

# NRV

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

**Only cooling**

# R410A

Variable MultiFlow<sup>®</sup>

VMF



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

## Features

NRV is made of independent 108kW, modules which can be connected together up to 970kW 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 NRV 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

**NRV<sup>o</sup>** Cooling only

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

- NRV is made of 1 chiller circuits. 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 increase,

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 quick connect couplings, 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.
- The NRV 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.

**Night Mode is standard on all freecooling versions. For all other versions either the DCPX accessory or "J" inverter fan must be specified to allow Night Mode to operate."**

## Accessories

- **AER485P1:** RS-485 interface for supervising systems with MODBUS protocol.
- **PGD1:** Remote chiller controlling.
- **MULTICHILLER\_PCO:** 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 cur-

rent (approx. 10%).

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

### COMPATIBILITY with Aermec VMF SYSTEM

For further information on this system, refer to the specific documentation.

## Accessories compatibility

NRV	vers.	0550
AER485P1	.	.
PGD1	.	.
MULTICHILLER_PCO	.	.
FB	.	.
DCPX	*	°
<b>Accessories mounted in the factory</b>		
DRE	*	.
RIF	*	.
GP	*	.

\* Contact supplier

## Selecting your NRV

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>Coil</b>
<b>1,2,3</b>	<b>NRV</b>	°	Aluminium microchannel
<b>4,5,6,7</b>	<b>Size</b>	<b>O</b>	Painted aluminium microchannel
	0550	<b>R</b>	Copper - Copper
<b>8</b>	<b>Filed of use</b>	<b>S</b>	Copper - Tinned
°	Standard (produced water down to +4°C)	<b>13</b>	<b>Fans</b>
<b>9</b>	<b>Model</b>	°	Standard
°	Cooling Only	<b>J</b>	Inverter (1)
<b>10</b>	<b>Heat recovery</b>	<b>14</b>	<b>Power supply</b>
°	Without heat recovery	°	400V/3/50Hz with magnetic circuit breakers
<b>D</b>	With desuperheater	<b>15-16</b>	<b>Integrated hydronic kit</b>
<b>11</b>	<b>Version</b>	<b>00</b>	Without hydronic kit
<b>A</b>	High efficiency		

(1) With inverter fan are not required DCPX

## Technical data

NRV - A		0550
	V/ph/Hz	
12°C / 7°C	Cooling capacity	kW
	Total input power	kW
	EER	
	ESEER	
	Water flow rate	l/h
	Pressure drop	kPa

Date (14511:2013)

(1) Water evaporator 12°C/7°C, External air 35°C

		0550
<b>Electrical data</b>		
Total input current	A	61
<b>Compressors - Scroll</b>		
Compressors / Circuit	n°/n°	2/1
Refrigerant	Type	R410A
<b>Heat exchanger system side</b>		
Heat exchanger	Type	Plate
	n°	1
<b>Axial fans</b>		
Fans	Type	Axial
	n°	2
Air flow rate	m³/h	32000
<b>Sound data</b>		
Sound power level	dB(A)	87

**Sound power** Aermec determines sound power values on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification.

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

## Dimensions (mm)

NRV	Vers.	0550
Height	(mm) A	2450
Width	(mm) B	2200
Length	(mm) C	1190
Weight	(kg)	1020

Aermec reserves the right to make all modification deemed necessary for improving the product at any time with any modification of technical data.

**Aermec S.p.A.**

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