

Electrodeionization Water Purification System

This electrodeionization system purifies water using electricity, membranes, and ion exchange resins. It is constructed with stainless steel tanks, piping, and control panels.



ADDITIONAL IMAGES



System Overview

Advanced Water Purification Technology

The Electrodeionization (EDI) system represents a modern approach to producing pure and ultra-pure water. Developed in the 1990s, this technology seamlessly integrates electrodialysis with ion-exchange processes. By utilizing the selective permeability of ion-exchange membranes and the ion-exchange capacity of resins, the system effectively removes salts from water. A key advantage is the continuous regeneration of resins using H⁺ and OH⁻ ions generated from water electrolysis, eliminating the need for chemical acid or alkali regeneration.

Technical Features

Technology Type	Electrodeionization (EDI)
Regeneration Method	Continuous, Electrochemical, Chemical-Free

System Components

Key Hardware

- Ion-exchange membranes
- Ion-exchange resin beds
- DC power supply modules
- Stainless steel piping network
- Control panel

Monitoring & Control

Monitored Parameters

Conductivity • pH Level • Voltage • System Flow