



Pond Pro

CAN-AIR SS AERATION SYSTEM OWNERS MANUAL

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 PONDPRO.CA



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SAFETY

INSTRUCTIONS

- Use caution when dealing with any electrical equipment with moving parts.
- Use caution when using the system in freezing conditions — diffusers will cause open water and thin ice around the area.
- Use extreme caution near cold water or in extreme weather conditions when installing.
- Post warning signs when legally necessary (varies by location). It is highly recommended to post signs to avoid injury or death from falling through ice.
- The product owner will assume all risks with operating the Can-Air System.
- Do not use waders in deep ponds/lakes or ponds/lakes with drop-offs, drastic slopes, or soft bottom material.
- Use a life jacket and a flat bottom boat for installation. Avoid boats that could easily flip like canoes.
- Consult a qualified electrician for electrical installation.
- Means for disconnection must be incorporated in the fixed wiring in accordance with local and national wiring rules.

UNIT

SPECIFICATIONS

Area Covered by 1 Can-Air SS Diffuser		
Pond Depth (ft)	Good Ponds \ Preventative	Eutrophic \ Problematic
5 - 8	50' x 50'	35' x 35'
9 - 12	100' x 100'	70' x 70'
13 - 15	130' x 130'	100' x 100'
16 - 20	170' x 170'	125' x 125'
20 +	235' x 235'	175' x 175'

ELECTRICAL

Pond Pro highly recommends that the site service providing the system have a human-rated Ground Fault Circuit Interrupter outlet (120V) or human-rated Ground Fault breaker (240V) for your protection.

Contact a licensed electrician to bring 120 or 240 volt (depending on model purchased), single phase electrical supply to the compressor location and to install appropriate human-rated ground fault protection.

COMPRESSOR SHELF INSTALLATION

Correct installation is your responsibility. Make sure you have the proper installation conditions and that installation clearances **do not block airflow**.

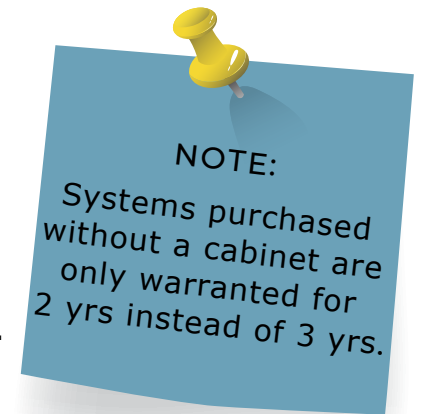
Compressor needs to be installed in a clean, dry location and protected from dirt, moisture and weather. Temperature readings taken 4" away from any surface of the compressor must not exceed 104° F (40°C).

Adequate ventilation and cooling air must be provided to keep the compressor from overheating and causing premature damage. **A fan must be used.**

Systems sold without cabinets include a shelf with a cooling fan and cord for wall mounting your compressor.

Pre-drilled holes on the shelf are 16" apart to mount on most standard studs.

- Secure the shelf to studs with four screws (min. 1.5" wood screw recommended).
- Mount the compressor and align the rubber feet with the holes.
- Tighten feet using nuts supplied.



POST MOUNT CABINET INSTALLATION

DO NOT INSTALL CABINET ON THE GROUND. CABINET MUST BE INSTALLED AT LEAST 4' OFF THE GROUND WITH VENTS UNOBSTRUCTED.



The post mount cabinet must be attached to a sturdy post or to a vertical wall with electrical service. If possible, install rubber between the post and the cabinet to reduce vibrations.

Pre-drill (2) holes that will align with those on the wall of the cabinet already drilled. Install 1 lag screw into the wall or post, leaving the hex head out roughly 1/4".

Hang the cabinet from lag screw using the bottom key-hole slot in the cabinet (a second person may be needed to help hold the cabinet in place). Install the second lag screw in the top mounting hole. Tighten the bottom lag screw.

Finish connecting tubing to the lead hose using the supplied fittings. Secure and tighten all clamps. You may need to use insulated hose under the water freeze mark and/or trench and bury tubing from the compressor to the pond. Plug fan and compressor into the supplied three-pronged 6' power cord when ready.

Please install as shown in the following pictures, dropping the plug into the bottom of the box through the 1 1/4" adapter. A cord protector is provided. Use this on the outside of cord before clamping the cord to the box.



