

WRK

Reversible water-cooled heat pump, gas side

Cooling capacity 19.1 ÷ 49.1 ton
Heating capacity 281,781 ÷ 742,025 BTU/h



- Optimised for heating in centralised systems.
- Production of hot water at high temperature up to 154.4 °F.
- Independent from the gas network.
- DHW production.



DESCRIPTION

Water source heat pump with reverse cycle valve. The unit can produce chilled and hot water but it is optimized for high temperature hot water production, making it a perfect solution for DHW applications. It can also work with low source temperatures which make it possible to work with geothermal applications.

VERSIONS

L Standard silenced

FEATURES

Extended operating range

Particular attention has been given to winter operation, ensuring the production of hot water up to 154.4 °F.

Plug and play

All units are equipped with scroll compressors with steam injection and brazed plate heat exchangers. The base and panels are made of steel treated with polyester paints RAL 9003.

The heat pump can be supplied with all the components required for its installation in new systems and in retrofit applications. It can be combined with low temperature emission systems such as in floor radiant heating or fan coils, but also with conventional radiators.

Integrated hydronic kit

Integrated hydronic kit containing the main hydraulic components; available with various configurations with one or two pumps, high or low head, to obtain a solution that allows you to save money and to facilitate installation.

CONTROL PCO₅

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.

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.

FL-UL: Flow switch.

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.

AVX: Spring anti-vibration supports.

VT: Anti-vibration supports.

FACTORY FITTED ACCESSORIES

T6: Double safety valve with exchange cock, both on the high and low pressure branches.

ACCESSORIES COMPATIBILITY

Model	Ver	0300	0330	0350	0500	0550	0600	0650	0700
AER485P1	L	*	*	*	*	*	*	*	*
AERBACP	L	*	*	*	*	*	*	*	*
AERNET	L	*	*	*	*	*	*	*	*
FL-UL (1)	L	*	*	*	*	*	*	*	*
MULTICHILLER_EVO	L	*	*	*	*	*	*	*	*

(1) Compliant with UL regulation

Antivibration

Version	System side - pumps	Integrated hydronic kit, source side	0300	0330	0350	0500	0550	0600	0650	0700
L	°	°	-	-	-	AVX345	AVX342	AVX342	AVX342	AVX342
L	°M	U,W	-	-	-	AVX343	AVX343	AVX343	AVX343	AVX343
L	N	°	-	-	-	AVX343	AVX343	AVX343	AVX343	AVX343
L	O	U,W	-	-	-	AVX343	AVX343	AVX343	AVX343	AVX343
L	P	°	-	-	-	AVX343	AVX343	AVX343	AVX343	AVX343
L	°	V,Z	-	-	-	AVX313	AVX343	AVX343	AVX343	AVX343
L	M,O	°	-	-	-	AVX313	AVX343	AVX343	AVX343	AVX343
L	N,P	V,Z	-	-	-	AVX343	AVX343	AVX343	AVX344	AVX344

- not available

Version	System side - pumps	Integrated hydronic kit, source side	0300	0330	0350	0500	0550	0600	0650	0700
L	°	°	VT9	VT9	VT9	-	-	-	-	-
L	°	U,V,W,Z	VT15	VT15	VT15	-	-	-	-	-
L	M	°U,W	VT15	VT15	VT15	-	-	-	-	-
L	N	°V,Z	VT15	VT15	VT15	-	-	-	-	-
L	O	°U,W	VT15	VT15	VT15	-	-	-	-	-
L	P	°V,Z	VT15	VT15	VT15	-	-	-	-	-

