

FRIGA-BOHN

eCO2Boost S

Transcritical CO₂ booster rack



CO₂



|||| MT **20 - 100 kW**
|||| LT **3 - 17 kW**



- # **Modular:** A truly customizable product that will meet your needs perfectly.
- # **Easy installation & maintenance:** A compact and ready-to-use design, created to make your work easier.
- # **Energy efficiency:** The use CO₂, a highly efficient refrigerant, and the integration of advanced technologies offer real energy savings.

HIGH-PRESSURE OIL RETURN SYSTEM

- # The oil separator – a technology exclusive to HK Refrigeration – assures optimal separation of oil and refrigerant, offering the best system reliability thanks to:
 - Its 3 levels of separation (centrifugal effect, deflectors, mechanical filter).
 - An 8-liter receiver.
- # High-pressure oil receiver with indicator.
- # Oil filter.
- # Electronic oil level controller per compressor.
- # Copper oil collector with flexible connection for each compressor.

LIQUID STATION

- # Vertical liquid receiver with shut-off valves.
- # Double safety shut-off valve with inverter switch.
- # Gas cooler pressure control valve connected upstream of the liquid receiver
- # Liquid receiver pressure controlled by means of a flash-gas valve.
- # Heat exchanger (tube/tube) between liquid line and low temperature rack gas return.
- # Heat exchanger (tube/tube) between cooler gas return and high temperature rack suction.

OPTIONS

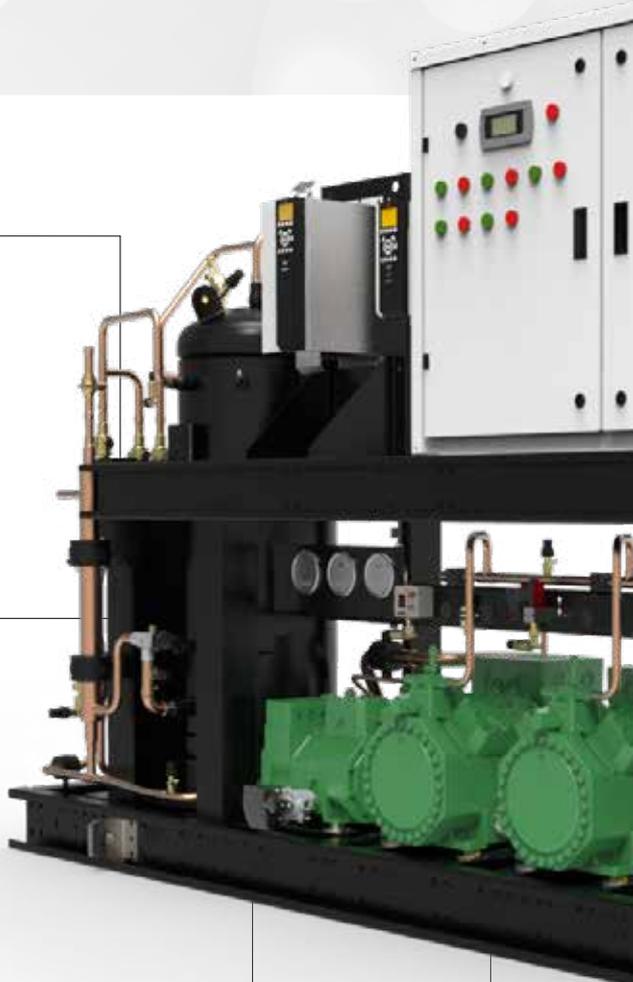
- Gas cooler pressure valve doubling.
- Liquid receiver pressure control doubling.

CONNECTION PACK

- # Delivery valve and connecting valve on the suction of each rack and the general liquid outlet.

CONTROL AND SAFETY DEVICES

- # Per compressor:
 - HP pressure switch connected to the cylinder head with automatic reset.
 - INT safety thermistor box.
- # Per rack:
 - LP general safety pressure switch.
 - Ratiometric pressure sensor.
 - LP pressure gage diameter 100 mm class 1.
- # For high temperature rack:
 - HP ratiometric pressure sensor.
 - LP and HP pressure gages diameter 100 mm class 1.
 - Variable frequency drive for the 1st compressor of the high temperature rack.



Do you have a specific request?

Contact us to design the unit that meets your needs.

ELECTRICAL CABINET

- # Electrical cabinet mounted and electrically connected to the rack frame.
- # It houses rack power and control .
- # Control can be achieved via Carel or Danfoss PLCs.
- # Cooling station outputs integrated into the cabinet.

[CONTACT US](#)

OPTION

Automatic back-up mode.

FRAME

- # Thick folded sheet steel monoblock.
- # Painted frame.
- # Frame divisible in 2 parts, to meet dimensional or access constraints.
- # Easy handling (by forklift or crane).

