

POOLRAY™ SERIES

MEDIUM PRESSURE UV AGAINST COMBINED CHLORINE, CRYPTO AND GIARDIA



ULTRAQUA
UV DISINFECTION SYSTEMS

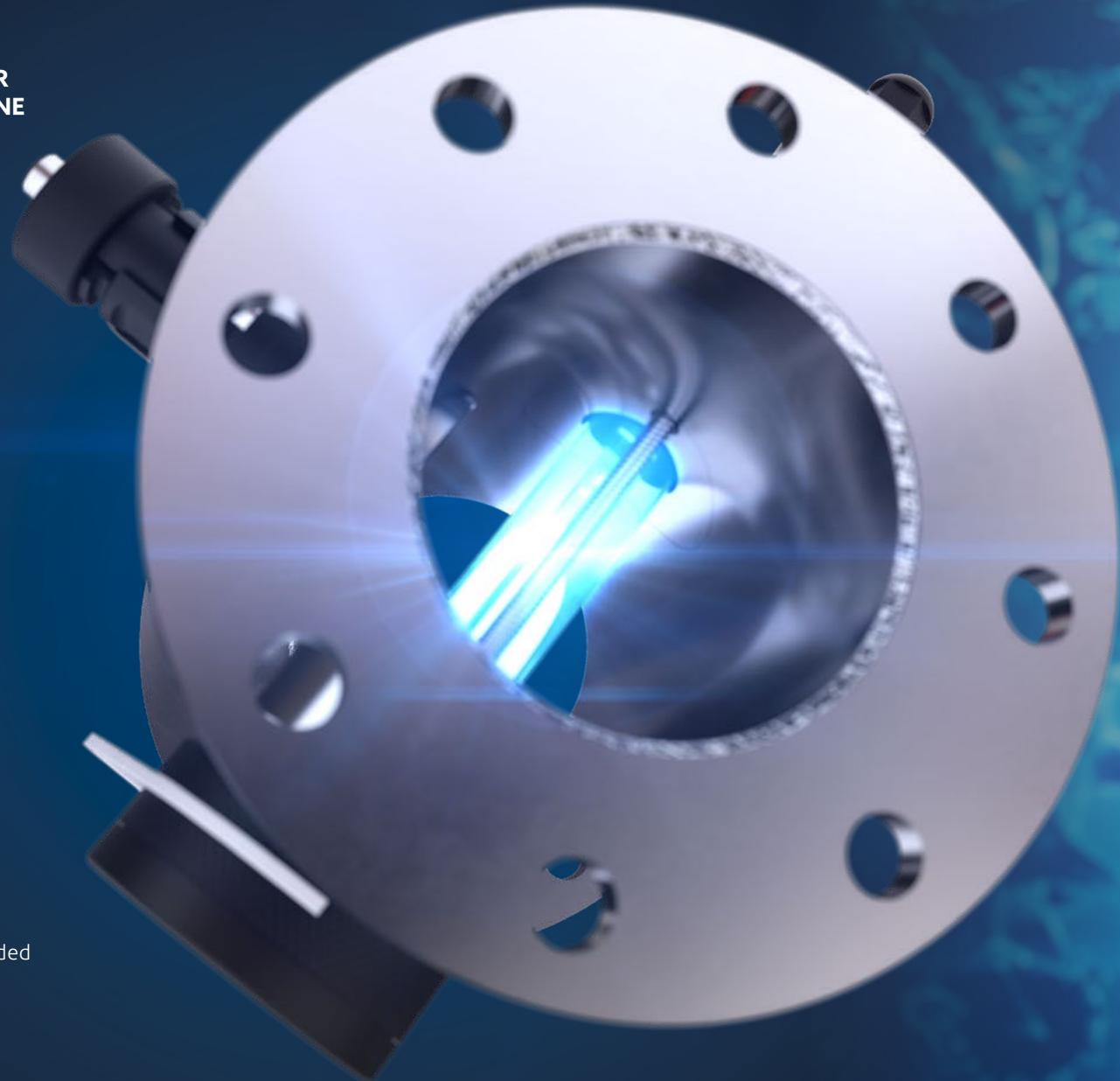
WE PROTECT YOUR MOST VALUABLE RESOURCE

POOLRAY™ SERIES

