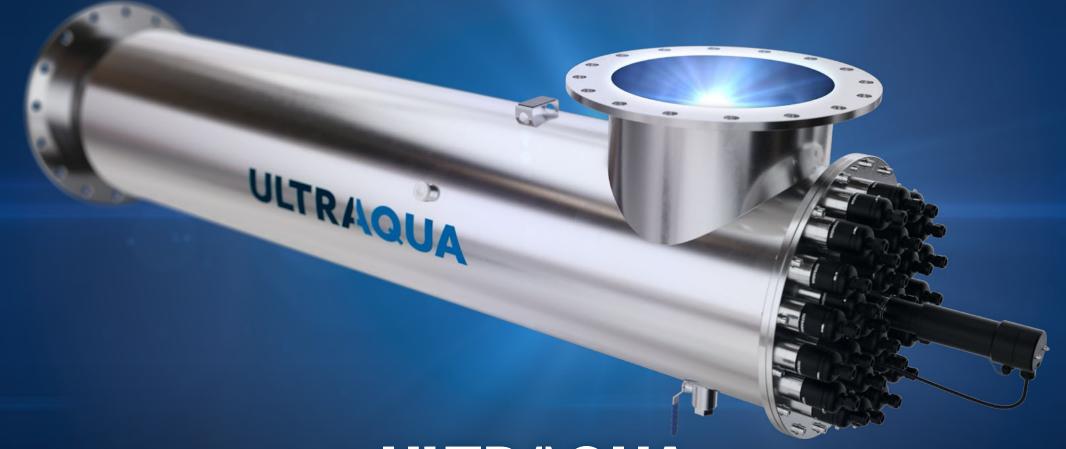
LOW UVT SERIES

UV DISINFECTION · EFFICIENT AND CHEMICAL-FREE WATER TREATMENT



ULTRAQUA

WE PROTECT YOUR MOST VALUABLE RESOURCE

LOW UVT SERIES

THE LOW UVT SYSTEM SERIES PROVIDES EXCELLENT UV DISINFECTION FOR APPLICATIONS IN LOW UVT ENVIRONMENTS.

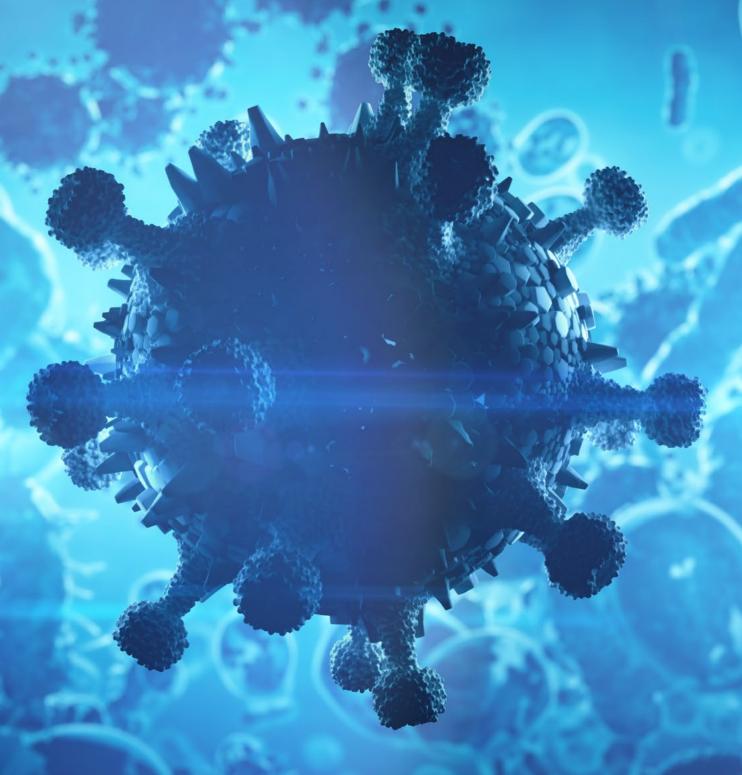
THE INNOVATIVE SWIRLFLOW TECHNOLOGY MAKES THE LOW UVT SERIES ABLE TO PROLONG UV EXPOSURE TIME FOR PASSING PATHOGENS, ELIMINATING ANY CHANCE OF 'DARK AREAS' WITH UNTREATED MICROORGANISMS, WHILE MAINTAINING LOW ENERGY REQUIREMENTS.

