ULTRABLUE SERIES

UV DISINFECTION • EFFICIENT AND CHEMICAL-FREE WATER TREATMENT

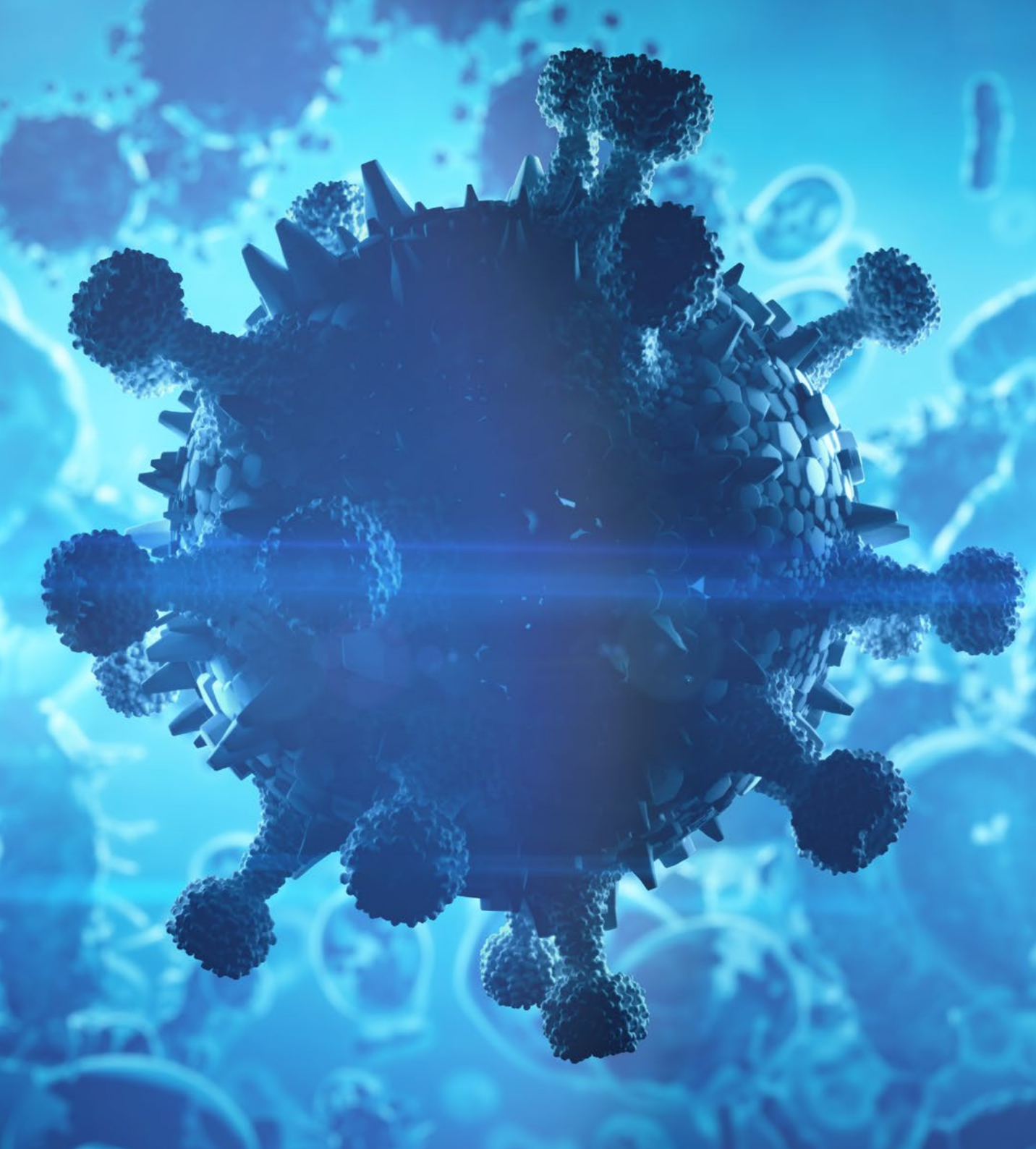
ULTRAQUA

UV DISINFECTION SYSTEMS

WE PROTECT YOUR MOST VALUABLE RESOURCE

3RD PARTY GUARANTEED DISINFECTION & SCIENTIFICALLY OPTIMIZED COMBINED CHLORINE REMOVAL

ULTRAQUA
UV DISINFECTION SYSTEMS



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 ULTRABLUE systems are designed to remove potential health issues associated with combined chlorine, to ensure a better bather experience.

