

NRL Free Cooling

Air cooled chiller with axial flow fans
Cooling capacity from 58 kW up to 174 kW

R410A



- **HIGH EFFICIENCY VERSION**
- **SILENCED HIGH EFFICIENCY VERSION**
- **VERSION WITH CIRCULATION PUMP**
- **2 COOLING CIRCUITS**
- **VERSION WITH CIRCULATION PUMP AND STORAGE TANK**

Characteristics

- Available in 9 different sizes
- Refrigerant R410A.
- 2 cooling circuits
- High efficiency even with partial loads
- Heat exchangers optimised to exploit the excellent heat transfer characteristics of the R410A
- High-efficiency scroll compressors
- Axial flow fans with reduced noise level
- Solid construction with polyester anticorrosion painted finish
- Cooling mode up to 44° C
- Operation modes:
 - Free-Cooling only: is the most economical way to use the unit. Only the fans operate in modulation of speed, the cooling power is fully recovered from the external air
 - mixed Free-Cooling and compressors: the cooling power recovered from the external air is integrated with the total or partial operation of the compressors
- compressors only: the cooling capacity is provided entirely by the compressors (standard operation of a chiller)
- Versions available:
 - High efficiency
 - Silenced high efficiency
 - Glycole-free
 - With pumping assembly (high-head, with/without reserve pump)
 - Versions with pumping assembly and 300 litre tank (500 litres for the 750 size), complete with water filter, flow switch, expansion tank, charging unit and antifreeze electric heater
 - Electronic thermostatic valve
 - Enlarged fans
- Microprocessor control system of the compressors and fans for the management of the three operating modes (Free-Cooling only, mixed Free-Cooling and compressors and compressors only)
- Display of all operating parameters in 4 languages.
- Simplified remote control panel with shielded cable up to 50 m. Performs the basic checks of the unit with alarm warnings.
- High efficiency air-water exchanger (Free-Cooling) with smooth tubes and corrugated fins
- Three-way valve located on the water side for water switch-over on the Free-Cooling coils
- High and low pressure transducers (standard for all versions)
- Fan speed adjustment device for low air temperature operation. Manages the cooling capacity in the Free-Cooling mode

Accessories

- **AER485:** RS-485 interface for supervision systems with MODBUS protocol.
- **VT:** anti-vibration support, to be fitted below the sheet metal base of the unit.
- **DRE:** Current soft starter device (about 30% reduction for single-circuit-units, 26% for two-circuit-units, 22% for three-circuit-units) Only available for 400V-3-phase power supply. It must be factory set
- **GP:** Protection grille, protects the external coil from accidental knocks.
- **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.
- **RIF:** Capacitor device . Connected in parallel to the motor winding. It allows to maintain a constant COSd at 0.95 and also allows an input current reduction (about 10%). It must be factory set when the unit is manufactured
- **AERWEB30:** The AERWEB device allows remote control of a chiller via a serial link from a standard PC. Using additional modules, the device allows to control the chiller via the telephone network, using the AERMODEM accessory; or via the GSM network, using the AERMODEMGSM accessory. AERWEB can pilot up to 9 chillers, but each of these must be equipped with the AER485 or AER485P2 accessory.
- **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.
- **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.

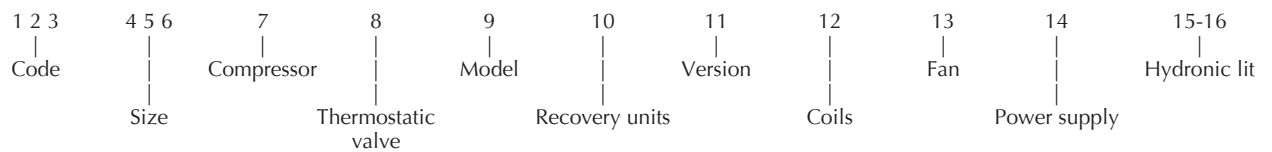
Compatibility of accessories

Mod. NRL	Vers.	280	300	330	350	500	550	600	650	700
AER485	Tutte	✓	✓	✓	✓	✓	✓	✓	✓	✓
DUALCHILLER	Tutte	✓	✓	✓	✓	✓	✓	✓	✓	✓
MULTICHILLER	Tutte	✓	✓	✓	✓	✓	✓	✓	✓	✓
PGS	Tutte	✓	✓	✓	✓	✓	✓	✓	✓	✓
AERWEB30	Tutte	✓	✓	✓	✓	✓	✓	✓	✓	✓
VT	00 - P3 - P4	17	17	17	17	13	13	22	22	22
	03 - 04	13	13	13	13	10	10	22	22	22
DRE	Tutte	281	301	331	351	501	551	601	651	701
GP	Tutte	4	4	4	4	2(x2)	2(x2)	2(x3)	2(x3)	2(x3)
RIF	Tutte	50	50	50	51	52	52	53	53	53
PRM1-PRM2	Tutte	✓	✓	✓	✓	✓	✓	✓	✓	✓

Choice of Unit

By suitably combining the numerous options available, it is possible to configure each model in such a way as to meet the most particular of system requirements.