KEY HIGHLIGHTS

- Guaranteed 16.000-hour ULTRATHERM™ lamp lifetime
- Optimized for maximum efficiency
- Easy maintenance and installation
- Easily integrated in complex environments
- Complete control with ULTRATOUCH™ control cabinets
- Automated ULTRAWIPER™ quartz cleaning with tailored brush heads
- Extended 5 years warranty available subject to terms & conditions



MARKET LEADING ENERGY EFFICIENCY



CORE BENEFITS OF UV

UV TECHNOLOGY IS A GLOBALLY ACCEPTED SOLUTION FOR WATER DISINFECTION, EFFECTIVELY INACTIVATING BACTERIA, VIRUSES, AND PROTOZOA.

The demand for cost-efficient solutions to provide clean water are at an all-time high and will only increase in the future. UV disinfection solves this complex challenge, being able to meet the strictest requirements regarding bacteria and virus protection.

Due to recent developments, UV disinfection is now an effective alternative in a wide range of water qualities and applications. Improved technological and design configurations have made UV a viable OPEX and CAPEX solution for disinfection processes as well as in more advanced applications such as Advanced Oxidation Processes (AOP).

Choosing UV as the disinfection method ensures optimal CAPEX and OPEX conditions compared to its alternatives, making UV the best solution for a wide range of installations.

ULTRAAQUA UV disinfection systems are easy to install, maintain, and thoroughly cost-optimized. The third-party approvals for performance and quality ensure complete peace of mind, employing the best available solution for complete biosecurity.



OPTIMIZED FOR MAXIMUM EFFICIENCY

The CFD optimized lamp positioning makes the LOW UVT series able to offer maximum hydraulic efficiency with minimum head loss, eliminating any chance of 'dark areas' with untreated microorganisms.

COMPLETE CONTROL WITH ULTRATOUCH™ CONTROL CABINETS

The market leading ULTRATOUCH™ PLC is the very latest in control and touch-screen HMI technology. Full data logging provides complete control to the operator, on site or remotely.

The PLC controls are easily integrated into SCADA layouts, and can be modified by our in-house software engineers. Multiple PLC options combined with various communication protocols makes the ULTRATOUCH highly versatile.

AUTOMATIC DOSE PACING

ULTRAQUA

The automatic dose pacing ensures optimized efficiency by reducing power consumption while ensuring a stable dose under operation. The ability to control the power increments ensures that issues related to overdosing and temperature issues are well mitigated.

EXCEPTIONAL LAMP LIFETIME

The integrated ULTRATHERM™ lamps offer the very latest low pressure Amalgam UV lamp technology, being optimized for energy efficiency and robustness. The substantial 16.000 hours of lamp lifetime offers market leading lamp efficiency in UV-C output density.

CLEANING WITH TAILORED BRUSH HEADS

The automatic sleeve wiping mechanism keeps both the quartz sleeves and the UV sensor clean while preventing harsh fouling. Keeping the quartz sleeves clean at all times contributes to a consistent and stable disinfection process.

