

# UltraDynamics®

## Series 8102-HO UV System

### Closed Vessel - High Output

The UltraDynamics® Series 8102-HO UV System design is the result of over 50 years of experience in the application of UV for the treatment of water and wastewater. The Series 8102 products have been proven effective in a number of global installations over a broad range of applications. Each Series 8102-HO system provides a dose of 30,000 to 400,000 micro-watt seconds per square centimeter at a wavelength of 254nm ultraviolet energy for deactivation of microorganisms.

The High Output germicidal lamps are guaranteed for 9,000 hours of continuous operation. The pure, fused quartz sleeves used to protect the lamps are manufactured to provide a maximum transmission of UV energy.

All UltraDynamics® UV systems are supplied with a variety of standard design features and an assortment of optional features to help meet your specific application needs.

#### Features:

- ◆ 316L stainless steel construction
- ◆ Electro polished and passivated
- ◆ Pressure drop < 1 PSIG at peak rated flow
- ◆ Maximum operating pressure 150 PSIG
- ◆ Remote power supply for maximum flexibility of installation
- ◆ Drain and monitor sight port included
- ◆ Mounting brackets for easy installation



#### Options:

- ◆ Remote alarm capability
- ◆ Quartz sleeve cleaning system
- ◆ High Temperature cut off switch (Thermistor type)
- ◆ Narrowband germicidal UV monitor  
Senses over 90% 254 nanometer germicidal wave length
- ◆ 1/4" sample port on inlet and outlet
- ◆ (L.O.W.) Lamp out warning system
- ◆ UL Certification available
- ◆ Available with 185nm ozone producing lamps



Model No.	Capacity* GPM (m <sup>3</sup> /hr)			Inlet/Outlet Size	KW 240V	AMPS 240V	DIMENSIONS	Shipping Weight	No. of Lamps	Lamp Length in (mm)
	Clear Waste Water 65%T	Potable Water (40 mJ/cm <sup>2</sup> ) 90%T	High Purity Water >98%T							
8102-HO-60	130 (30)	250 (56)	500 (114)	3" FLG	1.3	5.6	72.5 x 14 x 14 (1842 x 356 x 356)	500 LBS 227 KGS	6	64 (1626)
8102-HO-100	250 (56)	450 (102)	650 (147)	3" FLG	2.2	9.0	72.5 x 14 x 14 (1842 x 356 x 356)	625 LBS 284 KGS	10	64 (1626)
8102-HO-120	300 (68)	550 (125)	800 (181)	4" FLG	2.5	10.6	72.5 x 14 x 14 (1842 x 356 x 356)	700 LBS 318 KGS	12	64 (1626)
8102-HO-160	450 (102)	900 (204)	1200 (272)	4" FLG	3.3	13.0	76 x 20 x 20 (1930 x 508 x 508)	800 LBS 363 KGS	16	64 (1626)
8102-HO-200	550 (125)	1200 (272)	1500 (340)	6" FLG	4.0	17.0	76 x 20 x 20 (1930 x 508 x 508)	900 LBS 408 KGS	20	64 (1626)
8102-HO-280	850 (193)	1400 (318)	1800 (408)	6" FLG	5.6	23.4	76 x 20 x 20 (1930 x 508 x 508)	1025 LBS 465 KGS	28	64 (1626)
8102-HO-360	1100 (250)	1800 (408)	2200 (499)	6" FLG	7.2	29.8	82 x 23 x 27 (2083 x 635 x 686)	110 LBS 499 KGS	36	64 (1626)
8102-HO-400	1250 (284)	2000 (454)	2400 (545)	6" FLG	7.9	33.0	82 x 23 x 27 (2083 x 635 x 686)	1200 LBS 544 KGS	40	64 (1626)
8102-HO-600	1650 (374)	2500 (567)	3000 (681)	8" FLG	11.8	49.0	93 x 26 x 31 (2362 x 660 x 787)	2500 LBS 1134 KGS	60	64 (1626)

Notes: \* A minimum of 10 psi is required to meet flow specification.

## APPLICATIONS

### BACTERIA-FREE WATER FOR PROCESSING

- ◆ Breweries
- ◆ Cosmetics
- ◆ Pharmacy
- ◆ Chemical Plants
- ◆ Distilleries
- ◆ Bottling Plants

### DI SYSTEMS

- ◆ Prevent microorganism growth in resin beds.
- ◆ TOC reduction

### DRINKING WATER SYSTEMS

- ◆ Controls bacteria in potable water supplies

### ELECTRONICS

- ◆ Deactivates microorganisms in photomask & micro-electronics rinse water loops
- ◆ For reduction of TOC levels in ultra pure water.

### FISH HATCHERIES

- ◆ Prevents "Whirling Disease"
- ◆ Destroys fungus
- ◆ Reduces egg mortality

### SEWAGE EFFLUENT

- ◆ Final disinfection

### MARINE INDUSTRIES

- ◆ Disinfection of process and potable water systems
- ◆ Offshore drilling platforms

### REVERSE OSMOSIS SYSTEMS

- ◆ Pre-bacterial control which helps to extend membrane life
- ◆ Post-storage tank disinfection

### SWIMMING POOLS AND SPAS

- ◆ Algae & chlorine resistant bacteria control
- ◆ Reduces need for chemical additives

## Warranty and Capability

Severn Trent Services UltraDynamics® Ultraviolet Disinfection products are warranted for eighteen months from the date of invoice, or twelve months from the date of installation, whichever is earlier.

Disinfection technologies, water quality monitors and instrumentation for water and wastewater are areas of specialization. Over 35 years of industrial and municipal application experience in the water and wastewater industries.

## Brief Specification

The Ultraviolet Disinfection System shall incorporate low pressure, high-output, germicidal UV lamps positioned in a stainless steel chamber.

The system shall include UV lamps, protective quartz sleeves and a power supply center rated at (220Vac, 50/60Hz).

UV lamps shall be slimline, low pressure, high-output mercury vapor, hot cathode, instant start design and shall produce ultraviolet light with a minimum of 90% of emissions within the wavelengths of 233.7 and 273.7nm. Lamps shall be field replaceable by plant operations and maintenance personnel and shall be guaranteed for a period of 1 year. Lamp sleeves shall be manufactured from General Electric type 214 clear fused quartz. Sleeves shall be circular with open end fire polished smooth. Quartz sleeves shall be rated for UV transmittance of 89% and shall be subject to minimal solarization. An optional automatic (manual) sleeve cleaning system can be incorporated

The UV system shall be an UltraDynamics® Series 8102-HO as manufactured by UltraDynamics®.

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