Field configurator:



Code:

NRL

Size:

028, 030, 033, 035, 050, 055, 060, 065, 070

Compressor:

0 - Compressori standard ad R410A

Thermostatic valve:

- ° - Standard mechanical thermostatic valve
- Y - Mechanical thermostatic valve with processed water from +4°C down to -6 °C
- X - Electronic thermostatic valve also with processed water down to -6°C

Model:

- F - Free-cooling
- B - Free-cooling glycol free

Heat recovery units:

- ° - Without recovery units

Version:

- A - High efficiency
- E - High efficiency, silenced version

Coil:

- ° - Aluminium
- R - Copper
- S - Tinned copper
- V - In painted aluminium (epoxy paint)

Fans:

- ° - Standard
- M - Oversized

Power supply:

- ° - 400V/3N/50Hz with thermomagnetic switches
- 1 - 230V/3/50Hz with thermomagnetic switches
- 2 - 500V/3/50Hz with thermomagnetic switches
(contact the company head office for versions with DCPX)

Hydronic kit: (options listed are available only for models "F" free cooling)

- 00 - without storage tank
- 03 - high-head storage tank and single pump
- 04 - high-head storage tank and reserve pump
- P3 - without storage tank, with high-head pump
- P4 - without storage tank, with high-head pump and reserve pump

Warning:

– the standard options are shown by the symbol °;

Example of the commercial code: NRL0350°F°A°°°00

This is a size 035 NRL unit with standard mechanical thermostatic valve, Free-cooling model, high efficiency, with aluminium condensing coils, standard fans, electrical panel for compressors with 400V 3N~ 50Hz motors and without storage tank.

Technical data

			280	300	330	350	500	550	600	650	700
Cooling capacity	kW	A	-	-	-	-	99,0	104,0	132,0	144,0	159,0
		E	59,0	65,0	74,0	82,0	91,0	95,0	119,0	130,0	147,0
Total power input	kW	A	-	-	-	-	33,7	37,3	44,5	51,7	60,8
		E	18,1	21,8	24,0	28,3	37,0	40,0	49,2	59,8	65,8
Water flow rate	l/h	A	-	-	-	-	17030	17890	22700	24770	27350
		E	10150	11180	12730	14100	15650	16340	20470	22360	25280
Total pressure drop	kPa	A	-	-	-	-	60	69	78	73	87
		E	63	53	66	58	51	58	63	60	74
EER	W/W	A	-	-	-	-	2,93	2,79	2,96	2,79	2,62
		E	3,26	2,98	3,08	2,90	2,46	2,37	2,42	2,17	2,23
Input current	A	A	-	-	-	-	61	65	79	84	101
		E	32	38	41	51	67	70	87	97	109
Cooling capacity	kW	A/E	58,0	68,0	83,0	85,0	103,0	104,0	137,0	159,0	174,0
Total power input	kW	A/E	1,05	1,05	1,35	1,35	2,65	2,65	3,9	3,9	5,4
Water flow rate	l/h	A	-	-	-	-	17030	17890	22700	24770	27350
		E	10150	11180	12730	14100	15650	16340	20470	22360	25280
Total pressure drop	kPa	A	-	-	-	-	79,2	90,1	107,9	107,2	124,1
		E	95,6	69,1	85,8	82,2	67	75	88	87	106
EER	W/W	A/E	55,24	64,76	61,48	62,96	38,87	39,25	35,13	40,77	32,22
Input current	A	A/E	4,6	4,6	5,9	5,9	5,9	5,9	8,7	8,7	11,6
Maximum current (FLA)	A	A/E	46	53	58	63	76	81	100	112	122
Starting current (LRA)	A	A/E	155	184	190	200	214	220	232	243	261
Compressors	n°/n°	A/E	2/2	2/2	2/2	2/2	3/2	3/2	4/2	4/2	4/2
Sound pressure	db(A)	A	-	-	-	-	50	50	51	52	55
		E	42	42	43	44	44	44	44	45	50
Plumbing connections (00)	Ø	A/E	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2	2"1/2
Motor input power	kW		0,9	0,9	1,2	1,2	2,5	2,5	3,75	3,75	5,25
Motor input current	A		3,9	3,9	5,2	5,2	5,6	5,6	8,4	8,4	11,3
Air flow rate	m ³ /h	A	-	-	-	-	32500	32500	50000	49000	56000
		E	20000	19000	25000	25000	23400	24100	33500	35300	47600
Hydronic kit for models only "F" Free Cooling											
Storage tank capacity	l	A/E	300	300	300	300	300	300	300	300	300
Pump											
Total power input	kW	A/E	1,5	1,5	1,5	1,5	1,85	1,85	3	3	3
Input current	A	A/E	3,6	3,6	3,6	3,6	5	5	5,7	5,7	5,7
Useful head lowe head pumps	kPa	A	-	-	-	-	144	132	147	137	99
		E	124	132	110	118	160	151	174	169	131
Useful head High head pumps	kPa	A	-	-	-	-	123	109	114	122	77
		E	88	115	88	91	142	131	147	156	115

Performance values refer to the following conditions:

Cooling:

- water outlet temperature 7 °C
- outside air temp. 35 °C
- Dt = 5 °C.

