

# **Chillventa Specialist Forums 2022**

## **Chillventa Fachforen 2022**

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# Pressure Exchanger Technology for Energy Efficient R-744 Refrigeration

**CHILLVENTA**

*Energy Recovery*

***Joseph Marchetti, Product Manager, CO2***

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## Forward looking statement

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This presentation contains forward-looking statements within the “Safe Harbor” provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements in this report include, but are not limited to, statements about our expectations, objectives, anticipations, plans, hopes, beliefs, intentions, or strategies regarding the future. Forward-looking statements that represent our current expectations about future events are based on assumptions and involve risks and uncertainties. If the risks or uncertainties occur or the assumptions prove incorrect, then our results may differ materially from those set forth or implied by the forward-looking statements. Our forward-looking statements are not guarantees of future performance or events. Words such as “expects,” “anticipates,” “believes,” “estimates,” variations of such words, and similar expressions are also intended to identify such forward-looking statements.

These forward-looking statements are subject to risks, uncertainties, and assumptions that are difficult to predict; therefore, actual results may differ materially and adversely from those expressed in any forward-looking statements. You should not place undue reliance on these forward-looking statements, which reflect management’s opinions only as of the date of this presentation. All forward-looking statements included in this presentation are subject to certain risks and uncertainties, which could cause actual results to differ materially from those projected in the forward-looking statements, as disclosed from time to time in our reports on Forms 10-K, 10-Q, and 8-K as well as in our Annual Reports to Stockholders and, if necessary, updated in our quarterly reports on Form 10-Q or in other filings. We assume no obligation to update any such forward-looking statements. It is important to note that our actual results could differ materially from the results set forth or implied by our forward-looking statements.



1. Energy Recovery at a Glance
2. PX G1300™ for CO<sub>2</sub> Refrigeration
3. Commercial CO<sub>2</sub> Experience



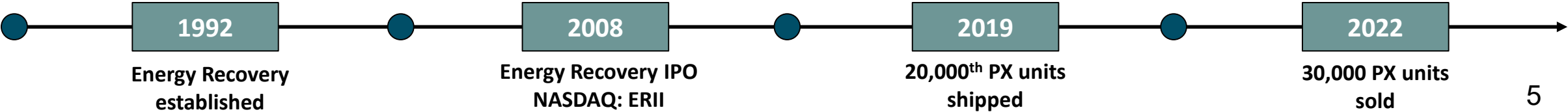
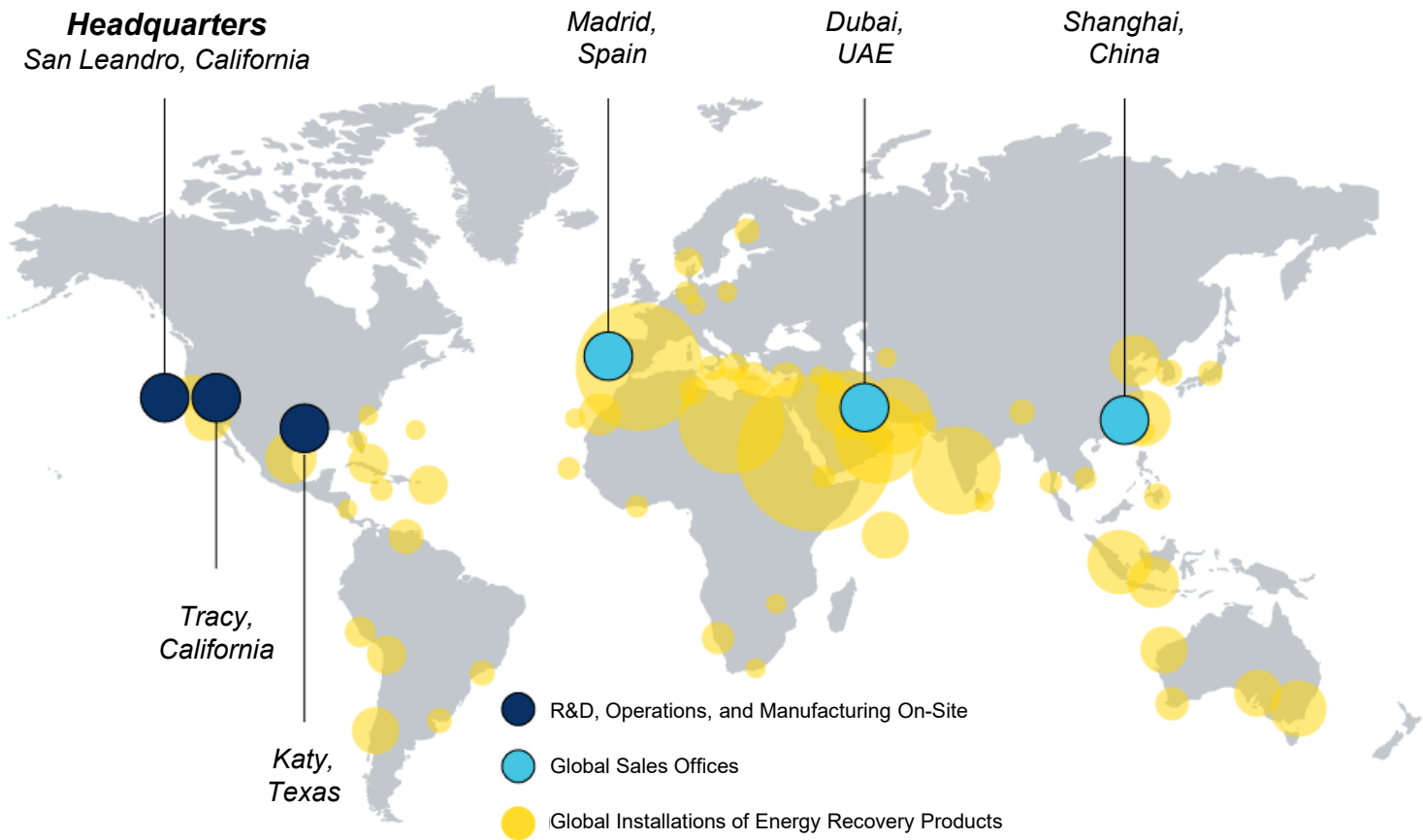
# Energy Recovery at a Glance



