AERMEC

ANL 020/202

Chiller, heat pumps and condensing units air source for outdoor installation. Axial fans and scroll compressors: Cooling capacity 5,65÷43,70kW Heating capacity 6,27÷44,64kW

R410A

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

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

Variable Multi Flow

VMF

- **STANDARD VERSION**
- **VERSION WITH BUILT–IN HYDRONIC KIT**
- **ABILITY TO PRODUCE DOMESTIC HOT WATER (D.H.W.)**

Features

- Cooling only, heat pump, and condensing unit models

Versions
ANL_°: Chiller without hydronic kit
ANL_H: Reversible heat pumps, without hydronic kit

Version with buil in hydronic kit
ANL_P/HP: with standard pumps
ANL_N/HN: with high head pressure pumps
ANL_A/HA: with buffer tank and standard pumps
ANL_Q/HQ: with buffer tank head static pressure pumps
ANL C: condensing unit

- High efficiency scroll compressors with low power input
- Differential pressure switch / flow switch as standard supply
- Water filter
- Electronic controller (Modu_control)
- High efficiency heat exchangers
- Axial flow fan units for extremely quiet operation
- Inverter axial flow fan units for heat pumps ANL030H÷ANL090H
- The hydronic kit includes:
  - Expansion tank
  - Safety valve
  - Pressure gauge
- Metallic protective cabinet with anti-corrosion polyester paint

Accessories

- **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.
VMF-CRP to predict accessory for the management of the probes SPLW / SDHW if provided with the MULTICONTROL

- **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.
- **DCPX**: Low temperature device for correct cooling mode operation with ambient temperatures from less than 20 °C down to - 10 °C. **Standard as versions vith desuperheater**
- **BDX**: Condensate drip tray for outdoor unit.
- **VT**: Anti-vibration mounts.

Accessories factory fitted only

- **DRE:** Electronic soft starter device reducing starting current by about 30%.
- **KR**: Anti-freeze electric heater for the plate heat exchanger, not available for sizes 020A-HA to 040A-HA.
- **KRB**: Electric anti-freeze heater for the base. Prevents the formation of ice on the base.
- **RA**: Anti-freeze electric heater for the buffer tank.

Compatibility with the VMF system
For further system information please refer to the specific documentation.

Accessories compatibility

ANL		vers	20	25	30	40	50	70	80	90	102	152	202
Accessories													
MODU-485A		**All**	•	•	•	•	•	•	•	•	•	•	•
AERWEB300		**All**	•	•	•	•	•	•	•	•	•	•	•
MULTICONTROL		**All**	•	•	•	•	•	•	•	•	•	•	•
SPLW		**All**	•	•	•	•	•	•	•	•	•	•	•
SDHW		**All**	•	•	•	•	•	•	•	•	•	•	•
VMF-CRP		**All**	•	•	•	•	•	•	•	•	•	•	•
PR3		**All**	•	•	•	•	•	•	•	•	•	•	•
DCPX	(1)	**(°) - C**	50	50	50	50	50	50	50	50	52	52	52
	(2)	**H**	51	51	-	-	-	-	-	-	53	53	53
BDX		**(°) / P**	5	5	5	5	5	5	5	5	-	-	-
		A	5	5	5	5	6	6	6	6	-	-	-
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
Accessories factory fitted only													
DRE	(3)		-	-	-	-	5	5	5	5	5 x2	5 x2	5 x2
KR		**°/H/°P/HP**	2	2	2	2	2	2	2	2	2	2	2
		°A/HA	-	-	-	-	2	2	2	2	100	100	100
KRB3			-	-	-	-	-	-	-	-	•	•	•
RA		**A/HA**	•	•	•	•	•	•	•	•	-	-	-
RA100			-	-	-	-	-	-	-	-	•	•	•

(1) Standard in the version with desuperheater
(2) The size ANL030H÷ANL090H Inverter fans are fitted as standard
(3) Only available for 400V/3N/50Hz power supply

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.

