

AERMEC

NYB

Air-cooled chillers with axial fans
Cooling capacity from 28.3 tons to 255 tons

R410A

Aermec participate in the EUROVENT program: LCP/A/P/C the products are present on the site

- MICROCHANNEL COILS
- FREECOOLING VERSION
- COMPACT MODULE, EASY AND QUICK TO INSTALL
- RELIABLE AND MODULAR



Characteristics

NYB is made of independent 28 ton, modules which can be connected together up to 255 ton cooling capacity. Every single module is an external chiller producing chilled water with high efficiency scroll compressors, axial fans, microchannel coils, system side plate heat exchanger. Units with the desuperheater option can also produce hot water for free. The base, the structure and the panels are made of treated galvanised steel with rustproof polyester paint.

With NYB it is possible to couple up to 9 chillers designed to reduce overall unit dimensions to a minimum. This modularity adapts the installation to actual system development requirements. This way, the cooling capacity can be increased over time in a simple and economic manner.

Versions

NYB_° Cooling Only

NYB_F Free-cooling

Operating range: Operation at up to 115 °F outdoor air temperature at full load.

- NYB is made of 2 chiller circuits to ensure continuity even if one of the two is stopped.

The careful choice of components, the particular configuration and the option of connecting multiple independent modules and managing them as if they were a single unit, allows maximum yield at full load, but also with partial loads thanks to the partialisation steps that increase

as the connected modules increases, ensuring continual adaptation to actual system requests.

- The electrical control panel, present in every unit, together with the control logic implemented, allows each module to operate in synergy with the others, whilst ensuring continued operation if one or more modules fail.

Modularity is essential for component redundancy, as it allows a safer system design and increased reliability.

- The modules are easy to install and can be connected together, both from the hydraulic and the electrical point of view, making it possible to fine tune the system.

Hydraulic connections are facilitated by victaulic connections, while electrical connections are simplified by the presence of a hinged electrical control panel on each unit.

- The chiller module uses aluminium microchannel coils, ensuring very high levels of efficiency. These coils use less refrigerant compared to traditional copper/aluminium coils.

To respond to multiple system requirements, a Freecooling version is also available, particularly indicated if the requirement for chilled water is significant even during the winter period.

In fact, the greater the difference between the outside air and requested water temperature, the greater the economical advantage of using freecooling.

- The NYB module is already supplied with a water filter and interception valves to facilitate cleaning and maintenance. As an accessory, an air filter protecting the coil facilitates cleaning and guarantees a good heat exchange.
- The microprocessor, with keyboard and LCD display, allows easy consultation and intervention on the unit via a menu, available in several languages. Adjustment includes complete management of the alarms and their log.

- The presence of a programmable timer allows operation time bands setting and programming of a possible second set-point.

- The temperature control takes place with the integral proportional logic, based on the water outlet temperature.

- With night Mode it is possible to set a silent mode profile.

Perfect for night operation, it guarantees greater acoustic comfort, nonetheless offering, a high efficiency in the time of greater load.

NB: The "J" inverter fan is compulsory for the Night Mode.

Accessories

- **AER485P1:** RS-485 interface for supervising systems with MODBUS protocol.

- **PGD1:** Remote chiller controlling.

• **MULTICHILLER:** Control system for control, switch-on and switch-off of single chillers in a plant where multiple units are installed in parallel, always ensuring constant flow to the evaporators.

- **FB:** Air filter protecting micro channel coils. composed of a frame and a composite structure of micro-expanded aluminium mesh, with very low pressure drops.

Accessories mounted in the factory

- **DRE:** Soft starter (peak current reduction).

- **RIF:** Current power factor correction. Connected

in parallel to the motor, it ensures a reduced input current (approx. 10%).

- **GP:** Anti-intrusion grid.

• **COMPATIBILITY** with Aermec VMF SYSTEM For further information on this system, refer to the specific documentation.

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Unit Configurator

By suitably combining the numerous options available it is possible to configure each model in such a way as to meet even the most demanding of system requirements.

Configuration fields:



Configuration fields :

CODE

NYB

SIZE

0500

APPLICATION

° - Standard (produced water down to +39.2 °F)

MODELS

° Cooling Only

F- Free-cooling

HEAT RECOVERY UNITS

° Without heat recovery

D With desuperheater

VERSION

A - High efficiency

COILS

° Aluminium microchannel

O Painted aluminium microchannel

R Copper - Copper

S Copper - Tinned

FANS

° Standard

J Inverter (1)

POWER SUPPLY

6 230/3/60Hz with magnetic circuit breakers

460/3/60Hz with magnetic circuit breakers

575/3/60Hz with magnetic circuit breakers

208/3/60Hz with magnetic circuit breakers

HYDRONIC KIT: (options listed are available only for models "F" Free Cooling)

00 Without hydronic kit

Technical Data

NYB standard model		0500
Cooling capacity	ton	29
Input power	kW	33
EER	BTU/(W h)	10.6
Water flow rate	gpm	69
Pressure drop	psi	2.5

Cooling mode

Evaporator water temperature (in/out) 54°F/44°F; Outdoor air temperature 95°F;

Free-cooling 0%

NYB free-cooling model		0500
Cooling capacity	ton	28.3
Input power	kW	33.8
EER	BTU/(W h)	10.1
Water flow rate	gpm	68.2
Pressure drop	psi	2.42
Cooling capacity	ton	24
Input power	kW	4.5
EER	BTU/(W h)	63.1
Water flow rate	gpm	68
Pressure drop	psi	6

Cooling mode

Evaporator water temperature (in/out) 54°F/44°F; Outdoor air temperature 95°F;

Cooling mode; free-cooling (100%)

Evaporator water temperature (in) 59°F; Outdoor air temperature 35.6°F

GENERAL DATA		0500	
Electrical data			
Total absorbed current (standard)	208V/3/60Hz	A	138
	230V/3/60Hz	A	124
	460V/3/60Hz	A	58
	575V/3/60Hz	A	45
Total absorbed current (Freecooling chiller)	208V/3/60Hz	A	140
	230V/3/60Hz	A	126
	460V/3/60Hz	A	58
	575V/3/60Hz	A	45
Compressors		type	scroll
Compressors	no.	2	
Circuits	no.	2	
Refrigerant	type	R410A	
System heat exchanger		type	plate
Heat exchangers	no.	1	
Standard fans		type	axial
Fans	no.	2	
Air flow rate (standard)	cfm	23543	
Air flow rate (Freecooling chiller)	cfm	20012	
Sound data			
Sound power level (standard)	dB(A)	89.4	
Sound power level (Freecooling chiller)	dB(A)	88.4	

Sound power level

Aermec determines sound power levels on the basis of measurements taken in accordance with UNI EN ISO 9614-2 Standards.

Dimensions and Weight

NYB model	Vers.			0500
Height	(in)	A	All	96.5
Width	(in)	B	All	86.6
Depth	(in)	C	All	46.9
Weight	(lb)			2249

Attention:

The standard options are shown by the symbol ° ;

