

# Installation, Operation and Maintenance Manual

## Ultra Violet Disinfection System

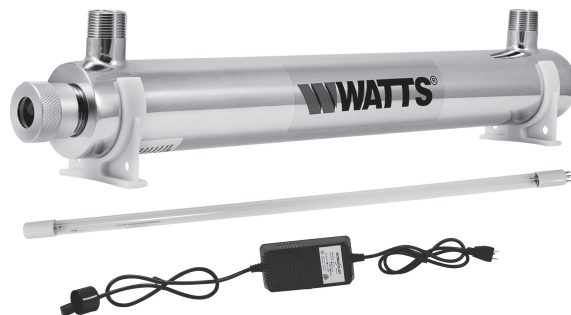
Series PWUV

### PURE WATER

#### Important

Please read the entire manual before proceeding with the installation and startup. Your failure to follow any attached instructions or operating parameters may lead to the product's failure. Water must be prefiltered by a minimum of 5 micron filtration.

Save manual for future reference.



Series PWUV

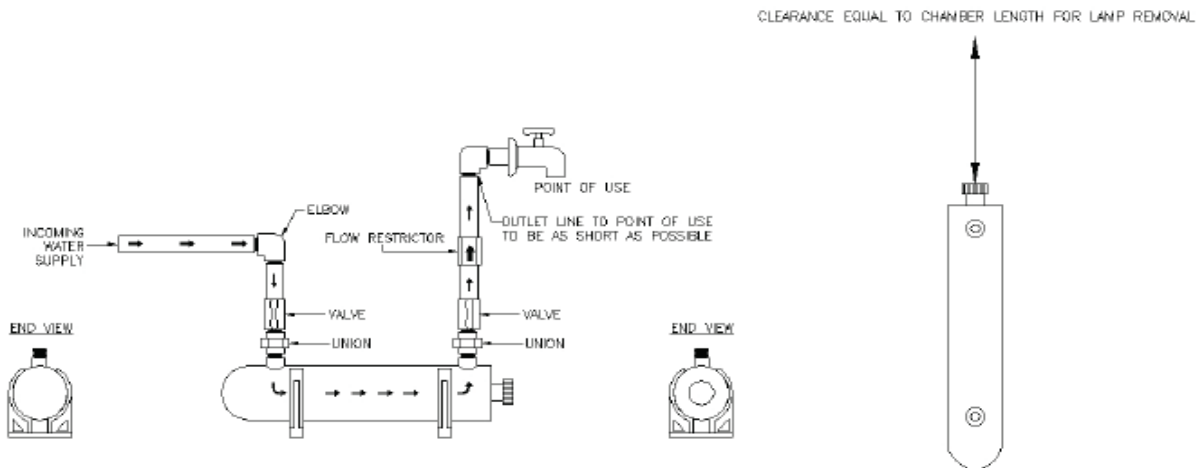
#### Table of Contents

|                                     |   |
|-------------------------------------|---|
| Installation . . . . .              | 2 |
| Specifications . . . . .            | 3 |
| Replacing UV Lamp . . . . .         | 3 |
| Maintenance Suggestion . . . . .    | 3 |
| Operating Conditions . . . . .      | 3 |
| Parts List / Unit Drawing . . . . . | 4 |
| Limited Warranty . . . . .          | 4 |

**Note:** Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.



# Typical Installation



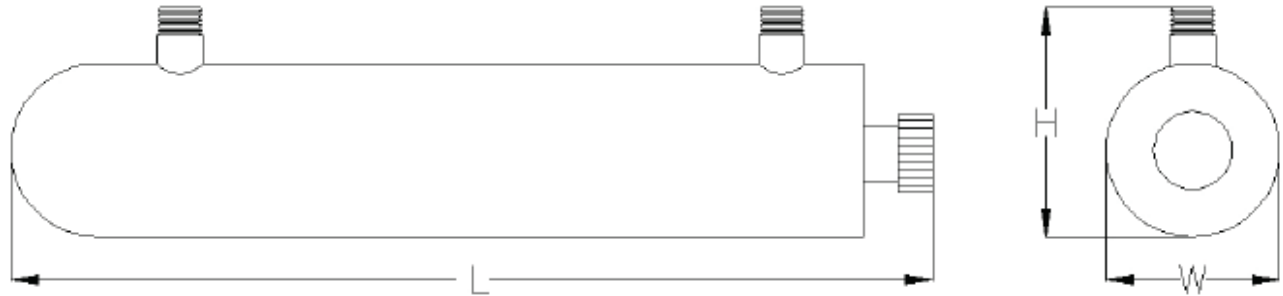
## Installation Instructions

1. Install sterilizer equipment in a readily accessible and well lit location to facilitate inspection and maintenance.
2. Inspect for hidden electrical wiring or plumbing prior to drilling holes.
3. Attach mounting clips to the wall.
4. Insert chamber through mounting clips.
5. Connect to plumbing.
6. Install quartz sleeve and lamp.

