

NLC

0280/1250
only cooling

Chillers Air/Water for indoor installation
Scroll compressors, plate exchangers and plug-fans brushless - EC
Cooling capacity from 52÷318kW

R410A



Aermec
is participating in the
EUROVENT Program : LCP
The involved products can be found in the website
www.eurovent-certification.com

Variable Multi Flow

VMF



- **HIGH EFFICIENCY ALSO AT PARTIAL LOADS**
- **COOLING CIRCUIT WITH CASING**
- **COMPLETE AIR FLOW VERSATILITY**
- **HIGH EFFICIENCY PLUG-FANS**
- **NIGHT MODE**

Caratteristiche

The NLC pumps are reversible heat pumps, designed and manufactured for the production of chilled water in residential / commercial buildings.

The units are equipped with high efficiency scroll compressors, plug-fans, external copper coils with aluminium louvers, plate heat exchangers on the system side. In the units (with desuperheater), there is also the possibility of producing hot water for free. The base, the structure and the panels are made of galvanised steel treated with rustproof polyester paint.

Versions

- NLC** ° Standard
- NLC_A** High efficiency
- NLC_E** Silenced high efficiency

Operating range: Work up to 46°C of outdoor air temperature at full load, depending on size and version. For further details refer to the selection software/technical documentation

- The range includes units with two single circuit compressors and units with four compressors divided into two independent circuits.
- The possibility of using the electronic thermostatic valve brings significant benefits, especially when the heat pump is working at partial loads to the benefit of the unit's energy efficiency.
- Electric resistance for the evaporator as standard.
- Possibility of integrated hydronic kit that encloses the main hydraulic components; it is available in different configurations with one or two pumps, with different static pressures available, with or without storage tank.
- 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.

- Horizontal or vertical air flow.
- Microprocessor adjustment, with keyboard and LCD display, for easy consultation and intervention on the unit via a menu available in several languages.
Adjustment includes complete management of the alarms and their log.
- The presence of a programmable timer allows setting time bands of operation and a possible second set-point.
- 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 supervising systems with MODBUS protocol.
- **AERWEB300:** the AERWEB device allows the remote control of a chiller by means of a common PC through Ethernet connection, via a common browser; 4 models available:
AERWEB300-6: Web server for monitoring and controlling maximum 6 RS485 network devices;
AERWEB300-18: Web server for monitoring and controlling maximum 18 RS485 network devices;
AERWEB300-6G: Web server for monitoring and controlling maximum 6 RS485 network devices with integrated GPRS modem;
AERWEB300-18G: Web server for monitoring and controlling maximum 18 RS485 network devices

- with integrated GPRS modem;
- **PGD1:** Allows you to control the chiller at a distance.
- **MULTICHILLER_PCO:** 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.
- **AVX:** Spring anti-vibration mounts.
- **FLG:** Flanges for ducts.
- **FL:** Flow switch.
- **FILW:** Water filter
Attention, the flow switch and the water filter must be mounted; failure to do so will void the warranty.

Accessories mounted in the factory;

- **DRE:** Plate peak current reduction electronic device.
- **RIFNLC:** Current power factor correction. Connected in parallel to the motor, it allows a reduction of the input current (approx. 10%).
- **KRQ:** Anti-condensate electric board resistance.
- **KRA:** Storage tank antifreeze resistance.
- **COMPATIBILITY with the VMF SYSTEM**
For further information on system, refer to specific documentation.

