



Ozonotech
RENA Water
Treatment

RENA Water Treatment Solutions

A complete range of turn-key systems
for any need

ozonotech.
a MELLIFIQ brand

Cutting-edge water treatment systems

Mellifiq offers a complete range of ozone based systems for wastewater treatment and disinfection needs. Growing environmental challenges require reliable solutions to mitigate energy demand, water use, chemical use and solve dire sanitation needs - locally, regionally and globally.

Our innovative water treatment RENA systems provide efficient operation with seamless integration in a multitude of industries and applications world-wide.

Ozonetech's high-performance RENA systems are implemented to help secure high quality process water, improve disinfection processes, treat complex industrial wastewater and improve product shelf-life in the food & hygiene sector, process manufacturing, commercial pools and many other enterprises.

Ozone water treatment brings advantages compared to chemicals and hot water. Ozone is produced on-site from air - a raw material free of cost. No purchases, no transports, no handling, no storage, no refills. Ozone decomposes to oxygen after use. No waste, no residues. In all, minimal operating cost and environmental impact.



The Ozonetech RENA range offers capacity to cover all treatment and disinfection needs. Every system is delivered to produce ozonated water in a turn-key design.

Industries & application areas

Industries:

- Food and hygiene
- Commercial swimming pools
- Pharmaceutical industry
- Process industry
- Breweries

Application areas:

- Clean in place (CIP)
- Bottled water
- Pharmaceutical residues treatment
- Cooling towers
- Drinking water disinfection

Sophisticated features intelligently integrated

Understanding ozone treatment is all about understanding processes - and making all components work as one. That's why we design, manufacture and test all RENA systems before delivery to ensure efficient, reliable and cost-effective operation. We wouldn't have it any other way.

State-of-the-art control system

Our advanced control system incorporates an intuitive human-machine-interface (HMI) with touch panel.

The control system features:

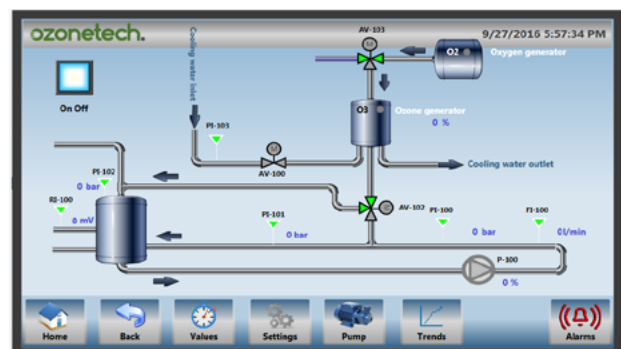
- Complete overview of operational parameters
- Programmable pressure and flow modes
- Historic trends
- Preparation for external control and SCADA

Integrated injection mechanism

RENA includes a built-in gas-liquid transfer mechanism. The systems are designed to deliver minimum 95% ozone transfer efficiency for highest possible performance. Through advanced active controls optimal flow, pressure and ozone-liquid mixing are ensured.

High-performance ozone generators

Our solutions always utilize oxygen fed and liquid cooled ozone generators in order to achieve high output concentrations. This optimizes life time, reduces maintenance, minimizes energy consumption and gives sustained performance over time. Our compact design enables a small overall system footprint down to one EUR-pallet.



HMI touch panel.



Integrated injection mechanism.

Unique electrode-free technology

Our ozone generators produce stable ozone output using HELS, our High Efficiency Lateral Structure technology. It gives several benefits.

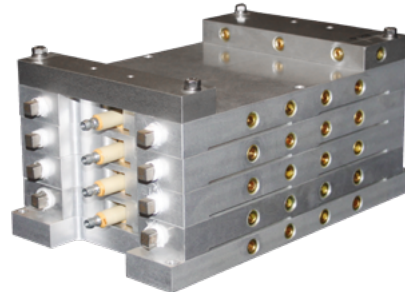
The ozone concentration is up to 30% higher compared to traditional Corona Discharge (CD) techniques. The heat dissipation from the ozone elements becomes very effective which increases cooling efficiency. The high ozone concentration of up to 20% enables superior gas-liquid transfer, compact design and simple system upgrade.



Ozone sensor

Safe use

During operation the system monitors ambient ozone levels to ensure safe use at all times. Any elevated levels of ambient ozone triggers system shut-down.



Our ozone generators produce a stable ozone output using HELS (High Efficiency Lateral Structure technology).



Stainless steel catalytic ozone destructors

Degassing & ozone destruction

The unique full system design incorporates a carefully controlled degassing mechanism to eliminate residual ozone gas. This feature is an integral part of our safe use principles. Any residual ozone is neutralized in a built-in, catalytic ozone destructor. Degassing and ozone destruction is connected to a contact tank.

