

## WFN

## Water cooled heat pump reversible water side

Cooling capacity 652÷ 2349 kW  
Heating capacity 726÷ 2610 kW

- Production of hot water up to 55°C.
- Production of chilled water down to -8°C.



### DESCRIPTION

Units for internal installation offering chilled/hot water, designed to meet air conditioning needs in residential/commercial complexes or industrial applications.

Compact and flexible, perfect alignment to the requested load thanks to an accurate control algorithm.

The base, the structure and the panels are made of galvanized steel treated with polyester paint RAL 9003.

### VERSIONS

° Standard

A High efficiency

### FEATURES

#### Operating field

Production of chilled water up to 16 °C of water produced on the evaporator side, but also suitable for use in heat pump mode with condenser water temperature up to 55 °C.

**With option Z (double electronic expansion valve) the unit is capable to produce chilled water temperature from -8°C up to 10°C.**

#### Bi-tri circuit unit

Unit with 2-3 refrigerant circuits designed to provide maximum efficiency at full load, ensuring high efficiency at partial loads also and ensuring continuity in case one of the circuits stops.

They are equipped with screw compressors and system and source side shell and tube heat exchangers with R134a refrigerant.

**The R513A (XP10) refrigerant with this type of gas is also available on the configurator. On average, the units have a yield > 2% and an EER < 3% compared to the same size with R134a.**

For further details refer to the technical documentation or to the Magellano selection program.

#### Electronic expansion valve

The possibility to use electronic expansion valve, offers significant benefits, especially when the chiller is working with partial loads, increasing the energy efficiency of the unit. Standard for all sizes.

### CONTROL PCO<sub>5</sub>

Microprocessor adjustment, with keyboard and LCD display, for easy access on the unit is a menu available in several languages.

Adjustment includes complete management of the alarms and their log.

Possibility to control two units in a Master-Slave configuration

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 x n° 2:** RS-485 interface for supervision systems with MOD-BUS protocol.

**AER485P1 x n° 3:** RS-485 interface for supervision systems with MOD-BUS 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.

**PRV3:** Allows you to control the chiller at a distance.

**AVX:** Spring anti-vibration supports.

### FACTORY FITTED ACCESSORIES

**RIF:** Power factor correction. Connected in parallel to the motor allowing about 10% reduction of input current.

**ISG:** Insulation kit for condensers. Mandatory accessory for machine functioning in heat pump; standard in units with desuperheater or with heat recovery.

## ACCESSORIES COMPATIBILITY

Model	Ver	2502	2802	3202	3602	4202	4802	5602	6402	6703	7203	8403	9603
AER48SP1 x n° 2 (1)	A	.	.	.	.	.	.	.	.	.	.	.	.
AER48SP1 x n° 3 (1)	°A									.	.	.	.
AERBACP	°									.	.	.	.
	A	.	.	.	.	.	.	.	.	.	.	.	.
	°									.	.	.	.
AERNET	A	.	.	.	.	.	.	.	.	.	.	.	.
	°									.	.	.	.
MULTICHILLER_EVO	A	.	.	.	.	.	.	.	.	.	.	.	.
	°									.	.	.	.
PRV3	A	.	.	.	.	.	.	.	.	.	.	.	.
	°									.	.	.	.

(1) x Indicates the quantity of accessories to match.