Accessories compatibility

Mod. NLC	.	0280	0300	0330	0350	0550	0600	0650	0675	0700	0750	0800	0900	1000	1100	1250
AER485P1		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
AERWEB300		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
PGD1		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MULTICHILLER_PCO		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
FL		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
FILTROW		DN50	DN50	DN50	DN50	DN65	DN65	DN65	DN65	DN65	DN65	DN80	DN80	DN80	DN80	DN80
FLG	A/E	1	1	1	1	2 (x2)	2 (x2)	2 (x2)	2 (x2)	1 (x2)	1+2(x2)	2 (x4)	2 (x4)	2 (x4)	2 (x4)	2 (x4)
	°	1	1	1	1	1	2 (x2)	2 (x2)	2 (x2)	1 (x2)	1 (x2)	1 (x2)	1+2(x2)	2 (x4)	2 (x4)	2 (x4)
VT	00	17	17	17	17	-	-	-	-	-	-	-	-	-	-	-
	P1-P8	13	13	13	13	-	-	-	-	-	-	-	-	-	-	-
	01-08	11	11	11	11	-	-	-	-	-	-	-	-	-	-	-
AVX °	00	-	-	-	-	437	421	421	421	424	440	440	444	431	431	431
	P1-P3	-	-	-	-	438	421	421	422	425	425	442	445	432	432	432
	P2-P4	-	-	-	-	438	422	422	422	426	426	443	445	433	433	433
	01-03	-	-	-	-	439	423	423	423	427	441	441	446	435	434	434
	02-04	-	-	-	-										436	436
AVX A/E	00	-	-	-	-	421	421	421	421	424	428	431	431	431	431	431
	P1-P3	-	-	-	-	421	421	422	422	425	429	432	432	432	432	432
	P2-P4	-	-	-	-	422	422	422	422	426	429	433	433	433	433	433
	01-03	-	-	-	-	423	423	423	423	427	430	434	434	434	434	434
	02-04	-	-	-	-	423	423	423	423	427	430	435	435	435	436	436
Accessories mounted in the factory																
DRE		275	275	300	350	552	602	652	675	350 (x2)	552 (x2)	552 (x2)	602 (x2)	652 (x2)	675 (x2)	1250
RIFNLC		1	1	2	3	1	1	1	4	3 (x2)	3 + 2	1 (x2)	1 (x2)	1 (x2)	4 (x2)	3 (x2)
KRQ		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
KRA		1	1	1	1	2	2	2	2	2	2	2	2	2	2	2

(x2) indicates the quantity to be ordered

Choosing the unit

By appropriately combining the variety of options available, every model can be configured in order to meet all specific system requirements.

Field	Description	15-16	Integrated hydronic kit
1,2,3	NLC	00	Without hydronic kit
4,5,6,7	Size	01	Storage tank and single low static pressure pump
	0280-0300-0330-0350-0550-0600-0650-0675-0700-0750-0800-0900-1000-1100-1250	02	Storage tank, single low static pressure pump and reserve pump
8	field of application	03	Storage tank and single high static pressure pump
	° Standard (water produced up to +4°C)	04	Storage tank, single high static pressure pump and reserve pump
	Z Thermostatic valve (water produced up 0 to + 4°C) (1)	05	Storage tank and single low static pressure pump
	Y Thermostatic valve (water produced up -6 to + 0°C) (1)	06	Storage tank, single low static pressure inverter pump and reserve inverter pump
	X Electronic expansion valve (water produced up +4 °C) Contact the head office for lower temperatures	07	Storage tank and single high static pressure inverter pump
9	Model	08	Storage tank, single high static pressure inverter pump and reserve inverter pump
	° Only cooling	P1	Single low static pressure pump
C	Condensing unit	P2	Single low static pressure pump and reserve pump
10	Heat recovery	P3	Single high static pressure pump
	° Without heat recovery	P4	Single high static pressure pump and reserve inverter pump
	D Without desuperheater	P5	Single low static pressure inverter pump
	T With Total recovery (2)	P6	Single low static pressure inverter pump and reserve inverter pump
11	Versions	P7	Single high static pressure inverter pump
	° Standard	P8	Single high static pressure inverter pump and reserve inverter pump
	A High efficiency		
	E Silenced high efficiency		
12	Coils		
	° Aluminium		
	R Copper - Copper		
	S Copper - Thinned		
	V Painted aluminium		
13	Fan		
	J EC inverter		
14	Power supply		
	° 400V/3/50Hz with magnet circuit breakers		
	1 220V/3/50Hz with magnet circuit breakers		

(1) Not available for the model with heat recovery. "D and T"

(2) Not available for condensing units, and for models with storage tank and pumps (01 - 08)

