



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

Models: 30/60/90g Cl₂/h

Function

Hyprolyser® iSEC® electrochlorination systems provide an on-demand supply of <1.0% sodium hypochlorite solution, generated through the electrolysis of diluted brine solution.

The iSEC® system automatically draws a concentrated brine solution from a salt saturator which is then diluted to the correct strength with softened water for efficient electrolysis. The diluted brine is automatically fed to the electrolytic cell where electric current is passed through the solution, producing sodium hypochlorite. The automatic process cycle is repeated until the product storage tank is filled.

Commercial strength sodium hypochlorite can degrade quickly in storage, often losing up to 20% of its chlorine content. The iSEC® system does not require caustic buffer chemicals or additives to retain its <1.0% w/w chlorine content remaining stable for many months.

Benefits

- Considerable Health & Safety benefit to operators by using only salt, eliminating delivery & handling of hazardous chemicals
- Generate chlorine on site for day tank storage or direct injection on demand
- A single iSEC® can provide chlorine disinfection for multiple injection points using a common product storage tank and dosing pumps
- Eliminate dosing pump air-locking associated with commercial sodium hypochlorite
- Eliminate injection point scaling associated with commercial sodium and calcium hypochlorites due to low mineral content of generated solution
- Simple and low maintenance frequency
- >5 year electrolyser long life span

Features

- iSEC® models available for 30, 60 and 90 g/h chlorine capacity
- Durable and attractive plastic cover
- Vivid LED illumination from the electrolytic chamber offers an attractive presence of the chlorine generation process and at the same time indicating through simple LED colour change the current operational status of the process.
- Easy to operate membrane keypad multi-lingual control panel & OLED display with green, amber and red LED operational status indicators
- Operational parameters displayed and code protected programming
- Alarm event log with real time clock recording
- Volumetric flow measurement of water and brine for consistent high efficiency electrolysis
- Corrosion resistant PVDF tank level switches
- Failsafe system management of room ventilation via integrated hydrogen gas detector
- Telemetry alarm event, data logging & RS485 options
- Supplied with fixings for wall mounting and includes product tank level switch kit and brine suction assembly
- Installation easily customised to meet space restrictions
- 2 year product warranty

