

ANL 020/202

chillers, and condensing units
Air/Water for outdoor installation
Axial fan and scroll compressor:
Cooling capacity 5,65÷43,70kW

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



• STANDARD VERSION • VERSION WITH BUILT-IN HYDRONIC KIT

Characteristics

Chillers for external installation for chilled water production with high performance scroll compressors and low electric absorption, axial fans, external copper coils with aluminum fins (from size 020 to 090) micro-channel (from size 102 to 202), plate heat exchangers. In the units (with desuperheater or total recovery) it is also possible to produce free-hot water. The basement, the structure and the panelling are in steel treated with polyester anti-corrosion paints.

Versions

ANL_°: Chillers without hydronic kit
ANL C: Condensing unit

Versions with hydronic kit

ANL_P: with standard pump
ANL_N: with high pump
ANL_A: with buffer tank and standard pump
ANL_Q: with buffer tank and high pump

Operational limits

Work at full load up to 46°C external air temperature, with options to produced water up to -10°C (for more details please refer to the technical documentation)

- 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
- Possibility of integrated hydronic -kit, which includes the main hydraulic components; it is available in different configurations with or without buffer tank, one high or low head pumps.
- Electronic controller (Modu_control)

Accessories

- **MODU-485BL:** 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.

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**
- **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-485BL	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
VT	°P/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	(2) °P	-	-	-	-	5	5	5	5	5x2	5x2	5x2
KR	°P	2	2	2	2	2	2	2	2	100	100	100
	°A	-	-	-	-	2	2	2	2	100	100	100
RA		.	.	.	.	.	.	.	.	-	-	-
RA100	A	-	-	-	-	-	-	-	-	.	.	.

(1) Standard for the unit with desuperheater

(2) Only for power 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
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) Y Low leaving liquid (from 0°C down to -6°C)
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 S" is replaced by cataphoresis treatment

V Cataphoresis treatment Cooling only available only for sizes 020 ÷ 025 and 102 ÷ 202;

Epoxy paint for models 020 ÷ 090

Technical Data

ANL			020	025	030	040	050	070	080	090	102	152	202
		V/ph/Hz	230V-400V	230V-400V	230V-400V	230V-400V	400V	400V	400V	400V	400V	400V	400V
12°C / 7°C	Cooling capacity	(1) kW	5,66	6,15	7,44	9,53	13,31	16,39	20,35	22,14	26,34	32,69	42,6
	Total power input	(1) kW	1,88	2,05	2,52	3,32	4,12	4,98	6,48	6,79	8,06	10,31	13,53
	EER	(1)	3,01	3,00	2,95	2,87	3,23	3,29	3,14	3,26	3,27	3,17	3,15
	ESEER	(1)	3,43	3,43	3,40	3,33	3,74	3,82	3,65	3,71	3,85	3,99	3,94
	Cooling Energy Class Eurovent	(1)	B	B	B	C	A	A	A	A	A	A	A
	Water flow rate	(1) l/h	979	1064	1287	1649	2303	2835	3521	3830	4557	5655	7370
	Pressure drop	(1) kPa	21	21	22	24	25	26	34	35	58	61	68

ANL - P / A			020	025	030	040	050	070	080	090	102	152	202
		V/ph/Hz	230V-400V	230V-400V	230V-400V	230V-400V	400V	400V	400V	400V	400V	400V	400V
12°C / 7°C	Cooling capacity	(1) kW	5,77	6,28	7,59	9,70	13,51	16,63	20,62	22,42	26,93	33,48	43,49
	Total power input	(1) kW	1,81	1,96	2,41	3,20	4,01	4,83	6,3	6,6	8,07	10,53	13,79
	EER	(1)	3,19	3,20	3,15	3,03	3,37	3,44	3,27	3,40	3,34	3,18	3,15
	ESEER	(1)	3,50	3,54	3,55	3,48	3,85	3,97	3,8	3,95	3,96	3,94	3,82
	Cooling Energy Class Eurovent	(1)	A	A	A	B	A	A	A	A	A	A	A
	Water flow rate	(1) l/h	979	1064	1287	1649	2303	2835	3521	3830	4568	5655	7385
	Useful head	(1) kPa	73	73	71	65	76	72	57	52	84	115	91

ANL - Q / N			020	025	030	040	050	070	080	090	102	152	202
		V/ph/Hz	230V-400V	230V-400V	230V-400V	230V-400V	400V	400V	400V	400V	400V	400V	400V
12°C / 7°C	Cooling capacity	(1) kW	/	/	/	/	13,72	16,87	20,9	22,72	27,07	33,66	43,72
	Total power input	(1) kW	/	/	/	/	4,18	5,01	6,48	6,79	8,46	10,58	13,82
	EER	(1)	/	/	/	/	3,28	3,37	3,23	3,35	3,20	3,18	3,16
	ESEER	(1)	/	/	/	/	3,66	3,77	3,61	3,75	3,61	3,74	3,62
	Cooling Energy Class Eurovent	(1)	/	/	/	/	A	A	A	A	A	A	A
	Water flow rate	(1) l/h	/	/	/	/	2303	2835	3521	3830	4568	5655	7385
	Useful head	(1) kPa	/	/	/	/	160	159	144	140	140	185	159

Date (14511:2013)

