

NXW 0503H - 1654H

Reversible water-cooled heat pump, gas side

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

- Installation versatility also for geothermal applications.
- Options of 1 or 2 pumps on both source and user side.
- Production of hot water up to 55 °C



DESCRIPTION

Water-water offering chilled/hot water, designed to mit air conditioning needs in residential/commercial complexes or industrial applications. These are indoor units with hermetic scroll compressors, system side heat exchanger and plate 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.

AERBACP: Ethernet communication interface for Bacnet/IP, Modbus TCP/IP, SNMP protocols. 1 accessory is provided for each unit control board.

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 control boards). 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, 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.

PR4: Remote panel with LCD display and touch keyboard that allows carrying out the basic controls, the programming of time ranges and the signaling of the alarms of a single unit.

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.

ACCESSORIES COMPATIBILITY

Model	Ver	0503	0553	0604	0654	0704	0754	0804
AER485P1	°L	•	•	•	•	•	•	•
AERBACP	°L	•	•	•	•	•	•	•
AERNET	°L	•	•	•	•	•	•	•
MULTICHILLER-EVO	°L	•	•	•	•	•	•	•
PGD1	°L	•	•	•	•	•	•	•
PR4	°L	•	•	•	•	•	•	•

Model	Ver	0904	1004	1254	1404	1504	1654
AER485P1	°L	•	•	•	•	•	•
AERBACP	°L	•	•	•	•	•	•
AERNET	°L	•	•	•	•	•	•
MULTICHILLER-EVO	°L	•	•	•	•	•	•
PGD1	°L	•	•	•	•	•	•
PR4	°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

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)
°	Standard mechanic thermostatic valve
X	Electronic thermostatic expansion valve
9	Model
H	Heat pump
10	Version
°	Standard
L	Standard silenced
11	Evaporator
°	Standard
12	Heat recovery
°	Without heat recovery
D	With desuperheater (2)
13	Power supply
°	400V ~ 3 50Hz with magnet circuit breakers
S	500V ~ 3 50Hz with magnet circuit breakers (3)
14	System side - pumps
°	Without hydronic kit
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)
15	Integrated hydronic kit, source side
°	Without hydronic kit
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)

(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	49,0	52,0	60,0	65,0	87,0	95,0	104,0	122,0	140,0	144,0	147,0	164,0	183,0
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	22173	23854	29402	33334	37744	44198	50635	58078	65694	71514	77333	88547	99702
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	18212	19586	24225	27490	31098	36424	41750	47764	53949	58759	63570	72837	82027
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	54,0	57,0	66,0	72,0	94,0	105,0	115,0	135,0	154,0	160,0	165,0	181,0	202,0
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	28545	30928	37776	42774	47928	62567	71944	74067	83306	91109	98905	114256	129207
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	21762	23561	28776	32552	36508	46797	53844	56470	63485	69420	75355	86926	98135
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) (1)															
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	%	212,6%	212,2%	218,2%	221,0%	212,2%	221,0%	207,8%	227,8%	232,2%	234,5%	235,6%	254,2%	254,7%
SEPR - (EN 14825: 2018) High temperature (2)															
SEPR	°L	W/W	-	-	-	-	-	-	-	7,03	7,06	7,06	7,03	-	-
UE 813/2013 performance in average ambient conditions (average) - 55 °C - Pdesignh ≤ 400 kW (3)															
Pdesignh	°L	kW	161	175	213	241	271	320	368	-	-	-	-	-	-
SCOP	°L	W/W	4,95	4,93	4,95	4,93	4,93	4,90	4,80	-	-	-	-	-	-
ηsh	°L	%	190,0%	189,0%	190,0%	189,0%	189,0%	188,0%	184,0%	-	-	-	-	-	-

(1) Calculation performed with FIXED water flow rate and VARIABLE outlet temperature.

(2) Calculation performed with FIXED water flow rate.

(3) 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

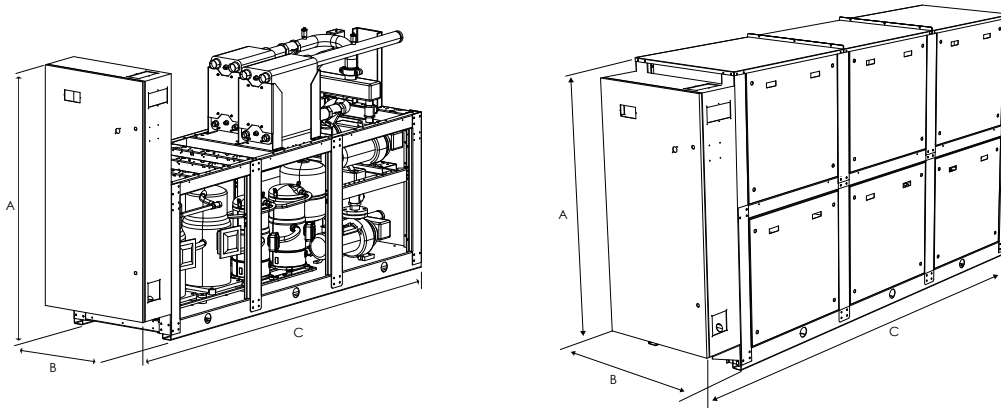
GENERAL TECHNICAL DATA

Size			0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
Compressor															
Type	°L	type	Scroll												
Compressor regulation	°L	Type	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												
Refrigerant charge (1)	°L	kg	13,0	13,0	17,0	17,0	20,0	22,0	26,0	36,0	54,0	54,0	58,0	60,0	62,0
Source side heat exchanger															
Type	°L	type	Braze 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"
System side heat exchanger															
Type	°L	type	Braze 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 calculated in cooling mode (2)															
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
Sound pressure level (10 m)	°	dB(A)	46,4	47,4	47,4	48,4	50,4	54,3	56,3	56,3	56,3	58,3	58,3	61,3	63,3
	L	dB(A)	40,3	41,3	41,3	42,3	44,3	48,3	50,3	50,3	50,3	52,3	52,3	54,3	55,3

(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.

(2) 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	1835	1835	1835	1835	1835	1775	1775	1820	1820	1820	1820	1820	1820
	L	mm	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
B	°L	mm	800	800	800	800	800	800	800	800	800	800	800	800	800
	°	mm	1795	1795	1795	1795	1795	2420	2420	2420	2420	2420	2420	2420	2420
C	L	mm	2090	2090	2090	2090	2090	2420	2420	2420	2420	2420	2420	2420	2420
	°L	mm	3020	3020	3020	3020	3020	3480	3480	3480	3480	3480	3480	3480	3480
Dimensions and weights with pump/s															
A	°	mm	1775	1775	1775	1775	1775	1775	1775	1820	1820	1820	1820	1820	1820
	L	mm	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
B	°L	mm	800	800	800	800	800	800	800	800	800	800	800	800	800
	°L	mm	3020	3020	3020	3020	3020	3480	3480	3480	3480	3480	3480	3480	3480
Dimensions and weights															
Empty weight	°	kg	628	633	734	743	791	948	1042	1275	1545	1577	1657	1687	1825
	L	kg	801	805	907	915	963	1121	1240	1473	1743	1774	1855	1885	2023

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

Aermec reserves the right to make any modifications deemed necessary.
All data is subject to change without notice. Aermec does not assume
responsibility or liability for errors or omissions.

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