NRL

0280/0750
cooling only

Air/Water Chillers for external installation
Scroll compressors, plate heat exchangers and axial fans
Cooling capacity 52,8÷194,6 kW

HFC Refrigerant R410A

Variable Multi Flow®

VMF

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

AERMEC
partecipates in the EUROVENT programme for: LCP Check ongoing validity of certificate online: www.eurovent-certification.com

- **COMPACT VERSION**
- **HIGH EFFICIENCIES ALSO AT PARTIAL LOADS**
- **EASY AND FAST INSTALLATION**

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, 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

NRL_°	Standard
NRL_L	Low noise
NRL_A	High efficiency
NRL_E	Low noise high efficiency

Operating range: Work at full load up to 46°C external air temperature (for more details please refer to the technical documentation)

- Units with two refrigerant circuits designed to grant the maximum performance at full load, ensuring high efficiencies also at partial loads and giving continuity in case of stop of one of the two circuit.
- Standard Flow-switch, water filter and high and low pressure transducer.
- Possibility of integrated hydronik -kit, which includes the main hydraulic components; it is available in different configurations with or without buffer tank, one or two high and low head pumps.
- 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.

Night Mode is standard on all low noise versions. For all other versions either the DCPX accessory or "J" inverter fan must be specified to allow Night Mode to operate.

Accessories

- **AER485P1**: RS-485 interface for supervising systems with MODBUS protocol.
- **PGD1:** Simplified remote panel. Allows control of basic unit functions and alarm notification.
- **C-TOUCH:** 7" touch screen keyboard, which allows to navigate intuitively among the various screens, allowing to modify the operating parameters and graphically view the progress of some variables in real time
- **MULTICHILLER_EVO**: Control system to switch the individual chillers on and off, and command them, in a system in which several units are installed in parallel, always ensuring a constant delivery to the evaporators.
- **AERNET:** il dispositivo permette il controllo la gestione e il monitoraggio remoto di un refrigeratore con un PC, smartphone o tablet tramite collegamento Cloud. AERNET svolge la funzione di Master mentre ogni unità collegata viene configurata come Slave fino ad un massimo di 6 unità; è inoltre possibile con un sempice click salvare sul proprio terminale un file log con tutti i dati delle unità collegate per eventuali post analisi.
- **DCPX:** Device for condensation temperature control, with continuous speed modulation of fans by using a pressure transducer.
- **GP**: Protective grille. Condenser coil external protection against accidental or hail damage.
- **VT**: anti-vibration support, to be fitted below the sheet metal base of the unit.

Accessories factory fitted only

- **DRE:** Current soft starter device. Available only with power supply 400V/3N.
- **RIF:** Power factor correction. Connected in parallel to the motor allowing about 10% reduction of input current
- **PRM1:** It is a manual pressure switch electrically wired in series with the existing automatic high pressure switch on the compressor discharge pipe

COMPATIBILITY WITH THE VMF SYSTEM.
For further system information please refer to the specific documentation.

Compatibility of accessories

Mod. NRL		Vers.	0280	0300	0330	0350	0500	0550	0600	0650	0700	0750
AER485P1			•	•	•	•	•	•	•	•	•	•
PGD1			•	•	•	•	•	•	•	•	•	•
C-TOUCH			•	•	•	•	•	•	•	•	•	•
MULTICHILLER_EVO		All	•	•	•	•	•	•	•	•	•	•
AERNET		All	•	•	•	•	•	•	•	•	•	•
DCPX standard fan	(1)	°	-	-	-	-	64	64	64	64	64	64
	(1)	L	inverter fan				standard	standard	standard	standard	standard	standard
	(1)	A	-	-	-	-	64	64	64	64	64	64
	(1)	E	inverter fan				standard	standard	standard	standard	standard	standard
DCPX increased fans (M)	(1)	°	-	-	-	-	64	64	64	64	64	65
	(1)	L	63	63	63	63	standard	standard	standard	standard	standard	standard
	(1)	A	-	-	-	-	64	64	64	64	65	65
	(1)	E	63	63	63	63	standard	standard	standard	standard	standard	standard
GP	(2)	° - L	3	3	3	3	2 (x2)	2 (x2)	2 (x2)	2 (x2)	2 (x2)	10 (x3)
	(2)	A - E	3	4	4	4	2 (x2)	2 (x2)	2 (x2)	2 (x2)	2 (x3)	10 (x3)
VT (00 / P1÷P4)		°	17	17	17	17	11	11	11	11	11	23
		L - A - E	17	17	17	17	11	11	11	11	22	23
VT (01÷10)		° - L	13	13	13	13	11	11	11	11	11	23
		L - A - E	13	13	13	13	11	11	11	11	22	23
Accessories factory fitted only												
DRE		400V/3N	281	301	331	351	501	551	601	651	701	751
RIF		Alls	50	50	50	51	52	52	53	53	53	53
PRM1		Alls	•	•	•	•	•	•	•	•	•	•

