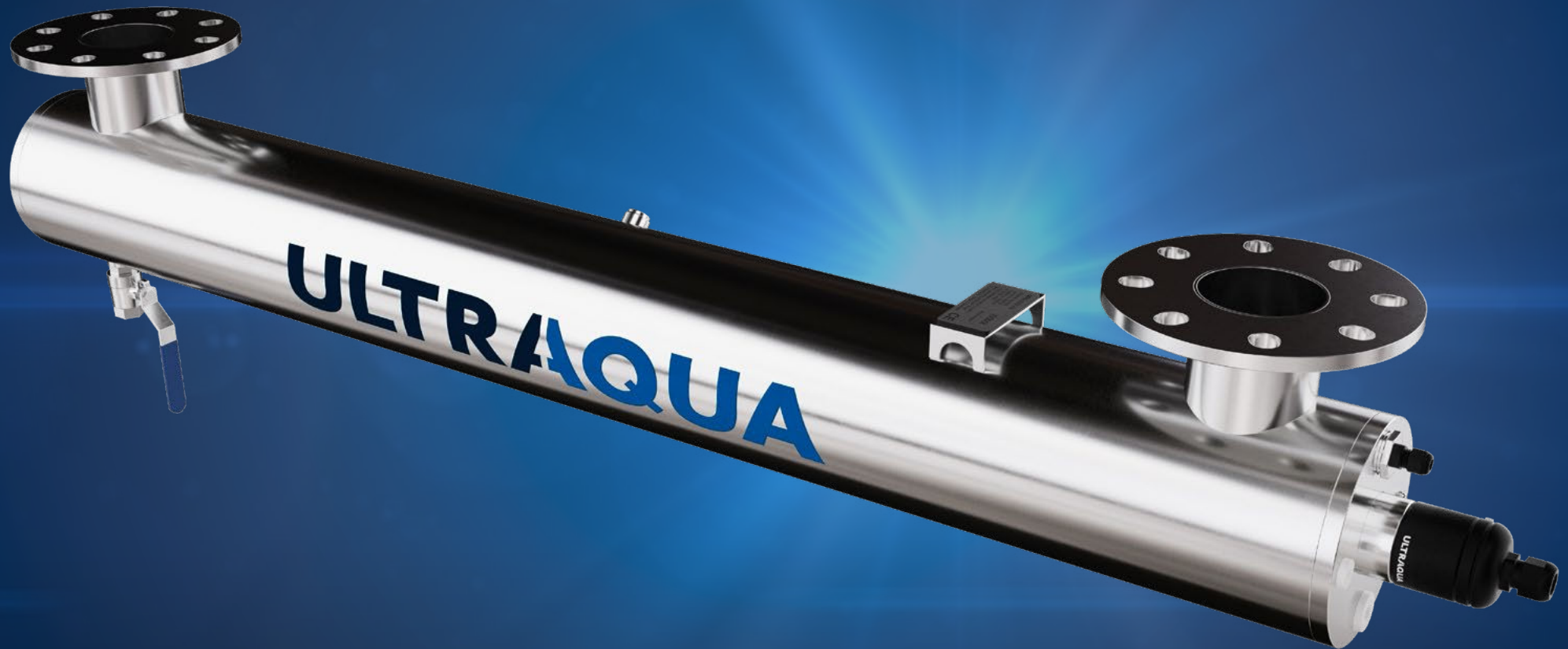


ULTRATOX™ SERIES

UV DISINFECTION • EFFICIENT AND CHEMICAL-FREE WATER TREATMENT



ULTRAQUA
UV DISINFECTION SYSTEMS

WE PROTECT YOUR MOST VALUABLE RESOURCE

ULTRATOX™ SERIES

THE ULTRATOX™ SERIES IS DEVELOPED SPECIFICALLY FOR TOC REDUCTION EXCELLENCE.

THE REACTORS ARE OPTIMIZED THROUGH A COMPREHENSIVE CFD MODELING APPROACH, RESULTING IN EXCELLENT ENERGY EFFICIENCY.

