

MINICHLORGEN

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



The safe generation of sodium hypochlorite

MINICHLORGEN sodium hypochlorite systems provide an on-demand supply of <math><1.0\%</math> sodium hypochlorite solution, generated through the electrolysis of diluted brine solution.

The MINICHLORGEN 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 tank is filled.

Conventional sodium hypochlorite losses per month up to 20 % of the chlorine it contains during storage. The 1 % sodium hypochlorite generated by MINICHLORGEN does not require any additives; its chlorine contents remains stable over months.

Generated in close proximity to the process, the direct storage and dosing of sodium hypochlorite rules out accidental spillage of the sodium hypochlorite and contact with the operating personnel.

Advantages

- Eliminate delivery & handling of hazardous chemicals
- Handle only salt
- Generate on site for on-demand or residual storage
- No exhaust gases as with conventional sodium hypochlorite solutions in dosing pumps
- Eliminate injection point scaling associated with commercial sodium and calcium hypochlorites
- Considerable Health & Safety benefit to operators
- A single MINICHLORGEN can provide chlorine disinfection for multiple injection points using a common product tank and dosing pumps
- Simple and low maintenance frequency
- >5 year electrolyser long life span

Functions

- MINICHLORGEN models available for 30, 60 and 90 g/h chlorine capacity
- Robust and attractive plastic cover
- Vivid LED illumination from the electrolytic chamber offers a 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
- Safe operation by ambient air monitoring from a hydrogen detector
- Remote transfer of the fault message, data logging & RS485 options
- MINICHLORGEN is supplied with fixings for wall mounting, product tank level switch kit and brine suction assembly

Areas of Application

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

Technical data

Description		MINICHLORGEN		
		30	60	90
Chlorine capacity	g/h	30	60	90
Chlorine concentration*	g/l	6		
Power consumption	kWh	0.15	0.30	0.60
Power supply	Ø	110 – 240V		
Operating pressure	bar	2 – 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

** in this case, extra venting is required

*** in this case, a water cooler is required

Further specifications upon request

The MINICHLORGEN is a system for the "in situ" production of the biocide active agent "active chlorine produced from sodium chloride via electrolysis". In accordance with the biocide ordinance, as of 01/09/2015, the member states of the European Union may only use precursors for biocidal active agents produced "in situ" and which are used as disinfectants. These precursors must satisfy the quality requirements made of these substances by DIN EN and be sourced from a manufacturer or supplier listed in accordance with article 95 of the biocide ordinance. Please ask your supplier to confirm conformity with the biocide ordinance (certificate).

Biocidal active agent:

Active chlorine produced from sodium chloride via electrolysis

EC no. mix;

CAS no. not applicable

Precursors:

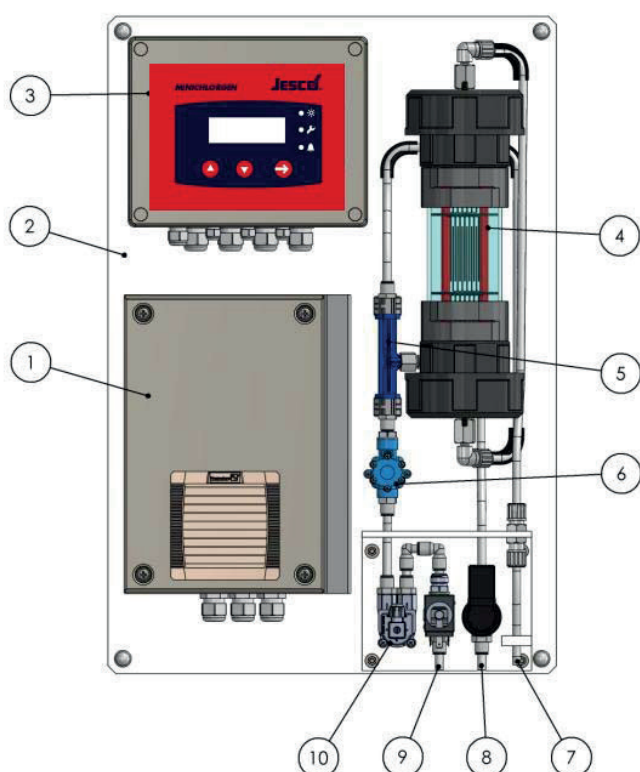
Sodium chloride

EC no. 231-598-3;

CAS no. 7647-15-5;

