# ENERGY PROCESS EQUIPMENTS

your satisfaction
is our reputation

$H_2O$

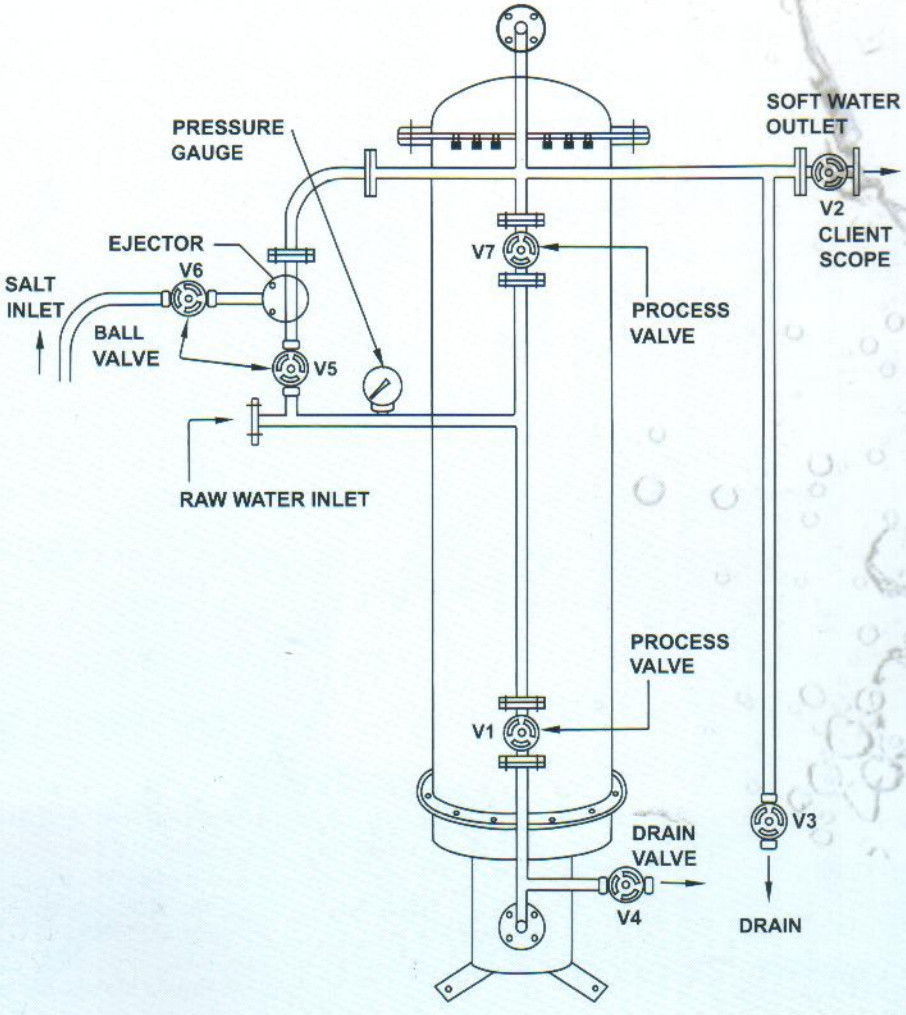
## WATER SOFTENING PLANT

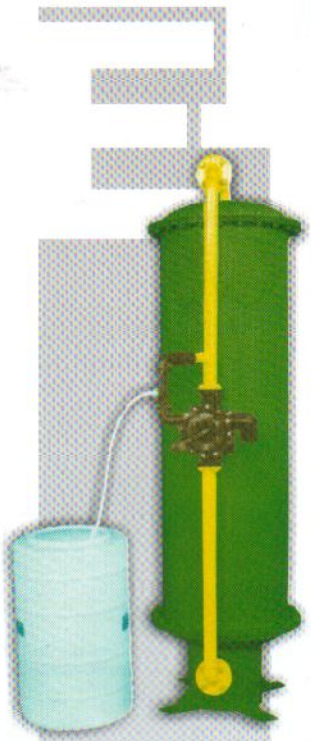
### GENERAL

Naturally occuring water can be regarded as a very dilute solution of various salts all water containing Calcium or Magnesium salts in considerable amount are called 'Hard' Water. Such Hard Water when heated the calcium & Magnesium will deposit a hard scale in pipes, heating coils, Boilers etc. With consequent loss in efficiency and a proprtionate waste of fuel and ultimately money.

