gaffey

WATER TREATMENT FOR LIFE





Hyprolyser®

# Standard models: 280, 560, 1100, 2200, 4250, 8500

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

### Safe Preparation of Sodium Hypochlorite

Using harmless salt, water and electricity, Hyprolyser® iSEC® electrochlorination systems provide an on-demand supply of <1.0% sodium hypochlorite solution. Generated through the electrolysis of diluted brine solution.

Due to the low caustic and mineral content of the generated solution, injection point cleaning and descaling tasks are completely eliminated.

Commercial strength sodium hypochlorite can degrade quickly in storage, often losing up to 20% of its chlorine content. The <1.0% sodium hypochlorite solution produced by the Hyprolyser® system does not require caustic buffer chemicals or additives to retain its chlorine content. It can retain its original chlorine concentration for months.

The combination of storing low strength solution, the avoidance of chemical deliveries, handling and operator involvement significantly reduce the likelihood of any accidental spillage.

MADE IN BRITAIN®

Hyprolyser®

## Easy to operate

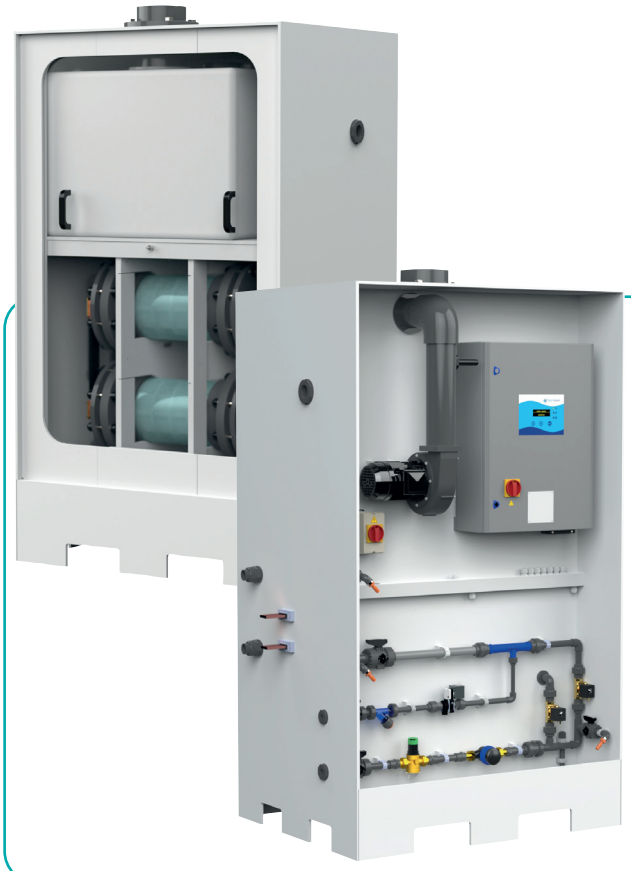
The operator is required to fill the salt saturator tank with salt. From this, the Hyprolyser® system produces a concentrated brine solution which is then diluted to the correct strength for efficient electrolysis.
The diluted brine is then delivered to the electrolytic cell where electric current is passed through the solution, producing sodium hypochlorite. The process is continued automatically until the product storage tank is filled. A range of metering and transfer pump options are available to convey the hypochlorite safely to the disinfection/treatment process.

## Benefits

- Eliminate delivery and handling of hazardous chemicals
- Handle only salt
- Generate on site for on-demand or residual storage
- Eliminate dosing pump air-locking associated with commercial hypochlorites
- Eliminate injection point scaling associated with commercial sodium and calcium hypochlorites
- Considerable Health & Safety benefit to operators

## Areas of Application

- Swimming & Spa Pool disinfection
- Chlorination of potable water supplies
- Food washing / processing treatment
- Dairies / Breweries cleaning in place (CIP)
- Cooling tower biocide treatment
- Secondary disinfection
- Industrial chlorination treatments



**Electrolytic Chlorination Systems**

# FEATURES

- On site electrolysis of brine for safe generation and preparation of <1% sodium hypochlorite solution
- Safe and fully sealed electrolytic process
- Easy to operate
- Integrated control panel & OLED screen
- Manual and automatic operation
- Multilingual operating display option
- Telemetry alarm event & data logging option
- Chlorine production from 0.28 – 8.5kg/h

