

Sparkling, clean water *everyday*

Owner's Manual and
Installation Instructions
**FOR INGROUND AND
ABOVE GROUND MODELS**



UltraPure
WATER QUALITY INC. 



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Important Safety Instructions

READ AND FOLLOW ALL INSTRUCTIONS

- Read this manual completely before attempting installation.
- UV light is harmful to eyes and exposed skin.
- All permanent electrical connections should be made by a qualified electrician.
- Cord and plug connected units are designed to connect to a three prong grounding type receptacle only. If the UltraPure™ Automatic Water Cleaner™ electrical connection is to be attached to the pool controls, be sure the pool controls are protected by a Ground Fault Circuit Interrupter (G.F.C.I.). If the UltraPure™ Automatic Water Cleaner™ is connected to an independent electrical supply, a G.F.C.I. must be installed between the UltraPure™ Automatic Water Cleaner™ and the electrical supply.
- Do not bury cord.
- Warning – To reduce the risk of electrical shock, replace damaged cord immediately.
- Install at least 5 feet from wall of pool using non-metallic plumbing. Install the UltraPure™ Automatic Water Cleaner™ no less than 1 foot above maximum water level to prevent water from contacting electrical equipment. Install in accordance with the installation instructions.
- Follow all applicable electrical codes.
- Electric shock hazard. Be sure to turn power OFF and disconnect from power source before any service work is performed. Failure to do so could result in serious injury or death.
- The UltraPure™ Automatic Water Cleaner™ must be installed in an outdoor location, or indoors in a forced air ventilated room.
- 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.

Ozone is considered toxic above certain concentrations and exposure time in the air. If the ozone concentration in the water exceeds the equilibrium state, the excess ozone will be emitted into the air. The Occupational Safety and Health Administration has set a short term exposure limit of 0.3 ppm (0.6 mg/m³) and 0.2 ppm (0.2 mg/m³) time weighted average over 8 hours per day, five days per week (see Warning – Short term inhalation above). There are ozone removal methods that may be considered prior to the addition of the chemical disinfectant.

- I. Degassing by means of aerated flow.
- II. Granular activated carbon filter.

When the equipment is located in an enclosed room, adequate exhaust, in case of ozone releases, is strongly recommended. The exhaust system should provide a minimum of three air changes per hour to comply with OSHA limits. In addition, an ambient air ozone monitor should be installed. Ozone systems, which operate under vacuum, should not present the danger of ozone leaks into the treatment room.

CLASSIFICATIONS



3M62

General Information

The UltraPure™ Automatic Water Cleaner™ Ozone generators described in this manual are designed to provide the benefits of ozonated water in an environmentally safe and effective manner. The high quality, specially engineered components ensure efficient ozone output and reliable performance.

PERFORMANCE GUARANTEE

With proper installation, setup and steady bather use, we guarantee that our UltraPure UV Ozone generator will give you the following benefits within the first three to six months, or we will refund your purchase price:

- Chlorine use decreased by at least 50% to maintain a 1.0 to 2.0 ppm residual.
- Virtual elimination of shock, specialty chemicals, tile-line bathtub rings, after showers, eye and skin irritation, combined-chlorine odor, discolored hair or bathing suits.
- Extended filter runs with easier-to-clean filters.
- Crystal clear, odor free, soft-to-the-touch water.
- Easy to manage pool water chemistry and balancing.
- Compatibility with any chlorine source, algaecides and minerals.
- The lowest chemical use of any system.

While Ozone is not a disinfectant (to kill algae and bacteria), and does not provide a measurable residual, it is the best Oxidizer for bather-waste removal. An UltraPure UV Ozone generator pays for itself while delivering a bottled-water-like bathing experience.

SPECIFICATIONS

Model	Pool Volume (USG)	Ozone Output (Gm/Hr)	Air Draw (scfh)	Electrical Power (Volts/Amps)	Size (Inches L/H/D)	Weight (Lbs.)	Lamp Life (Hours)
UPP15	15,000	0.057	3-4	120 or 240/1A	16/4/3	6	12,000
UPP25	25,000	0.146	3-4	120 or 240/1A	16/7/4	8	12,000
UPPHO	85,000	0.435	2-3	100-277/1A	16/7/4	7	14,000
UPAG20	20,000	0.057	3-4	120/1A	16/4/3	6	12,000
UPAG33	30,000	0.146	3-4	120/1A	16/7/4	8	12,000

Notes:

- UPP stands for UltraPure Pool
- UPAG stands for UltraPure Pool Above Ground

Installation

LOCATION

Mount the UltraPure™ Automatic Water Cleaner™ indoor or outdoor (preferably out of direct sunlight). Select a wall location within 8 feet of the 120V or 240V timer box or the 120V grounded plug, and within 15 feet of the suction side injection point and 7 feet with above ground units.

