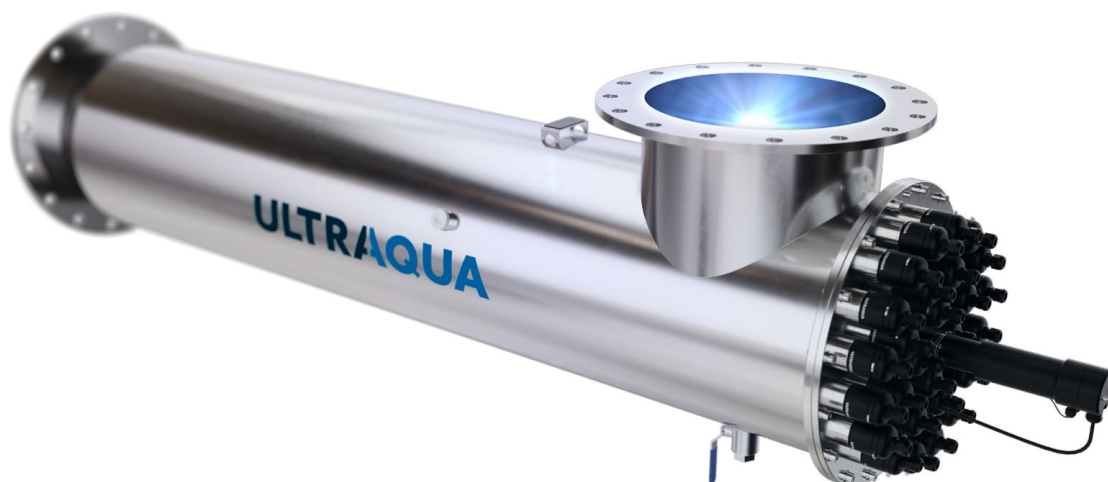


ULTRAAQUA · UV DISINFECTION FOR LOW-TRANSMITTANCE WATER

LOW UVT Series

UV systems with SWIRLFLOW™ hydraulics for wastewater, reuse water and other water with low UV transmittance.



Overview

Turbid or coloured water, as found in wastewater treatment, absorbs much of the UV light, and a standard reactor can leave poorly irradiated zones. The LOW UVT series is designed for exactly these conditions, in municipal and industrial secondary treatment and reuse applications.

Its SWIRLFLOW™ hydraulics lengthen the time pathogens spend in the UV field and remove the dark areas where untreated organisms could pass, while energy demand stays low.

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

Key features

- SWIRLFLOW™ hydraulic design for even UV exposure without dark zones
- Electropolished SS316L reactor [Super Duplex], design pressure 10 bar [16 bar]; 6 bar [10 bar] on MR44 and MR56
- ULTRATHERM 350 W low-pressure high-output amalgam lamps with a rated life of 16,000 hours
- Sizes from 1 to 56 lamps with flanged connections from DN100 to DN500
- ÖNORM M5873 certified UV intensity sensor and automatic ULTRADOSE dose pacing (50–100%)
- Automatic ULTRAWIPER™ cleaning and PLC with 7" ULTRATOUCH touchscreen on models with four or more lamps

Design and operation

Hydraulics and dose

SWIRLFLOW™ guides the water so that it stays longer in the UV field and passes close to the lamps, which keeps the dose even where UV light penetrates poorly. ULTRADOSE pacing adjusts lamp power between 50% and 100% to hold the target dose with low energy use.

Lamps and cleaning

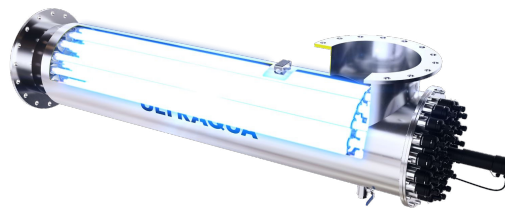
ULTRATHERM 350 W amalgam lamps have a rated life of 16,000 hours. The automatic ULTRAWIPER™ keeps the quartz sleeves clean, which is essential in fouling-prone wastewater.

Controls

PLC with 7" ULTRATOUCH HMI, alarm, event and data logs, Modbus TCP/IP or PROFINET and 4–20 mA signals for flow, dose and intensity, with optional UVT input. The single-lamp MR1-350SS uses a microprocessor controller with 4-line LCD and Modbus RTU.

Maintenance

Single-ended lamp and wiper access allows servicing without special tools. Reactors install horizontally or vertically, free-standing or on an optional horizontal SS316 stand.



Typical applications

- Municipal and industrial wastewater, including secondary treatment and reuse
- Stormwater overflow (CSO) and landfill leachate
- Cooling tower water, oil and gas, and horticulture

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 dose required for the target pathogens. Send us these figures and we will confirm the model and configuration.