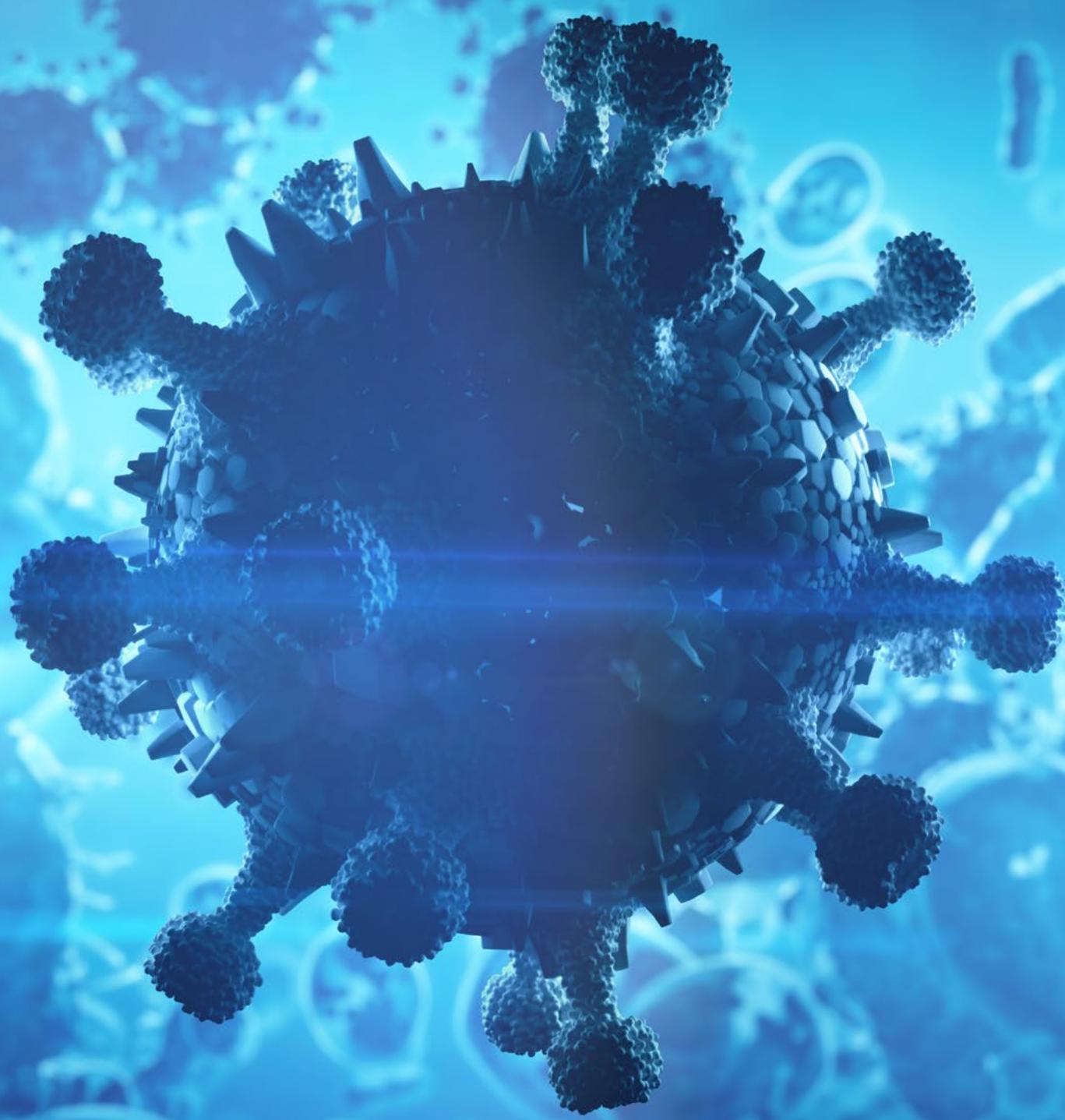
THE POOLRAY UV SERIES IS DEVELOPED FOR EXCELLENT DISINFECTION AND CHLORAMINE REDUCTION IN SWIMMING POOLS, BEING OPTIMIZED FOR THE LOWEST POSSIBLE OPERATING COSTS WHILE ENSURING EFFECTIVE REMOVAL OF COMBINED CHLORINE.

