OmniLyte™

Innovation for a safer tomorrow.

CIP OF THE PROCESSING EQUIPMENT

FASTER, CHEAPER, AND ECO-FRIENDLY

Water processing with anolyte and catholyte or, in other words, Electrolyzed Water (EW) is used in several hygiene applications to remove unwanted microorganisms from contact surfaces in the food and beverage industry.

The multiple applications imply the use of anolyte for disinfection and catholyte as washing fluid. Therefore, there is a distinct need in the food processing, beer, and beverage industries for generators capable of producing both an Anolyte and Catholyte.

OmniLyte CIP type of generators is ideally suited to these markets for CIP applications or hospitality markets (hotels, schools, government facilities, military bases, prisons, cruise ships, janitorial services, and others.). These generators are easy to install, operate and maintain and are the ideal solution when safety and cost are a concern.

Previously, beverage manufacturers would use traditional harmful chemicals to clean and sanitize to achieve similar results.

CIP is used during production when changing from one product to another or at specific times for hygiene reasons to eliminate the growth of harmful bacteria often present in water-rich environments.

Traditional non-ECA chemical CIP steps are performed at high temperatures. They involve a water rinse, followed by application of a detergent, followed by another water rinse, followed by application of a disinfectant, followed by a final water rinse, all of which require significantly more time, water, and energy than cleaning with OmniLyte ECA solutions.

Replacing traditional chemical CIP with OmniLyte green ECA detergent and disinfectant solutions eliminates the need for high temperatures and eliminate the rinse between the detergent and the disinfectant steps reducing cleaning to a 4-step process, which results in a considerable reduction in the loss of valuable production time. This time-saving cleaning process also saves energy and water for the bottler, resulting in greater profits and a greener CIP process.

The OmniLyte methodology helps beverage plants achieve sustainability goals, protect product & human life and improve profitability by providing, amongst others, the following benefits:

- Increased production time due to less time having to be spent on CIP;
- Total microbial decontamination;
- Reduction or complete elimination of costly and harmful chemicals;
- Savings on energy, with a reduction or elimination of the need to heat chemicals resulting in significant energy savings;
- Significant water savings;
- Flavor and residue elimination; and
- Improved safety for workers

In contrast to traditional chemicals, OmniLyte ECA Anolyte solution is produced and applied at a neutral pH, i.e., neither too acidic nor too alkaline, which makes it completely safe when in contact with humans and as effluent in the environment. The ECA solutions can be used without any requirement for safety or protective gear.

The OmniLyte CIP range of anolyte/catholyte generators was developed in cooperation with our partners for the food processing and beverage market and is available in a low salt configuration only.

The generators are a significant step forward in anolyte/catholyte production technology and are characterized by:

- Minimal Maintenance
- State-of-the-art reactor cell technology, with a prolonged operational life improving the generator performance dramatically.
- Reduced Total Cost of Ownership
- On-demand solutions
- Highly effective eco-friendly ECA solutions
- Anolyte 500ppm FAC @ pH 6,5
- Catholyte 1000ppm NaOH @ pH >12
- Separated Anolyte and Catholyte reactor cell technology
- Less complicated
- Extremely low waste generation, less than 0,5% of device capacity
- Easy anolyte production with a generator that is factory set to customer needs and specification
- Simplified installation and operation
- High-quality components, European standards
- Low Salt / Chloride technology that protects our customer’s corrosion concerns.
- Easy to use interface, ensuring that the solutions are always within their specified parameters and are producing consistent quality Anolyte and Catholyte.
- Equipped with remote monitoring for peace of mind. (GSM or Ethernet Modbus)

Although these anolyte/catholyte generators were designed with the beverage market in mind, they can also be used in any situation where both Anolyte and Catholyte solutions are required for effective cleaning and sanitizing operations.

