

Sustainability
 CARB A2L
 AIM Act CO₂ Green
 Natural Refrigerants
 SNAP 23 HFO

Heatcraft's eCO₂Boost Transcritical Booster System is a cost-effective solution for cold storage applications. It uses natural, environmentally friendly and energy efficient carbon dioxide – CO₂ – refrigerant.

With **eCO₂Boost** racks, unit coolers and gas coolers, Heatcraft Refrigeration Products offers complete **Low GWP** refrigeration packages that provide efficiency, top performance and reliability.

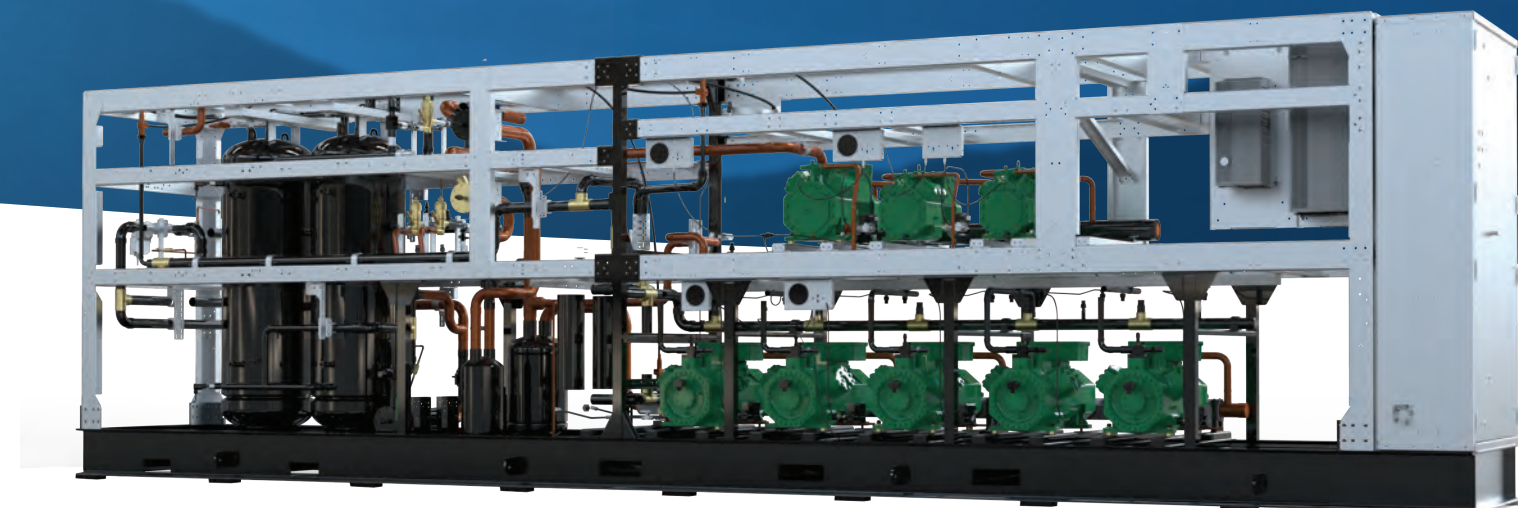
Why Heatcraft for Low GWP?

Heatcraft leverages over 100 years of refrigeration experience – the most of any manufacturer in the North American market – to provide the technical and regulatory expertise, as well as the broadest range of Low GWP compliant products to meet your needs. You won't find a more complete Low GWP partner to educate, advise and actualize Low GWP regulation information to your business – regardless of your location, size or scale. Navigating the landscape of future regulations, at every level, can be a daunting task. Allow Heatcraft to guide you along the way.

The low GWP landscape is rapidly evolving. For the latest information or questions, please contact Heatcraft at low.gwp@heatcraftprd.com

eCO₂Boost TRANSCRITICAL RACK

Meeting Evolving Standards for Global Warming Potential in Commercial Refrigeration and Cold Storage Applications



What is Low GWP?

Per the EPA's definition, GWP (Global Warming Potential) is the measure of how much energy the emissions of 1 ton of gas will absorb over a given period, relative to 1 ton of carbon dioxide (CO₂). In other words, the larger the GWP, the more the gas warms up the Earth. Globally and domestically, we are moving towards a low GWP regulatory framework.

