



# SYS5100F

## Ultra Violet Water Sterilizer

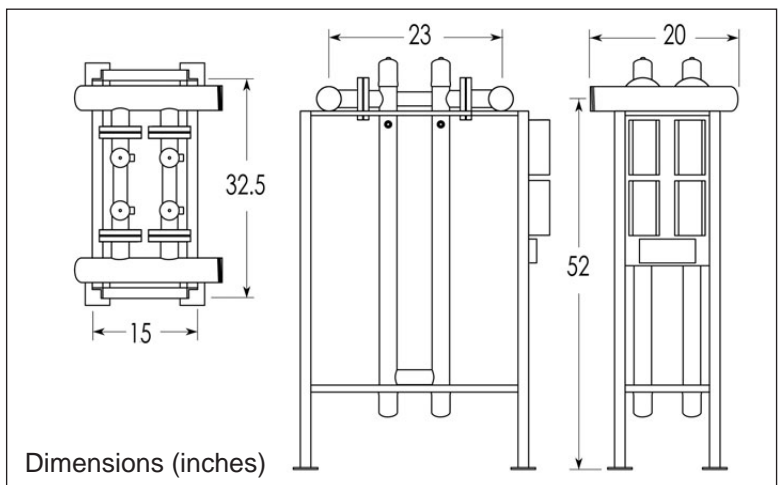
### Description

The SYS-5100F is a robust, high quality and economical ultra-violet sterilizer that offers very efficient treatment at a very low cost per unit volume. Typically installed as a component in a larger water treatment system, it can be used in all applications where safe drinking water is required. In process water applications such as rainwater harvesting, fish farming or irrigation water disinfection, this sterilizer is perfect for the reduction of harmful organisms such as viruses, fungi and protists due to its exceptional high UV efficacy, as well as in other commercial and industrial applications, including food and beverage processing, pharmaceutical manufacturing, or cooling towers.

The system contains four low-pressure, high output UV lamps in manifolded 316L stainless steel reaction chambers. It comes with electronic ballasts that feature a lamp-out alarm if there is no power to the lamp.

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

The SYS-5100F kills most harmful pathogens such as viruses, bacteria and protozoa with a powerful UV disinfection dose that will inactivate the organisms 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, Process Water
- ▶ Water Bottling Plants
- ▶ Food Processing and Packaging Centres
- ▶ Hospitals and Health Clinics
- ▶ Vegetable Processors and Irrigation Systems
- ▶ Rainwater Harvesting
- ▶ Beverage Production

### Benefits

- ▶ Efficient Disinfection, Low Cost per Litre
- ▶ Exceptional High UV Dose
- ▶ Extremely Simple to Use and Maintain
- ▶ High Quality Stainless Steel Reaction Chamber
- ▶ Easily Upgradeable with Optional Features
- ▶ Made in Canada



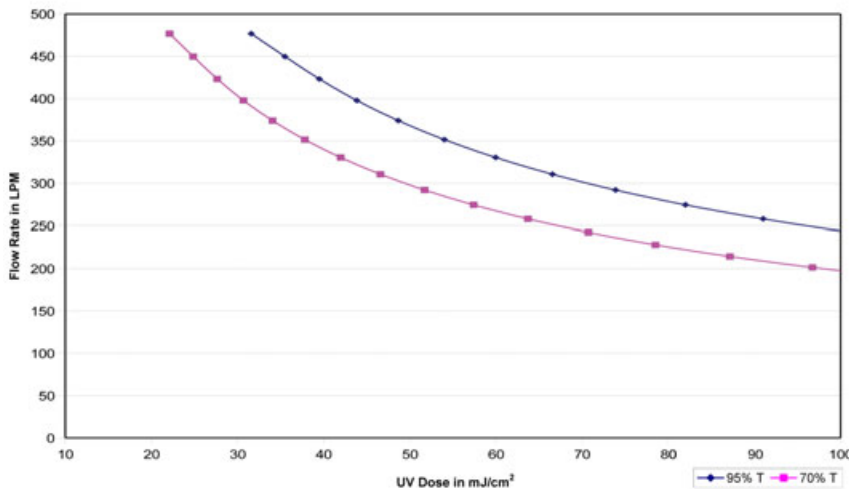
# Specifications

Part # SYS5100F

<b>Rated Flow:</b>	379 litres per minute (100 GPM) 22,740 litres (22.7 m <sup>3</sup> )/hour, 546 m <sup>3</sup> /day (6,000 gallons/hour, 144,000 gallons/day)
<b>Initial UV Dose at Rated Flow:</b>	47 mJ/cm <sup>2</sup> (47,000 μWsec/cm <sup>2</sup> ) @ 95% UVT 34 mJ/cm <sup>2</sup> (34,000 μWsec/cm <sup>2</sup> ) @ 70% UVT
<b>Electrical:</b>	110-130 Volt AC / 50-60 Hz, or 220-240 Volt AC / 50-60 Hz
<b>Power Consumption Overall:</b>	408 VA @ 120 V, 428 VA @ 240 V
<b>Ballast:</b>	4 x Electronic Ballast (Part # 4-BE-800WL-1/2) w/ Lamp Out Alarm, Power LED
<b>Number of Lamps:</b>	4 (Part # RL-110/1197T5)
<b>Lamp Wattage and Current:</b>	110 Watts, 800 mA
<b>UV Monitor:</b>	Optional (2 x Part # 4-UV/MS50-1/2 V3)
<b>Solenoid Valve:</b>	Optional (Part # 4-SV-2000-1)
<b>Hour Meter:</b>	Optional (Part # 4-HM-R100) (one each per lamp)
<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" MNPT In/Out (Flanges Optional)
<b>Chamber Material:</b>	316L Stainless Steel
<b>Shipping Size and Weight:</b>	1 rack 20x28x56 inches, 150 lbs / 68 kg

## Dose Chart

SYS5100F UV Dose Response Curve



## Additional Features (Optional):

- UV Monitoring System and Solenoid Valve for Failsafe Operation
- Volt-Free Contacts on Ballasts for Remote Signaling
- Purge Valve at Out Port for Overheat Protection
- Ballasts with Hour Meter for Total Runtime Display
- Sanitary Tubing and Fittings

## 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 can be manifolded in parallel for higher flow rates (see Part #SYS5100F3) and can be customized for many applications with pre-filtration into All-in-One skid-mounted systems

