PRODUCT DATASHEET

Electrodialysis (ED / EDR / BPMED) Test System

Ion-exchange membrane stacks under test





DETAIL – ELECTRODIALYSIS STACK

OVERVIEW

The Tech Inc. Electrodialysis (ED / EDR / BPMED) Test System tests ion-exchange membranes and stacks for electrodialysis (ED), electrodialysis reversal (EDR) and bipolar membrane electrodialysis (BPMED). Diluate, concentrate and electrode-rinse loops are pumped through a laboratory stack while a DC supply controls current or voltage and the system logs conductivity, pH and temperature.

MODELS AND CONFIGURATIONS

- **ED system** – standard electrodialysis.
- **EDR system** – automatic polarity reversal.
- **BPMED system** – three-compartment stack for acid and base production.
- **Pilot stack** – larger cell area for scale-up.

TYPICAL DESIGN DATA

Active area	About 64 to 400 cm² per membrane
Cell pairs	5 to 20
DC supply	Up to 30 V and 10 A, programmable
Loops	Three, with conductivity and pH
Materials	PVC, PP or PVDF wetted parts

APPLICATIONS

Desalination of brackish water, brine concentration, acid and base recovery, lithium and resource recovery, and food and pharma demineralisation.

KEY ADVANTAGES

- **Three processes in one** – ED, EDR and BPMED with the same skid
- **Full data** – current efficiency and energy use calculated
- **Easy rebuilds** – stack opens for membrane changes
- **Matched to our CDI and EDI work** – one supplier for electro-membrane research

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

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