(1) Standard in the models with desuperheater; In versions low noise; Not necessary fields with fans inverter
(2) (x2)(x3) the number in brackets indicates the quantity to order

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 demanding of system requirements.

Field **Code**
1,2,3 **NRL**
4,5,6,7 **Size**
0280-0300-0330-0350-0500-0550-0600-0650-0700-0750 (3)
8 **Expansion valve (4)**
° Standard (leaving water temperature down to 4°C)
Y Low temperature (Low leaving liquid from 0°C down to -6°C)
X Electronic expansion valve (leaving water temperature down to 4°C) contact head office for lower temperatures
9 **Model**
° Chillers
C Condensing unit (5)
10 **Heat recovery**
° Without recovery
D With Desuperheater
T With Total Recovery
11 **Versions**
° Compact
L Compact low noise
A High efficiency
E High efficiency in low noise operation
12 **Coil**
° In aluminium
R In copper
S In tinned copper
V In painted aluminium-copper (epoxy paint)
13 **Fans** (6)
° Standard
M Increased
J Inverter
14 **Power supply**
° 400V/3N/50Hz with circuit breakers
1 220V/3/50Hz with circuit breakers
15-16 **Hydronic kit** (7)
00 Without hydronic kit
01 n°1 low head pump and buffer tank
02 n°2 low head pump and buffer tank
03 n°1 high head pump and buffer tank
04 n°2 high head pump and buffer tank
05 n°1 low head pump and buffer tank (with holes for immersion heaters)
06 n°2 low head pump and buffer tank (with holes for immersion heaters)
07 n°1 high head pump and buffer tank (with holes for immersion heaters)
08 n°2 high head pump and buffer tank (with holes for immersion heaters)
09 double hydraulic circuit
10 double hydraulic circuit with holes for immersion heater
P1 n°1 low head pump
P2 n°2 low head pump
P3 n°1 high head pump
P4 n°2 high head pump

(3) The sizes 0280-0300-0330-0350 are only low noise L/E with inverter fans
(4) **Temperature range of termostatich valve**
° Standard
from 4°C to 18°C
Y Thermostatic valve for low temperature
from 4°C to -6°C for vers. ° et L
from 4°C to -10 for vers. A (0500 to 0750)
from 4°C to -8 for vers. E (0500 to 0750)
X EEV (Exspansion Electronic Valve)
from 4°C to 18°C (contact head office for lower temperatures)
The option
YD/XD contact Aermec
YT not available
(5) The motocondensing models are not configurable with the option D and T, and with the integrated hydronik-kit on the system's side.
(6) **Fans on/off Standard,** for size from 0500 to 0750
Fans on/off Increased, option available for all size
Fans Inverter, Standard for size from 0280 to 0350, without high static pressure
Fans Inverter, option for size from 0500 to 0750 with high static pressure
(7) Buffer tanks with holes for additional heaters are supplied from factory with plastics caps of protection, before system's loading, where the installation of one or all the heaters is not provided, it is mandatory to replace plastic caps with special caps, which are commonly available in the market.

