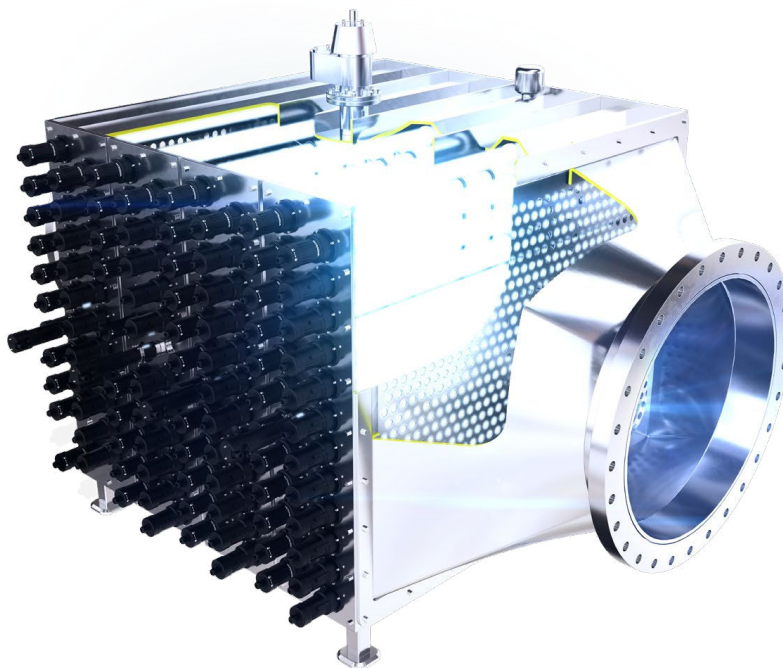


ULTRAAQUA · LARGE-SCALE DRINKING WATER UV DISINFECTION

CROSSFLOW Series

High-capacity UV systems for large municipal drinking water plants, with the lamps arranged across the flow in a compact stainless-steel reactor.



Overview

The CROSSFLOW series is built for large municipal drinking water facilities. Instead of running along the flow, the lamps are arranged across it in a CFD-optimised pattern. This keeps the reactor compact, improves hydraulic efficiency and lowers operating costs.

The reactor installs horizontally or vertically and fits into complex plant layouts with a small footprint. Systems can be scaled up as treatment demand grows.

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

Key features

- Cross-flow lamp arrangement, CFD-optimised for hydraulic efficiency
- ULTRATHERM low-pressure high-output amalgam lamps, 500 W or 925 W (1000 series), with a rated life of 16,000 hours
- From 24 to 120 lamps per reactor, with DN900 or DN1200 flanged connections
- Electropolished SS316L reactor [Super Duplex], design pressure 6 bar [10 bar]
- Automatic ULTRAWIPER™ cleaning and ULTRADOSE automatic dose pacing from 30% to 100%
- DN150 top connection for cooling, air bleeding and CIP cleaning

Design and operation

Hydraulics and dose

The lamps sit across the flow in a CFD-optimised arrangement for an even dose at low cost. The electropolished chamber reflects UV light back into the water, improving efficiency by up to 30% in water of high UV transmittance. ULTRADOSE pacing adjusts lamp power between 30% and 100%.

Lamps and cleaning

ULTRATHERM amalgam lamps have a rated life of 16,000 hours. The automatic ULTRAWIPER™ keeps the quartz sleeves and UV sensor clean and prevents heavy fouling, so disinfection stays stable.

Controls

Floor-standing cabinets with PLC and 7" ULTRATOUCH HMI, alarm, event and data logs, Modbus TCP/IP and PROFINET, and 4–20 mA signals for flow, dose and intensity, with optional UVT input.

Maintenance and installation

Single-ended lamp and wiper access and interlocking lamp connectors allow servicing without special tools. A DN150 connection on top of the reactor serves for cooling, air bleeding and CIP cleaning.



Typical applications

- Large municipal drinking water treatment plants
- Municipal wastewater disinfection

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**

Model selection

The right model depends on flow rate, UV transmittance (UVT) of the water and the required dose or log reduction. Send us these figures and we will confirm the model and configuration.