Cooling in Free-Cooling mode:

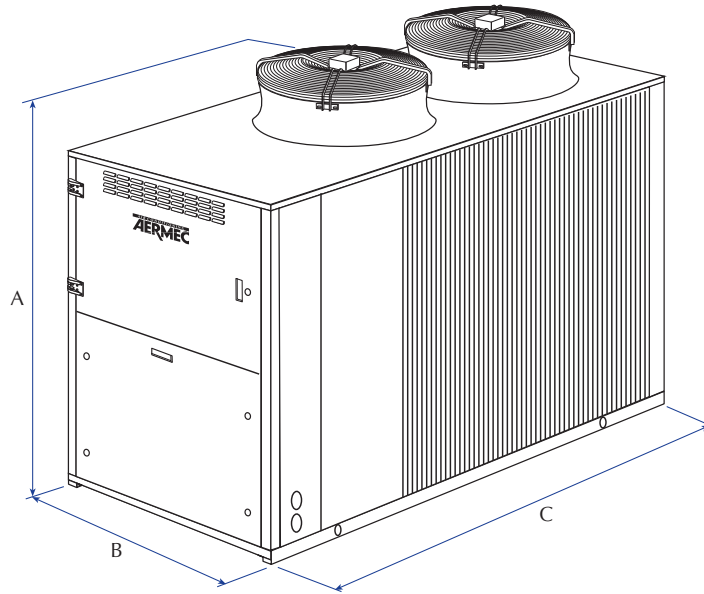
- water inlet temperature 15°C;
- outside air temperature 2°C;
- nominal water flow rate;
- compressors off.

Sound pressure measured in free field conditions, in cooling mode, at distance of 10m and direction factor = 2.

In accordance with the ISO 3744 standard

- Power supply voltage: 400 V

Dimensions (mm)



Mod.NRL Free Cooling		Vers.	280	300	330	350	500	550	600	650	700	
Height	(mm)	A	A/E	1606	1606	1606	1606	1875	1875	1875	1875	
Width	(mm)	B	A/E	1100	1100	1100	1100	1100	1100	1100	1100	
Depth	(mm)	C	FA/FE	2950	2950	2950	2950	3200	3200	3950	3950	3950
			BA/BE	2950	2950	2950	3200	3200	3950	3950	3950	3950
Weight	(kg)	A	A/E 00	838	908	913	922	1079	1083	1386	1460	1540

NRL Free-Cooling Air cooled chillers with axial flow fans Cooling capacity from 177 kW up to 452 kW

R410A



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- **VERSION WITH CIRCULATION PUMP**
- **2 COOLING CIRCUITS**
- **VERSION WITH CIRCULATION PUMP AND STORAGE TANK**

Characteristics

- Available in 9 different sizes
- Refrigerant R410A.
- 2 cooling circuits
- High efficiency even with partial loads
- Heat exchangers optimised to exploit the excellent heat transfer characteristics of the R410A
- High-efficiency scroll compressors
- Axial flow fans with reduced noise level
- Solid construction with polyester anticorrosion painted finish
- Cooling mode up to 44° C
- Operation modes:
 - Free-Cooling only: is the most economical way to use the unit. Only the fans operate in modulation of speed, the cooling power is fully recovered from the external air
 - mixed Free-Cooling and compressors: the cooling power recovered from the external air is integrated with the total or partial operation of the compressors
- compressors only: the cooling capacity is provided entirely by the compressors (standard operation of a chiller)
- Versions available:
 - High efficiency
 - Silenced high efficiency
 - Glycole-free
 - With pumping assembly (high-head, with/without reserve pump)
 - Versions with pumping assembly and 700 litre tank (500 litres for the 750 size), complete with water filter, flow switch, expansion tank, charging unit and antifreeze electric heater
 - Electronic thermostatic valve
 - Inverter fans
- Microprocessor control system of the compressors and fans for the management of the three operating modes (Free-Cooling only, mixed Free-Cooling and compressors and compressors only)
- Display of all operating parameters in 4 languages.
- Simplified remote control panel with shielded cable up to 50 m. Performs the basic checks of the unit with alarm warnings.
- High efficiency air-water exchanger (Free-Cooling) with smooth tubes and corrugated fins
- Three-way valve located on the water side for water switch-over on the Free-Cooling coils
- High and low pressure transducers (standard for all versions)
- Fan speed adjustment device for low air temperature operation. Manages the cooling capacity in the Free-Cooling mode