Technical Data

NRL - °			0280	0300	0330	0350	0500	0550	0600	0650	0700	0750
	V/ph/Hz		400V	400V	400V	400V	400V	400V	400V	400V	400V	400V
12°C / 7°C	Cooling capacity (1)	kW	/	/	/	/	96,7	102,6	125,7	136,7	155,7	189,6
	Total power input (1)	kW	/	/	/	/	35,4	38,9	46,7	54,7	61,0	70,6
	EER (1)		/	/	/	/	2,73	2,64	2,69	2,50	2,55	2,69
	Water flow rate (1)	l/h	/	/	/	/	16665	17696	21648	23538	26802	32644
	Pressure drop (1)	kPa	/	/	/	/	53	59	64	61	74	86
	Cooling capacity with low leaving water temp											
	ηsc	%	/	/	/	/	138	133,9	143,3	135	137,6	144,5
	SEER		/	/	/	/	3,53	3,42	3,66	3,45	3,52	3,69

NRL - L			0280	0300	0330	0350	0500	0550	0600	0650	0700	0750
	V/ph/Hz		400V	400V	400V	400V	400V	400V	400V	400V	400V	400V
12°C / 7°C	Cooling capacity (1)	kW	52,8	62,8	67,8	80,7	86,8	92,7	112,6	126,7	143,7	173,6
	Total power input (1)	kW	20,6	22,9	26,5	28,9	38,9	43,0	51,5	58,3	65,7	76,1
	EER (1)		2,56	2,74	2,56	2,79	2,23	2,16	2,19	2,17	2,19	2,28
	Water flow rate (1)	l/h	9106	10824	11683	13916	14947	15978	19414	21820	24740	29895
	Pressure drop (1)	kPa	51	46	54	55	43	48	51	52	63	72
	Cooling capacity with low leaving water temp											
	ηsc	%	124,6	134,9	126,7	128,8	133,1	129,3	135,9	129,3	131,2	138,2
	SEER		3,19	3,45	3,24	3,30	3,40	3,31	3,47	3,31	3,36	3,53

NRL - A			0280	0300	0330	0350	0500	0550	0600	0650	0700	0750
	V/ph/Hz		400V	400V	400V	400V	400V	400V	400V	400V	400V	400V
12°C / 7°C	Potenza frigorifera (1)	kW	/	/	/	/	97,7	103,7	128,7	142,7	162,7	194,6
	Potenza assorbita (1)	kW	/	/	/	/	30,7	34,8	40,8	45,4	53,3	63,3
	EER (1)		/	/	/	/	3,19	2,98	3,15	3,14	3,05	3,07
	Portata d'acqua (1)	l/h	/	/	/	/	16837	17868	22163	24569	28005	33503
	Perdite di carico (1)	kPa	/	/	/	/	44	49	54	60	68	88
	Cooling capacity with low leaving water temp											
	ηsc		/	/	/	/	156,3	151,8	153,3	153,1	151,7	151,3
	SEER		/	/	/	/	3,98	3,87	3,91	3,90	3,87	3,86

NRL - E			0280	0300	0330	0350	0500	0550	0600	0650	0700	0750
	V/ph/Hz		400V	400V	400V	400V	400V	400V	400V	400V	400V	400V
12°C / 7°C	Potenza frigorifera (1)	kW	56,8	64,8	73,8	82,8	89,8	94,8	116,7	128,7	149,7	179,6
	Potenza assorbita (1)	kW	17,1	19,7	22,1	25,5	33,5	37,1	44,9	52,3	57,4	69,2
	EER (1)		3,33	3,29	3,34	3,24	2,68	2,55	2,60	2,46	2,61	2,60
	Portata d'acqua (1)	l/h	9793	11167	12714	14260	15463	16322	20101	22163	25771	30926
	Perdite di carico (1)	kPa	43	39	35	44	37	41	44	49	58	75
	Cooling capacity with low leaving water temp											
	ηsc		149,1	150,7	149,9	149,9	152,9	150,1	150,0	150,5	150,4	150,0
	SEER		3,80	3,84	3,82	3,82	3,90	3,83	3,83	3,84	3,84	3,83

