

OUR CO₂ REFRIGERATION SYSTEMS OFFERING

SUSTAINABLE • FUTURE-PROOF • ENERGY EFFICIENT • SMOOTH TRANSITION



KYSOR WARREN
eptarefrigeration



Sustainable Refrigeration Solutions

LOW CARBON FOOTPRINT • RESPONSIBLE INNOVATION • THINK GLOBALLY, ACT LOCALLY

- Transcritical CO₂ refrigerant systems
- Capacities to meet your needs
- Compliant with current / anticipated regulations

WHY CO₂?

Natural refrigerants – such as carbon dioxide, ammonia, and propane – are climate-friendly options that offer future-proof alternatives to the high global-warming refrigerants – HFCs – commonly used in supermarkets.

HFCs are potent drivers of climate change. Pound for pound, these super-pollutants trap thousands of times more heat in the atmosphere than carbon dioxide.

Supermarket refrigeration leaks are roughly equal to the annual emissions from burning 608 billion pounds of coal – or 147 coal-fired power plants.

Kysor Warren Epta US is committed to building transcritical CO₂ refrigeration systems that meet tomorrow's regulations today.

BENEFITS OF NATURAL REFRIGERANTS

- Climate-friendly
- Zero or near-zero GWP
- Regulatory compliance
- Future-proof
- Accelerate emissions reduction beyond regulations
- Market-ready technologies
- Potential efficiency gains & cost savings

150 GWP Limit

Retail food refrigeration

- Stand-alone units
- Processing/dispensing equipment
- Supermarket systems and remote condensing units with >200 pounds charge capacity

Cold storage warehouse systems with >200 pounds charge capacity

300 GWP Limit

Retail food refrigeration

- Supermarket systems and remote condensing units with <200 pounds charge capacity
- High temperature side of cascade systems

Cold storage warehouse systems with <200 pounds charge capacity / High temp side of cascade systems



EFFICIENT OPTIONS FOR ALL CLIMATES

FTE - Full Transcritical Efficiency

- Energy benefit up to 10%
- Fully integrated in the transcritical CO₂ rack



EFFICIENT OPTIONS FOR HOT & DRY CLIMATES

ETE - Extreme Temperature Efficiency

- Energy benefit up to 14%
- Efficient operation in temperatures above 40°C (104°F)



EFFICIENT OPTIONS FOR ALL CLIMATES

ETE & FTE Combined

- Energy benefit up to 24%
- Better energy efficiency than a parallel compressor

EPTA'S NEW TECHNOLOGIES

Epta's **Full Transcritical Efficiency system FTE** provides high energy efficiency in transcritical refrigeration systems with medium and low temperature applications. With only standard components, it allows an increase of the evaporation temperature and an elimination of superheat in the medium temperature loads.

Epta high pressure parallel compression **ETE** provides **high reliability for transcritical systems** in hot ambient conditions with no limit in external temperatures. It includes a subcooling unit in the refrigeration circuit and no additional systems like water spray, external subcooling or adiabatic gascoolers are needed.

The system offers high energy efficiency compared to standard technical solutions (parallel compression) in the market and uses only standard components to promise a fast and reliable service.

ETE requires no LT applications or any other additional functions. It can be used in all retail applications and even in light industrial applications.



eCO₂ LARGE

- Our standard CO₂ rack system
- Time-tested, reliable
- Many capacities available

The leading technology in the global change to natural refrigerants is the CO₂ transcritical booster system. With many sizing options and efficiency technologies like ETE, there is a solution for every retailer.