CAUTION

IN NORTHERN CLIMATES WHERE THE GROUND MAY FREEZE DURING THE WINTER, BE SURE THERE ARE NO PEAKS AND VALLEYS IN THE AIRLINE. THIS CAN RESULT IN CONDENSATION FREEZING IN THE AIRLINE AND CAN BLOCK THE FLOW OF AIR TO YOUR DIFFUSER RESULTING IN COMPRESSOR DAMAGE.

AERATION SYSTEM CONNECTIONS



Frost Zone:

Connect the sinking airline to the insulated line with a hose barb connector. Make sure the insulated line is long enough to end below ice in low water conditions. The insulated line will need weight to sink the line (e.g. rebar, cinder block). Attach the other end of the insulated line to the red line from the compressor with a hose barb connector. Split the last foot of insulated line and cut the polyline out. Use the last foot of insulation to wrap the red hi-temp hose. The hi-temp hose should extend at least 18" from the compressor to reduce heat to the polyline.

No Frost Zone:

Run sinking airline all the way to the compressor. It is recommended to run the airline through a conduit to protect from rodents chewing the line on or close to shore. Make sure there is a minimum of 18" red hi-temp airline at the compressor before connecting the sinking airline with a barb and screw clamps.

For areas where it often gets below freezing, we use the Pond Pro insulated airline to go from compressor to below the ice in the pond. Compressors condensate and the condensation can freeze.

If your aeration system set-up does not include insulated airline, the sinking airline must be buried below the frost line which can vary from 6 - 10 ft (region dependent).

INSTALLATION TOOLS & MATERIALS

(Optional) nylon rope (or equivalent)
with length at least twice the water depth
7/16" socket wrench
7/16" box or open end wrench
5/16" socket/nut driver
Flat-head screwdriver

ON LAND PREPARATION

1 Remove diffuser from the box and gently pull the diffuser aeration tubing loose. Unwrap the three stainless steel arms.

2 Slip the end of arm opposite the orange clip into the notch on the diffuser base. Ensure the orange clip is facing up.

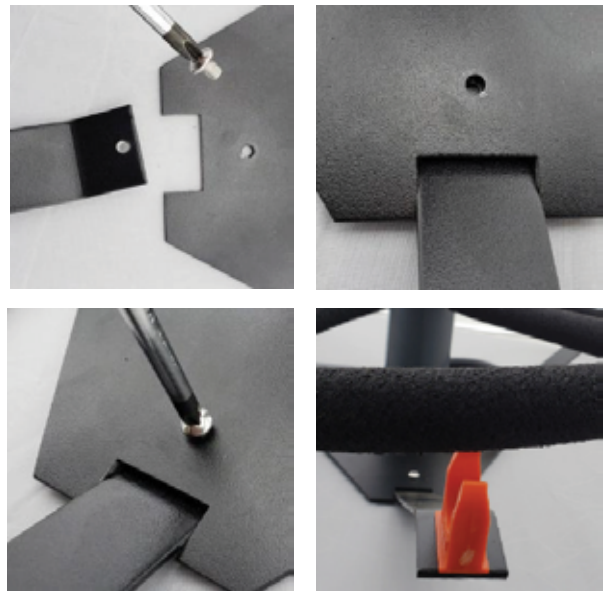
3 Align the hole in base and arm. Insert screw and tighten. Repeat this step with the other two arms.

4 Press diffuser aeration tubing into the orange plastic clip at the end of each diffuser arm.

5 A short 3/8" I.D. piece of sinking airline has been pre-installed on the diffuser for you. Attach the inside end of the 100' roll of 3/8" I.D. sinking airline to this short piece using a hose clamp and the hose barb fitting provided. Tighten using a socket/nut driver or flat head screwdriver. Do not over tighten clamp.

6 If a boat is being used (preferred) for diffuser placement, tie a rope to the outer holes on the diffuser body to allow you to drop the diffuser down to the bottom. If no boat is available (only works for 100' or less), tie a rope to one of the outer diffuser holes and pull diffuser into position with 100' of sinking airline attached.

* If fish are present, do not install the diffuser straight to the pond bottom. To keep the diffuser off of the bottom, tie a float to the arms with enough buoyancy to keep the diffuser suspended.



DIFFUSER INSTALLATION

Consider where the Can-Air Diffuser(s) are to be located in the pond. Proper diffuser placement is key for aeration efficiency. If using more than one, space the diffusers equally from one another in a depth that embodies the majority of the pond. Contact Pond Pro with any questions on placement.

