

# Ultravation® Aquatronic™

## OWNERS GUIDE



**Models: SS-10 / SV-10 / ME-10 / SS-20 / SV-20 / ME-20 – 120-VAC UVC Water Treatment Equipment**

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**LEAVE FOR HOMEOWNER**

**Shipping and Packaging List:**

- Electrical Housing
- Electro Polished 304SS Vessel
- UVC Lamp
- Quartz Sleeve
- Clear Compression Nut
- Quartz O-Ring and Silicone
- Top Bracket Locking Nut
- Upper Bracket
- Lower Bracket
- UVC Warning Label
- Warranty Card

**ME Series has a UVC Sensor Cord assembly in addition to the parts listed above.**

**Safety Precautions:**

It is recommended that this unit be installed and maintained by a trained technician:

**WARNING: UV Hazard. Always protect eyes from ultraviolet light. NEVER look at UV lamps in operation.**

**Unplug or disconnect power before re-lamping or servicing.**

**WARNING: Severe eye damage or temporary blinding may occur.**

**WARNING: DO NOT operate outside of Vessel.**

In the event of accidental breakage or replacement of the ultraviolet lamp, please ensure that the lamp is disposed of in accordance with local and state environmental laws regarding fluorescent lamps containing mercury.

**Pre-Treatment Requirements:**

A complete water test is recommended to determine if pre-treatment equipment is required before installation of the UV unit.

**Water must meet criteria below:**

<u>Untreated Water Quality Level</u>	<u>Maximum Allowable</u>
Chloride	250.00 ppm
Color	0.00 units
Hardness	8.00 gpg
Iron	0.30 ppm
Manganese	0.05 ppm
pH	6.0 to 8.5
Total Dissolved Solids	500.00 ppm
Turbidity	5.00 ntu

**If untreated water quality exceeds the maximum allowable levels specified, this will result in bacteria passing through the UV unit and into the piping system.**

### SS Vessel Installation:

1. The ultraviolet unit is designed to be installed in a vertical position. The unit is supplied with (2) brackets to support the unit.

**NOTE: The upper bracket has a grounding lug attached to it.**

2. Place the top bracket (larger one) over the nipple located at the top of the vessel. The end of the bracket with the three holes should be facing up towards the top of the vessel.
3. Tighten the gray PVC ring onto the nipple. This will compress down onto the top of bracket.
4. Attach the smaller bracket to the bottom of the vessel. The bracket has a clip type fastener that attaches to the bottom rim of the vessel. The end of the bracket with the three holes should be facing down towards the bottom of the vessel.
5. Secure the top bracket to a wall by using three appropriate screws or fasteners (not provided).

**Be sure to leave plenty of clearance above vessel for servicing the quartz tube and germicidal lamp.**

6. Secure the bottom bracket to the wall by using three screws or fasteners (not provided).
7. Use quality unions and ball valves on the inlet and outlet for servicing the unit. **See Page 7** for a typical installation piping layout. If sweat fittings are used, be sure soldering is done in such a manner as not to allow heat to reach the UV vessel. If Schedule 80 PVC or CPVC is used, make sure to follow the proper primer and solvent instructions.
8. Pipe the **inlet** into the **bottom** nipple and the **outlet** into the **top** nipple on the UV vessel. There is an internal flow restrictor in the outlet nipple of all units. **It is recommended you install a boiler drain on the outlet piping of the unit for bacteria testing.**

### Electrical Requirement:

**Always follow all local electrical codes when installing our water treatment equipment.**

1. Provide a properly grounded 115V/60 HZ dedicated electrical outlet. **Avoid using outlets that are switch controlled.**
2. Maximum amperage required is 5 amps.
3. Make sure the electrical service provides power 24 hours per day. We recommend installing a **surge protector** to protect unit from power surges, which are not covered by warranty.

**!! DO NOT UNDER ANY CIRCUMSTANCE WIRE THE UV UNIT TO THE WELL PUMP SWITCH OR WELL PUMP ELECTRICAL SUPPLY!!!**

### Power Supply Installation:

1. Choose a wall placement that is dry and clear of all piping and metal objects, and within 4 feet of the UV vessel and the electrical outlet.
2. Remove cover from power supply for mounting.
3. Secure power supply to wall with screws. (not provided)
4. Properly ground the power pack to the UV vessel.