It's no secret that governments and regulatory bodies across the world are taking more action to reduce the impact of industry on climate change. But how regulations apply to commercial refrigeration and cold storage, and specifically how and where you do business, can be tricky to navigate. The team at Heatcraft Refrigeration Products has put our resources, research and expertise into providing you the education and products necessary to get ahead of the game on Low GWP.



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Features & Benefits

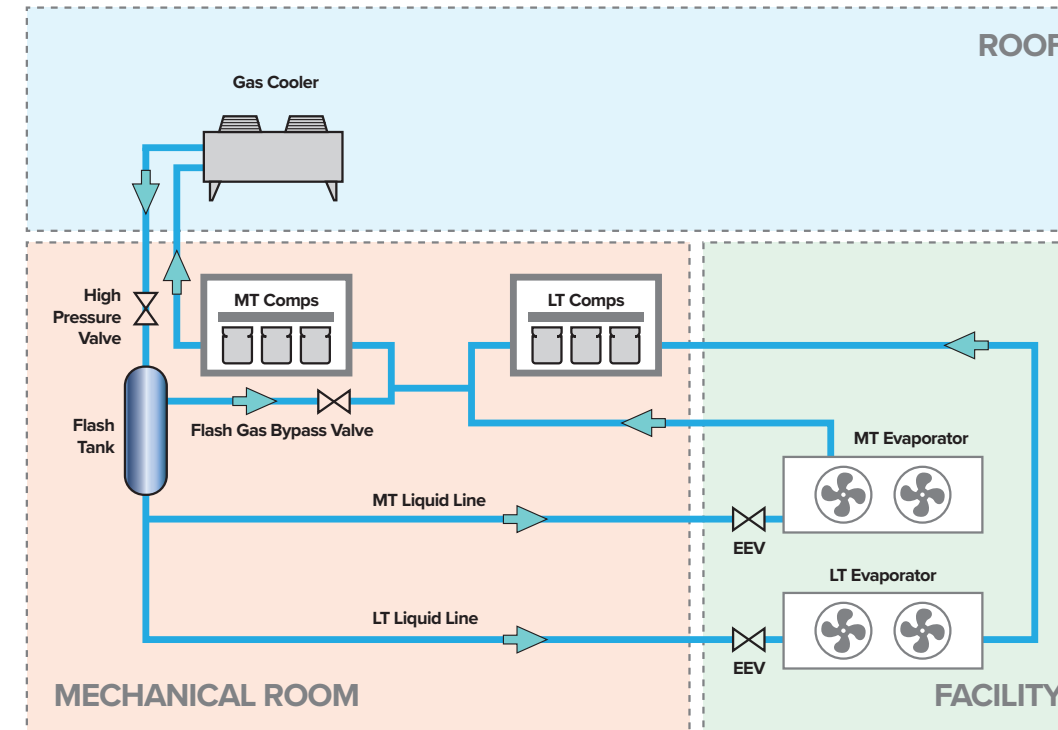
- Low temperature (LT) and medium temperature (MT) available
- Electric defrost standard
- Bitzer or Copeland compressors
- **Now available** with parallel compression
- **Now expanded up** to 250 refrigerated tons
- -40 °F min to 30 °F max evaporating temperature
- Danfoss or Emerson/CPC control architecture options
- Enhanced frame design for serviceability
- Welded base frame
- Electronic oil management system
- No hydrofluorocarbons (HFC) available
- Naturally occurring CO₂ refrigerant
- Ozone Depletion Potential (ODP) of 0
- Global Warming Potential (GWP) of 1
- Nonflammable
- Nontoxic
- No future refrigerant phaseout
- Wide range of products available
- Lower energy and ownership costs

Typical Performance vs. Traditional HFC System

	Traditional HFC	CO ₂ Transcritical
Global Warming Impact	Baseline	↓ 98%
Energy Cost	Baseline	↓ 6 - 10%
Total Cost of Ownership	Baseline	↓ 5 - 10%

Percentages shown indicate expected savings over baseline figures.

How a Transcritical System Works



The MT rack and LT rack compressors are typically in one rack frame.

System Operation

Heatcraft's transcritical CO₂ refrigeration system is completely HFC free and designed to provide improved performance for refrigerated warehousing and food processing applications.

