

# HWS

## Water cooled heat pump reversible water side

Cooling capacity 147 ÷ 369 kW  
Heating capacity 165 ÷ 778 kW



- High efficiency all in Class A Eurovent
- Unit optimised for high condenser temperatures.
- Optimised for geothermal applications
- Available also with R513A (XP10) refrigerant



### 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

L Standard silenced

### FEATURES

#### Operating field

Full-load operation with the production of chilled water 4-16 °C, and the possibility to produce also hot water for the condenser up to 60 °C. (for more information, refer to the technical documentation).

#### Units mono or dual-circuit

Depending on the size, the units are one-circuit or two-circuit models to ensure maximum efficiency with full loads as well as partial loads and guarantee operation continuity if one of the circuits stop.

They are equipped with screw compressors and system and source side plate heat exchangers.

#### Integral acoustic enclosure

For all versions, if required, it is available the integral acoustic enclosure, which can further reduce the sound level.

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

Microprocessor control, with keyboard and LCD display, for easy access on the unit with 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:** 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 tablet 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](http://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.

**PRV3:** Allows you to control the chiller 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.

## FACTORY FITTED ACCESSORIES

### ACCESSORIES COMPATIBILITY

Model	Ver	0601	0701	0801	0901	1101	1202	1402	1602	1802	2002	2202	2502	2802
AER48SP1	°L	*	*	*	*	*								
AER48SP1 x no. 2	°L						*	*	*	*	*	*	*	*
AERBAC-ONE	°L	*	*	*	*	*								
AERBAC-ONE x no. 2	°L						*	*	*	*	*	*	*	*
AERBACP	°L	*	*	*	*	*								
AERBACP x no. 2	°L						*	*	*	*	*	*	*	*
AERNET	°L	*	*	*	*	*	*	*	*	*	*	*	*	*
MULTICHILLER-EVO	°L	*	*	*	*	*	*	*	*	*	*	*	*	*
PRV3	°L	*	*	*	*	*	*	*	*	*	*	*	*	*
SGD	°L	*	*	*	*	*	*	*	*	*	*	*	*	*

### Antivibration

Version	Heat recovery	Evaporator	0601	0701	0801	0901	1101
°	°	°	AVX651	AVX651	AVX652	AVX652	AVX656
°	°D	E	-	AVX668	AVX668	AVX668	AVX669
°	D	°	-	AVX651	AVX652	AVX652	AVX654
°	T	°	-	AVX652	AVX655	AVX655	AVX657
L	°	°	AVX651	AVX651	AVX652	AVX652	AVX656
L	°D	E	-	AVX668	AVX668	AVX668	AVX669
L	D	°	-	AVX651	AVX652	AVX652	AVX654
L	T	°	-	AVX652	AVX655	AVX655	AVX657

Version	Heat recovery	Evaporator	1202	1402	1602	1802	2002
°	°	°	AVX658	AVX658	AVX658	AVX659	AVX667
°	°	E	-	AVX670	AVX670	AVX670	AVX671
°	D	°	AVX658	AVX658	-	-	-
°	D	E	-	AVX670	-	-	-
°	T	°	-	AVX662	-	-	-
L	°	°	AVX658	AVX658	AVX658	AVX659	AVX667
L	°	E	-	AVX670	AVX670	AVX670	AVX671
L	D	°	AVX658	AVX658	-	-	-
L	D	E	-	AVX670	-	-	-
L	T	°	-	AVX662	-	-	-

Version	Heat recovery	Evaporator	2202	2502	2802
°	°	°	AVX661	AVX661	AVX661
°	°	E	AVX672	AVX672	AVX672
°	D	°E	-	-	-
°	T	°	-	-	-
L	°	°	AVX661	AVX661	AVX661
L	°	E	AVX672	AVX672	AVX672
L	D	°E	-	-	-
L	T	°	-	-	-

- not available

### Power factor correction

### Acoustic kit

## CONFIGURATOR

Field	Description
<b>1,2,3</b>	<b>HWS</b>
<b>4,5,6,7</b>	<b>Size</b> 0601, 0701, 0801, 0901, 1101, 1202, 1402, 1602, 1802, 2002, 2202, 2502, 2802
<b>8</b>	<b>Operating field</b>
X	Electronic thermostatic expansion valve
°	Standard mechanic thermostatic valve
<b>9</b>	<b>Model</b>
°	Heat pump reversible on the water side
<b>10</b>	<b>Heat recovery</b>
D	With desuperheater (1)
T	With total recovery (2)
°	Without heat recovery
<b>11</b>	<b>Version</b>
°	Standard
L	Standard silenced

Field	Description
<b>12</b>	<b>Evaporator</b>
E	Evaporating unit (3)
°	Standard
<b>13</b>	<b>Power supply</b>
2	230V ~ 3 50Hz with fuses
4	230V ~ 3 50Hz with magnet circuit breakers
5	500V ~ 3 50Hz with fuses
8	400V ~ 3 50Hz with magnet circuit breakers
9	500V ~ 3 50Hz with magnet circuit breakers
°	400V ~ 3 50Hz with fuses

- (1) The temperature of the water in the heat exchanger inlet must never drop below 35°C. The desuperheater is not available for sizes 0601 and 1202.  
 (2) The desuperheater and total recovery are not available for sizes 0601 and 1202; T are not compatible with E.  
 (3) Shipped with holding charge only. Option not available for size 0601 and 1202.

