IONPURE

CEDI Performance Projection - VanAndel Institute GMP

System Summary

Product Flow Rate	3.3 gpm
Module Type	MX500
Number of Modules	1
Flow Per Module	3.30 gpm
Conductivity @ 25°C	29.9 uS/cm
Feed water conductivity equivalent, including CO2	30.02 uS/cm
Total Exchangeable Anions (TEA)	11.9 ppm CaCO3
System Recovery	95.00%
Product Resistivity	6.37 MegOhm-cm
Salt Rejection	99.48%
Pressure Drop	33.8 psi

Water Analysis

Species	Inlet	Outlet	Concentrate	Units
NH4				ppm NH4
K				ppm K
Na	5.44	0.028	108.8	ppm Na
Mg				ppm Mg
Ca				ppm Ca
Sr				ppm Sr
Ba				ppm Ba
Fe				ppm Fe
Cu				ppm Cu
Al				ppm Al
Mn				ppm Mn
CO3				ppm CO3
HCO3				ppm HCO3
NO3	.18	0.001	3.6	ppm NO3
Cl	8.10	0.042	162	ppm Cl
F	.03	0	0.6	ppm F
SO4	.17	0.001	3.4	ppm SO4
SiO2	.06 ppm	5.4 ppb	1.2 ppm	SiO2
CO2				ppm CO2
pH	7			
Temp. °C	25			

This projection is an estimate of performance and not a guarantee.

Feed total chlorine level must be less than 0.02 ppm as Cl2 at CEDI inlet. Start/stop systems require RO pre-service permeate flush to drain. Maximum inlet pressure is 100 psig (6.9 bar). The maximum possible recovery for all modules is 95%. If the hardness is greater than 0.2 ppm as CaCO3, or Silica greater than 0.5 ppm as such, the maximum recovery is 90%. However, the minimum reject flow is 0.16 gpm (40 lph) per module, which may limit the overall recovery. Please note that effluent silica can not be guaranteed if the influent is greater than 0.5 ppm as silica.
Required power supply is 600 VDC/2.5 amps per module.
The power supply board part number is: IP-600VPCB

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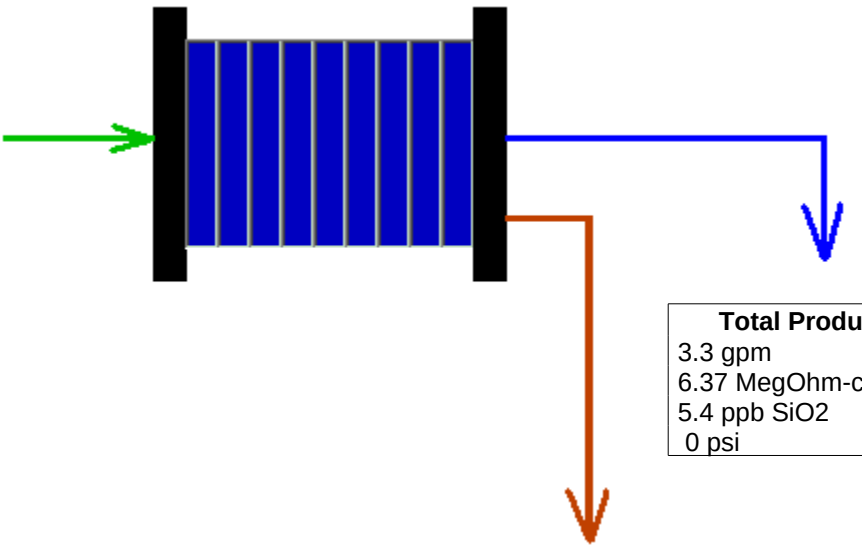
Power Consumption **		MX500
1 Module	0.298	kW
Total	1.43	kWh/kgal

Required power supply is 600 VDC, 2.5 amps per module.
The power supply board part number is:IP-600VPCB

Total Feed
3.47 gpm
29.9 uS/cm
(30.02 uS/cm FCE)
.06 ppm SiO2
0 ppm CO2
25 °C
33.8 psi



Total Product
3.3 gpm
6.37 MegOhm-cm
5.4 ppb SiO2
0 psi

Total Reject
0.17 gpm

** These numbers are estimates only. Power may have to be adjusted based on specific product quality targets.