

C³500™ Ultraviolet Disinfection System



Description

The C³500™ open channel series is an advanced, cost effective solution for the ultraviolet disinfection of wastewater using the highest powered, low-pressure horizontal lamps available. Calgon Carbon designed the C³500™ open channel, parallel flow ultraviolet disinfection series to meet the demands of treatment plant operators with simple operation and maintenance. The C³500™ allows plant operators to eliminate chlorine usage, which eliminates the risks associated with chemical handling, while improving effluent quality.

The C³500™ can be built to treat the flows of most open channel wastewater streams from medium- to large-sized wastewater treatment plants. The C³500™ is also capable of disinfecting combined sewer overflows (CSO), sanitary sewer overflows (SSO), and reuse waters. The modular design allows for easy expansion as plant capacity increases.

The C³500™ can be equipped with simple manual controls or sophisticated control systems based on customer requirements.

The UV System includes: lamp racks, power distribution center, automatic level control device, automatic cleaning system, and all necessary interconnecting cables. It is designed for simple installation and trouble-free operation throughout the life of the system. The C³500™ is designed to operate at ambient air temperatures ranging from 14°-104°F (-10°- 40°C) with 5-95% relative humidity (non-condensing). System modifications are available for conditions outside of this range.

Design Features

Modular Design

- Modular components are preassembled with quick-connect cables for simple installation and system start-up
- Components are designed to comply with NEMA 4X (IP56) ratings

Lamp Technology

- Low-pressure, high-output (LPHO) amalgam lamp technology
- Rapid-start continuous heat configuration

Ballast Technology

- Efficient, high frequency electronic ballast
- Variable output
- Each ballast powers one LPHO lamp

Automatic Cleaning System

- Mechanical, non-chemical cleaning
- Automatic or manual initiation

Innovative Control System

- Dose or flow pacing
- Self-diagnostics
- Individual lamp status indication
- Elapsed time counter
- Remote annunciation of alarms and bank status

UV Intensity Sensor

- Monitors the average intensity within the lamp bank array
- User adjustable setpoints for low and low-low UV intensity alarms

Level Control Devices

- Stainless steel weir or counterbalanced stainless steel level control gate

Input Power Options

- 380/220VAC, 3 Phase, 4 wire and GND, 50/60 Hz
- 415/240VAC, 3 Phase, 4 wire and GND, 50/60 Hz
- 480/277VAC, 3 Phase, 4 wire and GND, 60 Hz

Power Demand

- 490 watts/lamp including ballast (nominal)

Power Quality

- System Power Factor is 0.98 minimum

Options

Advanced Control System

- Optimizes disinfection performance
- Full control and monitoring features
- Lowers operating costs

Portable Photometer (Model # UV-254)

- Permits monitoring of effluent's UV transmittance

Service Trolley

- Portable trolley ideal for servicing lamp racks

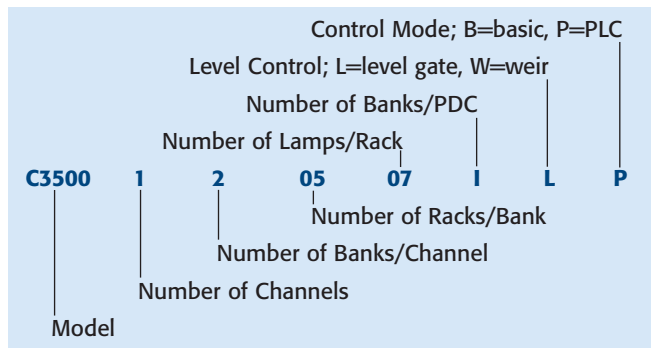


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Model Number Nomenclature

The C³500™ open channel series is identified by a combination of letters and digits by which the system's size, both mechanically and electrically, is designated.

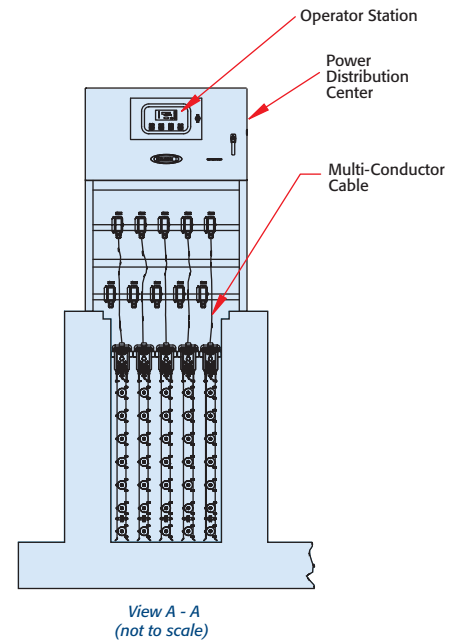
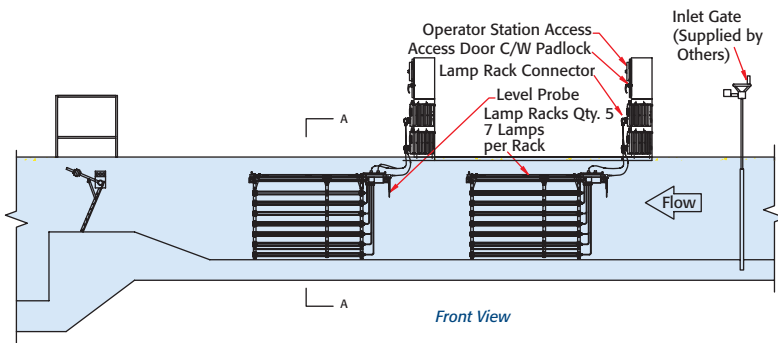
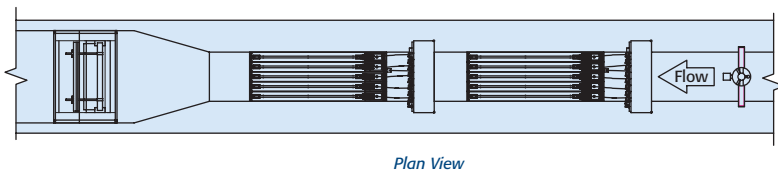


Calgon Carbon

Calgon Carbon Corporation, is a global manufacturer, supplier, and developer of granular activated carbon, innovative treatment systems, value added technologies, and services for optimizing production processes and safely purifying the environment.

With over 60 years of experience, facilities around the world, and a world-class team of over 1,100 employees, Calgon Carbon Corporation can provide the solutions to your most difficult purification and disinfection challenges.

Typical System Overview



CALGON CARBON CORPORATION

Calgon Carbon Corporation
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

