Reuse & Remediation

TROJAN UV®

Water Confidence®

TROJAN UVSWIFT® ECT

Robust UV Advanced Oxidation Water Treatment

Water resources are under stress due to increasing population, changing rainfall patterns, widespread pollution, and a variety of other factors. For this reason, water providers must strive to make the most of every available water source, even those that have been impacted by contamination. TrojanUV advanced oxidation systems provide water confidence and help restore and preserve precious water supplies. These systems are enabling water suppliers to cost-effectively treat 1,4-dioxane and NDMA, and inactivate *Cryptosporidium*, *Giardia,* and *Adenovirus*.

TrojanUV advanced oxidation systems can remotely monitor the use of consumables, such as hydrogen peroxide. This can aid in the scheduling of oxidant supply shipments and notify you of changes in system operation and consumable usage. We can also oversee the replenishment of hydrogen peroxide or other related oxidants on an as-needed basis.

Key Benefits

TrojanUV Advanced Oxidation Systems

Dual treatment action. Innovative process delivers microbial inactivation of *Cryptosporidium*, *Giardia*, and *Adenovirus* and breaks down environmental contaminants such as 1,4-dioxane, NDMA, geosmin and MIB.

Cost-effective. Optimized chamber technology makes the advanced oxidation process (UV AOP) cost-effective for a wide range of applications.

Compact design reduces capital costs. Small footprint relative to ozone and other technologies simplifies installation and significantly reduces capital costs.

Well suited to seasonal treatment. Effectively treats taste and odor problems related to algae blooms occurring in warm summer and fall months.

Rapid, by-product-free treatment. Single unit process treats water almost instantly, without forming bromate, other by-products, or hazardous gases.

Intuitive operation. Designed for minimal operator involvement.

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Compact, medium-pressure design for high-volume performance

Key Benefits:

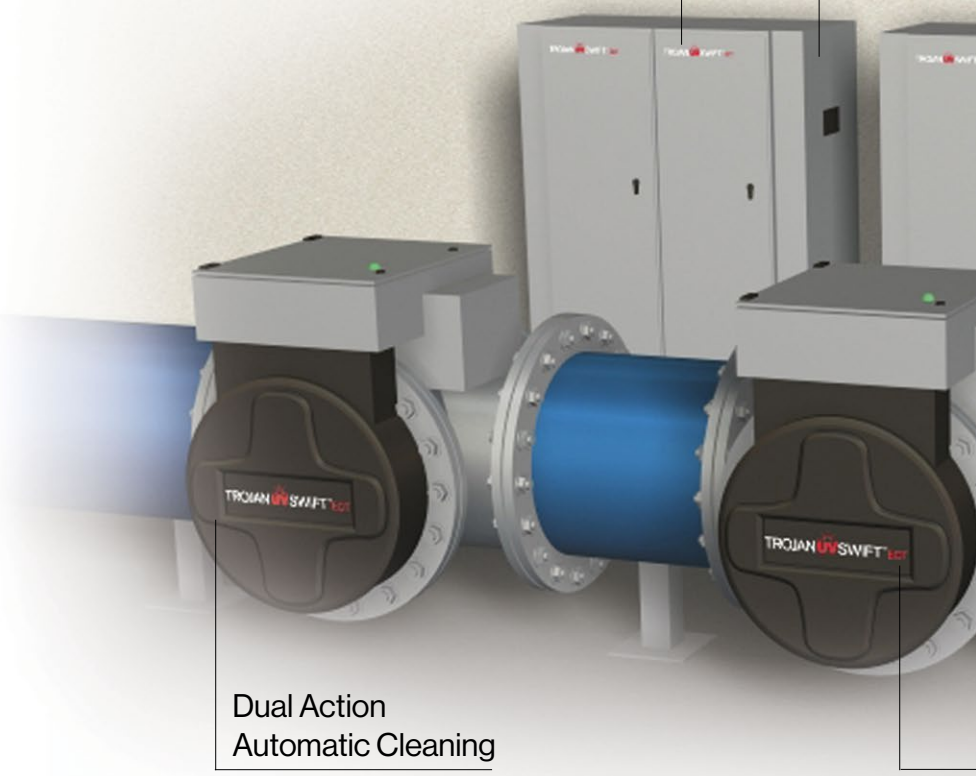
- High-intensity medium-pressure lamps deliver UV light for both microbial inactivation and advanced oxidation of contaminants
- Need for fewer lamps allows a smaller, space-efficient footprint that offers simplified integration into existing piping galleries
- Extensively validated treatment performance for a wide range of flow rates and water quality parameters

