

NRP

MULTIPURPOSE HEAT PUMPS
2 AND 4-PIPE SYSTEMS
PLUS PRODUCTION OF DOMESTIC HOT WATER



Multipurpose air cooled units with inverter axial fans.
For external installation. High efficiency version.



MULTIPURPOSE NRP

The NRP series from Aermec. A value choice.

The NRP series represents for Aermec an entry into the world of heat pump units of the multipurpose type: units that allow simultaneous production of chilled water and hot water in the most versatile and efficient way.

The NRP Multipurpose heat pump is capable of satisfying simultaneously and independently all the requirements for cooling, heating and hot water for domestic hot water purpose. All this in the most rational and efficient way: the multipurpose heat pump units are the most efficient current technology because they extract the maximum recovery of heat of condensation; heat that would otherwise be rejected to the external ambient.

The NRP heat pumps are therefore the units most suitable for 4 pipe systems (simultaneous demands for heating and cooling) and for 2 pipe systems + domestic hot water (simultaneous heating and production of domestic hot water; simultaneous cooling and production of domestic hot water).



Aermec technology has a heart. And it is green.

- Simultaneous and independent production of hot water and cold water
- Production of hot water for domestic hot water purpose all year round
- Very high energy efficiency, particularly at part load, through the multipurpose logic and the **MultiScroll Technology**
- Maximum reliability through the **MultiCircuit system**
- Extremely simplified plant: reduced time and cost of installation
- Units fitted as standard with axial fans Inverter EC - Motor

-40%

**Primary energy
annual saving**

Compared to traditional
chiller + boiler installation

-8dB(A)

**Average noise
level reduction**

Of Extra Low Noise
models compared to
standard models

-35%

**Installation cost
reduction**

Compared to traditional
chiller + boiler installation

-40%

**Reduction of CO₂
emissions**

Carbon dioxide is
responsible for the
greenhouse warming
effect



Green Comfort, versatility and savings. Aermec technology. To the service of air and water.

Cooling and heating simultaneously and independently

The Aermec NRP Multipurpose heat pump is the ideal choice for all applications that have simultaneous and independent requirements for heating and cooling. In general modern buildings in the commercial, lodging and health care sectors have heating and cooling demands not directly linked with seasonal variations. This creates the need to provide simultaneous and independent chilled water for space cooling and dehumidification and hot water for space heating and/or for the production of domestic hot water. The Aermec NRP Multipurpose heat pump unit does all this: it is the unit most suitable for 4 pipe systems (simultaneous requests for cooling and heating) and for 2 pipe systems + domestic hot water.



Maximum savings economic/energy

The Aermec NRP Multipurpose heat pump unit is the most efficient choice from the energy and running cost point of view. Aermec is the most efficient choice from the energy and running cost point of view. The simultaneous production of hot water and of chilled water allows the free recovery of the heat of condensation which would otherwise be rejected outdoors. At the times of simultaneous demand for heating and cooling the NRP heat pump unit reaches maximum efficiency because it simply transfers energy from the spaces to be cooled to the spaces to be heated or to the domestic hot water. The multiscroll technology serves to further increase the energy efficiency especially at part load.



Extremely simplified plant

The Aermec NRP Multipurpose heat pump unit allows the utmost simplification of the plant and to significantly reduce the time and cost of installation. Through the multipurpose technology the installation requires no gas: a gas fired boiler is not required. NRP makes available hot water for heating and domestic hot water throughout the year, independently and also simultaneously to the demands for chilled water.



Environmental respect

With the multipurpose technology and use of non-ozone depleting refrigerant R410A, the NRP series is a friend to the environment. R410A is also a thermodynamically high efficiency refrigerant which allows, together with the use of scroll compressors, to reduce CO2 emissions. Adding the savings for cooling, heating and production of domestic hot water the emissions of CO2 compared to a traditional chiller + boiler system are reduced by 40%.



TER: Total Efficiency Ratio

The energy efficiency of traditional heat pump units is measured by the parameters of EER for cooling mode and COP for heating mode. For the new multipurpose type of heat pumps a parameter is required that takes into account the simultaneous production of hot water and chilled water. This new parameter is the TER (Total Efficiency Ratio), defined as the ratio between the total capacity produced simultaneously (heating and cooling) and the electrical power input to the unit: **TOTAL EFFICIENCY RATIO: $TER = (\text{Heating Capacity} + \text{Cooling Capacity}) / \text{Electrical Power Input}$** Looking at the technical data for the NRP series it can be seen that the TER values are significantly higher than the values for COP and EER: this demonstrates the overall very high efficiency that a multipurpose heat pump unit can achieve compared to a traditional heat pump without heat recovery. The project designer (in close collaboration with the architect) can therefore achieve the maximum energy savings, optimally balancing the heating and cooling needs for the system installation.



The ideal solution for public and residential buildings.

NRP is the most rational and efficient choice for all buildings that typically have heating capacity and cooling capacity demands for the whole year, such as: hospitals, hotels, and buildings for residential use.

The NRP Multipurpose heat pump is the most convenient solution from an energy saving point of view for both 4 pipe systems and 2 pipe systems with hot water for domestic hot water purpose production.

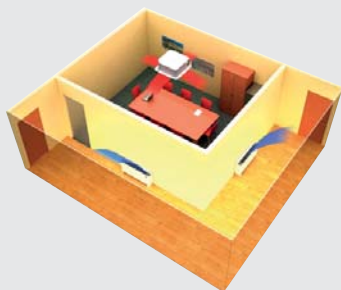
The following graphs show the results obtained in different american geographical locations and for various system installations (4 pipe system for offices – 2 pipe system + domestic hot water for hotels).

The results are extraordinary: the Aermec NRP multipurpose technology is shown as the most economical and environmentally friendly.

