

Air cooled chillers with axial flow fans Cooling capacity from 53 kW up to 150 kW





Aermec adheres to the EUROVENT Certification Programme.

The products concerned appear in the EUROVENT Certified Products Guide.

- AERNEC
- COMPACT VERSION
- SILENCED COMPACT VERSION
- HIGH EFFICIENCY VERSION
- SILENCED HIGH EFFICIENCY VERSION
- 2 COOLING CIRCUITS
- CIRCULATION PUMP
- 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 46° C
- Versions available:
 - ° Cooling only compact version (500-700)
 - L Cooling only compact silenced version (280-700)
 - A Cooling only, high efficiency (500-700)
 - E Cooling only, high efficiency, silenced version (280-700)

- C Condensing unit
- (o) standard mechanical thermostatic valve up to +4°C.
- (Y) Mechanical thermostatic valve (low water temperature down to -6°C).
- (X) Electronic thermostatic valve also for low water temperature (down to -6°C)
 - Standard and enlarged fans
- Versions with pumping assembly and tank complete with water filter, flow switch, expansion tank, a charging unit and antifreeze electric heater.
- Microprocessor control system
 - Control of the inlet water temperature, with the possibility of selecting the control of the outlet water
 - Summer condensation control with 0-10V modulating signal depending on pressure, compensated according to the outside air temperatu-

- re (with DCPX accessory).
- Intelligent defrosting with the decrease of the pressure
- Rotation of compressors and pumps according to operating hours
- Safety capacity control
- High and low pressure transducer, standard on all versions (for size from 280 to 350 cooling only, TP3 is provided as an accessory)
- Automatic reset of alarms before total block
- Messages in 4 languages.
- Historic alarm

Accessories

- **AER485**: RS-485 interface for supervision systems with MODBUS protocol.
- VT: anti-vibration support, set of four vibrationdamping components to fit under the sheet metal base of the unit.
- DCPX: This accessory allows correct operation with outside temperatures below 10°C and down to -10°C. It is made up of an electronic regulation card that varies the fan rpm on the basis of the condensation pressure, once the high pressure transducer is read for the purposes of keeping it sufficiently high FOR the proper functioning of the unit. It also allows correct heating operation with outside temperatures greater than 30°C and up to 42°C.
- 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 costant COSδ 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.
- TP 3: High pressure transducer, allows to view

the value of the related working pressure (one per circuit), for size from 280 up to 350 cooling only.

- 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.
- TRX1: Metal cap that replaces the plastic cap, mounted for protection in the accumulators with holes and supplementary electric heaters.
- PRM1: 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.

				Compatibi	lity of acce	ssories				
Mod. NRL	Vers.	280	300	330	350	500	550	600	650	700
AER485	All	V	V	V	V	✓	V	V	V	✓
DUALCHILLER	All	~	✓	~	V	✓	~	~	✓	V
MULTICHILLER	All	~	✓	~	V	✓	~	~	✓	V
PGS	All	~	✓	~	V	✓	~	~	✓	V
AERWEB30	All	V	V	V	V	~	V	V	V	V
TRX1	All	~	~	~	V	~	~	~	~	V
VT (00-P1-P2-P3-P4)	° - L	17	17	17	17	13	13	13	13	13
V1 (00-F1-F2-F3-F4)	A - E	17	17	17	17	13	13	13	13	22
VT (01-02-03-04-05-06-07-08-09-10)	° - L	13	13	13	13	10	10	10	10	10
V1 (01-02-03-04-05-06-07-08-09-10)	A - E	13	13	13	13	10	10	10	10	22
	0	-	-	-	-	64	64	64	64	64
(1)DCPX	L	56	56	56	56	standard	standard	standard	standard	standard
WDCPX	A	-	-	-	-	64	64	64	64	64
	E	56	56	57	57	standard	standard	standard	standard	standard
	0	-	-	-	-	64	64	64	64	64
DCDV St. L. Lf	L	60	60	60	61	standard	standard	standard	standard	standard
DCPX vers. with enlarged fans	A	-	-	-	-	64	64	64	64	65
	E	61	61	61	61	standard	standard	standard	standard	standard
DRE	All	281	301	331	351	501	551	601	651	701
CD.	° - L	3	3	3	3	2 (x2)				
GP	A - E	3	4	4	4	2 (x2)	2 (x2)	2 (x2)	2 (x2)	2 (x3)
RIF	All	50	50	50	51	52	52	53	53	53
PRM1	All	V	V	V	~	~	V	V	V	V
TP3	All	~	~	~	· ·	standard	standard	standard	standard	standard

NB>

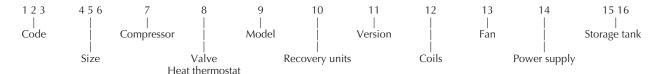
The versions available for sizes 280,300,330,350 are only (L - E).

(1) Accessories DCPX includes: DCPX + TP3

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

Compressors:

0 - R410A standard compressors

Thermostatic valve:

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

Model:

- Cooling only
- C Condensing unit

Heat recovery units

- Without recovery units
- D With desuperheaters
- T With total heat recovery units

Version:

- ° Compact
- L Compact, silenced 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

Warning:

- options D T C are incompatible with option Y;
- the standard options are shown by the symbol °;
- the 0350 size is not available with a 500V 3~ 50Hz power supply;

Example of the commercial code: NRL0350°°°L°°°00

M - Enlarged (280-700)

J - Inverter (500-700)

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).

Storage tank:

- 00 without c
- 01 low-head storage tank and single pump
- 02 low-head storage tank and reserve pump
- 03 high-head storage tank and single pump
- 04 high-head storage tank and reserve pump
- 05 storage tank (with holes for supplementary electric heaters) low-head and single pump
- 06 storage tank (with holes for supplementary electric heaters) low-head and reserve pump
- 07 storage tank (with holes for supplementary electric heaters) high-head and single pump
- 08 storage tank (with holes for supplementary electric heaters) high-head and reserve pump
- 09 double hydraulic ring
- 10 double hydraulic ring with supplementary electric heater
- P1 without storage tank, with low-head pump
- P2 without storage tank, with low-head pump and reserve pump
- P3 without storage tank, with high-head pump
- P4 without storage tank, with high-head pump and reserve pump

This is a size 0350 NRL unit with standard mechanical thermostatic valve, cooling only model, compact silenced version, with aluminium condensing coils, standard fans, electrical panel for compressors with 400V 3~ 50Hz motors and without storage tamk.

Mod. NRL		Vers.	280	300	330	350	500	550	600	650	700
		Ľ	53	63	- 68	- 81	97 87	103 93	126 113	137 127	156 144
Cooling capacity	(kW)	Α	-	-	-	-	98	104	129	143	163
		E	57	65	74	83	90	95	117	129	150
		0	-	-	-	-	34.8	38.2	45.9	53.9	60.0
Total power input	(kW)	L	20.3	22.6	26.1	28.4	38.5	42.5	50.9	57.6	64.8
rotai power input	(KVV)	Α	-	-	-	-	30.2	34.2	40.1	44.6	52.3
		E	16.8	19.4	21.8	25.1	33.1	36.7	44.3	51.6	56.6
			- 0120	10040	11700	12020	16680	17720	21670	23560	26830
Water flow rate	(l/h)	L	9120	10840	11700	13930	14960 16860	16000 17890	19440 22190	21840 24600	24770 28040
		É	9800	11180	12730	14280	15480	16340	20120	22190	25800
		0	-	-	-	-	53	59	64	61	74
	(LD.)	L	51	46	54	55	43	48	51	52	63
Pressure drop	(kPa)	Α	-	-	-	-	44	49	54	60	68
		E	43	39	35	42	37	41	44	49	58
		0	-	-	-	-	2.79	2.70	2.75	2.54	2.60
EER	(W/W)	L	2.61	2.79	2.61	2.85	2.26	2.19	2.22	2.20	2.22
	(Α	3.39	3.35	3.39	3.31	3.25	3.04 2.59	3.22 2.64	3.21 2.50	3.12 2.65
		E .	3.39	3.33	3.39	-	2.72 3.43	3.32	3.87	3.58	3.67
CCEED	() 4 ()	L	3.16	3.37	3.15	3.45	3.40	3.30	3.83	3.56	3.65
ESEER	(W/W)	Α	-	-	-	-	3.83	3.59	4.28	4.26	4.15
		E	3.94	3.89	3.94	3.84	3.78	3.55	4.15	4.13	4.02
Power supply						400V	′ 3N~ 50Hz	with ther			
11 7		0	-	-	-	-	63	67	81	88	100
Total current input	(A)	L	36	40	44	51	70	75	90	99	111
our current input	(/ 1/	Α	-	- 2.4	-	- 4.5	55	60	71	77	90
4	1) /A)	E	30	34	37	45	60	64	78	89	97
Maximum current (FLA	, , ,	All All	46 155	53 184	58 190	63 200	76 214	81 220	100 232	112 243	122 261
Starting current (LRA)	(A)	AII	- 155	- 184	-	- 200	214	220	232	243	261
ype of compressors		All	-				Scroll				
ype or compressors		0		_	_	_	3/2	3/2	4/2	4/2	4/2
	.:4\	L	2/2	2/2	2/2	2/2	3/2	3/2	4/2	4/2	4/2
Compressors (no./circu	III)	Ā ——		-	-	-	3/2	3/2	4/2	4/2	4/2
		Ε	2/2	2/2	2/2	2/2	3/2	3/2	4/2	4/2	4/2
Type of fans							Axial				
,		0	-	-	-	-	34600	34600	34600	34600	33600
an air flow rate	(m³/h)	L	14200	14200	14200	20200	28400	28700	27700	29400	28600
an an now rate	(111 /11)	Α	-	-	-	-	34100	34100	32600	32600	50000
		E	22000	22000	27000	27000	21100	22200	21800	22800	32500
			- 4	- 4	- 4	-	2	2	2	2	2
Number of fans	(no.)	L	4	4	4 -	6	2 2	2	2 2	2 2	3
		A E	- 6	- 6	8	- 8	2	2	2	2	3
vaporator		All	0	0	0	0	Plates				
Plumbing connections		All					Victaulic				
Dimension of plumbing co			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
nput power			1.1		1.1	1.1	1.5			1.5	1.8
ow-head pump	(kW)	All	1.1	1.1	1.1	1.1	1.3	1.5	1.5	1.3	1.0
nput power	(kW)	All	1.5	1.5	1.5	1.5	1.8	1.8	3.0	3.0	3.0
nigh-head pump	(N V V)	/ 111	1.5	1.5	1.5	1.5	1.0	1.0	5.0	5.0	5.0
nput current	(A)	All	2.7	2.7	2.7	2.7	3.6	3.6	3.6	3.6	5.0
ow-head pump	V •/							- · -	- /		•
nput current	(A)	All	3.6	3.6	3.6	3.6	5.0	5.0	5.7	5.7	5.7
nigh-head pump		0		_		_	123	111	91	83	91
Pump useful head		Ĺ	104	106	96	89	141	130	117	103	117
ow-head	(kPa)	Α	-	-	-	-	127	117	94	76	78
cooling mode		Ē —	113	114	114	104	140	132	117	104	106
		0	-	-	-	-	161	150	184	178	134
ump useful head	(L.D)	L	143	144	135	129	179	168	210	198	162
nigh-head	(kPa)	Α	-	-	-	-	166	156	188	172	140
cooling mode		E	152	153	153	140	179	171	215	201	170
Storage tank capacity		All	300	300	300	300	500	500	500	500	500
		0	-	-	-	-	82	82	82	83	83
Sound power	db(A)	L	73	73	74	75	77	77	77	78	78
		A	-	-	-	-	82	82	82	83	85
		E	74	74	75	76	74	74	74	75	77
. C . I	II. / 4.5	•	-	-	-	-	50	50	50	51	51
Sound pressure	db(A)	Ļ	41	41	42	43	45	45	45	46	46
							E()	EO	E ()	E 1	E.)
		A E	42	42	43	<u>-</u> 44	50 42	50 42	50 42	51 43	53 45

- Cooling:

 water outlet temperature 7 °C

 outside air temp. 35 °C

 $\Delta t = 5$ °C.

