



ION SPECTRA

(Double Bed Water Deionizers)

Model No.: DB-1400 Series



Ion Spectra (Double Bed Water Deionizers)

PRINCIPLES OF OPERATION (DOUBLE BED)

Deionizers (DI) remove both cations and anions, releasing hydrogen ions (H⁺) in exchange for the former, and hydroxyl ions (OH⁻) for the latter. The hydrogen and hydroxyl ions subsequently combine to form pure water.

APPLICATIONS

Deionizers are most commonly used when ionic contamination is such that reverse osmosis alone cannot be relied upon to produce water of acceptable quality. In such most instances, mixed bed deionizers may be placed downstream of the reverse osmosis unit, completing the purification process. A wide variety of public water vending machines as well as many industrial applications in the electronics industry operate in this manner.

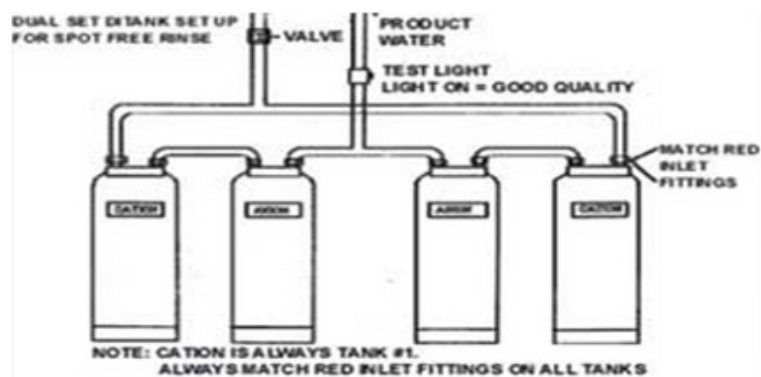
The common application of deionizers are us under.



COMMON APPLICATION

- Parts Washing
- Lab reagent-grade water
- Vehicle Washing
- Rinsing of electronic circuit boards
- Plating
- Paint lines - E-coat and powder coating
- Glass / mirror manufacturing
- Boiler Systems
- Humidifier feed water
- Printing

PROCESS EXPLANATION





TWO-BED DEIONIZATION

The two-bed deionizer consists of two vessels - one containing a cation-exchange resin in the hydrogen (H^+) form and the other containing an anion resin in the hydroxyl (OH^-) form. Water flows through the cation column, whereupon all the cations are exchanged for hydrogen ions. To keep the water electrically balanced, for every monovalent cation, e.g. Na^+ , one hydrogen ion is exchanged and for every divalent cation, e.g. Ca^{2+} , or Mg^{2+} , two hydrogen ions are exchanged. The same principle applies when considering anion-exchange. The decationised water then flows through the anion column. This time, all the negatively charged ions are exchanged for hydroxide ions which then combine with the hydrogen ions to form water (H_2O).

CONSTRUCTION

It consists of an in-built pre filter and very high exchanging capacity non-corrosive CATION and ANION resin columns pre-fitted with imported RESINS for efficient results having treated water parameters conforming to IS-1069/64. It yields chemically pure water equal to multiple distilled water having a conductivity of less than 10 micro siemens / cm and pH of 7.5 to 9pH. Fitted with sturdy PVC multi-control valve and connected direct to water taps.

The conductivity meter operates on both AC supply and 9.0 V DC battery. Supplied with one plastic chemical proof regeneration tank and the complete unit in housed in a painted M.S. trolley for easy mobility. Available with analogue as

NOTE: TDS of input water should be below 500 ppm

Note: We also custom design various models as per the specific requirements of the customers..

STANDARD MODELS

Model	TBD-70	TBD-100	TBD-200	TBD-300	TBD-500	TBD-750
Capacity ltr/ hr	70	100	200	300	500	750



An ISO 9001 : 2208 | ISO 14001 : 2008 | ISO 13485
WHO: GMP Products | GLP Compliant Products

www.acmasindia.com | www.acmasglobal.com | www.test-chambers.com

ACMAS TECHNOLOGIES PVT. LTD.

CORPORATE OFFICE/ SHOWROOM (INDIA)

Plot No. 352-353, Sector – 57
Phase- IV Kundli, Sonapat, Haryana - 131028
Land Line No.: +91 - 11- 47619688,
Fax: +91-11-47619788
E-mail.: info@acmasindia.com

SALES OFFICE (HONG KONG)

Unit D 28 11/F Wing Tat Comm,Bidg 97, Bonham Strand East,
Sheung Wan, Hong Kong (PRC)
Tel.: 0086-13929598046 | 0086- 18922303099
E-mail.: hk@acmasindia.com

SALES OFFICE (RUSSIA)

Inmed Trade Street Ozerkovsky Embankment,
Unit No 50, Straine- 1, Off- 502, Moscow, Russia
E-mail.: info@acmasindia.com
Tel.: 0049- 79592345 | Email: russia@acmasindia.com