

# WWM 0500

## Water cooled heat pump reversible water side

Cooling capacity 31 ton  
Heating capacity 433,956 BTU/h

- 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-water offering chilled/hot water, designed to meet air conditioning needs in residential/commercial complexes or industrial applications. These are indoor units with hermetic scroll compressors, system side heat exchanger and plate source. The base, the structure and the panels are made of galvanized steel treated with polyester paint RAL 9003.

### FEATURES

The precise choice of components, the special configuration, and the possibility to connect several independent modules and manage them as if they were 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 31 ton, modules that can be linked together to reach a capacity of 1,124 ton.**

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

The modules are easy to install and link together from the hydronic point of view, thanks to the connections with grooved joints.

### Refrigerant circuit

The refrigerant circuit can easily be 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

The MULTICHILLER\_EVO (accessory) allows up to 9 units to be managed in parallel mode.

This accessory allows to maximise the total efficiency to the system under to work load, external air temperature conditions and water produced. Each unit has its own electrical panel, guaranteeing continuity even if one module malfunctions or goes into lockout.

### CONTROL

Microprocessor adjustment, with keyboard and LCD display, for easy access on the unit is 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 adjustment system includes the complete management of alarms and the alarm log.

## 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.

**KCABLEV\_WWM:** Kit Bus Bar, to facilitate the electrical connections.

**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, always ensuring constant flow rate to the evaporators.

## FACTORY FITTED ACCESSORIES

**CRATE\_WWM°:** Special crate for transport

**CRATE\_WWMH-A:** Special crate for transport

**KITIDRO\_WWM:** Water filter with connection pipe (diameter 6") with drain tap and additional bulb well (diameter ½") available to the installer.

**KREC\_WWM:** Cable entries box in order to facilitate the electrical installation.

## ACCESSORIES COMPATIBILITY

Accessory	WWM 0500°	WWM 0500A	WWM 0500H
AER485P1	•	•	•
AERBACP	•	•	•
AERNET	•	•	•
KCABLEV_WWM	•	•	•
KWWM	•	•	•
MULTICHILLER_EVO	•	•	•

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

### Special crate for transport

Accessory	WWM 0500°	WWM 0500A	WWM 0500H
CRATE_WWM°	•		
CRATE_WWMH-A		•	•

### Cable entries box

Accessory	WWM 0500°	WWM 0500A	WWM 0500H
KREC_WWM	•	•	•

### Water filter

Accessory	WWM 0500°	WWM 0500A	WWM 0500H
KITIDRO_WWM	•	•	•

### Additional manifold kits

Accessory	WWM 0500A	WWM 0500H
KCOLLA_WWM	•	
KCOLLH_WWM		•

## CONFIGURATOR

Field	Description
1,2,3	WWM
4,5,6,7	Size 0500
8	Operating field (1)
°	Standard mechanic thermostatic valve
9	Model
2	Double refrigerant circuit
10	Hydraulic pressure rating
1	145 psi (PN10)
3	300 psi (PN21)
11	Hydraulic headers kit
°	No headers provided
A	6" Headers kit - PN21 standard carbon steel pipes declared in accordance with ASTM A106 Schedule 40
H	6" Headers kit - PN21 standard carbon steel pipes declared in accordance with EN 10255
12	Power connection

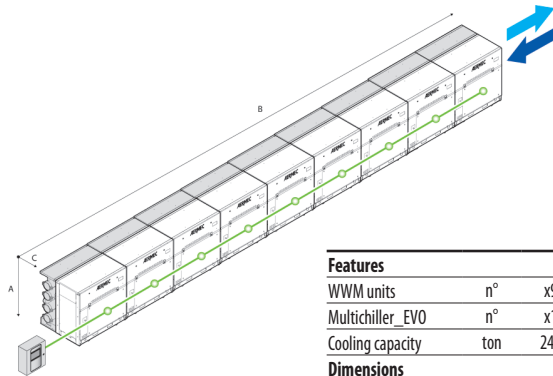
Field	Description
°	Without bus bars
B	With bus bars
13	Power supply
6	230V ~ 3 60Hz with magnet circuit breakers
7	460V ~ 3 60Hz with magnet circuit breakers
8	575V ~ 3 60Hz with magnet circuit breakers
9	208V ~ 3 60Hz with magnet circuit breakers
14	Electrical panel SCCR
°	10 kA control panel
15	Peak current reduction
°	Without power factor device
R	With power factor device (2)
16	Field for future development
°	-

