Fact Sheet

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E-Cell MK-3MiniHT

Industrial Electrodeionization (EDI) Stacks

E-Cell MK-3MiniHT is designed to

- Provide ultrapure water for pharmaceutical applications.
- Hot water sanitizable up to 85 °C for 160 cycles.
- Produce Ultra Pure quality water on a continuous basis.
- Require no caustic or acid for regeneration of ion exchange resin within the stack.
- Require no stack bolt tightening.
- Be leak free, guaranteed.
- Eliminate brine injection and concentrate recirculation, simplifying system design

Description and use

E-Cell MK-3PMiniHT stacks are hot water sanitizable EDI stacks which use electrical current to deionize and polish reverse osmosis (RO) permeate water. The product water quality for the system is at greater than USP quality levels required in today's Pharmaceutical applications.

Typical Applications

- Pharmaceutical
- Laboratory Semiconductor

Quality Assurance

- CE, UL & CSA marked
- Manufactured in a ISO 9001:2000 facility

MK-3PharmHT Stack Specifications		
Nominal flow	1.14	m³/h
Maximum flow	0.5 to 1.52	m³/h
Shipping weight, approx.	49	kg
Dimensions (w x h x d), approx.	30 x 61 x 28	cm

Typical Performance		
Product Quality		
Resistivity	> 10	MOhm·cm
TOC (as C)	< 500	ppb
Hot Water Sanitization		
No. of 1hr sanitization cycles	160	cycles
Sanitization temperature	80 to 85	°C
Max. sanitization inlet pressure	2.1	bar
Operating Parameters		
Recovery	Up to 95	%
[1]Concentrate flow	Counter current to Product flow	
Voltage	0 to 150	VDC
Amperage	0 to 5,2	ADC
Inlet Pressure (Counter Current) (Co-Current)	4,1-6,9 3,1-6,9	bar bar
Pressure Drop at Nominal Flow	1,4-2,8	bar

Maximum Feedwater Specifications		
Feedwater – Total Exchangeable Anions (TEA as $CaCO_3$)	< 25	mg/l
Feedwater – Conductivity, $NaHCO_3$ equivalent	< 43	µS/cm
Temperature	5 to 40	°C
Total hardness (as $CaCO_3$)	< 1.0	mg/l
Silica (SiO2)	< 1.0	mg/l
Total Organic Carbon, TOC as C	< 0.5	mg/l
Total Chlorine	< 0.05	mg/l

Actual performance may vary depending on site conditions. Reference E-Calc projection software to verify actual performance.
Patents pending.

[1]Co-flow operation is acceptable when feed hardness concentrations are <0.1 ppm as $CaCO_3$.

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