



aero-spa®

Installation Guide



**For additional assistance
please contact us at:**

Technical Support

877-254-7093

OR

info@aero-spa.net

For outdoor use only!

⚠ WARNING AVERTISSEMENT	⚠ CAUTION ATTENTION
<p>DISCONNECT ELECTRIC POWER BEFORE SERVICING</p> <p>SHORT TERM INHALATION OF HIGH CONCENTRATIONS OF OZONE AND LONG TERM INHALATION OF LOW CONCENTRATIONS OF OZONE GAS CAN CAUSE SERIOUS HARMFUL PHYSIOLOGICAL EFFECTS. DO NOT INHALE OZONE GAS PRODUCED BY THIS DEVICE.</p> <p>DÉBRANCHER L'ALIMENTATION ÉLECTRIQUE AVANT L'ENTRETEIN. L'INHALATION D'UNE HAUTE CONCENTRATION D'OZONE À COURT TERME ET L'INHALATION D'UNE BASSE CONCENTRATION D'OZONE À LONG TERME PEUVENT CAUSER DE SÉRIEUX DOMMAGES PHYSIOLOGIQUES. NE PAS INHALER L'OZONE PRODUIT PAR CET APPAREIL.</p>	<p>RISK OF ELECTRIC SHOCK. CONNECT ONLY TO A PROPERLY GROUNDED CIRCUIT PROTECTED BY CLASS A GROUND FAULT CIRCUIT INTERRUPTER (GFCI)</p> <p>CONNECT THIS OZONE GENERATOR IN ACCORDANCE WITH THE INSTALLATION INSTRUCTIONS.</p> <p>DO NOT INSTALL WITHIN AN ENCLOSURE THAT WOULD RESTRICT VENTILATION.</p> <p>READ THE ENTIRE INSTRUCTION MANUAL</p> <p>AVOID CONTACTING EYES, SKIN, OR CLOTHING WITH LIQUID INSIDE OZONE TUBE.</p> <p>RISQUES DE CHOCS ÉLECTRIQUES. BRANCHER À UN CIRCUIT PROTÉGÉ PAR UN DISJONCTEUR DE FUITE À LA TERRE DE CLASSE A SEULEMENT (GFCI). BRANCHER CE GÉNÉRATEUR D'OZONE CONFORMÉMENT AUX INSTRUCTIONS D'INSTALLATION. NE PAS INSTALLER DANS UN ENDROIT QUI RESTREINDRAIT LA VENTILATION. LIRE INTÉGRALEMENT LE GUIDE DE L'UTILISATEUR. ÉVITER TOUT CONTACT DU LIQUIDE DANS LE TUBE D'OZONE AVEC LES YEUX, LA PEAU OU LES VÊTEMENTS.</p>
<p>CSA ENCLOSURE 3 - FOR OUTDOOR USE ONLY. SET THIS UNIT ON A LEVEL SOLID SPACER BLOCK THAT IS AT LEAST 2 3/8" THICK TO PREVENT FLOODING.</p>	<p>ENCEINTE CSA 3 - UTILISATION EXTÉRIEURE SEULEMENT. INSTALLER CET APPAREIL SUR UN BLOC ESPACEUR SOLIDE ET NIVELÉ DE 6 cm (2 3/8 po) D'ÉPAIS POUR ÉVITER LES INONDATIONS.</p>

WARNING

Hot tub/Spa care and sanitizing is the sole responsibility of the owner. A residual sanitizer must be present to minimize cross contamination. Hot tubs/Spas are not intended to treat infections. Never allow use of hot tub/spa if you are unable to verify the condition of open sores, wounds, lesions, cuts, sores, abrasions, boil, etc. or infections of any type exist. The best industry practice is to maintain a minimum of 1 PPM residual chlorine sanitizer in the water at all times. The best industry practice will minimize the possibility of cross contamination; however, will not eliminate the possibility. Note – even in high concentrations residual sanitizers such as chlorine are only 99.9% effective on most contaminants and extremely slow or ineffective on other contaminants.

