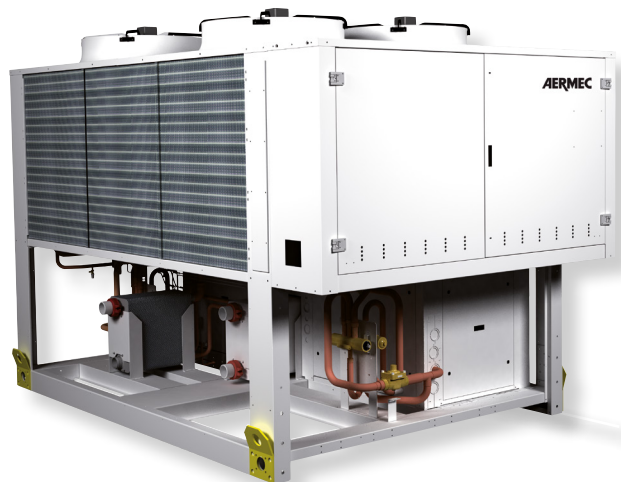


NRP

0800/1800

R410A

**Multipurpose
Air/Water for outdoor installation
Axial fans, scroll compressor
Cooling capacity 199÷475kW
Heating capacity 242÷547kW**



- **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.
- **AERWEB300:** The AERWEB option allows remote control of a chiller through a standard PC and an ethernet connection with a standard browser; 4 versions available:
 - AERWEB300-6:** Web server to monitor and remote control maximum 6 units on RS485 network;
 - AERWEB300-18:** Web server to monitor and remote control maximum 18 units on RS485 network;
 - AERWEB300-6G:** Web server to monitor and remote control maximum 6 units on RS485 network with integrated GPRS modem;
 - AERWEB300-18G:** Web server to monitor and remote control maximum 18 units on RS485

- network with integrated GPRS modem.
- **MULTICHILLER_NRP:** Control system to switch the individual chillers on and off, and command them, in a system in which several units are installed in parallel, always ensuring a constant delivery to the exchanger.
- **PGD1:** Simplified remote panel. Allows control of basic unit functions and alarm notification. Remote mounted up to 500 m away with TWISTED PAIR SCREENED cable and TCONN6J000.
- **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	.	.	.	.	.	.	.	.
AERWEB300	Alls	.	.	.	.	.	.	.	.
MULTICHILLER_NRP	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

Mod. NRP Multipurpose for 2-pipe system			0800	0900	1000	1250	1404	1504	1655	1800
Cooling system side										
Cooling capacity	A	kW	217	242	259	321	363	400	439	475
	E	kW	199	216	229	290	331	367	400	428
Total input power	A	kW	73,52	83,41	89,40	109,36	122,55	136,71	147,20	157,93
	E	kW	81,23	95,24	101,32	121,82	135,62	150,55	163,11	176,67
EER	A	W/W	2,95	2,90	2,89	2,94	2,97	2,93	2,98	3,01
	E	W/W	2,45	2,27	2,26	2,38	2,44	2,44	2,46	2,42
Water flow rate	A	l/h	37498	41796	44753	55556	62852	69171	75888	81966
	E	l/h	34477	37289	39609	50044	57122	63288	69115	73977
Total pressure drop	A	kPa	59	58	54	64	52	53	55	55
	E	kPa	50	47	43	54	43	44	46	45
Heating system side										
Heating capacity	A/E	kW	242	259	292	387	402	461	506	547
Total input power	A/E	kW	74,65	81,11	89,40	117,15	121,47	139,96	155,68	167,47
COP	A/E	W/W	3,25	3,20	3,26	3,30	3,31	3,30	3,25	3,27
Water flow rate	A/E	l/h	41452	44312	49946	66115	68833	78870	86579	93555
Total pressure drop	A/E	kPa	72	66	68	93	63	68	72	72
Heating DHW side										
Heating capacity	A/E	kW	242	259	291	385	401	460	505	546
Total input power	A/E	kW	74,26	80,71	89,01	116,04	120,95	139,45	155,00	166,80
COP	A/E	W/W	3,26	3,21	3,27	3,32	3,32	3,30	3,26	3,27
Water flow rate	A/E	l/h	41452	44312	49946	66048	68833	78870	86579	93555
Total pressure drop	A/E	kPa	50	44	49	49	44	51	51	53
Cooling with heat recovery										
Cooling capacity	A/E	kW	226	254	282	339	384	428	470	503
Recovered power	A/E	kW	291	330	366	434	493	552	601	645
Total input power	A/E	kW	68,92	80,24	89,65	102,00	116,23	132,97	140,38	151,76
Water flow rate (system side)	A/E	l/h	38924	43834	48556	58291	66151	73685	80797	86568
Total pressure drop (system side)	A/E	kPa	63	64	63	70	57	60	62	61
Water flow rate (DHW side)	A/E	l/h	49708	56417	62609	74305	84453	94601	102857	110425
Total pressure drop (DHW side)	A/E	kPa	72	72	78	63	66	73	72	74
TER	(1)	A/E W/W	7,50	7,29	7,23	7,58	7,55	7,38	7,63	7,57

