

WWM

Water cooled heat pump reversible water side

Cooling capacity 96 kW
Heating capacity 110 kW

- Compact module
- Single or dual refrigerant circuit
- Reliable and modular
- Max 2 levels of stackable units
- Up to 36 connectable units (see the modularity options)
- Easy installation and maintenance



DESCRIPTION

Water cooled heat pump, for chilled and heated water production, refrigerant side, designed to meet air conditioning needs of residential and commercial buildings, or refrigeration needs of industrial applications. Indoor units equipped with hermetic scroll compressors and plate heat exchangers on both sides: user and source. The base, the structure and the panels are made of galvanized steel treated with polyester paint RAL 9003.

FEATURES

The accurate choice of components, the special configuration, and the possibility to connect several independent modules and manage them as if they are a single unit are all aspects that guarantee maximum output at full load, whilst ensuring continuous adaptation to the real service needs.

Bus Bar, to facilitate the electrical connections.

Modularity

Thanks to its modular construction, the installation can be adapted to suit specific system development needs whilst guaranteeing improved safety and reliability.

As a result, the cooling capacity can be easily increased over time, at a limited cost.

WWM consists of independent 96 kW modules that can be linked together to reach a capacity of 3456 kW.

With WWM, you can combine up to 36 units designed to minimise the overall dimensions.

The modules are easy to install and link together, thanks to the connections with grooved joints on the hydronic circuit.

Refrigerant circuit

The refrigerant circuit can be easily disconnected from the unit, maintaining all the functions of the hydronic circuit to ensure correct system operation.

Hydraulic components

WWM version PN10 has the **switch**; WWM version PN21 mounts the **transmitter**.

Fitted as standard, with **butterfly shut-off valves** on both hydronic lines for disconnecting the circuit when maintenance needs to be carried out.

In the event of a variable flow rate, the **motorised hydronic valves** can intercept one module or more in order to reduce the flow rate when there is a low thermal load level.

Very quiet

The WWM units stand out for their quiet operation.

Accurate unit sound-proofing, using good-quality sound absorbent material, means all the units work at low noise levels.

Units in parallel

MULTICHILLER_EVO (accessory) allows you to manage up to 9 units in parallel.

This accessory allow to maximise the total efficiency of the system based on work load, external air temperature conditions and water produced.

Each unit has its own electrical panel, guaranteeing continuity even if one module is not working due to malfunction.

CONTROL

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

— The presence of a programmable timer allows functioning time periods and a possible second set-point to be set.

— The control system includes the complete management of alarms and the alarm log.

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.

KWWM: Kit containing 4 caps with a diameter of 6" for the water manifolds.
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.

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.

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.

■ *The accessory PR4 should only be combined with the RS485 communication interface when the serial port is occupied by another device.*

FACTORY FITTED ACCESSORIES

CRATE_WWMH-A: Special crate for transport

CRATE_WWM°: Special crate for transport

ACCESSORIES COMPATIBILITY

Accessory	WWM05001H	WWM05001°	WWM05002H	WWM05002°
AER485P1	*	*	*	*
AERBAC-ONE	*	*	*	*
AERBACP	*	*	*	*
AERNET	*	*	*	*
KWWM	*	*	*	*
MULTICHILLER-EVO	*	*	*	*
SGD	*	*	*	*

For the control with MULTICHILLER EVO, nr.1 accessory AER485P1 is mandatory for every WWM of the system.

PR4

Accessory	WWM05001H	WWM05001°	WWM05002H	WWM05002°
PR4	*	*	*	*

Special crate for transport

Accessory	WWM05001H	WWM05001°	WWM05002H	WWM05002°
CRATE_WWMH-A	*	*	*	*
CRATE_WWM°		*		*

■ *CRATE_WWM°: 100 kg, CRATE_WWMH-A: 130 kg*

CONFIGURATOR

Field	Description
1,2,3	WWM
4,5,6,7	Size 0500
8	Operating field (1)
°	Standard mechanic thermostatic valve
9	Model
1	Single refrigerant circuit
2	Double refrigerant circuit
10	Hydraulic pressure rating
1	145 psi (PN10)
3	300 psi (PN21)
11	Hydraulic headers kit
H	6" Headers kit - PN21 standard carbon steel pipes declared in accordance with EN 10255
°	No headers provided

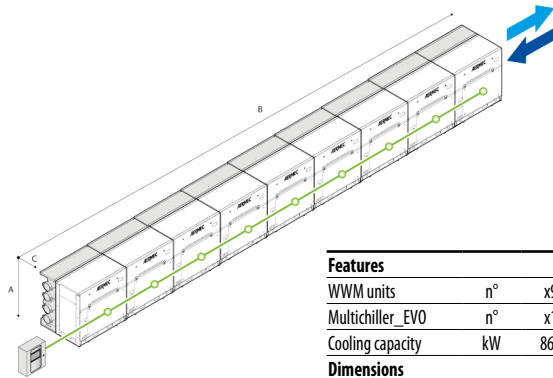
Field	Description
12	Power connection
B	With bus bars
°	Without bus bars
13	Power supply
°	400V ~ 3 50Hz with magnet circuit breakers
14	Electrical panel SCCR
°	10 kA control panel
15	Peak current reduction
R	With power factor device (2)
°	Without power factor device
16	Field for future development
°	-

(1) Water produced up to +4 °C

(2) Factory installed

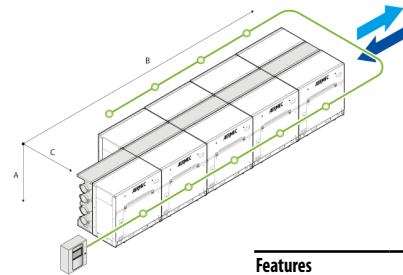
MODULARITY OPTIONS

**CONFIGURATION 1:
IN LINE**



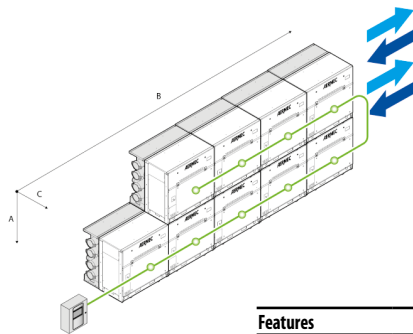
Features		
WWM units	n°	x9
Multichiller_EVO	n°	x1
Cooling capacity	kW	864
Dimensions		
A	mm	1300
B	mm	11970
C	mm	1150

**CONFIGURATION 2:
BACK TO BACK**



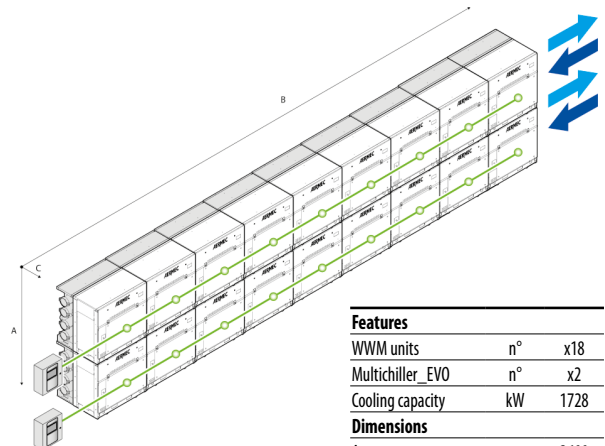
Features		
WWM units	n°	x9
Multichiller_EVO	n°	x1
Cooling capacity	kW	864
Dimensions		
A	mm	1300
B	mm	6650
C	mm	1850

**CONFIGURATION 3.1:
STACK IN LINE**



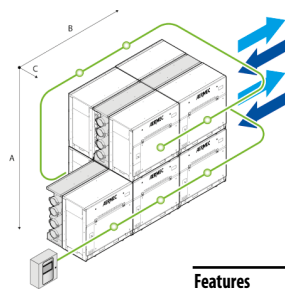
Features		
WWM units	n°	x9
Multichiller_EVO	n°	x1
Cooling capacity	kW	864
Dimensions		
A	mm	2600
B	mm	6650
C	mm	1150