KEY HIGHLIGHTS

- Compact and cost-optimized for pools and spas, including streamlined install and service
- Simplified maintenance and installation for minimal downtime
- High-grade electropolished stainless steel 316L material providing excellent resistance against chlorides
- Compact in-line design minimizing installation space requirements
- 9 000-hour lamp lifetime
- Sensor is removable during operation for service and cleaning
- Simplified maintenance and installation, single sided access with no special tools required



MARKET LEADING ENERGY EFFICIENCY



CORE BENEFITS OF UV

UV TECHNOLOGY IS A GLOBALLY ACCEPTED SOLUTION FOR WATER DISINFECTION AND COMBINED CHLORINE REMOVAL.

The demand for cost-efficient solutions to provide high quality disinfected swimming pool 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 disinfection and combined chlorine removal.

Improved technological and design configurations have made UV a viable OPEX and CAPEX solution for swimming pools of all sizes.

Choosing to include UV as a secondary disinfection method ensures protection against chlorine resistant pathogens such as Cryptosporidium and Giardia.

The scientifically optimized POOLRAY™ systems are designed to remove potential health issues associated with combined chlorine, to ensure a better bather experience.

The ULTRAAQUA UV POOLRAY™ 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.

ULTRAAQUA
UV DISINFECTION SYSTEMS

COMPLETE CONTROL WITH ULTRATOUCH CONTROL CABINETS

The market-leading ULTRATOUCH PLC is the very latest in Siemens touch-screen HMI technology. Relevant interfaces and connectors are available, also offering remote operation and dimming functionality.

OPTIMIZED FOR REMOVAL OF COMBINED-CHLORINE

The compact reactor with its CFD optimized lamp positioning makes the POOLRAY™ able to offer maximum hydraulic efficiency throughout the entire UVT range with minimum head loss, making the system optimized for combined chlorine removal.

DISINFECTION FIREWALL

The POOLRAY™ ensures excellent protection against cryptosporidium and giardia while removing combined chlorine.

ULTRAAQUA POOL SENSOR

High-quality precision sensor, designed for pool UV. Close sensor valve to clean under operation.

ULTRAAQUA TEMPERATURE CONTROL

Overheating and melting damage is avoided with a temperature sensor.



HIGH GRADE 316L STAINLESS STEEL

The high-grade stainless steel offers excellent resistance against chlorides.

EXCEPTIONAL LAMP LIFETIME

The integrated ULTRATHERM lamps offer the very latest medium pressure high-intensity UV lamp technology, being optimized for energy efficiency and robustness. The substantial 9 000 hours of lamp lifetime offers market-leading lamp efficiency in UV-C output density.

Additionally, the lamps are operated with an electronic ballast optimizing power use and making lamp function alarm possible.

SMARTWIPER QUARTZ CLEANING

The patented SMARTWIPER manual sleeve wiping mechanism keeps the quartz sleeves clean while preventing harsh fouling. Keeping the quartz sleeves clean at all times reduces maintenance requirements while contributing to a consistent and stable disinfection process.

EASY MAINTENANCE AND INSTALLATION

With a design that allows for easy maintenance, the system is easily installable and can be serviced using no special tools. The sensor is easily cleaned, serviced or replaced under operation due to the integrated valve. Additionally, the unique interlocking electrical and mechanical lamp connectors make servicing of the system safe, quick, and fool proof.



