Aeration Systems for Improving Lake, Pond & Marina Water Quality

FOR ALL 1/2 HP HIGHFLOW™ COMPRESSOR MODELS

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CONGRATULATIONS!
You have purchased the most efficient and cost-effective aeration system available on the market today. Since 1992 the professionals at Vertex Water Features, as a division of Aquatic Systems, Inc., have been developing total lake management techniques. Your Vertex system will provide you with the highest quality lake aeration equipment in the industry.

AERATION GOALS
A Vertex aeration system will supply many important benefits to the overall health of a waterway:
◆ Increased and constant oxygen levels throughout the entire water column.
◆ Breakup of thermal stratification of the water column.
◆ Elimination of oxygen-related fish-kill.
◆ Reduction of nutrient levels and associated algae growth.
◆ Allow for an increase in beneficial bacteria which are needed to breakdown organics.
◆ Reduction of bottom muck and its accompanying foul odors.
◆ Improved sport fisheries by expanding oxygenated habitat.
◆ An overall healthier waterway eco-system ... naturally!

Vertex reserves the right to change this information without notice, and makes no warranty, express or implied, with respect to this information. Vertex shall not be liable for any loss or damage, including consequential or special damages, resulting from the use of this information, even if loss or damage is caused by Vertex negligence or other fault.

SAFETY NOTES...
Please read the following instructions carefully before operating your aeration system. Failure to follow the recommendations in this section may result in personal injury or rescinding of the machine warranty agreement.

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

WARNING
An improper connection to the aerator grounding conductor can result in electrical shock.

Always connect the cabinet to a properly grounded outlet. If in doubt, have the outlet checked by a qualified electrician.

Never use an extension cord between the cabinet power cord and an electrical outlet.

Do not allow anything to rest on the power cord.

Do not place the cabinet where people may step on the power cord.

Follow all warnings and instructions that are marked on or supplied with the aeration system.

Never override or “cheat” electrical or mechanical interlock devices.

Always locate the cabinet on a solid support with adequate strength for the weight of the unit.

Install the cabinet at a distance and location safe from standing water or flooding.

Locate the cabinet away from irrigation sprinklers.

Never push objects of any kind into the slots in the covers, as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electrical shock.
WARNING (CONTINUED)

Never attempt any maintenance function that is not specified in the user manual.

Never remove any covers or guards that require a tool for removal, unless you are instructed to do so.

Ensure that you read all Warnings and Cautions, and follow each step in the instructions exactly as they are written.

Never attempt any activity that is not specified in the user manual, or that is not specifically directed by an authorized Vertex representative.

Never operate the system if unusual noises or odors are detected. Disconnect the power cord from the outlet and call Vertex to correct any problems.

Before performing any maintenance and troubleshooting, disconnect the electricity by turning off all circuit breakers and unplugging cabinet.

When in or around water wear a Coast Guard approved life jacket and follow all water safety guidelines.

Refer to these instructions as needed in order to ensure the safe operation of the aerator.

MAINTENANCE SAFETY

Always use parts that are supplied or approved by Vertex. Use of other parts may result in poor performance and could create a hazardous situation.

Do not use acid or corrosive cleaners. Follow the instructions in the manual for the appropriate cleaning methods.

Unplug the system from the outlet and refer servicing to a qualified electrician under the following conditions:

♦ When the power cord is damaged or frayed.
♦ Compressor fan, outlet or other electrical components need service.
♦ If the cabinet is producing unusual noises or odors.

PRODUCT DAMAGED IN DELIVERY

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

APPARENT DAMAGE OR LOSS

If upon delivery the equipment or containers indicate DAMAGE IN TRANSIT, such goods should be refused or not accepted until the transportation company’s agent has noted such on the freight bill.

A copy of such bill will be given to you, noting the nature and extent of the damage. If any part of shipment is LOST IN TRANSIT, have shortage noted on freight bill by agent.

CONCEALED DAMAGE

If damage is discovered, that was not apparent upon delivery, notify the transportation company immediately to inspect damaged equipment. The inspector will be required to provide a “CONCEALED BAD ORDER” report.