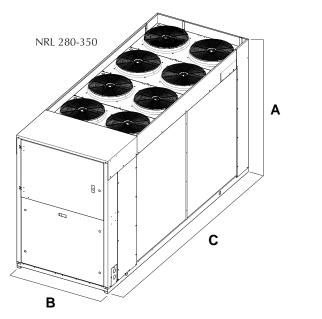
- Sound pressure measured in free field conditions at distance of 10m and direction factor = 2.
 In accordance with the ISO 3744 standard
 Power supply voltage: 400 V

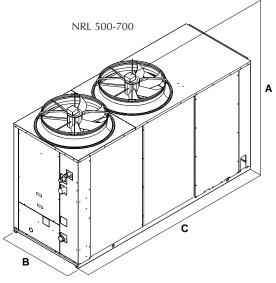
Mod. NRL C		Vers.	280	300	330	350	500	550	600	650	700
		0	-	-	-	-	100	106	130	141	161
Cooling capacity	(kW)	L	55	65	70	83	90	96	116	131	148
cooming capacity	(KVV)	A	-	-	-	-	101	107	133	147	168
		E	59	67	76	85	93	98	121	133	155
		0	-	-	-	-	35.1	38.5	46.3	54.4	60.5
Total power input	(kW)	L	20.5	22.8	26.3	28.7	38.8	42.9	51.4	58.1	65.4
Total power input	(KVV)	A	-	-	-	-	30.5	34.5	40.5	45.0	52.8
		E	17.0	19.6	22.0	25.3	33.4	37.0	44.7	52.1	57.1
		0	-	-	-	-	2.85	2.75	2.80	2.59	2.65
EER	(W/W)	L	2.67	2.85	2.66	2.91	2.31	2.23	2.27	2.25	2.27
LLIX	(• • / • • /	A	-	-	-	-	3.31	3.10	3.28	3.27	3.18
		E	3.46	3.42	3.47	3.38	2.78	2.64	2.70	2.55	2.71
Maximum current (FLA)	(A)	All	46	53	58	63	76	81	100	112	122
Starting current (LRA)	(A)	All	155	184	190	200	214	220	232	243	261
		0	-	-	-	-	63.6	67.6	81.7	88.8	100.9
Input current	(A)	L	36.3	40.4	44.4	51.5	60.8	75.2	90.7	99.9	112.0
input current	(71)	A	-	-	-	-	59.5	62.6	75.7	82.7	95.9
		E	35.3	39.4	43.4	49.4	70.5	64.9	78.9	89.9	97.9
		0					50	50	50	51	51
Sound pressure	db(A)	L	41	41	42	43	45	45	45	46	46
odana prossare	G. (7 t)	A					50	50	50	51	53
		E	42	42	43	44	42	42	42	43	45

- Cooling:
- evaporation temperature 5°C
 outside air temp. 35 °C
 Δt = 5 °C.

- 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			Vers.	280	300	330	350	500	550	600	650	700
Height	(mm)	Α	All	1606	1606	1606	1606	1875	1875	1875	1875	1875
Width	(mm)	В	All	1100	1100	1100	1100	1100	1100	1100	1100	1100
Depth	(2222)	C	° - L	2450	2450	2450	2450	2950	2950	2950	2950	2950
Бериі	(mm)	C	A - E	2450	2950	2950	2950	2950	2950	2950	2950	3950
\\/a:alatlaa.a			° - L	675	684	688	704	868	872	968	983	1091
Weight when e	empty (kg)		A - E	686	751	761	767	955	959	1142	1155	1323

The versions available for sizes 280,300,330,350 are only (L - E).



Air cooled chillers with axial flow fans Cooling capacity from 174 kW up to 469 kW



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- 2 COOLING CIRCUITS
- CIRCULATION PUMP
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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 (Y) painted finish
- Operating limits with cooling mode up to 46°C
- Max. processed water temperature 18° C
- Versions available
 - Cooling only compact version
 - L Cooling only compact silenced version

- A Cooling only, high efficiency
- E Cooling only, high efficiency, silenced version
- C Condenser unit
- Electronic thermostatic valve also for low water temperature (down to -6°C)
- (°) standard mechanical thermostatic valve
- (Y) Mechanical thermostatic valve (low water temperature - down to -6°C).- Enlarged fans
- Versions with pumping assembly and tank complete with water filter, flow switch, expansion tank, a charging unit and antifreeze electric heater
- Microprocessor control system
 - Control of the inlet water temperature, with

- the possibility of selecting the control of the outlet water
- Summer condensation control with 0-10V modulating signal depending on pressure, compensated according to the outside air temperature (with DCPX accessory).
- Rotation of compressors and pumps according to operating hours (manual rotation from 1400 to 1800)
- Safety capacity control
- Low pressure transducers and high pressure trasducer (standard on all the versions)
- Automatic reset of alarms before total block
- Messages in 4 languages.
- Alarm Log

Accessories

- **AER485**: RS-485 interface for supervision systems with MODBUS protocol.
- AVX: Sprung anti-vibration supports. Select the AVX model from the compatibility table.
- DCPX: This accessory allows correct operation with outside temperatures below 10°C and down to -10°C. It is made up of an electronic regulation card that varies the fan rpm on the basis of the condensation pressure, once the high pressure transducer is read for the purposes of keeping it sufficiently high for the proper functioning of the unit. It also allows correct heating operation with outside temperatures greater than 30°C and up to 42°C.
- **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.
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- or AER485P2 accessory.
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- 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.
- TRX1: Metal cap that replaces the plastic cap, mounted for protection in the accumulators with holes and supplementary electric heaters.
- VT: Anti-vibration support, to be fitted below the unit base.
- PRM1 e 2: 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.	750	800	900	1000	1250	1400	1500	1650	1800
AER485	All	V	V	~	~	~	~	~	V	V
DUALCHILLER	All	V	V	~	~	~	~	~	V	V
MULTICHILLER	All	V	V	~	~	~	~	~	V	V
PGS	All	V	~	V	V	V	V	V	V	V
AERWEB30	All	V	V	~	~	~	~	~	V	V
TRX1	All	V	V	~	~	~	~	~	V	V
AVX	All	-	V	~	~	~	~	~	V	V
VT	All	23	-	-	-	-	-	-	-	-
	0	64	64	64	65	65	66	66	67	67
D.C.D.V	L	standard								
DCPX	A	64	66	66	66	67	67	67	68	68
	E	standard								
	0	65	65	65	65	65	66	66	68	68
DCPX "M" vers.	L	standard								
with enlarged fans	A	65	66	66	66	68	68	68	68	68
	E	standard								
DRE	All	751	801	901	1001	1251	1401	1501	1651	1801
CD	° - L	10 (x3)	10 (x3)	10 (x3)	10 (x4)	10 (x4)	350	350	350	350
GP	A - E	10 (x3)	260	260	260	350	350	350	500	500
TP2	All	(x2)	(x 2)							
DIE	° - L	53	87	89	91	91	93	94	94	94
RIF	A - E	53	88	90	92	92	93	94	94	94
PRM1/PRM2	All	~	V	~	~	~	~	~	V	~

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:

- $^{\circ}~$ Standard mechanical thermostatic valve up to +4 $^{\circ}$ C
- Y Low water temperature mechanical thermostatic valve down to -6°C
- X Electronic thermostatic valve also for low water temperature (down to -6°C)

Model:

- Cooling only
- C Condensing unit

Heat recovery units

- Without recovery units
- D With partial recovery (desuperheater)
- T With total heat recovery (not available in versions with storage tank)

Version:

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

Batteries:

- Aluminium
- R Copper
- S Tinned copper
- V Varnished

Fans:

- Standard
- M Enlarged
- J Inverter

Power supply:

- 400V 3~ 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
- 01 low-head storage tank and single pump
- 02 low-head storage tank and reserve pump
- 03 high-head storage tank and single pump
- 04 high-head storage tank and reserve pump
- 05 storage tank (with holes for supplementary electric heaters) low-head and single pump
- 06 storage tank (with holes for supplementary electric heaters) low-head and reserve pump
- 07 storage tank (with holes for supplementary electric heaters) high-head and single pump
- 08 storage tank (with holes for supplementary electric heaters) high-head and reserve pump
- 09 double hydraulic ring
- 10 double hydraulic ring with supplementary electric heater
- P1 without storage tank, with low-head pump
- P2 without storage tank, with low-head pump and reserve pump
- P3 without storage tank, with high-head pump
- P4 without storage tank, with high-head pump and reserve pump

Warning

- options D T C are not compatible with option Y
- the standard options are shown by the symbol °;
- the 750 size not available for 500V 3~ 50Hz alimentation.

Example of the commercial code: NRL0900°°°°00

This is a size 090 NRL unit with standard mechanical thermostatic valve up to $+4^{\circ}$ C, cooling only model, compact, with aluminium condensing coils, standard fans, electrical panel for compressors with 400V 3° 50Hz motors and without storage tank.

Technical data

Mod. NRL			s. 750	800	900	1000	1250	1400	1500	1650	1800
		0	190	211	231	257	303	338	375	412	449
Cooling capacity	(kW)	L	174	190	210	235	271	302	336	366	393
cooming capacity	(1277)	Α	195	218	242	271	322	357	399	437	469
		E	180	203	224	250	298	329	367	409	436
		0	69	78	92	104	121	142	161	175	187
otal power input	(kW)	L	75	88	101	113	134	157	177	192	208
otal power input	(1200)	A	62	69	81	93	106	124	142	154	167
		E	68	76	88	101	115	134	154	165	179
		0	32680	36290	39730	44200	52120	58140	64500	70860	77230
Vater flow rate	(l/h)	L	29930	32680	36120	40420	46610	51940	57790	62950	67600
valer now rate	(1/11)	A	33540	37500	41620	46610	55380	61400	68630	75160	80670
		E	30960	34920	38530	43000	51260	56590	63120	70350	74990
		0	86	66	68	73	80	73	79	59	59
	(LD.)	L	72	55	57	61	65	59	64	48	46
ressure drop	(kPa)	A	88	66	70	70	73	78	61	61	62
		E	75	58	61	61	63	67	52	54	54
		0	2.75	2.71	2.51	2.47	2.50	2.38	2.33	2.35	2.40
		ī	2.32	2.16	2.08	2.08	2.02	1.92	1.90	1.91	1.89
ER	(W/W)	A	3.15	3.16	2.99	2.91	3.04	2.88	2.81	2.84	2.81
		E	2.65	2.67	2.55	2.48	2.59	2.46	2.38	2.48	2.44
		0	3.87	4.19	3.97	3.98	3.96	3.76	3.68	3.72	3.79
		1	3.85	4.19	3.97	3.98	3.84	3.65	3.61	3.62	3.79
SEER	(W/W)	A	4.19	4.10	4.27	4.17	4.34	4.12	4.02	4.06	4.02
		_									
ower supply		Е	4.05	4.27	4.20	4.08	4.28 00V-3-50Hz	4.05	3.93	4.02	4.02
ower supply		0	122	1.40	166				206	205	210
		_	122	142	166	189	208	249	286	305	319
otal input current	(A)	L	113	153	177	200	226	269	308	328	348
'		<u>A</u>	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	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
ype of compressors		All					Scroll				
Compressors (no./circui	t)	°-L	4/2	4/2	4/2	4/2	4/2	5/2	6/2	6/2	6/2
•	.,	A-E	4/2	4/2	4/2	4/2	5/2	6/2	6/2	6/2	6/2
ype of fans		All					Axial				
		0	51400	54900	54150	75800	73200	77000	76000	108300	106200
an air flow rate	(m³/h)	L	42700	38430	40575	53060	51240	57700	60800	75810	74340
an an now fate	(1117/11)	A	49000	72800	71500	70200	106200	104100	102000	125800	122000
		E	35300	50960	51805	52650	74340	75420	76500	91110	91500
Landa en el Co	(no.)	°-L	3	3	3	4	4	4	4	6	6
lumber of fans		A-E	3	4	4	4	6	6	6	8	8
vaporator		All					Plates				
lumbing connections		All					Victaulic				
Dimension of plumbing conne	ctions (Ø)		2"1/2	4"	4"	4"	4"	4"	4"	4"	4"
nput power ow-head pump		All	3.0	3.4	3.4	3.4	4.6	4.6	5.9	5.9	5.9
nput power igh-head pump	(kW)	All	5.5	5.7	5.7	5.7	8.3	8.3	8.3	10.5	10.5
nput current ow-head pump	(A)	All	6.2	5.8	5.8	5.8	7.8	7.8	10.0	10.0	10.0
nput current igh-head pump	(A)	All	11.0	9.7	9.7	9.7	14.1	14.1	14.1	17.8	17.8
O		0	81	100	92	91	111	102	88	109	99
ump useful head		ī .	92	120	112	111	139	133	116	134	130
ow-head	(kPa)	A	71	109	95	85	103	82	106	94	82
ow-iieau			82								
		<u>Е</u>	201	122	111	104	125	108	125	111	102
				219	211	208	256	246	220	246	237
ump useful head	(kPa)	L_	212	241	232	229	286	279	258	271	267
igh-head	. ,	<u>A</u>	191	227	213	200	247	222	226	233	221
Storage tank capacity	(l)	E All	202 700	237 700	226 700	216 700	700	246 700	250 700	245 700	236 700

 $^{(\}ast)$ The power supply for the 075 size is: 400V-3N-50Hz.

