NXW

Reversible water-cooled heat pump, gas side

Cooling capacity 106 ÷ 477 kW
Heating capacity 125 ÷ 565 kW

- **Production of hot water up to 55 °C**
- **Options of 1 or 2 pumps on both source and user side.**

DESCRIPTION

Water-water offering chilled/hot water, designed to mit air conditioning needs in residential/commercial complexes or industrial applications.
Indoor units equipped with hermetic scroll compressors and plate heat exchangers on both sides: user and source.
The base, the structure and the panels are made of galvanized steel treated with polyester paint RAL 9003.

VERSIONS

° Standard
L Standard silenced

FEATURES

Operating field

Full-load operation with the production of chilled water 4-18°C, and the possibility to produce also negative temperature water down to -8°C for the evaporator and hot water for the condenser up to 55 °C.
(for more information, refer to the technical documentation).

Dual-circuit unit

The units are dual-circuit, to ensure maximum efficiency both at full load and at partial load.

Option integrated hydronic kit, source and user side

Possibility of integrated hydronic kit containing the main hydraulic components and available with various configurations.

CONTROL PCO

Microprocessor adjustment, with display LCD which allows to navigate intuitively among the various screens, allowing to modify the operating parameters and the ad adjustment includes complete management of the alarms and their log.
You also have the possibility to:
— Check two units in parallel Master-Slave
— The presence of a programmable timer allows functioning time periods and a possible second set-point to be set.
— The temperature control takes place with the integral proportional logic, based on the water output temperature.

ACCESSORIES

AER485P1: RS-485 interface for supervising systems with MODBUS protocol. 1 accessory is provided for each unit control board.
AERBAC-ONE: Ethernet communication interface for Bacnet/IP and Modbus TCP/IP protocols, HTTPS protocol for web interface, encrypted communication protocols and access credential management in accordance with the latest standards. One accessory is provided for each unit control board.
AERBACP: Ethernet communication interface for Bacnet/IP and Modbus TCP/IP protocols. 1 accessory is provided for each unit control board.
AERNET: The device remotely controls, manages and remotely monitors a chiller/heat pump using a PC, smartphone or table via a Cloud connection. AERNET acts as Master while each connected unit is configured as Slave up to a maximum of 6 control cards. The connection is made via cable and/or USB key. Wi-Fi connectivity is not available. It is also possible to save a log file with all the data from the connected units to your terminal with a simple click for possible post-analysis. With the purchase of the Router, the Customer benefits from a 24-month free period during which he can use the Aernet Service at no additional cost. At the end of this initial period, the Service may be renewed by subscribing to a 1, 2 or 3 year subscription. For further details on costs and renewal methods, please contact our office or consult the technical documentation available on our website. www.aermec.com.
MULTICHILLER-EVO: Control, switch-on and switch-off system of the single chillers where multiple units are installed in parallel (max. no. 9), always ensuring constant flow rate to the evaporators.
PGD1: Allows you to control the unit at a distance.
SGD: Electronic expansion that enables connecting to the photovoltaic system and heat pumps to accumulate heat in the DHW tank or in the heating system during the photovoltaic production phase and release it at times when heating demand is highest.
AVX: Spring anti-vibration supports.
DRE: Electronic device for peak current reduction.
RIF: Power factor correction. Connected in parallel to the motor allowing about 10% reduction of input current.
T6: Double safety valve with exchange cock, both on the high and low pressure branches.
PR4: Remote panel with LCD display and touch keyboard that allows carrying out the basic controls, the programming of time ranges and the signalling of the alarms of a single unit.

■ *The accessory PR4 should only be combined with the RS485 communication interface when the serial port is occupied by another device.*

ACCESSORIES COMPATIBILITY

Model	Ver	0503	0553	0604	0654	0704	0754	0804
AER485P1	°,L	•	•	•	•	•	•	•
AERBAC-ONE	°,L	•	•	•	•	•	•	•
AERBACP	°,L	•	•	•	•	•	•	•
AERNET	°,L	•	•	•	•	•	•	•
MULTICHILLER-EVO	°,L	•	•	•	•	•	•	•
PGD1	°,L	•	•	•	•	•	•	•
SGD	°,L	•	•	•	•	•	•	•

Model	Ver	0904	1004	1254	1404	1504	1654
AER485P1	°,L	•	•	•	•	•	•
AERBAC-ONE	°,L	•	•	•	•	•	•
AERBACP	°,L	•	•	•	•	•	•
AERNET	°,L	•	•	•	•	•	•
MULTICHILLER-EVO	°,L	•	•	•	•	•	•
PGD1	°,L	•	•	•	•	•	•
SGD	°,L	•	•	•	•	•	•