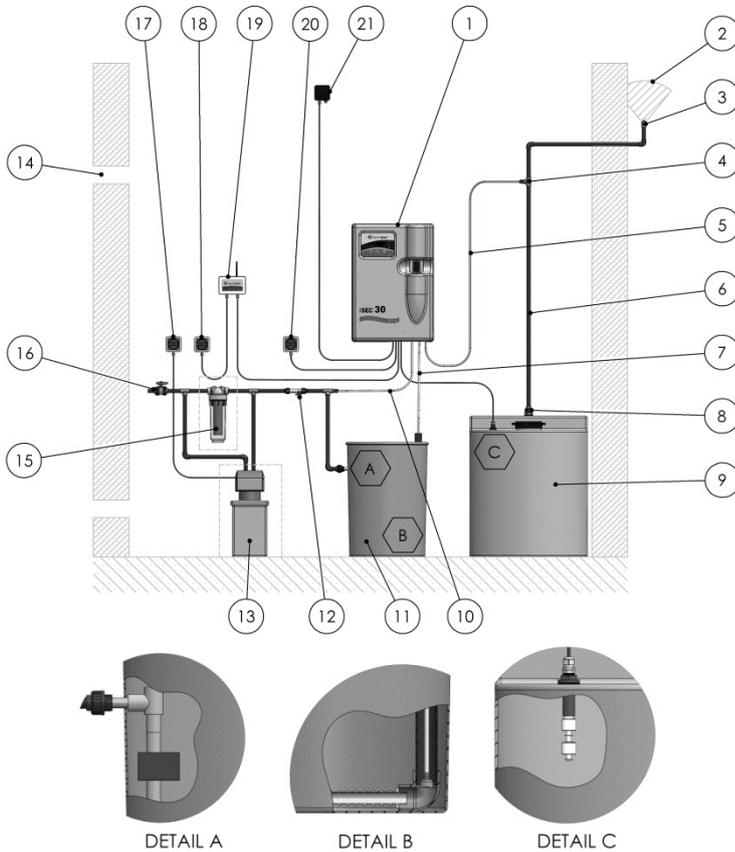
Areas of Application

- 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
- Animal husbandry

Product Description

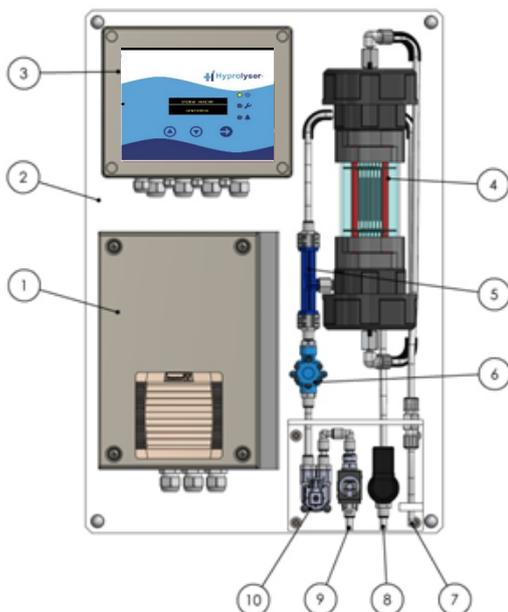
iSEC® 30, 60, 90 g/h, MODULAR kit

Installation Schematic



Item	Description	
1	iSEC®	✓
2	External unobstructed ventilation	
3	External ventilation point †	
4	Chlorine product injection	✓
5	Chlorine product feed tube	✓
6	Chlorine tank fill line	
7	Brine suction	✓
8	Product tank connection	✓
9	Product tank	
10	Softened water feed tube	✓
11	Salt saturator	
12	Softened water sample point	✓
13	Optional Auto regenerative softener*	
14	Natural room ventilation	
15	Optional Softener cartridge*	
16	Cold water feed supply	
17	Softener electrical power supply	
18	Telemetry electrical power supply	
19	Hyprolyser® telemetry unit	
20	iSEC electrical power supply	
21	Hydrogen gas detector	✓
A	Saturator float valve assembly	✓
B	Brine well & suction line assembly	✓
C	Product tank level switch assembly	✓

iSEC® 30, 60, 90 g/h Generator



- ✓ = MODULAR kit scope of supply
- * iSEC® must have softened water feed
- † Air blower ventilation kit required where vent point is >15m from iSEC® generator

Item	Description
1	Electrolyser DC power supply
2	Rigid backboard
3	Control panel
4	Electrolyser
5	Brine injector
6	Water pressure regulator
7	Chlorine product outlet
8	Brine control valve
9	Softened water control valve
10	Volumetric water flow sensor