FEATURES AND SPECIFICATIONS

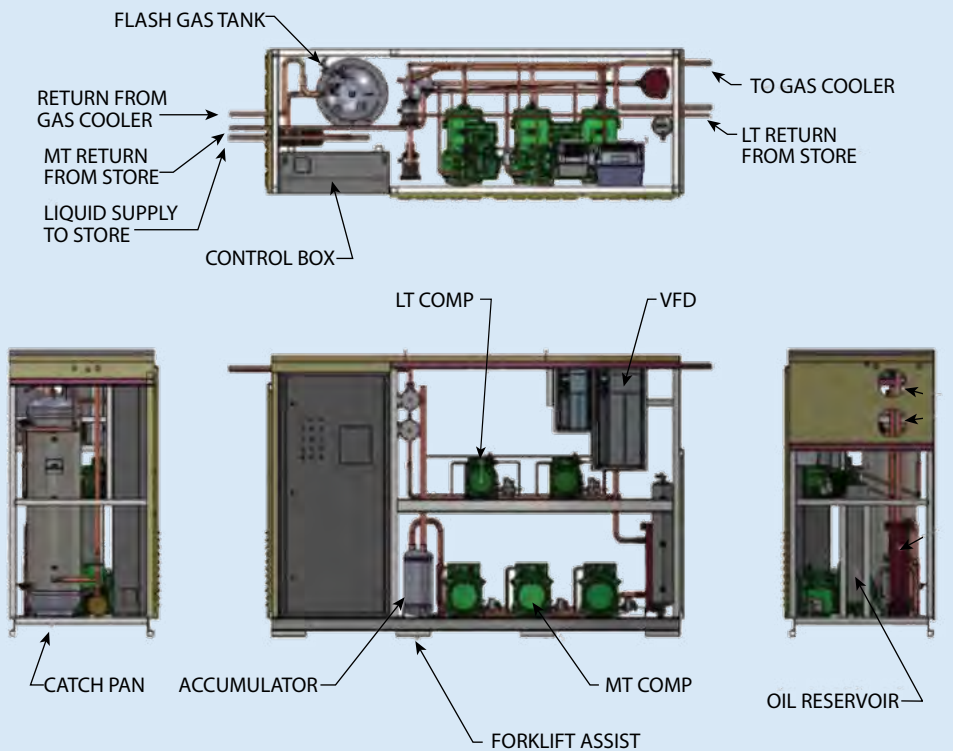
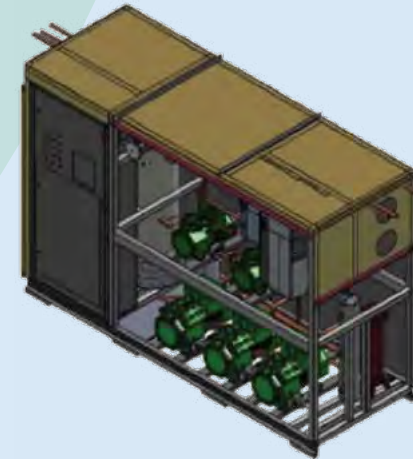
- 300 MBH – 1400 MBH total load
- Centralized
- All around access
- Indoor or outdoor
- Up to 10 compressors
- Controller (E2, Danfoss, Microthermo, RDM)
- Loop piping
- Electric defrost

OPTIONS

- Heat reclaim
- Sound attenuation
- Warm climate efficiency solutions
 - FTE - Full Transcritical Efficiency
 - Energy benefit up to 10%
 - ETE - Extreme Temperature Efficiency
 - Energy benefit up to 14%
 - ETE & FTE Combined
 - Energy benefit up to 24%

eCO₂ COMPACT

- Smaller footprint
- Easy to service
- High efficiency



Our eCO₂ Compact Rack is an ideal solution to the increasing demand for future-proof refrigeration technology. This system operates with natural refrigerant such as carbon dioxide (CO₂) to comply with regulations on systems with GWP < 150.

The smaller refrigeration rack is designed for easier serviceability and high efficiency. This unit can serve applications for low and medium temperature and has a much smaller footprint to suit retail formats from convenience stores to urban markets.