- 1** Load your boat with the pre-assembled diffuser and the 100' roll of 3/8" I.D. sinking airline already attached. If the diffuser is more than 100' from the compressor, additional rolls of 1/2" I.D. sinking airline will be required. For every extra roll of sinking airline, you will need one hose barb connector and two hose clamps.
 - 2** Position the boat near the pre-determined diffuser location. Slowly lower the diffuser into the water. Make sure the diffuser is being lowered upright and level. Do NOT drop the diffuser in an upside down or sideways orientation. Use the [optional] rope to guide the diffuser, or release the diffuser at the surface and allow it to sink to the bottom naturally. Always ensure that there is a sufficient amount of airline to avoid strain on the connection when dropping the diffuser.
 - 3** Once the diffuser is positioned, the [optional] rope may be kept in place and tied to a buoy for easier locating of the diffuser in the future. Slowly unspool the 3/8" I.D. airline into the water and make your way back to the shore where your compressor is located. Connect the airline to the compressor manifold/barbs and secure with clamps.
 - 4** For systems with two or more diffusers, repeat steps 1-3 for every diffuser. Once all diffusers are placed and properly connected to compressor manifold/barbs, the diffusers are ready to be balanced (in a multi-diffuser system set-up) or the system is ready to start up.
 - 5** To balance the diffusers, turn on the compressor and visually inspect the diffusers' bubbling performances. In small ponds this can be done from shore. In larger ponds/lakes, visual inspections may need to be done from the boat. Diffusers should all have similar bubbling action. If one appears weaker, reduce the air flow to the other diffuser(s) by adjusting the ball valve(s) on the manifold. Once the diffusers appear equal, your system is ready to operate!
- Please note: Diffusers are weighted and self-righting but proper placement can be confirmed by checking for a rising pillar of bubbles, after connections and power set up are complete.



WHEN FISH ARE PRESENT

- Do not install the diffuser straight to the bottom. A float with enough buoyancy to suspend the diffuser will be needed.
- Install your diffuser(s) at half-depth to not disturb the bottom and cause the anaerobic sludge to mix with the water.
- Lower it by 2' every second week until it is on the bottom.

MAINTENANCE

With adequate maintenance your Can-Air Aeration System can operate trouble-free for years!



Air Filters

Check intake filter after the first 500 hours of operation. Clean filter and determine how frequently filters should be checked during future operations. Filters should be checked monthly and replaced as needed.

To Replace Filter:

- Remove filter cover
- Remove felt and replace filter element

Compressors

Compressors should be rebuilt every 18-24 months. The compressors are oil-less and require NO lubrication. Pond Pro readily stocks rebuild kits for all compressors used in Can-Air Aeration Systems.

Diffusers

Diffusers should be rebuilt every 5-7 years. Pond Pro readily stocks Can-Air diffuser rebuild kits.

Rebuild Kits & Replacement Filters/Parts can be ordered online at www.pondpro.ca or picked up from our store. Call us at 1-855-414-7663 with any questions or to contact us about warranty claims.



WARNING:
COMPRESSOR SURFACES BECOME
VERY HOT DURING OPERATION.
ALLOW PRODUCT SURFACES TO
COOL BEFORE HANDLING.



WARNING:
DISCONNECT ELECTRICAL
POWER SUPPLY CORD BEFORE
PERFORMING MAINTENANCE.

TROUBLESHOOTING

Here are some helpful troubleshooting tips. If a problem occurs, please double check the assembly and installation instructions. Contact Pond Pro if problems persist after reviewing these instructions.

“Compressor and fan are not running.”

Check to make sure the power cord is connected. Check if the user supplied GFCI circuit is tripped and if it is, push the reset button.

“The fan is running but the compressor is not”

Check the compressor and capacitor wiring. If no damage is seen, a bad capacitor or compressor may be the issue.

“The compressor and fan are running, but there are no bubbles coming out of the diffuser(s)”

Check for any leaks in the line connections and in the cabinet. Re-tighten any loose connections. The compressor air filter may need to be cleaned or replaced.

“The compressor and fan are running. There are bubbles coming out of some diffusers, but not all.”

The valves in the cabinet may need to be balanced correctly. There may be a clog on a diffuser that needs to be removed. The compressor may be faulty and need a rebuild kit.

“The compressor stops and restarts”

This is likely a heat issue. Ensure the fan is working properly.

