



FRACTIONAL ELECTRODEIONIZATION FEDI-2 SPECIFICATIONS

10X, 20X AND 30X

FEDI[®] stacks are designed to produce high purity water up to 18 M Ω.cm using a patented process with double sets of electrodes per stack. FEDI[®] replaces mixed bed technology and produces pure water continuously without the use of regeneration chemicals. Applications include the semiconductor, power, food & beverage and pharmaceutical industry.



Features FEDI-2

FEDI-2 is available in two operating modes: Dual Voltage (DV) and Single Voltage (SV). The stacks contain media on the concentrate side which eliminates the need for salt injection.

DV Mode:

- High hardness tolerance, reducing cleaning frequency and increasing stack reliability
- Apply after single pass RO, lowering overall system cost
- Low feed pressure, no counter current operation required
- Improved removal of strongly and weakly ionized impurities
- No concentrate recirculation

SV Mode:

- Reduced hardness tolerance
- Excellent product water quality
- High recovery

Stack Flows:

Parameters	Unit	10X	20X	30X
Typical Product Flow	m ³ /hr	1.2*	2.3*	3.5*
	gpm	5.2	10	15.4
Maximum Product Flow	m ³ /hr	1.7	3.3	5.0
	gpm	7.5	14.5	22
Minimum Product Flow	m ³ /hr	0.5	1.0	1.5
	gpm	2.2	4.4	6.6
Max. Concentrate Flow DV mode	m ³ /hr	0.16	0.33	0.5
	gpm	0.7	1.45	2.2
Max. Concentrate Flow SV Mode	m ³ /hr	0.09	0.17	0.25
	gpm	0.4	0.7	1.1
Electrode Rinse Flow	m ³ /hr	0.1		
	gpm	0.44		

*Depending upon feedwater hardness, to be confirmed by FEDI Engineering Tool

Electrical DV Operation:

Parameters	Unit	10X	20X	30X	
Voltage 1 Voltage 2	Typical	VDC	90	170	250
			140	270	400
Voltage 1 Voltage 2	Maximum	VDC	200	350	500
			Current 1/Current 2 Typical		
		Amp.	1.5 / 2.5		
		Amp.	2.5 / 3.5		

Electrical SV Operation:

Parameters	Unit	10X	20X	30X
Voltage Typical	VDC	110	210	300
Voltage Maximum	VDC	200	350	500
Current Typical	Amp.	4		
Current Maximum	Amp.	6		



Operating Conditions:

Parameters	Unit	10X, 20X, 30X
Recovery	%	up to 95
Feedwater Temperature	°C	10 – 40
	°F	50 – 100
Pressure Drop (Feed to Product) @ typical flow	Bar	1.7 – 2.4
	psi	25 - 35
Max. Operating Pressure	bar	6.9
	psi	100

Product Water Specifications:

Parameters	Unit	Specifications
Product Resistivity	MΩ.cm	5 - 18
Silica (reactive)	ppb	<5 - 50

Feedwater Specifications:

Parameters	Unit	Specifications
Feed Conductivity Equivalent (FCE) (Including CO2) *	µS/cm	< 40
pH		5 – 10
Silica (reactive)	ppm	< 1.0
Total Hardness as CaCO3	ppm	< 2.0 DV
		< 1.0 SV
TOC	ppm	< 0.5
Heavy Metals (Fe, Mn etc.)	ppm	< 0.01
Free Chlorine as Cl2	ppm	< 0.05
Feedwater SDI		<1.0

* Feed Conductivity Equivalent, FCE, (µS/cm) = Feed water conductivity (µS/cm) + ppm CO2 x 2.83 + ppm SiO2 x 2.08.

Weight & Dimensions:

Parameters	Unit	10X	20X	30X
Weight (per Stack)	kg	60	80	100
	lbs	132	176	220
Shipping Weight (per Stack)	kg	80	115	130
	lbs	176	253	286
Length	mm	285	430	575
	inch	11.2	16.9	22.6
Width	mm	380		
	inch	15		
Height	mm	635		
	inch	25		

FEDI-2 Connections DV Mode:



FEDI-2 Connection SV Mode:



The above information provides the general characteristics and description of FEDI® stack. We believe that the above information is correct as of this printing. However, the content of this datasheet might be subject to changes with further development of the product. Make sure FEDI® stacks are operated according to Operation and Maintenance guidelines. Contact us for assistance in selection of FEDI® stacks for your application.

For additional information and local contacts, write to sales@quagroup.com or visit www.quagroup.com