### Quartz and O-ring Installation:

1. Wipe the quartz sleeve with household alcohol to remove dirt, oil and fingerprints.
2. Carefully place the quartz sleeve into the top opening of the vessel.
3. Lubricate the o-ring with silicone (which is supplied) then place the o-ring over the top of the quartz sleeve.
4. Hand-tighten the clear gland nut onto the nipple located on the top of the vessel. **DO NOT OVER TIGHTEN OR THE QUARTZ SLEEVE MAY SHATTER. WHEN OPERATING, THE CLEAR GLAND NUT WILL GLOW BLUE.**

### Germicidal Lamp Installation:

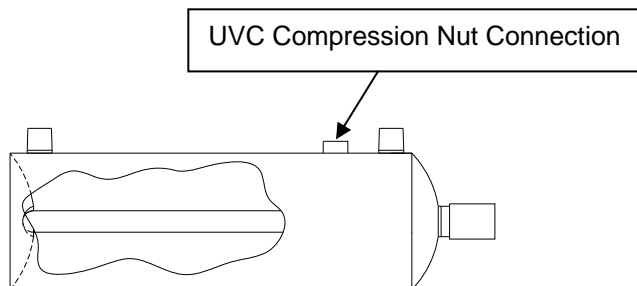
1. Clean the germicidal lamp with household alcohol to remove dirt, oil and fingerprints.
2. Connect the white connector from the power supply to the UV lamp.
3. Gently insert the germicidal lamp into the quartz sleeve through the center of the clear compression nut located at the top of the vessel.

**Be careful not to drop the lamp inside the vessel. This could break the quartz sleeve.**

4. Slide the black fitting into the center of the clear compression nut.

### UVC Sensor Installation (FOR ME SERIES ONLY):

1. Hand tighten the UVC Sensor compression nut to the hose fitting connection on the vessel:



2. Connect the BNC connection of the UVC Sensor cord to the bottom of the Power Supply.

### Power Supply Start Up:

1. Press the reset button (hold for 5-seconds and release) which is located in the lower center of the circuit board left of the battery.
2. Re-install cover.
3. Plug the power supply into the surge protector (not provided) then into dedicated electrical outlet. The germicidal lamp is now operating.

### Filling the UV Unit with Water:

1. Open the inlet ball valve about 25% to fill the UV vessel slowly.
2. Open the inlet and outlet ball valve to their **full** open position.
3. Open cold water faucet in kitchen and run until all air is purged. Shut off faucet.
4. Inspect for leaks and repair if any are found.

### Disinfecting the Piping System with Chlorine:

1. Shut off the water to the inlet and outlet of the cartridge filter.
2. Remove the cartridge sump and empty all water. Fill with household chlorine (Clorox, non-scented), 5.25% sodium hypochlorite.
3. Re-install the sump to the filter assembly and open the inlet and outlet valves.
4. Open the cold water faucet at the furthest point in the piping until you detect chlorine odor. Once the odor is detected, close that faucet. Continue this procedure until the chlorine odor has been detected at every faucet. If chlorine odor is not detected at all faucets, repeat steps 1 through 4.
5. Close ball valve on outlet of cartridge filter.
6. Allow the water to stand for at least (4) hours to kill the bacteria residual in the piping system.

**\*\*No water should be used during disinfection\*\***

### Final Check:

1. Open outlet ball valve on UV unit.
2. Make sure the Aquatronic UV unit is plugged into a surge protector (not provided) then a dedicated electrical outlet with power 24 hours per day.
3. Check all piping for leaks, repair if necessary.
4. Open cold water lines and flush out until chlorine odor is no longer detected.

**Before consumption of water, an EPA Lab Test is suggested.**

**UVCMONITOR (FOR ME SERIES ONLY)**

The digital display shows the percent UVC output based on a new UVC lamp. The output needs to be calibrated after 100 hours of use. This allows the lamp output to stabilize.