Inspections must be requested within 15 days of delivery. Do not move damaged goods from original point of delivery. Retain all original packing / containers for inspection. File a “FULL VALUE REPLACEMENT” claim against transportation company.
SYSTEM MATERIALS LIST

Upon receipt, closely inspect materials. If your aeration system experienced damage from shipping, promptly report the damage to the carrier that provided delivery. Verify that you have received the following:

◆ QuietAir™ Compressor Cabinet with Piston Compressor: The cabinet is constructed of aluminum and electrostatically powdercoated to provide a lifetime protection from rust. The cabinet houses the inlet filter / muffler assembly, air outlet hose, and ventilation fan.

◆ Shallow CoActive™ Flexible Membrane AirStations™: Designed specifically for shallow water applications from 4-8 feet deep, this unit utilizes two 9” diameter flexible membrane diffuser disks of EPDM construction incorporated into a single vacuum formed hollow base AirStation™.

◆ CoActive™ Flexible Membrane AirStations™: Designed for 8-14’ applications, this unit has two 9” diameter flexible membrane diffuser disks of EPDM construction, incorporated into a single vacuum formed hollow base unit per AirStation™.

◆ XL™ Flexible Membrane AirStations™: Designed for 14-30’ applications, this unit has four 9” diameter flexible membrane diffuser disks of EPDM construction incorporated into a single vacuum formed hollow base unit per AirStation™.

◆ XL-5™ Flexible Membrane AirStations™: Designed for a wide range of applications, this unit has five 9” diameter flexible membrane diffuser disks of EPDM construction incorporated into a single vacuum formed hollow base unit per AirStation™.

* Type of AirStation included depends on which system was ordered. Please refer to your invoice or packing slip for reference.

◆ Poly Plastic Mounting Pad.


◆ Compressor with Valve Manifold and Muffler Assembly.

INSTALLATION TOOLS & MATERIALS

For quick, easy and professional installations, it is suggested that the following materials be on site.

◆ Length of thin polypropylene or similar nylon rope — length needs to be twice water depth

◆ Utility razor knife

◆ Level

◆ Motor boat

◆ Small river rock or pea gravel

◆ Oatly™ Rain Tight PVC glue (1 pt.)

◆ Shovel — and pick if required
CABINET & COMPRESSOR INSTALLATION GUIDELINES

◆ If your system arrived via UPS or FedEx Ground Service, the compressor was shipped separately from the cabinet. To install the compressor, open the box containing the compressor and open the bag containing four vibration feet, nuts and washers. Mount the feet to the compressor. Pick up the compressor and align the holes found in the bottom of the cabinet with the threaded vibration feet mounted to the compressor.

Once aligned, secure the compressor to the cabinet using the remaining four washers and nuts. For more detailed procedures see separate instructions enclosed with systems shipped in this manner.

◆ Your cabinet was shipped with a plastic mounting pad attached. You may use this pad for the final installation or a cement pad may be needed in areas where vandalism is a potential problem.

◆ To use the plastic pad simply clear the ground of any rocks, sticks and debris that will prevent the pad from sitting flat. You may need to use a shovel to level the ground to achieve this. Check the final placement with a level.

◆ To minimize compressor noise, place cabinet directly on the ground, surrounded by landscaping.

◆ Note: Place the pad so that the air lines leaving the cabinet face the lake.

◆ Using this method, the cabinet installation is now complete.

◆ If a cement pad is required, a wooden form must be built to pour a pad. Please see the diagram for the form dimensions. Place the form for the concrete pad on the ground in the location that you would like to place the compressor and cabinet. Dig out around the form using the form as an outline. Depth should be no greater than three inches. You should have at least one inch above the ground level when complete.

◆ Mix the concrete and pour it up to the top of the form. Using a trowel, skim the top for a nice finish. The concrete should set within 48 hours, colder climates may take longer.

◆ Once the concrete has cured, simply take the cabinet and plastic mounting pad and place them on top of the cement pad. Drill four holes, one in each corner of the plastic pad using a 3/8-inch masonry drill bit.

◆ Insert a 3/8” x 3” wedge anchor through the plastic pad and into the cement. Using the nut and washer supplied with the anchor kit, fasten the plastic pad to the cement pad you made. Installation of the cabinet is now complete.

DIFFUSER ASSEMBLY & PLACEMENT

AIRSTATION™ ASSEMBLY

◆ Fill AirStation™ base completely with river rock or gravel and insert plug.

◆ Screw diffuser discs onto riser pipes.