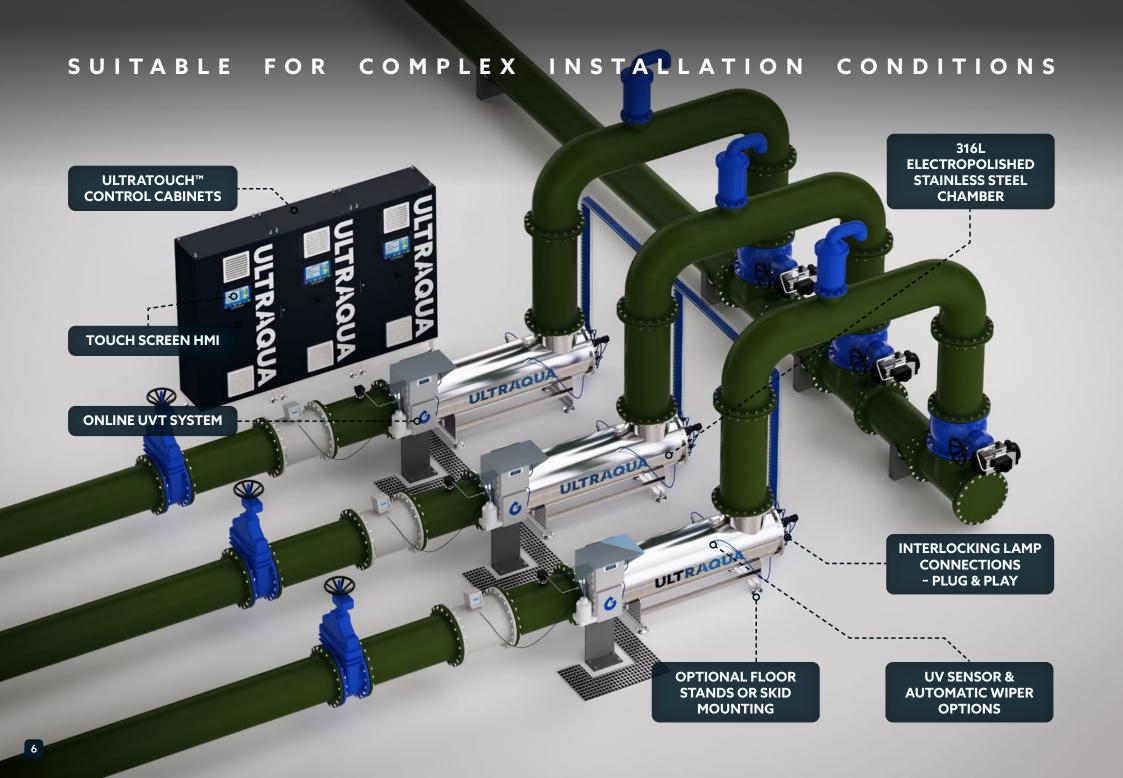
MULTIPLE FLANGE OPTIONS

The LOW UVT series is available in multiple flange sizes to accommodate custom requirements for installation and flow rates.

EASY MAINTENANCE AND INSTALLATION

With a design that allows for easy maintenance and single sided access, the system is easily installable and can be serviced using no special tools.

The unique interlocking electrical and mechanical lamp connectors make servicing of the system safe, quick, and fool proof.





CUSTOMIZED SOLUTIONS

ULTRAAQUA UTILIZES AN ENTIRE DEPARTMENT OF ENGINEERS SPECIALIZED IN THE DESIGN AND CONSTRUCTION OF UV SYSTEMS.

Numerous years of experience in various applications enable the adjustment of any standard UV system to accommodate specific requirements.

The customization requirements can vary from adjustments such as reactor shape or flange size to various advanced features.

This enables us to ensure on-site validation to various standards, fitting your exact requirements.

For all customizations, the services and solutions include, but are not limited to:

- Integrated CFD Analysis
- Particle tracing modeling analysis
- Determining fluence rate
- Physical testing
- On-site validation testing
- Solutions for advanced applications
- Packaged plant equipment
- Mobile treatment containers
- Skid packages

Additionally, our engineers are able to assist with installation details such as weir design, water level control devices, and many other project-specific matters.

R&D CAPACITIES

SINCE 1996, THE R&D DEPARTMENT HAS BEEN THE BACKBONE OF ULTRAAQUA.

Employing the brightest industry specialists with great diversity for continuous innovation has been vital to the success of the company.

The ULTRAAQUA R&D department conducts, supports, and pioneers some of the latest developmental work within the water industry. These projects are often done in collaboration with specialists from municipalities, universities, top tier consultancies and international companies. The projects are primarily focused on developing unique and advanced chemical free disinfection solution for some of the worlds most complex water quality problems.

The comprehensive in-house testing area facilitates optimal conditions for research, development, and innovation. With the ability to run full scale pilot trials and a 40 ft research container to support local testing combined with cutting edge engineering, makes us confident that ULTRAAQUA is the right partner for your organization.

This ultimately allows ULTRAAQUA to position itself amongst the industry leaders within UV disinfection, supplying customers with the best available solutions.

