VENICE

Water cooled heat pump reversible water side

Cooling capacity 6,9 ÷ 9,8 kW
Heating capacity 8,2 ÷ 11,5 kW

- **Compact dimensions**
- **Quick and easy installation**

DESCRIPTION

Venice is the range of water cooled chillers operating with refrigerant R407C. They are internal units with hermetic scroll compressors that respond perfectly to the market requirements: small dimensions, easy of installation, low noise.

FEATURES

— All versions are equipped with circulation pump, water tank, water filter and safety valve
— Complies with EEC Safety Directive (CE)
— High efficiency scroll compressors
— Differential pressure switch on the external circuit standard on heat pumps
— Fluxostat standard on installation circuit
— Modular microprocessor control system
— Straightforward intuitive control panel
— High efficiency plate type heat exchangers
— Compact size
— Metallic protective cabinet with rustproof polyester paint
— Degree of protection IP 24

ACCESSORIES

PR3: Remote control panel with ON/OFF, operating mode selection (cooling / heating) and general alarm indication.
VP: Pressure switch valve complete with connections, piloted directly in relation to condensation pressure; the valve modulates the volume of water needed to cool the condenser, thereby maintaining the condensation temperature unchanged.
VT: Rubber anti-vibration mounts.
VT M: Spring anti-vibration mounts.

ACCESSORIES COMPATIBILITY

Size	20	25	30
PR 3	•	•	•
VP 14	•		
VP 15		•	•
VT 7	•	•	•
VT M	•	•	•

PERFORMANCE SPECIFICATIONS

Size		20	25	30
Power supply	V/ph/Hz		230V~50Hz	
Cooling performance 12 °C / 7 °C (1)				
Cooling capacity	kW	6,9	8,3	9,8
Input power	kW	1,9	2,2	2,6
EER		3,71	3,81	3,81
Water flow rate system side	l/h	1185	1409	1667
Useful head system side	kPa	63	61	59
Water flow rate source side	l/h	1495	1769	2095
Pressure drop source side	kPa	18	13	12
Heating performance 40 °C / 45 °C (2)				
Heating capacity	kW	8,2	9,7	11,5
Input power	kW	2,4	2,8	3,3
COP		3,42	3,48	3,48
Water flow rate system side	l/h	1420	1678	1987
Pressure drop system side	kPa	16	12	11
Water flow rate source side	l/h	1705	2026	2397
Useful head source side	kPa	30	24	19

(1) Date 14511:2018; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C
(2) Date 14511:2018; Water user side 40 °C / 45 °C; Water source side 10 °C / 7 °C

ENERGY INDICES (REG. 2016/2281 EU)

Size		20	25	30
SEER - 12/7 (EN14825: 2018) (1)				
SEER	W/W	3,61	3,91	4,01
ηsc	%	141,2%	153,5%	157,5%
Performance under average climatic conditions (Average) UE n°811/2013 Pdesignh ˜ 70kW (2)				
Pdesignh	kW	11	13	16
SCOP		4,20	4,25	4,33
ηsh	%	160,0%	162,0%	165,0%
Efficiency Energy Class		A++	A++	A++

(1) Calculation performed with FIXED water flow rate and VARIABLE outlet temperature
(2) Efficiencies for low temperature Applications (35°C)

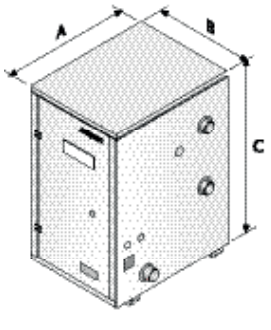
GENERAL TECHNICAL DATA

Size			20	25	30
Electric data					
Cooling total input current	(1)	A	9	11	13
Maximum current (FLA)	(1)	A	15	18	24
Peak current (LRA)	(1)	A	61	76	100
Compressor					
Compressor		Type/n°		Scroll/1	
Circuit		n°	1	1	1
Refrigerant		Type		R407C	
System side heat exchanger					
Exchanger		Type/n°		Plate/1	
Hydraulic connections (in/out)		Type/Ø		male Gas/1"	
Source side heat exchanger					
Exchanger		Type/n°		Plate/1	
Hydraulic connections (in/out)		Type/Ø		male Gas/1"	
Sound data					
Sound power level	(2)	dB(A)	56	56	57
Sound pressure level	(2)	dB(A)	48	48	49

(1) Including circulator pump power consumption
(2) 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		20	25	30
A	mm	504	504	504
B	mm	404	404	404
C	mm	625	625	625
Weight	kg	100	103	105



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VENICE-H

Reversible water-cooled heat pump, gas side

Cooling capacity 6,9 ÷ 9,8 kW
Heating capacity 8,3 ÷ 11,6 kW

- **Compact dimensions**
- **Quick and easy installation**

VERSIONS

Venice H Heat pump

FEATURES

— Cycle reversal on refrigerant circuit
— All versions are equipped with circulation pump, water tank, water filter and safety valve
— Complies with EEC Safety Directive (CE)
— High efficiency scroll compressors
— Differential pressure switch on the external circuit standard on heat pumps
— Fluxostat standard on installation circuit
— Modular microprocessor control system
— Straightforward intuitive control panel
— High efficiency plate type heat exchangers
— Compact size
— Metallic protective cabinet with rustproof polyester paint
— Degree of protection IP 24

ACCESSORIES

PR3: Remote control panel with ON/OFF, operating mode selection (cooling / heating) and general alarm indication.
VPH: Pressure switch valve with bypass solenoid valve: during cooling mode operation the bypass valve is closed so the water flows exclusively through the circuit with the pressure switch. During heating mode operation the water flows through both branches of the circuit.
VT: Rubber anti-vibration mounts.
VT M: Spring anti-vibration mounts.

ACCESSORIES COMPATIBILITY

Size	20H	25H	30H
PR 3	•	•	•
VPH 10	•		
VPH 11		•	•
VT 7	•	•	•
VT M	•	•	•

PERFORMANCE SPECIFICATIONS

Size		20H	25H	30H
Power supply	V/ph/Hz		230V~50Hz	
Cooling performance 12 °C / 7 °C (1)				
Cooling capacity	kW	6,9	8,3	9,8
Input power	kW	1,9	2,2	2,6
EER		3,71	3,80	3,81
Water flow rate system side	l/h	1185	1409	1666
Useful head system side	kPa	63	61	59
Water flow rate source side	l/h	1495	1769	2095
Pressure drop source side	kPa	18	17	12
Heating performance 40 °C / 45 °C (2)				
Heating capacity	kW	8,3	9,9	11,6
Input power	kW	2,3	2,7	3,1
COP		3,66	3,66	3,71
Water flow rate system side	l/h	1450	1729	2027
Useful head system side	kPa	48	44	41
Water flow rate source side	l/h	1791	2133	2505
Pressure drop source side	kPa	25	25	17

(1) Date 14511:2018; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C
(2) Date 14511:2018; Water user side 40 °C / 45 °C; Water source side 10 °C / 7 °C

ENERGY INDICES (REG. 2016/2281 EU)

Size		20H	25H	30H
SEER - 12/7 (EN14825: 2018) (1)				
SEER	W/W	3,66	3,94	4,02
ηsc	%	143,4%	154,6%	157,8%
Performance under average climatic conditions (Average) UE n°811/2013 Pdesignh ˜ 70kW (2)				
Pdesignh	kW	11	13	16
SCOP		4,20	4,25	4,33
ηsh	%	160	162	165
Efficiency Energy Class		A++	A++	A++

(1) Calculation performed with FIXED water flow rate and VARIABLE outlet temperature.
(2) Efficiencies for low temperature Applications (35°C)

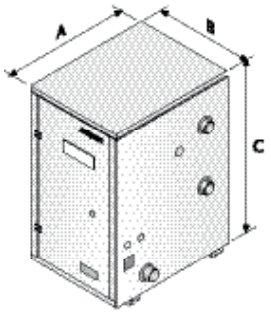
GENERAL TECHNICAL DATA

Size			20H	25H	30H
Electric data					
Cooling total input current	(1)	A	9	11	13
Heating total input current	(1)	A	12	14	16
Maximum current (FLA)	(1)	A	15	18	24
Peak current (LRA)	(1)	A	61	76	100
Compressor					
Compressor		Type/n°		Scroll/1	
Circuit		n°	1	1	1
Refrigerant		Type		R407C	
System side heat exchanger					
Exchanger		Type/n°		Plate/1	
Hydraulic connections (in/out)		Type/Ø		male Gas/1"	
Source side heat exchanger					
Exchanger		Type/n°		Plate/1	
Hydraulic connections (in/out)		Type/Ø		male Gas/1"	
Sound data					
Sound power level	(2)	dB(A)	56	56	57
Sound pressure level	(2)	dB(A)	48	48	49

(1) Including circulator pump power consumption
(2) 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		20H	25H	30H
A	mm	504	504	504
B	mm	404	404	404
C	mm	625	625	625
Weight	kg	103	106	109



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WRL 026 -161

Water cooled heat pump reversible water side

Cooling capacity 6,6 ÷ 44,2 kW
Heating capacity 7,5 ÷ 48,0 kW

- **High efficiency**
- **Suitable for geothermal applications**

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.

VERSIONS

° Without storage tank
A With storage tank

FEATURES

Operating field

Full-load operation with the production of chilled water 4-18°C, and the possibility to produce also negative temperature water down to -8°C for the evaporator and hot water for the condenser up to 55 °C.
(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

The standard unit is supplied with a water filter, differential pressure switch and safety valve already installed on the service and source side (and also on the recovery side, if present).
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).
Low-head and 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.

MODUCONTROL CONTROL

The command panel of the unit allows the rapid setting of the working parameters of the machine, and their visualisation. The display consists of 4 figures and various LEDs for indicating the type of operational mode, the visualisation of the parameters set and of any alarms triggered. The card stores all the default settings and any modifications.
The regulation using an outside air temperature sensor (accessory) allows a dynamic control of the water temperature produced by increasing the energy efficiency of the system.

ACCESSORIES

AERSET: It makes it possible to automatically compensate for the operation setting of the unit to which it is connected, based on a 0-10V MODBUS input signal. Mandatory accessory MODU-485BL.
KSAE: External air sensor.
MODU-485BL: RS-485 interface for supervision systems with MODBUS protocol.
PR3: Simplified remote panel. This makes it possible to carry out the unit's basic controls with the signalling of alarms. Can be made remote with shielded cable up to 150 m.

ACCESSORIES COMPATIBILITY

Model	Ver	026	031	041	051	071	081	101	141	161
AERSET	°,A	•	•	•	•	•	•	•	•	•
KSAE	°,A	•	•	•	•	•	•	•	•	•
MODU-485BL	°,A	•	•	•	•	•	•	•	•	•
PR3	°,A	•	•	•	•	•	•	•	•	•

Antivibration

Version	Integrated hydronic kit, source side	Integrated hydronic kit, user side	026	031	041	051	071	081	101	141	161
°	°	°	VT9	VT9	VT9	VT9	VT9	VT9	VT15	VT15	VT15
°	U	N,P	VT9	VT9	VT9	VT9	VT9	VT9	VT15	VT15	VT15
°	°	N,P	-	-	-	-	-	-	-	-	-
°	B,I,U,V	°	-	-	-	-	-	-	-	-	-
°	B,I,V	N,P	VT9	VT9	VT9	VT9	VT9	VT9	VT15	VT15	-
A	°,B,I,U,V	°,N,P	VT15	VT15	VT15	VT15	VT15	VT15	VT15A	VT15A	VT15A

CONFIGURATOR

Field	Description
1,2,3	**WRL**
4,5,6	**Size** 026, 031, 041, 051, 071, 081, 101, 141, 161
7	**Operating ÿeld**
°	Standard mechanic thermostatic valve (1)
Y	Low temperature mechanic thermostatic valve (2)
8	**Model**
°	Heat pump reversible on the water side
9	**Version**
°	Without storage tank
A	With storage tank
10	**Heat recovery**
°	Without heat recovery
D	With desuperheater
11	**Integrated hydronic kit, source side**
°	Without hydronic kit
B	On-off pump (3)
I	Inverter pump (4)
U	Pump high head (5)
	Applications with bore hole water
V	2-way modulating valve
12	**Integrated hydronic kit, user side**
°	Without hydronic kit
N	Pump high head (5)
P	On-off pump (3)
13	**Field for future development**
°	Field not used
14	**Soft-start**
°	Without soft-start
S	With soft-start
15	**Power supply**
°	400V~3N 50Hz
M	230V~ 50Hz (6)

(1) Water produced from 4 °C ÷ 18 °C
(2) Water produced from 4 °C ÷ - 8 °C
(3) Inverter pump for size WRL 026 ÷ 081. The speed of the inverter pump must be set upon commissioning, according to the useful static pressure required; once it has been set, the pump will work at a constant flow rate.
(4) Only for WRL 026 ÷ 081
(5) Only for WRL 101 ÷ 161
(6) Only for WRL 026 ÷ 041

PERFORMANCE SPECIFICATIONS

WRL - °

Size		026	031	041	051	071	081	101	141	161
Power supply: °										
Cooling performance 12 °C / 7 °C (1)										
Cooling capacity	kW	6,7	8,4	11,3	14,7	19,3	21,9	29,5	38,5	43,9
Input power	kW	1,5	1,8	2,6	3,1	4,0	4,7	6,2	8,1	9,5
Cooling total input current	A	3,1	2,6	4,9	6,4	7,4	9,1	13,0	15,0	18,0
EER	W/W	4,49	4,74	4,39	4,70	4,77	4,63	4,72	4,75	4,62
Water flow rate source side	l/h	1396	1735	2375	3054	3978	4538	6100	7947	9077
Pressure drop source side	kPa	28	30	35	32	40	46	42	57	66
Water flow rate system side	l/h	1154	1447	1955	2541	3320	3770	5078	6638	7555
Pressure drop system side	kPa	15	17	23	21	26	30	25	34	38
Heating performance 40 °C / 45 °C (2)										
Heating capacity	kW	7,7	9,3	12,6	16,3	21,0	24,0	32,5	42,1	48,0
Input power	kW	1,9	2,3	3,2	4,0	5,1	5,9	8,0	10,2	12,0
Heating total input current	A	4,1	3,4	6,1	8,2	9,2	11,0	16,0	18,0	23,0
COP	W/W	3,93	4,04	3,94	4,05	4,17	4,04	4,06	4,14	4,02
Water flow rate source side	l/h	1680	2053	2767	3602	4708	5325	7200	9414	10671
Pressure drop source side	kPa	32	34	46	42	52	60	50	68	76
Water flow rate system side	l/h	1326	1607	2181	2819	3647	4159	5629	7284	8315
Pressure drop system side	kPa	25	26	30	27	34	39	36	48	55
Power supply: M										
Cooling performance 12 °C / 7 °C (1)										
Cooling capacity	kW	6,6	8,3	11,3	-	-	-	-	-	-
Input power	kW	1,5	1,8	2,5	-	-	-	-	-	-
Cooling total input current	A	7,2	9,2	12,0	-	-	-	-	-	-
EER	W/W	4,30	4,50	4,56	-	-	-	-	-	-
Water flow rate source side	l/h	1386	1731	2359	-	-	-	-	-	-
Pressure drop source side	kPa	28	29	36	-	-	-	-	-	-
Water flow rate system side	l/h	1137	1430	1955	-	-	-	-	-	-
Pressure drop system side	kPa	15	17	23	-	-	-	-	-	-
Heating performance 40 °C / 45 °C (2)										
Heating capacity	kW	7,6	9,4	12,5	-	-	-	-	-	-
Input power	kW	2,0	2,4	3,1	-	-	-	-	-	-
Heating total input current	A	9,3	12,0	15,0	-	-	-	-	-	-
COP	W/W	3,86	3,89	4,05	-	-	-	-	-	-
Water flow rate source side	l/h	1662	2053	2778	-	-	-	-	-	-
Pressure drop source side	kPa	32	35	46	-	-	-	-	-	-
Water flow rate system side	l/h	1319	1626	2171	-	-	-	-	-	-
Pressure drop system side	kPa	25	26	30	-	-	-	-	-	-

(1) Date 14511:2018; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C
(2) Date 14511:2018; Water user side 40 °C / 45 °C; Water source side 10 °C / 7 °C

ENERGY INDICES (REG. 2016/2281 EU)

WRL - °

Size		026	031	041	051	071	081	101	141	161
Power supply: °										
SEER - 12/7 (EN14825: 2018) (1)										
SEER	W/W	3,93	4,29	4,13	4,51	4,66	4,52	4,93	4,93	4,75
Seasonal efficiency	%	154,0%	168,5%	162,1%	177,3%	183,3%	177,8%	194,1%	194,0%	187,1%
UE 811/2013 performance in average ambient conditions (average) - 35 °C - Pdesignh ° 70 kW (2)										
Pdesignh	kW	11	14	17	23	30	35	45	60	68
SCOP		5,08	5,45	5,38	5,50	5,48	5,33	6,03	5,85	5,50
ηsh	%	195.0%	210.0%	207.0%	212.0%	211.0%	205.0%	233.0%	226.0%	212.0%
Efficiency energy class		A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++
Power supply: M										
SEER - 12/7 (EN14825: 2018) (1)										
SEER	W/W	3,77	4,13	4,27	-	-	-	-	-	-
Seasonal efficiency	%	147,9%	162,0%	167,6%	-	-	-	-	-	-
UE 811/2013 performance in average ambient conditions (average) - 35 °C - Pdesignh ° 70 kW (2)										
Pdesignh	kW	11	14	17	-	-	-	-	-	-
SCOP		5,15	5,50	5,18	-	-	-	-	-	-
ηsh	%	198.0%	212.0%	199.0%	-	-	-	-	-	-
Efficiency energy class		A+++	A+++	A+++	-	-	-	-	-	-

(1) Calculation performed with FIXED water flow rate and VARIABLE outlet temperature.
(2) Efficiencies for low temperature applications (35 °C)

PERFORMANCE SPECIFICATIONS

WRL ABP

Size		026	031	041	051	071	081	101	141	161
Power supply: °										
Cooling performance 12 °C / 7 °C (1)										
Cooling capacity	kW	6,8	8,5	11,4	14,9	19,4	22,0	29,8	38,9	44,2
Input power	kW	1,4	1,7	2,5	3,1	3,9	4,6	6,3	8,1	9,4
Cooling total input current	A	3,7	3,3	5,6	7,5	8,6	10,0	14,0	17,0	20,0
EER	W/W	4,75	5,02	4,62	4,84	4,93	4,78	4,75	4,79	4,69
Water flow rate source side	l/h	1396	1735	2375	3054	3978	4538	6100	7947	9077
Useful head source side	kPa	59	53	36	63	43	28	116	137	125
Water flow rate system side	l/h	1154	1447	1955	2541	3320	3770	5078	6638	7555
Useful head system side	kPa	74	70	56	79	66	56	148	164	157
Heating performance 40 °C / 45 °C (2)										
Heating capacity	kW	7,6	9,2	12,5	16,1	20,9	23,8	32,2	41,6	47,6
Input power	kW	1,9	2,2	3,1	3,9	4,9	5,8	8,0	10,1	11,8
Heating total input current	A	4,7	4,0	6,7	9,3	10,0	13,0	18,0	20,0	25,0
COP	W/W	4,05	4,17	4,05	4,11	4,24	4,09	4,01	4,13	4,04
Water flow rate source side	l/h	1680	2053	2767	3602	4708	5325	7200	9414	10671
Useful head source side	kPa	52	43	16	46	20	4	90	121	109
Water flow rate system side	l/h	1326	1607	2181	2819	3647	4159	5629	7284	8315
Useful head system side	kPa	63	59	46	70	54	41	130	148	138
Power supply: M										
Cooling performance 12 °C / 7 °C (1)										
Cooling capacity	kW	6,7	8,4	11,4	-	-	-	-	-	-
Input power	kW	1,5	1,8	2,4	-	-	-	-	-	-
Cooling total input current	A	7,8	9,9	12,0	-	-	-	-	-	-
EER	W/W	4,54	4,75	4,80	-	-	-	-	-	-
Water flow rate source side	l/h	1386	1731	2359	-	-	-	-	-	-
Useful head source side	kPa	59	54	36	-	-	-	-	-	-
Water flow rate system side	l/h	1137	1430	1955	-	-	-	-	-	-
Useful head system side	kPa	74	70	56	-	-	-	-	-	-
Heating performance 40 °C / 45 °C (2)										
Heating capacity	kW	7,5	9,3	12,4	-	-	-	-	-	-
Input power	kW	1,9	2,3	3,0	-	-	-	-	-	-
Heating total input current	A	9,9	13,0	15,0	-	-	-	-	-	-
COP	W/W	3,97	4,01	4,17	-	-	-	-	-	-
Water flow rate source side	l/h	1662	2053	2778	-	-	-	-	-	-
Useful head source side	kPa	52	43	16	-	-	-	-	-	-
Water flow rate system side	l/h	1319	1626	2171	-	-	-	-	-	-
Useful head system side	kPa	63	59	45	-	-	-	-	-	-