CAUTION: Once filled with gravel or stone, DO NOT attempt to lift AirStation by PVC riser pipes or discs. Pick up at base.
AIRSTATION™ PLACEMENT

Correct placement of the AirStation™ is critical. The ability of the aeration system to affect your waterway is dependent upon the position of the diffuser. Generally, AirStations™ are spaced equally at the depth that encompasses most of the shape of the lake. Do not lower the AirStation™ into small deep pockets, these should be left as nutrient sinks. If you have any questions on placement, please contact the technical staff at Vertex.

⚠️ CAUTION: When in or around water always wear a Coast Guard approved life jacket and follow all water safety guidelines.

1. We recommend that you place a marking buoy in the general area of each proposed diffuser location to act as a reference point.

2. For Vertex BottomLine™ tubing uncoil the tubing along the shoreline. The easiest way to accomplish this is by standing the coil on end and rolling it out. (Photo #1) It is imperative that tubing not be twisted or tangled for proper installation.

3. Secure one end of the self-weighted tubing plus approximately four extra feet to the compressor cabinet. The extra four feet of tubing will ensure that you have enough tubing to make it to the compressor after trenching of tubing.

4. Grasp the other end of the tubing and enter your boat. (Assembled AirStations™, PVC glue, utility razor knife and rope, should also be on-board). Head towards your marking buoy with your boat in reverse — otherwise damage could be caused to boat propeller — while pulling tubing from shore out to the buoy. (Photo #2)

5. Once at marked buoy connect the end of the tubing to the barbed fitting on the AirStations™ using PVC cement. Let dry completely before placing unit into water. (Photo #3)

6. Thread one end of rope through the two eyelets — one on each corner — of the AirStations™ base. Pull through until the base is at the midway point of total rope length. (Photo #4)

7. Secure the two ends of the rope in your hand and lower the diffuser assembly into the water. Air in the diffuser base will begin to vent causing unit to sink to lake bottom. (Photo #5)

8. Once unit is situated on lake bottom, release one end of the rope and pull the rope back into the boat. Following the above installation guidelines will help ensure that the AirStations™ do not invert during installation.

9. AirStation™ installation is complete.

10. Once you have returned to shore, attach the open end of the supply tubing to the hose coming out of the compressor cabinet via the barbed fitting. Secure and tighten stainless steel clamps to both supply tubing and compressor hose. (Photo #6)

11. Trench and bury supply tubing runs from compressor cabinet to water’s edge. (Photo #7)

12. Contract a licensed electrical contractor to bring 115 or 230 volt (depending on which aeration model is purchased), single phase electrical supply to the cabinet and install a weatherproof receptacle.

Vertex 115 volt aeration systems are equipped with a Class A GFCI outlet receptacle. This outlet is specifically installed for personal protection and should NEVER be replaced by a non-GFCI outlet without first consulting Vertex Water Features. Due to the fact that aerators often experience damp or wet environments, any short in non-GFCI equipment or circuits could have fatal consequences. Since Vertex 115 volt aeration systems have a GFCI outlet, plugging them into another GFCI outlet can cause “nuisance tripping” resulting in persistent system shut down. It is recommended that only one GFCI outlet be used per circuit. For more information on the GFCI and operations testing see the ADDENDUM on page 17 of this manual. 230 volt systems are available by special order but do not have a Class A GFCI receptacle.

13. Before starting your system review our start-up procedures — otherwise a fish-kill may occur.
SYSTEM START-UP PROCEDURES

The purpose of the aeration system is to circulate the lake’s entire water column. This circulation will increase and maintain oxygen levels, and eliminate drastic temperature fluctuations. The efficiency of the system can initially create problems if start-up procedures are not followed properly.

CAUTION: The circulation of poor quality, low oxygen deep water to the lake’s surface can introduce harmful gases and by-products into the previously healthy upper regions of the water column. These by-products can make the upper regions unfit for aquatic life and could result in a fish-kill.

TO PREVENT AN INITIAL FISH-KILL

To prevent this potential problem, Vertex has established start-up procedures:

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

NOTE: The start-up procedures are a general guideline. If you should have any questions and/or concerns, contact Vertex Water Features at 800-432-4302 for technical assistance.

MAINTENANCE

Vertex aeration systems are designed for low-maintenance and typically only require minimal scheduled maintenance: Periodic cleaning and/or replacement of the compressor air filter, and its piston cups, and “Flexing” of the AirStation™ is required.

