HWSG_H

Water/water heat pump for heating only

Heating capacity 145 ÷ 450 kW

- **Unit optimised for high condenser temperatures.**
- **Domestic hot water production on the condenser side up to 80°C.**
- **Low GWP refrigerant R1234ze or R515B**

DESCRIPTION

Non-reversible water-water heat pump for the production of high-temperature water, uses low environmental impact refrigerants R1234ze or R515B, ensuring high energy efficiency and compliance with the latest sustainability requirements.

The unit is specifically developed for the production of domestic hot water up to 80°C, making it particularly suitable for high-temperature heating systems, industrial processes, and upgrading existing buildings for energy efficiency, making it possible to enhance existing plant infrastructures.

The refrigeration circuit is equipped with screw compressors and electronic expansion valves (EEV), which are also optimised for operation at high evaporation temperatures. The plate heat exchangers on the utility side and on the source side guarantee reduced pressure drops and reliability in the long term.

The unit is available in a standard or low noise version, with complete cowling and dedicated noise attenuation solutions, to meet even the most demanding acoustic comfort requirements.

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

VERSIONS

° Standard
L Standard silenced

FEATURES

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.

Electronic expansion valve

The use of the electronic expansion valve offers significant benefits, especially when the unit is operating with partial loads, increasing the energy efficiency of the unit. It is standard in all sizes.

CONTROL

pCO^5 control type

Microprocessor control complete with a touchscreen keypad for simple and intuitive navigation between the various screens, making it possible to modify the operating parameters, view the real time trend of certain values in graphic format and permit the complete management of alarms and their logs.

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 board designed to receive external signals from the electricity grid or energy suppliers, converting them into Modbus commands for our units. This system allows you to vary the operation of our generators to optimise consumption based on electricity prices, grid load or the availability of renewable sources. The key principle of the standard is demand

response: shifting consumption from peak demand times to times when energy is cheaper and more environmentally sustainable.

AVX: Spring anti-vibration supports.

ACCESSORIES COMPATIBILITY

Model	Ver	0701	0801	1101	1402	1602	1802	2202
AER485P1	°,L	•	•	•				
AER485P1 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	•	•	•	•	•	•	•
PGD1	°,L	•	•	•	•	•	•	•
SGD	°,L	•	•	•	•	•	•	•

Antivibration

Ver	0701	0801	1101	1402	1602	1802	2202
Refrigerant gas: G, °							
°, L	AVX651	AVX652	AVX656	AVX658	AVX658	AVX667	AVX661

CONFIGURATOR

Field	Description
1,2,3,4	**HWSG**
5,6,7,8	**Size** 0701, 0801, 1101, 1402, 1602, 1802, 2202
9	**Operating field**
W	Electronic valve for high evaporations (source side water from +16°C to 40°C)
X	Electronic valve (source side water from +0°C to 20°C)
10	**Model**
H	High temperature
11	**Heat recovery**
°	Without heat recovery
12	**Version**
°	Standard
L	Standard silenced
13	**Evaporator**
°	Standard
14	**Power supply**
°	400V ~ 3 50Hz with fuses
15	**Refrigerant gas**
G	R515B
°	R1234ze(E)

PERFORMANCE SPECIFICATIONS

Size			0701	0801	1101	1402	1602	1802	2202
Refrigerant gas: G, °									
Heating performances (Water user side 47 °C / 55 °C; Water source side 10 °C / 7 °C) (1)									
Heating capacity	°,L	kW	145,3	168,4	235,3	278,9	328,0	400,7	450,5
Input power	°,L	kW	38,8	44,8	62,6	78,0	88,6	110,1	127,0
Input current	°,L	A	75,8	87,0	124,9	152,1	172,6	224,1	251,9
COP	°,L	W/W	3,75	3,76	3,76	3,58	3,70	3,64	3,55
Water flow rate system side	°,L	l/h	15.827	18.347	26.636	30.377	35.724	43.633	49.055
Pressure drop system side	°,L	kPa	7	6	8	13	14	17	21
Water flow rate source side	°,L	l/h	31.152	36.136	50.522	58.949	70.166	85.241	94.956
Pressure drop source side	°,L	kPa	17	16	20	34	34	39	39

(1) Date 14511:2022; Water user side 47 °C / 55 °C; Water source side 10 °C / 7 °C

ENERGY INDICES (REG. 2016/2281 EU)

Size			0701	0801	1101	1402	1602	1802	2202
Refrigerant gas: G, °									
Performance in average ambient conditions (average) - 55 °C (1)									
Pdesignh	°,L	kW	143,20	166,00	231,90	274,90	323,30	395,00	444,10
SCOP	°,L	W/W	4,79	4,60	4,34	4,50	4,59	4,47	4,48
ηsh	°,L	%	183,70	175,80	165,70	172,00	175,70	170,80	171,20
Water Regulation (2)	°,L	type	VW/VO-VW	VW/VO-VW	VW/VO-VW	VW/VO-VW	VW/VO-VW	VW/VO-VW	VW/VO-VW

(1) Efficiencies for average temperature applications (55 °C)
(2) 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.