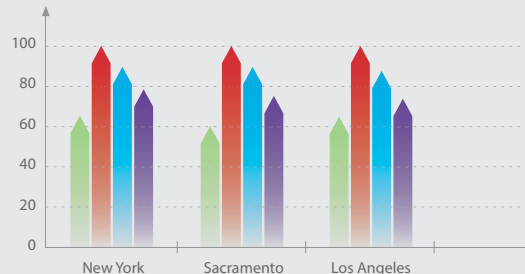
Energy Saving Calculation for a 4 pipe system office building

Primary energy consumption for an office 4 pipe system case (% kWh)

The primary energy savings are significant and ensure total environmental friendliness.



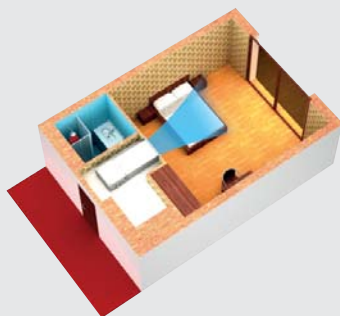
- Aermec NRP Multipurpose
- Chiller + boiler
- Chiller with desuperheater + boiler
- Chiller with total heat recovery + boiler



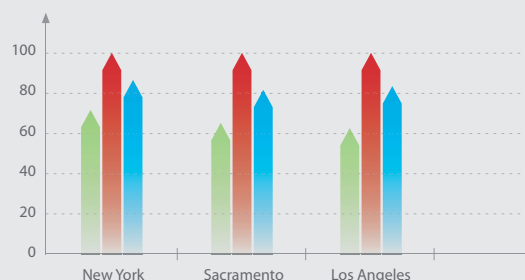
Energy Saving Calculation for a 2 pipe system + Domestic Hot Water

Primary energy consumption for a hotel 2 pipe system + domestic hot water (% kWh)

Even in the lodging sector the most environmentally friendly choice is the Aermec NRP technology.



- Aermec NRP Multipurpose
- Chiller + boiler
- Heat pump + boiler

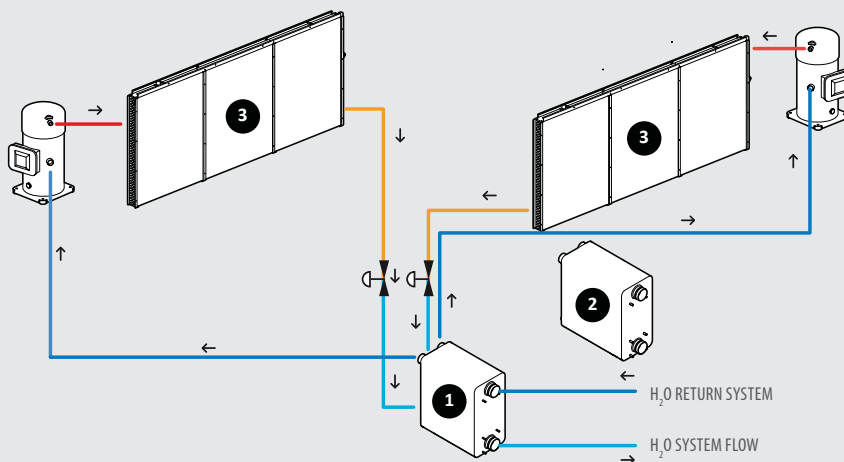


Description of operation.

The NRP Multipurpose operating schematics are detailed for various 2 pipe and 4 pipe systems.

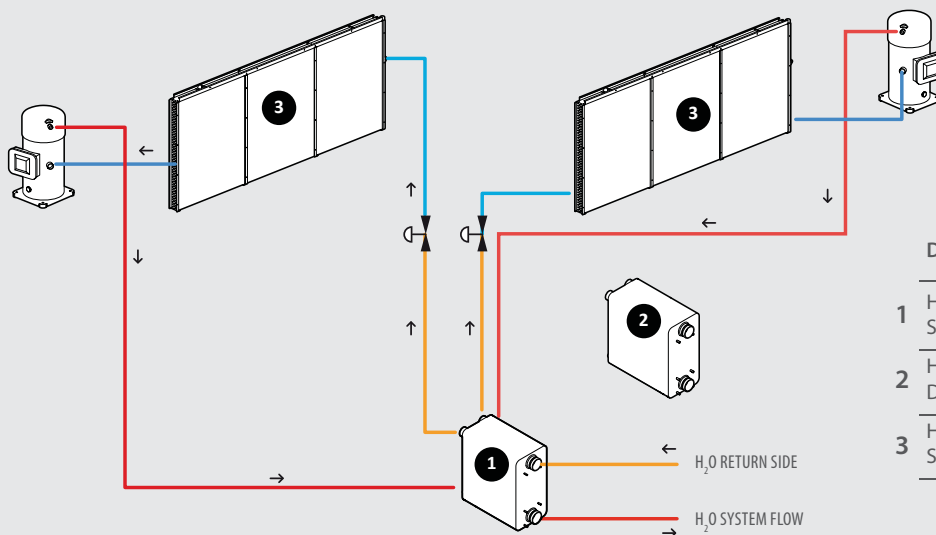
Basic operating production for 2-pipe system+ HDW

Cold water production only to system



Description	Functioning
1 Heat exchanger SYSTEM SIDE	(EVAPORATION) cold water production
2 Heat exchanger DHW SIDE	not running
3 Heat exchanger SOURCE SIDE	(CONDENSATION) heat exchange with air

