

IONTECH EDI Modules And Power Accessories Warranty



IONTECH BEIJING TECHNOLOGIES CO., LTD Products, ("hereinafter IONTECH) provides a limited warranty on the materials, workmanship, and performance of its continuous electrodeionization modules and power accessories, when installed and operated in accordance with IONTECH's recommended design and operating specifications, according to the following provisions:

CEDI Power Accessories Limited Warranty

IONTECH warrants that its CEDI power accessories are free from defects in materials and workmanship. IONTECH's obligation under this limited warranty covers a period not to exceed 12 months from date of receipt by Buyer, provided that such power components are operated and maintained in accordance with IONTECH's published specifications and good engineering practices.

IONTECH's obligation under this limited warranty is limited to the repair or, at IONTECH's discretion, the replacement of any power component which, when examined by IONTECH, is determined to be defective under this provision of the limited warranty.

Warranty Guidelines

Warranty Start Date:

IONTECH warrants the performance of its modules for three years from whichever of the following events occurs first:

- a) First use in system;
- b) Three (3) months following date of shipment.

Rebuilt Modules (all types) – IONTECH warrants the performance for 1 year from which ever occurs first:

- a) First use in system;
- b) Three (3) months following date of shipment.

Initial Performance:

IONTECH warrants that the modules herein offered have the initial pressure drop, electrical resistance and salt removal as specified in product brochure.

Should any module(s) not meet performance specifications, and Buyer notifies IONTECH of such deficiency, IONTECH will, upon confirmation of faulty performance, repair or issue credit for the defective module(s). Shipping costs, in such case, will be paid by IONTECH via credit issue.

Leak-Free Guarantee

IONTECH Products provides a non-prorated warranty for leak free operation for a three (3) year period from the start of the warranty period for the new MX, LX and VNX CEDI modules. This warranty is contingent on the following:

- a. The feedwater pressure must not exceed maximum module pressure specification.
- b. Modules must be torqued prior to initial startup and check periodically (LX)
- c. The module(s) shall be operationally protected against hydraulic transients (water hammer).
- d. Outlet pressure differential (product outlet pressure minus reject outlet pressure) shall not exceed 10 psi at any time.

Performance during the Limited Warranty Period

During the first pro-rated years of operation of the module(s), IONTECH warrants that the product pressure drop, when operated under standard conditions published by IONTECH, shall not exceed 1.3x the specified initial pressure drop. IONTECH further warrants that maximum salt passage, when an module is operated under standard test conditions published by IONTECH will not exceed 1.35x the specified maximum value.

IONTECH will, on confirmation of loss of performance during the warranty period, credit 1/36 of the original purchase price of the module for each unused month of the warranty period toward the purchase of a replacement module for each unused month of the warranty period toward the purchase of a replacement module at the current prevailing price.

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Conditions of Module Prorated Performance Limited Warranty

The performance limited warranty described in the previous section, *Performance During Limited Warranty Period*, shall be null and void if any of the following conditions are not met:

- e. The design parameters (flow, recovery, etc.) plus instrumentation and other components of the system in which the module(s) are employed shall be consistent with sound engineering practice. IONTECH reserves the right to review system design.
- f. Feed water temperature during operation shall be greater than 41°F (5°C) and less than 113°F (45°C)
- g. Feed water SDI (15min., 30 psi) shall be less than 1.0.
- h. Feed water shall contain no chlorine, ozone, permanganate, or other strong oxidizing agents.
- i. The module(s) shall not be exposed to pressure greater than 100 psig, unless otherwise stated in the product specification.
- j. During continuous operation the pH shall be no less than 4.0 or greater than 11.0.
- k. Feed water total hardness shall always be less than 1 ppm as CaCO₃ (during both operation and hot water sanitization).
- l. Feed water TOC shall always be less than 0.5 ppm.
- m. Feed water silica shall always be less than 1 ppm as SiO₂ (during both operation and hot water sanitization).
- n. Feed water iron, manganese and sulfide shall always be less than 0.1 ppm (during both operation and hot water sanitization).
- o. Outlet pressure differential (product outlet pressure minus reject outlet pressure) shall not exceed 10 psi at any time.
- p. The module(s) shall be operationally protected against hydraulic transients (water hammer).
- q. The module(s) shall be maintained in a clean condition, unfouled by particulate matter or precipitates or biological growth; *if scaling or fouling should occur, or normalized electrical resistance increase 25 percent, or pressure drop increase 40%, then cleaning procedures must be employed in accordance with the procedures as published in the Operating and Maintenance (O&M) Manual.*
- r. Adequate provisions against microbiological contamination shall be incorporated into the system design, as well as into all operating and maintenance procedures.
- s. The module(s) shall not be exposed during cleaning, or in shutdown periods, to a pH less than 0.5 nor greater than 13.5. Neither nonionic nor cationic surfactants should be used for membrane cleaning or come in contact with IONTECH modules. The buyer is fully

Repair or Replacement

Buyer's sole remedy for any breach of warranty is limited to and shall be fully discharged by IONTECH repairing any defective module or, at IONTECH's discretion, replacing same at the then selling price ex-works IONTECH's plant. IONTECH reserves the right to test the alleged defective modules and the CEDI System on user's or Buyer's

premises or to request Buyer to perform such inspections or tests and forward the results thereof to IONTECH. If the module failure is determined to be from cause other than breach of warranty as set forth above, Buyer shall pay to IONTECH \$1000 per day, plus direct travel expenses incurred by IONTECH's employees, in connection with any inspection and testing of such modules and system on Buyer's premises. Modules shipped to IONTECH for warranty examination must be shipped freight prepaid. Modules examined as part of a warranty claim which are found to be performing as warranted will be returned to the Buyer freight collect.

Reminders

1. Product water obtained from the first 10 minutes of operation should be discharged.
2. Before returning any module(s) to IONTECH for warranty examination, see the Module Return Procedures technical bulletin.

Warranty Notice

Failure or refusal to fully disclose to IONTECH the use and operating parameters of IONTECH CE modules shall render all warranties other than that covering materials and workmanship null and void.

LIABILITY FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL, EXEMPLARY, AND PUNITIVE DAMAGES ARE EXCLUDED.

IONTECH is a registered trademark of Siemens AG. Siemens reserves the right to change the specifications referred to in this literature at any time, without prior notice.

For more information about IONTECH Modules, call the local IONTECH center: <http://www.IONTECHBJ.com.cn>