

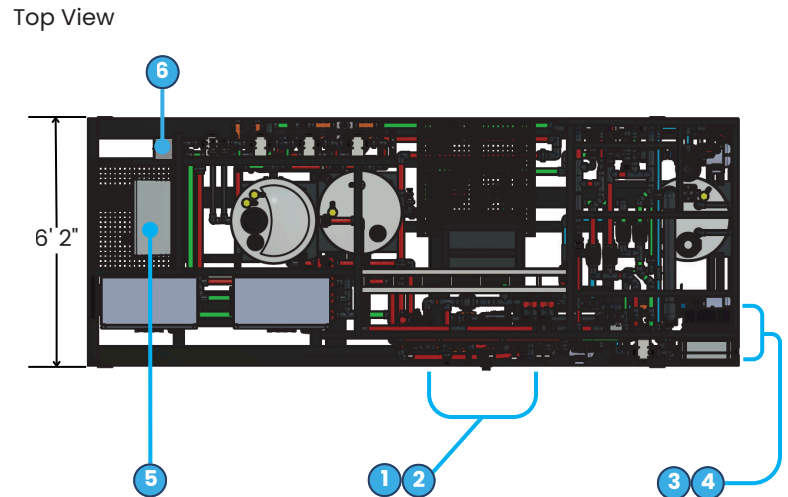
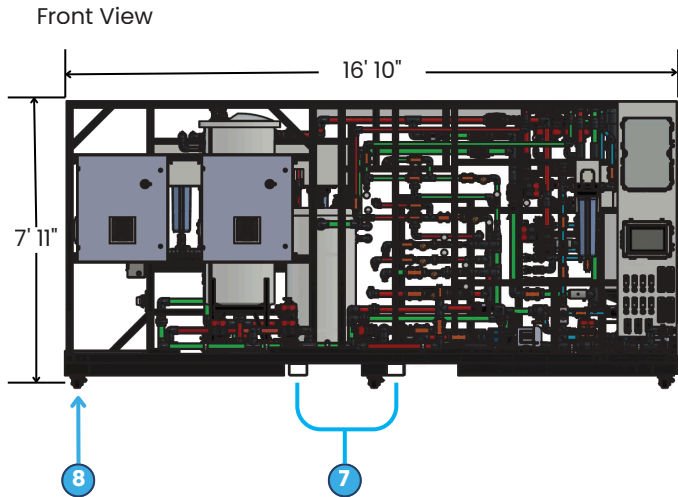
## Skid Mounted ECD System Specifications

Membrion's Pilot ECD system is designed for rapid deployment and quick commissioning, making it an ideal solution for piloting projects. ECD delivers exceptional performance in treating challenging wastewaters, achieving high recovery rates with minimal maintenance requirements.

### Electro-Ceramic Desalination (ECD) Features

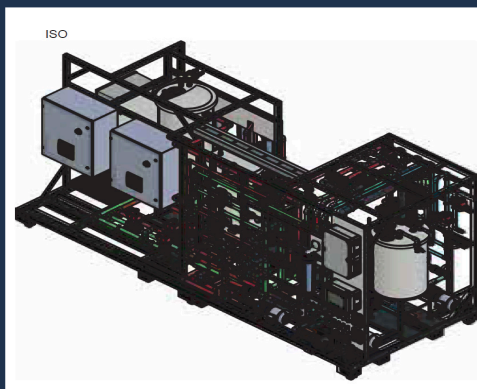
- Plug-and-Play Design: minimal installation requirements
- Fully Automated Operation: Remote monitoring and control
- Compact and Practical: skid-mounted unit for indoor installations
- Integrated Cleaning System: minimizing downtime
- Comprehensive System Monitoring: Real-time feedback and performance tracking
- Targeted TDS Reduction: customizable total dissolved solids (TDS) reduction
- Robust Materials: tolerant to harsh acidic streams containing solvents and oxidizers
- Integrated pH Adjustment: built-in control and feedback
- Documentation: CAD models available for site integration

### Container Dimensions and Tie Points



1. Concentrate (1.5" NPT)
2. Dilute (1.5" NPT)
3. Feed (1.5" NPT)
4. Municipal/Treated Water (1.5" NPT)

5. 480V Electrical Incomer
6. 110v Service Receptacle
7. Forklift Pockets
8. Casters



### System Features

**Continuous Monitoring:** Conductivity, flow, pH, temperature, pressure, module voltage and current

**Reporting:** Treated volume, power consumption, water recovery

**Control:** Manual HMI, remote user interface, remote monitoring, control, and reporting package

## OPERATIONAL REQUIREMENTS

<b>Physical Specifications</b>	System Dimensions: L x W x H	16'10" x 6'5" x 7'11" (5.1m x 2m x 2.4m)
	Service Space	4' (1.2m) from the edge of system
	Installed Weight	4,900lbs (2,222 kg) dry, 6,900lbs (3,130 kg) wet
	System Configuration	Skid mounted: clean, dry, temperature controlled environment
<b>Power Requirements</b>	Input Power Requirements	3 phase, 480 VAC, 175 A, 50-60 Hz
		Breaker located at perimeter of system
<b>Hydraulic Specifications</b>	Water Pressure	0-50 PSI (0 - 3.4 bar), pressure regulator available
	Water Temperature	34-135 °F (1-45 °C)
	pH Range	0-8 (automatic adjustment if required)
	Treated/Municipal Water Supply	Required for electrode rinse and cleaning solution dilution
	Feed Connection	1.5" NPT
	Concentrate Connection	1.5" NPT
	Dilute Connection	1.5" NPT
	Treated/Municipal Water Connection	1.5" NPT
<b>Controls and Communication</b>	External Control Signals	Tank level sensors OR potential free contact (0-30 VDC OR 0-250 VAC, 0-5 A)
	Internet Connection	Remote monitoring and control capabilities Ethernet or Wi-Fi. Data connection available on request

## SYSTEM COMPONENTS

<b>Module Configuration</b>	2x IonX-1000 modules    parallel module operation
<b>Module Operation (Per Module)</b>	125 A, 120 VDC    Performance based on feed water quality and targets.
<b>System Prefiltration</b>	N/A
<b>ECD Process Filtration</b>	Duplexed cartridge filter housings; 4.5" x 18", 50µm (as specified)
<b>Process Valves</b>	Electrically actuated
<b>Process Piping</b>	Sch. 80 PVC
<b>Chemical Injection</b>	Chemical metering pumps and storage tanks; H <sub>2</sub> SO <sub>4</sub> , NaOH (as specified)
<b>PLC</b>	Unistream PLC with HMI screen
<b>Certification</b>	On request
<b>Operating Chemicals</b>	H <sub>2</sub> SO <sub>4</sub> , NaOH ( as specified)
<b>pH Control</b>	Integrated pH modification - automated monitoring and feedback
<b>Additional Components Available</b>	External pre/post filtration    secondary containment    feed, dilute, and concentrate tanks
<b>Documentation Available</b>	P and ID    operational manuals    installation, commissioning, operation, decommissioning check lists    maintenance and spare parts checklists    performance reports    quality control and FAT certificates