(1) Date 14511:2018; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C
(2) Date 14511:2018; Water user side 40 °C / 45 °C; Water source side 10 °C / 7 °C

ENERGY INDICES (REG. 2016/2281 EU)

WRL ABP

Size		026	031	041	051	071	081	101	141	161
Power supply: °										
SEER - 12/7 (EN14825: 2018) (1)										
SEER	W/W	5,00	5,37	5,22	5,38	5,62	5,30	5,31	5,27	5,21
Seasonal efficiency	%	196,9%	211,7%	205,8%	212,0%	221,7%	208,8%	209,2%	207,7%	205,5%
UE 811/2013 performance in average ambient conditions (average) - 35 °C - Pdesignh ° 70 kW (2)										
Pdesignh	kW	10	13	17	22	30	34	44	59	66
SCOP		5,78	6,15	5,75	6,13	5,75	5,45	6,00	5,95	5,60
ηsh	%	223.0%	238.0%	222.0%	237.0%	222.0%	210.0%	232.0%	230.0%	216.0%
Efficiency energy class		A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++
Power supply: M										
SEER - 12/7 (EN14825: 2018) (1)										
SEER	W/W	4,73	5,20	5,22	-	-	-	-	-	-
Seasonal efficiency	%	186,3%	205,1%	205,6%	-	-	-	-	-	-
UE 811/2013 performance in average ambient conditions (average) - 35 °C - Pdesignh ° 70 kW (2)										
Pdesignh	kW	11	13	17	-	-	-	-	-	-
SCOP		5,90	6,28	5,55	-	-	-	-	-	-
ηsh	%	228.0%	243.0%	214.0%	-	-	-	-	-	-
Efficiency energy class		A+++	A+++	A+++	-	-	-	-	-	-

(1) Calculation performed with FIXED water flow rate and VARIABLE outlet temperature.
(2) Efficiencies for low temperature applications (35 °C)

ELECTRIC DATA

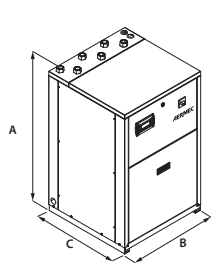
Size			026	031	041	051	071	081	101	141	161
Electric data											
Maximum current (FLA)	°	A	8,0	8,0	15,0	17,0	21,0	22,0	32,0	40,0	41,0
	M	A	18,0	21,0	34,0	-	-	-	-	-	-
Peak current (LRA)	°	A	34,0	37,0	65,0	75,0	75,0	75,0	90,0	94,0	95,0
	M	A	63,0	84,0	119,0	-	-	-	-	-	-

GENERAL TECHNICAL DATA

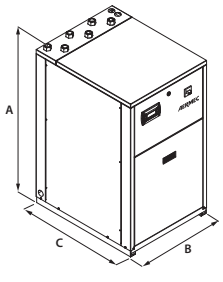
Size			026	031	041	051	071	081	101	141	161
Compressor											
Type	°,A	type					Scroll				
Number	°,A	no.	1	1	1	1	1	1	2	2	2
Circuits	°,A	no.	1	1	1	1	1	1	1	1	1
Refrigerant	°,A	type					R410A				
Refrigerant charge	°,A	kg	0,8	0,9	1,2	1,6	1,9	2,0	3,6	4,4	4,7
Source side heat exchanger											
Type	°,A	type					Brazed plate				
Number	°,A	no.	1	1	1	1	1	1	1	1	1
System side heat exchanger											
Type	°,A	type					Brazed plate				
Number	°,A	no.	1	1	1	1	1	1	1	1	1
Source side hydraulic connections											
Connections (in/out)	°,A	Type					Gas-F				
Sizes (in/out)	°,A	Ø					1" 1/4				
System side hydraulic connections											
Connections (in/out)	°,A	Type					Gas-F				
Sizes (in/out)	°,A	Ø					1" 1/4				
Sound data calculated in cooling mode (1)											
Sound power level	°,A	dB(A)	55,5	57,0	57,5	59,0	60,0	60,5	62,0	63,0	63,5
Sound pressure level (10 m)	°	dB(A)	24,3	25,8	26,3	27,7	28,7	29,2	30,6	31,6	32,1
	A	dB(A)	24,1	25,6	26,1	27,6	28,6	29,1	30,5	31,5	32,0

(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).

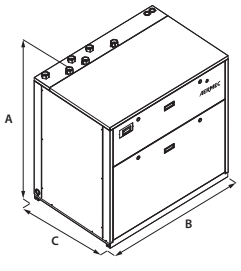
DIMENSIONS



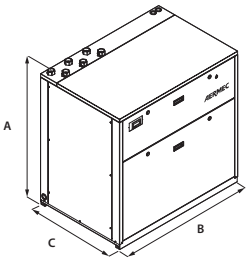
WRL 026-041



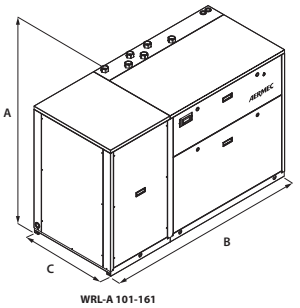
WRL 051-081



WRL 101-161



WRL-A 026-081



WRL-A 101-161

Size			026	031	041	051	071	081	101	141	161
Dimensions and weights											
A	°	mm	976	976	976	1126	1126	1126	1126	1126	1126
	A	mm	1126	1126	1126	1126	1126	1126	1126	1126	1126
B	°	mm	605	605	605	605	605	605	1155	1155	1155
	A	mm	1155	1155	1155	1155	1155	1155	1755	1755	1755
C	°	mm	603	603	603	773	773	773	773	773	773
	A	mm	773	773	773	773	773	773	773	773	773
Empty weight	°	kg	120	125	130	150	170	180	260	270	280
	A	kg	190 (1)	200 (1)	210 (1)	230 (1)	250 (1)	260 (1)	340 (1)	350 (1)	360 (1)

(1) Units with two heat exchangers and storage tank, without pumps

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

WRL 026H - 161H

Reversible water-cooled heat pump, gas side

Cooling capacity 6 ÷ 40 kW
Heating capacity 8 ÷ 48 kW

- High efficiency
- Production of hot water up to 60 °C
- Production of domestic hot water priority
- Suitable for geothermal applications

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.

VERSIONS

° Without storage tank
A With storage tank

FEATURES

Operating field

Operation at full power with domestic hot water for the system up to 60 °C.
(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

The standard unit is supplied with a water filter, differential pressure switch and safety valve already installed on the service and source side (and also on the recovery side, if present).
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).
Low-head and 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.
KSAE: External air sensor.
PGD1: Allows you to control the unit at a distance.
SSM: Probe to be used with the mixer valve in applications with radiant panels. The probe requires the VMF-CRP area accessory as well.
TAH: Ambient terminal with temperature and humidity probe - 230V AC flush-mounting model that can command an On-Off valve or a zone pump and dehumidifier consent.
TAT: Ambient terminal with temperature probe - 230V AC flush-mounting model that can command an On-Off valve or a zone pump.
VT: Anti-vibration supports.
VPHL: Pressure switch valve with bypass solenoid valve, during cooling mode operation the bypass valve is closed so the water flows exclusive-

ly through the circuit with the pressure switch. During heating mode operation the water flows through both branches of the circuit.

ACCESSORIES COMPATIBILITY

Model	026	031	041	051	071	081	101	141	161
AER485P1	•	•	•	•	•	•	•	•	•
KSAE	•	•	•	•	•	•	•	•	•
PGD1	•	•	•	•	•	•	•	•	•
SSM	•	•	•	•	•	•	•	•	•
TAH	•	•	•	•	•	•	•	•	•
TAT	•	•	•	•	•	•	•	•	•

Antivibration

Version	Integrated hydronic kit, source side	Integrated hydronic kit, user side	026	031	041	051	071	081	101	141	161
°	°,B,I,U,V	°,N,P	VT9	VT9	VT9	VT9	VT9	VT9	VT15	VT15	VT15
A	°,B,I,U,V	°,N,P	VT15	VT15	VT15	VT15	VT15	VT15	VT15A	VT15A	VT15A

Pressure switch valve

Ver	026	031	041	051	071	081	101	141	161
°,A	VPHL1	VPHL1	VPHL2	VPHL2	VPHL3	VPHL3	VPHL4	VPHL4	VPHL4

CONFIGURATOR

Field	Description
1,2,3	**WRL**
4,5,6	**Size** 026, 031, 041, 051, 071, 081, 101, 141, 161
7	**Operating ÿeld**
X	Electronic thermostatic expansion valve
8	**Model**
H	Reversible heat pump, gas side
9	**Version**
°	Without storage tank
A	With storage tank
10	**Heat recovery**
°	Without heat recovery
T	With total recovery
11	**Integrated hydronic kit, source side**
°	Without hydronic kit
B	On-off pump (1)
I	Inverter pump (2)
U	Pump high head (3)
V	Applications with bore hole water
12	**Integrated hydronic kit, user side**
°	Without hydronic kit
N	Pump high head (3)
P	On-off pump (1)
13	**Integrated hydronic kit, recovery side**
°	Without hydronic kit
Q	Inverter pump
14	**Soft-start**
°	Without soft-start
S	With soft-start
15	**Power supply**
°	400V~3N 50Hz
4	230V~3 50Hz (4)
M	230V~ 50Hz (5)

(1) Inverter pump for size WRL 026 ÷ 081. The speed of the inverter pump must be set upon commissioning, according to the useful static pressure required; once it has been set, the pump will work at a constant flow rate.
(2) Only for WRL 026 ÷ 081
(3) Only for WRL 101 ÷ 161
(4) Only for WRL 051 ÷ 141
(5) Only for WRL 026 ÷ 041

PERFORMANCE SPECIFICATIONS 12 °C/ 7 °C - 40 °C/ 45 °C

WRL - (H°) - (400V 3N ~ 50Hz)

Size		026	031	041	051	071	081	101	141	161
Power supply: °										
Cooling performance 12 °C / 7 °C (1)										
Cooling capacity	kW	6,3	8,1	10,4	13,7	17,8	20,3	27,6	35,4	40,4
Input power	kW	1,6	2,3	2,3	3,0	4,2	5,0	6,1	8,5	10,1
Cooling total input current	A	4,0	4,0	6,0	7,0	9,0	10,0	13,0	17,0	19,0
EER	W/W	3,98	3,47	4,52	4,51	4,18	4,08	4,49	4,15	4,01
Water flow rate source side	l/h	1346	1782	2178	2870	3759	4312	5763	7501	8611
Pressure drop source side	kPa	13	16	19	20	24	27	28	37	44
Water flow rate system side	l/h	1085	1396	1798	2367	3058	3492	4748	6098	6964
Pressure drop system side	kPa	9	11	13	14	16	18	20	24	29
Heating performance 40 °C / 45 °C (2)										
Heating capacity	kW	7,9	9,5	12,4	16,4	20,9	24,0	32,7	41,7	47,6
Input power	kW	2,1	2,4	3,0	4,0	5,2	6,1	8,1	10,5	12,3
Heating total input current	A	4,8	4,8	6,6	8,3	10,0	12,0	16,0	20,0	23,0
COP	W/W	3,84	3,96	4,08	4,07	4,01	3,94	4,05	3,97	3,87
Water flow rate source side	l/h	1714	2086	2759	3635	4611	5291	7248	9196	10445
Pressure drop source side	kPa	34	34	46	43	50	59	52	62	73
Water flow rate system side	l/h	1364	1644	2151	2842	3616	4165	5669	7217	8246
Pressure drop system side	kPa	20	18	28	28	32	38	35	43	51

(1) Date 14511:2018; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C
(2) Date 14511:2018; Water user side 40 °C / 45 °C; Water source side 10 °C / 7 °C

Technical data WRL (H°) - (230V ~ 50Hz)

Size		026	031	041	051	071	081	101	141	161
Power supply: M										
Cooling performance 12 °C / 7 °C (1)										
Cooling capacity	kW	6,3	7,9	10,3	-	-	-	-	-	-
Input power	kW	1,7	1,9	2,4	-	-	-	-	-	-
Cooling total input current	A	9,0	11,0	14,0	-	-	-	-	-	-
EER	W/W	3,74	4,13	4,28	-	-	-	-	-	-
Water flow rate source side	l/h	1363	1678	2179	-	-	-	-	-	-
Pressure drop source side	kPa	14	16	19	-	-	-	-	-	-
Water flow rate system side	l/h	1085	1362	1781	-	-	-	-	-	-
Pressure drop system side	kPa	9	10	13	-	-	-	-	-	-
Heating performance 40 °C / 45 °C (2)										
Heating capacity	kW	7,9	9,9	12,6	-	-	-	-	-	-
Input power	kW	2,1	2,6	3,3	-	-	-	-	-	-
Heating total input current	A	10,0	13,0	17,0	-	-	-	-	-	-
COP	W/W	3,85	3,89	3,82	-	-	-	-	-	-
Water flow rate source side	l/h	1717	2173	2745	-	-	-	-	-	-
Pressure drop source side	kPa	34	36	46	-	-	-	-	-	-
Water flow rate system side	l/h	1366	1723	2186	-	-	-	-	-	-
Pressure drop system side	kPa	20	22	29	-	-	-	-	-	-

(1) Date 14511:2018; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C
(2) Date 14511:2018; Water user side 40 °C / 45 °C; Water source side 10 °C / 7 °C

PERFORMANCE SPECIFICATIONS 23 °C/ 18 °C - 30 °C/ 35 °C

WRL - (H°) - (400V 3N ~ 50Hz)

Size		026	031	041	051	071	081	101	141	161
Power supply: °										
Cooling performance 23 °C / 18 °C (1)										
Cooling capacity	kW	8,3	10,0	13,5	17,5	23,9	27,4	34,9	47,8	54,5
Input power	kW	1,6	1,9	2,4	3,3	4,4	5,2	6,6	9,0	10,7
Cooling total input current	A	4,0	3,0	6,0	8,0	9,0	10,0	14,0	17,0	19,0
EER	W/W	5,22	5,34	5,54	5,35	5,39	5,25	5,31	5,32	5,11
Water flow rate source side	l/h	1681	2039	2719	3547	4844	5557	7089	9679	11092
Pressure drop source side	kPa	20	21	30	31	40	45	42	62	73
Water flow rate system side	l/h	1428	1737	2330	3022	4136	4730	6040	8270	9438
Pressure drop system side	kPa	16	17	22	23	29	33	32	44	53
Heating performance 30 °C / 35 °C (2)										
Heating capacity	kW	7,9	9,4	12,4	16,4	20,9	24,0	32,7	41,7	47,6
Input power	kW	2,1	2,4	3,0	4,0	5,2	6,1	8,1	10,5	12,3
Heating total input current	A	4,8	4,8	6,6	8,3	10,0	12,0	16,0	20,0	23,0
COP	W/W	3,84	3,96	4,08	4,07	4,01	3,94	4,05	3,97	3,87
Water flow rate source side	l/h	1714	2086	2759	3635	4611	5291	7248	9196	10445
Pressure drop source side	kPa	34	34	46	43	50	59	52	62	73
Water flow rate system side	l/h	1364	1644	2151	2842	3612	4165	5669	7217	8246
Pressure drop system side	kPa	20	18	28	28	32	38	35	43	51

(1) Date 14511:2018; Water user side 23 °C / 18 °C; Water source side 30 °C / 35 °C
(2) Date 14511:2018; Water user side 30 °C / 35 °C; Water source side 10 °C / 5 °C

WRL (H°) - (230V ~ 50Hz)

Size		026	031	041	051	071	081	101	141	161
Power supply: M										
Cooling performance 23 °C / 18 °C (1)										
Cooling capacity	kW	8,3	10,1	13,3	-	-	-	-	-	-
Input power	kW	1,6	2,0	2,5	-	-	-	-	-	-
Cooling total input current	A	8,0	11,0	14,0	-	-	-	-	-	-
EER	W/W	5,05	5,18	5,27	-	-	-	-	-	-
Water flow rate source side	l/h	1690	2070	2699	-	-	-	-	-	-
Pressure drop source side	kPa	22	24	29	-	-	-	-	-	-
Water flow rate system side	l/h	1428	1755	2295	-	-	-	-	-	-
Pressure drop system side	kPa	16	17	22	-	-	-	-	-	-
Heating performance 30 °C / 35 °C (2)										
Heating capacity	kW	7,9	9,9	12,6	-	-	-	-	-	-
Input power	kW	2,1	2,6	3,3	-	-	-	-	-	-
Heating total input current	A	10,0	13,0	17,0	-	-	-	-	-	-
COP	W/W	3,85	3,89	3,82	-	-	-	-	-	-
Water flow rate source side	l/h	1717	2173	2745	-	-	-	-	-	-
Pressure drop source side	kPa	34	36	46	-	-	-	-	-	-
Water flow rate system side	l/h	1366	1723	2186	-	-	-	-	-	-
Pressure drop system side	kPa	20	22	29	-	-	-	-	-	-

(1) Date 14511:2018; Water user side 23 °C / 18 °C; Water source side 30 °C / 35 °C
(2) Date 14511:2018; Water user side 30 °C / 35 °C; Water source side 10 °C / 5 °C

ENERGY INDICES (REG. 2016/2281 EU)

WRL - (H°) - (400V 3N ~ 50Hz)

Size		026	031	041	051	071	081	101	141	161
Power supply: °										
SEER - 12/7 (EN14825: 2018) (1)										
SEER	W/W	3,64	3,39	4,31	4,53	4,20	4,13	4,81	4,49	4,36
Seasonal efficiency	%	142,7%	132,4%	169,4%	178,1%	165,1%	162,3%	189,4%	176,5%	171,4%
UE 811/2013 performance in average ambient conditions (average) - 55 °C - Pdesignh ° 70 kW (2)										
Pdesignh	kW	10	12	16	21	26	31	42	53	61
ηsh	%	141.0%	145.0%	151.0%	152.0%	151.0%	150.0%	175.0%	173.0%	167.0%
SCOP		3,73	3,83	3,98	4,00	3,98	3,95	4,58	4,53	4,38
Efficiency energy class		A++	A++	A+++	A+++	A+++	A+++	A+++	A+++	A+++
UE 811/2013 performance in average ambient conditions (average) - 35 °C - Pdesignh ° 70 kW (3)										
Pdesignh	kW	11	14	17	23	30	35	45	60	68
ηsh	%	195.0%	210.0%	207.0%	212.0%	211.0%	205.0%	233.0%	226.0%	212.0%
SCOP		5,08	5,45	5,38	5,50	5,48	5,33	6,03	5,85	5,50
Efficiency energy class		A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++

