

# SYS-5100F3-1/2 Ultra Violet Water Sterilizer

### **Description**

The SYS-5100F-3 is a robust, high quality and economical ultra-violet sterilizer that offers very efficient treatment at a low cost per unit volume. Typically installed as a component within a larger water treatment system, it can be used in commercial and industrial drinking water applications, including food and beverage processing and pharmaceutical manufacturing, but also for process water applications, irrigation water disinfection or in cooling tower recirculation systems. This sterilizer is perfect for the reduction of harmful organisms such as viruses, fungi and protists due to its exceptional high UV efficacy.

The system is mounted on a steel rack and contains six 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-3 sterilizer 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 oth





#### **Applications**

- Potable Water, Process Water
- Power Industries
- Food Processing and Packaging Centres
- Aqua Culture
- Vegetable Processors and Irrigation Systems
- Rainwater Harvesting
- Cooling Towers

#### **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**

Flow Range Indication: (Depending on UVT*)	60 - 540 litres per minute (15.8 - 142.6 GPM / 3.6 -	32.4 m³/h)
UV Dose Applied:	30 mJ/cm <sup>2</sup> @ 484 LPM / 127.8 GPM / 29 m <sup>3</sup> /h, UV	Γ = 70%
(1 mJ/cm <sup>2</sup> = 1,000 µWsec/cm <sup>2</sup> )	40 mJ/cm <sup>2</sup> @ 315 LPM / 83.2 GPM / 18.9 m <sup>3</sup> /h, UV	T = 70%
	30 mJ/cm <sup>2</sup> @ 540 LPM / 142.6 GPM / 32.4 m <sup>3</sup> /h, U	VT = 95%
	200 mJ/cm <sup>2</sup> @ 60 LPM / 15.8 GPM / 3.6 m <sup>3</sup> /h, UVT	= 70%
Electrical:	110-130 Volt AC / 50-60 Hz (Part # SYS-5100F3-1)	
	220-240 Volt AC / 50-60 Hz (Part # SYS-5100F3-2)	)
Power Consumption Overall:	620 VA @ 120 V, 720 VA @ 240 V	
Ballast:	6 x Electronic Ballast w/ Lamp Out Alarm, Power LED,	
	Running Days Countdown on LCD Display (Resetta	able)
	Model RH51-800-95L (Wyckomar Part # 4-BE-800-	ECO)
Number of Lamps:	6 (Part # RL-110/1197T5)	
Lamp Wattage and Current:	110 Watts, 800 mA	
UV Monitor:	Optional (3 x Part # 4-UV/MS50-1/2 V3)	
Max. Operating Temperature:	40 °C (104 °F)	
Max. Operating Pressure:	125 psi - 8.6 bar	
Plumbing:	3" MNPT In/Out (Flanges or Sanitary Tri-Clamp Fittings Optional)	
Chamber Material:	316L Stainless Steel	
Shipping Size and Weight:	1 skid 54x48x43 inches, 320 lbs	Specifications subject to change

#### **Dose Chart**

\*UVT = Ultraviolet Transmittance



## **Filtration**

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

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