EDI principle

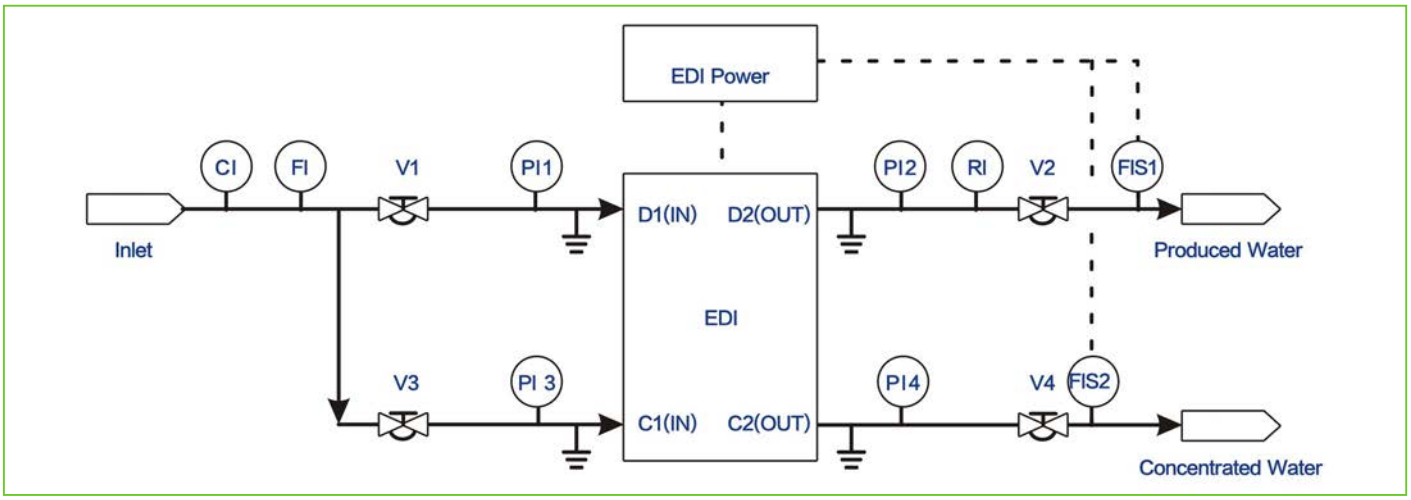
EDI is a kind of pure water manufacturing apparatus that applies to ion exchange technology, ion exchange membrane technology and ion electric migration technology. It is wisely combined electro dialysis with ion exchange technology, by using of high-voltage electrodes at both ends to drive charged ion in the water to move, and with ion exchange resin and selective resin membrane to accelerate ions moving, so as to achieve the purpose of water purification. EDI has the features of easy operation and excellent environmental protection. It is a green revolution in high pure water producing.

FEED WATER REQUIREMENT

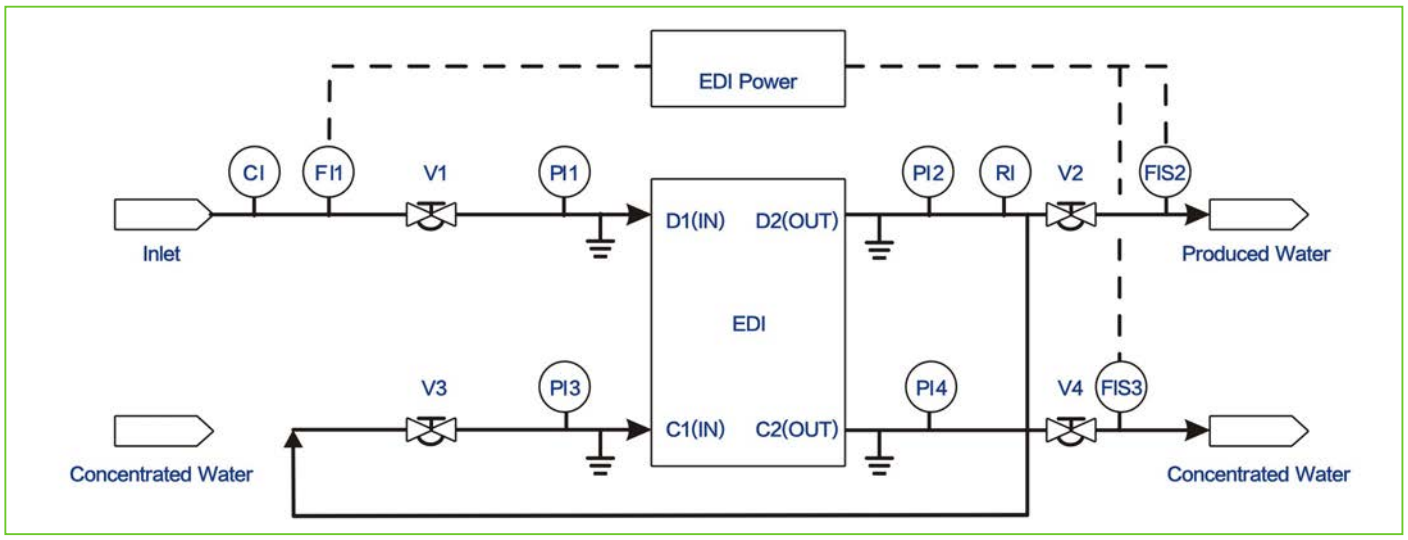
1. Resource: RO water, conductivity <20 μs/cm, better <10 μs/cm
2. PH: 6.5-9.0
3. Water temperature: 5-35 °C
4. Hardness (as CaCO3): <0.5 ppm
5. Organics: <0.5 ppm, TOC recommended to be 0 ppm
6. Oxidizers: <0.05 ppm, Cl2: 0.05 ppm, O3: 0.02 ppm, better both to be 0 ppm
7. Metals: <0.01 ppm
8. Silica: <0.5 ppm
9. Carbon dioxide: <5 ppm
10. Oil: not detectable

