



# PX G1300™

Accelerating Sustainable and Affordable Refrigeration

## ACCELERATING SUSTAINABLE AND AFFORDABLE REFRIGERATION

Carbon dioxide (CO<sub>2</sub>) is one of the most sustainable and safe natural refrigerants. But the cost of CO<sub>2</sub> refrigeration systems has traditionally made it hard for retailers to make the switch from super-polluting hydrofluorocarbons (HFCs), especially in warmer climates.

**Energy Recovery's new PX G1300 (PX G) energy recovery device** eliminates the barriers to CO<sub>2</sub> adoption in supermarkets in all ambient temperatures. CO<sub>2</sub> systems offer near-zero global warming potential (GWP) — a huge benefit as retailers work to green their operations and comply with regulation to phase out HFCs.

The PX G recovers lost energy and lowers the electricity bill of CO<sub>2</sub> systems. This improves the bottom line for supermarkets and reduces their carbon footprint. By recycling otherwise wasted pressure energy and returning it to the system, the PX G reduces energy consumption and operating costs of CO<sub>2</sub> refrigeration. The PX G works by expanding the refrigerant similar to a valve, but recovers the energy of expansion and provides compression. This reduces the load on the compressors and the energy consumption of the system.

### OPERATING RANGE\*

- Pressure 350–1,450 PSI (24–100 bar)
- Ambient Temperature: 50–110 F (10–43C)
- System Size: 40 KW and higher

### SPECIFICATIONS\*

- Rated Pressure: 1,885 PSI (130 bar)
- Overall Dimensions: 42" (H) X 22" (W) X 12" (L) (106 cm X 56 cm X 30 cm)
- Overall Weight: 278 lbs (126 kg)
- Connection Size: 1" NPT (2.5 cm NPT)
- Pressure Exchanger Internal Material: Ceramic
- Outer Housing Material: Alloy Steel

\*Preliminary values based on system modeling.

## PX G1300

# BENEFITS

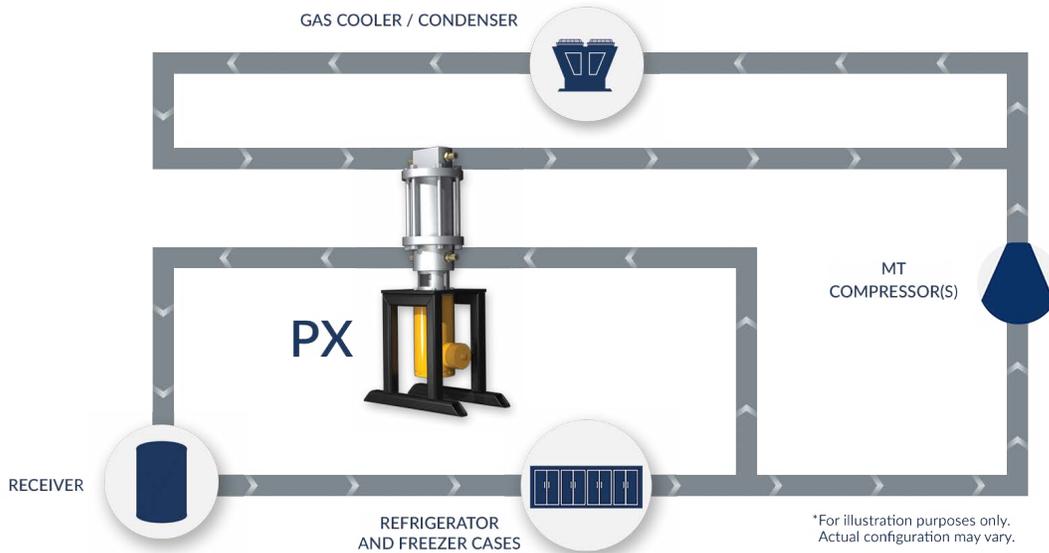
- Increases system efficiency and lowers energy consumption
- Reduces operating costs
- Designed for easy operation and maintenance
- Reduces workload on compressors
- New or existing CO<sub>2</sub> system integration



**Good for the environment and the electric bill, Energy Recovery's PX G1300 can ensure a financially attractive next generation CO<sub>2</sub> refrigeration system helping supermarkets meet the future of refrigeration head on.**

## HOW DOES THE PX G1300 WORK IN A CO<sub>2</sub> REFRIGERATION SYSTEM?

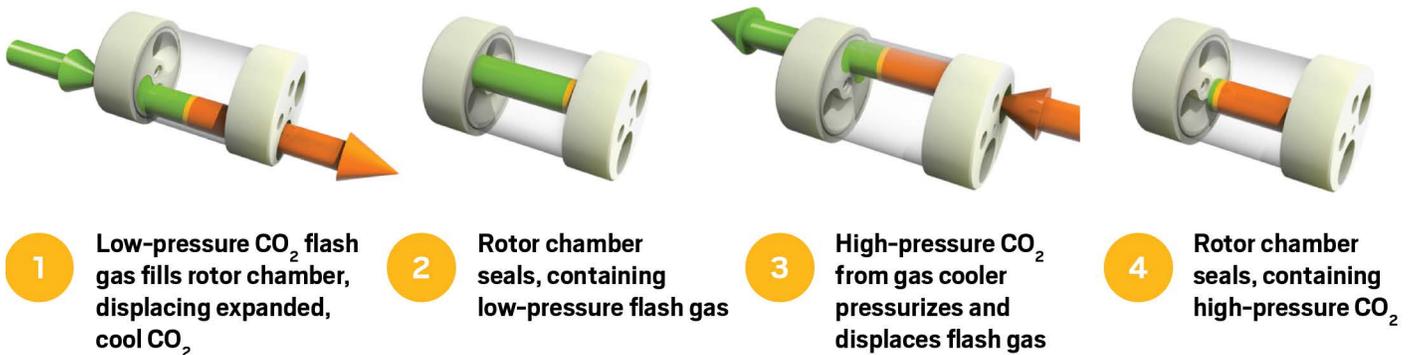
A typical Energy Recovery PX is energized by fluid flow and pressure transfer from a high-pressure fluid to a low-pressure fluid. PX G1300 handles both gas and liquid, which makes it ideal for CO<sub>2</sub> refrigeration systems in order to lower energy consumption. The PX G operates alongside the high-pressure valve of the refrigeration system. Instead of simply throttling the pressure energy at a high-pressure valve, the PX G harvests the energy to reduce compressor work and reduce power requirements. Diminished compressor work saves energy and reduces compressor duty cycles, leading to lower maintenance needs for the compressors and savings for the system operator.



## PROVEN, RELIABLE, TRUSTED TECHNOLOGY

Energy Recovery's pressure exchanger (PX) technology is a globally trusted technology, providing significant savings and operational reliability for its users. PX technology recycles otherwise wasted pressure energy within industrial systems, saving energy, reducing waste and minimizing emissions. It can also handle a range of pressures, including pressure above and beyond what is needed for CO<sub>2</sub> refrigeration systems.

How does it work? A PX acts like a fluid piston, efficiently transferring energy between high-pressure and low-pressure liquid and/or gas through continuously rotating ducts. The PX has only one moving part, the rotor, which boosts reliability — the more moving parts in a mechanical system, the greater chance something could break.



If you are ready to optimize your CO<sub>2</sub> refrigeration system, please email us at [Refrigeration@energyrecovery.com](mailto:Refrigeration@energyrecovery.com) or visit [energyrecovery.com/refrigeration](http://energyrecovery.com/refrigeration)