**222** Employees

**\$104M** Product Revenue

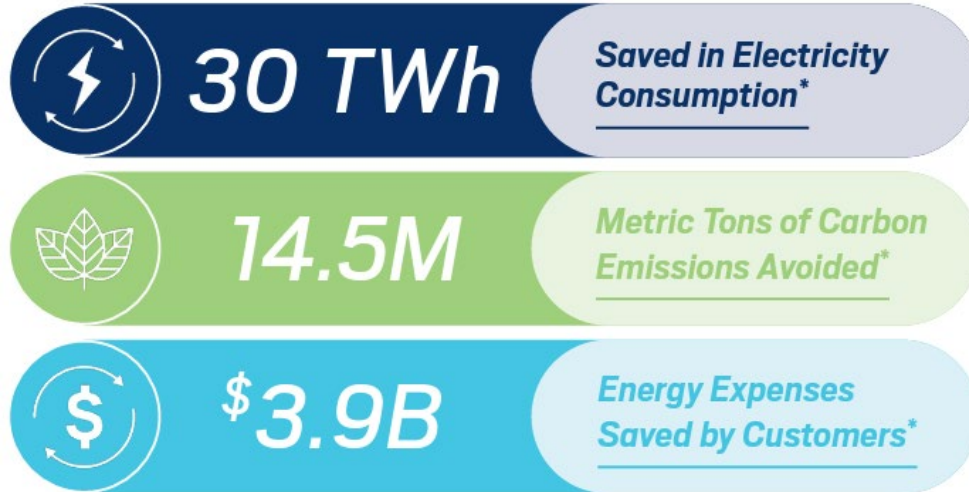
Employees Located in **11** Countries



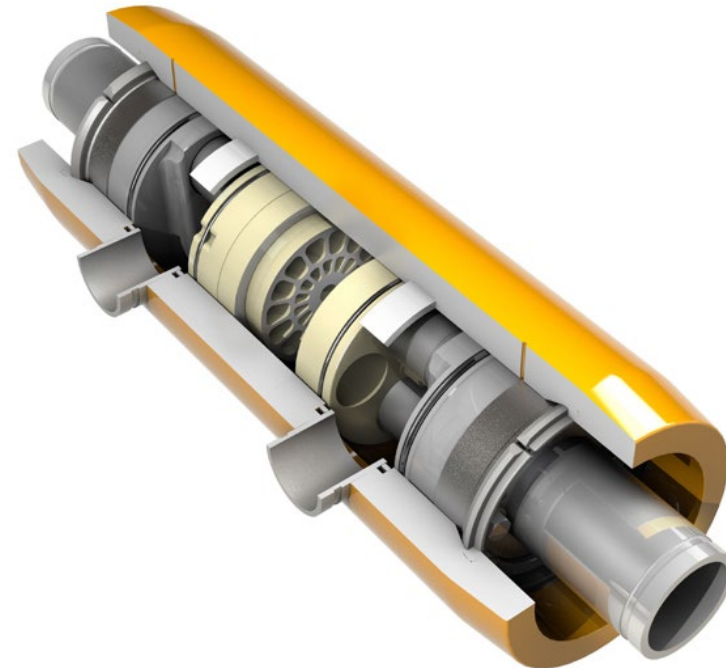
# Energy Recovery at a Glance

## Over 30 years, ERI's PX has achieved:

- 60% reduced energy in Reverse Osmosis Water Desalination applications
  - Reduced energy bill costs
  - Reduced capital costs based on reduced need of other equipment
- 25 year design life with no scheduled maintenance



