NRP
0800/1800

Multipurpose
Air/Water for outdoor installation
Axial fans, scroll compressor
Cooling capacity 199,7÷476,5 kW
Heating capacity 241,4÷544,7 kW

HFC Refrigerant R410A

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Aermec participate in the EUROVENT program: LCP
the products are present on the site www.eurovent-certification.com

- **DESIGNED FOR 2 AND 4-PIPE SYSTEMS**
- **HIGH EFFICIENCY VERSION**
- **HIGH EFFICIENCY EVEN AT PART LOAD**
- **OPTION VERSION WITH BUILT-IN HYDRONIC KIT**

Characteristics

NRP is the range of multipurpose external units operating on refrigerant R410A, designed for **2 or 4-pipe systems.** With just one unit simultaneous and independent requests for hot and chilled water can be accommodated all year round.

Version

NRP_A Multipurpose high efficiency version
NRP_E Multipurpose high efficiency low noise version

- **Operational limits (1)**
- max. external air temperature 46°C Cooling mode
- Maximum leaving water temperature 55°C Heating mode
- 2refrigerant circuits
- Heat exchangers optimised to benefit from the excellent heat transfer characteristics of R410A.
- flow switch as standard supply
- Water filter
- Options for integrated hydronic modules with pumps:
- Pumps or only pumps
- Expansion tank
- Safety valve
- Pressure gauge
- Axial fans for extremely quiet operation
- Units fitted as standard with fan speed controller (DCPX), which permits operation in the winter with external temperatures down to –10 °C, and in heating mode with external temperatures up to 42 °C
- Microprocessor controls.
- Control from the leaving water temperature, with the possibility of selecting control of the entering water temperature.
- Condensing control in summer with a 0-10 V modulating signal based on pressure and compensated for external air temperature
- Evaporating control in summer for heat pump operation
- Intelligent defrost control on drop of pressure
- Automatic rotation of compressors and pumps based on operating hours
- Load limiting safety control
- Metallic protective cabinet with anti-corrosion polyester paint

(1) For more details on operating limits, refer to the technical documentation available on the website www.aermec.com

Accessories

- **AER485P1:** RS-485 interface for supervising systems with MODBUS protocol.
- **AERNET**: The device allows the control, the management and the remote monitoring of a Chiller with a PC, smartphone or tablet using Cloud connection. AERNET works as Master while every unit connected is configured as Slave (max. 6 unit); also, with a simple click is possible to save a log file with all the connected unit datas in the personal terminal for post analysis.
- **MULTICHILLER_EVO**: Control system for multiple parallel installed constant flow chillers providing individual chiller on/off and control capability.
- **PGD1:** Remote control of the chiller operating functions.
- **GP:** Protection grille protects the external coil from accidental damage.
- **AVX:** Anti-vibration mounts to be installed under the base of the unit.

Accessories factory fitted only

- **DRE**: Electronic soft starter which reduces starting current by about 26%.
  Available only with 400V power supply.
- **RIF**: Power factor correction. Connected in parallel to the motor allowing about 10% reduction of input current.

Compatibility of accessories

Mod. NRP		Vers.	0800	0900	1000	1250	1404	1504	1655	1800
AER485P1		Alls	•	•	•	•	•	•	•	•
AERNET		Alls	•	•	•	•	•	•	•	•
MULTICHILLER_EVO		Alls	•	•	•	•	•	•	•	•
PGD1		Alls	•	•	•	•	•	•	•	•
GP		Alls	GP260	GP260	GP260	GP350	GP350	GP350	GP500	GP500
AVX (00)		Alls	704	710	716	719	725	730	734	737
AVX (P1-P2-P3-P4)		Alls	706	712	712	721	727	732	736	736
AVX (P1-R1÷P4-R4)		Alls	706	712	712	721	727	732	736	736
Accessories factory fitted only										
DRE	(1)	Alls	801	901	1001	1251	1404	1504	1655	1801
RIF		Alls	88	90	92	92	92	92	93	94

(1) Only available for 400V/3/50Hz power supply

Unit Configurator

By suitably combining the numerous options available it is possible to configure each model in such a way as to meet the most demanding of system requirements.