**Note: Avoid touching the sides of the quartz sleeve and lamp, handle by the ends only.**

- a) Remove the retainer nut.
  - b) Slide the quartz sleeve into the chamber - closed end first.
  - c) Slide the O-ring over the open end of the quartz sleeve.
  - d) Tighten the retainer nut, hand tight.
  - e) Slide the lamp into the quartz sleeve.
  - f) Connect the lamp to the plug in transformer.
  - g) Cover the lamp connection with the vinyl cap.
7. Turn on the water and inspect for leaks. Repair if necessary.
  8. a) For 110 VAC Units – Plug the transformer into an electrical outlet. An electrical outlet protected by a Ground Fault Circuit Interrupt (GFCI) circuit is recommended.  
b) For 220 VAC Units – Obtain the appropriate plug for your type of receptacle and attach it to the end of the power cord and plug it in.

# Specifications



| PRODUCT CODE | FLOW RATE<br>(GPM) | PIPE SIZE | DIMENSIONS<br>(L X W X H) | ELECTRICAL           | SHIPPING<br>(LBS.) |
|--------------|--------------------|-----------|---------------------------|----------------------|--------------------|
| PWUV2110     | 2                  | 1/2" MNPT | 18" x 6" x 5 5/8"         | 110-130 v / 50-60 Hz | 6                  |
| PWUV2220     | 2                  | 1/2" MNPT | 18" x 6" x 5 5/8"         | 200-250 v / 50-60 Hz | 6                  |
| PWUV6110     | 6                  | 3/4" MNPT | 25 1/2" x 6" x 5 5/8"     | 110-130 v / 50-60 Hz | 7                  |
| PWUV6220     | 6                  | 3/4" MNPT | 25 1/2" x 6" x 5 5/8"     | 200-250 v / 50-60 Hz | 7                  |
| PWUV8110     | 8                  | 3/4" MNPT | 32" x 8 1/4" x 3 3/4"     | 110-130 v / 50-60 Hz | 9                  |
| PWUV8220     | 8                  | 3/4" MNPT | 32" x 8 1/4" x 3 3/4"     | 200-250 v / 50-60 Hz | 9                  |
| PWUV12110    | 12                 | 1" MNPT   | 41 1/2" x 8 1/4" x 3 3/4" | 110-130 v / 50-60 Hz | 17                 |
| PWUV12220    | 12                 | 1" MNPT   | 41 1/2" x 8 1/4" x 3 3/4" | 200-250 v / 50-60 Hz | 17                 |

Notes: Line cord and lamp lead wire omitted for clarity.

## Replacing UV Lamp and Servicing UV System

**Note: Avoid touching the sides of the quartz sleeve and lamp, handle by the ends only.**

- Step 1 Disconnect power.
- Step 2 Turn water off and open valve downstream of system to relieve pressure.
- Step 3 Remove vinyl cap and unscrew the nut.
- Step 4 Carefully withdraw lamp approximately 2 inches from chamber.
- Step 5 While holding lamp end carefully remove lamp socket on end now exposed.
- Step 6 Carefully withdraw lamp from chamber.
- Step 7 Carefully remove O-ring from the end of quartz sleeve.
- Step 8 Carefully remove quartz sleeve.
- Step 9 To reinstall follow Steps 8 through 1 in reverse.

## Maintenance Suggestion

To operate the sterilizer properly and attain its maximum efficiency, the following maintenance is recommended:

1. Quartz sleeve cleaning or replacement:
  - a) Quartz sleeve is to be cleaned every 6-12 months, clean with glass cleaner.
  - b) Quartz sleeve is to be replaced every 24 months.
2. UV lamp replacement is recommended every 8000-9000 hours of operation (approx. 12 months of continuous service).

