

ECO MASTER

ADVANCED OXIDATION PURIFICATION

INSTALLATION AND OPERATION MANUAL



IMPORTANT SAFETY INSTRUCTIONS

- **READ AND FOLLOW ALL INSTRUCTIONS.**
- **WARNING:** CONFIRM THE ELECTRICAL POWER IS SHUT OFF AT THE MAIN BREAKER BEFORE INSTALLING THE ECO MASTER.
- **WARNING:** SERVICE SHOULD ONLY BE PERFORMED BY A QUALIFIED POOL SERVICE PROFESSIONAL TO AVOID RISK OF ELECTRICAL SHOCK, FIRE, OR INJURY.
- **WARNING:** FOLLOW ANY APPLICABLE ELECTRICAL CODES.
- **WARNING:** REPLACE DAMAGED CORD IMMEDIATELY TO AVOID RISK OF ELECTRICAL SHOCK.
- **WARNING:** MOUNT THE ECO MASTER WHERE IT IS INACCESSIBLE TO CHILDREN, TO AVOID RISK OF INJURY.
- **WARNING:** MOUNT THE ECO MASTER WHERE IT IS INACCESSIBLE TO ANYONE IN THE SPA. NEVER ATTEMPT SERVICING WHEN WET.
- **WARNING:** SHORT TERM INHALATION OF HIGH CONCENTRATIONS OF OZONE AND LONG TERM INHALATION OF LOW CONCENTRATIONS OF OZONE CAN CAUSE SERIOUS HARMFUL PHYSIOLOGICAL EFFECTS. DO NOT INHALE OZONE GAS PRODUCED BY THIS DEVICE.
- VOLTAGE MUST BE DETERMINED BEFORE ECO MASTER IS INSTALLED.
- DO NOT BURY THE CORD.
- CONNECT ONLY TO A PROPERLY GROUNDED, GROUNDING RECEPTACLE.

A WIRE CONNECTOR IS PROVIDED ON THE UNIT TO CONNECT A MINIMUM NO. 8 AWG SOLID COPPER CONDUCTOR BETWEEN THE ECO MASTER AND ANY METAL EQUIPMENT, METAL ENCLOSURES OF ELECTRICAL EQUIPMENT, METAL WATER PIPES, OR CONDUIT WITHIN FIVE FEET OF THE UNIT.

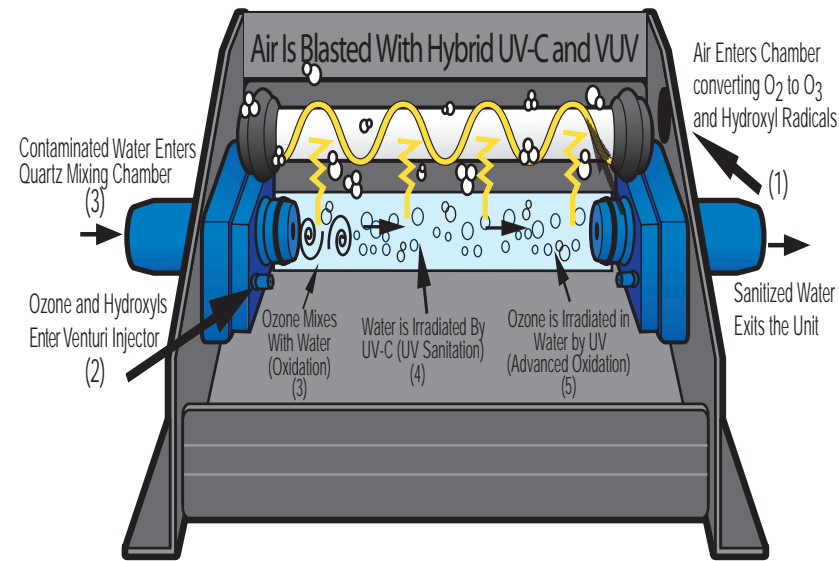


SAVE THESE INSTRUCTIONS

PROZONE WATER PRODUCTS • 3004 11TH AVENUE • HUNTSVILLE, AL 35805 • (256) 539-4570 • www.prozoneint.com

How the Eco Master Generator Works

Prozone's Eco Master combines its patented Hybrid lamp with cutting edge Germicidal UV sterilization in one compact system, to generate Ozone and Advanced Oxidation Processing (AOP).