Performance values refer to the following conditions: Cooling:

- water outlet temperature 7 °C

- outside air temp. 35 °C

- $\Delta t = 5$ °C.

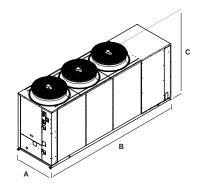
Sound pressure measured in free field conditions, in cooling mode at distance of 10m and direction factor = 2.
 In accordance with the ISO 3744 standard
 Power supply voltage: 400 V

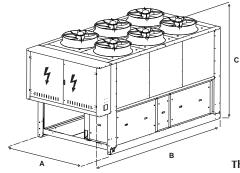
Mod. NRL		Vers	s. 750	800	900	1000	1250	1400	1500	1650	1800
		0	85.0	86.0	86.0	90.0	91.0	90.5	90.5	92.0	92.0
\Cd	JD(A)	L	80.0	83.0	83.0	87.0	88.0	87.5	87.5	89.0	89.0
♪Sound power	dB(A)	Α	85.0	88.0	88.0	88.0	91.0	90.5	90.5	91.5	93.5
•		Е	77.0	83.0	83.0	83.0	86.0	85.5	85.0	86.5	88.5
		0	53.0	54.0	54.0	58.0	59.0	58.5	58.5	60.0	60.0
) Cound proceure	dB(A)	L	48.0	51.0	51.0	55.0	56.0	55.5	55.5	57.0	57.0
Sound pressure		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

Technical data version "C"

Mod. NRL C		Vers.	750	800	900	1000	1250	1400	1500	1650	1800
		0	196	220	241	269	316	352	391	430	469
Cooling capacity	(kW)	L	179	198	219	245	283	315	351	383	410
Cooling capacity	(KVV)	Α	201	227	252	282	335	372	415	463	497
		Е	185	211	233	260	311	343	382	426	454
		0	70	81	95	108	125	147	166	182	194
Total power input	(kW)	L	76	91	105	117	139	163	183	199	216
Total power input	(KVV)	Α	62	71	83	95	109	127	145	152	165
		Е	69	78	91	103	118	138	158	169	184
		0	2.80	2.71	2.53	2.48	2.52	2.39	2.35	2.37	2.42
EER	(W/W)	L	2.37	2.19	2.09	2.09	2.03	1.94	1.91	1.92	1.90
LLK	(VV/VV)	Α	3.22	3.19	3.03	2.97	3.08	2.92	2.86	3.05	3.02
		Ε	2.70	2.71	2.57	2.52	2.64	2.48	2.42	2.52	2.47
Maximum current (FLA) (A	(A)	°-L	144	170	192	217	261	290	319	358	391
	(八)	A-E	144	173	195	217	267	296	325	365	398
	(A)	°-L	320	345	401	426	529	499	528	626	659
marting current (LICA)	(八)	A-E	320	348	404	426	535	505	534	633	666
		0	123	147	172	196	215	258	297	316	331
Input current	(A)	L	134	158	183	207	234	279	319	340	361
input current	(八)	Α	110	140	163	185	202	241	281	289	302
		Е	121	149	173	197	216	258	299	315	333
		0	85.0	86.0	86.0	90.0	91.0	90.5	90.5	92.0	92.0
Sound power	db(A)	L	80.0	83.0	83.0	87.0	88.0	87.5	87.5	89.0	89.0
/ Sound power	UD(A)	Α	85.0	88.0	88.0	88.0	91.0	90.5	90.5	91.5	93.5
		Е	77.0	83.0	83.0	83.0	86.0	85.5	85.0	86.5	88.5
		0	53.0	54.0	54.0	58.0	59.0	58.5	58.5	60.0	60.0
Sound pressure	db(A)	L	48.0	51.0	51.0	55.0	56.0	55.5	55.5	57.0	57.0
pound pressure	ub(A)	Α	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

Dimensions (mm)





The drawings are only examples!

Mod. NRL			Vers.	750	800	900	1000	1250	1400	1500	1650	1800
Uniolet	()		° - L	1975	1975	1975	1975	1975	2450	2450	2450	2450
Height	(mm)	C	A - E	1975	2450	2450	2450	2450	2450	2450	2450	2450
١٨/: الماء	Vidth (mm)	Δ.	° - L	1500	1500	1500	1500	1500	2200	2200	2200	2200
vviain	,	А	A - E	1500	2200	2200	2200	2200	2200	2200	2200	2200
Donath	(,,,,,	В	° - L	4350	4355	4355	5355	5355	4250	4250	4250	4250
Бериі	Depth (mm)	D	A - E	4350	3400	3400	3400	4250	4250	4250	5750	5750
			0	1382	1730	1860	2015	2135	2765	2960	3055	3160
A/-:-		.\	L	1382	1740	1870	2025	2145	2775	2970	3065	3170
Weight when empty (kg)	A	1663	2120	2265	2410	2710	2910	3125	3620	3735		
		E	1663	2135	2280	2425	2725	2925	3140	3635	3750	





Air cooled chiller with axial flow fans Cooling capacity from 500 kW up to 938 kW





Aermec adheres to the EUROVENT Certification Programme.

The products concerned appear in the EUROVENT Certified Products Guide.



- HIGH EFFICIENCY VERSION
- SILENCED HIGH EFFICIENCY VERSION
- COMPACT VERSION
- SILENCED COMPACT VERSION
- 4 COOLING CIRCUITS
- CIRCULATION PUMP
- 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
- Operating limits with cooling mode up to 46°C
 - Max. processed water temperature 18° C
- Versions available
 - ° Cooling only compact version
 - L Cooling only compact silenced version
 - A Cooling only, high efficiency

- E Cooling only, high efficiency, silenced version
- C Condenser unit
- Thermostatic valve (selectable with configurator):
- (°) standard mechanical thermostatic valve
- (Y) low water temperature mechanical thermostatic valve (down to -6°C)
- (X) electronic thermostatic valve also for low water temperature (down to -6°C)
- Fan unit (selectable with configurator):
 - "°"Standard.
 - "M" Enlarged
 - "J" Inverter.
- Versions with pumping assembly and tanks complete with water filter, flow switch, expansion tank, a charging unit and antifree-

- ze electric heater.
- Microprocessor control system
 - Control of the inlet water temperature, with the possibility of selecting the control of the outlet water
 - Summer condensation control with 0-10V modulating signal depending on pressure, compensated according to the outside air temperature (with DCPX accessory).
 - Auto rotation of compressors and pumps according to operating hours
 - Safety capacity control
 - Low and high pressure transducers (standard on all the versions)
- Automatic reset of alarms before total block
- Messages in 4 languages.
- Alarm Log

Accessories

- **AER485P1**: RS-485 interface for supervision systems with MODBUS protocol.
- AVX: Sprung anti-vibration supports. Select the AVX model from the compatibility table.
- DCPX: This accessory allows correct operation with outside temperatures below 10°C and down to -10°C. It is made up of an electronic regulation card that varies the fan rpm on the basis of the condensation pressure, once the high pressure transducer is read for the purposes of keeping it sufficiently high FOR the proper functioning of the unit. It also allows correct heating operation with outside temperatures
- greater than 30°C and up to 42°C.
- **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 costant COSδ at 0.95 and also allows an input current reduction (about 10%)
- It must be factory set when the unit is manu-

factured

- TRX1: Metal cap that replaces the plastic cap, mounted for protection in the accumulators with holes and supplementary electric heaters.
- PRM1-PRM2: FACTORY FITTED ACCES-SORY. It is a manual pressure switch electrically wired in series with the existing automatic high pressure switch on the compressor discharge pipe.

			Com	patibility of acce	essories			
Mod. NRL	Vers.	2000	2250	2500	2800	3000	3300	3600
AER485P1	All	V	V	V	V	V	V	V
PGS	All	V	V	V	V	V	V	V
TRX1	All	V	V	V	V	V	V	V
	0	-	-	-	78	78	81	81
DCDV	L	standard	standard	standard	standard	standard	standard	standard
DCPX	A	78	79	81	81	81	82	82
	E	standard	standard	standard	standard	standard	standard	standard
	0	-	-	-	78	78	82	82
DCPX "M" vers.	L	standard	standard	standard	standard	standard	standard	standard
con ventilatori maggiorati	A	78	80	82	82	82	82	82
	E	standard	standard	standard	standard	standard	standard	standard
GP	° - L	-	-	-	350 x 2	350 x 2	350 x 2	350 x 2
GP	A - E	260 x 2	260 350	350 x 2	350 x 2	350 x 2	500 x 2	500 x 2
RIF	° - L	-	-	-	RIFNRL2800	RIFNRL3000	RIFNRL3300	RIFNRL3600
KIF	A - E	RIFNRL2000	RIFNRL2250	RIFNRL2500	RIFNRL2800	RIFNRL3000	RIFNRL3300	RIFNRL3600
PRM1/PRM2	All	V	V	V	V	V	V	V
AN (N/ (00)	° - L	-	-	-	785	791	791	791
AVX (00)	A - E	767	773	779	785	791	798	798
AV/V (01 02 02 04)	° - L	-	-	-	786	792	792	792
AVX (01-02-03-04)	A - E	768	774	780	786	792	799	799
AN/N (D1 D2 D2 D4)	° - L	-	-	-	787	793	793	793
AVX (P1-P2-P3-P4)	A - E	769	775	781	787	793	800	800

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:

NRI

Size:

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

Compressors:

0 - R410A standard compressors

Thermostatic valve:

- Standard mechanical thermostatic valve up to +4°C

- Y Low water temperature mechanical thermostatic valve down to -6°C
- X Electronic thermostatic valve also for low water temperature (down to -6°C)

Model:

- Cooling only
- C Condensing unit

Heat recovery units

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

Version:

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

Batteries:

- Aluminium
- R Copper
- Tinned copper
- Varnished

Fans:

- Standard
- M Enlarged
- J Inverter

Power supply:

- 400V 3~ 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
- 01 low-head storage tank and single pump
- 02 low-head storage tank and reserve pump
- 03 high-head storage tank and single pump
- 04 high-head storage tank and reserve pump
- storage tank (with holes for supplementary electric heaters) low-head and single pump
- storage tank (with holes for supplementary electric heaters) low-head and reserve pump
- storage tank (with holes for supplementary electric heaters) high-head and single pump
- storage tank (with holes for supplementary electric heaters) high-head and reserve pump
- 09 double hydraulic ring
- 10 double hydraulic ring with supplementary electric heater
- P1 without storage tank, with low-head pump
- P2 without storage tank, with low-head pump and reserve pump
- P3 without storage tank, with high-head pump
- P4 without storage tank, with high-head pump and reserve pump

Warning:

- options D T C are not compatible with option Y
- the standard options are shown by the symbol °;

Example of the commercial code: NRL200°°°°00

This is a size 200 NRL unit with standard mechanical thermostatic valve up to +4°C, cooling only model, compact, with aluminium condensing coils, standard fans, electrical panel for compressors with 400V 3~ 50Hz motors and without storage tank.

