

Capacitive Deionization Fact Sheet



Atlantis Technologies
Cost-effective Wastewater Desalination



System features:

- Lowest cost of ownership (up to 70% less than RO)
- High water recovery (up to 95%)
- Adjustable outlet conductivity
- Zero pre-treatment chemicals
- Long membrane lifetime
- Scalable to hundreds of m³/hr
- Removes hardness, sulfates, alkalinity, heavy metals
- Easy to backwash

Feedwater Requirements

• Silica	No limit
• Hardness/Alkalinity	No limit
• Fe/Mn	< 10 ppm
• TSS	< 30 ppm
• SDI	< 5
• Turbidity	< 1
• COD	< 10 ppm

Instrumentation

- Inlet & outlet conductivity
- System flow rates
- Power usage
- Inlet pressure

System Performance

• Recovery	Up to 95%
• Salt Removal	Up to 95%
• Silica Removal	None
• Input Power	380VAC/3P
• Temperature	40 – 160F
• Max Feed Pressure	6 bar

Standard System

- 24 Cylinders (Atlantis RDI-6 series)
- 2-24VDC power supply for capacitors (Meanwell)
- Inlet flow rate up to 200 gpm
- Basic inlet cartridge filters and centrifugal pump
- Automation Direct PLC & HMI, flow meter, etc.

Atlantis Radial Deionization System

The Atlantis RDI-6 Capacitive Deionization System is a low cost, high recovery, desalination system for use on brackish groundwater, industrial wastewater, cooling tower feed water, RO reject, and other wastewater sources.

RDI 6 Standard System

Model	RDI-6-6	RDI-6-12	RDI-6-18	RDI-6-24
	Flow Rates (m ³ /hr)			
Nominal Inlet Flow Rate	0.8	1.7	2.5	3.4
Inlet Flow Rate Range	0.5 - 1.4	1.0 - 2.5	1.25 - 4.0	1.5 - 5.0
Nominal Clean Outlet Rate	0.7	1.4	2.1	2.9
Nominal Max Clean Flow Rate	1.0	2.1	3.1	4.2
Inlet Conductivity Range (uS)	<5,000 uS	<5,000 uS	<5,000 uS	<5,000 uS
	General Info			
Cylinder Quantity	6	12	18	24
Cylinder Model	S-10V-PVC	S-10V-PVC	S-10V-PVC	S-10V-PVC
Height (cm)	168	190	190	190
Width (cm)	127	127	127	127
Length	183	153	275	275
Inlet/Outlet Pipe Diameter (mm)	40	40	40	40
Weight (kg)	300	675	1050	1500
Max Power Draw (kW)	3.5	5.5	11.0	11.0



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