

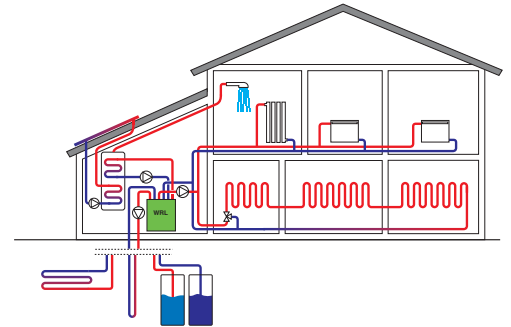
WRL

R410A

Water cooled reversible heat pumps for the production of system hot water up to 60 °C
Cooling capacity from 6 up to 40 kW
Heating capacity from 8 up to 48 kW



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



STA - STH
ACCESSORIES



PGD1
Simplified remote panel.
ACCESSORIES

- **HIGH EFFICIENCIES**
- **POSSIBILITY OF HAVING: PARTIAL OR TOTAL HEAT RECOVERY FREECOOLING SET-UP AND SOLAR HEAT PRODUCTION OF HOT WATER FOR SYSTEM USE UP TO 60 °C PRIORITY PRODUCTION OF DHW**
- **SUITABLE FOR GEOTHERMAL APPLICATIONS**
- **THE STANDARD SUPPLY OF N° 2 TEMPERATURE PROBES**

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 requirements of the residential market: small dimensions, easy installation, low noise.

High performance

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

Connections

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

Silence

The WRL units are distinguished for its working silence. Careful soundproofing of the unit with suitable sound-absorbent material confer all units with noise limits such to consent the use of the WRL also in homes and not necessarily in dedicated technical rooms.

Priority production of domestic hot water

The unit guarantees the production of DHW

with priority mode both in summer and winter. The production temperature of the DHW depends on the type of coupling between the WRL heat pump and the associated DHW production device

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

- Availability of 9 models with gas side cycle inversion
- Available versions
WRL H.
WRL HA:
WRL E: Moto-evaporating delivered after

being pre-charged.

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.
 - The standard supply of n° 2 temperature probes (n° 1 for mixer valve and n° 1 for any DHW tank).
 - 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, group of four anti-vibration mounts to assemble 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 temperature probe, 230Vac recess kit containing the room and humidity probes with display and regulation knob, able to control an ON-OFF valve or a zone pump and dehumidifier consent
- **SSM:** Probe for DHW and for mixing valve. Kit formed by two temperature probes with cable measuring 6 metres. Accessory to be requested along with 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:

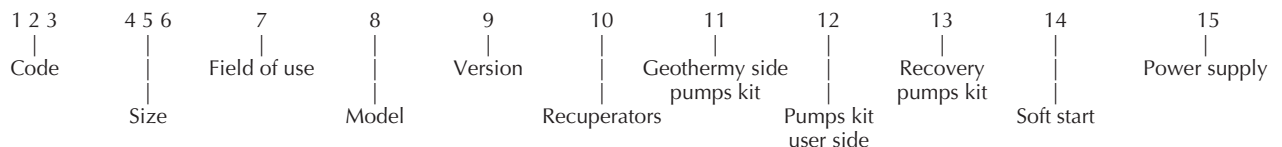
- Zone n° 1: managed in series, thanks to the use of latest generation electronic regulation and the standard supply of n° 2 temperature probes (n° 1 for mixer valve and n° 1 for any DHW tank).
- The management of the remaining Zone 2 and Zone 3 is possible using the VMFCRP + SSM accessories for each zone.

WRL	Compatibility of accessories									
	025	030	040	050	070	080	100	140	160	
AER485P1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VT	9	9	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:



IDENTIFICATION:

WRL

SIZE:

025 - 030 - 040 - 050 - 070 - 080 - 100 - 140 - 160

FIELD OF USE:

° - Standard with water produced at +4 °C

(models WRL 100-140-160)

Y - Low temperature with water produced to -6 °C

(models WRL 100-140-160)

X - Electronic thermostatic valve with water produced to -6 °C

(as standard for 025-030-040-050-070-080 models)

MODEL:

° - Cooling only

H - Heat pump

E - Moto-evaporating

VERSION:

° - Standard

A - With system storage tank

HEAT RECOVERY:

° - Without recuperators

D- With desuperheate **FOR COOLING VERSIONS ONLY**

T- With total recovery **FOR HEAT PUMP VERSIONS ONLY**

VERSION "°/A" GEOTHERMY SIDE PUMPS KIT:

° - Without pump

Geothermy applications

B - 3-SPEED PUMP ON-OFF (UP TO MODEL WRL 080)

Single speed three-phase STANDARD PUMP

(WRL 100-140-060 MODELS)

U - Single speed three-phase LARGER PUMP (WRL 100-140-160)

F - Pump with phase cut set-up (MODELS UP TO WRL 080)

I - Pump INVERTER (for the models 025-030-040-050-070-080)

Applications with water sheet

V - 2-way modulating valve

USER SIDE PUMPS KIT:

Standard version "°"

° - Without pump

P - 3-speed PUMP ON-OFF (UP TO MODEL WRL 080)

Single speed three-phase STANDARD PUMP

(WRL 100-140-060 MODELS)

N - Single speed three-phase LARGER PUMP

(WRL 100-140-160 MODELS)

Version "A"

° - Without pump

P - 3-speed PUMP ON-OFF (UP TO MODEL WRL 080)

Single speed three-phase STANDARD PUMP

(WRL 100-140-160 MODELS)

J - 3-speed INCREASED PUMP ON-OFF (MODELS UP TO WRL 080):

N - Single speed three-phase LARGER PUMP

(WRL 100-140-160 MODELS)

RECOVERY PUMP KIT:

° - Without pump

Q - Pump

SOFT-START:

° - Without soft-start

S - With Soft-start

POWER SUPPLY:

° - 400V 3N~ 50Hz

M - 230V ~ 50Hz

Technical data

WRL Model		025H	030H	040H	050H	070H	080H	100H	140H	160H
Cooling capacity	230V-1 kW	6,3	7,9	10,3	-	-	-	-	-	-
	400V-3	6,3	8,1	10,4	13,7	17,7	20,2	27,5	35,3	40,3
Input power	230V-1 kW	1,67	1,90	2,40	-	-	-	-	-	-
	400V-3	1,57	1,80	2,29	3,02	4,22	4,95	6,07	8,45	9,91
Input current	230V-1 A	8,3	10,4	13,2	-	-	-	-	-	-
	400V-3	2,9	3,6	4,6	6,2	7,4	8,9	12,2	14,9	17,8
E.E.R.	230V-1	3,77	4,17	4,29	-	-	-	-	-	-
	400V-3	4,01	4,49	4,55	4,55	4,19	4,08	4,53	4,18	4,07
Evap water flow rate	230V-1 l/h	1.080	1.360	1.770	-	-	-	-	-	-
	400V-3	1.080	1.390	1.790	2.360	3.040	3.470	4.730	6.070	6.930
Evap pressure drops	230V-1 l/h	9	10	13	-	-	-	-	-	-
	400V-3	9	11	13	14	16	18	20	24	29
Cond. water consumption	230V-1 l/h	1.370	1.680	2.180	-	-	-	-	-	-
	400V-3	1.350	1.700	2.180	2.880	3.760	4.320	5.760	7.500	8.610
Cond pressure drops	230V-1 kPa	14	16	19	-	-	-	-	-	-
	400V-3	13	16	19	20	24	27	28	37	44
Heating capacity	230V-1 kW	7,9	10,0	12,6	-	-	-	-	-	-
	400V-3	7,9	9,5	12,4	16,4	20,9	24,1	32,7	41,9	48,2
Input power	230V-1 kW	1,97	2,48	3,10	-	-	-	-	-	-
	400V-3	1,97	2,31	2,89	3,85	5,05	5,94	7,70	10,12	11,91
Input current	230V-1 A	9,8	12,1	15,3	-	-	-	-	-	-
	400V-3	3,5	4,3	5,5	7,2	8,9	10,5	14,2	17,9	21,0
C.O.P.	230V-1	4,01	4,02	4,05	-	-	-	-	-	-
	400V-3	4,01	4,11	4,28	4,25	4,14	4,06	4,25	4,14	4,05
Cond water flow rate	230V-1 l/h	1.360	1.710	2.160	-	-	-	-	-	-
	400V-3	1.360	1.630	2.120	2.810	3.590	4.140	5.620	7.190	8.270
Cond pressure drops	230V-1 kPa	5	18	21	-	-	-	-	-	-
	400V-3	5	17	21	22	25	28	31	39	46
Evap water consumption	230V-1 l/h	1.300	1.610	2.070	-	-	-	-	-	-
	400V-3	1.290	1.600	2.030	2.720	3.410	3.910	5.450	6.810	7.820
Evap pressure drops	230V-1 kPa	13	15	20	-	-	-	-	-	-
	400V-3	13	15	19	20	22	25	28	33	38
Compressor		SCROLL								
N° circuits / N° compressors		1 / 1	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1	1 / 2	1 / 2	1 / 2
Flow rate control		%	0 - 100	0 - 100	0 - 100	0 - 100	0 - 100	0 - 50 - 100	0 - 50 - 100	0 - 50 - 100
Evaporator		PLATE								
Hydraulic connections		ø	F / 1"1/4	F / 1"1/4	F / 1"1/4	F / 1"1/4	F / 1"1/4	F / 1"1/4	F / 1"1/4	F / 1"1/4
Quantity		n°	1	1	1	1	1	1	1	1
Condenser		PLATE								
Hydraulic connections		ø	F / 1"1/4	F / 1"1/4	F / 1"1/4	F / 1"1/4	F / 1"1/4	F / 1"1/4	F / 1"1/4	F / 1"1/4
Quantity		n°	1	1	1	1	1	1	1	1

Performance in compliance with the EN 14511 Standard

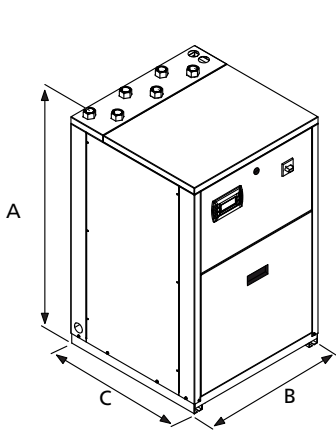
■ Cooling:

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

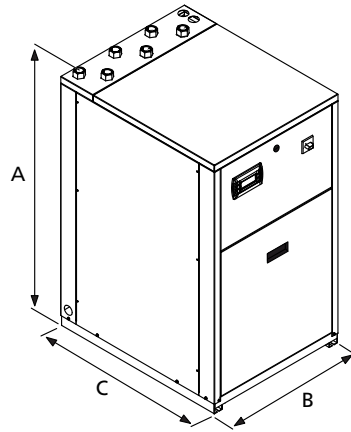
■ Heating:

Evaporator
 Input temperature 10 °C
 Output temperature 7 °C
 Condenser
 Input temperature 40 °C
 Output temperature 45 °C

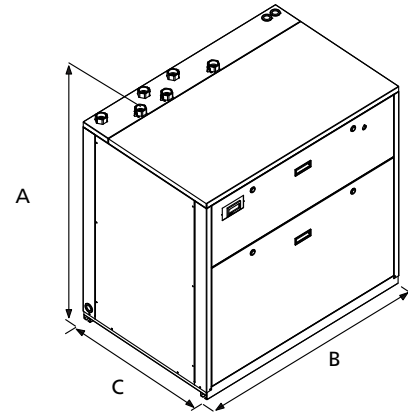
Dimensions (mm)



WRL 025-040



WRL 050-080



WRL 100-160

WRL		025H	030H	040H	050H	070H	080H	100H	140H	160H
Height (A)	mm	976	976	976	1.126	1.126	1.126	1.126	1.126	1.126
Width (B)	mm	607	607	607	607	607	607	1.157	1.157	1.157
Depth (C)	mm	628	628	628	798	798	798	798	798	798
Weight 2 exchanger	kg	115	117	119	155	161	165	261	264	267
Peso 3 exchanger	kg	120	123	126	164	173	179	275	282	287