[CONTACT US](#)

OPTION

Lifting rings.

Did you know that compressors equipped with "VARISPEED" technology or "Ecoline Plus" permanent magnet models allow you to optimize your energy consumption?

COMPRESSORS

- # Bitzer or Dorin, from 2 to 4 cylinders depending on the power.
- # Multiple configurations available (from 2 to 3 in MT, from 0 to 2 in LT).
- # Semi-hermetic reciprocating technology compressors equipped with:
 - Crankcase heater.
 - Suction and delivery shut-off valves.
 - HP and LP tapping points with Schrader connector.

OPTION

Permanent magnet compressor

In order to best meet your needs, the **eCO₂Boost S** is available in 3 versions:

encased version
eCO₂Boost S 

machine room version
eCO₂Boost S 

condensing unit version
eCO₂Boost S 



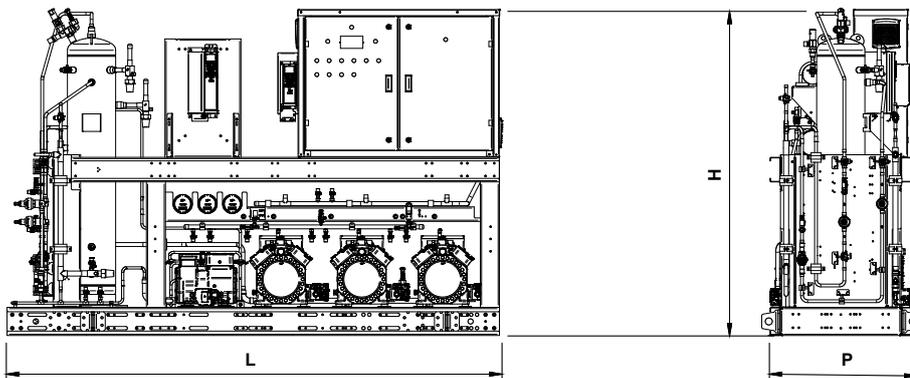
eCO2Boost S | Technical data

	Combinations	Power ratings
MT Compressors*	2 > 3	20 > 100 kW
LT Compressors*	0 > 2	3 > 17 kW
Liquid reservoir volume	75 > 130 l	

* Available brands: Bitzer or Dorin

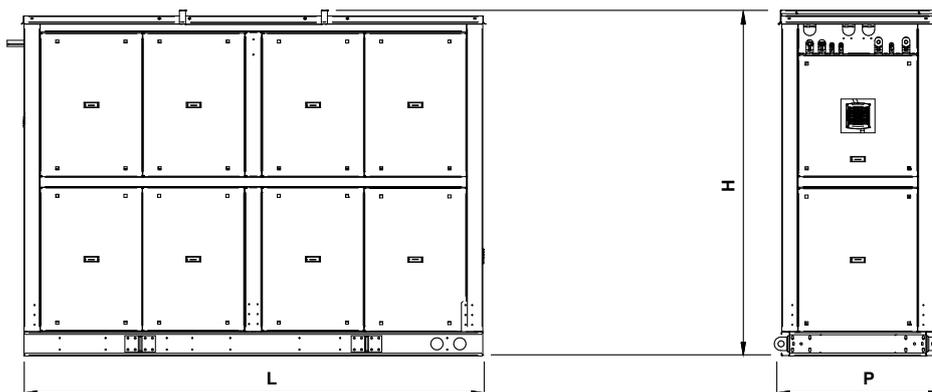


eCO2Boost S MR



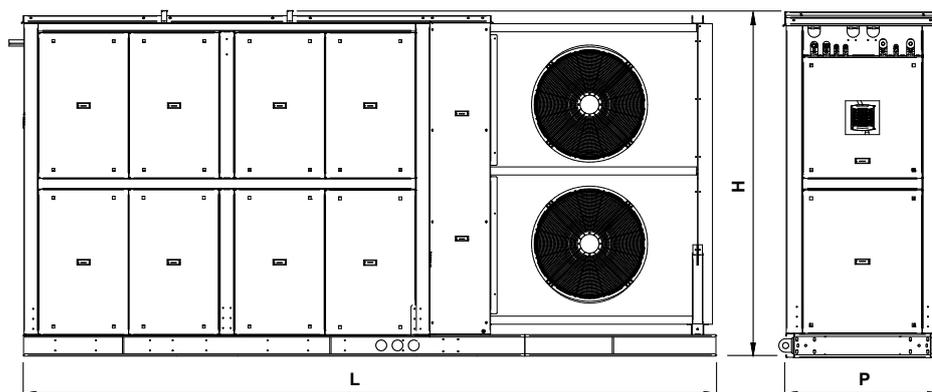
MT 2 x LT 0	
L x P x H	1935 x 800 x 1862
MT 2 x LT 2 MT 2 x LT 1	
L x P x H	2166 x 800 x 1862
MT 3 x LT 2 MT 3 x LT 1	
L x P x H	2785 x 800 x 1862

eCO2Boost S CO



MT 2 x LT 0	
L x P x H	2150 x 1000 x 2280
MT 2 x LT 2 MT 2 x LT 1	
L x P x H	2450 x 1000 x 2280
MT 3 x LT 2 MT 3 x LT 1	
L x P x H	3000 x 1000 x 2280

