



Mixed Bed Water De-ionizer Ion Spectra

MODEL NO.- MB-1400 Series



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Principles of Operation (Four 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.

Need For Mixed Bed system

Deionizers, like softeners, have a finite capacity for ion exchange, and the costs of regeneration are substantial. The higher the level of supply water ionic contamination, and/or the greater the water consumption rate, the greater will be the costs of deionization. The combination of reverse osmosis, followed by deionization, greatly reduces costs and reverse osmosis often extends the service cycle of the deionizer by a factor of 10 or more. To a lesser extent, costs may be reduced by using a dual bed deionizer followed by a mixed bed deionizer. This is economical because the regeneration costs of dual bed units are lower than the mixed bed type.

Mixed-bed deionization

In mixed-bed deionizers the cation-exchange and anion-exchange resins are intimately mixed and contained in a single pressure vessel. The thorough mixture of cation-exchangers and anion-exchangers in a single column makes a mixed-bed deionizer equivalent to a lengthy series of two-bed plants. As a result, the water quality obtained from a mixed-bed deionizer is appreciably higher than that produced by a two-bed plant. Although more efficient in purifying the incoming feed water, mixed-bed plants are more sensitive to impurities in the water supply and involve a more complicated regeneration process. Mixed-bed deionizers are normally used to 'polish' the water to higher levels of purity after it has been initially treated by either a two-bed deionizer or a reverse osmosis unit.

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

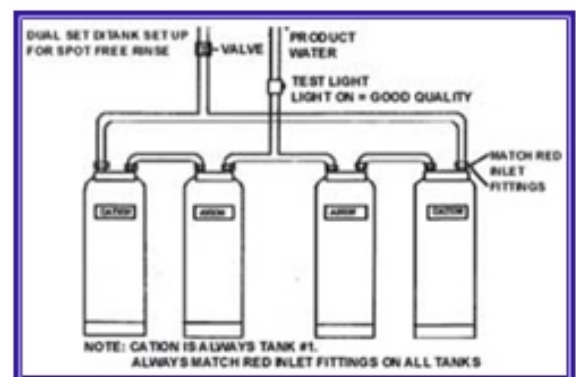
- Parts washing
- Vehicle washing
- Plating
- Glass / mirror manufacturing
- Humidifier feed water
- Lab reagent-grade water
- Rinsing of electronic circuit boards
- Paint lines - E-coat and powder coating
- Boiler systems
- Printing

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 well as Digital conductivity meter.

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.



Model	FBD- 70	FBD- 100	FBD- 200	FBD- 300	FBD- 500	FBD - 750
Capacity ltr/ hr	20-70	100	200	300	500	750



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