

Drinking Water Treatment

TROJAN UV®

MEDITECNA
Instrumentación | Proyectos | Servicios

TROJAN UV®
Municipal Drinking Water



UV for the Treatment of Drinking Water

UV light has been proven in installations around the world as an effective solution for treating *Cryptosporidium* and *Giardia*. UV is a simple and cost-effective solution that adds nothing to the water but UV light and does not create by-products.

The contact time required for the UV process is mere seconds, so the footprint required for treatment is relatively small making it ideal for both retrofits and new construction.

TrojanUV systems are treating drinking water for small communities, large municipalities, and everything in between. In fact, New York City has built the world's largest UV treatment facility for drinking water and we are proud to have supplied the UV equipment which is capable of treating 2.02 billion gallons of water per day.

TROJANUVFLEX®

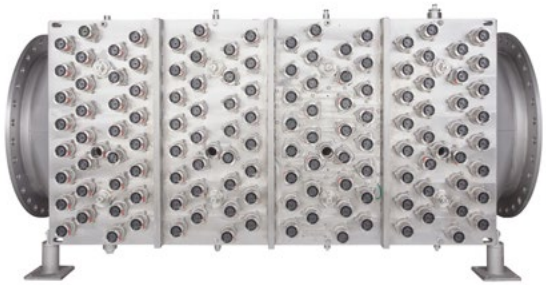
Compact, Eco-efficient UV Treatment for Drinking Water

The TrojanUVFlex® is our latest innovation and is designed with features to make installation and operation simpler, faster and more cost-effective than ever before. Built on our proven Solo Lamp® Technology platform, TrojanUVFlex allows for energy-efficient high-intensity delivery of UV light in an extremely compact footprint.



TrojanUVFlex 200 Series





TrojanUVFlex 100 Series

Cost-Saving Cross-Flow Lamp Orientation. TrojanUV Solo Lamps are arranged in arrays engineered to minimize cost. Perpendicular cross-flow lamp orientation reduces operating costs by allowing independently operated sections of lamps to be turned on/off in response to changing treatment conditions and also ensures water continues to be treated by downstream lamps in the event an upstream lamp needs to be replaced.

Future Expansion Made Easy. Chambers can be manufactured with additional banks to accommodate future treatment capacity or for the UV advanced oxidation process. This ensures the system meets your current requirements while also planning for future needs.

