

# MEGATRON<sup>®</sup>

## GERMICIDAL ULTRAVIOLET WATER DISINFECTION SYSTEM

Models M50, M90, M150 & M250



### Installation, Operation & Maintenance

Read and Follow All  
Safety Instructions.  
Save These Instructions.



**ATLANTIC ULTRAVIOLET  
CORPORATION<sup>®</sup>** SINCE 1963

*Manufacturers / Engineers / Sales / Service*  
Germicidal Ultraviolet – Equipment & Lamps

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# Owner's Manual

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These instructions generally describe the installation, operation and maintenance of the **MEGATRON**<sup>®</sup> Models M50, M90, M150, and M250. Questions that are not specifically answered by these instructions should be directed to the Factory. Atlantic Ultraviolet Corporation<sup>®</sup> takes all possible precautions when packaging equipment to prevent damage. Carefully inspect and report all damages. Do not install damaged equipment. Follow all instructions on any labels or tags. Carefully inspect all packing materials before discarding to prevent the loss of accessories, mounting hardware, spare parts, or instructions.





# SAFETY WARNINGS


- All personnel should be alerted to the potential hazards indicated by the product safety labeling on this unit.
- The following conventions are used to indicate and classify precautions in this manual and on product safety labeling. Failure to observe precautions could result in injury to people or damage to property.

 This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

 **DANGER** Danger indicates an **IMMINENTLY** hazardous situation, which, if not avoided, **WILL** result in death or serious injury.


 **WARNING** Warning indicates a **POTENTIALLY** hazardous situation, which, if not avoided, **COULD** result in death or serious injury.


 **CAUTION** Caution indicates a **POTENTIALLY** hazardous situation, which, if not avoided, **MAY** result in minor or moderate injury.


 **CAUTION** Caution used without the safety alert symbol indicates a potentially hazardous situation, which, if not avoided, may result in property damage.

 This symbol is used to identify an **ELECTRICAL SHOCK** or **ELECTROCUTION** hazard.

 This symbol is used to identify a **GERMICIDAL ULTRAVIOLET LIGHT** hazard.

 This symbol is used to identify the need to wear approved germicidal ultraviolet blocking eyewear.







 This symbol is used to identify the need to wear approved germicidal ultraviolet blocking face shield.

 This symbol is used to identify the need to wear protective gloves.

 This symbol is used to identify components which must not be disposed of in trash.

# SAFETY INSTRUCTIONS

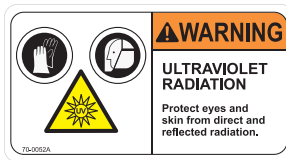
 **WARNING** To guard against injury, basic safety precautions should be observed, including the following:

1. Read and follow **ALL** safety instructions.
2. Do not use the **MEGATRON**<sup>®</sup> for other than its intended purpose as described in this manual.
3. Do not alter design or construction.
4. Do not remove any labels or devices.
5.   **DANGER** To prevent the risk of severe or fatal electrical shock, special precautions must be taken since water is present near electrical equipment. **Always disconnect power before performing any service or maintenance.**
6.   **WARNING** Avoid exposure to direct or reflected germicidal ultraviolet rays. Germicidal ultraviolet rays are harmful to the eyes and skin.
7. Intended for indoor use only. The **MEGATRON**<sup>®</sup> should be protected from the elements, direct sunlight, and from temperatures below freezing.
8. Do not operate the **MEGATRON**<sup>®</sup> if damage to the power cord, lamp cords, or any part of the unit is visible or suspected.
9. Electrical power supplied to the **MEGATRON**<sup>®</sup> **MUST** match power requirements listed on the system label.
10.   **WARNING** Do not operate without proper electrical ground.
11. Do not operate unit with lamps powered on and no water flow for an extended period (**consult factory for further details**).
12. Do not exceed the **MEGATRON**<sup>®</sup> maximum rated flow capacity.
13. Do not exceed maximum operating pressure of 100 PSI.
14. Read and follow all notices and warnings on the **MEGATRON**<sup>®</sup>.
15. **SAVE THESE INSTRUCTIONS.**

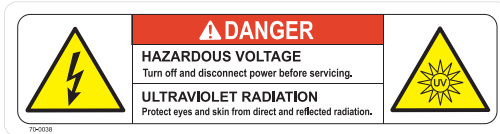
# CAUTION

It is the user's responsibility to determine and validate the suitability of this equipment for use in the user's system or process. No warranty or representation is made by the manufacturer with respect to suitability or performance of this equipment or to the results that may be expected from its use. The user should periodically inspect, clean as necessary and confirm the presence and good legibility of the product safety labels. Contact the factory for replacement labels in the event that any of the labels are missing or illegible. (Labels shown on next page.)

# SAFETY LABELS



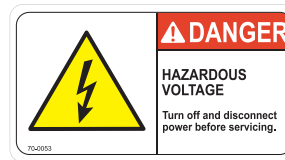
Warning: Ultraviolet Radiation (70-0052A)



Danger: Hazardous Voltage and UV Radiation (70-0038)



Location of Danger Labels 70-0052A and 70-0038



Danger: Hazardous Voltage (70-0053)



Location of Danger Label 70-0053

# PRODUCT APPLICATION

## CONSTRUCTION

- The **MEGATRON**<sup>®</sup> Germicidal Ultraviolet Water Disinfection System is designed to mount horizontally on a flat surface, using the provided stainless steel mounting brackets.
- Each **MEGATRON**<sup>®</sup> is a self-contained system, utilizing a modular design. All internal electronics can be easily removed and replaced, simplifying troubleshooting and reducing any downtime of the System.
- The **MEGATRON**<sup>®</sup> disinfection chamber and chamber heads are fabricated from Stainless Steel Type 316. All surfaces of the chamber are passivated and have an electropolished exterior.
- In case internal repairs become necessary, each **MEGATRON**<sup>®</sup> is equipped with removable flanged chamber heads, on both ends, allowing for ease of maintenance.
- The **MEGATRON**<sup>®</sup> electrical enclosure is a water resistant, NEMA Style enclosure, fabricated from Stainless Steel Type 304, with a gasketed, tempered glass display window.
- **EASY-OFF**<sup>™</sup> End Caps enable quick and easy lamp change, without disconnecting from the water supply or draining the purifier. No tools are required. **Always disconnect electrical power when changing lamps.**

## PRINCIPLE OF OPERATION

The **MEGATRON**<sup>®</sup> design has been carefully conceived to provide a uniform germicidal dosage throughout the disinfection chamber. The dosage, as it applies to ultraviolet disinfection, is a function of time and intensity of ultraviolet radiation, to which a surface is exposed. The exposure time, in seconds, is the total time it takes the water to flow through the disinfection chamber, exposing it to the germicidal lamps. Exposure time is inversely related to the linear flow rate. The higher the flow rate, the shorter the exposure time. The lower the flow rate, the longer the exposure time. The UV intensity, in microwatts per square centimeter ( $\mu\text{W}/\text{cm}^2$ ), is the amount of energy emitted by the germicidal lamps. The dosage is expressed in microwatt-seconds per square centimeter ( $\mu\text{W sec}/\text{cm}^2$ ), which is equivalent to millijoules per square centimeter ( $\text{mJ}/\text{cm}^2$ ).

The operation of the **MEGATRON**<sup>®</sup> is as follows:

1. Water enters the stainless-steel disinfection chamber via the inlet and flows into the annular spaces between the quartz sleeves and the chamber wall.
2. Suspended microorganisms are exposed to germicidal ultraviolet rays emitted by the germicidal lamp.
3. A translucent Sight Port and status display indicator LEDs provide positive, visual indication of germicidal lamp operation.
4. A dual-action wiper mechanism facilitates routine cleaning of the quartz sleeves without disassembly or interruption of system operation. Available in manual or automatic programmable versions.
5. Water leaving the System is instantly ready for use. No further contact time is required.

## LIMITATION OF USE

The **MEGATRON**<sup>®</sup> is intended for the use with visually clear water—not colored, cloudy, or turbid. See “**WATER QUALITY REQUIREMENTS**” on the next page for recommended maximum concentration levels.

# WATER QUALITY REQUIREMENTS

Water quality plays a major role in the transmission of germicidal ultraviolet rays. It is recommended that the water does not exceed the following maximum concentration levels:

**Table 1 – Maximum Concentration Levels for Clear, Fresh Water Applications**

Turbidity	5 NTU
Manganese	0.05 mg/l
Total Suspended Solids	10 mg /l
pH:	6.5 – 9.5
Color:	None
Hardness	6 GPG or 102 ppm
Iron	0.3 mg/l
UV Transmission	80%
Operating Water Temperature	45°F–100°F

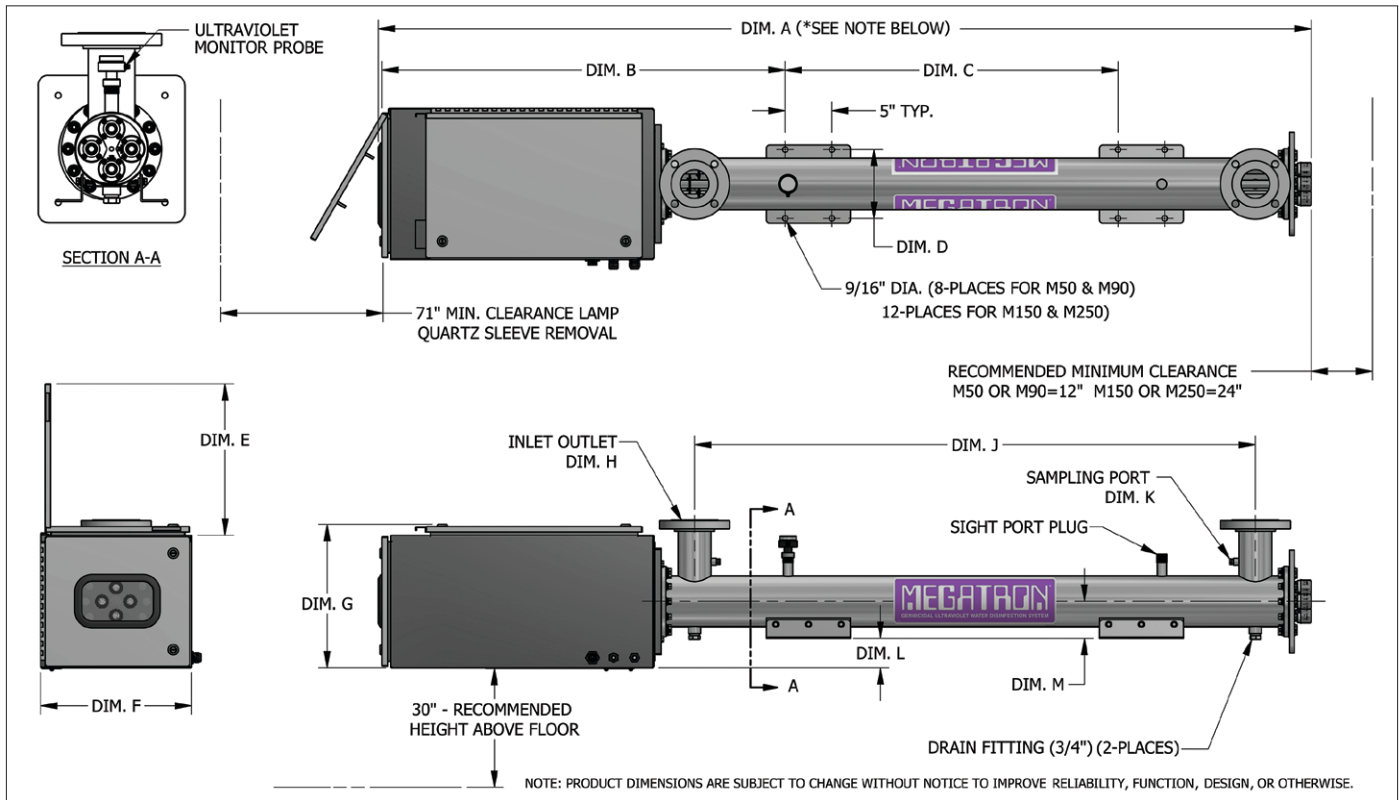
**Table 2 – Maximum Concentration Levels for Wastewater Applications**

Biological Oxygen Demand (BOD)	30 mg/l
Total Suspended Solids	30 mg/l
UV Transmission	65%
Operating Water Temperature	45°F–100°F

\* Effectively treating water with higher concentration levels than listed above can be accomplished but may require added measures to improve water quality to treatable levels.

