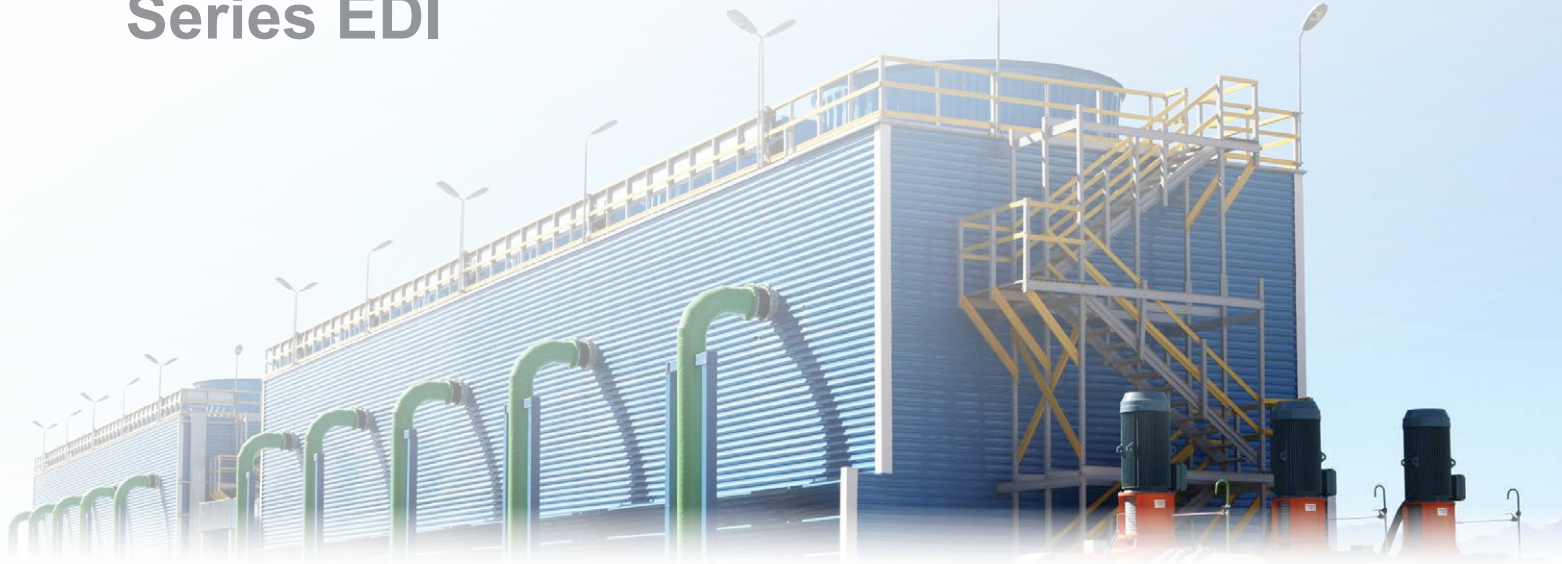


# Electro-deionization Systems

## Series EDI



### Standard Features

- No regenerant required for regeneration, EDI does not consume salt and recycle the concentrate in operation, which saves much expense and makes the system much simpler.
- Less fouling design, concentrate and electrolyte stream are flowing into EDI in opposite directions to feed water can avoid fouling effectively. Then it broadens the feed water limit adequately.
- Low energy consumption, EDI filled with resin reduces the EDI module resistivity significantly, which reduces the energy consumption largely.
- Carbon coated steel frame
- Control panel
- LCD screen
- Liquid filled pressure gauges
- Flow meters
- Resistivity meter
- Factory tested to insured quality
- 1 Year warranty



Model EDI-20

## Electro-deionization (EDI)

EDI is a process which combines semi-impermeable membrane technology with ion-exchange media to provide a high efficiency demineralization water up to 18 MΩ.

EDI employs electrical current and specially-prepared membranes which are semi permeable to ions based on their charge, electrical current, and ability to reduce the ions based to their charge. Through electro dialysis an electrical potential transports and segregates charged aqueous species. The electrical current is used to continuously regenerate the resin, eliminating the need for periodical regeneration.

The EDI process produces industrial process water of very high purity, using less than 95% of the chemical products used in the conventional ion exchange processes. With EDI system membranes and electricity replace the million gallons of acid and caustic chemicals that the old processes required daily.

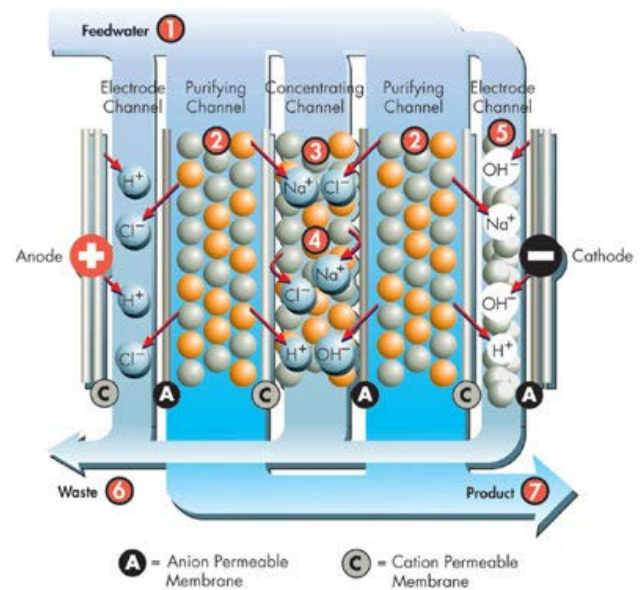
## EDI Module

An EDI Module consists of a series of thin chambers that alternately contain mixed bed resin for water purification and a concentrate water flow to carry away impurities. Ion-specific membranes, cationic on one side and anionic on the other, separate the chambers.

