

NLC 0280-1250

Air-water chiller

Cooling capacity 14.5 ÷ 87.2 ton



- High efficiency also at partial loads
- Complete air flow versatility
- EC fan Plug-fan with high performance
- Night mode



DESCRIPTION

Chiller offering chilled/hot water, designed to mit air conditioning needs in residential / commercial complexes or industrial applications. Indoor units with Scroll compressors, centrifugal fans and plate heat exchangers. The base, the structure and the panels are made of galvanized steel treated with polyester paint RAL 9003.

VERSIONS

A High efficiency

FEATURES

Operating field

Operation at full load up to 114.8 °F external air temperature. Unit can produce chilled water (up to 17.6 °F).

Units mono or dual-circuit

The range includes units with 2 compressors in single circuit and units with 4 compressors divided into two independent circuits.

EC fan plug-fan

The units are equipped with plug-fans and inverter motors coupled directly with the fan, with the electronic condensation control as standard, which adjusts the air flow according to the actual system requirements, with benefits in terms of consumption and noise reduction. In addition, compared to conventional centrifugal fans, they do not feature belt and pulley transmission, resulting in easy flow adjustment, compactness, versatility, easy maintenance and no vibrations.

Integrated hydronic kit

Integrated hydronic kit containing the main hydraulic components; available with various configurations to obtain a solution that allows you to save money and to facilitate installation.

CONTROL PCO⁵

Microprocessor adjustment, with keyboard and LCD display, for easy access on the unit is a menu available in several languages.

- The presence of a programmable timer allows functioning time periods and a possible second set-point to be set.
- The temperature control takes place with the integral proportional logic, based on the water output temperature.
- **Night Mode:** it is possible to set a silenced operation profile. Perfect for night operation since it guarantees greater acoustic comfort in the evenings, and a high efficiency in the time of greater load.

ACCESSORIES

AER485P1: RS-485 interface for supervision systems with MODBUS protocol.

AERBACP: Ethernet communication Interface for protocols Bacnet/IP, Modbus TCP/IP, SNMP

AERNET: The device allows the control, the management and the remote monitoring of a Chiller with a PC, smartphone or tablet using Cloud connection. AERNET works as Master while every unit connected is configured as Slave (max. 6 unit); also, with a simple click is possible to save a log file with all the connected unit datas in the personal terminal for post analysis.

FL-UL: Flow switch.

MULTICHILLER_EVO: Control, switch-on and switch-off system of the single chillers where multiple units are installed in parallel, always ensuring constant flow rate to the evaporators.

PGD1: Allows you to control the unit at a distance.

AVX: Spring anti-vibration supports.

VT: Anti-vibration supports.

FLG: Flange for ducts.

CRATE: Special crate for transport

FILW: Water filter

FACTORY FITTED ACCESSORIES

DRE: Electronic device for peak current reduction.

RIF: Power factor correction. Connected in parallel to the motor allowing about 10% reduction of input current.

KRQ: Electric heater for the control and electric power board.

COMPATIBILITY WITH VMF SYSTEM

For more information about VMF system, refer to the dedicated documentation.

ACCESSORIES COMPATIBILITY

Model	Ver	0280	0300	0330	0350	0550	0600	0650	0675	0750	0800	0900	1000	1100	1250
AER485P1	A	*	*	*	*	*	*	*	*	*	*	*	*	*	*
AERBACP	A	*	*	*	*	*	*	*	*	*	*	*	*	*	*
AERNET	A	*	*	*	*	*	*	*	*	*	*	*	*	*	*
FL-UL (1)	A	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MULTICHILLER_EVO	A	*	*	*	*	*	*	*	*	*	*	*	*	*	*
PGD1	A	*	*	*	*	*	*	*	*	*	*	*	*	*	*

(1) Compliant with UL regulation

Antivibration

Ver	0280	0300	0330	0350	0550	0600	0650
Integrated hydronic kit: 00							
A	VT17	VT17	VT17	VT17	-	-	-
Integrated hydronic kit: 01, 02, 03, 04							
A	VT11	VT11	VT11	VT11	-	-	-
Integrated hydronic kit: P1, P2, P3, P4							
A	VT13	VT13	VT13	VT13	-	-	-

