

Water Tech

Technical Specification Development Kit

Voltea's Development Kit (DK) Programme is a versatile evaluation tool that allows a fast and simplistic exploration of the potential for CapDI for your application.

Operating the reduced sized Industrial Series C Modules, or the Appliance VS Modules, you can establish a baseline representation of a full size system. Included with every DK purchase is a tailored testing programme to ensure clients experience the full capabilities of CapDI technology in relation to their specific application.

CapDI Benefits

- Patented Membrane Capacitive Deionization (CapDI) technology
- Tuneable TDS reduction, up to 95 %
- High water recovery, up to 95 %
- Complete system monitoring and feedback

Design and Scope of Supply

- DK System including built in monitoring; flow, pressure, conductivity, module voltage and current
- Laptop and control and monitoring software
- Reduced size Industrial or Appliance design CapDI Modules
- DK System User Manual
- On-site installation and training package
- Two 5 µm filters
- 10 hours support and guidance from CapDI experts

DK Features

Conductivity Meters	0 - 10 mS/cm (In/Out)
Total Flow Meters	0 - 10 L/min (0.05 - 2.5 gpm)
System Pressure	0 - 2,5 bar (0 - 40 psi)
Module Voltage	0 - 3 V
Module Current	0 - 240 A
<i>(Operational range of instrument)</i>	

- In-line 10" slim-line filter housing with 1 µm filter
- Intuitive control program and laptop
- System monitoring and data recording
- Data analysis and calculation templates



Feed Water Quality

Parameter	Unit	Range	Intermittent
Removal Limit	Δppm	0 - 2000	
Total Dissolved Solids	ppm	0 - 4000	
Total Organic Carbon	ppm	<15	
Chemical Oxygen Demand	ppm	<50	<100
Turbidity	NTU	<4	<100
Fats, Oils, Greases	ppm	<0,5	
Total Suspended Solids	ppm	<4	<20
Free Chlorine	ppm	<1	<25
pH	-	2 - 10	1 - 12
Iron Total	ppm	<0,5	
Total Hardness (as CaCO ₃)	ppm	<1000*	
M Alkalinity (as CaCO ₃)	ppm	<1000*	
Pre-filtration	µm	5	
Temperature	°C	5 - 60	
	°F	40 - 140	
Chemicals		Contact Voltea	

**Limits depend on set TDS reduction and water recovery*

Quality Assurance

- CE Certified
- Systems and Modules Quality Control Tested
- Factory Acceptance Test on request

DK System Specification

	System	DK Low Range (LR)	DK High Range (HR)
Performance	Flow Rate Capacity*	0,2 - 2,5 L/min (0.05 - 0.7 gpm)	1,0 - 10,0 L/min (0.3 - 2.5 gpm)
	Salt Removal	25 - 95 %	
	Water Recovery	40 - 95 %	
System Specification	System Power Requirement	Single - Phase (110 - 240 V-AC / 50 - 60 Hz)	
	Power Output to Modules	1 - 60 A / 0 - 10 V DC	5 - 240 A / 0 - 3 V DC
	System Dimensions length x width x height	75 x 50 x 60 cm (2'6" x 1'8" x 1'11")	
	Service Space	0,8 m around system (2'7" around system)	
	Weight	29 kg (65 lb)	30 kg (67 lb)
	Feed Inlet Coupling	10 mm tubing push-in connection (3/8")	20 mm tubing coupling (1/2")
	Product Outlet Coupling	10 mm tubing push-in connection (3/8")	12 mm tubing push-in connection (3/8")
System Requirements	Water Feed **	Test barrel	
	Water Temperature **	5 - 60 °C (40 - 140 °F)	
	Operating Ambient Air Temperature	5 - 35 °C (40 - 95 °F)	
Inputs and Outputs	Control	Voltea laptop control program	
	Data Output	txt. file format for Voltea analysis template	
Recommended Modules		VS1, VS2, VS3, C-3	VS3, C-3, C-6

* Actual flow will depend on module used and settings

** Please contact Voltea if unavailable