

DEMINERALISATION PLANT

Designed to high working temperature (55°C – 132 °F)

ECOTEAM®
Environmental Technologies



Fields of application

Metal Plating
Anodizing
Painting
Galvanizing
Printed Circuit Board
Coil Coating
Ultra Pure D.I. Water

ECOTEAM propose demineralisation plant using closed loop rinse and also for the production of de-ionising water from tap water.

Demineralisation process permit to eliminate pollutants dissolved in water with ionic exchange.

Resins exchange cationic elements like Al^{3+} , Ca^{2+} , Mg^{2+} , Ni^{2+} , Na^+ , K^+ with H^+ and anionic elements like Cr^{6-} , Cl^- , NO_3^- , CN^- , F^- with OH^- .

Ionic exchange is a reversible process, regeneration is done using acid (HCl or H_2SO_4) on cationic resin and base (NaOH) on anionic resin.

Organic substances, that may pollute the ionic resins, are treated

with a granular carbon filter put before the resin filters. Demineralisation plant can be produced in a single line (Simplex) or double line (Duplex).

Simplex plant are designed for a maximum of two shifts otherwise Duplex plants can be designed for 24/24 hour production. Demineralization plant use PLC control with every phase being checked

ECOTEAM proposes options like:

- pH and conductivity control in every phase
- Regeneration of single resin filter
- Lead-leg system on duplex plant
- Counter-current system

| MODEL | flow rate (L/H) | Charge activated carbon filter (L) | Charge cationic resin filter (L) | Charge anionic resin filter (L) | Eluate waste (L) | HCl 33% (L) | NaOH 33% (L) | Dimension in mm (L x W x H) | | |
|-----------|-----------------|------------------------------------|----------------------------------|---------------------------------|------------------|-------------|--------------|-----------------------------|------|------|
| DM 5 125 | 3,125 | 125 | 125 | 125 | 3000 | 38 | 42 | 3500 | 680 | 2100 |
| DM 5 180 | 4,500 | 180 | 180 | 180 | 4320 | 55 | 60 | 4000 | 950 | 2200 |
| DM 5 250 | 6,250 | 250 | 250 | 250 | 6000 | 76 | 83 | 4500 | 1000 | 2300 |
| DM 5 300 | 7,500 | 300 | 300 | 300 | 7200 | 91 | 100 | 5000 | 1100 | 2400 |
| DM 5 375 | 9,375 | 375 | 375 | 375 | 9000 | 114 | 125 | 5000 | 1100 | 2400 |
| DM 5 400 | 10,000 | 400 | 400 | 400 | 9600 | 121 | 133 | 6150 | 1150 | 2420 |
| DM 5 500 | 12,500 | 500 | 500 | 500 | 12000 | 152 | 167 | 6150 | 1150 | 2420 |
| DM 5 750 | 18,750 | 750 | 750 | 750 | 18000 | 227 | 250 | 7500 | 1350 | 2450 |
| DM 5 1000 | 25,000 | 1000 | 1000 | 1000 | 24000 | 303 | 333 | 9000 | 1550 | 2500 |



Options:

- Washing panel to clean the regeneration pipes
- Double pump on alimentation
- D.I. storage and pumping system
- Acid and Base storages and control
- Counter-current regeneration system
- Regeneration of single column to reduce eluati
- Lead-leg working for complete exhaustion
- Mixed bed resins system for Ultra D.I. Water

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