fields **Code**

1,2,3 ANL

4,5,6 **Size**
020-025-030-040-050-070-080-090-102-152-202

7 **Model**
° Cooling only
H Heat pump

8 **Version**
° Standard
P With pump standard
N With high head pump (from size 102 to 202)
A With pump and buffer tank
Q With buffer tank and high head pump (dalla taglia 050 alla 202)

9 **Heat recovery:**
° Without heat recovery
D With desuperheater (4)

10 **Coil fins**
° Aluminium
R Copper (possible for H version for sizes from 102 to 202)
S Tinned copper (possible for H version for sizes from 102 to 202)
V Treated aluminium (epoxy coated)
- epoxy paint for sizes 102-152-202 in heat pump models
- cataphoresis treatment for sizes 102-152-202 in cooling only models

11 **Field of use**
° Standard (leaving water temperature down to 4°C)
Z Low temperature (Low leaving liquid from 4°C down to up to 0°C) (5)
Y Low temperature (Low leaving liquid from 0°C down to -6°C) (5)

12 **Evaporator**
° Standatd
C Condensing unit

13 **Power supply**
M 230V/1/50Hz (from 020 to 040)
° 400V/3N/50Hz

(3) 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.
(4) options apply exclusively to cooling only models.

Technical Data

Model				020°	025°	030°	040°	050°	070°	080°	090°	102°	152°	202°
Cooling capacity	(1)	°	kW	5,65	6,15	7,44	9,53	13,31	16,39	20,35	22,14	26,34	32,69	42,60
		P|A	kW	5,71	6,21	7,52	9,64	13,47	16,59	20,60	22,40	26,93	33,48	43,49
		N|Q	kW	-	-	-	-	13,73	16,9	20,9	22,72	27,07	33,7	43,7
Total power input		°	kW	1,89	2,05	2,52	3,32	4,12	4,98	6,48	6,79	8,06	10,31	13,53
		P|A	kW	1,92	2,07	2,52	3,30	4,10	4,92	6,39	6,69	8,07	10,53	13,79
		N|Q	kW	-	-	-	-	4,18	5,01	6,48	6,79	8,46	10,58	13,83
EER		°	W/W	3,00	3,00	2,96	2,87	3,23	3,29	3,14	3,26	3,27	3,17	3,15
		P|A	W/W	2,98	3,00	2,98	2,92	3,28	3,37	3,22	3,35	3,34	3,18	3,15
		N|Q	W/W	-	-	-	-	3,28	3,37	3,22	3,35	3,20	3,18	3,16
ESEER		°		3,43	3,43	3,4	3,33	3,74	3,82	3,65	3,71	3,85	3,99	3,94
		P|A		3,5	3,54	3,55	3,48	3,85	3,97	3,8	3,95	3,96	3,94	3,82
		N|Q		-	-	-	-	3,66	3,77	3,61	3,75	3,61	3,74	3,62
Water flow rate		TUTTE	l/h	980	1066	1290	1651	2305	2838	3526	3836	4575	5676	7396
Pressure drop		°	kPa	21	21	22	24	25	26	34	35	58	61	68
Available head		P|A	kPa	60	60	59	55	82	81	69	66	84	115	90
		N|Q	kPa	-	-	-	-	160	159	144	140	140	185	158

Cooling: (EN14511:2011)
System side water temperature exchanger (in/out) 12°C/7°C; Source side air temperature exchanger (in) 35°C
(1) The data do not vary between versions 230V/1/50Hz - 400V/3N/50Hz

