

OXAQUA RW

Recirculation Water Disinfection

CHEMICAL FREE DRINKING WATER DISINFECTION on RECIRCULATION GENERATION of an OXIDIZER RESIDUAL WITHOUT PRECURSOR

BlueSense™ technology, part of LONZA Water Care, developed **OXAQUA RW**, a reliable and sustainable water disinfection technology.

Based on the water electrolysis principle, **OXAQUA RW** sanitizes water stored in tanks and water towers by recirculating continuously a flow rate up to 7 m³/h without any addition of chemicals nor precursors such as sodium chloride. In addition it creates a residual of oxidizer up to the end-user's point of use.

OXAQUA RW will be placed on a recirculation loop of the drinking water tanks using an integrated pump. Its electrode will activate only when the oxidizer residual is reaching a low level (Built-in chlorine analyser provided in option **OXAQUA RW CL**).

OXAQUA RW uses the chlorides naturally present in the water to be treated (concentration has to be above 20 ppm Cl⁻) to generate on site and on demand up to 2 ppm of free chlorine under the form of hypochlorous acid, a strong oxidizer known for the prevention of the proliferation of bacteria, viruses, algae and molds in drinking and hot water systems. It is also efficient against many pathogens, such as E. Coli or Legionella Pneumophila.

On site Water Disinfection

OXAQUA RW is a compact system, easy to install and to control, even on existing pipework for retrofitting or replacement of obsolete disinfection systems.

The core of **OXAQUA RW**, the electrolysis cell, has a lifetime of up to 8,000 hours of operation, and an overall electric consumption of less than 500W, including the recirculation allows its installation not only on small to mid-size water supplies but also on fountain systems, water towers and reservoirs, drinking water tanks aboard ships and factory cooling processes.

The residual additional free chlorine generated will protect the distribution network (pipes & tanks) against micro-organism growth and will limit the biofilm development.

It is easily operated through an intuitive control panel and monitoring of the performance can be done through the built-in data-logger (optional). Although it is generating a sanitizer, **OXAQUA RW** does not require any handling of chemicals, ensuring a minimum manpower and an extremely low carbon footprint.

Maintenance operations are also limited and do not necessitate specific skillset nor personal protection equipment.

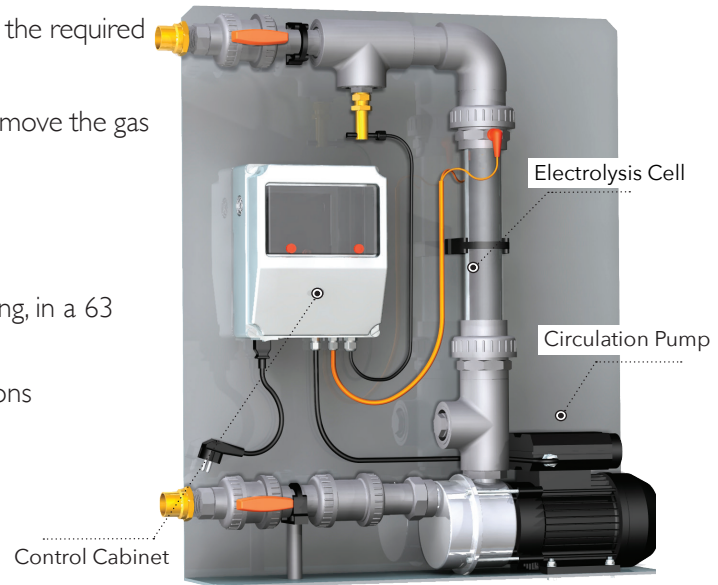


OXAQUA RW CL unit

OXAQUA RW TECHNICAL SPECIFICATIONS

BlueSense's supply scope:

- Control cabinet (220VAC with 3 metres wire), powering the electrolysis-cell at maximal 24VDC/6A
 - > Single system start button.
 - > A default alarm-LED will blink if the system cannot reach the required chlorine residual
- Air relief valve assembled on the highest point of the cell to remove the gas potentially produced during the electrolyse (H²).
- Flow switch output on/off signal
- Electrodes
 - > Assembly of plates with proprietary and exclusive coating, in a 63 mm transparent PVC-pipe
 - > Provided with standard 63 mm PVC coupling connections
- Circulation pump voltage 220 VAC, 50 Hz (Oxaqua RW)
- Box of test strips "free Chlorine" (Box with 50 units)



OXAQUA RW unit

Optional features:

- Automatic Free-chlorine-measurement-system (Oxaqua RW CL)
- PVC panel on which all the equipment is skidded to facilitate its implementation on a wall or on a frame.

Examples of application:

- Water Towers and Reservoirs
- Fountains
- Factory cooling processes (e.g.: Milk, ...)

KEY ADVANTAGES

Advantages	Benefits
On-site generation of disinfected water	No handling of hazardous chemicals
Consistent chlorine production	No loss of chlorine strength, less adjustments of the dosage compared with Sodium Hypochlorite
Integrated chlorine controller	Operation of the unit only when required (free chlorine level)
Production of a free chlorine residual	Treatment of the entire distribution network and security in case of contamination
Need of only 20 ppm of chlorides	Adaptive to most waters (surface and ground water)
Low footprint	Easily fitted in valve chamber, no civil work required
Efficient on Legionella spp.	Can be installed on recirculating process water, cooling towers or water towers
Low production of by-products	No discharge of bromates in the environment, less chlorates and THMs compared with Sodium Hypochlorite

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Lonza

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