Cabinet air inlets and outlets should be kept free of debris and weed growth allowing normal ventilation.

Before performing any maintenance or troubleshooting, unplug system.

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

AIR FILTER CLEANING / REPLACEMENT

◆ Air filter cleaning or replacement: Remove compressor air intake filter and wash with soap and water or replace. This should be done 2-4 times per year. Never re-install a wet or damp filter.

PISTON CUP REPLACEMENT

◆ Piston cup replacement: Under normal year-round, continuous use, the piston cups typically last 24-36 months. Vertex highly recommends replacement of cabinet cooling fan at this time also.

DISK FLEX-CLEANING PROCEDURES

Routine maintenance of the AirStation™ disks is recommended twice per year. This procedure is known as disk flexing. Over time organic matter and algae can settle on the AirStations™ and inhibit the release of micro-bubbles, in turn reducing the effectiveness of the AirStation™. Disk flexing helps unclog the pores in the membranes, reduces back pressure on the compressor(s), and restores the performance of the AirStation™.

Disk flexing is very easy and is done from the cabinet or valve box location. The control valves for each AirStation™ are located inside the cabinet, unless a VBS (Valve Box System) was installed. In the instance that a VBS system was installed, the control valves will be inside the valve box, buried to ground level, down by the shoreline.

Before beginning this procedure, make a line with a permanent marker on each valve body and handle that line up with each other in the valve’s present position. This will help re-balance the system once your finished flex cleaning the disks.

With the system running, close all but two valves. Slowly open and close second to last valve three times. Now open another valve and close the one that was just flexed. Slowly open and close the second valve. Continue this way until all AirStations™ have been flexed. Return all valves to their original, balanced positions by aligning the marks you made on the valve bodies before starting the procedure. If you have not yet balanced the AirStations™, or cannot read your indicator marks, see the “AirStation™ Balancing” section for details. The Disk Flex Cleaning procedure is now complete.
AIRSTATION™ BALANCING

Once the installation of a multiple AirStation™ system has been completed, proper balancing of the AirStations™ is required to ensure that they all get an equal amount of air. The control valves for each AirStation™ are located inside the cabinet, unless a VBS (Valve Box System) was installed. In the instance that a VBS system was installed, the control valves will be inside the valve box, buried to ground level, down by the shoreline.

With the system running, close all valves except the one that controls the air flow to the AirStation™ with the longest (or deepest) run of tubing. With this one valve wide open, slowly open the valve that controls the air flow to the AirStation™ with the second longest (or second deepest) run of tubing. Once a boil is noticed above this AirStation™, leave the valve in this position and move on to the next. Work your way from the longest (or deepest) to the shortest (or most shallow) run of tubing. Once there is air to all of the AirStations™, check to be sure all boils are approximately the same size. If they are not, make small adjustments as necessary to even them out. At this point we suggest making indicator marks with a permanent marker from the valve handle to the valve body to assist you in rebalancing the system in the future.

CAUTION: If the system has been installed in an established pond, and you are attempting to balance the AirStations™ during the first day of operation, make certain that this procedure takes as little time as possible. Under 60 minutes is preferred. See “System Start-up Procedures” section for details.

WINTER OPERATIONS & PRECAUTIONS

Vertex aeration systems are specially designed to operate year-round in cold climates but there are several important precautions.

DANGER

If you choose to run the aeration through the winter:

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

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

1. Simply unplug the system; no other equipment preparation is required.

2. In the spring, when the system is restarted, airlines may still contain ice inside the line. If this is so, adding one cup of denatured alcohol per frozen line, with compressors off, will melt the ice enough to allow the compressor to push air through the line until heat generated by the compressor melts the remaining ice.

