

FRIGA-BOHN

eCO | eMR

CO₂ compressor rack

Cascade installation on HFC or glycol water loop



CO₂



LT 8 - 341 kW



Modular unit to best meet the needs of your application, available in two versions:

- encased outdoor **eCO**,
- machine room **eMR**.

Compact to save space.

Use of CO₂, a natural refrigerant, for **more environmentally friendly** refrigeration.



1 OIL LINE

- # Removable oil separator with relief valve.
- # Oil receiver with high and low indicator, shut-off valves and relief valve.
- # Return with filter and oil indicator.
- # Electronic level controller with shut-off valve per compressor.
- # Non-adjustable differential valve for degassing the receiver connected to the LP manifold.
- # Copper oil collector with flexible connection for each compressor.

3 COMPRESSORS

- # Semi-hermetic reciprocating technology compressors equipped with:
 - Crankcase heater.
 - Suction and delivery shut-off valves.
 - HP and LP pressure ports with Schrader connector.

2 MANIFOLDS

- # A general filter unit or per compressor.
- # Copper suction and delivery manifold.
- # Condensate recovery tank under suction manifold.

4 CONNECTION PACK

- # 1 connecting valve on the suction side and the liquid outlet.

OPTIONS

PC1

Rack pre-wired with 5 m cable available

5 CONTROL AND SAFETY DEVICES

- # Per compressor:
 - LP safety pressure switch connected to the compressor.
 - 1 or 2 HP cartridge pressure switch(s) with automatic reset per compressor.
 - INT safety thermistor box.
- # Per rack:
 - LP general safety pressure switch.
 - HP general safety pressure switch.
 - HP and LP support pressure switches.
 - HP and LP pressure gage set diameter 100 mm class 1.
 - LP and HP sensors for normal operation regulator.
 - LP and HP sensors for back-up mode regulator.
- # Safety unit (optional): Condensing unit charged with R134a and connected to the CO₂ liquid receiver via a plate unit cooler.

OPTIONS

GMP

Safety unit (delivered installed and connected)

Do you have a specific request?

Contact us to design the unit that meets your needs.

7 CONDENSER

- # Soldered plate heat exchanger.
- # Delivery in kit form of a flow controller and a glycol water thermostat.
- # Air desuperheater (delivered separately) placed upstream of the plate condenser.

OPTIONS

2CD

2 x 50/50% condensers

6 LIQUID STATION

- # Horizontal liquid receiver with shut-off valves.
- # Double safety shut-off valve with inverter switch.
- # Removable cartridge drier with valve for maintenance (1/4" SAE).
- # Optoelectronic level alarm mounted on liquid receiver (high and low level).
- # Plate liquid/steam exchanger.
- # Liquid indicator.

OPTIONS

BFA

Suction filter bypass

VFA

Suction valve and filter

DES

Braze plate desuperheater

BAC

Liquid separator tank

RLS

Oversized receiver

BSH

Oil separator bypass

BD1

Drier bypass

8 INSULATION

- # Thick thermal insulation of liquid lines.

OPTIONS

MPI

Injected polyurethane foam insulation (liquid receiver and condenser only)

9 FRAME

- # Compressor rack:
 - Monoblock designed to avoid vibration problems.
- # Liquid station:
 - Monoblock made from folded galvanized sheet steel.
 - Anti-vibration pads (delivered separately).
- # Monoblock version. [CONTACT US](#)

OPTIONS

PEI

Painted frame

eCO_(A) 8_(B) / 2_(C)

(A) eCO = encased outdoor rack - eMR = machine room rack

(B) Power

(C) Number of compressors

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Power CO ₂ *			kW
Power consumption*			kW
Compressor			Nb
Max. Input current			A
Receiver volume			l.
Connection	Suction		Ø
	Delivery		Ø
	Liquid		Ø

eCO | eMR

Negative range

8 /2	16 /2	18 /3	25 /3	26 /2	32 /3	33 /4	40 /3	42 /4	53 /4	60 /3	80 /4	90 /3	100 /3	108 /2
8,0	16,0	16,5	25,1	26,0	32,3	33,5	40,2	43,1	53,5	60,0	80,0	90,0	100,0	108,0
2,4	4,6	4,5	6,7	7,2	8,0	8,9	10,2	11,4	13,6	16,4	21,9	24,7	24,7	25,5
2	2	3	3	2	3	4	3	4	4	3	4	3	3	2
7,0	13,6	18,0	18,0	19,4	21,0	24,0	35,0	28,0	46,0	47,1	62,8	66,0	66,0	67,0
50	50	70	70	70	70	70	180	180	180	180	180	300	300	300
5/8"	7/8"	7/8"	7/8"	7/8"	1"1/8	1"1/8	1"1/8	1"1/8	1"3/8	1"3/8	1"5/8	1"5/8	1"5/8	1"5/8
1/2"	5/8"	5/8"	5/8"	5/8"	7/8"	7/8"	7/8"	7/8"	7/8"	1"1/8	1"1/8	1"1/8	1"3/8	1"3/8
1/2"	5/8"	7/8"	7/8"	7/8"	7/8"	7/8"	1"1/8	1"1/8	1"1/8	1"1/8	1"3/8	1"3/8	1"1/8	1"1/8

eCO ...

