

NRL

0280/0750
cooling only

Air/Water Chillers for external installation
Scroll compressors, plate heat exchangers and axial fans
Cooling capacity 56÷194kW

HFC
Refrigerant
R410A

Variable Multi Flow
VMF



AERMEC
participates 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_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:** 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.

- **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

[illegible]

(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	08	n°2 high head pump and buffer tank (with holes for immersion heaters)
1,2,3	NRL	09	double hydraulic circuit
4,5,6,7	Size	10	double hydraulic circuit with holes for immersion heater
	0280-0300-0330-0350-0500-0550-0600-0650-0700-0750 (3)	P1	n°1 low head pump
8	Expansion valve (4)	P2	n°2 low head pump
	° Standard (leaving water temperature down to 4°C)	P3	n°1 high head pump
Y	Low temperature (Low leaving liquid from 0°C down to -6°C)	P4	n°2 high head pump
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		
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)		

Technical Data

NRL - A			280	300	330	350	500	550	600	650	700	750
		V/ph/Hz	400V	400V	400V	400V	400V	400V	400V	400V	400V	400V
12°C/7°C	Cooling capacity	(1) kW	/	/	/	/	97,5	103,4	128,3	142,16	162,02	193,58
	Total power input	(1) kW	/	/	/	/	30,72	34,79	40,83	45,44	53,28	63,32
	EER	(1)	/	/	/	/	3,17	2,97	3,14	3,13	3,04	3,06
	ESEER	(1)	/	/	/	/	3,68	3,45	4,07	4,04	3,93	3,91
	Cooling Energy Class Eurovent	(1)	/	/	/	/	A	B	A	A	B	B
	Water flow rate	(1) l/h	/	/	/	/	16830	17861	22154	24559	27993	33489
	Pressure drop	(1) kPa	/	/	/	/	44	49	54	60	68	88
Cooling capacity with low leaving water temp (UE n° 2016/2281)												
SEER			/	/	/	/	3,98	3,87	3,91	3,90	3,87	3,86
ηsc			/	/	/	/	156,3	151,8	153,3	153,1	151,7	151,3

NRL - E			280	300	330	350	500	550	600	650	700	750
		V/ph/Hz	400V	400V	400V	400V	400V	400V	400V	400V	400V	400V
12°C/7°C	Cooling capacity	(1) kW	56,64	64,64	73,63	82,5	89,6	94,5	116,4	128,32	149,16	178,84
	Total power input	(1) kW	17,16	19,76	22,17	25,57	33,54	37,19	44,89	52,28	57,44	69,16
	EER	(1)	3,30	3,27	3,32	3,23	2,67	2,54	2,59	2,45	2,60	2,59
	ESEER	(1)	3,75	3,72	3,80	3,68	3,65	3,43	3,97	3,95	3,83	3,82
	Cooling Energy Class Eurovent	(1)	A	A	A	A	D	D	D	E	D	D
	Water flow rate	(1) l/h	9789	11163	12709	14254	15456	16315	20093	22154	25761	30913
	Pressure drop	(1) kPa	43	39	35	44	37	41	44	49	58	75
Cooling capacity with low leaving water temp (UE n° 2016/2281)												
SEER			3,80	3,84	3,82	3,82	3,90	3,83	3,83	3,84	3,84	3,83
ηsc			149,1	150,7	149,9	149,9	152,9	150,1	150,0	150,5	150,4	150,0

Date (14511:2013)

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

NRL - CA			280	300	330	350	500	550	600	650	700	750
		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			280	300	330	350	500	550	600	650	700	750
		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

			280	300	330	350	500	550	600	650	700	750	
Electrical data													
Total input currente (cooling)	A	(3)	A	/	/	/	/	55	60	71	77	90	113
	E	(3)	A	30	34	37	45	60	64	78	89	97	109
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	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	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	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	28/28
Axial fans													
Fans	A	Type/n°	/	/	/	/	std/2	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/2	std/3
Air flow rate (cooling)	A	m³/h	/	/	/	/	34100	34100	32600	32600	50000	49000	49000
	E	m³/h	22000	22000	27000	27000	21100	22200	21800	22800	32500	35300	35300
Sound data (cooling)													
Sound power level	A	dB(A)	/	/	/	/	82	82	82	83	85	85	85
Sound pressure level	A	dB(A)	/	/	/	/	50	50	50	51	53	53	53
Sound power level	E	dB(A)	74	74	75	76	74	74	74	75	77	77	77
Sound pressure level	E	dB(A)	42	42	43	44	42	42	42	43	45	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 E

NRL 0330-0350 E

NRL 0500-0550-0600-0650 A/E

NRL 0700 A/E - 0750 /A/E

Mod. NRL		Vers.	0280	0300	0330	0350	0500	0550	0600	0650	0700	0750
A	(mm)	Tutte	1606	1606	1606	1606	1875	1875	1875	1875	1875	1975
B	(mm)	Tutte	1100	1100	1100	1100	1100	1100	1100	1100	1100	1500
C	(mm)	A / E / C	2450	2950	2950	2950	3010	3010	3010	3010	4010	4350
Empty weight*	(kg)	A / E	686	751	761	767	955	959	1142	1155	1323	1663

* Weight standard units without hydronic kit