

# SENTINEL® 48

## Ultraviolet Drinking Water Disinfection System



### Description

Designed to treat flows up to 40 million gallons per day (150 MLD), the Sentinel® 48 can effectively disinfect drinking water in large-sized treatment plants. The Sentinel® 48 uses medium-pressure lamp technology to achieve greater than 4 log inactivation of *Cryptosporidium* and similar pathogens in drinking water. Medium-pressure lamp technology allows the Sentinel® 48 to be compact with a small footprint. This can provide a significant advantage to large water treatment plants looking for a system that can be easily retrofitted into existing treatment systems. The Sentinel® 48 outperforms other advanced treatment technologies such as membranes and ozone at a fraction of the cost. The Sentinel® 48 system features include independent, third-party-certified UV intensity sensors to assure accurate delivery of UV dose, an automatic quartz sleeve cleaning system, and a fully automated control system.

The Sentinel® 48 was designed using advanced computational fluid dynamics allowing for optimal lamp and baffle placement to ensure maximum reactor performance and operational efficiency. The Sentinel® 48 has undergone third-party validation under the U.S. EPA LT2 Enhanced Surface Water Treatment Rule guidelines.

Calgon Carbon's UV Technologies Division has hundreds of UV systems installed for treating a broad spectrum of contaminated groundwater, process water, wastewater, and drinking water. The Sentinel® product line has one of the industry's largest installed bases treating hundreds of millions of gallons of drinking water per day.

### Design Features

#### Lamps

- High intensity medium-pressure lamps

#### Lamp Intensity Sensors

- DVGW-certified germicidal sensors (one per lamp)

#### Cleaning System

- Automatic Quickwipe™ system

#### Automated Operation and Control System

- PLC-based operation and control

#### Electromagnetic Ballast

- Reliable time-proven design

### Advantages

**Low Cost:** compared to other advanced treatment technologies such as ozone and membranes

**Compact Design:** easy installation and retrofits for large-sized treatment plants

**Third Party Validated:** in compliance with U.S. EPA's LT2 Enhanced Surface Water Treatment Rule

**Clean:** no chemicals used for cleaning; produces no disinfection by-products

**Safe:** automatic emergency shut down

**Reliable:** robust long-life electromagnetic ballasts with superb voltage tolerance

**Easily Installed:** power cabinets may be located up to 500 feet (150 meters) from reactor



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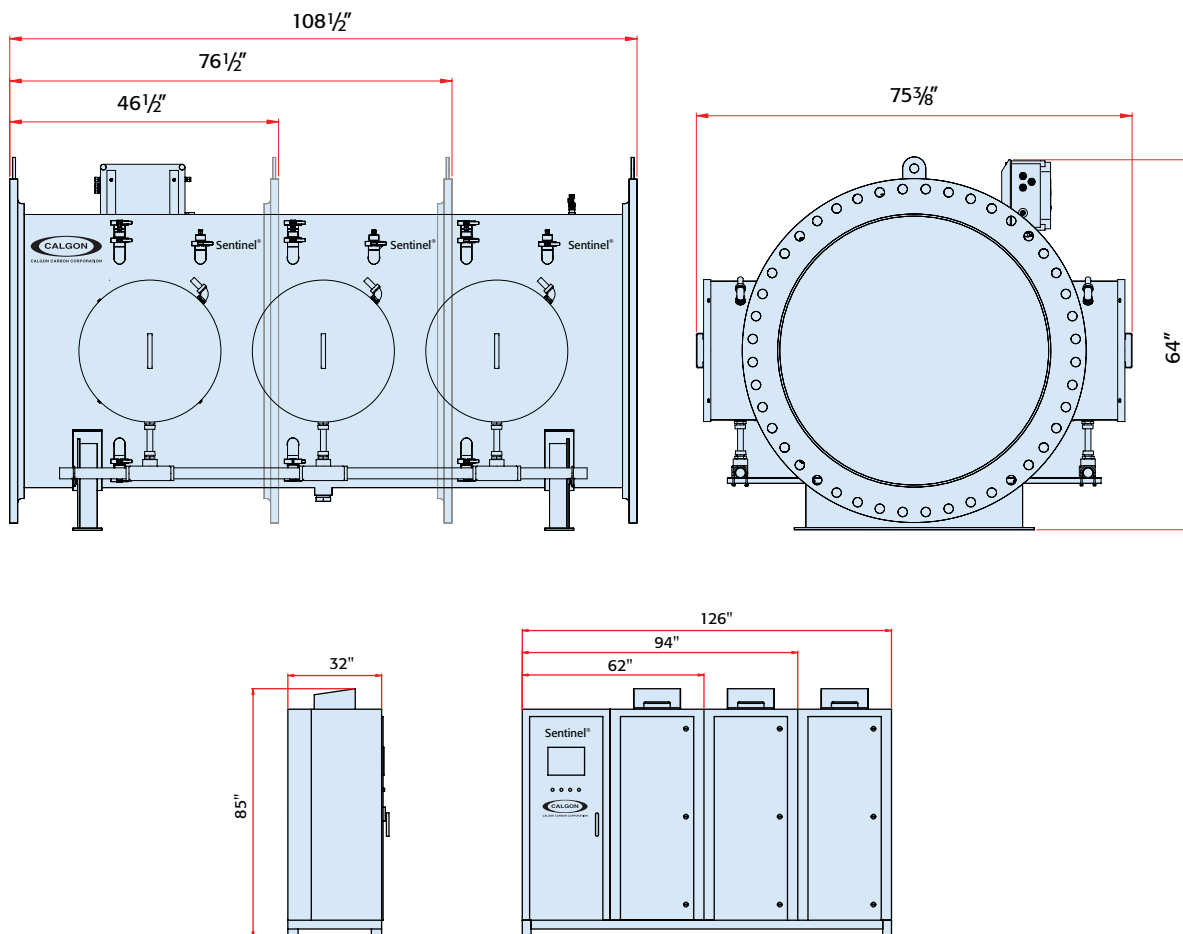
## Ultraviolet Drinking Water Disinfection System



CALGON CARBON CORPORATION

### Specifications

Inlet/Outlet	48" (1,200 mm) - 150# flange
Flow	up to 40 MGD (150 MLD)
% UVT at 254 nm	as low as 70%
Number of Lamps	up to 9
Total Lamp Power	20 to 180 kW
Power Supply	480/600 VAC
Reactor Body	316L stainless steel
Maximum System Pressure	150 psi
Sensors	DVGW-certified germicidal (one per lamp)
Wipers	Quickwipe <sup>™</sup> stainless steel wipers



CALGON CARBON CORPORATION

Calgon Carbon Corporation  
 UV Technologies Division  
 P.O. Box 717  
 Pittsburgh, PA USA 15230-0717  
 1-800-422-7266  
 Tel: 412-787-6700  
 Fx: 412-787-6713

Making Water and Air Safer and Cleaner

Chemviron Carbon  
 European Operations of  
 Calgon Carbon Corporation  
 Zoning Industriel C de Feluy  
 B-7181 Feluy, Belgium  
 Tel: + 32 (0) 64 51 18 11  
 Fx: + 32 (0) 64 54 15 91

Calgon Carbon Asia  
 65 Chulia Street  
 #37-03 OCBC Centre  
 Singapore 049513  
 Tel: +65 6 221 3500  
 Fx: +65 6 221 3554

Your local representative