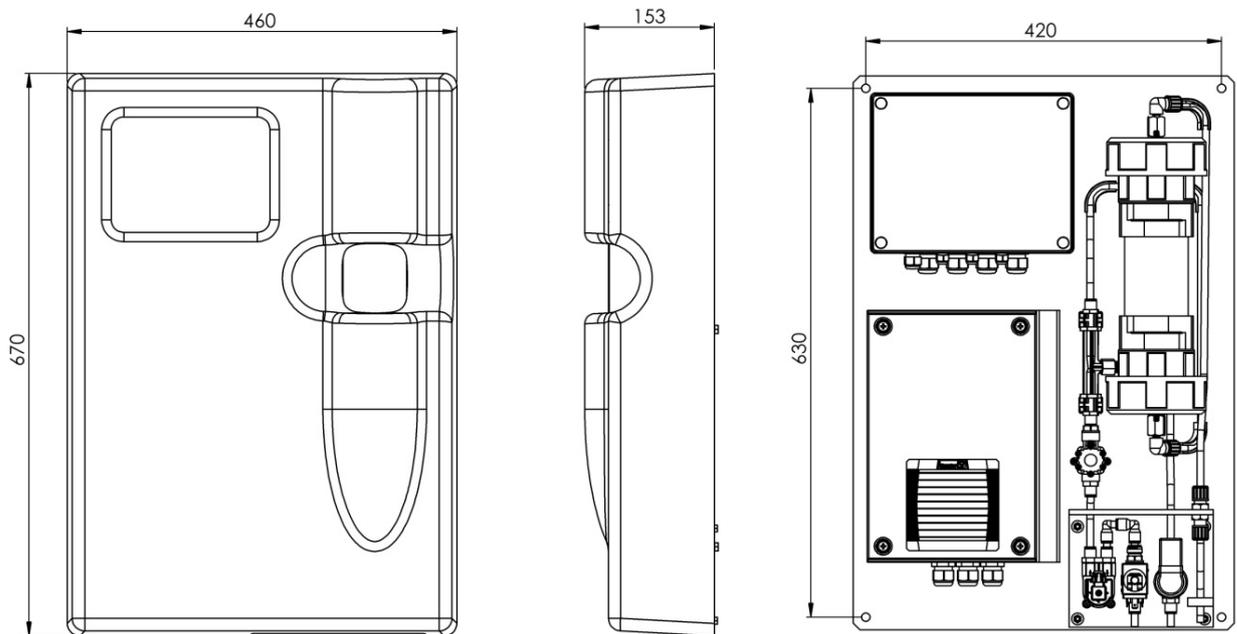
iSEC® Generator Technical Specification

Description	unit	Hyprolyser® iSEC model capacity		
		30	60	90
Chlorine capacity	g/h	30	60	90
Chlorine concentration *	g/l	6		
Power consumption	Watts	150	300	450
Power supply	∅	100 - 264VAC/1∅/ 50-60Hz		
Operating pressure	Bar	2 to 8		
Nominal water consumption *	l/h	5	10	15
Nominal salt consumption *	kg/h	0.1	0.2	0.3
Protection class	IP	54		
Permissible ambient temperature	°C	5-45		
Permissible feed water temperature	°C	8-25 [†]		
* standard factory settings				

[†]Water chiller required above 25°C

iSEC® Generator Dimensions & Weight

iSEC® 30, 60, 90



Description	Unit	Measure
Dimensions (w x d x h)	mm	460 x 153 x 670
Generator, net weight	kg	12
MODULAR kit, shipping weight		18

iSEC® MODULAR Options/Accessories

All accessories are available on request.



Hyprolyser® iSEC must have a softened water supply!

Softener options:-

Softener filter cartridge available in two capacity sizes.

Automatic regenerative softener requires local power supply and waste drain for backwash outflow.

Softening not included in standard scope of supply.



External product storage tank options available from 50 to 2000 litres. Not included in standard scope of supply.



External salt saturator tank options available from 50kg to 500kg salt capacity. Not included in standard scope of supply.



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

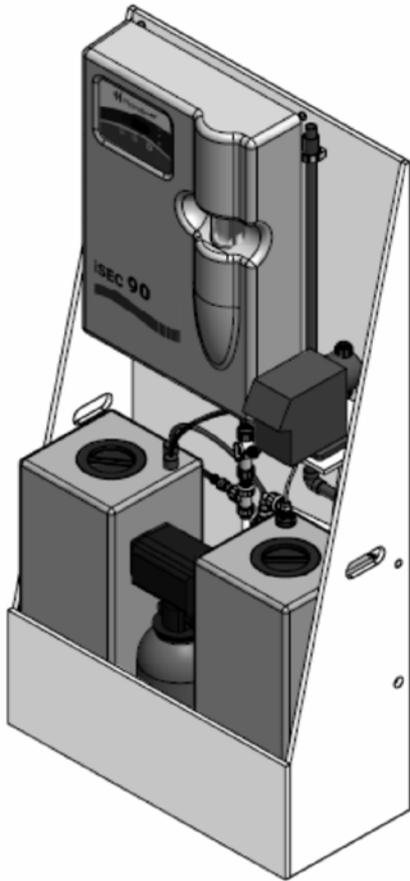


Hyprolyser® Test Kit contains all instruments, glassware and reagents to carry out all necessary routine and service tests to confirm and monitor the efficient operation of the iSEC system. Not included in standard scope of supply.

