Canadianpond.ca

Owner's Manual For

CanadianAir & Mini-Air Aeration system

TABLE OF CONTENT

Thank you for purchasing a CanadianAir or Mini-Air Aeration system at CanadianPond.ca! We hope this product allows you to achieve the best results for the maintenance and preservation of your water body! The user's manual will help you follow the installation steps in the right order to achieve the desired result.

If you need help or advice installing your CanadianAir or Mini-Air Aeration system, don't hesitate to contact us at 1 866 249-0976 or by e-mail at info@canadianpond.ca. We'll be happy to guide you.

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IMPORTANT SAFETY INSTRUCTIONS

⚠ WARNING!

- Necessary precautions must be taken when handling electric components with moving parts.

- Always use caution when near water.

- The owner assumes the risks related to the use of a CanadianAir or Mini-Air aeration system.

- Do not use waders in deep ponds/lakes, and where slopes are steep and/or muddy because of the risks of drowning if they get filled with water.

- Use a stable boat (such as flat bottom) for installations and avoid using a canoe or kayak. Follow all boating safety rules and regulations; always wear a PFD (Personal Floating Device).

- Consult a qualified electrician for electrical installation.

- Protective eyewear and gloves should be worn when handling a sharp object.

- When used during winter, see winter warnings on page 12.

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COMPONENTS

Here are the components of these systems:

- Compressor
- Cabinet or mounting base with a fan.
- Manifold *Optional*: This component is required when more than 1 diffuser is installed, and these diffusers are supplied with air by the same compressor.
- Heat-resistant hose: This hose helps dissipate heat from the compressor and carries air from the compressor to the Torpedo tubing.
- Torpedo self-sinking air feeder lines (required length depending on the system selected). The Torpedo air supply tubing is used to deliver air from the compressor (on shore) to the diffusers (in water).
- Diffuser:
    - Option 1: Bubble Tubing® (length(s) varies depending on the selected system)
    - Option 2: Piccolo diffuser: small disk diffuser
- All others require hardware

COMPRESSOR INSTALLATION

Two compressor options are used to supply air to CanadianAir or Mini-Air systems. The option you are provided with depends on the system you choose.

Piston Compressor

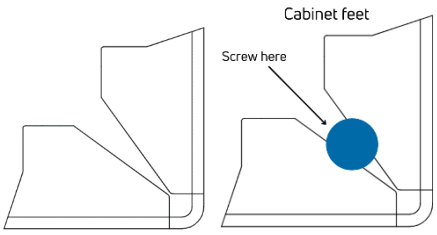
Diaphragm Compressor

COMPRESSOR: INSTALLATION IN A CABINET

Installing the compressor in a cabinet is the best option to protect the compressor from the weather and to allow good air circulation to avoid overheating. If you purchased a system with a cabinet, **the compressor will already be installed inside the cabinet. However, the manifold needs to be installed either inside or outside the cabinet.**

1 compressor : Mini-Cab

2 compressors : Cab2



Cabinet Feet

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COMPRESSOR: MOUNTING BASE INSTALLATION

It is necessary that the compressor be protected by a ventilated shelter that allows good air circulation around the compressor. Once the shelter is identified, mount the compressor on its base and secure it with screws (not included) either to the wall, floor or on a shelf. Securing the base prevents the compressor from moving while it is running. In addition, this shelter must have a power supply to connect the fan and compressor. It is not recommended to use an extension cord, make sure the electrical outlet is within reach of the compressor and fan wires; 1.8 m (6 feet).

Double-piston compressor on ventilated base

CABINET INSTALLATION

**NOTE*: Not applicable if your compressor is mounted on a ventilated base.

Choose a location for placing your base cabinet assembly. The location should be placed far enough from the shore to avoid potential of flooding. Plants or shrubs can be used to help hide the cabinet from sight, however, be sure that both the inlet and outlet vents will not be blocked as fresh air is needed to keep the compressor from overheating.

The cabinet can be placed directly on the ground or can be permanently attached to a concrete pad. The bottom feet of the cabinet have holes which can be used to anchor the cabinet in place.

