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## RO EDI Ultra Pure Water System



### 1. Specification:

Continuous electrodeionization device: It integrates electro dialysis technology and ion exchange technology scientifically, realizing the directional migration of ions in water under the action of electric field through the selective permeation of cations and anions by anodic and anionic membranes and the exchange of ions in water by ion exchange resin, so as to achieve the deep purification and desalting. The hydrogen ion and hydroxide ion produced by water electrolysis, in this way, the filled resin will be regenerated continuously, so the EDI can produce high-quality ultra-pure water continuously without regeneration of acid and alkali chemicals. It has the advanced technology, compact structure and simple operation. It is a green revolution of water treatment technology. The product water quality has the best stability, and the resistance can reach 10-18 MΩ·cm(25°C) .

### 2. Application:

- 2.1) Semiconductor and electronics industry - Ultra pure water
- 2.2) Biological and pharmaceutical industries - Purified Water
- 2.3) Power plant-boiler supplementary water
- 2.4) Surface coating
- 2.5) Consumer goods and cosmetics industry
- 2.6) Replacement of distilled water

### Feeding water quality requirements:

Water source: Reverse osmosis product water, conductivity 1-20μS/cm, maximum permissible conductivity < 50μ S/cm (NaCl).

PH value: 5.5-9.5 (pH between 7.0-8.0, EDI has the best water resistivity)

Temperature: 15°C -35°C (The optimum temperature of EDI is at 25°C)

Inlet pressure (DIN) :0.2-0.4MPa

Concentrated water intake pressure (CIN): Lower than DIN end pressure at 0.05-0.1 MPa (Must)

Product water pressure (DOUT): 0.05-0.25 MPa

Concentrated water outlet pressure (COUT): Lower than DOUT end pressure at 0.05-0.1 MPa (Must)

Feeding water hardness: <0.5ppm

Influent organic matter: TOC<0.5ppm

Influent oxidant: Cl<sub>2</sub> (activity) < 0.03 ppm, O<sub>3</sub> (ozone) < 0.02 ppm, HO (hydroxyl oxygen) < 0.02 ppm

Influent heavy metal ions: Fe, Mn, variable valence metal ions < 0.01 ppm

Influent silicon: SiO<sub>2</sub> < 0.5 ppm (typical range of RO product water is 50-150 ppb)

Total influent CO<sub>2</sub>: <5ppm

Influent granularity: < 1 micron

#### 4. Parameter:

Specification	Product water capacity (m <sup>3</sup> /h)	Recovery rate (%)	Product water resistivity (MΩ.cm)	Voltage (DCV)	Electric current (DCA)	Size (L*W*H)
50	0.3-0.75	80-95	16-18	≤60	≤5.0	320*690*320mm
100	0.8-1.4	90-95	16-18	≤125	≤5.0	400*690*320mm
200	1.5-2.4	90-95	16-18	≤125	≤5.0	590*690*320mm
300	2.5-4.5	90-95	16-18	≤170	≤5.0	720*690*320mm

#### 4.1) Pictures of the Ultra pure water equipment

##### EDI Module:





RO+EDI system:

