Release June 2022

REFRIGERATION UNITS

TAGO Series

Cooling capacities from 10 to 40 kW in Medium Temperature

Enex presents TAGO, the new range of transcritical CO_2 refrigeration units, designed to combine compactness and high reliability. Available in 7 sizes with 2 MT compressor and 1 LT compressor, it is only 800 mm wide. With its tower shape, it is ideal for installation in plant rooms with restricted footprint and/or where access is through narrow doors.

Enex was the first ever company to develop CO_2 only solutions since 2004. CO_2 is a natural fluid with zero OPD, GWP = 1. Neutral refrigerant of excellence, CO_2 is neither toxic nor flammable: it is in fact the one of the natural gases with fewer contraindications and for this reason it is a candidate as the refrigerant of the future, not subject to the F-gas regulation on fluorinated gases.

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Publication: Commercial Brochure, TAGO Series | Release June 2022 | ENG

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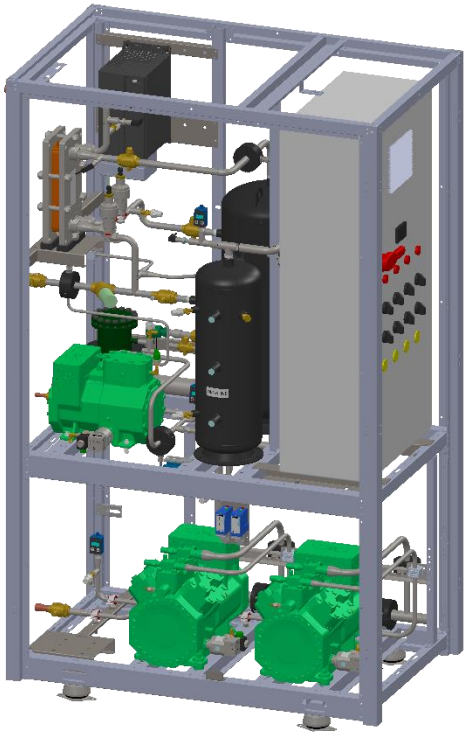
LEADING SOLUTION IN RETAIL, FOOD INDUSTRY & PROCESS APPLICATIONS

The Minibooster range TAGO Series is designed for small size commercial refrigeration systems in food retail, food storage, petrol station and other similar applications. It is available in single temperature (MT only) or dual temperature (MT and LT) configurations.
It can be provided with a cladding for sound insulation and/or as protection against atmospheric agents for outdoor use.



The image is for illustrative purpose and it is referred to MINIBOOSTER unit type 2+1

TAGO is the new range of Enex transcritical CO_2 refrigeration units designed to combine: simplicity, compactness and high reliability.

GENERAL TECHNICAL DATA
SIZES 10-15

The Minibooster TAGO range includes 7 sizes with pre-defined compressor configurations. The technical data may vary according to the specifications provided and / or agreed with the customer. In the following table the sizes 10 and 15 are expressed, with cooling capacities from 2 to 7,8kW in Low Temperature and from 10 to 15kW in Medium Temperature.

Size		**10**				**15**				
Model		**2.0 10 kW**	**2.1 10 kW**	**2.1 10 kW**	**2.1 10 kW**	**2.0 15 kW**	**2.1 15 kW**	**2.1 15 kW**	**2.1 15 kW**	**2.1 15 kW**
Power Input	[kW]	6,4	7,0	7,4	7,7	10,0	10,5	11,1	11,6	12,0
Low temperature section										
Compressor number	[-]	0	1	1	1	0	1	1	1	1
Cooling Capacity	[kW]	-	2,6	4,2	5,6	-	2,6	4,2	5,6	7,8
Medium temperature section										
Compressor number	[-]	2	2	2	2	2	2	2	2	2
Cooling Capacity	[kW]	10,0	7,0	5,1	3,4	15,0	12,4	10,8	9,4	7,2
Gas cooler	[kW]	17,0	17,0	17,0	17,0	27,0	27,0	27,0	27,0	27,0
Connections diameters										
Low temperature suction	[mm]	-	12	12	12	-	12	12	12	12
Medium temperature suction	[mm]	12	12	12	12	12	12	12	12	12
Gas cooler line	[mm]	12	12	12	12	12	12	12	12	12
Liquid line	[mm]	12	12	12	12	12	12	12	12	12
Tanks Capacity										
Liquid Receiver	[liters]	50				50				
Oil Receiver/Suction accumulator	[liters]	20				20				
Dimensions										
L x W x H	[mm]	1380 x 800 x 2200				1380 x 800 x 2200				
Weight	[kg]	1200				1200				

NOTES:

1 - Evaporation temperatures

Low temperature evap. -30°C

Medium temperature evap. -8°C

2 - Ambient temperature 34°C

3 - Discharge compressor pressure 92 bar

4 - Outlet gas cooler temperature 36°C

GENERAL TECHNICAL DATA
SIZES 20-25

The Minibooster TAGO range includes 7 sizes with pre-defined compressor configurations. The technical data may vary according to the specifications provided and / or agreed with the customer. In the following table the sizes 20 and 25 are expressed, with cooling capacities from 2 to 9,9kW in Low Temperature and from 10 to 25kW in Medium Temperature.