Accessories

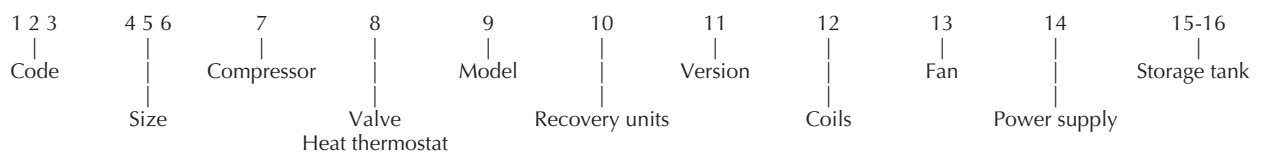
- **AER485:** RS-485 interface for supervision systems with MODBUS protocol.
- **VT:** anti-vibration support, to be fitted below the sheet metal base of the unit.
- **AVX:** sprung anti-vibration supports. Select the AVX model from the compatibility table.
- **DRE:** Current soft starter device (about 30% reduction for single-circuit-units, 26% for two-circuit-units, 22% for three-circuit-units) Only available for 400V-3-phase power supply. **It must be factory set**
- **GP:** Protection grille, protects the external coil from accidental knocks.
- **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.
- **RIF:** Capacitor device . Connected in parallel to the motor winding. It allows to maintain a constant COS ϕ at 0.95 and also allows an input current reduction (about 10%)
- It must be factory set when the unit is manufactured**
- **AERWEB30:** The AERWEB device allows remote control of a chiller via a serial link from a standard PC. Using additional modules, the device allows to control the chiller via the telephone network, using the **AER-MODEM** accessory; or via the GSM network, using the **AERMODEMGSM** accessory. AERWEB can pilot up to 9 chillers, but each of these **must** be equipped with the AER485 or AER485P2 accessory.
- **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.
- **PRM1 e PRM2:** ACTORY 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 of accessories								
Mod. NRL	Vers.	750	800	900	1000	1250	1400	1500	1650	1800
AER485	All	✓	✓	✓	✓	✓	✓	✓	✓	✓
DUALCHILLER	All	✓	✓	✓	✓	✓	✓	✓	✓	✓
MULTICHILLER	All	✓	✓	✓	✓	✓	✓	✓	✓	✓
PGS	All	✓	✓	✓	✓	✓	✓	✓	✓	✓
AERWEB30	All	✓	✓	✓	✓	✓	✓	✓	✓	✓
VT	00 - P3 - P4	23								
	03 - 04	23								
	00		739	739	745	748	752	757	761	766
AVX	P3 - P4		741	744	747	750	754	758	763	763
	03 - 04		740	743	746	749	753	753	762	762
DRE	All	751	801	901	1001	1251	1401	1501	1651	1801
GP	All	10 (x3)	260	260	260	350	350	350	500	500
RIF	All	53	88	90	92	92	93	94	94	94
PRM1-PRM2	All	✓	✓	✓	✓	✓	✓	✓	✓	✓

Choice of Unit

By suitably combining the numerous options available, it is possible to configure each model in such a way as to meet the most particular of system requirements.

Field configurator:



Code:

NRL

Size:

075, 080, 090, 100, 125, 140, 150, 165, 180

Compressors:

0 - R410A standard compressors

Thermostatic valve:

- ° - Standard mechanical thermostatic valve
- Y - Mechanical thermostatic valve with processed water from +4°C down to -6 °C
- X - Electronic thermostatic valve also with processed water down to -6°C

Model:

- F - Free-cooling
- B - Free-cooling glycol free

Heat recovery units

- ° - Without recovery units
- D - Desuperheater

Version:

- A - High efficiency
- E - High efficiency, silenced version

Batteries:

- ° - Aluminium
- R - Copper
- S - Tinned copper
- V - In painted copper and aluminium (epoxy paint)

Fans:

- ° - Standard
- J - Inverter

Power supply:

- ° - 400V 3N~ 50Hz with thermomagnetic switches
- 2 - 500V 3~ 50Hz with thermomagnetic switches (contact the company head office for versions with DCPX)

Storage tank:

- 00 - without storage tank
- 03 - high-head storage tank and single pump
- 04 - high-head storage tank and reserve pump
- P3 - without storage tank, with high-head pump
- P4 - without storage tank, with high-head pump and reserve pump

Warning:

– the standard options are shown by the symbol °;

Example of the commercial code: **NRL075°F°A°°00**

This is a size 075 NRL unit with standard mechanical thermostatic valve, Free-cooling model, high efficiency, with aluminium condensing coils, standard fans, electrical panel for compressors with 400V 3N~ 50Hz motors and without storage tank.