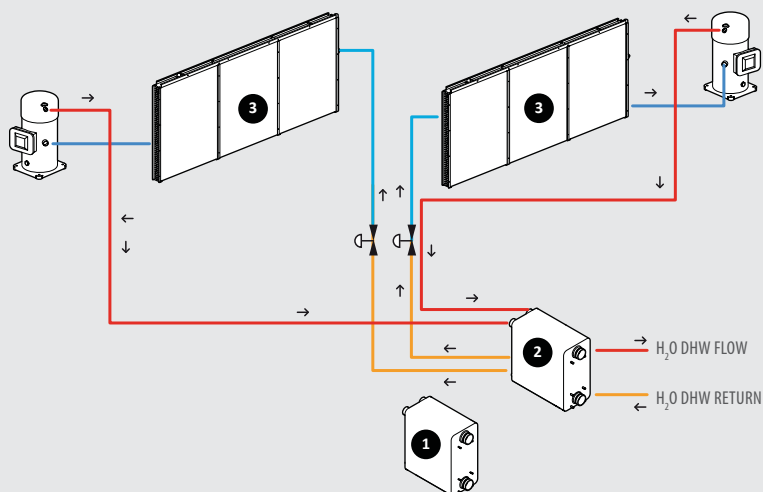
Hot water production only to system



Description	Functioning
1 Heat exchanger SYSTEM SIDE	(CONDENSATION) hot water production
2 Heat exchanger DHW SIDE	not running
3 Heat exchanger SOURCE SIDE	(EVAPORATION) heat exchange with air

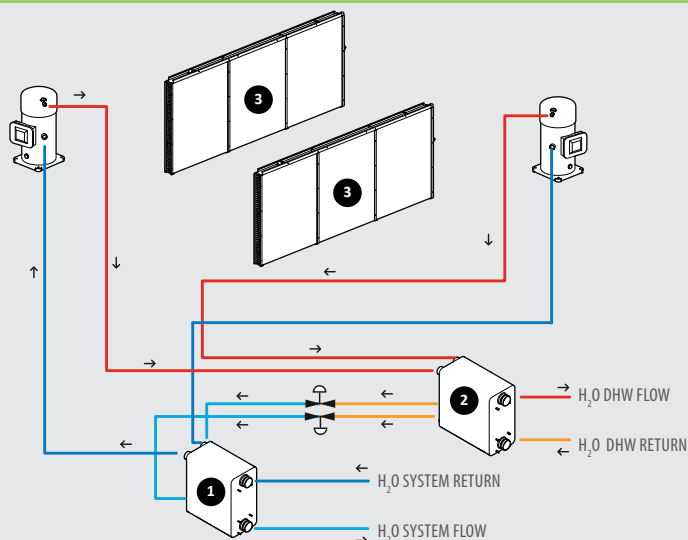
Basic operating production for 2-pipe system+ HDW

Production hot water only to DHW



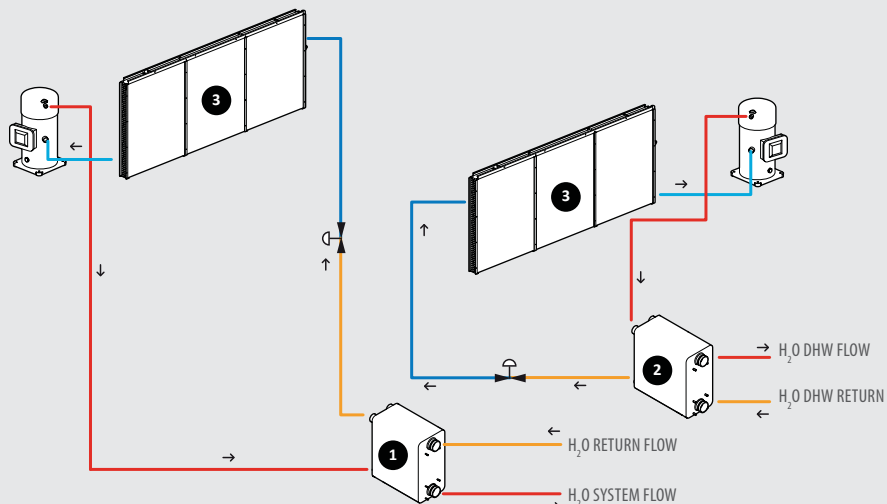
Description	Functioning
1 Heat exchanger SYSTEM SIDE	not running
2 Heat exchanger DHW SIDE	(CONDENSATION) DHW production
3 Heat exchanger SOURCE SIDE	(EVAPORATION) Heat exchange with air

Production cold water to system and hot water to DHW



Description	Functioning
1 Heat exchanger SYSTEM SIDE	(EVAPORATION) cold water production
2 Heat exchanger DHW SIDE	(CONDENSATION) DHW production
3 Heat exchanger SOURCE SIDE	not running

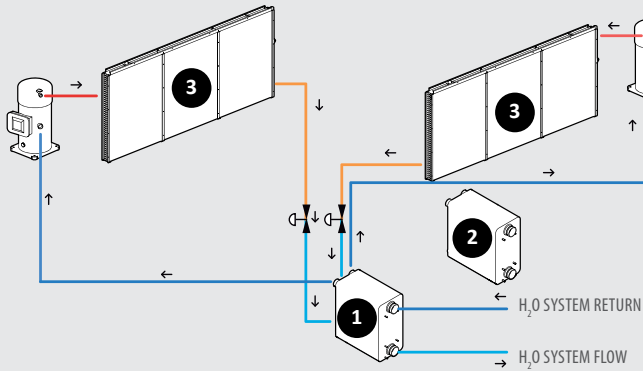
Production hot water to system and hot water to DHW



Description	Functioning
1 Heat exchanger SYSTEM SIDE	(CONDENSATION) hot water production
2 Heat exchanger DHW SIDE	(CONDENSAZIONE) DHW production
3 Heat exchanger SOURCE SIDE	(EVAPORAZIONE) heat exchange with air

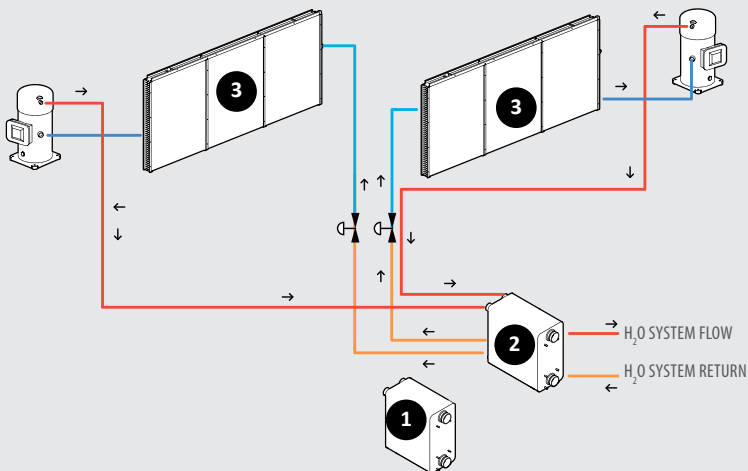
Basic operating layout for 4-pipe system