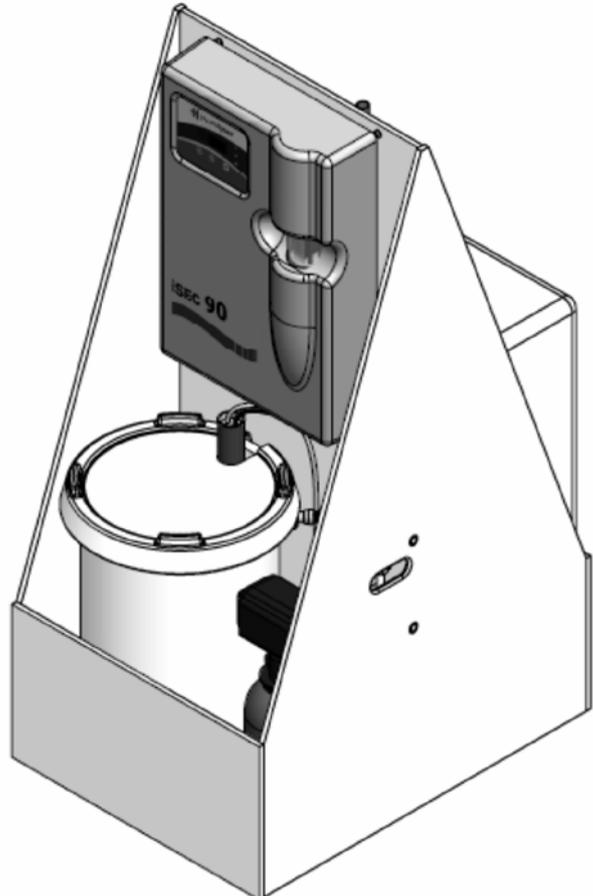
iSEC® SKID Options

N.B. First select correct iSEC® generator model and then choose additional skid option below. Depending on site conditions/location, check with your supplier if the system installation will require an air blower ventilation kit.

SKID-I



SKID-II



General SKID Specification

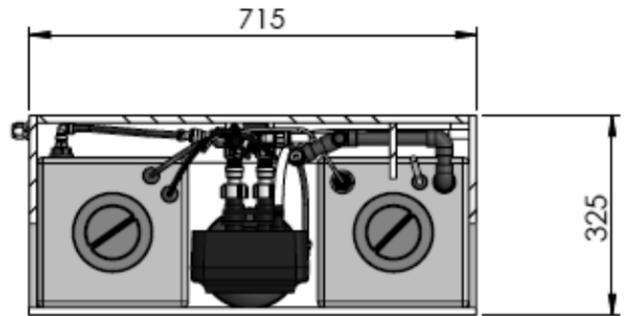
Description	Unit	SKID-I	SKID-II
Salt saturator nominal capacity	kg	30	50
Chlorine product tank capacity	litre	30	200
Auto regenerative softener	Watts	10	
Operating feed water pressure	Bar	2 to 8	
Water feed connection	-	15mmOD / ½" BSPm	
Ventilation outlet, uPVC solvent connection	-	20mm / ½"	
Softener drain outlet RPVC tubing	-	13mmID x 19mmOD (½"ID)	
Dimensions (w x d x h)	mm	715 x 325 x 1500	654 x 876 x 1512
Weight, net	kg	40	64