Technical data

Mod. NRL Free Cooling		Vers.	750	800	900	1000	1250	1400	1500	1650	1800
Cooling capacity	(kW)	A	191	210	229	247	310	337	364	430	452
		E	177	196	216	228	289	310	331	400	421
Total power input	(kW)	A	69.6	75	89	103	114	136	157	159	175
		E	76.4	80	93	109	120	145	169	169	186
Water flow rate	(l/h)	A	32850	36120	39390	42480	53320	57960	62610	73960	77740
		E	30440	33730	37110	39210	49670	53260	56850	68770	72330
Total pressure drop	(kPa)	A	103	77	82	81	92	98	83	104	107
		E	89	68	73	69	80	84	70	90	93
EER	(W/W)	A	2.75	2.81	2.58	2.41	2.72	2.48	2.31	2.70	2.58
		E	2.32	2.46	2.33	2.09	2.40	2.14	1.95	2.37	2.26
Input current	(A)	A	123	144	169	195	208	252	296	298	317
		E	135	149	174	203	217	265	312	310	332
Cooling capacity	(kW)	A	187	182	206	229	257	291	326	399	440
		E		178	201	223	263	288	314	396	443
Total power input	(kW)	A		5.4	7.5	7.5	11.0	11.0	11.0	14.5	14.5
		E									
Water flow rate	(l/h)	A	32850	36120	39390	42840	53320	57960	62610	73960	77740
		E	30440	33730	37110	39210	49670	53260	56850	68770	72330
Total pressure drop	(kPa)	A	156.3	105	110	110	123	131	117	140	145
		E	134	93	99	94	106	110	94	117	120
EER	(W/W)	A	34.63	24.30	27.48	30.53	23.34	26.47	29.61	27.48	30.32
		E		23.76	26.76	29.76	23.89	26.19	28.50	27.33	30.58
Input current	(A)	A/E	11.6	15	15	15	22	22	22	30	30
Maximum current (FLA)	(A)	A/E	144	177	199	221	274	303	332	373	406
Starting current (LRA)	(A)	A/E	320	352	408	430	542	512	541	641	674
Compressors	(no./no.)	A/E	4 / 2	4 / 2	4 / 2	4 / 2	4/2	5/2	6/2	6/2	6/2
♪ Sound pressure	db(A)	A	55	56.5	56.5	56.5	59.5	59.0	58.5	60.0	62.0
		E	50	50.5	50.5	50.5	53.5	53.0	52.5	54.00	56.0
Plumbing connections	(Ø)	(00)	2"1/2	3"	3"	3"	4"	4"	4"	4"	4"
Air flow rate	(m3/h)	A	56000	79600	78800	78000	115200	114000	112800	155200	153600
		E	46500	55700	55200	55800	80600	79800	80700	108600	109800
Hydronic kit											
Tank capacity	(l)	A/E	500	700	700	700	700	700	700	700	700
Input power pump motor	(kW)	A/E	5.5	6.5	6.5	6.5	8.6	8.6	8.6	12.3	12.3
Input current pump motor	(A)	A/E	11	11.0	11.0	11.0	14.6	14.6	14.6	21.2	21.2
Useful head chiller	(kPa)	A	177	220	210	204	242	223	224	192	182
		E	200	233	222	223	262	250	255	214	206
Useful head free-cooling	(kPa)	A	119	194	184	177	214	195	195	165	155
		E	150	211	202	203	245	234	242	197	189

Performance values refer to the following conditions:

■ Cooling:

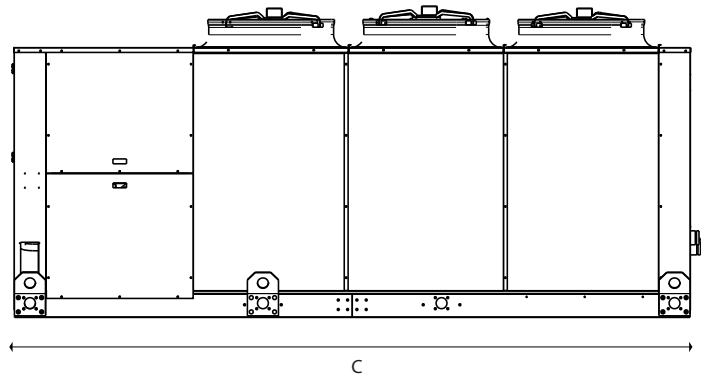
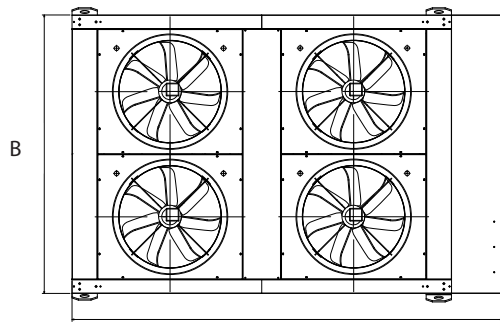
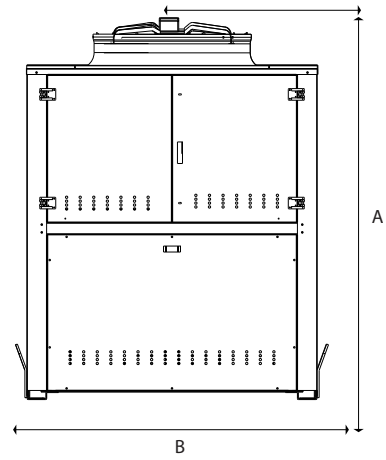
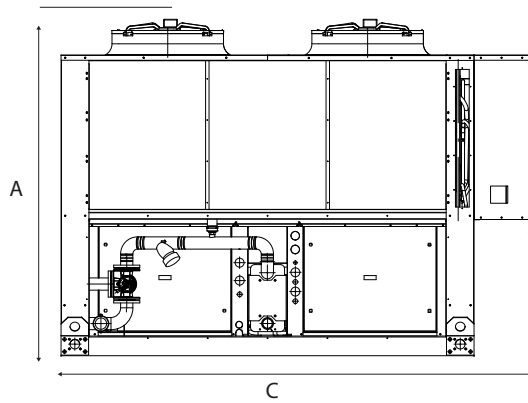
- water outlet temperature 7 °C
- outside air temp. 35 °C
- $\Delta t = 5$ °C.

■ Cooling in Free-Cooling mode:

- water inlet temperature 15°C;
- outside air temperature 2°C;
- nominal water flow rate;
- compressors off.

- ♪ Sound pressure measured in free field conditions, in cooling mode, at distance of 10m and direction factor = 2.
In accordance with the ISO 3744 standard
- Power supply voltage: 400 V

Dimensions (mm)



Mod.NRL Free Cooling	Vers.	750	800	900	1000	1250	1400	1500	1650	1800
Height (mm) A	A/E	1955	2450	2450	2450	2450	2450	2450	2450	2450
Width (mm) B	A/E	1500	2200	2200	2200	2200	2200	2200	2200	2200
Depth (mm) C	A/E	4350	3400	3400	3400	4250	4250	4250	5750	5750
Weight when empty (kg) A	A/E	1889	2470	2650	2840	3120	3380	3660	4220	4420

The technical data in this document are not binding. Aermec S.p.A. shall have the right to introduce at any time whatever modifications deemed necessary for the improvement of the product.

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www.aermec.com

NRL Free-Cooling Air cooled chiller with axial flow fans Cooling capacity from 446 kW up to 904 kW

R410A



- **HIGH EFFICIENCY VERSION**
- **SILENCED HIGH EFFICIENCY VERSION**
- **VERSION WITH CIRCULATION PUMP**
- **4 COOLING CIRCUITS**
- **VERSION WITH CIRCULATION PUMP AND STORAGE TANK**

Characteristics

- Available in 7 different sizes
- Refrigerant R410A.
- 4 cooling circuits
- High efficiency even with partial loads
- Heat exchangers optimised to exploit the excellent heat transfer characteristics of the R410A
- High-efficiency scroll compressors
- Axial flow fans with reduced noise level
- Solid construction with polyester anticorrosion painted finish
- Cooling mode up to 44° C
- Operation modes:
 - Free-Cooling only: is the most economical way to use the unit. Only the fans operate in modulation of speed, the cooling power is fully recovered from the external air
 - mixed Free-Cooling and compressors: the cooling power recovered from the external air is integrated with the total or partial operation of the compressors
 - compressors only: the cooling capacity is provided entirely by the compressors (standard operation of a chiller)
- Versions available:
 - High efficiency
 - Silenced high efficiency
 - Glycole-free
 - With pumping assembly (high-head, with/without reserve pump)
 - Versions with pumping assembly and 700 litre tanks complete with water filter, flow switch, expansion tank, a charging unit and antifreeze electric heater
 - Electronic thermostatic valve
 - Inverter fans
- Microprocessor control system of the compressors and fans for the management of the three operating modes (Free-Cooling only, mixed Free-Cooling and compressors and compressors only)
- Display of all operating parameters in 4 languages.
- Simplified remote control panel with shielded cable up to 50 m. Performs the basic checks of the unit with alarm warnings.
- High efficiency air-water exchanger (Free-Cooling) with smooth tubes and corrugated fins
- Three-way valve located on the water side for water switch-over on the Free-Cooling coils
- High and low pressure transducers (standard for all versions)
- Fan speed adjustment device for low air temperature operation. Manages the cooling capacity in the Free-Cooling mode

