



# UV-100 System

## Ultra Violet Water Sterilizer

### Description

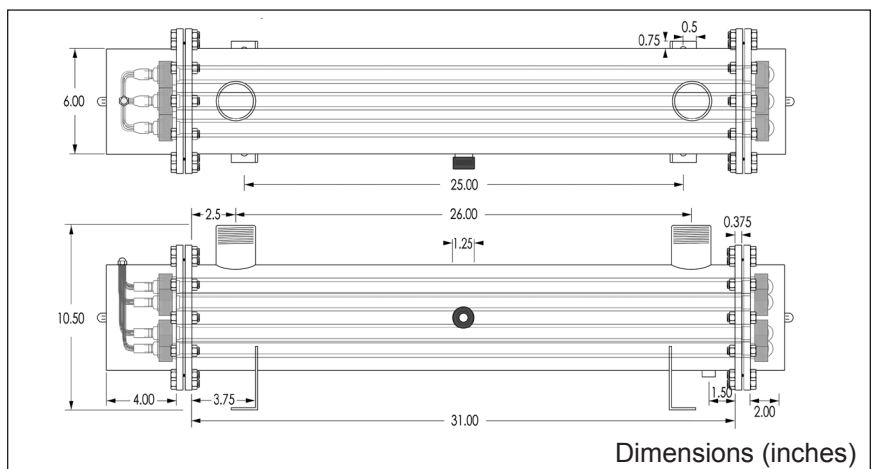
The UV-100 System is a small footprint, robust, efficient and cost-effective sterilizer designed for the disinfection of drinking and/or process water in commercial and industrial applications at flow rates up to 224 GPM (850 LPM).

The UV-100 System contains an array of 6 low-pressure, high output UV lamps in a 316L stainless steel reaction chamber. It is equipped with a control panel that has an integrated UV Monitor to monitor the UV light intensity in real time. The UV monitor will alarm if the UV power delivered to the water is inadequate. A powered contact on the monitor can be used to drive a solenoid-type valve to shut off the flow of water.

Additional features for this sterilizer can be ordered, such as a thermo-sensitive purge valve at the out port to prevent overheating in no-flow conditions, or volt-free contacts on the ballast for remote signaling.

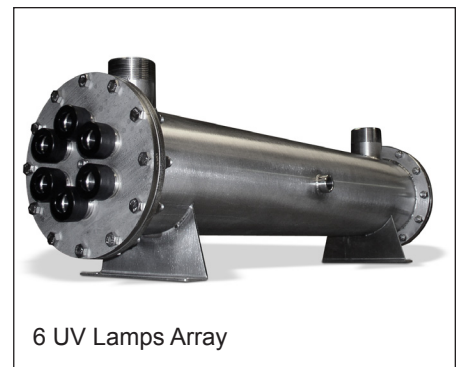
This system may be connected in series or in parallel for high-dose or high-volume applications, and complete systems including high-volume pre-filtration can be configured.

The UV-100 kills most microbiological contaminants, such as bacteria, protozoa and viruses with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of 99.99% (log 4) or more (*Giardia*, *E. coli*, *Cryptosporidium*, *Vibrio cholerae*, *Legionella*, *Salmonella*, *Shigella*, *Streptococcus* and many others)



### Features

- ▶ Quality Fabrication
- ▶ Rugged Construction
- ▶ 316L Stainless Steel
- ▶ Compact Footprint
- ▶ NEMA Control Panel
- ▶ Individual Lamp Indicators
- ▶ Single UV Monitor



### Benefits

- ▶ High Volume Disinfection, Low Cost per Litre
- ▶ Extreme UV Dose Available for Many Applications
- ▶ Larger Flow Rates Possible with Manifolding
- ▶ May be Configured for Redundant Operations
- ▶ Systems May be Skid Mounted for Ease of Transport and Installation
- ▶ Extremely Simple to Use and Maintain