### SOFTENING PROCESS

Removal of hardness from water is called softening. The softening is done by ion exchange process. The ion exchange process relies on the replacement of the Calcium and Magnesium ions in the water by an equivalent number of Sodium ions. This eliminates the unwanted characteristics of hard water because the sodium salts neither form scale nor a scum with soap out only lather. The resin will take up the Calcium ion to the extent of what sodium ions the Resin will have with it. Therefore, to give new sodium ions to the Resin, the cheapest and easiest means would be to pass the solution of Sodium chloride (common-salt) through the Resin. The same resin can be used over and over again to produce the soft water a- periodic dosage of Sodium chloride (common salt) solution. So, recurring cost in such process is only the cost in such process is only the coast of common salt.





## SCOPE OF SUPPLY

- Main M.S. Pressure vessel with top and bottom strainer plants supported on M.S. Supports
- Painted internally with bitumastic paint and externally with attractive finish
- Frontal ilnter connecting pipings with G.M./C.I. (Screwed End/Flange End) Diaphragm valve and sample Cock
- Brine suction assembly with ejector
- Pressure gauges at inlet and outlet
- Initial charge of High Exchange capacity ion exchange Resins
- Testing kit.
- Operation Manual.

## APPLICATIONS

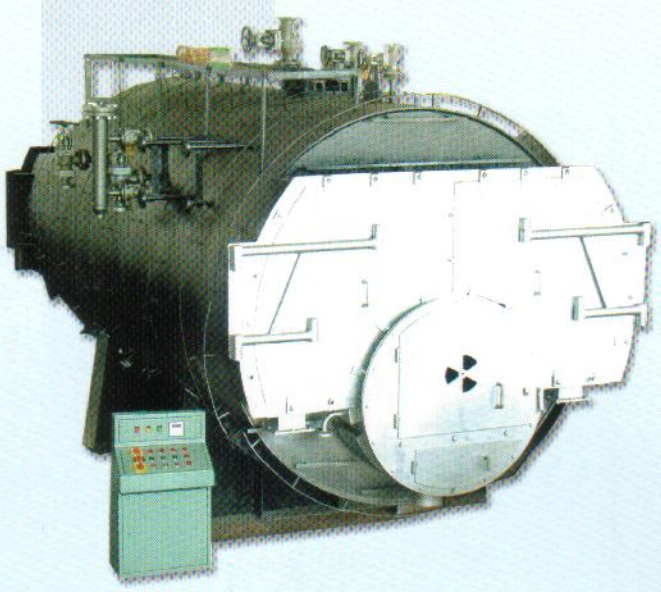
- Boiler Feed
- Textile Processing
- Dyes and Chemical Manufactures Hotels
- Hospitals
- Air Conditioning Plants
- Ice Plants
- Cooling Water make up
- Power Plants
- Soft Drink Beverages
- Dairies
- Chilling Plants

## SALIENT FEATURES

- Compact and Economical design
- Easy installation, little space, simple working, no skilled labour
- Reduction in fuel consumption and improved efficiency
- Prevents scale formation, Reduces Dyes, Chemical & Auxilliaries consumption
- Very less maintenance and running cost
- Uses high exchange capacity Resins

## TECHNICAL SPECIFICATIONS (UP FLOW)

| MODEL | EWS 1000 | EWS 2000 | EWS 3000 | EWS 5000 | EWS 7000 | EWS 10000 | EWS 15000 |
|---|---|---|---|---|---|---|---|
| Flow Rate Max ltr/hr | 1000 | 2000 | 3000 | 5000 | 7000 | 10000 | 15000 |
| Out/Regener ation in ltr based on Total hardness 200 PPM CaCo3. | 9000 | 15000 | 20000 | 35000 | 55000 | 80000 | 105000 |
| Duration for Regeneration Min. | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| Salt required/Reg in Kgs. Nacl. | 4.5 | 7.0 | 10.0 | 17.5 | 27.5 | 40.5 | 54 |
| Working Pressure Max.Kg/cm$^2$ | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| Working Pressure Min. Kg/cm$^2$ | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 |
| Residual hardness in Treated Water PPM as CaCo3 less than | 05 | 05 | 05 | 05 | 05 | 05 | 05 |



**We Supply Following also**

- PRESSURE SAND FILTER
- CHEMICAL DOSER
- CATION-ANION RESINS
- SPARES FOR WATER TREATMENT PLANTS
- BOILER WATER TREATMENT CHEMICALS

**NOTE:**

Raw water should be clean, clear and free from chlorine.

- Output/Regeneration is based on 200 PPM Total Hardness CaCo3.
- Energy under takes the design, fabrication and the supply of Water
- Softining plant ANY CAPACITY as specifically required by any customers.

**WE RESERVE THE RIGHT TO CHANGE AND OF THE ABOVE SPECIFICATIONS.**


Marketed & Manufactured by

**ENERGY PROCESS EQUIPMENTS**

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