[Dosing pump(s) not included, available as optional extra]

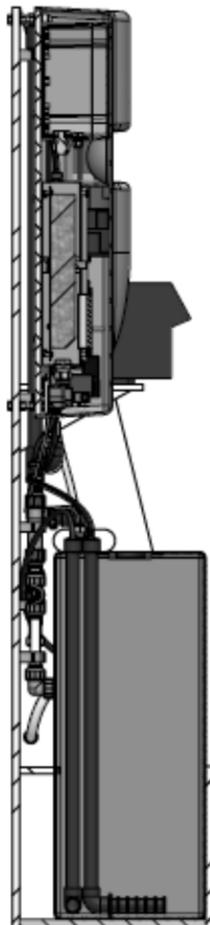
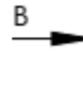
iSEC® SKID Dimensions & Weight

iSEC® SKID-I

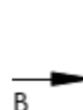
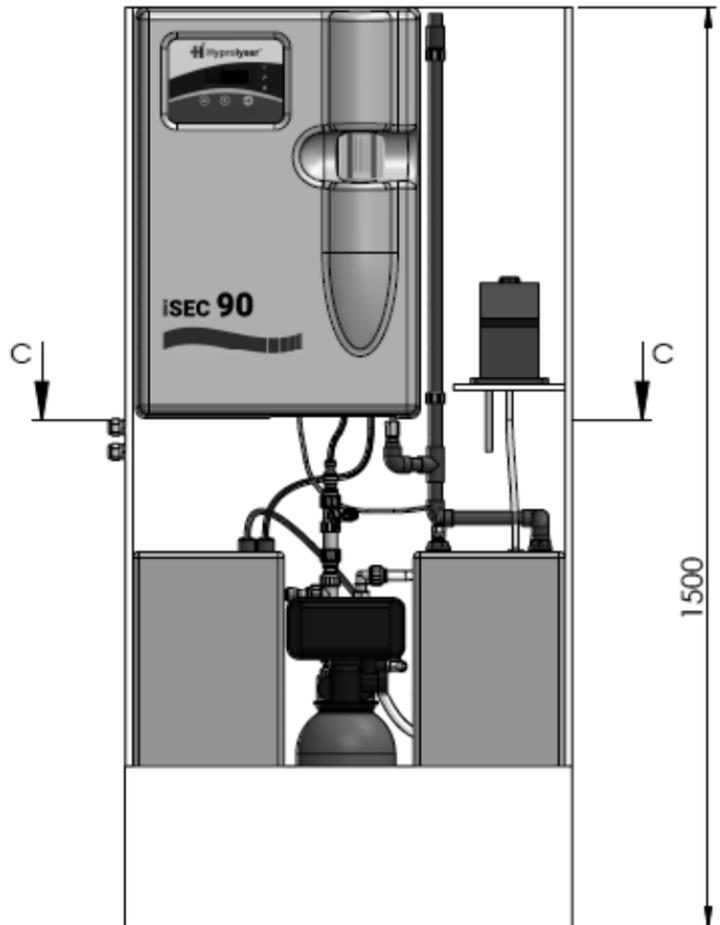
Description	Unit	SKID-I
Dimensions (w x d x h)	mm	715 x 325 x 1500
Shipping weight	kg	57