**CONFIGURATION 3.2:
STACK IN LINE**



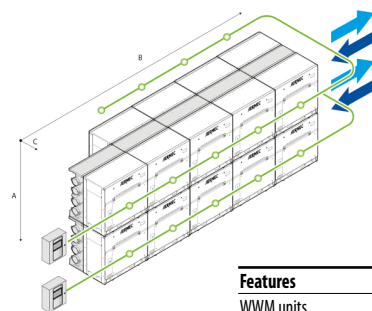
Features		
WWM units	n°	x18
Multichiller_EVO	n°	x2
Cooling capacity	kW	1728
Dimensions		
A	mm	2600
B	mm	11970
C	mm	1150

**CONFIGURATION 4.1:
STACK IN LINE BACK TO BACK**



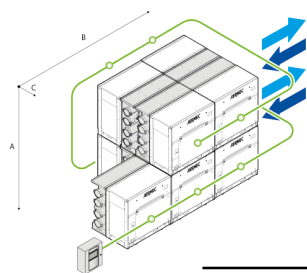
Features		
WWM units	n°	x9
Multichiller_EVO	n°	x1
Cooling capacity	kW	864
Dimensions		
A	mm	2600
B	mm	3990
C	mm	1850

**CONFIGURATION 4.2:
STACK IN LINE BACK TO BACK**



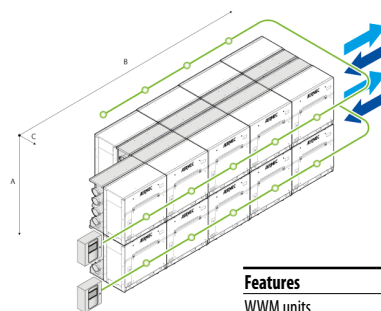
Features		
WWM units	n°	x18
Multichiller_EVO	n°	x2
Cooling capacity	kW	1728
Dimensions		
A	mm	2600
B	mm	6650
C	mm	1850

CONFIGURATION 5.1: STACK IN LINE BACK TO BACK DOUBLE



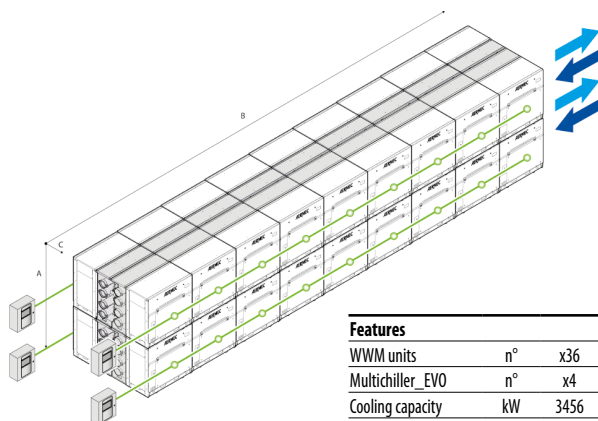
Features		
WWM units	n°	x9
Multichiller_EVO	n°	x1
Cooling capacity	kW	864
Dimensions		
A	mm	2600
B	mm	3990
C	mm	2300

CONFIGURATION 5.2: STACK IN LINE BACK TO BACK DOUBLE



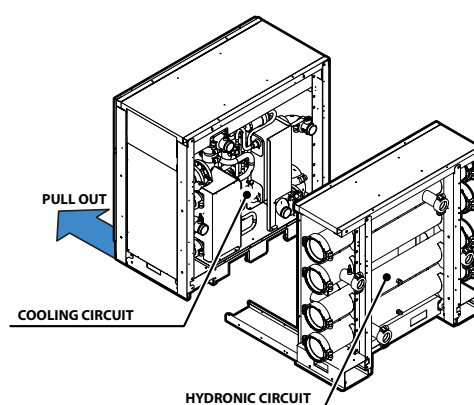
Features		
WWM units	n°	x18
Multichiller_EVO	n°	x2
Cooling capacity	kW	1728
Dimensions		
A	mm	2600
B	mm	6650
C	mm	2300

CONFIGURATION 5.3: STACK IN LINE BACK TO BACK DOUBLE



Features		
WWM units	n°	x36
Multichiller_EVO	n°	x4
Cooling capacity	kW	3456
Dimensions		
A	mm	2600
B	mm	11970
C	mm	2300

EASY MAINTENANCE



PERFORMANCE SPECIFICATIONS

WWM - Single refrigerant circuit "1" - Double refrigerant circuit "2"

