

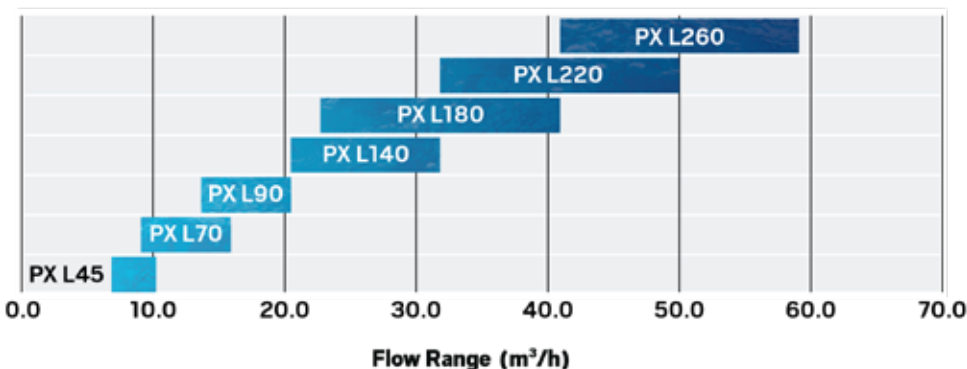
# ENERGY RECOVERY SOLUTIONS FOR LOW- PRESSURE RO SYSTEMS

Making water reuse and brackish water RO treatment sustainable and energy efficient

## PX® Pressure Exchanger® Low-Pressure Series

Energy Recovery's PX Pressure Exchanger Low-Pressure Series is a range of energy recovery devices uniquely designed for low-pressure reverse osmosis (LPRO) and nanofiltration (NF) systems to provide a sustainable, affordable path to save operational energy. Incorporating a low-pressure PX can reduce the specific energy consumption of systems by up to 30%.

Suitable and compatible for use in brackish water reverse osmosis (BWRO), industrial and municipal water reuse, and wastewater treatment reverse osmosis systems, the low-pressure PX devices offer a flexible solution that works under variable operational conditions, such as varying flow rate, recovery, pressure, feed water total dissolved solids (TDS), and temperature.



### BENEFITS\*

- **Reliable:**
  - Industry-leading reliability (99.8% uptime)
- **Flexible:**
  - Isobaric device, stable efficiency maintained across variations in flow and pressure (5.5 – 31 bar; 80 – 450 psi)
  - Compact, modular, and scalable to any flow capacity (7 m³/h – 59 m³/h; 30 gpm – 260 gpm)
  - Easy to implement in new and existing RO systems
- **Short Payback:**
  - Reduce specific energy consumption by up to 30% compared to systems without the low-pressure PX

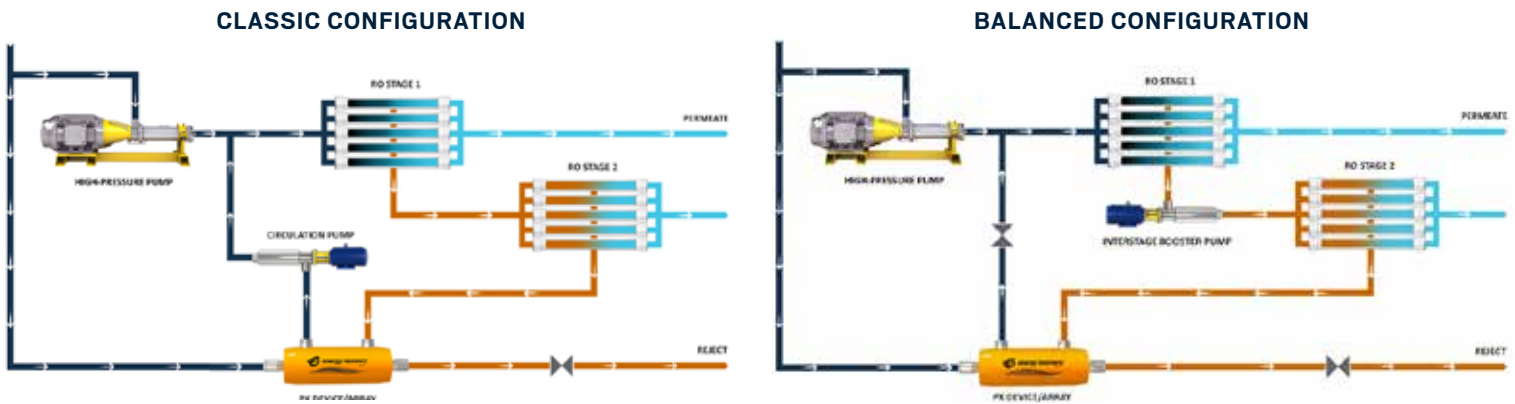
\*Actual results may vary.





# Configurations to Match New or Existing Systems

A low-pressure PX can be configured in a balanced or classic arrangement. In the balanced configuration, an interstage booster pump boosts the feed pressure of the final stage of an RO system to balance the flow distribution. The low-pressure PX is installed at the brine stream of the final RO stage, which transfers the hydraulic energy from the brine to the raw feedwater stream, reducing the work on the high-pressure pump. This configuration allows plant operators to maximize energy savings while improving flux distribution balance. Similarly, the classic configuration reduces the flow and work of the high-pressure pump but without the benefits of flux balancing due to the lack of an interstage pump for implementation in new and existing RO trains.



## LPT Turbocharger

The LPT Turbocharger is a cost-efficient energy recovery solution for low-pressure applications such as multistage brackish reverse osmosis water treatment and potable, non-potable, agricultural, and industrial water reuse. The LPT operates at pressures of up to 45 bar (650 psi) and a flow range of 205 to 908 m<sup>3</sup>/h (900 to 4,000 gpm) per unit.

### BENEFITS

- **Flexible:** Operates at high efficiency and provides versatility with a compact footprint
- **Reliable:** Eliminates the need for an interstage booster pump and requires no electrical connections, motors, or drives
- **Compatible:** Easy system integration for long-term reliability



## ENERGY RECOVERY – TRUSTED PARTNER FOR DESALINATION

Energy Recovery (Nasdaq: ERII) is a trusted global leader in energy efficiency technology for the water treatment industry. Building on our gold-standard pressure exchanger technology platform, we design and manufacture reliable, high-performance solutions that generate cost savings, increase energy efficiency, and reduce carbon emissions across desalination, wastewater treatment, and other water treatment applications. With a strong foundation in desalination, Energy Recovery has delivered transformative solutions that increase operational efficiency and provide a positive environmental impact to water producers worldwide for more than 30 years. Headquartered in the San Francisco Bay Area, Energy Recovery has manufacturing and R&D facilities in California, with sales and on-site technical support available globally.

For more information, please visit [www.energyrecovery.com](http://www.energyrecovery.com) or contact us at [www.energyrecovery.com/contact](http://www.energyrecovery.com/contact).