Antivibration

Version	System side - pumps	Integrated hydronic kit, source side	0503	0553	0604	0654	0704	0754	0804
°	°	°	AVX319	AVX319	AVX301	AVX301	AVX302	AVX310	AVX310
°	°	J, K, U, W	AVX320	AVX320	AVX320	AVX309	AVX309	AVX651	AVX651
°	M, O	°	AVX320	AVX320	AVX320	AVX309	AVX309	AVX651	AVX651
°	°	V, Z	AVX320	AVX320	AVX303	AVX309	AVX311	AVX651	AVX651
°	M	J, K, U, W	AVX320	AVX320	AVX303	AVX309	AVX311	AVX651	AVX651
°	N	°	AVX320	AVX320	AVX303	AVX309	AVX311	AVX651	AVX651
°	O	J, K, U, W	AVX320	AVX320	AVX303	AVX309	AVX311	AVX651	AVX651
°	P	°	AVX320	AVX320	AVX303	AVX309	AVX311	AVX651	AVX651
°	M	V, Z	AVX309	AVX309	AVX303	AVX311	AVX312	AVX651	AVX651
°	N	J, K, U, W	AVX309	AVX309	AVX303	AVX311	AVX312	AVX651	AVX651
°	O	V, Z	AVX309	AVX309	AVX303	AVX311	AVX312	AVX651	AVX651
°	P	J, K, U, W	AVX309	AVX309	AVX303	AVX311	AVX312	AVX651	AVX651
°	N, P	V, Z	AVX309	AVX309	AVX312	AVX312	AVX312	AVX651	AVX651
L	°	°	AVX309	AVX309	AVX310	AVX303	AVX304	AVX314	AVX314
L	°	J, K, U, W	AVX311	AVX311	AVX311	AVX311	AVX651	AVX652	AVX665
L	M, O	°	AVX311	AVX311	AVX311	AVX311	AVX651	AVX652	AVX665
L	°	V, Z	AVX311	AVX311	AVX312	AVX313	AVX651	AVX652	AVX665
L	M	J, K, U, W	AVX311	AVX311	AVX312	AVX313	AVX651	AVX652	AVX665
L	N	°	AVX311	AVX311	AVX312	AVX313	AVX651	AVX652	AVX665
L	O	J, K, U, W	AVX311	AVX311	AVX312	AVX313	AVX651	AVX652	AVX665
L	P	°	AVX311	AVX311	AVX312	AVX313	AVX651	AVX652	AVX665
L	M	V, Z	AVX312	AVX312	AVX312	AVX313	AVX651	AVX652	AVX665
L	N	J, K, U, V, W, Z	AVX312	AVX312	AVX312	AVX313	AVX651	AVX652	AVX665
L	O	V, Z	AVX312	AVX312	AVX312	AVX313	AVX651	AVX652	AVX665
L	P	J, K, U, V, W, Z	AVX312	AVX312	AVX312	AVX313	AVX651	AVX652	AVX665

Version	System side - pumps	Integrated hydronic kit, source side	0904	1004	1254	1404	1504	1654
°	°	°	AVX314	AVX316	AVX315	AVX317	AVX330	AVX331
°	°	J, K, U, W	AVX665	AVX654	AVX654	AVX654	AVX337	AVX336
°	M, O	°	AVX665	AVX654	AVX654	AVX654	AVX337	AVX336
°	°	V, Z	AVX665	AVX654	AVX654	AVX654	AVX336	-
°	M	J, K, U, W	AVX665	AVX654	AVX654	AVX654	AVX336	AVX335
°	N	°	AVX665	AVX654	AVX654	AVX654	AVX336	AVX335
°	O	J, K, U, W	AVX665	AVX654	AVX654	AVX654	AVX336	AVX335
°	M, O	V, Z	AVX665	AVX654	AVX654	AVX654	AVX335	-
°	N	J, K, U, W	AVX665	AVX654	AVX654	AVX654	AVX335	AVX339
°	N	V, Z	AVX665	AVX654	AVX654	AVX654	-	-
°	P	°, J, K, U, V, W, Z	AVX665	AVX654	AVX654	AVX654	-	-
L	°	°	AVX315	AVX317	AVX317	AVX318	AVX331	AVX333
L	°	J, K, U, W	AVX653	AVX659	AVX659	AVX659	AVX338	AVX338
L	°	V, Z	AVX653	AVX659	AVX659	AVX659	AVX338	AVX341
L	M	°, J, K, U, W	AVX653	AVX659	AVX659	AVX659	AVX338	AVX341
L	N	°	AVX653	AVX659	AVX659	AVX659	AVX338	AVX341
L	O	°, J, K, U, W	AVX653	AVX659	AVX659	AVX659	AVX338	AVX341
L	M, O	V, Z	AVX653	AVX659	AVX659	AVX659	AVX339	-
L	N	J, K, U, W	AVX653	AVX659	AVX659	AVX659	AVX339	AVX341
L	N	V, Z	AVX653	AVX659	AVX659	AVX659	AVX341	-
L	P	°, J, K, U, V, W, Z	AVX653	AVX659	AVX659	AVX659	-	-

