

TOC VUV SERIES

UV DISINFECTION • EFFICIENT AND CHEMICAL-FREE WATER TREATMENT



ULTRAQUA
UV DISINFECTION SYSTEMS

WE PROTECT YOUR MOST VALUABLE RESOURCE

TOC VUV SYSTEM SERIES

THE VACUUM UV (VUV) SERIES IS DEVELOPED SPECIFICALLY FOR TOC REDUCTION EXCELLENCE.

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

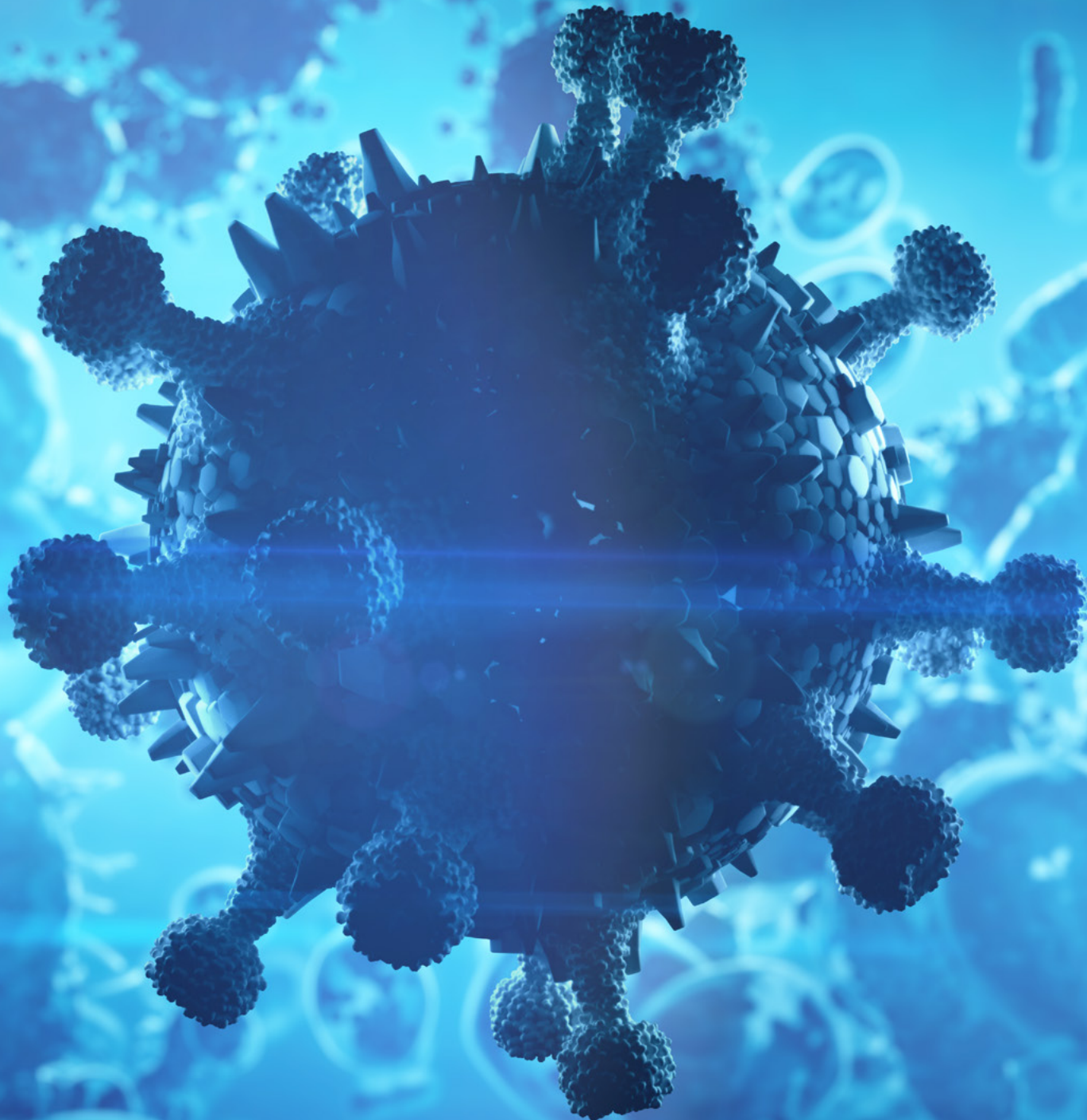
THIS MAKES IT MARKET-LEADING IN PROVIDING DISINFECTED WATER FOR APPLICATIONS SUCH AS PHARMACEUTICAL, FOOD & BEVERAGE, AND PROCESS WASTEWATER, WHERE EVEN THE SMALLEST OF CONTAMINANTS CAN HAVE A MAJOR NEGATIVE IMPACT.