The cabinet should be placed near the electrical receptacle outlet which will provide power to the system using the provided 5.5' (1.67 m) or 6' (1.83 m) length of power cord with a plug. ***DO NOT USE EXTENSION CORDS.***

Cabinet installed near pond and electrical power outlet

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CONNECTIONS OF AIR LINES AND DIFFUSERS

Multiple connections are needed to assemble the CanadianAir aeration system. Here is the order in which you need to assemble them. Use the hardware and fittings provided for a leak-free connection and follow the instructions on the next page:

DIFFUSER OPTION 1 → BUBBLE TUBING®

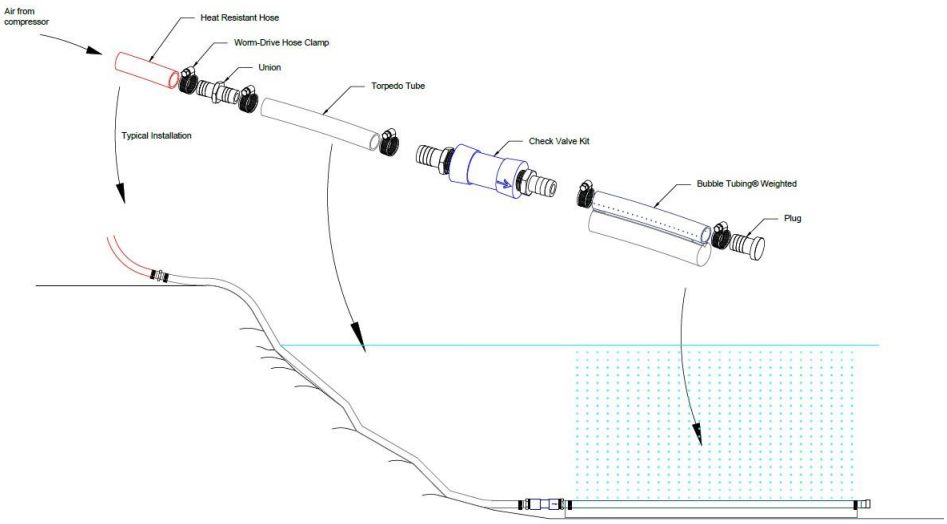

Image 5: Correct Bubble Tubing® diffuser assembly schema

DIFFUSER OPTION 2 → PICCOLO

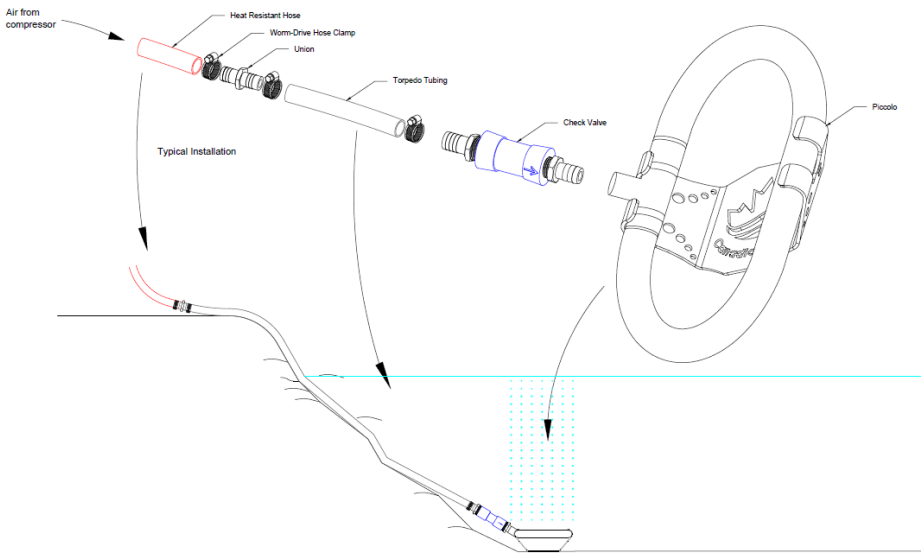

Image 6: Correct Piccolo diffuser assembly schema

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BUBBLE TUBING® PREPARATION

Before connecting the Bubble Tubing® to the feeder line, unroll it, making sure it is not twisted. Tubing well straighten allows a uniform dispersion of air through all its length. By unrolling the tubing length before installing it, you improve efficiency of the system and affect life of the compressor. Let the tubing rest unrolled before the installation of the system.

