



SM ENVIRO SOLUTIONS

ULTRAPURE WATER SOLUTIONS

Company Introduction :

SM Enviro Solutions is a high-flying name, involved in offering the best-in-line quality products in the Indian and overseas markets. Operating as a Manufacturer, Exporter and Supplier, we bring forth a range of products having long service life and low maintenance requirements. Our product range entails RO Water Purifier Plant, Effluent Water Treatment Plant, Rainwater Harvesting System, Solar Panels, Solar Water Heaters, Solar Water Pumping System, Solar Street Lights, Wastewater Treatment Plant, Wastewater Treatment Chemicals, RO Antiscalants, Water Softening System and DM Water Plant. With the aid of modern manufacturing techniques and adroit professionals, we have gained rich customer base. With us, one can stay assured for timely deliveries.

Our Quality:

For us, quality is one of the foremost priorities. And, for ensuring the same, we have adopted high-quality measures that ensure the finest quality and help us in attaining 100% client contentment.

Our People:

Our strength also lies in the dedicated efforts of our experienced professionals, who go the extra mile for complete client satisfaction. Each of our team members is highly experienced in their respective domains. Further, the dedicated endeavor of our workforce has set us apart to create new success stories with quality-centralized products.

Certification:

We ensure client is provided with necessary test certificates for the system and spares supplied by us.

Our Strength:

We are preferred over our competitors for the following reasons

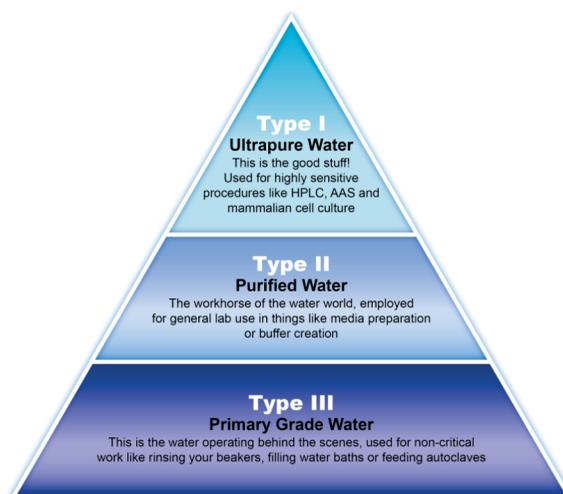
- Premium quality products
- Capability to meet various demands
- Timely delivery
- Cost effective prices
- After sales service.

Features of our Plants & Systems:

- Rugged construction
- Corrosion resistance
- Effective water purification and filtration
- Low power consumption
- Stability under varied conditions
- Tolerance
- Low Maintenance life

SMES Range of Ultrapure Water Solutions

Type of Water:



International Organization for Standardization (ISO)

The ISO based its specification on ISO 3696:1987, and specifies three grades of water: Grade 1, Grade 2 and Grade 3, where Grade 1 is the most pure (see below): Water quality parameters for ISO grades.

Parameter	Grade 1	Grade 2	Grade 3
pH value at 25°C	–	–	5.0–7.0
Conductivity (µS/cm) at 25°C, max	0.1	1.0	5.0
Oxidisable matter Oxygen content (mg/l), max	–	0.08	0.4
Residue after evaporation on heating at 110°C (mg/kg), max	–	1	2
Silica (SiO ₂) content (mg/l), max	0.01	0.02	–
Techniques	Glassware washing, solution preparation & dilutions, Steam generation, Bacterial Cell Culture, Clinical Biochemistry, Electrophoresis	Feed to ultra pure water system, General Chemistry, Glassware Washing, Media Preparation.	Feed to still.

Our Technology:

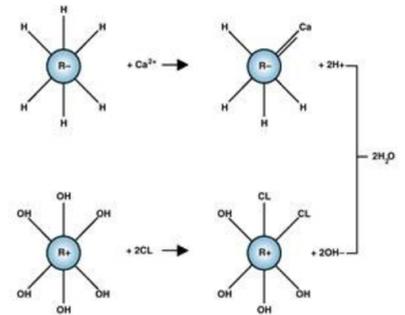
How Does Ion Exchange Work?

