

ULTRAQUBE™ SERIES (5-192)



OZONE OXIDATION • EFFICIENT AND CHEMICAL-FREE WATER TREATMENT

ULTRAQUBE™ 5-192 SERIES

THE ULTRAQUBE™ 5-192 DELIVERS INDUSTRIAL-SCALE, HIGH-CONCENTRATION OZONE PRODUCTION OF UP TO 20 KG/H. ITS MODULAR DESIGN SCALES SEAMLESSLY TO ENSURE OPERATIONAL FLEXIBILITY AND LONG-TERM COST-EFFICIENCY

KEY HIGHLIGHTS

- Industry-leading capacity of up to 20 kg/h - the largest modular cold plasma ozone system available
- Advanced modularity and scalability from 5-20 kg/h within the same frame
- Optimized CAPEX through row-based expansion - invest in today's capacity and scale as demand grows
- High-concentration ozone output ranging from 7-15 wt% at 1.5-3 bar(g)
- Integrated catalytic ozone destructor with fail-safe valve design for enhanced operational safety
- Advanced reactor protection through cooling water flow measurement and inlet/outlet temperature monitoring
- Sectional maintenance design with four-door access
- Optional UPS solution ensuring uninterrupted control during power outages

MARKET LEADING ENERGY EFFICIENCY



CORE BENEFITS OF OZONE

OZONE TECHNOLOGY IS A GLOBALLY RECOGNIZED SOLUTION FOR WATER DISINFECTION, EFFECTIVELY OXIDIZING A WIDE RANGE OF CONTAMINANTS, INCLUDING BACTERIA, VIRUSES, AS WELL AS ORGANIC AND INORGANIC SUBSTANCES.

The need for economical and effective solutions to provide clean water is at an all-time high and continuously increasing. Ozone treatment addresses this complex issue, meeting the most stringent requirements for bacteria and virus protection, as well as improving the overall quality of water.

Ozone technology provides an effective solution across various water qualities and applications, being one of the strongest oxidizing agents available for water treatment. The broad disinfection spectrum makes ozone extremely efficient against a wide range of microorganisms to provide a high level of biosecurity.

With the proper installation conditions, ozone disinfection leaves no chemical residue, as it decomposes back into oxygen. This makes facilities worldwide able to reduce their dependency on chemical treatment, leading to both environmental benefits and potential cost savings.

ULTRAAQUA ozone disinfection systems offers marketleading ozone efficiency while being thoroughly cost-optimized. The tailored design allows for comprehensive scalability and modularity, allowing flexibility to adjust for additional demand.

ULTRAAQUA



CATALYTIC OZONE DESTRUCTOR

An integrated catalytic destructor safely neutralizes ozone during emergency stops and depressurization, eliminating the need for external destruction equipment.

COOLING WATER FLOW METER

Integrated flow measurement on the cooling circuit ensures optimal water flow, enabling real-time reactor diagnostics and early-warning protection.

INLET/OUTLET TEMPERATURE SENSORS

Dual temperature monitoring across the cooling circuit allows delta-T tracking and precise reactor condition alarms.

PCUX6 POWER UNITS

Next-generation power control units deliver 5 kW per unit, enabling a significant improvement in power density over the previous PCU generation.



MODULAR REACTOR ROWS

2-8 horizontal reactor rows housed within the frame, enabling capacity expansion by adding rows inside the existing enclosure.

FOUR-DOOR ACCESS

Two doors on each side plus removable center sections provide full component access without compromising IP rating.

SECTIONAL LINE ISOLATION

Gas and water lines can be closed off per section, allowing individual sections to be serviced.

PERFORMANCE / CONC.	ULTRAQUBE 5-48	ULTRAQUBE 5-72	ULTRAQUBE 5-96	ULTRAQUBE 5-120	ULTRAQUBE 5-144	ULTRAQUBE 5-168	ULTRAQUBE 5-192
102 g/Nm ³ 7% wt/wt	4992 g/hr (264 lb/day)	7488 g/hr (396 lb/day)	9984 g/hr (528 lb/day)	12480 g/hr (660 lb/day)	14976 g/hr (792 lb/day)	17472 g/hr (924 lb/day)	19968 g/hr (1057 lb/day)
200 g/Nm ³ 10% wt/wt	4224 g/hr (223 lb/day)	6336 g/hr (335 lb/day)	8448 g/hr (447 lb/day)	10560 g/hr (559 lb/day)	12672 g/hr (670 lb/day)	14784 g/hr (782 lb/day)	16896 g/hr (894 lb/day)
250 g/Nm ³ 14% wt/wt	3600 g/hr (190 lb/day)	5400 g/hr (286 lb/day)	7200 g/hr (381 lb/day)	9000 g/hr (476 lb/day)	10800 g/hr (571 lb/day)	12600 g/hr (667 lb/day)	14400 g/hr (762 lb/day)