# DIMENSIONAL DATA

**Figure 1 – MEGATRON® Dimensional Data**



**Table 1 – MEGATRON® Dimensional Data**

Model	DIM. A*	DIM. B	DIM. C	DIM. D	DIM. E	DIM. F	DIM. G	DIM. H	DIM. J	DIM. K	DIM. L	DIM. M
M50	99-3/4"	43-1/8"	35-5/8"	7-3/8"	16-3/16"	16-1/8"	15-5/16"	2" Male NPT OR 3" Weld Flange	60"	1/4" NPT	3-1/8"	4"
M90	99-3/4"	43-1/8"	35-5/8"	8-3/32"	16-3/16"	16-1/8"	15-5/16"	3" Weld Flange	60"	1/4" NPT	2-1/16"	5"
M150	99-3/4"	43-13/16"	39-1/8"	12-1/8"	19-5/8"	20"	17-7/8"	4" Weld Flange	58"	3/4" NPT	2-9/16"	5-7/8"
M250	101-5/8"	46-1/4"	38"	13-1/4"	20-7/8"	21-1/8"	23-1/8"	6" Weld Flange	55-7/8"	3/4" NPT	4-7/32"	6-7/8"

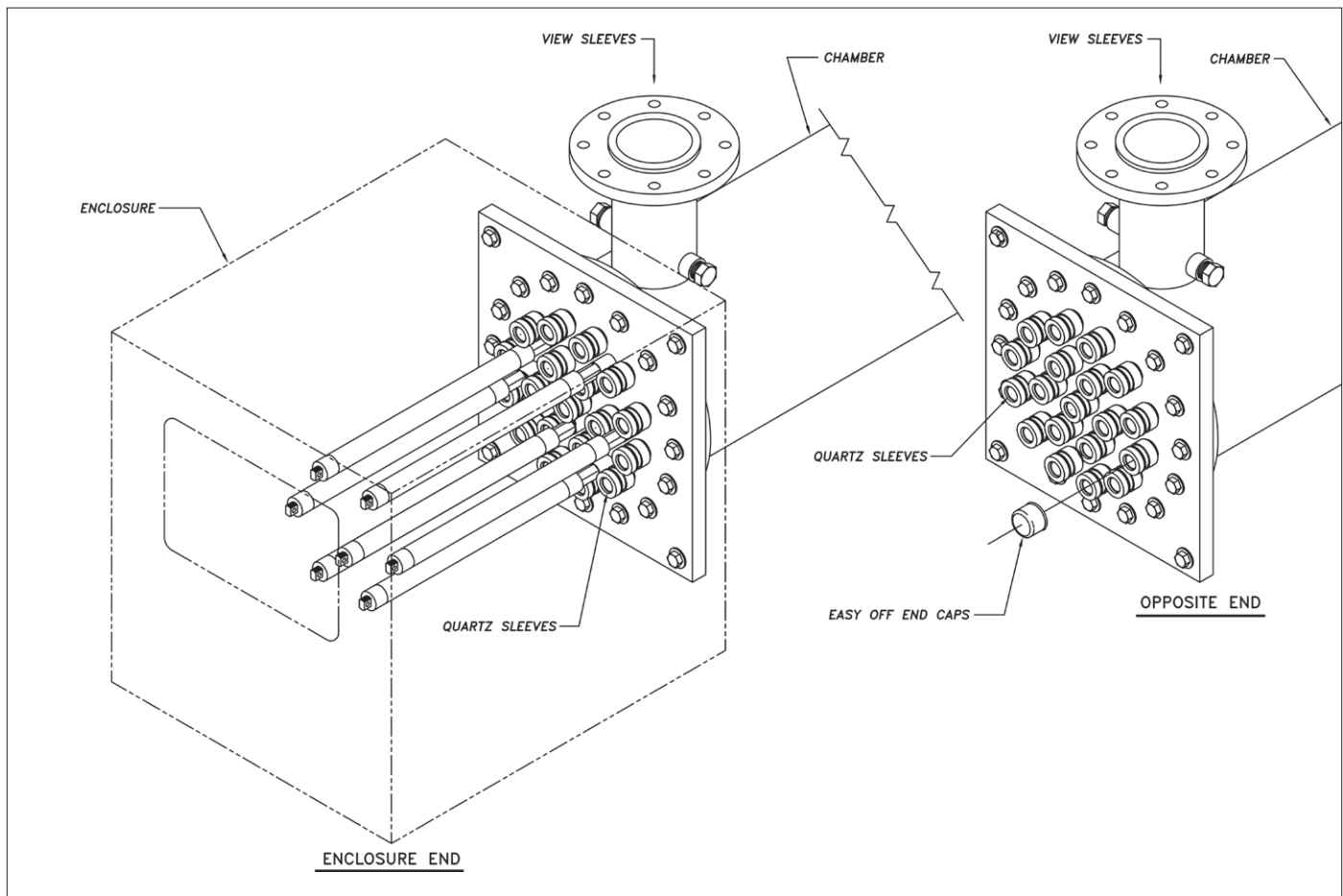
\*Add 7 Inches to Dimension "A" for Manual Wiper Models.

# INSTALLATION

1. Remove the **MEGATRON®** from its shipping crate. Inspect the Disinfection System, power cable, and plug for damage. Do not operate if there is any damage to the System, power cable, or plug. All lamps are packed separately, to ensure maximum protection to the lamps and quartz sleeves. Keep the lamps aside for installation once the System has been properly mounted. See “**Lamp Installation**” prior to the “**System Start-Up**” Section in this manual.
2. Systems occasionally experience damage in shipment due to the fragility of the quartz sleeves employed. It is therefore recommended to inspect the Disinfection System for damage to the quartz sleeves after it has been removed from the shipping crate. Each end of the System, as well as the inlet and outlet, should be viewed to see if the quartz sleeves have experienced damage. If the quartz sleeves show signs of damage, they should be replaced before the System is pressurized. See “**Quartz Sleeve Cleaning and Replacement**” in the “**Maintenance**” section for the proper method of replacing the quartz sleeves in your Disinfection System.

## UNIT INSPECTION

Figure 2 – MEGATRON® Unit Inspection\*



\*Automatic wiper version shown in the above diagram.

## UNIT PLACEMENT

The **MEGATRON®** is intended for indoor use only. However, it is capable of being installed outdoors, providing the unit is protected from the elements, direct sunlight, and from temperatures below freezing. **NOTE:** that the ambient temperature in the area surrounding the unit should be between 35°F and 100°F.

The **MEGATRON®** should be in a dry, well-lit area which provides enough room to perform routine maintenance. This includes a minimum height of 14 inches from the floor, with a preferred height of 30 inches, and approximately 71 inches clearance around at least one end of the unit, to allow for cleaning and/or changing of the lamps and quartz sleeves. See the “**Dimensional Data**” section on page 5 for all other recommended clearances.

The **MEGATRON®** is to be mounted horizontally on a secure footing capable of supporting two and a half times the Dry Weight listed in the “**Technical Specifications**” section of this manual. The unit should be level from front to back and right to left.

## ***PLUMBING***

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Connecting supply lines to and from the chamber should be supported, so that the chamber does not bear any load of the attached lines.

Shut-off valves should be installed on both the inlet and outlet sides of the unit. The shut-off valves allow the unit to be isolated from the water supply, which will be required when performing unit inspections or maintenance.

The chamber's inlet and outlet ports should be connected to the supply and delivery with the appropriate connections by a licensed plumber following state and local codes and guidelines. When making connections, be sure not to drop anything in the chamber that may damage the quartz sleeves and lamps or contaminate the chamber.

Drain lines should be directed to flow away from the unit to a free-flow, dedicated waste drain.

A sediment filter must be installed, in line, prior to the **MEGATRON®**. The sediment filter will stop or trap any large particles from entering the Disinfection System. Large particles can damage the quartz sleeves, as well as reduce the System's ability to disinfect the water. The sediment filter may also help to reduce the amount of routine quartz sleeve cleaning required. The size of the sediment filter will depend on the System's application:

- For High Purity Water, a 1-Micron or less filter is recommended.
- For Drinking Water, a 5-Micron filter is recommended.
- For Wastewater applications, a sand filter, or equivalent 25-Micron filter is recommended.

## ***POWER***

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**⚠ CAUTION** Unit should be connected to power by a licensed electrician following state and local codes and guidelines.

Power supplied to the **MEGATRON®** **MUST** match the power requirements listed on the system label of the unit.

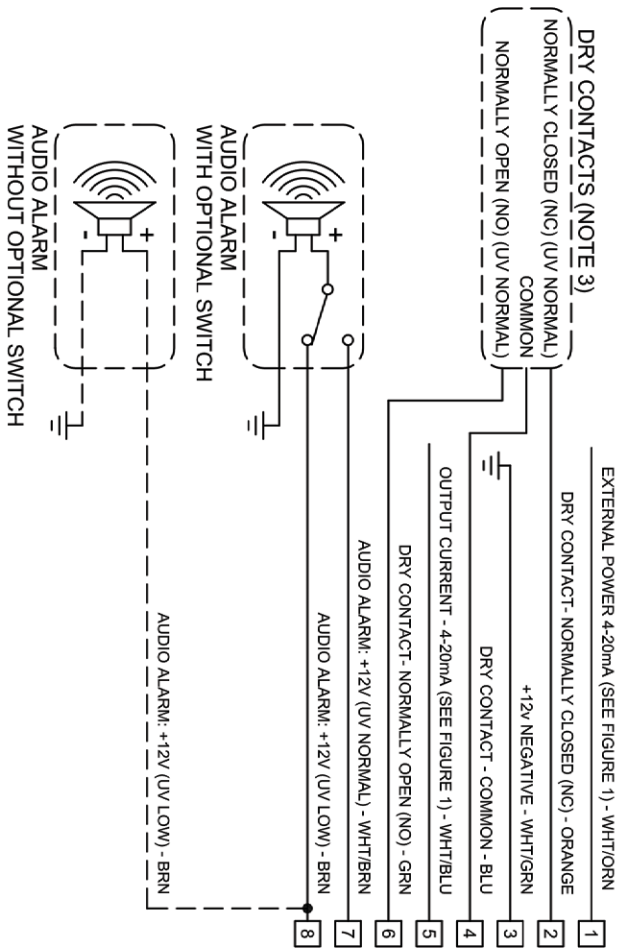
To protect the systems electronics, the use of a voltage surge protector is strongly recommended.

Power supplied to the **MEGATRON®** should be installed with an external power switch, sized correctly for the proper wire gauge size and amp ratings of the unit.

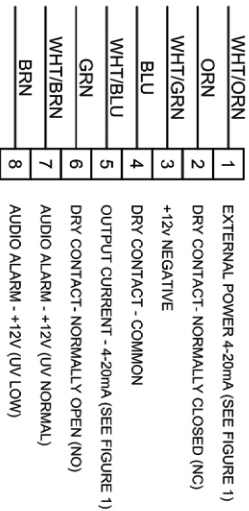
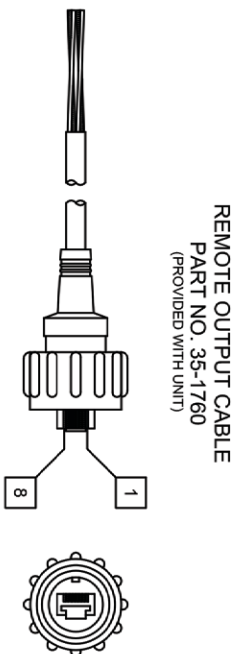
**“Installation” section continued on next page.**

# REMOTE OUTPUT CONNECTIONS

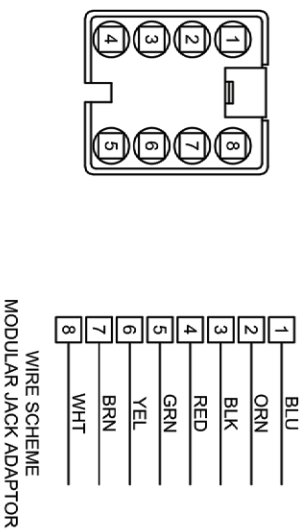
Figure 3 – MEGATRON® Remote Output Connections



- Notes:
1. REMOTE OUTPUT RATINGS (MAX.):  
 DRY CONTACTS: 50V AC OR DC, 100 mA  
 LOW-VOLTAGE ALARM: 12V DC 50mA
  2. UV NORMAL: ALL LAMPS OPERATING, ULTRAVIOLET INTENSITY ABOVE TRIP POINT, UV NORMAL INDICATOR LIT.
  3. DRY CONTACTS:  
 CLOSED: IF ALL LAMPS & LEDS ARE LIT.  
 OPEN: IF ANY LAMP IS NOT LIT OR IF MONITORED LAMP IS BELOW THE TRIP POINT.