Cold water production only to system



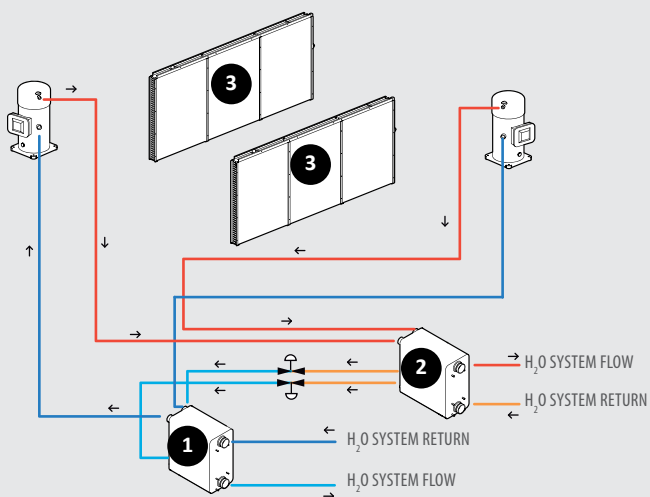
Description	Functioning
1 Heat exchanger COOLING SIDE	(EVAPORATION) cold water production
2 Heat exchanger HEATING SIDE	not running
3 Heat exchanger SOURCE SIDE	(CONDENSATION) heat exchange with air

Hot water production only to system



Description	Functioning
1 Exchanger COOLING SIDE	not running
2 Exchanger HEATING SIDE	(CONDENSATION) hot water production
3 Heat exchanger SOURCE SIDE	(EVAPORATION) heat exchange with air

Simultaneous hot and cold water production to system



Description	Functioning
1 Exchanger COOLING SIDE	(EVAPORATION) cold water production
2 Exchanger HEATING SIDE	(CONDENSATION) hot water production
3 Heat Exchanger SOURCE EXCHANGER	not running

TER is the new name for energy efficiency

TER

TOTAL
EFFICIENCY
RATIO

$$= (\text{Heating Capacity} + \text{Cooling Capacity}) / \text{Electrical Power Input}$$

Looking at the technical data for the NRP series it can be seen that the TER values are significantly higher than the values for COP and EER: this demonstrates the overall very high efficiency that a multipurpose heat pump unit can achieve compared to a traditional heat pump without heat recovery. The project designer (in close collaboration with the architect) can therefore achieve the maximum energy savings, optimally balancing the heating and cooling needs for the system installation.



(*) Note this high value compared to traditional heat pump COP and EER values.

Technical features

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.

Range:

- Refrigerant R410A.
- 2 refrigerant circuits.
- High efficiency even at part load.
- Heat exchangers optimised to benefit from the excellent heat transfer characteristics of R410A.
- High efficiency scroll compressors.
- Axial fans with low sound level.
- Extremely solid structure with anti-corrosion polyester paint.
- Extended operating limits in heat pump operation:
 - Maximum leaving water temperature 55 °C.
 - External air temperature from -15 °C to 42 °C.

Units fitted as standard with Inverter EC - Motor which permits operation in the winter with external temperatures down to -10 °C, and in heating mode with external temperatures up to 42 °C.

Available versions:

- "A" High efficiency heat pump.
- "E" High efficiency low noise heat pump.

Options for integrated hydronic modules with pumps, buffer tank, water filter, flow switch, expansion tank.

Microprocessor controls.

Accessories

- VT: Anti-vibration mounts to be installed under the base of the unit.
- AVX: Anti-vibration mounts to be installed under the base of the unit.
- GP: Protection grille protects the external coil from accidental damage.
- RIF: Power factor correction. Connected in parallel to the motor allowing about 10% reduction of input current. Must be requested at time of order and is available factory fitted only.
- 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.
- 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.

