

WRL

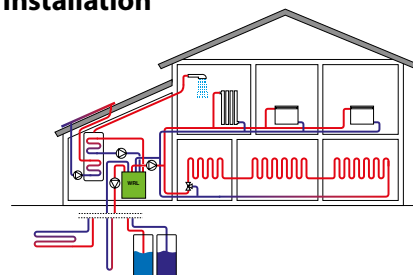
026/161
heat pumps

R410A



Aermec participate in the EUROVENT program: LCP, the products are present on the site www.eurovent-certification.com

Reversible heat pumps Water/Water for indoor installation
Scroll compressors, plate heat exchangers
Cooling capacity 6,3÷40,3kW
Heating capacity 7,9÷48,1kW



TAT - TAH
ACCESSORIES



PGD1
Simplified remote panel.
ACCESSORIES

- **HIGH EFFICIENCY**
- **PRODUCTION OF HOT WATER UP TO 60 °C PRIORITY**
- **PRODUCTION OF DOMESTIC HOT WATER**
- **IDEAL FOR GEOTHERMAL APPLICATIONS**

Characteristics

The WRL water-cooled heat pumps are reversible products for the production of chilled, hot and domestic hot water. These indoor units feature hermetic scroll compressors, system side heat exchangers and source with plates, which fully meet the needs of the residential market: small size, easy installation, low noise. They can be installed in traditional systems or with radiant panels.

In the latter, by using lower water temperatures, they ensure better overall efficiency. They are particularly suitable for new low consumption buildings that mainly use renewable energy sources. In the total recovery systems there is also the possibility to produce domestic hot water with priority both in summer and in winter. The unit is supplied with a temperature probe for a possible DHW storage tank. The base, the structure and the panels are made of steel treated with rustproof polyester paint.

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

WRL_H Heat pump without storage tank

WRL_HA with system storage tank

Operational limits: Operation at full power with domestic hot water for the system up to 60°C. For further details refer to the technical/selection software documentation.

- Single-circuit unit
- Water filter, differential pressure switch and water safety valve as standard on the system and source

sides and on the domestic hot water side if envisaged.

- Possibility of a hydronic kit, which encloses the main hydraulic components; available in different configurations, with high or low static pressure pumps, inverter pumps and the possibility of a modulating valve for reducing consumption (source side, for groundwater applications)
- Microprocessor adjustment, with keyboard and LCD display, for easy intervention on the unit via a menu available in several languages. Adjusting the unit with an external air temperature probe (accessory) ensures dynamic temperature control of the water produced, increasing the energetic efficiency of the system.

Accessories

- **AER485P1:** RS-485 interface for supervising systems with MODBUS protocol.
- **AERWEB300:** Accessory AERWEB allows remote control of a chiller through a common PC and an ethernet connection over a common browser; 4 versions available:
 - **AERWEB300-6:** Web server to monitor and remote control max. 6 units in RS485 network;
 - **AERWEB300-18:** Web server to monitor and remote control max. 18 units in RS485 network;
 - **AERWEB300-6G:** Web server to monitor and remote control max. 6 units in RS485 network with integrated GPRS modem;
 - **AERWEB300-18G:** Web server to monitor and remote control max. 18 units in RS485 network with integrated GPRS modem;
- **VT:** Anti-vibration mounts.
- **TAT:** Room temperature sensor. 230 Vac recess mounted kit containing the ambient sensor with display and control knob, able to control an ON-OFF valve or a zone pump.
- **TAH:** Room temperature and humidity sensor. 230 Vac recess mounted kit containing the sensor with display and control knob, able to control an ON-OFF valve or a zone pump and
- **SSM:** Sensor to be used together with the mixing valve in applications with radiant panels. Accessory to be requested together with the VMFCRP zone accessory.
- **S...I:** System buffer tanks: available in sizes 200, 300, 400 and 500 litres (S200I, S300I, S400I and S500I).
- **PGD1:** Simplified remote panel. Allows control of basic unit functions and alarm notification. Remote mounted up to 500 m away with TWISTED PAIR SCREENED cable and TCONN6J000.
- **KSAE:** External air sensor. Temperature sensor

- with plastic enclosure.
- VPHL:** 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.

- VMFCRP:** WRL Zones Control can control up to a maximum of 3 zones with the following modes:
 - Zone 1: Controlled as standard with the latest generation electronic controller. The "SSM" clamp on sensor (accessory) is recommended to control the flow temperature.**
 - The unit is shipped with a temperature**

sensor kit for the DHW tank.

- The control of the remaining Zone 2 and Zone 3 is possible using the VMFCRP + SSM accessories for each zone.

Accessory compatibility

WRL_H	026H	031H	041H	051H	071H	081H	101H	141H	161H
AER485P1	•	•	•	•	•	•	•	•	•
AERWEB300	•	•	•	•	•	•	•	•	•
VT (vers. H)	9	9	9	9	9	9	15	15	15
VT (vers. HA)	15	15	15	15	15	15	15A	15A	15A
TAT	•	•	•	•	•	•	•	•	•
TAH	•	•	•	•	•	•	•	•	•
SSM	•	•	•	•	•	•	•	•	•
S...I (200-300-400-500)	•	•	•	•	•	•	•	•	•
PGD1	•	•	•	•	•	•	•	•	•
VPHL	VPHL1	VPHL1	VPHL2	VPHL2	VPHL3	VPHL3	VPHL4	VPHL4	VPHL4
KSAE	•	•	•	•	•	•	•	•	•
VMFCRP	•	•	•	•	•	•	•	•	•

Unit Configurator

By suitably combining the numerous options available it is possible to configure each model in such a way as to meet even the most demanding of system requirements.

Field	Description
1,2,3	WRL
4,5,6	Size 026-031-041-051-071-081-101-141-161
7	Field of use
X	Electronic thermostatic valve (temperature of water produced up to +4 °C) for other temperatures, contact the head office.
8	Model
H	Heat pumps
9	Version
°	Standard
A	With buffer tank
10	Heat recovery
°	Without recovery
T	With total recovery
11	Geothermal side pump kit
°	Without pump
	Geothermal applications
B	Circulator inverter (WRL026÷081) (1)
	Pump On/Off (WRL101÷161)
U	High head pump (WRL101÷161)
I	Inverter pump (WRL026÷081)
	Applications with bore hole water
V	2-way modulating valve
12	System side kit pumps version
°	Without pump
P	Circulator inverter (WRL026÷081) (1)
	Pumps On/Off (WRL101÷161)
N	High head pump (WRL101÷161)
13	Heat recovery side kit pump version
°	Without pump
Q	Circulator inverter (1)
14	Soft-start
°	Without soft-start
S	With soft-start
15	Power supply
°	400/3N/50Hz
M	230V/1/50Hz (WRL026÷041)
4	230V/3/50Hz (only for sizes WRL051÷141)

(1) 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

Date relating to the version with storage tank and pump "B" on geothermal side, pump "P" on utility side.

(1) Water system side (in/out) 12°C/7°C; Water geothermal (in/out) 30°C/35°C

(2) Water system side (in/out) 40°C/45°C; Water geothermal (in/out) 10°C/7°C

(3) Efficiencies for low temperature Applications (35°C)

(5) Efficiencies for average temperature Applications (55°C)

(4) Efficiency Energy Class in according to regulation n°811/2013 $P_{designh} \leq 70kW$

Technical Data

			026	031	041	051	071	081	101	141	161
Electrical data											
230V	Total input current (cooling)	(6) A	8,5	10,8	13,5	/	/	/	/	/	/
	Total input current (heating)	(6) A	10,5	13,1	16,6	/	/	/	/	/	/
	Maximum current (FLA)	(6) A	18	21	34	/	/	/	/	/	/
	Starting current (LRA)	(6) A	63	84	119	/	/	/	/	/	/
400V	Total input current (cooling)	(6) A	4,2	3,8	5,8	7,2	9,0	10,2	13,3	16,7	19,1
	Total input current (heating)	(6) A	4,9	4,9	6,7	8,5	10,7	12,2	16,1	20,7	23,9
	Maximum current (FLA)	(6) A	8	8	15	17	21	22	32	40	41
	Starting current (LRA)	(6) A	34	37	65	75	75	75	90	94	95
Scroll Compressor											
Compressors / Circuit		n°/n°	1/1	1/1	1/1	1/1	1/1	1/1	2/1	2/1	2/1
Refrigerant		Type	R410A								
Heat exchanger system side											
Exchanger		Type/n°	Plate/1								
hydraulic connections (In/Out)		Type/Ø	F/1"¼								
Heat exchanger source side											
Exchanger		Type/n°	Plate/1								
hydraulic connections (In/Out)		Type/Ø	F/1"¼								
Sound data (Cooling mode)											
Sound power level		dB(A)	55,5	57,0	57,5	59,0	60,0	60,5	62,0	63,0	63,5
Sound pressure level		dB(A)	24,0	25,8	25,3	27,7	28,7	29,2	30,6	31,6	32,1

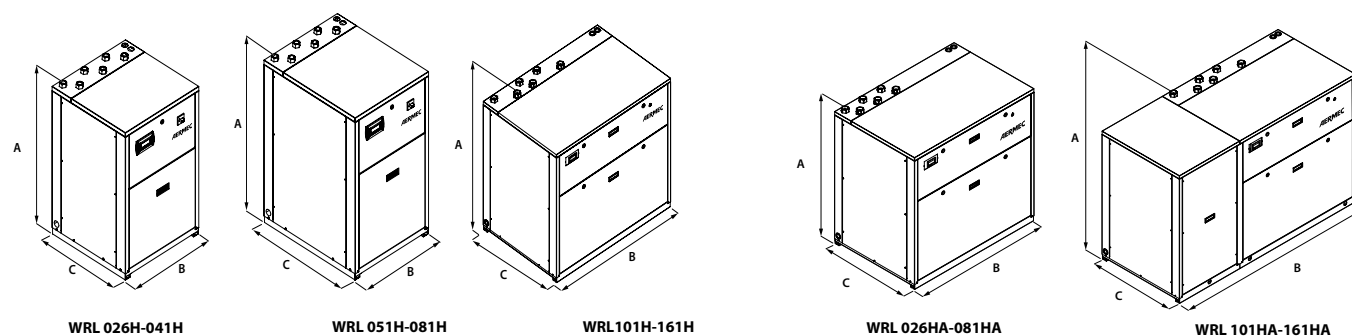
(6) Unit standar configuration without hydronic kit

Sound power Aermec determines sound power values on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification.

Sound pressure Sound pressure in free field, at 10 m distance from the external surface of the unit (in accordance with UNI EN ISO 3744).

Note: For more information, refer to the selection program or the technical documentation available on the website www.aermec.com

Dimensions (mm)



WRL		026H	031H	041H	051H	071H	081H	101H	141H	161H
Height (A)	mm	976	976	976	1126	1126	1126	1126	1126	1126
Width (B)	mm	605	605	605	605	605	605	1155	1155	1155
Depth (C)	mm	603	603	603	773	773	773	773	773	773
Weight	kg	120	125	130	150	170	180	260	270	280

WRL		026HA	031HA	041HA	051HA	071HA	081HA	101HA	141HA	161HA
Height (A)	mm	1126	1126	1126	1126	1126	1126	1126	1126	1126
Width (B)	mm	1155	1155	1155	1155	1155	1155	1755	1755	1755
Depth (C)	mm	773	773	773	773	773	773	773	773	773
Weight *	Kg	190	200	210	230	250	260	340	350	360

* Weight with two heat exchangers and buffer tank without pumps.