

# WATER PROCESS SOLUTIONS



**Effective Electrochlorination  
Solutions**

# Safe Disinfection Technology working for you

## Electrochlorination

Electrochlorination is the process of generating a solution of Sodium Hypochlorite from three common place and readily available materials - salt, water and electricity. This process is economically proven to provide a low cost of ownership over the life of the systems.

The simple process occurs when a DC voltage is applied to a salt solution flowing between a series of electrodes. An electrical current results in a chemical reaction which produces a low strength Sodium Hypochlorite solution. The solution can be safely stored in a product tank and used to disinfect water.

## Description of the process

Throughout the electrolytic process softened water is used to ensure the longevity of the system and prevent scale depositing on the surface of the electrodes. The softened water is used to dissolve salt in a brine tank and to dilute the brine solution to a concentration which is suitable for the electrolytic process.

The diluted brine flows through a series of electrodes within an electrolytic cell. The chemical reaction to generate the Sodium Hypochlorite is then initiated as a DC voltage, is applied across the electrodes causing the conversion of the brine into Sodium Hypochlorite.

The Sodium Hypochlorite flows into a second chamber, where the by-product - hydrogen gas, is separated from the solution. All WPS-P series include a hydrogen dilution and ventilation systems to ensure Hydrogen is safely vented to atmosphere.

The sodium hypochlorite flows out of the system in to a product tank for metered injection to the process water.

As electrochlorination is an on-demand process it reduces the need to store large volumes of hazardous chemicals on site and eliminates the need for hazardous transportation.

The low strength sodium hypochlorite solution (typically 7g/l) has the added benefit of a moderate pH compared to alternate forms of disinfection chemicals.

This can be advantageous in maintaining an appropriate and effective pH of the water to ensure its maximum disinfection capability.



## Integrator advantages

The WPS-P range of electrochlorinators is ideal for system integrators. By supplying only the core system, you can source your own tanks and softeners to help keep the installation cost down. Alternatively, we can source and supply everything for you.

With two different systems configurations (WPS-P:S / WPS-P:X) within the WPS-P range of electrochlorinators the majority of disinfection applications can be treated using a single electrochlorinator. Capacities range from 25 g/h up to 400 g/h



# Selection criteria

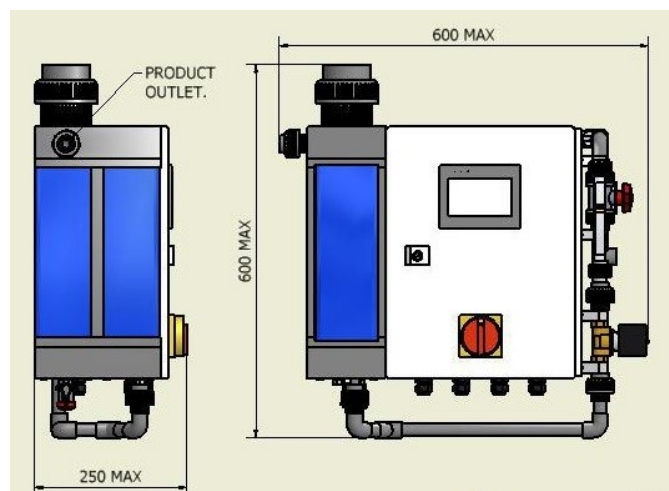
	Capacity equivalent Cl2 g/h	Power consumption kW/hr	Salt consumption kg/h	Output l/hr
WPS-P:X50	50	0.28	0.2	8.2
WPS-P:X100	100	0.55	0.4	16.5
WPS-P:X200	200	1.1	0.8	33
WPS-P:X400	400	2.2	1.6	66

## WPS-P:X series Electrochlorinators

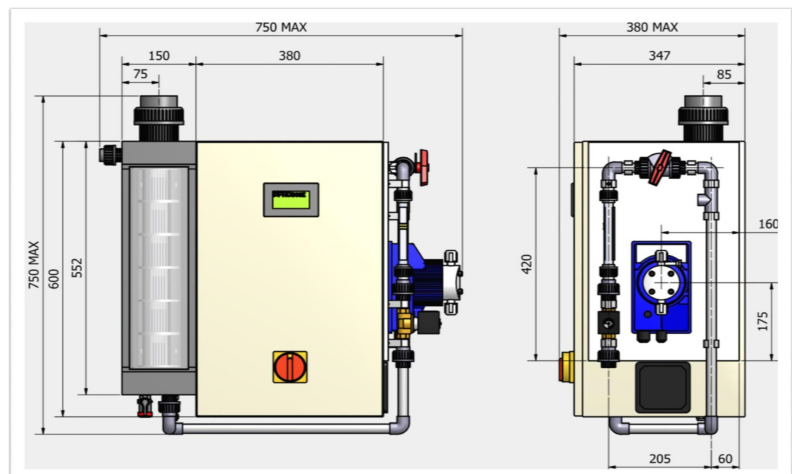
Standard features include;

Dual containment of cell with internal force air ventilation / Interlocked airflow sensor monitoring hydrogen dilution rate / Hydrogen degassing system / Automatic brine dilution system / 230V power requirement / DWI approved.

WPS-P:X50-100



WPS-P:X200-400



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# WATER PROCESS SOLUTIONS

Water Process Solutions comprises a group of highly experienced water treatment professionals. Our personnel have backgrounds with brands and companies such as Wallace & Tiernan, Stranco and Chemfeed, all well known and trusted within the water industry.

Based in Kent, our aim is to provide customers with the equipment and support they need for effective and reliable water treatment.



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