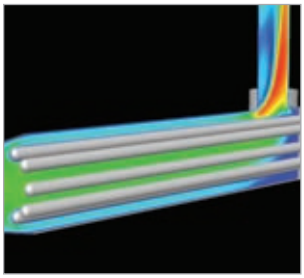
TROJAN UV
WATER CONFIDENCE™

Application Overview GENERAL INDUSTRIAL

Trojan UV systems provide efficient disinfection, TOC reduction, ozone & chlorine destruction for process, utility and ultrapure water

Ultraviolet Solutions for Industrial Applications

Full digital instrumentation provides instant, at-a-glance status of key system information in an easy-to-use, menu-driven interface. The revolutionary "L-shaped" reactor of the TrojanUVLogic™ delivers maximum efficiency. Sophisticated 3-D CFD computer modeling was used to optimize the hydraulics and dose delivery of the system.



Ultraviolet (UV) light is well established as a fast acting, point-of-contact disinfection technology for water treatment. UV, at the 254 nm wavelength, penetrates the cell walls of microorganisms and permanently alters their DNA structure – rendering them inactive and unable to reproduce. UV is also effective for reducing ozone (O_3), chlorine and chloramines compounds, and total organic carbon (TOC) compounds to required levels.

Comprehensive UV Product Line
The TrojanUVLogic™ series addresses the diverse needs of the food and beverage sector, and many other industries, including ultrapure water applications. The product line includes models ranging from 1 to 30 lamps, with disinfection capabilities from 40 to 8,000 GPM (9 to 2,044 m^3/hr) from a single reactor at 95% UVT. The TrojanUVLogic™ also provides effective TOC reduction and ozone and chlorine/chloramines destruction.

Sophisticated Digital Instrumentation
A key feature of the TrojanUVLogic™ is its user-friendly, microprocessor-based controller. The robust, versatile system features a menu-driven, digital interface and keypad for easy configuration, and is housed in a NEMA 4X/IP65 stainless steel cabinet with UL, NEN, and CE rating. The sophisticated controller offers:

- Discreet alarm outputs for rapid identification and correction of system faults
- Programmable inputs/outputs and remote ON/OFF control
- Ability to be linked to plant SCADA systems for integrated plant operation and monitoring
- Built-in memory for data acquisition, logging, and trending analysis of UV intensity and alarm conditions
- Easy-to-read, real time visual display for at-a-glance assessment of system performance

High-Output, Amalgam Lamps
Trojan's low-pressure, high-output (LPHO) amalgam lamps deliver significantly higher UV output than conventional systems. As a result, TrojanUVLogic™ systems require only one-third the number of lamps to deliver an equivalent dose – and also draw less power – than other systems. The single-ended lamps are rated for 9,000-hours and provide flat UV output in operating water temperatures of 41 ° to 104 ° F (5 ° to 40 ° C). Trojan TOC reduction lamps deliver a full 25% of their UV output at 185 nm – almost four times that of conventional 185 nm lamps.

Unsurpassed Hydraulic Efficiency & Installation Flexibility
Trojan's "L-shaped" reactor was developed using advanced 3-D computer modeling, resulting in 40% greater hydraulic efficiency than conventional "U-shaped" systems. Its compact size and ability to be mounted inline, horizontally or vertically, maximizes installation flexibility and preserves precious floor space.

Designed for Fast, Easy Maintenance
Trojan offers optional manual or automated sleeve cleaning that can be operated while the reactor is online. Single-ended lamps and quartz sleeves allow fast lamp change-outs without tools. One person can replace a lamp in less than 5 minutes.

Fully Equipped, Tested and Pre-Assembled
In addition to a comprehensive list of standard features, every system undergoes rigorous quality checks, and electronic and hydrostatic pressure testing before leaving our facility. Systems are shipped in a wood crate, ready for installation – arriving fully assembled, including quartz sleeves, lamps and seals.