Field **Code**

1,2,3 **NRP**

4,5,6,7 **Size**

0800-0900-1000-1250-1404-1504-1655-1800

8 **Version**

- **A** High efficiency
- **E** High efficiency in low noise operation

9 **System type**

- **2** 2-pipe system (cooling + DHW heating)
- **4** 4-pipe system (cooling + heating)

10 **Coil**

- **°** In aluminium
- **R** In copper
- **S** In tinned copper
- **V** Coated aluminium (epoxy paint)

11 **Fans**

- **°** Standard
- **J** High static pressure Inverter

12 **Power supply**

- **°** 400V/3/50Hz with circuit breakers

13-14 **System integrated hydronic module**

- **00** without pumps
- **P1** n°1 low head pump
- **P2** n°2 low head pump
- **P3** n°1 high head pump
- **P4** n°2 high head pump

15-16 **Heat recovery integrated hydronic module**

- **00** without pumps
- **R1** n°1 low head pump
- **R2** n°2 low head pump
- **R3** n°1 high head pump
- **R4** n°2 high head pump

NRP	NRP 0800 … 1000 Heat recovery integrated hydronic module					
System integrated hydronic module		°	R1	R2	R3	R4
	°	ok	ok	n.d.	ok	n.d.
	P1	ok	ok	n.d.	ok	n.d.
	P2	ok	ok	n.d.	ok	n.d.
	P3	ok	ok	n.d.	ok	n.d.
	P4	ok	ok	n.d.	ok	n.d.

NRP	NRP 1250 … 1800 Heat recovery integrated hydronic module					
System integrated hydronic module		°	R1	R2	R3	R4
	°	ok	ok	ok	ok	ok
	P1	ok	ok	ok	ok	ok
	P2	ok	ok	ok	ok	ok
	P3	ok	ok	ok	ok	ok
	P4	ok	ok	ok	ok	ok

nd = not available

Technical Data

NRP - for 2-pipe system *				0800	0900	1000	1250	1404	1504	1655	1800
	V/Ph/Hz			400V/3/50Hz							
Cooling system side (A)											
12°C / 7°C	Cooling capacity	(1)	kW	217,6	242,6	259,6	322,5	364,5	401,5	440,5	476,5
	Total input power	(1)	kW	73,5	83,4	89,4	109,4	122,5	136,7	147,2	157,9
	EER	(1)		2,96	2,91	2,90	2,95	2,97	2,94	2,99	3,02
	ηsc	%		160,1	154,0	155,9	155,9	158,7	161,7	152,0	153,7
	SEER			4,08	3,93	3,97	3,97	4,04	4,12	3,88	3,92
	Water flow rate	(1)	l/h	37454	41750	44670	55495	62711	69068	75768	81954
	Pressure drop	(1)	kPa	59	58	54	64	52	53	55	55
Cooling system side (E)											
12°C / 7°C	Cooling capacity	(1)	kW	199,7	216,7	229,7	290,6	331,6	367,6	401,6	429,5
	Total input power	(1)	kW	81,2	95,2	101,3	121,8	135,6	150,6	163,1	176,7
	EER	(1)		2,46	2,27	2,27	2,39	2,45	2,44	2,46	2,43
	ηsc	%		154,7	150,5	152,6	155,5	157,4	157,1	150,5	152,0
	SEER			3,94	3,84	3,89	3,96	4,01	4,00	3,84	3,88
	Water flow rate	(1)	l/h	34362	37283	39516	49997	57041	63226	69068	73878
	Pressure drop	(1)	kPa	50	47	43	54	43	44	46	45
Heating system side (A) (E)											
40°C / 45°C	Heating capacity	(2)	kW	241,4	258,4	290,5	384,6	400,5	459,6	503,6	544,7
	Total input power	(2)	kW	74,7	81,2	89,5	117,3	121,5	140,0	155,8	167,6
	COP	(2)		3,23	3,18	3,25	3,28	3,30	3,28	3,23	3,25
	Water flow rate	(2)	l/h	41885	44840	50401	66738	69519	79773	87421	94546
	Pressure drop	(2)	kPa	74	68	70	96	64	70	74	74
Heating DHW side (A) (E)											
40°C / 45°C	Heating capacity	(3)	kW	241,4	258,3	290,4	348,5	400,4	459,5	503,5	544,6
	Total input power	(3)	kW	74,3	80,7	89,0	116,1	121,0	139,5	155,0	166,8
	COP	(3)		3,25	3,20	3,26	3,31	3,31	3,29	3,25	3,26
	Water flow rate	(3)	l/h	41885	44840	50401	66738	69519	79773	87421	94546
	Pressure drop	(3)	kPa	50	45	49	50	44	51	51	53
	Performance under average climatic conditions (Average) Efficiency Energy Class in according to regulation n°813/2013 Pdesignh ≤ 400kW										
	Pdesignh	(4)		204	219	246	3.26	339	389	/	/
	SCOP	(4)		3,60	3,60	3,60	3,70	3,75	3,72	/	/
	ηs	(4)		141	141	141	145	147	146	/	/
Cooling with recovery for versions (A) (E)											
40°C / 45°C - 7°C / 12°C	Cooling capacity	(5)	kW	226,3	254,9	282,3	338,9	384,6	428,4	469,8	503,3
	Recovered power	(5)	kW	289,4	328,3	364,4	432,5	491,4	550,5	598,5	642,6
	Total input power	(5)	kW	67,1	78,0	87,2	99,6	113,5	129,9	137,0	148,2
	Water flow rate system side	(5)	l/h	34362	37283	39516	49997	57041	63226	69068	73878
	Pressure drop	(5)	kPa	50	47	43	54	43	44	46	45
	Water flow rate DHW side	(5)	l/h	41885	44840	50401	66738	69519	79773	87421	94546
	Pressure drop	(5)	kPa	50	45	49	50	44	51	51	53
	TER		W/W	7,69	7,47	7,41	7,75	7,72	7,54	7,80	7,73