Technical data - NRP 0280-0750

NRP	u.m.	0280E	0300E	0330E	0350E	0500A	0550A	0600A	0650A	0700A	0750A
Cooling capacity ¹	Tons	12.02	14.12	16.19	20.09	21.34	24.83	32.61	36.28	39.91	44.89
	kW	42.3	49.7	57.0	70.7	75.1	87.4	114.8	127.7	140.5	158.0
Input power	kW	15.2	17.6	20.1	25.4	29.0	35.1	40.6	46.3	51.8	56.0
Evaporator water flow	gpm	28.82	33.88	38.86	48.16	51.15	59.54	78.26	87.02	95.79	107.70
	l/h	6545	7695	8827	10938	11618	13523	17774	19765	21756	24461
Evaporator pressure drop - Vers. 00	p.s.i.	1.7	2.2	2.2	2.5	2.0	2.5	4.6	5.2	6.4	4.8
	kPa	12	15	15	17	14	17	32	36	44	33
EER	BTU/h/W	9.50	9.64	9.68	9.51	8.84	8.50	9.66	9.42	9.26	9.64
	W/W	2.77	2.82	2.84	2.78	2.59	2.49	2.83	2.76	2.71	2.82
Heating capacity ²	BTU/h	184070	213440	242810	304960	328520	381800	479810	536840	591140	660800
	kW	53.9	62.5	71.1	89.3	96.2	111.8	140.5	157.2	173.1	193.5
Input power	kW	17.2	19.9	22.7	27.3	31.0	36.5	46.6	51.2	56.6	63.5
Condenser water flow	gpm	40.84	47.35	53.86	67.64	72.85	84.70	106.42	119.03	131.06	146.51
	l/h	9276	10755	12234	15363	16547	19238	24170	27035	29767	33275
Condenser pressure drop	p.s.i.	3.2	5.1	5.2	4.2	5.1	8.1	10.0	10.0	9.0	7.0
	kPa	22	35	36	29	35	56	69	69	62	48
COP	W/W	3.13	3.14	3.14	3.27	3.10	3.06	3.02	3.07	3.06	3.05
Cooling capacity ³	Tons	11.16	13.18	15.11	19.38	20.63	24.55	29.89	33.98	37.84	41.56
	kW	39.3	46.4	53.2	68.2	72.6	86.4	105.2	119.6	133.2	146.3
Recovery capacity	BTU/h	181680	214800	246900	312810	328860	401260	491760	556640	620510	681630
	kW	53.2	62.9	72.3	91.6	96.3	117.5	144.0	163.0	181.7	199.6
Input power	kW	14.7	17.4	20.1	24.7	24.9	32.8	40.8	45.7	51.0	56.1
Evaporator water flow	gpm	26.8	31.6	36.2	46.5	49.5	58.9	71.7	81.5	90.8	99.7
	l/h	6081	7181	8233	10551	11238	13375	16287	18517	20627	22648
Evaporator pressure drop - Vers. 00	p.s.i.	1.5	1.9	1.9	2.3	1.9	2.5	3.9	4.6	5.8	4.2
	kPa	10	13	13	16	13	17	27	32	40	29
Recovery water flow	gpm	40.3	47.6	54.7	69.4	72.9	89.0	109.0	123.5	137.6	151.2
	l/h	9157	10821	12432	15760	16561	20212	24764	28042	31252	34331
Recovery pressure drop - Vers. 00	p.s.i.	3	5.1	5.4	4.4	5.1	9.0	10.4	10.7	9.9	7.5
	kPa	21	35	37	30	35	62	72	74	68	52
TER (Total Efficiency Ratio)	W/W	6.30	6.28	6.24	6.47	6.77	6.23	6.11	6.18	6.18	6.17
Electrical data											
Power supply		230V-3-60Hz									
Input current	A	62	69	78	99	102	120	151	168	186	210
Input current	A	66	74	89	104	106	123	167	182	199	222
Input current	A	48	64	71	86	92	109	131	160	178	193
LRA	A	239	287	294	375	376	389	373	454	494	546
MCA	A	87	95	101	146	148	161	180	225	265	284
MOP	A	117	132	138	203	205	218	218	283	323	346
Power supply		460V-3-60Hz									
Input current	A	40	43	47	54	49	58	70	78	86	97
Input current	A	42	46	50	57	51	60	77	84	92	106
Input current	A	24	32	32	39	44	52	65	72	80	91
LRA	A	132	157	163	193	189	200	199	229	239	276
MCA	A	50	57	63	74	70	81	99	110	120	134
MOP	A	64	77	83	99	95	106	119	135	145	163
Power supply		575V-3-60Hz									
Input current	A	34	37	40	46	38	45	54	60	66	75
Input current	A	36	39	42	48	40	46	60	65	71	82
Input current	A	18	25	25	30	34	40	50	56	62	70
LRA	A	103	105	108	145	138	146	134	171	186	217
MCA	A	38	43	46	64	57	64	72	89	105	118
MOP	A	49	57	60	86	79	86	86	112	127	144
Compressors											
Compressors (n°/circuit)		2" 1/2	2" 1/2	2" 1/2	2" 1/2	2" 1/2	2" 1/2	2" 1/2	2" 1/2	2" 1/2	3"
EC inverter fans											
Air flow rate	cfm	25882	25882	25882	24118	26471	26471	40000	40000	40000	54118
	m³/h	44000	44000	44000	41000	45000	45000	68000	68000	68000	92000
Quantity of fans	n°	8	8	8	8	2	2	3	3	3	4
Evaporator											
Hydraulic connection type		Vitacluc									
Hydraulic connections size	inch	2" 1/2	2" 1/2	2" 1/2	2" 1/2	2" 1/2	2" 1/2	2" 1/2	2" 1/2	2" 1/2	3"
Hydronic module											
System side (2 and 4 pipes) - Hydronic kit											
Low static head pump											
Input power (230-460V)	kW	1.5	1.5	1.5	1.5	1.5	1.5	2.2	2.2	2.2	2.2
Input power (575V)	kW	1.1	1.1	1.1	1.1	1.1	1.1				
Input current (230V)	A	7.5	7.5	7.5	7.5	7.5	7.5	7.8	7.8	7.8	7.8
Input current (460V)	A	4.3	4.3	4.3	4.3	4.3	4.3	3.9	3.9	3.9	3.9
Input current (575V)	A	1.6	1.6	1.6	1.6	1.6	1.6	3.1	3.1	3.1	3.1
High static head pump											
Input power (230-460V)	kW	2.2	2.2	2.2	2.2	2.2	2.2	3.0	3.0	3.0	3.0
Input power (575V)	kW	1.5	1.5	1.5	1.5						
Input current (230V)	A	7.8	7.8	7.8	7.8	7.8	7.8	10.0	10.0	10.0	10.0
Input current (460V)	A	4.5	4.5	4.5	4.5	4.5	4.5	5.0	5.0	5.0	5.0
Input current (575V)	A	2.2	2.2	2.2	2.2	3.1	3.1	4.0	4.0	4.0	4.0
DHW side (2 pipes) / System side (4 pipes) - Hydronic kit											
Input power (230-460V)	kW	1.5	1.5	1.5	1.5						
Input power (575V)	kW	1.1	1.1	1.1	1.1	2.2	2.2	2.2	3.0	3.0	3.0
Input current (230V)	A	7.5	7.5	7.5	7.5	7.8	7.8	7.8	10.0	10.0	10.0
Input current (460V)	A	4.3	4.3	4.3	4.3	3.9	3.9	3.9	5.0	5.0	5.0
Input current (575V)	A	1.6	1.6	1.6	1.6	3.1	3.1	3.1	4.0	4.0	4.0
High static head pump											
Input power (230-460V)	kW	2.2	2.2	2.2	2.2						
Input power (575V)	kW	1.5	1.5	1.5	1.5	3.0	3.0	4.0	4.0	4.0	4.0
Input current (230V)	A	7.8	7.8	7.8	7.8	10.0	10.0	13.2	13.2	13.2	13.2
Input current (460V)	A	4.5	4.5	4.5	4.5	5.0	5.0	6.6	6.6	6.6	6.6
Input current (575V)	A	2.2	2.2	2.2	2.2	4.0	4.0	5.3	5.3	5.3	5.3
Buffer tank											
Capacity	gal	78.9	78.9	78.9	78.9	131.6	131.6	131.6	131.6	131.6	184.2
	l	300	300	300	300	500	500	500	500	500	700
Sound data											
Sound pressure	dB(A)	74	76	77	78	83	84	85	86	86	87
Sound power	dB(A)	42	44	45	46	51	52	53	54	54	55

