

NRL
0750/1800
cooling only

Air cooled chillers with axial fans
 Cooling capacity 174kW÷469kW

Variable Multi Flow

VMF

R410A



Aermec adheres to the EUROVENT Certification programme up to 600kW cooling. The products concerned appear in the EUROVENT Certified products guide.



- **HIGH EFFICIENCY VERSION**
- **LOW NOISE HIGH EFFICIENCY VERSION**
- **COMPACT VERSION**
- **LOW NOISE COMPACT VERSION**
- **2 REFRIGERANT CIRCUITS**
- **PUMP ASSEMBLY OPTION**
- **PUMP ASSEMBLY AND TANK OPTION**

Characteristics

- Available in 9 sizes
- Refrigerant R410A
- 2 refrigerant circuits
- High efficiency even at part load
- Heat exchangers optimised to benefit from the excellent heat transfer characteristics of R410A
- High efficiency scroll compressors
- Axial fans with low sound level
- Solid construction with polyester anti-corrosion painted finish
- Operating limits in cooling up to 46 °C ambient
 - Maximum leaving water temperature 18 °C
- Versions available:
 - ° Compact cooling only
 - L** Compact low noise cooling only
 - A** High efficiency cooling only
- E** **High efficiency low noise cooling only**
- C** Condensing unit
 - Expansion valve (selected in unit configurator):
 - (°) standard thermostatic expansion valve
 - (Y) thermostatic expansion valve for low liquid temperature down to -6 °C
 - (X) electronic expansion valve, also for low liquid temperature (down to -6 °C)
 - Fan unit (selected in unit configurator):
 - "°" Standard
 - "M" High static pressure
 - "J" Inverter
 - Pump assembly and buffer tank options complete with water filter, flow switch, expansion tank, charging point, and anti-freeze electric heater
 - Microprocessor control system:
 - Control from the entering water temperature, with the possibility of selecting control of the leaving water temperature
 - Summer condensation control with 0-10V modulating signal depending on pressure, compensated according to the outside air temperature (with DCPX accessory)
 - Automatic rotation of compressors and pumps based on operating hours (manual rotation sizes 1400 to 1800)
 - 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

Accessori

- **AERSET:** The AERSET accessory allows the automatic compensation of the operating set-point of the unit to which it is connected, based on a 0-10V MODBUS input signal. Mandatory accessory: AER485 or MODU-485A
- **AER485:** RS-485 interface for supervision systems with MODBUS protocol.
- **AVX:** spring anti-vibration mounts Select the AVX model from the compatibility table.
- **DCPX:** Low ambient device for cooling operation below 10 °C down to -10 °C. Pressure transducers read the condensing pressure and the electronic controller varies fan speed to maintain adequate pressure for correct unit operation.
- **DRE:** Soft starter (current reduction of about 30% for single circuit units, 26% for two circuit units, 22% for three circuit units). Only available for 400V-3-phase power supply. Factory fitted only.
- **GP:** Protection grille protects the external coil from accidental damage.
- **PGS:** Daily/Weekly Programmer. Allows two daily time-clock programmes (two switch on/off cycles) and different programmes for each day of the week.
- **RIF:** Power factor correction. Connected in parallel to the motor allowing about 10% reduction of input current. Must be requested at time of order and is available factory fitted only.
- **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 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;
- **DUALCHILLER:** Simplified control system to switch on/off and control two chillers in a single system (using Aermec GR3 command), as if they were a single unit.
- **MULTICHILLER:** Control system for multiple parallel installed constant flow chillers providing individual chiller on/off and control capability.
- **TRX1:** Metal cap that replaces the plastic cap, mounted as shipping protection, for immersion heater holes in the buffer tank.
- **VT:** anti-vibration mounts, to be fitted below the unit base.
- **PRM1 and PRM2:** FACTORY FITTED ACCESSORY. A manual reset pressure switch wired in series with the existing high pressure switch installed on the compressor discharge line.
- **COMPATIBILITY with the VMF SYSTEM** For more information on the system refer to the manual.

