

**CapDI<sup>®</sup> SYSTEMS  
TECHNICAL SPECIFICATIONS**

[WWW.VOLTEA.COM](http://WWW.VOLTEA.COM)



We specialize in tunable water purification that is designed to remove total dissolved salts (TDS) from a variety of water sources, ranging from tap water and brackish groundwater to industrial process water. CapDI achieves this at a lower economic cost and reduced environmental impact than any other available technology.

Voltea's CapDI technology purifies water types ranging from residential consumer appliances to large-scale industrial plants. Our systems are modular, allowing easy expansion to meet any increased water demands.

### CapDI Benefits

- Automated cleaning
- Remote monitoring available
- High water recovery, up to 90 %
- Tunable TDS reduction, up to 90 %
- Complete system monitoring and feedback
- Dynamic Control - controlled output water quality
- Customizable system sizing to reach client needs
- Operation at high temperatures, up to 60 °C (140 °F)
- Low energy usage, 0,4 - 0,8 kWh/m<sup>3</sup> (1.5 - 3.0 kWh/kgal)
- Patented Membrane Capacitive Deionization Technology

### Quality Assurance

- CE Certified
- UL on request
- Factory Acceptance Test on request
- Systems and modules quality control tested
- Voltea Remote Monitoring and Control package

### Feed Water Quality

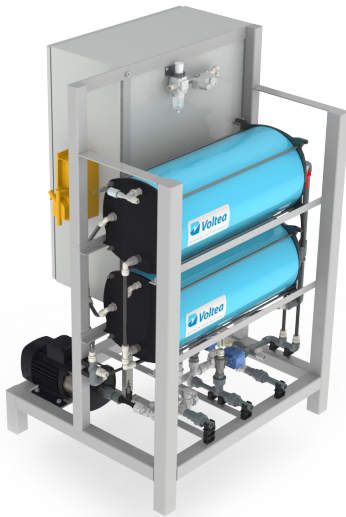
PARAMETER	UNIT	RANGE	INTERMITTENT
Removal Limit	Δppm	0 - 2000	
Total Dissolved Solids (TDS)	ppm	0 - 4000	
Total Organic Carbon	ppm	< 15	
Chemical Oxygen Demand	ppm	< 50	< 100
Turbidity	NTU	< 4	< 100
Fats, Oils, Greases	ppm	< 0.5	
Total Suspended Solids (TSS)	ppm	< 4	< 20
Free Chlorine	ppm	< 1	< 25
pH	-	2 - 10	1 - 12
Iron total	ppm	< 0.5	
Total Hardness (CaCO <sub>3</sub> )*	ppm	< 1000	
M Alkalinity (as CaCO <sub>3</sub> )*	ppm	< 1000	
Pre-filtration	μm	5	
Temperature	°C	1 - 60	
Chemicals	-	Contact Voltea	

\* Limits depend on set TDS reduction and water recovery



# IS-2H

## CapDI IS-2H Industrial Series 1-2 Module Skid



### Design and Scope of Supply

- IS System User Manual
- Capable of ambient or high temperature feed water
- Built-in monitoring; flow, pressure, conductivity, module voltage
- Skids can take up to full accompaniment of modules

### IS Features

- Voltea Remote Monitoring and Control available
- Automated System CIP (Clean-In-Place); chemical and/or air (*air optional*)

