UNCOMPROMISING WATER DISINFECTION SYSTEMS

Electrolytic chlorination

Hyprolyser

WATER TREATMENT FOR LIFE
At Gaffey, we pride ourselves on producing products that challenge convention and defy expectation. Our story is one of change, innovation and development.

We know the importance of creating safe environments and use our 30+ years industry experience to focus on solving the problems of waterborne bacteria.

Through innovative design and smarter engineering, we manufacture unique, functional and future-proof technologies with the safety of the end user in mind.
Introducing the Hyprolyser® family

Hyprolyser electrochlorination systems offer a safer, cleaner and more environmentally friendly way to provide chlorine for a wide range of disinfection uses.

Using only salt, water and electricity to produce hypochlorite, each Hyprolyser model offers exactly the same quality of performance and benefits. Whether you are looking to disinfect a spa pool or provide enough chlorine to treat millions of litres of drinking water per day, there's a Hyprolyser system available to perfectly fit your needs.
Why use electrochlorination?

Using salt as the raw material to generate your own supply of hypochlorite offers several advantages. Salt is a widely available commodity used in many commercial and industrial settings and is competitively priced for both small and large users. Compared to commercial chemicals salt is very safe and easy to store, has an infinite shelf life and requires minimal packaging which can be easily recycled.

Using only salt, water and electricity, Hyprolyser systems efficiently generate a supply of dilute sodium hypochlorite <1%, below the threshold for classification as a hazardous substance.
The benefits of using this method of chlorination are many; the avoidance of risks which occur through frequent chemical deliveries and handling, reduced health & safety management, a low-hazard workplace and reduced disinfection costs are just some of the benefits Hyprolyser can bring to your operation.

Commercially produced hypochlorite products can quickly begin to degrade during storage. Using food grade salt and potable quality supply water, Hyprolyser generates a fresh, high quality hypochlorite solution everyday, on-demand.

**Low hazard, easy management**

**SUSTAINABILITY**
- Minimal recyclable packaging
- Reduced transportation
- Low environmental impact

**ECONOMIC**
- Low cost of salt
- Reduced pH correction chemical costs
- Reduced operator labour
- Low service costs

**RELIABLE**
- Annual Test & Inspection
- 2 Year Service Interval
- 2 - 5 Year Warranty
- 6 - 8 year typical electrolyser life

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Hyprolyser® iSEC

The Hyprolyser iSEC range is ideal for smaller scale chlorine demands. Available in modular or fully pre-assembled & tested skid format for quick and easy installation.

### Quick sizing guide

<table>
<thead>
<tr>
<th>Approx. Capacity</th>
<th>Drinking Water MI/day</th>
<th>Max. Total Pool Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.5</td>
<td>300</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>180</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>90</td>
</tr>
<tr>
<td>Chlorine gas kg/day</td>
<td>0.5 1.0 1.5</td>
<td></td>
</tr>
<tr>
<td>Sodium hypo 14% l/day</td>
<td>3.0 6.0 9.0</td>
<td></td>
</tr>
<tr>
<td>Calcium hypo 70% kg/day</td>
<td>0.7 1.4 2.1</td>
<td></td>
</tr>
</tbody>
</table>

THREE CORE UNIT SIZES
30, 60 & 90 g/h of chlorine
Applications

Where an efficient and cost effective supply of chlorine is required in smaller scale applications: Building services & legionella control, private water supplies, hotel and school pools.

Overview

Highly compact space saving design in modular or skid format, ideal for locations where space is restricted.

Features & Benefits

• Easy operation with unique visual colour change indication of operating status
• Quick and easy servicing
• Sleek, easy to clean design - ideal for food processing areas

COMMERCIAL SWIMMING POOL

Consistent product strength and a sediment and scale-free dosing solution ensures reliability in delivering the highest standards of water hygiene

DRINKING WATER

iSEC’s smaller capacity is ideal for bore-hole and private water supplies to ensure chlorine solution is always freshly supplied and low in chlorate content
Hyprolyser® Compact

The combination of powerful generating capability and convenient salt storage capacity make the Hyprolyser Compact range an ideal solution for chlorine demands of up to 480g/h Cl2.

Quick sizing guide

<table>
<thead>
<tr>
<th>Drinking Water MI/day</th>
<th>Max. Total Pool Volumes m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>900</td>
</tr>
<tr>
<td>4</td>
<td>450</td>
</tr>
</tbody>
</table>

Approx. Capacity

| Chlorine gas kg/day | 4 | 8 |
| Sodium hypo 14% l/day | 24 | 48 |
| Calcium hypo 70% kg/day | 5.8 | 11.6 |

Current Daily Chemical Usage
Applications

Hyprolyser Compact 240 & 480 systems are ideal for supplying chlorine in industrial processes, and midsized commercial pool facilities; typically 25m lap pool + learner pool, leisure pools and private leisure clubs.

Overview

- 100kg salt capacity (32kg Cl2)
- Supplied with integrated 200L product tank
- Ventilation - integrated
- Water softener included

Features & Benefits

- Unique, patent pending volumetric brine & water measurement
- 110/230v “plug & play” installation
- Fits through a standard doorway
- 2 year maintenance interval
- Flexibility to supply several applications from a single unit

TEDDINGTON POOLS & FITNESS CENTRE, LONDON

Hyprolyser 480 system specified to avoid the unloading of hazardous chemicals near a public parking area

25M + LEARNER POOL + HYDROTHERAPY
Hyprolyser® Standard

Offering a high level of installation flexibility in a wide variety of applications, the Hyprolyser Standard range offers additional safety features and functionality. 4250 & 8500 models are available for high capacity requirements such as large drinking water treatment plants and multi-pool waterparks.