The ULTRABLUE 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.

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SWIMMING POOL UV DISINFECTION

THE WORLD HEALTH ORGANIZATION (WHO) URGES POOL OWNERS TO FOCUS ON LOWERING CHLORINE BY-PRODUCTS THAT ARE PRESENT IN THE WATER AND AIR OF RECREATIONAL POOL ENVIRONMENTS.

Many facilities are now installing UV as a dual-purpose technology. A technology that requires highly optimized and scientifically proven testing.

The ULTRABLUE range is verified by the EU government, showing proven scientific results in terms of reducing harmful and potentially carcinogenic chloramines from the water. These chloramines can pose a critical threat to the health and overall experience of the users.

The ULTRABLUE series is scientifically proven to achieve a 99.9% removal of Cryptosporidium in a single pass.

ULTRAQUA
UV DISINFECTION SYSTEMS

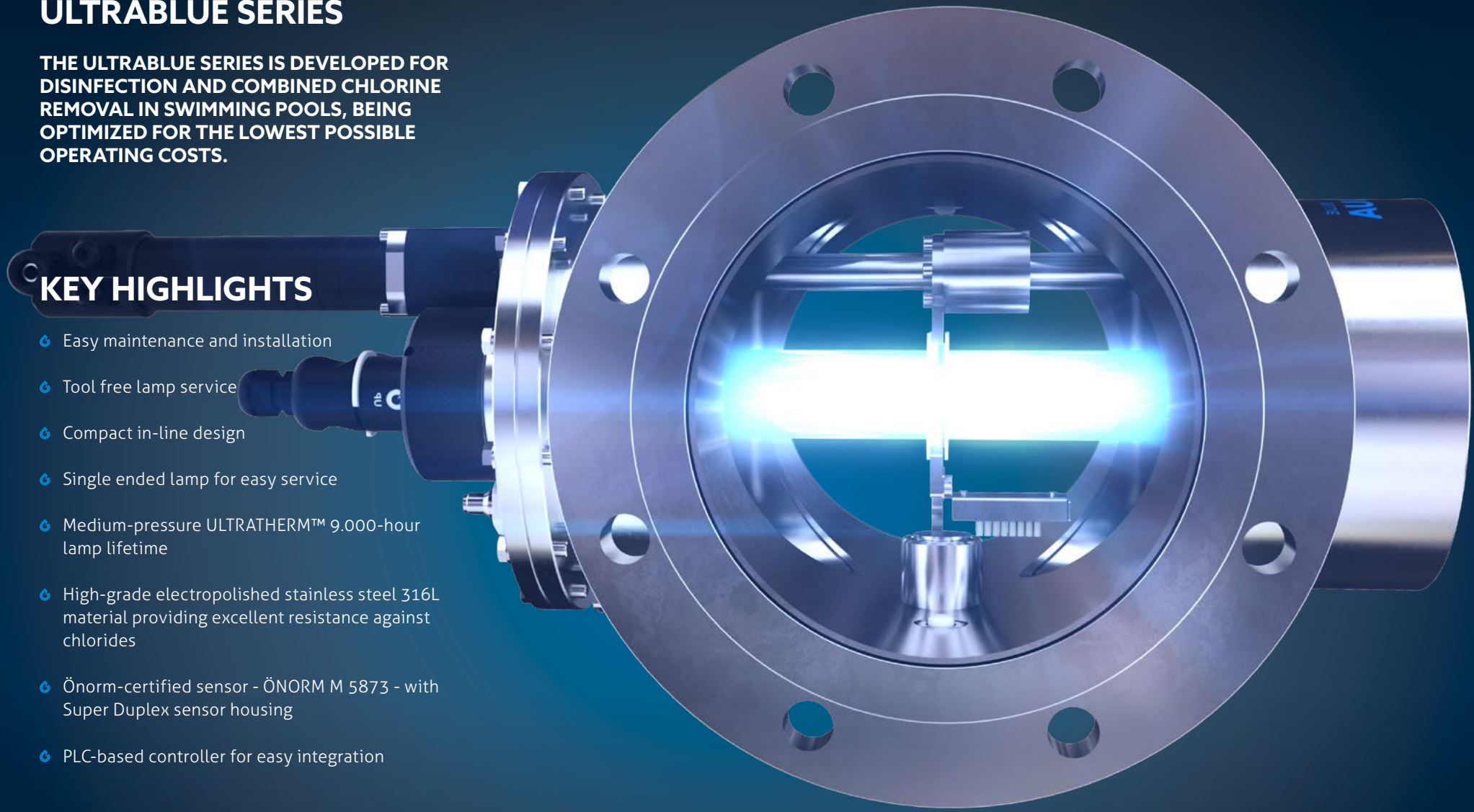
200 SYSTEMS INSTALLED

55 ACTIVE SITES

50.000 BATHERS PROTECTED

ULTRABLUE SERIES