FEATURES AND SPECIFICATIONS

- 60-500 MBH load
- Distributed or centralized
- Front access
- Indoor or outdoor
- Up to 5 compressors (low & medium temperature)
- Capacity modulation (low & medium temperature)
- Controller (E2, Danfoss, Microthermo, RDM)
- Loop piping
- Electric defrost
- 4500 lbs. 125"L x 45"W x 84"H

OPTIONS

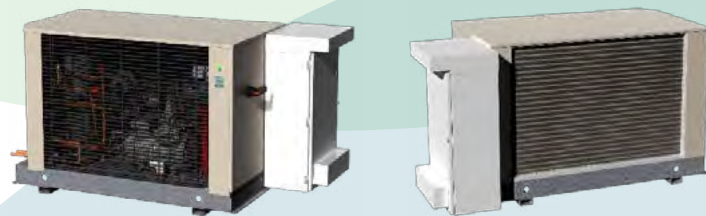
- Heat reclaim
- Sound attenuation
- Warm climate efficiency solutions
 - FTE - Full Transcritical Efficiency
 - Energy benefit up to 10%
 - ETE - Extreme Temperature Efficiency
 - Energy benefit up to 14%
 - ETE & FTE Combined
 - Energy benefit up to 24%

eCO₂ MINI CONDENSING UNIT

- First UL-approved CO₂ condensing unit in U.S.
- Ideal for:
 - New construction
 - Remodels
 - Expansions
 - Convenience stores

FEATURES AND SPECIFICATIONS

- 40, 70, or 100 MBH load
- Distributed
- Indoor or outdoor
- Low or medium temperature
- 9 standard configurations for quick ship
- 1300 lbs. 95"L x 50"W x 50"H
- Voltage: 208-230v or 460v
- Advanced electronic controls



This quick and simple CO₂ system is designed for easy installation or conversion, indoors or outdoors. Low GWP meets current and upcoming regulations.

Our eCO₂ Mini offers shorter lead times with fast-ship, standard configurations. All components are integrated into a single cabinet with advanced electronic controls that integrate with most monitoring systems.



MEETING TOMORROW'S CHALLENGES TODAY

Transcritical CO₂ systems use a gas cooler to dissipate heat and have a high-pressure expansion valve that controls gas introduction to the evaporator. We believe transcritical CO₂ systems are the best solution for using natural refrigerants in a retail context.

This system provides an HFC-free supermarket refrigeration solution while providing significant lifecycle cost savings for retailers.

We know food retailers value more than just product features. Reliable, responsive support, service, a parts replacement network, and minimal downtime are equally important.

BENEFITS

- 100% HFC-free
- Uses only one naturally occurring refrigerant: carbon dioxide
- Low toxicity and non-flammable
- Lower refrigerant cost

IMPROVED PERFORMANCE

- Significant reduction in temperature pull-down time
- Reduced compressor runtime
- Increased compressor life
- Less energy usage

LIFE CYCLE COST ADVANTAGE

- No need for secondary loops or cascades
- Long-term R744 refrigerant
- Inexpensive to produce and widely available

ENERGY EFFICIENT

- Climate neutral refrigerant
 - Ozone Depletion Potential = 0
 - Global Warming Potential = 1
- Any leaks have very low impact on climate change
- CO₂ has significantly higher volumetric energy capacity without phase transition

ABOUT KYSOR WARREN EPTA US

Kysor Warren Epta US, part of the Epta Group, is a leading manufacturer of refrigerated merchandisers and refrigeration systems that provides solutions to supermarkets and other retailers across North and Central America. For almost 140 years, we've come to understand that the solutions we provide are more than just products to our customers; they are critical pieces of equipment vital for ensuring businesses stay up and running. By partnering with our customers, each piece of equipment is designed to meet individual specifications, built with exact precision, and tested to meet our rigorous standards. We are fully committed to offering exceptional customer service and a highly diverse, customizable product portfolio.

"Every refrigeration idea, investment, project, or technology meets a single goal – to offer unique, appealing consumer experiences to millions of people in a simple, safe, sustainable way."

*– Marco Nocivelli
Chairman and CEO of Epta*



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