Mod. NRL		Vers.	2000	2250	2500	2800 676	3000 750	3300 824	3600 898	
						604	672	733	786	
Cooling capacity	(kW)	A	542	593	644	714	798	874	938	
		E	500	548	596	658	734	818	872	
		0				284	322	350	374	
	(1.14.0)	L				314	354	384	416	
otal power input	(kW)	A	186	199	212	248	284	308	334	
		E	202	216	230	268	308	330	358	
		0				116270	129000	141730	154460	
A/-1 (11-	(1.4.)	L				103890	115580	125900	135190	
Vater flow rate	(l/h)	A	93220	102000	110770	122810	137260	150330	161340	
		E	86000	94260	102510	113180	126250	140700	149980	
		0				73.0	78.6	59.5	58.8	
Pressure drops	(L.D.»)	L				59.1	63.8	47.9	45.9	
·	(kPa)	A	70.4	72.6	72.6	77.8	60.8	60.8	61.7	
		E	60.7	63.0	63.0	66.9	52.1	53.7	53.9	
		0				2.38	2.33	2.35	2.40	
ED.	0.4.0.4.0	L				1.92	1.90	1.90	1.89	
ER	(W/W)	A	2.91	2.98	3.04	2.88	2.81	2.84	2.81	
		E	2.48	2.54	2.59	2.46	2.38	2.48	2.44	
		0				3.76	3.68	3.72	3.79	
		L				3.65	3.61	3.62	3.59	
SEER	(W/W)	A	4.17	4.25	4.34	4.12	4.02	4.06	4.02	
		E	4.08	4.18	4.28	4.05	3.93	4.02	4.02	
upply	(A)	(All)	-1.00	1.10		4.03 100V-3-50Hz		1.02	1.02	
ype of fan	Axial	(/ 111/				.00 - 0 00112	-			
		° - L				10/4	12/4	12/4	12/4	
Compressors	(no.)	A - E	8/4	8/4	8/4	10/4	12/4	12/4	12/4	
		0 °	0/4	0/4	0/4	154000	152000	216600	212400	
						115400	121600	151620	148680	
otal air flow rate	(m^3/h)	Δ	140400	176400	212400	208200	204000	266000	244000	
		A								
		E .	105300	126990	148680	150840	153000	192300	183000	
		·				498	572	610	638	
Operating current	(A)	L	261	277	202	538	616	656	696	
. •		A	361	377	393	470	547	563	589	
		E	384	403	421	502	583	613	649	
Maximum current (FLA)	(A)	° - L	42.4	40.4	F2.4	580	638	716	782	
		A - E	434	484	534	592	650	729	795	
tarting current (LRA)	(A)	° - L		===	000	789	847	984	1050	
		A - E	643	752	802	801	859	997	1063	
ype of compressors		•				Scroll	4 ~ 1 .		4~	
Compressors	(no.)	° - L				10/4	12/4	12/4	12/4	
·	(/	A - E	8/4	8/4	8/4	10/4	12/4	12/4	12/4	
vaporator		All				Plates				
ype of plumbing conne						Victaulic				
lumber of plumbing co	nnection		2	2	2	2	2	2	2	
lumbing connections	(Ø)	°-L				4"	4"	4"	4"	
		A-E	4"	3"/4"	4"	4"	4"	4"	4"	
torage Tank capacity	(1)	All				2 x 700				
anut nower		0				9.6	9.6	13.0	13.0	
nput power ow-head pump	(kW)	L				9.6	9.6	9.6	9.6	
ж-неай ришр		A	7.4	3.7+4.8	9.6	9.6	9.6	9.6	9.6	
		E	15.4	7.7+4.8	9.6	9.6	9.6	9.6	9.6	
nput power	([,3,4,7)	°/L				17.2	17.2	24.7	24.7	
igh-head pump	(kW)	A/E	13.0	6.5+8.6	17.2	17.2	17.2	17.2	17.2	
nput current	(A)	°/L				16.3	16.3	22.0	22.0	
ow-head pump	(A)	A/E	12.4	6.2+8.1	16.2	16.3	16.3	22.0	22.0	
nput current	(A)	°/L				29.2	29.2	42.4	42.4	
igh-head pump	(A)	A/E	22.0	11+14.6	29.2	29.2	29.2	42.4	42.4	
U 1 T		0				102	88	109	99	
seful pump head	a =	L				133	116	134	130	
w-head	(kPa)	A	85	103	103	82	106	94	82	
		E	104	118	125	108	125	111	102	
		0	107	110	143	246	220	246	237	
Jseful pump head		L				279	258	271	267	
	(kPa)	A	200	227	247	222	226	233	221	
igh-head										
		E .	216	245	264	246	250	245	236	
	(ID 4)					93.5	93.5	95.0	95.0	
Second and		L				90.5	90.5	92.0	92.0	
ound power	(dBA)								0	
ound power	(dBA)	A E	91 86.0	93 88	94 89.0	93.5 88.5	93.5 88.0	94.5 89.5	96.5 91.5	

Mod. NRL		Vers.	2000	2250	2500	2800	3000	3300	3600	
		0	-	-	-	61.5	61.5	63.0	63.0	
Sound pressure 🎝	(dBA)	L	-	-	-	58.5	58.5	60.0	60.0	
•		A	59	61	62	61.5	61.5	62.5	64.5	
		F	54	56	57	56.5	56	57.5	59.5	

Mod. NRL C		Vers.	2000	2250	2500	2800	3000	3300	3600
		0				704	782	860	938
Cooling consoity	(kW)	L				630	702	766	820
Cooling capacity	(KVV)	A	564	617	670	744	830	926	994
		E	520	571	622	686	764	852	908
		0				284	322	350	374
Tatal mannan immut	(1.3.4./)	L				314	354	384	416
Total power input	(kW)	A	190	204	218	254	290	304	330
		E	206	221	236	276	316	338	368
		0				2.39	2.36	2.36	2.42
FFD	(14/44/)	L				1.93	1.92	1.92	1.90
EER	(W/W)	A	2.97	3.02	3.07	2.93	2.86	3.05	3.01
		E	2.52	2.58	2.64	2.49	2.42	2.52	2.47
Manifester (FLA)	(A)	°/L				580	638	716	782
Maximum current (FLA)	(A)	A	434	484	534	592	650	729	795
Ctouting a commant (LDA)	(A)	°/L				789	847	984	1050
Starting current (LRA)	(A)	A	643	752	802	801	859	997	1063
		0				516	594	632	662
Laurent accomment	(4)	L				558	638	680	722
Input current	(A)	A	370	387	404	482	562	578	604
		E	394	413	432	516	598	630	666
		0				61.5	61.5	63	63
C	.II. / A \	L				58.5	58.5	60	60
Sound pressure	db(A)	A	59	61	62	61.5	61.5	62.5	64.5
		E	54	56	57	56.5	56	57.5	59.5

Cooling:
- water outlet temperature 7 °C

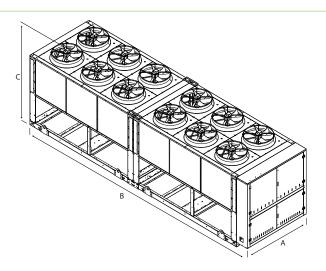
- outside air temp. 35 °C

- $\Delta t = 5$ °C.

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			Vers.	2000	2250	2500	2800	3000	3300	3600	
I I a l a la t	()		° - L	-	-	-	2450	2450	2450	2450	
Height	(mm)	C	A - E	2450	2450	2450	2450	2450	2450	2450	
Width	(Α.	° - L				2200	2200	2200	2200	
vviatn	(mm)	Α	A - E	2200	2200	2200	2200	2200	2200	2200	
Danth	()	D	° - L	-	-	-	8100	8100	8100	8100	
Depth	(mm)	В	A - E	6400	7250	8100	8100	8100	11100	11100	
NA / - 1 - 1 - 1 - 1 - 1 1	(1/	-\	° - L	-	_	-	5630	6020	6220	6420	
Weight whe	n empty (Kg	3)	A - E	4820	5240	5660	6060	6510	7590	7850	



Air-cooled heat pumps with axial flow fans Heating capacity from 58 kW up to 171 kW



Aermec adheres to the EUROVENT Certification Programme.

The products concerned appear in the EUROVENT Certified Products Guide.



- COMPACT VERSION
- SILENCED COMPACT VERSION
- HIGH EFFICIENCY VERSION
- SILENCED HIGH EFFICIENCY VERSION
- 2 COOLING CIRCUITS
- CIRCULATION PUMP
- 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
- Extended operating limits with heat pump functioning:
 - Max. processed water temperature 55° C
 - Max. external air temperature 30° C
 (42° C with speed regulator accessory for the DCPX fans)
- Cooling mode up to 46° C
- Versions available:

- H° Heat pump, compact version
- HL Heat pump, compact version,
- silenced version **HA** Heat pump, high efficiency version.
- HE High-efficiency heat pump, silenced version
- Enlarged fans
- Versions with pumping assembly and tank complete with water filter, flow switch, expansion tank, a charging unit and antifreeze electric heater
- Microprocessor control system
 - Control of the inlet water temperature, with the possibility of selecting the control of the outlet water
- Summer condensation control with 0-10V modulating signal depending on pressure,

- compensated according to the outside air temperature (with DCPX accessory).
- Evaporation control for the heat pump summer operation (with DCPX accessory)
- Intelligent defrosting with the decrease of the pressure
- Rotation of compressors and pumps according to operating hours
- Safety capacity control
- High and low pressure transducer (standard on all versions)
- Automatic reset of alarms before total block
- Messages in 4 languages.
- Alarm Log

Accessories

- **AER485**: RS-485 interface for supervision systems with MODBUS protocol.
- VT: anti-vibration support, set of four vibrationdamping components to fit under the sheet metal base of the unit.
- DCPX: This accessory allows correct operation with outside temperatures below 10°C and down to -10°C. It is made up of an electronic regulation card that varies the fan rpm on the basis of the condensation pressure, once the high pressure transducer is read for the purposes of keeping it sufficiently high FOR the proper functioning of the unit. It also allows correct heating operation with outside temperatures greater than 30°C and up to 42°C.
- 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

Can only be installed in the factory.

- **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 costant COSδ 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
- 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.
 TRX1: Metal cap that replaces the plastic cap,
- TRX1: Metal cap that replaces the plastic cap, mounted for protection in the accumulators with holes and supplementary electric heaters.
- PRM1: 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.

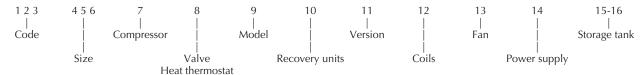
				Compatibi	lity of acce	ssories					
Mod. NRL	Vers.	280	300	330	350	500	550	600	650	700	
AER485	All	~	V	~	· ·	V	~	~	~	V	
DUALCHILLER	All	~	~	~	V	V	~	~	~	V	
MULTICHILLER	All	~	~	~	V	V	~	~	~	V	
PGS	All	✓	V	V	V	✓	V	V	V	✓	
AERWEB30	All	✓	~	~	V	✓	~	~	✓	V	
TRX1	All	~	~	~	V	✓	~	~	✓	V	
	Н	-	-	-	-	13	13	13	13	13	
√T (00-P1-P2-P3-P4)	HL	1 <i>7</i>	17	17	17	13	13	13	13	13	
(0011121311)	HA	-	-	-	-	13	13	13	13	22	
	HE	17	17	17	17	13	13	13	13	22	
	Н	-	-	-	-	10	10	10	10	10	
/T (01-02-03-04-05-06-07-08-09-10)	HL	13	13	13	13	10	10	10	10	10	
(6. 62 63 6. 63 66 67 66 63 16)	HA	-	-	-	-	10	10	10	10	22	
	HE	13	13	13	13	10	10	10	10	22	
	Н	-	-	-	-	64	64	64	64	64	
DCPX	HL	58	58	58	58	standard	standard	standard	standard	standard	
JCPX	HA	-	-	-	-	64	64	64	64	65	
	HE	58	58	59	59	standard	standard	standard	standard	standard	
	Н	-	-	-	-	-	-	-	-	-	
OCDV	HL	63	63	63	63	-	-	-	-	-	
OCPX vers. with enlarged fans (*)	HA	-	-	-	-	-	-	-	-	-	
	HE	63	63	63	63	-	-	-	-	-	
ORE	All	281	301	331	351	501	551	601	651	701	
	Н	-	-	-	-	2 (x2)					
GP	HL	3	3	3	3	2 (x2)					
	НА	-	-	-	-	2 (x2)	2 (x2)	2 (x2)	2 (x2)	2 (x3)	
	HE	3	4	4	4	2 (x2)	2 (x2)	2 (x2)	2 (x2)	2 (x3)	
RIF	All	50	50	50	51	52	52	53	53	53	
PRM1	All	~	~	~	V	V	~	~	~	V	

(*) DCPX for versions with enlarged fans not necessary (sizes from 500 up to 700). The fans are already equipped with rpm regulator.

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

Compressors:

0 - R410A standard compressors

Thermostatic valve:

- Standard mechanical thermostatic valve up to +4°C
- X Electronic thermostat valve for processed water down to -6°C

Model:

H - Heat pump

Heat recovery units

- Without recovery units
- D With partial recovery (desuperheater)
- T With total heat recovery units

Version:

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

Batteries:

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

Fans:

- Standard
- M Enlarged (280-350)
- J Inverter (500-700)

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).

