AERMEC

NRA

Air-cooled water chillers, heat pumps and condensing units
With axial fans and capacities from 48 to 82 kW

R407C

Aermec adheres to the EUROVENT Certification Programme.
The products concerned appear in the EUROVENT Certified Products Guide.

• STANDARD VERSION

• VERSION EQUIPPED WITH WATER PUMP AND STORAGE TANK

Features

- Available in 4 different sizes
- Cooling only, heat pump and air cooled condensing versions
- All versions are supplied for use with R407C
- Version equipped with partial or total heat recovery is available
- 3 versions available:
  - Standard with water filter and flow switch
  - With low head pumping unit, 500 litre storage tank with 300 W antifreeze heater, water filter, flow switch and expansion tank
  - With high head pumping unit, 500 litre storage tank with 300W antifreeze heater, water filter, flow switch and expansion tank
- All versions except the motocondensing one can be ordered for low temperature operation for production of chilled water from 4 °C down to -6 °C. This option must be specified at the time of ordering
- High efficiency scroll compressors with low power consumption
- Modular microprocessor control system
- Functional parameters can be displayed in any of four languages
- Simplified remote control panel. All main functions of the unit, alarms included, are possible
- High efficiency plate type heat exchangers
- Evaporator electric heating element
- Electric heater for the compressor carter
- High pressure transducer (NRA H only)
- Low pressure transducer (NRA H only)
- Axial flow fan units for extremely quiet operation
- Compact size
- Metallic protective cabinet with rustproof polyester paint

Accessories

- **AER485**: RS-485 interface for supervision systems with MODBUS protocol.
- **DCPX**: Low temperature device for correct cooling mode operation with ambient temperatures from less than 19 °C down to - 10 °C.
- **DRE**: Electronic peak current reducer. **It must be factory-mounted.**
- **GP**: Safety grille: protects external coils from accidental impact.
- **PGS**: Daily/weekly programmer with facility to program two daily on/off cycles and set different parameters for each day of the week.
- **RIF**: Current rephaser. Parallel connection with the motor makes the reduction of input current possible. **This can only be installed when the machine is being made and must therefore be specified when the order is placed.**
- **ROMEO**: (**R**emote **O**verwatching **M**odem **E**nabling **O**peration) is a device that enables a remote control of a chiller from an ordinary WAP mobile phone. Furthermore it allows to send alarm or pre-alarm SMS messages up to 3 GSM mobile phones which may not be equipped with WAP. **This device includes AER485 accessory.**
- **TP 1**: Low pressure transducer: to provide working pressure readout on the microprocessor card display (one required for each circuit).
- **TP 2**: High pressure transducer: to provide working pressure readout on the microprocessor card display (one required for each circuit).
- **VT**: Anti-vibration mounts: set of four mounts for installation in locations on the underneath of the baseplate.

Compatibility of accessories												
Mod.	**275 L**	**300 L**	**325 L**	**350 L**	**275 A/LC**	**300 A/LC**	**325 A/LC**	**350 A/LC**	**275 HL**	**300 HL**	**325 HL**	**350 HL**
AER485	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
DCPX 14									✔	✔ (x2)	✔ (x2)	✔ (x2)
DCPX 16	✔	✔	✔	✔	✔	✔	✔	✔ (x2)				
DRE 275	✔				✔				✔			
DRE 300		✔				✔				✔		
DRE 325			✔	✔			✔	✔			✔	✔
GP 3	✔	✔	✔	✔	✔	✔	✔					
GP 4								✔ *	✔	✔	✔	✔
PGS	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
RIF	62	62	62	82	62	62	62	82	62	62	62	82
ROMEO	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
TP 1	✔ (x2)	✔ (x2)	✔ (x2)	✔ (x2)	✔ (x2)	✔ (x2)	✔ (x2)	✔ (x2)				
TP 2	✔ (x2)	✔ (x2)	✔ (x2)	✔ (x2)	✔ (x2)	✔ (x2)	✔ (x2)	✔ (x2)				
VT 12	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
VT 13**	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

* = GP 3 for NRA 350 LC and GP 4 for NRA 350 A
** = To be used in place of the accessory VT 12 on versions with accumulators.
N.B. = between brackets, the quantity necessary.

