NYB

Air-water chiller

Cooling capacity 28.97 ton

- **Easy and quick to install compact**
- **Reliability and modularity**
- **Microchannel coils**

DESCRIPTION

Is made up of independent 31 ton modules that can be connected to each other up to a power of 276 ton. Every single module is an outdoor chiller to produce chilled water.
The base, the structure and the panels are made of galvanized steel treated with polyester paint RAL 9003.

VERSIONS

A High efficiency

FEATURES

Operating field

Operation at full load up to 118.4 °F external air temperature. Unit can produce chilled water up to 39.2 °F.
Maximum yield at full load but even partial load, thanks to the partialisation steps that increase as the number of connected modules increases this ensures continuous adaptation to the actual system requirements.

Modularity

It is possible to couple up to 9 chillers designed to reduce the overall unit dimensions to a minimum.
The combination of the various chillers allows all the strengths of the individual module to be maintained.
Modularity allows you to adapt installation to the actual development needs of the system. This way the cooling capacity can be increased over time simply and affordably.
Modularity is essential when component redundancy is required, as it allows for a safer system design and increased reliability.

Hot water production

In the configuration with desuperheater, it is also possible to produce free-hot water.

Microchannel coils

Microchannel heat exchanger that guarantees higher thermal exchange yield. Circuit that optimises the liquid distribution in the coil, which is arranged with V beam geometry with open angle.

Components

Unit is already equipped with a differential pressure switch and butterfly check valves, useful to cut off the hydraulic circuit for maintenance; for instance, to clean the filter.
In the event of variable flow rate, the motorised hydronic valves can intercept one or more modules to reduce the flow rate in low heat load conditions.

CONTROL PCO_5

Microprocessor adjustment, with keyboard and LCD display,for easy access on the unit is a menu available in several languages.
Adjustment includes complete management of the alarms and their log.
The presence of a programmable timer allows functioning time periods and a possible second set-point to be set.
The temperature control takes place with the integral proportional logic, based on the water output temperature.
Night Mode: it is possible to set a silenced operation profile. Perfect for night operation since it guarantees greater acoustic comfort in the evenings, and a high efficiency in the time of greater load.
Pour la modalité Night Mode, le ventilateur inverter « J » est obligatoire.

ACCESSORIES

AER485P1: RS-485 interface for supervision systems with MODBUS protocol.
FB1: Air filter to protect the micro-channel coils. Formed of a frame and a composite baffle in micro-expanded aluminium mesh, with particularly low pressure drops.
GPNYB_BACK: kit with 1 anti-intrusion grid for the short side of the unit.
GPNYB_SIDE: kit with 2 anti-intrusion grids for the long side of the unit.
MULTICHILLER_EVO: Control, switch-on and switch-off system of the single chillers where multiple units are installed in parallel, always ensuring constant flow rate to the evaporators.
PGD1: Allows you to control the unit at a distance.

CRATE: Special crate for transport

FACTORY FITTED ACCESSORIES

DRE: Electronic device for peak current reduction.
KNYB: Pair of caps with grooved joints assembled on the unit manifold.
KREC-6-9: Accessory kit to remote the electric power supply input to the back

KREC-7-8: Accessory kit to remote the electric power supply input to the back
RIF: Power factor correction. Connected in parallel to the motor allowing about 10% reduction of input current.

COMPATIBILITY WITH VMF SYSTEM

For more information about VMF system, refer to the dedicated documentation.

ACCESSORIES COMPATIBILITY

Accessories

Model	Ver	0500
AER485P1	A	•
FB1	A	•
GPNYB_BACK	A	•
GPNYB_SIDE	A	•
MULTICHILLER_EVO	A	•
PGD1	A	•

Special crate for transport

Ver	0500
A	CRATE_NYB

DRE: electronic device for peak current reduction

Ver	0500
A	DRE (1)

(1) Contact the factory
A grey background indicates the accessory must be assembled in the factory

RIF: Power factor correction

Ver	0500
A	RIF (1)

(1) Contact the factory
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KREC: kit to remote the electric power supply input to the back