- not available

PR4

Model	Ver	0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
PR4	°,L	•	•	•	•	•	•	•	•	•	•	•	•	•

Power factor correction

Ver	0503	0553	0604	0654	0704	0754	0804
°, L	RIF98	RIF98	RIF95	RIF95	RIF95	RIF95	RIF95

A grey background indicates the accessory must be assembled in the factory

Ver	0904	1004	1254	1404	1504	1654
°, L	RIF96	RIF97	RIF97	RIF97	RIF97	RIF97

A grey background indicates the accessory must be assembled in the factory

Device for peak current reduction

Ver	0503	0553	0604	0654	0704	0754	0804
°, L	DRE501 (1)	DRE551 (1)	DRE601 (1)	DRE651 (1)	DRE701 (1)	DRE751 (1)	DRE801 (1)

(1) Only for supplies of 400V 3N ~ 50Hz and 400V 3 ~ 50Hz. x 2 or x 3 (if present) indicates the quantity to be ordered.
A grey background indicates the accessory must be assembled in the factory

Ver	0904	1004	1254	1404	1504	1654
°, L	DRE901 (1)	DRE1001 (1)	DRE1251 (1)	DRE1401 (1)	DRE1500 (1)	DRE1650 (1)

(1) Only for supplies of 400V 3N ~ 50Hz and 400V 3 ~ 50Hz. x 2 or x 3 (if present) indicates the quantity to be ordered.
A grey background indicates the accessory must be assembled in the factory

CONFIGURATOR

Field	Description
1,2,3	**NXW**
4,5,6,7	**Size** 0503, 0553, 0604, 0654, 0704, 0754, 0804, 0904, 1004, 1254, 1404, 1504, 1654
8	**Operating field (1)**
X	Electronic thermostatic expansion valve
°	Standard mechanic thermostatic valve
9	**Model**
H	Heat pump
10	**Version**
°	Standard
L	Standard silenced
11	**Evaporator**
°	Standard
12	**Heat recovery**
D	With desuperheater (2)
°	Without heat recovery
13	**Power supply**
5	500V ~ 3 50Hz with magnet circuit breakers (3)
°	400V ~ 3 50Hz with magnet circuit breakers
14	**System side - pumps**
M	Single pump low head
N	Pump low head + stand-by pump
O	Single pump high head
P	Pump high head + stand-by pump (4)
°	Without hydronic kit
15	**Integrated hydronic kit, source side**
J	Single low-head inverter pump
K	Single high-head inverter pump
U	Single pump low head
V	Pump low head + stand-by pump (5)
W	Pump high head
Z	Pump high head + stand-by pump (5)
°	Without hydronic kit

(1) Water produced from 4 °C ÷ 18 °C
(2) The desuperheater must be isolated in heating mode. In cooling mode, a water temperature no lower than 35°C must always be guaranteed on the heat exchanger inlet.
(3) Only for 0804 ÷ 1004 sizes
(4) The hydronic kit P is not available for sizes 1504 and 1654
(5) The hydronic kits V and Z are not available for size 1654