Accessories

- **AER485P1:** RS-485 interface for supervision systems with MODBUS protocol.
- **AVX:** sprung anti-vibration supports. Select the AVX model from the compatibility table.
- **GP:** Protection grille protects the external coil from accidental knocks.
- **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.
- **RIF:** Capacitor device . Connected in parallel to the motor winding. It allows to maintain a constant COS ϕ at 0.95 and also allows an input current reduction (about 10%).
It must be factory set when the unit is manufactured.
- **AERWEB30:** The AERWEB device allows remote control of a chiller via a serial link from a standard PC. Using additional modules, the device allows to control the chiller via the telephone network, using the **AER-MODEM** accessory; or via the GSM network, using the **AERMODEMGSM** accessory. AERWEB can pilot up to 9 chillers, but each of these **must** be equipped with the AER485 or AER485P2 accessory.
- **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.

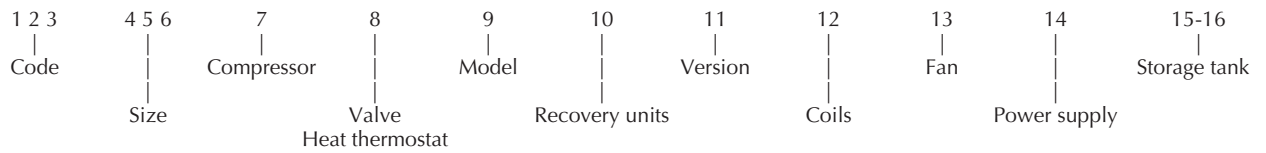
Compatibility of accessories

Mod. NRL	Vers.	2000	2250	2500	2800	3000	3300	3600
AER485P1	All	✓	✓	✓	✓	✓	✓	✓
PGS	All	✓	✓	✓	✓	✓	✓	✓
AERWEB30	All	✓	✓	✓	✓	✓	✓	✓
TRX1	All	✓	✓	✓	✓	✓	✓	✓
GP	A - E	260 x 2	260 - 350	350 x 2	350 x 2	350 x 2	500 x 2	500 x 2
RIF	A - E	RIFNRL2000	RIFNRL2250	RIFNRL2500	RIFNRL2800	RIFNRL3000	RIFNRL3300	RIFNRL3600
PRM1/PRM2	All	✓	✓	✓	✓	✓	✓	✓
AVX (00)	A - E	770	776	782	788	794	801	801
AVX (03-04)	A - E	771	777	783	789	795	802	802
AVX (P3-P4)	A - E	772	778	784	790	796	803	803

Choice of Unit

By suitably combining the numerous options available, it is possible to configure each model in such a way as to meet the most particular of system requirements.

Field configurator:



Code:

NRL

Size:

200, 225, 250, 280, 300, 330, 360

Compressors:

0 - R410A standard compressors

Thermostatic valve:

- ° - Standard mechanical thermostatic valve
- Y - Mechanical thermostatic valve with processed water from +4°C down to -6 °C
- X - Electronic thermostatic valve also with processed water down to -6°C

Model:

- F - Free-cooling
- B - Free-cooling glycol free

Heat recovery units

- ° - Without recovery units
- D - Desuperheater

Version:

- A - High efficiency
- E - High efficiency, silenced version

Batteries:

- ° - Aluminium
- R - Copper
- S - Tinned copper
- V - In painted copper and aluminium (epoxy paint)

Fans:

- ° - Standard
- J - Inverter

Power supply:

- ° - 400V 3~ 50Hz with thermomagnetic switches
- 2 - 500V 3~ 50Hz with thermomagnetic switches

Storage tank:

- 00 - without storage tank
- 03 - high-head storage tank and single pump
- 04 - high-head storage tank and reserve pump
- P3 - without storage tank, with high-head pump
- P4 - without storage tank, with high-head pump and reserve pump

Warning:

– the standard options are shown by the symbol °;
Example of the commercial code: **NRL200°F°A°°°00**

This is a size 200 NRL unit with standard mechanical thermostatic valve, Free-cooling model, high efficiency, with aluminium condensing coils, standard fans, electrical panel for compressors with 400V 3~ 50Hz motors and without storage tank.