Deionized Water

Beds of ion exchange resins efficiently remove ionized species from water by exchanging them for H⁺ and OH⁻ ions. The resins are sub 1 mm porous beads made of highly cross-linked insoluble polymers with large numbers of strongly ionic exchange sites.

How Ion Exchange Removes Ionized Species from Water

Ions in solution migrate into the beads, where, as a function of their relative charge densities (charge per hydrated volume), they compete for the exchange sites.



Deionization beads are either cationic or anionic and exchange either hydrogen ions for cations e.g. sodium, calcium and aluminium or hydroxyl ions for anions e.g. chloride, nitrate and sulfate. The hydrogen ion from the cation exchanger unites with the hydroxyl ion of the anion exchanger to form pure water.

Beds of ion exchange resins are available as cartridges or cylinders and are typically used for a period of time and then replaced, when cations and anions have replaced most of the H⁺ and OH⁻ active sites in the resins.

Advantages:

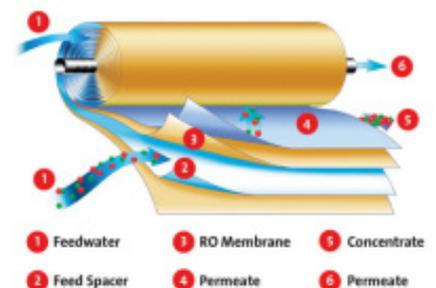
- Removes dissolved ions, up to up to 18.2 MΩ-cm, TOC < 1ppb
- Regenerated by deionization using acid and bases
- Non regenerative type resin can be used. No need for regeneration.
- Cost effective water purification solution

How Does Reverse Osmosis Work?

Reverse osmosis (RO), with its exceptional purifying efficiency, is a very cost-effective technology for the removal of the majority of impurities. RO membranes are typically thin film polyamide and are stable over a wide pH range.

RO membranes are used to remove

- Water contaminants that are less than 1 nm diameter
- Typically over 90% of ionic contamination, most organic contamination and nearly all particulate contamination



How reverse osmosis removes contaminants

During reverse osmosis, feedwater is pumped past the input side of a RO membrane under pressure (typically 4–15 bar, 60–220 psi) in cross-flow fashion. Typically 15-30% of feedwater passes through the membrane as permeate and the rest exits the membrane as a concentrate that contains most of the salts, organics, and essentially all particulates.

Advantages

- Effective removal of contaminants such as colloids, pyrogens etc
- Minimal maintenance and easy to monitor

STORAGE TANK



Consistent and Reliable Quality for Pure Water Storage

The quality of pure water degrades over time as storing water can lead to contamination particularly from bacteria. Good design and proper maintenance regimes are needed to minimize these problems. Reservoirs should be protected from airborne impurities with suitable filters. Materials should be chosen which do not contaminate the water.

Our unique vessels and stand alone reservoirs have been designed to optimize the quality of any stored water. The vessels are cylindrical shaped specially designed.

Features:

- Range of capacities to suit pure water needs.
- Vent filter to prevent the ingress of airborne impurities particulates, organic vapours and reduce CO₂ levels
- Fully opaque to prevent algal growth
- Constructed steel to minimize the release of organics
- Provides more complete sanitization and quicker rinse out time
- Electronic monitoring of reservoir water levels from the water purification system display
- Compact size, takes less space.

Our Ultrapure Product:



Guaranteeing Pure Water for your Application:

- Ultrapure water for trace element analysis
- Purity for advanced chromatography applications
- Effective removal of Volatile Organic Compounds (VOCs)
- Optimizing water for Life Science applications
- Endocrine disruptors and Phthalates

Main Advantages of our System:

- Robust Appearance, Corrosion resistance.
- Two installation: Hanging & Bench top
- Online monitors for conductivity & TDS.

Model	SMES - UPW
Flow Procedure	PF+AC+RO+DI
Deionised Water Quality- Resistivity	13-17.5 MΩ.cm
Heavy Metal Ion	<0.1ppb
Bacteria	<1/ml
Flow Rate	As per your requirement
Water Quality Monitor	Online Conductivity/TDS Meter
Electric Requirements	AC-110-220V, 50/60hz/120W

CONTACT US



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