

PHARMACEUTICAL

refrigeration solutions customized to fit your needs



about Pharamceutical

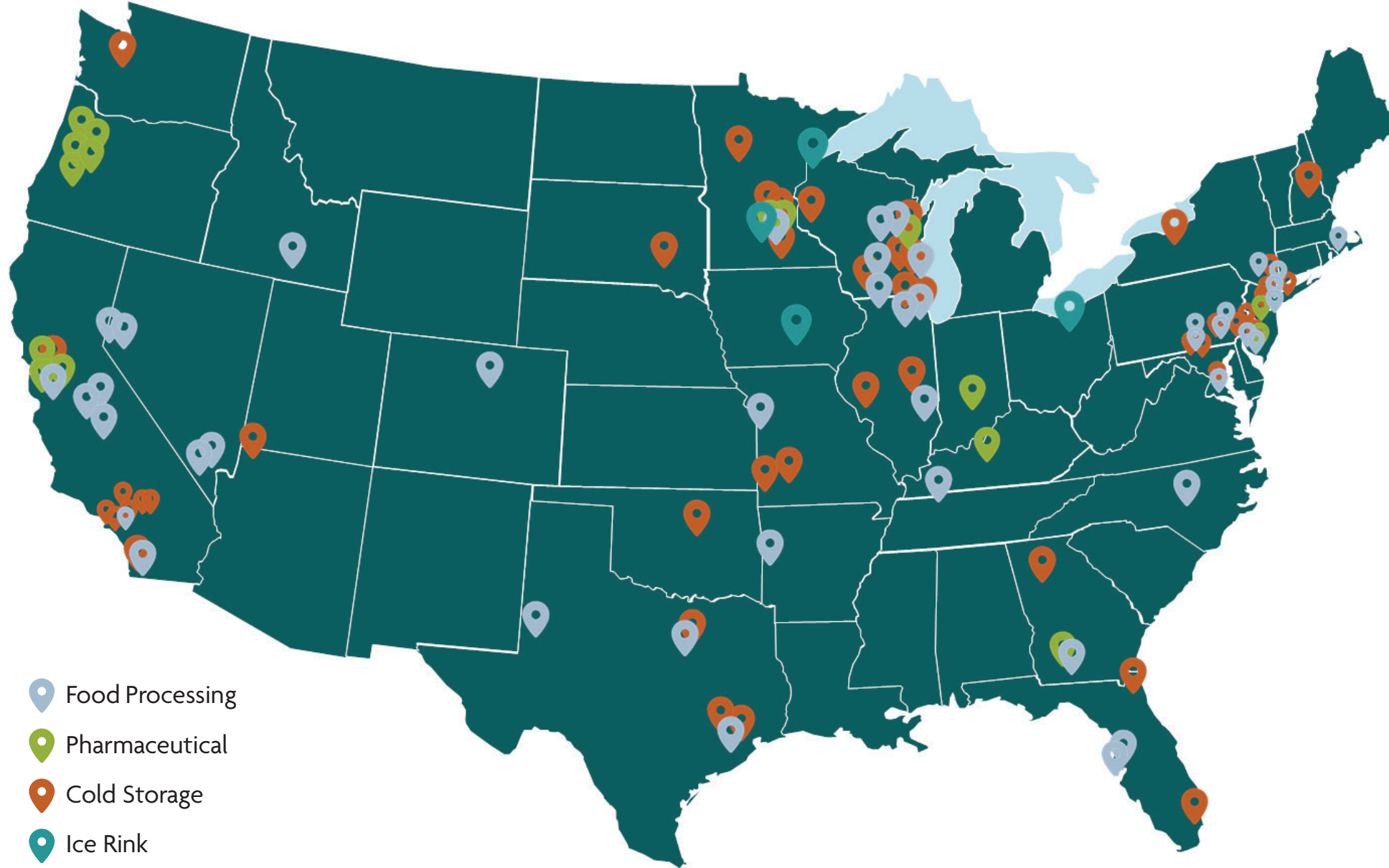
- > Bio Science
- > Manufacturing
- > Storage

Our custom industrial refrigeration systems are optimized to ensure precise temperature control for raw materials, intermediates, and finished products to protect their integrity while safeguarding against loss. With refrigeration capacity from **1 ton to 500 tons for temperatures from -40F to +50F**, you can ensure all materials and products are stored properly with 100% up time.