Selection

By combining the various options, each model can be configured exactly to match even the most specific system requirements.

Configuration rules:

1 2 3 — Code
4 5 6 — Size
7 — Application
8 — Model
9 — Heat recovery units
10 — Version
11 — Coils
12 — Evaporator
13 — Power supply
14 15 — Storage tank

Code:
NRA

Size:
275, 300, 325, 350

Application:
° - Standard with produced water above +4 °C
Y - Low temperature with produced water down to -6 °C

Model:
° - Cooling only
H - Heat pump

Heat recovery units:
° - Without heat recovery units
D - With desuperheaters
T - With total recovery units

Version:
L - Silenced
A - Silenced high temperature

Coils:
° - Aluminium
R - Copper
S - Tinned copper
V - Painted copper / aluminium version

Evaporator:
° - To PED standards
C - Without evaporator

Power supply:
° - 3N~ 400V 50Hz with thermal-magnetic cut-outs
4 - 3~ 230V 50Hz with thermal-magnetic cut-outs
9 - 3~ 500V 50Hz with thermal-magnetic cut-outs

Storage tank:
00 - without accumulator
01 - low head storage tank and single pump
02 - low head storage tank and standby pump
03 - high head storage tank and single pump
04 - high head storage tank and standby pump
05 - storage tank with holes for supplementary heater, low head and single pump
06 - storage tank with holes for supplementary heater, low head and standby pump
07 - storage tank with holes for supplementary heater, high head and single pump
08 - storage tank with holes for supplementary heater, high head and standby pump

Warning:
– standard options are shown by symbol °;
– for cooling only versions, it is possibile only the combination between options Y and A (please, contact the Headquarter for particolar needs);
– Following options are not available for heat pump version: Y, T, A and C.

Commercial code example: **NRA300LRG402**

This code identifies an NRA unit, size 300, with copper condensing coils, with electrical panel for compressors with 3~ 230V 50Hz motors and low head storage tank and standby pump.
Note that as each option is precisely identified, it is not necessary to specify standard options (shown with °) in the commercial code.

Technical data

Mod. NRA	Vers.	275	300	325	350
Cooling capacity (kW)	L	48	57	65	74
	A	53	62	71	82
Total input power (kW)	L	20.5	24	27	31
	A	18	21	24	27.5
Water flow rate (l/h)	L	8260	9800	11180	12730
	A	9120	10660	12380	14100
Pressure drops (kPa)	L	33.0	30.0	29.8	40.8
	A	40.0	35.5	36.5	50.0
Working current (A)	L	40.0	46.0	50.0	57.5
	A	36.2	41.6	45.4	54.0
Total air flow rate (m^3/h)	L	14000	21000	21000	20300
	A	13720	20450	20450	27300
♪ Sound pressure dB (A)	L - A	44	44	45	45
Compressors / circuits (n.)	All	2 / 2	2 / 2	2 / 2	2 / 2
Partialisation steps (n.)	All	2	2	2	2
Fans (n.)	L	4	6	6	6
	A	4	6	6	8
Max. current (A)	L - A	65	68	71	77
Peak current (A)	L - A	155	161	166	209
Carter electric heater (W)	L - A	2 x 75	2 x 75	2 x 75	2 x 75
Water connections (Ø)	L - A	2″ 1/2	2″ 1/2	2″ 1/2	2″ 1/2
Storage tank capacity (l)	L - A	500	500	500	500
Effective pressure (kPa)	gr1* L / A	140 / 122	135 / 126	126 / 113	148 / 130
	gr2* L / A	182 / 172	176 / 162	171 / 161	157 / 145

* = gr1 (Low head pumping unit); gr2 (High head pumping unit)