ULTRAQUA
UV DISINFECTION SYSTEMS





| UV SYSTEM | MR1-350SS LOW UVT | MR4-350SS LOW UVT | MR6-350SS LOW UVT | MR8-350SS LOW UVT | MR12-350SS LOW UVT | MR18-350SS LOW UVT | MR28-350SS LOW UVT |
|--------------------------------|---|--|--------------------|---------------------------------|---------------------|----------------------|----------------------|
| Product ID | 21510 | 21513 | 21515 | 21517 | 21520 | 21522 | 21525 |
| Approvals | | | | CE (Option UL/ cUL) | | | |
| UV LAMPS & MONITORING | | | | | | | |
| Lamp Number | 1 | 4 | 6 | 8 | 12 | 18 | 28 |
| ULTRATHERM™ LPHO Lamp | | | | 350 W | | | |
| Guaranteed Lamp Lifetime | | | | 16 000 Hours | | | |
| UV Monitoring | | | UV Inten | sity Sensor ÖNORM M5873 Certifi | ed SS316L | | |
| Variable Power | | | Aut | omatic ULTRADOSE™ Pacing 50-1 | 00% | | |
| UV CHAMBER | | | | | | | |
| Connection Size | DN100 | DN100 | DN150 | DN150 | DN200 | DN300 | DN400 |
| Connection Type | | | EI | N-1092 Type 01A PN10 (Option PN | 16) | | |
| Design Pressure | 10 Bar (Option 16 Bar) | | | | | | |
| Chamber Material | SS316L / 1.4404 (Option Super Duplex) | | | | | | |
| Internal & External Finish | Electropolished Inside/Out | | | | | | |
| Lamp/Wiper Access Single Ended | · | | | | | | |
| Quartz Type | High Purity Fused Quartz Transmittance >95% | | | | | | |
| Mounting | Free Standing (Option Horizontal SS316 Stand) | | | | | | |
| ULTRAWIPER™ System | Automatic Mechanical with PTFE/Fiber Rings (Electrical) | | | | | | |
| Temperature Probe | 1x PT100 | | | | | | |
| Vent & Drain Ports | | | | 1" Drain Port | | | |
| Ingress Protection | | | | IP68 | | | |
| Installation | Horizontal / Vertical | | | | | | |
| Minor Wetted Parts | | | | FDA Approved PTFE, PVDF, VITON | I | | |
| Reactor Dry Weight | 38 kg | 58 kg | 66 kg | 91 kg | 119 kg | 172 kg | 197 kg |
| Reactor Volume | 31 L | 67 L | 73 L | 117 L | 182 L | 293 L | 368 L |
| CONTROL CABINET | | | | | | | |
| Cabinet Material | | | | GFRP (Option SS304/SS316) | | | |
| Cabinet Sizes (H x W x D) | 400 x 600 x 300 mm | 800 x 600 x 300 mm | 800 x 600 x 300 mm | 1000 x 750 x 320 mm | 1000 x 750 x 320 mm | 1000 x 1250 x 320 mm | 1250 x 1250 x 420 mm |
| Cable Length | | | | 4 Meters (Max. 30 Meters) | | | |
| Installation & Ambient | Wallmount 0-40 °C Wallmount 0-40 °C Non-Condensing | | | | | | |
| Ingress Protection | IP65 | IP65 IP54 (Option IP65/NEMA4X) | | | | | |
| Thermal Control | assive Dissipation (Option Fan / AC / Heat exchanger) Fan with Filter (Option AC / Heat Exchanger) | | | | | | |
| Control Logic | Microprosessor PLC | | | | | | |
| Interface/HMI | 4 Line LCD with System State Indication | ation 7" ULTRATOUCH™ | | | | | |
| UV Dose | On HMI, UV Intensity | Actual UV Dose & Target UV Dose on HMI | | | | | |
| SCADA Communication | MODBUS RTU | MODBUS TCP / IP / PROFINET | | | | | |
| Analogue 4-20mA I/O | Flow Input/UV Irradiance Output | /UV Irradiance Output Flow Input/UV Dose Output/UV Intensity Output (Option UVT Input) | | | | | |
| External Wiring | Remote ON/OFF, System Status, Alarm & Warning | | | | | | |
| Log | Alarms | | | | | | |
| Power Consumption | 0,4 kW | 1,5 kW | 2,3 kW | 3,0 kW | 4,5 kW | 6,8 kW | 10,5 kW |
| Power Supply | | 230VAC +/- 10% +N+PE 50/60Hz | | | 3x 400VAC +/- 109 | | |
| Cabinet Weight | 10 kg | 32 kg | 35 kg | 60kg | 66 kg | 101 kg | 146 kg |