Technical data

Mod. NRL Free Cooling		Vers.	2000	2250	2500	2800	3000	3300	3600
Cooling capacity	(kW)	A	494	557	620	674	728	860	904
		E	456	517	578	620	662	800	842
Total power input	(kW)	A	206	217	228	272	314	318	350
		E	218	229	240	290	338	338	372
Water flow rate	(l/h)	A	84970	95800	106640	115930	125220	147920	155490
		E	78430	88920	99420	106640	113860	137600	144820
Total pressure drop	(kPa)	A	81	92	92	98	83	104	107
		E	69	80	80	84	70	90	93
EER	(W/W)	A	2.40	2.57	2.72	2.48	2.32	2.70	2.58
		E	2.09	2.26	2.41	2.14	1.96	2.37	2.26
Input current	(A)	A	389	403	417	504	592	597	634
		E	407	421	435	529	624	621	665
Cooling capacity	(kW)	A	458	486	514	582	652	798	880
		E	446	486	526	576	627	792	887
Total power input	(kW)	A/E	15	19	22	22	22	29	29
Water flow rate	(l/h)	A	85115	95903	106691	115871	125052	147870	155459
		E	78413	88871	99330	106518	113706	137540	144658
Total pressure drop	(kPa)	A	110	123	123	131	117	140	145
		E	94	107	107	111	97	122	126
EER	(W/W)	A	30.53	25.58	23.36	26.45	29.64	27.52	30.34
		E	29.73	25.58	23.91	26.18	28.50	27.31	30.59
Input current	(A)	A/E	30	37	44	44	44	59	59
Maximum current (FLA)	(A)	A/E	442	495	548	606	664	747	813
Starting current (LRA)	(A)	A/E	651	763	816	815	873	1015	1081
Compressors	(no./no.)	A/E	8/4	8/4	8/4	10/4	12/4	12/4	12/4
♪ Sound pressure	db(A)	A	59.5	61.5	62.5	62	61.5	63	65
		E	53.5	55.3	56.5	56.0	55.5	57.0	59.0
Plumbing connections	(Ø)	(00)	3"	3 1/4"	4"	4"	4"	4"	4"
Air flow rate	(m³/h)	A	156000	193200	230400	228000	225600	310400	307200
		E	111600	136400	161200	159600	161400	217200	219600
NRL Free Cooling hydronic kit									
StorageTank capacity	(l)	A/E	2x700	2x700	2x700	2x700	2x700	2x700V	2x700
Input power pump motor	(kW)	A/E	13.0	6.5+8.6	17.2	17.2	17.2	24.7	24.7
Input current pump motor	(A)	A/E	22.0	11+14.6	29.2	29.2	29.2	42.4	42.4
Useful head chiller	(kPa)	A	204	242	242	223	224	192	182
		E	223	262	262	250	255	214	206
Useful head free-cooling	(kPa)	A	177	214	214	195	195	165	155
		E	199	239	239	226	231	191	182

Performance values refer to the following conditions:

■ Cooling:

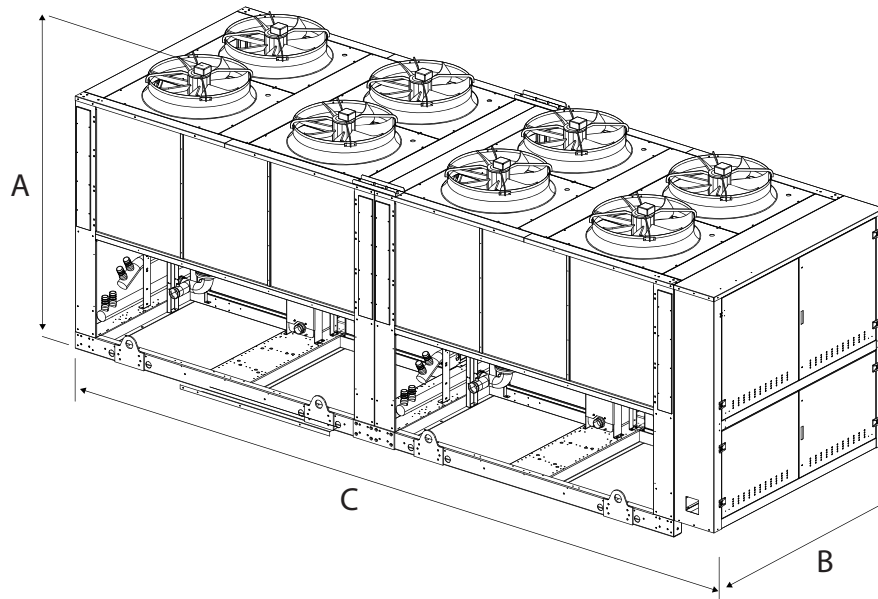
- water outlet temperature 7 °C
- outside air temp. 35 °C
- Δt = 5 °C.

■ Cooling in Free-Cooling mode:

- water inlet temperature 15°C;
- outside air temperature 2°C;
- nominal water flow rate;
- compressors off.

- ♪ Sound pressure measured in free field conditions, in cooling mode, at distance of 10m and direction factor = 2. In accordance with the ISO 3744 standard
- Power supply voltage: 400 V

Dimensions (mm)



Mod.NRL Free Cooling	Vers.	2000	2250	2500	2800	3000	3300	3600
Height (mm) A	A/E	2450	2450	2450	2450	2450	2450	2450
Width (mm) B	A/E	2200	2200	2200	2200	2200	2200	2200
Depth (mm) C	A/E	6400	7250	8100	8100	8100	11100	11100
Weight when empty (Kg)	A/E	5670	6190	6700	7120	7580	9060	9330