Mod. NRP Multipurpose for 4-pipe system			0800	0900	1000	1250	1404	1504	1655	1800
Cooling system side										
Cooling capacity	A	kW	217	242	259	321	363	400	439	475
	E	kW	199	216	229	290	331	367	400	428
Total input power	A	kW	73,52	83,41	89,40	109,36	122,55	136,71	147,20	157,93
	E	kW	81,23	95,24	101,32	121,82	135,62	150,55	163,11	176,67
EER	A	W/W	2,95	2,90	2,89	2,94	2,97	2,93	2,98	3,01
	E	W/W	2,45	2,27	2,26	2,38	2,44	2,44	2,46	2,42
Water flow rate	A	l/h	37498	41796	44753	55556	62852	69171	75888	81966
	E	l/h	34477	37289	39609	50044	57122	63288	69115	73977
Total pressure drop	A	kPa	59	58	54	64	52	53	55	55
	E	kPa	50	47	43	54	43	44	46	45
Heating system side										
Heating capacity	A/E	kW	242	259	291	385	401	460	505	546
Total input power	A/E	kW	74,26	80,71	89,01	116,04	120,95	139,45	155,00	166,80
COP	A/E	W/W	3,26	3,21	3,27	3,32	3,32	3,30	3,26	3,27
Water flow rate	A/E	l/h	41452	44312	49946	66048	68833	78870	86579	93555
Total pressure drop	A/E	kPa	50	44	49	49	44	51	51	53
Cooling with heat recovery										
Cooling capacity	A/E	kW	226	254	282	339	384	428	470	503
Recovered power	A/E	kW	291	330	366	434	493	552	601	645
Total input power	A/E	kW	68,92	80,24	89,65	102,00	116,23	132,97	140,38	151,76
Water flow rate (cold side)	A/E	l/h	38924	43834	48556	58291	66151	73685	80797	86568
Total pressure drop (cold side)	A/E	kPa	63	64	63	70	57	60	62	61
Water flow rate (hot side)	A/E	l/h	49708	56417	62609	74305	84453	94601	102857	110425
Total pressure drop (hot side)	A/E	kPa	72	72	78	63	66	73	72	74
TER	(1)	A/E W/W	7,50	7,29	7,23	7,58	7,55	7,38	7,63	7,57

Cooling (14511:2013)

Evaporator water temperature (in/out) 12°C/7°C; External air temperature 35°C

Heating (14511:2013)

Condenser water temperature (in/out) 40°C/45°C; External air temperature 7°C b.s./6°C b.u.

Cooling mode with heat recovery:

heat recovery water temperature (in/out) 40°C/45°C; Evaporator water temperature (out) 7°C

(1) Total Efficiency Ratio

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	m³/h		85600	84600	83600	126000	124200	122400	168000	165600
cooling mode	E	m³/h		59920	59220	60610	88200	90000	91800	117600	115920
Air flow rate heating mode		m³/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											
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

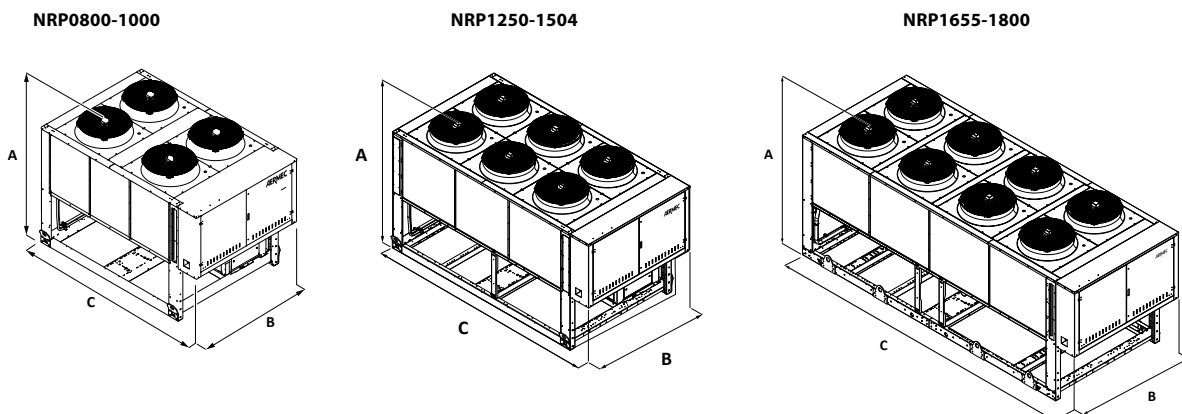
Sound pressure in free field, at 10 m distance from the external surface of the unit (in accordance with UNI EN ISO 3744).

(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)



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

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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