THE ULTRABLUE SERIES IS DEVELOPED FOR DISINFECTION AND COMBINED CHLORINE REMOVAL IN SWIMMING POOLS, BEING OPTIMIZED FOR THE LOWEST POSSIBLE OPERATING COSTS.



KEY HIGHLIGHTS

- Easy maintenance and installation
- Tool free lamp service
- Compact in-line design
- Single ended lamp for easy service
- Medium-pressure ULTRATHERM™ 9.000-hour lamp lifetime
- High-grade electropolished stainless steel 316L material providing excellent resistance against chlorides
- Önorm-certified sensor - ÖNORM M 5873 - with Super Duplex sensor housing
- PLC-based controller for easy integration

MARKET LEADING ENERGY EFFICIENCY

SWIMMING POOL WATER DISINFECTION IN CHINA

THE WORLD EXPO IS ONE OF THE LARGEST EXHIBITIONS IN THE WORLD, HOSTING ALL WILLING NATIONS AROUND THE GLOBE SINCE 1928.

The event primarily serves as a platform for countries to share their cultural heritage, values, and achievements with one another.

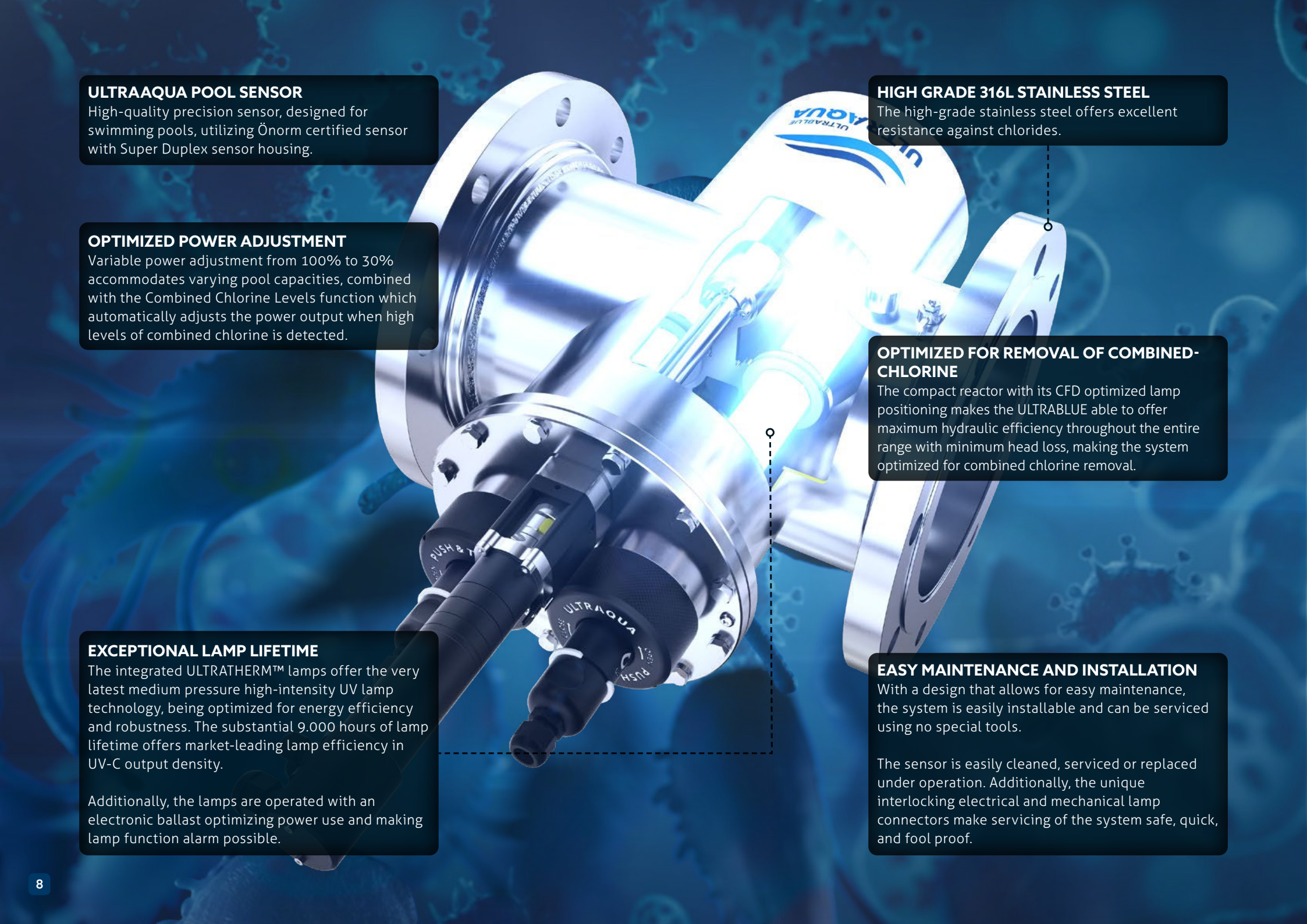
The theme of the event was "better city, better life", and several Danish companies participated to demonstrate their capabilities, suited for the theme.