Note: The UltraPure™ Automatic Water Cleaner™ is to be installed on the suction side of the pump, as it will not withstand pressure.

WALL MOUNTING

It is recommended that your UltraPure™ Automatic Water Cleaner™ is mounted horizontally to improve lamp life. Use the slots in the mounting tabs, the screws and wall plugs provided to secure the unit. The above ground units come complete with mounting pad brackets which bolt to the unit tabs.

ELECTRICAL

A qualified electrician should perform the electrical procedure(s).

Connect the UltraPure™ Automatic Water Cleaner™ to the pool timing clock so that the UltraPure operates simultaneously with the pool pump or plug your 120V unit into a grounded receptacle. Above ground units come complete with a 120V Piggy back cord. The circuit must be protected by a ground fault circuit interrupter (G.F.C.I.) installed in accordance to electrical code.

Operating your UltraPure™ Automatic Water Cleaner™ on a single speed pump 6 to 12 hours per day will clean the pool water and extend lamp life. When using a 2 speed pump, the ozone generator is operating only on high speed, typically 2 to 4 hours per day. Typically, the above ground units run for 24 hours a day.

Be sure to check the voltage of the power supply is matched to the voltage of your unit.

Shut off the pump before plumbing your UltraPure™ Automatic Water Cleaner™.

Proceed to plumbing instructions.

Plumbing

Ozone and air is drawn into the water by the pump's suction. It is mixed into the water by the pump's impeller. Ozone is then driven into the water by the pressure in the pipe between the pump and the filter. The filter acts as an Ozone reaction-vessel. The air, with a very small amount of active Ozone, is taken off the top of the filter sent to the pool through the returns. The 'Champagne bubbles' you see returning in the pool are air and not hazardous to the environment or the pool equipment.

There are two ways your Inground UltraPure™ Automatic Water Cleaner™ can be plumbed into your system. Please choose which method would be most appropriate for your pool. See Retrofit installation for Above ground pools.

BUILDER STANDPIPE INSTALLATION – INGROUND

When the pool is being built or during renovation work, it can be made (Ozone) ready. With this installation, a 3/4" suction side standpipe runs from below water level on a suction line, back to a convenient location on the equipment pad. This will stop air from entering the pump. The 3/4" line originates from below water level and there is no possibility to lose prime because there is a water lock below grade.

"Tee in" a 3/4" standpipe from (one of) the suction line(s) below water level and run it to a protected location behind the filter on the equipment pad. Cap the standpipe for pressure testing the plumbing. When you are ready to install the UltraPure™ Automatic Water Cleaner™, cut the cap from the 3/4" standpipe and glue on our 3/4" FSL x 1/4" FPT reducing coupling. Apply Teflon tape and screw in the 1/4" MPT x 3/8" straight compression fitting into the reducing coupling. The 1 1/2 lb. compression check valve is not required and should NOT be used with the method. Connect the 3/8" black tubing to the straight compression fitting and run the tubing back to the UltraPure™ Automatic Water Cleaner™.

RETROFIT INSTALLATION – INGROUND AND ABOVE GROUND

Apply Teflon tape and screw the 1 1/2 lb. Compression Check Valve or 1/2 lb. Compression Check Valve for above ground units into the bottom drain plug hole of the strainer basket portion of the pump. The straight compression fitting and reducing coupling are not required for this method. Connect the black 3/8" tubing to the 1 1/2 lb. or 1/2 lb. compression check valve and run the tubing back to the UltraPure™ Automatic Water Cleaner™.

Note: On inground pools, the possibility exists that air can enter the pump and water line through the UltraPure™ Automatic Water Cleaner™. Ensure that the 1 1/2 lb. Compression Check Valve is not allowing air to bubble back into the pump basket when the pump is turned off. If the check valve allows air to bubble back into the pump basket, call UltraPure Water Quality Inc. at 877 281 7603.

Installation Instructions

INGROUND DIAL FLOWMETER INSTALLATION

See parts package included with your UltraPure™ Automatic Water Cleaner™.

Note: Some Dial Flowmeters are equipped with a Quick Connect Elbow. The Quick Connect Elbow is designed to insert the tubing into the elbow and pull back to lock. To remove the tubing, simply push in the release collar and remove the tubing. Parts packages containing the Dial Flowmeter with the Quick Connect Elbow will not have a compression elbow with metal grippers included. The Quick Connect Elbow on the Dial Flowmeter serves the same purpose as the compression elbow with the metal grippers.

