



Outdoor unit for the production of chilled/hot water with variable speed (Inverter Driven) Scroll compressors, optimized for R410A in a single-circuit configuration, axial-flow fans, condensing coil with copper tubes and aluminum fins, plate heat exchanger on water side and electronic expansion valve as standard equipment. Flexible and reliable unit; it easily adapts itself to different thermal load conditions thanks to the precise temperature control together with the use of inverter technology. The high performance's level, both full and partial load, is achieved thanks to the accurate unit's design and to the use of variable speed (inverter) motor. The chillers i-BX are used in many applications, even completely different from each other, suitable for comfort and industrial processes, without making any compromises.

Control



NADISYSTEM

The keypad features function controls and a complete LCD display for viewing data and activating the unit, via a multilevel menu. The remote keyboard kit wired indoor and outdoor temperature sensors allow dynamic control of delivery temperature water, optimizing comfort in the room and increasing the energy efficiency.

The electronic board allows you to manage:

- outdoor air temperature sensor on board for climatic curve
- the built-in clock can be used to create an operating profile containing time bands for space cooling
- night mode to limit the noise level of the units. Noise level is reduced limiting the maximum speed of the compressor and fans.
- up to 4 units in cascade (with the accessories N-CM)

Refrigerant



Versions

B Basic

Features

ErP READY

The highest level of efficiency at part load, thanks to the inverter technology, can meet and exceed the minimum seasonal efficiency for cooling, SEER, according with the eco-sustainable design requirements for all products using energy. For this reason, the unit represents the best choice for all the hydronic application on the residential and commercial markets. The unit is suitable also for industrial market, satisfying the seasonal energy performance ratio SEPR.

SYSTEM EFFICIENCY

The unit is designed as a system: all components are regulated using proprietary control's logic for the highest efficiency.

HIGH EFFICIENCY AT PARTIAL LOAD

High seasonal efficiency in both heating and cooling mode, using DC inverter technology to modulate compressor operation and deliver the exact amount of energy based on the actual needs of the building. High efficiency for low energy consumption during the operating hours.

HIGH EFFICIENCY COMPONENTS

In terms of improving performance and reducing power consumption, the electronic thermostatic valve is an important component that maximises system efficiency, same for the choice the hydronic kit with inverter water pump and the modulating the fans speed as standard equipments.

WIDE OPERATING RANGE

Full load operation is ensured with outdoor air temperature up to 46°C during summer and down to -10°C of outdoor air temperature during winter. Production of evaporator leaving water temperature from -8°C to 20°C.

INTEGRATED HYDRONIC MODULE

The integrated hydronic include all the water circuit components (anti-freeze electrical heater on plate heat exchanger, air vents, flow switch, water filter, safety valve, EC water pumps, expansion tank) so as to optimize installation space, times and costs.

Accessories

- Remote keyboard
- Cascade management kit
- Copper-Aluminum heat exchanger coils with epoxy treatment
- Copper-Copper heat exchanger coils
- Buffer tank
- Serial card RS485 for ModBus
- Rubber anti-vibration mounting kit