# SPECIFICATIONS

| Description | Unit | Hyprolyser® Standard Models | | | | | |
|---|---|---|---|---|---|---|---|
| | | 280 | 560 | 1100 | 2200 | 4250 | 8500 |
| Chlorine capacity | g/h | 280 | 560 | 1100 | 2200 | 4250 | 8500 |
| Chlorine concentration | g/h | 5 - 7 | | | | | |
| Power consumption | kWh | 1.4 | 2.8 | 5.6 | 12 | 24 | 47 |
| Power supply | V | 120/230V~ | | 230V~<br>400V 3N~ | 400V 3N~ | | |
| Operating pressure | Bar | 2 - 8 | | | | | |
| Nominal water consumption | l/h | 49 | 98 | 196 | 392 | 650 | 1300 |
| Nominal salt consumption | kg/h | 0.93 | 1.80 | 3.60 | 7.30 | 14.02 | 28.04 |
| Protection class | IP | 5X | | | | 54 | |
| Permissible ambient temperature | °C | 5 to 40 | | | | | |
| Max. altitude | m | 2000 (ambient temperature derating of 5°C/1000m for operating altitude higher than 2000m/6500ft) | | | | | |
| Pollution degree | | 2 | | | | | |
| Permissible feed water temperature | °C | 8 to 20* | | | | | |

** chiller recommended above 20°C.
Other specifications available upon request.

## Quick Sizing Guide

| Approx. Capacity | Drinking water m³/day | Total Pool Volume (m³) | | | |
|---|---|---|---|---|---|
| | 37,000 | 4000 | | | 2200 |
| | 18,400 | 2000 | | 1100 | |
| | 9,400 | 1000 | 560 | | |
| | Chlorine gas (kg/day) | | 9.4 | 18.5 | 37 |
| | Sodium hypochlorite 12% (L/day) | | 60 | 110 | 220 |
| | Calcium hypo 70% (kg/day) | | 13.5 | 26.5 | 53 |

Current daily chemical usage

# SPECIFICATIONS

## Supply Water Quality (softened water only)

| | |
|---|---|
| Temperature (°C) | 8-20* |
| Max inlet pressure (MPa) | 0.4 |
| Turbidity (NTU) | <5 |
| pH | 6.5-10 |
| Particle size (µm) | <100 |
| Iron (µg/l) | <200 |
| Manganese (µg/l) | <10 |
| Fluoride (mg/l) | <2 |
| Hardness (mg/l of CaCO3) | <20 |
| Hardness (°dH) | <1 |
| Free chlorine (mg/l) | <1 |

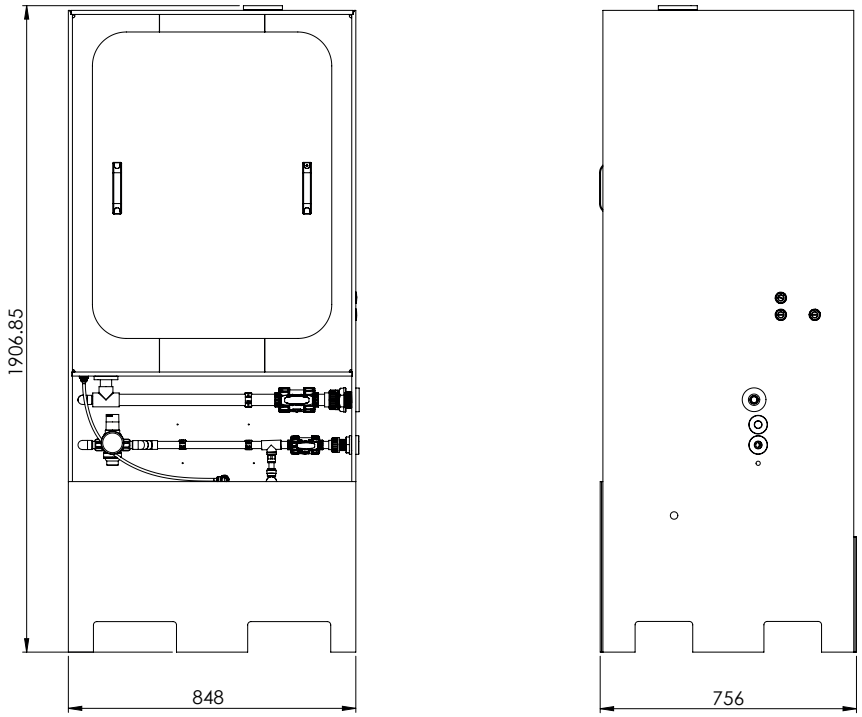
*A water heater or chiller is required if the water supply temperature is outside recommended parameters.