PRESSURE SIDE "VENTURI" INSTRUCTIONS (kit sold separately)

See instructions included with the Pool Venturi Conversion Kit (Part# 1008079).

For some applications, a pressure side installation may be desired. This kit is available for purchase separately.

ABOVE GROUND INSTALLATION

The above ground installation is very similar to the above retrofit installation. All above ground units come complete with a 'Yellow' Suction Side Water Flow restrictor which is placed in the top of the skimmer to create a simple reliable air draw using our Dial Flowmeter or Valveless installation kits.

See parts package included with your UltraPure™ Automatic Water Cleaner™.

External Safety Air Bleed Kit Instructions

Effective December 2006, the External Safety Air Bleed Kit (ESABK) comes with every UltraPure™ Automatic Water Cleaner™. The ESABK is not needed or included with the above ground units. This kit is designed to take air from the top of the filter and send it downstream (up to 15) past any and all equipment. The supplied tee screws into the pressure gauge port. In some cases, it is necessary to install this tee into the manual air relief port of opening. Be sure all air is venting from the filter as the pump runs. The internal bleed in the filter acts as a backup to the external kit. Installation of the ESABK is necessary when: the filter is old and does not have an internal air bleed; when there is a solar system on the pool; when there is a pressure side cleaner; when using a booster pump; or on newer filters which will not evacuate the air.

See parts package included with your UltraPure™ Automatic Water Cleaner™.

OPERATION

To achieve optimal performance from the UltraPure™ Automatic Water Cleaner™, the pool must be as clean as possible to start with.

- Back wash or clean the filters before starting the UltraPure™ Automatic Water Cleaner™.
- Test the pool water and adjust as stated in the chart below.

Test	Ideal Range
Free Available Chlorine (FAC)	1.0 ppm (minimum)
Total Chlorine (TC)	Up to 0.5 ppm above the FAC reading
Bromine	2.0 ppm
pH	7.2 - 7.8
Total Alkalinity (TA)	80 – 120 ppm
Calcium Hardness (CH)	200 – 300 ppm
Total Dissolved Solids (TDS)	300 – 1200 ppm

The free chlorine or bromine residual should be maintained at all times. Outdoor pools on chlorine require a stabilizer. Pool may require a shock treatment after heavy usage, heavy rains or wind storms. Follow your dealer's recommendations.

When the pool circulation system starts, the sight glass located on the front of the unit will glow blue to let you know instantly that the system is working.

Check the returns. Bubbles in the pool means ozone is getting into the water.

Your UltraPure™ Automatic Water Cleaner™ is virtually maintenance free. Your unit should be stored indoors during cold weather or when not in use. Should foreign matter enter the bulb chamber, the bulb may be carefully cleaned using methanol alcohol. Always be sure to disconnect the power before removing the end plates. **UV rays can temporarily 'Blur' your vision.**

Trouble Shooting & Repair

Knowledge of electrical applications is required for trouble shooting. Contact a certified electrician if you are unsure of your ability to service the equipment. Improper servicing will void the ozonator warranty. If any condition persists, call UltraPure at 877 281 7603 for further technical assistance.

PUMP IS OVERLY NOISY OR LOSES PRIME WHILE RUNNING:

Note: A small amount of noise can be expected since air is being drawn into the pump and works its way through the filter and pipes. Problems are solved by using one or more of the following alternatives; moving the injection point "up stream" from the pump; and/or reducing the airflow; and/or increasing the water flow.

Plug the 3/8" tubing (unit end) with the pump running and check for a suction side plumbing leak. Install the suction side injection point in the plumbing upstream before the pump.

Reduce air draw by either turning the Dial Flowmeter (on equipped models) clockwise or adding more Threaded Rod into the tubing.

AIR "BLOW BACK" THROUGH THE SKIMMER LINE(S):

Note: An air build up in the filter will cause this. When the pump shuts off, air expands and seeks "the path of least resistance" to escape. This path is usually through the skimmer line. This problem is solved by completely removing air from the filter while the pump is running, or by stopping air from backing up through the suction (skimmer) line(s).

Extend or install the internal air bleed line inside the filter. By ensuring this internal air bleed line is as close to the top of the filter as possible, air readily escapes as the pump runs.

Where the External Safety Air Bleed Kit (ESABK) is installed, ensure that it is actually releasing the air being introduced into the filter. The pressure gauge port or the manual air bleed port will work well on most filters. In some instances, the air bleed(s) inside the filter must be drilled out larger. To check that our ESABK is letting air out of the filter shut off the pump; disconnect the black tubing at the filter; hold your thumb over the tubing end (to close it off); start the pump and see that air (and some water) is coming out of the compression fitting at the tee. Once you have a good air bleed, shut off the pump and reconnect the tubing.

PUMP LOSES PRIME OR HAS TROUBLE "CATCHING PRIME" AFTER IT HAS BEEN SHUT OFF:

Note: This problem is limited to retrofit installations. It is caused by either a suction side air leak; a filter (multi-port) air leak; or air in the filter partially blowing back past the pump. In any case, the pump has an "air lock".

- Install a 2 lb. or 1 lb. water line check valve just below (on the suction side) of the pump.
- Repair or replace the multi port valve gasket.
- To help diagnose a plumbing air leak problem, plug the "unit end" of the black tubing to see if the problem ceases.
- Where the pump has a "lift" more that 3 to 4 feet, order a stronger (than 1 1/2 lb.) spring loaded check valve from UltraPure Water Quality Inc. A 3 lb. or 6 lb. spring loaded check valve may be required.

THE “BUBBLE MIST” STOPS COMING BACK INTO THE POOL:

Note: Our suction side installation method requires a portion of the pump’s power. Anything affecting the pump’s performance affects our air draw.

- Under normal running conditions, back washing/cleaning the filter restores the “bubble mist”.
- Increase the air draw by either adjusting the Dial Flowmeter (on equipped models) counter clockwise or resetting the Threaded Rod.
- Replacing a worn out pump may be necessary.

Note: When the outside temperature falls below 50°F (10°C), the ultraviolet lamp(s) in your UltraPure™ Automatic Water Cleaner™ may have difficulty starting. The quartz ozone producing lamp have mercury vapor inside and the cold temperature causes the mercury to condense and make the lamp(s) more difficult to start. This occurs in all Ultra Violet Ozone generators.

Note: A small amount of condensation may become apparent inside the Dial Flowmeter. This is normal and does not indicate any malfunction of the Flowmeter or the Ozone generator. The flowmeter will not read correctly until the condensation has evaporated and the inside of the flowmeter is dry.

Terms and Conditions of Warranty

UltraPure Water Quality Inc. stands firmly behind all of our products. If any of the items you have purchased have been received damaged or become defective within the warranty period, please contact UltraPure Water Quality Inc at 877 281 7603.

1 To validate this warranty, the 'Registration of Purchase' form must be completed online at www.waterquality.net within 30 days of installation.

2 We warrant that all internal electrical components of the UltraPure pool Ozone generator are free from defects in material and workmanship from the date of delivery to the first owner. This warranty is not transferable.

Inground Models:

Two Year conditional warranty is from the date of delivery to the first owner. The first year warranty covers parts and labor. The second year is parts only. This two year conditional warranty is based on a run time of 6 to 8 hours per day. If the unit is set to run continuously (24 hours per day), the warranty period will be reduced to one year (parts and labour) for all internal electrical working components.

Above ground Models:

One Year parts only is from the date of delivery to the first owner.

3 To make a warranty claim you must:

- a. Call 877 281 7603 to obtain a Return Goods Authorization (RGA) number. No claim will be accepted without an RGA number.
- b. UltraPure Water Quality Inc. will send out a local area Authorized Service Dealer (ASD) in applicable areas.
- c. If no ASD is in the area, the manufactured goods in need of service should be shipped (with RGA) to the address on the RGA form, freight prepaid. Any returned item deemed faulty due to manufacturer defect will be repaired or replaced and shipped back to the customer at no charge to the customer.
- d. The owner of the goods may be responsible for all expenses if the field-serviced or returned item(s) are deemed operational, or not under warranty. Non-warranty goods will be shipped back to the customer at the customer's expense.

4 This warranty and the remedies set forth below are exclusive and in lieu of all other warranties remedies and conditions, whether oral or written, express or implied. UltraPure specifically disclaims any and all implied warranties, including without limitation warranties of merchant-ability and fitness for a particular purpose.

5 In no event shall UltraPure or any of its officers, agents, employees, representatives or associates be liable for any losses however occurring, including but not limited to breach warranty or condition, tort or negligence.

6 This warranty shall be void if this product or any of its components are altered, misused, modified, not installed, used, repaired or maintained in accordance with the instructions printed in the UltraPure Owner's Manual using UltraPure factory approved parts.

7 Warranty does not extend to accident, damage, flood, fire or any other cause beyond the control of the manufacturer.

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Part # 3704700