ELECTRIC DATA

Size			0701	0801	1101	1402	1602	1802	2202
Refrigerant gas: G, °									
Electric data									
Heating total input current	°,L	A	64,60	73,59	105,77	128,45	144,41	188,18	211,44
400V ~ 3 50Hz									
Maximum current (FLA)	°,L	A	134,0	152,0	229,0	268,0	305,0	404,0	459,0
Peak current (LRA)	°,L	A	229,0	255,0	341,0	363,0	407,0	516,0	570,0

GENERAL TECHNICAL DATA

Refrigerant circuit

Size			0701	0801	1101	1402	1602	1802	2202
Refrigerant gas: G, °									
Compressor									
Type	°,L	type				Screw			
Compressor regulation	°,L	type				On-Off			
Number	°,L	no.	1	1	1	2	2	2	2
Circuits	°,L	no.	1	1	1	2	2	2	2

System side heat exchanger

Size			0701	0801	1101	1402	1602	1802	2202
Refrigerant gas: G, °									
System side heat exchanger									
Type	°,L	type				Brazed plate			
Number	°,L	no.	1	1	1	1	1	1	1
Connections (in/out)	°,L	Type				Grooved joints			
Sizes (in/out)	°,L	Ø				3"			

Source side heat exchanger

Size			0701	0801	1101	1402	1602	1802	2202
Refrigerant gas: G, °									
Source side heat exchanger									
Type	°,L	type				Brazed plate			
Number	°,L	no.	1	1	1	1	1	1	1
Connections (in/out)	°,L	Type				Grooved joints			
Sizes (in/out)	°,L	Ø				3"			

Sound data

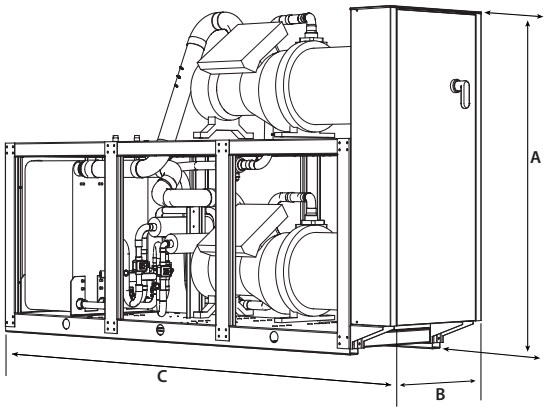
Size			0701	0801	1101	1402	1602	1802	2202
Refrigerant gas: G									
Sound data calculated in heating mode (1)									
Sound power level	°	dB(A)	88,0	88,0	94,0	92,0	91,0	91,0	97,0
	L	dB(A)	80,0	80,0	86,0	83,9	83,0	83,0	89,0

(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).

Size			0701	0801	1101	1402	1602	1802	2202
Refrigerant gas: °									
Sound data calculated in heating mode (1)									
Sound power level	°	dB(A)	88,0	88,0	94,0	92,0	91,0	91,0	97,0
	L	dB(A)	84,0	84,0	90,0	88,0	87,0	87,0	93,0

(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			0701	0801	1101	1402	1602	1802	2202
Refrigerant gas: G, °									
Dimensions and weights									
A	°	mm	1775	1775	1775	1975	1975	2005	2065
	L	mm	1775	1775	1775	2120	2120	2120	2120
B	°,L	mm	810	810	810	810	810	810	810
C	°,L	mm	2960	2960	3360	2960	2960	2960	3360
Empty weight	°	kg	1.251	1.301	1.788	2.028	2.097	2.169	3.000
	L	kg	1.379	1.429	1.934	2.256	2.325	2.397	3.257

Aermec S.p.A.
Via Roma, 996 - 37040 Bevilacqua (VR) - Italia
Tel. 0442633111 - Telefax 044293577
www.aermec.com