

# NXW 0503 - 1654

## Water cooled heat pump reversible water side

Cooling capacity 111 ÷ 511 kW  
Heating capacity 127 ÷ 582 kW



- Installation versatility also for geothermal applications.
- Options of 1 or 2 pumps on both source and user side.
- Reversible on hydraulic side in heat pump



### DESCRIPTION

Water-water offering chilled/hot water, designed to mit air conditioning needs in residential/commercial complexes or industrial applications. Indoor units with hermetic scroll compressors and plate heat exchangers. 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 -10°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

The built-in hydronic module includes the main water circuit components; it is available in varius configurations with one or two pumps with high or low head both on the system side and the source side, to obtain a solution that allows you to save money and to facilitate installation.

### 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 supervision systems with MODBUS protocol.

**AERBACP:** Ethernet communication Interface for protocols Bacnet/IP, Modbus TCP/IP, SNMP

**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, switch-on and switch-off system of the single chillers where multiple units are installed in parallel, always ensuring constant flow rate to the evaporators.

**PGD1:** Allows you to control the unit at a distance.

**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	0904	1004	1254	1404	1504	1654
AER485P1	°L	*	*	*	*	*	*	*	*	*	*	*	*	*
AERBACP	°L	*	*	*	*	*	*	*	*	*	*	*	*	*
AERNET	°L	*	*	*	*	*	*	*	*	*	*	*	*	*
MULTICHILLER_EVO	°L	*	*	*	*	*	*	*	*	*	*	*	*	*
PGD1	°L	*	*	*	*	*	*	*	*	*	*	*	*	*

## Antivibration

Version	Integrated hydronic kit user side	Integrated hydronic kit, source side	0503	0553	0604	0654	0704	0754	0804
°	°	°	AVX319	AVX319	AVX301	AVX301	AVX301	AVX303	AVX310
°	°	J,K,U,W	AVX320	AVX320	AVX320	AVX320	AVX320	AVX312	AVX651
°	M,O	°	AVX320	AVX320	AVX320	AVX320	AVX320	AVX312	AVX651
°	°	V,Z	AVX320	AVX320	AVX309	AVX309	AVX309	AVX312	AVX651
°	M	J,K,U,V,W,Z	AVX320	AVX320	AVX309	AVX309	AVX309	AVX312	AVX651
°	N	°J,K,U,W	AVX320	AVX320	AVX309	AVX309	AVX309	AVX312	AVX651
°	O	J,K,U,V,W,Z	AVX320	AVX320	AVX309	AVX309	AVX309	AVX312	AVX651
°	P	°J,K,U,W	AVX320	AVX320	AVX309	AVX309	AVX309	AVX312	AVX651
°	N,P	V,Z	AVX309	AVX309	AVX310	AVX310	AVX310	AVX312	AVX651
L	°	°	AVX309	AVX309	AVX310	AVX303	AVX303	AVX310	AVX314
L	°	J,K,U,W	AVX321	AVX321	AVX311	AVX311	AVX651	AVX651	AVX652
L	M,O	°	AVX321	AVX321	AVX311	AVX311	AVX651	AVX651	AVX652
L	°	V,Z	AVX311	AVX311	AVX311	AVX311	AVX651	AVX651	AVX652
L	M	J,K,U,W	AVX311	AVX311	AVX311	AVX311	AVX651	AVX651	AVX652
L	N	°	AVX311	AVX311	AVX311	AVX311	AVX651	AVX651	AVX652
L	O	J,K,U,W	AVX311	AVX311	AVX311	AVX311	AVX651	AVX651	AVX652
L	P	°	AVX311	AVX311	AVX311	AVX311	AVX651	AVX651	AVX652
L	M	V,Z	AVX311	AVX311	AVX312	AVX312	AVX651	AVX651	AVX652
L	N	J,K,U,W	AVX311	AVX311	AVX312	AVX312	AVX651	AVX651	AVX652
L	O	V,Z	AVX311	AVX311	AVX312	AVX312	AVX651	AVX651	AVX652
L	P	J,K,U,W	AVX311	AVX311	AVX312	AVX312	AVX651	AVX651	AVX652
L	N,P	V,Z	AVX312	AVX312	AVX312	AVX310	AVX651	AVX651	AVX652