Pro Tip: Connect the check valve to the end of the diffuser while unrolled. It will make an easier connection with the feeder lines later on. (Follow instructions on how to install the check valve in the next 2 pages.)

Unwind the Bubble Tubing® without twisting it

CONNECTION: HEAT HOSE WITH MANIFOLD

Optional If your system does not use a nurse (line separator) go to the next section.

In the case where you need to separate the air at the outlet of the compressor to route the air to 2 diffusers, a manifold is necessary. If you purchased the compressor and cabinet together, the heat resistant hose coming out of the compressor will already be connected to the feed. All you have to do is connect the heat-resistant tubing to the outlet of the manifold.

Insert a loose clamp into one end of one of the heat resistant hoses, insert the hose over the barbed part of one of the manifold outlets and tighten the clamp around the heat resistant hose using a screwdriver. Repeat for each line of air exiting the manifold. Bring out the heat-resistant tubing through the holes at the bottom of the cabinet created for this purpose (1 tubing per hole) as shown in the picture below "After connection".

Manifold before connections

Manifold after connections

Go to the next section for connecting heat resistant hoses with Torpedo air intake hoses. Be sure to repeat the instructions for each line of air exiting the feeder.

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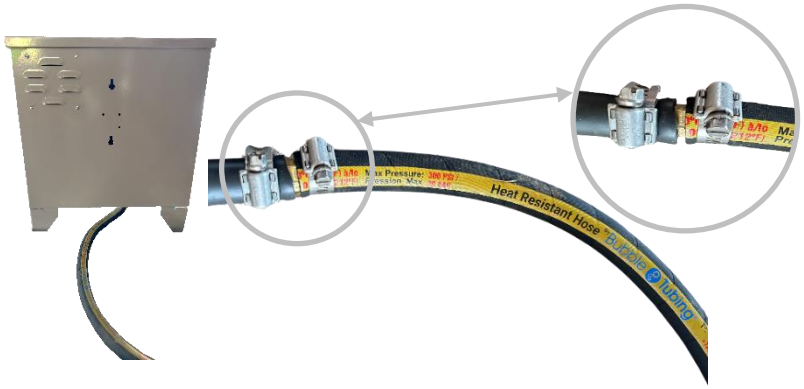
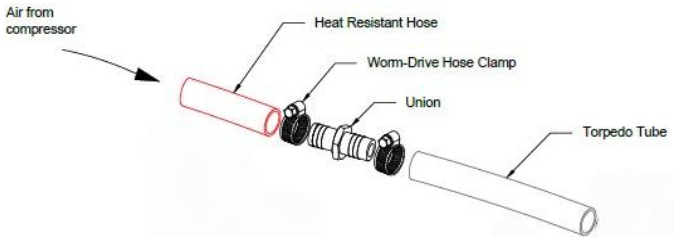
CONNECTION: HEAT HOSE AND TORPEDO

**The heat-resistant hose is the hose coming out of the cabinet or compressor (usually red, but can also be black with a yellow line).*

Note: Standard PVC pipe is not recommended. Once the air compressor is in place, insert a loosen clamp to 1 end of the Torpedo feeder line, insert the tubing over the barbed portion of the union already installed to the heat-resistant hose and tighten the clamp around the Torpedo tubing using a flathead screwdriver. Unroll the Torpedo hose towards the shoreline.





CONNECTION: TORPEDO WITH CHECK VALVE

Insert a loosen clamp to the other end of the Torpedo feeder line, insert the tubing over the barbed portion of the check valve and tighten the clamp around the Torpedo tubing using a screwdriver. **Make sure the airflow follows the directional arrow written on the valve**.

The CanadianAir aeration system diffusers must have a check valve to prevent water from going back to the airlines when the system is stopped. The check valve ensures an easy start-up of the compressor and prevents premature wear of its compressor in the long term.

Connect the Torpedo hose (at the left of the valve in this case). The airflow must follow the direction of the black arrow towards the diffuser hose.
See assembly diagram on page 7 for reference.

CONNECTION: DIFFUSER OPTION 1 → BUBBLE TUBING®

To ensure a secure connection to the Torpedo pipe as well as a proper installation of the cap, it is important to follow the following steps. Following this procedure to the letter will prevent air leaks and/or damage to the diffuser. Video is also available by following this link or scanning the QR code: click here.

