



# PX G1300™ Reduces Peak Power Consumption 30% Over Adiabatic Cooler

Energy Recovery's PX G1300™ pressure exchanger was installed at a Vallarta Supermarkets location in November 2022 to recover and recycle high-pressure energy within an existing CO<sub>2</sub> system.

## PROJECT GOALS

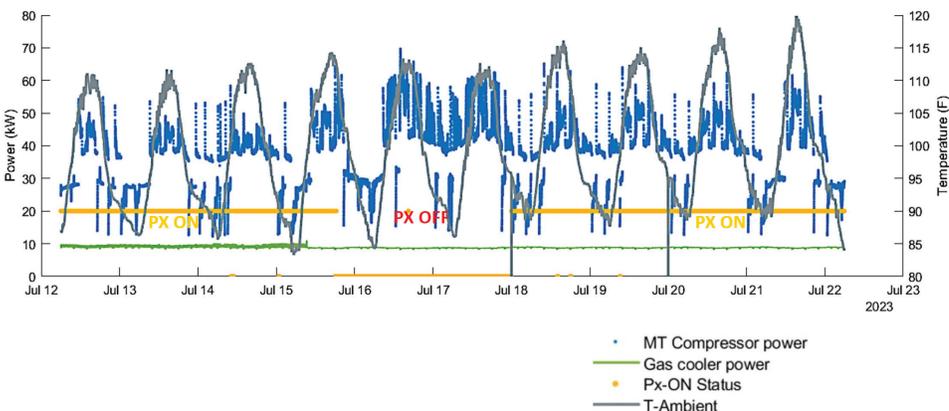
- Reduce energy consumption and emissions of the Vallarta CO<sub>2</sub> system
- Mitigate the impact of heat waves in an area where temperatures range from 42°F - 107°F (5°C - 41°C)
- Compliment the energy efficiency of Vallarta's existing adiabatic cooler

## PX G1300 RESULTS

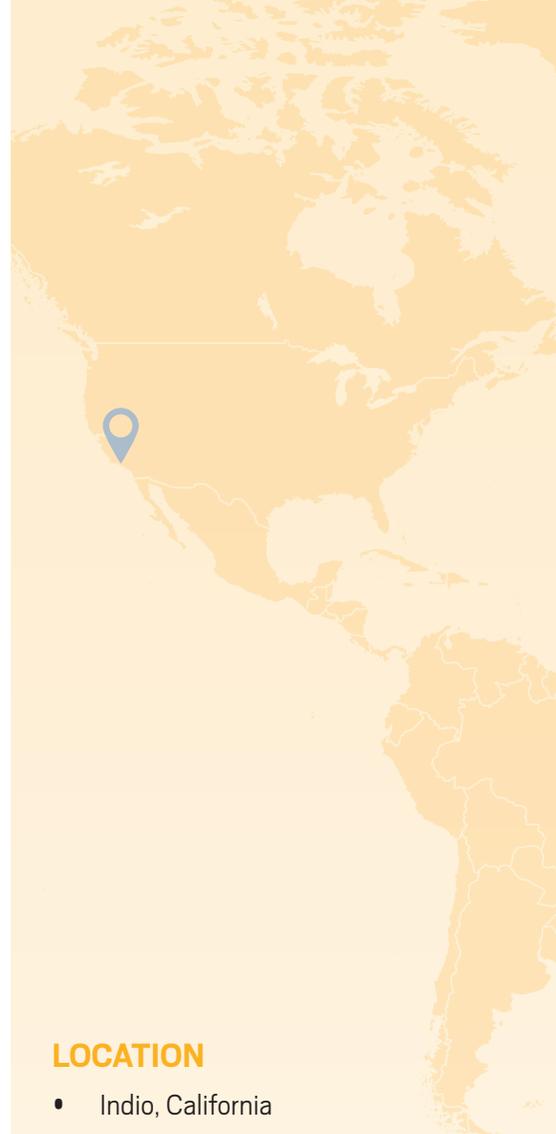
- Reduced peak power consumption approximately 30%\*
- Cut average energy consumption approximately 14%\*
- Installed and commissioned with no impact on regular store operations
- Second PX G1300 installation with Vallarta announced August 2023

## PERFORMANCE SNAPSHOT

After months of stable performance, the impact of the PX G1300 was measured in an 11-day analysis that compared system energy consumption when the PX G1300 was enabled versus disabled. During this time, the PX G1300 eliminated the intermittent onset of the system's third compressor, reducing peak power consumption by roughly 30%. The PX G1300 also cut average energy consumption by approximately 14%. These savings were all achieved on top of the system's adiabatic cooler.



\*Based on actual results collected between July 12-22, 2023.



## LOCATION

- Indio, California
- Supermarket Size: 37,000 sq ft

## REFRIGERATION RACK SPECS

- Rack Manufacturer: Hillphoenix
- Rack Controls: Carel
- Contractor: Prime Refrigeration
- 525 MBH (150 kW) CO<sub>2</sub> system
- LT Load: 120.5 MBH (35 kW)
- MT Load: 405.3 MBH (119 kW)



### ABOUT VALLARTA SUPERMARKETS

Vallarta Supermarkets launched its CO<sub>2</sub> refrigeration pilot program to satisfy state regulatory requirements and improve its sustainability footprint.

Vallarta uses CO<sub>2</sub> systems because they have some of the lowest global warming potential (GWP) of any refrigeration system. However, CO<sub>2</sub> systems have an Achilles heel – they require a lot of energy to operate in warm climates.

Vallarta selected Energy Recovery, Inc., an energy efficiency technology leader, to install the company's pressure exchanger technology, the PX G1300™, in Vallarta's existing CO<sub>2</sub> refrigeration system.

### ABOUT THE PX G1300

Energy Recovery's pressure exchanger (PX) technology was originally used in water desalination to lower the energy consumption of plants by up to 60%. This game-changing technology has now been adapted for use in CO<sub>2</sub> refrigeration systems. The PX G1300 can provide free compression by recovering high-pressure energy that would otherwise be wasted. Its simple design and precision manufacturing ensure that the PX G1300 is highly reliable and can be seamlessly integrated into existing and new high-pressure CO<sub>2</sub> systems, as it works with any existing rack controller.

At Vallarta Supermarkets, the PX G1300 was deployed with a fail-safe mechanism to protect store operations.



### CONTACT ENERGY RECOVERY ABOUT ORDERING THE PX G1300 TODAY

Reduce energy costs, increase cooling capacity, and increase energy efficiency with the PX G1300. Email us at [CO2@energyrecovery.com](mailto:CO2@energyrecovery.com) to learn more.

### TESTIMONIAL

“The PX G1300 has made our CO<sub>2</sub> refrigeration system more cost-effective and energy efficient, reducing our emissions while mitigating the impact of summer heat waves.”

– Steve Goh, Vallarta Supermarkets  
Director of Energy Management & Sustainability