POOLRAY SERIES RANGE



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[Options are marked with square brackets] - Specifications are subject to change without notice. **Version: 25.2**

| UV SYSTEM | POOLRAY NANO | POOLRAY MP1-600SS | POOLRAY MP2-600SS |
|---|---------------------------------|--|-----------------------------|
| Product ID | 25225 | 25235 | 25236 |
| Approvals | | CE [UL] | |
| UV LAMPS & MONITORING | | | |
| Total Lamps | 1 | 1 | 2 |
| ULTRAAQUA Medium-Pressure DBP Lamp | | 600 W | |
| Lamp Lifetime | | 9000 Hours | |
| Variable Power | | Manual Adjustment 60-100% | |
| UV Monitoring | No | [UV Intensity Sensor Pool Specialised] | |
| UV CHAMBER | | | |
| Connection Size | 2,5" BSPT | DN100 / D110 | DN100 / D110 |
| Connection Type | | EN-1092 Type 01A PN10 | |
| Design Pressure | | 10 Bar | |
| Chamber Material | | SS316L / 1.4404 | |
| Internal / External Finish | | Electropolished Inside/Out | |
| Quartz Type | | High Purity Fused Quartz Transmittance >95% | |
| Temperature Probe | | Yes | |
| Ingress Protection | | IP68 | |
| Minor Wetted Parts | | FDA Approved PTFE, PVDF, VITON | |
| Quartz Sleeve Wiping System | | SMARTWIPER (PA 2023 70549) | |
| Reactor Weight | 5 kg (11 lbs) | 8,5 kg (19 lbs) | 12 kg (26 lbs) |
| Reactor Volume | 1 L (0.3 gallons) | 3 L (0.8 gallons) | 4,5 L (1.2 gallons) |
| CONTROL CABINET | | | |
| Cabinet Material | | Powder Painted Steel [Plastic] | |
| Cabinet Size (H×W×D) mm (in) | 400×300×210 (15.7×11.8×8.3) | 400×300×210 (15.7×11.8×8.3) | 500×400×210 (19.7×15.7×8.3) |
| Control Logic | No | PLC Siemens | |
| SCADA Communication | No | Siemens Logo PLC | |
| Power Indication | 5-Line Digital Display | PLC Screen | |
| Remote Control | No | Yes | |
| Cable Length | | 4 Meters [Max. 30 Meters] (13 ft [Max. 98 ft]) | |
| Installation | | Wallmount 0-40° Non-Condensing | |
| Thermal Control | | Fan | |
| Ballast Type | | Electronical | |
| Ingress Protection | | IP54 [IP65] | |
| Power Supply | 1x 230VAC +/- 10% +N+PE 50/60Hz | 1x 230VAC +/- 10% +N+PE 50/60Hz [3x 400VAC] | |
| Power Consumption | 0,67 kW | 0,69 kW | 1,37 kW |
| Cabinet Weight | 12 kg (26 lbs) | 14 kg (31 lbs) | 20 kg (44 lbs) |
| SYSTEM | | | |
| Capacity Max Flow 3 m/sec. | 30 m³/h | 80 m³/h | 80 m³/h |
| Flow @ 60mJ/cm² 95% UVT (3log Crypto + Combined Chlorine Breakdown) | 15 m³/h | 29 m³/h | 59 m³/h |
| Flow @ 60mJ/cm² 98% UVT (3log Crypto + Combined Chlorine Breakdown) | 18 m³/h | 37 m³/h | 74 m³/h |

European standard for pool designs: 60mJ/cm² - 95% UVT

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.