1. Cooling conditions: AHRI standard
system water outlet = 6.7 °C
system water flow = 0.043 l/s per kW
external air temperature = 35 °C

2. Heating conditions:
DHW / System water inlet = 40°C
DHW / System water outlet = 45°C
external air temperature d.b./w.b. = 7 / 6 °C

3. Cooling and Total Recovery conditions:
system heat exchanger
water outlet = 6.7 °C
water flow = 0.043 l/s per kW

DHW / System heat exchanger
water inlet = 40°C
water outlet = 45°C

Technical data - NRP 0800-1800

NRP	u.m.	0800A	0900A	1000A	1250A	1400A	1500A	1650A	1800A
Cooling capacity ¹	Tons	49.20	55.09	60.99	77.24	87.56	97.76	103.58	109.32
	kW	173.2	193.9	214.7	271.9	308.2	344.1	364.6	384.8
Input power	kW	64.1	73.0	81.9	103.5	119.3	135.1	146.4	157.7
Evaporator water flow	gpm	118.04	132.17	146.30	185.30	210.03	234.50	248.50	262.24
	l/h	26809	30019	33229	42086	47703	53261	56441	59562
Evaporator pressure drop - Vers. 00	p.s.i.	3.9	4.4	3.2	3.5	3.6	4.1	4.1	4.2
	kPa	27	30	22	24	25	28	28	29
EER	BTU/h/W	9.23	9.07	8.95	8.97	8.82	8.70	8.50	8.33
	W/W	2.70	2.66	2.62	2.63	2.58	2.55	2.49	2.44
Heating capacity ³	BTU/h	739006	831211	929222	1179541	1339705	1499868	1595830	1690767
	kW	216.4	243.4	272.1	345.4	392.3	439.2	467.3	495.1
Input power	kW	70.9	79.7	87.1	111.9	126.3	140.7	149.9	158.9
Condenser water flow	gpm	163.86	184.29	206.05	261.57	297.09	332.61	353.91	374.92
	l/h	37216	41857	46798	59410	67476	75543	80381	85154
Condenser pressure drop	p.s.i.	5.5	6.1	3.6	4.9	5.4	5.8	5.8	5.9
	kPa	38	42	25	34	37	40	40	41
COP	W/W	3.05	3.05	3.12	3.09	3.11	3.12	3.12	3.12
Cooling capacity ³	Tons	46.25	52.47	59.66	74.29	85.85	97.19	104.40	111.45
	kW	162.8	184.7	210.0	261.5	302.2	342.1	367.5	392.3
Recovery capacity	BTU/h	748568	852384	963372	1207203	1393320	1577047	1694865	1810633
	kW	219.2	249.6	282.1	353.5	408.0	461.8	496.3	530.2
Input power	kW	59.4	68.3	75.8	96.8	111.4	126.0	135.6	145.2
Evaporator water flow	gpm	111	125.9	143.2	178.2	206.0	233.2	250.5	267.3
	l/h	25204	28592	32515	40481	46782	52964	56887	60721
Evaporator pressure drop - Vers. 00	p.s.i.	3.5	3.9	3.0	3.2	3.6	4.1	4.2	4.4
	kPa	24	27	21	22	25	28	29	30
Recovery water flow	gpm	166	189	213.6	267.7	309.0	349.8	375.9	401.5
	l/h	37711	42930	48515	60796	70183	79438	85366	91195
Recovery pressure drop - Vers. 00	p.s.i.	5.7	6.4	3.9	5.2	5.8	6.5	6.7	6.8
	kPa	39	44	27	36	40	45	46	47
TER (Total Efficiency Ratio)	W/W	6.43	6.36	6.49	6.35	6.38	6.38	6.37	6.35
Electrical data									
Power supply					230V-3-60Hz				
Input current	A	245	-	-	-	-	-	-	-
Input current	A	219	-	-	-	-	-	-	-
Input current	A	264	-	-	-	-	-	-	-
LRA	A	571	-	-	-	-	-	-	-
MCA	A	309	-	-	-	-	-	-	-
MOP	A	371	-	-	-	-	-	-	-
Power supply					460V-3-60Hz				
Input current	A	114	121	129	162	184	206	223	240
Input current	A	99	106	112	142	162	183	198	212
Input current	A	122	130	135	173	193	213	227	31
LRA	A	294	344	355	448	500	528	546	541
MCA	A	151	162	172	234	266	294	312	328
MOP	A	181	196	206	281	326	354	373	374
Power supply					575V-3-60Hz				
Input current	A	88	94	100	126	143	160	173	186
Input current	A	37	82	86	109	125	141	152	164
Input current	A	95	100	105	134	149	165	176	25
LRA	A	233	282	285	383	400	432	439	460
MCA	A	134	136	139	193	230	262	268	270
MOP	A	160	164	166	232	285	317	323	309
Compressors									
Compressors (n°/circuit)		4 / 2	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2	5 / 2	6 / 2
EC inverter fans									
Air flow rate	cfm	78824	78824	78824	105882	105882	105882	105882	105882
	m³/h	134000	134000	134000	180000	180000	180000	180000	180000
Quantity of fans	n°	6	6	6	8	8	8	8	8
Evaporator									
Hydraulic connection type					Victaulic				
Hydraulic connections size	inch	3"	3"	3"	4"	4"	4"	4"	4"
Hydronic module									
System side (2 and 4 pipes) - Hydronic kit									
Low static head pump									
Input power	kW	2.2	2.2	3.0	3.0	3.0	3.0	4.0	4.0
Input current (230V)	A	7.8	-	-	-	-	-	-	-
Input current (460V)	A	3.9	3.9	5.0	5.0	5.0	5.0	6.6	6.6
Input current (575V)	A	3.1	3.1	4.0	4.0	4.0	4.0	5.3	5.3
High static head pump									
Input power	kW	3.0	3.0	5.5	5.5	5.5	5.5	7.5	7.5
Input current (230V)	A	10.0	-	-	-	-	-	-	-
Input current (460V)	A	5.0	5.0	9.2	9.2	9.2	9.2	11.0	11.0
Input current (575V)	A	4.0	4.0	7.4	7.4	7.4	7.4	8.8	8.8
DHW side (2 pipes) / System side (4 pipes) - Hydronic kit									
Input power	kW	4.0	4.0	4.0	5.5	5.5	5.5	7.5	7.5
Input current (230V)	A	13.2	-	-	-	-	-	-	-
Input current (460V)	A	6.6	6.6	6.6	9.2	9.2	9.2	11.0	11.0
Input current (575V)	A	5.3	5.3	5.3	7.4	7.4	7.4	8.8	8.8
High static head pump									
Input power	kW	5.5	5.5	5.5	7.5	7.5	7.5	11.0	11.0
Input current (230V)	A	18.4	-	-	-	-	-	-	-
Input current (460V)	A	9.2	9.2	9.2	11.0	11.0	11.0	17.3	17.3
Input current (575V)	A	7.4	7.4	7.4	8.8	8.8	8.8	13.8	13.8
Buffer tank									
Capacity	gal	184.2	184.2	184.2	184.2	184.2	184.2	184.2	184.2
	l	700	700	700	700	700	700	700	700
Sound data									
Sound pressure	dB(A)	89	92	93	94	95	96	96	96
Sound power	dB(A)	57	60	61	62	63	64	64	64