Model				020H	025H	030H	040H	050H	070H	080H	090H	102H	152H	202H
Cooling capacity	(1)	°	kW	5,65	6,15	7,44	9,53	13,31	16,39	20,35	22,14	26,34	32,69	42,60
		P/A	kW	5,71	6,21	7,52	9,64	13,47	16,59	20,60	22,40	26,93	33,48	43,49
		N/Q	kW	-	-	-	-	13,73	16,9	20,9	22,72	27,07	33,7	43,7
Total power input		°	kW	1,89	2,05	2,52	3,32	4,12	4,98	6,48	6,79	8,06	10,31	13,53
		P/A	kW	1,92	2,07	2,52	3,30	4,10	4,92	6,39	6,69	8,07	10,53	13,79
		N/Q	kW	-	-	-	-	4,18	5,01	6,48	6,79	8,46	10,58	13,83
EER		°	W/W	3,00	3,00	2,96	2,87	3,23	3,29	3,14	3,26	3,27	3,17	3,15
		P/A	W/W	2,98	3,00	2,98	2,92	3,28	3,37	3,22	3,35	3,34	3,18	3,15
		N/Q	W/W	-	-	-	-	3,28	3,37	3,22	3,35	3,20	3,18	3,16
ESEER		°		3,43	3,43	3,4	3,33	3,74	3,82	3,65	3,71	3,85	3,99	3,94
		P/A		3,5	3,54	3,55	3,48	3,85	3,97	3,8	3,95	3,96	3,94	3,82
		N/Q		-	-	-	-	3,66	3,77	3,61	3,75	3,61	3,74	3,62
Water flow rate			l/h	980	1066	1290	1651	2305	2838	3526	3836	4575	5676	7396
Total pressure drop		°	kPa	21	21	22	24	25	26	34	35	58	61	68
Available head		P/A	kPa	60	60	59	55	82	81	69	66	84	115	90
		N/Q	kPa	-	-	-	-	160	159	144	140	140	185	158
Heating capacity	(1)	°	kW	6,27	7,08	8,49	10,70	14,12	17,44	22,40	24,46	29,31	35,35	45,78
		P/A	kW	6,19	6,98	8,37	10,56	13,93	17,20	22,11	24,10	28,69	34,55	44,90
		N/Q	kW	-	-	-	-	13,67	16,92	21,79	23,77	28,56	34,34	44,64
Total power input		°	kW	1,98	2,20	2,71	3,28	4,42	5,04	6,50	7,11	8,87	10,45	13,78
		P/A	kW	1,98	2,19	2,68	3,23	4,37	4,95	6,36	6,91	8,87	10,67	14,06
		N/Q	kW	-	-	-	-	4,45	5,04	6,46	7,02	9,30	10,72	14,08
COP		°	W/W	3,17	3,22	3,13	3,26	3,20	3,46	3,45	3,44	3,30	3,38	3,32
		P/A	W/W	3,12	3,19	3,12	3,27	3,19	3,48	3,48	3,49	3,23	3,24	3,19
		N/Q	W/W	-	-	-	-	3,07	3,36	3,37	3,39	3,07	3,20	3,17
Water flow rate			l/h	1066	1204	1445	1823	2408	2976	3818	4162	4988	6020	7795
Total pressure drop		°	kPa	33	37	37	34	34	36	48	65	69	68	78
Available head		P/A	kPa	58	56	55	51	82	79	65	61	70	100	68
		N/Q	kPa	-	-	-	-	159	157	137	132	117	174	141

Cooling: (EN14511:2011)
System side water temperature exchanger (in/out) 12°C/7°C; Source side air temperature exchanger (in) 35°C
Heating: (14511:2011)
System side water temperature exchanger (in/out) 40°C/45°C; Source side air temperature exchanger (in) 7°C b.s./6°C b.u.
(1) The data do not vary between versions 230V/1/50Hz - 400V/3N/50Hz

				020C	025C	030C	040C	050C	070C	080C	090C	102C	152C	202C
Cooling capacity	(1)		kW	5,7	6,0	7,5	9,6	13,7	16,8	20,8	22,5	26,9	33,4	43,7
Total power input		°	kW	1,85	2,05	2,5	3,3	4,1	5,0	6,5	6,8	8,6	10,2	14,10
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	28
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:
Evaporating temperature 5°C; Source side air temperature exchanger (in) 35°C
(1) The data do not vary between versions 230V/1/50Hz - 400V/3N/50Hz

