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Aquatic 2

Operating Manual



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Important Safety Information

Read and follow this owner's manual carefully for important installation, operation and safety information. Basic safety precautions should always be followed, including but not limited to the following:

- All electrical connections should be made by a qualified electrician.
- Follow all applicable electrical codes.
- Be sure the electrical power is shut OFF at the main circuit breaker before installing the ozone generator.
- If the ozone generator electrical connection is to be attached to the spa controls, make sure they are protected by Ground Fault Circuit Interrupter (GFCI). If the Aquatic 2 is connected to an independent electrical supply, a GFCI must be installed between the ozone generator and the electrical supply.
- Do not bury the cord.
- **WARNING** - To reduce the risk of electrical shock, replace damaged cord immediately.
- Per UL spa requirements, the Aquatic 2 must be mounted indoors or under a cover sheltered from the elements (rain, sun, sprinklers).
- Mount the Aquatic 2 so that it is inaccessible to anyone in the spa. Never attempt servicing when wet.
- To reduce the risk of injury, the unit should be mounted where it is inaccessible to children.
- Plastic ozone supply tubing is available with the Aquatic 2. Never replace this tubing with metal tubing.
- Do not operate the Aquatic 2 unless sufficient air flow is being drawn through the unit.
- **WARNING** - Short term inhalation of high concentrations of ozone and long-term inhalations of low concentrations of ozone can cause harmful physiological effects. Do not inhale ozone gas produced by the device. In Accordance with California Regulations -- This Ozone Generator is solely for industrial use and must be installed by a professional.

Technical Specifications

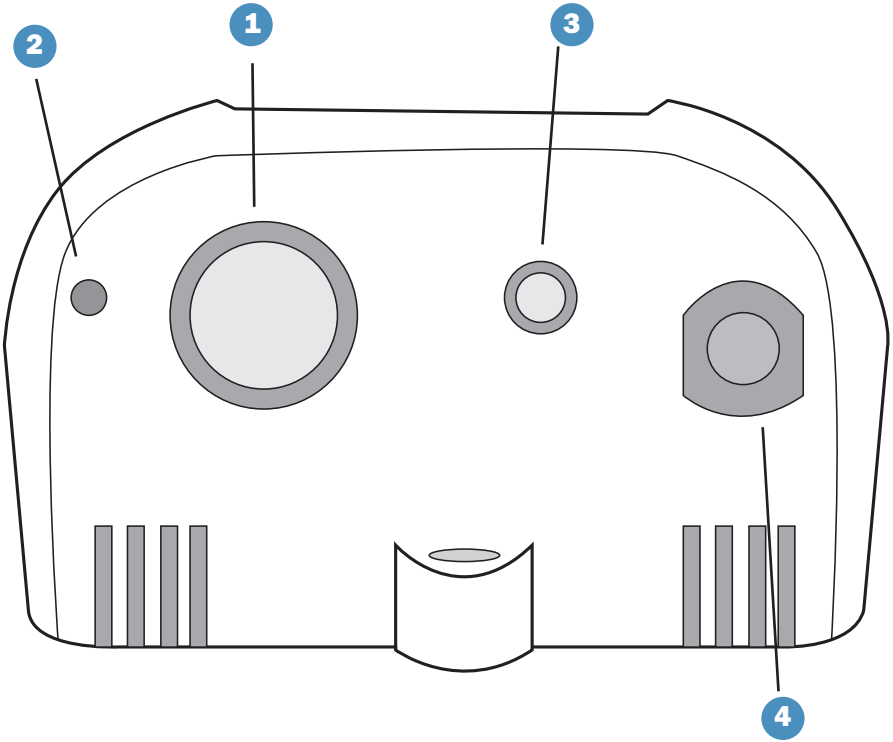
Items Included:

1. Aquatic 2 spa ozone generator
2. Aquatic 2 operation manual
3. 1 check valve
4. 5 feet of tubing
5. 4 hose ties
6. 2 screws and plastic anchor for mounting