\*Annual data based on Energy Recovery estimates (internally assured)



## The innovative, sustainable energy savings device for CO<sub>2</sub> refrigeration systems



**Energy savings leads to lower total cost of ownership & OPEX**



**Peak performance in hottest ambient temperatures\*:**

- ✓ Potential design point CAPEX reduction
- ✓ Peak demand reduction



**Virtually no maintenance and performance degradation\*\*, no water, no fouling, no fuss**



**Sustainable & future proof:**

- ✓ Reduces indirect CO<sub>2</sub> emissions
- ✓ No water consumption

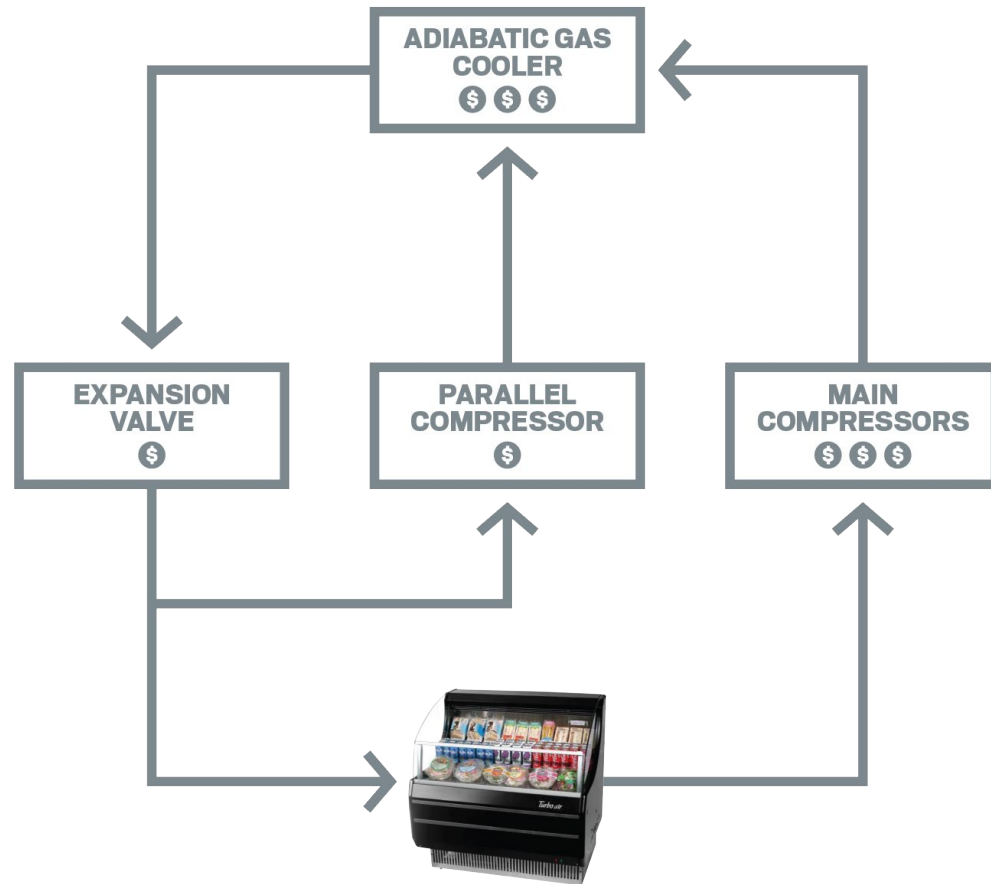
\*Based on Energy Recovery's computer simulations.