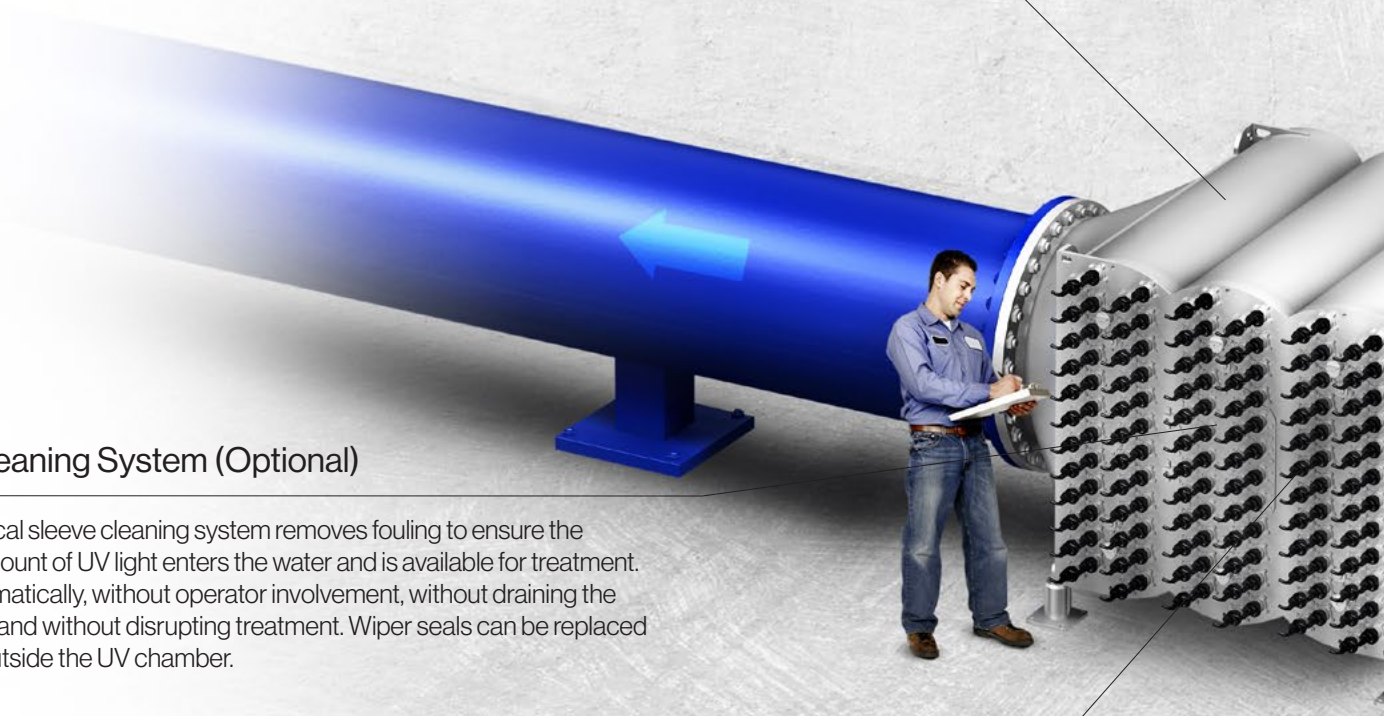
Flexible Installation Options. The option to install chambers vertically or horizontally makes integration into existing piping straightforward and allows service access from any direction.

Advanced Validation. The TrojanUVFlex has been validated through microbial testing. Through this testing, performance data has been generated for UV dose delivery to inactivate *Cryptosporidium*, *Giardia*, and *Adenovirus*.

TROJAN UV FLEX®

UV Chamber

A stainless steel chamber houses the lamps and quartz sleeves in a unique cross-flow orientation. Its design has been optimized for highly-efficient treatment in a very compact footprint. Precise UV intensity sensors monitor lamp output optimizing power use and reducing overall energy consumption.



Sleeve Cleaning System (Optional)

Our mechanical sleeve cleaning system removes fouling to ensure the maximum amount of UV light enters the water and is available for treatment. It works automatically, without operator involvement, without draining the UV chamber, and without disrupting treatment. Wiper seals can be replaced easily from outside the UV chamber.



TrojanUV Solo Lamps

The TrojanUV Solo Lamp combines the benefits of low- and medium-pressure lamps, providing high UV output, low power consumption, low lamp count, long lamp life (>15,000 hours), and reduced maintenance. Lamps are located within protective quartz sleeves and are easily accessible for change-outs.

SOLO LAMP® TECHNOLOGY

Power Distribution

The compact power distribution panels house rack mounted Solo Lamp drivers to power and control the UV lamps. To reduce power consumption and save costs, drivers control lamp sections which turn on/off based on real-time treatment conditions and can dim lamps from 100 to 30% power. They feature built-in diagnostic capability for easy troubleshooting and take only minutes to replace.



Local Control

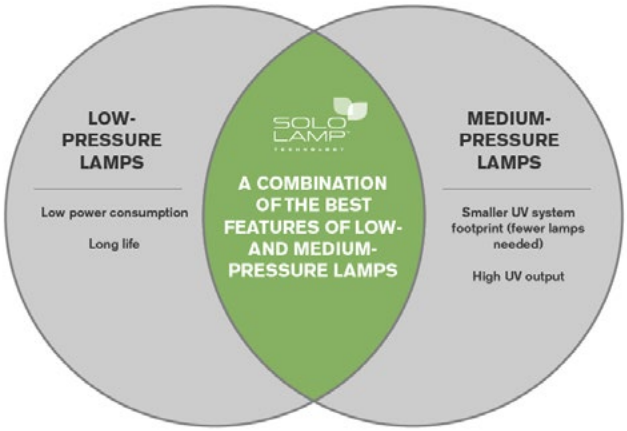
A local control panel houses the UV controller which maintains the customer desired dose through real-time input signals for flow, UVT, and UV intensity. Dose is carefully monitored with return signals being sent to lamp drivers which adjust UV output to maintain energy efficient operation.