Operation and Precautions

IMPORTANT SAFETY INSTRUCTIONS

Proper installation and usage of your Aero-Spa Ozone Generator is your responsibility. Read and follow this Installation Guide carefully for important installation, operation and safety information. Basic safety precautions should always be followed, including but not limited to the following:

- Read and follow all instruction.
- Never operate Aero-Spa equipment indoors.
- Do not use hot tub for 30 minutes after the Aero-Spa unit has operated.
- Never inhale ozone exhausted by Aero-Spa unit.
- Follow all electrical installation instructions in this installation guide.
- Do not operate Aero-Spa unit unless the electrical source is protected by a Ground Fault Circuit Interrupt (GFCI) device.
- Do not use the Aero-Spa unit for applications other than those described in this installation guide.
- Follow all applicable electrical codes.
- WARNING - To reduce the risk of electrical shock, do not use this product if it has a damaged cord. Call Aero-Spa, LLC immediately to get the product repaired.
- Mount the Ozone Generator so that it is inaccessible to anyone in the hot tub.
- Never attempt servicing when wet.
- Do not allow children to operate the Aero-Spa.
- Plastic ozone supply tubing is supplied with the Ozone Generator. Never replace this tubing with metal tubing.
- Trace amounts of hydrochloric acid may be present in the ozone tube. Avoid contact with eyes, skin and clothing.

SAVE THESE INSTRUCTIONS.

Equipment Identification

Remove the equipment from the packaging. Care must be taken when handling the components. Do not drop the generator or sintered diffuser, as they are fragile.

Identify the equipment components: Ozone Generator, Cycle Timer, Ozone Tube and Sintered Diffuser (Figure 1).

Please note that your product may vary from photos in this installation guide.



Model: AP 1000	
DESCRIPTION	QTY
Aero-Spa™ Generator	1
20 feet – Ozone Tube	1
Sintered Diffuser	1
Cycle Timer	1

Figure 1: Equipment Identification

Equipment Set-up

For best results it is highly recommended that the hot tub be drained and thoroughly cleaned to remove residual dirt and contaminants prior to installation of the Aero-Spa system.

Set the equipment on a level solid spacer block that is at least 2 – 3/8” thick and at least 10’ from the hot tub that is not prone to flooding (equipment is weather proof but not waterproof) (Figure 2). If the supplied ozone tube is not of adequate length, move the equipment closer to the hot tub but not closer than 10’. Do not extend or shorten the ozone tube. If the tube is too long, coil the excess tube in an 8” diameter coil.

Do not splice or modify the air line setup, an improperly sized ozone tube will detrimentally affect the performance and life of this product and may void the warranty!

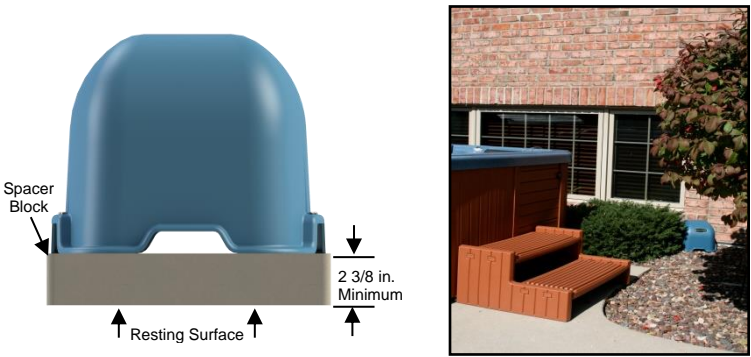


Figure 2: Unit Placement

- 1.) Connect the 20’ ozone tube (connected to diffuser) to the fitting exiting the underside of the Generator. Secure using provided cable tie
- 2.) Loop the ozone tube over the edge of the hot tub (Figure 3).
- 3.) Align the ozone tube with the center seam of the cover and allow it to lie in the gap to ensure that it is not pinched when the cover is closed. The clear protector tube must be positioned in the gap (See Figure 3).