SECTION C-C



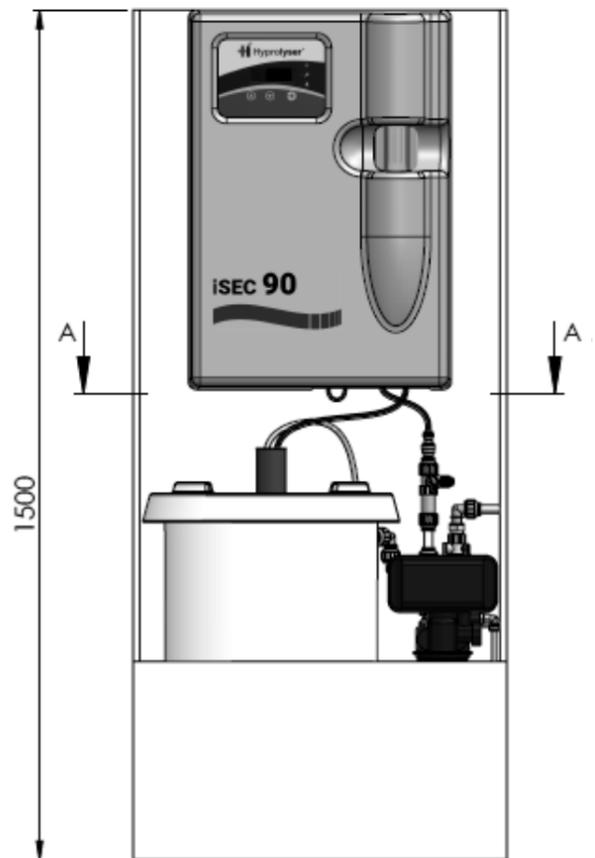
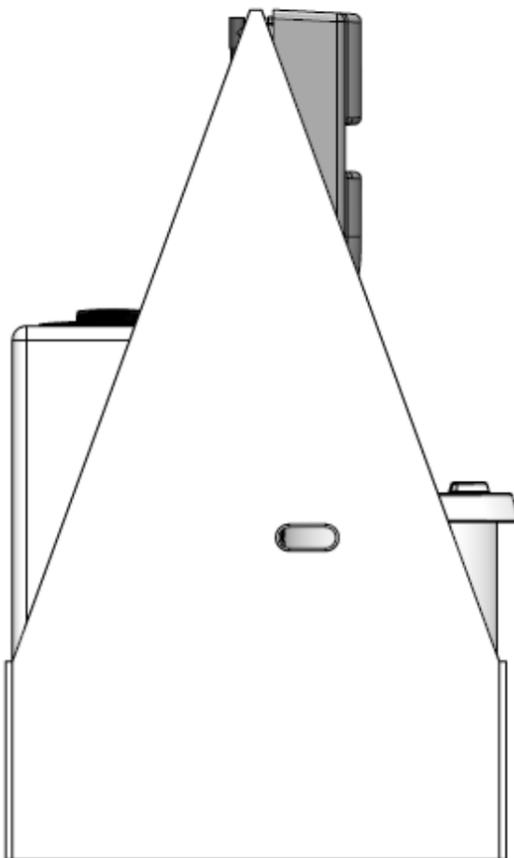
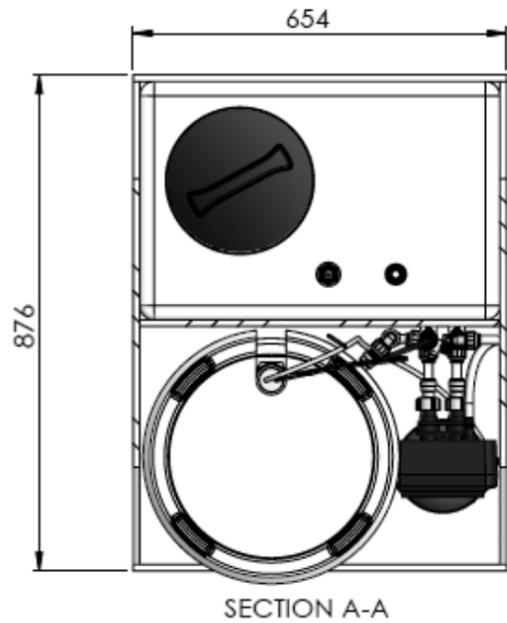
SECTION B-B



iSEC® SKID Dimensions & Weight

iSEC® SKID-II

Description	Unit	SKID-II
Dimensions (w x d x h)	mm	654 x 876 x 1512
Shipping weight	kg	81



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