Version	Integrated hydronic kit user side	Integrated hydronic kit, source side	0904	1004	1254	1404	1504	1654
°	°	°	AVX314	AVX316	AVX316	AVX315	AVX330	AVX330
°	°	J,K,U,W	AVX655	AVX653	AVX654	AVX654	AVX334	AVX337
°	M,N,O	°	AVX655	AVX653	AVX654	AVX654	AVX334	AVX337
°	°	V,Z	AVX655	AVX653	AVX654	AVX654	AVX337	-
°	M,O	J,K,U,W	AVX665	AVX653	AVX654	AVX654	AVX337	AVX335
°	M,O	V,Z	AVX655	AVX653	AVX654	AVX654	AVX340	-
°	N	J,K,U,W	AVX665	AVX653	AVX654	AVX654	AVX340	AVX335
°	N	V,Z	AVX665	AVX653	AVX654	AVX654	AVX335	-
°	P	°	AVX655	AVX653	AVX654	AVX654	-	-
°	P	J,K,U,V,W,Z	AVX665	AVX653	AVX654	AVX654	-	-
L	°	°	AVX314	AVX315	AVX315	AVX317	AVX331	AVX331
L	°	J,K,U,W	AVX653	AVX654	AVX659	AVX659	AVX335	AVX338
L	M,O	°	AVX653	AVX654	AVX659	AVX659	AVX335	AVX338
L	°	V,Z	AVX653	AVX654	AVX659	AVX659	AVX338	-
L	M	J,K,U,W	AVX653	AVX654	AVX659	AVX659	AVX338	AVX339
L	N	°	AVX653	AVX654	AVX659	AVX659	AVX338	AVX339
L	O	J,K,U,W	AVX653	AVX654	AVX659	AVX659	AVX338	AVX339
L	M,N,O	V,Z	AVX653	AVX654	AVX659	AVX659	AVX339	-
L	N	J,K,U,W	AVX653	AVX654	AVX659	AVX659	AVX339	AVX341
L	P	°J,K,U,V,W,Z	AVX653	AVX654	AVX659	AVX659	-	-

- not available

## Power factor correction

Ver	0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
°L	RIF98	RIF98	RIF95	RIF95	RIF95	RIF95	RIF95	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	0904	1004	1254	1404	1504	1654
°L	DRES01 (1)	DRES51 (1)	DRE601 (1)	DRE651 (1)	DRE701 (1)	DRE751 (1)	DRE801 (1)	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
<b>1,2,3</b>	<b>NXW</b>
<b>4,5,6,7</b>	<b>Size</b> 0503, 0553, 0604, 0654, 0704, 0754, 0804, 0904, 1004, 1254, 1404, 1504, 1654
<b>8</b>	<b>Operating field</b>
°	Standard mechanic thermostatic valve (1)
X	Electronic thermostatic expansion valve (1)
Y	Low temperature mechanic thermostatic valve (2)
<b>9</b>	<b>Model</b>
°	Heat pump reversible on the water side
K	Heat pump reversible on the water side with low pressure drops
<b>10</b>	<b>Version</b>
°	Standard
L	Standard silenced
<b>11</b>	<b>Evaporator</b>
°	Standard
E	Evaporating unit (3)
<b>12</b>	<b>Heat recovery</b>
°	Without heat recovery
D	With desuperheater (4)
T	With total recovery (5)
<b>13</b>	<b>Power supply</b>
°	400V ~ 3 50Hz with magnet circuit breakers
5	500V ~ 3 50Hz with magnet circuit breakers (6)
<b>14</b>	<b>Integrated hydronic kit user side</b>
°	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 (7)
<b>15</b>	<b>Integrated hydronic kit, source side</b>
°	Without hydronic kit
J	Single low-head inverter pump (7)
K	Single high-head inverter pump (7)
U	Single pump low head
V	Pump low head + stand-by pump (8)
W	Pump high head
Z	Pump high head + stand-by pump (8)

(1) Water produced from 4 °C ÷ 18 °C

(2) Water produced from 4 °C ÷ -10 °C; for the availability with the heat recovery we advise you to contact us

(3) Shipped with holding charge only.

(4) 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.