Model	Aquatic 2
Electric	85-240 VAC 50/60 Hz
Power	6 W
Ozone Output	300 mg/hour
Size	3.6 x 2.5 x 5.7 inches 92 x 62 x 146 millimeters
Weight	.74 lbs 330 grams
Connection	AMP Model
Cable	5.5 feet
Check Valve	¼ inch
Tube	5 feet

Aquatic 2 Features

1	Air Intake	Allows air that is needed for ozone to pass over the ozone cell. DO NOT BLOCK
2	Power LED	Indicates when there is power to the unit. If the power is supplied, the light will remain a solid red.
3	O₃ Output	Ozone is sucked out through this port.
4	AMP Power Cable	Supply power to the ozone generator.



(Bottom of unit)

Installation Instructions

How the Aquatic 2 Works

AZZ Ozone Generators produce ozone gas which is introduced to spa water through suction created by the spa injector. Tubing is used to connect the ozone generator to an injector or a vacuum port provided by the spa manufacturer. The injector or vacuum ports are sources used to pull the ozone gas out of the ozone generator and into the water. At no time should water come in contact with the Aquatic 2. To protect the ozone generator from water traveling backwards through the tubing connection, the unit must be mounted and plumbed as described in this manual.

Installation Parts

- 1 installation manual
- 1 check valve
- 5 feet of tubing
- 4 hose ties
- 2 screws and plastic anchor for mounting

Installation Tools and Materials

- Phillips screwdriver
- Pliers

Unit Assembly

- The Aquatic 2 is pre-assembled and ready to install.

Mounting

- Mount the ozone generator as high as possible within the spa's protected equipment area or outside.
- Screws are provided for mounting but may not be appropriate for all surfaces. Substitute proper mounting hardware as required.

Plumbing – Vacuum System (refer to Figure 1)

- Most spas are factory equipped with an ozone injector or vacuum port, like the one shown in Figure 1. Review your spa's installation manual to identify the correct ozone connection location.

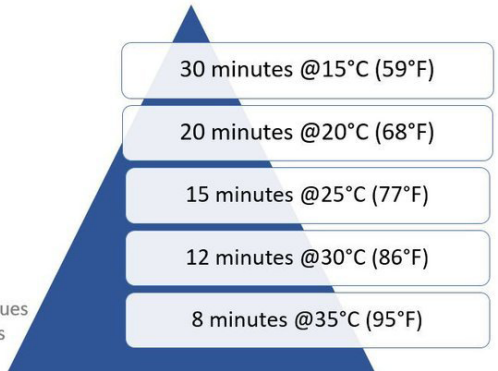


Measured Ozone Solubility Half-Life at Temperatures °C and °F

Dissolved in Water – pH7

As the temperature rises, the half-life of ozone shortens. For example, when the temperature is 59°F, ozone will last for 30 minutes. When the pool reaches 95°F, then ozone is detected for 8 minutes.

Adapted from [Guzel-Seydim et al. \(2004\)](#). These values only show thermal decomposition—catalytic effects may produce different results.



- If the spa is not equipped with an injector (vacuum source), A2Z Ozone provides a wide range of optional installation kits.
- Contact A2Z Customer Service for assistance at 502-499-4977 or visit www.a2zozone.com/collections/accessories-1/venturi-injector to view our venturi injectors.

Plumbing – Ozone Generator (refer to Figure 1)

- Connect shorter PVC ozone tubing (8 inch) provided to the hose barb on the ozone generator side.
- Connect the other end to the check valve.
- Connect the longer PVC tube to the other end of the check valve and run to the injector.
- Observe the flow arrow on the check valve and ensure that the flow direction is into the injector vacuum source.
- Connect the other end of PVC tube to injector suction. Run the spa and pump and check the vacuum before connecting PVC tube to injector.
- If there is no vacuum at suction then you will need to check the injector or pump water flow.
- Do not connect ozonator if there is no vacuum at injector suction.
- Slide hose ties on each end into the tubing.
- Secure all tubing connections with the hose ties.