		WWM05001°	WWM05002°
Cooling performance 12 °C / 7 °C (1)			
Cooling capacity	kW	96,0	95,2
Input power	kW	20,3	20,0
Cooling total input current	A	40,00	40,00
EER	W/W	4,74	4,76
Water flow rate source side	l/h	20.046	19.895
Pressure drop source side	kPa	34	23
Water flow rate system side	l/h	16.528	16.384
Pressure drop system side	kPa	24	17
Heating performance 40 °C / 45 °C (2)			
Heating capacity	kW	109,2	110,0
Input power	kW	24,8	24,1
Heating total input current	A	48,00	48,00
COP	W/W	4,41	4,57
Water flow rate system side	l/h	18.943	19.092
Pressure drop system side	kPa	30	21
Water flow rate source side	l/h	24.430	24.809
Pressure drop source side	kPa	52	39

(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 DATA

		WWM05001°	WWM05002°
SEER - 12/7 (EN14825:2018) with standard fans (1)			
SEER	W/W	6,12	5,37
Seasonal efficiency	%	241,8%	211,8%
UE 813/2013 performance in average ambient conditions (average) - 55 °C - Pdesignh ≤ 400 kW (2)			
Pdesignh	kW	138	140
SCOP	W/W	4,83	4,68
ηsh	%	185,0%	179,0%

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

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

ELECTRIC DATA

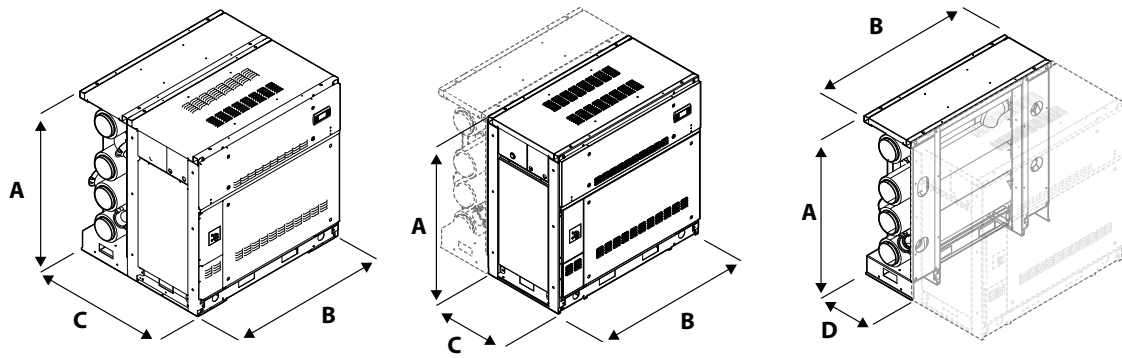
		WWM05001°	WWM05002°
Electric data			
Maximum current (FLA)	A	62,0	62,0
Peak current (LRA)	A	148,9	148,9

GENERAL TECHNICAL DATA

		WWM05001°	WWM05002°
Compressor			
Type	type	Scroll	Scroll
Number	no.	2	2
Circuits	no.	1	2
Refrigerant	type	R410A	R410A
Source side heat exchanger			
Type	type	Brazed plate	Brazed plate
Number	no.	1	1
Connections (in/out)	Type	Grooved joints	Grooved joints
Sizes (in/out)	Ø	6"	6"
System side heat exchanger			
Type	type	Brazed plate	Brazed plate
Number	no.	1	1
Connections (in/out)	Type	Grooved joints	Grooved joints
Sizes (in/out)	Ø	6"	6"
Sound data calculated in cooling mode (1)			
Sound power level	dB(A)	81,0	81,0
Sound pressure level (10 m)	dB(A)	49,5	49,5

(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



		WWM5001°	WWM5001H	WWM5002°	WWM5002H
Dimensions and weights					
A	mm	1.300	1.300	1.300	1.300
B	mm	1.330	1.330	1.330	1.330
C	mm	775	1.150	775	1.150
D	mm	-	452	-	452
Weights					
Weight empty + packaging	kg	700	930	700	930
Weight functioning	kg	711	1.042	711	1.042
Empty weight + packaging (with bus bars)	kg	736	966	736	966
Weight functioning (with bus bars)	kg	747	1.078	747	1.078
Hydraulic headers kit					
Weight empty + packaging	kg	-	230	-	230
Weight functioning	kg	-	330	-	330

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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