### Antivibration

Version	Set-up	Heat recovery	2502	2802	3202	3602	4202	4802	5602	6402	6703	7203	8403	9603
°	°K,L	°D,T	-	-	-	-	-	-	-	-	Contact us.	Contact us.	Contact us.	Contact us.
A	°	°	AVX673	AVX674	AVX679	AVX679	AVX678	AVX678	AVX678	AVX678	Contact us.	Contact us.	Contact us.	Contact us.
A	°	D	AVX674	AVX674	AVX679	AVX679	AVX678	AVX678	AVX678	AVX678	Contact us.	Contact us.	Contact us.	Contact us.
A	°	T	AVX674	AVX674	AVX678	AVX678	AVX678	AVX678	AVX678	AVX678	Contact us.	Contact us.	Contact us.	Contact us.
A	L	°D	AVX674	AVX674	AVX678	AVX678	AVX678	AVX678	AVX678	AVX678	Contact us.	Contact us.	Contact us.	Contact us.
A	K	°D,T	Contact us.	Contact us.	Contact us.	Contact us.	Contact us.	Contact us.	Contact us.	Contact us.	Contact us.	Contact us.	Contact us.	Contact us.
A	L	T	AVX674	AVX674	AVX678	AVX678	AVX678	AVX676	AVX676	AVX676	Contact us.	Contact us.	Contact us.	Contact us.

- not available

### Power factor correction

Ver	2502	2802	3202	3602	4202	4802	5602	6402	6703	7203	8403	9603
°	-	-	-	-	-	-	-	-	RIFWFN6703	RIFWFN7203	RIFWFN8403	RIFWFN9603
A	RIFWFN2502	RIFWFN2802	RIFWFN3202	RIFWFN3602	RIFWFN4202	RIFWFN4802	RIFWFN5602	RIFWFN6402	RIFWFN6703	RIFWFN7203	RIFWFN8403	RIFWFN9603

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

**For the size of the units with the RIF accessory we ask you to contact the headquarters.**

### Isolating kit

Ver	2502	2802	3202	3602	4202	4802	5602	6402	6703	7203	8403	9603
°	-	-	-	-	-	-	-	-	ISG5	ISG5	ISG6	ISG6
A	ISG1	ISG1	ISG2	ISG2	ISG2	ISG3	ISG3	ISG3	ISG7	ISG8	ISG8	ISG8

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

## CONFIGURATOR

Field	Description
<b>1,2,3</b>	<b>WFN</b>
<b>4,5,6,7</b>	<b>Size</b> 2502, 2802, 3202, 3602, 4202, 4802, 5602, 6402, 6703, 7203, 8403, 9603
<b>8</b>	<b>Model</b>
°	Heat pump reversible on the water side
<b>9</b>	<b>Version</b>
°	Standard (1)
A	High efficiency
<b>10</b>	<b>Operating field</b>
X	Electronic thermostatic expansion valve (2)
Z	Double electronic thermostatic for low temperature (3)
<b>11</b>	<b>Set-up</b>
°	Standard
K	Super silenced
L	Silenced with hood
<b>12</b>	<b>Heat recovery</b>
°	Without heat recovery
D	With desuperheater (4)
T	With total recovery (4)

Field	Description
<b>13</b>	<b>Evaporator</b>
°	Standard
E	Evaporating unit
<b>14</b>	<b>Power supply</b>
°	400V/3/50Hz with fuses on compressors and magnet circuit breakers on auxiliary circuit (5)
2	230V/3/50Hz with fuses on compressors and magnet circuit breakers on auxiliary circuit (5)
4	230V/3/50Hz with magnet circuit breakers on compressors and auxiliary circuit (5)
5	500V/3/50Hz with fuses on compressors and magnet circuit breakers on auxiliary circuit
8	400V/3/50Hz with magnet circuit breakers on compressors and auxiliary circuit
9	500V/3/50Hz with magnet circuit breakers on compressors and auxiliary circuit (5)
<b>15</b>	<b>Refrigerant gas</b>
°	R134a
G	R513A (XP10)

(1) Only for sizes from 6703 to 9603

(2) Water produced from 0 °C ÷ 16 °C

(3) Water produced from -8 °C up to 10 °C

(4) Not available for the condenserless "E"