(3) The speed of the inverter pump must be set upon commissioning, according to the useful static pressure required; once it has been set, the pump will work at a constant flow rate

Technical data

NLC - °			0280	0300	0330	0350	0550	0600	0650	0675	0700	0750	0800	0900	1000	1100	1250
		V/ph/Hz	400V/3N/50Hz														
12°C / 7°C	Cooling capacity	(1) kW	52,10	57,00	62,70	75,20	94	111,8	122,7	137,2	151,2	169,9	189,3	219,7	242,1	276,7	305,8
	Total power input	(1) kW	20,70	23,70	24,60	29,30	39,6	44,8	50,6	54,2	59,3	67,2	79,6	87,3	100,7	108,5	122,3
	EER*	(1)	2,52	2,41	2,55	2,57	2,37	2,50	2,42	2,53	2,55	2,53	2,38	2,52	2,40	2,55	2,50
	EER		2,71	2,59	2,71	2,72	2,47	2,64	2,55	2,66	2,70	2,66	2,48	2,65	2,52	2,67	2,61
	ESEER	(1)	3,79	3,62	3,84	3,85	3,56	3,74	3,64	3,79	3,80	3,71	3,54	3,75	3,58	3,80	3,67
	Cooling Energy Class Eurovent	(1)	B	C	B	B	C	B	C	B	B	B	C	B	C	B	B
	Water flow rate	(1) l/h	8976	9834	10814	12967	16236	19281	21166	23680	26083	29294	32649	37884	41736	47712	52763
	Pressure drop	(1) kPa	19	22	28	27	43	27	31	43	37	30	38	35	35	41	48

NLC - A			0280	0300	0330	0350	0550	0600	0650	0675	0700	0750	0800	0900	1000	1100	1250
12°C / 7°C	Cooling capacity	(1) kW	53,90	59,20	66,70	78,40	106,1	119,2	129	146	157,2	177,6	209,3	232,8	257,1	289,9	318,4
	Total power input	(1) kW	19,80	21,90	23,70	28,00	38,2	43,4	45,3	52,9	56	61,1	76,1	85,5	90,3	106,6	116,7
	EER*	(1)	2,72	2,70	2,81	2,80	2,78	2,75	2,85	2,76	2,81	2,91	2,75	2,72	2,85	2,72	2,73
	EER		2,95	2,92	2,98	2,96	2,93	2,90	2,97	2,89	2,98	3,12	2,90	2,85	2,97	2,84	2,84
	ESEER	(1)	4,11	4,07	4,24	4,19	4,17	4,12	4,27	4,14	4,18	4,27	4,10	4,05	4,24	4,05	4,01
	Cooling Energy Class Eurovent	(1)	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
	Water flow rate	(1) l/h	9298	10218	11504	13530	18293	20558	22255	25195	27100	30614	36081	40125	44315	49976	54903
	Pressure drop	(1) kPa	20	24	22	30	25	30	36	36	25	25	33	33	35	37	43

NLC - E			0280	0300	0330	0350	0550	0600	0650	0675	0700	0750	0800	0900	1000	1100	1250
12°C / 7°C	Cooling capacity	(1) kW	52,10	57,90	64,10	73,20	102,8	115,4	124,3	142,3	150,8	171,1	200,9	224,4	247,5	282,2	309,9
	Total power input	(1) kW	19,60	21,80	23,90	27,80	37,8	43	46,1	52,8	55,9	60,7	75,2	85,6	91	106,3	116,5
	EER*	(1)	2,66	2,66	2,68	2,63	2,72	2,68	2,70	2,70	2,70	2,82	2,67	2,62	2,72	2,65	2,66
	EER		2,81	2,82	2,80	2,75	2,80	2,79	2,75	2,77	2,82	2,96	2,75	2,69	2,78	2,73	2,73
	ESEER	(1)	3,95	3,91	4,07	4,03	4,00	3,95	4,10	3,97	4,02	4,10	3,93	3,89	4,07	3,89	3,85
	Cooling Energy Class Eurovent	(1)	B	B	B	B	A	B	A	A	A	A	B	B	A	B	B
	Water flow rate	(1) l/h	8991	9988	11055	12633	17714	19900	21440	24544	25988	29485	34635	38681	42666	48647	53434
	Pressure drop	(1) kPa	19	23	20	26	23	29	34	34	23	24	31	30	33	35	41