| UV SYSTEM | MR44-350SS LOW UVT | MR56-350SS LOW UVT | | | |
|--------------------------------|--|--------------------|--|--|--|
| Product ID | 21530 | 21535 | | | |
| Approvals | CE (Option UL/ cUL) | | | | |
| UV LAMPS & MONITORING | | | | | |
| Lamp Number | 44 | 56 | | | |
| ULTRATHERM™ LPHO Lamp | 350 W | | | | |
| Guaranteed Lamp Lifetime | 16.000 Hours | | | | |
| UV Monitoring | UV Intensity Sensor ÖNORM M5873 Certified SS316L | | | | |
| Variable Power | Automatic ULTRADOSE™ Pacing 50-100% | | | | |
| UV CHAMBER | | | | | |
| Connection Size | DN500 | | | | |
| Connection Type | EN-1092 Type 01A PN10 (Option PN16) | | | | |
| Design Pressure | 6 Bar (Option 10 Bar) | | | | |
| Chamber Material | SS316L / 1.4404 (Option Super Duplex) | | | | |
| Internal & External Finish | Electropolished Inside/Out | | | | |
| Lamp/Wiper Access Single Ended | Yes | | | | |
| Quartz Type | High Purity Fused Quartz Transmittance >95% | | | | |
| Mounting | Free Standing (Option Horizontal SS316 Stand) | | | | |
| ULTRAWIPER™ System | Automatic Mechanical with PTFE/Fiber Rings (Electrical) | | | | |
| Temperature Probe | 1x PT100 | | | | |
| Vent & Drain Ports | 1" Drain Port | | | | |
| Ingress Protection | IP68 | | | | |
| Installation | Horizontal / Vertical | | | | |
| Minor Wetted Parts | FDA Approved PTFE, PVDF, VITON | | | | |
| Reactor Dry Weight | 322 kg | 370 kg | | | |
| Reactor Volume | 584 L | 646 L | | | |
| CONTROL CABINET | | | | | |
| Cabinet Material | Powder Coated Steel (Option SS304 / 316L) | | | | |
| Cabinet Sizes (H x W x D) | 2200 x 1000 x 500 mm | | | | |
| Cable Length | 4 Meters (Max. 30 Meters) | | | | |
| Installation & Ambient | Floor Standing 0-40 °C Non-Condensing | | | | |
| Ingress Protection | IP54 (Option IP65/NEMA4X) | | | | |
| Thermal Control | Fan with Filter (Option AC / Heat Exchanger) | | | | |
| Control Logic | PLC | | | | |
| Interface/HMI | 7" ULTRATOUCH™ | | | | |
| UV Dose | Actual UV Dose & Target UV Dose on HMI | | | | |
| SCADA Communication | MODBUS TCP / IP / PROFINET | | | | |
| Analogue 4-20mA I/O | Flow Input/UV Dose Output/UV Intensity Output (Option UVT Inpu | | | | |
| External Wiring | Remote ON/OFF, Safety ON/OFF, System Status, Pre-Alarm & Alarm | | | | |
| Log | Alarm, Event & Data (UV Dose, UV Intensity & Flow) | | | | |
| Power Consumption | 16,5 kW | 21,0 kW | | | |
| Power Supply | 3x 400VAC +/- 10° | % +N+PE 50/60Hz | | | |
| Cabinet Weight | 305 kg | 315 kg | | | |



COMPANY HISTORY

ULTRAAQUA IS AN INTERNATIONAL MANUFACTURER OF ADVANCED UV WATER DISINFECTION SYSTEMS FOR A WIDE RANGE OF WATER TREATMENT APPLICATIONS.

The company was founded in 1996 by two Danish scientists, with the mission of solving the increasing global water safety challenges, by combining extensive research, innovation, and technology. Today, more than 10.000 UV disinfection systems has been supplied worldwide, to help create a more sustainable world.

ULTRAAQUA operates through a carefully selected partner network, with activity in more than 120 countries, making it possible to deliver cutting-edge UV disinfection systems across the globe.

Continuous research and innovation activities have made it possible to maintain the position of delivering cutting-edge solutions to clients with diverse requirements in different applications.

Global experience combined with advanced knowledge of dealing with varying customer requirements, ensures an optimal solution to accommodate every client.

Combined with a dedicated support experience, a streamlined operational process is guaranteed.

WANT TO LEARN MORE?



mww.ultraaqua.com

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VALIDATION OVERVIEW



The NIPH (Norwegian Institute of Public Health) type approval ensures that all UV disinfection units meets the requirements for UV dosage.



The **DVGW certification** assures that critical technical requirements are met regarding hygiene, safety, and general functionality.

AMS

The AMS (Analog Mixed Signal) verification ensures that the electronic components are compliant with the latest industry-standard.



The **ETV-EU verification** is a third-party validation of new innovative environmental technologies, ensuring product credibility for the buyer.