**CAUTION: Ultraviolet lamp and quartz sleeve are easily damaged. Pay attention when removing or replacing lamp and quartz sleeve.**

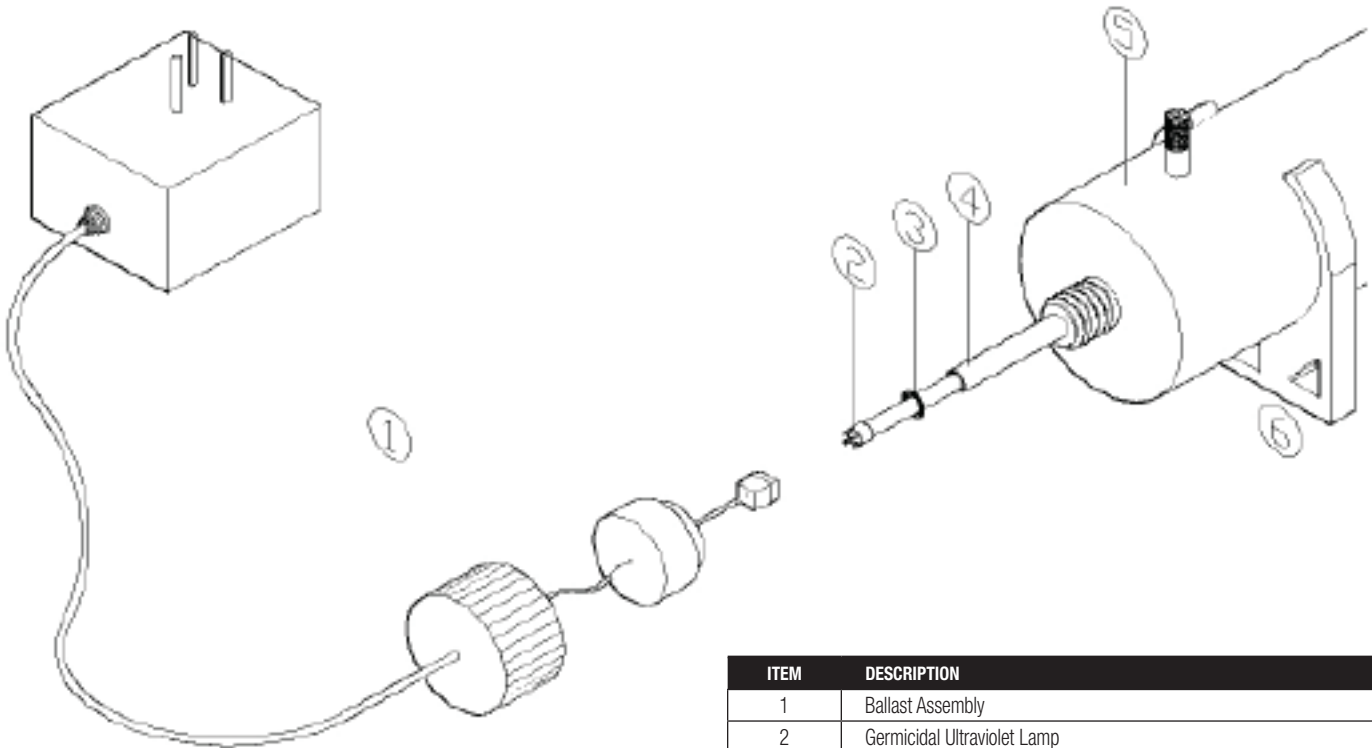
## Operating Conditions

- Maximum Operating Pressure: 125psi (8.9 bar)
- Maximum Operating Temperature: 104°F (40°C)
- Minimum Operating Temperature: 36°F (2°C)
- UV Dose At End Of Lamp Life (1 year or 9,000 Hours): 30mj/cm<sup>2</sup>
- Maximum Iron: Less Than .3 PPM
- Maximum Manganese: Less Than .05 PPM
- Maximum Turbidity: Less Than 5 NTU
- Maximum Hydrogen Sulfide: Less Than .05 PPM
- Maximum Hardness: Less Than 7 Grains Per Gallon as CaCO<sub>3</sub>

## Replacement Parts

| FLOW RATE<br>(GPM) | BULB MODEL | BALLAST MODEL | QUARTZ SLEEVE MODEL |
|--------------------|------------|---------------|---------------------|
| 2                  | PWUVBULB2  | PWUVBAL2      | PWUVQS2             |
| 6                  | PWUVBULB6  | PWUVBAL6-12   | PWUVQS6             |
| 8                  | PWUVBULB8  | PWUVBAL6-12   | PWUVQS8             |
| 12                 | PWUVBULB12 | PWUVBAL6-12   | PWUVQS12            |

# Parts List



| ITEM | DESCRIPTION                 |
|------|-----------------------------|
| 1    | Ballast Assembly            |
| 2    | Germicidal Ultraviolet Lamp |
| 3    | Rubber O-ring               |
| 4    | Quartz Sleeve               |
| 5    | Chamber                     |
| 6    | Mounting Clip               |

### CALIFORNIA PROPOSITION 65 WARNING

**WARNING:** This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. (California law requires this warning to be given to customers in the State of California.)

For more information: [www.watts.com/prop65](http://www.watts.com/prop65)

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