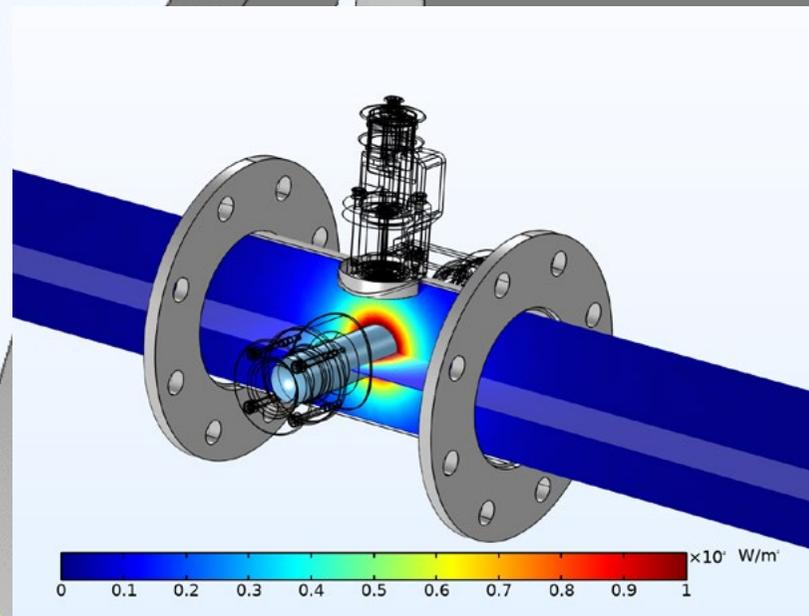
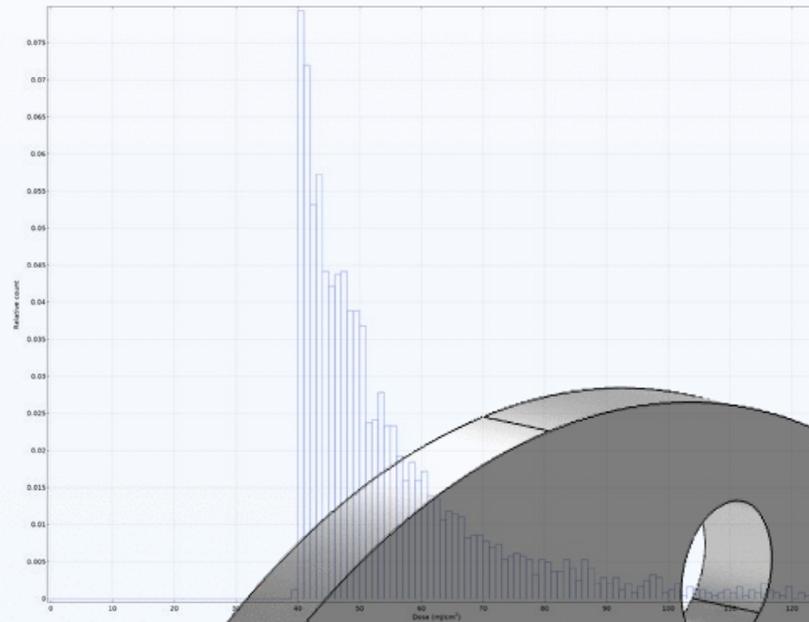
This enables us to ensure on-site validation to various standards, fitting your exact requirements.