MODULAR JACK ADAPTOR  
 PART NO. 30-0122  
 (OPTIONAL)

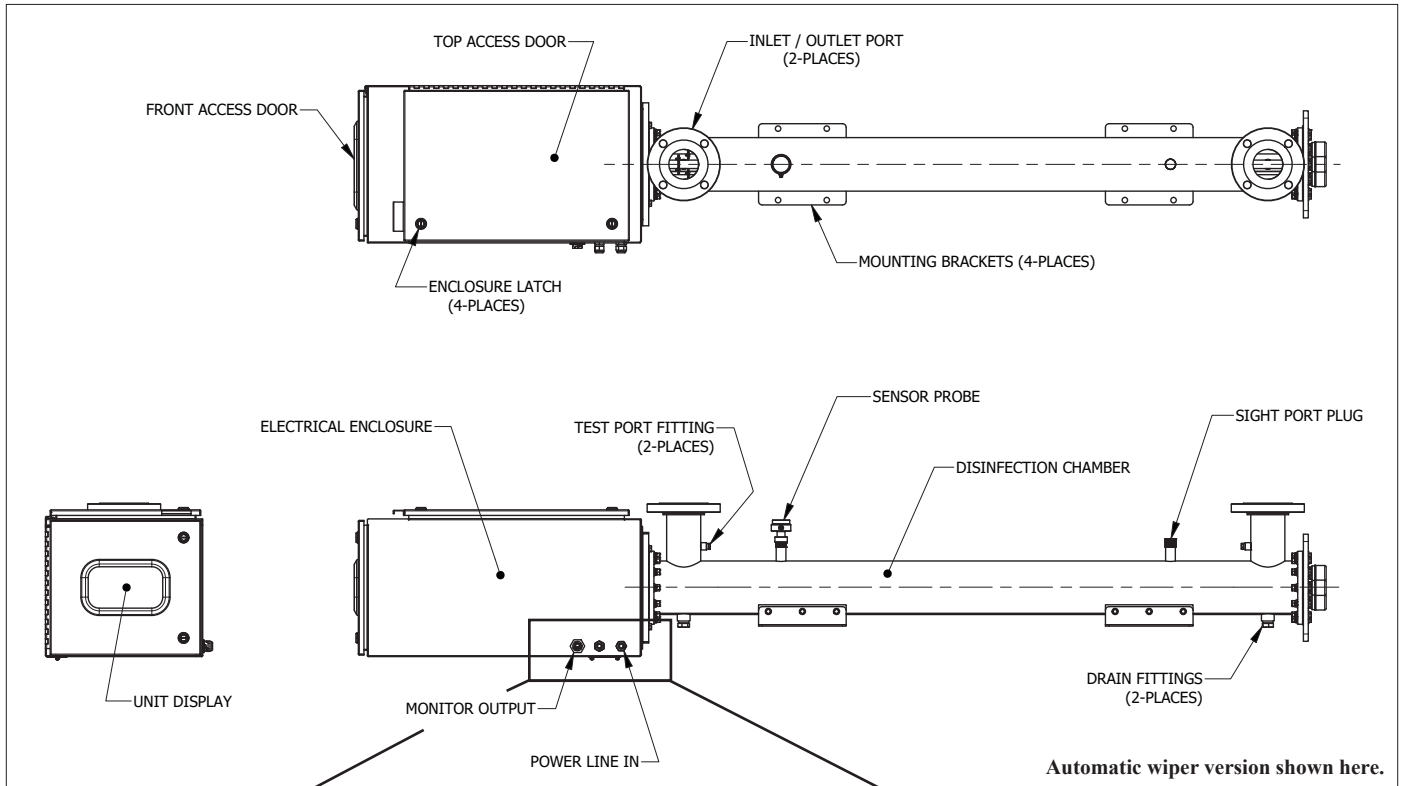




# SYSTEM OVERVIEW

## CHAMBER AND ELECTRICAL ENCLOSURE

Figure 4 – MEGATRON® Chamber and Electrical Enclosure Diagram



Closeup of Monitor Input and Power Line In



## FRONT PANEL FEATURES

Figure 5 – MEGATRON® Front Panel (Model Shown: M150 with Automatic Wiper)

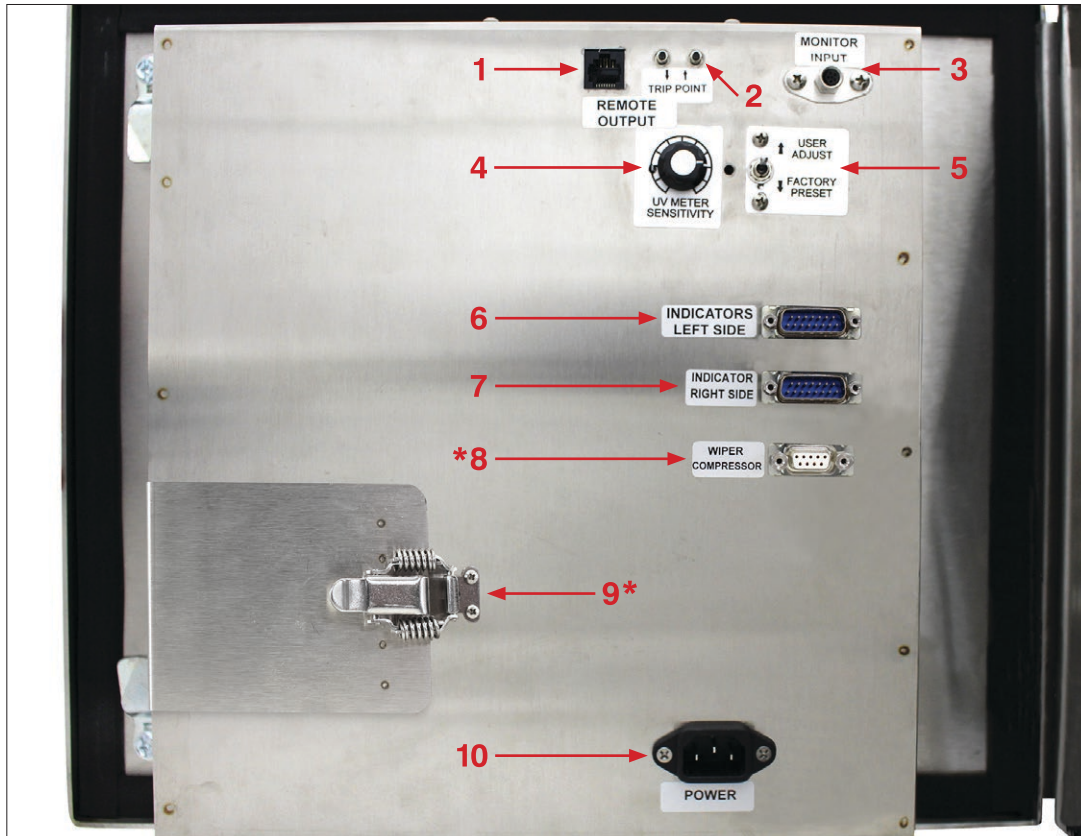


- 1. Lamp Out Indicators:** The LEDs position in the array relates to lamp position inside the chamber. When LEDs glow GREEN, it indicates the germicidal lamp is operating correctly. An off LED indicates the lamp or ballast has a fault.
- 2. Elapsed Time Indicator:** Displays operating time in hours for use in Maintenance Scheduling.
- 3. Wiper Cycle\*:** An optional feature. The LED glows YELLOW when the automatic quartz sleeve wiper is operating.
- 4. UV Intensity:** Visually provides the level of ultraviolet germicidal energy available after penetration of the quartz sleeve and liquid medium.
- 5. Monitor Indicators:** The green LED glowing indicates the level of germicidal ultraviolet energy available after penetration of the quartz sleeve and liquid medium is NORMAL. The red LED glowing indicates a FAULT. Additionally, these lights will switch from Green to Red when a lamp or ballast fails.
- 6. Wiper Programmer\*:** An optional feature. The programmable controller can be set to clean the unit's quartz sleeves 24/7 up to six times per day.

\*Features 3 and 6 ONLY on models with automatic wipers.

## REAR OF FRONT PANEL FEATURES

Figure 6 – MEGATRON® Rear of Front Panel (Model Shown: M150 with Automatic Wiper)



1. **Connector / Remote Output:** RJ45 Female connector which supplies an output corresponding to the UV Meter into a current between 4mA and 20mA. Also supplies a 12v DC/50mA output for a low voltage alarm and a SPDT dry contact output which also corresponds to Normal or Fault operation of the UV Meter.
2. **Trip Point:** Individual push buttons which increase or decrease the control trip point of the NORMAL and FAULT Monitor Indicators located on the front panel.
3. **Connector / UV Monitor Input:** This connector receives input from the Ultraviolet Sensor Probe mounted to the chamber.
4. **UV Meter Sensitivity:** Dial which controls the gain of the UV Intensity Meter located on the front panel.
5. **Switch: User Adjust / Factory Preset:** Allows customers to toggle between the Monitor Settings adjusted in the Factory or adjust the monitor to what they wish.
6. **Connector / Indicator LEFT SIDE:** This connector supplies the Lamp Out Indicators from the left side ballast tray.
7. **Connector / Indicator RIGHT SIDE:** This connector supplies the Lamp Out Indicators from the right side ballast tray.
8. **Connector / Wiper Compressor\*:** This connector supplies the compressor with power.
9. **Wiper Control Access Door\*:** Open to access the Automatic Wiper Controller.
10. **Connector / Power:** This connector supplies the front panel with power from the Power Distribution Panel.

\*Features 8 and 9 ONLY on models with automatic wipers.

## CLEANING QUARTZ SLEEVES

### OVERVIEW

Quartz sleeves which protect the germicidal lamps within your MEGATRON® need to be kept clean. Fouling on the quartz sleeves will hinder the germicidal lamps from accomplishing the task of disinfection by limiting the amount of energy allowed to pass into the medium being treated.

To accomplish this task, the MEGATRON® can employ either a manually or automatically operated quartz wiper system. Each system employs a series of small squeegee blades which wipe the quartz sleeve as the wiper is moved back and forth.

(Continued on Next Page)

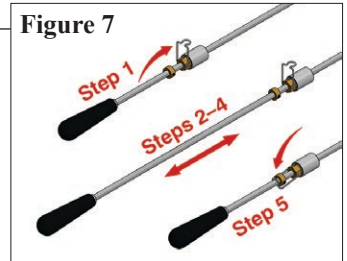
The simplest way to ensure that your quartz sleeves remain clean is to set your wiping cycle to wipe once a week. This method will normally work well on most applications. If your monitor continues to show a significant drop in UV output, or an increase in bacteria is shown in water tests, you can increase the wiping cycle to twice a week. This procedure can be repeated until the cycle time happens often enough that your monitor only indicates a small drop in intensity or acceptable bacteria count is shown in water tests. (For programming automatic wiper systems, refer to the “**Programming Wiper Controller**” section)

Another method is based upon your monitor intensity reading. This method suggests that your cycle time for wiping the quartz sleeves be set to roughly half the time it takes for a significant drop in the UV monitor. For example: If after a period of 96 hours the ultraviolet monitor drops into the red zone, your cycle time should be set to 48 hours. This method can also be checked with a water test to determine if the bacteria exiting the unit is at an acceptable level.

## MANUAL WIPER

Cleaning of the quartz sleeve with a manual wiper can be performed as often as required.

1. Snap Wiper lock up and away from the wiper rod (See Figure 7).
2. Grasp wiper handle and gently pull out, away from the **MEGATRON**® until it reaches its stop.
3. Push wiper back in, toward the **MEGATRON**® until it reaches its second stop.
4. Repeat steps 2 and 3 as necessary on each of the wipers present on your model.
5. Return the wiper back to its original starting place and snap the wiper lock back into place.



## PROGRAMMING AUTOMATIC WIPER CONTROLLER (FOR AUTO WIPER MODELS ONLY)

### 1. Set Clock

- a. While pressing and holding the Clock button:
  - Press the Day button until the correct day is displayed.
  - Press the Hour button until the correct hour is displayed.
  - Press the Minute button until the correct minute is displayed.

### 2. Programming Wiper (ALL WIPER CYCLE TIMES MUST BE SET TO OPERATE FOR 1 MINUTE ONLY.)

- a. Press Timer button: this will display the first wiper cycle as “1on”
- b. Press Day button to choose any of the 15 combinations of the daily wiper program.  
**NOTE:** Press and hold the Day button, and the display will cycle through the 15 combinations available.
- c. Press Hour button to set hour to program first “1on” wiper cycle.
- d. Press Minute button to set minute program “1on” wiper cycle.
- e. Press Timer button again to switch to first off wiper cycle displayed as “1off”
- f. Press Hour button to set hour to program first “1off” wiper cycle.
- g. Press Minute button to set minute to program first “1off” wiper cycle which must be 1 minute after 1on time.
- h. Repeat steps above if more than one wiper cycle is required per week.

