WaterMax

DEMINERALISATION PLANT

Total Water Solutions

#48, Ground Floor,Pooja Layout (Next to NRI Layout),
Near Sundara Anjaneya Temple, Kalkere, Bangalore - 43.

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Demineralisation Plant

Watermax DM Plants (Two Bed & Mixed Bed units) are available in various sizes having cation and anion exchanger unit with 200 mm to 2000 mm diameter with either Valves or Multi Port Valve depending upon the sizes and customer requirement.

In Two Bed DM Plant, Strong Acid Cation Exchanger and Strong Base Anion Exchanger resins are used for reducing Total Dissolved Solids up to 2 - 5 ppm. To check the treated water quality at the outlet, conductivity meter is provided.
Mixed Bed Units are used in series with Two Bed DM Plant as a polisher unit which can produce treated water having conductivity < 1 mS/cm

Principle of Working

Two-bed deionization

Watermax 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. Ca2+, or Mg2+, 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 (H2O).

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.

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.

Advantages

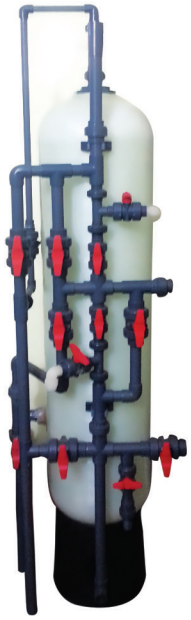
- Variety of cost effective standard models.
- Improved aesthetics and rugged design.
- User friendly, low maintenance and easy to install.
- Simpler distribution and collection systems.
- Quick availability.
- Pre dispatch assembly check.
  Available individual valve systems and MPV Systems with Manual and Automatic
- The multiport valves are top mounted as well as side mounted with the necessary high pressure rating PVC piping.
- Rust free
- Durable
- Economical
- High shelf life

Standard Features

- Auto / Manual regeneration when water quality falls below pre-set limit
- Constant monitoring of water quality
- Solid-state reliability for trouble-free service
- No untreated by-pass water
- Compact, non-corrosive components
- Fiberglass tanks for corrosion resistance
- Convenient, modular construction

Major Applications

- Boilers feed water, Textiles, Pharmaceuticals, Chemicals, Breweries, Potable Water, Hospitals, Automobile, and Battery, Fertilizers.
- Pharmaceutical Industry
- Power Plant
- Oil & Gas sector
- Chemical Industries
- Textile Industries



Technical Specifications – Two Bed System

Model	Vessel Size (Dia × HOS) mm	Resin Qty (Ltrs)		Max Flow Rate (M3/Hr)	Regenerants Qty		Max Working Pressure Kg/cm2
		Cation	Anion		Hydrochloric Acid (100%)	Sodium Hydroxide (100%)	
MAX CA-1	150 × 300	7	7	1	0.6	0.6	3.5
MAX CA-2	175 × 600	17	17	1	1.4	1.4	3.5
MAX CA-3	200 × 900	35	35	1	2.8	2.8	3.5
MAX CA-4	250 × 1000	55	55	2	4.4	4.4	3.5
MAX CA-5	300 × 1000	75	75	3	6	6	3.5
MAX CA-6	350 × 1000	100	100	4	8	8	3.5
MAX CA-7	400 × 1250	175	175	6	14	14	3.5
MAX CA-8	450 × 1300	250	250	7	20	20	3.5
MAX CA-9	600 × 1300	450	450	13	36	36	3.5

Technical Specifications – Mixed Bed

Model	Vessel DIA mm	Resin Qty (Ltrs)		Max Flow Rate (M3/Hr)	Regenerants Qty		Max Working Pressure Kg/cm2
		Cation	Anion		Hydrochloric Acid (100%)	Sodium Hydroxide (100%)	
MAX MB-200	200	13	25	1.5	1.04	2.0	3.5
MAX MB- 300	300	25	35	3.5	1.8	2.5	3.5
MAX MB - 400	400	40	60	7.5	3.0	4.5	3.5
MAX MB - 600	600	90	140	13	6.75	10.5	3.5
MAX MB - 800	800	250	250	16	20	20	3.5

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