A cationic-specific membrane will only allow positively charged ions to pass, while blocking the passage of negatively charge ions. An anionic-specific membrane does just the reverse. Neither membrane will allow water to pass.

High voltage DC Electrodes are located on either side of the sandwiched resin/concentrate chambers. There can be from 4 to 100 resin chambers in an EDI cell, depending on the manufacturer.

As water begins to flow through the cell, the charged ions in the water in a resin chamber are captured by the ion exchange resin. When a voltage is applied (200-400 VDC) across the cell, the captured cationic (+) and anionic (-) impurities begin to migrate across the resin bed in the direction of the appropriate electrode. The ions then pass through the ion-specific membranes into the concentrate chamber. The ions are kept in the concentrate chamber by the reverse charged membrane on the adjacent resin chamber, thus trapping them in the concentrate stream.



## Applications

- Paints
- Chemicals
- Cosmetics
- Pharmeceticals
- Semiconductors
- Electronics
- Plating
- Boiler feed
- Film processing
- Electrodeposition
- Metalworking lubricants
- Glassware rinse
- Hospitals/Medical
- Food/Beverage processing

- **No regenerant required for regeneration**  
EDI does not consume regenerant and recycle the concentrate in operation, which saves much expense and makes the system much simpler.
- **Less fouling design**  
Concentrate and electrolyte stream are flowing into EDI in opposite directions to feed water can avoid fouling effectively. Then it broadens the feed water limit adequately.
- **Low energy consumption**  
EDI filled with resin reduces the EDI module resistivity significantly, which reduces the energy consumption largely.



Model CP-1000S      Model CP-5800S

EDI Module Specification	Model				
	CP-1000S	CP-2000S	CP-3600S	CP-4500S	CP-5800S
Maximum voltage (V)	100	120	240	300	450
Maximum current (A)	5.5	5.5	5.5	5.5	5.5
Product Flow (m <sup>3</sup> /hr)	1.0	2.0	3.0	4.0	5.0
Concentrate flow (m <sup>3</sup> /hr)	0.15	0.2	0.3	0.45	0.65
Electrolyte flow (m <sup>3</sup> /hr)	0.06	0.06	0.06	0.06	0.06

## EDI System

An EDI system comes complete with

- EDI Modules
- Flow meters
- Pressure gauges
- Flow switch
- Inlet/Outlet water conductivity meter
- Auto inlet water diverter valves with controller
- Auto outlet DI water diverter valves with controller
- Control panel
- Carbon Coated Steel Frame



Model EDI-20

Ordering Information						
Model	Capacity m <sup>3</sup> /hr	EDI Module	Numbers of EDI Module	Power/Phase	Dimension L x D x H (cm)	Approx weight (kg)
EDI-01	1	CP-1000S	1	220V/1ph	60 x 70 x 90	100
EDI-02	2	CP-2000S	1	220V/1ph	60 x 70 x 90	115
EDI-03	3	CP-3600S	1	220V/1ph	60 x 70 x 90	120
EDI-04	4	CP-4500S	1	220V/1ph	60 x 70 x 90	125
EDI-05	5	CP-5800S	1	220V/1ph	60 x 70 x 90	150
EDI-10	10	CP-5800S	2	380V/3ph	60 x 70 x 90	250
EDI-15	15	CP-5800S	3	380V/3ph	150 x 125 x 150	300
EDI-20	20	CP-5800S	4	380V/3ph	150 x 125 x 150	350
EDI-25	25	CP-5800S	5	380V/3ph	150 x 125 x 180	400
EDI-30	30	CP-5800S	6	380V/3ph	250 x 125 x 180	450
EDI-35	35	CP-5800S	7	380V/3ph	250 x 125 x 180	500
EDI-40	40	CP-5800S	8	380V/3ph	350 x 125 x 180	550
EDI-45	45	CP-5800S	9	380V/3ph	350 x 125 x 180	600
EDI-50	50	CP-5800S	10	380V/3ph	350 x 125 x 180	650
EDI-75	75	CP-5800S	15	380V/3ph	450 x 125 x 180	900

Design, specification and materials subject to change without notice.

# Options



## Media Filters and Softeners

Anthracite : for Sediment Removal  
Manganese Green Sand : For Stain Removal  
Activated Carbon : for Chlorine, Tastes and Odors Removal  
Resin : for Hardness Removal



## RO Systems

- Series PRO48, capacity of 1.5 - 3.0 m<sup>3</sup>/hr
- Series PRO88, capacity of 6-18 m<sup>3</sup>/hr



## Booster Pumps

For boosting the constant pressure to the filter tanks and offering smooth filtration and high efficiency. Consists of single or double pumps , diaphragm pressure tank, pump controller with pressure switch or float switch.



## Microfiltration Systems

Multi-Cartridge Filter and Housings provide a high quality solution for high-volume microfiltration up to 825 m<sup>3</sup>/hr. Ideal for use in post-filtration and more. SS304 or FRP housings fit standard 40" filter cartridges. Filters cartridges are nominal micron rating 1-50 micron.



## Ozone Systems

- Ozone can literally oxidize material in water 3,200 times faster than chlorine
- Ozone is the best choice for bacterial disinfection and inactivation of viruses.
- Ozone can precipitates iron, manganese, sulfides, nitrites and organometallics.
- Ozone can oxidize organics causing color, taste and odor problems, some detergents and pesticides, phenols, VOCs, turbidity control and micro flocculation of soluble organics.

Please request more information

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