Best Suited for:

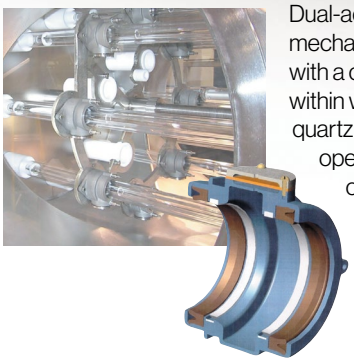
- Applications in which contaminant treatment is intermittent (e.g. seasonal taste and odor treatment)
- Locations in which electrical power is relatively inexpensive

Control Power Panel

Distributes power to the UV lamps, UV sensor(s) and optional ActiClean® cleaning system. Incorporates a programmable logic controller with input/ output connection points and communication hardware.



Dual Action Automatic Cleaning



Dual-action cleaning system uses mechanical wiping in conjunction with a cleaning solution contained within wiper canisters surrounding the quartz sleeves. This advanced system operates automatically, without operator involvement, reducing maintenance and ensuring maximum UV output every day.

Hydrogen Peroxide Storage Tank

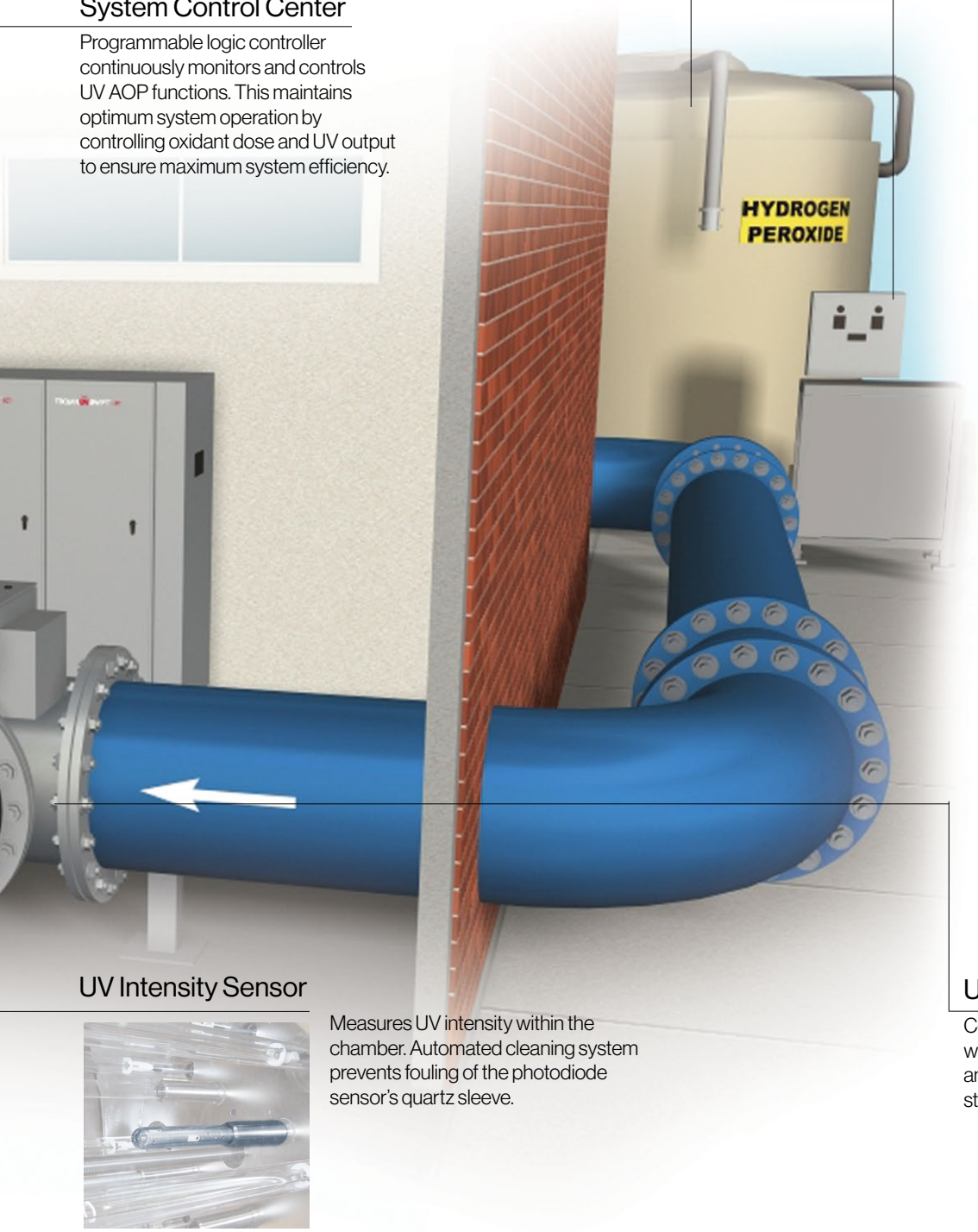
Durable, double-contained, high-density polyethylene resists sun damage. Includes leak detection and level indicator.

Hydrogen Peroxide Dosing System

Delivers oxidant based on real-time signals from the system control center.

System Control Center

Programmable logic controller continuously monitors and controls UV AOP functions. This maintains optimum system operation by controlling oxidant dose and UV output to ensure maximum system efficiency.



UV Intensity Sensor

Measures UV intensity within the chamber. Automated cleaning system prevents fouling of the photodiode sensor's quartz sleeve.

UV Chamber

Compact, flow-through design with lamps mounted horizontally and perpendicular to the flow. 316L stainless steel construction.

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Compact, Hydraulically-Efficient Chamber

Innovative design substantially reduces footprint and head loss

The TrojanUVSwiftECT was developed using advanced Computational Fluid Dynamics modeling, resulting in a compact, highly efficient system that minimizes space requirements and installation costs.

Benefits:

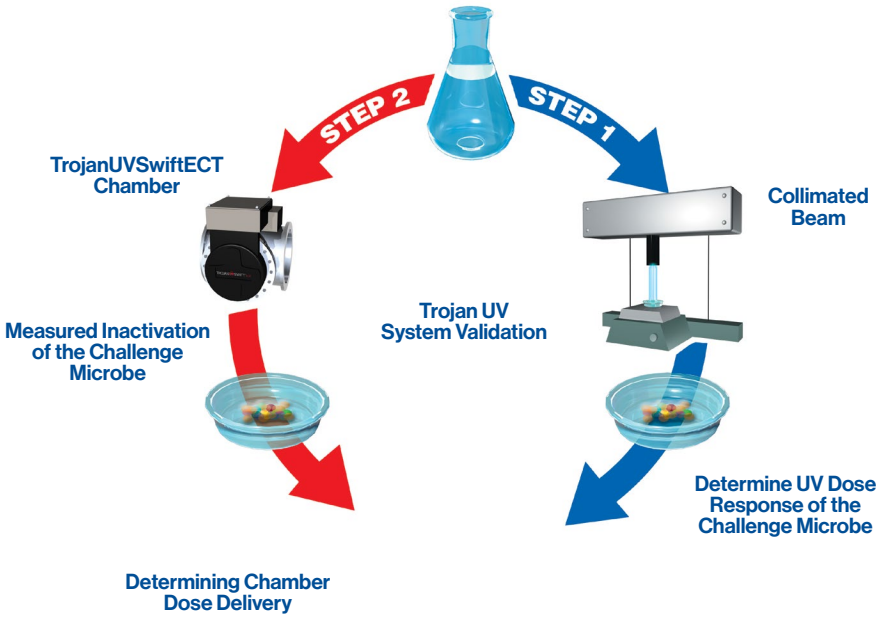
- Compact, in-line design minimizes chamber footprint
- Space requirements for taste and odor treatment are less than ozone equipment/contact tanks – leading to reduced installed capital costs
- Full serviceability from one side of the chamber allows installation in restrictive pipe galleries and against walls for maximum flexibility
- Hydraulically efficient, flow-through design developed through extensive computer analysis to minimize head loss and pumping requirements