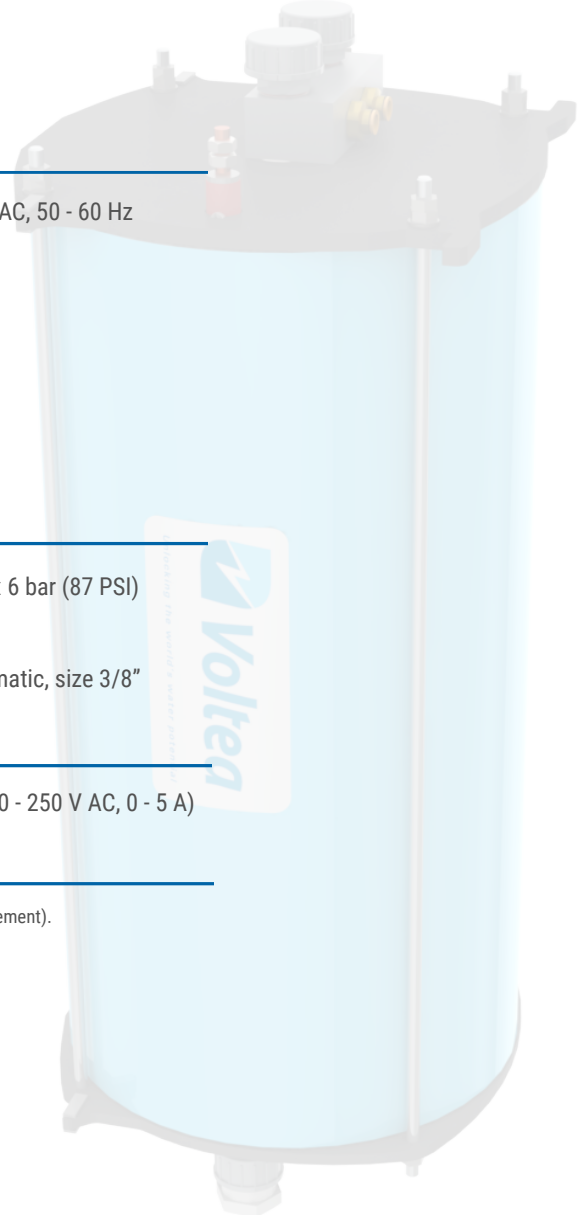
Pure Outlet Conductivity Meters	0 - 10 mS/cm
Total Flow Meter	0 - 40 L/min (0 - 11 gpm)
System Pressure	0 - 10 bar (0 - 145 PSI)
Module Pressure	0 - 6 bar (0 - 87 PSI)
User Interface	HMI Panel

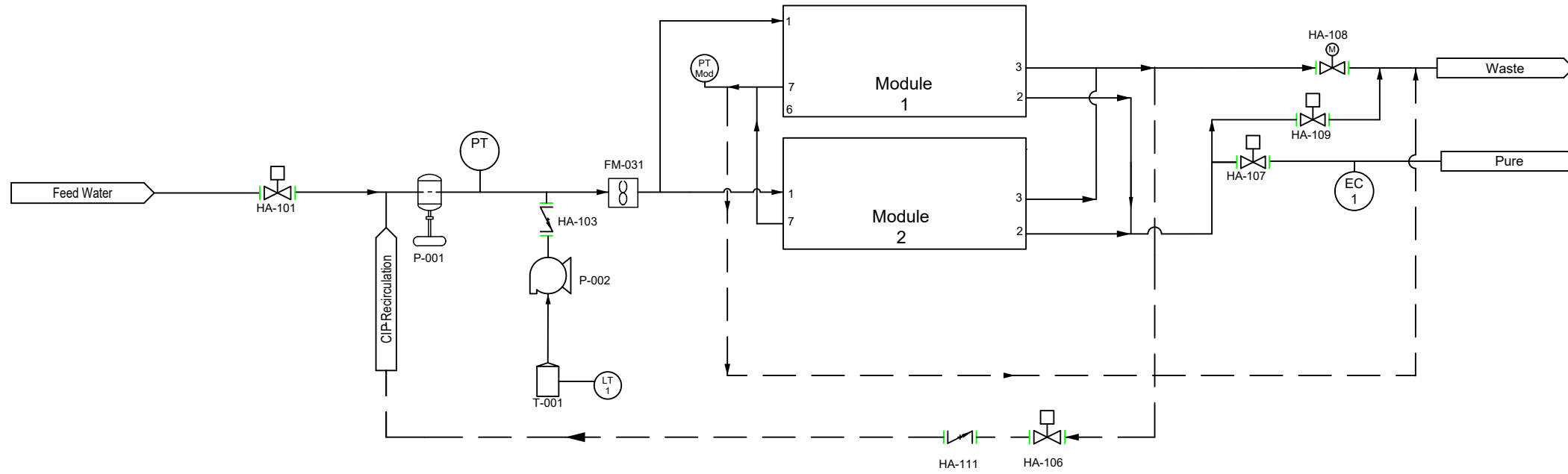
Performance	Net Produced Flow	0,2 - 1 m <sup>3</sup> /h (0.9 - 4.4 gpm)
	Salt Removal	25 - 90 %
	Water Recovery	40 - 90 %
System Specification	Input Power Requirements*	1-ph 1.8 kW, 110 (or 230, please specify) V AC, 50 - 60 Hz
	System Dimensions (L x W x H)	0,86 x 0,7 x 1,3 m (2'10" x 2'4" x 4'3")
	Service Space	0,8 m (2'7") from edge of system
	Weight**	250 kg (550 lbs)
	Feed Inlet Coupling	.5" union
	Product Outlet Coupling	.5" union
Concentrate/Waste Outlet Coupling	.5" union	
Operational Requirements	Water Feed Pressure	3 bar (44 PSI) at the flow rate required, max 6 bar (87 PSI)
	Water Temperature	1 - 60 °C (34 - 140 °F)
	Compressed Air Line ( <i>optional</i> )	50 L/min (1.8 CFM) @ 6 bar (87 PSI), pneumatic, size 3/8"
	Operating Ambient Air Temperature***	< 25 °C (< 77 °F)
Inputs/ Outputs	Start / Stop	Input - Potential free contact (0 - 30 V DC / 0 - 250 V AC, 0 - 5 A)
	External Pump	Output - Potential free contact (24 V DC)