(1) Water produced up to 39.2 °F

(2) Factory installed

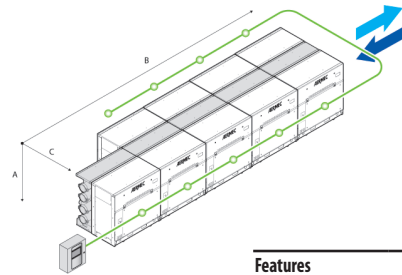
## MODULARITY OPTIONS

**CONFIGURATION 1:  
IN LINE**



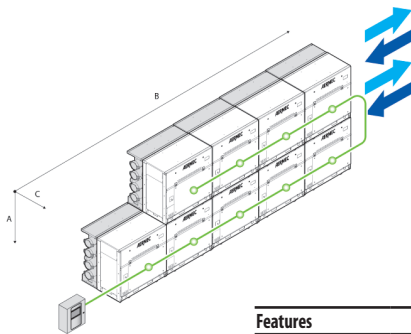
Features			
WWM units	n°	x9	
Multichiller_EVO	n°	x1	
Cooling capacity	ton	245.7	
Dimensions			
A	in	51.2	
B	in	471.6	
C	in	45.3	

**CONFIGURATION 2:  
BACK TO BACK**



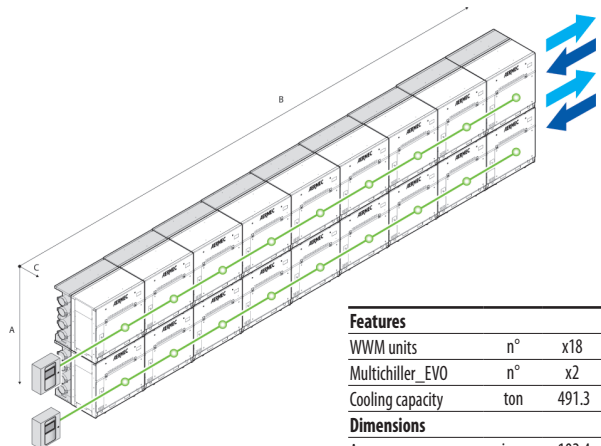
Features			
WWM units	n°	x9	
Multichiller_EVO	n°	x1	
Cooling capacity	ton	245.7	
Dimensions			
A	in	51.2	
B	in	262.0	
C	in	72.9	

**CONFIGURATION 3.1:  
STACK IN LINE**



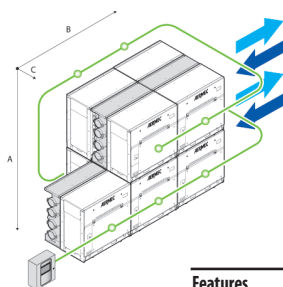
Features			
WWM units	n°	x9	
Multichiller_EVO	n°	x1	
Cooling capacity	ton	245.7	
Dimensions			
A	in	102.4	
B	in	262.0	
C	in	45.3	

**CONFIGURATION 3.2:  
STACK IN LINE**



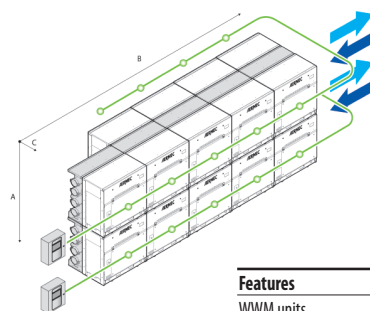
Features			
WWM units	n°	x18	
Multichiller_EVO	n°	x2	
Cooling capacity	ton	491.3	
Dimensions			
A	in	102.4	
B	in	471.6	
C	in	45.3	

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



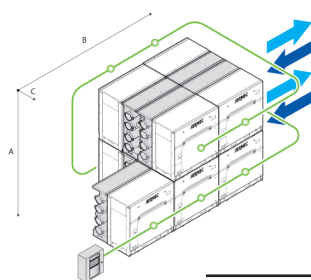
Features			
WWM units	n°	x9	
Multichiller_EVO	n°	x1	
Cooling capacity	ton	245.7	
Dimensions			
A	in	102.4	
B	in	157.2	
C	in	72.9	