THIS MAKES IT MARKET-LEADING IN PROVIDING DISINFECTED WATER FOR APPLICATIONS SUCH AS PHARMACEUTICAL, FOOD & BEVERAGE, AND PROCESS WASTEWATER, WHERE EVEN THE SMALLEST OF CONTAMINANTS CAN HAVE A MAJOR NEGATIVE IMPACT.

KEY HIGHLIGHTS

- ⚙️ Guaranteed 12.000-hour ULTRATOX™ lamp lifetime
- ⚙️ Optimized for maximum efficiency
- ⚙️ Easy maintenance and installation
- ⚙️ Complete control with ULTRATOUCH™ control cabinets
- ⚙️ Excellent level of customization
- ⚙️ 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.

ULTRAQUA 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.

ULTRAQUA
UV DISINFECTION SYSTEMS

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.

HIGH GRADE 316L STAINLESS STEEL

The internal reflection of the electropolished system provides efficiency improvements of up to 30% at high UVT's.

AUTOMATIC DOSE PACING

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.



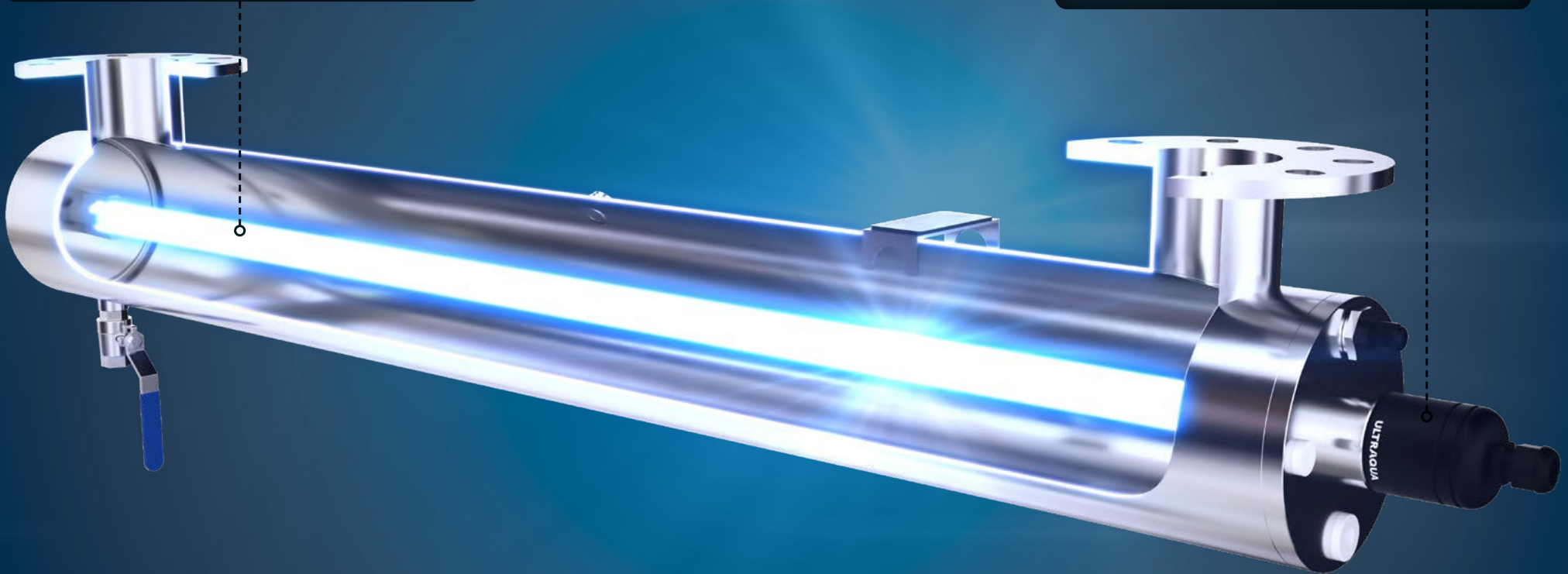
EXCEPTIONAL LAMP LIFETIME

The integrated ULTRATOX™ lamps offer the very latest low pressure Amalgam UV lamp technology. The ULTRATHERM™ lamps are based on 20 years of experience and extensive research, aiming for optimized energy efficiency and robustness. This makes the lamps able to provide a substantial 12.000 hours of lamp lifetime.