\*Actual power consumption will depend on module and settings used (typically 30-60% of input power requirement).

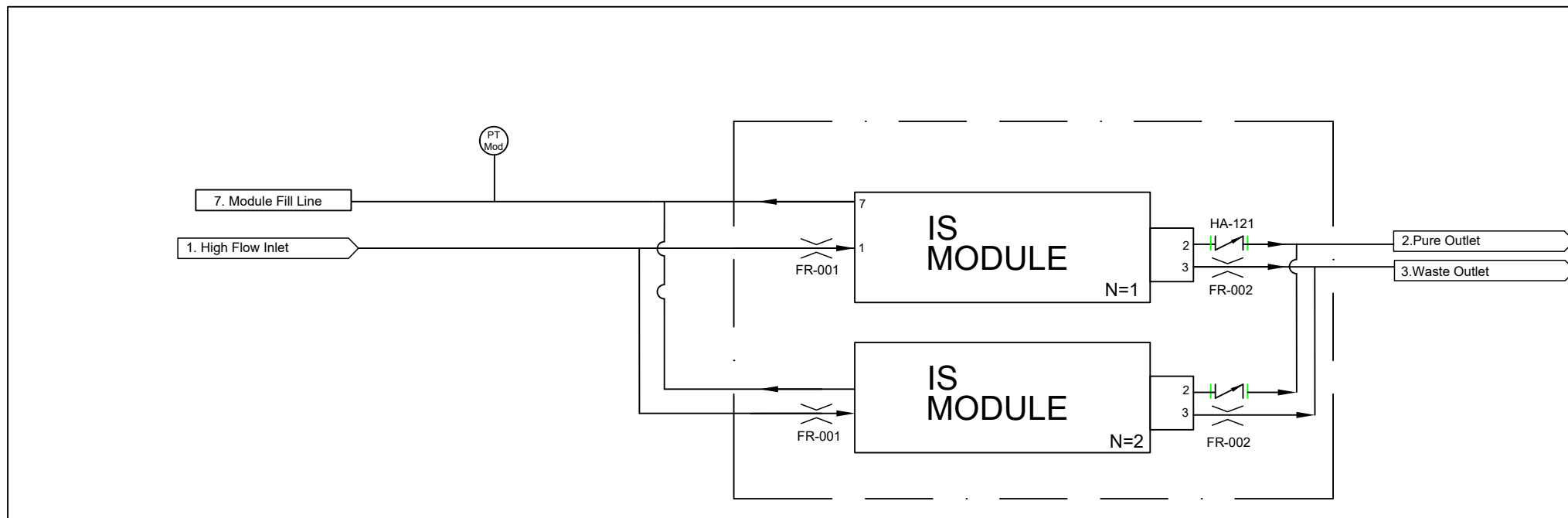
\*\*Weight without modules

\*\*\*Without added cooling



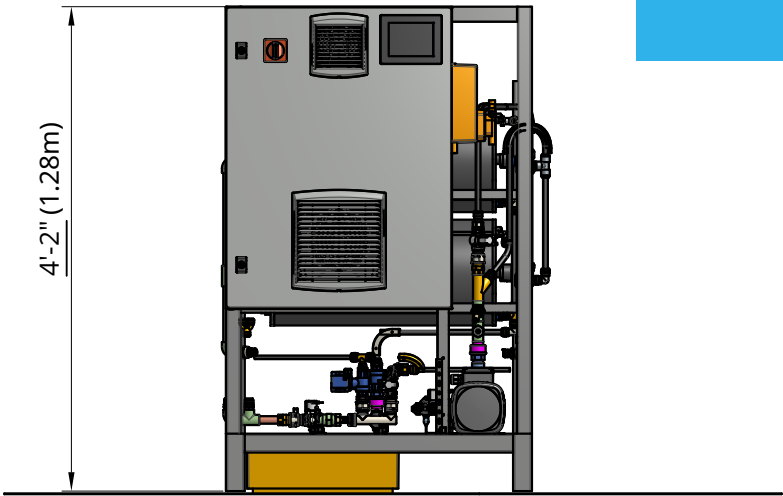


List of Parts	
HA-101	Solenoid Valve for Inlet
HA-103	Check Valve for CIP Injection
HA-106	Solenoid Valve for CIP Recirculation
HA-107	Pure Solenoid Valve
HA-109	Bypass Valve
HA-111	Check Valve for CIP Recirculation
