

## NRL 028/075 free-cooling

Air cooled chillers  
Free-cooling mode  
Outdoor unit  
Scroll compressor  
Axial fans  
Chiller mode 13,16/46,24 tons  
Free-cooling mode 10,22/32,71 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 chillers
- **NRL\_E** High efficiency low noise chillers

#### RECOVERY

- **NRL"A-E"** ° without recovery units

#### 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

- **VT:** Group of anti-vibration, to be installed under the base.
- **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 control max. 18 units in RS485 network;  
AERWEB300-6G: Web server to monitor and remote con-

trol 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 028	NRL 030	NRL 033	NRL 035	NRL 050	NRL 055	NRL 060	NRL 065	NRL 070	NRL 075
00 / P3 / P4	VT 17	VT 17	VT 17	VT 17	VT 13	VT 13	VT 22	VT 22	VT 22	VT 23
03 / 04	VT 13	VT 13	VT 13	VT 13	VT 10	VT 10	VT 22	VT 22	VT 22	VT 23

## UNIT CONFIGURATOR

<b>Field</b>	<b>DESCRIPTION</b>	<b>12</b>	<b>COILS</b>
<b>1,2,3</b>	<b>NRL</b>		° Alluminium
			R Copper
<b>4,5,6</b>	<b>SIZE</b>		S Copper tin plated
	028 - 030 - 033 - 035 - 050 - 055 - 060 - 065 - 070 - 075		V Epoxy coated
<b>7</b>	<b>COMPRESSOR</b>	<b>13</b>	<b>FANS</b>
<b>0</b>	R410A standard compressor		I Fan speed modulating for condensation control
<b>8</b>	<b>THERMOSTATIC VALVE</b>	<b>14</b>	<b>SUPPLY</b>
	° Standard mechanical thermostatic valve with produced water up to 39,2°F / +4°C		<b>6</b> 230/3/60 With magnet circuit breakers
<b>Y</b>	Mechanical thermostatic valve with produced water from 39,2°F / +4°C to -42,8°F / -6°C		<b>7</b> 460/3/60 With magnet circuit breakers
<b>X</b>	Electronic thermostatic valve min. Water out temp 39,2°F / +4°C (contact the factory for lower temperature)		<b>8</b> 575/3/60 With magnet circuit breakers
<b>9</b>	<b>MODELS</b>	<b>15,16</b>	<b>HYDRONIC KIT</b>
<b>F</b>	Free-cooling		<b>00</b> Without hydronic kit
<b>10</b>	<b>HEATHING RECOVERY</b>		<b>03</b> Water storage tank and high-head single pump
	° Without Recovery		<b>04</b> Water storage tank, with high-head pump and reserve pump
<b>11</b>	<b>VERSION</b>		<b>P3</b> Without water storage tank, with high-head pump
	<b>A</b> High efficiency (not available for size 028 ÷ 035)		<b>P4</b> Without water storage tank, with high-head pump and reserve pump
	<b>E</b> High efficiency low noise (data on demand for size 050 ÷ 075)		

## TECHNICAL DATA

Mod. NRL			028	030	033	035	050	055	060	065	070	075
<b>CHILLER MODE</b>												
Cooling capacity	FA	tons	-	-	-	-	23,84	27,23	34,06	37,91	41,17	46,24
	FE	tons	13,16	15,18	17,44	21,39	-	-	-	-	-	-
Total input power	FA	kW	-	-	-	-	33,30	40,02	48,02	56,23	64,65	65,05
	FE	kW	16,38	19,52	22,32	29,95	-	-	-	-	-	-
Water flow rate	FA	gpm	-	-	-	-	57	65	82	91	99	111
	FE	gpm	32	36	42	51	-	-	-	-	-	-
Pressure drops	FA	p.s.i.	-	-	-	-	7	9	10	10	12	12
	FE	p.s.i.	6	5	7	8	-	-	-	-	-	-
<b>ENERGY INDICES</b>												
EER	FA	BTU/h/W	-	-	-	-	8,60	8,17	8,52	8,10	7,65	8,54
	FE	BTU/h/W	9,65	9,34	9,39	8,58	-	-	-	-	-	-
IPLV	FA	BTU/h/W	-	-	-	-	12,02	11,92	12,56	12,19	11,87	11,51
	FE	BTU/h/W	11,85	11,82	11,89	11,48	-	-	-	-	-	-
<b>FREE COOLING MODE</b>												
Cooling capacity	FA	tons	-	-	-	-	18,48	19,39	25,19	29,82	30,68	32,71
	FE	tons	10,22	13,21	15,47	16,55	-	-	-	-	-	-
Total power input	FA	kW	-	-	-	-	4,67	4,67	6,59	6,66	6,66	6,66
	FE	kW	2,06	2,06	2,58	2,58	-	-	-	-	-	-
Water flow rate	FA	gpm	-	-	-	-	57	65	82	91	99	111
	FE	gpm	32	36	42	51	-	-	-	-	-	-
Pressure drops	FA	psi	-	-	-	-	9	12	14	15	17	19
	FE	psi	9	7	9	11	-	-	-	-	-	-
EER	FA	BTU/h/W	-	-	-	-	47,55	49,89	45,91	53,79	55,34	59,00
	FE	BTU/h/W	59,58	77,04	72,02	77,06	-	-	-	-	-	-