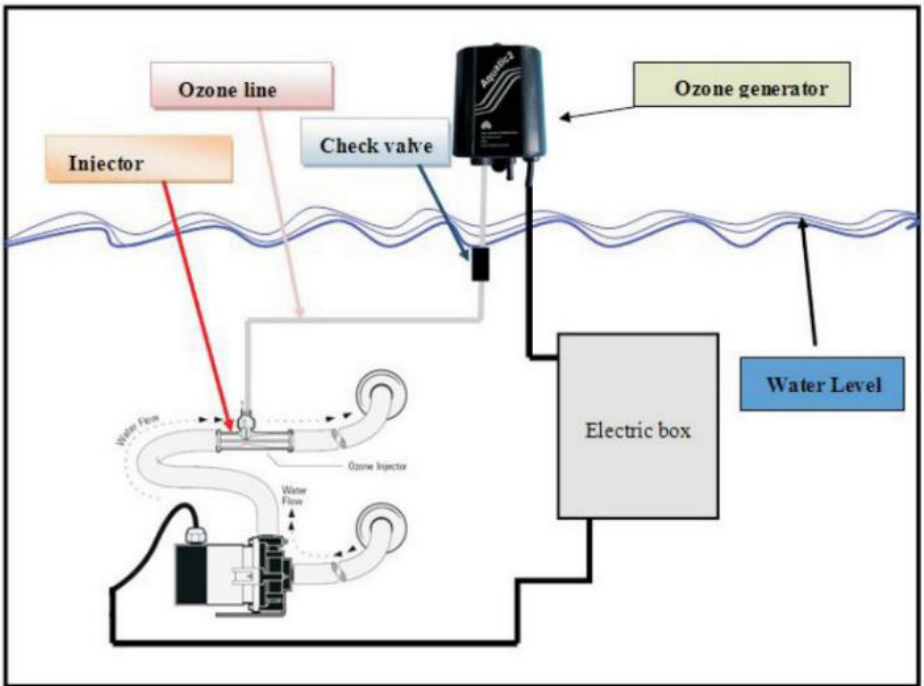
NOTE: If the Aquatic 2 is mounted below the water line, run tubing to a point above the water line and back down to the vacuum source. Secure tubing in this position.

Electrical

- Test the GFCI breaker protecting the spa for proper operation.
- Disconnect power to the spa.
- Connect the Aquatic 2 cord to the mating connector(s) on the spa control box as described in the spa's installation manual and the provided A2Z Ozone wiring diagram in Figure 2.
- Where possible, route the power cord away from other electrical lines. Do not run the power cord parallel to any low voltage signal wires.
- Secure the power cord as required to prevent damage.

Figure 1

This diagram represents how the Aquatic 2 Spa Ozone Generator should be installed in relation to the hot tub's water and electric box. Additionally, the venturi injector and check valve are on the ozone line. Remember, the spa ozone generator should be mounted as high as possible to prevent backflow into the unit.



Operation

- With the spa filled to the proper level, run the spa controller through several cycles.
- Verify that the ozone generator turns on and off as required by the controller.
- The red LED light will be visible from the viewing window on the bottom left.
- Verify that the gas is flowing into the injector.
 - There should be no water in the tubing and very small bubbles entering the spa through the return.
- Verify that water does not push past the check valve during any spa cycle.
- Check for and correct any leaks.

Installation Complete

- Once properly installed, the ozone generator requires no further user operation.
- It will operate automatically with the spa system.

Wiring Diagram

This unit is shipped with the wiring as shown. 110V or 240V can be applied to the black and white wires. To match alignment of the white wire of the ozone generator connector with the controller box connector. Keep in mind, the white wire can be moved. Mount the unit so that the tube, light and wires are toward the ground. Disregard the front label.