Accessory compatibility

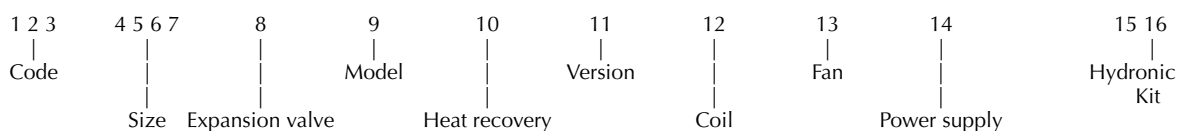
Mod. NRL	Vers.	0750	0800	0900	1000	1250	1404	1504	1655	1800
AERSET	All	✓	✓	✓	✓	✓	✓	✓	✓	✓
AER485	All	✓	✓	✓	✓	✓	✓	✓	✓	✓
DUALCHILLER	All	✓	✓	✓	✓	✓	✓	✓	✓	✓
MULTICHILLER	All	✓	✓	✓	✓	✓	✓	✓	✓	✓
PGS	All	✓	✓	✓	✓	✓	✓	✓	✓	✓
AERWEB300	All	✓	✓	✓	✓	✓	✓	✓	✓	✓
TRX1	All	✓	✓	✓	✓	✓	✓	✓	✓	✓
AVX	All	-	✓	✓	✓	✓	✓	✓	✓	✓
VT	All	23	-	-	-	-	-	-	-	-
	°	64	64	64	65	65	66	66	67	67
DCPX	L	standard	standard	di standard	standard	standard	standard	standard	standard	standard
	A	64	66	66	66	67	67	67	68	68
	E	standard	standard	di standard	standard	standard	standard	standard	standard	standard
	°	65	65	65	65	65	66	66	68	68
DCPX "M" vers. con ventilatori maggiorati	L	standard	standard	di standard	standard	standard	standard	standard	standard	standard
	A	65	66	66	66	68	68	68	68	68
	E	standard	standard	di standard	standard	standard	standard	standard	standard	standard
DRE	standard	751	801	901	1001	1251	1404	1504	1655	1801
GP	° - L	10 (x3)	10 (x3)	10 (x3)	10 (x4)	10 (x4)	350	350	350	350
	A - E	10 (x3)	260	260	260	350	350	350	500	500
RIF	° - L	53	87	89	91	91	92	92	93	94
	A - E	53	88	90	92	92	92	92	93	94
PRM1/PRM2	standard	✓	✓	✓	✓	✓	✓	✓	✓	✓

NOTE: For the selection of AVX refer to the technical manual

Unit Configurator

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

Configuration fields:



Code:

NRL

Size:

0750, 0800, 0900, 1000, 1250, 1404, 1504, 1655, 1800

Expansion valve:

- ° - Standard thermostatic expansion valve for water temperature down to +4 °C
- Y - Thermostatic expansion valve for low liquid temperature down to -6 °C
- X - Electronic thermostatic valve, max. temp. of water produced: +4°C (for lower temperatures please contact us)

Model:

- ° - Cooling only
- C - Condensing unit

Heat recovery

- ° - Without heat recovery
- D - With partial heat recovery (desuperheater)
- T - With total heat recovery (not available with buffer tank)

Version:

- ° - Compact
- L - Compact low noise
- A - High efficiency
- E - High efficiency low noise

Coil:

- ° - Aluminium
- R - Copper
- S - Tinned copper
- V - Coated aluminium

Fan:

- ° - Standard
- M - High static pressure
- J - Inverter

Power supply:

- ° - 400V 3~ 50Hz with circuit breakers
- 400V 3N~ 50Hz with circuit breakers (only NRL 0750)

Integrated hydronic module:

- 00 - without pump or buffer tank
- 01 - single low head pump and buffer tank
- 02 - single and standby low head pump and buffer tank
- 03 - single high head pump and buffer tank
- 04 - single and standby high head pump and buffer tank
- 05 - single low head pump and buffer tank (with holes for immersion heaters)
- 06 - single and standby low head pump and buffer tank (with holes for immersion heaters)
- 07 - single high head pump and buffer tank (with holes for immersion heaters)
- 08 - single and standby high head pump and buffer tank (with holes for immersion heaters)
- 09 - double hydraulic circuit (with holes for immersion heaters)
- 10 - double hydraulic circuit with immersion heater
- P1 - single low head pump without buffer tank
- P2 - single and standby low head pump without buffer tank
- P3 - single high head pump without buffer tank
- P4 - single and standby high head pump without buffer tank

Attention:

- options D - T - C are not compatible with option Y
 - the standard options are shown by the symbol °
- Example of configuration code: NRL0900°°°°°°°°00

This is an NRL unit of size 900, with standard thermostatic expansion valve, cooling only model, without heat recovery, compact version, with aluminium condenser coils, standard fans, and electrical panel for compressor motors 400V 3~ 50Hz, without pump or buffer tank.

Technical Data

Mod. NRL	U.M.	Vers.	0750	0800	0900	1000	1250	1404	1504	1655	1800
Cooling capacity	(kW)	°	189	210	230	255	301	336	373	410	447
		L	173	189	209	234	270	301	334	365	392
		A	194	217	241	269	320	355	397	435	467
		E	179	202	223	249	296	327	365	407	434
Total power input	(kW)	°	70,56	79,19	93,32	105,53	122,90	143,93	163,26	176,91	189,05
		L	76,09	88,96	102,05	114,22	135,45	158,47	178,72	193,45	209,48
		A	63,32	70,23	82,41	94,55	107,85	126,14	143,91	156,06	169,22
		E	69,16	77,04	89,17	102,29	116,53	135,76	155,55	166,76	180,86
Water flow rate	(l/h)	°	32680	36292	39732	44204	52116	58136	64500	70864	77228
		L	29928	32680	36120	40420	46612	51944	57792	62952	67596
		A	33540	37496	41624	46612	55384	61404	68628	75164	80668
		E	30960	34916	38528	43000	51256	56588	63124	70348	74992
Pressure drop	(kPa)	°	86	66	68	73	80	73	79	59	59
		L	72	55	57	61	65	59	64	48	46
		A	88	66	70	70	73	78	61	61	62
		E	75	58	61	61	63	67	52	54	54

ENERGY INDICES

EER	(W/W)	°	2,67	2,65	2,46	2,42	2,45	2,33	2,28	2,32	2,36
		L	2,27	2,13	2,05	2,05	1,99	1,90	1,87	1,88	1,87
		A	3,06	3,09	2,92	2,85	2,97	2,81	2,76	2,79	2,76
		E	2,59	2,62	2,50	2,43	2,54	2,41	2,35	2,44	2,40
ESEER	(W/W)	°	3,63	3,96	3,76	3,75	3,71	3,55	3,46	3,57	3,64
		L	3,65	3,91	3,78	3,76	3,65	3,49	3,44	3,51	3,49
		A	3,91	4,14	4,01	3,93	4,06	3,85	3,84	3,88	3,88
		E	3,82	4,06	3,98	3,88	4,04	3,82	3,79	3,87	3,86