LOW UVT models

Model	UV lamps (350 W)	Connection	Design pressure	Power	Reactor dry weight	Reactor volume	Controller
MR1-350SS	1	DN100 (ANSI 4)	10 bar [16 bar]	0.4 kW	38 kg	31 L	Microprocessor
MR4-350SS	4	DN100 (ANSI 4)	10 bar [16 bar]	1.5 kW	58 kg	67 L	PLC
MR6-350SS	6	DN150 (ANSI 6)	10 bar [16 bar]	2.3 kW	66 kg	73 L	PLC
MR8-350SS	8	DN150 (ANSI 6)	10 bar [16 bar]	3.0 kW	91 kg	117 L	PLC
MR12-350SS	12	DN200 (ANSI 8)	10 bar [16 bar]	4.5 kW	119 kg	182 L	PLC
MR18-350SS	18	DN300 (ANSI 12)	10 bar [16 bar]	6.8 kW	172 kg	293 L	PLC
MR28-350SS	28	DN400 (ANSI 16)	10 bar [16 bar]	10.5 kW	197 kg	368 L	PLC
MR44-350SS	44	DN500 (ANSI 20)	6 bar [10 bar]	16.5 kW	322 kg	584 L	PLC
MR56-350SS	56	DN500 (ANSI 20)	6 bar [10 bar]	21.0 kW	370 kg	646 L	PLC

Control cabinet by model

Model	Cabinet size (H×W×D mm)	Cabinet weight	Cabinet material	Power supply
MR1-350SS	400×600×300 · wall	10 kg	GFRP [SS304 / SS316]	1 × 230 VAC
MR4-350SS	800×600×300 · wall	32 kg	GFRP [SS304 / SS316]	1 × 230 VAC
MR6-350SS	750×1000×320 · wall	35 kg	GFRP [SS304 / SS316]	1 × 230 VAC
MR8-350SS	750×1000×320 · wall	60 kg	GFRP [SS304 / SS316]	3 × 400 VAC
MR12-350SS	750×1000×320 · wall	66 kg	GFRP [SS304 / SS316]	3 × 400 VAC
MR18-350SS	1000×1250×320 · wall	101 kg	GFRP [SS304 / SS316]	3 × 400 VAC
MR28-350SS	1250×1250×420 · wall	146 kg	GFRP [SS304 / SS316]	3 × 400 VAC
MR44-350SS	2200×1000×500 · floor	305 kg	Powder-coated steel [SS304 / 316L]	3 × 400 VAC
MR56-350SS	2200×1000×500 · floor	315 kg	Powder-coated steel [SS304 / 316L]	3 × 400 VAC

Cabinet: wall = wall-mounted, floor = floor-standing. Options are shown in [square brackets].

Common specifications

UV LAMPS & MONITORING	
Lamp type	ULTRATHERM low-pressure high-output (LPHO) amalgam, 350 W
Rated lamp life	16,000 hours
UV monitoring	UV intensity sensor, ÖNORM M5873 certified, SS316L
Power control	Automatic ULTRADOSE dose pacing, 50–100%
Approvals	CE [UL / cUL]
UV CHAMBER	
Chamber material	SS316L / 1.4404 [Super Duplex], electropolished inside, glass-blasted outside
Connection type	EN 1092 Type 01A PN10 (ANSI Class 150) [PN16 (ANSI Class 300)]
Quartz sleeves	High-purity fused quartz, transmittance > 95%
Cleaning	ULTRAWIPER™ automatic mechanical wiper with PTFE/fibre rings (electric drive)
Access / installation	Single-ended lamp and wiper access · horizontal or vertical installation · free-standing [horizontal SS316 stand]
Other	PT100 temperature probe · 1" drain port · IP65 · minor wetted parts FDA-approved PTFE, PVDF, Viton
CONTROL CABINET	
Control logic / HMI	MR1-350SS: microprocessor with 4-line LCD · other models: PLC with 7" ULTRATOUCH touchscreen
Communication	MR1-350SS: Modbus RTU · other models: Modbus TCP/IP, PROFINET
Analogue I/O (4–20 mA)	MR1-350SS: flow input, UV irradiance output · other models: flow input, UV dose output, UV intensity output [UVT input]
External wiring	MR1-350SS: remote ON/OFF, system status, alarm and warning · other models: remote ON/OFF, safety ON/OFF, system status, pre-alarm and alarm
Logging	MR1-350SS: alarms · other models: alarms, events and data (UV dose, UV intensity, flow), actual and target UV dose on HMI
Installation & cooling	MR1-350SS: wall-mounted, 0–40 °C, IP65, passive cooling [fan / AC / heat exchanger] · other models: 0–40 °C non-condensing, IP54 [IP65], fan with filter [AC / heat exchanger]
Cable length	4 m standard [up to 30 m]

Request sizing or a quote

Send us your flow rate, water source, UV transmittance if known, and the target pathogens or required dose. We will recommend the model and configuration and quote supply, installation and ongoing service.

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Specifications subject to change without notice.