## PERFORMANCE SPECIFICATIONS

### HWS - °/L

Size			0601	0701	0801	0901	1101	1202	1402
<b>Cooling performance 12 °C / 7 °C (1)</b>									
Cooling capacity	°L	kW	146,7	178,8	212,7	233,7	293,7	293,7	356,6
Input power	°L	kW	31,7	38,0	43,2	49,2	59,7	63,5	76,8
Cooling total input current	°L	A	56,00	66,00	74,00	82,00	101,00	112,00	132,00
EER	°L	W/W	4,63	4,70	4,92	4,75	4,92	4,62	4,64
Water flow rate source side	°L	l/h	30.474	37.085	43.795	48.419	60.454	60.948	73.996
Pressure drop source side	°L	kPa	40	27	27	26	31	53	50
Water flow rate system side	°L	l/h	25.256	30.754	36.596	40.204	50.513	50.513	61.337
Pressure drop system side	°L	kPa	29	20	20	19	23	38	36
<b>Heating performance 40 °C / 45 °C (2)</b>									
Heating capacity	°L	kW	163,9	199,3	234,8	260,1	324,0	327,5	397,5
Input power	°L	kW	38,0	45,4	51,6	58,8	71,4	76,3	92,2
Heating total input current	°	A	66,50	78,30	87,80	97,30	119,90	132,90	156,70
	L	A	66,00	78,00	88,00	97,00	120,00	133,00	157,00
COP	°L	W/W	4,31	4,39	4,55	4,42	4,54	4,29	4,31
Water flow rate source side	°L	l/h	36.968	45.016	53.566	58.847	73.936	73.936	89.780
Pressure drop source side	°L	kPa	62	43	43	41	49	81	77
Water flow rate system side	°L	l/h	28.421	34.581	40.752	45.134	56.255	56.843	69.010
Pressure drop system side	°L	kPa	35	23	23	23	27	46	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

Size			1602	1802	2002	2202	2502	2802
<b>Heating performance 40 °C / 45 °C (1)</b>								
Heating capacity	°	kW	465,7	522,8	584,8	646,9	730,9	799,6
	L	kW	465,7	522,8	584,8	646,9	730,9	799,6
Input power	°L	kW	104,0	121,3	133,2	145,1	165,9	181,5
Heating total input current	°	A	175,60	194,60	218,40	240,90	276,50	279,80
	L	A	176,00	195,00	218,00	241,00	277,00	280,00
COP	°L	W/W	4,48	4,31	4,39	4,46	4,41	4,40
Water flow rate source side	°L	l/h	106.378	118.198	133.036	147.873	166.735	182.932
Pressure drop source side	°L	kPa	86	88	96	103	114	137
Water flow rate system side	°	l/h	80.851	90.770	101.543	112.315	126.902	138.829
	L	l/h	80.851	90.770	101.543	112.315	126.902	138.828
Pressure drop system side	°L	kPa	48	50	54	58	65	79

- (1) Date 14511:2022; Water user side 40 °C / 45 °C; Water source side 10 °C / 7 °C

## Performance specifications Evaporating units

### HWS - E

Size			0601	0701	0801	0901	1101	1202	1402	1602	1802	2002	2202	2502	2802
<b>Evaporator: E</b>															
<b>Cooling performance 12 °C / 7 °C (1)</b>															
Cooling capacity	°L	kW	-	163,0	192,0	212,0	263,0	-	326,0	385,0	428,0	481,0	539,0	601,0	676,0
Input power	°L	kW	-	41,0	47,0	54,0	66,0	-	82,0	93,0	108,0	120,0	132,0	146,0	159,0
Cooling total input current	°L	A	-	72,00	81,00	90,00	113,00	-	144,00	162,00	180,00	204,00	226,00	254,00	272,00
EER	°L	W/W	-	3,98	4,09	3,93	3,98	-	3,98	4,14	3,96	4,01	4,08	4,12	4,25
Water flow rate system side	°L	l/h	-	28.005	32.988	36.424	45.186	-	56.011	66.147	73.535	82.641	92.606	103.259	116.144
Pressure drop system side	°L	kPa	-	20	20	19	23	-	36	40	41	45	48	53	62