The accessory cannot be fitted on the configurations indicated with -

Antivibration

Ver	0280	0300	0330	0350	0550	0600	0650
Integrated hydronic kit: 00, P1, P2, P3, P4							
A	-	-	-	-	AVX410	AVX410	AVX410
Integrated hydronic kit: 01, 02, 03, 04							
A	-	-	-	-	AVX412	AVX412	AVX412

The accessory cannot be fitted on the configurations indicated with -

Ver	0675	0750	0800	0900	1000	1100	1250
Integrated hydronic kit: 00							
A	AVX410	AVX429	AVX432	AVX432	AVX432	AVX432	AVX431
Integrated hydronic kit: 01, 02, 03, 04							
A	AVX412	AVX430	AVX435	AVX436	AVX436	AVX436	AVX436
Integrated hydronic kit: P1, P2, P3, P4							
A	AVX410	AVX429	AVX432	AVX432	AVX432	AVX432	AVX433

Flange for ducts

Ver	0280	0300	0330	0350	0550	0600	0650
A	FLG1	FLG1	FLG1	FLG1	FLG2 x 2 (1)	FLG2 x 2 (1)	FLG2 x 2 (1)

(1) x... indicates the quantity to buy.

Ver	0675	0750	0800	0900	1000	1100	1250
A	FLG2 x 2 (1)	FLG1 + FLG2 x 2 (1)	FLG2 x 4 (1)	FLG2 x 4 (1)	FLG2 x 4 (1)	FLG2 x 4 (1)	FLG2 x 4 (1)

(1) x... indicates the quantity to buy.

Special crate for transport

Ver	0280	0300	0330	0350	0550	0600	0650	0675	0750	0800	0900	1000	1100	1250
Integrated hydronic kit: 00, P1, P2, P3, P4														
A	-	-	-	-	CRATE22	CRATE22	CRATE22	CRATE22	-	-	-	-	-	-

The accessory cannot be fitted on the configurations indicated with -

FILTROW

Ver	0280	0300	0330	0350	0550	0600	0650
A	FILTRO W DN50 (1)	FILTRO W DN50 (1)	FILTRO W DN50 (1)	FILTRO W DN50 (1)	FILTRO W DN65 (1)	FILTRO W DN65 (1)	FILTRO W DN65 (1)

(1) Installation is mandatory, contrarily guarantee becomes void.

Ver	0675	0750	0800	0900	1000	1100	1250
A	FILTRO W DN65 (1)	FILTRO W DN65 (1)	FILTRO W DN80 (1)	FILTRO W DN80 (1)	FILTRO W DN80 (1)	FILTRO W DN80 (1)	FILTRO W DN80 (1)

(1) Installation is mandatory, contrarily guarantee becomes void.

Device for peak current reduction

Ver	0280	0300	0330	0350	0550	0600	0650
A	DRE (1)	DRE (1)	DRE (1)	DRE (1)	DRE (1)	DRE (1)	DRE (1)

(1) Contact the factory

A grey background indicates the accessory must be assembled in the factory

Ver	0675	0750	0800	0900	1000	1100	1250
A	DRE (1)	DRE (1)	DRE (1)	DRE (1)	DRE (1)	DRE (1)	DRE (1)

(1) Contact the factory

A grey background indicates the accessory must be assembled in the factory

Power factor correction

Ver	0280	0300	0330	0350	0550	0600	0650
A	RIF (1)	RIF (1)	RIF (1)	RIF (1)	RIF (1)	RIF (1)	RIF (1)

(1) Contact the factory

A grey background indicates the accessory must be assembled in the factory

Ver	0675	0750	0800	0900	1000	1100	1250
A	RIF (1)	RIF (1)	RIF (1)	RIF (1)	RIF (1)	RIF (1)	RIF (1)