(5) The 230V and 500V power supplies are only available for sizes 2502 - 2802

## PERFORMANCE SPECIFICATIONS

### WFN - version ° - gas R134a

Size		6703	7203	8403	9603
<b>Cooling performance 12 °C / 7 °C (1)</b>					
Cooling capacity	kW	1691,1	1925,6	2120,1	2310,0
Input power	kW	322,4	364,9	407,2	452,6
Cooling total input current	A	505,0	594,0	660,0	733,0
EER	W/W	5,00	5,00	5,00	5,00
Water flow rate system side	l/h	290696	330989	364406	397041
Pressure drop system side	kPa	46	52	39	46
Water flow rate source side	l/h	343740	390980	431894	471655
Pressure drop source side	kPa	70	70	58	69
<b>Heating performance 40 °C / 45 °C (2)</b>					
Heating capacity	kW	1885,5	2129,2	2348,8	2575,2
Input power	kW	401,0	454,4	501,6	558,6
Heating total input current	A	619,0	728,0	803,0	893,0
COP	W/W	5,00	5,00	5,00	5,00
Water flow rate system side	l/h	327527	369895	408061	447398
Pressure drop system side	kPa	64	63	52	62
Water flow rate source side	l/h	436659	493020	542047	593071
Pressure drop source side	kPa	105	115	86	103

(1) Date 14S11:2018; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C  
(2) Date 14S11:2018; Water user side 40 °C / 45 °C; Water source side 10 °C / 7 °C

### WFN - version A - gas R134a

Size		2502	2802	3202	3602	4202	4802	5602	6402	6703	7203	8403	9603
<b>Cooling performance 12 °C / 7 °C (1)</b>													
Cooling capacity	kW	652,3	746,8	905,7	1024,5	1164,3	1325,5	1446,9	1589,7	1721,1	1960,7	2149,5	2349,3
Input power	kW	121,4	137,8	167,7	189,5	213,7	242,9	270,4	296,6	317,6	359,9	406,3	445,4
Cooling total input current	A	208,0	239,0	275,0	310,0	341,0	401,0	447,0	493,0	509,0	598,0	667,0	739,0
EER	W/W	5,37	5,42	5,40	5,41	5,45	5,46	5,35	5,36	5,42	5,45	5,29	5,28
Water flow rate system side	l/h	112179	128411	155723	176117	200144	227870	248717	273259	295856	337027	369472	403784
Pressure drop system side	kPa	51	41	38	29	33	45	32	38	43	55	51	30
Water flow rate source side	l/h	132175	151199	183520	207646	235653	268115	293728	322600	348857	396964	437212	478412
Pressure drop source side	kPa	49	50	49	49	50	49	48	46	34	32	32	36
<b>Heating performance 40 °C / 45 °C (2)</b>													
Heating capacity	kW	726,4	828,1	1001,4	1138,6	1283,2	1459,8	1589,2	1809,3	1911,8	2159,8	2376,5	2610,0
Input power	kW	154,8	174,8	209,3	234,9	264,8	302,9	332,5	371,1	396,0	450,7	504,3	547,7
Heating total input current	A	260,0	298,0	339,0	381,0	418,0	492,0	545,0	606,0	624,0	733,0	812,0	900,0
COP	W/W	4,69	4,74	4,78	4,85	4,85	4,82	4,78	4,88	4,83	4,79	4,71	4,77
Water flow rate system side	l/h	126142	143812	173923	197757	222889	253571	276062	314312	332129	375231	412895	453465
Pressure drop system side	kPa	45	45	44	45	45	44	43	44	31	28	28	32
Water flow rate source side	l/h	168271	191878	232387	264585	298364	339696	368017	421779	444410	502013	549582	603144
Pressure drop source side	kPa	114	92	85	65	73	101	70	91	97	122	112	66

(1) Date 14S11:2018; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C  
(2) Date 14S11:2018; Water user side 40 °C / 45 °C; Water source side 10 °C / 7 °C