PERFORMANCE SPECIFICATIONS

Size			0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
Cooling performance 12 °C / 7 °C (1)															
Cooling capacity	°,L	kW	105,9	113,8	140,8	159,8	180,7	211,6	242,7	277,7	313,6	341,7	369,7	423,6	477,0
Input power	°,L	kW	23,8	25,7	31,1	35,3	40,2	47,1	54,2	62,2	70,4	76,6	82,7	94,8	106,7
Cooling total input current	°,L	A	49,00	52,00	60,00	65,00	87,00	95,00	104,00	122,00	140,00	144,00	147,00	164,00	183,00
EER	°,L	W/W	4,45	4,43	4,52	4,52	4,50	4,49	4,47	4,47	4,45	4,46	4,47	4,47	4,47
Water flow rate source side	°,L	l/h	22.173	23.854	29.402	33.334	37.744	44.198	50.635	58.078	65.694	71.514	77.333	88.547	99.702
Pressure drop source side	°,L	kPa	25	29	28	35	35	42	55	36	28	32	34	41	44
Water flow rate system side	°,L	l/h	18.212	19.586	24.225	27.490	31.098	36.424	41.750	47.764	53.949	58.759	63.570	72.837	82.027
Pressure drop system side	°,L	kPa	17	20	19	24	24	29	38	24	19	22	24	29	30
Heating performance 40 °C / 45 °C (2)															
Heating capacity	°,L	kW	125,4	135,8	165,8	187,6	210,4	269,6	310,2	325,2	365,6	399,8	434,0	500,6	565,2
Input power	°,L	kW	27,9	30,2	36,8	41,8	46,9	55,6	64,6	72,6	80,8	88,6	96,4	111,2	124,9
Heating total input current	°,L	A	54,00	57,00	66,00	72,00	94,00	105,00	115,00	135,00	154,00	160,00	165,00	181,00	202,00
COP	°,L	W/W	4,49	4,49	4,51	4,49	4,48	4,85	4,80	4,48	4,52	4,51	4,50	4,50	4,52
Water flow rate source side	°,L	l/h	28.545	30.928	37.776	42.774	47.928	62.567	71.944	74.067	83.306	91.109	98.905	114.256	129.207
Pressure drop source side	°,L	kPa	43	49	46	58	58	46	61	58	46	52	58	66	71
Water flow rate system side	°,L	l/h	21.762	23.561	28.776	32.552	36.508	46.797	53.844	56.470	63.485	69.420	75.355	86.926	98.135
Pressure drop system side	°,L	kPa	24	28	26	33	32	31	40	33	26	30	32	41	43

(1) Date 14511:2022; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C
(2) Date 14511:2022; Water user side 40 °C / 45 °C; Water source side 10 °C / 7 °C

ENERGY INDICES (REG. 2016/2281 EU)

Size			0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
SEER - 12/7 (EN14825: 2018)															
SEER	°,L	W/W	5,39	5,38	5,53	5,60	5,38	5,60	5,27	5,77	5,88	5,94	5,97	6,43	6,44
Seasonal efficiency	°,L	%	212,60	212,20	218,20	221,00	212,20	221,00	207,80	227,80	232,20	234,50	235,60	254,20	254,70
Water Regulation (1)	°,L	type	FW/VO-FW	FW/VO-FW	FW/VO-FW	FW/VO-FW	FW/VO-FW	FW/VO-FW	FW/VO-FW	FW/VO-FW	FW/VO-FW	FW/VO-FW	FW/VO-FW	FW/VO-FW	FW/VO-FW
SEPR - (EN 14825: 2018)															
SEPR	°,L	W/W	-	-	-	-	-	-	-	7,03	7,06	7,06	7,03	-	-
Water Regulation (1)	°,L	type	-	-	-	-	-	-	-	FW/VO-FW	FW/VO-FW	FW/VO-FW	FW/VO-FW	-	-
Performance in average ambient conditions (average) - 55 °C (2)															
Pdesignh	°,L	kW	161,00	175,00	213,00	241,00	271,00	320,00	368,00	-	-	-	-	-	-
SCOP	°,L	W/W	4,95	4,93	4,95	4,93	4,93	4,90	4,80	-	-	-	-	-	-
ηsh	°,L	%	190,00	189,00	190,00	189,00	189,00	188,00	184,00	-	-	-	-	-	-
Water Regulation (1)	°,L	type	FW/VO-FW	FW/VO-FW	FW/VO-FW	FW/VO-FW	FW/VO-FW	FW/VO-FW	FW/VO-FW	-	-	-	-	-	-

(1) VW/VO - variable water flow rate/variable outlet temperature; FW/VO - fixed water flow rate/variable outlet temperature; VW/FO - variable water flow rate/fixed outlet temperature; FW/FO - fixed water flow rate/fixed outlet temperature.
(2) Efficiencies for average temperature applications (55 °C)

ELECTRIC DATA

Size			0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
Electric data															
Maximum current (FLA)	°,L	A	75,0	80,0	96,0	107,0	122,0	146,0	169,0	193,0	217,0	231,0	248,0	267,0	296,0
Peak current (LRA)	°,L	A	240,0	245,0	227,0	238,0	289,0	319,0	341,0	398,0	422,0	490,0	504,0	601,0	630,0

