Air Filter Inspection / Replacement (Air Filter inspections suggested every 3 months)

- Unscrew the filter from the compressor; press filter cap down and rotate clockwise then pull cap off. Inspect / replace filter element. Air filter elements cannot be cleaned. These filter elements must be replaced.

Check Diffusers for Material Build Up or Damage

- The diffusers located on the AirPod may have been damaged (wildlife and fishing hooks are most common) or blocked by material build up (after a long period of inactivity). Remove the AirPod to inspect that the membranes are clear with no rips or holes. Clean or replace as necessary.

Piston Rebuild Kit

- Rebuild kits are available by contacting Aqua Control or your distributor. Under optimal operating conditions, a rebuild should be performed at least every two years.

Questions?

If in doubt about any part of these instructions or the safe and proper operation of your Lake Bed Aerator, please contact your sales representative or distributor to have your questions answered. You may also contact Aqua Control for sales, technical assistance or general questions at 1-800-377-0019 or via email at customerservice@aquacontrol.com.

AQUA CONTROL, INC.

Lake Bed Aerator

Lifetime Limited Warranty

Aqua Control, Inc. warrants to the original purchaser (the end user) of any **Lake Bed Aerator** manufactured by *Aqua Control, Inc.* that any **compressor pump component** which proves to be defective in materials or workmanship, as determined by the factory within **two (2) years** from the shipping date, will be repaired or replaced at no charge with a new or remanufactured part, and returned freight prepaid. The included **self-weighted air tubing** has a **fifteen (15) year** warranty and the accompanying **diffuser(s)** have a **Five (5) year** warranty. The **AirPro™ outdoor cabinet** has a **limited lifetime warranty** against rust. The **AirEco™ outdoor cabinet** has a **two (2) year** warranty. The end user shall assume all the responsibility and expense for removal, packaging, and freight to ship to *Aqua Control, Inc.* to determine the warranty claim and for all reinstallation expenses.

The warranty is void in cases where damage results from: improper installation, improper electrical connection, improper voltage, alteration, lightning, careless handling, misuse, abuse, disassembly of compressor, or failure to follow maintenance or operating instructions. Modification or repair by an un-authorized repair facility will void the warranty.

In no case will *Aqua Control, Inc.* or its distributors accept responsibility for any costs incurred by the user during installation, removal, inspection, evaluation, repair, parts replacement, or for return freight. Nor will any liability be accepted or loss of use, loss of profits, loss of goodwill, for consequential damage, or for personal injuries to the purchaser or any person.

In the event of problems believed to be covered under warranty, it will be necessary to notify the distributor who will try to help resolve the problem and who may contact the factory for additional assistance. If it is concluded that there may be a defect which may be covered under warranty, it will be necessary to get a Return Material Authorization (RMA) from the distributor before shipment. Freight collect shipments will not be accepted by the factory on warranties or repairs.

The product or part(s) must be returned freight prepaid, to the factory, as directed, and in its original packaging or in a container which will prevent damage. Parts returned under warranty and damaged during shipping will not be covered under warranty for the shipping damage.

If the factory evaluation of the returned goods concludes that the failure is due to defects in materials or workmanship, the part or parts in question will be replaced under warranty with new parts, remanufactured parts, or will be repaired, at the factory's option. The warranty period for all parts supplied under warranty will terminate at the end of the original product's warranty. All warranty shipments from the factory will be shipped freight prepaid.

Warranty registration is HIGHLY recommended.

No implied warranties of any kind are made by *Aqua Control, Inc.* for its products, and no other warranties, whether expressed or implied, including implied warranties of merchantability and fitness for a particular purpose, shall apply. Should an *Aqua Control, Inc.* product prove to be defective in materials or workmanship, the retail purchaser's sole remedy shall be repair or replacement of the product as expressly provided above.

Aqua Control, Inc.

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Effective April 1st, 2015