Our systems use microprocessor and PLC controls compatible with SCADA systems (Supervisory Control and Data Acquisition). SCADA systems monitor, automate, visualize and log data for real time corrective action. This compatibility ensures traceability and supports audits by entities like the FDA.



Indoor CO₂ Transcritical Parallel Rack



industrial Installations*

With installations in pharmaceutical facilities across the country, we've earned the confidence of manufacturers who depend on consistency and compliance to safeguard product integrity and meet regulatory standards. Zero Zone industrial refrigeration systems are engineered to meet the stringent demands of pharmaceutical manufacturing, far exceeding the capabilities of standard commercial racks.

We educate our customers on the importance of ultra-precise temperature control, dynamic load management, system durability, and continuous operational reliability. Built for environments where precision is non-negotiable, Zero Zone systems deliver validated performance, scalable configurations, and uncompromising safety.

*since 2020

case study

San Francisco, CA

“After an extensive budgeting comparison and months of rigorous vetting for our last chiller purchase, I wouldn’t hesitate to acquire another Zero Zone system.” – Facilities & Engineering Specialist

A leading biotechnology company relies on Zero Zone industrial refrigeration systems to safeguard high-value biologic products. These systems maintain strict temperature ranges of 36-46°F throughout production, storage, and distribution, ensuring compliance and product integrity. With redundant cooling, backup power, and continuous monitoring, Zero Zone delivers reliability where uptime is nonnegotiable.

From validated cold storage to scalable rack systems, Zero Zone designs solutions that meet the rigorous demands of pharmaceutical environments. Our advanced technology minimizes risk, optimizes energy efficiency, and supports FDA audits—helping manufacturers protect millions of dollars in product while advancing life-saving therapies.





System Solutions

Using parallel compression, these systems are designed with a modular design, adding flexibility and easy scalability. They deliver exceptional efficiency with precise load balancing and optimized energy use.

Indoor/Outdoor Parallel Rack

Available in air-cooled or water-cooled options, all models arrive preassembled with integrated piping, wiring, and controls for fast installation. Each system incorporates multiple compressors in a single package.

Custom Electrical Mechanical Center

Electrical mechanical centers are rugged, versatile, and efficient. Constructed with a robust steel base, a resilient rubber membrane roof, and high-quality insulated exterior panels, these centers withstand even the harshest environmental conditions.

Transcritical CO₂ Condensing Unit

Built with scroll compressors for greater reliability, energy efficiency, and longer life. With large capacity models and adiabatic gas coolers, they perform better in high ambient conditions and require fewer units than the competition.

