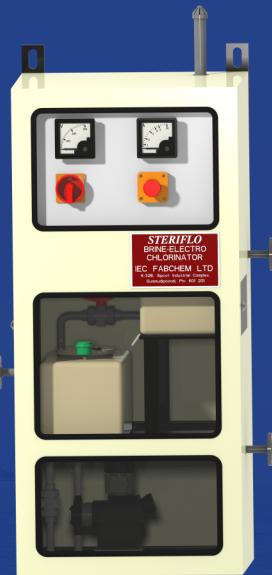


# **STERIFLO**

**ON-SITE BRINE ELECTRO-CHLORINATION SYSTEMS**



# STERIFLO

ON-SITE BRINE ELECTRO-CHLORINATION SYSTEMS

## ABOUT IEC

With nearly sixty years of excellence in the design, manufacture & supply of water disinfection and drinking water treatment plants, we bring to you On-site Brine electro-chlorination technology with world-class construction and quality standards. Our On-site Brine Electro-Chlorinators are capable of generating potent disinfectant and dose in local water main at OHT inlet/outlet to ensure distribution of safe drinking water.

STERIFLO complies with the requirements of **Government of India – Jal Jeevan Mission**

“



Har Ghar Jal  
Jal Jeevan Mission



जल शक्ति मंत्रालय  
MINISTRY OF  
JAL SHAKTI

सत्यमेव जयते

**BRINE**  
ELECTRO-  
CHLORINATION

SAFE AND  
RELIABLE METHOD

*For disinfection of water.*

## WHY STERIFLO ?

On-site sodium hypochlorite (**NaOCl**) generation by brine electro-chlorination is a safe and reliable method for disinfection of water. The key raw materials for sodium hypochlorite production are



Common salt



Potable water



Single Phase Power Supply

# | The Solution

IEC'S onsite sodium hypochlorite generators produce chlorine in the form of sodium hypochlorite by means of electrolysis of salt (brine) solution. The system is capable of generating sodium hypochlorite solution upto 7000 ppm (0.7 %) strength and comes in a modular skid mounted plug and play package.

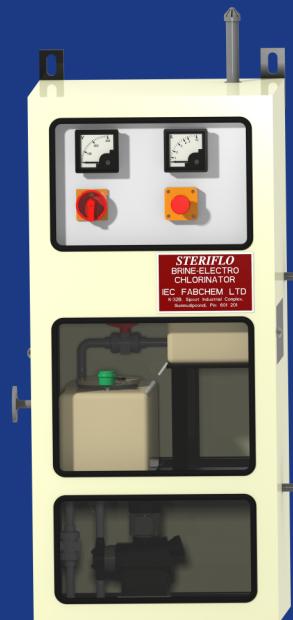
# | Applications

**Rural water supply – Over Head Tank (OHT)** water disinfection prior to distribution.



## **STERIFLO** SYSTEM

Typical Installation Near Over Head Tank (OHT)



# Special emphasis on safety

- A perfect non-hazardous system

Electro-chlorination doesn't generate any toxic by-products and it eliminates the handling of hazardous chemicals, such as chlorine gas or sodium hypochlorite in high concentrations.

## Brine Electrolysis Process

The following Electrochemical reactions will take place inside the Electrochemical Cell

**At the Anode:** Chloride ions in the water deplete and Chlorine gets evolved



**At the Cathode:** Hydrogen and Hydroxyl ions evolve. These Hydroxyl ions react with Sodium atoms and form Sodium Hydroxide.



**Overall Reaction**



## Technical Details

<b>Water Supply</b>	Potable water @ 1.2 to 4.8 bar TDS <100 ppm Hardness <10 ppm, PH 7.2 – 8.3
<b>Temperature Range</b>	Temperature: 18 – 30 °C (65°F - 80°F)
<b>Salt Quality</b>	99.7 % pure dry weight solar salt or with water softener
<b>Electrical Power</b>	230 V AC 1 Phase 50Hz or 415 V AC 3 Phase 50 Hz (Other Power options upon request)
<b>Control panel</b>	230 V AC 1 Phase 50 Hz (Other Voltages & Frequencies options upon request)
<b>Operator interface</b>	PLC/HMI Touch screen*
<b>Hypochlorite Concentration</b>	7000 ppm



# Design & Safety Features

-  The entire electrolyzer system is housed in a safe chamber.
-  Advanced cell design ensures proper production of chlorine.
-  Process safety instruments with electrical interlock.
-  Hypo tank level controller controls the dosing facility.
-  Safe Operation and proper venting of hydrogen.
-  Operator friendly maintenance procedures.



## Power Converter & Treatment dose

A Dedicated Transformer - Rectifier is provided to feed the Electrolyzer with Direct Current (DC). This rectifier will be combined with transformer as a single unit.

Dosage of hypo for drinking water disinfection is typically at the rate of 1 ppm at the distribution Over Head Tank inlet/outlet.

### Available Capacity

\*230 V AC Power supply for all models of the STERIFLO systems.

MODEL	Over Head Tanks Capacity	Operating Hours	Required Electrolyzer Capacity	Connected load
<b>STERIFLO - 10 KL</b>	10 KL	1 hr	10 grams/hr	250 VA
<b>STERIFLO - 30 KL</b>	30 KL	3 hr	10 grams/hr	250 VA
<b>STERIFLO - 60 KL</b>	60 KL	6 hr	10 grams/hr	250 VA
<b>STERIFLO - 100 KL</b>	100 KL	4 hr	25 grams/hr	500 VA
<b>STERIFLO - 300 KL</b>	300 KL	6 hr	50 grams/hr	500 VA
<b>STERIFLO - 600 KL</b>	600 KL	6 hr	100 grams/hr	1000 VA
<b>STERIFLO - 1000 KL</b>	1000 KL	5 hr	200 grams/hr	1500 VA
<b>STERIFLO - 2000 KL</b>	2000 KL	5 hr	400 grams/hr	3000 VA
<b>STERIFLO - 3000 KL</b>	3000 KL	5 hr	600 grams/hr	4500 VA



**STERIFLO**

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