- (1) Air enters unit where the Hybrid lamp converts it to Ozone (O₃) and Hydroxyl Radicals (OH⁻)
- (2) Water enters unit through the Dynamic Venturi Injector drawing Ozone and Hydroxyl Radicals from the Hybrid lamp chamber
- (3) Static mixer combines water, ozone, and hydroxyls in a scrambled flow
- (4) Water is irradiated by Germicidal UV which converts Ozone to Hydroxyl Radicals through Advanced Oxidation Processing (AOP)
- (5) Contaminants are destroyed by intense Germicidal UV, Ozone, and Hydroxyl Radicals, using up all the Ozone and adding ORP to the Water

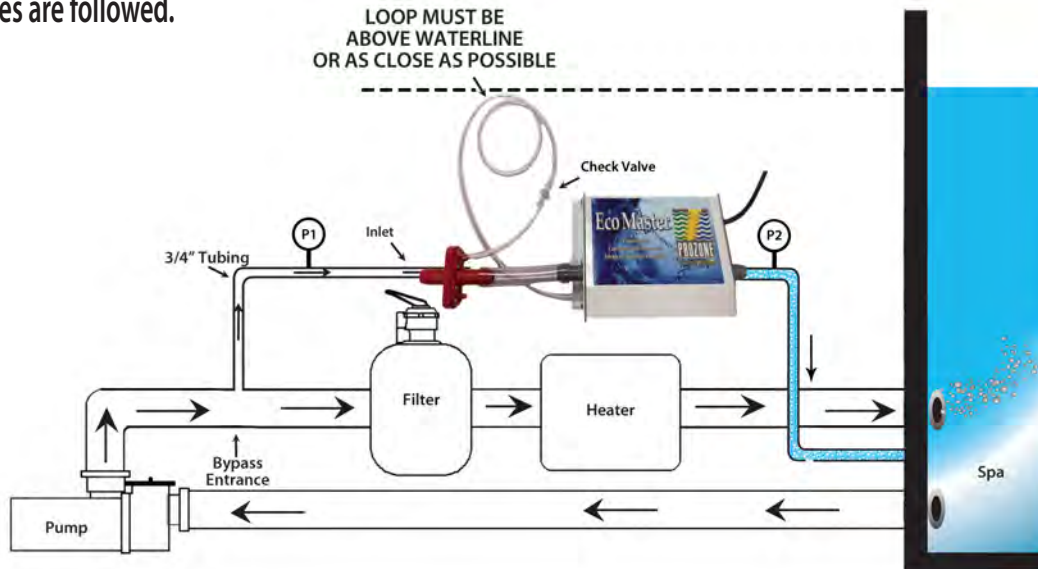
Preparing For Installation

pH	7.2 - 7.6
Alkalinity	80 - 120 ppm
TDS	< 1,000
Cyanuric Acid	30 - 70 ppm
Free Chlorine	0.5 - 1.5 ppm
Calcium Hardness	60 - 400 ppm
Metals	0 ppm
Nitrates/Phosphates	< 30 ppm

1. For best results, drain the spa and fill with fresh water. If not, refer to chart for recommended levels.
2. Check for and correct all leaks in the plumbing.
3. Check electrical system. Verify voltage is the same as prescribed on the side of the Eco Master.
4. Check filters. Clean or replace as necessary.
5. Balance the pH.
6. Shock the spa. The use of Calcium Hypochlorite is recommended.
7. Eco Master contains an ozonator, injector, and check valve. Remove any vacuum source (such as an injector) already installed on the spa.

Eco Master Installation For Ozone Ready Spas

The instructions contained in this manual will help ensure a successful installation. It is the installer's responsibility to make sure these guidelines are followed.



The above diagram shows that a dedicated return line for the Eco Master is recommended to limit back pressure on the system, typically in the footwell or at the filter cavity. Alternatively, if the system cannot be plumbed to a dedicated return, then the system should return as the last component on an unrestricted line.

MOUNTING

It is recommended that the Eco Master be mounted as high as possible, to relieve the pressure on the check valve. The recommended mounting orientation of the Eco Master is on a vertical surface. The Eco-Master should never be mounted with the inlet and outlet fittings in a vertical orientation. The 3/4" fittings should be horizontal and level.

PLUMBING

The Eco Master requires between 3-10 GPM of water flow for optimum performance. This is accomplished by installing the Eco Master at a location in the water circulation system, where the pressure at the supply line (P1) is higher than the back pressure on the system at the return line (P2). Install the Injector prior to the EcoMaster, as close as possible to the unit. If there is not enough pressure difference between these two points, then you will not see bubbles flowing in the line at the output of the system. These bubbles are the main indicator of a proper installation. In addition, consideration should be made for backpressure surges on the return line, as back pressure may result in temporary leakage from the internal check valve. The back pressure on the system at the return line should not exceed 10 PSI. The Ozone Line and Check Valve must be connected from the 1/4" Hose Barb on the EcoMaster to the #1 port on the Injector. This line should include at least one full loop and be secured as high as possible under the skirt, above the water level if possible.