## ENERGY INDICES (REG. 2016/2281 EU)

Size		2502	2802	3202	3602	4202	4802	5602	6402	6703	7203	8403	9603
<b>SEER - 12/7 (EN14825: 2018) (1)</b>													
SEER	°	W/W	-	-	-	-	-	-	-	6,88	6,98	7,02	6,85
	A	W/W	7,06	7,19	7,07	7,23	7,24	7,18	7,01	7,14	7,37	7,44	7,34
Seasonal efficiency	°	%	-	-	-	-	-	-	-	272.3%	276.2%	277.7%	270.8%
	A	%	279.5%	284.6%	279.8%	286.3%	286.5%	284.3%	277.3%	282.4%	291.9%	294.5%	289.5%

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

## PERFORMANCE SPECIFICATIONS EVAPORATING UNITS

### WFN - AE- gas R134a

Size		2502	2802	3202	3602	4202	4802	5602	6402	6703	7203	8403	9603
<b>Evaporator: E</b>													
<b>Cooling performance 12 °C / 7 °C - gas R134a (1)</b>													
Cooling capacity	kW	584,6	668,6	803,3	911,8	1043,5	1186,8	1284,6	1414,9	1544,3	1758,8	1912,5	2076,9
Input power	kW	143,3	163,2	196,5	222,8	249,8	283,2	317,9	349,1	373,7	422,6	474,7	523,3
Cooling total input current	A	246,7	282,2	326,3	368,7	405,5	472,6	525,9	578,3	606,7	705,8	785,6	867,1
EER	W/W	4,08	4,10	4,09	4,09	4,18	4,19	4,04	4,05	4,13	4,16	4,03	3,97
Evaporator water flow rate	l/h	100443	114870	138020	156649	179280	203906	220716	243093	265322	302189	328596	356829
Pressure drop evaporator side	kPa	41	33	30	23	27	36	25	30	35	44	40	23
<b>Length of refrigerant lines from/to 0 - 10 m</b>													
Gas line (C1)	Ø	67,0	67,0	67,0	76,0	76,0	88,9	88,9	88,9	76,0	88,9	88,9	88,9
Gas line (C2)	Ø	67,0	67,0	67,0	76,0	76,0	88,9	88,9	88,9	76,0	88,9	88,9	88,9
Gas line (C3)	Ø	-	-	-	-	-	-	-	42,0	76,0	88,9	88,9	88,9
Liquid line (C1)	Ø	42,0	42,0	42,0	42,0	54,0	54,0	54,0	54,0	54,0	54,0	54,0	54,0
Liquid line (C2)	Ø	42,0	42,0	42,0	42,0	54,0	54,0	54,0	54,0	54,0	54,0	54,0	54,0
Liquid line (C3)	Ø	-	-	-	-	-	-	-	-	54,0	54,0	54,0	54,0

(1) Service side water 12 °C / 7 °C; Condensing temperature 45 °C

### WFN - °E- gas R134a

Size		6703	7203	8403	9603
<b>Evaporator: E</b>					
<b>Cooling performance 12 °C / 7 °C - gas R134a (1)</b>					
Cooling capacity	kW	1500,1	1704,7	1830,1	1998,5
Input power	kW	375,4	424,4	474,7	524,9
Cooling total input current	A	609,0	708,0	786,0	869,0
EER	W/W	4,00	4,02	3,86	3,81
Evaporator water flow rate	l/h	257735	292888	314432	343357
Pressure drop evaporator side	kPa	36	41	29	35
<b>Length of refrigerant lines from/to 0 - 10 m</b>					
Gas line (C1)	Ø	76,0	88,9	88,9	88,9
Gas line (C2)	Ø	76,0	88,9	88,9	88,9
Gas line (C3)	Ø	76,0	88,9	88,9	88,9
Liquid line (C1)	Ø	54,0	54,0	54,0	54,0
Liquid line (C2)	Ø	54,0	54,0	54,0	54,0
Liquid line (C3)	Ø	54,0	54,0	54,0	54,0