Inspired by the Danish architecture in Copenhagen, the pool around The Little Mermaid was suitable for public swimming. With large numbers of visitors at the expo, efficient water disinfection was essential.

With many years of expertise and sustainable design philosophy, ULTRAAQUA provided UV systems to match the defined combined chlorine removal requirements.

THE RESULTS

- **Operational costs reduced by 27%**
- **Chemical usage reduced by 16%**
- **Water consumption reduced by 12%**



ULTRAAQUA POOL SENSOR
High-quality precision sensor, designed for swimming pools, utilizing Önorm certified sensor with Super Duplex sensor housing.

OPTIMIZED POWER ADJUSTMENT
Variable power adjustment from 100% to 30% accommodates varying pool capacities, combined with the Combined Chlorine Levels function which automatically adjusts the power output when high levels of combined chlorine is detected.

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.

HIGH GRADE 316L STAINLESS STEEL
The high-grade stainless steel offers excellent resistance against chlorides.

OPTIMIZED FOR REMOVAL OF COMBINED-CHLORINE
The compact reactor with its CFD optimized lamp positioning makes the ULTRABLUE able to offer maximum hydraulic efficiency throughout the entire range with minimum head loss, making the system optimized for combined chlorine removal.

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

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.

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 research department is led by Ole Grønborg and Morten Møller Klausen who are industry leaders within water treatment research, working towards a much-needed paradigm shift for commercial swimming pool sanitation.

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 solutions for some of the worlds most complex water quality problems.

In addition to ultraviolet sterilization, research work focused on technologies such as ozonation, biofiltration and filtration of particles has been conducted, resulting in deep scientific insights to achieve the healthiest bathing water in the world.

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

This makes us confident that ULTRAAQUA is the right partner for your organization.