Comprehensive Validation

Extensive microbial testing

Benefits:

- The TrojanUVSwiftECT shares a platform with the widely successful TrojanUVSwift® – a system with a significant installation base for drinking water applications
- Validated through microbial testing – through this testing, performance data has been generated for UV dose delivery to inactivate *Cryptosporidium*, *Giardia,* and *Adenovirus*



Sophisticated Oxidant Dosing Control System

Optimized dose delivery

Benefits:

- Sophisticated control system optimizes advanced oxidation and accounts for levels of nitrate and other water characteristics which influence performance
- Controls dose, lamp power and on/off status in real time
- Minimizes ongoing operational costs while maintaining the desired contaminant treatment objectives

Input Features

- Flow rate
- UV transmittance
- Oxidant dose
- Relative strength of the contamination event

Output Features

- Optimum oxidant dose
- Optimum lamp power
- Optimum number of lamps in operation
- UV energy output to minimize operation and maintenance (O&M) costs

Ideal for Seasonal Contaminants in Drinking Water

Treats algal toxins and taste and odor events when needed

- Recurring seasonal contamination events, such as algal blooms, can compromise drinking water supplies in many areas. The TrojanUVSwiftECT is ideally suited to this challenge, operating in two treatment modes to address the dual needs of communities with seasonal contamination issues:

Inactivation-Only Mode: Normal operating mode for year-round drinking water treatment. Runs at lower energy levels sufficient for treatment of microorganisms Cryptosporidium and Giardia.

Inactivation + Contaminant Control Mode: Activated only during seasonal contamination events. Additional UV lamps/chambers are energized and an oxidant is dosed into the water upstream of the UV system.

Benefits:

- Year-round inactivation of microorganisms and as-needed treatment of seasonal contaminants
- Validated to meet Long Term 2 Enhanced Surface Water Treatment Rule regulations
- Provides additional barrier when treating contaminants
- Produces no by-products
- Easily retrofitted into existing plants
- Flexible — active contaminant treatment turned on only when needed

TrojanUVSwiftECT Product Specifications	
Model	**8L24**
Number of Lamps	8
Dimensions/Miscellaneous	
Approximate Dimensions	
Width (in/m)	54/1.4
Length (Flange to Flange) (in/m)	35/0.9
Overall Height (in/m)	38/1.0
Required for Service beyond End Cap (in/m)	24/ 0.6
Vertical Distance Required for Service (in/m)	88/2.2
Maximum Operating Pressure (PSI/kPa)	150/1,034
Dry Chamber | Wet Chamber Weight (lb/kg)	1,500/680 | 2,240/1,016
Electrical/Control Power Panel	
Electrical Supply	480 V, 3 Ph + GND, 60Hz; (400 V, 380 V, or 415 V), 3Ph + GND, 50 Hz
Maximum Power Supply Range	8 lamp - 83 kVA unbalanced
Nominal kW Input per Lamp	9.6
Panel Rating	Type 12 Indoor
Enclosure Dimensions (H×W×D)	86.75" × 94" × 23.5" | 2.2 m × 2.4 m × 0.6 m (4 cabnets per chamber [16L30])

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

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