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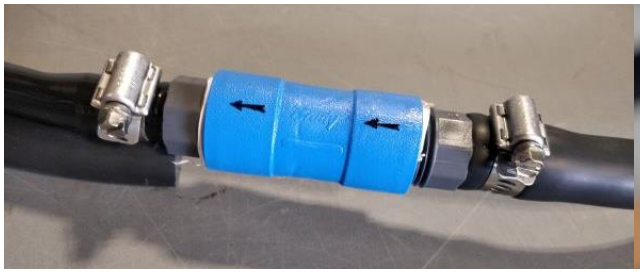
1- With a knife, cut 1 inch deep between the ballast and the diffuser tubing on both ends of the Bubble Tubing®. **Make sure not to cut the air tube (shallow part).**

2- Insert a loose clamp to an end of the Bubble Tubing® diffuser, insert the tubing over the remaining barbed portion of the check valve and tighten the clamp around the Bubble Tubing® using a screwdriver.

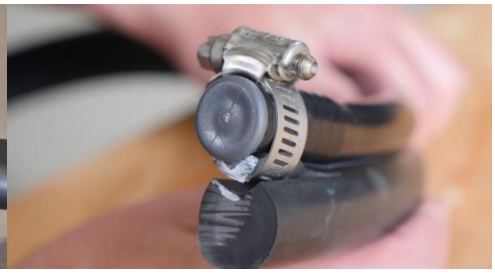
3- On the second end of the tubing cut at step 1, insert a loose clamp, insert the tubing over the barbed portion of the plug and tighten the clamp around the Bubble Tubing® using a screwdriver

4- Expected results:

Check valve connection

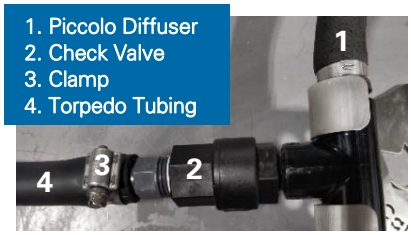


Plug install



CONNECTION: DIFFUSER OPTION 2 → PICCOLO

Insert a loose clamp to the other end of the Torpedo feeder line, insert the tubing over the barbed portion of the check valve and tighten the clamp around the Torpedo tubing using a screwdriver.



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INSTALLATION OF THE DIFFUSER(S) IN THE WATER

Our technician's team installs several aeration systems each summer and here we share the two easiest ways to achieve optimal results. If your system is used for de-icing, download the Thawline system manual by scanning this QR code.

Thawline Manual

DIFFUSER INSTALLATION: WITH A BOAT

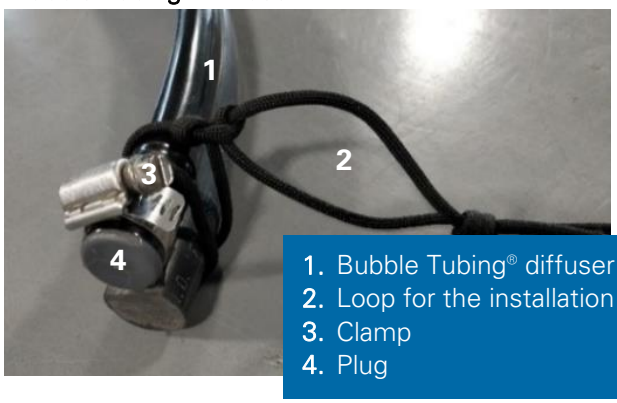
Pro Tip: Start the compressor right before installing the diffuser in the water, the bubble will guide you to settle the diffuser at the desired place in the water.

This method is recommended if you are installing the CanadianAir aeration system in a large pond. Start the compressor and bring the pre-assembled hose to the shore and put the rest of the roll in the boat. Go on the water while keeping the Torpedo feeder line in your hand the Torpedo tubing is self sinking. If you don't hold it, it may sink to the bottom, taking the diffuser with it. Uncoil the Torpedo feeder line until you reach the desired location of the Bubble Tubing® diffuser. With the diffuser already connected to the Torpedo air feeder line, slowly continue lowering into the water the diffuser as it self-sinks to the bottom. With the compressor turned on, you should see bubbles and can use them as visual reference to make sure the tubing is diffusing through its length.