PROCESS DIAGRAM

Plan A



Plan B



Note:

D1 - fresh water inlet
D2 - produced water outlet
C1 - concetrated water inlet
C2 - concetrated water outlet
CI - conductivity meter
FI - flow meter
V - valve
PI - pressure gauge
RI - resistivity meter

EDI

Item	EDI-P-50L	EDI-P-100L	EDI-P-200L
Product flow (l/h)	50	100	200
Recovery (%)	70-80	70-80	70-80
Resistivity (MΩ.cm)	≥15	≥15	≥15
Voltage (DCV)	24-30	32-40	40-50
Current (DCA)	0.5-1.0	0.5-1.0	0.5-1.0
Max pressure (Mpa)	0.4	0.4	0.4
Size of fresh/Produced pipe	DN6	DN6	DN8
Size of concentrate Inlet/Outlet pipe	DN6	DN6	DN8

Item	L (mm)	W (mm)	H (mm)	L1 (mm)	W1 (mm)	Ø1	Ø2	Ø3
EDI-P-50L	115	155	330	135	70	DN6	DN6	DN8
EDI-P-100L	145	155	330	165	70	DN6	DN6	DN8
EDI-P-200L	205	155	330	225	70	DN8	DN8	DN8

Item	EDI-P&F-0.5-HP	EDI-P&F-1.0-HP	EDI-P&F-2.0-HP	EDI-P&F-3.0-HP	EDI-P&F-4.0-HP
Product flow (t/h)	0.5	1.0	2.0	3.0	4.0
Min product flow (t/h)	0.3	0.7	1.4	2.4	3.2
Max product flow (t/h)	0.7	1.5	2.5	3.8	4.8
Recovery (%)	85-95	90-95	90-95	90-95	90-95
Resistivity (MΩ.cm)	≥15	≥15	≥15	≥15	≥15
Voltage (DCV)	9-18	15-30	30-60	45-90	60-120
Current (DCA)	2-5	2-5	2-5	2-5	2-5
Inlet pressure (Mpa)	0.10-0.3	0.10-0.3	0.15-0.4	0.15-0.4	0.15-0.4
Max pressure (Mpa)	0.7	0.7	0.7	0.7	0.7
Size of fresh/Produced pipe	DN25	DN25	DN25	DN25	DN25
Size of concentrate Inlet/Outlet pipe	DN15	DN15	DN15	DN15	DN15

Item	L (mm)	W (mm)	H (mm)	L1 (mm)	W1 (mm)	a	Ø1	Ø2	Ø3	Ø4	Ø5
EDI-P&F-0.5-HP	152	310	680	195	197	35	DN25	DN25	DN15	DN15	M8
EDI-P&F-1.0-HP	215	310	680	255	197						
EDI-P&F-2.0-HP	365	310	680	410	197						
EDI-P&F-3.0-HP	520	310	680	550	197						
EDI-P&F-4.0-HP	665	310	680	705	197						