GENERAL TECHNICAL DATA

Refrigerant circuit

Size			0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
Compressor															
Type	°,L	type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Compressor regulation	°,L	Type	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off
Number	°,L	no.	3	3	4	4	4	4	4	4	4	4	4	4	4
Circuits	°,L	no.	2	2	2	2	2	2	2	2	2	2	2	2	2
Refrigerant	°,L	type	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Total refrigerant charge (1)	°,L	kg	13,00	13,00	17,00	17,00	20,00	22,00	26,00	36,00	54,00	54,00	58,00	60,00	62,00
Potential global heating (GWP)	°,L		2088	2088	2088	2088	2088	2088	2088	2088	2088	2088	2088	2088	2088
Equivalent CO_2	°,L	tCO_2eq	27,14	27,14	35,50	35,50	41,76	45,94	54,29	75,17	112,75	112,75	121,10	125,28	129,46

(1) The load indicated in the table is an estimated and preliminary value. The final value of the refrigerant load is indicated on the unit's technical label. For further information contact the office.

System side heat exchanger

Size			0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
System side heat exchanger															
Type	°,L	type	Brazed plate												
Number	°,L	no.	1	1	1	1	1	1	1	1	1	1	1	1	1
Connections (in/out)	°,L	Type	Grooved joints												
Size (in)	°,L	Ø	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	3"	3"	3"	3"	3"	3"
Size (out)	°,L	Ø	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	3"	3"	3"	3"	3"	3"

Source side heat exchanger

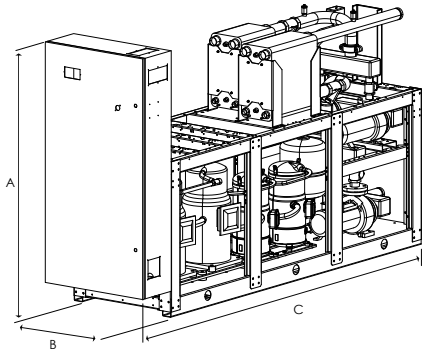
Size			0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
Source side heat exchanger															
Type	°,L	type	Brazed plate												
Number	°,L	no.	1	1	1	1	1	1	1	1	1	1	1	1	1
Connections (in/out)	°,L	Type	Grooved joints												
Size (in)	°,L	Ø	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	3"	3"	3"	3"	3"	3"
Size (out)	°,L	Ø	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	3"	3"	3"	3"	3"	3"

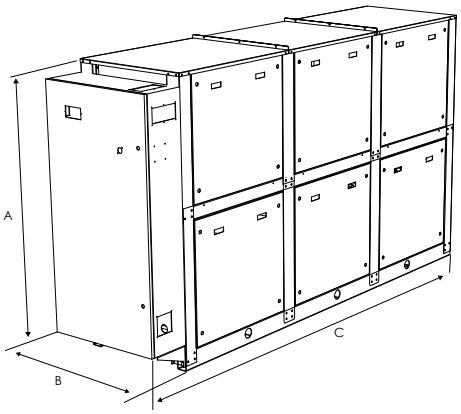
Sound data

Size			0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
Sound data calculated in cooling mode (1)															
Sound power level	°	dB(A)	78,0	79,0	79,0	80,0	82,0	86,0	88,0	88,0	88,0	90,0	90,0	93,0	95,0
	L	dB(A)	72,0	73,0	73,0	74,0	76,0	80,0	82,0	82,0	82,0	84,0	84,0	86,0	87,0

(1) Sound power calculated on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification. Sound pressure (cold functioning) measured in free field, 10m away from the unit external surface (in compliance with UNI EN ISO 3744).

DIMENSIONS





Size			0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
Dimensions and weights															
A	°	mm	1.835	1.835	1.835	1.835	1.835	1.775	1.775	1.820	1.820	1.820	1.820	1.820	1.820
	L	mm	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885
B	°,L	mm	800	800	800	800	800	800	800	800	800	800	800	800	800
C	°	mm	1.795	1.795	1.795	1.795	1.795	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420
	L	mm	2.090	2.090	2.090	2.090	2.090	2.420	2.420	2.420	2.420	2.420	2.420	2.420	2.420
Dimensions and weights with pump/s															
A	°	mm	1.775	1.775	1.775	1.775	1.775	1.775	1.775	1.820	1.820	1.820	1.820	1.820	1.820
	L	mm	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885
B	°,L	mm	800	800	800	800	800	800	800	800	800	800	800	800	800
C	°,L	mm	3.020	3.020	3.020	3.020	3.020	3.480	3.480	3.480	3.480	3.480	3.480	3.480	3.480
Dimensions and weights															
Empty weight	°	kg	628	633	734	743	791	948	1.042	1.275	1.545	1.577	1.657	1.687	1.825
	L	kg	801	805	907	915	963	1.121	1.240	1.473	1.743	1.774	1.855	1.885	2.023

The weight of the unit does not include the hydronic kit and accessories.

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