

NRV

Air/Water chillers for outdoor installation
Scroll compressors, plate heat exchangers and axial fans
Cooling capacity 108,3 kW

cooling only

HFC
Refrigerant
R410A

Variable Multi Flow[®]
VMF



Aermec participate in the EUROVENT program: LCP
 the products are present on the site
 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, and 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 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 managing them as if they were a single unit allows for 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.

- The electrical panel in every unit and the management logic that allows each module to be operated in synergy with the others ensures 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_EVO:** 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.
- **RIF:** 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_EVO		•
DCPX	* A	•
GPNYB_BACK		•
GPNYB_SIDE	(1)	•

NRV	vers.	0550
Accessories mounted in the factory;		
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.

Field	Description	12	Coils
1,2,3	NRV		° Aluminium micro-channel
4,5,6,7	Size		O Aluminium micro-channel with cataphoresis treatment
	0550		R Copper - Copper
8	Scope of application		S Copper - Thinned
	° Mechanical Thermostatic Valve (water produced to +4 °C)	13	Fans
	X Electronic Thermostatic Valve		° Standard
9	Model		J Inverter (2)
	° Cooling only	14	Power supply
10	Heat recovery		° 400V/3/50Hz with magnet circuit breakers
	° Without heat recovery	15-16	Integrated hydronic kit
	D With Desuperheater:	00	Without hydronic kit
11	Version		
	A High efficiency		
	E 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 108,3
	Input power	kW 34,8
	EER	3,11
	Water flow rate	l/h 18646
	Head drops	kPa 32
Cooling capacity with low leaving water temp (UE n° 2016/2281)		
	SEER	4,23
	ηsc	% 166,3

NRV - E		0550
	V/ph/Hz	400V/3/50Hz
12°C / 7°C	Cooling capacity	kW 103,8
	Input power	kW 36,2
	EER	2,86
	Water flow rate	l/h 17862
	Head drops	kPa 30
Cooling capacity with low leaving water temp (UE n° 2016/2281)		
	SEER	4,17
	ηsc	% 163,6

Data (14511:2018)

System side water 12°C/7°C, Outdoor air 35°C

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

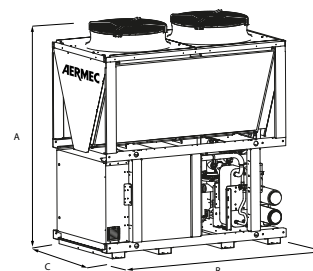
Sound pressure (cold functioning) Sound pressure measured in free field, 10m away from the unit external surface (in compliance with UNI EN ISO 3744).

Note: For further information, refer to the selection program or to the technical documentation on www.aermec.com

Dimensions and weights

NRV	Vers.	0550
A	(mm) A	all 2480
B	(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 modification deemed necessary for improving the product at any time with any modification of technical data.

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