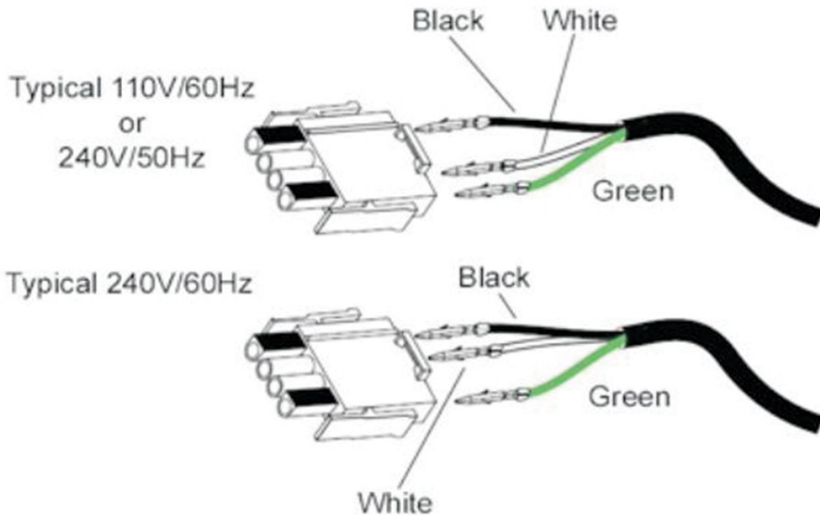


Figure 2

Operating Instructions

Please make sure water will not back into the Aquatic 2 Spa Ozone Generator. Water will damage the unit and void the warranty.

Please check these:

- Install the Aquatic 2 above the water level and as high as possible.
- Mount the unit so the tube, light and wires are toward the ground (disregard the front label).
- Install the check valve according to the arrow on the check valve (arrow is on the injector).
- You need an injector for injecting ozone into the spa's water line.
- If you do not have a venturi injector, please contact us to purchase one.
- **This unit does not work without an injector.**
- There should be a vacuum at ozone injector suction location.
- This can be felt with your finger when installing.
- Ozone generator should be on only when the spa pump is on.
- If your spa did not have an ozonator, then connect ozone electric wire to pump wires.

Maintenance

- To keep your Aquatic 2 Spa Ozone Generator operating properly, please replace the air filter in the unit every month.
- To ensure the highest degree of sanitation at all times, refer to the chart below.
- Renew your spa ozone generator as needed with a renewal kit.

Daily Use	Average Unit Life
2 hour/day ozone cycle	3 years
3 hour/day ozone cycle	2 years
6 hour/day ozone cycle	1 year

Troubleshooting

Problem	Possible Cause	What to Do
Cloudy water condition even though the unit appears to be operating properly	Unit and pump not operating long enough	Increase operating time (min. 6 hours is recommended)
	Total alkalinity not correct	Adjust total alkalinity between 8 and 150 ppm
	pH not correctly balanced	Check for proper pH between 7.2 and 7.6
	Not enough suction	Clear any obstruction in the water lines or return fitting
	Dirty, loose or cracked filter	Check/replace spa filter as needed
	Metals or minerals in the water	Ozone may react with metals/minerals in the water causing cloudy water. Check alkalinity pH and clean filter. Run filtration system and ozone 24 hours.
System won't turn on/off	Water backing into the unit	Mounting the unit as high as possible in relation to the spa water level is important. There is also a one-way check valve provided to prevent the back flow of water from reaching it. As a secondary precaution, a Hartford Loop in the tubing, also hanging above water level, will help prevent water damage to the unit.
The blue LED not lit on ozone generator	No power to the ozonator	Check the electrical connections and then the fuse

