

EP 300 - 2,200

Ultrapure water units (EDI)

The ultrapure water unit is used to produce diluate with a typical conductivity $< 0.2 \mu\text{S}/\text{cm}$ by treating reverse osmosis permeate via electrodeionisation (EDI). It is equipped with high quality EDI modules and a Siemens LOGO! controller.

BENEFITS

- Diluate with typical conductivity $< 0.2 \mu\text{S}/\text{cm}$
- Prepared for direct connection to an RO unit
- Piping in PP

APPLICATIONS

- For further demineralisation of RO permeate
- For pharmaceutical or laboratory applications, power plants and microelectronics



EP 900

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DESCRIPTION

Pure water system

- Base frame made of stainless steel with plastic front panel
- Electrodeionisation module(s) for continuous desalination of RO permeate
- Control cabinet with lockable main switch and rectifier for power supply to the EDI module(s)
- System piped and wired, electrical structure according to VDE 0100 Part 600, VDE 0113 Part 1
- System tested in our own test field, parameterised and preserved

Fittings and instrumentation

- Sampling valves for EDI feed water and diluate
- Diaphragm valve for adjusting the EDI concentrate flow rate
- Manometer with vibration damping for EDI feed water pressure, EDI concentrate inlet pressure and diluate outlet pressure
- Flow meter (rotameter) for EDI feed water, EDI concentrate and electrode rinsing water
- Flow monitoring of EDI concentrate
- Resistance measurement diluate with temperature compensation acc. to ASTM D 1125-95, measurement range 0 - 20 MΩ x cm

Logic controller Siemens LOGO!

- Digital display of current and voltage EDI module(s)
- Precision potentiometer for setting the EDI voltage
- Fault displays for low flow EDI concentrate, rectifier fault, resistance diluate too low

Available outputs

- DIGITAL: Collective error message as potential-free changeover contact

CONDITIONS OF USE

The unit is designed for a permeate conductivity of 4-20 $\mu\text{S}/\text{cm}$, a CO_2 concentration of 10 mg/l and free diluate discharge. The feed water must be softened (< 0.05 °dH) and treated via a reverse osmosis unit without a permeate buffer. The diluate quality depends on the permeate quality. In addition, the following parameters must be maintained in the feed water:

Free chlorine	not detectable
Silica (SiO_2)	0.5 mg/l
Silt density index (SDI)	< 0.25
Feed water temperature	5 – 35 °C
Feed water pressure	2 – 4 bar
Pressure fluctuation	± 0.5 bar

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TECHNICAL DATA OF SERIES

Controller	PLC Siemens Logo
Resistance diluate without CO2 binding	5 MΩ x cm
Resistance diluate with CO2 binding	10 MΩ x cm
Recovery	90 – 95 %
Diluate backpressure max.	1.0 bar
Ambient temperature	5 - 40 °C

Product name	Mains connection	Hydraulic connection	Dimensions in mm	Item number
Diluate l/h	kW / V / Hz	feed/diluate/conc.	W x D x H	
EP 300	2.1 / 3 x 400 / 50	DN 20 / DN 20 /	1,040 x 690 x 1,610	425 101
EP 900	2.1 / 3 x 400 / 50	DN 20 / DN 20 /	1,040 x 690 x 1,610	425 121
EP 1500	2.1 / 3 x 400 / 50	DN 20 / DN 20 /	1,040 x 690 x 1,610	425 141
EP 2200	3.1 / 3 x 400 / 50	DN 20 / DN 20 /	1,040 x 690 x 1,610	425 151