### 3. Reviewing or Changing Programs

- a. Programs can be reviewed or changed at any time by pressing the Timer button. (Press Clock button to return to current time and day)

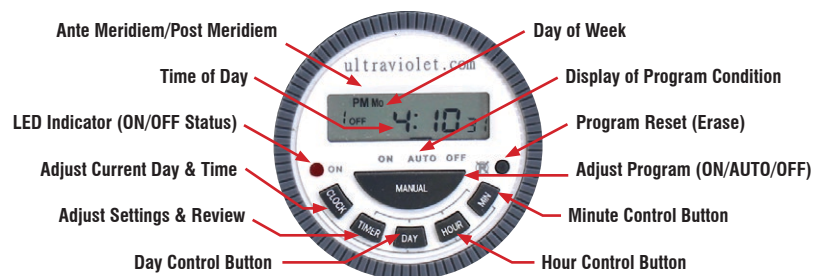
### 4. Canceling Program

- a. All programs, including day and hour indicators, can be deleted by pressing the Reset button.

### 5. Manual Wiper Operation

- a. The Manual button allows you to operate the wiper cycle at any time.
- b. This button has three positions: “ON” / “AUTO” / “OFF”
- c. “ON” Mode: Allows you to operate the wiper manually.
- d. “AUTO” Mode: Allows programs to function as scheduled.
- e. “OFF” Mode: Turns manual wiper off and suspends programs.

Figure 8 – MEGATRON® Wiper Controller



If the manual “ON” choice is selected, it must be switched to “OFF” after 1 minute. If the unit is left in the “ON” position, after 2-1/2 minutes the wiper cycle will automatically turn “OFF,” which may cause further disruption in the wiper operation. If this occurs, leave button in “OFF” position for a period of ten minutes before making any further selections.

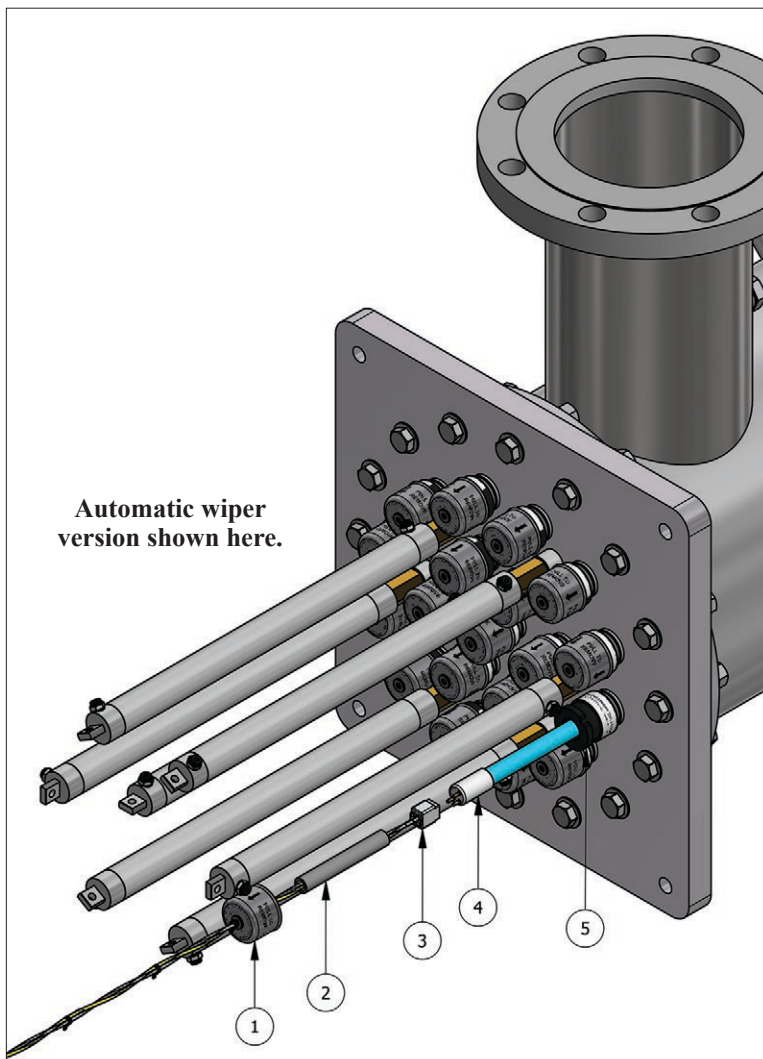
# LAMP INSTALLATION

**⚠ CAUTION** Lamp and quartz sleeve are easily damaged. Exercise care when handling.

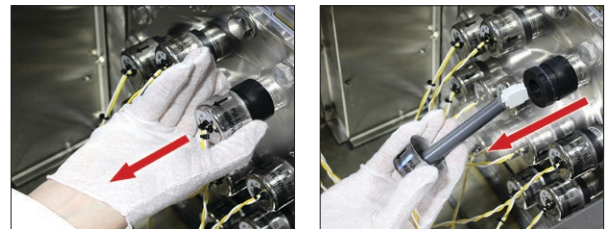
Lamps must be installed for the unit to operate. They are shipped outside of the unit to ensure maximum protection to the lamps and quartz sleeves. While lamps can be installed from either end of the unit, the pin end of the lamp must be facing towards the enclosure end of the unit.

1. Disconnect power to the unit.
2. Remove **EASY-OFF™** End Cap (Item 1) by pulling cap off static gland nut (Item 5). Remove the lamp lead assembly made up of three parts (Item 1, 2, and 3) from inside of the static gland nut (Item 5).
3. Within the center of the static gland nut (Item 5) is a quartz sleeve and the location where the lamps (Item 4) will reside. While holding the lamp (Item 4) parallel to the chamber, carefully install the non-pin end of the lamp into the end of the static gland nut (Item 5) and into the quartz sleeve. **Be careful not to angle the lamp while entering the sleeve.** Angling the lamp just a small amount could damage the quartz sleeve.
4. Push the lamp (Item 4) into the static gland nut (Item 5) until the lamp is protruding approximately 4 inches out from the end of the static gland nut (Item 5).
5. Carefully plug the corresponding lamp socket (Item 3) onto the end of the lamp (Item 4).
6. Next, carefully slide the lamp spacer (Item 2) and **EASY-OFF™** End Cap (Item 1) along the wire lead until they rest against the lamp socket (Item 3).
7. While supporting the lamp, socket, spacer, and **EASY-OFF™** End Cap (Items 1 thru 4), carefully slide the assembly of parts into the end of the static gland nut (Item 5) until the **EASY-OFF™** End Cap (Item 1) is secure on the static gland nut (Item 5).
8. Proceed until all lamps have been installed.

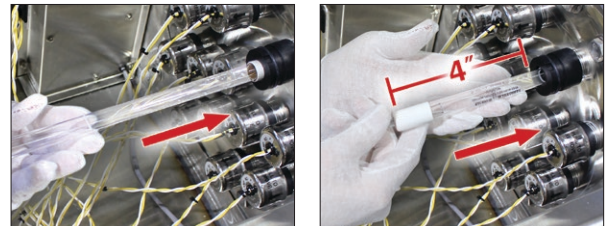
Figure 9 – MEGATRON® Lamp Installation



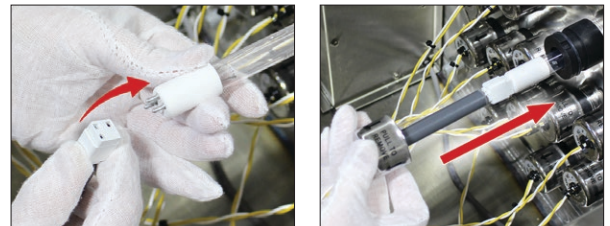
Step 2: Remove End Cap / Lamp Lead Assembly



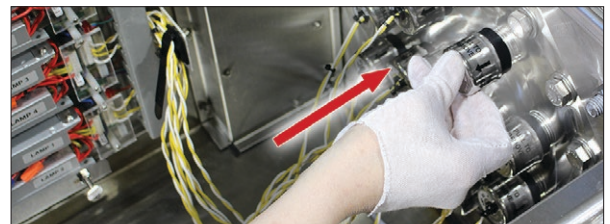
Steps 3 & 4: Carefully Insert Lamp



Steps 5 & 6: Plug In Socket / Slide Into Gland Nut



Step 7: Make End Cap Secure on Gland Nut



## SYSTEM START-UP

Where the MEGATRON® is being used on drinking or re-use water for consumption, it is recommended to disinfect the complete water system located downstream of the unit, including any holding tanks in the circuit. This is normally done by introducing chlorine or other disinfectant solutions into the circuit and allowing the disinfectant to remain in the plumbing for a minimum time of three hours, after which the water should be allowed to run until all solution is no longer detectable. A 100ppm solution of chlorine is recommended for this task. This process should be performed after start-up and repeated any time the unit is shut down for service, without power, or inoperative for any reason.

**⚠WARNING** Contaminants may hinder the unit's ability to produce an effective UV dose. Therefore, it is important to ensure all water entering the chamber meets water standards as listed in "Water Quality Requirements" on page 5.

When the unit receives its first flow of water, it is advisable to let water enter the unit at a low flow rate and be allowed to fill until the unit is pressurized. Bleed out any air that may have accumulated during this process. Once the unit is full with water and pressurized, a thorough inspection should be done of the chamber and plumbing to ensure no leaks are present. Power to the unit can now be switched on.

## GUARDIAN™ GERMICIDAL UV MONITOR SYSTEM

**NOTE:** All adjustments should be made to the Germicidal UV Monitoring System immediately after the MEGATRON® receives its first flow of water.

### OVERVIEW

The GUARDIAN™ Germicidal Ultraviolet Monitor (located in the MEGATRON® Rear Front Panel) visually indicates the level of germicidal ultraviolet energy that penetrates the quartz sleeve and liquid within the purifier. The monitor will detect reduction of ultraviolet levels due to:

- Fouling or deposits on the quartz sleeve.
- Fouling or deposits on the face of the sensor probe quartz rod.
- Poor germicidal ultraviolet transmission through the liquid. **NOTE: Color, turbidity, and organic or other impurities in the liquid can reduce or interfere with the transmission of ultraviolet rays.**
- Lamp outage, or depreciation of the lamp output. **NOTE: Germicidal UV lamp output gradually depreciates with use.**

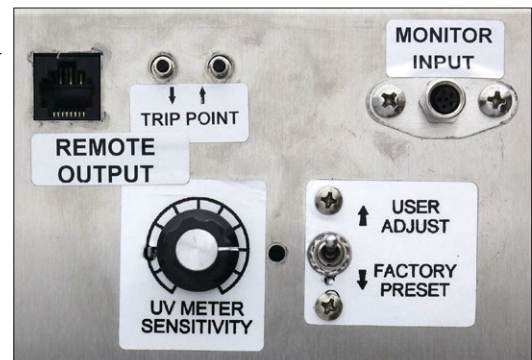
### ADJUSTMENT PROCEDURE

**NOTE:** The Control Panel shown above is located on the Rear Cover of the Front Panel inside the MEGATRON® electrical enclosure.

**⚠WARNING** Since the unit needs to be in full operation with the power on to make adjustments, proper precautions should be taken to not enter further into the electrical enclosure while the unit is powered on.

1. With the MEGATRON® receiving its first flow of water and the unit powered on, toggle the switch to the "USER ADJUST" position.
2. Rotate the "UV METER SENSITIVITY" knob until the ultraviolet intensity meter located on the MEGATRON® front panel reads approximately (100). **NOTE:** The number chosen represents an arbitrary point and does not reflect actual UV output.
3. Next, you will need to determine the current value of the Trip Point. This can be done by pushing and releasing any one of the "TRIP POINT" buttons. The value will appear on the ultraviolet intensity meter located on the MEGATRON® front panel.
4. Press and hold either the Up or Down Arrow buttons to set the desired Trip Point. Generally, we recommend using a value (25) or (30) numbers below the selected UV Meter Sensitivity number. The trip point is site-specific and contingent on the water quality passing through the MEGATRON®.
  - a. Over time, the quartz sleeves can become fouled and the MEGATRON® UV Meter Sensitivity value will lower. When the value reaches the Trip Point, the LED indicator on the front panel will switch from glowing GREEN (NORMAL) to glowing RED (FAULT).
  - b. In most cases, the Trip Points can be adjusted to allow for a greater drop in the ultraviolet intensity meter before quartz sleeve cleaning is required. A water test to determine total bacteria counts should be used to ensure these settings correlate with your expected results.
5. After making the adjustments to the UV Meter Sensitivity and Trip Points, record the settings in **Table 2** on the next page for future reference.

Figure 10 – UV Monitoring System  
(Located in Unit's Rear Front Panel)



## ***INITIAL USER'S SETTINGS CHART***

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**Table 2 – MEGATRON® Initial User Settings**

<b>Date</b>	<b>Time</b>	<b>UV Meter Setting</b>	<b>UV Indicator Setting</b>	<b>Notes</b>

**NOTE:** The toggle switch must be left in the “USER ADJUST” position for the system to operate under the new setting. Returning the toggle switch to the “FACTORY PRESET” will return the system to factory settings. However, in doing so the adjustments made under the “USER ADJUST” position will not be lost, providing the UV METER SENSITIVITY knob or TRIP POINT buttons are not disturbed.

