

NRL 080/180 free-cooling

Air cooled chillers
Free-cooling
Outdoor unit
Scroll compressor
Axial fans
Chiller mode 50.19/118.09 tons
Free-cooling mode 33.71/ 84.11 tons

R410A



- HIGH EFFICIENCY VERSION
- LOW NOISE HIGH EFFICIENCY VERSION
- 2/4 REFRIGERANT CIRCUITS
- VERSION WITH BUILT-IN HYDRONIC KIT

VERSION AND FEATURES

MODELS

- **NRL_F** Free-cooling

VERSIONS

Without hydronic kit system side.

- **NRL_A** High efficiency
- **NRL_E** High efficiency Low noise

RECOVERY

- **NRL"A-E"** ° without recovery

OPERATING LIMIT

Cooling mode

Max. external air temperature 114,8°F
Min. temperature of water produced 21,2°F

FEATURES

- High-efficiency scroll compressor with crank case heater
- High efficiency heat exchangers with trace heating as standard
- Axial flow fans for quiet operation
- Microprocessor control system:
 - Control from the entering water temperature, with the possibility of selecting control of the leaving water temperature.
 - Condensing control in summer with a 0-10 V modulating signal based on pressure and compensated for external air temperature
 - Automatic rotation of compressors and pumps based on operating hours

- Load limiting safety control
- Low and high pressure transducers (standard for all units)
- Automatic reset of alarms before tripping
- Display in 4 languages
- Alarm history
- Metal enclosure with anti-corrosion polyester paint.

ACCESSORIES

MECHANICAL ACCESSORIES

- **AVX:** Sprung anti-vibration supports. Select the AVX model from the compatibility table.
- **GP:** Protection grille, protects the external coil from accidental knocks.

ELECTRICAL ACCESSORIES

- **AER485:** RS-485 interface for supervision systems with MODBUS protocol.
- **AERWEB300**
Accessory AERWEB allows remote control of a chiller through a common PC and an ethernet connection over a common browser; 4 versions available:
AERWEB300-6: Web server to monitor and remote control max. 6 units in RS485 network;
AERWEB300-18: Web server to monitor and remote con-

trol max. 18 units in RS485 network;
AERWEB300-6G: Web server to monitor and remote control max. 6 units in RS485 network with integrated GPRS modem;
AERWEB300-18G: Web server to monitor and remote control max. 18 units in RS485 network with integrated GPRS modem;

- **DRE:** It allows the reduction of peak power necessary for the machine during start-up phase.
Accessories can only be fitted in the factory.
- **DUALCHILLER:** Simplified control system to switch on and off, and command, two chillers (using Aermec GR3 command) in a single system, as if they were a single unit.
- **MULTICHILLER:**
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.

- **PGS:** Daily/Weekly Programmer.
Allows you to programme two time bands per day (two switch on/off cycles) and to have differentiated programming for each day of the week.
- **PRM1-PRM2 FACTORY FITTED ACCESSORY.** 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.

For more information please contact us.

ACCESSORY COMPATIBILITY

Hydronic Kit NRL	080	090	100	125	140	150	165	180
00	AVX 739	AVX 739	AVX 745	AVX 748	AVX 752	AVX 757	AVX 761	AVX 766
P3 / P4	AVX 741	AVX 744	AVX 747	AVX 750	AVX 754	AVX 758	AVX 763	AVX 763
03 / 04	AVX 740	AVX 743	AVX 746	AVX 749	AVX 753	AVX 753	AVX 762	AVX 762

UNIT CONFIGURATOR

Field DESCRIPTION 1,2,3 NRL

4, 5, 6 SIZE

080 - 090 - 100 - 125 - 140 - 150 - 165 - 180

7 COMPRESSOR

0 R410A standard compressor

8 THERMOSTATIC VALVE

- ° standard mechanical thermostatic valve (min. water out temp 39 °F)
- Y mechanical thermostatic valve (water out temp range 21 ÷ 39 °F)
- X electronic thermostatic valve (min. water out temp 39 °F, contact the factory for lower

9 MODELS

F Free-cooling

10 Heat recovery

° without recovery

11 VERSION

- A High efficiency
- E High efficiency low noise (data on demand)