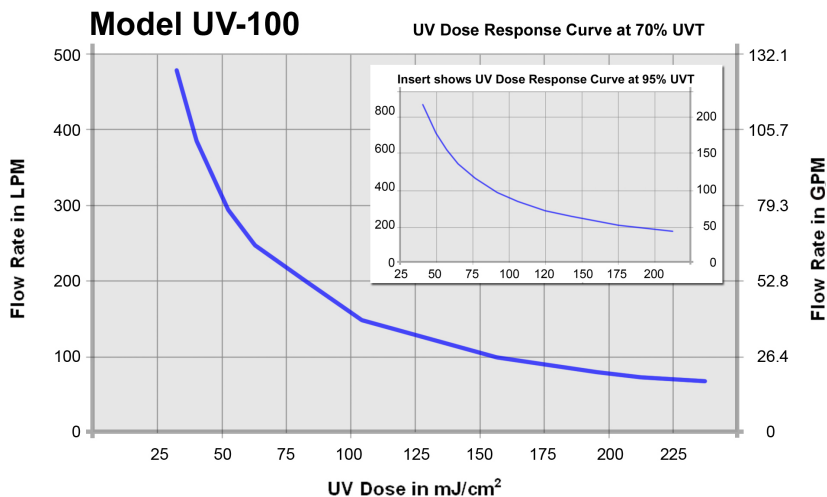


<b>Flow Range Indication:</b> (Depending on UVT*)	75 - 850 litres per minute (19.8 - 224.5 GPM / 4.5 - 51 m <sup>3</sup> /h)
<b>UV Dose Applied:</b> (1 mJ/cm <sup>2</sup> = 1,000 µWsec/cm <sup>2</sup> )	30 mJ/cm <sup>2</sup> @ 500 LPM / 132 GPM / 30 m <sup>3</sup> /h, UVT = 70% 40 mJ/cm <sup>2</sup> @ 370 LPM / 97.7 GPM / 22.2 m <sup>3</sup> /h, UVT = 70% 40 mJ/cm <sup>2</sup> @ 850 LPM / 224.5 GPM / 51 m <sup>3</sup> /h, UVT = 95% 200 mJ/cm <sup>2</sup> @ 75 LPM / 19.8 GPM / 4.5 m <sup>3</sup> /h, UVT = 70%
<b>Electrical:</b>	110-130 Volt AC / 50-60 Hz (Part # P100/QD4E-1) 220-240 Volt AC / 50-60 Hz (Part # P100/QD4E-2)
<b>Power Consumption:</b>	450 VA @ 120 V, 520 VA @ 230 V
<b>Ballast:</b>	Electronic Ballast (6) (Part # 4-13B-PN) w/ Lamp Out Alarm (1), Power LED (6)
<b>Lamps, Wattage, Current:</b>	6 Lamps (at 84 Watts each, 800 mA) (Part # RL-84/893T5)
<b>UV Monitor:</b>	Integrated (Part # 4-MCB-V3) with Sensor (Part # 4-35-3)
<b>Size and Weight (Chamber):</b>	46x8x10.5 inches, 90 lbs / 41 kg
<b>Max. Operating Temperature:</b>	40 °C (104 °F)
<b>Max. Operating Pressure:</b>	125 psi - 8.6 bar
<b>Plumbing:</b>	2" MNPT In/Out
<b>Chamber Material:</b>	316L Stainless Steel
<b>Control Panel:</b>	NEMA IV Enclosure, 18 x 18 x 12 inches, Non-Metallic. IP66 Includes Lamp LEDs, Power Switch, UV Monitor Meter Face
<b>Size &amp; Weight of Shipment:</b>	1 skid (crated) 48x23x30 inches, 116 lbs / 53 kg

Specifications subject to change

## Dose Chart

\*UVT = Ultraviolet Transmittance



## Additional Features (Optional):

- 2" Solenoid Valve for Fail-Safe Operation, triggered by UV Monitor
- Volt-Free Contacts or 4-20 mA Output on Control Panel for Remote Signaling
- Thermosensitive Purge Valve on Out Port for Overheat Protection
- Integrated Surge Suppressor
- Electronic Deposit Control System Pre-Wrapped with PVC or Stainless Steel Reaction Chamber

## Important Considerations

This UV System assumes certain water quality parameters to be met for proper operation. If the source water does not meet the following criteria, pretreatment has to be considered and additional cleaning and maintenance of the UV system will be required.

**Turbidity (Suspended Solids):** must be < 1 NTU at the time of disinfection. There must be a 5 micron (or less) sediment prefiltration system installed before the UV system.

**Total Hardness (Sum of Calcium and Magnesium):** Must be < 10 gpg (grains per gallon)

**Iron:** Must be < 0.3 ppm (parts per million)

**Manganese:** Must be < 0.05 ppm

**TDS (Total Dissolved Solids):** Must not exceed 500 ppm