Storage tank:

- 00 without storage tank
- 01 low-head storage tank and single pump
- 02 low-head storage tank and reserve pump
- 03 high-head storage tank and single pump
- 04 high-head storage tank and reserve pump
- 05 storage tank (with holes for supplementary electric heaters) low-head and single pump
- 06 storage tank (with holes for supplementary electric heaters) low-head and reserve pump
- 07 storage tank (with holes for supplementary electric heaters) high-head and single pump
- 08 storage tank (with holes for supplementary electric heaters) high-head and reserve pump
- 09 double hydraulic ring
- 10 double hydraulic ring with supplementary electric heater
- P1 without storage tank, with low-head pump
- P2 without storage tank, with low-head pump and reserve pump
- P3 without storage tank, with high-head pump
- P4 without storage tank, with high-head pump and reserve pump

Warning:

- the XD and XT configurations are not available (for temperatures below 4°C only);
- the 0350 size is not available with a 500V 3~ 50Hz power supply;
- the standard options are shown by the symbol °;

Example of the commercial code: NRL0350°H°L°°°00

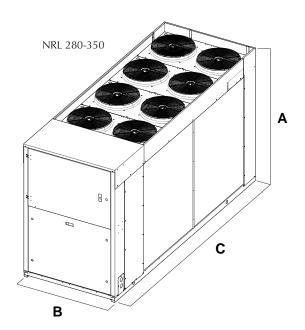
This is a size 035 NRL unit with standard mechanical thermostatic valve, heat pump model, compact silenced version, with aluminium condensing coils, standard fans, electrical panel for compressors with 400V 3N~ 50Hz motors and without storage tank.

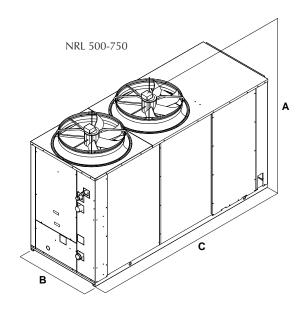
March Marc	Mod. NRL		Vers.	280	300	330	350	500	550	600	650	700
Mathematics			H		- (1	-		90	95	115	134	145
the power input with the power	Cooling capacity	(kW)										
Section Sect	0 , ,											
total power input KW HI 20.1 22.5 26.2 31.0 39.7 42.9 51.8 58.3 56.6 HI 20.0 23.0 26.6 33.1 36.4 41.0 57.7 HI 17.9 20.0 23.0 26.6 33.1 36.4 41.0 57.7 HI 27.0 27.0 23.0 26.6 33.1 36.4 45.0 52.7 Aster flow rate (I/h) HI 87.70 10.490 11.350 12.560 14.80 15.400 189.0 21.330 24.940 HI 47.0 47.0 47.0 11.50 12.560 14.80 15.400 189.0 21.330 24.940 HI 47.0 47.0 47.0 47.0 47.0 HI 47.0 47.0 47.0 47.0 HI 47.0 47.0 47.0 47.0 HI 20.2 27.2 23.2 27.3 23.3 36. 40.0 HI 20.2 27.2 23.2 27.3 23.3 36. 40.0 HI 20.2 27.2 23.2 27.3 23.3 36. 40.0 HI 20.2 27.2 23.2 27.3 23.2 31.0 HI 20.2 27.2 23.2 27.3 23.2 31.0 HI 20.2 27.2 23.2 27.3 23.2 23.0 22.13 21.13 HI 20.0 27.0 27.0 27.0 27.0 27.12 27.13 27.13 HI 20.0 27.0 27.0 27.0 27.0 27.0 27.12 27.13 27.13 HI 20.0 27.0 27.0 27.0 27.0 27.0 27.10 27.12 27.13 27.13 HI 20.0 27.0 27.0 27.0 27.0 27.0 27.10 27.12 27.13 27.13 SEER (WW) HI 23.6 33.7 31.5 34.5 34.3 33.2 35.8 35.8 35.6 HI 37.0 37.0 28.9 27.7 27.0 27.0 27.0 27.0 27.0 HI 37.0 37.0 28.9 27.7 27.0 27.0 27.0 27.0 27.0 HI 37.0 37.0 28.9 27.7 27.0 27.0 27.0 27.0 27.0 HI 37.0 37.0 28.9 27.7 27.0 27.0 27.0 27.0 27.0 HI 37.0 37.												
Man power input												
HE 17.9 20.0 23.0 26.6 33.1 36.4 45.0 52.7 57.8	Total power input	(kW)										
Atter flow rate H												
Atter flow rate (I/h) H. 8770 10490 11350 12560 14280 14280 18480 18920 21330 24880 23800 24800				- 17.3	20.0	23.0						
Hach provide				8770	10490	11350						
HE 9120 10660 11870 13240 15480 16340 19610 22020 24610	Water flow rate	(l/h)			-							
ressure drops					10660							
March Marc					-							
HR		(1.0.)	HL	47	43	51	45					
HE 20 27 23 27 30 32 31 37 45 251 25	ressure drops	(kPa)										
RR (WW) HA			HE	20	27	23	27					
SEER (WW) HA 3.09 2.98 2.98 2.99 2.92 2.92 HE 2.96 3.10 3.00 2.89 2.72 2.61 2.53 2.43 2.47 HE 2.96 3.10 3.00 2.89 2.72 2.61 2.53 2.43 2.47 HE 3.94 3.37 3.15 3.45 3.40 3.30 3.87 3.58 3.67 HA 3.43 3.32 3.87 3.58 3.67 HE 3.94 3.89 3.94 3.84 3.78 3.55 4.28 4.26 4.15 HE 3.94 3.89 3.94 3.84 3.78 3.55 4.15 4.13 4.02 HE 3.94 3.89 3.94 3.84 3.78 3.55 4.15 4.13 4.02 HE 3.94 3.89 3.94 3.84 3.78 3.55 4.15 4.13 4.02 HE 3.94 3.89 3.94 3.84 3.78 3.55 1.50 1.15 6.16 HE 3.94 3.89 3.94 3.84 3.78 3.55 1.50 1.15 6.16 HE 59 69 76 86 103 110 135 152 171 HE 59 69 76 86 103 110 135 152 171 HE 59 69 76 86 103 110 135 152 171 HE 18.6 2.13 2.43 2.78 3.32 36 43.1 48 55.1 HE 18.6 2.13 2.43 2.78 3.32 36 43.1 48 55.1 HE 17.3 2.03 2.25 2.58 3.12 3.38 40.1 44.9 5.21 HE 17.3 2.03 2.25 2.58 3.12 3.38 40.1 44.9 5.21 HE 17.3 2.03 2.25 2.58 3.12 3.38 40.1 44.9 5.21 HE 17.3 2.03 2.25 2.58 3.12 3.38 40.1 44.9 5.21 HE 18.6 2.10 1.10 1.10 1.10 1.10 1.10 1.10 1.10			Н	-	-	-	-	2.47	2.35	2.34	2.51	2.31
SEER (WW) HE 2.96 3.10 3.00 2.89 2.72 2.61 2.53 2.43 2.47		(14/44)	HL	2.54	2.71	2.52	2.35	2.09	2.10	2.12	2.13	2.13
SEER (WW) HL 3.16 3.37 3.15 3.45 3.40 3.30 3.87 3.58 3.67 HA 3.83 3.20 3.87 3.58 3.67 HA 3.83 3.50 4.28 4.26 4.15 HB 3.83 3.50 4.28 4.26 4.15 HB 3.83 3.50 4.28 4.26 4.15 HB 99 106 129 150 165 HB 99 106 129 150 165 HB 103 110 135 152 171 HB 103 110 135 152 171 HB 33.2 3.67 HB 33.2 3.6 43.1 48 551 HB 33.2 3.2 36 43.1 48 551 HB 33.2 3.6 43.1 48 551 HB 33.2 3.2 36 43.1 48 551 HB 33.2 3.2 36 43.1 48 551 HB 33.2 3.2 36 43.1 48 551 HB 31.2 33.8 40.1 44.9 52.1 HB 31.2 33.8 40.1 44.9 52.1 HB 17000 10.0 10.0 10.0 10.0 10.0 10.0 10.	EK	(VV/VV)	HA	-	-	-	-	3.09	2.98	2.98	2.89	2.92
SEER WAYN HE 3.16 3.37 3.15 3.45 3.40 3.30 3.30 3.83 3.50 4.26 4.15 HE 3.94 3.89 3.94 3.84 3.78 3.59 4.26 4.15 HE 3.94 3.89 3.94 3.84 3.78 3.59 4.26 4.15 HE 3.94 3.89 3.94 3.84 3.78 3.59 4.26 4.15 HE 3.94 3.89 3.94 3.84 3.78 3.59 4.26 4.15 HE 5.8 6.8 7 99 106 129 150 165 HE 5.9 6.9 7.6 8.6 103 110 135 152 171 HE 5.9 6.9 7.6 8.6 103 110 135 152 171 HE 5.9 6.9 7.6 8.6 103 110 135 152 171 HE 18.6 21.3 24.3 27.8 33.2 3.6 43.1 48 55.1 HE 17.3 20.3 22.5 25.8 31.2 33.8 40.1 44.9 52.1 HE 17.3 20.3 22.5 25.8 31.2 33.8 40.1 44.9 52.1 HE 17.3 20.3 22.5 25.8 31.2 33.8 40.1 44.9 52.1 HE 19.980 11700 12900 14100 17030 18230 22190 25800 28380 HE 10150 11870 13070 14790 17720 18920 23220 26140 29410 HE 10150 11870 13070 14790 17720 18920 23220 26140 29410 HE 10150 11870 13070 14790 17720 18920 32320 26140 29410 HE 13.1 3.6 65.6 56.5 56.4 55 62 67 73 83 HE 3.41 3.40 3.38 3.33 3.30 3.25 3.37 3.39 3.28 DOWN SUPPLY HE 3.1 3.1 3.6 3.8 41 50 2.9 44 44 45 52 64 HE 3.1 3.1 3.1 3.0 3.0 9. 2.95 2.98 2.94 2.99 3.13 2.99 HE 3.1 3.2 3.9 3.09 2.95 2.98 2.94 2.99 3.13 2.99 HE 3.1 3.1 3.6 3.8 41 50 72 75 75 91 100 113 HE 3.1 3.1 3.6 3.8 46 60 6 64 79 91 99 HE 3.1 3.1 3.6 3.8 46 60 6 64 79 91 99 HE 3.1 3.6 3.8 46 60 64 79 91 99 HE 3.1 3.6 3.8 46 60 64 79 91 99 HE 3.1 3.6 3.8 46 60 64 79 91 99 HE 3.1 3.6 3.8 46 60 64 79 91 99 HE 3.1 3.6 3.8 46 60 64 79 91 99 HE 3.1 3.6 3.8 46 60 64 79 91 99 HE 3.1 3.6 3.8 46 60 64 79 91 99 HE 3.1 3.6 3.8 46 60 64 79 91 99 HE 3.1 3.6 3.8 46 60 64 79 91 99 HE 3.1 3.6 3.8 46 60 64 79 91 99 HE 3.1 3.6 3.8 46 60 64 79 91 99 HE 3.1 3.6 3.8 46 66 6 2 2 2 2 2 2 2 2 HE 2.0 22 22 22 22 22 22 22 22 22 22 22 22 22			HE	2.96	3.10	3.00	2.89	2.72	2.61	2.53	2.43	2.47
Here the part of t				-		-	-	3.43				
ressure drops HA	SFFR	(W/M)		3.16	3.37	3.15	3.45					
ressure drops (kW) HI	JELK	(• • / • • /			-	-		3.83				
resure drops (kN) HL 58 68 75 82 99 100 110 125 150 165 171 186 187 181 181 185 185 197 181 181 185 185 181 181 181 18				3.94	3.89	3.94	3.84					
reasure drops (kW) HA 103 110 135 152 171 HE 59 69 76 86 103 110 135 152 171 HH 1 33.2 36 43.1 48 55.1 HH 1 33.2 36 43.1 48 55.1 HH 1 31.2 33.8 40.1 44.9 55.1 HH 1 31.2 33.8 40.1 44.9 55.1 HH 1 17030 11330 2190 25800 28380 Aler flow rate (l/h) HA 17030 11230 2190 25800 28380 Aler flow rate (l/h) HA 17030 11230 2190 25800 28380 HH 1 17720 18920 23220 26140 29410 HH 1 10150 11870 13070 14790 17720 18920 23220 26140 29410 HH 1 10150 11870 13070 14790 17720 18920 23220 26140 29410 HH 2 17030 144 44 52 64 HH 2 17030 144 44 44 52 64 HH 2 17030 144 44 44 52 64 HH 2 17030 144 44 44 52 64 HH 3 17030 144 44 52 64 HH 3 17030 144 14 44 52 64 HH 3 17030 144 14 15 2 64 HH 4 17030 144 14 14 15												
The state of the s	Jesting capacity	(1444)		58	68	75	82					
total power input KeW HI	пеания сарасну	(KVV)										
Age of the power input with potential power input with po				59	69	76	86					
Max Figure Max Figure Max Figure Max M												
HE 17.3 20.3 22.5 25.8 31.2 33.8 40.1 44.9 52.1	otal nower input	(1/1/1)		18.6	21.3	24.3						
Vater flow rate (I/h) (I	otal power input	(KVV)										
Atter flow rate with the first part of the first				17.3	20.3	22.5	25.8					
Age of a large low rate with left and it is a large low rate low r												
HE 10150 11870 1370 14790 17720 18920 23220 26140 29410	Nater flow rate	(l/h)			11700	12900						
ressure drops (kPa) HL 61.1 53.6 65.6 56.4 555 62 67 73 83 83 84 84 84 84 85 84 84 84	rate. How rate	(., ,			- 440=0							
HL 61.1 53.6 65.6 56.4 55 62 67 73 83 HA 40 44 44 52 64 HB - 24.8 33.5 27.9 33.7 40 44 44 52 64 HB 2.98 2.94 2.99 3.13 2.99 HB 2.98 2.94 2.99 3.13 2.99 HB 3.30 3.25 3.37 3.39 3.28 HB 3.30 3.25 3.37 3.39 3.28 HB 66 71 87 37 3.39 3.28 Over supply HB 66 71 87 92 108 HB - 3.41 3.40 3.38 3.33 3.30 3.25 3.37 3.39 3.28 Over supply HB 66 71 87 92 108 HB - 33.3 38 41 50 72 75 91 100 113 HA 66 71 87 92 108 HB 66 71 87 92 108 HB 66 71 87 92 108 HB 67 72 75 91 100 113 HA 67 72 75 91 100 113 HB												
ressure drops (RPa)												
HE 24.8 33.5 27.9 33.7 40 44 44 52 64 HE 34.8 33.5 27.9 33.7 40 44 44 52 64 HE 3.12 3.19 3.09 2.95 2.98 2.94 2.99 3.13 2.99 HA 3.30 3.25 3.37 3.39 3.28 HE 3.41 3.40 3.38 3.33 3.30 3.25 3.37 3.39 3.28 Dotation of the company of the comp	Pressure drops	(kPa)										
H		(
OP												
HA												
Ower supply	COP	(W/W)			3.19							
Second					2.40							
H	Power cumply		I IL	3.41	3.40		3.33 2.33		onagnet		3.39	3.20
total current input (A) HL 33 38 41 50 72 75 91 100 113 HA - - - 55 55 59 72 82 88 HE 31 36 38 46 60 64 79 91 99 Idaximum current (FLA) (A)	ower suppry		Н								92	108
HA												
HE 31 36 38 46 60 64 79 91 99 Jaximum current (FLA) (A) All 46 53 58 63 76 81 100 112 122 Jaming current (LRA) (A) All 155 184 190 200 214 220 232 243 261 Jaming compressors (no./circuit)	otal current input	(A)										
Maximum current (FLA) (A) All 46 53 58 63 76 81 100 112 122 122 124 120 232 243 261 125 125 125 125 125 125 125 125 125 12	•					3.8						
Farting current (LRA) (A) All 155 184 190 200 214 220 232 243 261 sype of compressors All Scroll Scroll Scroll Market Specification (no.) Fig. 184 190 200 214 220 232 243 261 Scroll H	Maximum current (FLA)	(A)										
ype of compressors	Starting current (LRA) (A	()										
ompressors (no./circuit) HL		-/		133	10-т	150	200		220	232	273	201
ompressors (no./circuit) HL	/			_	_	_	_		3/2	4/2	4/2	4/2
HA 3/2 3/2 3/2 4/2 4/2 4/2 ype of fans All HE 2/2 2/2 2/2 2/2 2/2 3/2 3/2 3/2 4/2 4/2 4/2 ype of fans All HA 3/2 3/2 3/2 4/2 4/2 4/2 ype of fans All HA 3/2 39400 39400 39400 37500 37500 HB 14000 20000 20000 20000 28400 28700 28700 27400 28100 HA 3/2 37000 37000 36500 36500 36500 58000 HE 20000 26000 26000 26000 20200 21100 21400 22400 31900 HA 2/2 2/2 2/2 2/2 Iumber of fans (no.) HA 2/2 2/2 2/2 2/2 HB 4/2 HB 6/8/8/8/8/8/8/8/8/8/8/8/8/8/8/8/8/8/8/8	Compressors (no Jaire	+)										
HE 2/2 2/2 2/2 2/2 3/2 3/2 3/2 4/2 4/2 4/2 4/2 4/2 ype of fans All	Lompressors (no./circuit	L)										
ype of fans All All Axial H 39400 39400 39400 37500 37500 37500 HL 14000 20000 20000 20000 28400 28700 28700 27400 28100 HA 37000 37000 36500 36500 58000 HE 20000 26000 26000 26000 20200 21100 21400 22400 31900 H 2 2 2 2 2 2 HL 4 6 6 6 6 2 2 2 2 2 MA Implementation of fans All All All Black Plates Victaulic												
HL 14000 20000 20000 20000 28400 28700 28700 27400 281	ype of fans											
HL 14000 20000 20000 20000 28400 28700 28700 27400 28100 HA 37000 37000 36500 36500 58000 HE 20000 26000 26000 26000 20200 21100 21400 22400 31900 HH 2 2 2 2 2 2 HH 4 6 6 6 6 2 2 2 2 2 2 HH 5 6 8 8 8 8 2 2 2 2 2 3 Waporator All Plates Umbing connections All Victaulic	/ !			-	-	-	-		39400	39400	37500	37500
HA		/ 2/15		14000	20000	20000						
HE 20000 26000 26000 20000 21100 21400 22400 31900 HH 2 2 2 2 2 2 HH - 4 6 6 6 6 2 2 2 2 2 HH 2 2 2 2 2 HH 2 2 2 2 2 MH - 4 6 6 6 6 2 2 2 2 2 HH 2 2 2 2 2 2 MH	an air flow rate	(m³/h)		-	-	-	-					
HL 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				20000	26000	26000	26000					
HL 4 6 6 6 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 3 2 2 2 3 2 2 2 3 2 3 2 2 2 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 3 3 2 3 2 3 2 3 3 2 3 3 2 3 3 2 3 3 2 3 3 2 3					-	-	-					
Import of fans (no.) HA - - - - 2 2 2 2 2 3 HE 6 8 8 8 2 2 2 2 2 3 vaporator All Plates lumbing connections All Victaulic				4	6	6	6					
HE 6 8 8 8 2 2 2 2 3 2 3 2 3 3	Number of fans	(no.)				-						
vaporator All Plates lumbing connections All Victaulic						8						
lumbing connections All Victaulic	vaporator			<u>~</u>								
inension of plumbing connections (Θ) All 2"1/2	Plumbing connections											
	Dimension of plumbing con	nections (C		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