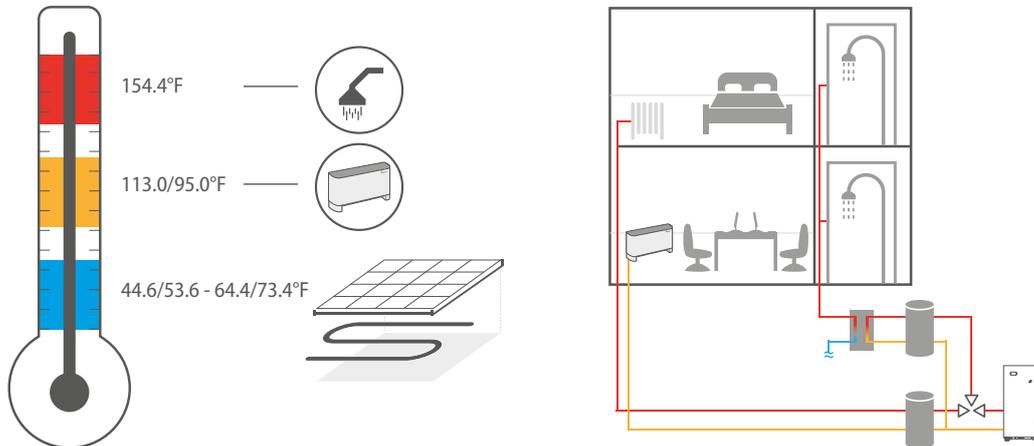
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Double safety valve.

Ver	0300	0330	0350	0500	0550	0600	0650	0700
L	T6WRK1	T6WRK1	T6WRK1	T6WRK2	T6WRK2	T6WRK2	T6WRK2	T6WRK2

A grey background indicates the accessory must be assembled in the factory

APPLICATION EXAMPLES



WRK units are used in building renovations, where centralised boilers need replacing, while maintaining the existing distribution system and terminals (e.g. radiators) at the same time, to ensure the production of domestic hot water. This situation is typical when operating in contexts such as public buildings, but also in the case of centralised residential systems such as condominiums, where costs must be limited without changing the distribution system, while also offering a renewable energy source, represented precisely by heat pumps. Being able to upgrade a building without involving the distribution system also eliminates the inconveniences associated with the renovation of the premises, ensuring the continuity of the property's use, saving time and money.

CONFIGURATOR

Field	Description
1,2,3	WRK
4,5,6,7	Size 0300, 0330, 0350, 0500, 0550, 0600, 0650, 0700
8	Operating field
°	Standard mechanic thermostatic valve
9	Model
H	Reversible heat pump, gas side
10	Version
L	Standard silenced
11	Evaporator
°	Standard
12	Heat recovery
°	Without heat recovery
D	With desuperheater
13	Power supply

Field	Description
7	460V~3 60Hz with magnet circuit breakers
14	System side - pumps
°	Without hydronic kit
M	Single pump low head
N	Pump low head + stand-by pump
O	Single pump high head (1)
P	Pump high head + stand-by pump (1)
15	Integrated hydronic kit, source side
°	Without hydronic kit
U	Single pump low head
V	Pump low head + stand-by pump
W	Pump high head (1)
Z	Pump high head + stand-by pump (1)
16	Field for future development

(1) Option not available only for sizes 0650-0700.