NRP - for 4-pipe system				0800	0900	1000	1250	1404	1504	1655	1800
Cooling system side (A)											
12°C / 7°C	Cooling capacity	(1)	kW	217,6	242,6	259,6	322,5	364,5	401,5	440,5	476,5
	Total input power	(1)	kW	73,5	83,4	89,4	109,4	122,5	136,7	147,2	157,9
	EER	(1)		2,96	2,91	2,90	2,95	2,97	2,94	2,99	3,02
	ηsc	%		160,1	154,0	155,9	155,9	158,7	161,7	152,0	153,7
	SEER			4,08	3,93	3,97	3,97	4,04	4,12	3,88	3,92
	Water flow rate	(1)	l/h	37454	41750	44670	55495	62711	69068	75768	81954
	Pressure drop	(1)	kPa	59	58	54	64	52	53	55	55
Cooling system side (E)											
12°C / 7°C	Cooling capacity	(1)	kW	199,7	216,7	229,7	290,6	331,6	367,6	401,6	429,5
	Total input power	(1)	kW	81,2	95,2	101,3	121,8	135,6	150,6	163,1	176,7
	EER	(1)		2,46	2,27	2,27	2,39	2,45	2,44	2,46	2,43
	ηsc	%		154,7	150,5	152,6	155,5	157,4	157,1	150,5	152,0
	SEER			3,94	3,84	3,89	3,96	4,01	4,00	3,84	3,88
	Water flow rate	(1)	l/h	34362	37283	39516	49997	57041	63226	69068	73878
	Pressure drop	(1)	kPa	50	47	43	54	43	44	46	45
Riscaldamento lato impianto versioni (A) (E)											
40°C / 45°C	Heating capacity	(3)	kW	241,4	258,3	290,4	384,5	400,4	459,5	503,5	544,6
	Total input power	(3)	kW	74,3	80,7	89,0	116,1	121,0	139,5	155,0	166,8
	COP	(3)		3,25	3,20	3,26	3,31	3,31	3,29	3,25	3,26
	Water flow rate	(3)	l/h	41885	44840	50401	66738	69519	79773	87421	94546
	Pressure drop	(3)	kPa	50	45	49	50	44	51	51	53
	Performance under average climatic conditions (Average) Efficiency Energy Class in according to regulation n°813/2013 Pdesignh ≤ 400kW										
	Pdesignh	(4)		204	219	246	3.26	339	389	/	/
	SCOP	(4)		3,60	3,60	3,60	3,70	3,75	3,72	/	/
	ηs	(4)		141	141	141	145	147	146	/	/
Cooling with recovery for versions (A) (E)											
40°C / 45°C - 7°C / 12°C	Cooling capacity	(5)	kW	226,3	254,9	282,3	338,9	384,6	428,4	469,8	503,3
	Recovered power	(5)	kW	289,4	328,3	364,4	432,5	491,4	550,5	598,5	642,6
	Total input power	(5)	kW	67,1	78,0	87,2	99,6	113,5	129,9	137,0	148,2
	Water flow rate (cold side)	(5)	l/h	34362	37283	39516	49997	57041	63226	69068	73878
	Pressure drop	(5)	kPa	50	47	43	54	43	44	46	45
	Water flow rate (hot side)	(5)	l/h	41885	44840	50401	66738	69519	79773	87421	94546
	Pressure drop	(5)	kPa	50	45	49	50	44	51	51	53
	TER		W/W	7,69	7,47	7,41	7,75	7,72	7,54	7,80	7,73

Date (14511:2018) *** Only units configured for 2-pipe systems are certified by Eurovent**

(1) Water system side 12°C/7°C, External air 35°C (EUROVENT)
(2) Water system side 40°C/45°C, External air 7°C b.s./6°C b.u. (EUROVENT)
(3) Water Total Recovery 40°C/45°C.
(4) Efficiencies for low temperature applications(35°C)
(5) Water Total Recovery 40°C/45°C, Water evaporator (7°C)
TER Global Efficincy