WINTER OPERATING

In climates where temperatures are likely to fall below freezing, it is recommended that you insulate the airlines from the compressor cabinet to a minimum of three feet into the water.

Using closed cell polyurethane foam to insulate your airlines will prevent ice build-up in the lines which can occur due to condensation. Ice buildup in the line can block the flow of air to your diffuser and can cause damage to your compressor.

If your body of water fluctuates greatly, run the insulation further in the water to account for low water level. You want the airline to be insulated through any ice thickness and into an area of water that will be below the ice level.

If only desiring to keep a small area open to prevent winterkill, it is recommended to move the diffusers closer to shore to allow shoreline to be in direct contact with the ice-free opening.

INSTALLATION WARNING

Some water bodies have a warmer (less dense) top layer and a colder (more dense) bottom layer. Can-Air Systems are designed in a way that allows these natural thermal stratification processes to keep occurring. However, extremely stratified water bodies require special attention.

To test for extreme stratification, reel a thermometer into the water and pause every couple feet to pick up a reading. Pull the thermometer quickly to the surface to record each reading. If over 30% of the total water volume is cold water (-15 C° below surface water temperatures), caution must be taken when turning on the aeration unit. Only run in short time intervals. Start cautiously (e.g. one hour/day for the first week) and gradually increase running time throughout the following weeks. Units can be run longer during sunny days when photosynthesis is supplementing oxygen levels.

Why is this important? Stirring up cold bottom water can expose fish to potentially harmful gases. Rapid mixing can also decrease overall oxygen levels in ponds with anoxic bottom conditions.

If you are at all concerned about this process please contact Pond Pro by calling 1-855-414-7663 or emailing sales@pondpro.ca.

WINTER WARNING

Check local laws and ordinances as warning signage is mandatory in some areas. The owner of the Can-Air system will assume all risks of running the system during the winter months.

Winter operation may result in open areas and thin ice at the diffuser location(s). Use extreme caution to avoid falling through ice in these areas. To prevent injuries or fatalities, warning signs are highly recommended.

In the spring, refer to the start up procedure above to prevent fish kills.

WARRANTY

Warranty period is three years with the cabinet and two years without the cabinet.

Pond Pro warrants this Can-Air System to be free from defects in material or workmanship under normal use and service. The obligation of Pond Pro under this warranty is limited to replacing or repairing any defective part within the warranty period free of charge. The customer is responsible for paying all shipping charges associated with returning the unit to Pond Pro repair facility.

THIS WARRANTY IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND ANY OTHER OBLIGATION OR LIABILITY WHATSOEVER ON THE PART OF POND PRO. AND IN NO EVENT POND PRO WILL BE LIABLE FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES.

Warranty is void if:

The system is incorrectly installed, not maintained under the maintenance guidelines contained in this manual or the system has been tampered with.

Warranty Claim Procedure:

Once warranty coverage has been established, please call Pond Pro at 1-855-414-7663 prior to returning the unit to receive any updated information and fill out a repair form. The repair form should be sent with information explaining the problem and a copy of the original invoice. The unit can be sent to any Pond Pro repair centre for evaluation and repair. Any expedited shipping method for the return of the unit is at the expense of the customer.

Non-Warranty Repairs:

Most failed equipment is cheaper to repair than to replace. Please call ahead and ship as directed in the previous section.

Customers may request an estimate of repair. This can be sent in the letter that accompanies the unit, and should include a daytime phone number and/or email address. Once the unit has been received at the repair centre and evaluated, the customer will be contacted as to whether to proceed with the repair. The unit will be repaired if repair costs are below the stated dollar amount. For example: "Please repair if total is under \$150.00 before shipping charges."

Estimates that are rejected will be destroyed unless the customer has stated otherwise. If the customer requests their unit be returned, it will be returned as closely as possible to the state it was received. Shipping and handling charges will be covered by the customer.

All non-warranty repairs will be returned to the customer and billed C.O.D. unless otherwise directed.

POND PRO

North America's Pond Superstore

Born out of Ackenberry Trout Farm, Pond Pro is a family owned business. We have grown from a small pond supply store to a Canadian leader in pond supply, aeration systems, water fountains, and industrial water needs.

Be it designing unique pond maintenance guides for a customer, offering advice on marketing products, or providing solutions for large scale water systems,

OUR TEAM IS HERE TO HELP!

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