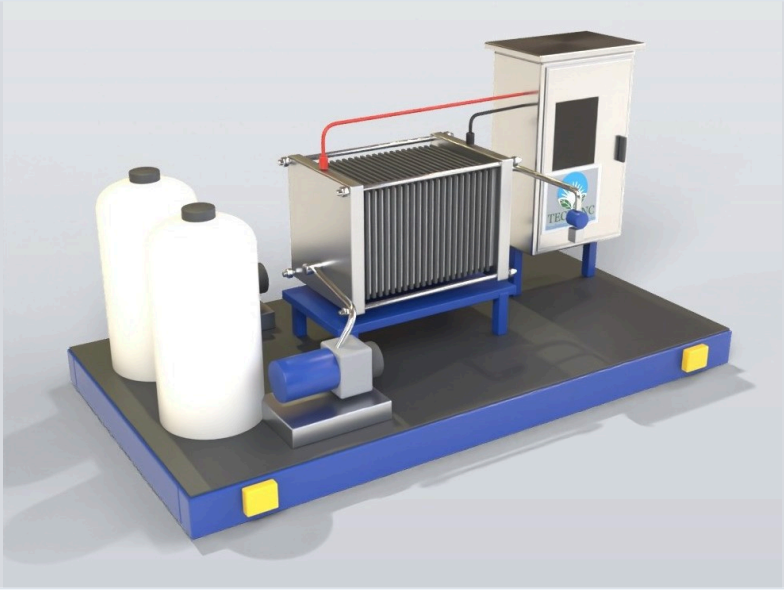
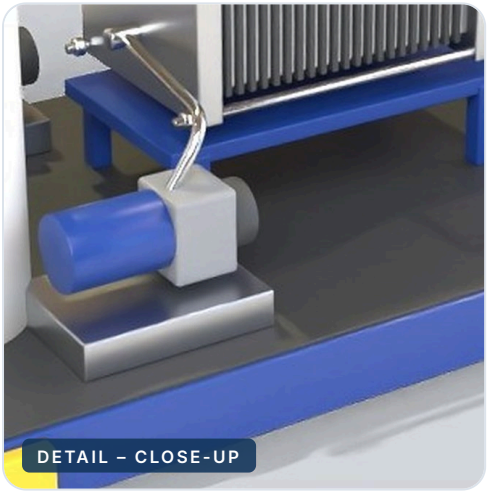
PRODUCT DATASHEET

Reverse Electrodialysis (RED) Testing System





OVERVIEW

The Tech Inc. Reverse Electrodialysis (RED) Testing System is a membrane-based energy generation platform engineered for salinity gradient power research and blue energy harvesting. The RED Testing System generates electricity from salinity gradients using alternating cation exchange membranes (CEM) and anion exchange membranes (AEM).

APPLICATIONS

Salinity gradient power (SGP) research and blue energy harvesting; ion exchange membrane characterisation and performance evaluation; desalination brine valorisation and energy recovery.

KEY ADVANTAGES

- RED stack configuration with alternating CEM/AEM ion exchange membrane pairs
- Precision electrode systems (Pt/Ti or carbon-based) for efficient current collection
- Configurable stack size for research flexibility (2 to 50+ cell pairs)
- Power density measurement with electronic load and potentiostat integration
- Digital data acquisition (DAQ) for real-time voltage, current, power, and conductivity monitoring

Designed and built by Tech Inc. · **Part of the Davey Group since 1990**

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