

REVERSE OSMOSIS (RO)

Hydro-Thermal provides versatile, proven water purification solutions for a wide variety of industries. Our products can heat RO inlet water or heat membrane back flush water while achieving precise temperature control and maintaining consistent throughput. Ultimately, A Hydro-Thermal heater can prolong the performance and life expectancy of your membranes in your RO system.

INLET WATER

RO filters are designed for a given water temperature. As water cools, viscosity increases and RO capacity decreases. For every 1°F below design temperature, a RO can lose up to 3% of capacity. A Hydroheater can keep the inlet water temperature at $\pm 1^\circ\text{F}$ of the set point so the RO can operate at the designed capacity without wasting energy overheating the water.

BACK FLUSH WATER

Similar to above, if the membrane back flush water is heated to the designed temperature, a Hydroheater will optimize the amount of water used and ensure the membranes are properly cleaned, eliminating the need for an additional filter.

Industries using Hydro-Thermal products for Reverse Osmosis:

CHEMICAL DISPOSAL

- + reduces the volume of waste disposed by removing excess water

DESALINATION FACILITIES

- + removes salt from ocean water for human consumption

FOOD, BEVERAGE, COSMETICS, PERSONAL CARE

- + produces thicker syrups by removing excess water
- + creates pure, potable water so flavoring, quality and taste are more tightly controlled

POWER PLANTS

- + provides efficient treatment of boiler feedwater including sediment and dissolved solids removal, which reduces boiler chemical usage and blow down

APPLICATION EXAMPLE

PLASTICS FABRICATION FACILITY

Challenge

precise, non-stop heating of reverse osmosis inlet water

Conditions

Steam pressure: 170 psi
Flow rate: 800-2000 gpm
Temperature in: 33°F
Temperature out: 72°F

Solution

A K514 Hydroheater provides extremely accurate ($\pm 1^\circ\text{F}$), efficient temperature control which allows continuous operation during winter months



For more information on the benefits of using Hydro-Thermal products or to learn which would work best for your application and specifications, contact us.