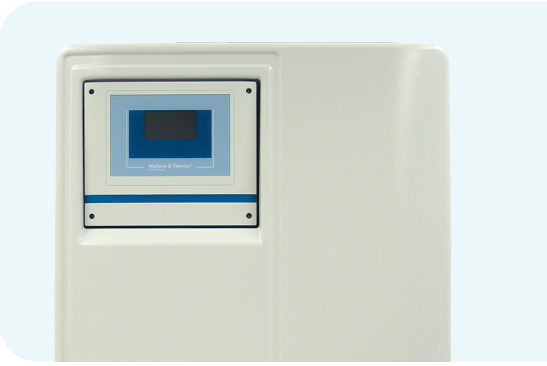
evoQUA
WATER TECHNOLOGIES

OSEC® L: Hypochlorite Generation System



WALLACE & TIERNAN® PROCESS SYSTEMS

The OSEC® L system generates < 1.0% sodium hypochlorite solution through the electrolysis of brine, consuming only water, salt and electricity. Producing hypochlorite on-site and on-demand eliminates concerns associated with transportation and storage of liquefied chlorine gas or commercial sodium hypochlorite solutions, making it ideal for any application requiring chlorination.

The system features up to four electrolyzer cartridges, each with a dedicated DC power supply for modular use giving unmatched operational flexibility.

Capacities up to 20 ppd (400 g/h) chlorine equivalent in the following configurations:

PRODUCTION CAPACITY, CHLORINE EQUIVALENT*

Configuration	ppd	g/h	kg/d
1	5	100	2.4
2	10	200	4.8
3	15	300	7.2
4	20	400	9.6

*Nominal production capacity according to operating temperature range, salt quality, and maintenance per manufacturer's instructions, etc.

The OSEC® L system is fully automated and pre-packaged for fast installation, safe operation, and easy maintenance. With an embedded process controller the system can work in batch operation mode.

FEATURES

- Packaged industrial design with robust engineered cell design
- Fully automated and integrated control panel with Touch-Screen Operator Interface
- Sleek innovative design provides minimal footprint
- No acid cleaning required, electrolyzer cell is easily replaced
- Minimal annual maintenance
- Certified to NSF®/ANSI 61 Drinking Water

BENEFITS

- Inherently safe system design, eliminates contact with chemicals
- Push-button operation with long service intervals reduces maintenance needs, reduces downtime and allows the system to run autonomously
- 50% smaller footprint than other on-site generators and wall mounting ability allows for unique space saving configurations
- "Plug and Play" design makes installation simple, even in remote locations replaced
- Real time monitoring allows for minimal maintenance and operating confidence

INNOVATIVE OPERATOR INTERFACE

The control panel includes a full color 4.3" capacitive touch screen with swipe technology for intuitive operation. A microprocessor based control system provides fully automatic operation of the entire process and monitors key variables to ensure reliable operation of the system. Safety features such as continuous flow monitoring, active hydrogen ventilation, and tank overfill protection are some of the many inherently safe interlocks built into the process controls.

ELECTROLYZER CARTRIDGE DESIGN

The unique OSEC® electrolyzer optimizes chlorine production over a wide temperature range eliminating the need for water heaters and/or chillers while maintaining high salt and power efficiency. The innovative cartridge design minimizes unplanned downtime by reducing the cost and labor of repairs traditionally associated with on-site generation equipment.

MODULAR POWER SUPPLY

Each electrolyzer cartridge is equipped with a dedicated 540 W DC power supply. The new design enables 92% efficiency over a wide ambient temperature range without forced air convection. The modular approach of the DC power supply allows for the system to run continuously with a faulty electrolyzer or power supply (for multiple cartridge configurations).

EASE OF INSTALLATION AND MAINTENANCE

The OSEC® L system is perfect for retrofit, existing, or new applications due to the compact footprint and ability to be wall mounted or installed as a free standing module.

Once the system is on site the electricity supply, brine solution and process water connections have to be connected to the skid. The common outlet pipe for hypochlorite and hydrogen solution is piped to the hypochlorite storage tank. All components are ergonomically situated on the frame so that it may be accessed by the operator while standing upright.

TECHNICAL DATA

Power consumption	Approx. 2.0 kWh per lb (4.4 kWh per kg) chlorine
Salt consumption	Approx. 3.1 lb per lb (3.1 kg salt per kg) chlorine
Sodium hypochlorite strength	0.7% ± 0.05 equivalent chlorine between 41–86°F (5–30°C)
Dimensions (W x H x D)	29" x 46" x 15" (720 x 1165 x 370 mm)
Weight	Max. 130 lb (60 kg)
Power supply	1/N/PE, AC, 115–240 V, 50/60 Hz
Certifications	CE, CSA
Optional equipment	Gas detector, brine saturator, hypochlorite storage, dosing, ORP/chlorine residual analyzer
Interfaces	- RS 485 to connect to Wallace & Tiernan® Process Monitoring System (option) - Ethernet interface with Modbus® TCP protocol and http protocol for web visualization

For more details, a separate data sheet is available.

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