

The logo features the word "UNICARE" in a bold, red, sans-serif font. The text is centered within a white, horizontal, pill-shaped element. This element is superimposed on a blue, teardrop-shaped graphic that has a gradient and a slight shadow, giving it a three-dimensional appearance.

UNICARE

The logo consists of the word "UNICARE" in a large, bold, blue, sans-serif font. Below it, the words "TECHNOLOGIES PVT. LTD." are written in a smaller, blue, sans-serif font. The entire text is centered within a white, rounded hexagonal shape with a blue border. The background of the page features large, abstract blue geometric shapes and white lines.

UNICARE
TECHNOLOGIES PVT. LTD.

PRODUCT

INTRODUCTION

Electro chlorination is a simple and proven technology to convert ordinary salt water [or brine or seawater) into Sodium Hypochlorite by means of Electrolysis. It is produced and applied on-site. The device which uses this technology is named as Electro chlorinator or Onsite Hypo Generator. Sodium Hypochlorite is universally accepted for combating slime, algae and other Bio-organisms in Water. The most important aspect of Sodium Hypochlorite usage is its economy and effectiveness in killing bio organisms thereby disinfecting water. Electro chlorinators find application where Chlorine is not readily available or where operation with chlorine is not acceptable. Electro chlorinators therefore, find application in Drinking Water Treatment, Cooling Water Treatment, Waste Water Treatment, Bleaching, Pharmaceutical formulations and other industrial applications. The Industries that benefit includes Chemicals & Fertilizers, Refineries, Petrochemicals, Power Stations, Steel Plants, Cement Plants, Pharmaceutical Industries, Pesticide Industries, Food Industries, Dairy Industries, Textiles, Paper & Pulp Industries, Sugar Plants, Municipalities, Corporations, Townships, Water Boards, Theme Parks, Hotels, Apartment Complexes, Aqua culture Units, Bottling Plants, Swimming Pools, Hospitals etc. Unicare Technologies markets a wide range of Chlorination Equipments & related accessories to cater to this requirement. Depending upon the mode of operation, Electro chlorinators are classified into two types namely Batch Production Electro chlorinators with capacity ranging from 15 gms/hr to 500 gms/hr and Continuous Production Electro chlorinators with capacity ranging from 15 gms/hr to 15 kgs/hr. Unicare Technologies

BATCH PRODUCTION DESCRIPTION

Batch Production Electro chlorinators are designed for small capacities and are available from 15 gms/hr to capacity of 500 gms/hr chlorine equivalent, using our unique Multimetallic Oxides Titanium Nobel Anodes and Electrochemical Process. Production of Sodium Hypochlorite is completed in a batch of every 8 hours, to concentration of around 6-8 gms/litre

OPERATION

A metered amount of water is mixed with common salt to form brine of required concentration [or Seawater is used]. This is the electrolyte used in the process. Electrolyser Cells are dipped in this measured quantity of Brine Solution, contained in a specially made FRP Tank [Bisphenol Resin]. These cells are connected to a rectifier, which converts Alternate current to Direct Current. When DC Current passes through these Titanium Anodes with MMO Coating, Sodium Hypochlorite evolves instantaneously with negligible quantities of hydrogen rising up to the surface, which is vented out. This process is based on the chemistry of Electrolysis of Sodium Chloride. The Sodium Hypochlorite thus generated is collected in a storage Tank and applied directly or pumped to the point of application.

CHEMISTRY:

The actual reactions are complex, but the key reaction can be represented by the following equation.

ELECTRO HYPO:

Thus generated contains 0.7% to 1% chlorine. Below 1% hupo is classified as a non hazardous chemical although still a very effective disinfectant. The only by product Hydrogen is safety vented into the atmosphere. It is preferred water disinfection / antifouling option...compared to gaseous Chlorine, Commercial Hypo and Bleaching Powder...considering Safety, Economy, Convenience and Environmental Protection.

It is the ultimate and the most versatile Chlorine based water disinfection option for:

Cooling Tower Chlorination

Rural and Urban Water supply schemes

Small and Large Water Treatment Plants

Effluent & Sewage Treatment Plant

The Potential risks associated with the bulk transport and handing of hazardous Chemicals (Gaseous Chlorine, Commercial Hypo and Bleaching Powder) is totally eliminated with onsite chlorination. It is the preferred substitute and the future of water Chlorination.