PERFORMANCE SPECIFICATIONS

WRK - HL

Size			0300	0330	0350	0500	0550	0600	0650	0700
Cooling performances 54.0 °F / 44.0 °F (1)										
Cooling capacity	L	ton	19.1	22.8	25.9	28.6	33.5	38.2	45.0	49.1
Input power	L	kW	14.2	16.7	19.4	21.4	24.8	28.4	33.7	39.8
Cooling total input current	L	A	25.0	31.0	41.0	41.0	46.0	50.0	62.0	82.0
EER	L	BTU/(Wh)	16.13	16.36	16.01	16.08	16.23	16.15	16.03	14.82
Water flow rate system side	L	gpm	45.8	54.6	62.1	68.7	80.2	91.6	107.9	117.7
Pressure drop system side	L	ftH ₂ O	5.0	3.3	3.3	4.0	4.0	5.4	4.3	5.4
Water flow rate source side	L	gpm	59.50	70.74	80.73	89.25	104.10	118.97	140.29	155.23
Pressure drop source side	L	ftH ₂ O	8.36	5.69	5.35	6.69	7.03	9.03	7.69	9.03
Heating performance 104.0 °F / 113.0 °F (2)										
Heating capacity	L	BTU/h	281,781	336,417	376,103	420,308	493,822	563,041	665,582	742,025
Input power	L	kW	16.8	20.0	23.2	25.1	29.2	33.6	40.1	47.0
Heating total input current	L	A	29.0	34.0	44.0	45.0	51.0	57.0	68.0	88.0
COP	L	kW/kW	4,91	4,94	4,75	4,91	4,95	4,91	4,86	4,62
Water flow rate system side	L	gpm	63.2	75.4	84.3	94.3	110.7	126.3	149.3	166.4
Pressure drop system side	L	ftH ₂ O	9.7	6.7	6.4	7.7	8.0	10.4	8.7	8.0
Water flow rate source side	L	gpm	83.93	100.36	111.13	125.22	147.39	167.73	197.81	217.77
Pressure drop source side	L	ftH ₂ O	17.06	11.71	11.04	13.72	14.05	18.07	15.39	13.72

(1) Water user side 54.0 °F / 44.0 °F; Water source side 85.0 °F / 94.3 °F
 (2) Water user side 104.0 °F / 113.0 °F; Water source side 50.0 °F / 44.6 °F

GENERAL TECHNICAL DATA

Size			0300	0330	0350	0500	0550	0600	0650	0700
Compressor										
Type	L	type					Scroll			
Number	L	no.	2	2	2	2	3	4	4	4
Circuits	L	no.	2	2	2	2	2	2	2	2
Refrigerant	L	type					R410A			
Refrigerant load circuit 2 (1)	L	lbs	10.6	12.1	14.1	16.5	20.9	20.9	27.6	27.6
Refrigerant load circuit 1 (1)	L	lbs	10.6	12.1	14.1	16.5	20.9	20.9	27.6	27.6
System side heat exchanger										
Type	L	type					Brazed plate			
Number	L	no.	1	1	1	1	1	1	1	1
Connections (in/out)	L	Type					Grooved joints			
Sizes (in/out)	L	Ø					2 1/2"			
Source side heat exchanger										
Type	L	type					Brazed plate			
Number	L	no.	1	1	1	1	1	1	1	1
Connections (in/out)	L	Type					Grooved joints			
Sizes (in/out)	L	Ø					2 1/2"			
Sound data calculated in cooling mode (2)										
Sound power level	L	dB(A)	78.3	76.4	79.5	75.9	77.7	81.8	79.8	81.3
Sound pressure level (10 m / 33 ft)	L	dB(A)	46.8	44.9	48.0	44.2	46.0	50.1	48.1	49.6

(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).