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
- ❖ An extended 5 year guaranteed warranty



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 has made UV a viable OPEX and CAPEX solution for disinfection processes as well as in more advanced applications such as AOP processes.

Choosing UV as the disinfection method ensures optimal CAPEX and OPEX 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 ensures complete peace of mind, employing the best available solution for complete biosecurity.

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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 lay-outs, 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 over-dosing and temperature issues are well mitigated.



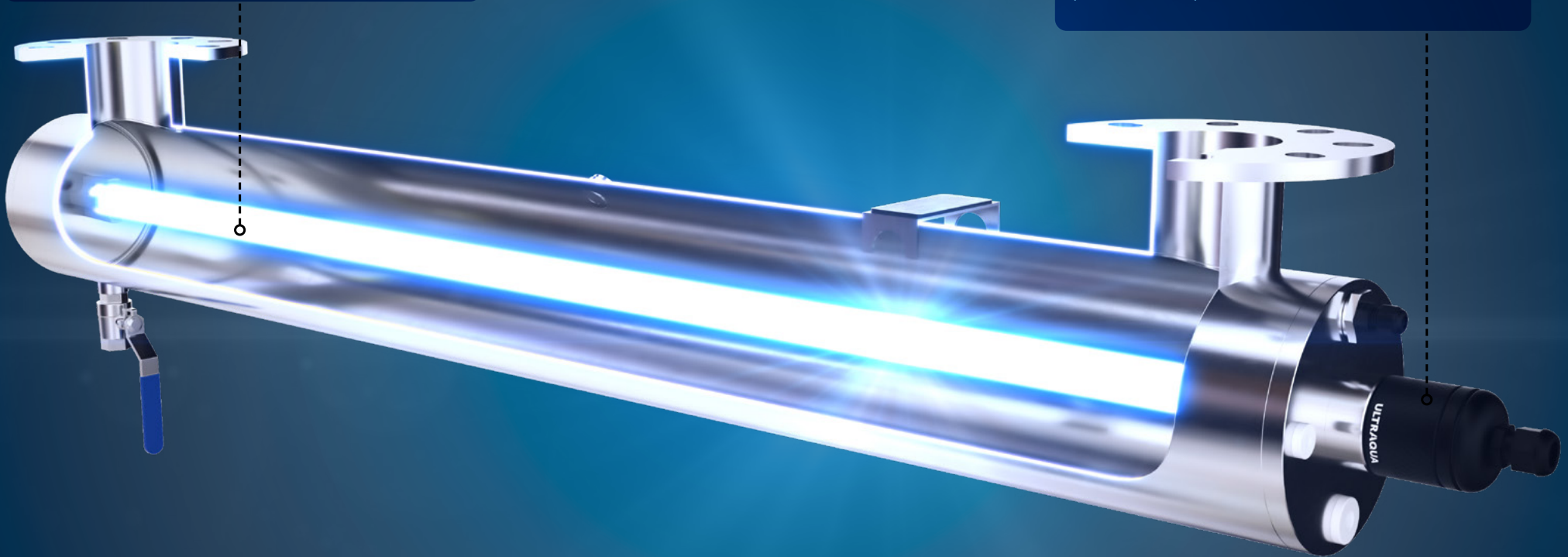
EXCEPTIONAL LAMP LIFETIME

The integrated ULTRATOX™ offers 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.

