

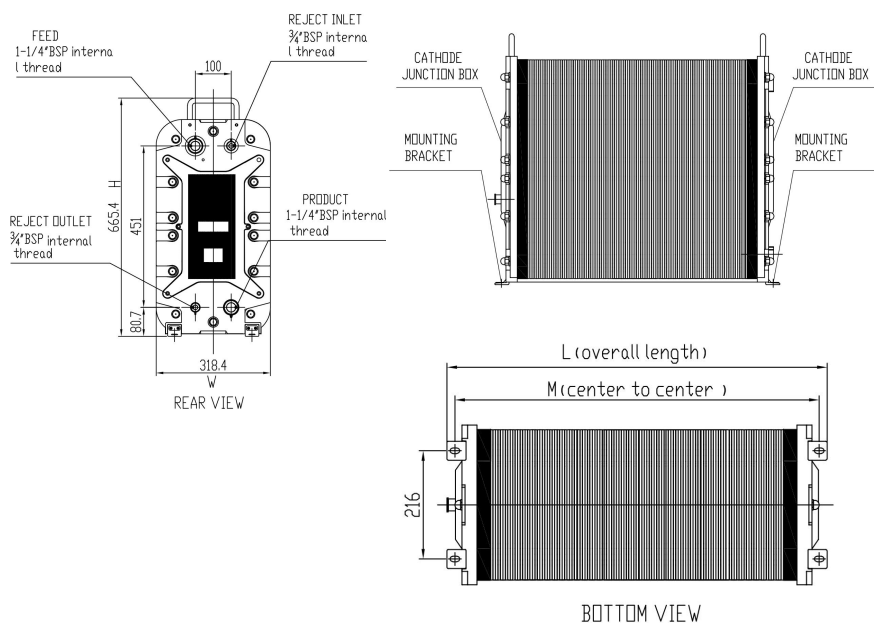


IONTECH® IT-DSHI INSTANT HOT WATER SANITIZABLE CONTINUOUS ELECTRODEIONIZATION (CEDI) MODULES

IONTECH IT-DSHI MODULE

Hot water sanitization has been shown to be more effective than chemical sanitization for controlling microbial growth, primarily in the pharmaceutical and biotechnology industries and other applications where chemical-free, instant hot water sanitization is desired.

IT-DSHI modules are capable of continuous operation up to 140°F (60°C) allowing these modules to provide high quality water, in higher temperature applications than typical CEDI, such as steam generation in power applications, without regeneration downtime. Ease of operation, maximum reliability and low operating costs are signature features of IONTECH modules.



QUALITY ASSURANCE STANDARDS

Each module is factory tested to meet strict industry standards and is manufactured in an ISO 9001 and ISO 14000 quality and environmental management system.



IT-DSHI SERIES FEATURES

- Hot water sanitizable at 185°F/85°C ± 5°C
- Continuous operation up to 140°F (60°C)
- Patented technology for instant hot water capability – no ramp up/down required
- Higher sanitization pressure 30 psi/2.0 bar
- Double O-ring seal guarantees leak-free operation
- Proven performance after 150+ sanitizations
- Concentrate recirculation and brine injection not required

OPERATING ENVIRONMENT

Installation should be indoors with no direct sunlight and should have a maximum ambient temperature of 45°C.

FEED WATER SPECIFICATIONS

Feed Water Source	RO permeate
Feed Water Conductivity	< 10 µS/cm
Silica (SiO ₂)	< 1 ppm
Sulfide (S ²⁻)	< 0.01 ppm
Manganese (as Mn)	< 0.01 ppm
Iron (as Fe)	< 0.01 ppm
Total Chlorine (as Cl ₂)	< 0.02 ppm
Total Hardness (as CaCO ₃)	< 1.0 ppm
Dissolved Organics (TOC as C)	< 0.5 ppm
pH	4 - 11
Temperature	5 - 60°C
Inlet Pressure	< 100 psi

PHYSICAL SPECIFICATIONS

Item Number	Dimensions	
	L	M
IT-DS04HI-S	224 mm	192 mm
IT-DS10HI-S	313 mm	281 mm
IT-DS18HI-S	431 mm	399 mm
IT-DS24HI-S	521 mm	489 mm
IT-DS30HI-S	603 mm	574 mm
IT-DS45HI-S	823mm	791 mm

FLOW AND PHYSICAL SPECIFICATIONS

Moduel Number	Nominal Flow	Flow range m ³ /h	DC Voltage V	DC Current A	Transport Weight kg
IT-DS04HI-S	0.44	0.22-0.67	0-55	0-6	55
IT-DS10HI-S	1.1	0.55-1.65	0-135	0-6	71
IT-DS18HI-S	2.0	1.0-3.1	0-240	0-6	94
IT-DS24HI-S	2.8	1.4-4.2	0-300	0-6	118
IT-DS30HI-S	3.3	1.65-5.1	0-320	0-6	124
IT-DS45HI-S	5.0	2.55-7.7	0-400	0-6	170

TYPICAL MODULE PERFORMANCE

Operating Parameters	
Recovery	90 – 95%
pressure Drop Range at Nominal Flow	20 - 30 psi (1.4 - 2.1 bar)
Maximum Feed Temperature	140°F (60°C)
Product Water Quality	
Product Resistivity	< 0.1 µS/cm
Silica(SiO ₂) Removal	90–99%, depending on feed conditions

† In order to ensure the long-term, stable, high-quality, and continuous operation of the EDI membrane stack, it is recommended to adopt two-stage RO production for EDI inlet water. This is currently the most reliable and mature process design for ultra pure water systems.

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