ULTRAAQUA
UV DISINFECTION SYSTEMS

UV SYSTEM	1-600SS DN80 ULTRABLUE	2-600SS DN100 ULTRABLUE	1-2500SS DN150 ULTRABLUE	2-2500SS DN200 ULTRABLUE	2-4000SS DN250 ULTRABLUE	3-4000SS DN300 ULTRABLUE
Product ID	25076	25077	25078	25079	25080	25081
Approvals	CE - EU Verified					
UV LAMPS & MONITORING						
Lamp Number	1	2	1	2	2	3
ULTRATHERM™ MPHI Lamp	600 W	600 W	2500 W	2500 W	4000 W	4000 W
Total Lamp Power	600 W	1200 W	2500 W	5000 W	8000 W	12000 W
Lamp Lifetime	9000 Hours					
Lamp Change Safety	Yes					
UV Monitoring / Sensor House Material	UV Intensity Sensor - ÖNORM M5873 Certified SS316L / SS316L					
Variable Power	Automatic ULTRADOSE™ Pacing 60-100%		Automatic ULTRADOSE™ Pacing 30-100%			
Single Lamp Control	N/A	ULTRASWITCH™ Setting	N/A	ULTRASWITCH™ Setting		
UV CHAMBER						
Connection Size	DN80	DN100	DN150	DN200	DN250	DN300
Connection Type	DN PN10 (Other Flanges Available on Request)					
Design Pressure	10 Bar					
Chamber Material	SS316L					
Internal & External Finish	Electropolished Inside/Out					
Lamp/Wiper Access Single Ended	Yes					
Quartz Type	High Purity Fused Quartz					
Mounting	Free Standing					
ULTRAWIPER™ System	Automatic Mechanical Wiper with PTFE-Electrical Motor 24V DC					
Temperature Probe	2 x Temperature Probe - PT100 (Thermal Cut Out 50°)					
Vent / Drain Ports / Air Port	1/2" BSP Plugged					
Ingress Protection	IP68					
Installation	Horizontal / Vertical (Lamps Must Be Horizontal)					
Minor Wetted Parts	PTFE, PVDF, FKM					
Dry Weight	19 kg	26 kg	31 kg	46 kg	53 kg	81 kg
Wet Weight	24 kg	35 kg	42 kg	70 kg	87 kg	134 kg
CONTROL CABINET						
Cabinet Material	Powder Painted Steel (Option SS304, SS316L)					
Cabinet Sizes (H x W x D)	700 x 500 x 260 mm		800 x 800 x 300 mm		1000 x 800 x 400 mm	
Cable Length	Standard 4m (Optional Lengths 10, 15, 20, 25, 30m Max)					
Installation & Ambient	Wall mount 0-45 °C Non-Condensing @ IP54					
Ingress Protection	IP54					
Thermal Control	Fan Cooled System					
Panel Interlock Switch	90 Degree Two Position Rotary Switch					
Control Logic	PLC					
Interface/HMI	STD.: 4" ULTRATOUCH™ / ADV.: 7" ULTRATOUCH™					
SCADA Communication	MODBUS TCP/IP (Ethernet RJ45)					
Analogue 4-20mA I/O	Dose Output / Flow Input / Combined Chlorine Input					
Combined Chlorine Control	Power Mode Based on Combined Chlorine Input - User Selectable					
External Wiring	Remote ON/OFF, Safety ON/OFF, System Status, Alarm					
Event Log	Power ON/OFF, Lamps ON/OFF, Alarms					
Data Log	Alarm, Event & Data (UV Dose, UV Intensity, Flow & Combined Chlorine)					
Power Supply	208/230VAC +/- 10% +N+PE 50/60Hz				3x 400VAC +/- 10% +N+PE 50/60Hz	
Power Consumption	3 A	6 A	14 A	28 A	24 A	24 A
Panel Weight	50 kg		60 kg		75 kg	
PERFORMANCE						
Flow @ 40mJ/cm² 95% UVT (3log Crypto + Germicidal Disinfection)	34 m3/h	80 m3/h	147 m3/h	348 m3/h	545 m3/h	1050 m3/h
Flow @ 60mJ/cm² 95% UVT (3log Crypto + Combined Chlorine Breakdown)	30 m3/h	65 m3/h	135 m3/h	335 m3/h	400 m3/h	900 m3/h

TECHNOLOGY OVERVIEW & VALIDATIONS

THE UV SYSTEMS OF ULTRAAQUA HAS UNDERGONE EXTENSIVE TESTING AND PASSED THE WORLD'S MOST RIGOROUS TESTS FOR VALIDATION AND APPROVAL BY RECOGNIZED LEADING CERTIFICATE PROVIDERS.

This means that reliable and thoroughly tested solutions are guaranteed.

Funded project for the common objective of developing and demonstrating the technical and commercial viability of a highly innovative, intelligent treatment and control concept for treatment of swimming pool water and indoor air, with much less impact on natural resources compared to traditional systems.