Clear Protector Tube

Figure 3: Air Line installed in hinge with clear plastic protector sleeve

- 4.) Lower the sintered diffuser into the hot tub and allow it to rest on the bottom. Resting the diffuser in front of the pump inlet(s) will draw the ozone through the piping system assisting in removing organic material in the piping system. If there is more than one pump inlet, moving the diffuser to each inlet is recommended.
- 5.) Locate the closest electrical outlet on the house or garage that is at least 10' from the hot tub that can be used to supply power to the equipment.
- 6.) Insert the electrical plug from the Aero-Spa into provided cycle timer. Adjust the timer to operate 2 hours of run time 2 times per day. Adjust the timer based on your use habits. Reducing the run time while maintaining water clarity will maximize the equipment life and minimize power consumption.
- 7.) Insert the electrical plug from the cycle timer into a GFCI (Type 15-5R) outlet. The equipment will begin to operate. You will hear a faint hum from the generator and a steady bubble stream will be emitted from the diffuser.

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 (type 5-15P). The plug must be plugged into an outlet (type 5-15R) that is properly installed and grounded in accordance with all local codes and ordinances. If repair or replacement of the cord or plug is necessary, contact Aero-Spa, LLC or a qualified electrician. Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the product is properly grounded.

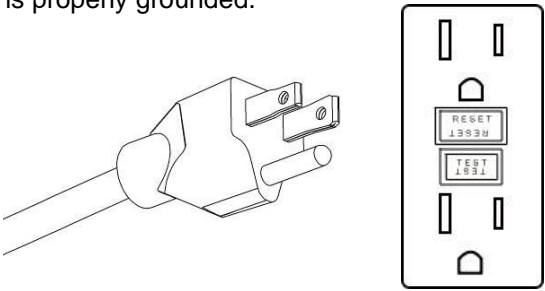


Figure 4: GFCI Outlet

DANGER: Improper installation of the grounding plug can result in a risk of electric shock.

Do not modify the plug provided; if it will not fit the outlet, have the proper outlet installed by a qualified electrician. This product is for use on a nominal 120-volt circuit. No adapter should be used with this product. This product has an automatic thermal limiter, which shuts off the entire product when an elevated temperature condition exists. When the product cools it will automatically restart. Only if required, obtain a UL outdoor rated extension cord. Never locate the Aero-Spa generator closer than 10' from the hot tub. In the event of a power outage, the GFCI device will need to be reset manually.

Occasionally GFCI breakers will experience nuisance tripping. This will shut off the power to the equipment. If this occurs, press the “reset” button. If pressing the “reset” button does not start the equipment, unplug the cycle timer and press the “reset” button again. If the “reset” button does not “hold in”, replace the GFCI breaker. If the button does “hold in”, plug the generator power cord into the GFCI breaker and circumvent the cycle timer. Press the “reset” button again. If the “reset” button does not “hold in” replace the GFCI breaker. If the “reset” button does “hold in” contact Aero-Spa™.

Do not operate this equipment without a GFCI breaker installed.

Maintenance and Care

This product has no user serviceable parts. If service is required, contact Aero-Spa, LLC. Attempts to service the ozone generator will void the customer satisfaction policy, Limited Warranty, and expose the user to electrical shock which may cause severe injury or death.

Keep the area around the product free of leaves and other debris. If debris enters the product through the air intake holes, ***unplug the product*** and carefully remove the debris. Restart product.

The diffuser stone can be cleaned with a 3% hydrogen peroxide solution or muriatic acid.

Fill & Start-Up Recommendations

Our customers have been using the Aero-Spa system as the primary water treatment process for years with limited harsh chemicals. Because we cannot control how your hot tub is used/maintained and according to the EPA it is recommend maintaining at 1 – 2 PPM of an approved residual sanitizer to minimize cross contamination of users. Customers are responsible for monitoring and maintaining these levels. To put this into perspective, to obtain a 1 PPM ratio in a 500 gallon hot tub, you would need to add about 0.63 OZ (1.25 tablespoons) of regular household bleach (6% sodium hypochlorite). If you substitute swimming pool chlorine (10% – 15% sodium hypochlorite) you would need about half as much.