Warranty

A2Z Ozone Systems Inc. - ONE YEAR LIMITED WARRANTY

The limited warranty set forth below applies to products manufactured by A2Z Ozone Systems Inc. - and sold by A2Z Ozone Systems or its authorized dealers. This limited warranty is given only to the first retail purchaser of such products and is not transferable to any subsequent owners or purchasers of such products. A2Z Ozone warrants that it or its authorized dealers will repair or replace, at its option, any part of such products proven to be defective in materials or workmanship within ONE (1) year from the date of retail purchase of such products. (All parts) ANY REPAIR OR REPLACEMENT WILL BE WARRANTED ONLY FOR THE BALANCE OF THE ORIGINAL WARRANTY PERIOD.

NOTE: USE ONLY A2Z Ozone AUTHORIZED REPLACEMENT PARTS. USE OF ANY OTHER PART(S) WILL AUTOMATICALLY VOID THIS WARRANTY. THIS LIMITED WARRANTY DOES NOT INCLUDE ANY OF THE FOLLOWING:

(a) Any labor charges for troubleshooting, removal, or installation of such parts;

(b) any repair or replacement of such parts necessitated by faulty installation, improper maintenance, improper operation, misuse, abuse, negligence, accident, fire, repair material, and/or unauthorized accessories;

(c) Any such products installed without regard to required local codes and accepted trade practices;

(d) ANY IMPLIED WARRANTY OF MERCHANTABILITY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE, AND SUCH WARRANTIES ARE HEREBY DISCLAIMED: AND

(e) A2Z Ozone SHALL NOT BE LIABLE UNDER ANY CIRCUMSTANCES FOR LOSS OF USE OF SUCH PRODUCTS, LOST PROFITS, DIRECT DAMAGES, INDIRECT DAMAGES, CONSEQUENTIAL DAMAGES AND/OR INCIDENTAL DAMAGES. TO OBTAIN WARRANTY SERVICE

Contact A2Z Ozone, 1844 Cargo Court Louisville, KY 40299, USA

Customer Service Number: +1 502-499-4977.

When filing a claim, you must provide:

- 1) Your name, mailing address and telephone number
- 2) The selling dealer's name
- 3) Proof of date of purchase
- 4) The date of failure
- 5) A description of the failure.

After this information is provided, A2Z Ozone will release a RETURN GOODS AUTHORIZATION (RAN) NUMBER. After receiving the RAN number the part in question must be returned to A2Z Ozone, freight prepaid, with the RAN number clearly marked on the outside of the package. All preauthorized defective parts must be returned to A2Z Ozone within thirty (30) days. Under no circumstances may any product be returned to A2Z Ozone without prior authorization. You must call or write prior to returning product or your returned goods shipment will be refused. Upon receipt of preauthorized returned goods, A2Z Ozone will repair or replace, at its option, the defective product(s) and return them (shipping is prepaid for units under warranty for USA customers only). Buyer's acceptance of the product and use thereof constitutes acceptance of these terms.

A2Z Ozone WARRANTY REGISTRATION CARD

This information can be also send by EMAIL to us. Please provide ALL pertinent information and send within twenty (20) days to:
service@a2zozone.com

Otherwise, please fill out completely and return to A2Z Ozone by post within twenty (20) days of purchase.

Customer Info:

Name _____

Address _____

City _____ State _____ Zip _____

Phone (____) _____

Dealer Info:

Dealer Name _____

Dealer _____

Address _____

City _____ State _____ Zip _____

Phone () _____

Purchase/Product Info:

Purchased Date: _____ Date

Installed _____

Product Purchased: **AQUATIC 2 SPA OZONE GENERATOR**

Comments / Questions:

DO NOT FORGET TO CUT OUT, PLACE IN ENVELOPE AND MAIL TO THE FOLLOWING ADDRESS FOR INSTANT WARRANTY COVERAGE!

A2Z Ozone Systems Inc.

ATTN: Warranty Dept.

1844 Cargo Court

Louisville, KY 40299, USA