DIFFUSER INSTALLATION: WITHOUT A BOAT

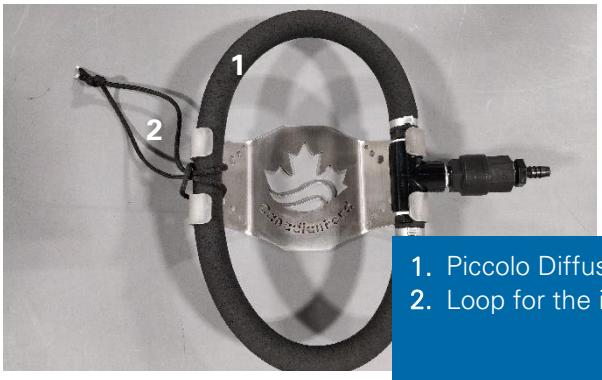
This method is recommended if you are installing the CanadianAir aeration system in a small pond. To install the system without a boat, use a long rope (twice the length of the pond) and a small cord (1 to 2 feet long). Form a loop at the end of the diffuser using the small cord (loop shown in the images below). Pass the long rope through this loop, and while holding both ends of the long rope, use it to pull the diffuser into place in the water. The diffuser will sink into place at the bottom of the water. A second person, on the other shoreline, should be hanging on the feeder line to help with the placement of the diffuser. Once the diffuser is in the wanted position, release one end of the long rope and pull the other end to retrieve it.

Bubble Tubing® Diffuser



1. Bubble Tubing® diffuser
2. Loop for the installation
3. Clamp
4. Plug

Piccolo Diffuser



1. Piccolo Diffuser
2. Loop for the installation

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DIFFUSER(S) INSTALLATION: POSITIONING OF THE BUBBLE TUBING®

Place the Bubble Tubing® at the same depth keeping it as level as possible (maximum 1 foot drop). The tubing can be placed in a circle, curve, or straight line to follow a continuous bathymetric line (level curve at the bottom of the pond). Note that even if the Bubble Tubing® does not bubble evenly, you will still ensure a "vertical" water circulation in your pond. We recommend the use of a "depth finder" tool if you do not know the level curve at the bottom of the pond.

Figure 1: Incorrect installation not following the curve level at the bottom of the pond. Bubbles are not coming out evenly from the Bubble Tubing®.

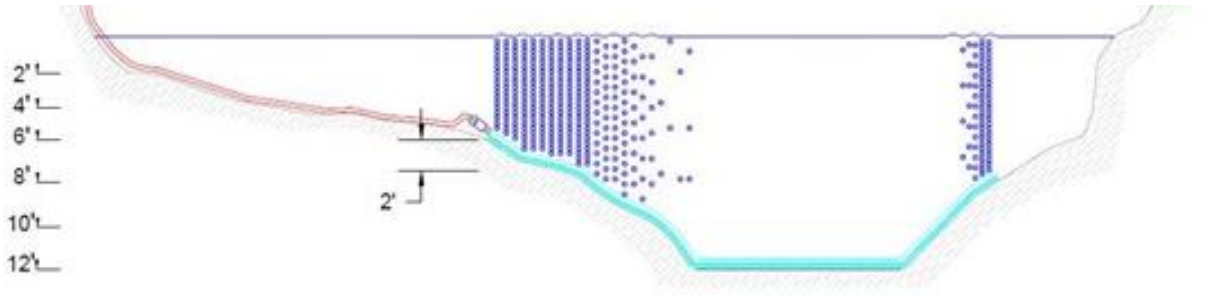
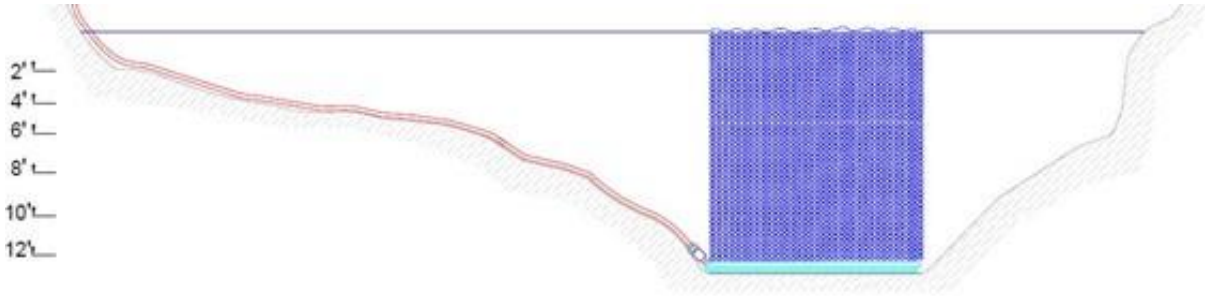


Figure 2: Correct installation of the Bubble Tubing® following the curve level at the bottom of the pond. Bubbles come out uniformly.