Revolutionary Lamp and Driver Technology

The best features of both low- and medium-pressure lamps

- High UV output and high electrical efficiency
- Low total lamp count (and associated components like drivers and sleeves) reduces maintenance costs
- Long lamp life (15,000 hours guaranteed)
- Solo Lamp driver has a high power factor and low total harmonic distortion
- Lamp drivers are rack mounted in panels for compact footprint and easy replacement

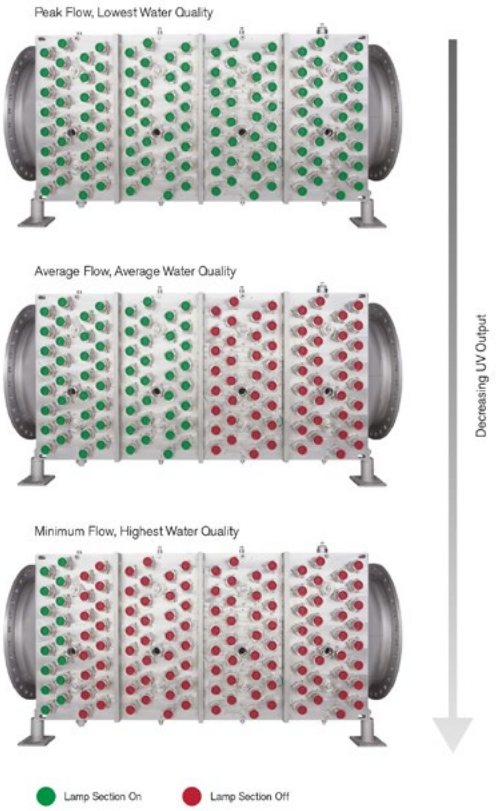


TrojanUV Solo Lamp systems combine the benefits of other lamp technologies – the low lamp count of medium-pressure systems with the high electrical efficiency of low-pressure high-output (LPHO) systems. The result is a compact, cost-effective installation that is easy and quick to maintain.

Compact, Modular UV Chamber

Significantly reduces footprint and installation cost

- Staggered, cross-flow lamp arrays maximize UV output and reduce chamber size
- Compact footprint simplifies indoor retrofit installations and reduces construction costs
- Horizontal or vertical installation allows service access from any direction
- Modular lamp sections enable expandability, redundancy and low power consumption
- Low headloss design reduces or eliminates pumping

