C^{3}150™

Ultraviolet Disinfection System

Description

The C^{3}150 open channel series is an advanced, cost effective solution for the ultraviolet disinfection of wastewater. Calgon Carbon designed the C^{3}150 open channel, parallel flow ultraviolet disinfection series to meet the demands of treatment plant operators with simple operation and maintenance. The C^{3}150 allows plant operators to eliminate chlorine usage, which eliminates the risks associated with chemical handling, while improving effluent quality.

The C^{3}150 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 C^{3}150 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 C^{3}150 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, and all necessary interconnecting cables. It is designed for simple installation and trouble-free operation throughout the life of the system. The C^{3}150 is designed to operate at temperatures ranging from 14° - 104°F (-10° - 40°C) with 5-95% relative humidity (non-condensing). System options 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 (IP55) ratings

Lamp Technology

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

Ballast Technology

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

Automatic Cleaning System

- 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

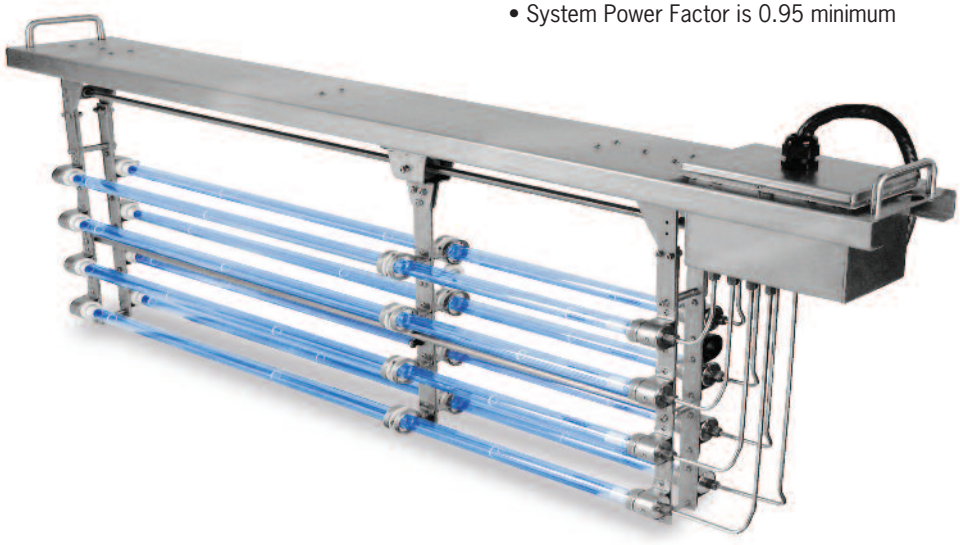
- 208/120VAC, 3 Phase, 4 Wire and GND, 60 Hz
- 380/220VAC, 3 Phase, 4 Wire and GND, 50/60 Hz
- 415/240VAC, 3 Phase, 4 Wire and GND, 50/60 Hz

Power Demand

- 170 watts/lamp including ballast (nominal)

Power Quality

- System Power Factor is 0.95 minimum



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

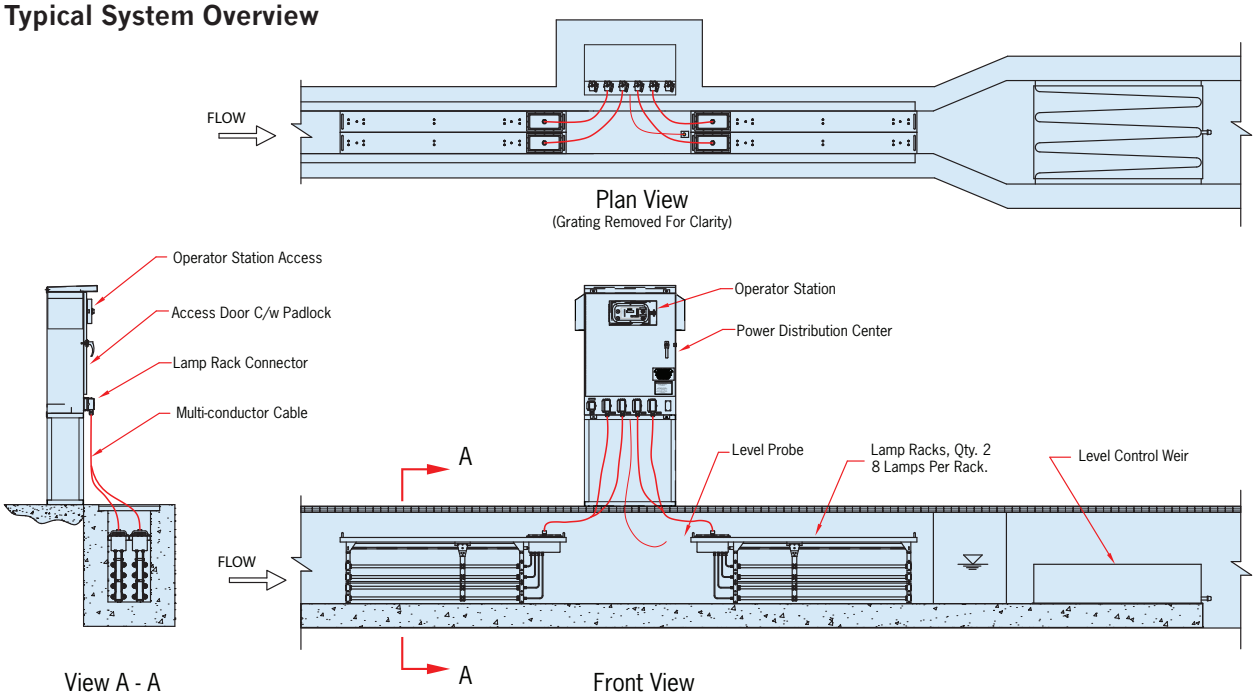
- Portable trolley ideal for servicing lamp racks

Model Number Nomenclature

The C^{3}150 open channel series is identified by a combination of letters and digits by which the system's size, both mechanically and electrically, is designated.

C3150	1	2	02	08	2	W	B
Model	Number of Channels	Number of Banks/Channel	Number of Racks/Bank	Number of Lamps/Rack	Number of Banks/PDC	Level Control; L=level gate, W=weir	Control Mode; B=basic, P=PLC

Typical System Overview



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