Working Conditions: At 12°C (54°F) cooling water, 98% oxygen purity, 100% power

CABINET SPECIFICATIONS							
Weight	1900 kg (4189 lb)	2200 kg (4850 lb)	2500 kg (5512 lb)	2800 kg (6173 lb)	3100 kg (6834 lb)	3400 kg (7496 lb)	3700 kg (8157 lb)
Length	3500 mm (137.8 in)						
Width	1105 mm (43.5 in)						
Height	2300 mm (90.6 in)						
Ingress Protection	IP54						
Temperature	5 - 40°C (41 - 104°F)						
Humidity	< 95% Non-Condensing						
Noise Level	< 53dB						
Cabinet Material	Powder Coated Metal						

ELECTRICAL SPECIFICATIONS							
Power (100%)	40 kW	60 kW	80 kW	100 kW	120 kW	140 kW	160 kW
Energy Consumption	<8 kWh per kg O ₃ (3.63 kWh/lb)*						
Power Supply	3x 400V + N + PE, AC 50 / 60 Hz						
Power Factor	0.95						
Control Range	20-100%						
Circuit Breaker Type - Power Supply	Use C-Characteristic Fuses on the Incoming Power Supply						
SCADA Communication	MODBUS TCP						

* At an ozone gas concentration of 140 g/Nm³ and cooling water temperature at 12°C (54°F).

FEED GAS SPECIFICATIONS							
Feed Gas Amount	31.2 m ³ /hr (1102 ft ³ /hr)	46.8 m ³ /hr (1653 ft ³ /hr)	62.4 m ³ /hr (2204 ft ³ /hr)	78.0 m ³ /hr (2755 ft ³ /hr)	93.6 m ³ /hr (3305 ft ³ /hr)	109.2 m ³ /hr (3856 ft ³ /hr)	124.8 m ³ /hr (4407 ft ³ /hr)
Max Gas Pressure at Inlet	3 bar(g) (43.5 psi(g))						
Oxygen Purity	>92%						
Oxygen Dew Point	<-40°C (<-40°F)						
Oxygen Connector	DN50						

COOLING SPECIFICATIONS							
Min. Cooling Water Flow	7.2 m ³ /hr (254 ft ³ /hr)	10.8 m ³ /hr (381 ft ³ /hr)	14.4 m ³ /hr (508 ft ³ /hr)	18.0 m ³ /hr (636 ft ³ /hr)	21.6 m ³ /hr (763 ft ³ /hr)	25.2 m ³ /hr (890 ft ³ /hr)	28.8 m ³ /hr (1017 ft ³ /hr)
Cooling Demand	37.5 kW	56.25 kW	75 kW	93.75 kW	112.5	131.25 kW	150 kW
Cooling Water Temp. Range	2 - 30°C (36 - 86°F)						
Max Cooling Water Pressure	4 bar(g) (58.0 psi(g))						
Cooling Water Connection	DN100						
Cooling Agent Composition	30% Ethylene Glycol and 70% Water						
Water Hardness	< 10° dH (< 10.4 gpg)						
Water Quality	Drinking Water (98/83/EC), Closed Loop System						
Target Temp. Ozone Generator	12°C (54°F)						



CUSTOMIZED SOLUTIONS

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

Multiple years of experience within relevant applications makes it possible to tailor the individual ozone system to accommodate specific requirements.

As ozone systems consist of several components which each contributes to the effectiveness and efficiency of the system, the needs for customization can vary from gas distribution management to cooling modules.

This makes the ULTRAAQUA design department function as a consulting agency, working towards an optimized customized solution.

