

# NRV

cooling only

**Air/Water chillers for outdoor installation**  
**Scroll compressors, plate heat exchangers and axial fans**  
**Cooling capacity from 108kW**

## R410A



Aermec is participating in the EUROVENT program: LCP The related products can be found on the website [www.eurovent-certification.com](http://www.eurovent-certification.com)



- **MICRO-CHANNEL COIL**
- **EASY AND QUICK TO INSTALL COMPACT MODULE**
- **RELIABILITY AND MODULARITY**

### Features

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 with high efficiency scroll compressors, axial fans, micro-channel coils, plate exchanger on the system side. In the units with desuperheater, there is also the possibility of producing hot water for free.

The base, the structure and the panels are made of galvanised steel treated with rustproof polyester paint.

With NRV, it is possible to couple up to 9 chillers designed to reduce the overall unit dimensions to a minimum. Modularity that 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.

#### Versions

**NRV\_A** Standard High Efficiency

**NRV\_E** Silenced High Efficiency

**Operating range:** Work up to 46°C of outdoor air temperature at full load.

- NRV is made up of a cooling circuit. The careful selection of the components used, the particular configuration and the option of connecting several independent modules and manage them as if they were a single unit allows for maximum yield at

full load but even partial loads, thanks to the partialisation steps that increase as the number of connected modules increases, ensuring continuous adaptation to the actual system requirements.

- The electrical panel in every unit and the management logic that allows each module to be operated in synergy with the others ensure continuity even if one or more of the modules freeze up.
- **Modularity is essential when component redundancy is required, as it allows for a safer system design and increased reliability.**
- **The modules are easy to install and connect to each other from a hydraulic standpoint, thanks to the connections with grooved joints.**
- The chiller module uses aluminium micro-channel coils, ensuring very high levels of efficiency. These coils allow less refrigerant to be used compared to traditional copper/aluminium coils.
- **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.
- Microprocessor adjustment, with keyboard and LCD display,

for 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 functioning time periods and a possible second set-point to be set
- Thermoregulation takes place with the integral proportional logic, based on the water output temperature.
- **Night Mode:** it is possible to set a silenced functioning profile. Perfect for night functioning, 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 supervising systems with MODBUS protocol.
- **PGD1:** Allows you to control the chiller at a distance.
- **MULTICHILLER\_PCO:** Control, switch-on and switch-off system of the individual chillers when multiple units are installed in parallel, always ensuring constant flow rate to the evaporators.
- **DCPX:** Condensation temperature control device with continuous modulation of the fan speed via pressure transducer. **Standard supplied in silenced versions and in units with Desuperheater**
- **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.
- **Accessories mounted in the factory;**
  - **DRE:** Plate peak current reduction electronic device.
  - **REF:** Current power factor correction. Connected in parallel to the motor, it allows a reduction of the input current (approx. 10%).
  - **KNYB:** Pair of caps with grooved joints assembled on the unit manifold.
- **KREC:** Accessory kit to remote the electric power supply input to the back (see documents)
- **COMPATIBILITY with VMF SYSTEM**  
For further information on system, refer to specific documentation.

NRV	vers.	0550
AER485P1		•
PGD1		•
MULTICHILLER_PCO		•
DCPX	* A	•
GPNYB_BACK		•
GPNYB_SIDE	(1)	•

NRV	vers.	0550
<b>Accessories mounted in the factory;</b>		
DRE	*	•
REF	*	•
KNYB		•
KREC		•

\* Contact the head office  
 (1) Kit made up of two grids

## Choosing the unit

By appropriately combining the variety of options available, every model can be configured in order to meet all specific system requirements.

<b>Field</b>	<b>Description</b>	<b>12</b>	<b>Coils</b>
<b>1,2,3</b>	<b>NRV</b>		° Aluminium micro-channel
<b>4,5,6,7</b>	<b>Size</b>		<b>O</b> Aluminium micro-channel with cataphoresis treatment
	0550		<b>R</b> Copper - Copper
<b>8</b>	<b>Scope of application</b>		<b>S</b> Copper - Thinned
	° Mechanical Thermostatic Valve (water produced to +4 °C)	<b>13</b>	<b>Fans</b>
	<b>X</b> Electronic Thermostatic Valve		° Standard
<b>9</b>	<b>Model</b>		<b>J</b> Inverter (2)
	° Cooling Only	<b>14</b>	<b>Power supply</b>
<b>10</b>	<b>Heat recovery</b>		° 400V/3/50Hz with magnet circuit breakers
	° Without Heat Recovery	<b>15-16</b>	<b>Integrated hydronic kit</b>
	<b>D</b> With Desuperheater:	<b>00</b>	Without hydronic kit
<b>11</b>	<b>Version</b>		
	<b>A</b> High Efficiency		
	<b>E</b> Silenced High Efficiency		

(2) The DCPX is unnecessary with the "J" fan

## Technical data

NRV - A		0550
	V/ph/Hz	400V/3/50Hz
12°C / 7°C	Cooling capacity	kW
	Input power	kW
	EER	
	ESEER	
	Eurovent Class during cooling function	
	Water flow rate	l/h
	Head drops	kPa

NRV - E		0550
	V/ph/Hz	400V/3/50Hz
12°C / 7°C	Cooling capacity	kW
	Input power	kW
	EER	
	ESEER	
	Eurovent Class during cooling function	
	Water flow rate	l/h
	Head drops	kPa

### Data (14511:2013)

Evaporator water 12°C/7°C, Outdoor air 35°C

GENERAL DATA		0550
<b>Electrical data</b>		
Total input current	A	62
<b>Scroll Compressors</b>		
Compressors / Circuit	n°/n°	2/1
Refrigerant gas	type	R410A
<b>System side heat exchanger - Plates</b>		
Heat exchanger	no.	1
<b>Axial Fans</b>		
Fans	no.	2
Air flow rate in cooling mode	A m³/h	32000
	E m³/h	24000
<b>Sound data</b>		
Sound power level	A dB(A)	85
Sound pressure level	A dB(A)	53
Sound power level	E dB(A)	82
Sound pressure level	E dB(A)	50

**Sound power** Aermec determines sound power values in agreement with the Standard UNI EN ISO 9614-2, in compliance with what is requested by Eurovent certification.

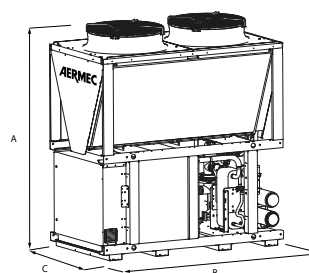
**Sound pressure (cold functioning)** Sound pressure measured in free field, 10 m away from the unit external surface (in compliance with UNI EN ISO 3744).

**Note:** For further information, refer to the selection program or to the technical documentation on [www.aermec.com](http://www.aermec.com)

## Dimensions and weights

NRV	Vers.	0550
Height	(mm) A	all 2480
Width	(mm) B	all 2200
Depth	(mm) C	all 1190
Weight*	(kg)	all 1105

\* Weight of the Standard unit without accessories



Aermec reserves the right to make all the modifications deemed necessary for improving the product, including technical data.

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