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



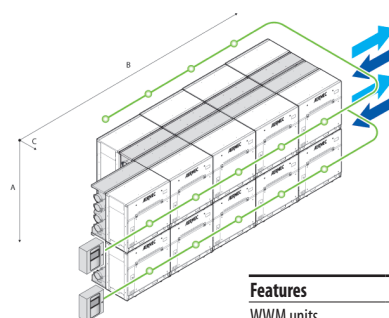
Features			
WWM units	n°	x18	
Multichiller_EVO	n°	x2	
Cooling capacity	ton	491.3	
Dimensions			
A	in	102.4	
B	in	262.0	
C	in	72.9	

### CONFIGURATION 5.1: STACK IN LINE BACK TO BACK DOUBLE



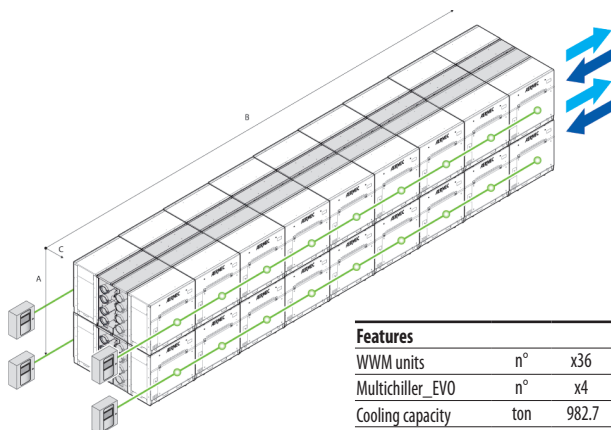
Features			
WWM units	n°	x9	
Multichiller_EVO	n°	x1	
Cooling capacity	ton	245.7	
Dimensions			
A	in	102.4	
B	in	157.2	
C	in	90.6	

### CONFIGURATION 5.2: STACK IN LINE BACK TO BACK DOUBLE



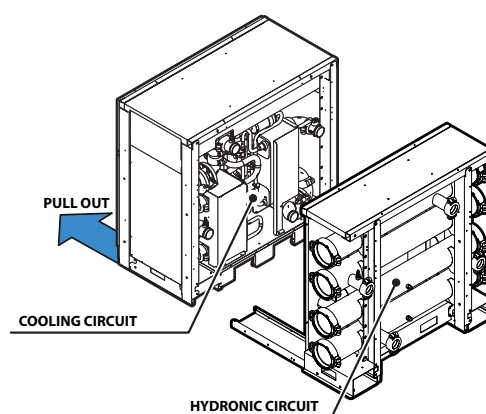
Features			
WWM units	n°	x18	
Multichiller_EVO	n°	x2	
Cooling capacity	ton	491.3	
Dimensions			
A	in	102.4	
B	in	262.0	
C	in	90.6	

### CONFIGURATION 5.3: STACK IN LINE BACK TO BACK DOUBLE



Features			
WWM units	n°	x36	
Multichiller_EVO	n°	x4	
Cooling capacity	ton	982.7	
Dimensions			
A	in	102.4	
B	in	471.6	
C	in	90.6	

### EASY MAINTENANCE



## PERFORMANCE SPECIFICATIONS

WWM 0500°		
<b>Cooling performance 54.07 °F / 44.06 °F (1)</b>		
Cooling capacity	ton	31.22
Input power	kW	23.16
EER	BTU/(Wh)	16.17
IPLV	BTU/(Wh)	20.81
Cooling total input current	A	34.0
Water flow rate system side	gpm	74.69
Pressure drop system side	ftH <sub>2</sub> O	6.69
Water flow rate source side	gpm	98.02
Pressure drop source side	ftH <sub>2</sub> O	10.37
<b>Heating performance 104.00 °F / 113.00 °F (2)</b>		
Heating capacity	BTU/h	433,956
Input power	kW	29.69
COP	kW/kW	4.284
Heating total input current	A	44.0
Water flow rate system side	gpm	58.47
Pressure drop system side	ftH <sub>2</sub> O	3.68
Water flow rate source side	gpm	66.32
Pressure drop source side	ftH <sub>2</sub> O	5.02

(1) Reference conditions: AHRI std 550/590 I-P; Water user side 54.07 °F / 44.06 °F; Water source side 85.24 °F / 94.55 °F