Overview
- Models: 280, 560, 1100, 2200, 4250, 8500 g/h
- High Level of Safety
- Integrated De-gassing Tank
- Integrated Duplex Softener®
- Integrated Saturator®
- 5 Year limit warranty

Quick sizing guide

<table>
<thead>
<tr>
<th>Drinking Water Ml/day</th>
<th>Max. Total Pool Volumes m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>143</td>
<td>16000</td>
</tr>
<tr>
<td>71.4</td>
<td>8000</td>
</tr>
<tr>
<td>37</td>
<td>4000</td>
</tr>
<tr>
<td>18.4</td>
<td>2000</td>
</tr>
<tr>
<td>13.4</td>
<td>1000</td>
</tr>
<tr>
<td>6.7</td>
<td>500</td>
</tr>
</tbody>
</table>

| Chlorine gas kg/day | 5 | 9.4 | 18.5 | 37 | 71.4 | 153 |
| Sodium hypo 14% l/day | 30 | 60 | 110 | 220 | 425 | 910 |
| Calcium hypo 70% kg/day | 7 | 13.5 | 26.5 | 53 | 102 | 204 |
Applications

Standard systems are commonly used in drinking and wastewater treatment, large industrial processes, multi-pool leisure facilities and water parks.

Features & Benefits

- Dual contained electrolyser and de-gassing tank
- Electrolyser housed in a clear PVC tubular casing
- Integral 250kg Salt Saturator Tank*

Safety

- Integrated air dilution fan with sealed electrolyser compartment - no external Ex zones
- Quantitative ventilation airflow sensor for failsafe shutdown
- Hydrogen sensor for shutdown of system if any hydrogen is detected in the vicinity of the equipment

* Except 4250 & 8500 models

WESTWATER ENTERPRISES PTY

2 x Hyprolyser 2200 systems installed in Australia’s first solar powered water treatment plant, for Logan Water, Queensland
Our Technology

Electrolytic chlorine chemistry produces a non-hazardous solution of sodium hypochlorite (range 0.5 - 0.7%).

Sodium Hypochlorite Solution

Salt + water → Sodium hypochlorite solution

Anode → Cl₂ → OH⁻ + H₂ → Cathode
Electrolyser design

All Hyprolyser electrolysers are manufactured and assembled by hand in our factory in Lancashire. Meticulous attention to construction detail and thorough testing guarantee efficient output, robustness and long term reliability. For peace of mind all our electrolysers are provided with a 5 year limited (pro-rata) warranty.

Process control

The whole of the electrolysis process is controlled using our specially developed, dedicated software. All key performance parameters are monitored and can be accessed remotely via Modbus output.
Technical Summary

Our in-house technical sales team have a wealth of knowledge and experience to offer and are available to assist in the selection and correct sizing of Hyprolyser systems and options.

<table>
<thead>
<tr>
<th>Hyprolyser model</th>
<th>iSEC 30</th>
<th>iSEC 60</th>
<th>iSEC 90</th>
<th>Compact 240</th>
<th>Compact 480</th>
<th>280</th>
<th>560</th>
<th>1100</th>
<th>2200</th>
<th>4250</th>
<th>8500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorine capacity g/h</td>
<td>30</td>
<td>60</td>
<td>90</td>
<td>240</td>
<td>480</td>
<td>280</td>
<td>560</td>
<td>1100</td>
<td>2200</td>
<td>4250</td>
<td>8500</td>
</tr>
<tr>
<td>Chlorine capacity kg/day</td>
<td>0.72</td>
<td>1.44</td>
<td>2.16</td>
<td>5.76</td>
<td>11.52</td>
<td>6.72</td>
<td>13.44</td>
<td>26.4</td>
<td>52.8</td>
<td>102</td>
<td>204</td>
</tr>
<tr>
<td>Chlorine concentration g/l</td>
<td>5 - 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal salt consumption kg/h</td>
<td>0.1</td>
<td>0.2</td>
<td>0.3</td>
<td>0.72</td>
<td>1.44</td>
<td>0.93</td>
<td>1.8</td>
<td>3.6</td>
<td>7.3</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>Nominal water consumption l/h</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>40</td>
<td>80</td>
<td>47</td>
<td>94</td>
<td>184</td>
<td>367</td>
<td>650</td>
<td>1300</td>
</tr>
<tr>
<td>Power consumption kWh</td>
<td>0.3</td>
<td>0.45</td>
<td>0.6</td>
<td>1.75</td>
<td>3.33</td>
<td>14</td>
<td>2.8</td>
<td>5.6</td>
<td>11</td>
<td>21.5</td>
<td>43</td>
</tr>
</tbody>
</table>
Support Services & Training

Our system specifiers can be confident that safe, correct installation and high quality maintenance can be provided through our network of approved Service Partners. All Service Partners receive training to our exacting standards, to enable a comprehensive understanding of installation, service requirements and ensure the integrity and performance of our products at all times.

For more information
Visit [www.gaffey.co.uk](http://www.gaffey.co.uk)
Call 01254 350180
Email info@gaffey.co.uk