3. In the spring, it will be necessary to follow our standard start-up procedures to prevent a possible fish kill. The purpose of the aeration system is to circulate the lake’s entire water column. The circulation of poor quality, deep water that accumulated over the winter upward to the lake’s surface can introduce harmful gases and by-products into the previously healthy upper regions of the water column. These by-products can make the upper regions temporarily unfit for aquatic life and could result in a fish kill. To prevent this potential problem, Vertex has established the following start-up procedures:
   • Turn on system and operate for 15 minutes.
   • Turn off system for remainder of the day.
   • Restart the system the next day and operate for 30 minutes. Turn off system for the remainder of day.
   • Each day double the operating time from the previous day until the system is running continuously. This should take 8 days.
<table>
<thead>
<tr>
<th>ISSUE</th>
<th>CHECK</th>
<th>LIKELY CAUSE</th>
<th>CORRECTION</th>
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<tbody>
<tr>
<td>No bubbles at ANY AirStations. Compressor and cabinet fan are not running.</td>
<td>GFCI circuit tripped.</td>
<td>Cabinet plugged into another GFCI circuit causing nuisance tripping.</td>
<td>Change one GFCI duplex to a standard non-GFCI duplex. Reset GFCI, and restart system.</td>
</tr>
<tr>
<td></td>
<td>GFCI circuit not tripped.</td>
<td>Cabinet not plugged into another GFCI circuit. Check for low voltage while compressor is running.</td>
<td>Contact Vertex or local dealer for electrical troubleshoot assistance.</td>
</tr>
<tr>
<td>No bubbles at ANY AirStations. Compressor not running, but cabinet fan is.</td>
<td>Check compressor capacitor wiring for frays or poor connections.</td>
<td>Wiring loosened or was damaged during shipment or maintenance.</td>
<td>Contact Vertex or local dealer for instructions.</td>
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<td></td>
<td>No capacitor wiring issues can be seen.</td>
<td>Bad capacitor.</td>
<td>Contact Vertex or local dealer for repair/replacement.</td>
</tr>
<tr>
<td></td>
<td>Capacitor has been replaced.</td>
<td>Compressor is bad.</td>
<td>Contact Vertex or local dealer for repair/replacement.</td>
</tr>
<tr>
<td>No bubbles at ANY AirStations. Compressor not running, but cabinet fan is.</td>
<td>Pressure gauge reading is low or zero.</td>
<td>Check valve is bad. It is difficult to tell if check valve is bad if compressor is still running.</td>
<td>Contact Vertex or local dealer for repair/replacement.</td>
</tr>
<tr>
<td></td>
<td>Pressure gauge reading is normal or high.</td>
<td>Solenoid valve possibly bad.</td>
<td>Pull pop-off valve open to release pressure (should release quickly). Reset GFCI, and try to restart compressor. If it will not restart, contact Vertex or local dealer for repair/replacement.</td>
</tr>
<tr>
<td>No bubbles at ANY AirStations. Compressor and cabinet fan both running.</td>
<td>No air leaks are audible in cabinet. Compressor running louder and possible excessive vibration.</td>
<td>Compressor muffler filter is dirty/clogged or silencer tube in muffler cap is blocked.</td>
<td>Clean or replace filter. NEVER re-install a wet filter. Remove debris clogging silencer tube in muffler cap if blocked.</td>
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<td></td>
<td>Compressor operating normally or making unusual noises. Exhibits reduced pressure and/or air flow.</td>
<td>Compressor needs piston rebuild kit and possibly new muffler filter.</td>
<td>Contact Vertex or local dealer with specifications for rebuild kit. Keep muffler filter clean.</td>
</tr>
<tr>
<td>No bubbles at one or more AirStations, possibly all. Compressor and cabinet fan are running.</td>
<td>Check for leaks at all connections in line and in cabinet. If none are audible, carefully spray SMALL amount of soapy water onto connections and look for bubbles.</td>
<td>Vibration loosened connection, or cracked fitting.</td>
<td>Tighten loose connection or replace cracked fitting as necessary.</td>
</tr>
<tr>
<td>No bubbles at one or more AirStations, most likely all. Compressor and cabinet fan are running.</td>
<td>Obvious air leak from solenoid valve.</td>
<td>Solenoid valve bad.</td>
<td>Call Vertex or local dealer for repair/replacement.</td>
</tr>
<tr>
<td>No bubbles at one or more, but not ALL AirStations. Compressor and cabinet fan are running.</td>
<td>Are all valves in cabinet wide open?</td>
<td>Improper “balancing” of AirStations.</td>
<td>Adjust valves on manifold in cabinet until all AirStations operate properly. See “AirStation Balancing” section for instructions.</td>
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<td></td>
<td>Valves in cabinet are properly “balanced” and no leaks are evident.</td>
<td>Compressor beginning to lose compression and needs piston rebuild kit.</td>
<td>Contact Vertex or local dealer with compressor specifications for rebuild kit. Keep muffler filter clean.</td>
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<td>Large rolling bubbles instead of fine bubbles at surface above one or more AirStations.</td>
<td>Inspect each AirStation for malfunction.</td>
<td>Diffuser membrane damaged, or AirStation fitting broken.</td>
<td>Contact Vertex or local dealer for repair/replacement.</td>
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<td>Air coming out of pressure relief valve.</td>
<td>High pressure reading on gauge. Inspect AirStations and tubing for clogging.</td>
<td>Regular disc flexing not performed. Flex discs 2 times per year to help avoid clogging.</td>
<td>Remove any overgrowth around discs and clean membrane surface.</td>
</tr>
<tr>
<td></td>
<td>Low pressure reading on gauge. AirStations not clogged.</td>
<td>Bad pressure relief valve.</td>
<td>Contact Vertex or local dealer for repair/replacement.</td>
</tr>
<tr>
<td>Compressor stops working for periods of time then restarts.</td>
<td>Inspect fan for proper function.</td>
<td>Compressor overheating due to bad fan.</td>
<td>Contact Vertex or local dealer for fan replacement. Leave top of cabinet open for cooling if possible, otherwise unplug system until fan is replaced.</td>
</tr>
<tr>
<td>Compressor shakes erratically and makes loud noises.</td>
<td>Check for low voltage while compressor is running under load.</td>
<td>Gauge of supply wires to circuit possibly undersized, or circuit is plugged into extension cord. If gauge of circuit wiring is incorrect, have electrician replace. NEVER use extension cord to operate system for continual use.</td>
<td>Clean or replace filter. NEVER re-install a wet filter. Remove debris clogging silencer tube in muffler cap if blocked.</td>
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<td></td>
<td>Check for clogged muffler or blocked silencer tube in muffler cap.</td>
<td>Muffler filter in need of replacement, or blockage of silencer tube in muffler cap.</td>
<td>Clean or replace filter. NEVER re-install a wet filter. Remove debris clogging silencer tube in muffler cap if blocked.</td>
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PRODUCT WARRANTY
Vertex Water Features will repair or replace any defective part within the compressor cabinet for a period of two years from date of receipt. The AirStation™ diffuser assembly will be warranted for a period of five years and BottomLine™ tubing will be warranted for a period of 15 years.