P-001	Inlet Pump
P-002	CIP Dosing Pump
T-001	CIP Solution Tank
LT-1	CIP Solution Level Sensor
PT	Pressure Transmitter After Inlet Pump
FM-031	Flow Meter
PT Mod	Pressure Transmitter for Modules
EC 1	Pure EC Sensor
FR-001	High Flow Inlet, Flow Restrictor
FR-002	Waste, Flow Restrictor
HA-121	Check Valve, Pure Outlet

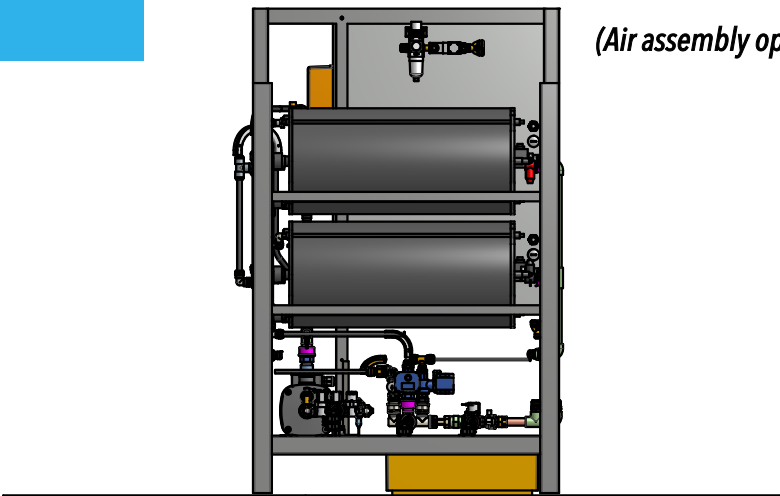


IS-2 PROCESS FLOW			
	BY	DATE	SCALE: -
DRAWN	DT	SEP-17	
MOD	JB	MAY-20	DWG NO.: 1
CHK'D			
APP'D	-	-	SH NO.: - REV: $\Delta$

