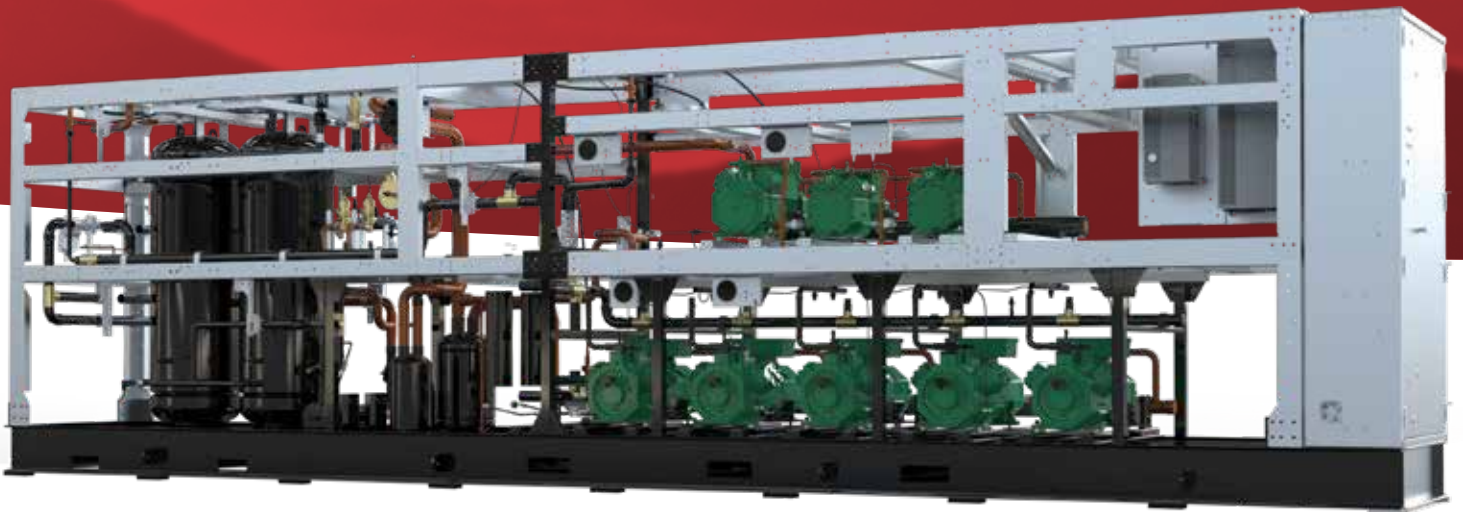


Sustainability
CARB A2L
AIM Act CO₂ Green
Natural Refrigerants
SNAP 23 HFO

eCO₂ Boost™

TRANSCRITICAL RACK

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





MAGNA Industrial Refrigeration'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, MAGNA Industrial Refrigeration offers complete **Low GWP** refrigeration packages that provide efficiency, top performance and reliability.

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 Industrial refrigeration and cold storage, and specifically how and where you do business, can be tricky to navigate. The team at MAGNA Industrial Refrigeration has put our resources, research and expertise into providing you the education and products necessary to get ahead of the game on Low GWP.