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

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

Size			0601	0701	0801	0901	1101	1202	1402	
<b>SEER - 12/7 (EN14825: 2018)</b>										
SEER	°L	W/W	5,01	5,28	5,57	5,43	5,59	5,36	5,42	
Seasonal efficiency	°L	%	197,40	208,20	219,80	214,20	220,60	211,40	213,60	
Water Regulation (1)	°L	type	FW/VO-FW							
<b>Performance in average ambient conditions (average) - 55 °C (2)</b>										
Pdesignh	°L	kW	215,00	257,00	293,00	330,00	-	-	-	
SCOP	°L	W/W	4,55	4,60	4,73	4,58	-	-	-	
ηsh	°L	%	174,00	176,00	181,00	175,00	-	-	-	
Water Regulation (1)	°L	type	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			0601	0701	0801	0901	1101	1202	1402	1602	1802	2002	2202	2502	2802
<b>Electric data</b>															
Maximum current (FLA)	°L	A	105,0	124,0	144,0	162,0	182,0	210,0	248,0	288,0	324,0	344,0	364,0	430,0	430,0
Peak current (LRA)	°L	A	180,0	163,0	192,0	229,0	300,0	285,0	287,0	336,0	391,0	462,0	482,0	575,0	575,0

## GENERAL TECHNICAL DATA

### Refrigerant circuit

Size			0601	0701	0801	0901	1101	1202	1402	1602	1802	2002	2202	2502	2802
<b>Compressor</b>															
Type	°L	type	Screw												
Compressor regulation	°L	Type	On-Off												
Number	°L	no.	1	1	1	1	1	2	2	2	2	2	2	2	2
Circuits	°L	no.	1	1	1	1	1	2	2	2	2	2	2	2	2
Refrigerant	°L	type	R134a												
Total refrigerant charge (1)	°L	kg	18,00	22,00	22,00	25,00	38,00	36,00	42,00	44,00	50,00	59,00	68,00	70,00	80,00
Potential global heating (GWP)	°L		1430												
Equivalent CO <sub>2</sub>	°L	tCO <sub>2</sub> eq	25,74	31,46	31,46	35,75	54,34	51,48	60,06	62,92	71,50	84,37	97,24	100,10	114,40

(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			0601	0701	0801	0901	1101	1202	1402	1602	1802	2002	2202	2502	2802
<b>System side heat exchanger</b>															
Type	°L	type	Braze plate												
Number	°L	no.	1	1	1	1	1	1	1	1	1	1	1	1	1
<b>System side hydraulic connections</b>															
Connections (in/out)	°L	Type	Grooved joints												
Sizes (in/out)	°L	Ø	3"												

### Source side heat exchanger

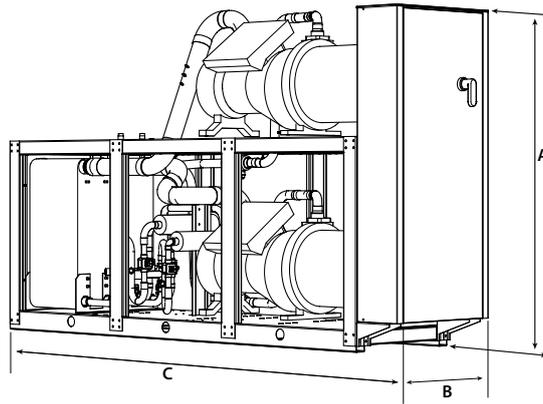
Size			0601	0701	0801	0901	1101	1202	1402	1602	1802	2002	2202	2502	2802
<b>Source side heat exchanger</b>															
Type	°L	type	Braze plate												
Number	°L	no.	1	1	1	1	1	1	1	1	1	1	1	1	1
<b>Source side hydraulic connections</b>															
Connections (in/out)	°L	Type	Grooved joints												
Sizes (in/out)	°L	Ø	3"												

## Sound data

Size			0601	0701	0801	0901	1101	1202	1402	1602	1802	2002	2202	2502	2802
<b>Sound data calculated in cooling mode (1)</b>															
Sound power level	°	dB(A)	85,0	86,0	86,0	86,0	92,0	88,0	89,0	89,0	89,0	93,0	95,0	95,0	95,0
	L	dB(A)	77,0	78,0	78,0	78,0	84,0	80,0	81,0	81,0	81,0	85,0	87,0	87,0	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			0601	0701	0801	0901	1101	1202	1402	1602	1802	2002	2202	2502	2802
<b>Dimensions and weights</b>															
A	°	mm	1.775	1.775	1.775	1.775	1.775	1.975	1.975	1.975	2.005	1.985	2.065	2.065	2.065
	L	mm	1.775	1.775	1.775	1.775	1.775	2.120	2.120	2.120	2.120	2.120	2.120	2.120	2.120
B	°L	mm	810	810	810	810	810	810	810	810	810	810	810	810	810
C	°L	mm	2.960	2.960	2.960	2.960	3.360	2.960	2.960	2.960	2.960	3.360	3.360	3.360	3.360
Empty weight	°L	kg	1.101	1.251	1.301	1.357	1.788	1.738	2.028	2.097	2.169	2.598	3.000	3.095	3.095

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