

KUBE

REFRIGERATION SUBCRITICAL UNIT

Cooling capacity from 10 kW to 270 kW



Enex presents KUBE, the new range of CO₂ refrigeration units, designed to combine compactness and high reliability. With its modular design, the fully industrialized KUBE range allows a fast assembling in the production and it is ideal for installation in plant rooms with restricted footprint.

Enex was the first ever company to develop CO₂ only solutions since 2004. CO₂ is a natural fluid with zero OPD, GWP = 1. Neutral refrigerant of excellence, CO₂ 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.



LEADING SOLUTION IN RETAIL, FOOD INDUSTRY & PROCESS APPLICATIONS

The KUBE range is designed for small size commercial refrigeration systems in food retail, food storage and other similar applications where an existing water or brine loop is available, or in cascade with a high stage R290 or A2L to achieve outstanding performance, especially in warm climates. It can be provided with a cladding for sound insulation and/or as protection against atmospheric agents for outdoor use.

MAIN COMPONENTS

OIL RECOVERY SYSTEM

Coalescent oil separator installed on LT compressor discharge.

FRAME

Sheetmetal and painted with epoxy powders RAL7035 (other colours on request)

PIPING

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

EXCHANGERS

Regenerative plate exchanger between liquid & suction line to guarantee superheating of the vapour from evaporator (option)

TANKS

In painted carbon steel. Cold storage tanks are insulated as described below. Liquid line design pressure 45 bar

INSULATION

Armaflex or equivalent with closed cells, combined with protection, for cold parts.

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). Possibility to have second inverter optional in all the range.

LUBRICATION OIL

PAG oil as standard for better oil management and longer compressor life.

DESIGN PRESSURES

For the standard version 28 bar on the LP/ 45 bar on the MT.

TECHNOLOGICAL ADVANTAGES ARISING FROM ENEX KNOW HOW

- Robust frame and compact design
- Easily accessible components
- Plug and play unit
- CE / PED certification Cat. IV.
- Modular design
- Maintenance friendly (by pass valves on most important components)
- Propane cascade cycle to realizes all nat packaging

TECHNICAL DATA

The KUBE range includes 17 sizes with pre-defined compressor configurations. The technical data may vary according to the specifications provided and / or agreed with the customer.

MODEL		1 x 2JSL-2K-40S	1 x 2GSL-3K-40S	2 X 2JSL-2K-40S	2 X 2HSL-3K-40S	2 X 2GSL-3K-40S
Power Input	kW	2,1	2,9	3,7	4,6	5,3
Compressor		1	1	2	2	2
Cooling Capacity ⁽¹⁾	KW	8,1	12,4	14,8	19,1	22,7
Condenser Capacity ⁽¹⁾	KW	10,2	15,3	18,5	23,6	28,0
EER	KW/KW	3,95	4,23	3,97	4,18	4,25
Connections diameters						
Low temperature suction	In	1/2 CU	1/2 CU	1/2 CU	5/8 CU	5/8 CU
Liquid line	In	1/2 CU	1/2 CU	1/2 CU	1/2 CU	1/2 CU
Tanks Capacity						
Liquid Receiver	l	15	15	30	30	30
Suction accumulator	l	5	5	5	5	5
Dimensions						
Lenght	mm	1005	1005	1961	1961	1961
Wide	mm	1005	1005	1005	1005	1005
Height ⁽²⁾	mm	2050	2050	2050	2050	2050
Weight	Kg	530	530	620	640	640

MODEL		2 X 2FSL-4K-40S	2 X 2ESL-4K-40S	2 X 2DSL-5K-40S	2 X 2CSL-6K-40S
Power Input	kW	6,8	8,0	9,5	11,5
Compressor		2	2	2	2
Cooling Capacity ⁽¹⁾	KW	29,0	36,2	42,8	51,9
Condenser Capacity ⁽¹⁾	KW	35,8	44,2	52,3	63,4
EER	KW/KW	4,28	4,50	4,49	4,51
Connections diameters					
Low temperature suction	mm	7/8 CU	7/8 CU	7/8 CU	1-1/8 CU
Liquid line	mm	5/8 CU	5/8 CU	5/8 CU	7/8 CU
Tanks Capacity					
Liquid Receiver	l	60	60	60	60
Suction accumulator	l	5	5	5	5
Dimensions					
Lenght	mm	1961	1961	1961	1961
Wide	mm	1005	1005	1005	1005
Height ⁽²⁾	mm	2050	2050	2050	2050
Weight	Kg	660	710	710	720

(1) Performances are referred to the following conditions: -30°C Evaporation Temperature, -2°C Condensation Temperature