## Salt Quality

| Element/Compound | Upper Limit (mg/kg) |
|---|---|
| Arsenic (As) | 13 |
| Cadmium (Cd) | 1.3 |
| Chromium (Cr) | 13 |
| Iron (Fe) | 10 |
| Mercury (Hg) | 0.26 |
| Nickel (Ni) | 13 |
| Manganese (Mn) | 0.5 |
| Lead (Pb) | 13 |
| Antimony (Sb) | 2.6 |
| Selenium (Se) | 2.6 |
| Calcium (Ca) | 100 |
| Magnesium (Mg) | 100 |
| Bromide (Br-) | 100 |

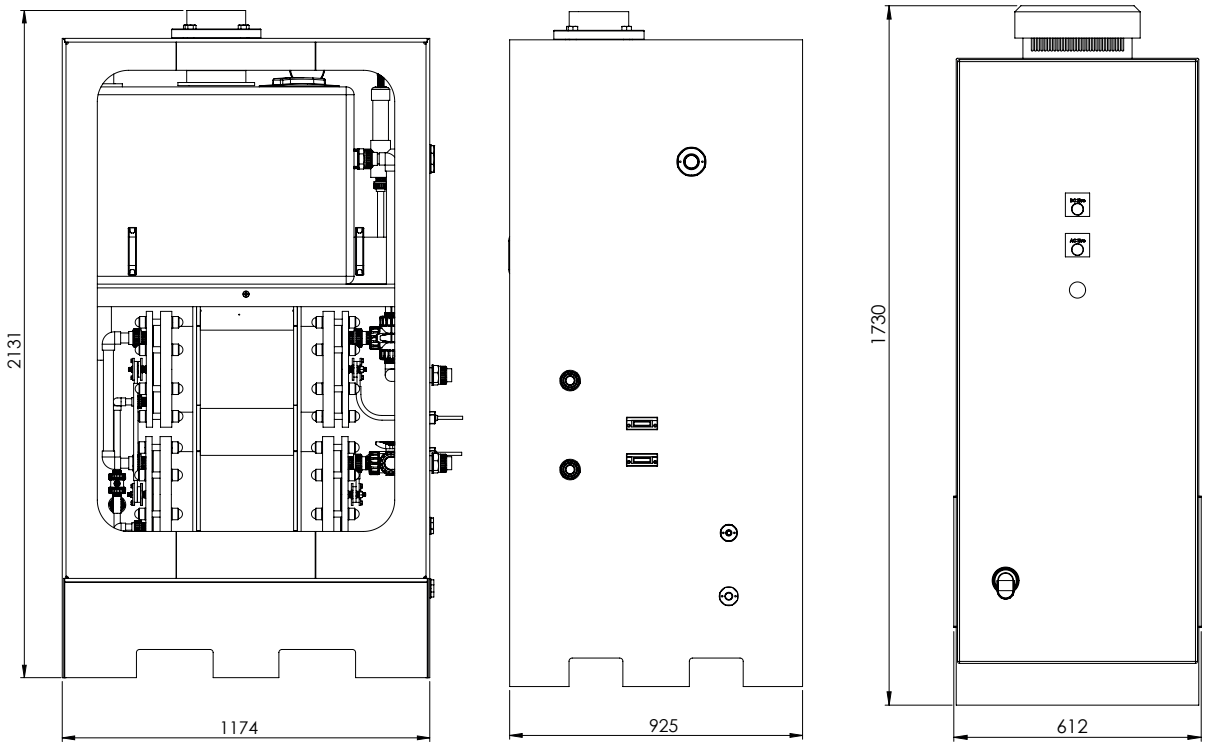
# DIMENSIONS

## Standard




All dimensions in mm

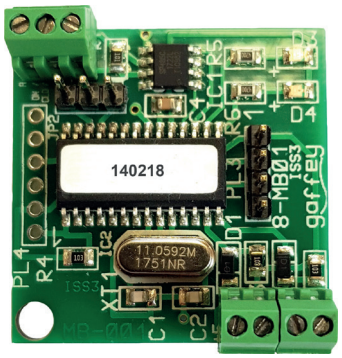
## High Capacity




All dimensions in mm

DC Power Supply

# SYSTEM COMPONENTS & ACCESSORIES




Modbus RTU module option available.
Not included in standard scope of supply.

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Hyprolyser® Test Kit contains all instruments, glassware and reagents to carry out all necessary routine and service tests to confirm and monitor the efficient operation of the system.

# SUMMARY

## Low environmental impact

Minimal recyclable packaging, reduced transportation, no hazardous waste disposal.

## Economical

Low cost of salt, reduced pH correction chemical costs, reduced operator labour, low service costs.

## Simple to use

Fill saturator with salt, no remedial maintenance of chlorine injector, no technical intervention required by the operator, low hazard system.

## Low maintenance

Smart design and robust engineering requires simple, minimal periodic maintenance.

## Reliable

Annual test & inspection, 2 year service interval, 2-5 year warranty, 6-8 year typical electrolyser life.

## Low hazard system

Delivery and storage of salt, no toxic dangers to staff or neighbours, no hazardous waste disposal and no chemical handling.

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WATER TREATMENT FOR LIFE

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