



CO2 Transcritical



Cold Food Storage Facility

Yosemite Foods: One of the Largest Transcritical CO2 Refrigeration Systems in North America.

Project Objective

- Must be energy efficient, using "best-in-class" equipment
- Must be safe; safety is paramount
- Must be environmentally friendly
- Must be able to reclaim heat; this is critical in the operation
- Must be cost effective: initial purchase price of equipment along with cost of ownership with regards to maintenance, service, and energy consumption

The Problem

Yosemite Foods Inc., in Modesto, CA, has been providing the highest quality specialty pork products to a diverse array of niche markets across the West Coast for over 30 years. This facility approached CoolSys to see if they could help them achieve a unique set of refrigeration and energy reduction goals for their new hog processing plant in Stockton, CA.









The Solution:

The Yosemite Foods Facility was designed to process 550,000 lbs. daily in 116,000 square feet of processing space, 95,000 square feet of which is comprised of refrigerated areas. After presenting and considering several options, CoolSys was contracted to provide a turnkey solution which included engineering, design, equipment selection, procurement, and installation for this project.

The Impact:

CoolSys met the challenge and was able to satisfy all objectives put forth this facility. Utilizing CoolSys' capabilities the facility's refrigeration system now includes the largest transcritical CO₂ refrigeration system in North America with a total of five compressor racks running 2,450 horsepower and 22.5 million BTUs/hour. This approach eliminated the need for an ammonia over CO₂ system, satisfying the customer's desire of using non-corrosive substances. Discharged heat from the compressors is reclaimed and redirected to generate hot water more efficiently, which is a critical requirement for the meat processing operation.

Project Highlights:

-  Largest transcritical CO₂ refrigeration system in North America
-  5 compressor racks running a total of 2,450 horsepower
-  System produces 22.5 million BTUs/hour
-  Eliminated need for ammonia over CO₂ system, meeting non-corrosive requirements
-  Heat reclamation system repurposes discharged heat for efficient hot water generation
-  Designed to meet the critical needs of a meat processing facility