(2) Without feet

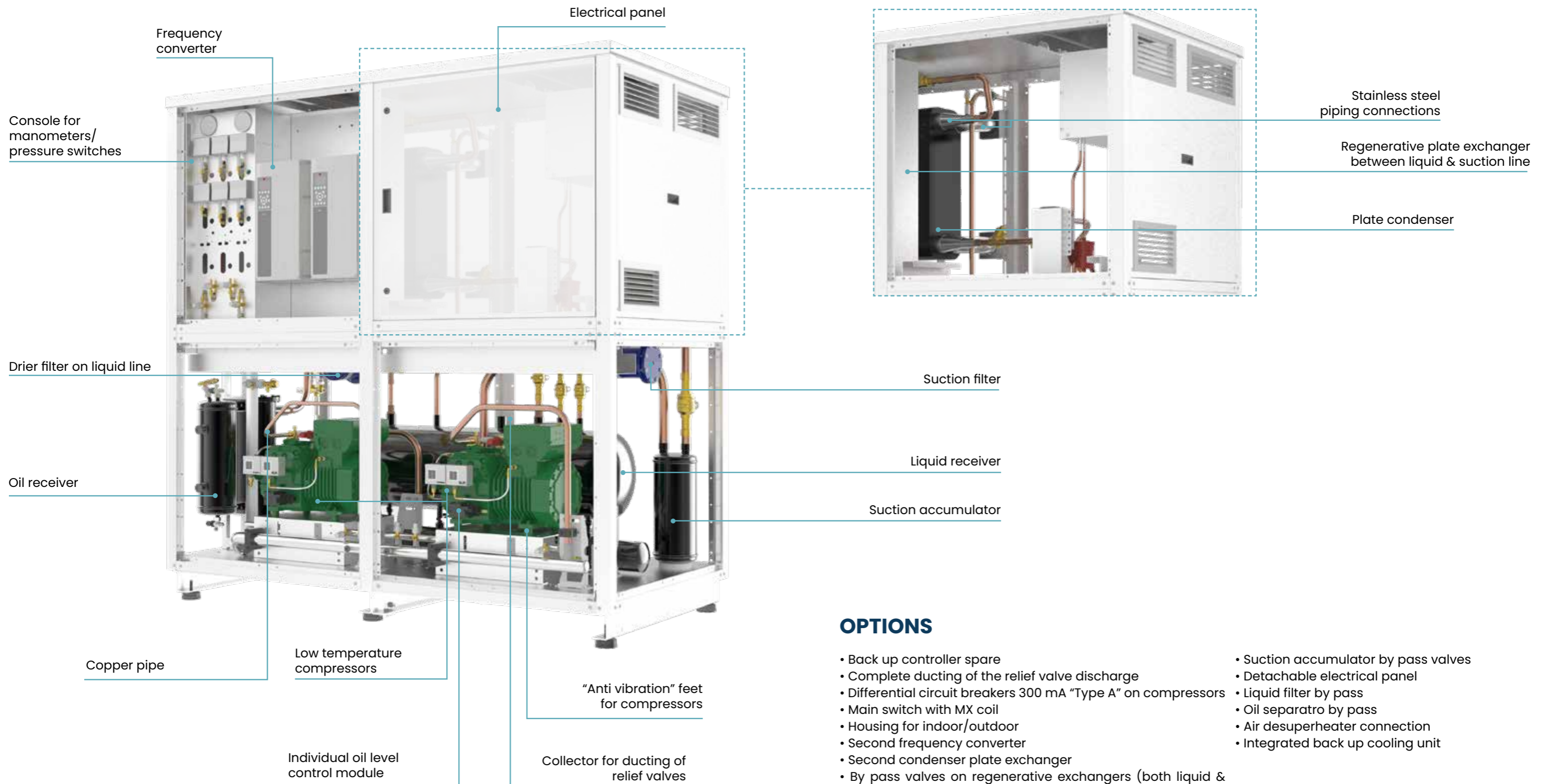
MODEL		2 X 4ESL-9K-40S	2 X 4DSL-10K-40S	2 X 4CSL-12K-40S	2 X 4VSL-15K-40S
Power Input	kW	15,7	18,6	22,6	28,9
Compressor		2	2	2	2
Cooling Capacity ⁽¹⁾	KW	71,1	84,4	102,9	132,4
Condenser Capacity ⁽¹⁾	KW	86,8	103,0	125,5	161,3
EER	KW/KW	4,53	4,54	4,55	4,58
Connections diameters					
Low temperature suction	mm	1-1/8 CU	1-1/8 CU	1-3/8 CU	1-3/8 CU
Liquid line	mm	7/8 CU	7/8 CU	1-1/8 CU	1-1/8 CU
Tanks Capacity					
Liquid Receiver	l	90	90	120	120
Suction accumulator	l	5	7	7	12
Dimensions					
Lenght	mm	1961	1961	1961	1961
Wide	mm	1005	1005	1005	1005
Height ⁽²⁾	mm	2050	2050	2050	2050
Weight	Kg	790	800	840	970

MODEL		3 X 4CSL-12K-40S	3 X 4VSL-15K-40S	3 X 4TSL-20K	3 X 4PSL-25K
Power Input	kW	32,8	42,3	50,2	59,3
Compressor		3	3	3	3
Cooling Capacity ⁽¹⁾	KW	149,5	192,0	230,2	271,6
Condenser Capacity ⁽¹⁾	KW	182,3	234,3	280,4	330,9
EER	KW/KW	4,56	4,54	4,59	4,58
Connections diameters					
Low temperature suction	mm	1-3/8 CU	1-3/8 CU	1-5/8 CU	1-5/8 CU
Liquid line	mm	1-1/8 CU	1-3/8 CU	1-3/8 CU	1-3/8 CU
Tanks Capacity					
Liquid Receiver	l	200	200	200	200
Suction accumulator	l	12	18	18	18
Dimensions					
Lenght	mm	2916	2916	2916	2916
Wide	mm	1005	1005	1005	1005
Height ⁽²⁾	mm	2050	2050	2050	2050
Weight	Kg	1290	1420	1570	1720

(1) Performances are referred to the following conditions: -30°C Evaporation Temperature, -2°C Condensation Temperature

(2) Without feet

DISTINCTIVE FEATURES AND BENEFITS OF THE RANGE



OPTIONS

- Back up controller spare
- Complete ducting of the relief valve discharge
- Differential circuit breakers 300 mA "Type A" on compressors
- Main switch with MX coil
- Housing for indoor/outdoor
- Second frequency converter
- Second condenser plate exchanger
- By pass valves on regenerative exchangers (both liquid & suction side)
- Suction accumulator by pass valves
- Detachable electrical panel
- Liquid filter by pass
- Oil separator by pass
- Air desuperheater connection
- Integrated back up cooling unit

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