\*\*Desalination application experience

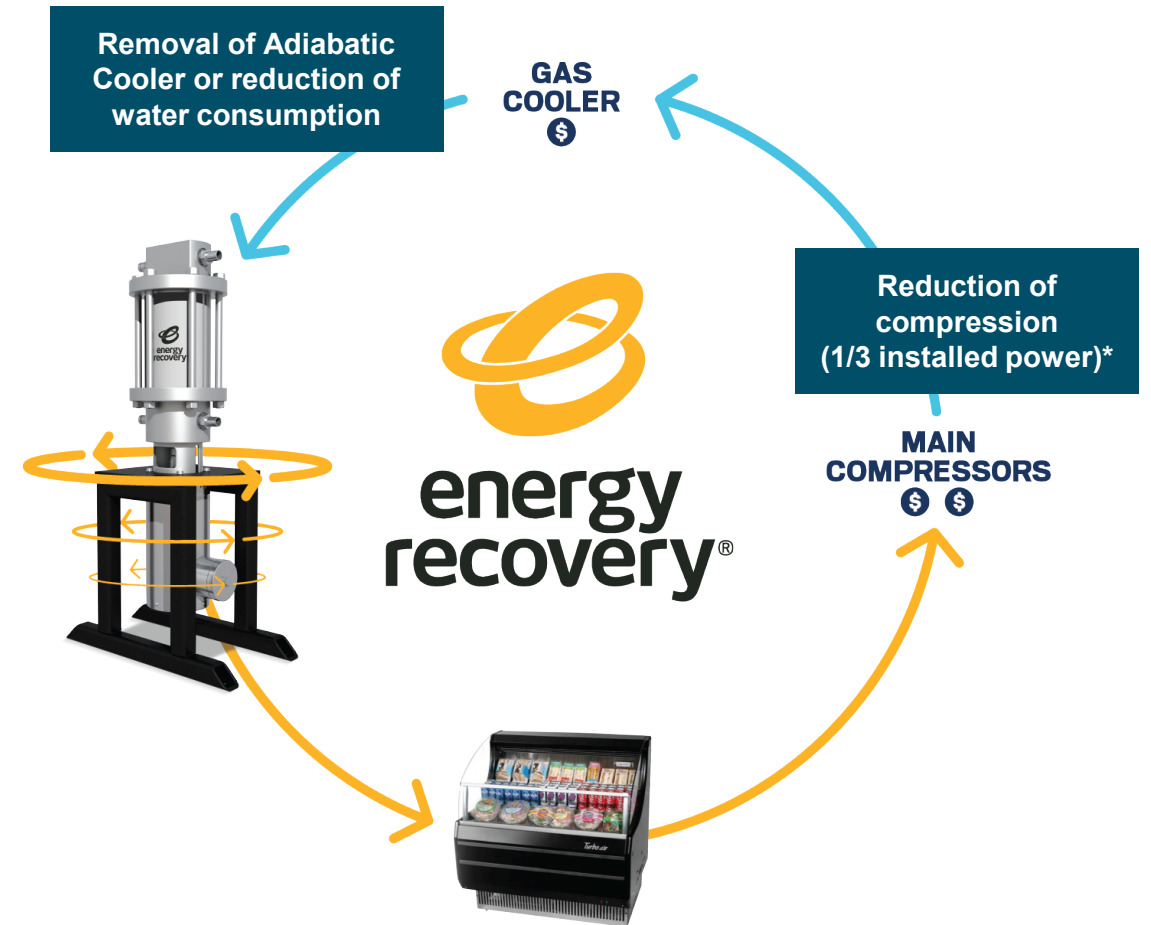
# Installation and Potential Value

# CHILLVENTA

## Alternate CO<sub>2</sub> Systems



## PX G1300-Enabled CO<sub>2</sub> Systems



Picture Courtesy of: <https://www.kegerator.com/turbo-air-commercial-merchandise-refrigerators-commercial-refrigeration-equipment/TOM-40S.html?uid=3098144>

\* Estimated based on modeling of 150kW system, \$0.20/kWh, in Sacramento, CA with idealized PX and flooded evaporators compared to a standard CO<sub>2</sub> booster system (per 'PX G1300 Integrated System Reference Designs')



The PX G1300™ is generating significant excitement and movement within the industry

### 1. Supermarket installation in Europe

- In collaboration with rack manufacturer/OEM
- Shown efficiency improvements of 20+% at 30+°C

### 2. Supermarket installation in California, USA

- Vallarta chain in Indio California (hot dry climate)
- Currently finalizing commissioning

### 3. Supermarket installation committed in USA

- In collaboration with US rack manufacturer/OEM

### 4. Additional deployments for commercial and industrial refrigeration in Europe planned



**Thank you!**  
*Any Questions?*

**Be sure to visit us at *Booth 7A-226***

**Joseph Marchetti, *Product Manager, CO2***  
[jmarchetti@energyrecovery.com](mailto:jmarchetti@energyrecovery.com)  
Mobile: +1.936.615.3643

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