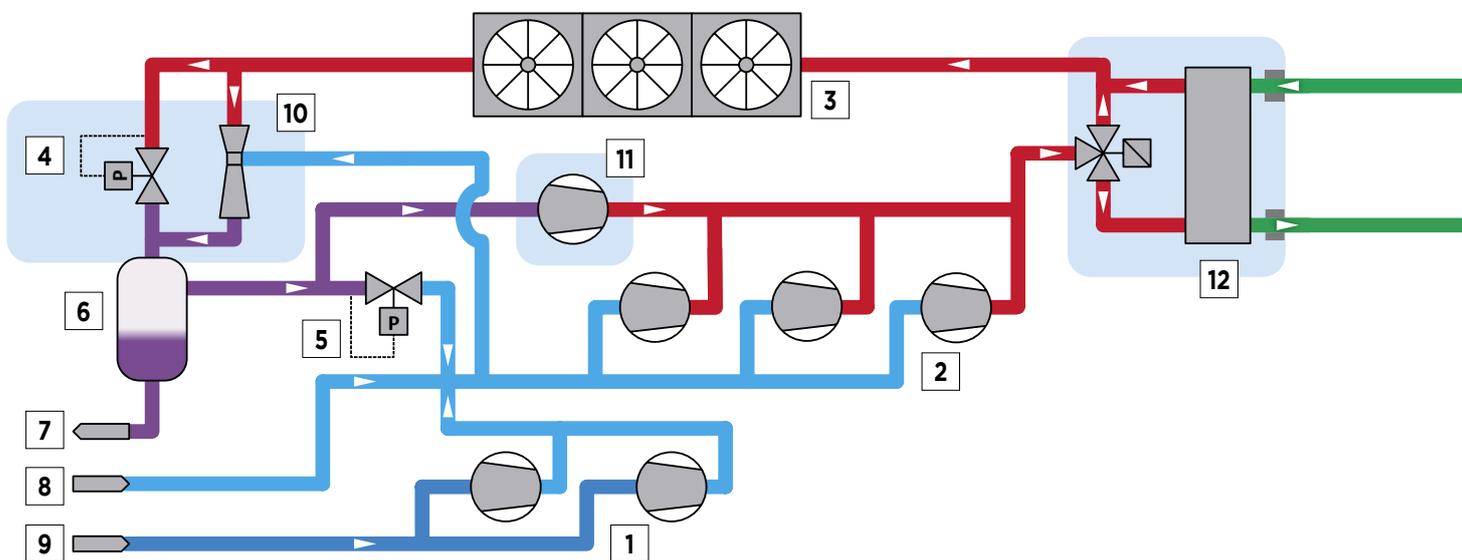
eCO2Boost S CU



MT 2 x LT 0	
L x P x H	n.c. x 1000 x 2570
MT 2 x LT 2 MT 2 x LT 1	
L x P x H	n.c. x 1000 x 2570
MT 3 x LT 2 MT 3 x LT 1	
L x P x H	n.c. x 1000 x 2570

Choose heat recovery: the heat produced, instead of being evacuated by the gas cooler, can be used to heat the store or provide hot water.

Optimize your energy consumption during the hottest times of the year by choosing parallel compression.



- 1. Low temperature rack (LT)
- 2. Medium temperature rack (MT)
- 3. Gas cooler
- 4. High pressure control valve
- 5. Flash gas valve
- 6. Liquid receiver
- 7. Liquid line to supply display cases and units coolers
- 8. Return from MT unit coolers and display cases
- 9. Return from LT unit coolers and display cases

No.	OPTIONS	ADVANTAGES	COP
10.	Ejectors	To optimize system performance during the hottest times of the year, the rack can optionally be equipped with ejectors. The high pressure control valve (4) is retained and can be used as an ejector bypass to ensure operation of the rack in the event of malfunction.	The COP achieved is 15% to 20% greater than the COP of a standard installation.
11.	Parallel compression	For hotter average external temperatures, the parallel compression option is offered, which increases system performance.	The COP achieved is 10% to 15% greater than the COP of a standard installation.
12.	Heat recovery	The heat recovery option allows you to either heat the store economically, or produce the domestic hot water you need at a lower cost.	The COP remains the same as a standard installation but savings are made on your store's heating and/or hot water production.