Date (14511:2018)
(1) Water system side 12°C/7°C, External air 35°C

NRL - C			0280	0300	0330	0350	0500	0550	0600	0650	0700	0750
	V/ph/Hz		400V	400V	400V	400V	400V	400V	400V	400V	400V	400V
	Cooling capacity (2)	kW	/	/	/	/	100,0	106,0	130,0	141,0	161,0	196,0
	Total power input (2)	kW	/	/	/	/	35,1	38,5	46,3	54,4	60,5	69,8
	EER (2)		/	/	/	/	2,85	2,75	2,81	2,59	2,66	2,81

NRL - CL			0280	0300	0330	0350	0500	0550	0600	0650	0700	0750
	V/ph/Hz		400V	400V	400V	400V	400V	400V	400V	400V	400V	400V
	Cooling capacity (2)	kW	55,0	65,0	70,0	83,0	90,0	96,0	116,0	131,0	148,0	179,0
	Total power input (2)	kW	20,5	22,8	26,3	28,7	38,8	42,9	51,4	58,1	65,4	75,7
	EER (2)		2,68	2,85	2,66	2,89	2,32	2,24	2,26	2,25	2,26	2,36

NRL - CA			0280	0300	0330	0350	0500	0550	0600	0650	0700	0750
	V/ph/Hz		400V	400V	400V	400V	400V	400V	400V	400V	400V	400V
	Cooling capacity (2)	kW	/	/	/	/	101,0	107,0	133,0	147,0	168,0	201,0
	Total power input (2)	kW	/	/	/	/	30,5	34,5	40,5	45,0	52,8	62,5
	EER (2)		/	/	/	/	3,31	3,10	3,28	3,27	3,18	3,22

NRL - CE			0280	0300	0330	0350	0500	0550	0600	0650	0700	0750
	V/ph/Hz		400V	400V	400V	400V	400V	400V	400V	400V	400V	400V
	Cooling capacity (2)	kW	59,0	67,0	76,0	85,0	93,0	98,0	121,0	133,0	155,0	185,0
	Total power input (2)	kW	17,0	19,6	22,0	25,3	33,4	37,0	44,7	52,1	57,1	68,6
	EER (2)		3,47	3,42	3,45	3,36	2,78	2,65	2,71	2,55	2,71	2,7

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

Technical Data

				280	300	330	350	500	550	600	650	700	750
Electrical data													
Total input currente (cooling)	°	(3)	A	/	/	/	/	63	67	81	88	100	122
	L	(3)	A	36	40	44	51	70	75	90	99	111	132
	A	(3)	A	/	/	/	/	55	60	71	77	90	113
	E	(3)	A	30	34	37	45	60	64	78	89	97	120
Maximum current (FLA)		(3)	A	46	53	58	63	76	81	100	112	122	144
Starting current (LRA)		(3)	A	155	184	190	200	214	220	232	243	261	320
Scroll Compressor													
Compressors / Circuit			n°	2/2	2/2	2/2	2/2	3/2	3/2	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"½	2"½	2"½	2"½	2"½	2"½	2"½	2"½	2"½	3"
Connection of Condensing unit C													
Gas line			Ø	28/28	28/28	28/28	28/28	35/28	35/28	35/35	35/35	42/42	42/42
Liquid line			Ø	15,88/15,88	15,88/15,88	15,88/15,88	18/18	18/18	18/18	22/22	22/22	28/28	28/28
Axial fans													
Fans	°		Type/n°	/	/	/	/	std/2	std/2	std/2	std/2	std/2	std/3
	L		Type/n°	Inverter/4	Inverter/4	Inverter/4	Inverter/6	std/2	std/2	std/2	std/2	std/2	std/3
	A		Type/n°	/	/	/	/	std/2	std/2	std/2	std/2	std/2	std/3
	E		Type/n°	Inverter/6	Inverter/6	Inverter/8	Inverter/8	std/2	std/2	std/2	std/2	std/2	std/3
Air flow rate (cooling)	°		m³/h	/	/	/	/	34600	34600	34600	34600	33600	51400
	L		m³/h	14200	14200	14200	20200	28400	28700	27700	29400	28600	42700
	A		m³/h	/	/	/	/	34100	34100	32600	32600	50000	49000
	E		m³/h	22000	22000	27000	27000	21100	22200	21800	22800	32500	35300
Sound data (cooling)													
Sound power level	°		dB(A)	/	/	/	/	82	82	82	83	83	85
Sound pressure level	°		dB(A)	/	/	/	/	50	50	50	51	51	53
Sound power level	L		dB(A)	73	73	74	75	77	77	77	78	78	80
Sound pressure level	L		dB(A)	41	41	42	43	45	45	45	46	46	48
Sound power level	A		dB(A)	/	/	/	/	82	82	82	83	85	85
Sound pressure level	A		dB(A)	/	/	/	/	50	50	50	51	53	53
Sound power level	E		dB(A)	74	74	75	76	74	74	74	75	77	77
Sound pressure level	E		dB(A)	42	42	43	44	42	42	42	43	45	45