RENA Vivo – Turn key series

RENA Vivo A-series – The RENA Vivo A-series is a highly efficient system, tailored for smaller food & beverage facilities, craft breweries and treatment of smaller waste streams in various industries for Clean-in-Place (CIP) and water treatment. It effectively produces ozonated water in a compact design, 120x80x180 cm. Power input is very low at maximum 900W during operation.

RENA Vivo B-series – The B-series is Ozonetech's wide range capacity system designed to cover most needs in disinfection and treatment in versatile environments and industries such as large breweries, pharmaceutical production and process manufacturing.

RENA Vivo C-series – The C-series is our highest capacity ozone system of the Vivo range, designed to solve complex treatment challenges such as break-down of pharmaceutical residues and complex substances. It is a perfect solution for ensuring large flows and volumes of high quality process water with an integrated oxygen generator or external oxygen supply.

Rena Vitro – AOP

RENA Vitro – AOP (Advanced Oxidation Process)

Using the RENA Vivo range as the strongest possible base, Ozonetech provides complete Advanced Oxidation Processes (AOP) for complex wastewater treatment. Our patented catalytic ozone-AOP systems, RENA Vitro, are a series



RENA Vivo A-series



RENA Vivo B-series



RENA Vivo C-series

of high capacity turn-key systems suitable for eliminating highly stable organic substances. RENA Vitro is delivered with a fully integrated AOP module which enhances the high level of radical formation our ozone solutions provide.

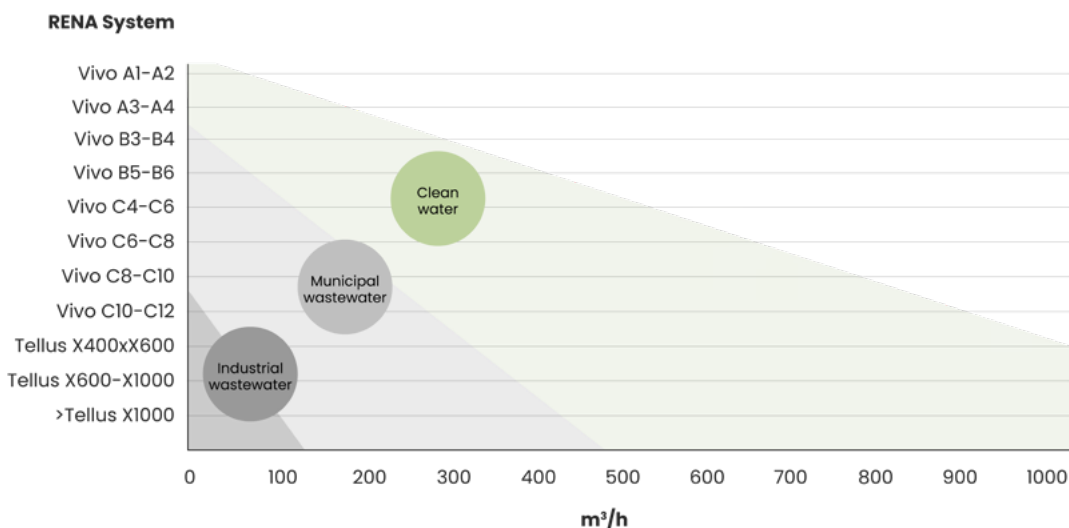


Technical specification RENA Vivo

Features	A-series	B-series	C-series
High-performance ozone generator with HELS™ technology	Yes	Yes	Yes
Integrated oxygen generator	Yes	Yes	Yes
Integrated ozone degassing	Yes	Yes	Yes
Ozone destructor	Typical	Typical	Typical
Ambient ozone detector	Optional	Optional	Optional
Integrated contact and/or reaction tank	50 L	150 L	300 or 500 L
Advanced control system with HMI	Yes, 7" touch panel	Yes, 9" touch panel	Yes, 9" touch panel
Automatic ORP control	Yes	Yes§	Yes
1 ppm at nominal conditions	4-35 m³/hr	18-110 m³/hr	35-210 m³/hr
Hydraulic connections	DN25	DN50	DN50/65
Dimensions (mm,HxLxW)	1800x1200x800	2128x1200x800	2092x1600x1200
Weight	285 kg (628 lbs)	309 kg (681 lbs)	322 kg (710 lbs)

System selection guide

Our system range covers all needs. The selection guide indicates the choice of RENA system for your application - based on your treated water volumes and water quality.