### ***DIGITAL GUARDIAN™ MONITORS MODULAR REMOTE OPTIONS (SEE PAGE 8, FIG. 3)***

The Digital **GUARDIAN™** Germicidal Ultraviolet Monitors are capable of supplying outputs for remote monitoring of the water purifier’s operation. An RJ45 connector, located on the **MEGATRON®** Rear Front Panel, is provided to access these outputs. See **Figure 3 on Page 8 for diagrams of these options.** An RJ45 cable is required to interconnect between the Germicidal Ultraviolet Monitor and the remote monitoring devices. An RJ45 modular jack adapter might be needed to interconnect the RJ45 cable and a remote monitoring device. The RJ45 cable and modular jack adapter are not supplied and can be obtained from the factory. Contact the factory with specific requirements.

### ***AVAILABLE OUTPUTS FOR THE GUARDIAN™ DIGITAL MONITOR RJ45 CONNECTOR (AS SHOWN IN FIGURE 3 ON PAGE 8)***

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#### **4–20MA OUTPUT**

The 4–20mA output supplies an output corresponding to the intensity meter, converted to a current between 4 and 20mA. The output is unaffected by reasonable line resistances, but the output must be displayed by a PLC, computer, or 4–20mA meter which can interpret the signal. A 4mA output will be displayed as 0% germicidal ultraviolet intensity and 20mA will be displayed as 102%.

#### **DRY CONTACTS**

The Dry Contact output provides a Single Pole Double Throw (SPDT) output corresponding to the “NORMAL” or “LOW” intensity of the germicidal lamp. The contacts are rated at 50v 100mA maximum.

- “Common” will connect to “Pin 2” when the display value is above the trip set point and the green “NORMAL” indicator LED is lit.
- “Common” will connect to “Pin 6” when the display value is below the trip set point and the red “LOW” indicator LED is lit.

#### **LOW-VOLTAGE PROMATE™ AUDIO ALARM**

A 12v DC 100mA maximum output is provided to power a low-voltage audio alarm. An optional Single Pole Double Throw (SPDT) switch can be installed with the low-voltage **Promate™** Audio Alarm in a way that allows the audio alarm to be silenced during an alarm condition. The audio alarm will sound again when the normal condition is restored; this prevents the alarm from being accidentally disabled by the switch.

# MAINTENANCE

## LAMP REPLACEMENT

**Overview:** Lamp replacement is recommended every 10,000 hours of operation (approximately 12 months of continuous service). It is recommended that the lamps remain on continuously, since the cycling of the lamps may reduce their operating life.



**IN ORDER TO PERFORM THIS TASK, BE SURE TO WEAR THE FOLLOWING SAFETY EQUIPMENT: SAFETY GLASSES OR A FACE SHIELD, AS WELL AS GLOVES.**

**⚠ WARNING** Always disconnect power to the MEGATRON® before performing any service or maintenance.

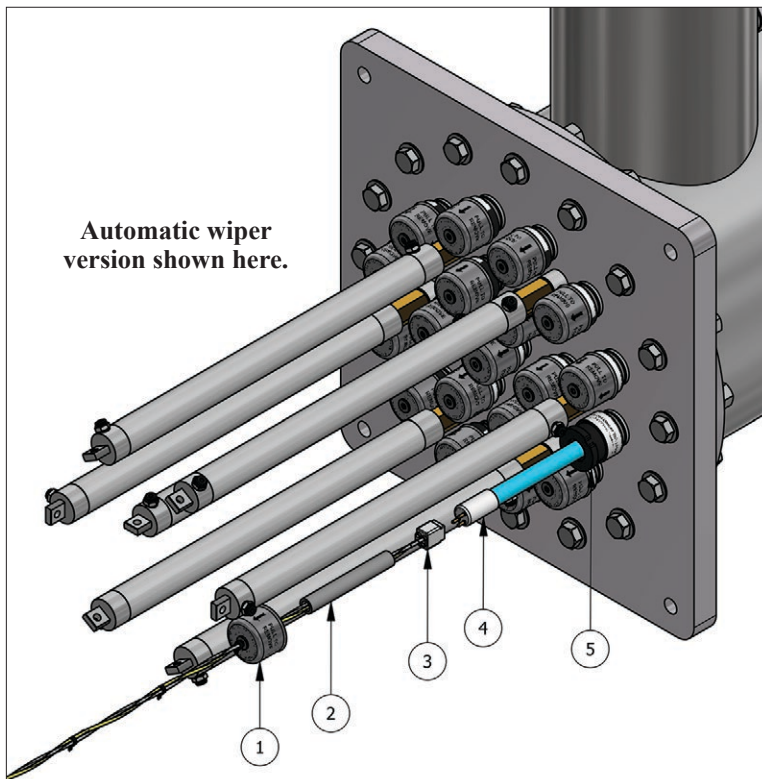
**⚠ WARNING** Germicidal ultraviolet rays are harmful to eyes and skin. Do not restore power to the unit until lamp (Item 4) and EASY-OFF™ End Caps have been properly installed.

1. Disconnect power to the unit.
2. Remove EASY-OFF™ End Cap (Item 1) by pulling cap off static gland nut (Item 5). Slide end cap (Item 1) along the wire away from the socket (Item 3).
3. Carefully withdraw lamp (Item 4) approximately 4 inches from the chamber. While holding the lamp end (Item 4), carefully remove the lamp socket (Item 3) from the lamp.
4. Next, carefully withdraw the lamp (Item 4) from the chamber. **Be sure to withdraw the lamp straight out without angling until the lamp is completely clear of the quartz sleeve.**

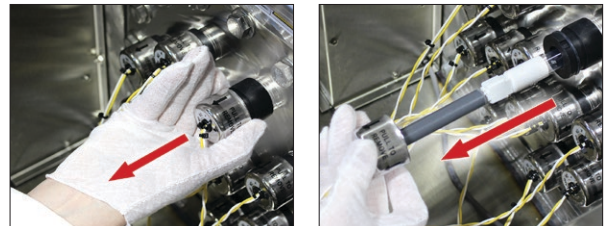
**⚠ CAUTION** Lamp and quartz sleeve are easily damaged. Exercise care when handling.

5. Reassemble in reverse order.

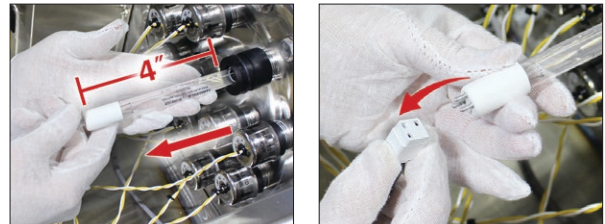
Figure 12 – MEGATRON® Lamp Replacement



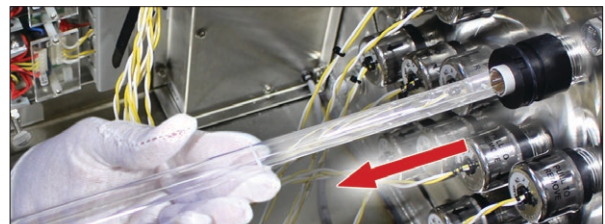
Step 2: Remove End Cap & Slide Away From Socket



Step 3: Remove Lamp 4" / Remove Lamp Socket



Step 4: Carefully Remove Lamp Completely



## LAMP BREAKAGE

**⚠ CAUTION** Broken Quartz is **SHARP**.



**Wear protective gloves when handling broken ultraviolet lamps. In the event of breakage, DO NOT use a household vacuum cleaner to pick up fragments of the lamp. Sweep up debris into a plastic bag and dispose of in accordance with local and/or state regulations.**



## DISPOSAL OF MERCURY ADDED LAMPS



Germicidal ultraviolet lamps, like standard fluorescent lamps contain small amounts of mercury. Mercury added lamps should not be placed in the trash. Dispose of properly. For further information regarding the disposal and recycling of lamps containing mercury, along with Federal and State requirements visit [LampRecycle.org](http://LampRecycle.org). For more information on **STER-L-RAY**<sup>®</sup> Germicidal Ultraviolet Lamps, visit [AtlanticUltraviolet.com](http://AtlanticUltraviolet.com) or [Ultraviolet.com](http://Ultraviolet.com).

## QUARTZ SLEEVE CLEANING & REPLACEMENT

**Overview:** The quartz sleeves need to be cleaned routinely to remove any deposits or discoloration, which may hinder the ability of the ultraviolet radiation to pass through the quartz sleeves into the liquid medium.

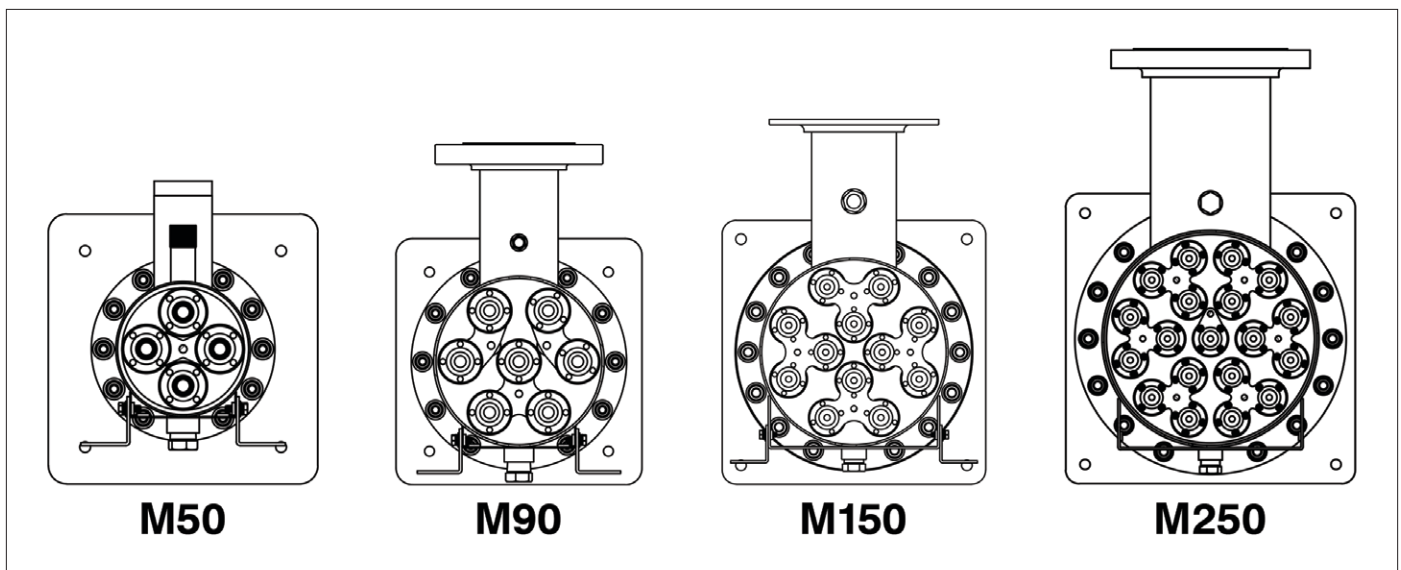
**⚠ WARNING** We recommend only one quartz sleeve be removed at a time. Multiple sleeves can be removed, providing the quartz sleeve installation tool (PN# 25-1013A) is used. This tool is used to provide support for the quartz sleeve wipers. Model M250 requires an additional tool (PN# 25-1329A) for the single center quartz sleeve. **NOTE:** Tools are included and shipped with the unit. Each unit contains a cluster of wipers. Model M50 has (1), model M90 has (3), model M150 has (4) and Model M250 has (7). See the diagram below showing the clusters. When pulling all sleeves from the same cluster, the tool must be inserted in place of a removed quartz sleeve to ensure the wiper cluster does not drop into the chamber. For M250 center single sleeve, insert tool 25-1329A into sleeve before removing.