Dimensions	L D H	mm
Weight		kg

eCO - Encased outdoor rack

8 /2	16 /2	18 /3	25 /3	26 /2	32 /3	33 /4	40 /3	42 /4	53 /4	60 /3	80 /4	90 /3	100 /3	108 /2
A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
1320	1330	1640	1650	1435	1655	1705	1835	1815	1915	1855	2120	2000	2000	2030

eMR ...

Dimensions	L D H	mm
Weight		kg

eMR - Machine room rack

8 /2	16 /2	18 /3	25 /3	26 /2	32 /3	33 /4	40 /3	42 /4	53 /4	60 /3	80 /4	90 /3	100 /3	108 /2
Hydraulic skid														
A	A	A	A	A	A	A	A	A	A	A	A	B	B	B
380	380	455	455	455	455	455	565	565	565	565	710	710	710	710

Rack

Dimensions	L H	mm
	D	mm
Weight		kg

A	A	B	B	A	B	C	B	C	C	B	C	B	B	A
850	850	784	784	850	784	784	784	784	784	784	784	784	784	850
140	150	265	275	180	280	330	350	330	430	370	490	370	370	400

Monoblock - Rack/Hydraulic skid

Dimensions	L D H	mm
Weight		kg

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* Evaporating temperature: -35 °C / Condensing temperature: -3 °C - Total superheat 20K, useful 10K and subcool 3K, with a 60 Hz head compressor
 Glycol water: Percentage of glycol = 40% - Regime -8/-4 °C

eCO_(A) 8_(B) / 2_(C)

(A) eCO = encased outdoor rack - eMR = machine room rack

(B) Power

(C) Number of compressors

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		111 /4	129 /2	122 /3	132 /4	153 /2	157 /3	160 /4	179 /2	188 /3	206 /4	222 /3	247 /4	260 /3	292 /4	341 /4
Power CO ₂ *	kW	111,0	129,0	122,0	132,0	153,0	157,0	160,0	179,0	188,0	206,0	222,0	247,0	260,0	292,0	341,0
Power consumption*	kW	27,8	30,6	30,0	32,9	36,1	38,3	40,0	42,0	45,8	51,0	54,1	61,1	63,0	72,1	84,0
Compressor	Nb	4	2	3	4	2	3	4	2	3	4	3	4	3	4	4
Max. Input current	A	75,6	80,0	80,1	88,0	96,6	100,5	106,8	111,0	120,0	134,0	144,9	160,0	166,5	193,2	222,0
Receiver volume	l.	300	300	300	300	300	300	300	300	300	300	300	550	550	550	550
Connection	Suction	Ø	1"5/8	2"1/8	2"1/8	2"1/8	2"1/8	2"1/8	2"1/8	2"5/8	2"5/8	2"5/8	2"5/8	2"5/8	2"5/8	2"5/8
	Delivery	Ø	1"3/8	1"3/8	1"3/8	1"3/8	1"5/8	1"5/8	1"5/8	1"5/8	1"5/8	1"5/8	2"1/8	2"1/8	2"1/8	2"1/8
	Liquid	Ø	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"1/8	1"3/8	1"3/8	1"3/8	1"3/8	1"5/8	1"5/8	1"5/8	1"5/8

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Negative range

eCO ...

Dimensions	L D H	mm	A	A	A	A	A	A	A	A	A	B	B	B	B	B	
Weight		kg	2120	2060	2080	2270	2170	2280	2220	2620	2730	2930	2830	3180	3080	3380	3430

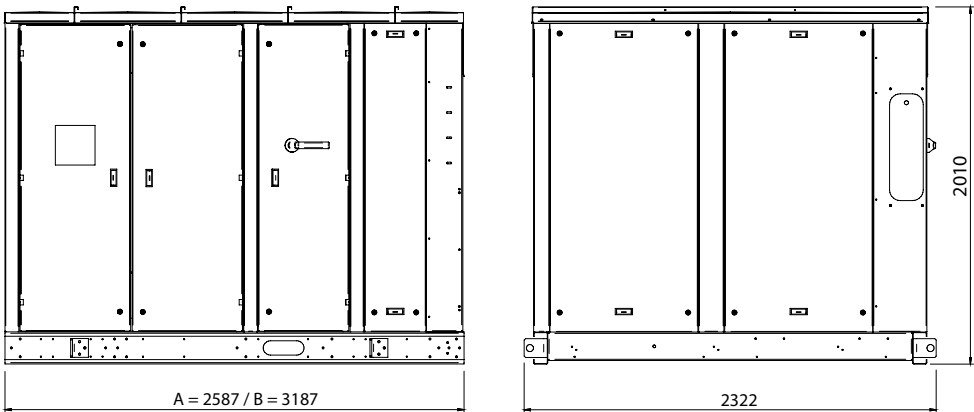
eMR ...

			Hydraulic skid														
Dimensions	L D H	mm	B	B	B	B	B	B	B	B	B	C	C	C	C	C	
Weight		kg	710	750	750	750	790	790	790	810	810	850	850	1100	1100	1200	1250
			Rack														
Dimensions	L H	mm	C	A	B	C	A	B	C	A	B	C	B	C	B	C	C
	D	mm	784	850	784	784	850	850	784	850	850	850	850	850	850	850	850
Weight		kg	490	390	410	600	460	570	510	460	570	730	630	730	630	830	830
			Monoblock - Rack/Hydraulic skid														
Dimensions	L D H	mm															
Weight		kg															
			Contact us														

Contact us

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