

# Ionpure® VNX50-E High Flow Continuous Electrodeionization (CEDI) Modules

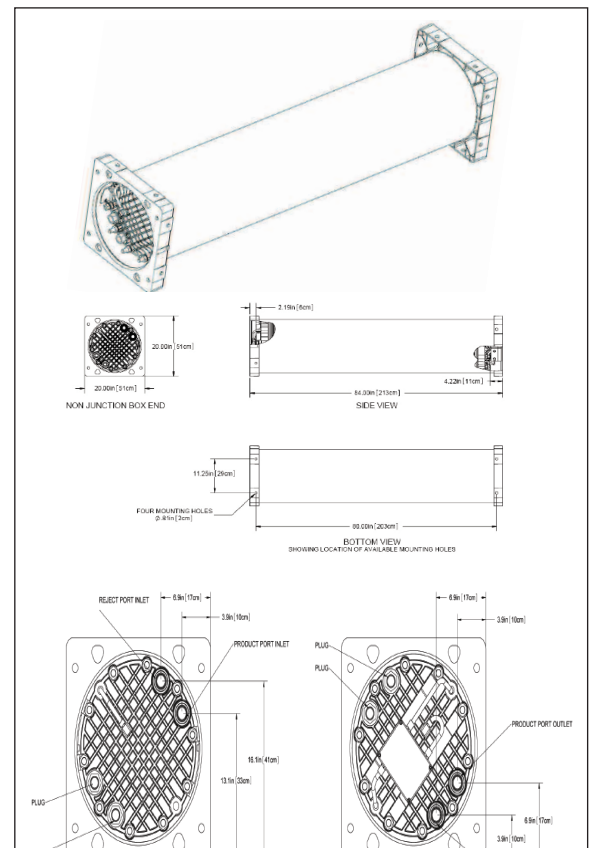
## Ionpure VNX Module–VNX50E-2 Continuous Electrodeionization Module

The VNX50-E module is designed with proven Ionpure® continuous electrodeionization (CEDI) technology to produce high purity water. Performance has been optimized for high recovery and the ultrapure water demands of the microelectronics industry.

Each VNX50-E industrial module has a nominal flow rate of 50.0 gpm (11.4 m<sup>3</sup>/hr). Multiple 50 gpm modules provide for system designs with flow rates up to, and greater than 1000 gpm.

### VNX50E Series Features

- Guaranteed 18 megohm-cm product Resistivity, optimized for microelectronics and UPW systems
- Silica and Boron removal ≥95%
- Sodium and Chloride removal ≥99.8%
- 98.5-99% recovery for loop usage and high water savings
- No need for acid/caustic, neutralization systems or tank exchanges
- Significantly lower operating cost compared to conventional ion exchange systems
- Robust, guaranteed leak free operation
- Continuous production of consistent quality
- Low operating costs and compact footprint
- 50mm butt weld natural Polypropylene or PVDF connection kits and drawings available



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# Ionpure® VNX50-E High Flow Continuous Electrodeionization (CEDI)

## Operating Environment

Installation should be indoors with no direct sunlight and it should have a maximum ambient room temperature of 113°F (45°C).

## Materials Construction

- Wetted components of the VNX module consist of: Polyphenylene oxide, polypropylene, silicone, ion-selective membranes, ion exchange resins, and thermoplastic elastomer.
- Housing is fiberglass reinforced plastic (FRP). Standard color is white with glossy finish. Custom colors and labeling are available.
- The Flexmount bracket/end-block assembly (patent pending) is an epoxy painted aluminum casting suitable for securing modules to the frames and/or each other in Ionpure approved configurations.

## Quality Assurance Standards

CE marked. Each module is factory tested to meet strict Ionpure and industry standards and is manufactured in an ISO 9001:2000 facility. The final assembled modules are factory tested to ensure interconnector and electrical integrity.

## ORDERING INFO

- Part number to use when ordering for vertical or horizontal installation use IP-VNX50E-2.
- Each VNX module has four process connections: Feed, Concentrate Feed, Product, and Reject.
- High purity 50mm butt weld connection kits adapter(4)/plug(4):  
Natural Polypropylene - Part# IP-VNX-CK-PP-2  
PVDF - Part# IP-VNX-CK-PVDF-2
- Standard 1-1/2" female socket connection kits adapter(4)/plug(4):  
PVC - Part# IP-VNX-CK-PVC-2
- Module electrical power connections are made through an on-board junction box

Maximum Feed Water Specifications	
Feed Water Conductivity Equivalent, including CO <sub>2</sub> and Silica	< 10 µS/cm
Feed Water Source	RO permeate (2 pass) or DI Water
Temperature	68–113 °F (20–45 °C)
Inlet Pressure	20–100 psi (1.4–7 bar)
Maximum Total Chlorine (as Cl <sub>2</sub> )	<0.02 ppm
Iron (Fe)	<0.01 ppm
Manganese (Mn)	<0.01 ppm
Sulfide (S-)	<0.01 ppm
pH	4–11
Total Hardness (as CaCO <sub>3</sub> )	<0.1 ppm
Dissolved Organics (TOC as C)	<0.5 ppm
Silica (SiO <sub>2</sub> )	<0.2 ppm

Typical Module Performance	
Operating Parameters	
Recovery	98.5–99%
Flow Rate: minimum	33 gpm (7.5 m <sup>3</sup> /hr)
Flow Rate: nominal	50.0 gpm (11.4 m <sup>3</sup> /hr)
Flow Rate: maximum	66 gpm (15.0 m <sup>3</sup> /hr)
DC Voltage	0–600
DC Amperage	0–10
Product Water Quality	
Product Resistivity - 2 Pass RO - DI Water	>17.5 megohm-cm (see note below) > 18 megohm-cm
Note: Actual performance may be determined using the IP-Pro projection software available from Ionpure.	
Silica (SiO <sub>2</sub> ) Removal	≥ 95%
Boron (B) Removal	≥ 95%
Sodium (Na) Removal	99.8%
Chloride (Cl) Removal	99.8%

Physical Specifications					
Diameter	Width	Height	Length	Shipping Weight	Operating Weight
17.5" (44.45 cm)	20.0" (50.8 cm)	20.0" (50.8 cm)	84.0" (213.3 cm)	610 lbs (276.7 kg)	825 lbs (374.2 kg)

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