



NERITH
global water solutions

CAPACITIVE DEIONIZATION

CDI Based Water Treatment

Next-generation, chemical-free desalination that recovers up to 80% of water while preserving essential natural minerals.



80%

Water recovery rate

0%

Chemicals used

350 LPH x n

Modular-Scalable system

50 ppm+

Tunable mineral output

Smarter purification, cleaner water.

Capacitive Deionization removes dissolved salts by drawing charged ions onto porous electrodes with a low-voltage electric field — no membranes to clog and no chemicals to dose. The result is a highly efficient purification cycle that delivers balanced, great-tasting mineral water while dramatically cutting waste and running cost.

TECHNICAL SPECIFICATIONS

Parameter	Model 1	Model 2	Model 3
Max Output	350 LPH	700 LPH	4000 LPH
Power Use	~2 kW	~4 kW	~30 kW
Dimensions (m)	0.6 × 0.6 × 1.5	0.6 × 0.6 × 1.8	0.6 × 3.0 × 1.5
Input TDS Range	100 – 1500 PPM		
Water Recovery	Up to 80%		
Output Quality	100 – 300 PPM (with essential minerals)		
Pre-Treatment	Activated Carbon & Sediment		
Auto Clean	Included		

WHY IT MATTERS

- Natural mineral restoration**
 Optimum mineral balance — tunable TDS and concentration of minerals
- Longer module life**
 4–6 years vs 12–24 months for typical RO membranes.
- Lower treatment cost**
 Just 0.1–0.2 INR per litre against 0.3–1.0 for RO.
- Auto cleaning included**
 Built-in self-cleaning keeps performance steady over time.



BUILT FOR REAL CONDITIONS

Engineered in durable stainless steel with an intuitive touchscreen controller and integrated activated carbon & sediment pre-treatment — ready for homes, institutions and industry.

PRODUCT DETAIL

Electro Deionization (EDI) Unit

A continuous, chemical-free polishing process to deliver ultrapure water – no regeneration chemicals, no downtime.



NERITH EDI SYSTEM

DESIGN HIGHLIGHTS

< 1500 ppm

Feed Water TDS

< 15 $\mu\text{S}/\text{cm}^2$

RO Conductivity

18.2 $\text{M}\Omega\cdot\text{cm}$

EDI Product Resistivity

< 1 $\mu\text{S}/\text{cm}^3$

EDI Product Conductivity

OPERATING & FEED WATER LIMITS

pH	4 – 11	—	Iron (Fe)	< 0.01	ppm
Inlet Feed Pressure	0 – 7	Bar	Sulphate (SO_4)	< 0.001	ppm
Temperature	Max 113 (45)	$^{\circ}\text{F}$ ($^{\circ}\text{C}$)	Total Hardness	< 1	ppm
Feed Equiv. Conductivity (FCE)	< 15	$\mu\text{S}/\text{cm}^2$	Total Organic Compound (TOC)	< 0.05	ppm
Total Chlorine	< 0.002	ppm	Silica (SiO_2)	< 0.05	ppm

FCE measured including SiO_2 & CO_2 . Values represent maximum feed-water limits unless noted.

WHERE EDI IS USED

Pharmaceutical & Biotech

USP purified & injectable-grade water.

Power & Boiler Feed

High-purity make-up water for boilers & turbines.

Electronics & Semiconductor

Ultrapure rinse water for wafer & PCB fabrication.

Laboratories & Research

Reagent-grade water for analytics & testing.

Food & Beverage

Consistent process & ingredient water.

Cosmetics & Chemicals

Deionized water for formulation & processing.

COMPARISON

CDI vs Reverse Osmosis

Purification Feature	Our CDI System	Reverse Osmosis (RO)
Water Recovery	80%	22-25%
Electricity (per 100 LPH)	0.33 units	1.33 units
Mineral Restoration	Optimum	Minimal
Module Life	4-6 years	12-24 months
Treatment Cost	0.1-0.2 INR/L	0.3-1.0 INR/L
Health Benefits	Retains essential minerals	Remineralization required

OUR COMMITMENT

Delivering reliable technologies that provide clean water, safe sanitation, environmental sustainability, and an improved quality of life.

OUR OTHER PRODUCTS

- > Sewage Treatment Plant (STP)
- > Air Water Generator
- > RO Based Water Treatment
- > Greywater Treatment
- > Fluoride Removal
- > Effluent Treatment Plant (ETP)
- > Rain Water Harvesting
- > Ground Water Recharge
- > Iron Removal
- > Arsenic Removal

TURNKEY SOLUTIONS

From compact units to large-scale plants, NERITH engineers, builds and commissions complete water & wastewater treatment systems.



Let's build your water solution.



+91 73583 69139



nerithglobal@gmail.com



D-2, Anand Apartment, 72/3, Nehru 100 Feet Road, Vadapalani, Chennai - 600026