

## NRV 0550

## Air-water chiller

Cooling capacity 108,3 kW

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



### DESCRIPTION

NRV is made up of independent 108kW modules that can be connected to each other up to a power of 970kW. Every single module is an outdoor chiller to produce chilled water. The base the structure and the panels are made of steel treated with polyester paint RAL 9003.

### VERSIONS

- A** High efficiency
- E** Silenced high efficiency

### FEATURES

#### Operating field

Operation at full load up to 46°C external air temperature. Unit can produce chilled water up to 4 °C. 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

NRV is already equipped with a water filter, 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<sub>5</sub>

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. **Night Mode is standard in the unit with J inverter fan and in the E silenced version. Either a DCPX or inverter fan is necessary for the high efficiency version.**

### ACCESSORIES

- AER485P1:** RS-485 interface for supervision systems with MODBUS protocol.
- DCPX:** Device for condensation temperature control, with continuous speed modulation of fans by using a pressure transducer.
- GPNY\_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.

### FACTORY FITTED ACCESSORIES

**DRE:** Electronic device for peak current reduction.

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

### ACCESSORIES COMPATIBILITY

#### Accessories

Model	Ver	0550
AER485P1	A,E	•
DCPX	A	•
GPNYB_SIDE	A,E	•
GPNY_BACK	A,E	•
MULTICHILLER_EVO	A,E	•
PGD1	A,E	•

*DRE: electronic device for peak current reduction*

Ver	0550
A,E	DRE (1)

(1) Contact us

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	0550
A,E	KNYB

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

*KREC: kit to remote the electric power supply input to the back*

Ver	0550
A,E	KREC

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

*RIF: Power factor correction*

Ver	0550
A,E	RIF (1)

(1) Contact us

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### CONFIGURATOR

Field	Description
<b>1,2,3</b>	<b>NRV</b>
<b>4,5,6,7</b>	<b>Size</b> 0550
<b>8</b>	<b>Operating field</b>
°	Standard mechanic thermostatic valve (1)
X	Electronic thermostatic valve
<b>9</b>	<b>Model</b>
°	Cooling only
<b>10</b>	<b>Heat recovery</b>
°	Without heat recovery
D	With desuperheater
<b>11</b>	<b>Version</b>
A	High efficiency
E	Silenced high efficiency
<b>12</b>	<b>Coils</b>
°	Alluminium microchannel
O	Painted alluminium microchannel
R	Copper-copper
S	Copper-Tinned copper
<b>13</b>	<b>Fans</b>
°	Standard
J	Inverter (2)
<b>14</b>	<b>Power supply</b>
°	400V ~ 3 50Hz (3)
<b>15,16</b>	<b>Integrated hydronic kit</b>
00	Without hydronic kit

(1) Water produced up to +4 °C

(2) With "J" fan is unnecessary DCPX accessory

(3) With magnet circuit breakers

**KREC:** 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.**

## PERFORMANCE SPECIFICATIONS

NRV - A

Size			0550
<b>Cooling performance 12 °C/7 °C(1)</b>			
Cooling capacity	A	kW	108,3
	E	kW	103,8
Input power	A	kW	34,8
	E	kW	36,2
Cooling total input current	A,E	A	62,0
	A	W/W	3,11
EER	E	W/W	2,86
	A	l/h	18646
Water flow rate system side	E	l/h	17862
	A	kPa	32
Pressure drop system side	E	kPa	30

(1) Data 14511:2018; System side water heat exchanger 12 °C/7 °C; External air 35 °C

## ENERGY INDEX

Size			0550
<b>Cooling capacity with low leaving water temp (UE n° 2016/2281)</b>			
SEER	A	W/W	4,23
	E	W/W	4,17
η <sub>sc</sub>	A	%	166,30
	E	%	163,60

## ELECTRIC DATA

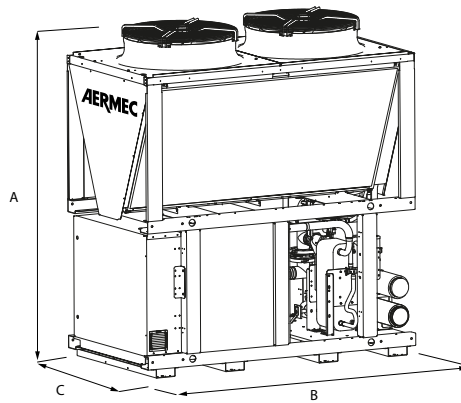
Size			0550
<b>Electric data</b>			
Maximum current (FLA)	A,E	A	95,6
Peak current (LRA)	A,E	A	280,6

## GENERAL TECHNICAL DATA

Size			0550
<b>Compressor</b>			
Type	A,E	type	Scroll
Number	A,E	no.	2
Circuits	A,E	no.	1
Refrigerant	A,E	type	R410A
<b>System side heat exchanger</b>			
Type	A,E	type	Brazed plate
Number	A,E	no.	1
<b>System side hydraulic connections</b>			
Connections (in/out)	A,E	Type	Grooved joints
Sizes (in/out)	A,E	∅	6"
<b>Fan</b>			
Type	A,E	type	Axial
Fan motor	A,E	type	On-Off
Number	A,E	no.	2
Air flow rate	A	m <sup>3</sup> /h	32000
	E	m <sup>3</sup> /h	24000
<b>Sound data calculated in cooling mode (1)</b>			
Sound power level	A	dB(A)	85,0
	E	dB(A)	82,0
Sound pressure level (10 m)	A	dB(A)	53,0
	E	dB(A)	50,0

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

## DIMENSIONS



Size			0550
<b>Dimensions and weights</b>			
A	A,E	mm	2480
B	A,E	mm	2200
C	A,E	mm	1190
Weight empty	A,E	kg	1105

Aermec reserves the right to make any modifications deemed necessary.  
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**Aermec S.p.A.**  
Via Roma, 996 - 37040 Bevilacqua (VR) - Italia  
Tel. 0442633111 - Telefax 044293577  
[www.aermec.com](http://www.aermec.com)