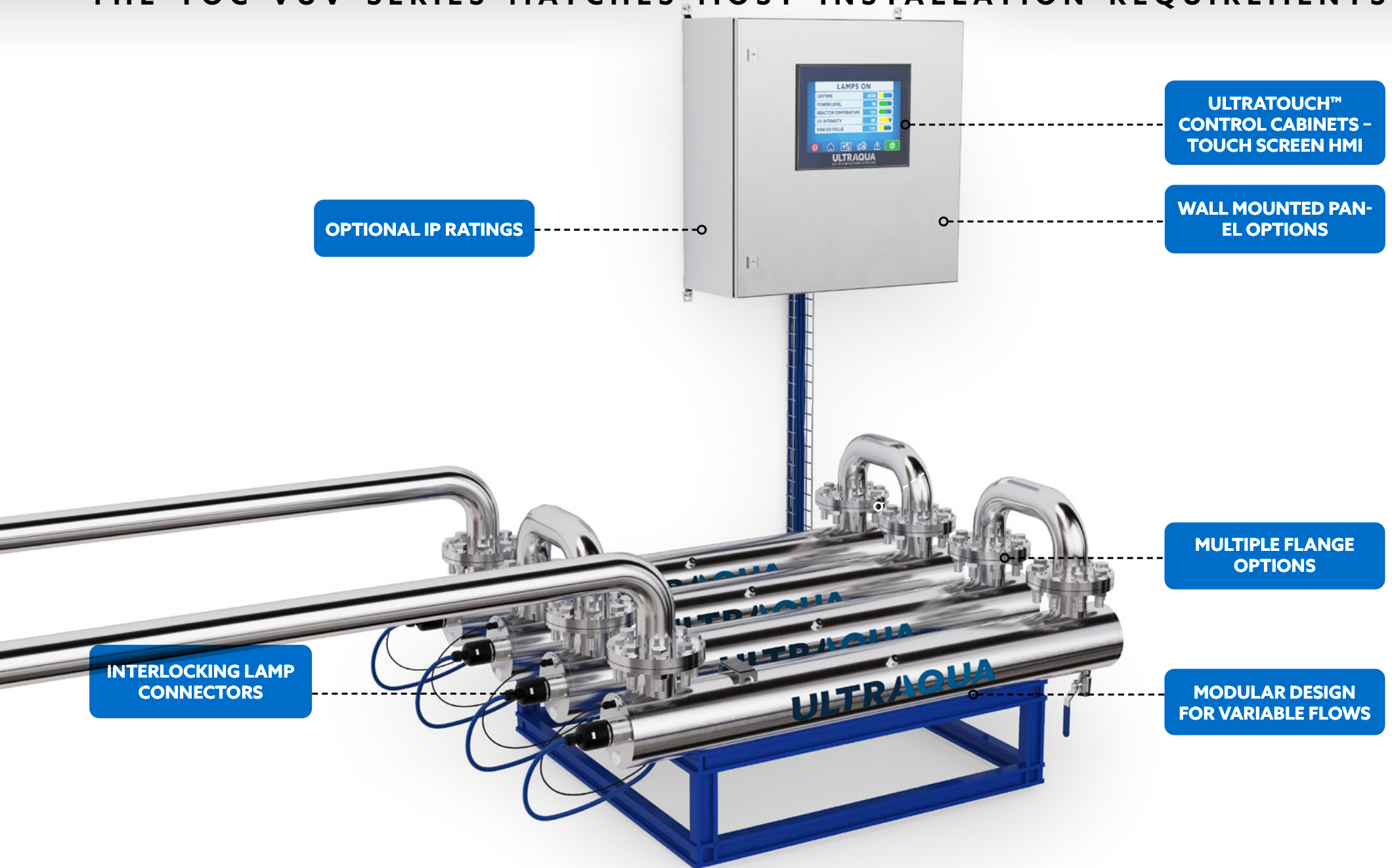
The unique interlocking electrical and mechanical lamp connectors make servicing of the system safe, quick, and fool proof.



EXCELLENT LEVEL OF CUSTOMIZATION

The ULU UV series offers a high level of customization through its modular design, which makes it possible to accommodate the most complex requirements by connecting as many ULU UV reactors as required, from 2 to 20.

THE TOC VUV SERIES MATCHES MOST INSTALLATION REQUIREMENTS





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 alter and adjust any standard UV system to accommodate the 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.

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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 the extensive network of regional offices.

The technical support team in our head office provides 24-hour remote service upon agreement, ensuring complete protection to avoid potential emergencies.

At ULTRAAQUA, we wish to provide a complete product experience for our customers, from the very start of determining requirements to the 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.

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. The partner network has been key to the success of ULTRAAQUA, 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.

The validity, experience, and trustworthiness are proven through our wide range of acquired certificates, patents, and trademarks.

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TECHNOLOGY OVERVIEW & VALIDATIONS



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



The **DVGW certification** assures that critical technical requirements are met regarding hygiene, safety, and general functionality. DVGW is an unbiased technical-scientific association based in Germany, specialized in gas and water industries.

AMS

The **AMS (Analog Mixed Signal) verification** ensures that the electronic components are compliant with the latest industry-standard, allowing smooth and quick signal transmission among the electrical components used in data tracking and storage.



The **NIPH (Norwegian Institute of Public Health) type approval** ensures that all UV disinfection units meets the requirements for UV dosage. The approval means that ULTRAAQUA is able to distribute selected UV systems in Norway and The Faroe Islands.