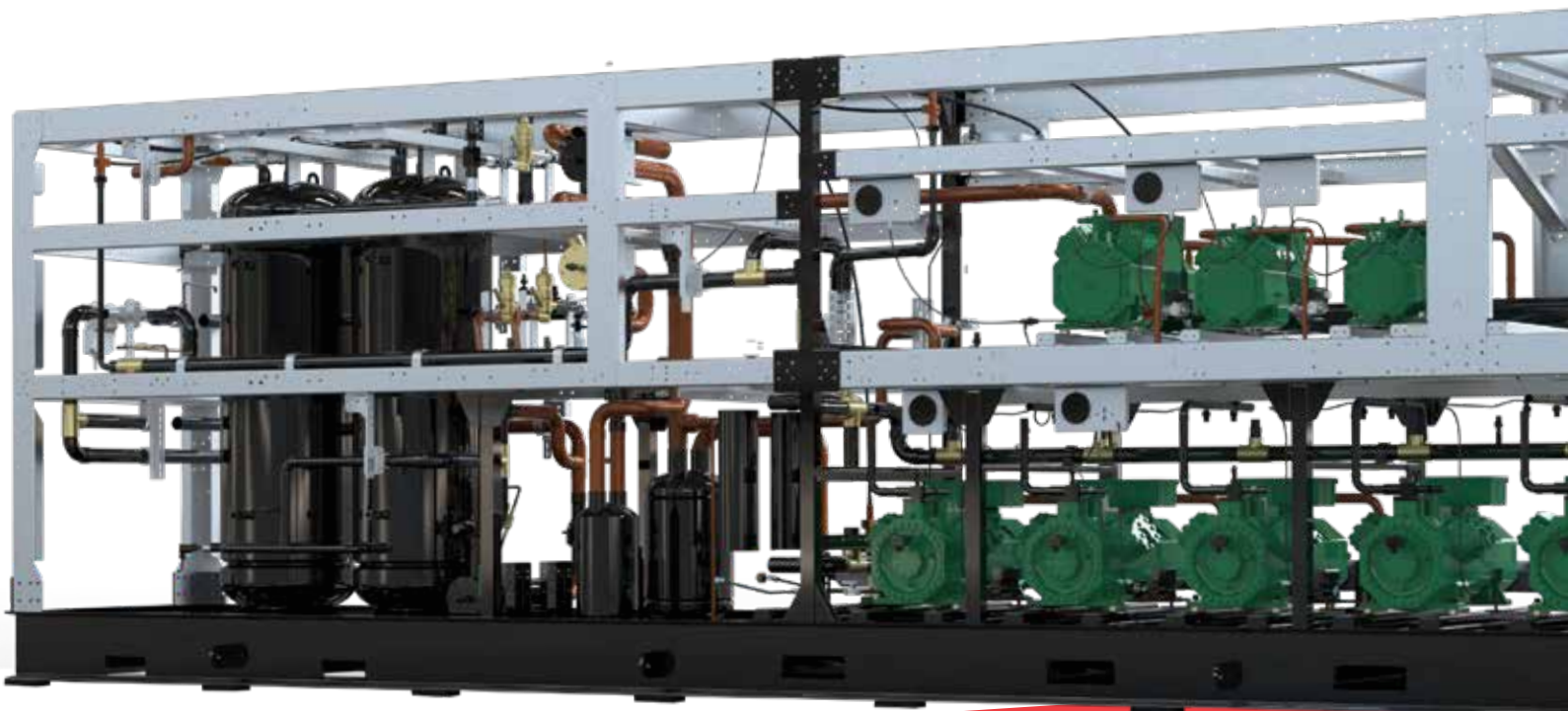
Features & Benefits

- Low temperature (LT) and medium temperature (MT) available
- Electric defrost standard
- Bitzer or Copeland compressors
- Up to 150 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)
- 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

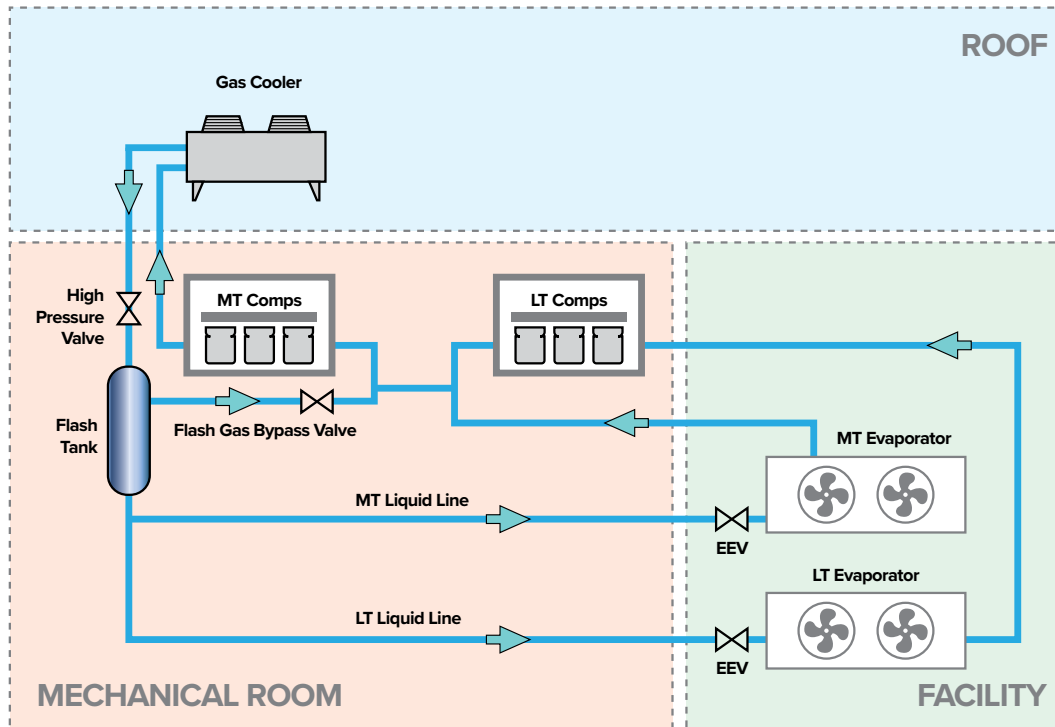
Typical Performance vs. Traditional HFC System

	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 Applications



Regardless of the size, scope or scale of your Industrial cold storage needs, MAGNA 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.

System Operation

MAGNA'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

Nomenclature

TYPE OF COMPRESSOR

TR = Bitzer
TD = Copeland

TOTAL HORSEPOWER

051 = 51 HP 081 = 81 HP
065 = 65HP Etc.

VOLTAGE CODE

4 = 400 to 480V
2 = 200 to 240V
5 = 575 to 600V

RACK DESIGNATION

A = Rack "A"
S = Rack "B"

TR

230

051

CS

4

OXV

A

NO. OF COMPRESSORS PER SUCTION GROUP

230 = 2 LT, 3 MT AND 0 PT

REFRIGERANT & APPLICATIONS

C = CO₂
S = Split temperature

RACK MODEL & RECEIVER STYLE

O = Outdoor Unit
X = CO₂ transcritical
V = Vertical receiver

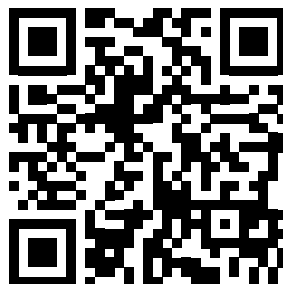
Why MAGNA?

MAGNA Industrial Refrigeration® provides large-capacity heavy duty equipment solutions for the industrial refrigeration market. The MAGNA line of warehouse and center mount unit coolers, vertical condensing units and both HFC and HFC-free parallel compressor rack systems are custom engineered to meet the growing needs of the cold storage, food distribution and food processing industries. From extreme blast freezers and sanitary food preparation to floral warehousing and cold product distribution applications, MAGNA gives end-users greater choices to reduce energy costs, improve product integrity and control their bottom line.

For additional information, visit MagnaRefrigeration.com



MagnaRefrigeration.com



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