

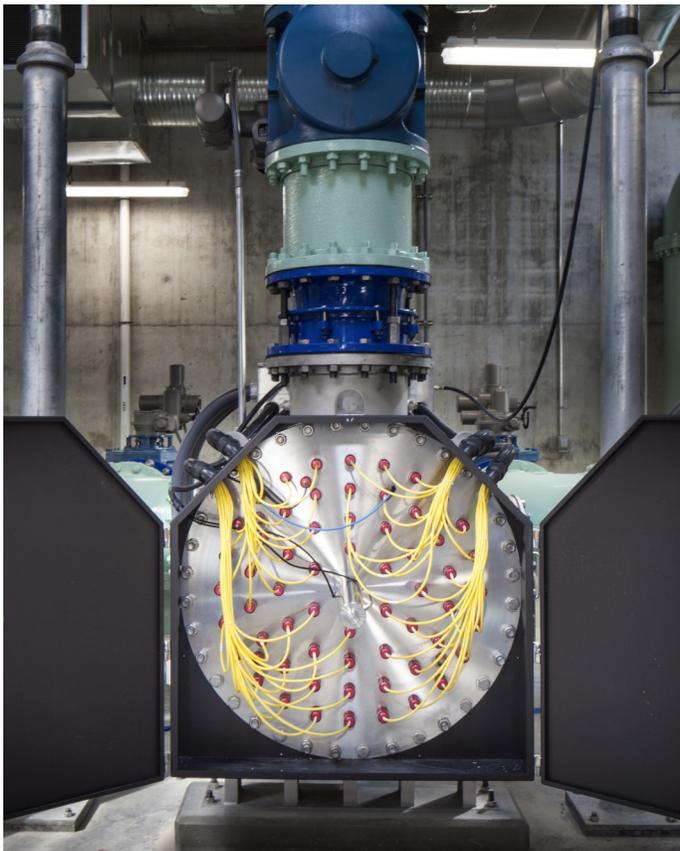
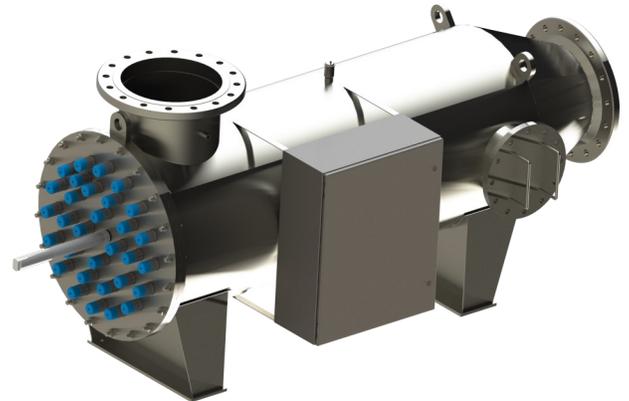
IL Series

Product Overview

The "IL" wastewater series uses chambers (vessels) to treat a large range of flow rates. For large flows, multiple vessels are used.

Wastewater enters the chamber and once inside, it is exposed to UV light. The UV lamps produce light in the 254-nm wavelength. At this wavelength, UV light destroys bacteria, protozoa, viruses, molds algae and other microbes. This includes fecal coliform and such waterborne diseases as: E-coli, hepatitis, cholera and many others.

Systems integrate energy efficient low pressure high output or high intensity (amalgam) UV lamps. These lamps last over 16,000+ hours and produce 90%+ of their light in the 254 nm range



Features

- Electropolished 316L stainless steel vessel
- Low pressure UV lamps (HO and Amalgam)
- Automatic quartz cleaning
- 150 psi (10 bar) pressure rating
- Flexible flanges sizes
- UV lamp monitoring
- Remote stainless steel electrical enclosures
- Lamp status and running time indicators
- Biologically validated systems available
- Programmable Logic Controls (PLC)
- Online UV transmission monitoring
- Supplemental chemical cleaning system
- Remote On/Off



Operation

Wastewater facilities are installing low pressure UV lamp chambered systems to disinfect wastewater. As with all UV systems, the main operational and maintenance responsibilities have to do with keeping the system clean and the lamps operating at optimum performance.

UV lamps need to be replaced every 16,000 hours. Due to the harsh nature of wastewater, the quartz sleeves (the glass-like tubes that protect the lamps) need to be cleaned. Cleaning frequency is directly related to the pre-treatment processes and the make-up of the wastewater. Fouled quartz prevents the UV light from penetrating and will reduce system efficiency.

The "IL" systems incorporate automatic quartz cleaning systems. The pneumatically or electrically driven system pushes a wiper mechanism over the sleeves to remove build up.



Configurations

Piping to and from the vessels can cause issues due to spatial constraints and existing piping. Glasco UV offers flexibility when designing the UV system by allowing custom flange sizes and locations.

The various "IL" following orientations are available:

- "U" inlet and outlet are on the same side
- "Z" opposing inlet and outlet
- "BT" or "L" inlet is at end and outlet on other side

Chambers are manufactured using raised face 150# flanges. They are also available in DN style and various other end user requested configurations. Existing piping galleries can be matched through our ability to custom design stainless pressure vessels.

Ballast Control Center (BCC) can be remotely located up to 90 feet from the systems (depending on the technology used). Typical systems are standard within 8 to 10 feet. Discuss with factory prior to designing. BCC can be supplied in various voltages.



"U" Configuration



"L" Configuration



"Z" Configuration



Installation Design

The goal is to have the vessels installed in a manner where they are always full of wastewater. This prevents the system from overheating and fouling.

Individual chambers can treat in excess of 7.0 MGD. Depending on redundancy requirements, systems will be designed to provide both optimal performance and energy savings. Peak flow rates are often shared between multiple units, while lower flows will be addressed through dimming.

The UV systems will be powered and controlled by remote modified NEMA 4x stainless steel enclosures that display lamp status, run time and UV output under a window kit.

For plants that require remote operation and automated systems cycling, a PLC system will be provided to work in conjunction with treatment plant's computer systems.