(1) Service side water 12 °C / 7 °C; Condensing temperature 45 °C

## ELECTRIC DATA

Size		2502	2802	3202	3602	4202	4802	5602	6402	6703	7203	8403	9603
<b>Electric data</b>													
Maximum current (FLA)	°	A	-	-	-	-	-	-	-	913,0	1050,0	1166,0	1281,0
	A	A	365,0	416,0	486,0	549,0	609,0	700,0	777,0	854,0	913,0	1050,0	1166,0
Peak current (LRA)	°	A	-	-	-	-	-	-	-	1198,0	1353,0	1585,0	1774,0
	A	A	500,0	552,0	682,0	743,0	894,0	1003,0	1197,0	1347,0	1198,0	1353,0	1585,0

## GENERAL TECHNICAL DATA

Size			2502	2802	3202	3602	4202	4802	5602	6402	6703	7203	8403	9603
<b>Compressor</b>														
Type	°A	type												
Compressor regulation	°A	Type												
Number	°A	no.	2	2	2	2	2	2	2	2	3	3	3	3
Circuits	°A	no.	2	2	2	2	2	2	2	2	3	3	3	3
Refrigerant	°A	type												
	°													
Refrigerant load circuit 1 (1)	A	kg	50,0	53,0	81,0	71,0	70,0	123,0	124,0	121,0	106,0	104,0	110,0	120,0
	°	kg	-	-	-	-	-	-	-	-	107,0	115,0	136,0	157,0
Refrigerant load circuit 2 (1)	A	kg	50,0	53,0	81,0	71,0	70,0	123,0	124,0	121,0	106,0	104,0	110,0	120,0
	°	kg	-	-	-	-	-	-	-	-	107,0	115,0	136,0	157,0
Refrigerant load circuit 3 (1)	A	kg	-	-	-	-	-	-	-	-	107,0	115,0	136,0	157,0
	A	kg	-	-	-	-	-	-	-	-	106,0	104,0	110,0	120,0
<b>System side heat exchanger</b>														
Type	°A	type												
Number	°A	no.	1	1	1	1	1	1	1	1	1	1	1	1
Connections (in/out)	°A	Type												
	°	Ø	-	-	-	-	-	-	-	-	10"	10"	10"	10"
Sizes (in/out)	A	Ø	8"	8"	8"	8"	10"	10"	10"	10"	-	-	-	-
<b>Source side heat exchanger</b>														
Type	°A	type												
Number	°A	no.	2	2	2	2	2	2	2	2	3	3	3	3
Connections (in/out)	°A	Type												
	°	Ø	-	-	-	-	-	-	-	-	5"	5"	6"	6"
Sizes (in/out)	A	Ø	4"	4"	4"	4"	5"	6"	6"	6"	-	-	-	-

(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.