Sound power

Aermec determines sound power values in agreement with the 9614-2 Standard.

Sound Pressure

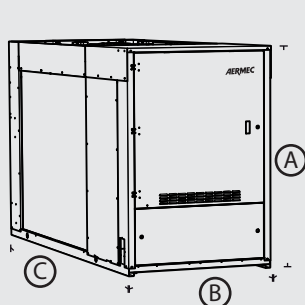
Sound pressure measured in free field conditions with reflective surface (directivity factor Q=2) at 394 in/10mt distance from external surface of unit, in compliance with ISO 3744 regulations.

*** DHW side/system side**

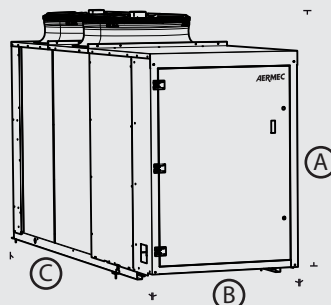
DHW side, hot water for domestic hot water purpose, in 2-pipe systems

System side, production of hot water, in 4-pipe systems.

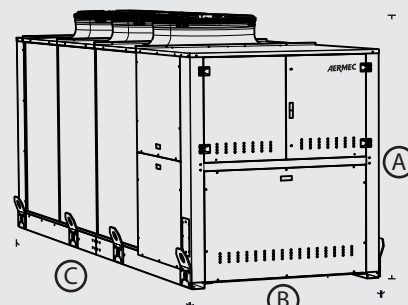
Technical drawings



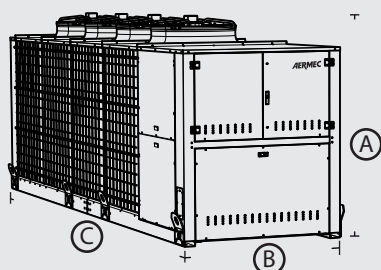
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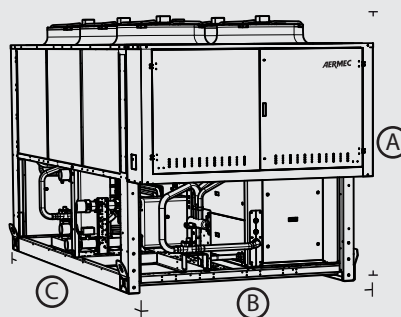
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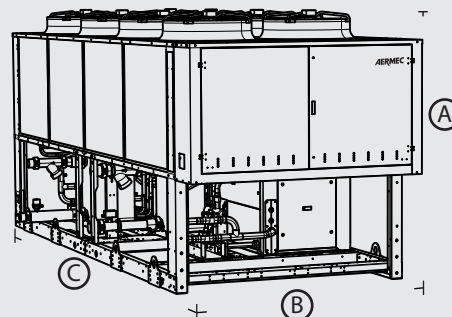
NRP 0600-0700



NRP 0750



NRP 0800 - 1000



NRP 1250 - 1800

Dimensions (mm)

NRP	u.m.	NRP 280E	NRP 300E	NRP 330E	NRP 350E	NRP 500A	NRP 550A	NRP 600A	NRP 650A	NRP 700A	NRP 750A
Height (A)	in	63.23	63.23	63.23	63.23	73.82	73.82	73.82	73.82	73.82	77.76
	mm	1606	1606	1606	1606	1875	1875	1875	1875	1875	1975
Width (B)	in	43.31	43.31	43.31	43.31	43.31	43.31	43.31	43.31	43.31	59.06
	mm	1100	1100	1100	1100	1100	1100	1100	1100	1100	1500
Length (C)	in	125.98	125.98	125.98	125.98	131.57	131.57	170.94	170.94	170.94	210.83
	mm	3200	3200	3200	3200	3342	3342	4342	4342	4342	5355
Weight empty	lb	1949	2004	2061	2244	2465	2571	3210	3263	3406	4932
	kg	884	909	935	1018	1118	1166	1456	1480	1545	2237