Ver	0500
A	KREC-6-9, KREC-7-8

A grey background indicates the accessory must be assembled in the factory

KNYB: Pair of caps with grooved joints assembled on the unit manifold

Ver	0500
A	KNYB

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CONFIGURATOR

Field		Description
1,2,3		**NYB**
4,5,6,7		**Size** 0500
8		**Operating field**
	°	Standard mechanic thermostatic valve (1)
	Y	Low temperature mechanic thermostatic valve (2)
9		**Model**
	°	Cooling only
10		**Heat recovery**
	°	Without heat recovery
	D	With desuperheater (3)
11		**Version**
	A	High efficiency
12		**Coils**
	°	Aluminium microchannel
	I	Copper-aluminium
	O	Coated aluminium microchannel
	R	Copper pipes-copper fins
	S	Copper pipes-Tinned copper fins
13		**Fans**
	°	Standard
	J	Inverter (4)
	M	Inverter surdimensionnés
14		**Power supply**
	6	230V ~ 3 60Hz with magnet circuit breakers
	7	460V ~ 3 60Hz with magnet circuit breakers
	8	575V ~ 3 60Hz with magnet circuit breakers
	9	208V ~ 3 60Hz with magnet circuit breakers
15,16		**Integrated hydronic kit**
	00	Collecteurs hydrauliques standard 90 psi nominaux (PN6)
	01	300 psi nominal hydraulic collectors (PN21)

(1) Water produced up to +39.2 °F
(2) Water produced from 39.2 °F up to +21.2 °F
(3) If the unit is also fitted with a low temperature valve in addition to the desuperheater, it is necessary to always guarantee a minimum water temperature of 95°F at its inlet.
(4) Ventilateurs J de série avec l'alimentation 208V 3 ~ 60 Hz

PERFORMANCE SPECIFICATIONS

Size			0500
Cooling performance 54.0 °F / 44.1 °F (1)			
Cooling capacity	A	ton	29.0
Input power	A	kW	32.9
Cooling total input current	A	A	55.0
EER	A	BTU/(Wh)	10.56
IPLV	A	BTU/(Wh)	12.49
Water flow rate system side	A	gpm	69.3
Pressure drop system side	A	ftH_2O	7.36

(1) Data: System side water heat exchanger 54.0 °F / 44.1 °F; External air 95 °F

ELECTRIC DATA

	Version	Fans	Power supply		0500
Peak current (LRA)	A	°/J	6	A	429.00
	A	°/J	7	A	222.97
	A	°/J	8	A	166.98
	A	°	9	A	-
	A	J	9	A	433.81
	A	M	6	A	438.40
	A	M	7	A	227.57
	A	M	8	A	170.66
	A	M	9	A	443.21
Minimum circuit amperage (MCA)	A	°/J	6	A	140.48
	A	°/J	7	A	69.11
	A	°/J	8	A	61.34
	A	°	9	A	-
	A	J	9	A	145.29
	A	M	6	A	149.88
	A	M	7	A	73.71
	A	M	8	A	65.02
	A	M	9	A	154.69
Maximum overcurrent permitted by the protection device (MOP)	A	°/J	6	A	175.00
	A	°/J	7	A	90.00
	A	°/J/M	8	A	80.00
	A	°	9	A	-
	A	J	9	A	200.00
	A	M	6/9	A	200.00
	A	M	7	A	99.99

- not available

GENERAL TECHNICAL DATA

Size			0500
Compressor			
Type	A	type	Scroll
Number	A	no.	2
Circuits	A	no.	2
Refrigerant	A	type	R410A
Refrigerant charge	A	lbs	31
System side heat exchanger			
Type	A	type	Brazed plate
Number	A	no.	1
Connections (in/out)	A	Type	Grooved joints
Sizes (in/out)	A	Ø	6"

Fans

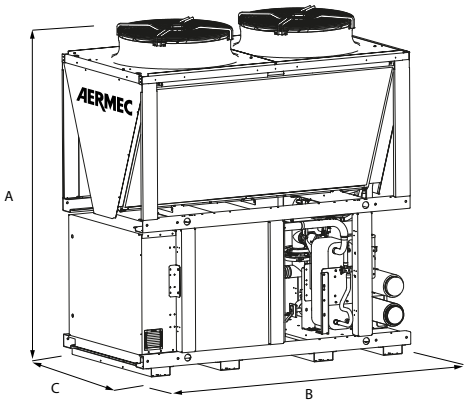
Size			0500
Fans: °			
Fan			
Type	A	type	Axial
Fan motor	A	type	Asynchronous with phase cut
Number	A	no.	2
Air flow rate	A	cfm	23,543

Sound data

Size			0500
Sound data calculated in cooling mode (1)			
Sound power level	A	dB(A)	89.4
Sound pressure level (10 m / 33 ft)	A	dB(A)	57.5

(1) Sound power calculated on the basis of measurements made in accordance with UNI EN ISO 9614-2. Sound pressure (cold functioning) measured in free field, 10 m / 33 ft away from the unit external surface (in compliance with UNI EN ISO 3744).

DIMENSIONS



Size			0500
Dimensions and weights			
A	A	in	96.5
B	A	in	86.6
C	A	in	46.9
Empty weight	A	lbs	2,046
Weight functioning	A	lbs	2,213

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