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.

The **CE marking** signifies that the product has been assessed to meet high safety, health, and environmental protection requirements.

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

The **UL safety mark** is your guarantee of trusted safety of performance, meaning that the product has been certified to meet scientific safety, quality, or security standards.

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.

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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.

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

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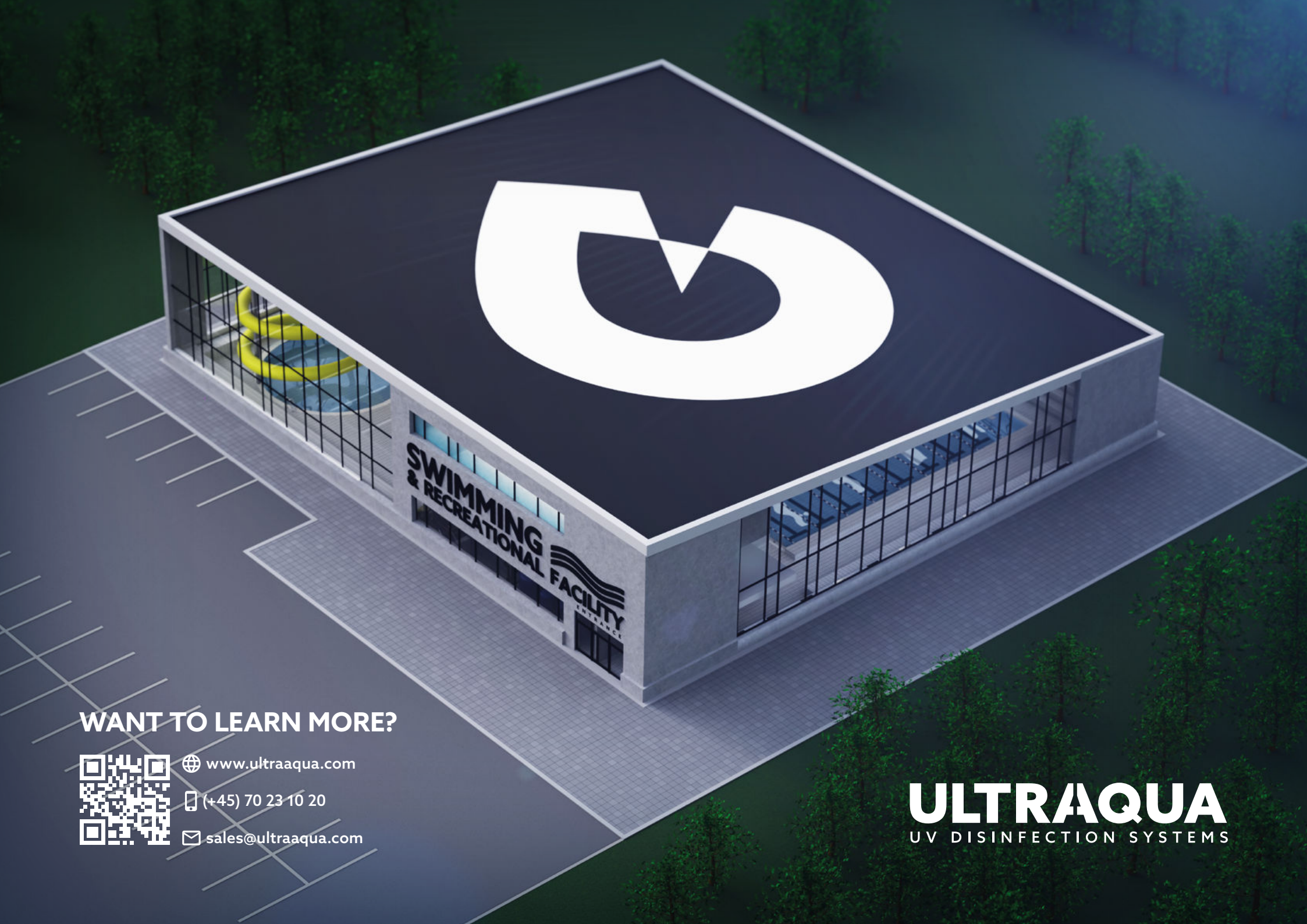

WANT TO LEARN MORE?

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