Dimensions (mm)

NRP	u.m.	NRP 800 A	NRP 900 A	NRP 1000 A	NRP 1250 A	NRP 1400 A	NRP 1500 A	NRP 1650 A	NRP 1800 A
Height (A)	in	96.5	96.46	96.46	96.46	96.46	96.46	96.46	96.46
	mm	2450	2450	2450	2450	2450	2450	2450	2450
Width (B)	in	86.61	86.61	86.61	86.61	86.61	86.61	86.61	86.61
	mm	2200	2200	2200	2200	2200	2200	2200	2200
Length (C)	in	167.32	167.32	167.32	226.38	226.38	226.38	226.38	226.38
	mm	4250.0	4250.0	4250.0	5750.0	5750.0	5750.0	5750.0	5750.0
Weight empty	lb	5357	5754	6327	7782	8025	8201	8598	8995
	kg	2430	2610	2870	3530	3640	3720	3900	4080

Attention: weights refer to units without pumps or buffer tank.

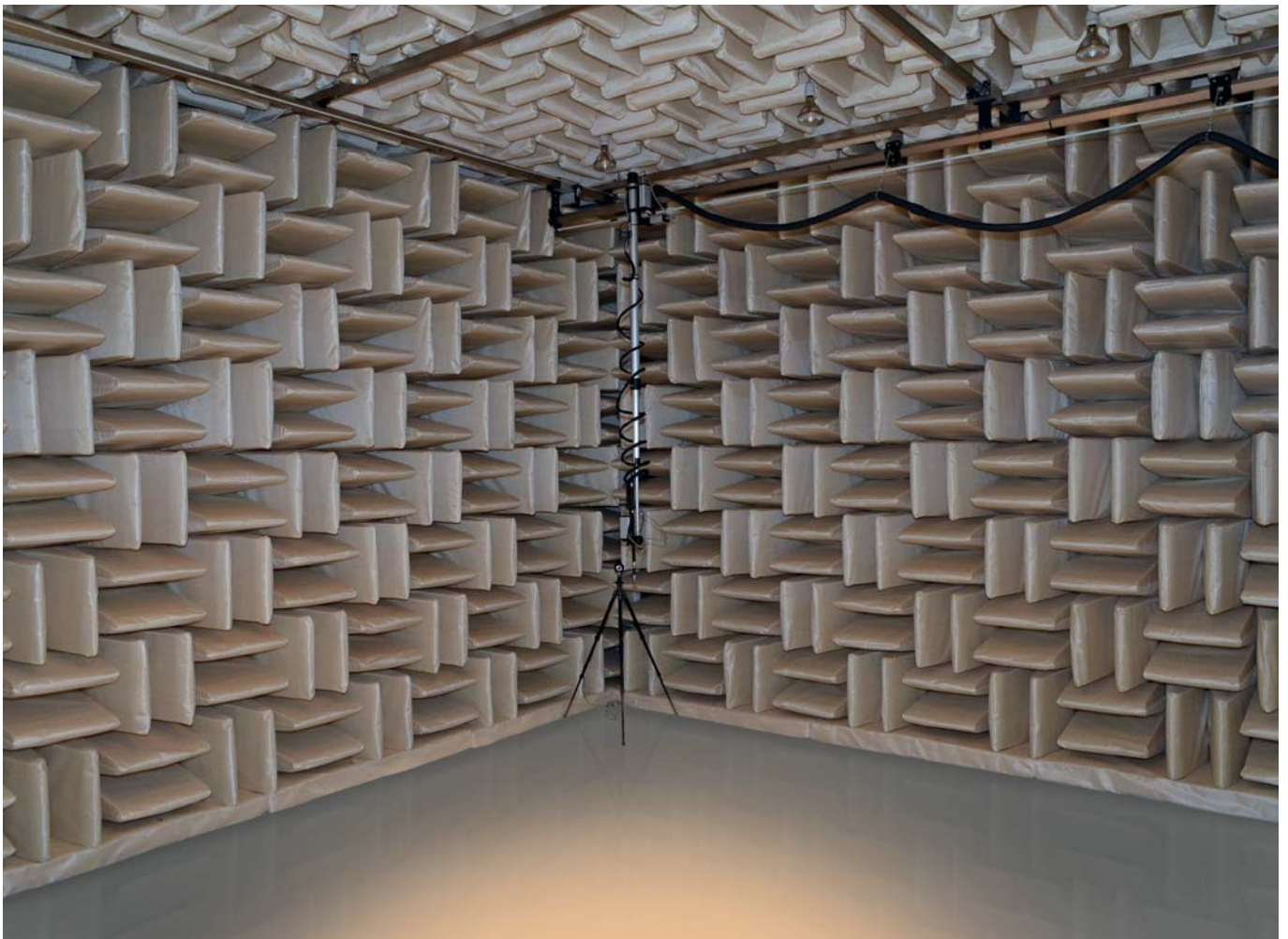
For further informations, please refer to the technical booklet available in the web site www.aermec.com

The technical data shown in the following documentation are not binding. Aermec reserves the right, at any time, to make any changes necessary to improve the product.

Total comfort. Maximum efficiency. Minimum consumption. This is Aermec. Italian technology serving your comfort.

Aermec's capacity to remain leader in an evolving market is based on constant research for quality and innovation. A total Italian quality because each unit is designed, developed and tested in the modern and technologically advanced research laboratories of Aermec in Bevilacqua (Verona).

Constant attention to research and the final product quality is also developed through continuous training of specialised personnel and a close collaboration with the most prestigious Italian Universities.



Room for fan coils, split system and small chiller acoustic test.

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