ANL 020/202

chillers, heat pumps and condensing units
Air/Water for outdoor installation
Axial fan and scroll compressor:
Cooling capacity 5,65÷43,70kW
Heating capacity 6,27÷44,64kW

R410A

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

Variable Multi Flow
VMF

Fans INVERTER TECHNOLOGY

- **STANDARD VERSION**
- **VERSION WITH BUILT–IN HYDRONIC KIT**
- **PRODUCTION OF HOT DOMESTIC WATER (D.H.W.)**

Characteristics

Cooling only, heat pump, and condensing unit models

Versions

ANL_°: Chillers without hydronic kit
ANL_H: Heat pumps without hydronic kit
ANL C: Condensing unit

Versions with hydronic kit

ANL_P/HP: with standard pump
ANL_N/HN: with high pump
ANL_A/HA: with buffer tank and standard pump
ANL_Q/HQ: with buffer tank and high pump

- **Operational limits (1)**

Cooling mode

- max. external air temperature 46°C

Heating mode

- max. Leaving water temperature 50°C

- High efficiency scroll compressors with low power input
- flow switch/ pressure switch as standard supply
- Water filter
- High efficiency heat exchangers
- Axial flow fan units for extremely quiet operation
- Inverter axial flow fan units for heat pumps from size 030H to 090H)
- The hydronic kit includes:
  - Expansion tank
  - Safety valve
  - Pressure gauge
- Electronic controller (Modu_control)
- Metallic protective cabinet with anti-corrosion polyester paint

(1) For more details on operating limits, refer to the technical documentation available on the website www.aermec.com

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**: an speed controller allowing operation in cooling mode within an external temperature range from +20 °C to -10 °C;
  Standard for the version with desuperheater
- **BDX**: Condensate drip tray with integrated electric heater controlled by the external air temperature sensor.
- **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.

Accessory compatibility

ANL		vers	020	025	030	040	050	070	080	090	102	152	202
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 - HA	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 for the unit with desuperheater
(2) The heat pump ANL030H÷090H fitted as standard fans Inverter
(3) Only for puwer supply 400V/3N/50Hz

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.

Field **Code**

1,2,3 ANL

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

7 **Model**
° Only cooling
H Heat pump

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

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

10 **Coil fin (5)**
° Aluminium
R Copper
S Tinned copper
V Treated aluminium

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

12 **Evaporator**
° Standatd
C Condensing unit

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

(4) The desuperheater is available for sizes from 050 to 090 only with buffer tank, whilst sizes from 102 to 202 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.

(5) Coil fin options

° **Aluminium**

R e S **Only cooling model**: only available for sizes 030-090; for sizes 020-025 treatment "R and D" is replaced by cataphoresis treatment
Models in heat pump: only for sizes 030H-202H

V **Cataphoresis treatment Cooling only available only for sizes 020 ÷ 025 and 102 ÷ 202; Models in heat pump: only for sizes 020 ÷ 025**
Epoxy paint for models with heat pump 020H ÷ 202H; for cooling only models 020 ÷ 090(6) Option only in cooling model.

(6) Options available only cooling version

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		All	l/h	980	1066	1290	1651	2305	2838	3526	3836	4575	5676	7396
Total pressure drops		°	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: (14511:2013)
Evaporator water temperature (in/out) 12°C/7°C; External air temperature 35°C
(1) 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 drops		°	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 drops		°	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: (14511:2013)
Evaporator water temperature (in/out) 12°C/7°C; External air temperature 35°C
Heating: (14511:2013)
Condenser water temperature (in/out) 40°C/45°C; External air temperature 7°C b.s./6°C b.u.
(1) 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														
Gas line			Ø	15,88	15,88	15,88	15,88	22	22	22	28	28	28	28
Liquid line			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; External air temperature 35°C
(1) 230V/1/50Hz = 400V/3N/50Hz

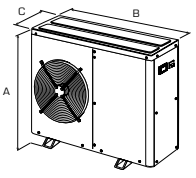
Technical Data

DATA FOR ALL VERSIONS				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

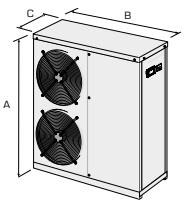
Sound power
Aermec determines sound power values on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification.
Sound pressure
Sound pressure in free field, at 10 m distance from the external surface of the unit (in accordance with UNI EN ISO 3744)
(2) Unit in standard configuration/execution without hydroni kit
Nota: For more information, refer to the selection program or the technical documentation available on the website www.aermec.com

Dimensions (mm)

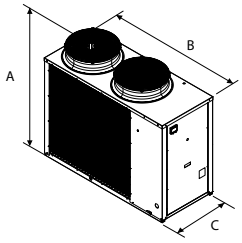
			020	025	030	040	050	070	080	090	102	152	202
Height (A)	°|P|C	mm	868	868	1000	1000	1252	1252	1252	1252	1450	1450	1450
	A	mm	868	868	1015	1015	1281	1281	1281	1281			
	Q	mm	-	-	-	-	1281	1281	1281	1281			
Width (B)	°|P|C	mm	900	900	900	900	1124	1124	1124	1124	1750	1750	1750
	A	mm	1124	1124	1124	1124	1165	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			
Chillers (only cooling)													
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 pumps													
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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Cod.: SANLUY.17/1502

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