(3) Unit standar configuration without hydronic kit

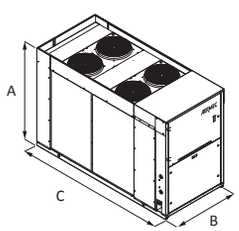
Sound power Aermec determines sound power values on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification.

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).

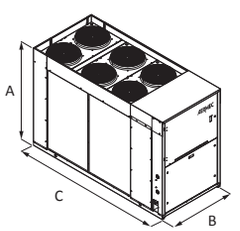
Note: For more information, refer to the selection program or the technical documentation available on the website www.aermec.com

Dimensions (mm)

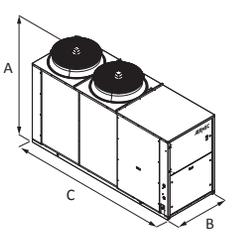
NRL 0280-0300-0330 L



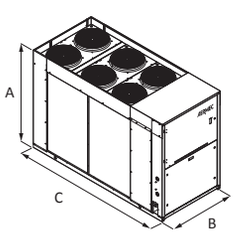
NRL 0350 L



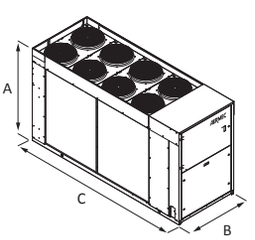
NRL 0500-0550-0600-0650-0700 °/L



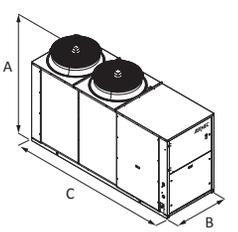
NRL 0280-0300 E



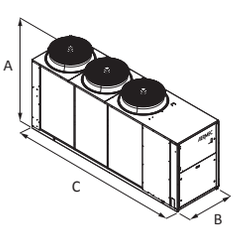
NRL 0330-0350 E



NRL 0500-0550-0600-0650 A/E



NRL 0700 A/E - 0750 °/L/A/E



Mod. NRL		Vers.	0280	0300	0330	0350	0500	0550	0600	0650	0700	0750
A	(mm)	Alls	1606	1606	1606	1606	1875	1875	1875	1875	1875	1975
B	(mm)	Alls	1100	1100	1100	1100	1100	1100	1100	1100	1100	1500
C	(mm)	° / L / C	2450	2450	2450	2450	3010	3010	3010	3010	3010	4350
		A / E / C	2450	2950	2950	2950	3010	3010	3010	3010	4010	4350
Empty weight*	(kg)	° / L	675	684	688	704	868	872	968	983	1091	1382
		A / E	686	751	761	767	955	959	1142	1155	1323	1663

* Weight standard units without hydronic kit

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