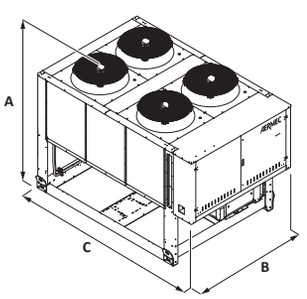
Technical Data

GENERAL DATA				0800	0900	1000	1250	1404	1504	1655	1800
Electrical data											
Total input current	(1)	A	A	136	158	180	196	235	273	289	304
	(1)	E	A	145	169	192	211	251	292	306	324
Maximum current (FLA)	(1)	A/E	A	173	195	217	267	296	325	365	398
Starting current (LRA)	(1)	A/E	A	348	404	426	535	505	534	633	666
Compressors											
Compressors			type	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
			n°	4	4	4	4	4	4	5	6
Circuits			n°	2	2	2	2	2	2	2	2
Capacity control			%								
Refrigerant				R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Exchanger side (hot/cold) 2 pipe system / side (cold) 4 pipe system											
Exchanger			type	plate	plate	plate	plate	plate	plate	plate	plate
			n°	1	1	1	1	1	1	1	1
hydraulic connections		(in/out)	Ø	3"	3"	3"	4"	4"	4"	4"	4"
Exchanger side (DHW) 2 pipe system / side (hot) 4 pipe system											
Exchanger			type	plate	plate	plate	plate	plate	plate	plate	plate
			n°	2	2	2	2	2	2	2	2
hydraulic connections		(in/out)	Ø	3"	3"	3"	4"	4"	4"	4"	4"
Fans standard											
Fans			type	axial	axial	axial	axial	axial	axial	axial	axial
			n°	4	4	4	6	6	6	8	8
Air flow rate		A	m^3/h	85600	84600	83600	126000	124200	122400	168000	165600
cooling mode		E	m^3/h	59920	59220	60610	88200	90000	91800	117600	115920
Air flow rate heating mode			m^3/h	85600	84600	83600	126000	124200	122400	168000	165600
System integrated hydronic module											
Useful head			kPa	For more information, refer to the selection program or the technical documentation							
Sound data (cooling mode)											
Sound pressure	(2)	A	dB(A)	56,5	56,5	56,5	59,5	59	58,5	60	62
	(2)	E	dB(A)	51	51	51	54	53,5	53	54,5	56,5
Sound power	(2)	A	dB(A)	88,5	88,5	88,5	91,5	91	91,5	92	94
	(2)	E	dB(A)	83	83	83,5	86	85,5	85	86,5	88,5
Power supply			V/ph/Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz	400V/3/50Hz

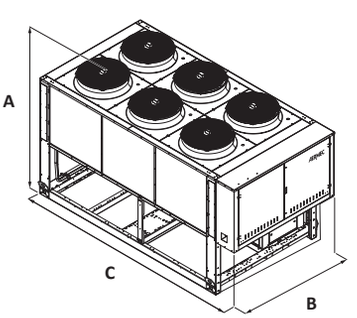
Sound power
Aermec determines sound power values on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification.
Sound pressure
Sound pressure in free field, at 10 m distance from the external surface of the unit (in accordance with UNI EN ISO 3744).
(1) The electrical data of the versions without hydronic module integrated
(2) Calculated in cooling mode
Note: For more information, refer to the selection program or the technical documentation available on the website www.aermec.com

Dimensions (mm)

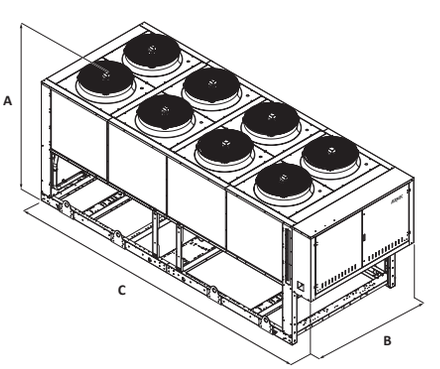
NRP0800-1000



NRP1250-1504



NRP1655-1800



Mod. NRP		Vers	0800	0900	1000	1250	1404	1504	1655	1800
A	(mm)	Alls	2450	2450	2450	2450	2450	2450	2450	2450
B	(mm)	Alls	2200	2200	2200	2200	2200	2200	2200	2200
C	(mm)	Alls	3400	3400	3400	4250	4250	4250	5750	5750
Weight when empty	(kg)		2270	2460	2640	2970	3220	3430	3950	4090

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