■ **Cooling (AHRI STANDARD CONDITIONS):** Outlet water temperature 6,7°C/44,6°F; Flow rate 0,043 l/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			028	030	033	035	050	055	060	065	070	075	
<b>SCROLL COMPRESSORS</b>													
Compressors	FA/FE	n°	2	2	2	2	3	3	4	4	4	4	
Circuits	FA/FE	n°	2	2	2	2	2	2	2	2	2	2	
Refrigerant	FA/FE	type	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	
Charges	C1	FA/FE	lb	21,83	21,83	21,83	21,83	27,56	26,46	29,76	29,76	30,86	49,16
	C2	FA/FE	lb	21,83	21,83	21,83	21,83	20,94	21,83	29,76	29,76	30,86	51,81
<b>EXCHANGERS USER SIDE</b>													
Water connections (in/out)	FA/FE	∅	2"½	2"½	2"½	2"½	2"½	2"½	2"½	2"½	2"½	2"½	
<b>STANDARD FANS °</b>													
Numbers	FA/FE	n°	6	6	8	8	2	2	3	3	3	3	
Air flow rate	FA/FE	cfm	14750	14514	18172	18172	23836	23836	37170	36580	36580	36580	
<b>SOUND DATA</b>													
Sound pressure	FA	dB(A)	-	-	-	-	50	50	51	52	55	55	
	FE	dB(A)	42	42	43	44	44	44	44	45	50	50	
Sound power	FA	dB(A)	-	-	-	-	82	82	83	84	85	87	
	FE	dB(A)	74	74	75	76	76	76	76	77	77	82	

**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.

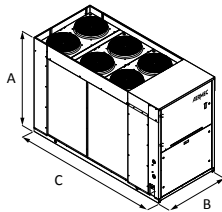
**Sound pressure:** Sound pressure in free field, at 10 m distance from the external surface of the unit (in accordance with UNI EN ISO 3744).

**Note:** For more information, refer to the selection program Magellan or the technical documentation available on the website [www.aermec.com](http://www.aermec.com)

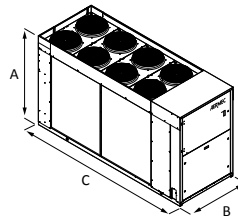
## Dimensions

Mod. NRL				028	030	033	035	050	055	060	065	070	075
Height	A	FA-FE	in	63	63	63	63	74	74	74	74	74	77
Width	B	FA-FE	in	43	43	43	43	43	43	43	43	43	59
Depth	C	FA-FE	in	116	116	116	116	126	126	156	156	156	171
Empty weight	-	FA-FE	lbs	1847	2002	2037	2066	2449	2467	3020	3197	3241	3946

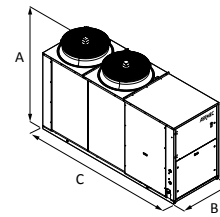
- NRL 028 FE
- NRL 030 FE



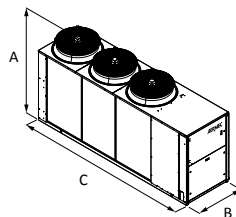
- NRL 033 FE
- NRL 035 FE



- NRL 050 FA
- NRL 055 FA



- NRL 060 FA
- NRL 065 FA
- NRL 070 FA



- NRL 075 FA