Size		**20**						**25**					
Model		**2.0 20 kW**	**2.1 20 kW**	**2.1 20 kW**	**2.1 20 kW**	**2.1 20 kW**	**2.1 20 kW**	**2.0 25 kW**	**2.1 25 kW**	**2.1 25 kW**	**2.1 25 kW**	**2.1 25 kW**	**2.1 25 kW**
Power Input	[kW]	12,3	13,1	13,3	13,7	14,1	14,6	15,4	16,1	16,4	16,7	17,2	17,6
Low temperature section													
Compressor number	[-]	0	1	1	1	1	1	0	1	1	1	1	1
Cooling Capacity	[kW]	-	2,6	4,2	5,6	7,8	9,9	-	2,6	4,2	5,6	7,8	9,9
Medium temperature section													
Compressor number	[-]	2	2	2	2	2	2	2	2	2	2	2	2
Cooling Capacity	[kW]	20,0	17,4	15,8	14,4	12,2	10,1	25,0	22,4	20,8	19,4	17,2	15,1
Gas cooler	[kW]	34,3	34,3	34,3	34,3	34,3	34,3	43,2	43,2	43,2	43,2	43,2	43,2
Connections diameters													
Low temperature suction	[mm]	-	12	12	12	16	16	-	12	12	12	16	16
Medium temperature suction	[mm]	16	16	16	12	12	12	16	16	16	16	16	16
Gas cooler line	[mm]	16	16	16	16	16	16	16	16	16	16	16	16
Liquid line	[mm]	16	16	16	16	16	16	16	16	16	16	16	16
Tanks Capacity													
Liquid Receiver	[liters]	50						50					
Oil Receiver/Suction accumulator	[liters]	20						20					
Dimensions													
L x W x H	[mm]	1380 x 800 x 2200						1380 x 800 x 2200					
Weight	[kg]	1200						1200					

NOTES:

1 - Evaporation temperatures
Low temperature evap. -30°C
Medium temperature evap. -8°C
2 - Ambient temperature 34°C
3 - Discharge compressor pressure 92 bar
4 - Outlet gas cooler temperature 36°C

GENERAL TECHNICAL DATA
SIZES 30-35

The Minibooster TAGO range includes 7 sizes with pre-defined compressor configurations. The technical data may vary according to the specifications provided and / or agreed with the customer. In the following table the sizes 30 and 35 are expressed, with cooling capacities from 2 to 9,9kW in Low Temperature and from 20 to 35kW in Medium Temperature.

Size		30						35					
Model		2.0 30 kW	2.1 30 kW	2.1 30 kW	2.1 30 kW	2.1 30 kW	2.1 30 kW	2.0 35 kW	2.1 35 kW	2.1 35 kW	2.1 35 kW	2.1 35 kW	2.1 35 kW
Power Input	[kW]	18,0	18,6	18,8	19,0	19,5	19,9	20,8	22,0	22,3	22,6	23,2	23,6
Low temperature section													
Compressor number	[-]	0	1	1	1	1	1	0	1	2	1	1	1
Cooling Capacity	[kW]	-	2,6	4,2	5,6	7,8	9,9	-	2,6	4,2	5,6	7,8	9,9
Medium temperature section													
Compressor number	[-]	2	2	2	2	2	2	2	2	2	2	2	2
Cooling Capacity	[kW]	30,0	27,4	25,8	24,4	22,2	20,1	35,0	32,4	30,8	29,4	27,2	25,1
Gas cooler	[kW]		50,0	50,0	50,0	50,0	50,0	58,7	58,7	58,7	58,7	58,7	58,7
Connections diameters													
Low temperature suction	[mm]	-	12	12	12	16	16	-	12	12	12	16	16
Medium temperature suction	[mm]	22	22	22	22	16	16	22	22	22	22	16	22
Gas cooler line	[mm]	16	16	16	16	16	16	16	16	16	16	16	16
Liquid line	[mm]	16	16	16	16	16	16	16	16	16	16	16	16
Tanks Capacity													
Liquid Receiver	[liters]				50						50		
Oil Receiver/Suction accumulator	[liters]				20						20		
Dimensions													
L x W x H	[mm]				1380 x 800 x 2200						1380 x 800 x 2200		
Weight	[kg]				1200						1200		