500 W lamp models

Model	UV lamps	Connection	Power	Control cabinet (H×W×D mm)	Cabinet weight
MR32-500SS	32	DN900 (ANSI 36)	19 kW	2200×800×600	400 kg
MR48-500SS	48	DN900 (ANSI 36)	27 kW	2200×800×600	800 kg
MR64-500SS	64	DN900 (ANSI 36)	35 kW	2200×800×600	1,200 kg
MR80-500SS	80	DN900 (ANSI 36)	43 kW	2200×1600×600	1,600 kg
MR96-500SS	96	DN900 (ANSI 36)	51 kW	2200×1600×600	2,000 kg

925 W lamp models (1000 series)

Model	UV lamps	Connection	Power	Control cabinet (H×W×D mm)	Cabinet weight
MR24-1000SS	24	DN900 (ANSI 36) [DN1200 (ANSI 48)]	25.2 kW	1 × 2200×600×500	400 kg
MR48-1000SS	48	DN900 (ANSI 36) [DN1200 (ANSI 48)]	47.4 kW	2 × 2200×600×500	800 kg
MR72-1000SS	72	DN900 (ANSI 36) [DN1200 (ANSI 48)]	69.6 kW	3 × 2200×600×500	1,200 kg
MR96-1000SS	96	DN1200 (ANSI 48)	91.8 kW	4 × 2200×600×500	1,600 kg
MR120-1000SS	120	DN1200 (ANSI 48)	114 kW	5 × 2200×600×500	2,000 kg

Options are shown in [square brackets].

Common specifications

UV LAMPS & MONITORING	
Lamp type	ULTRATHERM low-pressure high-output (LPHO) amalgam, 500 W or 925 W
Rated lamp life	16,000 hours
UV monitoring	500 W models: side-reading UV intensity sensor to NIST standard · 925 W models: UV intensity sensor, ÖNORM M5873 certified [non-corrosive PTFE]
Power control	ULTRADOSE automatic dose pacing, 30–100%
Approvals	CE [UL / cUL]
UV CHAMBER	
Chamber material	SS316L / 1.4404 [Super Duplex]; 500 W models electropolished inside and glass-blasted outside, 925 W models electropolished inside and out
Connection type	EN 1092 Type 01A PN10 (ANSI Class 150) [PN16 (ANSI Class 300)]
Design pressure	6 bar [10 bar]
Quartz sleeves	High-purity fused quartz, transmittance > 95%
Cleaning	ULTRAWIPER™ automatic mechanical wiper with PTFE/fibre rings (electric drive)
Mounting / installation	Horizontal stand, 316L [Super Duplex] · single-ended lamp and wiper access · horizontal or vertical installation (500 W models also inclined)
Ports	Drain: DN100 [customised] on 500 W models, DN150 on 925 W models · DN150 top connection for cooling, air bleeding and CIP
Other	PT100 temperature probe · IP65 · minor wetted parts FDA-approved PTFE, PVDF, Viton
CONTROL CABINET	
Control logic / HMI	PLC · 7" ULTRATOUCH touchscreen
Communication	Modbus TCP/IP, PROFINET
Analogue I/O (4–20 mA)	Flow input, UV dose output, UV intensity output [UVT input]
Logging and alarms	Alarms, events and data (UV dose, UV intensity, flow) · actual and target UV dose on HMI · UV dose pre-alarm and alarm
External wiring	Remote ON/OFF, safety ON/OFF, system status, alarm
Cabinet	Powder-painted steel [SS304 / SS316] · floor-standing, ambient 0–40 °C · IP54 [IP65] · fan with filter [AC / heat exchanger]
Power supply	3 × 400 VAC ±10% +N+PE 50/60 Hz
Cable length	7 m standard [up to 20 m]

Request sizing or a quote

Send us your design flow, UV transmittance if known, and the required dose or log reduction. We will recommend the model and configuration and quote supply, installation and ongoing service.

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Specifications subject to change without notice.