(1) Calculation performed with FIXED water flow rate and VARIABLE outlet temperature.
(2) Efficiencies for average temperature applications (55 °C)
(3) Efficiencies for low temperature applications (35 °C)

WRL - (H°) - (230V ~ 50Hz)

Size		026	031	041	051	071	081	101	141	161
Power supply: M										
SEER - 12/7 (EN14825: 2018) (1)										
SEER	W/W	3,48	3,80	4,15	-	-	-	-	-	-
Seasonal efficiency	%	136,2%	148,8%	163,1%	-	-	-	-	-	-
UE 811/2013 performance in average ambient conditions (average) - 55 °C - Pdesignh ° 70 kW (2)										
Pdesignh	kW	10	13	16	-	-	-	-	-	-
ηsh	%	142.0%	145.0%	142.0%	-	-	-	-	-	-
SCOP		3,75	3,83	3,75	-	-	-	-	-	-
Efficiency energy class		A++	A++	A++	-	-	-	-	-	-
UE 811/2013 performance in average ambient conditions (average) - 35 °C - Pdesignh ° 70 kW (3)										
Pdesignh	kW	11	14	17	-	-	-	-	-	-
ηsh	%	198.0%	212.0%	199.0%	-	-	-	-	-	-
SCOP		5,15	5,50	5,18	-	-	-	-	-	-
Efficiency energy class		A+++	A+++	A+++	-	-	-	-	-	-

(1) Calculation performed with FIXED water flow rate and VARIABLE outlet temperature.
(2) Efficiencies for average temperature applications (55 °C)
(3) Efficiencies for low temperature applications (35 °C)

WRL - (H ABP) - (400V 3N ~ 50Hz)

Size		026	031	041	051	071	081	101	141	161
Power supply: °										
SEER - 12/7 (EN14825: 2018) (1)										
SEER	W/W	4,47	4,07	5,37	5,40	4,96	4,85	5,17	4,75	4,67
Seasonal efficiency	%	175,9%	159,7%	211,8%	213,1%	195,3%	190,9%	203,7%	186,8%	183,9%
UE 811/2013 performance in average ambient conditions (average) - 55 °C - Pdesignh ° 70 kW (2)										
Pdesignh	kW	10	12	16	21	26	30	41	52	60
ηsh	%	151.0%	155.0%	161.0%	161.0%	157.0%	155.0%	173.0%	170.0%	166.0%
SCOP		3,98	4,08	4,23	4,23	4,13	4,08	4,53	4,45	4,35
Efficiency energy class		A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++
UE 811/2013 performance in average ambient conditions (average) - 35 °C - Pdesignh ° 70 kW (3)										
Pdesignh	kW	10	13	17	22	30	34	44	59	66
ηsh	%	223.0%	238.0%	222.0%	237.0%	222.0%	210.0%	232.0%	230.0%	216.0%
SCOP		5,78	6,15	5,75	6,13	5,75	5,45	6,00	5,95	5,60
Efficiency energy class		A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++

(1) Calculation performed with FIXED water flow rate and VARIABLE outlet temperature.
(2) Efficiencies for average temperature applications (55 °C)
(3) Efficiencies for low temperature applications (35 °C)

WRL - (H ABP) - (230V ~ 50Hz)

Size			026	031	041	051	071	081	101	141	161
Power supply: M											
SEER - 12/7 (EN14825: 2018) (1)											
SEER		W/W	4,21	4,63	5,14	-	-	-	-	-	-
Seasonal efficiency		%	165,5%	182,3%	202,7%	-	-	-	-	-	-
UE 811/2013 performance in average ambient conditions (average) - 55 °C - Pdesignh ° 70 kW (2)											
Pdesignh		kW	10	13	16	-	-	-	-	-	-
ηsh		%	152.0%	156.0%	152.0%	-	-	-	-	-	-
SCOP			4,00	4,10	4,00	-	-	-	-	-	-
Efficiency energy class			A+++	A+++	A+++	-	-	-	-	-	-
UE 811/2013 performance in average ambient conditions (average) - 35 °C - Pdesignh ° 70 kW (3)											
Pdesignh		kW	11	13	17	-	-	-	-	-	-
ηsh		%	228.0%	243.0%	214.0%	-	-	-	-	-	-
SCOP			5,90	6,28	5,55	-	-	-	-	-	-
Efficiency energy class			A+++	A+++	A+++	-	-	-	-	-	-

(1) Calculation performed with FIXED water flow rate and VARIABLE outlet temperature.
(2) Efficiencies for average temperature applications (55 °C)
(3) Efficiencies for low temperature applications (35 °C)

ELECTRIC DATA

Size			026	031	041	051	071	081	101	141	161
Power supply: °											
Electric data											
Maximum current (FLA)		A	8,5	9,0	11,0	13,0	20,0	23,0	23,0	37,0	43,0
Peak current (LRA)		A	34,0	37,0	50,0	66,0	75,0	75,0	88,0	91,0	94,0

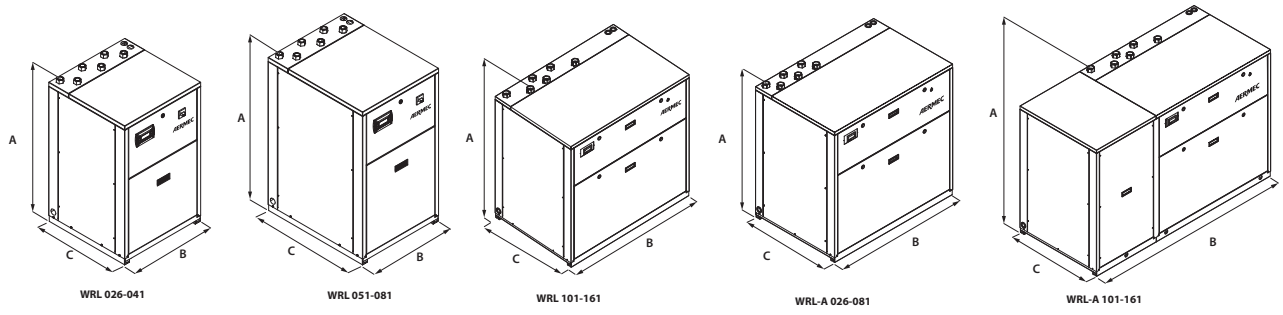
Size			026	031	041	051	071	081	101	141	161
Power supply: M											
Electric data											
Maximum current (FLA)		A	19,0	22,0	26,0	-	-	-	-	-	-
Peak current (LRA)		A	63,0	84,0	99,0	-	-	-	-	-	-

GENERAL TECHNICAL DATA

Size			026	031	041	051	071	081	101	141	161
Compressor											
Type	°,A	type					Scroll				
Number	°,A	no.	1	1	1	1	1	1	2	2	2
Circuits	°,A	no.	1	1	1	1	1	1	1	1	1
Refrigerant	°,A	type					R410A				
Source side heat exchanger											
Type	°,A	type					Brazed plate				
Number	°,A	no.	1	1	1	1	1	1	1	1	1
System side heat exchanger											
Type	°,A	type					Brazed plate				
Number	°,A	no.	1	1	1	1	1	1	1	1	1
Source side hydraulic connections											
Connections (in/out)	°,A	Type					Gas - F				
Sizes (in/out)	°,A	Ø					1" 1/4				
System side hydraulic connections											
Connections (in/out)	°,A	Type					Gas - F				
Sizes (in/out)	°,A	Ø					1" 1/4				
Sound data calculated in cooling mode (1)											
Sound power level	°,A	dB(A)	55,5	57,0	57,5	59,0	60,0	60,5	62,0	63,0	63,5
Sound pressure level (10 m)	°,A	dB(A)	24,3	25,8	26,3	27,7	28,7	29,2	30,6	31,6	32,1

(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



WRL 026-041 | WRL 051-081 | WRL 101-161 | WRL-A 026-081 | WRL-A 101-161

Size			026	031	041	051	071	081	101	141	161
Dimensions and weights											
A	°	mm	976	976	976	1126	1126	1126	1126	1126	1126
	A	mm	1126	1126	1126	1126	1126	1126	1126	1126	1126
B	°	mm	605	605	605	605	605	605	1155	1155	1155
	A	mm	1155	1155	1155	1155	1155	1155	1155	1155	1155
C	°	mm	603	603	603	773	773	773	773	773	773
	A	mm	773	773	773	773	773	773	773	773	773
Empty weight	°	kg	120	125	130	150	170	180	260	270	280
	A	kg	190 (1)	200 (1)	210 (1)	230 (1)	250 (1)	260 (1)	340 (1)	350 (1)	360 (1)

(1) Units with two heat exchangers and storage tank, without pumps

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

WRL 180 - 650

Water cooled heat pump reversible water side

Cooling capacity 49 ÷ 174 kW
Heating capacity 55 ÷ 192 kW

- **High efficiency**
- **Suitable for geothermal applications**
- **Production of hot water up to 55 °C**

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 4-18°C, and the possibility to produce also negative temperature water down to -8°C for the evaporator and hot water for the condenser up to 55 °C.
(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

The standard unit is supplied with a water filter, differential pressure switch and safety valve already installed on the service and source side (and also on the recovery side, if present).
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).
Low-head and 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.
KSAE: External air sensor.
PGD1: Allows you to control the unit at a distance.
SSM: Probe to be used with the mixer valve in applications with radiant panels. The probe requires the VMF-CRP area accessory as well.
TAH: Ambient terminal with temperature and humidity probe - 230V AC flush-mounting model that can command an On-Off valve or a zone pump and dehumidifier consent.
TAT: Ambient terminal with temperature probe - 230V AC flush-mounting model that can command an On-Off valve or a zone pump.
VMF-CRP: To predict accessory for the manage-ment of the probes SPLW / SDHW if provided with the MULTICONTROL

VT: Anti-vibration supports.

ACCESSORIES COMPATIBILITY

Ver	180	200	300	400	500	550	600	650
Model: °, E, K								
°	AER485P1, AERNET, KSAE, PGD1, SSM, TAH, TAT, VMF-CRP	AER485P1, AERNET, KSAE, PGD1, SSM, TAH, TAT, VMF-CRP	AER485P1, AERNET, KSAE, PGD1, SSM, TAH, TAT, VMF-CRP	AER485P1, AERNET, KSAE, PGD1, SSM, TAH, TAT, VMF-CRP	AER485P1, AERNET, KSAE, PGD1, SSM, TAH, TAT, VMF-CRP	AER485P1, AERNET, KSAE, PGD1, SSM, TAH, TAT, VMF-CRP	AER485P1, AERNET, KSAE, PGD1, SSM, TAH, TAT, VMF-CRP	AER485P1, AERNET, KSAE, PGD1, SSM, TAH, TAT, VMF-CRP

Antivibration

Version	Integrated hydronic kit, source side	Integrated hydronic kit, user side	180	200	300	400	500	550	600	650
°	°,B,F,I,U,V	°,N,P	VT9	VT9	VT9	VT9	VT15	VT15	VT15	VT15

CONFIGURATOR

Field	Description
1,2,3	**WRL**
4,5,6	**Size** 180, 200, 300, 400, 500, 550, 600, 650
7	**Operating ÿeld**
°	Standard mechanic thermostatic valve (1)
X	Electronic thermostatic expansion valve
Y	Low temperature mechanic thermostatic valve (2)
8	**Model**
°	Heat pump reversible on the water side
E	Evaporating unit (3)
K	Heat pump reversible on the water side with low pressure drops
9	**Version**
°	Standard
10	**Heat recovery**
°	Without heat recovery
D	With desuperheater
11	**Integrated hydronic kit, source side**
°	Without hydronic kit
B	On-off pump
F	Single low-head inverter pump
I	High-head inverter pump
U	Pump high head
	Applications with bore hole water
V	2-way modulating valve
12	**Integrated hydronic kit, user side**
°	Without hydronic kit
N	Pump high head
P	Pump low head
13	**Field for future development**
°	Field for future development
14	**Soft-start**
°	Without soft-start
S	With soft-start
15	**Power supply**
°	400V~3N 50Hz

(1) Water produced from 4 °C ÷ 18 °C
(2) Water produced from 4 °C ÷ - 8 °C
(3) Shipped with holding charge only

PERFORMANCE SPECIFICATIONS

WRL - E

Size		180	200	300	400	500	550	600	650
Cooling performance 12 °C / 7 °C (1)									
Cooling capacity	kW	46,0	60,1	69,6	80,1	90,6	121,3	140,2	158,7
Input power	kW	12,4	16,0	18,5	19,8	23,1	29,6	34,1	38,5
Cooling total input current	A	23,0	29,0	32,0	36,0	42,0	56,0	65,0	74,0
EER	W/W	3,71	3,76	3,76	4,05	3,92	4,10	4,11	4,12
Water flow rate system side	l/h	7903	10326	11958	13762	15566	20841	24088	27266
Pressure drop system side	kPa	23	39	39	56	25	42	47	57

(1) Service side water 12 °C / 7 °C; Condensing temperature 45 °C

WRL - °

Size		180	200	300	400	500	550	600	650
Cooling performance 12 °C / 7 °C (1)									
Cooling capacity	kW	49,7	64,3	74,4	85,9	99,8	129,5	150,1	169,0
Input power	kW	10,8	14,4	16,8	18,3	20,4	27,0	31,0	35,7
Cooling total input current	A	20,0	25,0	29,0	62,0	36,0	51,0	59,0	68,0
EER	W/W	4,59	4,47	4,42	4,69	4,90	4,80	4,84	4,73
Water flow rate source side	l/h	10336	13418	15531	17725	20550	26664	30860	34836
Pressure drop source side	kPa	27	46	62	81	32	52	57	72
Water flow rate system side	l/h	8549	11082	12824	14822	17186	22296	25844	29025
Pressure drop system side	kPa	27	43	46	60	30	49	53	67
Heating performance 40 °C / 45 °C (2)									
Heating capacity	kW	55,8	72,6	84,1	95,6	110,7	143,6	166,1	187,7
Input power	kW	13,2	17,6	20,5	22,4	24,8	32,9	37,9	43,9
Heating total input current	A	24,0	30,0	34,0	38,0	44,0	61,0	71,0	82,0
COP	W/W	4,24	4,13	4,10	4,27	4,46	4,36	4,38	4,27
Water flow rate source side	l/h	12542	16257	18813	21745	25213	32709	37914	42683
Pressure drop source side	kPa	58	93	99	129	65	105	114	144
Water flow rate system side	l/h	9685	12580	14561	16557	19196	24909	28816	32553
Pressure drop system side	kPa	24	40	55	71	28	45	50	63

(1) Date 14511:2018; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C
(2) Date 14511:2018; Water user side 40 °C / 45 °C; Water source side 10 °C / 7 °C

WRL - K

Size		180	200	300	400	500	550	600	650
Cooling performance 12 °C / 7 °C (1)									
Cooling capacity	kW	49,7	66,3	76,7	88,6	99,8	133,5	154,6	174,1
Input power	kW	10,8	14,4	16,9	18,3	20,4	26,7	30,8	35,6
Cooling total input current	A	20,0	25,0	29,0	32,0	36,0	51,0	59,0	68,0
EER	W/W	4,59	4,61	4,55	4,85	4,50	5,00	5,02	4,90
Water flow rate source side	l/h	10336	13753	15919	18173	20550	27338	31642	35716
Pressure drop source side	kPa	27	48	65	85	32	55	60	76
Water flow rate system side	l/h	8549	11414	13209	15267	17186	22965	26619	29967
Pressure drop system side	kPa	27	34	42	48	30	24	33	41
Heating performance 40 °C / 45 °C (2)									
Heating capacity	kW	55,8	74,3	86,1	97,9	110,7	147,1	170,1	192,1
Input power	kW	13,2	17,5	20,5	22,2	24,8	32,3	37,3	43,1
Heating total input current	A	24,0	30,0	34,0	38,0	44,0	61,0	71,0	82,0
COP	W/W	4,24	4,24	4,20	4,40	4,46	4,56	4,56	4,46
Water flow rate source side	l/h	12542	16745	19337	22397	25213	33690	39052	43963
Pressure drop source side	kPa	58	73	90	103	65	52	71	88
Water flow rate system side	l/h	9685	12876	14904	16953	19196	25504	29507	33331
Pressure drop system side	kPa	24	42	57	74	28	48	52	66

(1) Date 14511:2018; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C
(2) Date 14511:2018; Water user side 40 °C / 45 °C; Water source side 10 °C / 7 °C

ENERGY INDICES (REG. 2016/2281 EU)

WRL °

Size		180	200	300	400	500	550	600	650
SEER - 12/7 (EN14825: 2018) (1)									
SEER	W/W	4,65	4,55	4,54	4,74	5,31	5,04	5,12	4,97
Seasonal efficiency	%	182,8%	178,9%	178,5%	186,4%	209,3%	198,7%	201,7%	195,8%
UE 813/2013 performance in average ambient conditions (average) - 55 °C - Pdesignh ° 400 kW (2)									
Pdesignh	kW	68	91	98	119	137	185	212	236
ηsh	%	173.0%	170.0%	170.0%	175.0%	189.0%	186.0%	189.0%	184.0%
SCOP		4,53	4,45	4,45	4,58	4,93	4,85	4,93	4,80
Efficiency energy class		A+++	-	-	-	-	-	-	-
UE 813/2013 performance in average ambient conditions (average) - 35 °C - Pdesignh ° 400 kW (3)									
Pdesignh	kW	79	-	-	-	-	-	-	-
ηsh	%	222.0%	-	-	-	-	-	-	-
SCOP		5,75	-	-	-	-	-	-	-
Efficiency energy class		A+++	-	-	-	-	-	-	-

(1) Calculation performed with FIXED water flow rate and VARIABLE outlet temperature.
(2) Efficiencies for average temperature applications (55 °C)
(3) Efficiencies for low temperature applications (35 °C)

WRL K

Size		180	200	300	400	500	550	600	650
SEER - 12/7 (EN14825: 2018) (1)									
SEER	W/W	4,65	4,71	4,67	4,90	5,31	5,31	5,35	5,19
Seasonal efficiency	%	182,8%	185,3%	183,6%	192,9%	209,3%	209,2%	210,9%	204,6%
UE 813/2013 performance in average ambient conditions (average) - 55 °C - Pdesignh ° 400 kW (2)									
Pdesignh	kW	68	91	98	119	137	185	212	236
ηsh	%	173.0%	170.0%	170.0%	175.0%	189.0%	186.0%	189.0%	184.0%
SCOP		4,53	4,45	4,45	4,58	4,93	4,85	4,93	4,80
Efficiency energy class		A+++	-	-	-	-	-	-	-
UE 813/2013 performance in average ambient conditions (average) - 35 °C - Pdesignh ° 400 kW (3)									
Pdesignh	kW	79	-	-	-	-	-	-	-
ηsh	%	222.0%	-	-	-	-	-	-	-
SCOP		5,75	-	-	-	-	-	-	-
Efficiency energy class		A+++	-	-	-	-	-	-	-

(1) Calculation performed with FIXED water flow rate and VARIABLE outlet temperature.
(2) Efficiencies for average temperature applications (55 °C)
(3) Efficiencies for low temperature applications (35 °C)

ELECTRIC DATA

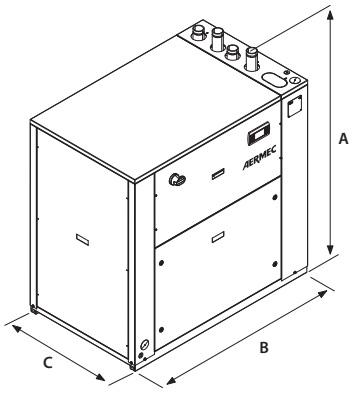
Size			180	200	300	400	500	550	600	650
Electric data										
Maximum current (FLA)	°,E,K	A	32,6	41,8	45,2	52,1	59,0	99,0	112,0	125,0
Peak current (LRA)	°,E,K	A	119,0	123,0	125,0	167,0	174,0	265,0	310,0	323,0