SYSTEM STARTUP

SOFT START PROCEDURE

If you install your unit into a body of water that is extremely stratified, use caution as you start it up. Suggested startup time for the unit for a stratified lake might be initially running for 1 hour per day during daylight hours for the first week and gradually increase operation by increment of 1 hour until running continuously. Sunny days are preferable to cloudy days because photosynthesis provides oxygen while the water circulates and mixes. For more information on the soft start procedure, visit our website.

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WARNING FOR WINTER USE

Check your local laws and ordinances as some areas require warning signs to be posted. The owner will assume all risks with operating the CanadianAir aeration system during winter months.

Winter Installations Procedure

Although possible, winter installation is not recommended due to the increased risk. For increased safety and comfort, we recommend installing the CanadianAir aeration system before any ice forms on the water surface. Bubble Tubing®, like all PVC tubing, must be unrolled and handled at temperatures above 0°C (30°F). Make sure tubing are left in a warm place beforehand to allow them to unwind.

Winter Operations

In areas when temperatures drop below freezing level, it is recommended to insulate the feeder lines from the cabinet to 3' (1 m) in the water from the shoreline. Dig the feeder line 6" to 8" minimum in the ground or you can use polyurethane (PU) foam isolation tubes to isolate each airline and prevent ice chunk formation created by condensation in the lines. Ice plug in the airline can block air circulation to the diffuser and damage the compressor. If water level fluctuations exist, make sure to insulate each line even further out into the water to ensure no section of the tubing outside the water is exposed without isolation at low tide.

Operating the CanadianAir aeration system during the winter or freezing temperatures can create open areas in the ice at the diffuser locations. Also, ice will be thin surrounding those areas. Precautions must be taken in these areas to avoid injury or drowning. It is highly recommended to post warning signs to indicate the danger to others. Always follow local regulations.

Scan this QR code to purchase
the thin ice poster on our website

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MAINTENANCE

Warning!
Product surfaces become very hot during operation, allow product surfaces to cool before handling.

Warning!
Disconnect electrical cord before handling and performing maintenance.

The compressor is oil-less and DOES NOT NEED LUBRICATION.

AIR FILTER

Check intake filter after the first 500 hours of operation. Clean filters and determine how frequently filters should be checked during future operation. CanadianPond.ca Products Ltd. recommends checking the filter every month. Clean or replace as necessary.

This one procedure will help assure the product's performance and service life. Failure to maintain clean air filter elements will lead to clogging which will cause excessive heat and premature failure of the compressor.

- Remove filter cover
- Remove filter cartridge and replace filter element
- Replacement filter cartridges are readily available. Contact CanadianPond.ca Products Ltd. to order.
- Reinstall filter element and cover.

DIFFUSERS MAINTENANCE

Bubble Tubing® and Piccolo are designed to permanently stay at the bottom of water. Various conditions (biofilm, calcification, etc.) can reduce aeration performance with time (less bubbles visible at the surface). In this case, cleaning the diffuser might be needed. For optimal performance, we recommend cleaning the tubing once or twice a year, based on water quality.

EcoPurge is the only product tested and approved to clean the Bubble Tubing® and the Piccolo diffuser. Before using any other product, contact us to check if you can use the product with Bubble Tubing®.

Warning!
DO NOT USE CHLORINE, JAVEX, DRANO OR ANY OTHER CHEMICAL PRODUCT TO CLEAN THE TUBING.

After cleaning with EcoPurge, "Blowing out" the lines with a slightly stronger compressor than the one normally used is an efficient way to clean up debris and accumulated water in the lines.

WARNING!
- Do not use a compressor providing more than 3,48 BAR (50 PSI) as excessive pressure may damage the diffuser.
- Do not use a shop compressor not equipped with a pressure regulator. Make sure pressure does not exceed 3,84 BAR (50 PSI).
- If you are using a slightly stronger compressor to blow out the lines, do not let it run more than 5 to 10 minutes.

