



OSEC® B-PAK HYPOCHLORITE GENERATION SYSTEM

WALLACE & TIERNAN® PROCESS SYSTEMS

The OSEC® B-Pak system generates a 0.8 % sodium hypochlorite solution through the electrolysis of brine, consuming only water, salt and electricity. By producing hypochlorite on-site and on-demand, the system eliminates concerns associated with transportation and storage of liquefied chlorine gas or commercial sodium hypochlorite solutions, making it ideal for any application requiring chlorination.

Due to its low concentration, the hypochlorite solution generated by the OSEC B-Pak system minimizes corrosion and degradation (loss of available chlorine during storage) issues typical of high-strength (10 -15 %) sodium hypochlorite solutions. In addition, the system offers lower operating costs than commercial hypochlorite, typically resulting in attractive payback periods.

FULL FEATURE SKID-MOUNTED SYSTEM

Capacities to 5 kg/h (260 lb/day)

The OSEC B-Pak system is available at the following equivalent chlorine generation capacities:

Model	Capacity	
OSEC B-Pak 65	1.25 kg/h	65 lb/day
OSEC B-Pak 130	2.50 kg/h	130 lb/day
OSEC B-Pak 195	3.75 kg/h	195 lb/day
OSEC B-Pak 260	5.00 kg/h	260 lb/day

The OSEC B-Pak skid is a fully automated, pre-packaged on-site hypochlorite generation system designed for fast and economical installation, safe operation, and easy maintenance. Skids are shipped intact and completely piped, wired and tested.

Key Benefits

- Inherently safe system design and process controls
- Highest process efficiency achieved without sacrificing quality of hypochlorite solution produced
- Robust electrolyzer construction for reliable operation, ease of cleaning and access
- Small system footprint, ease of installation

Compact Skid Design:

The OSEC B-Pak skid is designed to minimize system footprint while maintaining accessibility to all components. The overall dimensions of the skid are the same for all capacities from 1.25 to 5.00 kg/h (65 to 260 lb/day). Skid-mounted components are standard and sized to meet the rated capacity of the skid. Standalone components, such as brine tanks and hypochlorite tanks, are sized and selected to meet application specific requirements.

FEATURES (CONT.)

Fully Automated Operation:

A PLC-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 run inhibit during a descaling process, and tank overflow protection are some of the many inherently safe interlocks built into the process controls. The control panel includes a touch-screen human-machine interface (HMI) to provide user-friendly access to operators.

Robust Single-Electrolyzer Design:

The OSEC® B-Pak unique electrolyzer design optimizes salt and power consumption while providing easy access to the cell components for maintenance. A clear cast acrylic casing allows for visual inspection, and the improved end-connection cap design minimizes the potential for leaks. The electrolyzer is arranged horizontally for flow optimization; increasing residence time and heat transfer in each cell pass and minimizing hydrogen bubble size. The result is maximum process efficiency while yielding the highest quality hypochlorite solution.

TECHNICAL DATA

Power consumption:

Approx 4.2 kWh per kg (1.9 kWh per lb) chlorine

Salt consumption:

Approx. 3.0 kg salt per kg (3.0 lb per lb) chlorine

Sodium hypochlorite strength:

0.8 % ± 0.05 equivalent chlorine

Dimensions (W x H x D):

1690 x 1820 x 750 mm (66" x 72" x 29.5")

Weight: Max. 520 kg (1150 lb)

Power supply:

3/N/PE AC 400/230 V, 50 Hz (3/PE AC 480 V, 60 Hz)

Optional equipment:

Gas detector, integral acid cleaning kit, integral heat exchanger

EASE OF INSTALLATION AND MAINTENANCE

Installation Flexibility:

The OSEC B-Pak skid is perfect for retrofit applications or installation in existing buildings since it can pass through a standard doorway. The floor-mounted transformer/rectifier cabinet on 3.75 kg/h and 5.00 kg/h (195 lb/day and 260 lb/day) is typically installed adjacent to the OSEC B-Pak skid to minimize the length of interconnecting power cables.

Plug-and-Play Convenience:

The electrolyzer system is shipped pre-assembled, pre-wired, and tested to verify hypochlorite production. 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. For these works, the correct installation and regular maintenance, we recommend our specially trained technicians.

Less Maintenance, Reduced Downtime:

All serviceable components are strategically arranged on the skid as to facilitate quick access by maintenance personnel. The process water and brine management subassembly is panel mounted on the skid. The electrolyzer is situated on the frame so that it may be accessed by the operator while standing upright. Flexible hydraulic hose and electrical cables to the electrolyzer make for easy connections and adjustment if needed. Piping and electrical connections are provided for the acid-cleaning system (sold separately).



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