**After 100 hours of operation the SCALE adjustment – on the right side of the control box – must be adjusted until the percent output = 100.**

**ANNUAL MAINTENANCE PROCEDURE:**

**Annual Germicidal Lamp Replacement and Quartz Cleaning:**

1. Unplug the power supply from surge protector and the electrical outlet.
2. Pull the black cap from the center of the clear gland nut.
3. Carefully lift the germicidal lamp out of the quartz sleeve by pulling up on the gray harness wire and discard the lamp. Remember the lamp is glass and can cause injury to you if the lamp is dropped.
4. Open the boiler drain on outlet side of UV unit to depressurize vessel. When completed, close boiler drain.
5. Carefully remove clear gland nut, gently grasp quartz sleeve and lift out.
6. Remove clear gland nut and O-ring from quartz sleeve.
7. Clean quartz sleeve with household alcohol. If stained, replace.

**(Reference Quartz Installation)**

8. Follow with germicidal lamp installation.

**9000 Hour Timer Reset (FOR SV SERIES ONLY):**

**It is recommended to reset the 9000 hour timer after replacing the germicidal lamp.**

1. Make sure the electrical power cord is removed from the electrical outlet.
2. Remove power supply cover.
3. The battery which operates the 9000 hour timer during a power outage should be changed annually with a CR2032 (3V) battery or equivalent. To remove old battery, pull it up and away from the battery harness located on the right side of circuit board.

When installing the new battery, make sure the “+” side of the batter is viewable.

Locate the brown reset button on the lower center portion of the green circuit board, to the left of the battery.

1. Once located, hold reset button for 5 seconds and release.
2. Re-install the power supply cover and plug electrical power cord into the dedicated outlet.

**UVLampMonitor (FOR SV SERIES ONLY):**

LED Color	Audible Visual Alarm	Unit Status
Green	No audible	OK
Solid Red	No Audible	Reset lamp service indicator or replace lamp within 30 days
Pulsing Red (Every 5 seconds)	Beep every 60 Minutes	Lamp has exceeded 1 year of operation reset or replace lamps
Flashing Red (Every 1 second)	Beep every 1 second	UV lamp(s) are not lit

**Power Consumption:**

<b>Model</b>	<b>Power Consumption</b>
SS-10, SV-10, ME-10	25 Watts (.22 A @ 115VAC)
SS-20, SV-20, ME-20	40 Watts (.35 A @ 115VAC)

**Replacement Parts:**

<b>Model</b>	<b>Description</b>	<b>Replacement Part Number</b>
SS-10, SV-10, ME-10	Replacement Aquatronic – 10 Lamp	LP-PP-0021
SS-10, SV-10, ME-10	Replacement Aquatronic – 10 Quartz	QZ-OH-0020
SS-20, SV-20, ME-20	Replacement Aquatronic – 20 Lamp	LP-PP-0023
SS-20, SV-20, ME-20	Replacement Aquatronic – 20 Quartz	QZ-OH-0021
RB-PP-0004	EPDM HI-TEM O-Ring for sealing of the Quartz Sleeve	RB-PP-0004

**Warranty:**

Ultravation warrants this product against any defects in material or workmanship for a period of 2 years after date of consumer purchase, with the exception of the Ultraviolet Lamp, which is warranted for a period of 90 days after date of consumer purchase.

This warranty does not include damage to the unit from accident, misuse or improper installation. If this product should become defective during the warranty period, Ultravation will elect to repair or replace the product free of charge.

This warranty shall be void if the ultraviolet sterilizer is moved from a place or original installation, or if damage is caused by misuse, misapplication, accident, freezing, flood, fire, or if not installed in accordance with instructions furnished by Ultravation Inc.

This warranty shall be void in the event of damages from external sources or where the ultraviolet sterilizer has been operated at pressure in excess of 100 pounds per square inch or at a temperature in excess of 100 degrees F., or below 32 degrees F. Incidental costs or consequential damages are not covered by this warranty.

Ultravation will return repaired or replaced warranted products pre-paid, provided that the product was delivered pre-paid. Ultravation shall have no responsibilities for charges incurred by the customer for installation or removal of warranted items. Liability is limited only to the replacement or repair of this product

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. All returns must be accompanied by a return authorization number, which may be obtained by contacting Ultravation, Inc.

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## RECOMMENDED INSTALLATION

**Note: All Aquatronic Series units must be installed after all pretreatment including automatic filters and water softeners.**