**IN ORDER TO PERFORM THIS TASK, BE SURE TO WEAR THE FOLLOWING SAFETY EQUIPMENT: SAFETY GLASSES OR A FACE SHIELD, AS WELL AS GLOVES.**

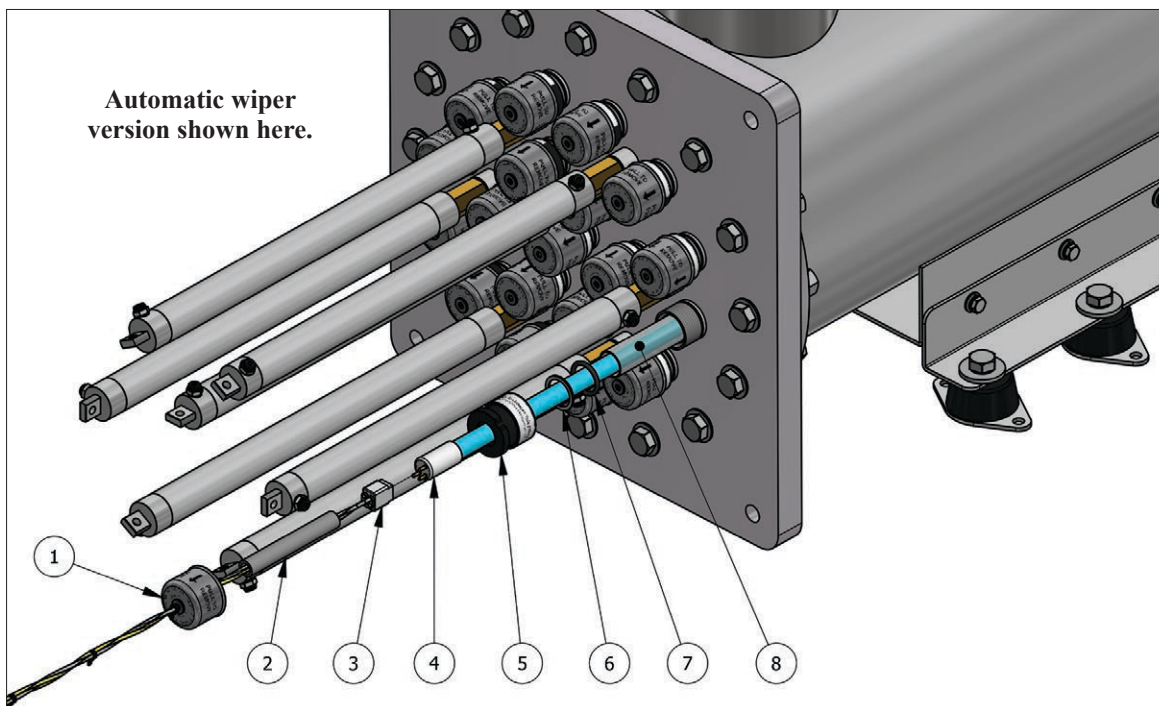
**⚠ WARNING** Always disconnect power to the MEGATRON<sup>®</sup> before performing any service or maintenance.

Figure 13 – MEGATRON<sup>®</sup> Quartz Sleeve Arrangements by Model



“Quartz Sleeve Cleaning & Replacement” section continued on next page.

Figure 14 – MEGATRON® Quartz Sleeve Cleaning and Replacement



1. Disconnect power to the unit and shut off water inlet and outlet valves.
2. Drain chamber of all water by removing the two drain fittings located on the underside of the chamber. Once the chamber is completely drained, remove any old sealing tape from the threads of the drain plugs, rewrap with 1/2" wide Teflon® thread sealing tape, and reinstall both drain plugs.
3. Remove **EASY-OFF™** End Cap (Item 1) by pulling cap off static gland nut (Item 5). Slide end cap (Item 1) along the wire away from the socket (Item 3).
4. Carefully withdraw lamp (Item 4) approximately 4 inches from the chamber. While holding the lamp end (Item 4), carefully remove the lamp socket (Item 3) from the lamp.
5. Next, carefully withdraw the lamp (Item 4) from the chamber. **Be sure to withdraw the lamp straight out without angling until the lamp is completely clear of the quartz sleeve (Item 8).**

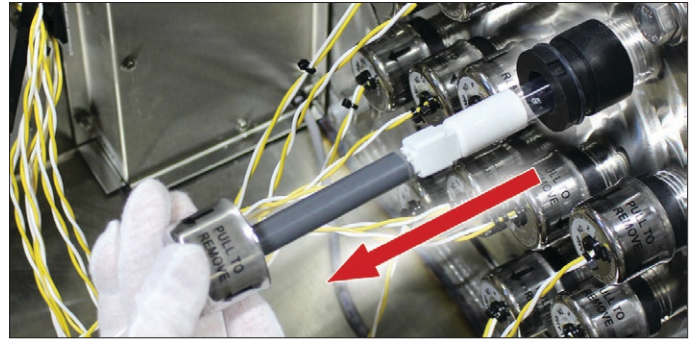
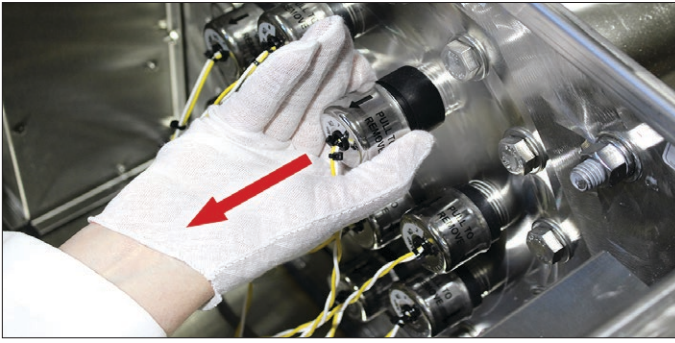
**CAUTION** Lamp and quartz sleeve are easily damaged. Exercise care when handling.

6. Remove **EASY-OFF™** End Cap (Item 1) on the opposite end of the chamber by pulling off static gland nut (Item 5).
7. Unscrew static gland nut (Item 5) from each end of the chamber using the supplied static gland nut wrench (PN# 25-1421A) or by hand. Then carefully remove Teflon® washers (Item 6) and O-Rings (Item 7) from both ends of the quartz sleeve (Item 8). **NOTE:** The Teflon® washers (Item 6) will sometimes remain within the static gland nut. If so, remove Teflon® washers from static gland nuts (Item 5) before proceeding.

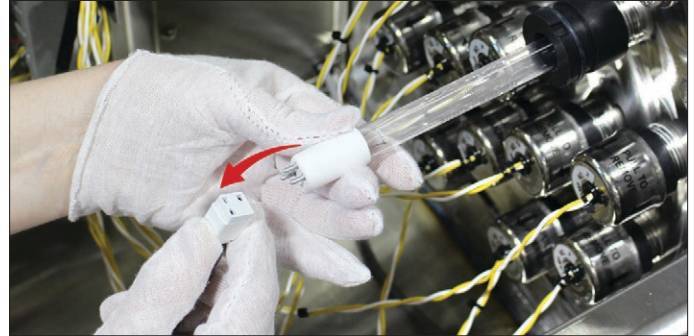
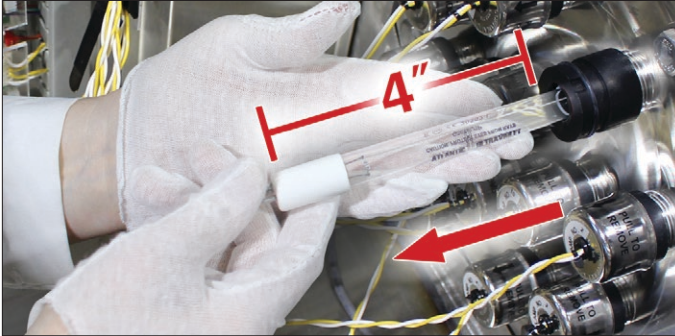
**NOTE:** It is recommended to complete this next step with an extra set of hands to support the quartz sleeve on the opposite end as it is withdrawn from the chamber.

8. Carefully remove the quartz sleeve (Item 8) from the chamber. It is advisable to support the quartz sleeve on the opposite end with a finger so that it does not strike or drop to the bottom of the chamber as it is withdrawn. Rotating the quartz sleeve as it is withdrawn from the chamber can aid in the removal, since the quartz sleeve needs to slip out of the multiple wiper blades inside the chamber. Once the quartz sleeve is removed, clean with alcohol or a detergent. Stubborn stains usually can be removed with a dilute hydrochloric acid. **NOTE:** Follow all manufacturer's instructions and precautions when handling chemicals.
9. Reassemble in the reverse order. Rotate the quartz sleeve (Item 8) if needed as it is inserted. Be sure O-Rings (Item 7) are replaced on quartz sleeve (Item 8) before Teflon® washers (Item 6). The quartz sleeve (Item 8) should be centered in the chamber. This can be checked by making sure that the quartz sleeve protrudes an equal distance past each end of the chamber's threaded nipples.
10. Use static gland nut wrench (PN# 25-1421A) and tighten static gland nuts (Item 5) firmly.
11. Slowly restore the water supply to the chamber and check for leaks.
12. If no leaks occur, reinstall lamps following the steps in "**Lamp Installation or Replacement**" section.

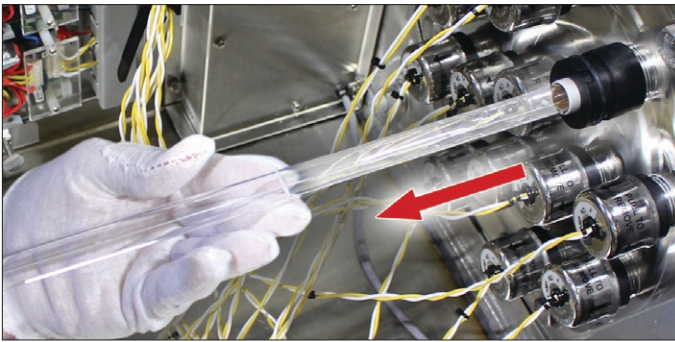
**Step 3: Remove End Cap & Slide Away From Socket**



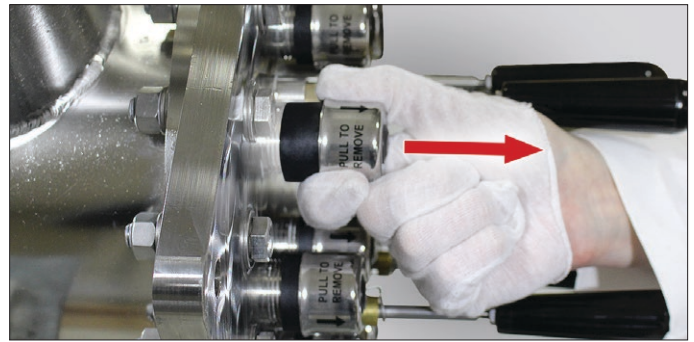
**Step 4: Withdraw Lamp 4" From Chamber / Remove Lamp Socket From Lamp**



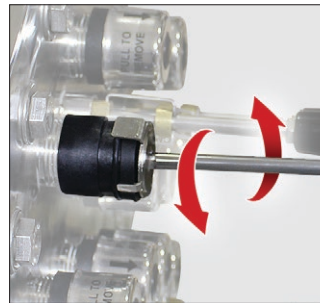
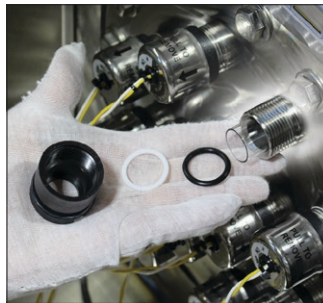
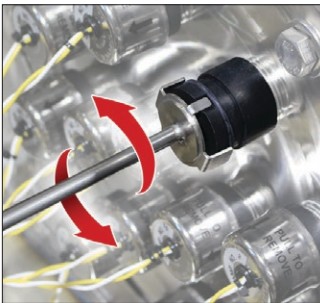
**Step 5: Carefully Remove Lamp Completely From Chamber**



**Step 6: Remove End Cap on Other Side of Chamber**



**Step 7: Unscrew Static Gland Nut From Each Chamber End / Remove Teflon® Washers and O-Rings From Each End**



**Step 8: With One Person Supporting Quartz Sleeve with a Finger, Have Other Person Carefully Remove Quartz Sleeve**



## ***CLEANING OF THE GUARDIAN™ GERMICIDAL UV MONITOR SENSOR PROBE***

**Overview:** The Ultraviolet Monitor Sensor Probe needs to be cleaned to remove any deposits or discoloration, which may hinder the ability of ultraviolet radiation to pass into the sensor. This task should be completed anytime the Quartz Sleeve cleaning is performed.

