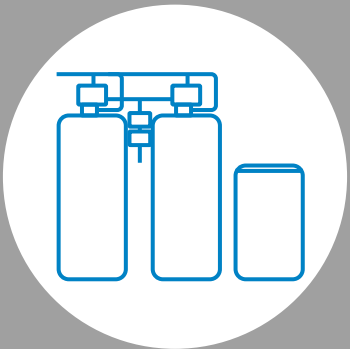


Makeup Water Pretreatment Equipment Options

Pretreatment removes unwanted impurities from raw water before it enters a boiler, cooling, or other process water system.

Water Softener

Softens water by exchanging calcium and magnesium hardness ions for sodium ions.



Reduces scale forming potential to maximize heat transfer efficiency and minimize energy and maintenance costs.

Dealkalizer

Reduces alkalinity by exchanging alkalinity ions for chloride.



Reducing boiler alkalinity can minimize carbonic acid attack of condensate systems while decreasing condensate neutralizing amine usage and costs.

Demineralizer/Deionizer

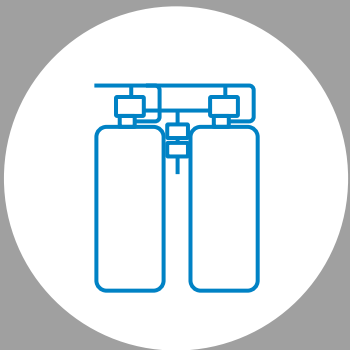
Uses ion exchange to greatly reduce all dissolved solids to produce high-purity water.



Allows boilers to run at higher cycles of concentration, which reduces energy and water costs.

Condensate Polisher

Removes hardness and iron contamination from boiler condensate at high temperatures.



Reduces scale forming potential within boilers to maximize heat transfer efficiency and minimize energy and maintenance costs.

Activated Carbon

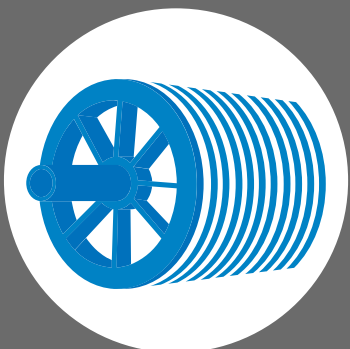
Reduces chlorine and organics through reaction and adsorption with its porous surface.



Removing free chlorine before an RO to protect the membranes from degradation.

Reverse Osmosis

Uses a semi-permeable membrane to remove dissolved solids to make high-purity water.



Allows boiler systems to run at higher cycles of concentration, which reduces energy and water costs.

Iron Filters

Reduces iron and manganese through oxidation and filtration.



Reduces fouling and deposit formation in boiler, cooling, and process water systems.

Filtration

Removes suspended solids.

Decreases deposit formation on heat transfer surfaces, low flow areas, and membranes, reducing maintenance costs and maximizing heat transfer efficiencies.

Examples:

- Sand Filter
- Multi-Media Filtration
- Bag Filters
- Cartridge Filters