12 COILS

- ° Alluminium
- R Copper
- S Copper tin plated
- V Epoxy coated

13 FANS

I Fan speed modulating for condensation control

14 SUPPLY

- 6 230/3/60 with magnet circuit breakers (only for size 100 to 180)
- 7 460/3/60 with magnet circuit breakers
- 8 575/3/60 with magnet circuit breakers

15,16 HYDRONIC KIT

- 03 tank and single high head pump
- 04 tank and single high head pump and reserve pump
- P3 single high head pump
- P4 single high head pump and reserve pump

TECHNICAL DATA

Mod. NRL CHILLER MODE	Vers.		080	090	100	125	140	150	165	180
Cooling capacity	A	Tons	50.19	56.41	62.80	81.92	86.99	103.40	109.94	118.09
Total power input	A	(kW)	69.78	86.22	102.33	126.92	142.49	214.18	169.46	194.00
Water flow rate	A	gpm	120	135	151	196	208	248	264	283
Pressure drop	A	psi	10	11	12	13	13	14	14	16
ENERGY INDICES										
EER	BTU/Wat	Alls	8,64	7,86	7,37	7,75	7,33	5,80	7,79	7,31
IPLV	BTU/Wat	Alls	10.62	10.38	10.35	10.52	10.45	9.94	10.42	10.35
Mod. NRL FREE-COOLING MODE	Vers.		080	090	100	125	140	150	165	180
Cooling capacity	FA	Tons	33,71	38,19	43,39	49,28	55,87	65,17	74,08	84,11
Total power input	FA	(kW)	8,76	8,86	8,86	13,11	13,29	13,29	17,36	17,36
Water flow rate	FA	gpm	120	135	151	196	209	248	264	283
Pressure drop	FA	psi	13	16	16	17	18	20	20	21
ENERGY INDICES										
EER	All	Watt/Watt	46,23	51,75	58,80	45,15	50,50	58,90	51,27	58,21

■ Cooling (AHRI STANDARD CONDITIONS): Outlet water temperature 6,7°C/44,6°F; Flow rate 0,043l/s per kW; External air temperature 35°C/95°F.

■ Freecooling (100%) (AHRI STANDARD CONDITIONS): Inlet water temperature 15°C/59°F; Outside air temperature 2°C/35,6°F; Compressors off.

AHRI conditions: leaving water 6,7°C / 44,6°F

flow rate 0,043 l/s per kW (full load)

Load 100% air 35°C / 95°F

Load 75% air 26,7°C / 80,06°F

Load 50% air 18,3°C / 64,94°F

Load 25% air 12,8°C / 55,04°F

Data referred to no pump version.

Mod. NRL	Vers.		080	090	100	125	140	150	165	180
SCROLL COMPRESSORS										
Quantity / circuits	All	n° / n°	4/2	4/2	4/2	4/2	4/2	4/2	5/2	6/2
Refrigerant	type	All	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Charges	A	lbs C1	74,96	76,16	76,16	99,21	99,21	105,82	145,51	141,10
	A	lbs C2	74,96	79,37	76,16	103,62	103,62	105,82	154,32	141,10
EXCHANGERS USER SIDE										
Water connections (in/out)	All	∅	3"	3"	3"	4"	4"	4"	4"	4"
STANDARD FANS °										
Numbers	A	n°	4	4	4	6	6	6	8	8
Air flow rate	A	cfm	48380	47436	47436	70564	68912	68912	93692	93692
SOUND DATA										
Sound pressure	A	dB(A)	57	57	58	61	62	62	63	63
Sound power	A	dB(A)	89	89	90	93	94	94	95	95

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 Magellan or the technical documentation available on the website www.aermec.com

Dimensions

Mod. NRL				080	090	100	125	140	150	165	180
Height	A	All	in	96	96	96	96	96	96	96	96
Width	B	All	in	87	87	87	87	87	87	87	87
Depth	C	A	in	134	134	134	167	167	167	226	226
Weight (kg)		A	lbs	2370	2500	2640	3230	3370	3480	4240	4480