(2) Reference conditions: AHRI std 550/590 I-P; Water user side 104.00 °F / 113.00 °F; Water source side 50.00 °F / 41.00 °F

## ELECTRIC DATA

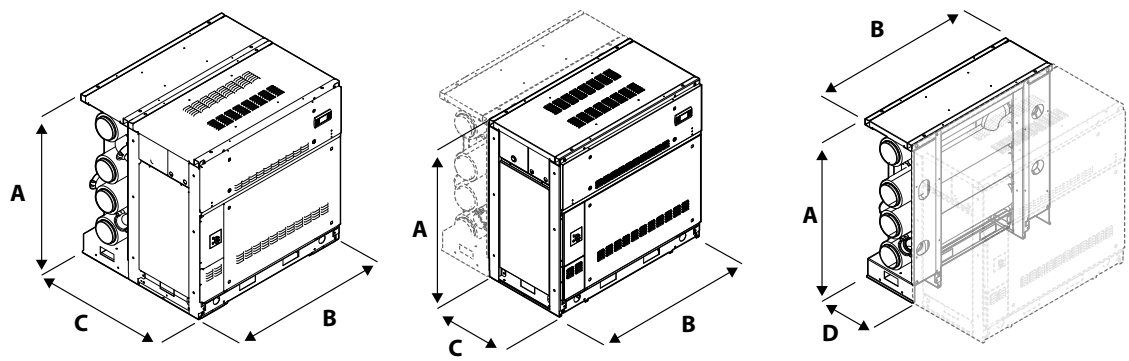
WWM 0500°		
<b>Power supply: 230V</b>		
Peak current (LRA)	A	411.0
Minimum circuit amperage (MCA)	A	125.0
Maximum overcurrent permitted by the protection device (MOP)	A	175.0
<b>Power supply: 460V</b>		
Peak current (LRA)	A	212.0
Minimum circuit amperage (MCA)	A	61.0
Maximum overcurrent permitted by the protection device (MOP)	A	80.0
<b>Power supply: 575V</b>		
Peak current (LRA)	A	156.0
Minimum circuit amperage (MCA)	A	54.0
Maximum overcurrent permitted by the protection device (MOP)	A	75.0
<b>Power supply: 208V</b>		
Peak current (LRA)	A	409.0
Minimum circuit amperage (MCA)	A	129.0
Maximum overcurrent permitted by the protection device (MOP)	A	175.0

## GENERAL TECHNICAL DATA

WWM 0500°		
<b>Compressor</b>		
Type	type	Scroll
Number	no.	2
Circuits	no.	2
Refrigerant	type	R410A
<b>Source side heat exchanger</b>		
Type	type	Brazed plate
Number	no.	1
Connections (in/out)	Type	Grooved joints
Sizes (in/out)	Ø	6"
<b>System side heat exchanger</b>		
Type	type	Brazed plate
Number	no.	1
Connections (in/out)	Type	Grooved joints
Sizes (in/out)	Ø	6"
<b>Sound data calculated in cooling mode (1)</b>		
Sound power level	dB(A)	84
Sound pressure level (10 m / 33 ft)	dB(A)	52.6
Sound pressure level (1 m / 3.3 ft)	dB(A)	68.3

(1) Sound power calculated on the basis of measurements made in accordance with UNI EN ISO 9614-2. Sound pressure (cold functioning) measured in free field, 10 m / 33 ft away from the unit external surface (in compliance with UNI EN ISO 3744).

DIMENSIONS



		WWM 0500°	WWM 0500H	WWM 0500A
<b>Dimensions and weights</b>				
A	in	51.2	51.2	51.2
B	in	52.4	52.4	52.4
C	in	30.5	45.3	45.3
D	in	-	17.8	17.8
<b>Weights</b>				
Weight empty + packaging	lbs	1,543	2,050	2,050
Weight functioning	lbs	1,567	2,297	2,297
Empty weight + packaging (with bus bars)	lbs	1,623	2,130	2,130
Weight functioning (with bus bars)	lbs	1,647	2,377	2,377
<b>Hydraulic headers kit</b>				
Weight empty + packaging	lbs	-	507	507
Weight functioning	lbs	-	728	728

Aermec reserves the right to make any modifications deemed necessary.  
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