(5) Options not available for condensing unit, and for models with pump/s

(6) Only for 0804 ÷ 1004 sizes

(7) Not available for size 1504 ÷ 1654

(8) Not available for size 1654

## PERFORMANCE SPECIFICATIONS

Size			0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
<b>Cooling performance 12 °C / 7 °C (1)</b>															
Cooling capacity	°L	kW	111,8	120,7	148,7	166,7	188,7	222,7	257,6	291,6	325,7	354,6	384,6	453,9	511,4
Input power	°L	kW	23,0	24,8	30,6	34,4	38,9	45,6	53,0	60,3	66,5	72,6	78,7	92,3	104,0
Cooling total input current	°L	A	48,0	51,0	58,0	63,0	86,0	94,0	102,0	120,0	138,0	140,0	143,0	160,0	178,0
EER	°L	W/W	4,87	4,86	4,86	4,85	4,85	4,88	4,86	4,84	4,90	4,88	4,89	4,92	4,92
Water flow rate source side	°L	l/h	23047	24886	30656	34332	38866	45790	52970	60075	67065	73041	79190	93374	105103
Pressure drop source side	°L	kPa	25	29	29	37	37	45	60	38	29	34	36	36	47
Water flow rate system side	°L	l/h	19243	20789	25600	28692	32472	38314	44327	50169	56011	60993	66147	78063	87938
Pressure drop system side	°L	kPa	30	35	32	40	43	47	49	55	35	36	36	36	40
<b>Heating performance 40 °C / 45 °C (2)</b>															
Heating capacity	°L	kW	127,6	137,8	170,0	190,3	215,4	253,7	293,5	332,9	371,5	404,7	438,7	517,1	582,0
Input power	°L	kW	27,6	29,9	36,3	40,9	46,4	54,5	63,3	72,3	79,0	86,2	93,3	109,5	123,4
Heating total input current	°L	A	57,0	60,0	68,0	73,0	100,0	109,0	119,0	140,0	161,0	163,0	166,0	186,0	207,0
COP	°L	W/W	4,62	4,61	4,69	4,66	4,64	4,66	4,64	4,60	4,70	4,69	4,70	4,72	4,71
Water flow rate source side	°L	l/h	29340	31697	39235	43975	49768	58721	67938	76891	85844	93480	101380	119642	134776
Pressure drop source side	°L	kPa	70	81	75	94	101	110	115	129	82	85	85	85	94
Water flow rate system side	°L	l/h	22142	23905	29490	33021	37384	44030	50933	57790	64513	70265	76175	89802	101065
Pressure drop system side	°L	kPa	23	27	27	34	34	42	55	35	27	31	33	33	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
<b>SEER - 12/7 (EN14825: 2018) (1)</b>															
SEER	°L	W/W	5,50	5,85	5,79	5,77	5,84	5,81	5,52	6,30	6,42	6,37	6,38	6,49	6,48
Seasonal efficiency	°L	%	217,0%	231,0%	228,6%	227,8%	230,6%	229,4%	217,8%	248,8%	253,8%	251,6%	252,0%	256,4%	256,2%
<b>SEPR - (EN 14825: 2018) High temperature (2)</b>															
SEPR	°	W/W	-	-	-	-	-	-	-	7,90	7,90	7,80	7,80	8,00	8,00
	L	W/W	-	-	-	-	-	-	-	7,93	7,90	7,78	7,80	8,00	8,02
<b>UE 813/2013 performance in average ambient conditions (average) - 55 °C - Pdesignh ≤ 400 kW (3)</b>															
Pdesignh	°L	kW	164	177	218	244	277	326	377	-	-	-	-	-	-
SCOP	°L	W/W	5,10	5,05	5,18	5,10	5,10	5,10	5,08	-	-	-	-	-	-
nsh	°L	%	196,0%	194,0%	199,0%	196,0%	196,0%	196,0%	195,0%	-	-	-	-	-	-

(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
<b>Electric data</b>															
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

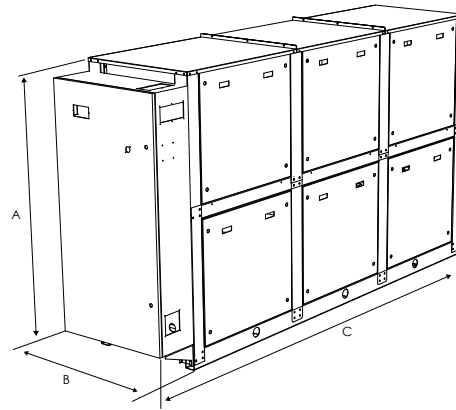
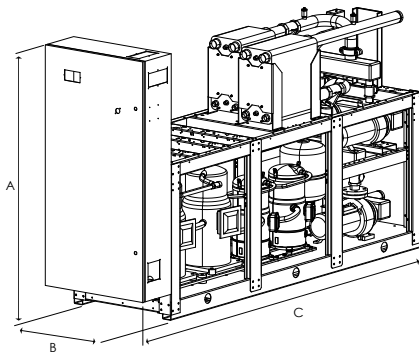
## GENERAL TECHNICAL DATA

Size			0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
<b>Compressor</b>															
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	13,2	12,5	15,6	15,6	18,0	22,0	26,0	33,0	38,0	44,0	44,0	46,0	53,0
<b>Source side heat exchanger</b>															
Type	°L	type	Brazen 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	2" 1/2	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	2" 1/2	3"	3"	3"	3"	3"
<b>System side heat exchanger</b>															
Type	°L	type	Brazen 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	2" 1/2	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	2" 1/2	3"	3"	3"	3"	3"
<b>Sound data calculated in cooling mode (2)</b>															
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
<b>Dimensions and weights</b>															
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
	°	L	mm	1795	1795	1795	1795	1795	2420	2420	2420	2420	2420	2420	2420
C	°	L	mm	2090	2090	2090	2090	2090	2420	2420	2420	2420	2420	2420	2420
	°	L	kg	578	582	682	690	727	882	989	1180	1417	1461	1539	1613
Empty weight	°	L	kg	750	755	854	863	900	1054	1187	1378	1615	1659	1737	1811
	°	L	kg	750	755	854	863	900	1054	1187	1378	1615	1659	1737	1811

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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