

## WRL 026/161 cooling only

### R410A

*Variable Multi Flow*

VMF



Aermec participates in the EUROVENT Programme: LCP  
The products of interest can be found on the website  
[www.eurovent-certification.com](http://www.eurovent-certification.com)

**Water-cooled chillers**  
**Cooling capacity from 6,58÷43,40 kW**



**DISPLAY  
MODU\_CONTROL**



**KSAE**  
External air sensor  
ACCESSORY



**PR3**  
Simplified remote panel  
ACCESSORY

- **HIGH EFFICIENCIES**
- **OPTION FOR:  
DESUPERHEATER**
- **SUITABLE FOR GEOTHERMAL APPLICATIONS**

### Characteristics

WRL is the range of water cooled chillers operating with refrigerant R410A. They are internal units with hermetic scroll compressors that respond perfectly to the market requirements, small dimensions, easy of installation, low noise.

**Connections:** 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.

**Silent:** The WRL units are distinguished for their silence in operation. Careful soundproofing of the unit with suitable sound-absorbent material results in low sound levels for all units.

**Dynamic set point:** Using the latest generation

of electronic controller and with an external air temperature sensor "KSAE" (accessory), the heat pump unit can vary the leaving water temperature based on climatic conditions, thus increasing the energy efficiency of the system.

#### Versions

- **WRL-°** (standard without buffer tank)
- **WRL-A** (with buffer tank)

- Structure and base in hot dip galvanised sheet steel with epoxy paint finish (RAL 9002)
- Generously sized plate heat exchangers
- Compressors with high performance and low electrical input

- Differential pressure switch standard (on evaporator side)
- Conforms with Safety Directives (CE) and the standards regarding electromagnetic compatibility

The safety of the unit is provided by the door interlocked isolator and active protection of the main components

- Latest generation of electronic controller
- Control circuit board (Modu control)
- "PR3" simplified remote panel (ACCESSORY)
- Compatible with the (VMF) system except for domestic hot water production.

### Accessories

- **MODU-485A:** 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;
- **AERSET:** The AERSET accessory allows the automatic compensation of the operating set-point of the unit to which it is connected, based on a 0-10V MODBUS input signal.  
**Mandatory accessory: AER485 or MODU-485BL**
- **PR3:** Simplified remote panel. Allows control of the basic unit functions and alarm notification. Remote mounted up to 150 m distance

- with a shielded cable.
- **VPL:** 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.
- **KSAE:** External air sensor. Temperature sensor with plastic enclosure.
- **VT:** Anti-vibration mounts: four anti-vibration mounts to be installed under the unit's steel base.

## Accessory compatibility

WRL	026	031	041	051	071	081	101	141	161
MODU-485A	•	•	•	•	•	•	•	•	•
AERWEB300	•	•	•	•	•	•	•	•	•
AERSET	•	•	•	•	•	•	•	•	•
PR3	•	•	•	•	•	•	•	•	•
VPL	VPL1	VPL1	VPL2	VPL2	VPL3	VPL3	VPL4	VPL4	VPL4
KSAE	•	•	•	•	•	•	•	•	•
VT (version °)	9	9	9	9	9	9	15	15	15
VT (version A)	15	15	15	15	15	15	15A	15A	15A

## 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	Code
1,2,3	WRL
4,5,6	Size
	026-031-041-051-071-081-101-141-161
7	<b>Field of use</b>
	° Standard (with leaving water down to +4 °C)
Y	Low temperature (with leaving water up +4°C to -8°C)
8	<b>Model</b>
	° Cooling only
E	Evaporating unit (shipped with holding charge only)
9	<b>Version</b>
	° Without buffer tank
A	With buffer tank
10	<b>Heat recovery</b>
	° Without recovery
D	Desupeheater
11	<b>Geothermal side kit pumps version</b>
	° Without pump
	<b>Geothermal applications</b>
B	Circulator inverter (WRL026÷081) (1)
	Pumps On/Off (WRL101÷161)
U	High head pump (WRL101÷161)
I	Inverter pump (WRL026÷081)
	<b>Applications with bore hole water</b>
V	2-way modulating valve
12	<b>System side kit pumps version</b>
	° Without pump
P	Circulator inverter (WRL026÷081) (1)
	Pumps On/Off (WRL101÷161)
N	High head pump (WRL101÷161)
13	<b>Filed not used</b>
	°
14	<b>Soft-start</b>
	° Without soft-start
S	With soft-start
15	<b>Power supply</b>
	° 400/3N/50Hz
M	230V/1/50Hz (WRL026÷041)

(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

## Technical Data

WRL - °			026	031	041	026	031	041	051	071	081	101	141	161
V/ph/Hz			230V	230V	230V	400V	400V	400V	400V	400V	400V	400V	400V	400V
12°C / 7°C	Cooling capacity	(1) kW	6,58	8,27	11,30	6,7	8,4	11,3	14,7	19,2	21,8	29,4	38,4	43,7
	Total input power	(1) kW	1,57	1,89	2,56	1,53	1,82	2,66	3,22	4,15	4,85	6,38	8,25	9,62
	EER	(1)	4,19	4,38	4,41	4,37	4,60	4,25	4,57	4,63	4,49	4,61	4,65	4,54
	ESEER	(1)	4,22	4,41	4,34	4,42	4,65	4,46	4,59	4,58	4,46	4,89	4,84	4,69
	Cooling Energy Class Eurovent	(1)	D	C	C	C	C	D	C	C	C	C	B	C
	Water flow rate system side	(1) l/h	1136	1429	1954	1153	1447	1954	2539	3318	3769	5076	6635	7552
	Pressure drop	(1) kPa	15	17	23	15	17	23	21	26	30	25	34	38
	Water flow rate geothermal side	(1) l/h	1386	1731	2360	1396	1736	2375	3055	3979	4538	6101	7949	9079
	Pressure drop	(1) kPa	29	30	36	28	30	36	32	40	46	42	58	67

WRL - ABP			026	031	041	026	031	041	051	071	081	101	141	161
V/ph/Hz			230V	230V	230V	400V	400V	400V	400V	400V	400V	400V	400V	400V
12°C / 7°C	Cooling capacity	(1) kW	6,70	8,42	11,48	6,8	8,5	11,5	14,9	19,44	22,06	30,08	39,31	44,7
	Total input power	(1) kW	1,37	1,66	2,27	1,33	1,58	2,37	2,96	3,84	4,52	6,27	8,13	9,44
	EER	(1)	4,89	5,07	5,06	5,11	5,39	4,84	5,03	5,06	4,88	4,80	4,84	4,74
	Cooling Energy Class Eurovent	(1)	B	A	A	A	A	B	B	A	B	B	B	B
	Water flow rate system side	(1) l/h	1136	1429	1954	1153	1447	1954	2539	3318	3769	5076	6535	7552
	Usefoul head	(1) kPa	78	74	60	78	74	60	74	60	50	147	163	157
	Water flow rate geothermal side	(1) l/h	1386	1731	2360	1396	1736	2375	3055	3979	4528	6101	7949	9079
	Usefoul head	(1) kPa	63	57	39	62	56	38	56	36	22	115	136	123

WRL - E			026	031	041	026	031	041	051	071	081	101	141	161
V/ph/Hz			230V	230V	230V	400V	400V	400V	400V	400V	400V	400V	400V	400V
Cooling capacity	(2)	kW	6,20	7,80	10,40	6,30	7,80	10,40	13,40	17,40	19,70	26,80	34,70	39,40
Total input power	(2)	kW	1,70	2,10	2,90	1,70	2,00	2,80	3,60	4,50	5,30	7,20	9,10	10,60
EER	(2)		3,56	3,65	3,63	3,70	3,87	3,75	3,73	3,83	3,71	3,73	3,83	3,71
Water flow rate system side	(2)	l/h	1070	1340	1790	1080	1340	1790	2300	2980	3390	4600	5970	6770
Pressure drop	(2)	kPa	13	15	20	13	15	20	18	21	24	21	28	31

### Data (14511:2013)

Data 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) 12°C/7°C; Condensing temperature 45°C

			026	031	041	051	071	081	101	141	161
Electrical data											
230V	Total input currente (cooling) ver. °	(3)	A	7,2	9,2	11,7	/	/	/	/	/
	Total input currente (cooling) ver.E	(3)	A	8,3	10,5	12,8	/	/	/	/	/
	Maximum current (FLA)	(3)	A	18	21	34	/	/	/	/	/
	Starting current (LRA)	(3)	A	63	84	119	/	/	/	/	/
400V	Total input currente (cooling) ver. °	(3)	A	4,2	4,5	4,9	6,4	7,4	9,1	12,8	14,8
	Total input currente (cooling) ver.E	(3)	A	3,4	3,2	5,4	7,2	8,3	10,2	14,3	16,6
	Maximum current (FLA)	(3)	A	8	8	15	17	21	22	32	40
	Starting current (LRA)	(3)	A	34	37	65	75	75	75	90	94
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)											
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

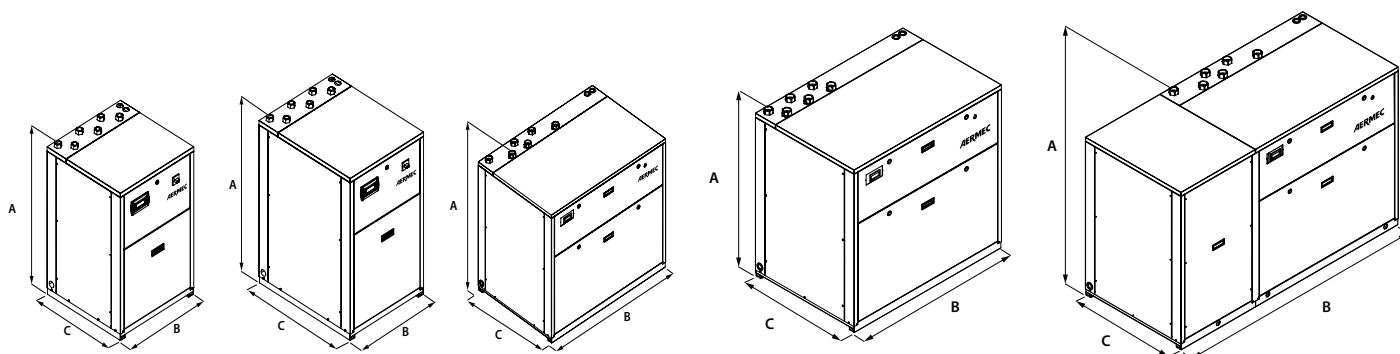
(3) Unit standar configuration without hydronic kit

**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](http://www.aermec.com)

## Dimensions (mm)



**WRL 026-041**

**WRL 051-081**

**WRL 101-161**

**WRL-A 026-081**

**WRL-A 101-161**

<b>WRL °-E</b>		<b>026</b>	<b>031</b>	<b>041</b>	<b>051</b>	<b>071</b>	<b>081</b>	<b>101</b>	<b>141</b>	<b>161</b>
Height (A)	mm	976	976	976	1126	1126	1126	1126	1126	1126
Width (B)	mm	605	605	605	605	605	605	1155	1155	1155
Length (C)	mm	603	603	603	773	773	773	773	773	773
Weight WRL°	kg	120	125	130	150	170	180	260	270	280
Weight WRLE	kg	110	115	125	150	150	150	245	250	250

<b>WRL-A</b>		<b>026</b>	<b>031</b>	<b>041</b>	<b>051</b>	<b>071</b>	<b>081</b>	<b>101</b>	<b>141</b>	<b>161</b>
Height (A)	mm	1126	1126	1126	1126	1126	1126	1126	1126	1126
Width (B)	mm	1155	1155	1155	1155	1155	1155	1755	1755	1755
Length (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.