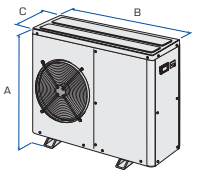
Technical Data

GENERAL DATA				020	025	030	040	050	070	080	090	102	152	202
Electrical data														
Total input current cooling mode	(2)	230V/1	A	6,43	7,3	8,17	10,78	-	-	-	-	-	-	-
	(2)	400V/3N	A	3,7	4,2	4,7	6,2	8,7	9,7	12,2	12,8	15,57	18,81	24,67
Total input current heating mode	(2)	230V/1	A	6,61	7,65	9,39	11,83	-	-	-	-	-	-	-
	(2)	400V/3N	A	3,80	4,40	5,40	6,80	9,50	10,30	12,90	13,80	17,00	19,00	25,00
Maximum current (FLA)	(2)	230V/1	A	16,5	16,5	19,7	23,7	-	-	-	-	-	-	-
	(2)	400V/3N	A	6,0	6,0	6,7	8,7	11,3	13,5	16,3	17,3	22,0	26,0	32,0
Starting current (LRA)	(2)	230V/1	A	59,5	62,5	83,7	98,7	-	-	-	-	-	-	-
	(2)	400V/3N	A	26,5	32,5	35,7	48,7	65,3	75,3	102,3	96,3	76,0	87,0	117,0
Compressors														
Compressors			type	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
			n°	1	1	1	1	1	1	1	1	2	2	2
Circuits			n°	1	1	1	1	1	1	1	1	1	1	1
Capacity control			%	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-50-100	0-50-100	0-50-100
Refrigerant			type	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
System side exchanger														
Exchanger			type	plate	plate	plate	plate	plate	plate	plate	plate	plate	plate	plate
			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
Fans standard														
Fans			type	axial	axial	axial	axial	axial	axial	axial	axial	axial	axial	axial
			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	14000	13500	13500
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
Power supply			V/ph/Hz	230V/1	230V/1	230V/1	230V/1	-	-	-	-	-	-	-
			V/ph/Hz	400V/3N	400V/3N	400V/3N	400V/3N	400V/3N	400V/3N	400V/3N	400V/3N	400V/3N	400V/3N	400V/3N

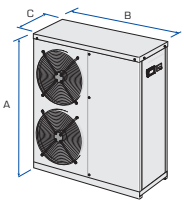
Sound power
Aermec determines sound power values on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification.
Sound pressure
Sound pressure in free field, at 10 m distance from the external surface of the unit (in accordance with UNI EN ISO 3744)
(2) Unit in standard configuration/execution without hydroni kit

Dimensions (mm)

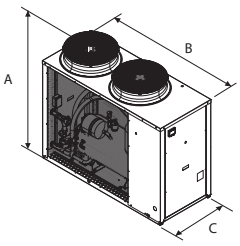
DIMENSIONS - WEIGHT			020	025	030	040	050	070	080	090	102	152	202
Height (A)	°|P|C	mm	868	868	1000	1000	1252	1252	1252	1252	1450	1450	1450
	A	mm	868	868	1015	1015	1281	1281	1281	1281			
	Q	mm	-	-	-	-	1281	1281	1281	1281			
Width (B)	°|P|C	mm	900	900	900	900	1124	1124	1124	1124	1750	1750	1750
	A	mm	1124	1124	1124	1124	1165	1165	1165	1165			
	Q	mm	-	-	-	-	1165	1165	1165	1165			
Depth (C)	°|P|C	mm	310/354*	310/354*	310/354*	310/354*	384/428*	384/428*	384/428*	384/428*	750	750	750
	A	mm	384/428*	384/428*	384/428*	384/428*	550	550	550	550			
	Q	mm	-	-	-	-	550	550	550	550			
Only cooling 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	270	293	329
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



020 ÷ 040 *** without feet / with feet**



050 ÷ 090



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Aermec S.p.A.
Via Roma, 996 - 37040 Bevilacqua (VR) - Italia
Tel. 0442633111 - Telefax 044293730
www.aermec.com

Cod.: SANLUI.20/1311