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

- Heating:
- water outlet temperature 45 °C
- outside air temp 7 °C D.B. 6 °C W.B.;
- $\Delta t = 5$ °C.
- 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			Vers.	280	300	330	350	500	550	600	650	700
Height	(mm)	Α	All	1606	1606	1606	1606	1875	1875	1875	1875	1875
Width	(mm)	В	All	1100	1100	1100	1100	1100	1100	1100	1100	1100
Donath	()		H - HL	2450	2450	2450	2450	2950	2950	2950	2950	2950
Depth	(mm)	C	HA - HE	2450	2950	2950	2950	2950	2950	2950	2950	3950
\\/\ai=\n++++\n+===	t. (l.e)		H - HL	713	724	731	740	913	917	1016	1130	1142
vveignt when e	Veight when empty (kg)		HA - HE	730	795	805	811	1099	1103	1204	1212	1390

NB:

The versions available for sizes 280,300,330,350 are only (HL - HE).



Air cooled heat pumps with axial flow fans Heating capacity from 165 up to 523 kW



adheres Aermec EUROVENT Certification Programme.

The products concerned appear in the EUROVENT Certified Products Guide



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

Characteristics

- Available in 9 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 anti-corrosion painted finish.
- Extended operating limits with heat pump functioning:
 - Max. processed water temperature 55° C.
 - Max. external air temperature 30° C. (42° C with speed regulator accessory for DCPX fans).
- Versions available:

- "H" Standard compact heat pump.
- "HL" Silenced compact heat pump.
- "HA" High efficiency heat pump.
- "HE" High-efficiency silenced heat pump.
- Thermostatic valve:
- "o" standard mechanical thermostatic valve.
- "x" electronic thermostatic valve, also for low water temperature (down to -6°C).
- Fan unit:
- "°" Standard.
- "J" Inverter.
- Versions with pumping assembly and tank complete with water filter, flow switch, expansion tank, a charging unit and antifreeze electric heater.
- Microprocessor control system:
 - Control of the inlet water temperature, with the possibility of selecting

the control of the outlet water.

- Summer condensation control with 0-10V modulating signal depending on pressure, compensated according to the outside air temperature (with DCPX accessory).
- Evaporation control for the heat pump summer operation (with DCPX accessory).
- Rotation of compressors and pumps according to operating hours (manual rotation from 1400 to 1800).
- Safety capacity control.
- Low pressure transducers and high pressure transducer (standard for all versions)
- Automatic reset of alarms before total block.
- Messages in 4 languages.
- Alarm Log.

Accessories

- AER485: RS-485 interface for supervision PGS: Daily/Weekly Programmer. systems with MODBUS protocol.
- AVX: Sprung anti-vibration supports. Select the AVX model from the compatibility table.
- DCPX: With this accessory correct operation is possible with outside temperatures below 10 °C and down to - 10 °C. It is made up of an electronic regulation card that varies the fan rpm on the basis of the condensation pressure, read by the high pressure transducer in order to keep it sufficiently high for the proper functioning of the unit. It also allows correct heating operation with outside temperatures greater than 30°C and up to 42°C.
- 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 external coils from accidental knocks

- 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 costant COSδ 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.
- TRX1: Metal cap that replaces the plastic cap, mounted for protection in accumulators with holes for supplementary electric heaters.
- VT: anti-vibration support, to be fitted below the unit base.
- PRM1-PRM2: FACTORY FITTED ACCES-SORY. It is a manual pressure switch electrically wired in series with the existing automatic highpressure switch on the compressor discharge pipe.

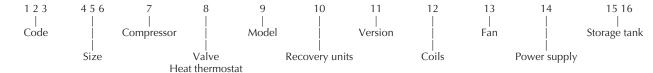
Compatibility of accessories

Mod. NRL	Vers.	750	800	900	1000	1250	1400	1500	1650	1800
AER485	All	V	~	~	~	~	~	~	~	V
DUALCHILLER	All	V	~	~	~	~	~	~	~	V
MULTICHILLER	All	V	~	~	~	~	~	~	~	V
PGS	All	V	~	~	~	~	~	~	~	V
AERWEB30	All	V	~	~	~	~	~	~	~	V
TRX1	All	✓	✓	~	~	~	~	~	~	V
AVX	All	-	~	~	~	~	~	~	~	V
VT	All	23	-	-	-	-	-	-	-	-
	Н	64	65	65	65	65	66	66	68	68
DCPX	HL	standard	standard	standard	standard	standard	standard	standard	standard	standard
DCFX	HA	65	66	66	66	68	68	68	68	68
	HE	standard	standard	standard	standard	standard	standard	standard	standard	standard
DCPX vers. with enlarged fans	All	NOTE: [DCPX not neces	ssary. The fans	are already e	quipped with i	pm regulator.			
DRE	All	751	801	901	1001	1251	1401	1501	1651	1801
GP	H - HL	10 (x3)	10 (x3)	10 (x3)	10 (x4)	10 (x4)	350	350	350	350
GP	HA - HE	10 (x3)	260	260	260	350	350	350	500	500
RIF	H - HL	53	87	89	91	91	93	94	94	94
KIF	HA - HE	53	88	90	92	92	93	94	94	94
PRM1/PRM2	Tutte	V	V	~	~	~	~	~	~	V

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 up to +4°C
- X Electronic thermostatic valve also for low water temperature (down to -6°C)

Model:

H - Heat pump

Heat recovery units

- Without recovery units
- D With partial recovery (desuperheater)
- T With total heat recovery (not available in versions with storage tank)

Version:

- Standard compact heat pump
- L Compact heat pump, silenced version
- A High efficiency heat pump
- E High-efficiency heat pump, silenced version

Batteries:

- ° Aluminium
- R Copper
- S Tinned copper
- V Varnished

Fans:

- - Standard
- J Inverter

Warning:

- the standard options are shown by the symbol °;
- the XD and XT configurations are not available (for temperatures below 4°C only).
- the 750 size not available for 500V 3~ 50Hz alimentation.