(1) Contact the factory

A grey background indicates the accessory must be assembled in the factory

Anti-condensate electric board resistance

Ver	0280	0300	0330	0350	0550	0600	0650
A	KRQ	KRQ	KRQ	KRQ	KRQ	KRQ	KRQ

A grey background indicates the accessory must be assembled in the factory

Ver	0675	0750	0800	0900	1000	1100	1250
A	KRQ	KRQ	KRQ	KRQ	KRQ	KRQ	KRQ

A grey background indicates the accessory must be assembled in the factory

CONFIGURATOR

Field	Description
1,2,3	NLC
	Size
4,5,6,7	0280, 0300, 0330, 0350, 0550, 0600, 0650, 0675, 0750, 0800, 0900, 1000, 1100, 1250
8	Operating field
	° Standard mechanic thermostatic valve (1)
	X Electronic thermostatic expansion valve (1)
	Y Low temperature mechanic thermostatic valve (2)
	Z Mechanic thermostatic valve (3)
9	Model
	° Cooling only
10	Heat recovery
	° Without heat recovery
	D With desuperheater (4)
	T With total recovery (5)
11	Version
	A High efficiency
12	Coils
	° Copper-aluminium
	R Copper pipes-copper fins
	S Copper pipes-Tinned copper fins
	V Copper pipes-Coated aluminium fins
13	Fans

Field	Description
J	Inverter
14	Power supply
6	230V ~ 3 60Hz with magnet circuit breakers
7	460V ~ 3 60Hz with magnet circuit breakers
8	575V ~ 3 60Hz with magnet circuit breakers
9	208V ~ 3 60Hz with magnet circuit breakers
15,16	Integrated hydronic kit
00	Without hydronic kit
	Kit with storage tank and pump/s
01	Storage tank with low head pump
02	Storage tank with low head pump + stand-by pump
03	Storage tank with high head pump
04	Storage tank with high head pump + stand-by pump
	Kit with pump/s
P1	Single pump low head
P2	Pump low head + stand-by pump
P3	Single pump high head
P4	Pump high head + stand-by pump

(1) Water produced up to 39.2 °F.

(2) Water produced from 32 °F up to 17.6 °F

(3) Water produced from 39.2 °F up to 32 °F

(4) When functioning, the temperature of the water in the heat exchanger inlet must never drop below 95°F. For "YD" and "ZD" recovery versions, contact the headquarters.

(5) With this option the "Y" and "Z" valves are not compatible. The units with total recovery are not configurable with the integrated hydronic kit.

PERFORMANCE SPECIFICATIONS (460V ~ 3 60HZ WITH MAGNET CIRCUIT BREAKERS)

Size			0280	0300	0330	0350	0550	0600	0650	0675	0750	0800	0900	1000	1100	1250
Cooling performances 54.0 °F / 44.0 °F (1)																
Cooling capacity	A	ton	14.5	18.8	21.2	23.5	28.7	36.7	40.7	44.0	51.6	56.5	64.7	73.0	80.2	87.2
Input power	A	kW	17.5	25.4	27.5	32.2	35.6	46.9	54.8	62.7	68.2	70.4	81.6	93.1	108.2	124.4
Cooling total input current	A	A	27.0	39.0	42.0	49.0	59.0	70.0	82.0	93.0	108.0	117.0	128.0	139.0	161.0	184.0
EER	A	BTU/(Wh)	9.99	8.89	9.23	8.78	9.69	9.40	8.91	8.41	9.08	9.63	9.51	9.42	8.90	8.41
IPLV	A	BTU/(Wh)	14.77	13.51	14.33	13.99	15.59	14.88	14.81	13.75	14.57	15.76	15.59	15.56	14.67	13.85
Water flow rate system side	A	gpm	34.8	44.9	50.6	56.3	68.8	87.8	97.4	105.2	123.4	135.1	154.7	174.7	191.9	208.6
Pressure drop system side	A	ftH ₂ O	5.7	6.4	8.4	9.4	5.4	6.7	7.0	8.0	8.4	8.4	8.0	8.7	10.7	11.7