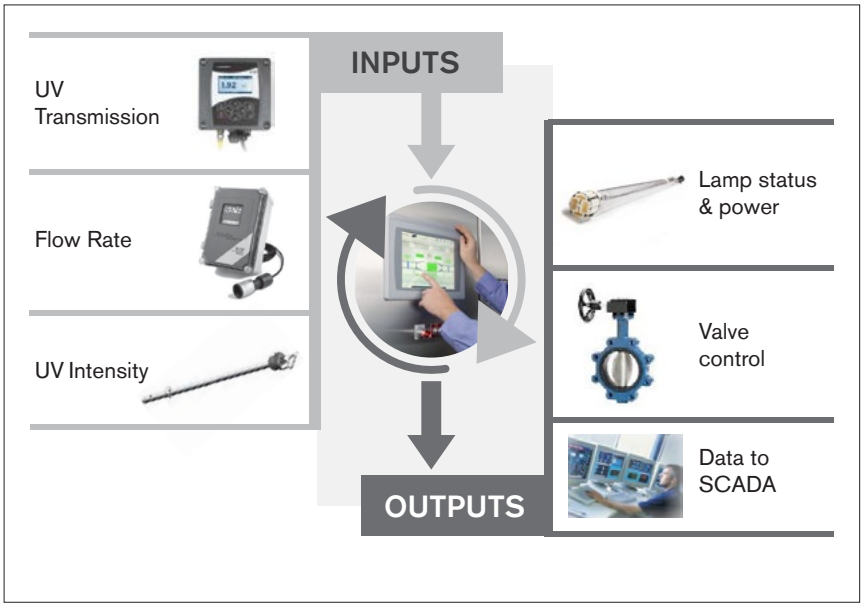


Lamp sections can turn on/off to minimize lamp hours and power in response to changing treatment conditions.

State-of-the-Art System Control

Confidently achieve treatment objectives while minimizing operational costs

- Controller processes multiple real-time inputs including flow rate, treatment objectives, UV transmission and system operational parameters (UV sensors and lamp data)
- Computes delivered dose and compares against treatment requirements
- Automatically controls number of lamps turned on and individual lamp power settings
- Optimizes energy use by modulating UV output to match treatment conditions



Real-time inputs are utilized in the computation of dose. The system dynamically adjusts lamp power and number of lamps to minimize operation and maintenance costs.

User-Friendly Experience

Designed to make the operator's job easier

- Access lamps, UV sensors, and quartz sleeves all from the outside of the chamber
- "Lamp on" LED indicator on lamp plug provides easy visual determination of lamp status
- Optional mechanical sleeve cleaning system prevents quartz sleeve fouling
- Wiper seals are quickly replaced from outside the UV chamber
- Integrated chamber hatches provide easy access for internal inspection or maintenance
- Graphic screens and icons make system operation intuitive for operators



All UV systems require periodic maintenance; but TrojanUVFlex allows fast access to all routine maintenance components (including wiper components) from outside the UV chamber. This minimizes maintenance time and increases efficiency.

Building Water Confidence

The TrojanUV line of products include open-channel and closed-vessel UV treatment and UV advanced oxidation systems for municipal wastewater, drinking water, remediation and reuse applications. We have the largest municipal UV installation base in the world and are proud to play an important role in continually advancing UV technology and helping to build Water Confidence for communities and municipalities.

Experience. Over 10,000 municipal UV installations; treating 60 billion gallons of water every day (225 million m^3/day).

Global Support. Local Service. Our comprehensive network of certified service providers offer rapid response and personalized attention for service, replacement parts and system optimization.

Guaranteed Performance and Comprehensive Warranty. TrojanUV systems include a Lifetime Performance Guarantee* and comprehensive warranties for systems and parts.

System Specifications

System Characteristics	TrojanUVFlex 200 Series	TrojanUVFlex 100 Series
Lamp Type	TrojanUV Solo Lamp - Low Pressure High Output	
Lamp Power	1000 Watts	500 Watts
Lamp Driver	Electronic, variable power (30% to 100%)	
Chamber Material	2205 duplex stainless steel	
Flange Size	48 inch AWWA C207, DN1200	36 inch AWWA C207, DN900
Maximum Pressure	87 psi (6 bar)	150 psi (10 bar)
Sleeve Cleaning	Mechanical cleaning (Optional)	
Network Connection	AB Ethernet I/P, ProfiNet, Profibus, Modbus TCP/IP, Modbus RTU RS485	
Panel Material	Painted mild steel, 304 stainless steel, 316 stainless steel	
Validation	USEPA and NWRI	

* When you use TrojanUV parts, we guarantee that your system will meet the treatment requirement specified at purchase, provided that the system's original design parameters haven't changed (e.g., flow rate, UV Transmittance) and maintenance is completed per the UV System O&M manual. Should you experience an issue, our Service Technicians will work with you to resolve it as fast as possible.

To learn more about the brands and affiliates of Trojan Technologies, please visit www.trojantechnologies.com

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