energy recovery®

PX Q650: ADVANCING THE GOLD STANDARD

Our most efficient, highest capacity PX for seawater reverse osmosis desalination facilities



The PX Q650 is our highest capacity pressure exchanger, offering best-in-class performance from our trusted PX® Pressure Exchanger® technology with up to 99% peak efficiency. Thanks to its high performance and low maintenance, the PX Q650 reduces energy consumption and delivers the lowest projected life cycle cost compared to competing technologies. Even at peak flow, the PX Q650 operates at or below 82 dBA, well under occupational sound exposure limits set by OSHA and the EU.

Highest Efficiency and Reliability

The PX Q650 offers the highest efficiency on the market with a 250–650 gpm (56.8 m^3/h -147.6 m^3/h) operating range to reduce footprint and piping manifolds, resulting in simpler train designs. With its patented corrosion-resistant ceramic core and one moving part, the PX delivers a 30-year design life and supports low operating costs across diverse operating conditions.

Lowest Life Cycle Cost

The PX Q650 is reliable, easy to use, and ideal for harsh environments. Ceramic components are machined in-house with micrometer-level precision through vertically integrated manufacturing, producing consistent, high-performing products trusted worldwide.

The PX Q650 requires no scheduled maintenance, enabling low life cycle costs and high uptime. Its flexible design and simple installation make it easy to incorporate into new facilities or retrofits.

BENEFITS*

Compared to competing technology

Highest Capacity on the Market:

- 650 gpm (147.6 m^3/h) peak flow, 63% capacity increase over previous model

Highest Efficiency:

- Up to 99% peak efficiency

Lowest Mixing:

- As low as 2% volumetric mixing

Lowest Operating Costs:

- Lowest SEC, minimizing total cost of ownership

Quietest Operation:

- 82 dBA or lower sound levels at max flow and pressure

Greatest Operating Flexibility:

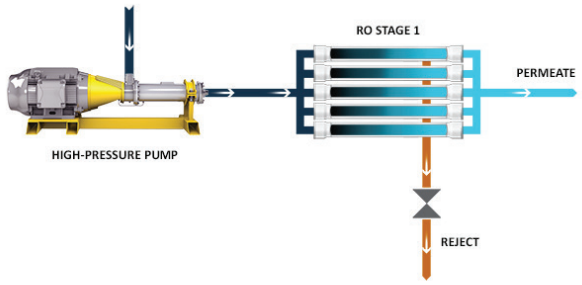
- The highest turndown ratio available

**Actual results may vary.*

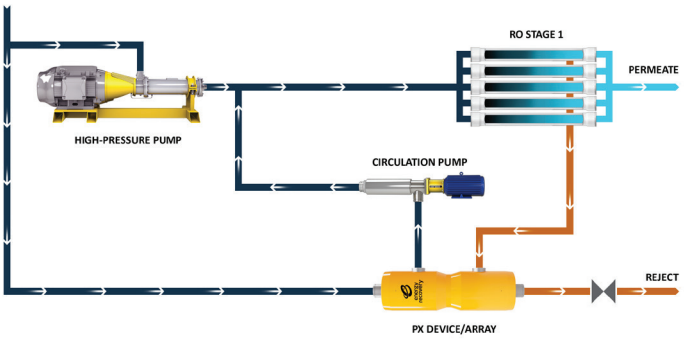
How it Works

The PX Q650 directly transfers hydraulic energy from the high-pressure reject stream to incoming low-pressure feedwater. With one moving part driven by fluid pressure and direct fluid-to-fluid energy transfer, nearly all unused hydraulic energy is recirculated within the RO process, reducing energy drawn by high-pressure pumps.

SWRO Without Energy Recovery Device



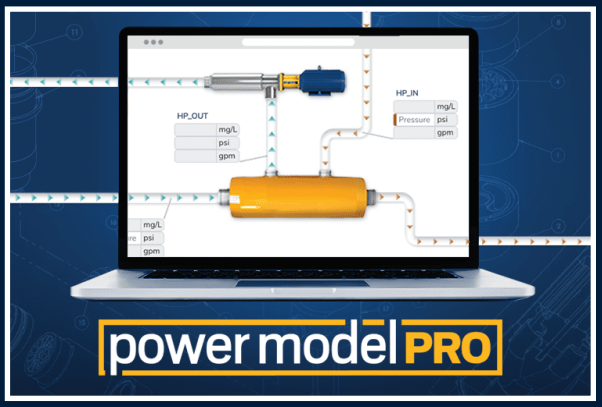
SWRO With the PX Pressure Exchanger



POWER MODEL PRO

Power Model Pro is a secure, easy-to-use cloud-based product configurator tool that allows you to predict equipment performance, estimate energy consumption, and optimize efficiency of a reverse osmosis system using our products.

To register, visit energyrecovery.com/resources/power-model-pro.



Energy Recovery (Nasdaq: ERII) designs and manufactures world-class energy-saving technology for critical infrastructure that communities rely on every day, driving a more resilient and sustainable future. Grounded in more than 30 years of leadership in the desalination industry, today we use our proprietary pressure exchanger technology to help customers in multiple industries improve their operations and lower their emissions. Headquartered in the San Francisco Bay Area, we operate manufacturing and R&D facilities throughout California, with sales and on-site technical support available globally. For more information, please visit www.energyrecovery.com or email sales@energyrecovery.com.

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