

## WRL-H

Water cooled reversible heat pumps  
for the production of hot water up to 55 °C  
Cooling capacity from 45 to 157 kW  
Heating capacity from 53 to 183 kW

R410A



Aermec participates in the EUROVENT Certification Program. The products of interest appear in the EUROVENT Guide of Certified products.



PGD1  
Simplified remote panel.  
ACCESSORY

- **HIGH EFFICIENCIES**
- **POSSIBILITY OF HAVING: PARTIAL HEAT RECOVERY**
- **PRODUCTION OF HOT WATER UP TO 55 °C**
- **USED FOR GEOTHERMAL APPLICATIONS**

### Features

WRL is the range of water-cooled heat pumps functioning with R410A refrigerant. They are indoor units with hermetic scroll compressors that respond perfectly to the market requirements: small dimensions, easy installation, low noise.

#### High efficiency

Aermec has designed these units optimising functioning in heat pump mode, allowing to reach high efficiencies and low consumption.

#### Connections

The electric and hydraulic connections are all positioned in the upper part of the unit facilitating the installation and maintenance operations. All this also allows to reduce the technical spaces and their positioning in as smaller space possible.

The WRL units are distinguished for its working silence.

Careful soundproofing of the unit with suitable sound-absorbent material confers all units with noise limits.

#### Dynamic set point

Thanks to the use of a latest generation electronic regulation and the use of an external air temperature probe (Accessory), the heat pump can adapt the temperature of the water produced, on variation of the climatic conditions, increasing the energy efficiency of the system.

#### Advantages

The technological choices made, orientated always at maximum quality coupled with the use of the most innovative technologies making the WRL series able to ensure, as well as the maximum energy efficiency, complete installation facility and excellent versatility of use aimed at the use of alternative sources.

#### Range

Available in 8 models:

- Gas side cycle inversion

#### Version

- WRLH= heat pump

#### Technical features

- Structure and base in hot galvanised sheet steel and with epoxy paint. (RAL 9002).
- Large plate heat exchangers.
- Compressors with high performance and low electric absorption
- Flow meter as per standard.
- Conform with Safety Directives (CE) and the Standards regarding electromagnetic compatibility.
- The safety of the appliance is guaranteed by the door-lock isolating switch on the electric control board and active protections on the main components.
- Command can be accessed from outdoors, with the user interface with display, showing all functioning parameters in 4 languages.
- Last generation electronic regulation
- User-friendly remote control panel with alarm signals.

## Accessories

- **AER485P1:** RS-485 interface for supervising systems with MODBUS protocol.
- **VT:** Anti-vibration mounts, four anti-vibration mounts to be mounted under the unit's sheet steel base.
- **STA:** Room temperature probe, 230Vac recess kit containing the room probe with display and regulation knob, able to control an ON-OFF valve or a zone pump.
- **STH:** Room and humidity temperature probe, 230Vac recess kit containing the probe with display and regulation knob, able to control an ON-OFF valve or a zone pump and dehumidifier consent.
- **SSM:** Probe to be used together with the mixer valve in applications with radiant panels. Accessory to be requested together with the VMFCRP zone accessory.
- **S...I:** System storage tanks; available in sizes 200, 300, 400 and 500 litres (S200I, S300I, S400I and S500I).
- **PGD1:** Simplified remote panel. Allows to perform the basic controls of the unit with alarm signals. Remote controllable to 500 m with 2 PAIRS of TWISTED cable + SHIELD with shielded pairs and TCONN6J000.
- **KSAE:** External air probe. Temperature probe with plastic container.
- **VMFCRP:** Zones Management

The WRL heat pump, can manage up to a maximum of n° 3 zones with the following methods:

- **Zone 1: Managed as per standard thanks to last generation electronic regulation. It is recommended to mount the "SSM" electronic marking probe (accessory) to control the flow temperature.**

- **The unit is shipped with 1 temperature probe for any DHW tank.**

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

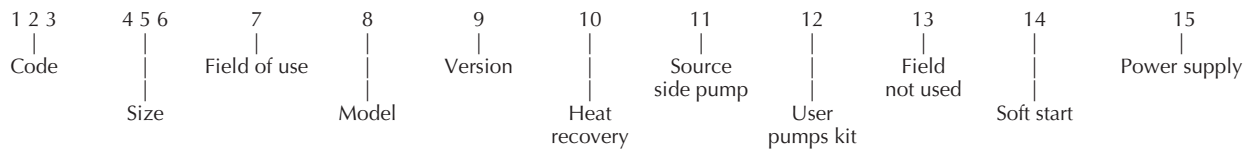
### Accessories compatibility

	180	200	300	400	500	550	600	650
WRLH								
AER485P1	✓	✓	✓	✓	✓	✓	✓	✓
VT	9	9	9	9	15	15	15	15
STA	✓	✓	✓	✓	✓	✓	✓	✓
STH	✓	✓	✓	✓	✓	✓	✓	✓
SSM	✓	✓	✓	✓	✓	✓	✓	✓
S...I (200-300-400-500)	✓	✓	✓	✓	✓	✓	✓	✓
PGD1	✓	✓	✓	✓	✓	✓	✓	✓
KSAE	✓	✓	✓	✓	✓	✓	✓	✓
VMFCRP	✓	✓	✓	✓	✓	✓	✓	✓

## Choosing the unit

By appropriately combining the variety of options available, it is possible to configure every model in a manner that satisfies all specific implant requirements.

Fields configurator:



### CODE:

WRL

### SIZE:

180 - 200 - 300 - 400 - 500 - 550 - 600 - 650

### FIELD OF USE:

° - Standard with water produced over +4 °C

Y - Low temperature with water produced to -8 °C

X - Electronic thermostatic valve with water produced to -8 °C

### MODEL:

H - Reversible cooling circuit

### VERSION:

° - Standard

### HEAT RECOVERY

° - Without heat recovery

D - Desuperheater

### GEOHERMIC SIDE PUMPS

° - Without pump

B - Low static pressure pump

U - High static pressure pump

F - Low static pressure inverter pump

I - High static pressure inverter pump

### SYSTEM SIDE PUMPS

° - Without pump

P - Low static pressure pump

N - High static pressure pump

### FIELD NOT USED

°

### SOFT START

° - Without Soft Start

S - Soft Start

### POWER SUPPLY

° - 400V-3N -50 Hz

5 - 500V-3-50Hz (only models WRL400-550-600-650)

## Technical data

WRLH Model		180	200	300	400	500	550	600	650
Cooling capacity	Kw	44.8	59.5	64.7	79.2	92.8	119.6	139.6	156.6
Input power	Kw	10.7	14.3	15.9	17.9	19.8	27.0	30.7	35.1
Input current	A	20	25	28	32	36	52	60	69
E.E.R.	-	4.21	4.15	4.07	4.41	4.69	4.43	4.55	4.46
Evaporator water capacity	l/h	7710	10230	11120	13620	15960	20570	24010	26930
Evaporator pressure drops	kPa	22	37	36	52	25	40	40	49
Condenser water consumption	l/h	9360	12450	13580	16400	19030	24750	28760	32370
Condenser pressure drops	kPa	31	52	51	74	34	56	57	71
Heating capacity	Kw	52.6	70.4	76.0	93.0	105.4	143.2	163.7	183.1
Input power	Kw	12.6	17.2	18.5	21.4	23.5	32.0	36.3	41.5
Input current	A	23	29	31	36	41	57	65	75
C.O.P.	-	4.16	4.09	4.10	4.35	4.48	4.47	4.51	4.42
Condenser water capacity	l/h	9050	12100	13070	16000	18130	24620	28160	31490
Condenser pressure drops	kPa	28	48	48	70	29	52	54	67
Evaporator water consumption	l/h	9360	12450	13580	16400	19030	24750	28760	32370
Evaporator pressure drops	kPa	31	52	51	74	34	56	57	71
<b>Compressor</b>					SCROLL				
N° circuits/N° compressors		1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Flow rate control	%	50/100	50/100	50/100	50/100	50/100	50/100	50/100	50/100
<b>Geothermic side heat exchanger</b>					PLATES				
Hydraulic connections	ø	2"	2"	2"	2"	2"½	2"½	2"½	2"½
Quantity	n°	1	1	1	1	1	1	1	1
<b>System side heat exchanger</b>					PLATES				
Hydraulic connections	ø	2"	2"	2"	2"	2"½	2"½	2"½	2"½
Quantity	n°	1	1	1	1	1	1	1	1
<b>Desuperheater (optional)</b>					PLATES				
Hydraulic connections	ø	1"½	1"½	1"½	1"½	1"½	1"½	1"½	1"½
Quantity	n°	1	1	1	1	1	1	1	1
<b>Expansion vessel (versions with pumps)</b>					-				
Expansion vessel (per circuit)	n°/l	1/8	1/8	1/8	1/8	1/12	1/12	1/12	1/12

### Performance in compliance with the EN 14511 Standard.

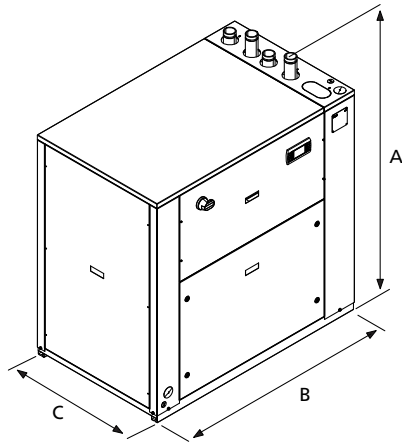
#### ■ Cooling:

Evaporator	
Input temperature	12 °C
Output temperature	7 °C
Condenser	
Input temperature	30 °C
Output temperature	35 °C

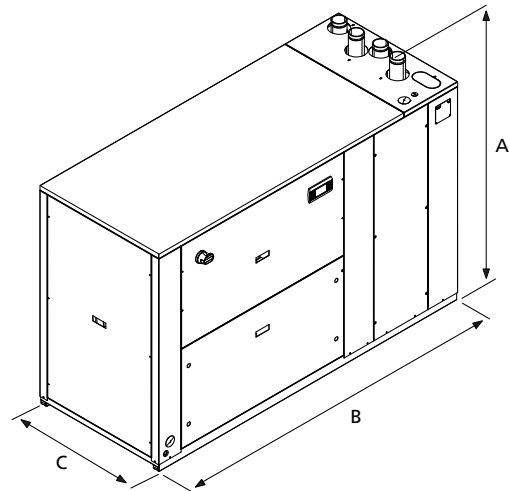
#### ■ Heating:

Evaporator	
Input temperature	10 °C
Output temperature	* °C
Condenser	
Input temperature	40 °C
Output temperature	45 °C

## Dimensions (mm)



**WRLH 180-400**



**WRLH 500-650**

WRLH Model		180	200	300	400	500	550	600	650
Height (A)	mm	1380	1380	1380	1380	1380	1380	1380	1380
Width (B)	mm	1320	1320	1320	1320	2009	2009	2009	2009
Depth (C)	mm	845	845	845	845	845	845	845	845
Empty weight	kg	370	370	381	388	522	598	708	753