



# UV-1

## Ultra Violet Water Sterilizer

### Description

The UV-1 is a robust, efficient and cost-effective ultra-violet sterilizer designed for the disinfection of drinking water in the average household at a flow rate of 1 GPM (4 LPM). Typically installed at the point of use (e.g. under the sink), it can treat municipal water as well as ground water from drilled or dug wells, and surface water from lakes, ponds or rivers. Other applications for this sterilizer are for the purification of process water in laboratories and dental offices, or the prevention of biofouling in RO Systems.

This sterilizer contains a low-pressure, high output UV lamp in a 304L stainless steel reaction chamber (also available in 316L). It comes with an electronic ballast that features a lamp-out alarm if there is no power to the lamp.

Combined with a Wyckomar filter set, this sterilizer is the centre piece of a complete water treatment system for the elimination of bacteria and viruses and reduction of taste and odour at the point of use (see part # SYS1-QD4E-1/2).

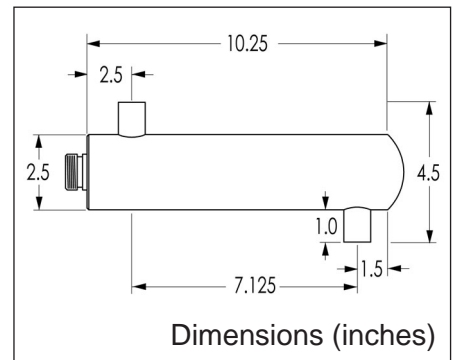
Additional features for this sterilizer can be ordered, such as a thermo-sensitive purge valve at the out port to prevent overheating in no-flow conditions, or volt-free contacts on the ballast for remote signaling. A 12 V DC version for use on boats or RVs is also available.

The UV-1 kills most harmful pathogens such as viruses, bacteria and protozoa 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)



### Applications

- ▶ Potable Water
- ▶ RV's
- ▶ Cottages
- ▶ RO Systems
- ▶ Laboratories
- ▶ Dental Offices
- ▶ Water Cooler



### Benefits

- ▶ Efficient Disinfection, Low Cost per Litre
- ▶ High UV Dose for Peace of Mind
- ▶ Easy Installation
- ▶ Extremely Simple to Use and Maintain
- ▶ Easy Lamp Replacement
- ▶ High Quality Stainless Steel Reaction Chamber
- ▶ Domed Quartz Sleeve with Single Seal
- ▶ Made in Canada



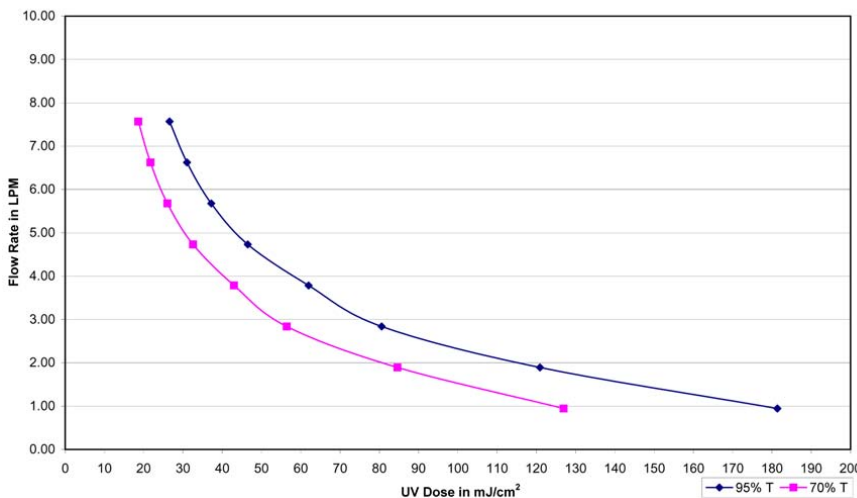
# Specifications

Part # P1/QD4E-1/2

<b>Rated Flow:</b>	4 litres per minute (1 GPM) 240 litres/hour, 5.7 m <sup>3</sup> /day (60 gallons/hour, 1440 gallons/day)
<b>Initial UV Dose at Rated Flow:</b>	63 mJ/cm <sup>2</sup> (63,000 μWsec/cm <sup>2</sup> ) @ 95% UVT 43 mJ/cm <sup>2</sup> (43,000 μWsec/cm <sup>2</sup> ) @ 70% UVT
<b>Electrical:</b>	110-130 Volt AC / 50-60 Hz (Part # P1/QD4E-1) 220-240 Volt AC / 50-60 Hz (Part # P1/QD4E-2) 12 V DC (Part # P1/QD4E-12)
<b>Power Consumption:</b>	18 VA @ 120 V, 23 VA @ 240 V, 0.7 VA @ 12 V
<b>Ballast:</b>	Electronic Ballast (Part # 4-BE-425W-U) w/ Lamp Out Alarm, Power LED
<b>Number of Lamps:</b>	1 at 12 Watts, 425 mA (Part # RL-12/254T5)
<b>UV Monitor:</b>	No
<b>Hour Meter:</b>	Optional (Part # 4-HM-R100)
<b>Max. Operating Temperature:</b>	37 °C (98.6 °F)
<b>Max. Operating Pressure:</b>	125 psi - 8.6 bar (tested to 500 psi)
<b>Plumbing:</b>	3/8" FNPT In/Out
<b>Chamber Material:</b>	304L Stainless Steel (316L SS optional)
<b>Shipping Size and Weight:</b>	1 box 16x7x4 inches, 5 lbs / 2.3 kg

## Dose Chart

UV-1 UV Dose Response Curve



## Additional Features (Optional):

- Electronic Deposit Control System with PVC or Stainless Reaction Chamber
- Volt-Free Contacts on Ballast for Remote Signaling
- Purge Valve at Out Port for Overheat Protection
- Ballast with Hour Meter for Total Runtime Display

## Filtration

This UV sterilizer 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:

**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

This UV unit is available as complete system with appropriate pre-filtration (Part # SYS1/QD4E-1/2)