TROJAN UV LOGIC™

SPECIFICATIONS

Model: TrojanUVLogic™	01AM10	01AM15	02AM15	02AM20	03AM20	03AS20	04AS20	03AL20	06AS20	04AL20	08AS20	06AL20	08AL20
Flow Rate:													
Disinfection (@ 95% UVT) GPM (m^3/hr)*	40 (9)	65 (15)	110 (25)	155 (35)	230 (52)	350 (80)	480 (110)	560 (130)	695 (160)	780 (189)	875 (200)	1120 (255)	1345 (306)
Disinfection (@ 99% UVT) GPM (m^3/hr)*	44 (10)	75 (17)	128 (29)	195 (44)	280 (63)	430 (97)	585 (133)	690 (156)	835 (189)	935 (212)	1010 (229)	1340 (304)	1620 (367)
TOC/Ozone Destruction (@ 99% UVT) GPM (m^3/hr)**	15 (3)	25 (5)	45 (10)	65 (14)	95 (21)	145 (32)	195 (44)	235 (53)	280 (63)	320 (72)	345 (78)	455 (103)	555 (126)
Number of Lamps:	1	1	2	2	3	3	4	3	6	4	8	6	8
Electrical Requirements:													
Voltage	120V/60Hz or 220-240V/50Hz, 1Φ 2W+GND					240/120V 1Φ 3W+GND 60Hz							
Power (VA)	197	197	334	334	471	534	692	849	1007	1113	1323	1639	2165
Internal System Fuse @ 240V	5	5	5	5	5	6	7.5	6	10	7.5	15	10	15
Ballast Type	Electronic, High Frequency												
Control Panel:													
Rating	NEMA 4X/IP65												
Materials of Construction	304 Stainless Steel												
Max. Cable Length ft (m)	15 (5)												
Water Chamber:													
Materials of Construction	316L Stainless Steel												
Nozzles (ANSI Flange) inches	1.5	2	2	4	4	4	6	6	6	6	6	6	6
Nozzles (Metric) mm	38	50	50	100	100	100	150	150	150	150	150	150	150
Max. Operating Pressure PSIG (Bar)	150 (10)												
Max. Operating Temperature °F (°C)	120 (49)												
Hot Water Sanitizable with Sensor °F (°C)	185 (85)												
Approx. Dimensions (L x H) - inches	37 x 11	37 x 11	37 x 11	37 x 11	37 x 13	50 x 14	50 x 14	71 x 14	50 x 14	71 x 14	50 x 14	71 x 14	71 x 14
- mm	94 x 28	94 x 28	94 x 28	94 x 28	94 x 33	127 x 36	127 x 36	180 x 36	127 x 36	180 x 36	127 x 36	180 x 36	180 x 36
Standard Features:													
Ra 40/Ra <0,7 µm Electropolished Surfaces	Yes												
Microprocessor-Based Digital Controller	Yes												
Menu-Driven Digital Interface with Password Protection	Yes												
Programmable Digital & Analog Inputs/Outputs	Yes												
Remote ON/OFF	Yes												
4-20 mA UV Output Signal	Yes												
Elapsed Time Indicator	Yes												
Lamp Failure Indicator (with Alarm)	Yes												
UV Intensity Monitor (with Alarm)	Yes												
Chamber High Temperature Alarm	Yes												
Built-In Memory for Data Acquisition	Yes												
Auto. Max. Power								Yes		Yes		Yes	Yes
Options:													
Sleeve Cleaning System	n/a		Manual Only			Manual or Automatic							
TOC Reduction Lamps & Suprasil™ Quartz Sleeves	Yes												
Sanitary Fittings (3A Tri-Clamp/DIN 32676)	Yes												
Drain 1"/DN25 for Horizontal Installation	Yes												
Ra 25/Ra <0,5 µm Electropolished Surfaces	Yes												
Ra 15/Ra <0,38 µm Electropolished Surfaces	Yes												
SCADA Interface	Yes												

*Disinfection Dose Level: 30 mJ/cm² after 9,000 hours of operation.
**TOC/Ozone Destruct Dose Level: 90 mJ/cm² after 9,000 hours of operation (up to 1.0 ppm of ozone).

For sizing information for larger systems, please contact your Trojan Representative or call (519) 457-3400

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