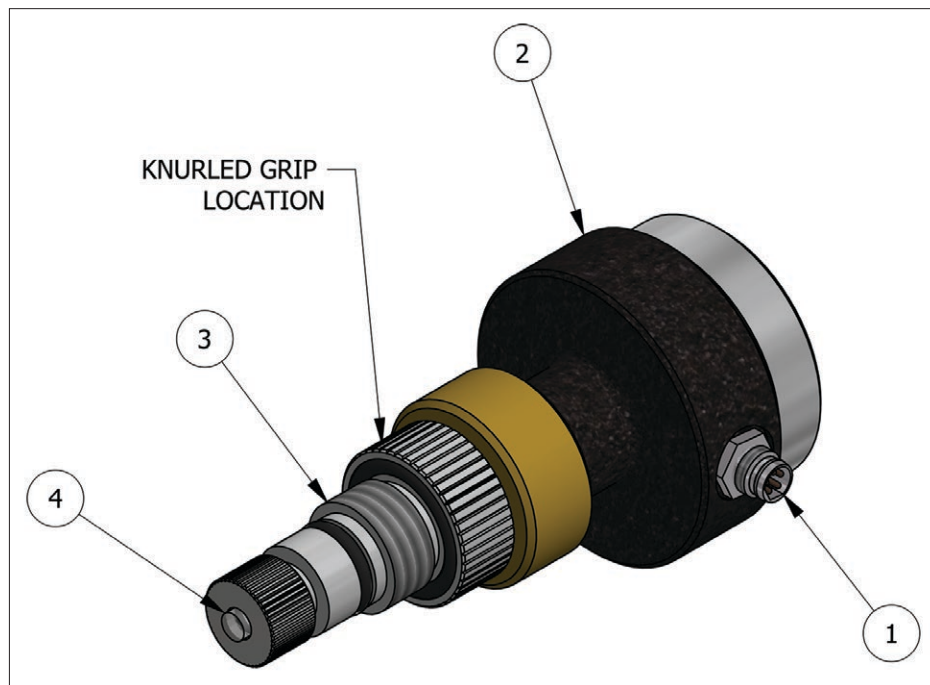


**IN ORDER TO PERFORM THIS TASK, BE SURE TO WEAR THE FOLLOWING SAFETY EQUIPMENT: SAFETY GLASSES OR A FACE SHIELD, AS WELL AS GLOVES.**

**⚠ WARNING** Always disconnect power to the MEGATRON® before performing any service or maintenance.

1. Disconnect power to the unit and shut off water inlet and outlet valves.
2. Drain chamber of all water by removing the two drain fittings located on the underside of the chamber. Once the chamber is completely drained, remove any old sealing tape from the threads of the drain plugs, rewrap with 1/2" wide Teflon® thread sealing tape and reinstall both drain plugs.

**Figure 15 – Germicidal UV Monitor Sensor Probe**



3. Disconnect the probe cable from the sensor probe at connector (Item 1).
4. Using the knurl grip, loosen the probe body from the chamber and remove the entire assembly (Items 1, 2, 3 & 4) from the side of the chamber.

**⚠ WARNING** The nose of the sensor probe body has a small quartz rod which protrudes out from the body. Be careful not to strike this end of the sensor probe on any object since it is easily damaged.

5. Once the probe assembly is removed, clean the probe body of any dirt that may be attached to it. Using a cotton swab and alcohol, clean the end of the protruding quartz rod, making sure no staining or film is left behind on its face.
6. Reassemble in reverse order and reinstall into the chamber.
7. Slowly restore the water supply to the chamber and check for leaks.
8. Restore power to the disinfection system.
9. Allow the system to warm up for approximately 10 minutes before making any adjustments to the UV monitor.

## REPLACING THE GERMICIDAL UV MONITOR SENSOR PROBE QUARTZ ROD

**Overview:** Replacement of the quartz rod is warranted any time the rod is damaged. This can be important since damage to the quartz rod may cause leaking of water into the sensor probe which could lead to permanent damage of this component. Therefore, this task should be completed if any striking of the quartz rod has occurred during routine cleaning of the sensor probe.

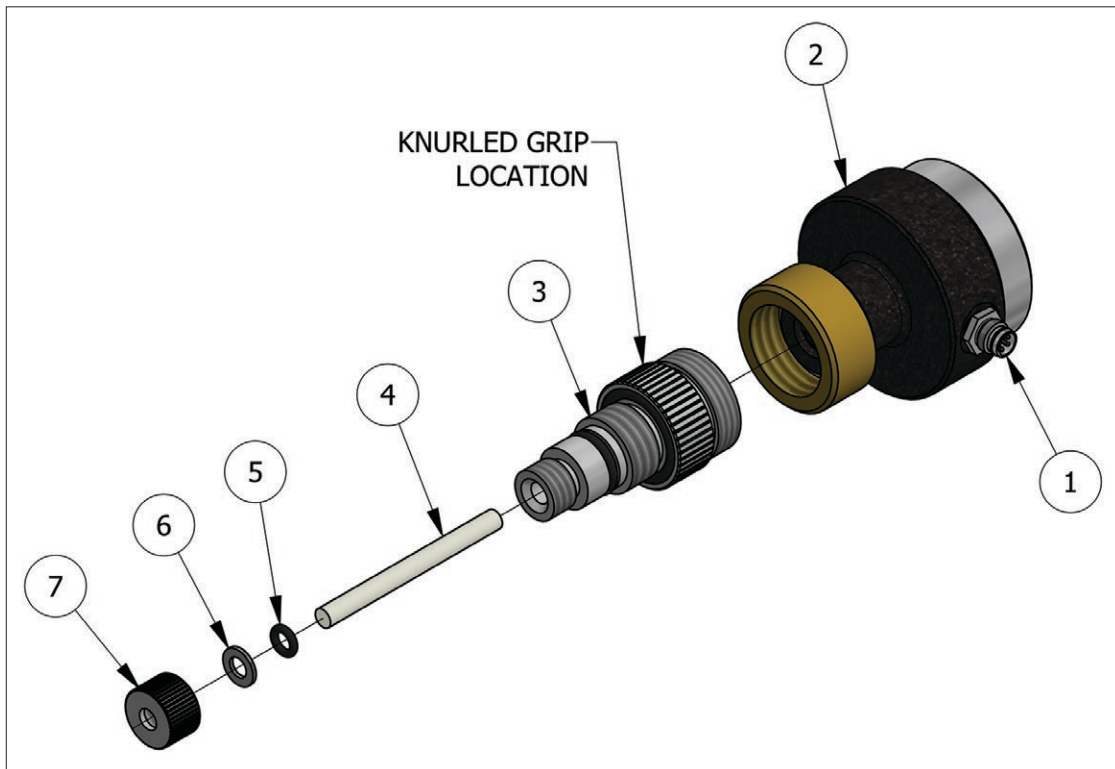


**IN ORDER TO PERFORM THIS TASK, BE SURE TO WEAR THE FOLLOWING SAFETY EQUIPMENT: SAFETY GLASSES OR A FACE SHIELD, AS WELL AS GLOVES.**

**⚠ WARNING** Always disconnect power to the MEGATRON® before performing any service or maintenance.

1. Disconnect power to the unit and shut off water inlet and outlet valves.
2. Drain chamber of all water by removing the two drain fittings located on the underside of the chamber. Once the chamber is completely drained, remove any old sealing tape from the threads of the drain plugs, rewrap with 1/2" wide Teflon® thread sealing tape, and reinstall both drain plugs.

Figure 16 – Cleaning the Germicidal UV Monitor Sensor Probe



3. Disconnect the probe cable from the sensor probe at connector (Item 1).
4. Using the knurl grip, loosen the probe body from the chamber and remove the entire assembly (Items 1 thru 7) from the side of the chamber.

**⚠ WARNING** The nose of the sensor probe body has a small quartz rod which protrudes out from the body. Be careful not to strike this end of the sensor probe on any object since it is easily damaged.

5. Once the probe assembly is removed, clean the probe body of any dirt that may be attached to it. Loosen the sensor probe cap (Item 7). Remove backup washer (Item 6), O-Ring (Item 5), and quartz rod (Item 4) from assembly. Replace both the O-Ring (Item 5) and quartz rod (Item 4) with new factory-supplied components.
6. Reassemble all parts in the same order, making sure the quartz rod (Item 4) is gently sealed against the rear of the probe body (Item 3) and that the O-Ring (Item 5) seats correctly against the nose of the probe body (Item 3).
7. Tighten the sensor probe cap (Item 7) by hand only.
8. Reinstall the sensor probe assembly (Items 1 thru 7) back into the chamber.
9. Slowly restore the water supply to the chamber and check for leaks.
10. Restore power to the disinfection system.
11. Allow the system to warm up for approximately 10 minutes before making any adjustments to the UV monitor.

## ***CLEANING AND/OR REPLACING THE INTAKE FILTER***

**Overview:** Cleaning of the air intake filter is generally based on visual inspection. The period between cleanings will vary with the conditions surrounding each system's installation. It is recommended that the filter be cleaned at least once every three months.



**IN ORDER TO PERFORM THIS TASK, BE SURE TO WEAR THE FOLLOWING SAFETY EQUIPMENT: SAFETY GLASSES OR A FACE SHIELD, AS WELL AS GLOVES.**

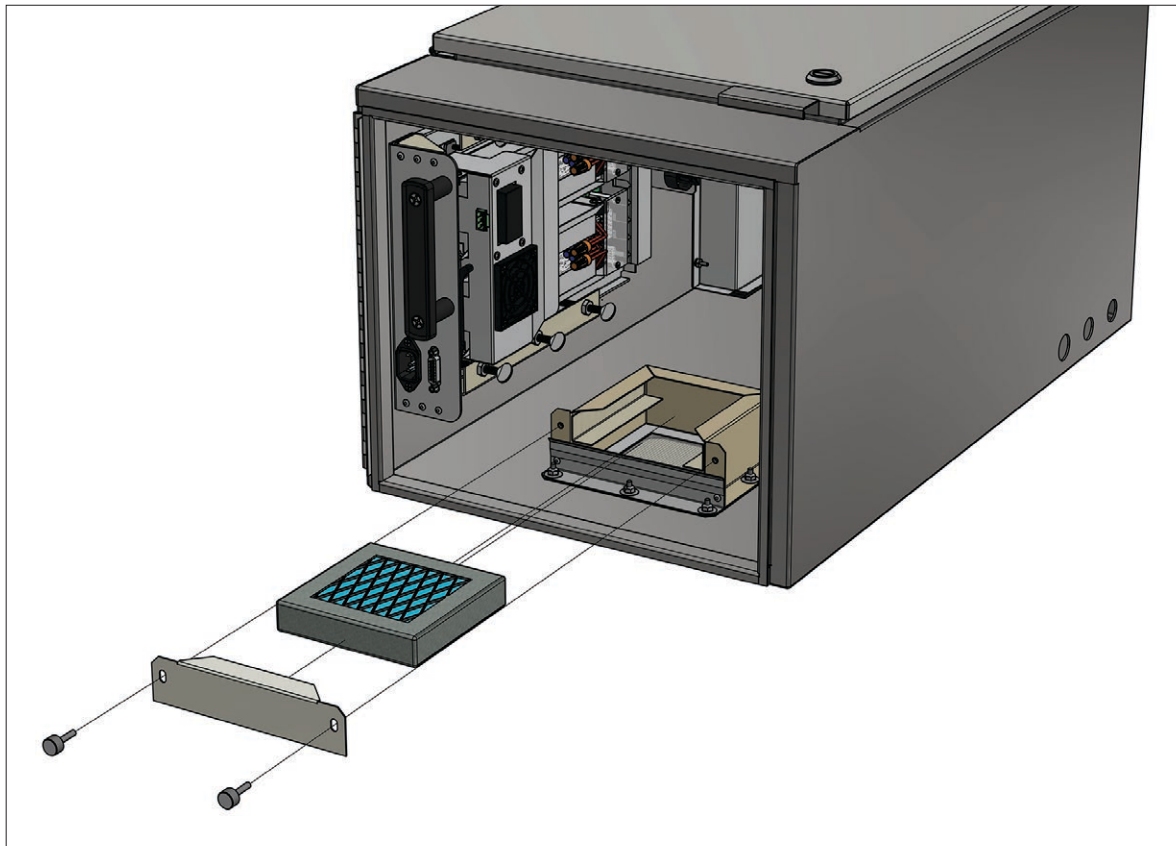
**⚠ WARNING** Always disconnect power to the MEGATRON® before performing any service or maintenance.

All MEGATRON® models are all fitted with one removable, washable, electrostatic air filter to protect incoming cooling air to the unit. **DO NOT** apply oil or adhesive sprays to the filter.

In most applications, regular vacuuming will maintain peak performance; periodically flushing filter with clean water is recommended whenever vacuuming fails to restore a clean appearance. Filter(s) may be cleaned repeatedly without loss of efficiency. The frequency of cleaning will vary with the conditions surrounding each installation.

1. Disconnect power to the unit.
2. Open the unit's electrical enclosure front door. Using a slotted flat-blade screwdriver, turn the quarter-turn fasteners.
3. Remove two thumb screws and filter face plate, and gently slide the filter out of the guides as shown below.
4. Once out of the unit, inspect for damage or voids in the filter's surface. The filter should be replaced if damage is found that would allow particles to pass into the unit.
5. Use a vacuum to remove any trapped dust or dirt. If vacuuming fails to thoroughly clean the filter, immerse the filter in soapy water followed by clean rinse water. Be careful not to use a strong spray from a hose or faucet that would disrupt the filter media. Allow the filter to completely dry before reinstalling into the unit.
6. Reinstall the filter into the unit and secure the filter face plate.
7. Close the electrical enclosure front door, securing the quarter-turn fasteners.
8. Restore power to the unit.

