

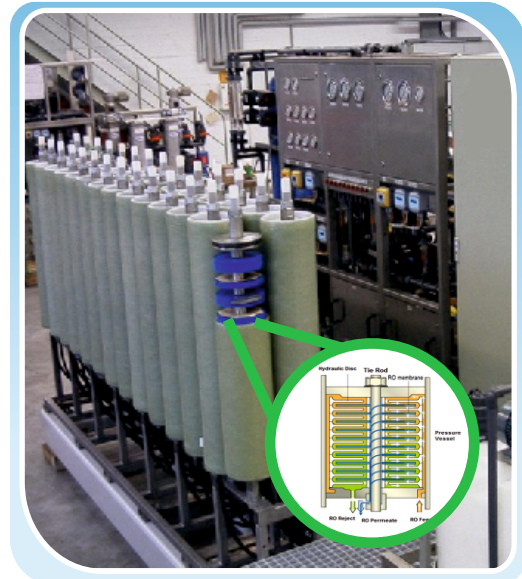
## INDION® PF/DT Reverse Osmosis System

Scarcity of clean water and stringent regulatory norms for discharge of effluent have increased dependence on alternative water sources like seawater, industrial effluent, municipal sewage, etc. However, water from these sources is unfit for drinking or industrial use unless properly treated.

Ion Exchange (India) Ltd., pioneers of water treatment in India, offers a unique INDION PF/DT Reverse Osmosis System to treat:

- Seawater for drinking water & industrial use
- Recycle of complex industrial effluents

INDION PF/DT Reverse Osmosis System, with its flat-sheet membrane technology, treats complex water with minimal pre-treatment and footprint. It produces water that has very low dissolved solids and is free from particulate, colloidal and organic matter.



### Features

- High-pressure systems to maximise recovery
- Auto and manual control of entire Reverse Osmosis (RO) plant
- Built-in safety features such as dry run protection, overload protection, etc. to prevent high-pressure pump and membrane system from damage
- Onscreen simulation of complete operation and fault indication
- Inbuilt clean-in-place (CIP) for periodic membrane cleaning

### Advantages

- Precursor to complete Zero Liquid Discharge (ZLD) & Multi-Effect Evaporator (MEE) system to reduce life cycle cost of the system
- Minimal pre-treatment [INDION Multigrade Filter [(MGF) + INDION Cartridge Filter (CF)]
- Low membrane replacement cost

- > 95% Total Dissolved Solids (TDS) removal and efficient handling of TDS fluctuation
- Reusable quality of treated water
- Smaller footprint and modular units
- Upgradable system
- Easy availability of spares & services with short delivery periods

### Applications

- Fresh water generation from seawater for army, navy, cruise liners & submarines
- Treatment of complex wastewater generated from industries like:
  - Distillery
  - Pharmaceutical & Chemical
  - Textile
  - Brewery
  - Cement
  - Tannery
  - and many more
- Landfill leachate treatment

## Typical Inlet Feed Parameters

Industry	Unit	Distillery	Pharmaceutical		Chemical	Textile
		Biomethanated Spent Wash	API	Formulation		
Total Suspended Solids (TSS)	mg/l	2000	200	200	200	200
Feed Conductivity	µs/cm	30000 - 45000	4000 - 10000	7000 - 20000	3000 - 20000	3000 - 10000
Feed TDS	mg/l	20000 - 35000	3000 - 7000	5000 - 15000	2000 - 15000	2000 - 8000
Chemical Oxygen Demand (COD)	mg/l	30000 - 40000	1000 - 5000	2000 - 5000	500 - 3000	300 - 800
Biological Oxygen Demand (BOD)	mg/l	10000 - 15000	600 - 3000	500 - 2000	200 - 1000	100 - 200
Recovery	%	50 - 70	70 - 85	60 - 75	60 - 80	70 - 85
Brix	°Bx	6 - 7	NA	NA	NA	NA
Temperature	°C	30 - 35	30 - 35	30 - 35	30 - 35	30 - 35

Note:

- The above parameters are typical & may change based on site conditions
- Higher recovery of water is possible. Contact us with detailed effluent analysis for confirmation

Ion Exchange also offers a packaged solution which includes INDION Effluent Treatment Plant (ETP), INDION RO & INDION Multi-effect Evaporator (MEE) to achieve Zero Liquid Discharge (ZLD).

**Our state-of-the-art manufacturing facilities are ISO 9001, ISO 14001 & ISO 45001 certified.**

To the best of our knowledge, the information contained in this publication is accurate. Ion Exchange (India) Ltd. maintains a policy of continuous development and reserves the right to amend the information given herein without notice. Please contact our regional/branch offices for current product specifications.

**INDION** is the registered trademark of Ion Exchange (India) Ltd.



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