The suggested method on fill and start-up would be to use sodium dichlor on the initial application of the sanitizer and then the first time you need to adjust the free chlorine. Any subsequent time the free chlorine needs to be adjusted use 0.63 OZ (1.25 tablespoons) of regular household bleach (6% sodium hypochlorite). The reason for this is that the sodium dichlor contains cyanuric acid (CYA) as a stabilizing agent. The CYA keeps the chlorine from degrading. If you continue to use sodium dichlor to raise the free chlorine, over time the CYA builds up in the water and makes the chlorine ineffective. The initial application of sodium dichlor will have enough CYA to stabilize the chlorine for the long run. This method will minimize maintenance and save you money! The easy formula is first and second application is sodium dichlor and all others bleach.

TROUBLESHOOTING

Aero-Spa not running / No bubble from sintered diffuser

1. Verify unit is receiving power
 - a. Reset GFCI breaker.
 - b. Reset circuit breaker at house fuse panel.
2. Bypass timer, if this corrects the problem, replace timer
3. Verify ozone tube is not broken, pinched, or disconnected
4. If these steps do not solve the problem call Aero-Spa, LLC

Water is cloudy

A condition typically associated with organic particulates from oils, soaps, or materials inside piping of the hot tub.

1. Increase runtime by (2) hours. Synchronize circulation pump and Aero-Spa run time.
2. Move diffuser in front of water inlets so ozone is circulated through piping system for 20 minutes. Repeat for each water inlet.
3. Shock water with chlorine to bring the free chloring level to 8 – 10 PPM. Do not enter the water until the free chlorine level is less than 5 PPM.
4. If not resolved within (4) days, contact Aero-Spa, LLC

Strong ozone odor near Aero-Spa generator

1. Verify ozone tube is not broken
2. Verify ozone tube is not pinched or disconnected
3. Unplug unit and call Aero-Spa, LLC

Strong ozone odor in hot tub

1. Reduce cycle run time by 25%. Repeat if odor remains strong after 1 hour.
2. Unplug unit and call Aero-Spa, LLC

Ozone tube is cloudy in color and not flexible

This is normal, periodically check for cracks in ozone tube. Replacement parts are available from Aero-Spa, LLC

Sintered diffuser is turning brown

This is a result of the ozone precipitating the iron out of the water. It will not cause any issues with the operation of the diffuser. This typically occurs when the water used to fill the hot tub has high iron content. The diffuser can be soaked in “rust or stain remover” or similar product and rinsed thoroughly after soaking.

Brown ring at water line

This is normal when the water used to fill the hot tub has high iron content. Using “rust or stain remover” solution, wipe the rust stain with damp sponge containing rust or stain remover. Rinse sponge in solution periodically.

Light scale on surface

This occurs when the water used to fill the hot tub is hard. Using a sponge or “Scouring pad” pad, wipe surface to remove scale. Care should be used if using a “Scouring pad” pad to ensure the surface of the hot tub is not damaged. Recommend use of calcium or scale controller to lower Calcium Hardness

Light brown material on surface of hot tub walls

This occurs when the water is not adequately circulated in the hot tub. Using a sponge, wipe surface to remove scale.

1. Increase hot tub circulation pump cycle time. Synchronize circulation pump and Aero-Spa run time.

Water is normally clear but turns cloudy during or just after use

1. Increase the cycle run time by 25%
2. If these steps do not solve the problem within (4) days, contact Aero-Spa, LLC

Water back siphoned into the ozone tube and or the ozone generator

1. A small amount of moisture can be considered normal in high humidity conditions and in such a case nothing needs to be done. If there is more than a few drops proceed to step 2. below
2. Turn off all power by unplugging Aero-Spa from the 120 volt power outlet. Remove the sintered diffuser from the hot tub and lay it on the ground at a lower elevation than the generator. Allow the unit to purge the water from the ozone tube. When complete, reinstall sintered diffuser in hot tub and make sure the air line is installed as described in the installation procedure.
3. If these steps do not solve the problem call Aero-Spa, LLC