SPECIFICATIONS OF OMNILYTE CIP ANOLYTE/CATHOLYTE GENERATORS

SPECIFICATIONS/ MODELS	OMNILYTE CIP-20/20	OMNILYTE CIP-40/40	OMNILYTE CIP-100/100	OMNILYTE CIP-200/200	OMNILYTE CIP-300/300
Output capacity	~ 20 LPH of ANW anolyte with pH ~ 6.0 – 7.0 (can be regulated) and ~ 500- 550 ppm of FAC; ~20 LPH of catholyte with pH ~ 12,2-12,5 and ~ 0,8-1,0 g/L of NaOH	~ 40 LPH of ANW anolyte with pH ~ 6.0 – 7.0 (can be regulated) and ~ 500- 550 ppm of FAC; ~40 LPH of catholyte with pH ~ 12,2-12,5 and ~ 0,8-1,0 g/L of NaOH	~ 100 LPH of ANW anolyte with pH ~ 6.0 – 7.0 (can be regulated) and ~ 500- 550 ppm of FAC; ~100 LPH of catholyte with pH ~ 12,2-12,5 and ~ 0,8-1,0 g/L of NaOH	~ 200 LPH of ANW anolyte with pH ~ 6.0 – 7.0 (can be regulated) and ~ 500- 550 ppm of FAC; ~200 LPH of catholyte with pH ~ 12,2-12,5 and ~ 0,8-1,0 g/L of NaOH	~ 300 LPH of ANW anolyte with pH ~ 6.0 – 7.0 (can be regulated) and ~ 500- 550 ppm of FAC; ~300 LPH of catholyte with pH ~ 12,2-12,5 and ~0,8-1,0 g/L of NaOH
Production mode	Either independent production of anolyte and catholyte or simultaneous production of both fluids. Operation is controlled by the level switches in anolyte and catholyte tanks	Either independent production of anolyte and catholyte or simultaneous production of both fluids. Operation is controlled by the level switches in anolyte and catholyte tanks	Either independent production of anolyte and catholyte or simultaneous production of both fluids. Operation is controlled by the level switches in anolyte and catholyte tanks	Either independent production of anolyte and catholyte or simultaneous production of both fluids. Operation is controlled by the level switches in anolyte and catholyte tanks	Either independent production of anolyte and catholyte or simultaneous production of both fluids. Operation is controlled by the level switches in anolyte and catholyte tanks

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SPECIFICATIONS/ MODELS	OMNILYTE CIP-20/20	OMNILYTE CIP-40/40	OMNILYTE CIP-100/100	OMNILYTE CIP-200/200	OMNILYTE CIP-300/300
Power supply	220VAC/One phase/ 50-60 Hz	220VAC/One phase/ 50-60 Hz	220VAC/One phase/ 50-60 Hz	220VAC/One phase/ 50-60 Hz	220VAC/One phase/ 50-60 Hz
Salt consumption to generate ~ 500 ppm of FAC and catholyte with ~1,0 g/L of NaOH	~1,5 g per 1 L of anolyte and ~-3,8 g per 1 L of catholyte	~1,5 g per 1 L of anolyte and ~-3,8 g per 1 L of catholyte	~1,5 g per 1 L of anolyte and ~-3,8 g per 1 L of catholyte	~1,5 g per 1 L of anolyte and ~-3,8 g per 1 L of catholyte	~1,5 g per 1 L of anolyte and ~-3,8 g per 1 L of catholyte
Semi-automated flushing	●	●	●	●	●
Acid pump to flush the cells	●	●	●	●	●
Brine pump	●	●	●	●	●
Peristaltic control pump for cathode chamber of anolyte generator	●	●	●	●	●
Peristaltic control pump for anode chamber of catholyte generator	●	●	●	●	●
Peristaltic control pump for Ph regulation of anolyte	●	●	●	●	●
Input valves	●	●	●	●	●
Flow and pressure switches/ controllers	+ separate for each platform	+ separate for each platform	+ separate for each platform	+ separate for each platform	+ separate for each platform
Conductivity sensor to control the brine saturation and consumption	●	●	●	●	●
Level switch	+ independent for anolyte and catholyte tanks	+ independent for anolyte and catholyte tanks	+ independent for anolyte and catholyte tanks	+ independent for anolyte and catholyte tanks	+ independent for anolyte and catholyte tanks
Overflow Level switch	Optional	Optional	Optional	Optional	Optional

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SPECIFICATIONS/ MODELS	OMNILYTE CIP-20/20	OMNILYTE CIP-40/40	OMNILYTE CIP-100/100	OMNILYTE CIP-200/200	OMNILYTE CIP-300/300
Overflow sound alarm	Optional	Optional	Optional	Optional	Optional
230 VAC Extra socket in the electrical cabinet	Optional	Optional	Optional	Optional	Optional
Durability	Able to stand up to adverse conditions such as dust and high humidity	Able to stand up to adverse conditions such as dust and high humidity	Able to stand up to adverse conditions such as dust and high humidity	Able to stand up to adverse conditions such as dust and high humidity	Able to stand up to adverse conditions such as dust and high humidity
Type of cells	1 x R-40ANW 1 x R-60C	1 x R-80ANW 1 x R-120C	1 x R-120ANW 1 x R-300C	1 x R-200ANW 1 x R-400C	1 x R-300ANW 1 x R-600C
Life expectancy of electrodes and membrane	~ 5 – 7 years	~ 5 – 7 years	~ 5 – 7 years	~ 5 – 7 years	~ 5 – 7 years
Fittings	LLDPE tubing + Kynar fittings	LLDPE tubing + Kynar fittings	LLDPE tubing + Kynar fittings	LLDPE tubing + Kynar fittings	LLDPE tubing + Kynar fittings
PLC control: Unitronics/Vision 130 or Vision 280	●	●	●	●	●
Remote control capabilities	Optional Ethernet or GSM or Modbus – needs to be specified when ordering	Optional Ethernet or GSM or Modbus – needs to be specified when ordering	Optional Ethernet or GSM or Modbus – needs to be specified when ordering	Optional Ethernet or GSM or Modbus – needs to be specified when ordering	Optional Ethernet or GSM or Modbus – needs to be specified when ordering

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