WRL 200-500

Water cooled heat pump reversible water side

Cooling capacity 15.26 ÷ 26.86 ton
Heating capacity 201,700 ÷ 350,800 BTU/h

- **High efficiency**
- **Suitable for geothermal applications**
- **Production of hot water up to 131.0 °F**

DESCRIPTION

Water-water offering chilled/hot water, designed to mit air conditioning needs in residential/commercial complexes or industrial applications.
Indoor units with hermetic scroll compressors and plate heat exchangers.
In the configuration with desuperheater, it is also possible to produce free-hot water.
The technological choices made, always oriented to the highest quality, ensure very easy installation. In fact the electrical and hydraulic connections are all located in the upper part of the unit, facilitating the installation and maintenance operations and also reducing the technical gaps and their position in as little space as possible.

FEATURES

Operating field

Full-load operation with the production of chilled water 39.2 °F to 64.4 °F, and the possibility to produce also negative temperature water down to 17.6 °F for the evaporator and hot water for the condenser up to 131.0 °F.
(for more information, refer to the technical documentation).

Plug and play

All the units are equipped with scroll compressors and plate heat exchangers; the base and panelling are made of steel treated with RAL 9003 polyester paints.
The electric and hydraulic connections are all located on the upper part of the unit facilitating installation and maintenance. This allows reduced plant room space and installation in the smallest space possible.
The heat pump can be supplied with all the components required for its installation in new systems and to replace other heat generators. It can be combined with low temperature emission systems such as floor heating or fan coils, but also with conventional radiators.

Version with Integrated hydronic kit

To obtain a solution that offers economic savings and facilitates installation, these units can be configured with an integrated hydronic kit on both hydraulic sides (service and source).
High-head pumps are available, along with a modulating 2-way valve that can only be applied on the source side to reduce consumption in applications with groundwater.

CONTROL MPC

Microprocessor adjustment, with keyboard and LCD display,for easy access on the unit is a menu available in several languages.
— 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 supervision systems with MODBUS protocol.
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.
PGD1: Allows you to control the unit at a distance.
VT: Anti-vibration supports.

ACCESSORIES COMPATIBILITY

Model	Ver	200	400	500
AER485P1	°	•	•	•
AERNET	°	•	•	•
PGD1	°	•	•	•

Antivibration

Ver	200	400	500
°	VT9	VT9	VT15

CONFIGURATOR

Field		Description
1,2,3		**WRL**
4,5,6		**Size** 200, 400, 500
7		**Operating field**
	°	Standard mechanic thermostatic valve (1)
	X	Electronic thermostatic expansion valve (2)
	Y	Low temperature mechanic thermostatic valve (3)
8		**Model**
	°	Heat pump reversible on the water side
	E	Evaporating unit
9		**Version**
	°	Standard
10		**Heat recovery**
	°	Without heat recovery
	D	With desuperheater (4)
11		**Integrated hydronic kit, source side**
	°	Without hydronic kit
	U	Pump high head

Field		Description
	V	2-way modulating valve
12		**Integrated hydronic kit, user side**
	°	Without hydronic kit
	N	Pump high head
13		**Field for future development**
	°	Field for future development
14		**Soft-start**
	°	Without soft-start
	S	With soft-start (5)
15		**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

(1) Water produced up to +39.2 °F
(2) Water produced up to +39.2 °F. For different temperature please contact the factory.
(3) Water produced from 39.2 °F up to 17.6 °F
(4) With this option the "Y" valve is not compatible.
(5) Only for supplies 460V ~ 3 60Hz and 575V ~ 3 60Hz

