



SNOWPURE

Water Technologies

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EDI Operating Feed Water Specifications:

The following are requirements to operate within SnowPure's limited warranty. Optimum performance from Electropure™ EDI modules will result if values that are more stringent are set as design goals.

Specification	Notes	Working Range	Optimum Performance
Feedwater Source	RO water, direct feed, or with intermediate break tank plus filter		
EDI Feed Conductivity	Ionic load determines size of the working bed and polishing bed within the EDI	1-20 µS/cm	1-6 µS/cm
Feedwater Conductivity Equivalent**	FCE = Conductivity + 2.79*CO ₂ +1.94*SiO ₂ <i>see note below**</i>	< 33 µS/cm	< 9 µS/cm
pH	Low pH feedwater typically indicates the presence of CO ₂ which will decrease quality.	5.0-9.5	7.0-7.5
Total CO ₂	Combined CO ₂ and HCO ₃ ⁻	<5 mg/l as CO₂	<2 mg/l
Temperature		5°C to 35°C	20 to 30°C
Hardness	Ca ⁺ and Mg ⁺ as CaCO ₃	<1.0 ppm at 90% recovery	
Organics	TOC	< 0.5 ppm	Not Detectable
Metals	Fe, Mn, transition metals	< 10 ppb	Not Detectable
Silica, SiO ₂	Typically dissolved, reactive	< 0.5 ppm	< 0.2 ppm
Oxidizers	Cl ₂ and O ₃ , typically	Not Detectable	Not Detectable
Particles	Recommended direct feed particle-free RO permeate, or 1 µm pre-filtration of feed from intermediate tank		
Inlet Pressure	Depends on flow and temperature	5 bar (75 psi) max	2-3 bar typical
Outlet Pressure	Concentrate and Electrolyte outlet pressures to be lower than the Product outlet pressure		

** FCE example:

$FCE = \text{Conductivity} + 2.79*(CO_2) + 1.94*(SiO_2)$, so if conductivity=5.0 µS/cm, CO₂=3.5 mg/l, SiO₂=0.5 mg/l, then FCE = 5.0 + 2.79*(3.5) + 1.94*(0.5) = 15.7 µS/cm.