(1) Water evaporator 12°C/7°C, External air 35°C

Q Version available from size 050 to 202

N Version available from size 102 to 202

ANL - C			020	025	030	040	050	070	080	090	102	152	202
		V/ph/Hz	230V-400V	230V-400V	230V-400V	230V-400V	400V	400V	400V	400V	400V	400V	400V
	Cooling capacity	(2) kW	5,70	6,00	7,50	9,60	13,7	16,8	20,8	22,5	26,9	33,4	43,7
	Total power input	(2) kW	1,85	2,05	2,50	3,30	4,10	5,00	6,50	6,80	8,60	10,20	14,10
	EER	(2)	3,08	2,93	3,00	2,91	3,34	3,36	3,20	3,31	3,13	3,27	3,10

(2) Evaporating temperature 5°C, External air 35°C

			020	025	030	040	050	070	080	090	102	152	202
Electrical data													
230V	Total input current (cooling)	(3) A	6,4	7,3	8,1	10,7	-	-	-	-	-	-	-
	Maximum current (FLA)	(3) A	16,5	16,5	19,7	23,7	-	-	-	-	-	-	-
	Starting current (LRA)	(3) A	59,5	62,5	83,7	98,7	-	-	-	-	-	-	-
400V	Total input current (cooling)	(3) A	3,7	4,2	4,7	6,2	8,7	9,7	12,2	12,8	15,6	18,8	24,7
	Maximum current (FLA)	(3) 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)	(3) A	26,5	32,5	35,7	48,7	65,3	75,3	102,3	96,3	76,0	87,0	117,0
Scroll Compressor													
Compressors		n°	1	1	1	1	1	1	1	1	2	2	2
Circuit		n°	1	1	1	1	1	1	1	1	1	1	1
Refrigerant		Type	R410A										
Heat exchanger system side													
Exchanger		Type/n°	Plate/1										
hydraulic connections (In/Out)		Ø	1"1/4										
Connection of Condensing unit C													
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
Axial fans													
Fan		Type/n°	std/1	std/1	std/1	std/1	std/2	std/2	std/2	std/2	std/2	std/2	std/2
Air flow rate (cooling)		m³/h	2500	2500	3500	3500	7200	7200	7300	7200	14000	13500	13500
Sound data (cooling)													
Sound power level		dB(A)	61	61	68	68	69	69	69	68	76	77	78
Sound pressure level		dB(A)	30	30	37	37	38	38	38	37	44	45	46

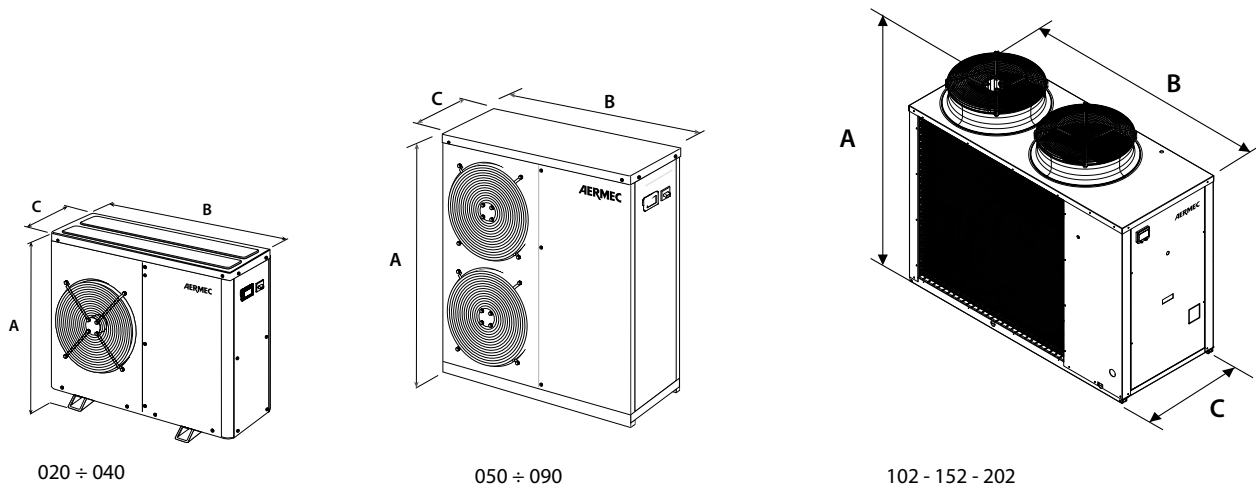
(3) Unit standar configuration without hydronic kit

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

Dimensions (mm)



			020	025	030	040	050	070	080	090	102	152	202
ANL° - P - C													
Height	A	mm	868		1000			1252				1450	
Width	B	mm	900		900			1124				1750	
Length (*with feet)	C	mm	310/354*		310/354*			384/428*				750	
ANL - A													
Height	A	mm	868		1015			1281				1450	
Width	B	mm	1124		1124			1165				1750	
Length (*with feet)	C	mm	384/428*		384/428*			550				750	
ANL - Q													
Height	A	mm	/		/			1281				1450	
Width	B	mm	/		/			1165				1750	
Length (*with feet)	C	mm	/		/			550				750	
Weight													
ANL°		kg	75		86		120	120	120	156	270	293	329
ANL - P		kg	77		91		127	127	163	163	288	314	350
ANL - A		kg	99		103		147	147	147	183	338	364	400
ANL - Q e N		kg	/		/		151	151	151	187	338	364	400
ANL - C		kg	70		78		110	110	110	141	270	293	329