GENERAL TECHNICAL DATA

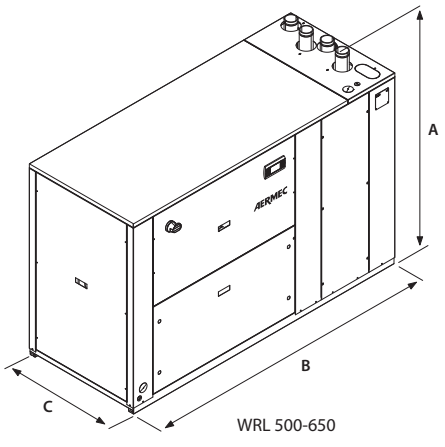
Size			180	200	300	400	500	550	600	650
Compressor										
Type	°,E,K	type					Scroll			
Compressor regulation	°,E,K	Type					On-Off			
Number	°,E,K	no.	2	2	2	2	2	2	2	2
Circuits	°,E,K	no.	1	1	1	1	1	1	1	1
Refrigerant	°,E,K	type					R410A			
Refrigerant charge	°,K	kg	6,0	7,0	6,8	7,2	9,0	14,5	16,8	16,5
	E	kg	Holding charge	Holding charge	Holding charge	Holding charge	Holding charge	Holding charge	Holding charge	Holding charge
Source side heat exchanger										
Type	°,K	type					Brazed plate			
	E	type								
Number	°,K	no.	1	1	1	1	1	1	1	1
	E	no.	-	-	-	-	-	-	-	-
System side heat exchanger										
Type	°,E,K	type					Brazed plate			
Number	°,E,K	no.	1	1	1	1	1	1	1	1
Source side hydraulic connections										
Connections (in/out)	°,K	Type					Grooved joints			
	E	Type								
Sizes (in/out)	°,K	Ø	2″	2″	2″	2″	2″1/2	2″1/2	2″1/2	2″1/2
	E	Ø								
System side hydraulic connections										
Connections (in/out)	°,E,K	Type					Grooved joints			
Sizes (in/out)	°,E,K	Ø	2″	2″	2″	2″	2″1/2	2″1/2	2″1/2	2″1/2
Sound data calculated in cooling mode (1)										
Sound power level	°,E,K	dB(A)	61,1	61,8	62,9	71,1	67,6	79,1	79,1	79,1
Sound pressure level (10 m)	°,E,K	dB(A)	29,6	30,3	31,4	39,6	36,0	47,5	47,5	47,5

(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



WRL 180-400



WRL 500-650

Size			180	200	300	400	500	550	600	650
Dimensions and weights										
A	°,E,K	mm	1380	1380	1380	1380	1380	1380	1380	1380
B	°,E,K	mm	1320	1320	1320	1320	2060	2060	2060	2060
C	°,E,K	mm	845	845	845	845	845	845	845	845
Empty weight	°,K	kg	375	375	381	388	518	594	670	715
	E	kg	-	-	-	-	-	-	-	-

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WRL 180H - 650H

Reversible water-cooled heat pump, gas side

Cooling capacity 44,9 ÷ 157,4 kW
Heating capacity 53,0 ÷ 183,3 kW

- **High efficiency**
- **Suitable for geothermal applications**
- **Production of hot water up to 55 °C**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

DESCRIPTION

Water-water offering chilled/hot water, designed to mit air conditioning needs in residential/commercial complexes or industrial applications.
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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 4-18°C, and the possibility to produce also negative temperature water down to -8°C for the evaporator and hot water for the condenser up to 55 °C.
(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

The standard unit is supplied with a water filter, differential pressure switch and safety valve already installed on the service and source side (and also on the recovery side, if present).

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).
Low-head and 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.
KSAE: External air sensor.
PGD1: Allows you to control the unit at a distance.
SSM: Probe to be used with the mixer valve in applications with radiant panels. The probe requires the VMF-CRP area accessory as well.
TAH: Ambient terminal with temperature and humidity probe - 230V AC flush-mounting model that can command an On-Off valve or a zone pump and dehumidifier consent.
TAT: Ambient terminal with temperature probe - 230V AC flush-mounting model that can command an On-Off valve or a zone pump.
VMF-CRP: To predict accessory for the manage-ment of the probes SPLW / SDHW if provided with the MULTICONTROL

VT: Anti-vibration supports.

ACCESSORIES COMPATIBILITY

Model	Ver	180	200	300	400	500	550	600	650
AER485P1	°	•	•	•	•	•	•	•	•
AERNET	°	•	•	•	•	•	•	•	•
KSAE	°	•	•	•	•	•	•	•	•
PGD1	°	•	•	•	•	•	•	•	•
SSM	°	•	•	•	•	•	•	•	•
TAH	°	•	•	•	•	•	•	•	•
TAT	°	•	•	•	•	•	•	•	•
VMF-CRP	°	•	•	•	•	•	•	•	•

Antivibration

Version	Integrated hydronic kit, user side	Integrated hydronic kit, source side	180	200	300	400	500	550	600	650
°	°,N,P	°,B,F,I,U,V	VT9	VT9	VT9	VT9	VT15	VT15	VT15	VT15

CONFIGURATOR

Field		Description
1,2,3		**WRL**
4,5,6		**Size** 180, 200, 300, 400, 500, 550, 600, 650
7		**Operating ÿ eld**
	°	Standard mechanic thermostatic valve (1)
	X	Electronic thermostatic expansion valve
	Y	Low temperature mechanic thermostatic valve (2)
8		**Model**
	H	Reversible heat pump, gas side
9		**Version**
	°	Standard
10		**Heat recovery**
	°	Without heat recovery
	D	With desuperheater
11		**Integrated hydronic kit, source side**
	°	Without hydronic kit
	B	On-off pump
	F	Single low-head inverter pump
	I	High-head inverter pump
	U	Pump high head
		Applications with bore hole water
	V	2-way modulating valve
12		**Integrated hydronic kit, user side**
	°	Without hydronic kit
	N	Pump high head
	P	Pump low head
13		**Field for future development**
	°	Field for future development
14		**Soft-start**
	°	Without soft-start
	S	With soft-start
15		**Power supply**
	°	400V ~ 3N 50Hz

(1) Water produced from 4 °C ÷ 18 °C
(2) Water produced from 4 °C ÷ - 8 °C

PERFORMANCE SPECIFICATIONS

WRL - °

Size			180	200	300	400	500	550	600	650
Cooling performance 12 °C / 7 °C (1)										
Cooling capacity	°	kW	44,9	59,6	64,8	79,5	93,0	120,1	140,1	157,4
Input power	°	kW	10,8	14,7	16,3	18,6	20,1	27,6	31,4	35,8
Cooling total input current	°	A	20,0	25,0	28,0	32,0	36,0	52,0	60,0	69,0
EER	°	W/W	4,15	4,06	3,97	4,27	4,63	4,34	4,46	4,39
Water flow rate source side	°	l/h	9520	12659	13823	16682	19331	25177	29250	32920
Pressure drop source side	°	kPa	31	52	51	74	34	56	57	71
Water flow rate system side	°	l/h	7732	10274	11168	13711	16013	20686	24139	27112
Pressure drop system side	°	kPa	22	37	36	52	25	40	40	38
Heating performance 40 °C / 45 °C (2)										
Heating capacity	°	kW	53,0	70,9	76,6	92,6	106,4	143,7	164,2	183,3
Input power	°	kW	12,9	17,7	19,1	22,6	24,0	33,1	37,2	42,7
Heating total input current	°	A	23,0	29,0	31,0	37,0	41,0	56,0	64,0	74,0
COP	°	W/W	4,10	4,00	4,01	4,10	4,44	4,34	4,41	4,30
Water flow rate source side	°	l/h	11777	15734	17011	20840	24211	32704	37512	41689
Pressure drop source side	°	kPa	49	89	92	132	61	107	101	126
Water flow rate system side	°	l/h	9190	12277	13264	16046	18452	24913	28485	31788
Pressure drop system side	°	kPa	30	52	49	72	32	58	56	70

(1) Date 14511:2018; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C
(2) Date 14511:2018; Water user side 40 °C / 45 °C; Water source side 10 °C / 7 °C

ELECTRIC DATA

Size			180	200	300	400	500	550	600	650
Electric data										
Maximum current (FLA)	°	A	32,6	41,8	45,2	52,1	59,0	99,0	112,0	125,0
Peak current (LRA)	°	A	119,0	123,0	125,0	167,0	174,0	265,0	310,0	323,0

ENERGY INDICES (REG. 2016/2281 EU)

Size			180	200	300	400	500	550	600	650
SEER - 12/7 (EN14825: 2018) (1)										
SEER	°	W/W	4,25	4,04	4,15	4,38	5,04	4,62	4,80	4,69
Seasonal efficiency	°	%	166,9%	158,5%	162,8%	172,3%	198,4%	181,7%	188,9%	184,5%
UE 813/2013 performance in average ambient conditions (average) - 55 °C - Pdesignh ˜ 400 kW (2)										
Pdesignh	°	kW	68	91	98	119	137	185	212	236
ηsh	°	%	173.0%	170.0%	170.0%	175.0%	189.0%	186.0%	189.0%	184.0%
SCOP	°		4,53	4,45	4,45	4,58	4,93	4,85	4,93	4,80
Efficiency energy class	°		A+++	-	-	-	-	-	-	-
UE 813/2013 performance in average ambient conditions (average) - 35 °C - Pdesignh ˜ 400 kW (3)										
Pdesignh	°	kW	79	-	-	-	-	-	-	-
ηsh	°	%	222.0%	-	-	-	-	-	-	-
SCOP	°		5,75	-	-	-	-	-	-	-
Efficiency energy class	°		A+++	-	-	-	-	-	-	-

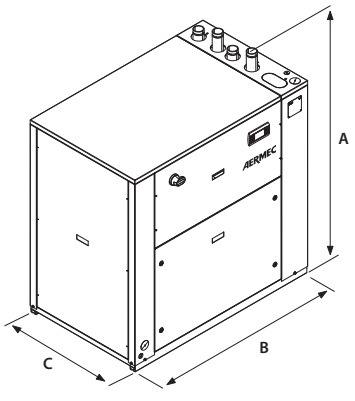
(1) Calculation performed with FIXED water flow rate and VARIABLE outlet temperature.
(2) Efficiencies for average temperature applications (55 °C)
(3) Efficiencies for low temperature applications (35 °C)

GENERAL TECHNICAL DATA

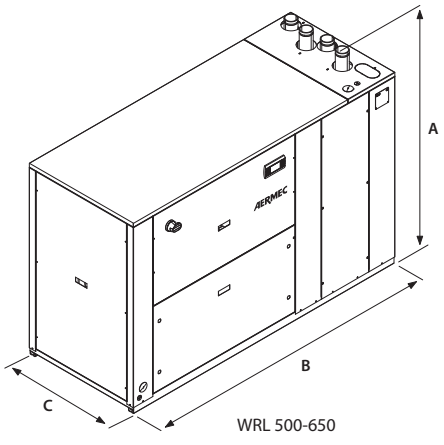
Size			180	200	300	400	500	550	600	650
Compressor										
Type	°	type					Scroll			
Compressor regulation	°	Type					On-Off			
Number	°	no.	2	2	2	2	2	2	2	2
Circuits	°	no.	1	1	1	1	1	1	1	1
Refrigerant	°	type					R410A			
Source side heat exchanger										
Type	°	type					Brazed plate			
Number	°	no.	1	1	1	1	1	1	1	1
System side heat exchanger										
Type	°	type					Brazed plate			
Number	°	no.	1	1	1	1	1	1	1	1
Source side hydraulic connections										
Connections (in/out)	°	Type					Grooved joints			
Sizes (in/out)	°	Ø	2"	2"	2"	2"	2"1/2	2"1/2	2"1/2	2"1/2
System side hydraulic connections										
Connections (in/out)	°	Type					Grooved joints			
Sizes (in/out)	°	Ø	2"	2"	2"	2"	2"1/2	2"1/2	2"1/2	2"1/2
Sound data calculated in cooling mode (1)										
Sound power level	°	dB(A)	61,1	61,8	62,9	71,1	67,6	79,1	79,1	79,1
Sound pressure level (10 m)	°	dB(A)	29,6	30,3	31,4	39,6	36,0	47,5	47,5	47,5

(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



WRL 180-400



WRL 500-650

Size			180	200	300	400	500	550	600	650
Dimensions and weights										
A	°	mm	1380	1380	1380	1380	1380	1380	1380	1380
B	°	mm	1320	1320	1320	1320	2060	2060	2060	2060
C	°	mm	845	845	845	845	845	845	845	845
Empty weight	°	kg	370	370	381	388	522	598	708	753

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

WRK

Reversible water-cooled heat pump, gas side

Cooling capacity 38,9 ÷ 165,9 kW
Heating capacity 48,5 ÷ 207,7 kW

- **Optimised for heating in centralised systems.**
- **Production of hot water at high temperature up to 68°C.**
- **Independent from the gas network.**
- **DHW production.**

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

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
° Standard
L Standard silenced

FEATURES

Extended operating range
Particular attention has been given to winter operation, ensuring the production of hot water up to 68°C.

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 PCO_5
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.
AVX: Spring anti-vibration supports.
VT: Anti-vibration supports.

FACTORY FITTED ACCESSORIES
DRE: Electronic device for peak current reduction.
RIF: Power factor correction. Connected in parallel to the motor allowing about 10% reduction of input current.
T6: Double safety valve; high and low pressure with exchange valve.

ACCESSORIES COMPATIBILITY

Model	Ver	0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
AER485P1	°						•	•	•	•	•
	L	•	•	•	•	•	•	•	•	•	•
AERNET	°						•	•	•	•	•
	L	•	•	•	•	•	•	•	•	•	•
PGD1	°						•	•	•	•	•
	L	•	•	•	•	•	•	•	•	•	•

Antivibration

Version	Integrated hydronic kit, user side	Integrated hydronic kit, source side	0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
°	°	°	-	-	-	-	-	AVX345	AVX342	AVX342	AVX342	AVX342
°	°,M	J,K,U,W	-	-	-	-	-	AVX343	AVX343	AVX343	AVX343	AVX343
°	N	°	-	-	-	-	-	AVX343	AVX343	AVX343	AVX343	AVX343
°	O	J,K,U,W	-	-	-	-	-	AVX343	AVX343	AVX343	AVX343	AVX343
°	P	°	-	-	-	-	-	AVX343	AVX343	AVX343	AVX343	AVX343
°	°	Q,R,V,Z	-	-	-	-	-	AVX313	AVX343	AVX343	AVX343	AVX343
°	M,O	°	-	-	-	-	-	AVX313	AVX343	AVX343	AVX343	AVX343
°	M	Q,R,V,Z	-	-	-	-	-	-	-	-	-	-
°	N	J,K,U,W	-	-	-	-	-	-	-	-	-	-
°	O	Q,R,V,Z	-	-	-	-	-	-	-	-	-	-
°	P	J,K,U,W	-	-	-	-	-	-	-	-	-	-
°	N,P	Q,R,V,Z	-	-	-	-	-	AVX343	AVX343	AVX343	AVX344	AVX344
L	°	°	-	-	-	-	-	AVX345	AVX342	AVX342	AVX342	AVX342
L	°,M	J,K,U,W	-	-	-	-	-	AVX343	AVX343	AVX343	AVX343	AVX343
L	N	°	-	-	-	-	-	AVX343	AVX343	AVX343	AVX343	AVX343
L	O	J,K,U,W	-	-	-	-	-	AVX343	AVX343	AVX343	AVX343	AVX343
L	P	°	-	-	-	-	-	AVX343	AVX343	AVX343	AVX343	AVX343
L	°	Q,R,V,Z	-	-	-	-	-	AVX313	AVX343	AVX343	AVX343	AVX343
L	M,O	°	-	-	-	-	-	AVX313	AVX343	AVX343	AVX343	AVX343
L	M	Q,R,V,Z	-	-	-	-	-	-	-	-	-	-
L	N	J,K,U,W	-	-	-	-	-	-	-	-	-	-
L	O	Q,R,V,Z	-	-	-	-	-	-	-	-	-	-
L	P	J,K,U,W	-	-	-	-	-	-	-	-	-	-
L	N,P	Q,R,V,Z	-	-	-	-	-	AVX343	AVX343	AVX343	AVX344	AVX344

Version	Integrated hydronic kit, user side	Integrated hydronic kit, source side	0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
°	°,M,N,O,P	°,J,K,Q,R,U,V,W,Z	-	-	-	-	-	-	-	-	-	-
L	°	°	VT9	VT9	VT9	VT9	VT9	-	-	-	-	-
L	°	J,K,Q,R,U,V,W,Z	VT15	VT15	VT15	VT15	VT15	-	-	-	-	-
L	M	°,J,K,U,W	VT15	VT15	VT15	VT15	VT15	-	-	-	-	-
L	N	°,Q,R,V,Z	VT15	VT15	VT15	VT15	VT15	-	-	-	-	-
L	O	°,J,K,U,W	VT15	VT15	VT15	VT15	VT15	-	-	-	-	-
L	P	°,Q,R,V,Z	VT15	VT15	VT15	VT15	VT15	-	-	-	-	-
L	M	Q,R,V,Z	-	-	-	-	-	-	-	-	-	-
L	N	J,K,U,W	-	-	-	-	-	-	-	-	-	-
L	O	Q,R,V,Z	-	-	-	-	-	-	-	-	-	-
L	P	J,K,U,W	-	-	-	-	-	-	-	-	-	-

Electronic device for peak current reduction.

Ver	0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
°	-	-	-	-	-	DREWRK0500 (1)	DREWRK0550 (1)	DREWRK0600 (1)	DREWRK0650 (1)	DREWRK0700 (1)
L	DREWRK0200 (1)	DREWRK0280 (1)	DREWRK0300 (1)	DREWRK0330 (1)	DREWRK0350 (1)	DREWRK0500 (1)	DREWRK0550 (1)	DREWRK0600 (1)	DREWRK0650 (1)	DREWRK0700 (1)

(1) Only for supplies of 400V 3N ~ 50Hz and 400V 3 ~ 50Hz. x 2 or x 3 (if present) indicates the quantity to be ordered.
A grey background indicates the accessory must be assembled in the factory

Power factor correction.

Ver	0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
°	-	-	-	-	-	RIFWRK0500	RIFWRK0550	RIFWRK0600	RIFWRK0650	RIFWRK0700
L	RIFWRK0200	RIFWRK0280	RIFWRK0300	RIFWRK0330	RIFWRK0350	RIFWRK0500	RIFWRK0550	RIFWRK0600	RIFWRK0650	RIFWRK0700

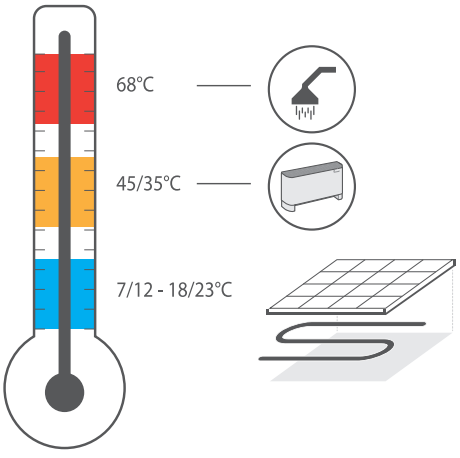
A grey background indicates the accessory must be assembled in the factory

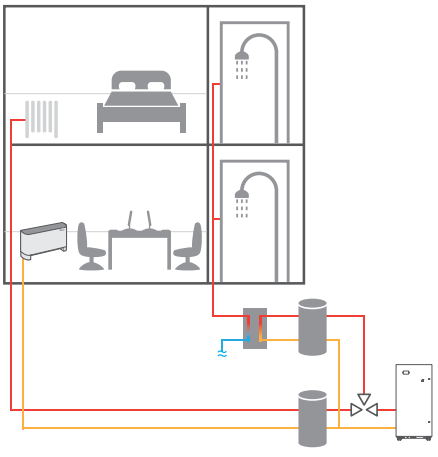
Double safety valve.