Example of the commercial code: NRL1000°H°E°°°04

This is a size 1000 NRL unit with aluminium condensing coils, PED standard evaporator, electrical panel for compressors with 400V 3~ 50Hz motors and with high-head storage tank and reserve pump.

As you may have noticed, each option is represented in a unique way from all the others, so it is not necessary to indicate (within the commercial code) the standard options (identified by °).

Power supply:

- 400V 3~ 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
- 01 low-head storage tank and single pump
- 02 low-head storage tank and reserve pump
- 03 high-head storage tank and single pump $\,$
- 04 high-head storage tank and reserve pump
- 05 storage tank (with holes for supplementary electric heaters) low-head and single pump
- 06 storage tank (with holes for supplementary electric heaters) low-head and reserve pump
- 07 storage tank (with holes for supplementary electric heaters) high-head and single pump
- 08 storage tank (with holes for supplementary electric heaters) high-head and reserve pump
- 09 double hydraulic ring
- 10 double hydraulic ring with supplementary electric heater
- P1 without storage tank, with low-head pump
- P2 without storage tank, with low-head pump and reserve pump
- P3 without storage tank, with high-head pump
- P4 without storage tank, with high-head pump and reserve pump

Mod. NRL		Vers.	750	800	900	1000	1250	1400	1500	1650	1800
		H	176	201	222	262	300	333	367	423	454
Cooling capacity	(kW)	HL HA	165 180	184 211	200	237 261	265 315	302 351	332 388	373 437	397 472
		HE	175	194	213	231	284	319	355	398	426
		Н	70	81	94	101	120	140	159	166	179
		HL	77	90	105	112	136	154	174	187	204
Total power input	(kW)	HA	63	73	82	94	109	126	143	151	162
		HE	69	81	94	107	122	140	158	168	182
		Н	30270	34570	38180	45060	51600	57280	63120	72760	78090
	a.a.s	HL	28380	31650	34400	40760	45580	51940	57100	64160	68280
Water flow rate	(l/h)	HA	30960	36290	41110	44890	54180	60370	66740	75160	81180
		HE	30100	33370	36640	39730	48850	54870	61060	68460	73270
		Н	74	46	45	50	57	40	40	47	46
Drocerino drop	(kPa)	HL	65	39	37	41	45	33	34	37	36
Pressure drop	(KFa)	HA	64	55	56	54	61	48	49	54	54
		HE	60	47	45	43	51	40	41	45	44
		H	2.51	2.48	2.36	2.59	2.50	2.38	2.31	2.55	2.54
EER	(W/W)	HL	2.13	2.04	1.90	2.12	1.95	1.96	1.91	1.99	1.95
LIX	(V V / V V)	НА	2.85	2.89	2.91	2.78	2.89	2.79	2.71	2.89	2.91
		HE	2.54	2.40	2.27	2.16	2.33	2.28	2.25	2.37	2.34
		Н	3.87	3.98	3.77	3.78	3.76	3.57	3.50	3.53	3.60
ESEER	(W/W)	HL	3.85	3.90	3.75	3.75	3.65	3.47	3.43	3.44	3.41
JULIA	(• • / • •)	НА	4.19	4.17	4.06	3.96	4.13	3.91	3.82	3.85	3.82
		HE	4.05	4.06	3.99	3.88	4.06	3.85	3.74	3.81	3.82
Heating capacity	(kW)	H - HL	201	227	256	293	340	384	427	468	503
icating capacity	(KVV)	HA - HE	204	233	263	293	344	388	433	484	523
Total power input	(kW)	H - HL	65	75	85	96	111	126	141	155	166
. otal power input	(1000)	HA - HE	61	74	83	93	110	124	139	153	163
Water flow rate	(l/h)	H - HL	34570	39040	44030	50400	58480	66050	73440	80500	86520
vater now rate	(1/11)	HA - HE	35090	40080	45240	50400	59170	66740	74480	83250	89960
Pressure drop	(kPa)	H - HL	96	61	62	65	78	54	55	59	58
ressure drop	(Ki G)	HA - HE	82	68	69	69	76	58	60	66	66
COP	(W/W)	H - HL	3.08	3.03	3.01	3.05	3.06	3.05	3.03	3.02	3.03
	(**,**)	HA - HE	3.33	3.15	3.17	3.15	3.13	3.13	3.12	3.16	3.21
Power supply		All					00V-3-50Hz				
Total input current	(A)	H - HL	113	136	156	179	193	227	261	279	290
	-	HA - HE	109	138	157	177	197	231	265	282	293
Maximum current (FLA)	(A)	H - HL	144	173	195	221	265	294	323	365	398
		HA - HE	144	177	199	221	274	303	332	373	406
Starting current (LRA)	(A)	H - HL	320	348	404	430	533	503	532	633	666
		HA - HE	320	352	408	430	542	512	541	641	674
Type of compressors		All	4./2	4/2	4./2	4/0	Scroll	F /2	6.10	6 /2	6 /0
Compressors / no. circuit		All	4/2	4/2	4/2	4/2	4/2	5/2	6/2	6/2	6/2
Type of fans		All	F0200	6.4500	62750	05600	Axial	07400	06000	124200	122400
		<u>H</u>	50200	64500	63750	85600	80800	87400	86800	124200	122400
Fan air flow rate	(m3/h)	HL HA	41700	45200	44600	59900	56600	65500	69400	86900	85700
		HA HE	48000	85600	84600	83600	126000	124200	122400	168000	165600
			34600	59920	59220	60610	88200	90000	91800	117600	115920
		H HL	3 3	3 3	3 3	<u>4</u> 4	4 4	4	4	6	6
Number of fans	(n°)	HA	3	4	4	4	6	6	6	8	6 8
		HE	3	4	4	4	6	6	6	8	8
vaporator		All	<u> </u>	7	7	-	Plates	U	U	U	U
Plumbing connections		All					Victaulic				
		H - HL	3"	3"	3"	3"	3"	4"	4"	4"	4"
Dimension of plumbing conne	ections (Ø)) HA - HE	3"	3"	3"	3"	3 4"	4" 4"	4" 4"	4" 4"	4" 4"
nput power								4			
ow-head pump	(kW)	All	3.0	3.4	3.4	3.4	4.6	4.6	5.9	5.9	5.9
nput power											
nigh-head pump	(kW)	All	5.5	5.7	5.7	5.7	8.3	8.3	8.3	10.5	10.5
Input current											
ow-head pump	(A)	All	6.2	5.8	5.8	5.8	7.8	7.8	10.0	10.0	10.0
nput current											
nigh-head pump	(A)	All	11.0	9.7	9.7	9.7	14.1	14.1	14.1	17.8	17.8
пъп пеаа рашр		Н	97	125	120	118	142	149	142	122	115
Pump useful head		HL	109	138	135	134	165	167	157	145	141
ow-head	(kPa)	HA	109	123	114	111	128	128	125	106	95
cooling mode		HE	110	135	132	131	150	149	141	126	119
Jooning mode		Н	211	243	237	233	285	290	274	257	251
Pump useful head		HL	235	257	253	250	309	310	297	280	276
rump userur nead nigh-head	(kPa)	HA	235	240	230	225	269	266	246	241	232
		HE	231	252	249	247	293	289	272	261	255
		LIL	23 I	232	Z49	Z4/	293	209	212	201	233
cooling mode Tank capacity	(1)	All	700	700	700	700	700	700	700	700	700

 $^{(\}ast)$ The power supply for the 075 size is: 400V-3N-50Hz.

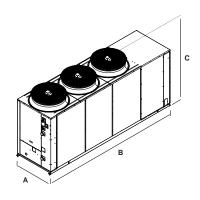
Mod. NRL		Vers.	750	800	900	1000	1250	1400	1500	1650	1800
		Н	85.0	88.5	88.5	90.5	93.5	91.0	90.5	92.0	94.0
) Carred marriag	JD(A)	HL	80.0	85.5	85.5	87.5	90.5	88.0	87.5	89.0	91.0
♪Sound power	dB(A)	НА	85.0	88.5	88.5	88.5	91.5	91.0	91.5	92.0	94.0
		HE	77.0	83.0	83.0	83.5	86.0	85.5	85.0	86.5	88.5
		Н	53.0	56.5	56.5	58.5	61.5	59.0	58.5	60.0	62.0
) Cound procesure	dD(A)	HL	48.0	53.5	53.5	55.5	58.5	56.0	55.5	57.0	59.0
♪ Sound pressure	dB(A)	НА	53.0	56.5	56.5	56.5	59.5	59.0	58.5	60.0	62.0
		HE	45.0	51.0	51.0	51.0	54.0	53.5	53.0	54.5	56.5

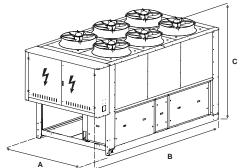
Cooling:

- water outlet temperature 7 °C
- outside air temp. 35 °C
- $\Delta t = 5 \, ^{\circ}C.$

- Heating:
 water outlet temperature 45 °C
 outside air temp 7 °C D.B. 6 °C W.B.;
- $\Delta t = 5$ °C.
- 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)





The drawings are only examples!

Mod. NRL			Vers.	750	800	900	1000	1250	1400	1500	1650	1800
	(mm)		H - HL	1975	1975	1975	1975	1975	2450	2450	2450	2450
Height	(mm)	C	HA - HE	1975	2450	2450	2450	2450	2450	2450	2450	2450
Width	(mm)	۸	H - HL	1500	1500	1500	1500	1500	2200	2200	2200	2200
vvidin	(mm)	А	HA -HE	1500	2200	2200	2200	2200	2200	2200	2200	2200
Depth	(mm)	В	H - HL	4350	4355	4355	5355	5355	4250	4250	4250	4250
Берип	(mm)	D	HA - HE	4350	3400	3400	3400	4250	4250	4250	5750	5750
			Н	1487	1800	1940	2170	2320	2930	3140	3220	3330
Waight when	omnte (ka	-)	HL	1487	1800	1950	2180	2320	2940	3150	3230	3340
Weight when	еттрту (к)	НА	1748	2150	2300	2460	2750	2990	3190	3680	3800
			HE	1748	2160	2310	2470	2760	3000	3200	3690	3810

Warning: the weights refer to versions without storage tank and pump.

Selection AVX

Mod. NRL	Vers.	AVX
NRL800H - HL	"00"	701
NRL800H - HL	"01-02-03-04"	702
NRL800H - HL	"P1-P2-P3-P4"	703
NRL800HA - HE	"00"	704
NRL800HA - HE	"01-02-03-04"	705
NRL800HA - HE	"P1-P2-P3-P4"	706
NRL900H - HL	"00"	707
NRL900H - HL	"01-02-03-04"	708
NRL900H - HL	"P1-P2-P3-P4"	709
NRL900HA - HE	"00"	710
NRL900HA - HE	"01-02-03-04"	711
NRL900HA - HE	"P1-P2-P3-P4"	712
NRL1000H - HL	"00"	713
NRL1000H - HL	"01-02-03-04"	714
NRL1000H - HL	"P1-P2-P3-P4"	715
NRL1000HA - HE	"00"	716
NRL1000HA - HE	"01-02-03-04"	711
NRL1000HA - HE	"P1-P2-P3-P4"	712
NRL1250H - HL	"00"	713
NRL1250H - HL	"01-02-03-04"	717
NRL1250H - HL	"P1-P2-P3-P4"	718
NRL1250HA - HE	"00"	719
NRL1250HA - HE	"01-02-03-04"	720
NRL1250HA - HE	"P1-P2-P3-P4"	721

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.