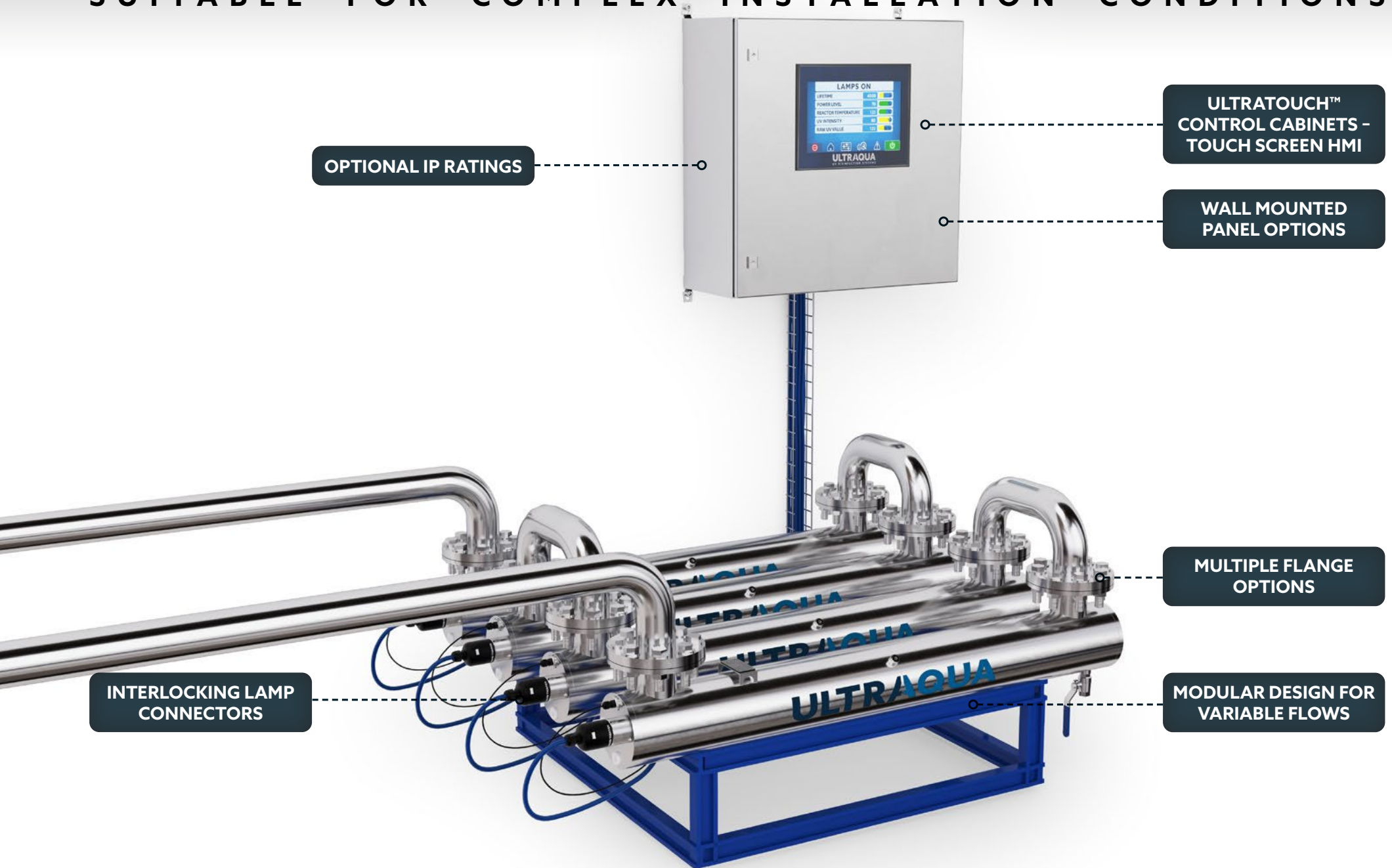
EASY MAINTENANCE AND INSTALLATION

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.