Outdoor Parallel Rack with Removable Panels

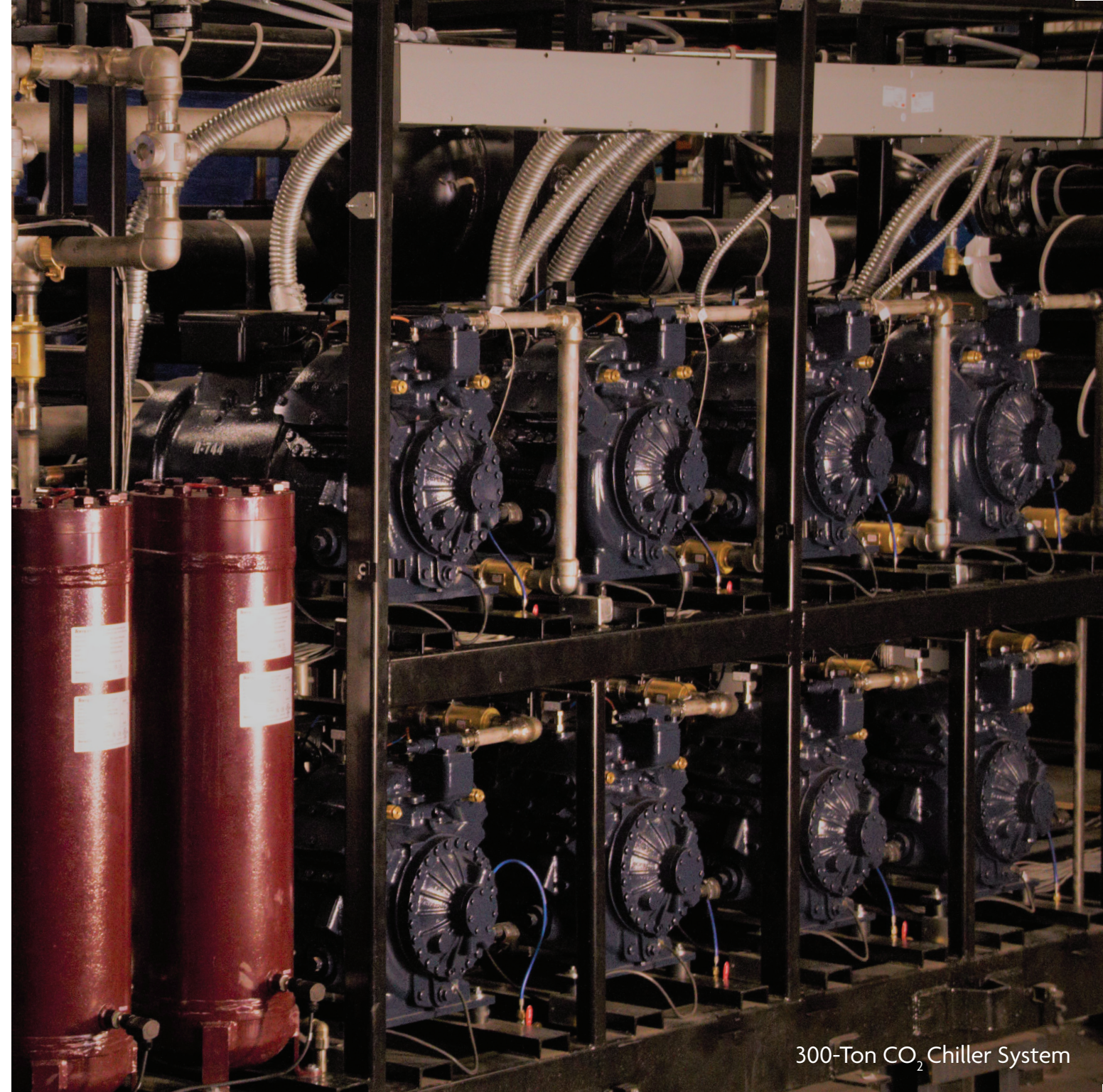
System Solutions

Edge™ Distributed System

Edge™ decentralizes refrigeration for a lower refrigerant charge, space savings, and improved energy performance. With a modular design for flexible scalability, Edge™ is available for indoor or outdoor installation in air- or water-cooled configurations, reducing piping and construction costs.

Chiller System

Chillers indirect refrigeration systems maintain precise temperature control by using propylene or ethylene glycol process fluids. It utilizes multiple smaller compressors to adapt seamlessly to fluctuating loads, ensuring optimal efficiency.



300-Ton CO₂ Chiller System

Genesys™ by Zero Zone

Natural Solutions

Why natural in pharmaceutical?

These innovative cooling technologies harness the power of nature to create a more sustainable and environmentally responsible approach to refrigeration. By replacing high GWP synthetic refrigerants with natural gases, these solutions play a pivotal role in reducing greenhouse gas emissions and preserving the delicate balance of our planet's ecosystem.



R744 (CO₂)

- > Stable, non-toxic, non-flammable
- > High cooling capacity
- > Low global warming potential
- > Operates efficiently in transcritical mode

R717 (Ammonia)

- > Zero ozone depletion potential (ODP)
- > Superior thermodynamic
- > High efficiency, availability, and reliability





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