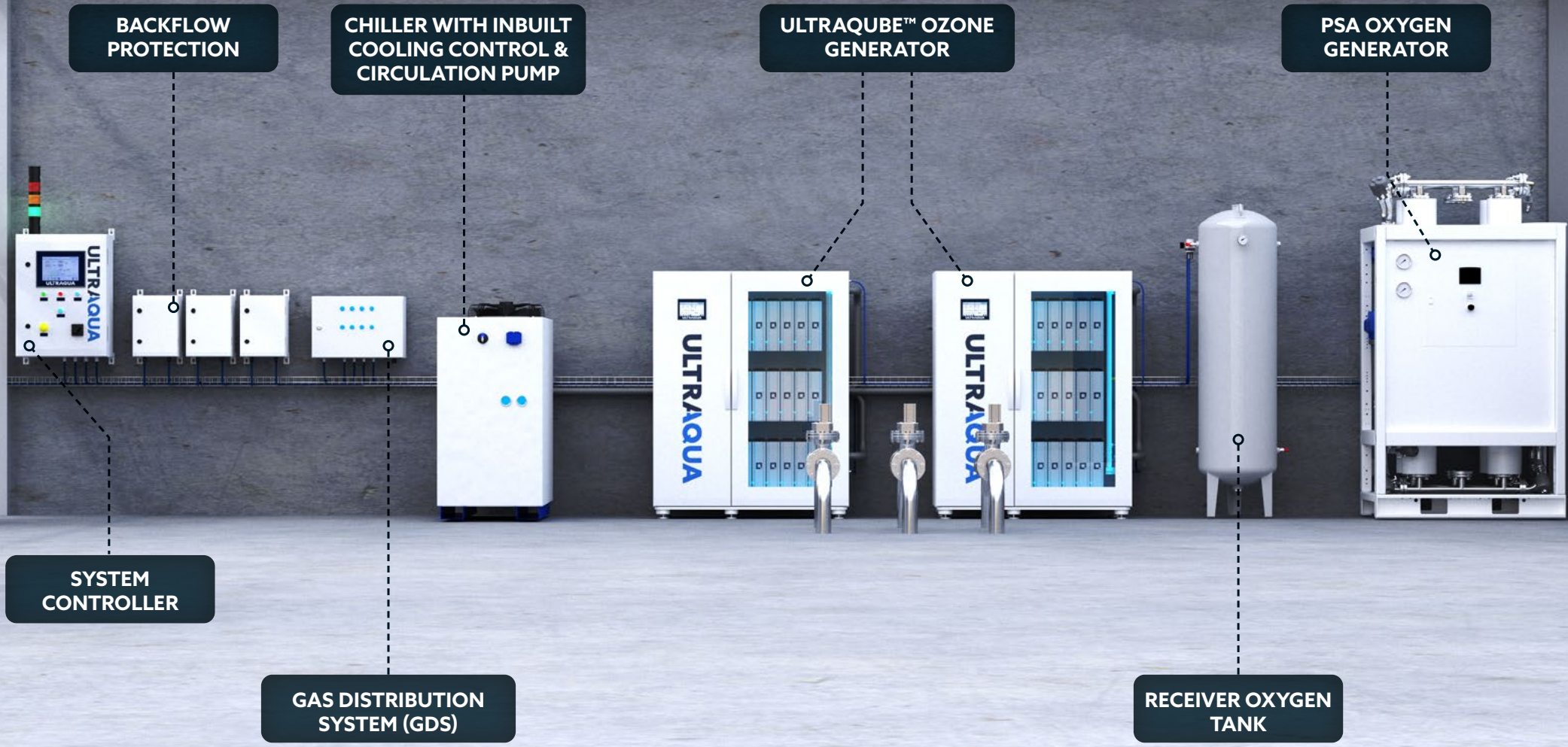
The possibilities below are available for all customized ozone systems.

CUSTOMIZED PRODUCTS & SERVICES:

- Custom ozone systems for advanced applications
- Physical testing
- Onsite validation testing
- Advanced ozone oxidation support



OZONE SYSTEM CONFIGURATION EXAMPLE





SERVICE & SUPPORT

ULTRAAQUA, headquartered in Denmark, provides global service and support with over 10,000 systems installed in 120+ countries.

We offer:

- General and 24/7 technical support (by agreement)
- Spare part supply and shipping
- Commissioning
- On-site training and support

Our engineers ensure smooth installation, optimal performance, and ongoing system reliability through close client collaboration.

R&D CAPABILITIES

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 success of the company.

The ULTRAAQUA R&D department conducts, supports, and pioneers some of the latest developments within 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.

The comprehensive in-house testing area provides optimal conditions for research, development, and innovation. This includes a 40-ft research container to support local testing, as well as the capability to conduct full-scale pilot trials. All of this, combined with cutting-edge engineering, makes us confident that ULTRAAQUA is the right partner for your organization.

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

ULTRAAQUA





OZONE PLUG & PLAY SKID SOLUTION

WITH A CUSTOM ULTRAQUBE™ SKID SOLUTION, YOU CAN REAP THE BENEFITS OF OZONE WATER TREATMENT IN JUST A FEW SIMPLE STEPS.

ULTRAQUBE™ Skid solutions are designed for easy straightforward installation. As the skid merely requires a water and power supply, the existing water treatment process can be improved significantly in a simple quick manner.

Choosing a skid solution can significantly reduce the general equipment costs dependent on the existing water treatment setup. Every skid solution comes as a customized solution that matches the exact customer requirements for ozone output capacity.

CUSTOM SKID SOLUTION EXAMPLE:

- ULTRAQUBE™ Ozone Generator
- PSA Oxygen Generator
- Chiller
- Injection pipe in various sizes
- Ambient ozone alarm
- Automatic ozone dosing due to redox, flow or other analog sensors

(The image displayed on this page represents this example)



COMPANY HISTORY

ULTRAAQUA IS AN INTERNATIONAL MANUFACTURER OF ADVANCED UV AND OZONE WATER DISINFECTION SYSTEMS SOLUTIONS 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 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 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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