(1) Data: System side water heat exchanger 54.0 °F / 44.0 °F, External air 95 °F

PART LOAD IPLV

Size			0280	0300	0330	0350	0550	0600	0650	0675	0750	0800	0900	1000	1100	1250
Part load IPLV																
100 %	A	BTU/(Wh)	10.20	9.14	9.45	9.04	10.00	9.69	9.18	8.67	9.38	9.90	9.79	9.69	9.14	8.67
75 %	A	BTU/(Wh)	13.20	11.98	12.69	12.32	13.72	13.14	12.97	12.08	12.69	13.72	13.58	13.51	12.76	12.04
50 %	A	BTU/(Wh)	16.11	14.77	15.73	15.39	17.16	16.34	16.31	15.15	15.83	17.16	17.03	16.99	16.04	15.12
25 %	A	BTU/(Wh)	15.66	14.40	15.32	15.05	16.82	16.00	16.00	14.88	16.72	18.08	17.91	17.88	16.86	15.93

GENERAL TECHNICAL DATA

Size			0280	0300	0330	0350	0550	0600	0650	0675	0750	0800	0900	1000	1100	1250
Compressor																
Type	A	type	Scroll													
Compressor regulation	A	Type	On/Off													
Number	A	no.	2	2	2	2	2	2	2	2	4	4	4	4	4	4
Circuits	A	no.	1	1	1	1	1	1	1	1	2	2	2	2	2	2
Refrigerant	A	type	R410A													
Refrigerant load circuit 1 (1)	A	lbs	18.3	19.8	22.0	22.0	39.7	48.5	52.9	52.9	24.7	41.2	41.2	52.0	52.0	52.0
Refrigerant load circuit 2 (1)	A	lbs	-	-	-	-	-	-	-	-	41.2	41.2	52.0	52.0	52.0	52.0
System side heat exchanger																
Type	A	type	Braze plate													
Number	A	no.	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Connections (in/out)	A	Type	Grooved joints													
Sizes (in/out)	A	Ø	2"	2"	2"	2"	2" 1/2 US	2" 1/2 US	2" 1/2 US	2" 1/2 US	2" 1/2 US	3"	3"	3"	3"	3"
Machine body																
Sound power level	A	dB(A)	76.2	80.7	80.3	81.8	81.5	87.0	88.4	89.4	84.8	84.2	87.9	89.9	91.3	92.3
Delivery unit																
Sound power level	A	dB(A)	75.9	80.9	80.4	82.4	81.7	86.7	88.4	89.6	84.2	84.3	87.6	89.6	91.2	92.5

(1) The load indicated in the table is an estimated and preliminary value. The final value of the refrigerant load is indicated on the unit's technical label. For further information contact the office.

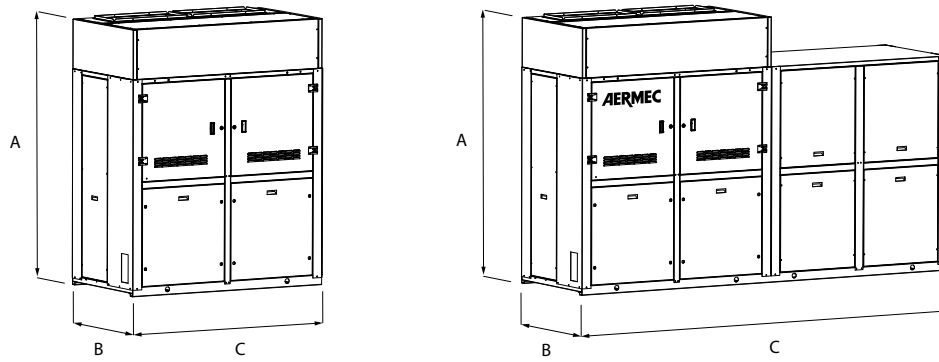
FANS DATA

Size			0280	0300	0330	0350	0550	0600	0650	0675	0750	0800	0900	1000	1100	1250
Power supply: 7																
Fan																
Type	A	type	Plug-fun													
Fan motor	A	type	Inverter													
Number	A	no.	2	2	2	2	4	4	4	4	6	8	8	8	8	8
Air flow rate	A	cfm	7,946	10,418	9,476	11,124	18,481	19,835	21,189	22,307	30,371	35,844	36,963	38,611	40,788	43,496