Customer is responsible for return shipping of any goods for warranty inspection by Vertex Water Features. After inspection, if product shows manufacturing defect, Vertex will replace or repair it at no cost to customer. Should inspection indicate non-warranty failure (incorrect voltage, faulty installation procedures, vandalism, customer negligence, etc.) warranty will be void.

The warranty period for all warranty work is equal to the remaining time period of the original new equipment warranty. Warranty claims are based on the date you notify your dealer or Vertex Water Features at 800-432-4302. All claims must be made to Vertex Water Features or an Authorized Dealer.

ADDENDUM GFCI GUIDELINES
What is a GFCI?
A GFCI receptacle is different from conventional receptacles. In the event of a ground fault, a GFCI will trip and quickly stop the flow of electricity to prevent serious injury.

Definition of a ground fault: Instead of following its normal safe path, electricity passes through a person’s body to reach the ground. For example, a defective appliance can cause a ground fault.

THE GFCI’S FEATURES
A GFCI receptacle does not protect against circuit overloads, short circuits, or shocks. For example, you can still be shocked if you touch bare wires while standing on a non-conducting surface, such as a wooden floor.

DANGER
To prevent severe shock or electrocution, always turn the power OFF at the service panel before working with electricity.

GFCI TESTING
Why Perform this test?
◆ If the GFCI is not operating correctly it may not prevent personal injury or death due to a ground fault (electrical shock).
◆ Press the TEST button in order to trip the device. This should stop the flow of electricity, making the fan/compressor shut OFF. If the power stays ON, contact Vertex. If the power goes OFF, the GFCI receptacle is working correctly.
◆ Perform GFCI testing monthly to assure proper operation.

If GFCI does not reset or operate correctly, call a licensed electrician for repair or replacement.

See page 3 for additional GFCI information.
CABINET DIAGRAMS

Medium Cabinet

Large Cabinet
### MAINTENANCE SCHEDULE

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* Manufacturer suggests air filter cleaned or replaced 2-4 times per year depending on environmental conditions. Piston kit should be replaced as needed. Reduced air flow, despite air filter replacement, is indicative of worn piston seal.

* Always unplug your system before performing any maintenance procedures!!!