CUSTOMER SATISFACTION POLICY

We are confident that the Aero-Spa™ process will maintain the desired water quality in your hot tub or pool. If during the first ninety days you are not satisfied with the water quality in your hot tub or pool you can return the Aero-Spa™ product to us for a refund. All other unused products and accessories returned are subject to a twenty-five percent restocking fee and must be returned within fourteen days of purchase. Payment Plan fees are not refundable. To be eligible to receive any refund under this Customer Satisfaction Policy you must contact us by telephone, e-mail or in writing within the time specified above, from the date of your invoice. A Return Material Authorization (RMA) will be issued with instructions. Canceled orders or RMA's for systems as described above issued or inquired about for any reason within thirty days of invoice date are subject to a fourteen percent restocking fee. All products must thereafter be received at our facility within twenty-one days of the return authorization date. Buyer is responsible for all shipping charges of returned product including insurance. Upon receipt, any evidence of tampering or misuse of the unit will void this Customer Satisfaction Policy. For more information, or to seek a refund under this Customer Satisfaction Policy, please contact Aero-Spa™ at W300 N7706 Christine Lane, Hartland, Wisconsin, 53029, visit our website at www.aero-spa.net or e-mail us at info@aero-spa.net. If Buyer is making a refund claim, please provide the reason for seeking the refund.

MANUFACTURERS LIMITED WARRANTY

DISCLAIMER, DURATION, AND SCOPE OF THE WARRANTY

Aero-Spa™, LLC ("Aero") warrants its products against defective materials or workmanship at the time of shipment for a specific warranty period. Aero offers the following warranty periods for each of its products: **12 months for "New" products**, and **6 months for all refurbished**

products. To make a valid claim under this warranty, Aero must be notified through writing, e-mail or otherwise of any warranty claim within the applicable warranty period and in the manner described below.

All implied warranties including the **IMPLIED WARRANTY OF MERCHANTABILITY** and the **IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE** are also **LIMITED IN DURATION** to the applicable warranty period. **SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATIONS MIGHT NOT APPLY TO YOU.** This warranty only covers the original Buyer of Aero's product. Aero will not be responsible under this warranty for any defect, failure, or malfunction of this product caused by abuse, misuse, unauthorized adjustments or dissembling of this product during the duration of this warranty. **AERO MAKES NO OTHER WARRANTY BEYOND THAT CONTAINED IN THIS WRITING.**

EXCLUSIVE REMEDY AVAILABLE UNDER THIS WARRANTY

If after the expiration of the Customer Service Policy, the Aero product fails to operate properly under normal conditions within the remaining warranty period because of a defect in materials or workmanship, Aero will repair or replace this product without cost to you for parts or labor. If repair or replacement of the product is impossible or impracticable, as an alternative, Aero retains the option to reimburse you with the original purchase price of the product within a reasonable amount of time. **THE REMEDY DESCRIBED ABOVE SHALL BE YOUR EXCLUSIVE REMEDY FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY. NO OTHER REMEDY FOR BREACH OF THIS WARRANTY, EXPRESS OR IMPLIED (INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE), SHALL BE AVAILABLE TO YOU.** Under no circumstances will Aero be responsible for **INCIDENTAL AND/OR CONSEQUENTIAL DAMAGES**, lost profits, lost sales, injury to property, or any other loss. These limitations do not apply, however, to damages related to personal injury. **SOME STATES DO NOT ALLOW LIMITATION ON INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.** For service, questions or to make a warranty claim, contact Aero at W300 N7706 Christine Lane, Hartland, Wisconsin, 53029, visit our website at www.aero-spa.net or e-mail us at info@aero-spa.net. If Buyer is making a warranty claim, please provide a description of the nature of the problem. Alternatively, call the following toll-free number to obtain further warranty instructions: **1-877-254-7093**.

STATE LAWS AND THIS WARRANTY

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE. To the extent that state law renders any provision in this warranty inoperative, state law shall apply and that clause shall be severed from the warranty; this severance, however, does not render the entire warranty inoperative.