

# **SENTINEL® 24**

## Ultraviolet Drinking Water Disinfection System



### **Description**

Designed to treat flows up to 20 million gallons per day (75 MLD), the Sentinel® 24 can effectively disinfect drinking water in medium-sized treatment plants. The Sentinel® 24 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® 24 to be compact with a small footprint. This can provide a significant advantage to water treatment plants looking for a system that can be easily retrofitted into existing treatment systems. The Sentinel® 24 outperforms other advanced treatment technologies such as membranes and ozone at a fraction of the cost. The Sentinel® 24 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® 24 was designed using advanced computational fluid dynamics allowing for optimal lamp and baffle placement to ensure maximum reactor performance and operational efficiency. The Sentinel® 24 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 medium-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



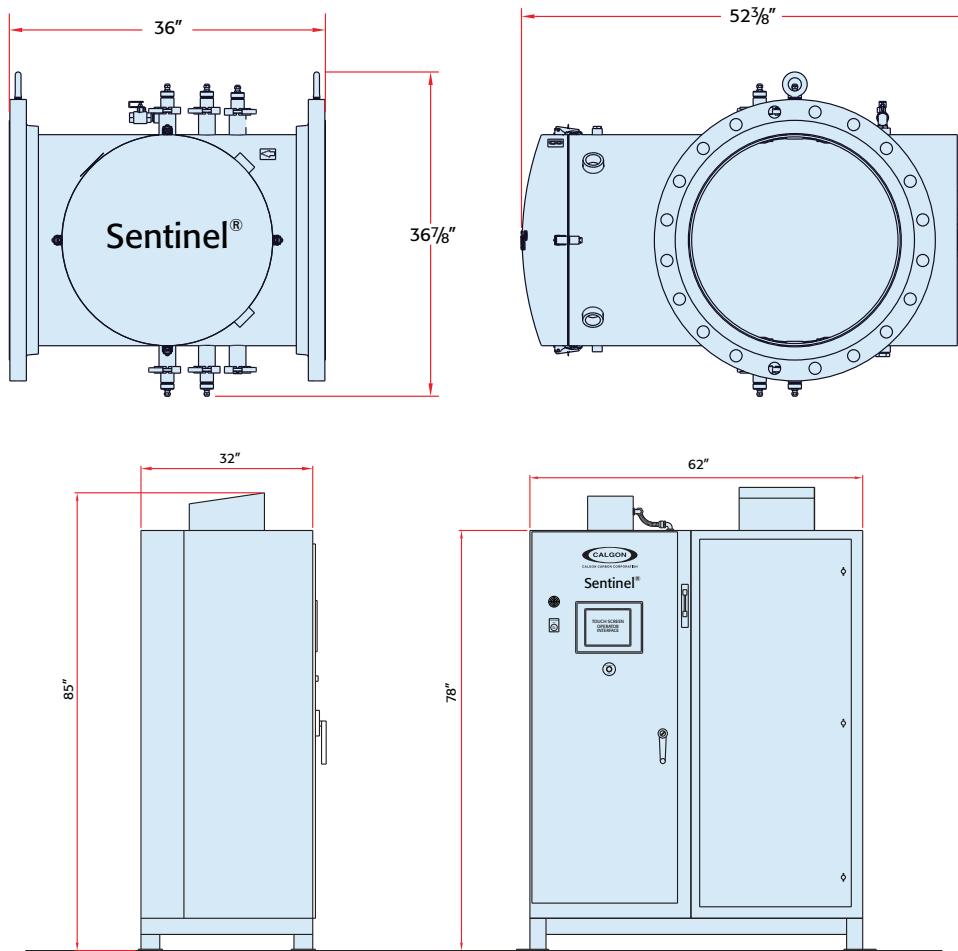
# **SENTINEL® 24**

## Ultraviolet Drinking Water Disinfection System



### Specifications

Inlet/Outlet	24" (600 mm) - 150# flange
Flow	up to 20 MGD (75 MLD)
% UVT at 254 nm	as low as 70%
Number of Lamps	up to 5
Total Lamp Power	20-50 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™ stainless steel wipers



CALGON CARBON CORPORATION

Calgon Carbon Corporation  
UV Technologies Division  
P.O. Box 7117  
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