Ver	0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
°	-	-	-	-	-	T6WRK2	T6WRK2	T6WRK2	T6WRK2	T6WRK2
L	T6WRK1	T6WRK1	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** 0200, 0280, 0300, 0330, 0350, 0500, 0550, 0600, 0650, 0700
8		**Operating ÿ eld**
	°	Standard mechanic thermostatic valve
9		**Model**
	H	Heat pump
10		**Version**
	°	Standard
	L	Standard silenced (1)
11		**Evaporator**
	°	Standard
12		**Heat recovery**
	°	Without heat recovery
	D	With desuperheater
13		**Power supply**
	°	400V ~ 3 50Hz with magnet circuit breakers
14		**Integrated hydronic kit, user side**
	°	Without hydronic kit
	M	Single pump low head
	N	Pump low head + stand-by pump
	O	Single pump high head
	P	Pump high head + stand-by pump
15		**Integrated hydronic kit, source side (2)**
	°	Without hydronic kit
	J	Single low-head inverter pump
	K	Single high-head inverter pump
	Q	Single high-head inverter pump + stand-by pump
	R	Single low-head inverter pump + stand-by pump
	U	Single pump low head
	V	Pump low head + stand-by pump
	W	Single pump high head
	Z	Pump high head + stand-by pump
16		**Field for future development**
	°	Field for future development

(1) The size 0200-0280-0300-0330-0350 only available in low noise version (L)
(2) Heat pumps R and Q are availables only for sizes 0500÷0700

PERFORMANCE SPECIFICATIONS 12 °C/ 7 °C - 40 °C/ 45 °C

WRK - H°

Size		0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
Cooling performance 12 °C / 7 °C (1)											
Cooling capacity	kW	-	-	-	-	-	96,2	110,9	130,0	145,8	166,1
Input power	kW	-	-	-	-	-	21,5	24,0	28,6	33,3	37,4
Cooling total input current	A	-	-	-	-	-	48,0	50,0	62,0	86,0	89,0
EER	W/W	-	-	-	-	-	4,47	4,63	4,55	4,38	4,44
Water flow rate source side	l/h	-	-	-	-	-	20140	23075	27128	30634	34797
Pressure drop source side	kPa	-	-	-	-	-	25	25	25	24	25
Water flow rate system side	l/h	-	-	-	-	-	16552	19082	22366	25077	28566
Pressure drop system side	kPa	-	-	-	-	-	17	17	17	16	17
Heating performance 40 °C / 45 °C (2)											
Heating capacity	kW	-	-	-	-	-	120,8	137,7	163,1	187,1	207,9
Input power	kW	-	-	-	-	-	26,4	29,7	35,4	41,2	45,4
Heating total input current	A	-	-	-	-	-	52,0	56,0	69,0	92,0	95,0
COP	W/W	-	-	-	-	-	4,58	4,64	4,61	4,55	4,58
Water flow rate source side	l/h	-	-	-	-	-	27658	31618	37369	42704	47563
Pressure drop source side	kPa	-	-	-	-	-	49	49	50	47	50
Water flow rate system side	l/h	-	-	-	-	-	20958	23884	28290	32459	36068
Pressure drop system side	kPa	-	-	-	-	-	28	27	28	27	28

(1) Date 14511:2018; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C
(2) Date 14511:2018; Water user side 40 °C / 45 °C; Water source side 10 °C / 7 °C

WRK - HL

Size		0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
Cooling performance 12 °C / 7 °C (1)											
Cooling capacity	kW	38,9	54,4	65,0	74,1	83,5	96,2	110,9	130,0	145,8	166,1
Input power	kW	8,6	12,0	14,3	16,8	18,8	21,5	24,0	28,6	33,3	37,4
Cooling total input current	A	20,0	25,0	31,0	43,0	45,0	48,0	50,0	62,0	86,0	89,0
EER	W/W	4,54	4,54	4,54	4,41	4,43	4,47	4,63	4,55	4,38	4,44
Water flow rate source side	l/h	8131	11358	13570	15551	17498	20140	23075	27128	30634	34797
Pressure drop source side	kPa	19	23	24	25	26	25	25	25	24	25
Water flow rate system side	l/h	6699	9362	11186	12754	14363	16552	19082	22366	25077	28566
Pressure drop system side	kPa	13	16	16	17	17	17	17	17	16	17
Heating performance 40 °C / 45 °C (2)											
Heating capacity	kW	48,4	68,6	81,6	93,4	104,0	120,8	137,7	163,1	187,1	207,9
Input power	kW	10,6	14,8	17,8	20,8	22,9	26,4	29,7	35,4	41,2	45,4
Heating total input current	A	21,0	28,0	35,0	46,0	48,0	52,0	45,0	69,0	92,0	95,0
COP	W/W	4,57	4,62	4,58	4,48	4,54	4,58	4,64	4,61	4,55	4,58
Water flow rate source side	l/h	11062	15751	18684	21290	23771	27658	31618	37369	42704	47563
Pressure drop source side	kPa	37	45	47	49	50	49	49	50	47	50
Water flow rate system side	l/h	8397	11904	14149	16207	18041	20958	23884	28290	32459	36068
Pressure drop system side	kPa	21	26	27	28	29	28	27	28	27	28

(1) Date 14511:2018; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C
(2) Date 14511:2018; Water user side 40 °C / 45 °C; Water source side 10 °C / 7 °C

PERFORMANCE SPECIFICATIONS 23 °C/ 18 °C - 30 °C/ 35 °C

WRK - H°

Size		0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
Cooling performance 23 °C / 18 °C (1)											
Cooling capacity	kW	-	-	-	-	-	126,3	144,8	169,8	189,7	217,3
Input power	kW	-	-	-	-	-	21,7	23,3	29,3	33,4	39,0
Cooling total input current	A	-	-	-	-	-	47,0	47,0	62,0	84,0	91,0
EER	W/W	-	-	-	-	-	5,82	6,20	5,80	5,69	5,58
Water flow rate source side	l/h	-	-	-	-	-	25317	28767	34057	38166	43828
Pressure drop source side	kPa	-	-	-	-	-	39	39	40	37	40
Water flow rate system side	l/h	-	-	-	-	-	21826	25015	29337	32770	37528
Pressure drop system side	kPa	-	-	-	-	-	29	29	29	28	29
Heating performance 30 °C / 35 °C (2)											
Heating capacity	kW	-	-	-	-	-	116,4	132,7	155,6	178,3	198,1
Input power	kW	-	-	-	-	-	20,7	23,0	27,5	32,1	35,4
Heating total input current	A	-	-	-	-	-	42,0	44,0	54,0	73,0	75,0
COP	W/W	-	-	-	-	-	5,62	5,77	5,66	5,56	5,60
Water flow rate source side	l/h	-	-	-	-	-	16656	19095	22309	25455	28334
Pressure drop source side	kPa	-	-	-	-	-	18	18	18	17	18
Water flow rate system side	l/h	-	-	-	-	-	20118	22943	26905	30825	34248
Pressure drop system side	kPa	-	-	-	-	-	25	25	25	24	25

(1) Date 14511:2018; Water user side 23 °C / 18 °C; Water source side 30 °C / 35 °C
(2) Date 14511:2018; Water user side 30 °C / 35 °C; Water source side 10 °C / 5 °C

WRK - HL

Size		0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
Cooling performance 23 °C / 18 °C (1)											
Cooling capacity	kW	50,9	71,0	84,9	96,4	109,2	126,3	144,8	169,8	189,7	217,3
Input power	kW	8,8	11,7	14,7	16,9	19,8	21,7	23,3	29,3	33,4	39,0
Cooling total input current	A	20,0	24,0	31,0	42,0	46,0	47,0	47,0	62,0	84,0	91,0
EER	W/W	5,81	6,10	5,78	5,69	5,53	5,82	6,20	5,80	5,69	5,58
Water flow rate source side	l/h	10217	14150	17036	19386	22038	25317	28767	34057	38166	43828
Pressure drop source side	kPa	30	36	37	39	41	39	39	40	37	40
Water flow rate system side	l/h	8796	12274	14672	16662	18865	21826	25015	29337	32770	37528
Pressure drop system side	kPa	22	27	28	29	30	29	29	29	28	29
Heating performance 30 °C / 35 °C (2)											
Heating capacity	kW	46,4	66,1	77,8	89,0	100,1	116,4	132,7	155,6	178,3	198,1
Input power	kW	8,3	11,5	13,8	16,2	18,2	20,7	23,0	27,5	32,1	35,4
Heating total input current	A	17,0	22,0	28,0	36,0	39,0	42,0	44,0	54,0	73,0	75,0
COP	W/W	5,60	5,76	5,66	5,51	5,49	5,62	5,77	5,66	5,56	5,60
Water flow rate source side	l/h	6629	9514	11157	12694	14269	16656	19095	22309	25455	28334
Pressure drop source side	kPa	13	17	17	17	18	18	18	18	17	18
Water flow rate system side	l/h	8016	11435	13458	15390	17310	20118	22943	26905	30825	34248
Pressure drop system side	kPa	19	24	24	25	26	25	25	25	24	25

(1) Date 14511:2018; Water user side 23 °C / 18 °C; Water source side 30 °C / 35 °C
(2) Date 14511:2018; Water user side 30 °C / 35 °C; Water source side 10 °C / 5 °C

ENERGY INDICES (REG. 2016/2281 EU)

Size			0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
SEER - 12/7 (EN14825: 2018) (1)												
SEER	°	W/W	-	-	-	-	-	5,33	5,46	5,28	5,38	5,28
	L	W/W	4,75	5,14	5,04	5,04	4,97	5,33	5,46	5,28	5,38	5,28
Seasonal efficiency	°	%	-	-	-	-	-	210,2%	215,4%	208,2%	212,2%	208,2%
	L	%	187,0%	202,6%	198,6%	198,6%	195,8%	210,2%	215,4%	208,2%	212,2%	208,2
UE 811/2013 performance in average ambient conditions (average) - 55 °C - Pdesignh ° 70 kW (2)												
Efficiency energy class	°		-	-	-	-	-	-	-	-	-	-
	L		A+++	-	-	-	-	-	-	-	-	-
Pdesignh	°	kW	-	-	-	-	-	157	179	212	244	271
	L	kW	63	89	106	122	135	157	179	212	244	271
ηsh	°	%	-	-	-	-	-	191.0%	195.0%	194.0%	193.0%	192.0%
	L	%	181.0%	187.0%	185.0%	181.0%	182.0%	191.0%	195.0%	194.0%	193.0%	192.0%
SCOP	°		-	-	-	-	-	4,98	5,08	5,05	5,03	5,00
	L		4,73	4,88	4,83	4,73	4,75	4,98	5,08	5,05	5,03	5,00

(1) Calculation performed with FIXED water flow rate and VARIABLE outlet temperature.
(2) Efficiencies for average temperature applications (55 °C)

ELECTRIC DATA

Size			0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
Electric data												
Maximum current (FLA)	°	A	-	-	-	-	-	75,0	84,0	104,0	130,0	132,0
	L	A	32,0	42,0	52,0	65,0	66,0	75,0	84,0	104,0	130,0	132,0
Peak current (LRA)	°	A	-	-	-	-	-	216,0	181,0	218,0	271,5	273,0
	L	A	144,0	139,0	166,0	206,5	207,0	216,0	181,0	218,0	271,5	273,0

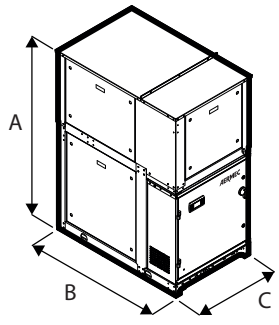
GENERAL TECHNICAL DATA

Size			0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
Compressor												
Type	°	type	-	-	-	-	-	Scroll	Scroll	Scroll	Scroll	Scroll
	L	type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Number	°	no.	-	-	-	-	-	3	4	4	4	4
	L	no.	2	2	2	2	2	3	4	4	4	4
Circuits	°	no.	-	-	-	-	-	2	2	2	2	2
	L	no.	2	2	2	2	2	2	2	2	2	2
Refrigerant	°	type	-	-	-	-	-	R410A	R410A	R410A	R410A	R410A
	L	type	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Refrigerant charge	°	kg	-	-	-	-	-	13,0	16,0	18,0	22,0	24,0
	L	kg	6,0	8,0	9,0	10,0	11,0	13,0	16,0	18,0	22,0	24,0
Source side heat exchanger												
Type	°	type	-	-	-	-	-	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate
	L	type	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate
Number	°	no.	-	-	-	-	-	1	1	1	1	1
	L	no.	1	1	1	1	1	1	1	1	1	1
System side heat exchanger												
Type	°	type	-	-	-	-	-	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate
	L	type	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate
Number	°	no.	-	-	-	-	-	1	1	1	1	1
	L	no.	1	1	1	1	1	1	1	1	1	1
Source side hydraulic connections												
Connections (in/out)	°	Type	-	-	-	-	-	Grooved joints	Grooved joints	Grooved joints	Grooved joints	Grooved joints
	L	Type	Grooved joints	Grooved joints	Grooved joints	Grooved joints	Grooved joints	Grooved joints	Grooved joints	Grooved joints	Grooved joints	Grooved joints
Sizes (in/out)	°	Ø	-	-	-	-	-	2 1/2″	2 1/2″	2 1/2″	2 1/2″	2 1/2″
	L	Ø	2 1/2″	2 1/2″	2 1/2″	2 1/2″	2 1/2″	2 1/2″	2 1/2″	2 1/2″	2 1/2″	2 1/2″
System side hydraulic connections												
Connections (in/out)	°	Type	-	-	-	-	-	Grooved joints	Grooved joints	Grooved joints	Grooved joints	Grooved joints
	L	Type	Grooved joints	Grooved joints	Grooved joints	Grooved joints	Grooved joints	Grooved joints	Grooved joints	Grooved joints	Grooved joints	Grooved joints
Sizes (in/out)	°	Ø	-	-	-	-	-	2 1/2″	2 1/2″	2 1/2″	2 1/2″	2 1/2″
	L	Ø	2 1/2″	2 1/2″	2 1/2″	2 1/2″	2 1/2″	2 1/2″	2 1/2″	2 1/2″	2 1/2″	2 1/2″
Sound data calculated in cooling mode (1)												
Sound power level	°	dB(A)	-	-	-	-	-	81,6	82,2	81,6	82,7	83,4
	L	dB(A)	71,6	73,9	72,4	74,0	75,6	76,3	77,0	75,9	77,5	78,0
Sound pressure level (10 m)	°	dB(A)	-	-	-	-	-	49,9	50,5	49,9	51,0	51,7
	L	dB(A)	40,1	42,4	40,9	42,5	44,1	44,6	45,3	44,2	45,8	46,3

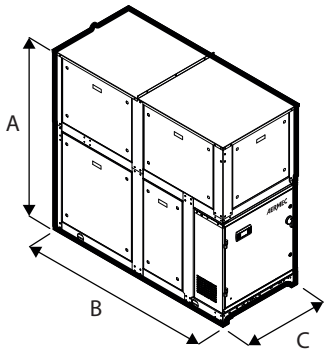
(1) Sound power calculated on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification. Sound pressure (cold functioning) measured in free field, 10m away from the unit external surface (in compliance with UNI EN ISO 3744).

DIMENSIONS

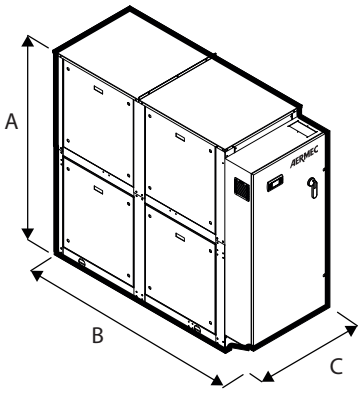
WRK 0350 °



WRK 0350 U-V-W-Z-J-R-K-Q



WRK 0700 °



Size				0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
Dimensions and weights without hydronic kit													
A	°		mm	-	-	-	-	-	1840	1840	1840	1840	1840
	L		mm	1675	1675	1675	1675	1675	1885	1885	1885	1885	1885
B	°		mm	-	-	-	-	-	2155	2155	2155	2155	2155
	L		mm	1265	1265	1265	1265	1265	2155	2155	2155	2155	2155
C	°		mm	-	-	-	-	-	800	800	800	800	800
	L		mm	800	800	800	800	800	800	800	800	800	800
Dimensions and weights with pump/s													
A	°		mm	-	-	-	-	-	1840	1840	1840	1840	1840
	L		mm	1675	1675	1675	1675	1675	1885	1885	1885	1885	1885
B	°		mm	-	-	-	-	-	3090	3090	3090	3090	3090
	L		mm	1890	1890	1890	1890	1890	3090	3090	3090	3090	3090
C	°		mm	-	-	-	-	-	800	800	800	800	800
	L		mm	800	800	800	800	800	800	800	800	800	800

	Version	Integrated hydronic kit, user side	Integrated hydronic kit, source side		0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
Empty weight	°	°	°	kg	-	-	-	-	-	755	840	865	890	920
	°	°	J/K/U/W	kg	-	-	-	-	-	935	1020	1045	1085	1115
	°	°	Q/R/V/Z	kg	-	-	-	-	-	1005	1090	1115	1170	1200
	°	M/O	°	kg	-	-	-	-	-	900	985	1010	1045	1075
	°	M/O	J/K/U/W	kg	-	-	-	-	-	990	1075	1100	1150	1180
	°	M	Q/R/V/Z	kg	-	-	-	-	-	-	-	-	-	-
	°	N	J/K/U/W	kg	-	-	-	-	-	-	-	-	-	-
	°	O	Q/R/V/Z	kg	-	-	-	-	-	-	-	-	-	-
	°	P	J/K/U/W	kg	-	-	-	-	-	-	-	-	-	-
	°	N/P	°	kg	-	-	-	-	-	970	1055	1080	1125	1155
	°	N/P	Q/R/V/Z	kg	-	-	-	-	-	1130	1215	1240	1315	1340
	L	°	°	kg	495	550	565	570	580	930	1015	1040	1065	1095
	L	°	J/K/U/W	kg	665	720	735	740	750	1155	1240	1265	1305	1335
	L	°	Q/R/V/Z	kg	690	745	760	765	775	1225	1310	1335	1390	1420
	L	M/O	°	kg	665	720	730	740	750	1120	1205	1230	1265	1295
	L	M/O	J/K/U/W	kg	695	755	765	775	785	1210	1295	1320	1370	1400
	L	M	Q/R/V/Z	kg	-	-	-	-	-	-	-	-	-	-
	L	N	J/K/U/W	kg	-	-	-	-	-	-	-	-	-	-
	L	O	Q/R/V/Z	kg	-	-	-	-	-	-	-	-	-	-
	L	P	J/K/U/W	kg	-	-	-	-	-	-	-	-	-	-
	L	N/P	°	kg	690	745	760	765	775	1190	1275	1300	1345	1375
	L	N/P	Q/R/V/Z	kg	750	805	820	825	835	1350	1435	1460	1535	1560

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WWB 0300-0900

Water-water heat pumps only

Heating capacity 56,7 ÷ 265,9 kW

- **Optimised to produce high temperature hot water**
- **Can be used with any air or water cooled heat pump**
- **Max. processed water temperature: 80 °C**
- **Max inlet temperature on source side: 45 °C**

DESCRIPTION

WWB is a range of irreversible water-water heat pumps that produce high temperature water with a low or medium temperature source.
Internal unit suitable for use in centralised residential systems, in systems that serve hotels and other forms of accommodation, and for applications in the tertiary and industrial sectors.

FEATURES

Maximum energy efficiency

Aermec, which has focused for years on energy efficiency, designed the WWB units with the aim of guaranteeing high efficiency both with full and partial loads.

Operating field

With its wide operating range, it can be integrated with numerous applications and is a valid alternative to boilers and all conventional systems used to produce high temperature hot water since it also uses existing systems.
Production of hot water up to 80 °C (Max inlet temperature on source side 45 °C).

Constructional characteristics of unit

— Optimised plate heat exchangers with low pressure drops.
— 2 cooling circuits, 1 compressor per circuit.
— Scroll compressors for high condensing temperatures.
— Compact size for easier installation.

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

Electronic expansion valve

The possibility to use electronic expansion valve, offers significant benefits, especially when the chiller is working with partial loads, increasing the energy efficiency of the unit.

CONTROL

Control unit accessible externally with touch-screen user interface, multilingual display of all operating parameters.
Optimised control logic for use with low and medium temperature heat pumps.
Complies with safety (EC) and electromagnetic compatibility directives.
Removable slide-out electrical panel with opening side (LH/RH side) configurator option

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.
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.
PGD1: Allows you to control the unit at a distance.
VT: Anti-vibration supports.

FACTORY FITTED ACCESSORIES

RIF: Power factor correction. Connected in parallel to the motor allowing about 10% reduction of input current.

ACCESSORIES COMPATIBILITY

Model	Ver	0300	0330	0350	0550	0600	0700	0800	0900
AER485P1	L	•	•	•	•	•	•	•	•
AERNET	L	•	•	•	•	•	•	•	•
MULTICHILLER_EVO	L	•	•	•	•	•	•	•	•
PGD1	L	•	•	•	•	•	•	•	•

MULTICHILLER_EVO: Contact the factory for compatibility of the accessory with the type of implant envisaged.

Antivibration

Ver	0300	0330	0350	0550	0600	0700	0800	0900
L	VT9	VT9	VT9	VT9	VT15	VT15	VT15	VT15

Power factor correction

Ver	0300	0330	0350	0550	0600	0700	0800	0900
L	RIFWWB0300	RIFWWB0330	RIFWWB0350	RIFWWB0550	RIFWWB0600	RIFWWB0700	RIFWWB0800	RIFWWB0900

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

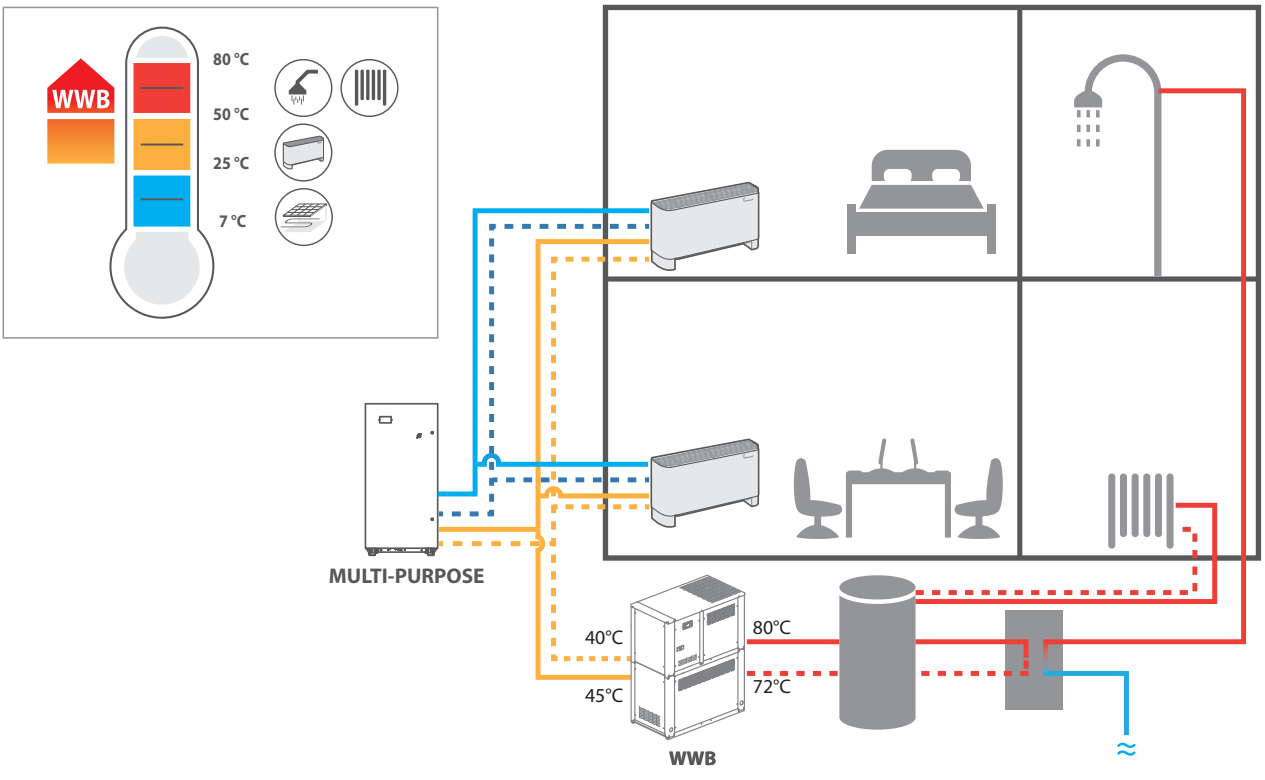
CONFIGURATOR

Field	Description
1,2,3	**WWB**
4,5,6,7	**Size** 0300, 0330, 0350, 0550, 0600, 0700, 0800, 0900
8	**Operating ÿeld**
X	Standard (1)
9	**Model**
H	Heat pump
10	**Version**

Field	Description
L	Silenced
11	**Power supply**
°	400V ~ 3 50Hz
S	400V ~ 3 50Hz with Soft-Start
12	**Electrical panel version**
°	Standard opening (LH)
R	Reverse opening (RH)

(1) Evaporator water up to +5°C. Electronic thermostatic valve as standard.

Example of four-pipe system



PERFORMANCE SPECIFICATIONS

Size			0300	0330	0350	0550	0600	0700	0800	0900
Heating performances (Water user side 70 °C / 78 °C; Water source side 45 °C / 40 °C) (1)										
Heating capacity	L	kW	70,3	77,7	93,2	114,6	143,7	181,7	220,5	265,9
Input power	L	kW	16,7	18,0	21,6	27,7	34,7	44,3	55,4	66,4
Heating total input current	L	A	29,0	30,0	36,0	46,0	61,0	71,0	89,0	104,0
COP	L	W/W	4,22	4,31	4,33	4,14	4,14	4,11	3,98	4,00
Water flow rate system side	L	l/h	7721	8537	10243	12592	15787	19973	24229	29221
Pressure drop system side	L	kPa	18	22	31	21	33	24	35	24
Water flow rate source side	L	l/h	9339	10400	12491	15141	18986	23950	28791	34785
Pressure drop source side	L	kPa	12	15	10	15	8	12	16	23
Heating performances (Water user side 70 °C / 78 °C; Water source side 35 °C / 30 °C) (2)										
Heating capacity	L	kW	56,7	62,7	75,2	92,4	115,9	146,5	177,8	214,4
Input power	L	kW	16,3	17,6	21,0	27,0	33,9	43,2	54,0	64,7
Heating total input current	L	A	28,0	29,0	35,0	45,0	59,0	70,0	87,0	102,0
COP	L	W/W	3,48	3,56	3,58	3,42	3,42	3,39	3,29	3,31
Water flow rate system side	L	l/h	6228	6886	8262	10157	12734	16110	19543	23570
Pressure drop system side	L	kPa	12	14	20	14	22	15	23	16
Water flow rate source side	L	l/h	7008	7820	9396	11340	14221	17924	21486	25974
Pressure drop source side	L	kPa	7	9	6	8	4	7	9	13

(1) Date 14511:2018; Water user side 70 °C / 78 °C; Water source side 45 °C / 40 °C
(2) Date 14511:2018; Water user side 70 °C / 78 °C; Water source side 35 °C / 30 °C

ENERGY DATA

Size			0300	0330	0350	0550	0600	0700	0800	0900
UE 813/2013 performance in average ambient conditions (average) - 55 °C - Pdesignh ° 400 kW (1)										
Pdesignh	L	kW	46	51	61	76	95	120	145	175
ηsh	L	%	176.0%	180.0%	180.0%	175.0%	174.0%	174.0%	169.0%	171.0%
SCOP	L		4,60	4,69	4,69	4,56	4,55	4,56	4,43	4,49
Efficiency energy class	L		A++	A++	A++	-	-	-	-	-

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

ELECTRIC DATA

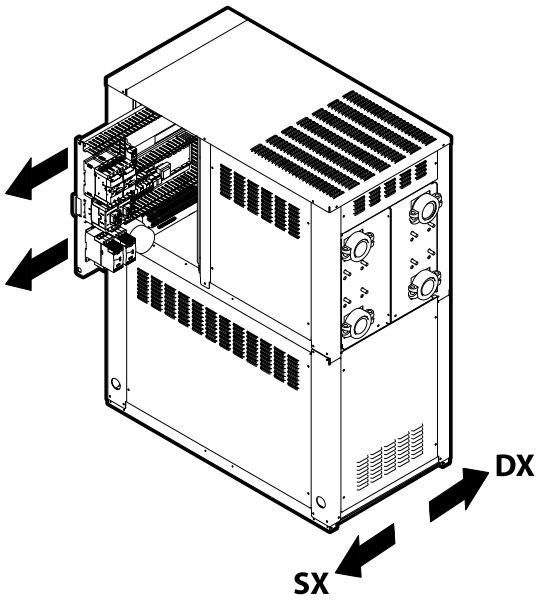
Size			0300	0330	0350	0550	0600	0700	0800	0900
Power supply: °										
Electric data										
Maximum current (FLA)	L	A	30,9	32,2	38,2	50,2	64,6	79,8	94,6	113,7
Peak current (LRA)	L	A	110,4	127,1	137,1	165,1	206,3	264,9	319,3	366,9
Power supply: S										
Electric data										
Maximum current (FLA)	L	A	30,9	32,2	38,2	50,2	64,6	79,8	94,6	113,7
Peak current (LRA)	L	A	53,4	60,5	66,3	81,1	101,9	129,9	156,1	180,9

GENERAL TECHNICAL DATA

Size			0300	0330	0350	0550	0600	0700	0800	0900
Compressor										
Type	L	type					Scroll			
Compressor regulation	L	Type					On-Off			
Number	L	no.	2	2	2	2	2	2	2	2
Circuits	L	no.	2	2	2	2	2	2	2	2
Refrigerant	L	type					R134a			
Refrigerant load circuit 1	L	kg	2,8	2,8	3,6	4,4	6,5	7,7	8,0	9,9
Refrigerant load circuit 2	L	kg	2,8	2,8	3,5	4,3	6,3	7,5	7,8	9,7
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"	2"	2"	2"	2" 1/2	2" 1/2	2" 1/2	2" 1/2
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"	2"	2"	2"	2"	2"	2"	2" 1/2
Sound data calculated in cooling mode (1)										
Sound power level	L	dB(A)	71,8	71,8	71,8	75,1	78,3	79,3	80,4	82,4
Sound pressure level (10 m)	L	dB(A)	40,2	40,2	40,2	43,5	46,7	47,7	48,9	50,9

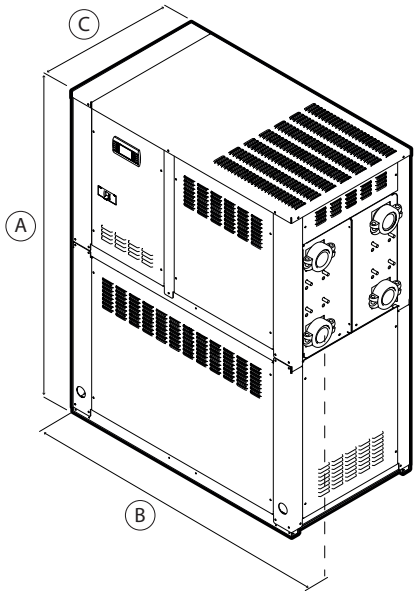
(1) Sound power calculated on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification. Sound pressure (cold functioning) measured in free field, 10m away from the unit external surface (in compliance with UNI EN ISO 3744).

Removal of electrical panel



Electrical panel version	Conÿgurator option
Sx - LH side	° (Standard)
Dx - RH side	R

DIMENSIONS



Size			0300	0330	0350	0550	0600	0700	0800	0900
Dimensions and weights										
A	L	mm	1650	1650	1650	1650	1650	1650	1650	1650
B	L	mm	1300	1300	1300	1300	1300	1300	1300	1300
C	L	mm	710	710	710	710	710	710	710	710
Weights										
Weight empty + packaging	L	kg	420	425	440	455	500	715	760	820
Weight functioning	L	kg	415	420	440	460	510	730	775	840

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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-water offering chilled/hot water, designed to mit 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 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 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 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 allow to maximise the total efficency 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.
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	WWM05001°	WWM05001H	WWM05002°	WWM05002H
AER485P1	•	•	•	•
AERBACP	•	•	•	•
AERNET	•	•	•	•
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	WWM05001°	WWM05001H	WWM05002°	WWM05002H
CRATE_WWM°	•		•	
CRATE_WWMH-A		•		•

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

Cable entries box

Accessory	WWM05001°	WWM05001H	WWM05002°	WWM05002H
KREC_WWM	•	•	•	•

Water filter

Accessory	WWM05001°	WWM05001H	WWM05002°	WWM05002H
KITIDRO_WWM	•	•	•	•

CONFIGURATOR

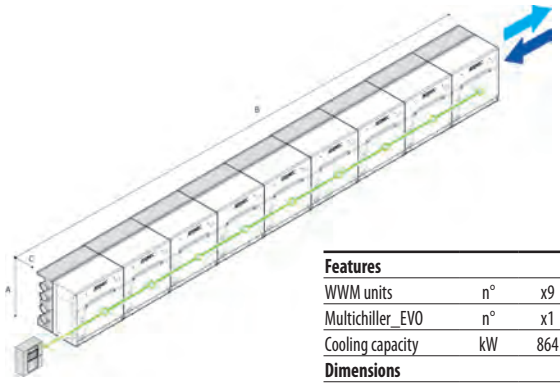
Field		Description
1,2,3		**WWM**
4,5,6,7		**Size** 0500
8		**Operating ÿ eld**
	°	Standard mechanic thermostatic valve (1)
9		**Model**
	1	Single refrigerant circuit
	2	Double refrigerant circuit
10		**Hydraulic pressure rating**
	1	145 psi (PN10)
	3	300 psi (PN21)
11		**Hydraulic headers kit**
	°	No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

Field		Description
12		**Power connection**
	°	Without bus bars
	B	With bus bars
13		**Power supply**
	°	400V ~ 3 50Hz 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 +4 °C
(2) Factory installed

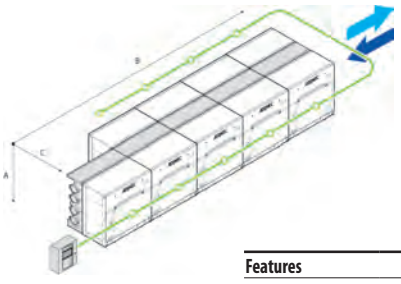
MODULARITY OPTIONS

CONFIGURATION 1: IN LINE



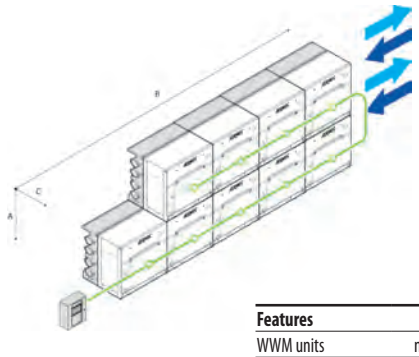
Features		
WWM units	n°	x9
Multichiller_EVO	n°	x1
Cooling capacity	kW	864
Dimensions		
A	mm	1300
B	mm	11970
C	mm	1150

CONFIGURATION 2: BACK TO BACK



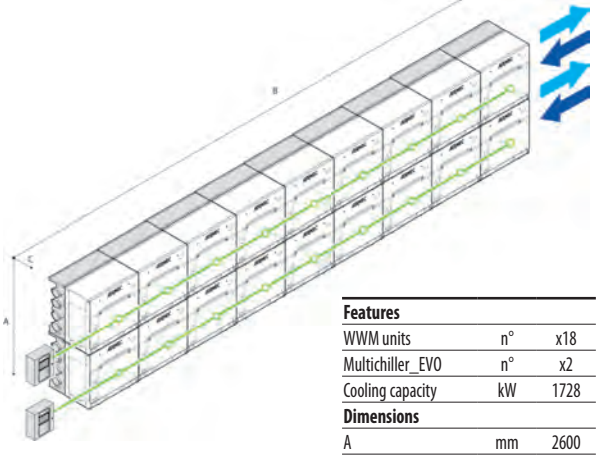
Features		
WWM units	n°	x9
Multichiller_EVO	n°	x1
Cooling capacity	kW	864
Dimensions		
A	mm	1300
B	mm	6650
C	mm	1850

CONFIGURATION 3.1: STACK IN LINE



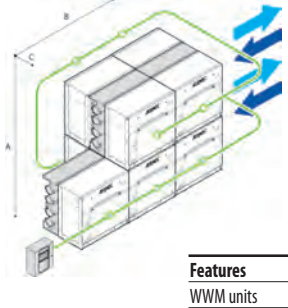
Features		
WWM units	n°	x9
Multichiller_EVO	n°	x1
Cooling capacity	kW	864
Dimensions		
A	mm	2600
B	mm	6650
C	mm	1150

CONFIGURATION 3.2: STACK IN LINE



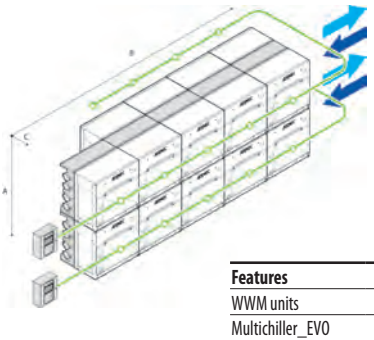
Features		
WWM units	n°	x18
Multichiller_EVO	n°	x2
Cooling capacity	kW	1728
Dimensions		
A	mm	2600
B	mm	11970
C	mm	1150

CONFIGURATION4.1: STACK IN LINE BACK TO BACK



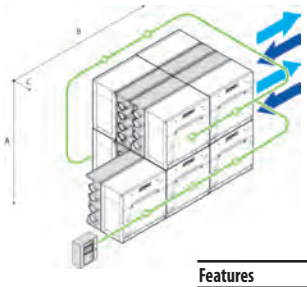
Features		
WWM units	n°	x9
Multichiller_EVO	n°	x1
Cooling capacity	kW	864
Dimensions		
A	mm	2600
B	mm	3990
C	mm	1850

CONFIGURATION 4.2: STACK IN LINE BACK TO BACK



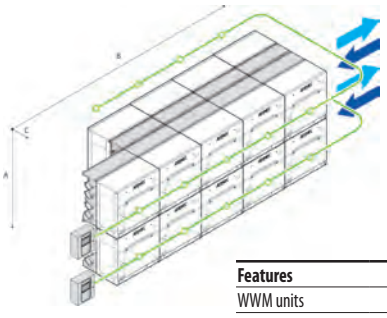
Features		
WWM units	n°	x18
Multichiller_EVO	n°	x2
Cooling capacity	kW	1728
Dimensions		
A	mm	2600
B	mm	6650
C	mm	1850

CONFIGURATION 5.1:
STACK IN LINE BACK TO BACK DOUBLE



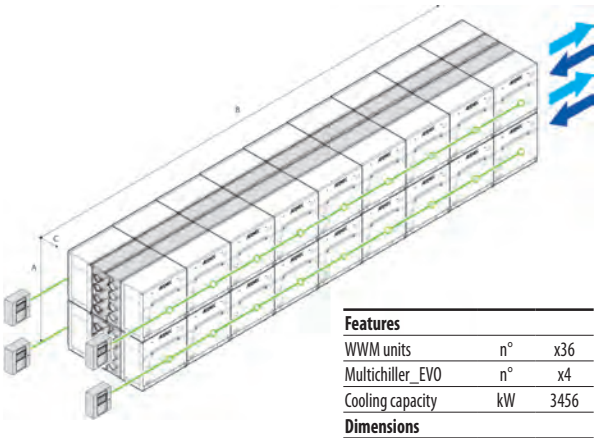
Features		
WWM units	n°	x9
Multichiller_EVO	n°	x1
Cooling capacity	kW	864
Dimensions		
A	mm	2600
B	mm	3990
C	mm	2300

CONFIGURATION 5.2:
STACK IN LINE BACK TO BACK DOUBLE



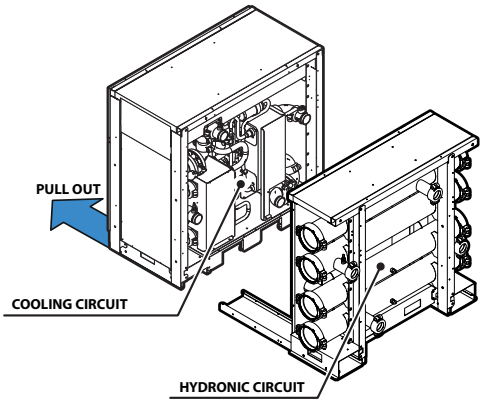
Features		
WWM units	n°	x18
Multichiller_EVO	n°	x2
Cooling capacity	kW	1728
Dimensions		
A	mm	2600
B	mm	6650
C	mm	2300

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	40,0	40,0
EER	W/W	4,74	4,76
Water flow rate source side	l/h	20046	19895
Pressure drop source side	kPa	34	23
Water flow rate system side	l/h	16528	16384
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	48,0	48,0
COP	W/W	4,41	4,57
Water flow rate system side	l/h	18943	19092
Pressure drop system side	kPa	30	21
Water flow rate source side	l/h	24430	24809
Pressure drop source side	kPa	52	39

(1) Date 14511:2018; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C
(2) Date 14511:2018; 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		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

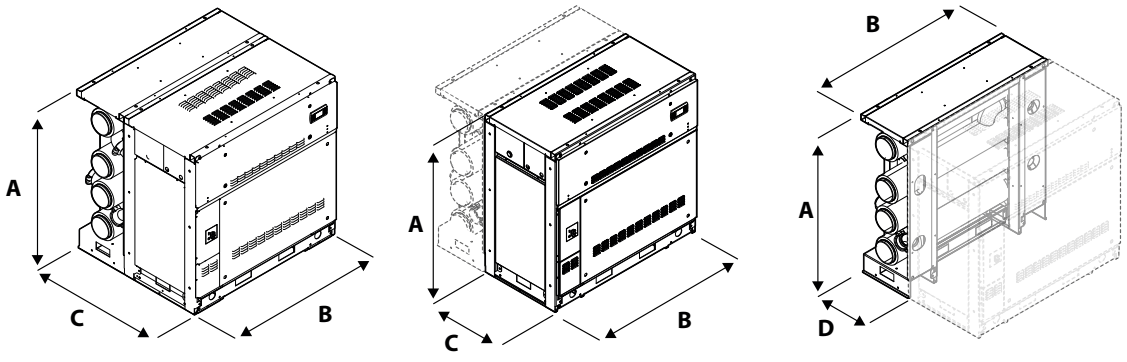
		WWM05001°	WWM05002°
Electric data			
Maximum current (FLA)	A	62,0	62,0
Peak current (LRA)	A	148,9	148,9

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



		WWM05001H	WWM05001°	WWM05002H	WWM05002°
Dimensions and weights					
A	mm	1300	1300	1300	1300
B	mm	1330	1330	1330	1330
C	mm	1150	775	1150	775
D	mm	452	-	452	-
Weights					
Weight empty + packaging	kg	930	700	930	700
Weight functioning	kg	1042	711	1042	711
Empty weight + packaging (with bus bars)	kg	966	736	966	736
Weight functioning (with bus bars)	kg	1078	747	1078	747
Hydraulic headers kit					
Weight empty + packaging	kg	230	-	230	-
Weight functioning	kg	330	-	330	-

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NXW 0503 - 1654

Water cooled heat pump reversible water side

Cooling capacity 111 ÷ 511 kW
Heating capacity 127 ÷ 582 kW

- **Installation versatility also for geothermal applications.**
- **Options of 1 or 2 pumps on both source and user side.**
- **Reversible on hydraulic side in heat pump**

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

VERSIONS

° Standard
L Standard silenced

FEATURES

Operating field

Full-load operation with the production of chilled water 4-18 °C, and the possibility to produce also negative temperature water down to -10°C for the evaporator and hot water for the condenser up to 55 °C. (for more information, refer to the technical documentation).

Dual-circuit unit

The units are dual-circuit, to ensure maximum efficiency both at full load and at partial load.

Option integrated hydronic kit, source and user side

The built-in hydronic module includes the main water circuit components; it is available in varius configurations with one or two pumps with high or low head both on the system side and the source side, to obtain a solution that allows you to save money and to facilitate installation.

CONTROL PCO

Microprocessor adjustment, with display LCD which allows to navigate intuitively among the various screens, allowing to modify the operating parameters and the ad adjustment includes complete management of the alarms and their log.
You also have the possibility to:
— Check two units in parallel Master-Slave
— 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.
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.
PGD1: Allows you to control the unit at a distance.
AVX: Spring anti-vibration supports.
DRE: Electronic device for peak current reduction.
RIF: Power factor correction. Connected in parallel to the motor allowing about 10% reduction of input current.

ACCESSORIES COMPATIBILITY

Model	Ver	0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
AER485P1	°,L	•	•	•	•	•	•	•	•	•	•	•	•	•
AERNET	°,L	•	•	•	•	•	•	•	•	•	•	•	•	•
MULTICHILLER_EVO	°,L	•	•	•	•	•	•	•	•	•	•	•	•	•
PGD1	°,L	•	•	•	•	•	•	•	•	•	•	•	•	•

Antivibration

Version	Integrated hydronic kit, user side	Integrated hydronic kit, source side	0503	0553	0604	0654	0704	0754	0804
°	°	°	AVX319	AVX319	AVX301	AVX301	AVX301	AVX303	AVX310
°	°	J,K,U,W	AVX320	AVX320	AVX320	AVX320	AVX320	AVX312	AVX651
°	M,O	°	AVX320	AVX320	AVX320	AVX320	AVX320	AVX312	AVX651
°	°	V,Z	AVX320	AVX320	AVX309	AVX309	AVX309	AVX312	AVX651
°	M	J,K,U,V,W,Z	AVX320	AVX320	AVX309	AVX309	AVX309	AVX312	AVX651
°	N	°,J,K,U,W	AVX320	AVX320	AVX309	AVX309	AVX309	AVX312	AVX651
°	O	J,K,U,V,W,Z	AVX320	AVX320	AVX309	AVX309	AVX309	AVX312	AVX651
°	P	°,J,K,U,W	AVX320	AVX320	AVX309	AVX309	AVX309	AVX312	AVX651
°	N,P	V,Z	AVX309	AVX309	AVX310	AVX310	AVX310	AVX312	AVX651
L	°	°	AVX309	AVX309	AVX310	AVX303	AVX303	AVX310	AVX314
L	°	J,K,U,W	AVX321	AVX321	AVX311	AVX311	AVX651	AVX651	AVX652
L	M,O	°	AVX321	AVX321	AVX311	AVX311	AVX651	AVX651	AVX652
L	°	V,Z	AVX311	AVX311	AVX311	AVX311	AVX651	AVX651	AVX652
L	M	J,K,U,W	AVX311	AVX311	AVX311	AVX311	AVX651	AVX651	AVX652
L	N	°	AVX311	AVX311	AVX311	AVX311	AVX651	AVX651	AVX652
L	O	J,K,U,W	AVX311	AVX311	AVX311	AVX311	AVX651	AVX651	AVX652
L	P	°	AVX311	AVX311	AVX311	AVX311	AVX651	AVX651	AVX652
L	M	V,Z	AVX311	AVX311	AVX312	AVX312	AVX651	AVX651	AVX652
L	N	J,K,U,W	AVX311	AVX311	AVX312	AVX312	AVX651	AVX651	AVX652
L	O	V,Z	AVX311	AVX311	AVX312	AVX312	AVX651	AVX651	AVX652
L	P	J,K,U,W	AVX311	AVX311	AVX312	AVX312	AVX651	AVX651	AVX652
L	N,P	V,Z	AVX312	AVX312	AVX312	AVX310	AVX651	AVX651	AVX652

Version	Integrated hydronic kit, user side	Integrated hydronic kit, source side	0904	1004	1254	1404	1504	1654
°	°	°	AVX314	AVX316	AVX316	AVX315	AVX330	AVX330
°	°	J,K,U,W	AVX655	AVX653	AVX654	AVX654	AVX334	AVX337
°	M,N,O	°	AVX655	AVX653	AVX654	AVX654	AVX334	AVX337
°	°	V,Z	AVX655	AVX653	AVX654	AVX654	AVX337	-
°	M,O	J,K,U,W	AVX665	AVX653	AVX654	AVX654	AVX337	AVX335
°	M,O	V,Z	AVX655	AVX653	AVX654	AVX654	AVX340	-
°	N	J,K,U,W	AVX665	AVX653	AVX654	AVX654	AVX340	AVX335
°	N	V,Z	AVX665	AVX653	AVX654	AVX654	AVX335	-
°	P	°	AVX655	AVX653	AVX654	AVX654	-	-
°	P	J,K,U,V,W,Z	AVX665	AVX653	AVX654	AVX654	-	-
L	°	°	AVX314	AVX315	AVX315	AVX317	AVX331	AVX331
L	°	J,K,U,W	AVX653	AVX654	AVX659	AVX659	AVX335	AVX338
L	M,O	°	AVX653	AVX654	AVX659	AVX659	AVX335	AVX338
L	°	V,Z	AVX653	AVX654	AVX659	AVX659	AVX338	-
L	M	J,K,U,W	AVX653	AVX654	AVX659	AVX659	AVX338	AVX339
L	N	°	AVX653	AVX654	AVX659	AVX659	AVX338	AVX339
L	O	J,K,U,W	AVX653	AVX654	AVX659	AVX659	AVX338	AVX339
L	M,N,O	V,Z	AVX653	AVX654	AVX659	AVX659	AVX339	-
L	N	J,K,U,W	AVX653	AVX654	AVX659	AVX659	AVX339	AVX341
L	P	°,J,K,U,V,W,Z	AVX653	AVX654	AVX659	AVX659	-	-

Power factor correction

Ver	0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
°,L	RIF98	RIF98	RIF95	RIF95	RIF95	RIF95	RIF95	RIF96	RIF97	RIF97	RIF97	RIF97	RIF97

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

Device for peak current reduction

Ver	0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
°,L	DRE501 (1)	DRE551 (1)	DRE601 (1)	DRE651 (1)	DRE701 (1)	DRE751 (1)	DRE801 (1)	DRE901 (1)	DRE1001 (1)	DRE1251 (1)	DRE1401 (1)	DRE1500 (1)	DRE1650 (1)

(1) Only for supplies of 400V 3N ~ 50Hz and 400V 3 ~ 50Hz. x 2 or x 3 (if present) indicates the quantity to be ordered.
A grey background indicates the accessory must be assembled in the factory

CONFIGURATOR

Field	Description
1,2,3	**NXW**
4,5,6,7	**Size** 0503, 0553, 0604, 0654, 0704, 0754, 0804, 0904, 1004, 1254, 1404, 1504, 1654
8	**Operating ÿeld**
°	Standard mechanic thermostatic valve (1)
X	Electronic thermostatic expansion valve (1)
Y	Low temperature mechanic thermostatic valve (2)
9	**Model**
°	Heat pump reversible on the water side
K	Heat pump reversible on the water side with low pressure drops
10	**Version**
°	Standard
L	Standard silenced
11	**Evaporator**
°	Standard
E	Evaporating unit (3)
12	**Heat recovery**
°	Without heat recovery
D	With desuperheater (4)
T	With total recovery (5)
13	**Power supply**
°	400V ~ 3 50Hz with magnet circuit breakers
4	220V ~ 3 50Hz with magnet circuit breakers (6)
5	500V ~ 3 50Hz with magnet circuit breakers (7)
14	**Integrated hydronic kit, user side**
°	Without hydronic kit
M	Single pump low head
N	Pump low head + stand-by pump
O	Single pump high head
P	Pump high head + stand-by pump (8)
15	**Integrated hydronic kit, source side**
°	Without hydronic kit
J	Single low-head inverter pump (8)
K	Single high-head inverter pump (8)
U	Single pump low head
V	Pump low head + stand-by pump (9)
W	Pump high head
Z	Pump high head + stand-by pump (9)

(1) Water produced from 4 °C ÷ 18 °C
(2) Water produced from 4 °C ÷ -10 °C; for the avalability with the heat recovery we advise you to contact us
(3) Shipped with holding charge only.
(4) The desuperheater must be isolated in heating mode. In cooling mode, a water temperature no lower than 35°C must always be guaranteed on the heat exchanger inlet.
(5) Options not available for condensing unit, and for models with pump/s
(6) Only for 0503 ÷ 0704 sizes
(7) Only for 0804 ÷ 1004 sizes
(8) Not available for size 1504 ÷ 1654
(9) Not available for size 1654

PERFORMANCE SPECIFICATIONS

Size			0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
Cooling performance 12 °C / 7 °C (1)															
Cooling capacity	°,L	kW	111,8	120,7	148,7	166,7	188,7	222,7	257,6	291,6	325,7	354,6	384,6	453,9	511,4
Input power	°,L	kW	23,0	24,8	30,6	34,4	38,9	45,6	53,0	60,3	66,5	72,6	78,7	92,3	104,0
Cooling total input current	°,L	A	48,0	51,0	58,0	63,0	86,0	94,0	102,0	120,0	138,0	140,0	143,0	160,0	178,0
EER	°,L	W/W	4,87	4,86	4,86	4,85	4,85	4,88	4,86	4,84	4,90	4,88	4,89	4,92	4,92
Water flow rate source side	°,L	l/h	23047	24886	30656	34332	38866	45790	52970	60075	67065	73041	79190	93374	105103
Pressure drop source side	°,L	kPa	25	29	29	37	37	45	60	38	29	34	36	36	47
Water flow rate system side	°,L	l/h	19243	20789	25600	28692	32472	38314	44327	50169	56011	60993	66147	78063	87938
Pressure drop system side	°,L	kPa	30	35	32	40	43	47	49	55	35	36	36	36	40
Heating performance 40 °C / 45 °C (2)															
Heating capacity	°,L	kW	127,6	137,8	170,0	190,3	215,4	253,7	293,5	332,9	371,5	404,7	438,7	517,1	582,0
Input power	°,L	kW	27,6	29,9	36,3	40,9	46,4	54,5	63,3	72,3	79,0	86,2	93,3	109,5	123,4
Heating total input current	°,L	A	57,0	60,0	68,0	73,0	100,0	109,0	119,0	140,0	161,0	163,0	166,0	186,0	207,0
COP	°,L	W/W	4,62	4,61	4,69	4,66	4,64	4,66	4,64	4,60	4,70	4,69	4,70	4,72	4,71
Water flow rate source side	°,L	l/h	29340	31697	39235	43975	49768	58721	67938	76891	85844	93480	101380	119642	134776
Pressure drop source side	°,L	kPa	70	81	75	94	101	110	115	129	82	85	85	85	94
Water flow rate system side	°,L	l/h	22142	23905	29490	33021	37384	44030	50933	57790	64513	70265	76175	89802	101065
Pressure drop system side	°,L	kPa	23	27	27	34	34	42	55	35	27	31	33	33	43

(1) Date 14511:2018; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C
(2) Date 14511:2018; Water user side 40 °C / 45 °C; Water source side 10 °C / 7 °C

ENERGY INDICES (REG. 2016/2281 EU)

Size			0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
SEER - 12/7 (EN14825: 2018) (1)															
SEER	°,L	W/W	5,50	5,85	5,79	5,77	5,84	5,81	5,52	6,30	6,42	6,37	6,38	6,49	6,48
Seasonal efficiency	°,L	%	217,0%	231,0%	228,6%	227,8%	230,6%	229,4%	217.8%	248,8%	253,8%	251,6%	252,0%	256,4%	256,2%
SEPR - (EN 14825: 2018) High temperature (2)															
SEPR	°,L	W/W	-	-	-	-	-	-	-	7,93	7,90	7,78	7,80	8,00	8,02
UE 813/2013 performance in average ambient conditions (average) - 55 °C - Pdesignh ¯ 400 kW (3)															
Pdesignh	°,L	kW	164	177	218	244	277	326	377	-	-	-	-	-	-
SCOP	°,L		5,10	5,05	5,18	5,10	5,10	5,10	5,08	-	-	-	-	-	-
ηsh	°,L	%	196.0%	194.0%	199.0%	196.0%	196.0%	196.0%	195.0%	-	-	-	-	-	-

(1) Calculation performed with FIXED water flow rate and VARIABLE outlet temperature.
(2) Calculation performed with FIXED water flow rate.
(3) Efficiencies for average temperature applications (55 °C)

ELECTRIC DATA

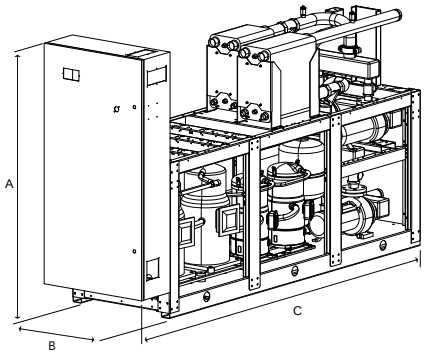
Size			0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
Electric data															
Maximum current (FLA)	°,L	A	75,0	80,0	96,0	107,0	122,0	146,0	169,0	193,0	217,0	231,0	248,0	267,0	296,0
Peak current (LRA)	°,L	A	240,0	245,0	227,0	238,0	289,0	319,0	341,0	398,0	422,0	490,0	504,0	601,0	630,0

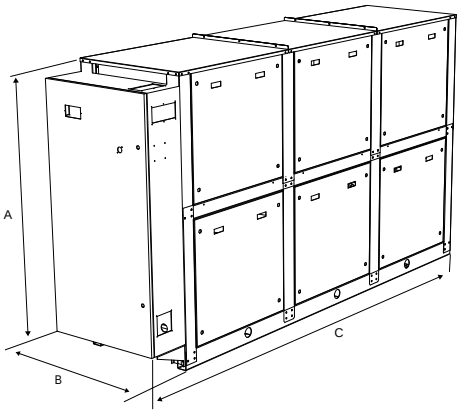
GENERAL TECHNICAL DATA

Size			0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
Compressor															
Type	°,L	type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Compressor regulation	°,L	Type	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off
Number	°,L	no.	3	3	4	4	4	4	4	4	4	4	4	4	4
Circuits	°,L	no.	2	2	2	2	2	2	2	2	2	2	2	2	2
Refrigerant	°,L	type	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Refrigerant charge	°,L	kg	13,2	12,5	15,6	15,6	18,0	22,0	26,0	33,0	38,0	44,0	44,0	46,0	53,0
Source side heat exchanger															
Type	°,L	type	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate
Number	°,L	no.	1	1	1	1	1	1	1	1	1	1	1	1	1
Connections (in/out)	°,L	Type	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F
Size (in)	°,L	Ø	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	3"	3"	3"	3"	3"	3"
Size (out)	°,L	Ø	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	3"	3"	3"	3"	3"	3"
System side heat exchanger															
Type	°,L	type	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate	Brazed plate
Number	°,L	no.	1	1	1	1	1	1	1	1	1	1	1	1	1
Connections (in/out)	°,L	Type	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F	Gas - F
Size (in)	°,L	Ø	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	3"	3"	3"	3"	3"
Size (out)	°,L	Ø	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	3"	3"	3"	3"	3"
Sound data calculated in cooling mode (1)															
Sound power level	°	dB(A)	78,0	79,0	79,0	80,0	82,0	86,0	88,0	88,0	88,0	90,0	90,0	93,0	95,0
	L	dB(A)	72,0	73,0	73,0	74,0	76,0	80,0	82,0	82,0	82,0	84,0	84,0	86,0	87,0
Sound pressure level (10 m)	°	dB(A)	46,4	47,4	47,4	48,4	50,4	54,3	56,3	56,3	56,3	58,3	58,3	61,3	63,3
	L	dB(A)	40,3	41,3	41,3	42,3	44,3	48,3	50,3	50,3	50,3	52,3	52,3	54,3	55,3

(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			0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
Dimensions and weights															
A	°	mm	1835	1835	1835	1835	1835	1775	1775	1820	1820	1820	1820	1820	1820
	L	mm	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
B	°,L	mm	800	800	800	800	800	800	800	800	800	800	800	800	800
C	°	mm	1795	1795	1795	1795	1795	2420	2420	2420	2420	2420	2420	2420	2420
	L	mm	2090	2090	2090	2090	2090	2420	2420	2420	2420	2420	2420	2420	2420
Empty weight	°	kg	578	582	682	690	727	882	989	1180	1417	1461	1539	1613	1721
	L	kg	750	755	854	863	900	1054	1187	1378	1615	1659	1737	1811	1919

The weight of the unit does not include the hydronic kit and accessories.

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

NXW 0503H - 1654H

Reversible water-cooled heat pump, gas side

Cooling capacity 106 ÷ 477 kW
Heating capacity 125 ÷ 565 kW

- **Installation versatility also for geothermal applications.**
- **Options of 1 or 2 pumps on both source and user side.**
- **Production of hot water up to 55 °C**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

DESCRIPTION

Water-water offering chilled/hot water, designed to mit 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 steel treated with polyester paint RAL 9003.

VERSIONS

° Standard
L Standard silenced

FEATURES

Operating field

Full-load operation with the production of chilled water 4-18°C, and the possibility to produce also negative temperature water down to -8°C for the evaporator and hot water for the condenser up to 55 °C.
(for more information, refer to the technical documentation).

Dual-circuit unit

The units are dual-circuit, to ensure maximum efficiency both at full load and at partial load.

Option integrated hydronic kit, source and user side

Possibility of integrated hydronic kit containing the main hydraulic components and available with various configurations.

CONTROL PCO

Microprocessor adjustment, with display LCD which allows to navigate intuitively among the various screens, allowing to modify the operating parameters and the ad adjustment includes complete management of the alarms and their log.
You also have the possibility to:
— Check two units in parallel Master-Slave
— 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.
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.
PGD1: Allows you to control the unit at a distance.
AVX: Spring anti-vibration supports.
DRE: Electronic device for peak current reduction.
RIF: Power factor correction. Connected in parallel to the motor allowing about 10% reduction of input current.

ACCESSORIES COMPATIBILITY

Model	Ver	0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
AER485P1	°,L	•	•	•	•	•	•	•	•	•	•	•	•	•
AERNET	°,L	•	•	•	•	•	•	•	•	•	•	•	•	•
MULTICHILLER_EVO	°,L	•	•	•	•	•	•	•	•	•	•	•	•	•
PGD1	°,L	•	•	•	•	•	•	•	•	•	•	•	•	•

Antivibration

Version	Integrated hydronic kit, user side	Integrated hydronic kit, source side	0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
°	°	°	AVX319	AVX319	AVX301	AVX301	AVX302	AVX310	AVX310	AVX314	AVX316	AVX315	AVX317	AVX330	AVX331
°	°	J,K,U,W	AVX320	AVX320	AVX320	AVX309	AVX309	AVX651	AVX651	AVX665	AVX654	AVX654	AVX654	AVX337	AVX336
°	M,O	°	AVX320	AVX320	AVX320	AVX309	AVX309	AVX651	AVX651	AVX665	AVX654	AVX654	AVX654	AVX337	AVX336
°	°	V,Z	AVX320	AVX320	AVX303	AVX309	AVX311	AVX651	AVX651	AVX665	AVX654	AVX654	AVX654	AVX336	-
°	M	J,K,U,W	AVX320	AVX320	AVX303	AVX309	AVX311	AVX651	AVX651	AVX665	AVX654	AVX654	AVX654	AVX336	AVX335
°	N	°	AVX320	AVX320	AVX303	AVX309	AVX311	AVX651	AVX651	AVX665	AVX654	AVX654	AVX654	AVX336	AVX335
°	O	J,K,U,W	AVX320	AVX320	AVX303	AVX309	AVX311	AVX651	AVX651	AVX665	AVX654	AVX654	AVX654	AVX336	AVX335
°	M,O	V,Z	AVX309	AVX309	AVX303	AVX311	AVX312	AVX651	AVX651	AVX665	AVX654	AVX654	AVX654	AVX335	-
°	N	J,K,U,W	AVX309	AVX309	AVX303	AVX311	AVX312	AVX651	AVX651	AVX665	AVX654	AVX654	AVX654	AVX335	AVX339
°	N,P	V,Z	AVX309	AVX309	AVX312	AVX312	AVX312	AVX651	AVX651	AVX665	AVX654	AVX654	AVX654	-	-
°	P	°	AVX320	AVX320	AVX303	AVX309	AVX311	AVX651	AVX651	AVX665	AVX654	AVX654	AVX654	-	-
°	P	J,K,U,W	AVX309	AVX309	AVX303	AVX311	AVX312	AVX651	AVX651	AVX665	AVX654	AVX654	AVX654	-	-
L	°	°	AVX309	AVX309	AVX310	AVX303	AVX304	AVX314	AVX314	AVX315	AVX317	AVX317	AVX318	AVX331	AVX333
L	°	J,K,U,W	AVX311	AVX311	AVX311	AVX311	AVX651	AVX652	AVX665	AVX653	AVX659	AVX659	AVX659	AVX338	AVX338
L	°	V,Z	AVX311	AVX311	AVX312	AVX313	AVX651	AVX652	AVX665	AVX653	AVX659	AVX659	AVX659	AVX338	AVX341
L	M	J,K,U,W	AVX311	AVX311	AVX312	AVX313	AVX651	AVX652	AVX665	AVX653	AVX659	AVX659	AVX659	AVX338	AVX341
L	N	°	AVX311	AVX311	AVX312	AVX313	AVX651	AVX652	AVX665	AVX653	AVX659	AVX659	AVX659	AVX338	AVX341
L	O	J,K,U,W	AVX311	AVX311	AVX312	AVX313	AVX651	AVX652	AVX665	AVX653	AVX659	AVX659	AVX659	AVX338	AVX341
L	M,O	°	AVX311	AVX311	AVX311	AVX311	AVX651	AVX652	AVX665	AVX653	AVX659	AVX659	AVX659	AVX338	AVX341
L	M,O	V,Z	AVX312	AVX312	AVX312	AVX313	AVX651	AVX652	AVX665	AVX653	AVX659	AVX659	AVX659	AVX339	-
L	N	J,K,U,W	AVX312	AVX312	AVX312	AVX313	AVX651	AVX652	AVX665	AVX653	AVX659	AVX659	AVX659	AVX339	AVX341
L	N	V,Z	AVX312	AVX312	AVX312	AVX313	AVX651	AVX652	AVX665	AVX653	AVX659	AVX659	AVX659	AVX341	-
L	P	°	AVX311	AVX311	AVX312	AVX313	AVX651	AVX652	AVX665	AVX653	AVX659	AVX659	AVX659	-	-
L	P	J,K,U,V,W,Z	AVX312	AVX312	AVX312	AVX313	AVX651	AVX652	AVX665	AVX653	AVX659	AVX659	AVX659	-	-

Power factor correction

Ver	0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
°,L	RIF98	RIF98	RIF95	RIF95	RIF95	RIF95	RIF95	RIF96	RIF97	RIF97	RIF97	RIF97	RIF97

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

Device for peak current reduction

Ver	0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
°,L	DRE501 (1)	DRE551 (1)	DRE601 (1)	DRE651 (1)	DRE701 (1)	DRE751 (1)	DRE801 (1)	DRE901 (1)	DRE1001 (1)	DRE1251 (1)	DRE1401 (1)	DRE1500 (1)	DRE1650 (1)

(1) Only for supplies of 400V 3N ~ 50Hz and 400V 3 ~ 50Hz. x 2 or x 3 (if present) indicates the quantity to be ordered.
A grey background indicates the accessory must be assembled in the factory

CONFIGURATOR

Field		Description
1,2,3		**NXW**
4,5,6,7		**Size** 0503, 0553, 0604, 0654, 0704, 0754, 0804, 0904, 1004, 1254, 1404, 1504, 1654
8		**Operating ÿeld (1)**
	°	Standard mechanic thermostatic valve
	X	Electronic thermostatic expansion valve
9		**Model**
	H	Heat pump
10		**Version**
	°	Standard
	L	Standard silenced
11		**Evaporator**
	°	Standard
12		**Heat recovery**
	°	Without heat recovery
	D	With desuperheater (2)
13		**Power supply**
	°	400V ~ 3 50Hz with magnet circuit breakers
	4	220V ~ 3 50Hz with magnet circuit breakers (3)
	5	500V ~ 3 50Hz with magnet circuit breakers (4)
14		**Integrated hydronic kit, user side**
	°	Without hydronic kit
	M	Single pump low head
	N	Pump low head + stand-by pump
	O	Single pump high head
	P	Pump high head + stand-by pump (5)
15		**Integrated hydronic kit, source side (6)**
	°	Without hydronic kit
	J	Single low-head inverter pump
	K	Single high-head inverter pump
	U	Single pump low head
	V	Pump low head + stand-by pump
	W	Pump high head
	Z	Pump high head + stand-by pump

(1) Water produced from 4 °C ÷ 18 °C
(2) The desuperheater must be isolated in heating mode. In cooling mode, a water temperature no lower than 35°C must always be guaranteed on the heat exchanger inlet.
(3) Only for 0503 ÷ 0704 sizes
(4) Only for 0804 ÷ 1004 sizes
(5) The hydronic kit P is not available for sizes 1504 and 1654
(6) The hydronic kits V and Z are not available for size 1654

PERFORMANCE SPECIFICATIONS

Size			0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
Cooling performance 12 °C / 7 °C (1)															
Cooling capacity	°,L	kW	105,9	113,8	140,8	159,8	180,7	211,6	242,7	277,7	313,6	341,7	369,7	423,6	477,0
Input power	°,L	kW	23,8	25,7	31,1	35,3	40,2	47,1	54,2	62,2	70,4	76,6	82,7	94,8	106,7
Cooling total input current	°,L	A	49,0	52,0	60,0	65,0	87,0	95,0	104,0	122,0	140,0	144,0	147,0	164,0	183,0
EER	°,L	W/W	4,45	4,43	4,52	4,52	4,50	4,49	4,47	4,47	4,45	4,46	4,47	4,47	4,47
Water flow rate source side	°,L	l/h	22173	23854	29402	33334	37744	44198	50635	58078	65694	71514	77333	88547	99702
Pressure drop source side	°,L	kPa	25	29	28	35	35	42	55	36	28	32	34	41	44
Water flow rate system side	°,L	l/h	18212	19586	24225	27490	31098	36424	41750	47764	53949	58759	63570	72837	82027
Pressure drop system side	°,L	kPa	17	20	19	24	24	29	38	24	19	22	24	29	30
Heating performance 40 °C / 45 °C (2)															
Heating capacity	°,L	kW	125,4	135,8	165,8	187,6	210,4	269,6	310,2	325,2	365,6	399,8	434,0	500,6	565,2
Input power	°,L	kW	27,9	30,2	36,8	41,8	46,9	55,6	64,6	72,6	80,8	88,6	96,4	111,2	124,9
Heating total input current	°,L	A	54,0	57,0	66,0	72,0	94,0	105,0	115,0	135,0	154,0	160,0	165,0	181,0	202,0
COP	°,L	W/W	4,49	4,49	4,51	4,49	4,48	4,85	4,80	4,48	4,52	4,51	4,50	4,50	4,52
Water flow rate source side	°,L	l/h	28545	30928	37776	42774	47928	62567	71944	74067	83306	91109	98905	114256	129207
Pressure drop source side	°,L	kPa	43	49	46	58	58	46	61	58	46	52	58	66	71
Water flow rate system side	°,L	l/h	21762	23561	28776	32552	36508	46797	53844	56470	63485	69420	75355	86926	98135
Pressure drop system side	°,L	kPa	24	28	26	33	32	31	40	33	26	30	32	41	43

(1) Date 14511:2018; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C
(2) Date 14511:2018; Water user side 40 °C / 45 °C; Water source side 10 °C / 7 °C

ENERGY INDICES (REG. 2016/2281 EU)

Size			0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
SEER - 12/7 (EN14825: 2018) (1)															
SEER	°,L	W/W	5,39	5,38	5,53	5,60	5,38	5,60	5,27	5,77	5,88	5,94	5,97	6,43	6,44
Seasonal efficiency	°,L	%	212,6%	212,2%	218,2%	221,0%	212,2%	221,0%	207.8%	227,8%	232,2%	234,5%	235,6%	254,2%	254,7%
SEPR - (EN 14825: 2018) High temperature (2)															
SEPR	°,L	W/W	-	-	-	-	-	-	-	7,03	7,06	7,06	7,03	-	-
UE 813/2013 performance in average ambient conditions (average) - 55 °C - Pdesignh ° 400 kW (3)															
Pdesignh	°,L	kW	161	175	213	241	271	320	368	-	-	-	-	-	-
SCOP	°,L		4,95	4,93	4,95	4,93	4,93	4,90	4,80	-	-	-	-	-	-
ηsh	°,L	%	190.0%	189.0%	190.0%	189.0%	189.0%	188.0%	184.0%	-	-	-	-	-	-

(1) Calculation performed with FIXED water flow rate and VARIABLE outlet temperature.
(2) Calculation performed with FIXED water flow rate.
(3) Efficiencies for average temperature applications (55 °C)

ELECTRIC DATA

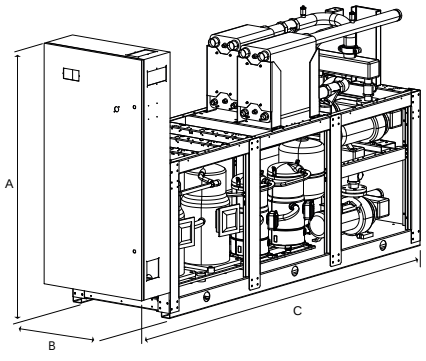
Size			0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
Electric data															
Maximum current (FLA)	°,L	A	75,0	80,0	96,0	107,0	122,0	146,0	169,0	193,0	217,0	231,0	248,0	267,0	296,0
Peak current (LRA)	°,L	A	240,0	245,0	227,0	238,0	289,0	319,0	341,0	398,0	422,0	490,0	504,0	601,0	630,0

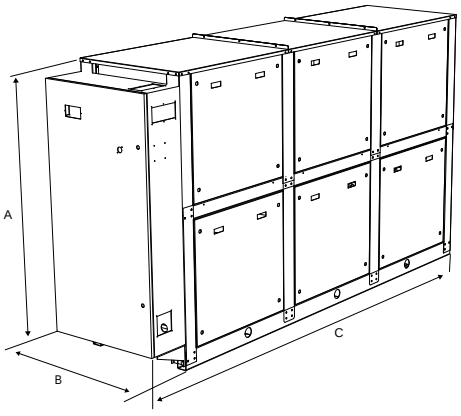
GENERAL TECHNICAL DATA

Size			0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
Compressor															
Type	°,L	type							Scroll						
Compressor regulation	°,L	Type							On-Off						
Number	°,L	no.	3	3	4	4	4	4	4	4	4	4	4	4	4
Circuits	°,L	no.	2	2	2	2	2	2	2	2	2	2	2	2	2
Refrigerant	°,L	type							R410A						
Refrigerant charge	°,L	kg	13,0	13,0	17,0	17,0	20,0	22,0	26,0	36,0	54,0	54,0	58,0	60,0	62,0
Source side heat exchanger															
Type	°,L	type							Brazed plate						
Number	°,L	no.	1	1	1	1	1	1	1	1	1	1	1	1	1
Connections (in/out)	°,L	Type							Gas - F						
Size (in)	°,L	Ø	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	3"	3"	3"	3"	3"	3"
Size (out)	°,L	Ø	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	3"	3"	3"	3"	3"	3"
System side heat exchanger															
Type	°,L	type							Brazed plate						
Number	°,L	no.	1	1	1	1	1	1	1	1	1	1	1	1	1
Connections (in/out)	°,L	Type							Gas - F						
Size (in)	°,L	Ø	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	3"	3"	3"	3"	3"	3"
Size (out)	°,L	Ø	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	3"	3"	3"	3"	3"	3"
Sound data calculated in cooling mode (1)															
Sound power level	°	dB(A)	78,0	79,0	79,0	80,0	82,0	86,0	88,0	88,0	88,0	90,0	90,0	93,0	95,0
	L	dB(A)	72,0	73,0	73,0	74,0	76,0	80,0	82,0	82,0	82,0	84,0	84,0	86,0	87,0
Sound pressure level (10 m)	°	dB(A)	46,4	47,4	47,4	48,4	50,4	54,3	56,3	56,3	56,3	58,3	58,3	61,3	63,3
	L	dB(A)	40,3	41,3	41,3	42,3	44,3	48,3	50,3	50,3	50,3	52,3	52,3	54,3	55,3

(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			0503	0553	0604	0654	0704	0754	0804	0904	1004	1254	1404	1504	1654
Dimensions and weights															
A	°	mm	1835	1835	1835	1835	1835	1775	1775	1820	1820	1820	1820	1820	1820
	L	mm	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
B	°,L	mm	800	800	800	800	800	800	800	800	800	800	800	800	800
C	°	mm	1795	1795	1795	1795	1795	2420	2420	2420	2420	2420	2420	2420	2420
	L	mm	2090	2090	2090	2090	2090	2420	2420	2420	2420	2420	2420	2420	2420
Empty weight	°	kg	628	633	734	743	791	948	1042	1275	1545	1577	1657	1687	1825
	L	kg	801	805	907	915	963	1121	1240	1473	1743	1774	1855	1885	2023

The weight of the unit does not include the hydronic kit and accessories.

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