

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:

Configuration	Production Capacity, Chlorine Equivalent*		
	g/h	kg/day	ppd
OSEC L 5	100	2,4	5
OSEC L 10	200	4,8	10
OSEC L 15	300	7,2	15
OSEC L 20	400	9,6	20

*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. As a result, several dosing points can be supplied with sodium hypochlorite solution.

KEY BENEFITS

- No hazardous chemicals required – safe alternative to chlorine, bleach, and chlorine tablets
- Up to 20 ppd chlorine equivalent – hypochlorite solution with minimized chlorate concentration – with interchangeable OSEC cartridges
- 50% smaller footprint than other on-site generators, plug-n-play installation
- User-friendly and intuitive operation with long service intervals
- Certified to NSF®/ANSI 61 Drinking Water

FEATURES

Innovative Operator Interface:

The control panel includes a full color 4.3" touchscreen for intuitive operation. The 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 overflow 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. 4.4 kWh per kg (2.0 kWh per lb) chlorine

Salt consumption:

Approx. 3.1 kg salt per kg (3.1 lb per lb) chlorine

Sodium hypochlorite strength:

0.7% ± 0.05 equivalent chlorine between 5 - 30°C

Dimensions (W x H x D):

720 x 1165 x 370 mm (29" x 46" x 15")

Weight: Max. 60 kg (130 lb)

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:

Ethernet interface with Modbus® TCP protocol and http protocol for web visualization

For more details a separate data sheet is available.

Auf der Weide 10, 89312 Günzburg, Germany

+49 (8221) 904-0 evoqua.com



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