Mod. NRA HL		275	300	325	350
Cooling capacity	kW	51	59	67	76
Total input power	kW	19.5	21.5	25	28.5
Water flow rate	l/h	8770	10150	11520	13070
Pressure drops	kPa	27.0	39.0	35.0	42.0
Working current	A	39	41.7	48.5	55.7
Heating capacity	kW	58	68	78	88
Total input power	kW	22	25.5	28.5	32.5
Water flow rate	l/h	9980	11700	13420	15140
Pressure drops	kPa	31.0	42.0	38.0	48.0
Working current	A	42.5	48.8	53.5	60.8
Total air flow rate	m^3/h	21000	28000	28000	28000
♪ Sound pressure	dB (A)	44	44	45	45
Compressors / circuits	n.	2 / 2	2 / 2	2 / 2	2 / 2
Partialisation steps	n.	2	2	2	2
Fans	n.	6	8	8	8
Max. current	A	65	68	71	77
Peak current	A	155	161	166	209
Carter electric heater	W	2 x 75	2 x 75	2 x 75	2 x 75
Water connections	Ø	2″ 1/2	2″ 1/2	2″ 1/2	2″ 1/2
Storage tank capacity	l	500	500	500	500
Effective pressure (kPa)	gr1*	134	131	122	105
	gr2*	176	172	168	155

* = gr1 (Low head pumping unit); gr2 (High head pumping unit)

Mod. NRA LC		275	300	325	350
Cooling capacity	kW	56	66	75	88
Total input power	kW	18.8	22	24.9	29
Working current	A	39	42.75	46.5	55.5
Total air flow rate	m^3/h	13720	20450	20450	27300
♪ Sound pressure	dB (A)	44	44	45	45
Compressors / circuits	n.	2 / 2	2 / 2	2 / 2	2 / 2
Fans	n.	4	6	6	8
Max. current	A	65	68	71	77
Peak current	A	155	161	166	209
Carter electric heater	W	2 x 75	2 x 75	2 x 75	2 x 75

Performance values refer to the following conditions:

♪ Sound pressure measured in free field conditions at distance of 10 m and direction factor = 2.
In accordance with ISO 3744 regulations

- Power supply: 3N~ 400V 50Hz

Cooling:

- water outlet temperature 7 °C;
- ambient air temperature 35 °C; Δt = 5 °C.

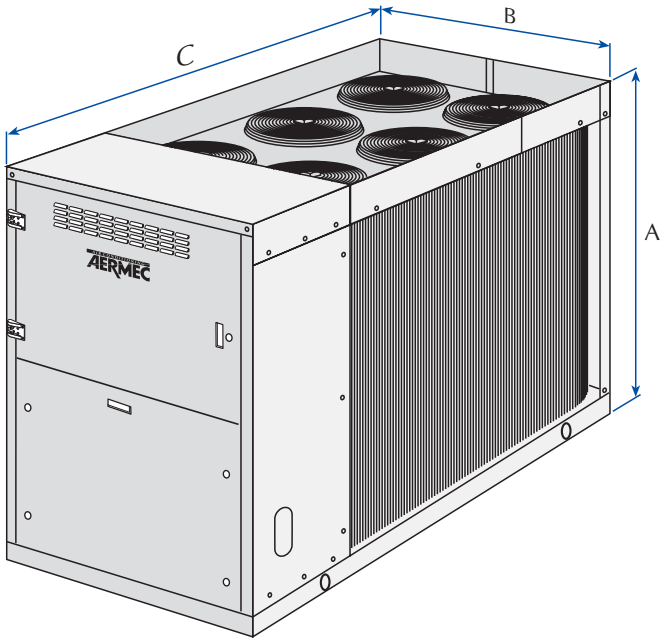
Heating:

- water outlet temperature 50 °C;
- ambient air temperature 7 °C D.B. 6 °C W.B.; Δt = 5 °C.

Cooling (NRA LC):

- evaporation temperature 5 °C;
- ambient air temperature 35 °C.

Dimensions (mm)



Mod. NRA		**275**	**300**	**325**	**350**
Height	A	1606	1606	1606	1606
Width	B	1100	1100	1100	1100
Depth (C)	NRA L - LC	2450	2450	2450	2450
	NRA A	2450	2450	2450	2950
	NRA HL	2950	2950	2950	2950
Weight (kg)	NRA L	625	655	670	750
	NRA A	660	690	705	790
	NRA HL	725	750	770	860

Additional weights (kg)	**275**	**300**	**325**	**350**
For 01-05 versions* add:	130	130	130	130
For 02-06 versions* add:	145	145	145	145
For 03-07 versions* add:	135	135	135	135
For 04-08 versions* add:	150	150	150	150

* = fields 14 and 15 of the Configuration Rules
Note: the weights given for the versions with accumulator refer to the weight with empty storage tank.

Cod.: SNRAUY.07 / 0702

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