SALIENT FEATURES:

Produces Sodium Hypochlorite solution onsite

Only common salt, water and power are the raw materials.

Compact and Easy to operate and maintain.

Generation is as and when required hence problem of deterioration of chlorine strength while storing is avoided.

Eliminating the hazards of gas chlorine and decay of purchased hypochlorite makes ELECTRO-CHLORINATOR CONVENIENT.

Low operating cost when compared to bleaching powder, commercial sodium hypochlorite, chloramines and other chemical disinfectants.

Require very low level of skill for operation.

TECHNICAL SPECIFICATIONS

Model No	8 GSM	25 GSM	50 GSM	100 GSM	200 GSM	400 GSM
Chlorine Capacity	8 Gms/Hr	25Gms/Hr	50 Gms/Hr	100 Gms/Hr	200 Gms/Hr	400 Gms/Hr
Batch Time	8 Hours	8 Hours	8 Hours	8 Hours	8 Hours	8 Hours
Total Chlorine generated	65 Gms	200 Gms	400 Gms	800 Gms	1600 Gms	3200 Gms
Hypochlorite Concentration	7to8 Gpl	7to8 Gpl	7to8 Gpl	7to8 Gpl	7to8 Gpl	7to8 Gpl
NaOCl Producedper batch	8 Litres	35 Litres	70 Litres	140 Litres	280 Litres	550 Litres
Water Can be treated with 2 PPM	30,000	125,000	250,000	500,000	1,000,000	200,000
Salt Consumption	335 Gms	1.125 Kg	2.25 Kg	4.5 Kg	9.0 Kg	18 Kg
AC Power Consumed	0.3KW	1.5 Kw	3 Kw	5Kw	10 Kw	20 Kw

OPERATING COST COMPARISON:

DISINFECTION SYSTEM	Equivalent	Cost / Kg, Lit	Cost - Rs.
Chlorine Gas (Baby Cylinders)	1 Kg	40	40
Bleaching Powder (20% chlorine content average)	5 Kg	15	75
Purchased hypochlorite (50 gpl concentration)	20 Lit	15	300
ENCEE CHLOR Hypochlorite (10 gpl concentration))	100 Lit	0.20 (Salt+power cost)	20

OPERATIVE ADVANTAGES OF ELECTRO-CHLORINATOR:

Disinfection System	Sources of Raw Material	Handling of Product	Shell-Life of Product	Operation & Maintenance	Cost of Consumable
ENCEE CHLOR	Only Edible Salt	No Transportation and storage, easy handling. No loss of chorine	Produced and dosed onsite, No storage required	Very easy	Very Economical
Chlorine Gas	Dependent on supplier and uneconomical for transport	Transportation and handling. is hazardous	Stable	Difficult	Most Economical
Bleaching Power	Dependent on supplier	Handling and Storage is inconvenient and Messy	Highly unstable and Rapidly losses Chlorine on storage	inconvenient , Difficult, Messy	Expensive
Commercial Sodium Hypochlorite	Dependent on supplier and uneconomical for transportation	Handling and Storage is inconvenient	unstable and Rapidly losses Chlorine on storage	Fairly Easy	Most Expensive

ENCEE CHLOR MODELS:

ENCEE CHLOR disinfection units are available in following models. The capacity of water treatment is considered at 2 mg/L (ppm) chlorine dosage at the point of injection.

BATCH TYPE	CAPACITY (CHLORINE OUTPUT)
NC-25	200 gms/8 Hr (25 gms/hr)
NC-50	400 gms/8 Hr (50 gms/hr)
NC-100	1000 gms/8 Hr (125 gms/hr)
NC-400	4000 gms/day
NC-600	6000 gms/day
NC-800	8000 gms/day
NC-1200	12000 gms/day

CONTINUOUS TYPE	CAPACITY (CHLORINE OUTPUT)
NC-25c	25 gms/hr
NC-50c	50 gms/hr
NC-100c	100 gms/hr
NC-250c	250 gms/hr
NC-12k	500 gms/hr
NC-24k	1000 gms/hr
NC-48k	2000 gms/hr
NC-72k	3000 gms/hr

We can also design tailor-made models for specific purposes as per requirement.



NC-600



NC-24k



NC-25