ANY OTHER WAY TO CLEAN THE AIRLINES WILL VOID THE WARRANTY OF BUBBLE TUBING®.

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TROUBLESHOOTING

Here are some helpful troubleshooting tips. If a problem occurs, please double check the assembly and installation instructions. Please contact CanadianPond.ca Products Ltd. if problems persist after reviewing these instructions.

"Compressor and fan are not working."

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. Contact us, our certified service centre can most likely help you in this situation.

"The compressor and fan are running, but there are no bubbles coming out of any diffusers."

Check for any leaks in the line connections and in the cabinet. Retighten any loose connections. The compressor air filter may need to be cleaned, replaced or the compressor may need to be rebuilt. Contact us, our certified service centre can most likely help you in this situation.

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

Multiple causes can have this result:

1- Retighten loose connections.
2- The valves in the cabinet or at the manifold may need to be balanced correctly
3- There may be a clog on a diffuser that needs to be removed.
4- Check if the tubing is bent or twisted (kink), which could prevent air from circulating freely.
5- The compressor may be faulty and need a rebuild kit. In the event of a faulty compressor, contact us.

If the situation persists after these checks, contact us.

"The compressor stops and restarts."

The compressor is equipped with an automatic shutdown and restart when it overheats. Check that it is properly ventilated and that there is no overheating.

"The Bubble Tubing® is not providing an even bubble curtain throughout its length."

Bubble Tubing® must be set at the same level/depth throughout its length to ensure the airflow will reach the end of the tubing. If a section of the tubing does not provide as many bubbles as the remaining length, this section is probably going through a hole or recess point at the bottom of the water. To correct this, simply move the tubing on either side of the hole (more details on page 12).

"The compressor is still running but a lower quantity of bubbles than usual appear at the surface."

The piston and the seal on the compressor might need to be changed. The compressor may need a repair kit. Our repair kits are available to purchase online.

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WARRANTY

Cabinet: 1 year
Compressor: 3 years
Bubble Tubing®: 5 years
Torpedo: 3 years
Piccolo: 1 year

Canadian Pond.ca Products Ltd. warrants this CanadianAir and Mini-Air aeration system to be free from defects in material or workmanship under normal use, conditions and service. Canadian Pond.ca Products Ltd. obligations under this warranty is limited to replacing or repairing free of charge any defective part within the warranty period. Customers shall pay shipping charges for returning the unit to Canadian Pond.ca Products Ltd. THIS WARRANTY IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND ANY OTHER OBLIGATION OR LIABILITY WHATEVER ON THE PART OF CANADIAN POND.CA PRODUCTS Ltd. AND IN NO EVENT SHALL CANADIAN POND.CA PRODUCTS Ltd. BE LIABLE FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES.

Warranty is void if:

1. The system is not maintained properly according to the maintenance recommendations supplied in this owner's manual.
2. The system is damaged by unauthorized tampering.
3. The system is damaged by a natural event or power surcharge.

WARRANTY CLAIM PROCEDURE

Refer to the date of purchase on your original invoice to determine if the product is under warranty. Contact Canadian Pond.ca Products Ltd's. service department at (450) 243-0976 or by email at info@canadianpond.ca before returning the product, to validate that the breakage is under warranty. An inspection in our workshop may be necessary to determine the eligibility of the repair. A Return Merchandise Authorization (RMA) number will be issued to you. Return the product accompanied by the (RMA):

Ship to:
Canadian Pond.ca Products Ltd.
Att.: Repair department
570, Knowlton Rd.
Lac-Brome, QC
J0E 1V0

Canadian Pond.ca Products Ltd. will cover the return ship fees for repairs under warranty by ground service within Canada. If a faster shipping method is required by the customer, up charges may be applicable, and the service is not guaranteed.

OTHER REPAIRS

Most failed equipment can be repaired at substantially lower cost than a new replacement. Please contact us for more details and procedures to have the item repaired. A credit card number is required to confirm any service request.

Proud of your installation? Send us pictures! info@canadianpond.ca, and follow us on our social media (Facebook, Instagram, LinkedIn).

Facebook Instagram LinkedIn

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