

gaffey
WATER TREATMENT FOR LIFE

+ **Hyprolyser**[®]
ART ADAPTIVE
RESPONSE
TECHNOLOGY

+ **Hyprolyser**[®]
iSEC[®] -2
30-90 Modular



Safe, reliable & efficient on-site generation of sodium hypochlorite

State-of-the-ART disinfection systems

Hyprolyser[®] iSEC[®] electrochlorination systems provide an on-demand supply of **0.6% sodium hypochlorite solution**. Using **harmless salt, water and electricity**, the sodium hypochlorite is generated through the electrolysis of the diluted brine solution.

Hyprolyser[®] iSEC[®] is flexible and versatile, adapting to the unique needs of various sectors and applications, including private and public drinking water supplies, food & beverage, secondary disinfection, commercial pools and wellness facilities.

The ART of iSEC[®]

Our latest generation of Hyprolyser[®] iSEC[®] systems give you even more. Our unique, state-of-the-art Adaptive Response Technology allows the system to adjust to changing environmental and site conditions, ensuring continued efficient and effective chemical generation.

Using the Adaptive Response Technology, the Hyprolyser[®] unit can detect the smallest irregularity within its process. Rather than immediately stopping chemical generation, it will automatically maintain production whilst displaying the relevant warning annotation.



This enables the operator to easily identify and resolve any issues without interrupting operation, avoiding nuisance and costly shutdowns.

However, if the parameters exceed alarm limits and the capacity cannot be reduced further, the Hyprolyser[®] enters an alarm state and safely stops generation – ensuring operator peace of mind and additional safety.

State-of-the-ART chlorination.

Delivering maximum efficiency for municipal, industrial and commercial applications.



Key Benefits



Hydrogen safety

- Systems are DSEAR compliant (installation guidance must be followed as detailed in product manual).
- Optional volumetric air dilution flow monitoring for additional ventilation safety.
- External area hydrogen detection provided with safety shutdown 40x less than LEL.



Environmental Protection

- IP54 sealed Power Supply Unit (PSU) with integrated water-cooling system.
- Warm water feed detection and automatic output regulation from 23°C up to 28°C.
- High ambient detection up to 45°C with automatic output regulation.
- Dust and corrosion protection for difficult industrial conditions.



Convenience

Installation:

- Single compact modular unit incorporates: controller, PSU and electrolyser.
- Integrated brine feed vacuum system eliminates the use of conventional brine dosing pump set, with a factory calibrated and preset brine dilution feed.
- Systems come supplied with product tank switch assembly and PTFE tubing connection kit for chlorine delivery to tank/process.
- A batch signal operation mode can be utilised to enable direct solution feed to process/treatment tank, eliminating need for dosing/transfer pump sets.

Operation:

- HMI Touchscreen control interface with process mimic screen.
- On-screen graphical displays for live/historic data visualisation.
- System warnings with simple to follow on-screen annotations.
- System parameters, operation history and alarm conditions recorded and accessed via SD card.
- Service interval calendar reminders.
- Secure access to operation and adjustments with user level code protection.
- Remote access via Modbus TCP/RTU and other options.

Maintenance:

- Easy access to all equipment hardware using basic tool sets for simple and quick parts inspection/replacement.
- Low frequency PPM requirements, 2-year service cycle.

Delivery:

- All systems complete in-house Factory Acceptance Testing (FAT) and pre-commissioned ready for plug-and-play commissioning.
- Shipping is possible via air freight and sea due to compact unit size.



Automation

- Soft-start operation to optimise system efficiency.
- Volumetric dilution feed water measurement for consistent chlorine generation.
- PSU automatic output regulation in response to warm water feed, high ambient temperature and electrolyser temperature.
- Auto correction of system output in response to changes in water feed pressure, brine feed and dilution salinity.
- Early detection of electrolyser scaling and output compensation.



Sustainability

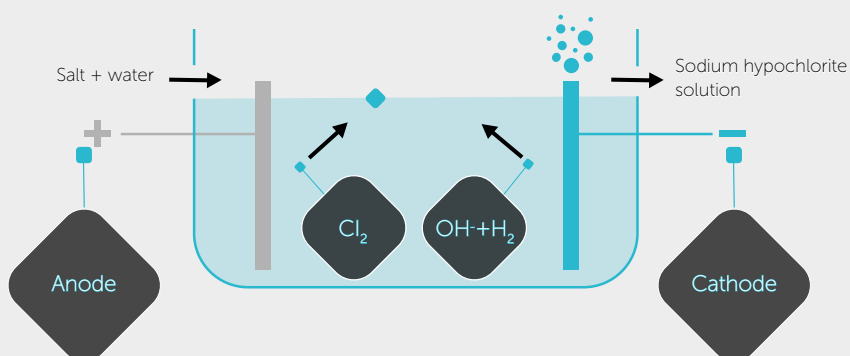
- Low salt consumption with high efficiency electrolyser technology.
- Adaptive Response control software extends PSU and electrolyser operational life.
- 5-year limited electrolyser warranty with system life expectancy of 15+ years.



At a glance

Hyprolyser® electrochlorination technology

Electrolytic chlorine chemistry produces a non-hazardous solution of sodium hypochlorite range (0.6% ± 0.1% Cl₂).



Wall-mounted system design

Hyprolyser® iSEC® Modular systems are wall mounted, easy to install and simple to operate. This plug-and-play technology is designed to integrate seamlessly into any existing water disinfection system.

Model	Chlorine Capacity	
iSEC®-2 30	30 g/h	1.60 lb/day
iSEC®-2 60	60 g/h	3.17 lb/day
iSEC® 90-2 90	90 g/h	4.76 lb/day





Technical Data

	iSEC®
Power consumption	4.0 – 5.0 kWh/kg Cl ₂
Salt consumption	3.0 – 3.5 kg/kg Cl ₂
Sodium hypochlorite strength	6 ±0.5 g/l Cl ₂
Weight	Max. 20kg
Supply voltage	Model dependent 110VAC to 240VAC

Quick Sizing Guide

Approx. Capacity	Drinking water MLD @ 1ppm Cl ₂	Total of Pool Volume(s) m ³		
	2.16	300	iSEC®-2 60	
1.44	180	iSEC®-2 30		
0.72	500	iSEC®-2 30		
	Chlorine gas (Kg/day)	0.72	1.44	2.16
	Sodium hypochlorite 14%, (L/day)	4.36	8.72	13.00
	Calcium hypochlorite 70%, (Kg/day)	1.03	2.06	3.10

Current daily chemical usage

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