Date (14511:2013)

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

* The legislation 14511: 2013 from the previous 14511: 2011 provides a different contribution of the fan

			0280	0300	0330	0350	0550	0600	0650	0675	0700	0750	0800	0900	1000	1100	1250	
Electrical data																		
Total input currente (cooling)	(2)	°	A	38,1	42,3	45,7	56,7	68,2	76,5	84,6	92,3	112,7	121,1	135,9	148,1	168,6	181	207,7
Maximum current (FLA)	(2)		A	52	56	62	73	103	111	119	132	146	169	206	222	238	263	289
Starting current (LRA)	(2)		A	128	130	133	216	261	273	281	358	290	346	353	372	400	489	515
Total input currente (cooling)	(2)	A	A	36,3	40,3	43,2	53,5	63	71,4	73	86,6	107,1	113,4	125,6	139,1	145,9	173,1	197,7
Maximum current (FLA)	(2)		A	52	56	62	73	92	111	119	132	146	158	183	210	238	263	289
Starting current (LRA)	(2)		A	128	130	133	216	273	273	281	358	290	357	376	384	400	489	515
Total input currente (cooling)	(2)	E	A	35,6	39,1	43,2	52,8	61,8	68,9	73,1	85,2	106,3	112	123,1	138,3	145,9	170,1	196,5
Maximum current (FLA)	(2)		A	52	56	62	73	92	111	119	132	146	158	183	210	238	263	289
Starting current (LRA)	(2)		A	128	130	133	216	273	273	281	358	290	357	376	384	400	489	515
Scroll Compressor																		
Compressors / Circuit		Type/n°	2/1	2/1	2/1	2/1	2/1	2/1	2/1	2/1	4/2	4/2	4/2	4/2	4/2	4/2	4/2	4/2
Refrigerant		Type	R410A															
Heat exchanger system side																		
Exchanger		Type/n°	Plate/1															
hydraulic connections (In/Out)		Ø	2"	2"	2"	2"	2"	2"	2"	2"	2"	2" 1/2	2" 1/2	3"	3"	3"	3"	3"
Fans Plug-fan inverter EC																		
Fan	°	n°	2	2	2	2	4	4	4	4	4	6	8	8	8	8	8	8
Air flow rate		m³/h	21600	24000	21150	23600	23200	34050	34050	38200	47150	46750	46350	62150	68100	66650	71750	
Fan	A	n°	2	2	2	2	2	4	4	4	4	4	4	6	8	8	8	8
Air flow rate		m³/h	21150	23600	19400	22050	27700	33350	27150	32750	44050	57900	55350	55350	54300	65450	65450	
Fan		E	n°	2	2	2	2	2	4	4	4	4	4	4	6	8	8	8
Air flow rate	m³/h		15000	18400	14650	16450	14900	22200	14600	21750	32900	41900	29850	29850	29200	43500	43500	
High static pressure		Pa	120															
Sound data - chiller (cooling)																		
Sound power level		dB(A)	83	86	83	85	88	84	84	86	88	90	91	87	87	89	89	89
Sound pressure level		dB(A)	66	68	66	68	70	66	66	68	70	71	72	68	67	69	69	69
Sound power level		dB(A)	84	86	82	85	83	85	83	85	88	86	86	88	86	88	88	88
Sound pressure level		dB(A)	66	69	65	67	65	67	65	67	69	66	66	68	66	68	68	68
Sound power level		dB(A)	77	80	77	78	75	79	75	78	81	80	78	82	78	81	81	81
Sound pressure level		dB(A)	59	63	59	61	57	60	57	60	63	61	58	62	58	62	62	62

