

ULTRAAQUA · OPEN CHANNEL UV DISINFECTION FOR WASTEWATER

OPEN CHANNEL INCLINED 1000 Series

Modular open channel UV systems with inclined lamp banks and 1000-series lamps for deeper channels and higher water levels.



Overview

The INCLINED 1000 series disinfects municipal and industrial wastewater in open channels without chemicals. Inclined lamp banks reach into deeper channels than vertical or horizontal designs: the latest lamp bank offers up to 30% more depth options, which suits installations with higher water levels.

The series fits a wide range of channel depths and widths and can replace older systems or be built into chlorine contact tanks. Its disinfection performance has been validated to USEPA standards and NWRI guidelines.

Ozone UV Solutions supplies INCLINED 1000 systems as an authorised ULTRAAQUA reseller and supports them locally: from sizing and installation through commissioning, servicing, lamps and spare parts.

Key features

- Validated to USEPA standards and NWRI guidelines
- Powerful 1000-series ULTRATHERM low-pressure high-output lamps with a rated life of 16,000 hours
- Inclined lamp banks with up to 30% more depth options for deep channels
- Water level variation of up to 30 cm (12 in) without loss of disinfection performance
- ULTRADOSE automatic dose pacing with lamp dimming from 30% to 100%
- Integrated lifting mechanism and sealed top compartment for maintenance in the rack

Design and operation

Lamp layout and dose

The CFD-optimised cross-line lamp arrangement gives full pathogen exposure with low energy use. ULTRADOSE dims the lamps between 30% and 100% to hold a stable dose, and a calibrated 90° side-looking sensor monitors UV intensity.

Lamps and cleaning

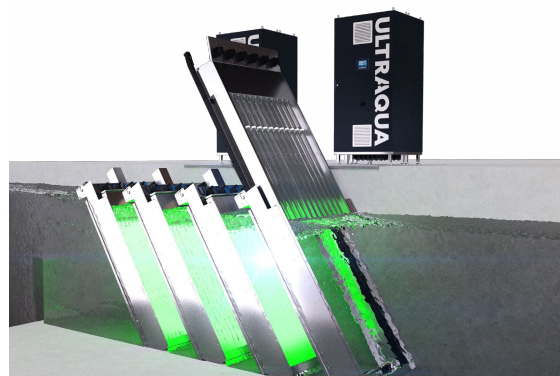
ULTRATHERM 1000-series amalgam lamps have a rated life of 16,000 hours. The automatic ULTRAWIPER™ keeps the quartz sleeves clean and prevents heavy fouling.

Maintenance

Lamps, quartz sleeves, wiper motor and UV sensors sit in a sealed top compartment. With the integrated hoisting mechanism, maintenance is quick and hygienic and the lamp bank does not need to be removed from the rack.

Installation

The series is customisable for virtually any channel dimension and handles water level variations of up to 30 cm (12 in).



Typical applications

- Municipal and industrial wastewater disinfection
- Stormwater overflow (CSO) treatment
- Recirculating aquaculture systems (RAS)

Supplied and supported by Ozone UV Solutions

System selection and UV dose sizing · Installation and commissioning · PLC/SCADA integration · Planned servicing and lamp changes · Spare parts and consumables · 24/7 technical support line **+61 422 081 913**

System characteristics

Open channel systems are configured for each channel. Send us the channel width and depth, the design flow, the water level range, UV transmittance if known, and the required dose or discharge limit. We will configure the lamp banks and quote supply, installation and ongoing service.

UV LAMPS & MONITORING	
Lamp type	ULTRATHERM low-pressure high-output (LPHO) amalgam, 1000 series
Rated lamp life	16,000 hours
Lamp arrangement	Inclined, CFD-optimised cross-line arrangement
UV monitoring	Calibrated 90° side-looking UV intensity sensor
Dose control	ULTRADOSE automatic dose pacing · lamp dimming 30–100%
Validation	USEPA; NWRI guidelines
LAMP BANKS AND CHANNEL	
Configuration	Modular inclined lamp banks, customised to the channel dimensions
Material	Passivated and pickled 316L, or Super Duplex
Hydraulics	Open channel, gravity flow
Flow range	5–24,000 m ³ /h
UV transmittance	20–100%
Water level	Variation up to 30 cm (12 in) without loss of disinfection performance
Cleaning	ULTRAWIPER™ automatic quartz sleeve wiping
Lifting	Integrated lifting mechanism
CONTROL CABINET	
Control logic / HMI	ULTRATOUCH PLC with touchscreen HMI and full data logging; UV dose, UVT, flow and power level shown on the HMI
Communication	Profibus, PROFINET, Modbus TCP/IP
Enclosure	Painted steel, SS304, SS316L or GFRP · IP54 or IP65 (NEMA 3/4X)
Lamp drivers	Electronic, variable output
Power supply	3 × 400 V +N+PE ±10%, 47–63 Hz [other voltages]

Options are shown in [square brackets].

Request sizing or a quote

Send us the channel dimensions, design flow, water level range, UV transmittance if known, and the required dose or discharge limit. We will configure the system and quote supply, installation and ongoing service.

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Specifications subject to change without notice.