PERFORMANCE SPECIFICATIONS

WRL - °

Size			200	400	500
Cooling performance 54.07 °F / 44.06 °F (1)					
Cooling capacity	°	ton	15.26	20.64	26.86
Input power	°	kW	11.38	15.08	19.02
Cooling total input current	°	A	21.0	26.0	32.0
EER	°	BTU/(Wh)	16.09	16.42	16.95
IPLV	°	BTU/(Wh)	23.68	24.16	24.91
Water flow rate system side	°	gpm	36.5	49.4	64.3
Pressure drop system side	°	ftH_2O	7.0	12.7	7.0
Water flow rate source side	°	gpm	48.0	64.6	83.7
Pressure drop source side	°	ftH_2O	10.7	20.7	9.7
Heating performance 104.00 °F / 113.00 °F (2)					
Heating capacity	°	BTU/h	201,700	271,500	350,800
Input power	°	kW	13.91	18.43	23.25
Heating total input current	°	A	25.0	32.0	39.0
COP	°	kW/kW	4.250	4.317	4.422
Water flow rate system side	°	gpm	45.2	60.9	78.7
Pressure drop system side	°	ftH_2O	9.4	18.4	8.7
Water flow rate source side	°	gpm	34.2	46.2	60.1
Pressure drop source side	°	ftH_2O	6.4	11.0	6.0

(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

PART LOAD IPLV

Size			200	400	500
Part load IPLV					
100 %	°	BTU/(Wh)	16.07	16.41	16.96
75 %	°	BTU/(Wh)	21.46	21.91	22.59
50 %	°	BTU/(Wh)	25.69	26.24	27.06
25 %	°	BTU/(Wh)	24.47	24.98	25.76

ELECTRIC DATA

460V ~ 3 60Hz with magnet circuit breakers

	Version	Integrated hydronic kit, user side	Integrated hydronic kit, source side		200	400	500
Peak current (LRA)	°	°	°/V	A	118.4	149.2	183.2
	°	°	U	A	122.4	153.2	187.2
	°	N	°/V	A	122.4	153.2	187.2
	°	N	U	A	126.4	157.2	191.2
Minimum circuit amperage (MCA)	°	°	°/V	A	35.0	45.0	60.0
	°	°	U	A	35.0	50.0	60.0
	°	N	°/V	A	35.0	50.0	60.0
	°	N	U	A	40.0	60.0	70.0
Maximum overcurrent permitted by the protection device (MOP)	°	°	°/V	A	40.0	60.0	75.0
	°	°	U	A	45.0	60.0	75.0
	°	N	°/V	A	45.0	60.0	75.0
	°	N	U	A	50.0	60.0	80.0

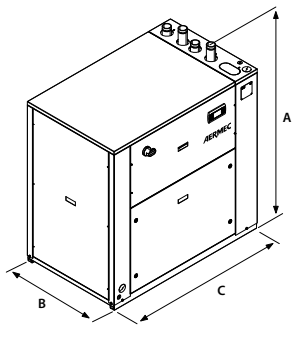
GENERAL TECHNICAL DATA

Size			200	400	500
Compressor					
Type	°	type		Scroll	
Compressor regulation	°	Type		On-Off	
Number	°	no.	2	2	2
Circuits	°	no.	1	1	1
Refrigerant	°	type		R410A	
Refrigerant charge (1)	°	lbs	12.8	15.4	24.3
System side heat exchanger					
Type	°	type		Brazed plate	
Number	°	no.	1	1	1
Connections (in/out)	°	Type		Grooved joints	
Sizes (in/out)	°	Ø	2"	2"	2"1/2
Source side heat exchanger					
Type	°	type		Brazed plate	
Number	°	no.	1	1	1
Connections (in/out)	°	Type		Grooved joints	
Sizes (in/out)	°	Ø	2"	2"	2"1/2
Sound data calculated in cooling mode (2)					
Sound power level	°	dB(A)	78.0	82.0	83.0
Sound pressure level (10 m / 33 ft)	°	dB(A)	46.5	50.5	51.4

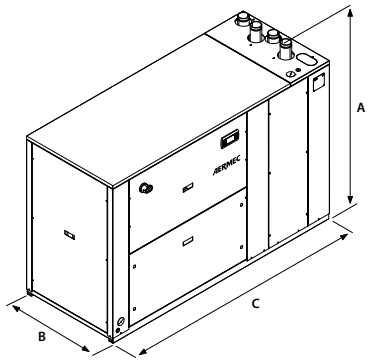
(1) The load indicated in the table is an estimated and preliminary value. The final value of the refrigerant load is indicated on the unit's technical label. For further information contact the office.
(2) Sound power calculated on the basis of measurements made in accordance with UNI EN ISO 9614-2. 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

WRL 200-400



WRL 500



Size			200	400	500
Dimensions and weights					
A	°	in	54.3	54.3	54.3
B	°	in	33.3	33.3	33.3
C	°	in	52.0	52.0	81.1

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