SUITABLE FOR COMPLEX INSTALLATION CONDITIONS





CUSTOMIZED SOLUTIONS

ULTRAAQUA EMPLOYS AN ENTIRE DEPARTMENT OF ENGINEERS WHO ARE SPECIALIZED IN THE DESIGN AND CONSTRUCTION OF UV SYSTEMS.

Multiple years of experience within relevant applications makes it possible to adjust any standard UV system to accommodate specific requirements.

The customization requirements can vary from adjustments such as reactor shape or flange size, to adding new advanced features. This makes the ULTRAAQUA design department function as a consulting agency, working towards an optimized customized solution. This means that we can ensure on site validation to various standards, fitting your exact requirements.

The following possibilities are available for all customized UV units:

Customized services

- 🔧 Integrated CFD Analysis
- 🔧 Particle tracing modeling analysis
- 🔧 Determining fluence rate
- 🔧 Physical testing
- 🔧 Onsite validation testing
- 🔧 Advanced UV disinfection support

Customized products

- 🔧 Custom UV systems for advanced applications
- 🔧 Packaged plant equipment
 - 🔧 Including mobile treatment container
 - 🔧 Skid packages

Comprehensive technical knowledge makes the engineers 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.

ULTRAAQUA
UV DISINFECTION SYSTEMS



UV SYSTEM	MR1-220SS ULTRATOX STD	MR1-220SS ULTRATOX ADV	MR3-220SS ULTRATOX	MR4-220SS ULTRATOX
Product ID	21602	21602	21605	21607
Approvals	CE (Option UL/ cUL)			
UV LAMPS & MONITORING				
Lamp Number	1	1	3	4
ULTRATOX™ TOC Lamp	220 W			
Guaranteed Lamp Lifetime	12 000 Hours			
UV Monitoring	N/A	UV Intensity Sensor ÖNORM M5873 Certified SS316L		
Variable Power	N/A	50-100%		
UV CHAMBER				
Connection Size	DN50			
Connection Type	EN-1092 Type 01A PN10 (Option PN16)			
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	Yes			
Quartz Type	Synthetic High Purity Fused Quartz			
Mounting	Free Standing (Option Horizontal SS316 Stand)			
ULTRAWIPER™ System	N/A	(Option Automatic Mechanical With PTFE/Fiber Rings (Electrical))		
Temperature Probe	1x PT100			
Vent & Drain Ports	½"			
Ingress Protection	IP68			
Installation	Horizontal / Vertical			
Minor Wetted Parts	FDA Approved PTFE, PVDF, VITON			
Reactor Dry Weight	23 kg	23 kg	38 kg	45 kg
Reactor Volume	22 L	22 L	42 L	64 L
CONTROL CABINET				
Cabinet Material	SS304 (Option GFRP/SS316)			
Cabinet Sizes (H x W x D)	400 x 300 x 210 mm	400 x 600 x 210 mm	800 x 600 x 300 mm	800 x 600 x 300 mm
Cable Length	4 Meters (Max. 30 Meters)			
Installation & Ambient	Wallmount 0-40 °C	Wallmount 0-40 °C Non-Condensing		
Ingress Protection	IP65		IP54 (Option IP65/NEMA4X)	
Thermal Control	Passive Dissipation (Option Fan / AC / Heat Exchanger)		Fan with Filter (Option AC / Heat Exchanger)	
Control Logic	N/A	Microprocessor	PLC	
Interface/HMI	Status LED Indicators & Hour Counter	4 Line LCD with System State Indication	7" ULTRATOUGH™	
External Wiring	N/A	Remote ON/OFF, Safety ON/OFF, System Status, Alarm		
Power Consumption	0,2 kW	0,2 kW	0,7 kW	1,0 kW
Power Supply	230VAC +/- 10% +N+PE 50/60Hz			
Cabinet Weight	8 kg	10 kg	29 kg	29 kg
ADV. CONTROLLER FEATURES				
SCADA Communication	N/A	MODBUS RTU	MODBUS TCP/IP / PROFINET (Option I-Device)	
Analogue 4-20mA I/O	N/A	Flow Input/UV Irradiance Output	Flow Input/UV Dose Output/UV Intensity Output (Option UVT Input)	
ULTRADOSE™	N/A	N/A	Automatic UV Dose Pacing 50-100%	
Log	N/A	Alarms	Alarm, Event & Data (UV Dose, UV Intensity & Flow)	
UV Dose	N/A	UV Intensity on Display	Actual UV Dose & Target UV Dose on HMI	
UV Dose Alarm	N/A	UV Intensity Pre-Alarm & Alarm	Pre-Alarm & Alarm	