ELECTRICAL

The Eco Master System is designed to operate on either 120 or 240 VAC, 50/60 Hz. Wire system to the circulation pump or timer. The Eco Master and circulation pump should start simultaneously. Use N.E.C or local code grounding and installation procedures for spa equipment.



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FOAMING GRAPH



The main indicator of a proper installation can be easily verified by observing the outlet fitting (opposite the cord end) and the hose connected to it. Ideally, you will see a "foam" (bubbles) flowing out of the system. Any amount of bubbles indicates ozone gas flow, but you want to see at least an amount of bubbles which can be easily identified by eye. It may helpful to hold the "foaming graph", behind the clear tubing, to better see the bubbles. The bubbles should be relatively small and fast moving. If you can visually observe the ozone gas flow then you have a good balance of flow and pressure differential and your installation should function effectively.

TROUBLESHOOTING GUIDE

PROBLEM	PROBABLE CAUSE	REMEDY
NO LIGHT FROM PROZONE UNIT	LOOSE WIRING	CHECK ALL WIRING CONNECTIONS
	NO POWER TO UNIT	CHECK VOLTAGE AND POWER SOURCE COMPATIBILITY
	DEFECTIVE LAMP OR OTHER INTERNAL COMPONENT	RETURN UNIT TO DEALER
NO BUBBLES IN RETURN FITTING OR LINE (NO INDICATOR OF OZONE)	TOO MUCH BACK PRESSURE IN RETURN LINE	CHECK SUPPLY LINE AND RETURN LINE PRESSURES. RETURN LINE PRESSURE SHOULD NOT BE GREATER THAN 10 PSI AND SHOULD NOT BE GREATER THAN SUPPLY LINE PRESSURE. ADJUST ACCORDINGLY.
CLOUDY WATER, FOAMY WATER, OR SCUM	UNBALANCED WATER CHEMISTRY	CHECK READINGS AND BALANCE ACCORDINGLY
	TOTAL DISSOLVED SOLIDS (TDS) LEVEL TOO HIGH	REFER TO DEALER FOR PROPER WATER TESTING
	FILTER NOT WORKING	CLEAN OR REPLACE FILTER

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PROZONE® Advanced Oxidation Purification Products LIMITED WARRANTY

Warranty is offered on this unit for a period of 24 months from date of purchase, and extends only to the original purchaser. If this unit becomes unserviceable due to defects in materials or workmanship within 24 months from date of purchase, it will be repaired or replaced without charge. Warranty does not apply to breakage due to obvious misuse. Warranty period for a repaired or replaced unit applies to the original date of purchase of the unit. Manufacturer will repair or replace based on evaluation of returned unit.

In order to receive warranty service, a Returned Goods Authorization (RGA) number must be obtained from Prozone before returning the product. The RGA number must be issued prior to end of warranty period. Product must be returned within 30 days of issuance of the RGA number. If the product is not received by Prozone within 30 days of RGA number issuance, another RGA number must be obtained.

This warranty along with the sales receipt must accompany the unit when it is returned. The RGA number must be printed prominently on the bottom left corner of the address side of the return packaging. To obtain an RGA number, or for any questions regarding warranty service, please contact:

PROZONE WATER PRODUCTS	Email: warranty@prozoneint.com
3004 11th Ave.	Tel: 256-539-4570
Huntsville, AL	Fax: 256-539-4225

This warranty is void if the unit has been opened, or if the product identification label has been removed or altered. This warranty does not cover damage resulting from misuse, abuse, accident, fire, flood, lightning or other acts of nature, lack of reasonable care, or subjecting the product to any but the specified voltage.

Under the terms of the warranty, manufacturer assumes no responsibility for any injury, loss or damage (direct, indirect, or consequential) arising out of the use of or inability to use the product. Manufacturer assumes no responsibility for labor involved in removal of defective part, shipping or installation of new part. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. This warranty is in lieu of all other warranties, expressed or implied.

**For manuals and more information, please visit www.prozoneint.com
RETURNS WITHOUT AN RGA NUMBER WILL BE REJECTED**

**PLEASE COMPLETE THIS WARRANTY ON THE DAY OF INSTALLATION AND RETURN TO
PROZONE WATER PRODUCTS
3004 11TH AVE, HUNTSVILLE, AL 35805**

Failure to return this warranty information will void this warranty

Date of purchase: _____ Purchased from: _____

Supplier Telephone No.: _____ Model Number: _____

Date of installation: _____ Installed by: _____

Name: _____ Telephone No.: _____

Address: _____ City: _____

State: _____ Zip: _____ Email: _____

Residential application: _____