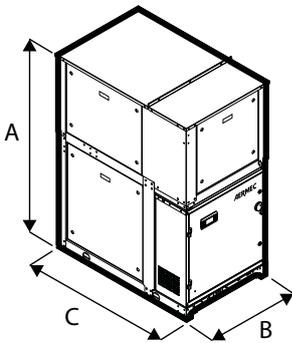
ELECTRIC DATA

	Version	System side - pumps	Integrated hydronic kit, source side	0300	0330	0350	0500	0550	0600	0650	0700	
Peak current (LRA)	L	°	°	A	147.5	177.5	213.0	213.5	222.5	189.5	229.5	278.0
	L	°	U/V	A	149.6	181.5	217.0	217.5	228.0	195.0	236.2	284.7
	L	M/N	°	A	149.6	181.5	217.0	217.5	228.0	195.0	236.2	284.7
	L	°	W/Z	A	151.5	183.0	218.5	220.2	229.2	196.2	-	-
	L	O/P	°	A	151.5	183.0	218.5	220.2	229.2	196.2	-	-
	L	M/N	U/V	A	151.7	185.5	221.0	221.5	233.4	200.4	242.9	291.4
	L	M/N	W/Z	A	153.6	187.0	222.5	224.2	234.7	201.7	-	-
	L	O/P	U/V	A	153.6	187.0	222.5	224.2	234.7	201.7	-	-
Minimum circuit amperage (MCA)	L	°	°	A	50.0	60.0	70.0	75.0	90.0	100.0	110.0	150.0
	L	°	U/V	A	60.0	70.0	75.0	75.0	90.0	100.0	125.0	150.0
	L	M/N	°	A	60.0	70.0	75.0	75.0	90.0	100.0	125.0	150.0
	L	°	W/Z	A	60.0	70.0	75.0	80.0	90.0	100.0	-	-
	L	O/P	°	A	60.0	70.0	75.0	80.0	90.0	100.0	-	-
	L	M/N	U/V	A	60.0	70.0	80.0	80.0	100.0	110.0	125.0	150.0
	L	M/N	W/Z	A	60.0	70.0	80.0	90.0	100.0	110.0	-	-
	L	O/P	U/V/W/Z	A	60.0	70.0	80.0	90.0	100.0	110.0	-	-
Maximum overcurrent permitted by the protection device (MOP)	L	°	°/U/V	A	70.0	80.0	100.0	100.0	110.0	110.0	125.0	150.0
	L	M/N	°	A	70.0	80.0	100.0	100.0	110.0	110.0	125.0	150.0
	L	°	W/Z	A	70.0	80.0	100.0	100.0	110.0	110.0	-	-
	L	O/P	°	A	70.0	80.0	100.0	100.0	110.0	110.0	-	-
	L	M/N	U/V	A	70.0	90.0	100.0	110.0	110.0	110.0	125.0	150.0
	L	M/N	W/Z	A	75.0	90.0	100.0	110.0	125.0	110.0	-	-
	L	O/P	U/V	A	75.0	90.0	100.0	110.0	125.0	110.0	-	-
	L	O/P	W/Z	A	75.0	90.0	110.0	110.0	125.0	125.0	-	-

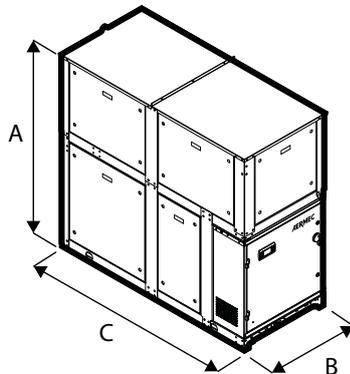
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DIMENSIONS

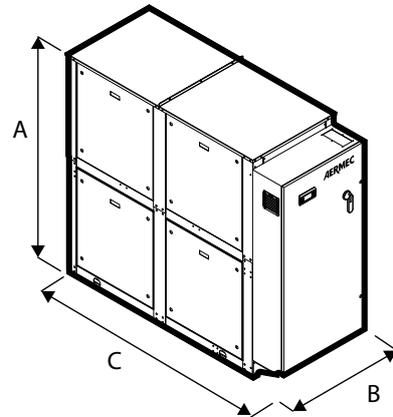
WRK 0300 - 0350 °



WRK 0300 - 0350 U-V-W-Z



WRK 0500 - 0700 °-U-V-W-Z



Size			0300	0330	0350	0500	0550	0600	0650	0700
Dimensions and weights without hydronic kit										
A	L	in	65.9	65.9	65.9	74.2	74.2	74.2	74.2	74.2
B	L	in	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
C	L	in	49.6	49.6	49.6	70.9	70.9	70.9	70.9	70.9
Dimensions and weights with pump/s										
A	L	in	65.9	65.9	65.9	74.2	74.2	74.2	74.2	74.2
B	L	in	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
C	L	in	70.9	70.9	70.9	118.9	118.9	118.9	118.9	118.9