NOTES:

1 - Evaporation temperatures

Low temperature evap. -30°C

Medium temperature evap. -8°C

2 - Ambient temperature 34°C

3 - Discharge compressor pressure 92 bar

4 - Outlet gas cooler temperature 36°C

GENERAL TECHNICAL DATA
SIZE 40

The Minibooster TAGO range includes 7 sizes with pre-defined compressor configurations. The technical data may vary according to the specifications provided and / or agreed with the customer. In the following table the size 40 is expressed, with cooling capacities from 2 to 9,9kW in Low Temperature and from 30 to 40kW in Medium Temperature.

Size		40					
Model		2.0 40 kW	2.1 40kW	2.1 40kW	2.1 40kW	2.1 40kW	2.1 40kW
Power Input	[kW]	23,2	23,9	24,2	24,5	25,0	25,4
Low temperature section							
Compressor number	[-]	0	1	1	1	1	1
Cooling Capacity	[kW]	-	2,6	4,2	5,6	7,8	9,9
Medium temperature section							
Compressor number	[-]	2	2	2	2	2	2
Cooling Capacity	[kW]	40,0	37,4	35,8	34,4	32,2	30,1
Gas cooler	[kW]	65,0	65,0	65,0	65,0	65,0	65,0
Connections diameters							
Low temperature suction	[mm]		12	12	12	16	16
Medium temperature suction	[mm]	22	22	22	22	22	22
Gas cooler line	[mm]	16	16	16	16	16	16
Liquid line	[mm]	22	22	22	22	22	22
Tanks Capacity							
Liquid Receiver	[liters]	50					
Oil Receiver/Suction accumulator	[liters]	20					
Dimensions							
L x W x H	[mm]	1380 x 800 x 2200					
Weight	[kg]	1200					

NOTES:

1 - Evaporation temperatures
- Low temperature evap. -30°C
- Medium temperature evap. -8°C

2 - Ambient temperature 34°C

3 - Discharge compressor pressure 92 bar

4 - Outlet gas cooler temperature 36°C

SPECIFICATION DESCRIPTION OF THE STANDARD UNITS

TAGO is available in 7 sizes, cooling load from 10 to 45 kW MT cooling capacity.
Below the list of main technical specifications:

Oil recovery system: Enex proven gravity system with oil accumulator on MT suction;

Frame: sheetmetal and painted with epoxy powders RAL9001 (other colours on request);

Piping: in AISI304L TIG welded stainless steel. Forged stainless steel fittings. The pipes are clamped with industrial type fixings. Cold pipes are thermally insulated with Armaflex insulation or equivalent with closed cells and low vapor permeability;

Control valves: stainless steel step motor valves;

Exchangers: optional one brazed plate heat recovery exchanger for Space Heating or DHW applications.
Regenerative stainless steel plate exchanger between flash gas and high temperature line to guarantee superheating of the vapour from the liquid receiver (all sizes);

Tanks: in painted carbon steel. Cold storage tanks are insulated as described below. Liquid line design pressure 80 bar;

Insulation: Armaflex or equivalent with closed cells, combined with protection, for cold parts, with fat bandage and vapor barrier;

