



SHOEF SOFT WATER SOFTENER (Industrial)



Water hardness and its significance

Most water carry various dissolved salts including calcium (Ca^{2+}) and magnesium (Mg^{2+}) which specifically contributes to water hardness. Depending upon the Ca^{2+} and Mg^{2+} contents in water, water hardness increases risk for clogging pipes, produces scales and deposits, effect heat transfer rates in boilers and other heat transfer equipment, overheated design system's parameters, effect washing process and increase soap and detergent consumption etc. Scale build up means more energy is required to heat the water that results in an increase in normal power / energy bills. Various technologies are available to reduce water hardness and make water suitable for any industrial, commercial and household water systems.

Sheof-Soft Water Softening Plant (Industrial and commercial)

Water softening systems are used to reduce the hardness from the water and avoid hardness related problems during the specific quality water use. Many water softening techniques are available to reduce water hardness among which ion exchange is the most popular technology.

Ion exchange water softening uses specific ion exchange resins technology to remove naturally occurring minerals such as calcium and magnesium (which cause hardness in water) from water to prevent scale /deposits buildup in pipes and associated appliances. It mainly removes Ca^{2+} & Mg^{2+} ions by replacing them with other ions (Na^+). The process is widely used in most industrial and commercial setups to ensure that all heating and cooling systems run smoothly at their designed parameters. Water softeners support run system with reduced energy losses, lower energy bills and help achieve best operating performances by extending the life expectancy of water-handling equipment and other process equipment.



Water softener is a simple but the most efficient system to deal with hard water issues and of all the known methods, leaves the least effects. As soon the water started to pass through water softener, the system quickly begins paying off for itself through reduced energy consumption, extended water appliance life, and lower equipment and plumbing repairs. With soft water, water heaters and boilers last longer; saves costly specialty chemicals for boilers and steam handling equipment. It is also widely used as pre-treatment systems for RO/ NF systems and help these systems run with minimal operational issues and helps reduce membrane cleaning /replacement frequency.

Benefits

- Reduced scaling/ keeps heat transfer surface clean
- Reduced equipment breakdown & lost production hours
- Eliminate un-necessary repair and maintenance
- Ensure quality textile dyeing and printing
- Reduces scaling on RO / NF/ UF membranes
- Reduced RO/ NF membrane cleaning
- Reduced water treatment chemical consumptions
- Saves thousands on chemical usage
- Extended equipment/appliance life
- Ensure smooth heating and cooling operation
- Reduced energy consumption
- Reduced energy bills
- Save fuel & your money
- Keep uniform fabric colour
- Reduced water losses
- Enhance cleaning
- Reduce CO_2 emissions
- Environment friendly
- Reduced chemical consumption

Applications

- Boiler feed water
- Cooling water treatment
- Process industry
- Humidification and air conditioning
- Energy & power generation
- Food & beverage
- Textile dyeing, printing & finishing
- Apartments, condominiums & homes
- Public buildings
- Educational facilities
- Agricultural
- Hospitals, medical and dialysis
- Swimming pools & leisure
- HVAC systems
- Re-circulation systems
- RO pre-treatment
- Manufacturing plants
- Industrial process water
- Dairy industries
- Textile weaving & spinning
- Motels & resorts
- Universities & colleges
- Commercial laundries
- Service stations/ car wash
- Hotels, restaurants & catering
- Pharmaceutical



SHOEF SOFT WATER SOFTENER

(Industrial/commercial)

Salient Features *

- High flow capacity systems also available 0-200 m³/hr
- Corrosion resistant tanks, internals and piping
- Available in varying sizes and configurations
- Simple design for ease of operation setting and service
- Can be configured as simplex, duplex triplex, Quadruple etc to match your flow requirements
- Comes with high capacity cross-linked virgin softening resin
- Various control mode such as manual, semi-automatic, automatic available
- Individual valve nest /Multiport valve options available
- Automatic brine injections system for small-medium size system
- Automatic backwash flow controllers insuring proper backwash regardless of inlet water pressure
- An automatic brine float valve controls brine draw and regulates fresh water refill and avoids overflow
- Can be coupled with any other pre-post water treatment system
- Comes with inlet water and outlet soft water sample valves
- Easy to install and operate
- Low power requirements
- Requires minimal maintenance
- Spares available



Parameters effecting the system design / Water softener size selection support (Input required as per your requirements) *

- ◆ Feed water hardness (ppm CaCO₃)
- ◆ Average flow rate required (m³/hr)
- ◆ Daily soft water required (m³)
- ◆ Configuration choice (Simplex, Duplex, Triplex, Quad)
- ◆ Media tank material (Fiberglass (RFP), MS/CS internally rubber lined)
- ◆ Piping material (PVC, MS, GI, HDPE)
- ◆ Control mode (Manual, semi-automatic, automatic (Timer based/ Volumetric control))
- ◆ Brine feed (Injector, SS/PVC pump)
- ◆ Instruments and control (SS Pressure gauge (Inlet/outlet), backwash flow controller, flow meter, tank level controller, PLC, etc)
- ◆ Feed water storage tank (Yes/No)
- ◆ If yes to FWST (Capacity in m³)
- ◆ Feed water storage tank material (HDPE, Fiberglass, RCC)
- ◆ Feed water pump (Yes/No)
- ◆ Feed water pressure (psi)
- ◆ Feed water pump material (MS, PVC, SS)
- ◆ Soft water storage tank (Yes/No)
- ◆ If yes to SWST (Capacity in m³)
- ◆ Soft water storage tank material (HDPE, Fiberglass, RCC)
- ◆ Pre-treatment options (Sand filter, carbon filter, cartridge filter, iron filter or other)
- ◆ Parallel and series arrangements

* Some of these may sharply increase the cost

For quote or any other details, please contact



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