	Version	System side - pumps	Integrated hydraulic kit, source side		0300	0330	0350	0500	0550	0600	0650	0700
Weight empty + packaging	L	°	°	lbs	1,246	1,257	1,279	2,050	2,238	2,293	2,348	2,414
	L	°	U	lbs	1,620	1,631	1,653	2,546	2,734	2,789	2,877	2,943
	L	°	V	lbs	1,676	1,687	1,709	2,701	2,888	2,943	3,064	3,131
	L	°	W	lbs	1,620	1,631	1,653	2,546	2,734	2,789	-	-
	L	°	Z	lbs	1,676	1,687	1,709	2,701	2,888	2,943	-	-
	L	M	°	lbs	1,609	1,631	1,653	2,469	2,657	2,712	2,789	2,855
	L	M	U	lbs	1,687	1,709	1,731	2,668	2,855	2,910	3,020	3,086
	L	M	V/Z	lbs	-	-	-	-	-	-	-	-
	L	N	U/W	lbs	-	-	-	-	-	-	-	-
	L	O	V/Z	lbs	-	-	-	-	-	-	-	-
	L	P	U/W	lbs	-	-	-	-	-	-	-	-
	L	M	W	lbs	1,687	1,709	1,731	2,668	2,855	2,910	-	-
	L	O	U/W	lbs	1,687	1,709	1,731	2,668	2,855	2,910	-	-
	L	N	°	lbs	1,676	1,687	1,709	2,624	2,811	2,866	2,965	3,031
	L	N	V	lbs	1,808	1,819	1,841	2,976	3,164	3,219	3,384	3,439
	L	N	Z	lbs	1,808	1,819	1,841	2,976	3,164	3,219	-	-
	L	P	V/Z	lbs	1,808	1,819	1,841	2,976	3,164	3,219	-	-
	L	O	°	lbs	1,609	1,631	1,653	2,469	2,657	2,712	-	-
	L	P	°	lbs	1,676	1,687	1,709	2,624	2,811	2,866	-	-
	Weight functioning	L	°	°	lbs	1,224	1,235	1,268	2,039	2,227	2,304	2,370
L		°	U	lbs	1,642	1,664	1,698	2,590	2,789	2,855	2,965	3,042
L		°	V	lbs	1,720	1,742	1,764	2,756	2,954	3,020	3,164	3,241
L		°	W	lbs	1,642	1,664	1,698	2,590	2,789	2,855	-	-
L		°	Z	lbs	1,720	1,742	1,764	2,756	2,954	3,020	-	-
L		M	°	lbs	1,642	1,664	1,698	2,513	2,712	2,778	2,877	2,954
L		M	U	lbs	1,720	1,742	1,775	2,723	2,921	2,987	3,120	3,197
L		M	V/Z	lbs	-	-	-	-	-	-	-	-
L		N	U/W	lbs	-	-	-	-	-	-	-	-
L		O	V/Z	lbs	-	-	-	-	-	-	-	-
L		P	U/W	lbs	-	-	-	-	-	-	-	-
L		M	W	lbs	1,720	1,742	1,775	2,723	2,921	2,987	-	-
L		O	U/W	lbs	1,720	1,742	1,775	2,723	2,921	2,987	-	-
L		N	°	lbs	1,720	1,731	1,764	2,679	2,877	2,943	3,064	3,142
L		N	V	lbs	1,863	1,874	1,907	3,053	3,252	3,318	3,505	3,571
L		N	Z	lbs	1,863	1,874	1,907	3,053	3,252	3,318	-	-
L		P	V/Z	lbs	1,863	1,874	1,907	3,053	3,252	3,318	-	-
L		O	°	lbs	1,642	1,664	1,698	2,513	2,712	2,778	-	-
L		P	°	lbs	1,720	1,731	1,764	2,679	2,877	2,943	-	-

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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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