

eNPure Process Systems is Your Single Source Solution for All Your Boiler, Process, and Cooling Tower Feedwater Resources and Treatment Programs



INCREASE FEEDWATER RECOVERY OF YOUR EXISTING REVERSE OSMOSIS SYSTEMS WHILE REDUCING ENERGY COSTS WITH RETROFIT REFLEX™ RO PRODUCTS

Maximize your water resources with Enhanced ReFlex™ Reverse Osmosis Products and Systems and **eliminate thousands of dollars in annual operating costs**

THE QUALITY AND OPERATING EFFICIENTLY OF DEMINERALIZED WATER SUPPLIED BY THE REVERSE OSMOSIS PROCESS IS UNPARALLELED IN INDUSTRY.

IT COMES AT A COST:

- *Purchasing unused feedwater*
- *Greater pre-treatment costs to meet the required feedwater flow*
- *Disposing of RO concentrates/brine*
- *High energy consumption*

Reverse Osmosis systems designed with low permeate recoveries, between 70% and 85%, impose costs far beyond their own footprint: in higher pre-treatment and chemical costs readying the feedwater for RO treatment. The challenge has always been to design an RO system that could operate reliably and flexibly at high enough recovery and efficiency to minimize the RO concentrate costs and justify the investment. Until now!

ReFlex™ systems deliver the maximum recovery rate - guaranteed. ReFlex™ RO systems can

meet the challenge, typically achieving recoveries of up to 95% for a boiler feedwater application, while reducing energy consumption by as much as 35 percent.

BENEFITS

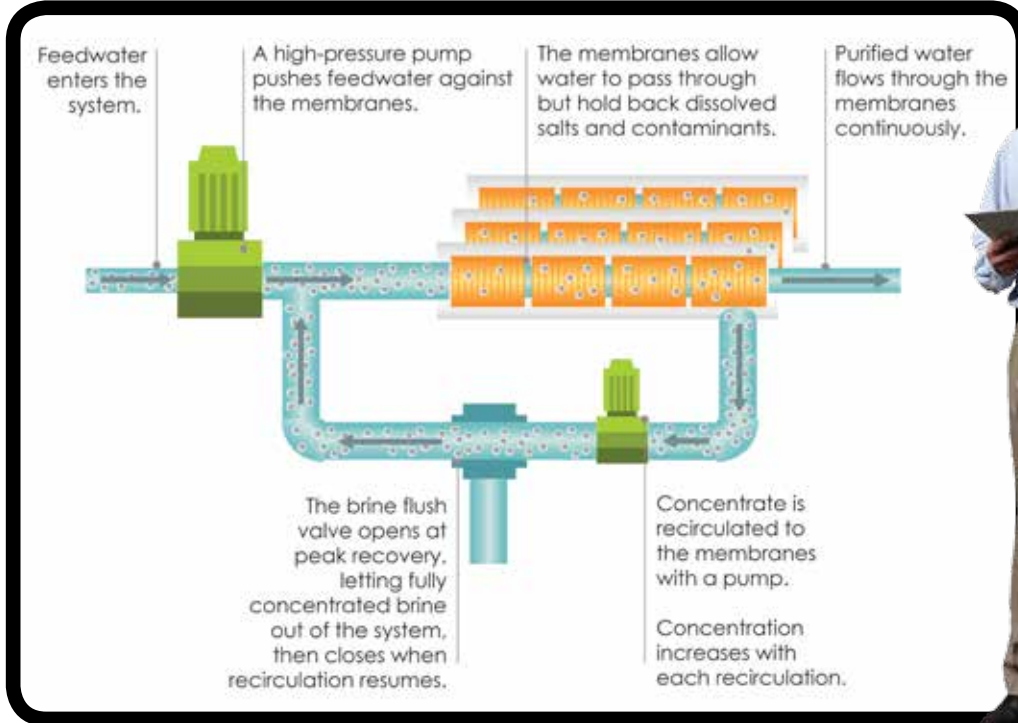
- QUICK PAYBACK, GENERALLY BETWEEN 18 TO 30 MONTHS.
- PERMEATE RECOVERIES UP TO 95%, RESULTING IN GREATER FEEDWATER UTILIZATION AND LOW WASTE-WATER DISCHARGE.
- REDUCED ENERGY CONSUMPTION, UP TO 35% LOWER THAN TRADITIONAL RO SYSTEMS
- HIGHER RELIABILITY AND UPTIME COMPARED TO CONVENTIONAL RO

Call eNPure for an evaluation today.
281-900-3842



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eNPure's water treatment experts can convert a conventional RO to a ReFlex™ RO utilizing advanced and proprietary process design and engineering



Schematic Flow Diagram

ReFlex™ RO combines media filtration with reverse osmosis to achieve recovery rates up to 95%. Reflex™ RO works by recirculating pressurized brine until a desired recovery level is reached. Brine is replaced with fresh feed without stopping the flow of pressurized feed or permeate and starts a new cycle. The low initial pressure of each Closed Circuit Desalination (CCD™) cycles means a lower average operating pressure and less pump energy than required in conventional RO systems. ReFlex™ RO achieves recovery by re-circulation, not with multiple membrane elements and stages in series, up to 95%, and can therefore reach any desired recovery percentage in a single stage. Recovery is adjustable at the system control panel, providing unmatched flexibility.

High crossflow supplied by recirculation scours the membranes, greatly reducing scaling and

fouling, while the higher salinity cycles act as a natural biocide, disrupting biological fouling. Cycle times are often shorter than the induction time for scale deposition; frequent and complete brine rejection can stop and even reverse precipitation, making very high recovery rates possible even from difficult source waters. Short membrane arrays and high cross flow also allow ReFlex™ RO to operate at higher average fluxes without exceeding the membrane manufacturer's flow or recovery specifications.

Our solution will conserve water and save treatment expenses. ReFlex™ RO reduces brine waste by up to 75% and energy consumption by up to 35% compared to conventional reverse osmosis designs. Our customers will enjoy superior performance, higher reliability and lower operating expenses.



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