

EDI Purified Water System

Electro-Deionization (EDI) Skid

Quality Product for Quality Water

The EDI Series Electrodeionization System is a revolution in chemical-free deionization that is cost-effective for all flow rates.

No regeneration chemicals are needed. No hazardous waste stream is produced. Operation is simple, continuous, and facility requirements are reduced. The EDI system has several different modules to choose from (see chart below).

Each EDI system includes the following components: EDI module(s), EDI power supply, high water recovery (optional), choice of piping material, monitoring instrumentation, and manual & automated valves. The EDI system also includes a main control panel (NEMA 4/12), which includes a PLC and OIT terminal to operate both the EDI system and components such as pre and post treatment that will interface with the system. The system is completely pre-wired and pre-piped on one skid for fast economical installation.



Typical Applications

- Pharmaceutical Preparation
- Biological Engineering
- Central Laboratory Water
- Power Industry
- Humidification
- Rinsing of Electronic Component
- Glassware Rinsing
- Preparation of Process Chemical

Standard Features

- Skid Mounted
- Integral Power Supply
- Optional Instrument
- Stainless Steel Frame
- Pressure Gauge
- Flow Meter
- Prewired/Preplumbed
- Factory Tested

Optional Items

- Hot Water Sanitizable
- Various Piping Materials
- Epoxy Coated Steel Frame
- Ultraviolet Sterilizer
- NIST Traceable Instrumentation
- High Water Recovery Design
- System Validation

Technical Data

EDI Module Design Parameter (Per Module)

Parameter	Mini MK-3	Maxi MK-3	Pharm MK-3	MiniHTMK-3	PharmHTMK-3
Product Flow	2.5 to 6.7 gpm	7.5 to 20 gpm	7 to 20 gpm	2.5 to 6.7 gpm	7 to 20 gpm
Product Quality	>16 Mohm.cm	>16 Mohm.cm	>10 Mohm.cm	>10 Mohm.cm	>10 Mohm.cm
Nominal Recovery	80 to 95%	80 to 95%	80 to 95%	80 to 95%	80 to 95%
Temperature	40 to 38°C	45 to 38°C	50 to 38°C	40 to 38°C	40 to 38°C
Inlet Pressure	45 to 100 psig	45 to 100 psig	45 to 100 psig	45 to 100 psig	45 to 100 psig

Note: HT model is designed to be fully heat sanizable.

Product Specifications

Electrodeionization (EDI) System Specifications @ 25°C

Model Number	Stock Number	Module Quantity	Min-Flowrate gpm (m3/hr)	Max-Flowrate gpm (m3/hr)	Feed / Product Pipe Size (In)	Maximum Recovery%	Concentrate In (mm)
EDI-MINI	1E715B-3EDI	1	2.5 (0.6)	6.7 (1.5)	3/4" / 3/4"	95	1/2 (1.27)
EDI-1	1E615B-3EDI	1	7.5 (1.7)	20 (4.5)	1" / 1"	95	3/4 (1.91)
EDI-2	2E618B-3EDI	2	15 (3.4)	40 (9.0)	2" / 2"	95	3/4 (1.91)
EDI-4	4E618B-3EDI	4	30 (6.8)	80 (18.2)	2" / 2"	95	1 (2.54)
EDI-6	6E618B-3EDI	6	45 (10.2)	120 (27.3)	3" / 3"	95	1 (2.54)
EDI-8	8E618B-3EDI	8	60 (13.6)	160 (36.3)	3" / 3"	95	1 (2.54)

Note: All weights and dimensions are approximate.

Feed Water Requirements*	Specifications
Feed Water Source	RO Permeate
Feed Water Conductivity Equivalent including CO ₂	< 40 µS/cm
Silica (SiO ₂)	< 1 ppm
Iron, Mn, H ₂	< 0.01 ppm
Total Chlorine (as Cl ₂)	< 0.02 ppm
Hardness (as CaCO ₃)	< 1.0 ppm
Dissolved Organics (TOC) (as C)	< 0.5 ppm
Operating pH Range	4 - 11

* If any of the feed water parameters are not within the limits given, consult one of our application specialists for assistance.

Modules	Dimension	Weight
1-2	66" W x 43" D x 86"	1400 lbs
3-4	84" W x 60" D x 86"	1700 lbs
5-6	84" W x 76" D x 86"	2000 lbs
7-8	84" W x 92" D x 86"	2300 lbs

Ordering Information

EDI Part Number Matrix

Number of RO Module

1 2 4 6 8

Module Type

E6 - MAXI MK-3 E9 - MINIHTMK-3
 E7 - MINI MK-3 E10 - PHARMHTMK-3
 E8 - PHARMMK-3

Piping Material

1 - PVC 3 - PVDF
 2 - PP 4 - SUS316L

Electrical Requirement

3 - 380/3/50 7 - 230/3/60
 4 - 420/3/50 8 - 460/3/60
 6 - 208/3/60 9 - 575/3/60

High Recovery Option

B - SUS316L Centrifugal

Controller Option

3 - PLC Controller

Unit Type

EDI - Electrodeionization System



Optional Equipment Available

- Product water divert valve
- Alternate PLC system
- EDI cell clean-in-place (CIP) system
- CPVC system piping
- Feedwater resistivity monitor
- System pressure transmitter
- Product water pressure relief valve
- Two-pass Reverse Osmosis (RO) pretreatment
- Feed/product water storage tank
- Feed/product water transfer pump system