

PureTec Continuous Electrodeionization



Electrodeionization (EDI) is the process of removing ionized or ionizable substances from water using ion exchange membranes, electrically active media (typically ion exchange resin), and a DC electric potential. EDI is used with reverse osmosis, which is an advanced environmental friendly technology on conventional mixed bed ion exchange making the process chemical-free to produce up to 18megohm-cm high purity deionized water.

Continuous demineralization in the Puretec module consists of three coupled processes:

- Ion exchange
- Continuous ion removal
- Continuous ion exchange resin regeneration

The benefits and advantages of using Puretec EDI compared to the traditional ion exchange process are:

- Operates continuously, no downtime for regenerations
- Eliminates regeneration chemicals
- Reduces energy, operating and maintenance expenses
- Minimizes space requirement
- Enables a simpler system (no concentrate recirculation) and fully shop assembled on skids to minimize site work

Reliable

Durability



Compact

Footprint



Environmental

Friendly



Energy

Efficiency



EWPO

Your Water Partner

Puretec EDI Specification

Feed Water Requirement

Parameters	
Feed Water Source	RO Permeate
Feed Water Conductivity	< 50µS/cm
CO ₂	<5mg/l
Silica (SiO ₂)	< 0.5 ppm
Iron, Mn, Sulfite	<0.01 ppm
Total Chlorine/Chloramine	< 0.05 ppm
Hardness	< 1.0 ppm
TOC	< 0.5 ppm
Operating pH range	5-9
Operating Temperature	41 – 108F (5 – 42°C)
Inlet Pressure	2-4.5bar/29-65.3psi

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

Puretec EDI Parameters

Parameters	PLX-100	PLX-200	PLX-300	PLX-450
Nominal product flow (m ³ /h/gpm)	1	2	3	4
Flow range (m ³ /h/gpm)	0.5-1.2/2.2-5.3	1.5-2.2/6.6-9.7	2.5-3.5/11-15.4	4.0-5.0/17.6-22.0
Product resistivity (MΩ.cm)	≥15	≥15	≥15	≥15
Operating current (A)	≤6	≤6	≤6	≤6
Operating voltage (V)	≤200	≤200	≤200	≤200
Feed pressure (bar/psi)	2-4.5/29-65	2-4.5/29-65	2-4.5/29-65	2-4.5/29-65
Recovery ratio (%)	90	90	90	90

EDI stacks are ideally used in power generation for boiler feed water and NOx control, semiconductors, microelectronics, laboratory and pharmaceutical application.



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