Special salt for electrolytic cells DIN EN 16401 and 14805

Description MINICHLORGEN Generator

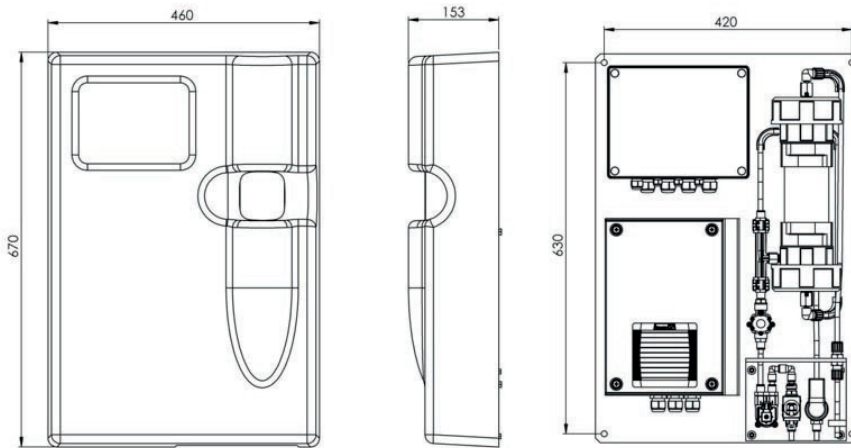


Description

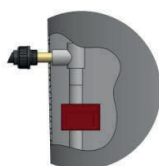
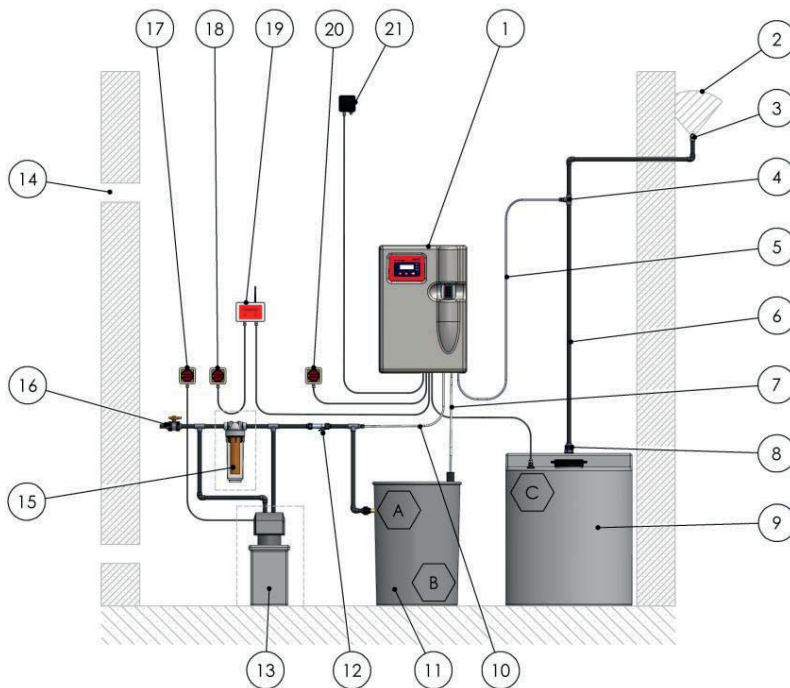
- 1 Power supply for electrolytic cell (rectifier)
- 2 Rigid backboard
- 3 Control box
- 4 Electrolytic cell
- 5 Injector for brine
- 6 Pressure reducer
- 7 Product outlet connection
- 8 Solenoid valve for brine control
- 9 Connection for softened water
- 10 Flow meter for the dilution water

Dimensions

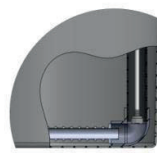
All dimensions in mm



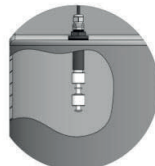
Description MINICHLORGEN Installation



DETAIL A



DETAIL B



DETAIL C

Description	
1	MINICHLORGEN Generator #
2	Venting zone
3	Venting to the outside
4	Hydrogen separator #
5	Product line #
6	Product tank supply pipe
7	Brine suction unit #
8	Product tank connection #
9	Product tank
10	Softened water feed tube #
11	Salt dissolving container
12	Sampler tap for softened water #
13	Water Softener *
14	Natural room ventilation
15	Optional water softening cartridge *
16	Cold water inlet
17	Softener electrical power supply
18	Telemetry unit electrical power supply
19	MINICHLORGEN telemetry unit
20	MINICHLORGEN power supply
21	Hydrogen gas detector #
A	Float valve for salt dissolving container #
B	Brine removal through filter pipe #
C	Product tank level monitoring #

included in standard scope of supply

* MINICHLORGEN requires softened water.

MINICHLORGEN - accessories



Hydrogen gas detector

The hydrogen meter deactivates the MINICHLORGEN following the detection of hydrogen gas and is installed directly over the system.

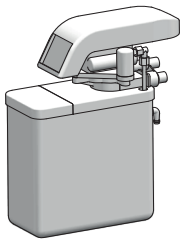
Supplied as standard with every MINICHLORGEN unit.



Water softening cartridge

Filter cartridge for use as a water softening module for MINICHLORGEN systems. Contains a softening cartridge for easy maintenance.

The filler cartridge is available either in standard size or with a higher capacity.



Softener with automatic regeneration

A softening unit with automatic regeneration is available for MINICHLORGEN systems.

This requires a power supply and an effluence connection for the flushing water.