SERVICE & SUPPORT

ULTRAAQUA IS A GLOBAL COMPANY OFFERING WORLDWIDE SERVICE AND SUPPORT, WITH ITS HEAD OFFICE BASED IN DENMARK.

With operations in over 120 countries and an install base of 10.000 systems, ULTRAAQUA is able to offer extensive support regarding installation and maintenance with its wide-ranging network of regional offices.

The technical support team in our head office provides 24-hour remote service upon agreement, ensuring that potential emergencies are avoided.

At ULTRAAQUA, we wish to provide a complete product experience for our customers, from the very start of determining requirements to ongoing operational maintenance. This means that our responsibility does not stop after the UV system reaches its destination. By establishing a close collaboration with all clients, a streamlined process is effectively ensured throughout all post-installation activities.

Our support services include, but are not limited to:

- General technical support
- Advanced 24-hour support upon agreement
- Spare part ordering and shipping services
- Commissioning
- On-site training
- On-site technical support

If needed, qualified engineers are available for on-site training and technical support, being able to assist in setting up the entire system. Extensive information and technical knowledge is always provided, to ensure maximum performance and system reliability.

UV SYSTEM	MR1-350SS ULTRATOX STD	MR1-350SS ULTRATOX ADV	MR4-350SS ULTRATOX	MR6-350SS ULTRATOX	MR8-350SS ULTRATOX	MR12-350SS ULTRATOX	MR18-350SS ULTRATOX
Product ID	25082	25082	25083	25084	25085	25086	25087
Approvals	CE (Option UL/ cUL)						
UV LAMPS & MONITORING							
Lamp Number	1	1	4	6	8	12	18
ULTRATOX™ TOC Lamp	350 W						
Guaranteed Lamp Lifetime	12 000 Hours						
UV Monitoring	N/A	UV Intensity Sensor ÖNORM M5873 Certified (Option Non-Corrosive PTFE)					
Variable Power	N/A	50-100%					
UV CHAMBER							
Connection Size	DN50	DN50	DN50	DN80	DN100	DN100	DN150
Connection Type	EN-1092 Type 01A PN10 (Option PN16)						
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	Yes						
Quartz Type	Synthetic High Purity Fused Quartz						
Mounting	Free Standing (Option Horizontal SS316 Stand)						
ULTRAWIPER™ System	N/A	(Option Automatic Mechanical With PTFE/Fiber Rings (Electrical))					
Temperature Probe	PT100						
Vent & Drain Ports	½"					1"	
Ingress Protection	IP68						
Installation	Horizontal / Vertical						
Minor Wetted Parts	FDA Approved PTFE, PVDF, VITON						
Reactor Dry Weight	28 kg	28 kg	53 kg	70 kg	112 kg	143 kg	181 kg
Reactor Volume	32 L	32 L	89 L	128 L	230 L	296 L	356 L
CONTROL CABINET							
Cabinet Material	SS304 (Option GFRP/SS316)						
Cabinet Sizes (H x W x D)	400 x 600 x 210 mm	400 x 600 x 210 mm	800 x 600 x 300 mm	800 x 600 x 300 mm	750 x 1000 x 320 mm	750 x 1000 x 320 mm	1000 x 1250 x 320 mm
Cable Length	4 Meters (Max. 30 Meters)						
Installation & Ambient	Wallmount 0-40 °C		Wallmount 0-40 °C Non-Condensing				
Ingress Protection	IP65		IP54 (Option IP65/NEMA4X)				
Thermal Control	Passive Dissipation (Option Fan / AC / Heat Exchanger)		Fan with Filter (Option AC / Heat Exchanger)				
Control Logic	N/A	Microprocessor	PLC				
Interface/HMI	Status LED Indicators & Hour Counter	4 Line LCD with System State Indication	7" ULTRATOUGH™				
External Wiring	N/A	Remote ON/OFF, Safety ON/OFF, System Status, Alarm					
Power Consumption	0,4 kW	0,4 kW	1,5 kW	2,3 kW	3,0 kW	4,5 kW	6,8 kW
Power Supply	230VAC +/- 10% +N+PE 50/60Hz				3x 400VAC +/- 10% +N+PE 50/60Hz		
Cabinet Weight	10 kg	10 kg	32 kg	35 kg	60 kg	66 kg	101 kg
ADV. CONTROLLER FEATURES							
SCADA Communication	N/A	MODBUS RTU	MODBUS TCP/IP / PROFINET (Option I-Device)				
Analogue 4-20mA I/O	N/A	Flow Input/UV Irradiance Output	Flow Input/UV Dose Output/UV Intensity Output (Option UVT Input)				
ULTRADOSE™	N/A	N/A	Automatic UV Dose Pacing 50-100%				
Log	N/A	Alarms	Alarm, Event & Data (UV Dose, UV Intensity & Flow)				
UV Dose	N/A	UV Intensity on Display	Actual UV Dose & Target UV Dose on HMI				
UV Dose Alarm	N/A	UV Intensity Pre-Alarm & Alarm	Pre-Alarm & Alarm				