# IS-2H

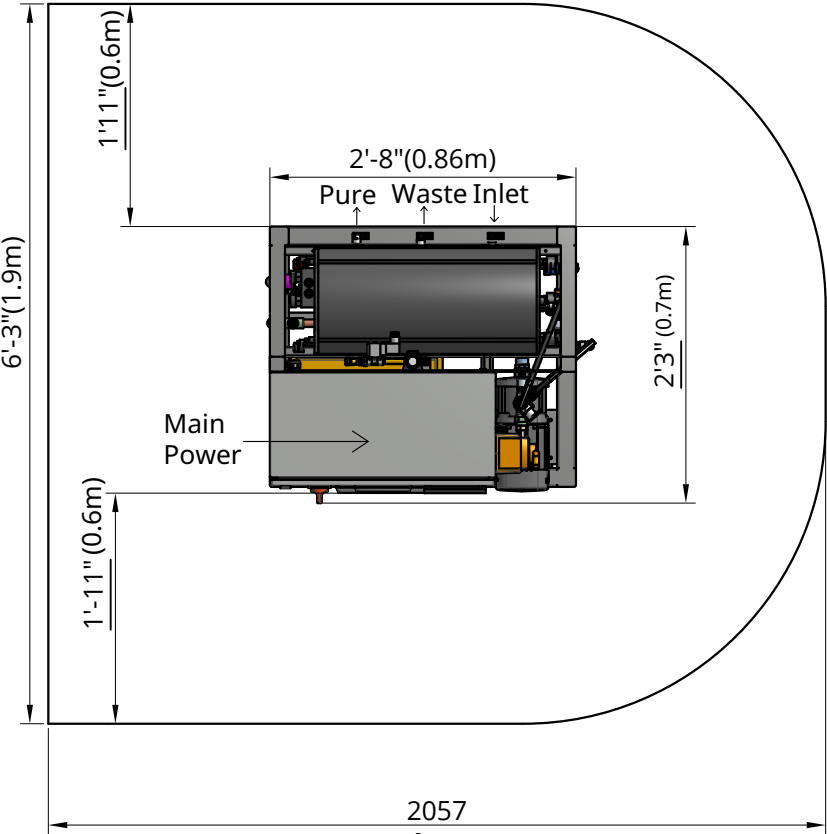


Front view

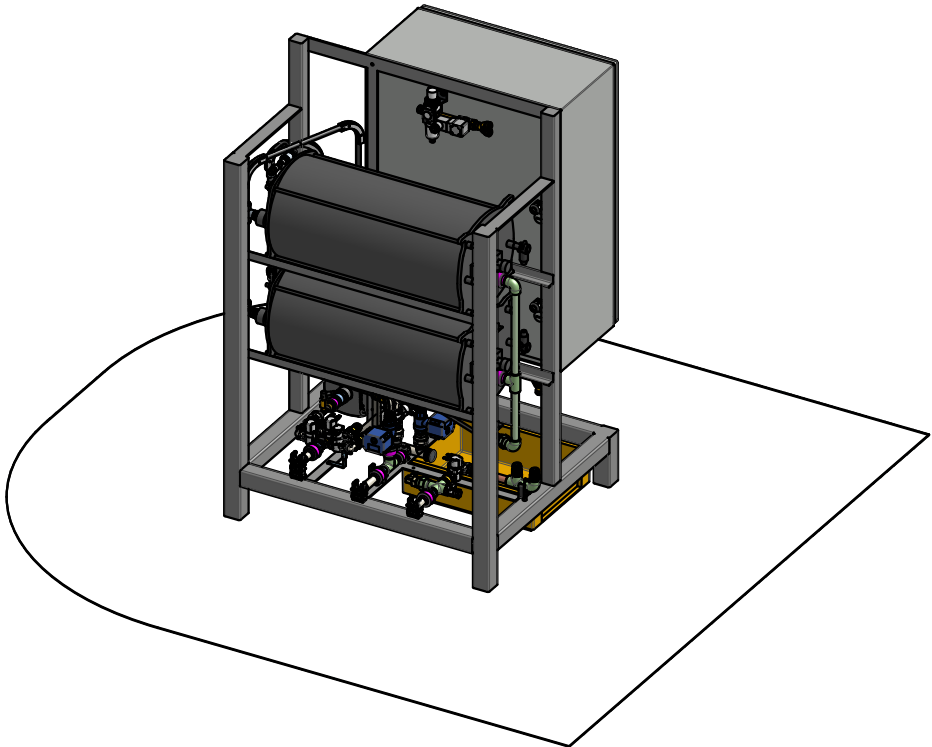


(Air assembly optional)

Back view



Top view



Isometric view