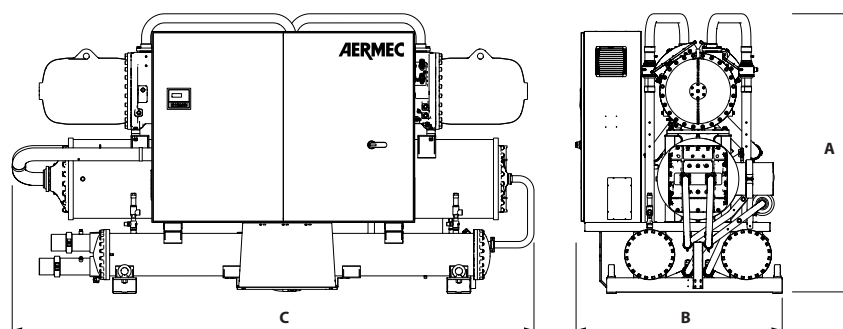
## SOUND DATA

### Sound data calculated with functioning in cooling mode - R134a gas

Size			2502	2802	3202	3602	4202	4802	5602	6402	6703	7203	8403	9603
<b>Standard equipment</b>														
	°	dB(A)	-	-	-	-	-	-	-	-	97,0	97,2	99,5	100,0
Sound power level (1)	A	dB(A)	93,5	94,0	94,0	94,5	95,0	95,5	97,5	98,0	97,0	97,2	99,5	100,0
<b>Silenced equipment</b>														
	°	dB(A)	-	-	-	-	-	-	-	-	91,1	90,2	92,8	93,3
Sound power level (1)	A	dB(A)	86,6	86,6	87,5	88,2	89,1	88,5	90,8	91,3	91,1	90,2	92,8	93,3
<b>Super silenced equipment</b>														
	°	dB(A)	-	-	-	-	-	-	-	-	88,1	87,3	89,8	90,3
Sound power level (1)	A	dB(A)	83,6	83,6	84,5	85,2	86,1	85,6	87,8	88,3	88,1	87,3	89,8	90,3

(1) Sound power: calculated in agreement with the Standard UNI EN ISO 9614-2, in compliance with that requested by Eurovent certification.

## DIMENSIONS



Size			2502	2802	3202	3602	4202	4802	5602	6402	6703	7203	8403	9603
<b>Dimensions and weights - standard configuration</b>														
A	°	mm	-	-	-	-	-	-	-	-	2250	2250	2250	2250
	A	mm	2000	2075	2195	2195	2340	2432	2440	2432	2250	2250	2250	2250
B	°	mm	-	-	-	-	-	-	-	-	2200	2200	2200	2200
	A	mm	1500	1500	1575	1575	1585	1775	1775	1820	2200	2200	2200	2200
C	°	mm	-	-	-	-	-	-	-	-	5650	5650	5650	5650
	A	mm	4320	4345	4380	4380	4395	4535	4605	4605	5650	5650	5650	5650
Empty weight	°	kg	-	-	-	-	-	-	-	-	9330	9910	10130	10200
	A	kg	3810	4100	5690	5750	6300	6670	6970	7070	10320	11670	12270	12360
<b>Dimensions and weights - quiet configuration</b>														
A	°	mm	-	-	-	-	-	-	-	-	2250	2250	2250	2250
	A	mm	2000	2075	2195	2195	2340	2432	2440	2432	2250	2250	2250	2250
B	°	mm	-	-	-	-	-	-	-	-	2200	2200	2200	2200
	A	mm	1500	1500	1575	1575	1585	1775	1775	1820	2200	2200	2200	2200
C	°	mm	-	-	-	-	-	-	-	-	5650	5650	5650	5650
	A	mm	4320	4345	4650	4650	4600	5015	5150	5150	5650	5650	5650	5650
Empty weight	°	kg	-	-	-	-	-	-	-	-	9890	10470	10760	10830
	A	kg	4120	4410	6050	6120	6670	7040	7420	7490	10880	12230	12950	12990
<b>Super silenced equipment dimensions and weights</b>														
A	°	mm	-	-	-	-	-	-	-	-	2250	2250	2250	2250
	A	mm	2000	2075	2195	2195	2340	2432	2440	2432	2250	2250	2250	2250
B	°	mm	-	-	-	-	-	-	-	-	2200	2200	2200	2200
	A	mm	1500	1500	1575	1575	1585	1775	1775	1820	2200	2200	2200	2200
C	°	mm	-	-	-	-	-	-	-	-	5650	5650	5650	5650
	A	mm	4320	4345	4650	4650	4600	5015	5150	5150	5650	5650	5650	5650
Empty weight	°	kg	-	-	-	-	-	-	-	-	10540	11120	11510	11580
	A	kg	4500	4790	6480	6550	7100	7470	7890	7990	11530	12880	13650	13740

■ For the sizes of D-T-E versions please contact the factory.

Aermec reserves the right to make any modifications deemed necessary.  
All data is subject to change without notice. Aermec does not assume  
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