Specifications are subject to change without notice. Version: 24.1

UV SYSTEM		MR28-350SS ULTRATOX
Product ID		25088
Approvals		CE (Option UL/ cUL)

UV LAMPS & MONITORING	
Lamp Number	28
ULTRATOX™ TOC Lamp	350 W
Guaranteed Lamp Lifetime	12 000 Hours
UV Monitoring	UV Intensity Sensor ÖNORM M5873 Certified (Option Non-Corrosive PTFE)
Variable Power	50-100%

UV CHAMBER	
Connection Size	DN200
Connection Type	EN-1092 Type 01A PN10 (Option PN16)
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	Yes
Quartz Type	Synthetic High Purity Fused Quartz
Mounting	Free Standing (Option Horizontal SS316 Stand)
ULTRAWIPER™ System	(Option Automatic Mechanical With PTFE/Fiber Rings (Electrical))
Temperature Probe	PT100
Vent & Drain Ports	1"
Ingress Protection	IP68
Installation	Horizontal / Vertical
Minor Wetted Parts	FDA Approved PTFE, PVDF, VITON
Reactor Dry Weight	209 kg
Reactor Volume	356 L

CONTROL CABINET	
Cabinet Material	SS304 (Option GFRP/SS316)
Cabinet Sizes (H x W x D)	1400 x 800 x 400 mm
Cable Length	4 Meters (Max. 30 Meters)
Installation & Ambient	Wallmount 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" ULTRATOUGH™
External Wiring	Remote ON/OFF, Safety ON/OFF, System Status, Alarm
Power Consumption	10,5 kW
Power Supply	3x 400VAC +/- 10% N+PE 50/60Hz
Cabinet Weight	146 kg

ADV. CONTROLLER FEATURES	
SCADA Communication	MODBUS TCP/IP / PROFINET (Option I-Device)
Analogue 4-20mA I/O	Flow Input/UV Dose Output/UV Intensity Output (Option UVT Input)
ULTRADOSE™	Automatic UV Dose Pacing 50-100%
Log	Alarm, Event & Data (UV Dose, UV Intensity & Flow)
UV Dose	Actual UV Dose & Target UV Dose on HMI
UV Dose Alarm	Pre-Alarm & Alarm

CONTROL CABINET VARIANTS

ONE LAMP STANDARD



ONE LAMP ADVANCED



MULTI LAMP



MULTI LAMP



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.



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.



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.

ULTRAAQUA
UV DISINFECTION SYSTEMS



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