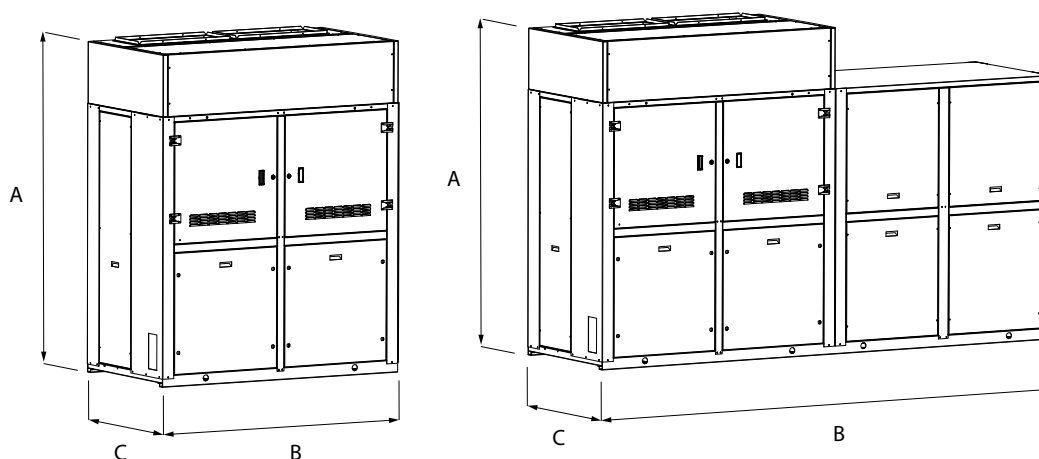
(2) Unit standar configuration without hydronic kit

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



The designs are representative of some structural work, more information is available in the technical documentation

Mod. NLC (3)					0280	0300	0330	0350	0550	0600	0650	0675	0700	0750	0800	0900	1000	1100	1250
Height		A	mm		2154	2154	2154	2154	2196	2196	2196	2196	2196	2196	2196	2196	2196	2196	2196
Width	°	00	mm		1750	1750	1750	1750	1750	3150	3150	3150	3500	3500	3500	4900	6300	6300	6300
	A/E	00	mm		1750	1750	1750	1750	3150	3150	3150	3150	3500	4900	6300	6300	6300	6300	6300
	°	P1÷P8	mm		2500	2500	2500	2500	2500	3150	3150	3150	4250	4250	4250	4900	6300	6300	6300
	A/E	P1÷P8	mm		2500	2500	2500	2500	3150	3150	3150	3150	4250	4900	6300	6300	6300	6300	6300
	°	01÷08	mm		3400	3400	3400	3400	3500	4150	4150	4150	5250	5250	5250	5900	7300	7300	7300
	A/E	01÷08	mm		3400	3400	3400	3400	4150	4150	4150	4150	5250	5900	7300	7300	7300	7300	7300
Length		C	mm		950	950	950	950	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100

(3) For the size of chillers with total recovery contact Aermec

Mod. NLC (2)					0280	0300	0330	0350	0550	0600	0650	0675	0700	0750	0800	0900	1000	1100	1250
Height		A	mm		2154	2154	2154	2154	2196	2196	2196	2196	2196	2196	2196	2196	2196	2196	2196
Width	°	00	mm		1750	1750	1750	1750	1750	3150	3150	3150	3500	3500	3500	4900	6300	6300	6300
	A/E	00	mm		1750	1750	1750	1750	3150	3150	3150	3150	3500	4900	6300	6300	6300	6300	6300
	°	P1÷P8	mm		2500	2500	2500	2500	2500	3150	3150	3150	4250	4250	4250	4900	6300	6300	6300
	A/E	P1÷P8	mm		2500	2500	2500	2500	3150	3150	3150	3150	4250	4250	4250	6300	6300	6300	6300
	°	01÷08	mm		3400	3400	3400	3400	3500	4150	4150	4150	5250	5250	5250	5900	7300	7300	7300
	A/E	01÷08	mm		3400	3400	3400	3400	4150	4150	4150	4150	5250	5900	7300	7300	7300	7300	7300
Length		C	mm		950	950	950	950	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100