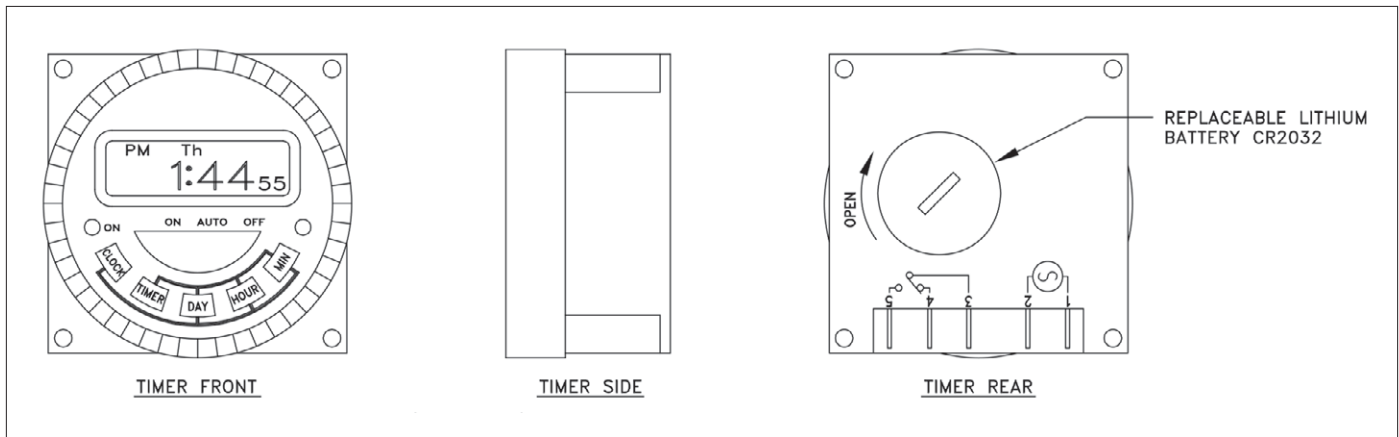
**Figure 17 – Cleaning / Replacing MEGATRON® Intake Filter**



## BATTERY REPLACEMENT ON THE AUTOMATIC WIPER CONTROLLER

Periodically, the battery in the automatic wiper controller needs to be replaced. This is likely the case when the device is still receiving power, yet no longer responds to selections or displays anything. If this is the case, replace the coin battery with a Lithium battery CR2032. See the diagram below for further details.

Figure 18 – Replacing the Automatic Wiper Controller Battery



## TECHNICAL SPECIFICATIONS

Table 3 – Technical Specifications

Model	Standard Inlet / Outlet	Number of Lamps	Power Requirements		Dry Weight
			120v	230v	
M50	2" Male NPT	4	4	2.5	168 lbs.
M90	3" Flange	7	5.5	3.0	208 lbs.
M150	4" Flange	12	8.5	4.5	436 lbs.
M250	6" Flange	19	12.0	6.5	471 lbs.

All specifications, dimensional data, etc are approximate and subject to change without notice.

## TROUBLESHOOTING

**⚠️ WARNING** Always disconnect power to the fixture before performing any service or maintenance.



**IN ORDER TO PERFORM THIS TASK, BE SURE TO WEAR THE FOLLOWING SAFETY EQUIPMENT: SAFETY GLASSES OR A FACE SHIELD, AS WELL AS GLOVES.**

**IMPORTANT:** This fixture is to be serviced **ONLY** by qualified and factory-authorized personnel.

Table 4 – Troubleshooting

Problem	Possible Cause	Corrective Action
System Not Operating	No electrical power	Verify that the system is connected to a good power source.
	Circuit breaker in power distribution panel has popped off	Disconnect system from power source and inspect all wiring for possible damage to any electrical components.
	Power connections to modules loose or disconnected	Verify power connections to modules are securely connected.

“Troubleshooting” section continued on next page.

<b>Problem</b>	<b>Possible Cause</b>	<b>Corrective Action</b>
<b>Enclosure Cooler Blower not Functioning</b>	Loose power connection	Confirm connections of blower to power distribution panel, making sure connection is tight and making full contact.
	Faulty blower	Replace blower.
<b>Single Lamp Indicator is Not Glowing Green</b>	Germicidal lamp not operating	Disconnect lamp socket from non-operating lamp. Then, connect lamp socket from a good lamp to the non-operating lamp. If nonoperating lamp still fails to operate, replace lamp.
	Germicidal lamp not properly connected	Confirm connection of lamp socket and lamp, making sure connection is tight and that lamp socket is making full contact with lamp.
	Lamp's ballast is not functioning	Disconnect lamp socket from non-operating lamp and reconnect to a known good operating lamp. If good lamp fails to operate, locate ballast with corresponding lamp number and replace ballast.
<b>Multiple Lamp Indicators are Not Glowing Green</b>	Loose or disconnected lamp-out cable from ballast tray assembly to front panel assembly	Verify that lamp-out cable connections to the ballast tray assembly and front panel assembly are securely connected.
	Power cable to ballast tray assembly loose or disconnected	Verify that power cable from power distribution panel and front panel are securely connected.
<b>All Lamp Indicators Fail to Glow Green</b>	Lamps are not installed	Install lamps by following “ <b>Lamp Installation</b> ” section in this manual.
	No power to ballast tray assemblies	Verify that power cable from power distribution panel to ballast tray assemblies are securely connected.
	Disconnected lamp-out cable from ballast tray assembly to front panel assembly	Verify that lamp-out cable connections to the ballast tray assembly and front panel assembly are securely connected.
<b>Water Leak from EASY-OFF™ End Cap or Quartz Sleeve</b>	Broken end cap or broken quartz sleeve	Disconnect system from power. Shut off water supply and depressurize chamber. Remove any standing water on or around unit. Replace quartz sleeves following “ <b>Quartz Sleeve Cleaning and Replacement</b> ” in this manual.
	Damaged or missing O-Rings	
<b>Water Leak from Chamber Fittings, Inlet/Outlet, Drain or Test Ports</b>	Loose or untightened plumbing, drain plug, test ports, or bolts	Shut off water supply and depressurize chamber. Remove any standing water on or around unit. Inspect leaking area. Tighten any loose fittings. Re-apply Teflon® tape on any leaking fittings and reinstall.
<b>Automatic Quartz Wiper System Not Functioning</b>	Loose or disconnected power connection	Verify that cabling between the front panel assembly and wiper compressor assembly are securely connected.
	Wiper controller not set up correctly	Review and confirm scheduled wiper program is properly set up.
	Wiper controller not set to “RUN” mode	Ensure controller is set to “RUN” mode.
	Wiper controller is set to “MANUAL” mode	Review and confirm scheduled wiper program is set to operate for only a 1-minute cycle time. If not, set mode to “OFF” mode for a period of 10 minutes before making any other selections. See “ <b>Programming Automatic Wiper Controller</b> ” section for more information.
<b>Low UV Intensity</b>	Sensor probes quartz rod is fouled	Follow cleaning procedure in the section “ <b>Cleaning of the Ultraviolet Monitor Sensor Probe</b> ” in this manual.
	Quartz sleeves are fouled	Follow cleaning procedure in the section “ <b>Quartz Sleeve Cleaning and Replacement</b> ” in this manual.
	Water quality of the liquid medium being treated has dropped	Test to see if the quality of water being treated has diminished or if something in the process has changed.
<b>UV Intensity Meter Not Displaying a Number</b>	Loose or disconnected probe or monitor cables	Check connection to Sensor Probe, as well as Monitor Input connection on rear of front panel.



# REPLACEMENT PARTS

Table 4 – Replacement Parts

Item No.	Description	Part No.
1	<b>CRYSTAL CLEAR™</b> Quartz Sleeve	15-1000A
2	<b>STER-L-RAY®</b> Germicidal Ultraviolet Lamp	05-1313A
3A	Intake Filter (M50, M90, & M150 Models)	40-0017A
3B	Intake Filter (M250 Model)	40-7058A
4	<b>Surelite™</b> Ballast 120–277v	10-0210
5	O-Ring: Quartz Sleeve	00-1238A
6	Teflon® Washer: Quartz Sleeve	25-1235A
7	Static Gland Nut	25-1492D
8	O-Ring: Static Gland Nut	25-1108B
9	O-Ring: Sensor Probe Quartz Rod	00-0280A
10	Quartz Rod: Sensor Probe Assembly	15-0100A
11	Head Gasket M50	25-1475C
12	Head Gasket M90	25-0328D
13	Head Gasket M150	25-0354C
14	Head Gasket M250	25-1460D
15	Quartz Sleeve Remove Tool (M50 Thru M250)	25-1013A
16	Quartz Sleeve Remove Tool (For Model M250 Only)	25-1329A

Other replacement parts are available. Consult Atlantic Ultraviolet Corporation® for specific requirements.

# MAINTENANCE LOG

Date	Maintenance Performed	Service Person	Comment(s)





# USER ASSISTANCE

Atlantic Ultraviolet Corporation® makes every effort to ensure that the **MEGATRON®** Germicidal UV Water Disinfection System is a product of superior quality and workmanship. This manual describes the installation, operation and maintenance of the **MEGATRON®** Germicidal UV Water Disinfection System.

Please read and become familiar with the contents of this manual before installing or using this purifier. If after reading the manual you still have questions, or concerns, regarding the installation or use of this purifier, contact our offices, weekdays between 8:30 am and 5:00 pm Eastern Time, at:

Atlantic Ultraviolet Corporation®  
375 Marcus Boulevard  
Hauppauge, New York, 11788  
Tel: (631) 273-0500  
Fax: (631) 273-0771  
Email: Sales@AtlanticUV.com  
Shop: AtlanticUltraviolet.com  
Learn More: Ultraviolet.com

## PATENT NOTICE

No attempt has been made to determine the patent status of applications illustrated or described in this publication. Inclusion in this publication of any design or method of use, which may be patented, is not to be construed as promoting or sanctioning unauthorized use.

# WARRANTY & PRODUCT REGISTRATION

We warrant this product to the original owner to be free from defects in material and workmanship when installed in accordance with Atlantic Ultraviolet Corporation® specifications for a period of time as follows:

**UV Water Purifier Chambers** – Type 316 stainless steel chambers will have a Twelve (12) year Limited Warranty on the stainless steel chamber, from the date of original purchase while the Type 304 stainless steel chambers will have a Six (6) year Limited Warranty on the stainless steel chamber.

**UV Air Disinfection Housing** – Three (3) year Limited Warranty on the metal housing, from the date of original purchase.

**Ballasts** – Three (3) year Limited Warranty, from the date of original purchase.

**UV Lamps, Monitoring Devices, Optional Accessories, and Other Parts** – One (1) year Limited Warranty from the date of original purchase.

Within the warranty period we shall repair or replace such products, which are returned to us with shipping charges prepaid and which are determined by us to be defective. This warranty will not apply to any product, which has been subjected to misuse, negligence or accident; or misapplied; or modified; or repaired by unauthorized person; or improperly installed. Warranty will be null and void if any of the product's original labels are removed. This Limited warranty excludes the cost of labor.

The Buyer shall inspect the product promptly after receipt and shall notify us at our main office in writing of claims, including claims of breach of warranty, within thirty (30) days after the Buyer discovers or should have discovered the facts upon which the claim is based. Failure of the Buyer to give written notice of a claim within the time period shall be deemed to be a waiver of such claim.

The provisions of the above warranty are our sole obligation and exclude all other remedies or warranties, expressed or implied, including warranties of merchantability and fitness for a particular purpose, whether or not purposes or specifications are described herein. We further disclaim any responsibility whatsoever to the customer, or to any person for injury to person, damage to, or loss of property or value caused by any product which has been subjected to misuse, negligence, accident; or modified or repaired by unauthorized persons; or improperly installed.

Under no circumstances shall the Company be liable for any incidental, consequential or special damages; losses or expenses arising from the contract for this product, or in connection with the use of, or inability to use, our product for any purpose whatsoever.

Be sure to register your product and validate purchase within 30 days — registration is simple and will take less than 2 minutes to do.

**NOTE** – failure to register your purchase may jeopardize warranty.

Go to AtlanticUltraviolet.com and scroll down to the bottom of the page, under “Trust” click the “Warranty Registration Form”, complete and click “Submit”. Or click on “Warranty Registration PDF” to download the warranty registration card as a PDF, complete and mail to us at 375 Marcus Boulevard, Hauppauge, NY 11788, or simply fax to (631) 273-0771. If you prefer to register by phone, please call (631) 273-0500 and our customer service staff will be glad to assist you.

For your convenience, record the following information below. The model and serial number can be found on a label located on the **MEGATRON®** Germicidal UV Water Disinfection System. Keep this manual, along with proof of purchase, handy when contacting our offices.

Purchased From:	Date:
Model:	Serial No.: