AERMEC

ANL

R410A

Air cooled water chillers, heat pumps and condensing units with axial fans
Cooling capacity from 5.7 to 43.0 kW
Heating capacity from 6.2 to 46.0 kW

Aermec participates in the EUROVENT Certification Programme: LCP/A/P/R. The products concerned appear in the EUROVENT site www.eurovent-certification.com.

- **STANDARD VERSION**
- **OPTION FOR WATER PUMP**
- **OPTION FOR WATER PUMP AND BUFFER TANK**
- **OPTION FOR HIGH HEAD PUMP**
- **ABILITY TO PRODUCE DOMESTIC HOT WATER (D.H.W.)**

Features

- Available in 11 sizes
- Cooling only, heat pump, and condensing unit models
- Available in 5 versions:
  ANL: Standard Version
  ANL P: Version fitted with water pump, expansion vessel, water filter
  ANL N: Version with high head pump
  ANL A: Version fitted with water pump, expansion vessel, water filter, and buffer tank
  ANL Q: Version with high head pump and buffer tank
  ANL C: Condensing unit (without evaporator)
- All versions, except the condensing unit (C) and the desuperheater option (D), can be requested to produce low leaving liquid temperature from 4 °C down to -6 °C.
- High efficiency scroll compressors with low power input
- Differential pressure switch / flow switch as standard supply
- Electronic controller (Modu_control)
- High efficiency heat exchangers
- Axial flow fan units for extremely quiet operation
- Metallic protective cabinet with anti-corrosion polyester paint

Accessories

- **BDX**: Condensate drip tray for outdoor unit
- **DCPX**: Low temperature device for correct cooling mode operation with ambient temperatures from less than 20 °C down to - 10 °C.
- **DRE**: Electronic soft starter device reducing starting current by about 30%. **Only available for three-phase models. Factory fitted only.**
- **KR**: Anti-freeze electric heater for the plate heat exchanger, not available for sizes 020A-HA to 040A-HA. Factory fitted only.
- **PR3**: Simplified remote panel. Permits control of the basic unit functions (on/off and change of operating mode, diagnostics and alarm reset). Maximum distance permitted is 150 m with screened cable.
- **MODU-485A**: RS-485 interface for supervision systems with MODBUS protocol.
- **AERWEB300:** The AERWEB option allows remote control of a chiller through a standard PC and an ethernet connection with a standard browser; 4 versions available:
  AERWEB300-6: Web server to monitor and remote control maximum 6 units on RS485 network;
  AERWEB300-18: Web server to monitor and remote control maximum 18 units on RS485 network;
  AERWEB300-6G: Web server to monitor and remote control maximum 6 units on RS485 network with integrated GPRS modem;
  AERWEB300-18G: Web server to monitor and remote control maximum 18 units on RS485 network with integrated GPRS modem.
- **MULTICONTROL: Allows the simultaneous control of several chillers or heat pumps (up to 4) fitted with our MODUCONTROL controller and installed in the same hydraulic system.**
  For complete control the following accessories are available:
  SPLW: System water temperature sensor. In most cases the loose supplied sensors for each chiller/heat pump are sufficient. In cases of a common flow/return header this sensor can be used to control the common system supply water temperature for the chillers connected to the header, or it can be used for temperature monitoring.
  SDHW: Domestic hot water temperature sensor. Used with the storage tank to control the temperature of water produced.
- **RA**: Anti-freeze electric heater for the buffer tank. Factory fitted only.
- **VT**: Anti-vibration mounts.
- **Compatibility with the VMF system**
  VMF-CRP
  VMF-VOC
  VMF-ACS
  VMF-E5B | N
  For further system information please refer to the specific documentation.

Accessory compatibility												
ANL	**vers**	**20**	**25**	**30**	**40**	**50**	**70**	**80**	**90**	**100**	**150**	**200**
PR3	**(°) - H - C**	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
MODU-485A	**All**	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
AERWEB300	**All**	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
MULTICONTROL	**All**	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
SPLW	**All**	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
SDHW	**All**	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
DRE [1]	**(°) - H - C**	-	-	-	-	5	5	5	5	5 x2	5 x2	5 x2
DCPX	**(°) - C**	50	50	50	50	50	50	50	50	52	52	52
	H	51	51	51	51	51	51	51	51	53	53	53
VT	**(°) - H - HP - C**	9	9	9	9	9	9	9	9	15	15	15
	A	9	9	9	9	15	15	15	15	15	15	15
RA [3]	**A**	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
BDX	**(°) / P**	5	5	5	5	5	5	5	5	-	-	-
	A	5	5	5	5	6	6	6	6	-	-	-
KR[2] [3]	**(°) / P**	2	2	2	2	2	2	2	2	2	2	2
	A	-	-	-	-	2	2	2	2	2	2	2

1 **Only available for** 400V/3N power supply. Factory fitted only**.**

2 Not available for sizes ANL 020…040°A | HA.

3 Factory fitted only.

x2 Quantity to be ordered

Unit Configurator

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

Configuration fields:

1 2 3 — Code
4 5 6 — Size
7 — Model
8 — Version
9 — Heat recovery
10 — Coil fins
11 — Field of use
12 — Evaporator
13 — Power supply

Code:
ANL

Size :
020, 025, 030, 041, 050, 070, 080, 090, 100, 150, 200

Model:
° - Cooling only
H - Heat pump

Version:
° - Standard
P - With pump
N - With high pump (from sizes 100 to 200)
A - With pump and buffer tank
Q - With buffer tank and high head pump (from sizes 050 to 200)

Heat recovery:
° - Without heat recovery
D - With desuperheater (partial heat recovery)*

Coil fins:
° - Aluminium
R - Copper
S - Tinned copper
V - Epoxy coated aluminium

Field of use:
° - Standard leaving water temperature down to 4°C
Z - Low leaving liquid, from 4°C down to up to 0°C
Y - Low leaving liquid from 0°C down to -6°C

Evaporator :
° - Standard
C - Condensing unit (without evaporator)

Power supply:
M - 230V ~ 50Hz (only for sizes 020 to 040)
° - 400V 3N~ 50Hz

Attention:
– Z-Y = these options apply exclusively to cooling only models
– standard options are shown by symbol °
– heat pump model not available as condensing unit version (field 7: option H; field 12: option C)
– single phase power supply (field 13: option M) is available only for sizes 020 - 025 - 030 - 040
– * The desuperheater is available for sizes from 050 to 090 only with buffer tank, whilst sizes from 100 to 200 are available in all versions. Desuperheater is incompatible with the low temperature options, with the condensing unit version, and for dimensional reasons even with the option Q.

Configuration code example: ANL090HAR
This is a an ANL unit, size 090, heat pump model, with buffer tank and pump, with copper condenser coil, with evaporator, and with electrical panel for compressors with motors 3N~ 400V 50Hz. Note that as each option is precisely identified, it is not necessary to specify standard options (indicated by °) in the configuration code.

Technical Data

Model				020°	025°	030°	040°	050°	070°	080°	090°	100°	150°	200°
Cooling capacity		All	kW	5,7	6,2	7,5	9,6	13,4	16,5	20,5	22,3	26,6	33,0	43,0
Total input power		°	kW	1,84	2,00	2,46	3,25	4,03	4,88	6,33	6,63	8.40	10.00	13.70
		P|A	kW	1,99	2,15	2,61	3,4	4,30	5,15	6,60	6,90	9.20	11.50	15.20
		N|Q	kW	-	-	-	-	4,48	5,33	6,78	7,08	9.40	11.30	15.00
Total input current	230V/1	°	A	9,4	10	13	16,3	-	-	-	-	-	-	-
	400V/3N	°	A	3,7	4,2	4,7	6,2	8,7	9,7	12,2	12,8	16,7	18,8	25,7
	230V/1	P|A	A	10,40	11,00	14,00	17,30	-	-	-	-	-	-	-
	400V/3N	P|A	A	4,70	5,20	5,70	7,20	10.7	11.7	14.2	14.8	17.9	20.8	27.7
	400V/3N	N|Q	A	-	-	-	-	11,40	12,40	14,90	15,50	18.7	21.4	28.3
Water flow rate		All	l/h	980	1070	1290	1650	2310	2840	3530	3840	4580	5680	7400
Pressure drop		°	kPa	20	20	20	21	21	21	26	25	43	39	32
Available head		P|A	kPa	60	60	59	55	82	80	69	66	84	115	90
		N|Q	kPa	-	-	-	-	160	158	144	140	140	185	158
EER		°	W/W	3,10	3,10	3,05	2,95	3,33	3,38	3,24	3,36	3,17	3,30	3,14
		P|A	W/W	2,86	2,88	2,87	2,82	3,12	3,20	3,11	3,23	2,89	2,87	2,83
		N|Q	W/W	-	-	-	-	2,99	3,10	3,02	3,15	2,83	2,92	2,87
ESEER				3,72	3,72	3,66	3,54	3,99	4,06	3,88	4,03	4,14	4,25	4,12

				020H	025H	030H	040H	050H	070H	080H	090H	100H	150H	200H
Heating capacity		All	kW	6,2	7,0	8,4	10,6	14	17,3	22,2	24,2	29,0	35,0	46,0
Total input power		H	kW	1,91	2,12	2,62	3,18	4,3	4,9	6,3	6,85	8,6	10,1	13,3
		P|A	kW	2,06	2,27	2,77	3,33	4,57	5,17	6,57	7,12	9.2	11.1	14.3
		N|Q	kW	-	-	-	-	4,75	5,35	6,75	7,3	9.6	11.4	14.6
Total input current	230V/1	H	A	10,4	11	14	17,3	-	-	-	-	-	-	-
	400V/3N	H	A	3,8	4,4	5,4	6,8	9,5	10,3	12,9	13,8	17	19	25
	230V/1	P|A	A	10,4	12,3	14	19,3	-	-	-	-	-	-	-
	400V/3N	P|A	A	4,8	5,4	6,4	7,8	11,5	12,3	14,9	15,8	18,2	21,0	27,0
	400V/3N	N|Q	A	-	-	-	-	12,2	13	15,6	16,5	19,0	21,6	27,6
COP		H	W/W	3,25	3,30	3,21	3,33	3,26	3,53	3,52	3,53	3,37	3,47	3,46
		P|A	W/W	3,01	3,08	3,03	3,18	3,06	3,35	3,38	3,40	3,15	3,15	3,22
		N|Q	W/W	-	-	-	-	2,95	3,23	3,29	3,32	3,02	3,07	3,15
Water flow rate		All	l/h	1070	1200	1450	1820	2410	2980	3820	4160	4990	6020	7910
Pressure drop		H	kPa	32	35	35	30	30	30	38	53	52	44	37
Available head		P|A	kPa	60	60	59	55	82	80	69	66	84	115	90
		N|Q	kPa	-	-	-	-	160	158	144	140	142	187	162
Cooling capacity		All	kW	5,7	6,2	7,5	9,6	13,4	16,5	20,5	22,3	26,0	32,0	42,0
Total input power		H	kW	1,84	2	2,46	3,25	4,03	4,88	6,33	6,63	8,6	10,2	13,9
		P|A	kW	1,99	2,15	2,61	3,4	4,3	5,15	6,6	6,9	9.2	11.2	14.9
		N|Q	kW	-	-	-	-	4,48	5,33	6,78	7,08	9.6	11.5	15.2
Total input current	230V/1	H	A	9,4	10	13	16,3	-	-	-	-	-	-	-
	400V/3N	H	A	3,7	4,2	4,7	6,2	8,7	9,7	12,2	12,8	17	19,2	26,2
	230V/1	P|A	A	9,4	10	13	16,3	-	-	-	-	-	-	-
	400V/3N	P|A	A	4,7	5,2	5,7	7,2	10,7	11,7	14,2	14,8	18,2	21,2	28,2
	400V/3N	N|Q	A	-	-	-	-	11,4	12,4	14,9	15,5	19	21,8	28,8
EER		H	W/W	3,10	3,10	3,05	2,95	3,33	3,38	3,24	3,36	3,02	3,14	3,02
		P|A	W/W	2,86	2,88	2,87	2,82	3,12	3,20	3,11	3,23	2,83	2,86	2,82
		N|Q	W/W	-	-	-	-	2,99	3,10	3,02	3,15	2,71	2,78	2,76
Water flow rate		All	l/h	980	1070	1290	1650	2310	2840	3530	3840	4470	5500	7220
Pressure drop		H	kPa	29	30	30	27	30	30	36	50	41	37	31
Available head		P|A	kPa	60	60	59	55	82	80	69	66	84	115	90
		N|Q	kPa	-	-	-	-	160	158	144	140	140	185	158

				020C	025C	030C	040C	050C	070C	080C	090C	100C	150C	200C
Cooling capacity		All	kW	5,7	6,0	7,5	9,6	13,7	16,8	20,8	22,5	26,9	33,4	43,7
Total input power		°	kW	1,85	2,05	2,5	3,3	4,1	5	6,5	6,8	8,6	10,2	14,1
Total input current	230V/1	°	A	9,50	10,00	13,00	16,30	-	-	-	-	-	-	-
	400V/3N	°	A	3,70	4,20	4,70	6,30	8,90	9,90	12,40	13,10	17,10	19,30	26,40
EER		°	W/W	3,08	2,93	3,00	2,91	3,34	3,36	3,20	3,31	3,13	3,27	3,10
Connections														
Line gas			Ø	15,88	15,88	15,88	15,88	22	22	22	28	28	28	35
Line liquid			Ø	9,52	9,52	12,7	12,7	15,88	15,88	15,88	15,88	15,88	15,88	15,88

COOLING

Evaporator water inlet	12°C
Evaporator water outlet	7°C
External air temperature	35 °C

HEATING

Condenser water inlet	40°C
Condenser water outlet	45°C
External air temperature	7 °C db / 6 °C wb

COOLING version C

Evaporating temperature	5°C
External air temperature	35 °C

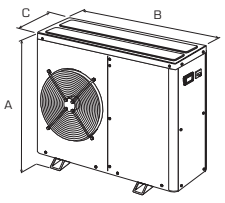
Technical Data

DATA FOR ALL VERSIONS				020	025	030	040	050	070	080	090	100	150	200
Electrical data														
Maximum current (FLA)	230V/1	°	A	16,50	16,50	19,70	23,70	-	-	-	-	-	-	-
	400V/3N	°	A	6	6	6,7	8,7	11,3	13,5	16,3	17,3	22	26	34
	230V/1	P|A	A	17,5	17,5	20,7	24,7	-	-	-	-	-	-	-
	400V/3N	P|A	A	7,00	7,00	7,70	9,70	13,30	15,50	18,30	19,30	23,4	28,8	36,8
	400V/3N	N|Q	A	-	-	-	-	14,0	16,2	19,0	20,0	24.8	29.5	37.5
Starting current (LRA)	230V/1	°	A	59,5	62,5	83,7	98,7	-	-	-	-	-	-	-
	400V/3N	°	A	26,5	32,5	35,7	48,7	65,3	75,3	102,3	96,3	76	87	117
	230V/1	P|A	A	60,5	63,5	84,7	99,7	-	-	-	-	-	-	-
	400V/3N	P|A	A	27,5	33,5	36,7	49,7	67,3	77,3	104,3	98,3	77.4	89.8	119.8
	400V/3N	N|Q	A	-	-	-	-	68	78	105	99	78.8	90.5	120.5
Protection rating									IP24					
Compressors									**scroll**					
Number / circuits		n°/n°		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	2/1	2/1	2/1
Capacity control		%					0-100						0-50-100	
Refrigerant		type							R410A					
Heat exchanger system side														
Number			n°	1	1	1	1	1	1	1	1	1	1	1
hydraulic connections	IN|OUT		Ø	1"¼	1"¼	1"¼	1"¼	1"¼	1"¼	1"¼	1"¼	1"¼	1"¼	1"¼
Buffer tank														
Capacity			l	25	25	35	35	75	75	75	75	100	100	100
Fans														
Number			n°	1	1	1	1	2	2	2	2	2	2	2
Air flow rate cooling mode			m^3/h	2500	2500	3500	3500	7200	7200	7300	7200	13200	12000	12000
Sound data														
Sound pressure			dB(A)	30	30	37	37	38	38	38	37	44	45	46
Sound power			dB(A)	61	61	68	68	69	69	69	68	76	77	78

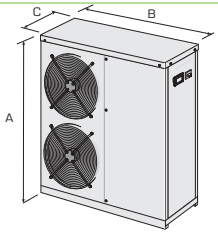
Sound power
Aermec determines sound power values on the basis of measurements made in accordance with ISO 9614-2, as required for Eurovent certification.

Sound pressure
Sound pressure in free field conditions over a reflective plane (directivity factor Q=2) at 10 m distance from the external surface of unit, in accordance with ISO 3744.

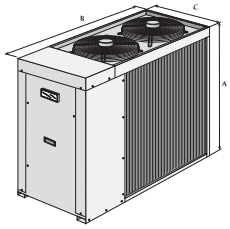
Dimensions (mm)



020 - 025 - 030 - 040



050 - 070 - 080 - 090


100 - 150 - 200

DIMENSIONS - WEIGHT			020	025	030	040	050	070	080	090	100	150	200
Height	°|P|C	mm	868	868	1000	1000	1252	1252	1252	1252	1345	1345	1345
	A	mm	868	868	1015	1015	1281	1281	1281	1281			
	Q	mm	-	-	-	-	1281	1281	1281	1281			
Width	°|P|C	mm	900	900	900	900	1124	1124	1124	1124	750	750	750
	A	mm	1124	1124	1124	1124	1165	1165	1165	1165			
	Q	mm	-	-	-	-	1165	1165	1165	1165			
Depth (without feet / with feet)	°|P|C	mm	310/354	310/354	310/354	310/354	384/428	384/428	384/428	384/428	1750	1750	1750
	A	mm	384/428	384/428	384/428	384/428	550	550	550	550			
	Q	mm	-	-	-	-	550	550	550	550			
Cooling only model													
Weight	°	kg	75	75	86	86	120	120	120	156	270	293	329
	P	kg	77	77	91	91	127	127	163	163	288	314	350
	A	kg	99	99	103	103	147	147	147	183	338	364	400
	Q	kg	-	-	-	-	151	151	187	187			
	C	kg	70	70	78	78	110	110	141	141			
Heat pump model													
Weight	°	kg	75	75	86	86	120	120	120	156	295	322	358
	P	kg	77	77	91	91	127	127	163	163	313	343	379
	A	kg	99	99	103	103	147	147	147	183	363	393	429
	Q	kg	-	-	-	-	151	151	187	187	423	447	457

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