In this system, liquid carbon dioxide is distributed throughout the facility to provide cooling for each refrigerated space. Electronic expansion devices control temperatures by metering refrigerant flow into evaporator coils designed specifically for use in CO₂ applications.

Suction gas from the low temperature evaporators return to the low temperature compressors on the CO₂ parallel rack.

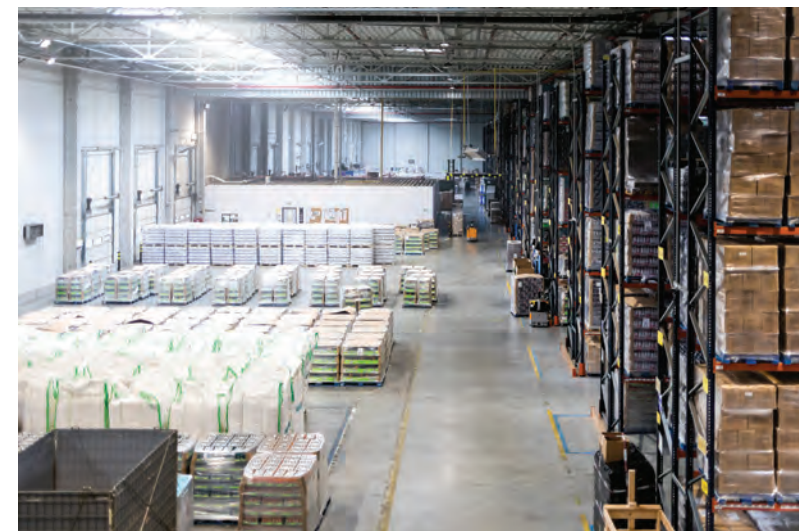
The gas is compressed to the same pressure as the suction line coming from the medium temperature evaporators. It is then combined with the medium temperature suction gas and any flash gas coming from the flash tank. This mixture then enters the medium temperature compressors before being routed to the gas cooler for heat rejection (gas cooling or condensation). Upon exiting the gas cooler, the refrigerant passes through a high pressure EEV before being separated into gas (which goes to the flash tank and is sent to the medium temperature suction) and liquid (which completes the refrigerant cycle).

Design and Equipment Options

We understand that each refrigeration application and design is unique. The eCO₂Boost Rack is tailored to meet your specific refrigeration needs; therefore, we offer a list of optional complementary products and design enhancements.

- Air-cooled gas cooler
- Unit cooler coils designed for use with CO₂
- Electronic expansion valves
- Evaporative assisted gas cooler
- Heat reclaim
- Warm climate enhancement

System Applications



Regardless of the size, scope or scale of your commercial cold storage needs, Heatcraft has the expertise and product range to successfully design a suitable eCO₂Boost Rack System for your new or existing applications and deliver equal levels of performance and reliability.

Nomenclature

BRAND B = Bohn C = Climate Control H = Chandler L = Larkin A = Magna	COMPRESSOR QTY # of Med Temp Compressors	COMPRESSOR QTY # of Parallel Compressors	TOTAL COMP HP 005 -5 HP 053 -53 HP 075 -75 HP 105 -105 HP 135 -135 HP	CONTROL VOLTAGE A = 115/1/60 B = 208-230/1/60 C = 24/1/60	TEMP RANGE L = Low M = Medium H = High C = Combo X = Ultra Low	UNIT VOLTAGE C = 208-230/3/60 D = 460/3/60 E = 575/3/60 V = 380-400/3/50 W = 200-220/3/50
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COMPRESSOR TYPE R = Reciprocating Z = Scroll C = Compound O = Open S = Screw M = Multiple	COMPRESSOR QTY # of Low Temp Compressors	UNIT CONSTRUCTION R = Remote Condenser or Gas Cooler U = Attached Condenser or Gas Cooler M = Multi Compressor Platform F = Frame Hybrid (Frame+Standard)	CONDENSER A = Air E = Evaporative W = Water	DEFROST A = Air/Off E = Electric G = Hot Gas S = Beacon II M = Multiple W = Water	REFRIGERANT 1 = R410A 2 = R22 3 = R448/R449 4 = R134A 5 = CO ₂ 6 = R404A/R507A 7 = R407 A & C 8 = Multiple	APPLICATION 1 = Indoor 2 = Outdoor
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B R 6 4 0 R 135 A A E C 5 D 1