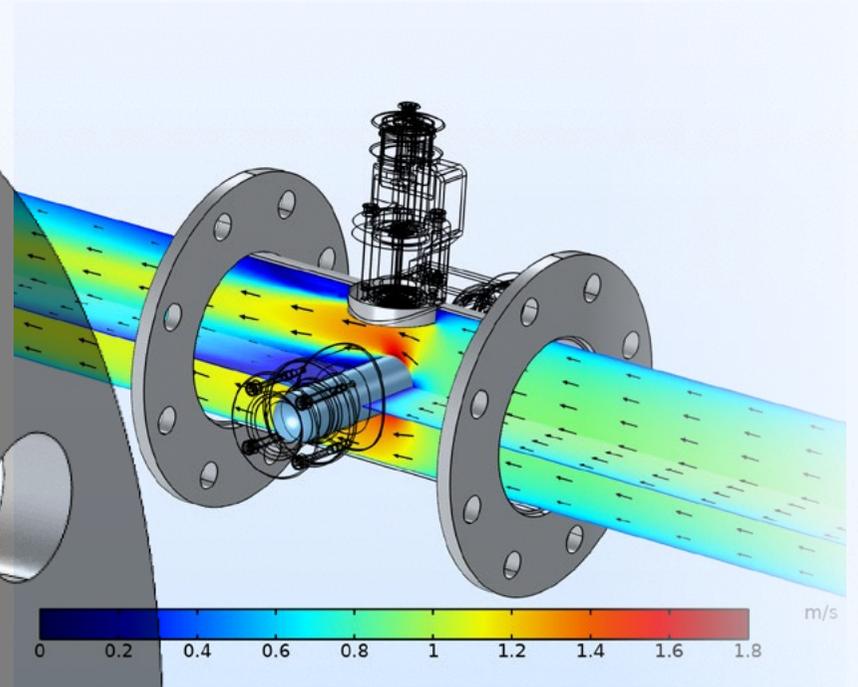
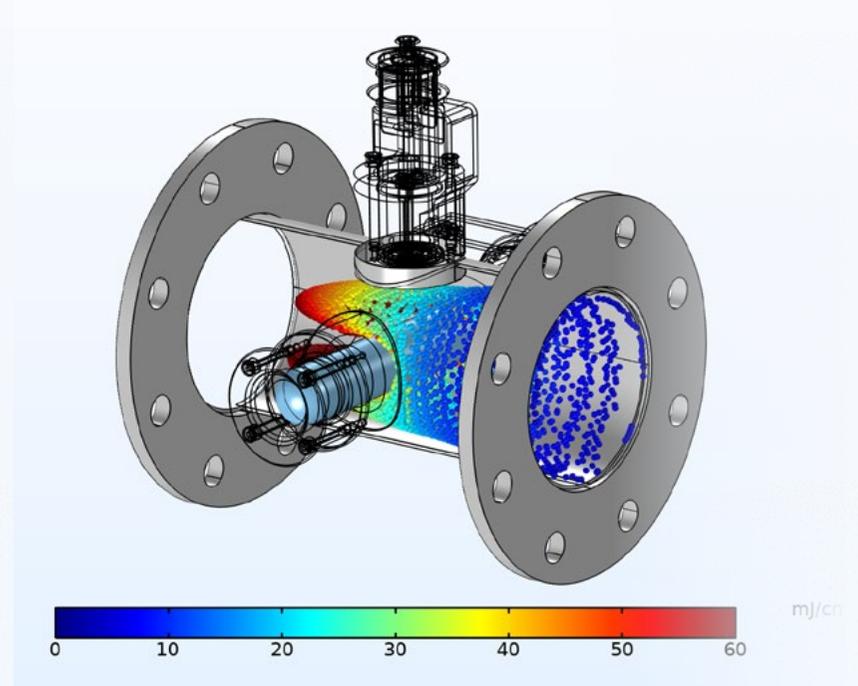
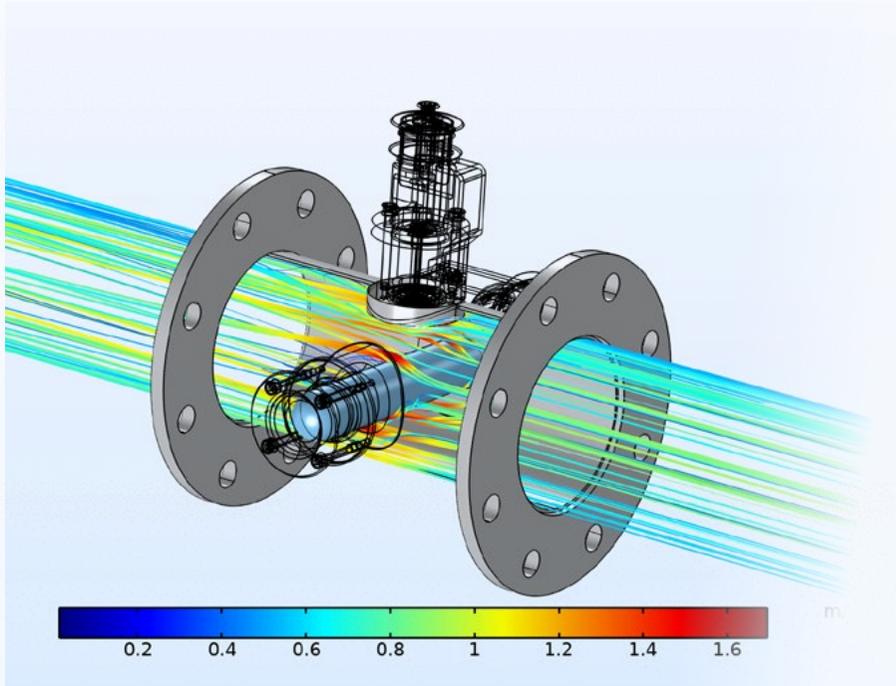
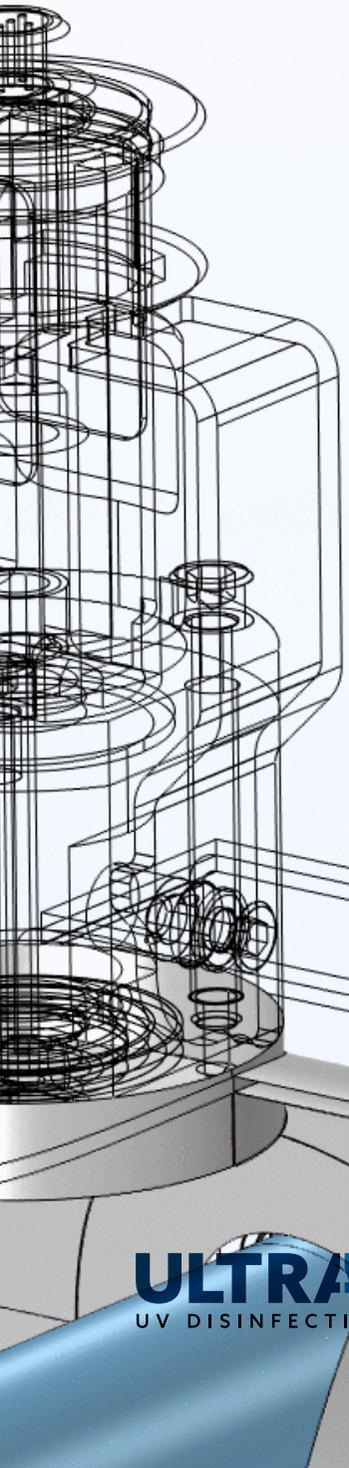
For all customizations, the services and solutions include, but are not limited to:

- 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.

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R&D CAPACITIES

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

Employing the brightest industry specialists with diverse expertise to drive continuous innovation has been vital to the company's success. The research department is led by Ole Grønberg and Morten Møller Klausen, who are industry leaders in water treatment research, working toward a much-needed paradigm shift in commercial swimming pool sanitation.

The ULTRAAQUA R&D department conducts, supports, and pioneers some of the latest developments in the water industry. These projects are often carried out in collaboration with specialists from municipalities, universities, top-tier consultancies, and international companies. The projects primarily focus on developing unique and advanced chemical-free disinfection solutions for some of the world's most complex water quality challenges.

In addition to ultraviolet sterilization, research on technologies such as ozonation, biofiltration, and particle filtration has been conducted, resulting in deep scientific insights into achieving the world's healthiest bathing water.

This ultimately allows ULTRAAQUA to position itself among the industry leaders in UV disinfection, providing customers with the best available solutions.



ULTRAAQUA

SERVICE & SUPPORT

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

With over 10 000 systems installed in over 120 countries, ULTRAAQUA offers extensive support regarding installation and maintenance through a wide-ranging network of regional offices.

The technical support team at our head office provides 24-hour remote service upon agreement to reduce the risk of emergencies.

At ULTRAAQUA, it is our goal to provide a complete product experience for our customers, from specifying requirements to ongoing operational maintenance. This naturally means that our responsibility does not stop after the UV system reaches its destination.

By maintaining close collaboration with all clients, a trouble-free process is ensured throughout all post-installation activities.

The 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 necessary, qualified engineers are available for on-site training and technical support, able to assist in setting up the complete solution. To ensure maximum system performance and reliability, extensive information and technical knowledge are always provided.



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 have 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.

WANT TO LEARN MORE?



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