i-BX M			004M	006M	008M	010	013
Power supply		V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
PERFORMANCE							
COOLING ONLY (GROSS VALUE)							
Cooling capacity	(1)	kW	4,300	6,107	8,100	10,60	12,90
Total power input	(1)	kW	1,555	2,120	2,820	3,640	4,740
EER	(1)	kW/kW	2,774	2,882	2,872	2,912	2,722
ESEER	(1)	kW/kW	4,200	4,360	4,700	4,290	4,550
COOLING ONLY (EN14511 VALUE)							
Cooling capacity	(1)(2)	kW	4,300	6,110	8,110	10,60	12,90
EER	(1)(2)	kW/kW	2,820	2,920	2,930	2,920	2,740
ESEER	(1)(2)	kW/kW	4,530	4,600	5,080	4,340	4,690
Cooling energy class			C	B	B	B	C
ENERGY EFFICIENCY							
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)							
Ambient refrigeration							
Prated,c	(7)	kW	4,30	6,11	8,11	10,6	12,9
SEER	(7)(8)		4,38	4,43	4,93	4,39	4,78
Performance ηs	(7)(9)	%	172	174	194	172	188
EXCHANGERS							
HEAT EXCHANGER USER SIDE IN REFRIGERATION							
Water flow		l/s	0,206	0,292	0,387	0,507	0,617
Available unit's head	(1)	kPa	50,7	38,1	61,8	55,6	55,3
REFRIGERANT CIRCUIT							
Compressors nr.		N°	1	1	1	1	1
No. Circuits		N°	1	1	1	1	1
Refrigerant charge		kg	1,45	2,10	3,55	3,60	3,65
NOISE LEVEL							
Sound Pressure	(3)	dB(A)	33	34	35	38	39
Sound power level in cooling	(4)(5)	dB(A)	64	65	66	69	70
SIZE AND WEIGHT							
A	(6)	mm	900	900	900	900	900
B	(6)	mm	370	370	420	420	420
H	(6)	mm	940	940	1240	1240	1240
Operating weight	(6)	kg	75	80	95	110	125

Notes

- 1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
- 2 Values in compliance with EN14511
- 3 Average sound pressure level at 10m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
- 4 Sound power on the basis of measurements made in compliance with ISO 9614.
- 5 Sound power level in cooling, outdoors.
- 6 Unit in standard configuration/execution, without optional accessories.
- 7 Parameter calculated according to [REGULATION (EU) N. 2016/2281]
- 8 Seasonal energy efficiency ratio
- 9 Seasonal space cooling energy efficiency

The units highlighted in this publication contain HFC R410A [GWP₁₀₀ 2088] fluorinated greenhouse gases.
Certified data in EUROVENT

i-BX T		010T	013T	015T	020T	025T	030T	035T
Power supply	V/ph/Hz	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
PERFORMANCE								
COOLING ONLY (GROSS VALUE)								
Cooling capacity	(1) kW	10,70	13,30	15,50	20,60	25,00	29,80	35,10
Total power input	(1) kW	3,640	4,740	5,440	7,200	8,690	10,00	11,84
EER	(1) kW/kW	2,940	2,806	2,849	2,861	2,877	2,980	2,975
ESEER	(1) kW/kW	4,360	4,570	4,140	4,120	4,260	4,150	4,290
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2) kW	10,70	13,30	15,50	20,60	25,00	29,90	35,20
EER	(1)(2) kW/kW	2,950	2,820	2,870	2,880	2,900	3,010	3,010
ESEER	(1)(2) kW/kW	4,420	4,690	4,200	4,200	4,360	4,270	4,390
Cooling energy class		B	C	C	C	B	B	B
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)								
Ambient refrigeration								
Prated,c	(7) kW	10,7	13,3	15,5	20,6	25,0	29,9	35,2
SEER	(7)(8)	4,46	4,80	4,31	4,31	4,52	4,52	4,57
Performance ηs	(7)(9) %	176	189	169	169	178	178	180
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	l/s	0,512	0,636	0,741	0,985	1,196	1,425	1,679
Available unit's head	(1) kPa	52,7	51,7	76,7	66,3	60,3	90,0	73,5
REFRIGERANT CIRCUIT								
Compressors nr.	N°	1	1	1	1	1	1	1
No. Circuits	N°	1	1	1	1	1	1	1
Refrigerant charge	kg	3,60	3,65	2,75	4,15	5,75	6,45	6,90
NOISE LEVEL								
Sound Pressure	(3) dB(A)	38	39	43	43	43	44	45
Sound power level in cooling	(4)(5) dB(A)	69	70	74	74	75	76	77
SIZE AND WEIGHT								
A	(6) mm	900	900	900	1450	1450	1450	1700
B	(6) mm	420	420	420	550	550	550	650
H	(6) mm	1240	1240	1390	1200	1700	1700	1700
Operating weight	(6) kg	110	125	135	190	250	270	305

Notes

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Dimensional drawing

