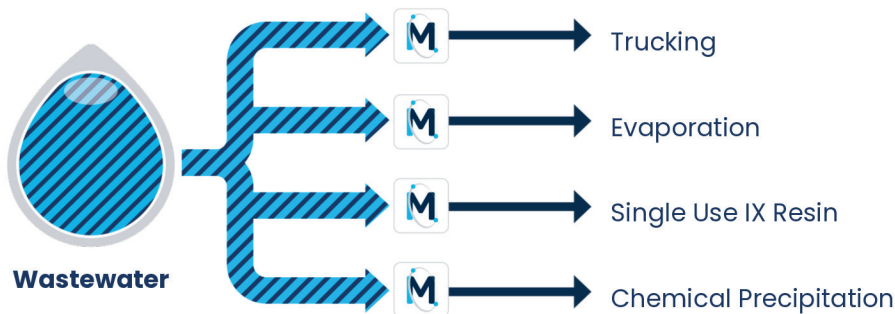


Electro-Ceramic Desalination (ECD)

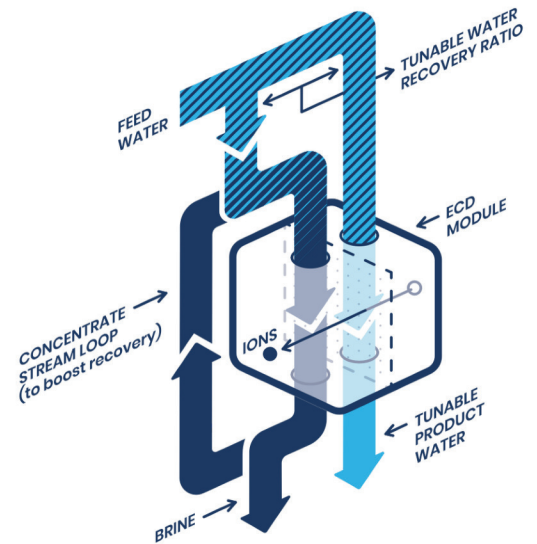
Membrion's ECD technology is based on our ion selective ceramic membrane. ECD is engineered for mass removal of dissolved minerals, salts, and metals from industrial wastewater streams and enabling ultra-high water recovery of RO brines. An electric charge is applied to move charged ionic species out of water and across Membrion's ion selective membranes - resulting in an easily managed concentrate stream and on-spec effluent stream.

What ECD Delivers

ECD is capable of mass removal of ions in TDS levels of 100,000+ mg/L, with an industry leading 95% or higher total water recovery. Through robust ceramic construction ECD is capable of operating in low pH environments at low pressure.



How ECD Works



ECD Features

- Up to 98% water recovery
- Tunable effluent TDS
- Compact and modular
- Self-cleaning
- Low organic and particle fouling
- Solvent resistant
- Scaling resistant (up to 3.5xksp CaSO₄ w/o antiscalant)
- Acid & oxidizer tolerant (pH < 1 & up to 10% H₂O₂)

IonX-1000® Module

Feed Water Requirements

pH, S.U.	0 – 10
Temperature, °F (°C)	33 – 122 (1 – 50)
Pressure	40 psi
Suspended Solids	<50 micron
Organics	Soluble non-charged
Silica, mg/L	No limit

Typical Applications

- Semiconductor
- Metal plating
- Surface finishing
- Automotive/EV
- Food and beverage
- Household care products
- Energy
- Battery
- Critical minerals



Low pressure TDS removal at high recovery



Visit our website to learn more