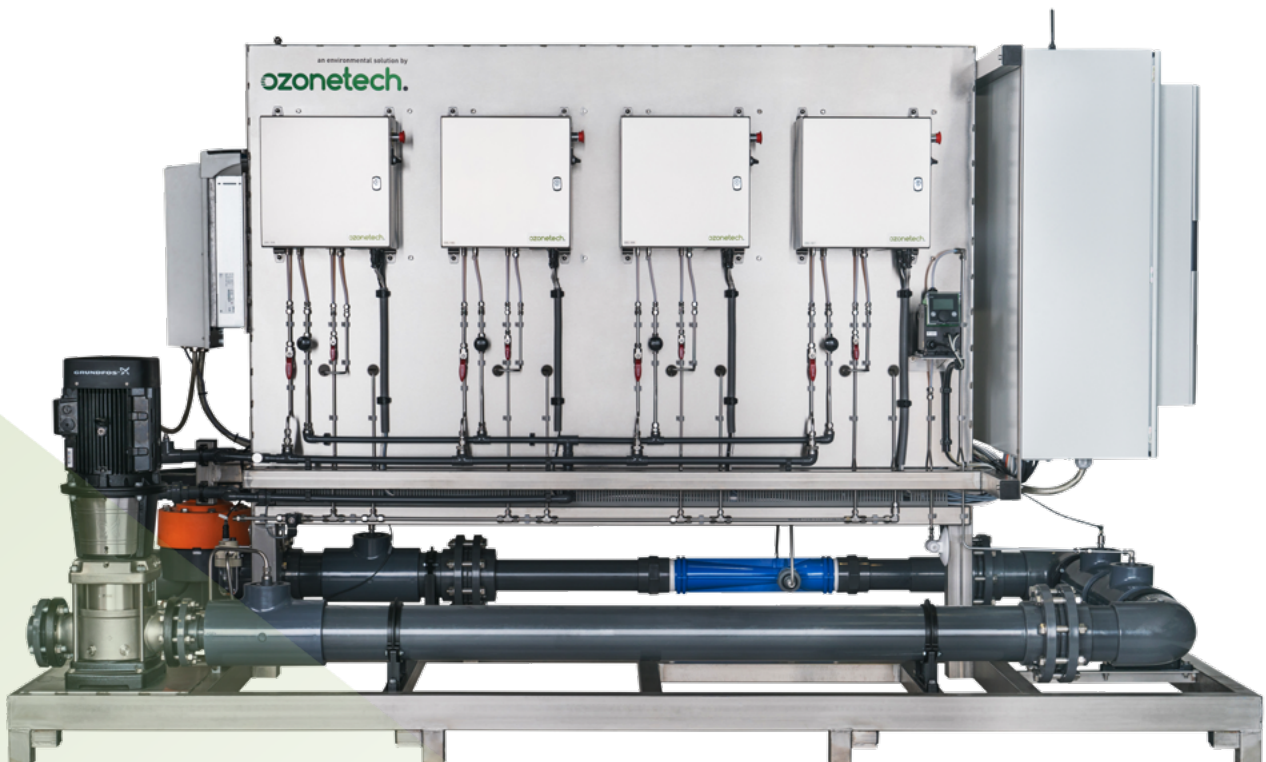


RENA Tellus

The RENA Tellus range is characterized by its highly customizable design for large scale treatment needs. It can treat anything from drinking water to waste-water containing high concentrations of COD and BOD. We also engineer our solutions to achieve complete removal or reduction of other critical parameters such as turbidity, TOC, specific substances and micro-pollutants. We also supply customized reaction and contact tanks for allowing proper reaction kinetics based on the characteristics of the wastewater streams.

RENA Tellus X series – Our tailored large scale high-capacity ozone system including advanced features for highest level of operating stability and efficiency.

RENA Tellus Y-series – The Y-series incorporates AOP for the most challenging wastewater treatment tasks, based on the X-series design and capacity.



About Mellifiq

Mellifiq is a multi-awarded environmental service company group, that has since the early nineties evolved into a world leading system and solution provider with multiple groundbreaking applications for industrial, municipal, and real estate clients. We supply cutting-edge technologies to manage the most sophisticated air, water, and energy challenges.

Mellifiq offers a complete range of air and water treatment technologies and solutions across multiple industries such as processing industry, energy sector, food and beverage, pharmaceutical, wastewater treatment and commercial real estate.

Mellifiq offers strong and renowned brands, such as Ozonotech, Nodora Water Maid, Saniray, Axolot and world-class engineering services combined an excellent track record of more than 40 years of innovation. We help our clients achieve the most efficient and sustainable solutions while creating the maximum value for their businesses.

With several business units across Europe, Mellifiq is headquartered in Stockholm where research and development, production, QA and certification all take place. Our unique technology and our extensive expertise have made us the Center of Excellence for the world's most complex projects, and a global player with installations on all six continents.

Everyday millions of people rely on our solutions for ventilation, disinfection, sanitation, and odor control. We are committed to raising the bar for the concept of clean and the industry standard for engineering, technical services and general contracting.

For additional information, visit our website at www.mellifiq.com