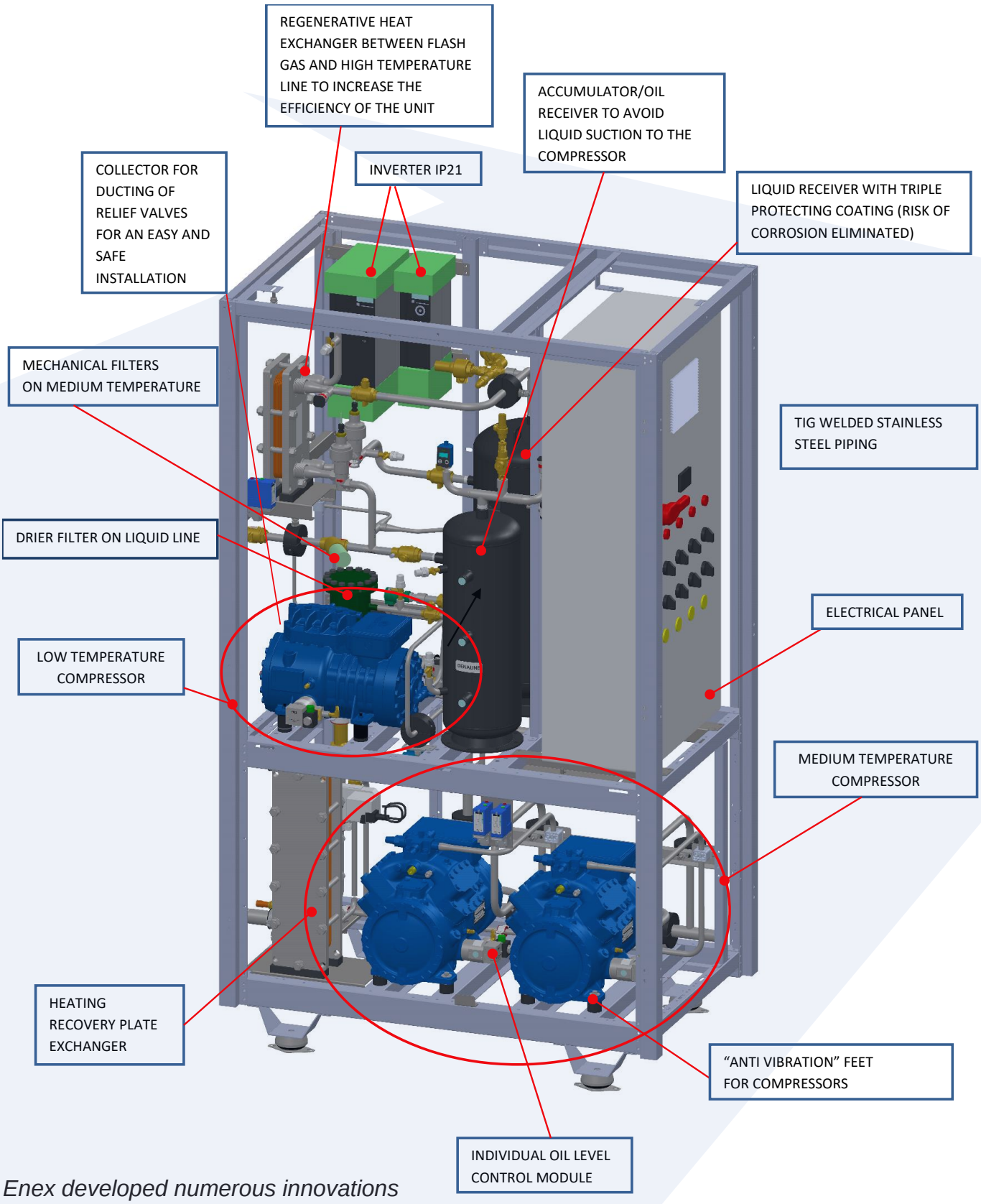
Liquid Level: visual indicator of the liquid level through sight glasses and low alarm level installed directly on the liquid receiver as standard;

Compressors: optimized for operation under specific conditions with low gas pulsations and low vibrations, low oil carry over rate and low starting currents, extreme reliability and trouble free operation have been reached for many years.
First compressor per stage equipped with inverters mounted and connected to the rack (speed range according to the compressor);

Lubrication oil: PAG oil as standard for better oil management and longer compressor life;

Design pressures: for the standard version 36 or 30 bar on the LP/ 52 or 60 bar on the MT (if LT section not included)/ 80 IP/ 120 bar on the HP side.

DISTINCTIVE FEATURES AND BENEFITS OF THE RANGE



Enex developed numerous innovations in the field of CO_2 refrigeration.

TECHNOLOGICAL ADVANTAGES ARISING FROM ENEX KNOW HOW

- High efficiency: optimal realization of the booster cycle with regenerative heat exchanger;
- Robust frame and compact design;
- Stainless steel pipes;
- Easily accessible components;
- Plug and play unit;
- CE / PED certification Cat. IV.

OPTIONS

- One heat recovery exchanger for Space Heating or DHW application;
- Back up controller spare;
- Complete ducting of the relief valve discharge;
- Danfoss Carel Wurm controller, others on request;
- Dorin or Bitzer compressors;
- Differential circuit breakers 300 mA “Type A” on compressors;
- Icc max up to 25 Ka;
- Main switch with MX coil;
- Housing for indoor/outdoor;
- Muffler for low noise applications on compressors discharge line.

Additional options and integrated versions suitable for the specific needs of Customers system should be evaluated/developed with technical department.

2004 — Foundation year

>3000 — Transcritical systems installed

25 — Countries in the world where Enex is present

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