ELECTRICAL DATA

Power supply						400V-3-50Hz(*)						
Total input current	(A)	°	122	142	166	189	208	249	286	305	319	
		L	113	153	177	200	226	269	308	328	348	
		A	113	136	158	180	196	235	273	289	304	
		E	109	145	169	192	211	251	292	306	324	
Maximum current (FLA)	(A)	°-L	144	170	192	217	261	278	308	343	391	
		A-E	144	173	195	217	267	284	314	349	398	
Starting current (LRA)	(A)	°-L	320	345	401	426	529	612	642	677	659	
		A-E	320	348	404	426	535	618	648	683	666	
Type of compressors			All Scroll									
Compressors/circuits		°-L	4/2	4/2	4/2	4/2	4/2	4/2	4/2	4/2	5/2	6/2
		A-E	4/2	4/2	4/2	4/2	4/2	4/2	4/2	4/2	5/2	6/2
Type of fans			All Axial									
Fan air flow rate	(m ³ /h)	°	51400	54900	54150	75800	73200	77000	76000	108300	106200	
		L	42700	38430	40575	53060	51240	57700	60800	75810	74340	
		A	49000	72800	71500	70200	106200	104100	102000	125800	122000	
		E	35300	50960	51805	52650	74340	75420	76500	91110	91500	
Number of fans	(n°)	°-L	3	3	3	4	4	4	4	6	6	
		A-E	3	4	4	4	6	6	6	8	8	
Evaporator			All Plate									
Type of hydraulic connections			All Victaulic									
Useful pump head low-head	(kPa)	°	81	100	92	91	111	102	88	109	99	
		L	101	120	112	110	139	133	115	134	129	
		A	74	93	81	78	92	84	69	94	87	
		E	94	108	99	97	116	110	94	111	106	
Useful pump head high-head	(kPa)	°	198	216	207	204	250	238	200	246	236	
		L	219	237	228	225	281	272	241	270	266	
		A	191	208	195	189	230	219	173	231	225	
		E	211	224	214	211	255	247	209	247	244	
Buffer tank capacity	(l)	All	700	700	700	700	700	700	700	700	700	
Hydraulic connections "00" version	(Ø)	All	3"	3"	3"	3"	3"	4"	4"	4"	4"	

(*) THE POWER SUPPLY FOR SIZE 750 IS: 400V-3N-50HZ.

DATA DECLARED IN ACCORDANCE WITH
UNI EN 14511: 2011

- Cooling:
- leaving water temperature 7 °C
 - external air temperature 35 °C
 - Δt = 5 K.

Mod. NRL	U.M.	Vers.	0750	0800	0900	1000	1250	1404	1504	1655	1800
Sound power	dB(A)	°	85,0	86,0	86,0	90,0	91,0	90,5	90,5	92,0	92,0
		L	80,0	83,0	83,0	87,0	88,0	87,5	87,5	89,0	89,0
		A	85,0	88,0	88,0	88,0	91,0	90,5	90,5	91,5	93,5
		E	77,0	83,0	83,0	83,0	86,0	85,5	85,0	86,5	88,5
Sound pressure	dB(A)	°	53,0	54,0	54,0	58,0	59,0	58,5	58,5	60,0	60,0
		L	48,0	51,0	51,0	55,0	56,0	55,5	55,5	57,0	57,0
		A	53,0	56,0	56,0	56,0	59,0	58,5	58,5	59,5	61,5
		E	45,0	51,0	51,0	51,0	54,0	53,5	53,0	54,5	56,5

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.

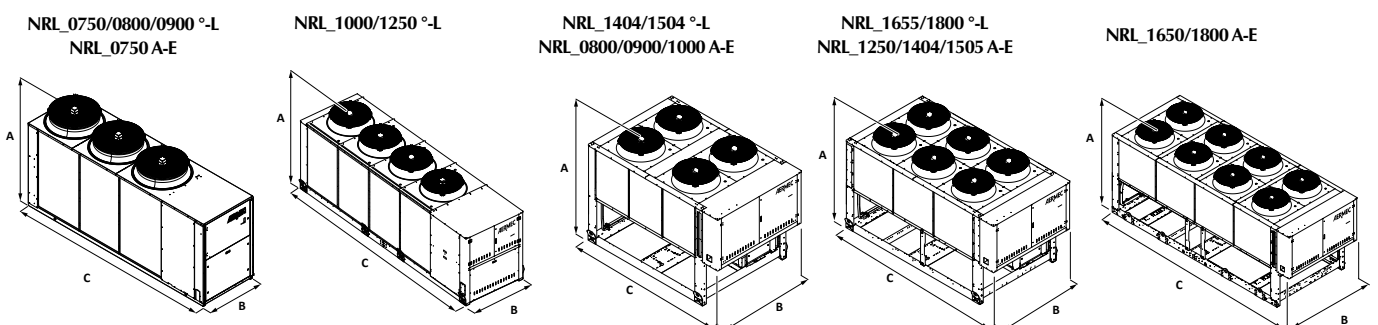
Sound pressure:

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

Technical Data " C Version "

Mod. NRL C		Vers.	0750	0800	0900	1000	1250	1404	1504	1655	1800
Cooling capacity	(kW)	°	196	220	241	269	316	352	391	430	469
		L	179	198	219	245	283	315	351	383	410
		A	201	227	252	282	335	372	415	463	497
		E	185	211	233	260	311	343	382	426	454
Total power input	(kW)	°	70	81	95	108	125	147	166	182	194
		L	76	91	105	117	139	163	183	199	216
		A	62	71	83	95	109	127	145	152	165
		E	69	78	91	103	118	138	158	169	184
EER	(W/W)	°	2,8	2,71	2,53	2,48	2,52	2,39	2,35	2,37	2,42
		L	2,37	2,19	2,09	2,09	2,03	1,94	1,91	1,92	1,9
		A	3,22	3,19	3,03	2,97	3,08	2,92	2,86	3,05	3,02
		E	2,7	2,71	2,57	2,52	2,64	2,48	2,42	2,52	2,47
Maximum current (FLA)	(A)	°-L	144	170	192	217	261	290	319	358	391
		A-E	144	173	195	217	267	296	325	365	398
Starting current (LRA)	(A)	°-L	320	345	401	426	529	499	528	626	659
		A-E	320	348	404	426	535	505	534	633	666
Input current	(A)	°	123	147	172	196	215	258	297	316	331
		L	134	158	183	207	234	279	319	340	361
		A	110	140	163	185	202	241	281	289	302
		E	121	149	173	197	216	258	299	315	333
Sound power	dB(A)	°	85	86	86	90	91	90,5	90,5	92	92
		L	80	83	83	87	88	87,5	87,5	89	89
		A	85	88	88	88	91	90,5	90,5	91,5	93,5
		E	77	83	83	83	86	85,5	85	86,5	88,5
Sound pressure	dB(A)	°	53	54	54	58	59	58,5	58,5	60	60
		L	48	51	51	55	56	55,5	55,5	57	57
		A	53	56	56	56	59	58,5	58,5	59,5	61,5
		E	45	51	51	51	54	53,5	53	54,5	56,5

Dimensions (mm)



Mod. NRL		Vers.	750	800	900	1000	1250	1400	1500	1650	1800	
Height	(mm)	A	° - L	1975	1975	1975	1975	1975	2450	2450	2450	2450
		A - E	1975	2450	2450	2450	2450	2450	2450	2450	2450	
Width	(mm)	B	° - L	1500	1500	1500	1500	1500	2200	2200	2200	2200
		A - E	1500	2200	2200	2200	2200	2200	2200	2200	2200	
Length	(mm)	C	° - L	4350	4355	4355	5355	5355	4250	4250	4250	4250
		A - E	4350	3400	3400	3400	4250	4250	4250	5750	5750	
Weight empty	(kg)	°	L	1382	1730	1860	2015	2135	2765	2960	3055	3160
		L	1382	1740	1870	2025	2145	2775	2970	3065	3170	
		A	1663	2120	2265	2410	2710	2910	3125	3620	3735	
		E	1663	2135	2280	2425	2725	2925	3140	3635	3750	

Aermec reserves the right to make all modification deemed necessary for improving the product at any time with any modification of technical data.

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