ELECTRIC DATA

Size			0280	0300	0330	0350	0550	0600	0650	0675	0750	0800	0900	1000	1100	1250
Power supply: 7																
Electric data																
Peak current (LRA)	A	A	127.7	157.4	182.4	187.5	235.6	285.8	332.8	341.8	294.5	320.2	370.4	378.7	434.7	452.7
Minimum circuit amperage (MCA)	A	A	42.2	53.8	59.4	63.9	84.4	93.7	108.1	119.6	139.8	158.7	168.0	176.4	202.2	225.1
Maximum overcurrent permitted by the protection device (MOP)	A	A	55.0	71.7	81.8	86.3	110.6	124.2	150.0	161.5	166.1	185.0	198.5	206.8	244.1	267.1

DIMENSIONS



Size			0280	0300	0330	0350	0550	0600	0650	0675	0750	0800	0900	1000	1100	1250
Integrated hydronic kit: 00																
Dimensions and weights																
A	A	in	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6
B	A	in	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3
C	A	in	68.9	68.9	68.9	68.9	124.0	124.0	124.0	124.0	192.9	248.0	248.0	248.0	248.0	248.0
Weights																
Empty weight	A	lbs	1,700	1,803	1,854	1,870	2,945	3,305	3,428	3,413	4,460	5,465	5,838	6,204	6,508	6,717
Weight functioning	A	lbs	1,713	1,821	1,870	1,887	2,974	3,336	3,463	3,448	4,508	5,520	5,900	6,272	6,576	6,786
Integrated hydronic kit: 01, 03																
Dimensions and weights																
A	A	in	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6
B	A	in	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3
C	A	in	133.9	133.9	133.9	133.9	163.4	163.4	163.4	163.4	232.3	287.4	287.4	287.4	287.4	287.4
Weights																
Empty weight	A	lbs	2,421	2,524	2,575	2,593	3,545	3,904	4,050	4,154	5,084	6,094	6,466	6,832	7,136	7,346
Weight functioning	A	lbs	3,144	3,252	3,300	3,320	4,718	5,079	5,229	5,333	6,279	7,297	7,679	8,051	8,356	8,563
Integrated hydronic kit: 02, 04																
Dimensions and weights																
A	A	in	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6
B	A	in	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3
C	A	in	133.9	133.9	133.9	133.9	163.4	163.4	163.4	163.4	232.3	287.4	287.4	287.4	287.4	287.4
Weights																
Empty weight	A	lbs	2,515	2,621	2,670	2,690	3,642	4,004	4,169	4,273	5,203	6,213	6,585	6,949	7,255	7,463
Weight functioning	A	lbs	3,239	3,347	3,395	3,417	4,815	5,179	5,346	5,452	6,398	7,416	7,796	8,168	8,472	8,682
Integrated hydronic kit: P1, P3																
Dimensions and weights																
A	A	in	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6
B	A	in	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3
C	A	in	98.4	98.4	98.4	98.4	124.0	124.0	124.0	124.0	192.9	248.0	248.0	248.0	248.0	248.0
Weights																
Empty weight	A	lbs	2,013	2,116	2,165	2,183	3,056	3,415	3,558	3,543	4,590	5,595	5,968	6,334	6,638	6,848
Weight functioning	A	lbs	2,070	2,176	2,227	2,244	3,120	3,483	3,631	3,616	4,674	5,686	6,067	6,437	6,744	6,951
Integrated hydronic kit: P2, P4																
Dimensions and weights																
A	A	in	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6
B	A	in	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3	43.3
C	A	in	98.4	98.4	98.4	98.4	124.0	124.0	124.0	124.0	192.9	248.0	248.0	248.0	248.0	248.0
Weights																
Empty weight	A	lbs	2,108	2,211	2,260	2,280	3,153	3,512	3,677	3,662	4,709	5,714	6,087	6,451	6,757	6,964
Weight functioning	A	lbs	2,165	2,273	2,321	2,344	3,217	3,580	3,748	3,732	4,793	5,805	6,184	6,557	6,861	7,070

Aermec reserves the right to make any modifications deemed necessary. All data is subject to change without notice. Aermec does not assume responsibility or liability for errors or omissions.

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