C³150

Ultraviolet Wastewater Disinfection System

Overview

The C³150 Open Channel Series is an advanced, cost effective solution for the ultraviolet disinfection of wastewater. Calgon Carbon designed the C³150 Open Channel, parallel flow ultraviolet disinfection Series to meet the demands of treatment plant operators with simple operation and maintenance. The C³150 allows plant operators to eliminate chlorine usage, which eliminates the risks associated with chemical handling, while improving effluent quality.

The C³150 can be built to treat the flows of most open channel wastewater streams of small- to medium-sized wastewater treatment plants. The modular design allows for easy expansion as plant capacity increases.

The C³150 is also available in a packaged plant design for quick and easy installation. This design is intended for plants with flows up to 1.0 MGD (3,785 m^3 per day).

The C³150 has either simple manual controls or sophisticated control systems based on customer requirements.

The UV System includes: lamp racks, power distribution center, automatic level control device, and all necessary interconnecting cables. It is designed for simple installation and trouble-free operation throughout the life of the system. The C³150 is designed to operate at temperatures ranging from 14°-104°F (-10°- 40°C) with 5-95% relative humidity (non-condensing).

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 ratings

Lamp Technology

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

Ballast Technology

- Efficient, high frequency electronic ballast
- Variable output
- Each ballast powers two LPHO lamps

Automatic Cleaning System (optional)

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

Innovative Control System

- Dose or flow pacing
- Self-diagnostics
- 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
- Counterbalanced stainless steel level control gate

Input Power Options

- 208/120VAC, 3 Phase, 60 Hz
- 380/220VAC, 3 Phase, 50/60 Hz
- 415/240VAC, 3 Phase, 50 Hz

Power Demand

- 170 watts/lamp including ballast (nominal)

Power Quality

- System Power Factor is 0.98 minimum
- Current Total Harmonic Distortion (THD_I) complies with IEEE519-1992 guidelines

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Options

Packaged Plant

- Includes pre-fabricated stainless steel channel, weir and inlet transition boxes, and UV system complete with preassembled quick-connect cables

Advanced Control System

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

Portable Photometer (Model # UV-254)

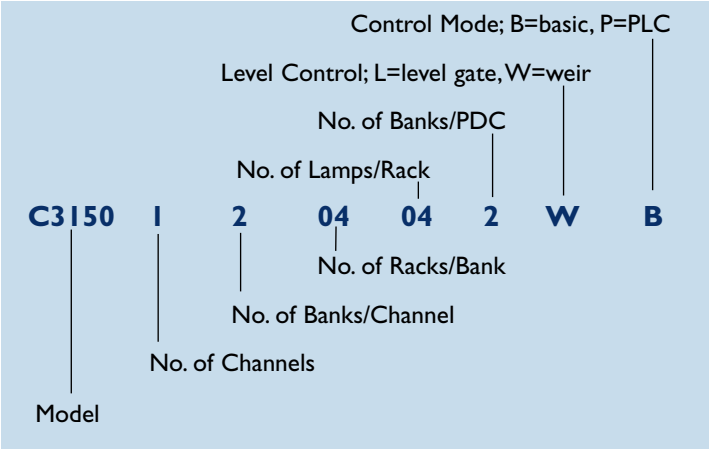
- Permits monitoring of effluent's UV transmittance

Service Trolley

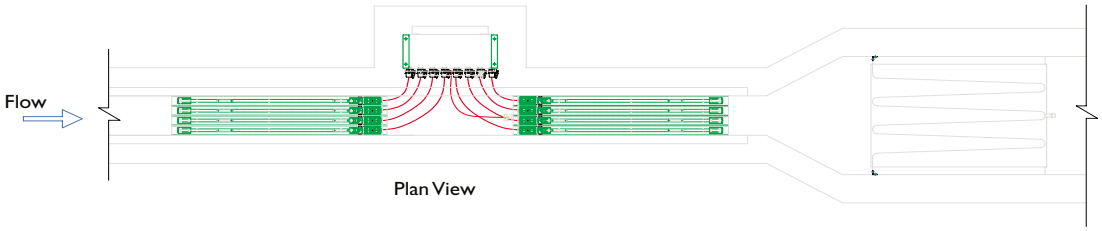
- Portable trolley ideal for servicing lamp racks

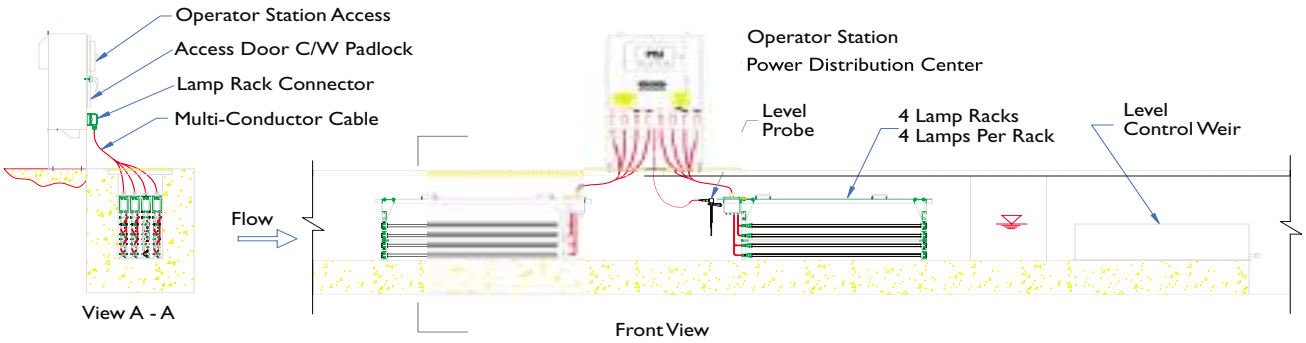
Model Number Nomenclature

The C³150 open channel series is identified by a combination of letters and digits by which the system's size, both mechanically and electrically, is designated.



Typical System Overview





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