Mod. NRL	Vers.	AVX
NRL1400H - HL	"00"	722
NRL1400H - HL	"01-02-03-04"	723
NRL1400H - HL	"P1-P2-P3-P4"	724
NRL1400HA - HE	"00"	722
NRL1400HA - HE	"01-02-03-04"	723
NRL1400HA - HE	"P1-P2-P3-P4"	724
NRL1500H - HL	"00"	722
NRL1500H - HL	"01-02-03-04"	728
NRL1500H - HL	"P1-P2-P3-P4"	729
NRL1500HA - HE	"00"	730
NRL1500HA - HE	"01-02-03-04"	731
NRL1500HA - HE	"P1-P2-P3-P4"	732
NRL1650H - HL	"00"	733
NRL1650H - HL	"01-02-03-04"	728
NRL1650H - HL	"P1-P2-P3-P4"	729
NRL1650HA - HE	"00"	734
NRL1650HA - HE	"01-02-03-04"	735
NRL1650HA - HE	"P1-P2-P3-P4"	736
NRL1800H - HL	"00"	730
NRL1800H - HL	"01-02-03-04"	728
NRL1800H - HL	"P1-P2-P3-P4"	732
NRL1800HA - HE	"00"	737
NRL1800HA - HE	"01-02-03-04"	738
NRL1800HA - HE	"P1-P2-P3-P4"	736



Air cooled heat pumps with axial flow fans Heating capacity from 462 up to 944 kW



- HIGH EFFICIENCY VERSION
- SILENCED HIGH EFFICIENCY VERSION
- COMPACT VERSION
- SILENCED COMPACT VERSION
- 4 COOLING CIRCUITS
- CIRCULATION PUMP
- CIRCULATION PUMP E STORAGE TANK

Characteristics

- Available in 7 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.
- Extended operating limits with heat pump functioning:
 - Max. processed water temperature 55° C.
 - Max. external air temperature 30° C. (42° C with speed regulator accessory for DCPX fans).
- Versions available:
 - "H" Standard compact heat pump.
 - "HL" Silenced compact heat pump.
 - "HA" High efficiency heat pump.

- "HE" High-efficiency silenced heat pump.
- Thermostatic valve (selectable with configurator):
 - "°" standard mechanical thermostatic valve.
- "x" electronic thermostatic valve, also for low water temperature (down to -6°C).
- Fan unit (selectable with configurator):
- "°" Standard.
- "M" Enlarged.
- "J" Inverter.
- Versions with pumping assembly and tanks complete with water filter, flow switch, expansion tank, a charging unit and antifreeze electric heater.
- Microprocessor control system:
 - Control of the inlet water temperature, with the possibility of selecting the control of the outlet water.
 - Summer condensation control with 0-10V modulating signal depending on

pressure, compensated according to the outside air temperature (with DCPX accessory).

- Evaporation control for the heat pump summer operation (with DCPX accessory).
- Auto rotation of compressors and pumps according to operating hours (for all sizes)
- Safety capacity control
- Low and high pressure transducers (standard for all versions).
- Automatic reset of alarms before total block.
- Messages in 4 languages.
- Alarm Log.

Accessories

- AER485P1: RS-485 interface for supervision systems with MODBUS protocol.
- AVX: Sprung anti-vibration supports. Select the AVX model from the compatibility table.
- DCPX: With this accessory correct operation is possible with outside temperatures below 10 °C and down to 10 °C. It is made up of an electronic regulation card that varies the fan rpm on the basis of the condensation pressure, read by the high pressure transducer in order to keep it sufficiently high for the proper functioning of the unit. It also allows correct heating operation with outside temperatures greater than 30°C and up to 42°C.
- **GP**: Protection grille, protects external coils 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 costant COSδ at 0.95 and also allows an input current reduction (about 10%)

It must be factory set when the unit is manufactured.

• TRX1: Metal cap that replaces the plastic cap,

mounted for protection in accumulators with holes and supplementary electric heaters.

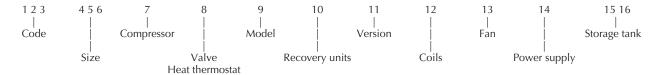
 PRM1-PRM2: FACTORY FITTED ACCES-SORY. It is a manual pressure switch electrically wired in series with the existing automatic high pressure switch on the compressor discharge pipe. Compatibility of accessories

Mod. NRL	Vers.	2000	2250	2500	2800	3000	3300	3600
AER485P1	All	V	V	V	V	V	V	V
PGS	All	V	V	V	V	V	V	V
TRX1	All	V	V	V	✓	✓	✓	✓
	Н	-	-	-	78	78	82	82
DCPX	HL	standard						
DCFX	HA	78	80	82	82	82	82	82
	HE	standard						
GP	H - HL	-	-	-	350 x 2	350 x 2	350 x 2	350 x 2
Gr	HA - HE	260 x 2	260 350	350 x 2	350 x 2	350 x 2	500 x 2	500 x 2
DIE	H - HL	-	-	-	RIFNRL2800	RIFNRL3000	RIFNRL3300	RIFNRL3600
RIF	HA - HE	RIFNRL2000	RIFNRL2250	RIFNRL2500	RIFNRL2800	RIFNRL3000	RIFNRL3300	RIFNRL3600
PRM1/PRM2	Tutte	V	V	V	✓	✓	✓	✓
AN (N/ (OO)	H - HL	-	-	-	785	791	791	791
AVX (00)	HA -HE	767	773	779	785	791	798	798
11/1/ (04 00 00 04)	H-HL	-	-	-	786	792	792	792
AVX (01-02-03-04)	HA - HE	768	774	780	786	792	799	799
AV/V (D4 D2 D2 D4)	H - HL	-	-	-	787	793	793	793
AVX (P1-P2-P3-P4)	HA - HE	769	775	781	787	793	800	800

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 up to +4°C
- X Electronic thermostatic valve also for low water temperature (down to -6°C)

Model:

H - Heat pump

Heat recovery units

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

Version:

- H Standard compact heat pump
- HL Compact heat pump, silenced version
- HA- High efficiency heat pump
- HE- High-efficiency heat pump, silenced version

Coils:

- Aluminium
- R Copper
- S Tinned copper
- V Varnished

Fans:

- Standard
- M Enlarged
- J Inverter

Warning

- the standard options are shown by the symbol °;
- the XD and XT configurations are not available (for temperatures below 4°C only).

Example of the commercial code: NRL200°H°E°°°04

This is a size 200 NRL unit with aluminium condensing coils, PED standard evaporator, electrical panel for compressors with 400V 3~ 50Hz motors and with high-head storage tank and reserve pump.

As you may have noticed, each option is represented in a unique way from all the others, so it is not necessary to indicate (within the commercial code) the standard options (identified by °).

Power supply:

- 400V 3~ 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
- 01 low-head storage tank and single pump
- 02 low-head storage tank and reserve pump
- 03 high-head storage tank and single pump
- 04 high-head storage tank and reserve pump
- 05 storage tank (with holes for supplementary electric heaters) low-head and single pump
- 06 storage tank (with holes for supplementary electric heaters) low-head and reserve pump
- 07 storage tank (with holes for supplementary electric heaters) high-head and single pump
- 08 storage tank (with holes for supplementary electric heaters) high-head and reserve pump
- 09 double hydraulic ring
- 10 double hydraulic ring with supplementary electric heater
- P1 without storage tank, with low-head pump
- P2 without storage tank, with low-head pump and reserve pump
- P3 without storage tank, with high-head pump
- P4 without storage tank, with high-head pump and reserve pump

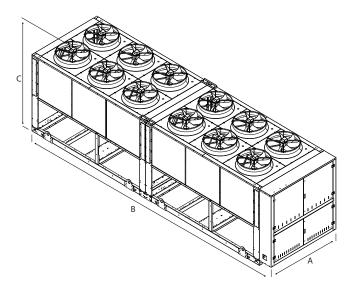
Mod. NRL		Vers.	2000	2250	2500	2800	3000	3300	3600	
2 - 1 1 1		H				666	734	846	908	
Cooling capacity	(kW)	HL	F22	F76	(20	604	664	746	794	
		HA	522	576	630	702	776	874	944	
		HE	462	515	568	638	710	796	852	
		H				280	318	332	358	
Total power input	(kW)	HL				308	348	374	408	
	(HA	188	203	218	252	286	302	324	
		HE	214	229	244	280	316	336	364	
		Н				114550	126250	145510	156180	
Nater flow rate	(l/h)	HL				103890	114210	128310	136570	
vater now rate	(1/11)	HA	89780	99070	108360	120740	133470	150330	162370	
		HE	79460	88580	97700	109740	122120	136910	146540	
		Н				40.2	40.4	46.9	45.7	
Pressure drops	(kPa)	HL				33.4	33.6	37	35.5	
ressure drops	(Ki a)	HA	53.5	61.4	61.4	48.0	48.6	54.0	53.5	
		HE	42.7	50.6	50.6	40.3	41.2	45.4	44.1	
		Н				2.38	2.31	2.54	2.54	
· FD	0.4/0.40	HL				1.96	1.90	1.99	1.95	
ER	(W/W)	HA	2.78	2.84	2.89	2.79	2.71	2.89	2.91	
		HE	2.16	2.25	2.33	2.28	2.25	2.37	2.34	
		Н	2.10	2.23	2.33	3.57	3.50	3.53	3.60	
		T.II				3.47	3.43	3.44	3.41	
SEER	(W/W)	HA	2.06	4.04	/ 12				3.82	
		ПА	3.96	4.04	4.13	3.91	3.82	3.85		
		HE	3.88	3.97	4.06	3.85	3.74	3.81	3.82	
Heating capacity	(kW)	H - HL				768	854	936	1006	
o supucity	(,	HA - HE	586	637	688	776	866	968	1046	
otal power input	(kW)	H - HL				252	282	310	332	
otal power input	(KVV)	HA - HE	186	203	220	248	278	306	326	
Vator flour rate	(1/b)	H - HL				132100	146890	160990	173030	
Vater flow rate	(l/h)	HA - HE	100790	109560	118340	133470	148950	166500	179910	
,	4.5	H - HL				53.7	55.4	58.8	57.8	
ressure drops	(kPa)	HA - HE	68.8	75.5	75.5	58.2	60.1	66.3	65.9	
		H - HL	30.0	75.5	, 5.5	3.05	3.03	3.02	3.03	
COP	(W/W)	HA - HE	3.15	3.14	3.13	3.13	3.12	3.16	3.21	
ower supply	(A)	(All)	3.13	3.17		00V - 3 - 50H		5.10	J.4 I	
	(/1)	(/\11)			4		14			
ype of fan		ш				Axial	172600	249400	244900	
	(m³/h)	H				174800	173600	248400	244800	
otal air flow rate		HL				131000	138800	173800	171400	
	(/	HA	167200	209600	252000	248400	244800	336000	331200	
		HE	121200	148800	176400	180000	183600	235200	231800	
otal input current	(A)	H - HL				28.8	28.8	43.2	43.2	
an group		HA - HE	28.8	36.0	43.2	43.2	43.2	57.6	57.6	
Anning to the CEL CO	(A)	H - HL				588	646	730	796	
Maximum current (FLA)	(A)	HA - HE	442	495	548	606	664	747	813	
		H - HL				797	855	998	1064	
tarting current (LRA)	(A)	HA - HE	651	763	816	815	873	1015	1081	
ype		. // X	0.5 1	, 03	010	Scroll	0, 3	1013	1001	
Ompressors no. circuit	(po.)	All	8/4	8/4	8/4	10/4	12/4	12/4	12/4	
	(110.)	All	0/4	0/4	0/4		12/4	12/4	12/4	
vaporator						Plates				
ype of plumbing conne		All				Victaulic				
lumber of plumbing co	nnectio		2	2	2	2	2	2	2	
lumbing connections	(Ø)	H - HL				4"	4"	4"	4"	
		HA - HE	4"	3"/4"	4"	4"	4"	4"	4"	
torage tank capacity	(l)	All	2x700	2x700	2x700	2x700	2x700	2x700	2x700	
nput power	([,1,4,4)	A II		27.40						
ow-head pump	(kW)	All	7.4	3.7+4.8	9.6	9.6	13.0	13.0	13.0	
nput power	4	4.11							a · -	
igh-head pump	(kW)	All	13.0	6.5+8.6	17.2	17.2	17.2	24.7	24.7	
nput current		H/HL				16.3	22	22	22	
ow-head	(A)	HA/HE	12.4	6.2+8.1	16.2	16.3	16.3	22.0	22.0	
nput current		H/HL	14.4	0.2+0.1	10.2	29.2			42.4	
	(A)		22.0	11.116	20.2		29.2	42.4		
nigh-head	. 7	HA/HE	22.0	11+14.6	29.2	29.2	29.2	42.4	42.4	
		<u>H</u>				149	142	122	115	
seful pump head	(kPa)	HL				167	157	145	141	
ow-head (**)		HA	111	128	128	128	125	106	95	
		HE	131	150	150	149	141	126	119	
		Н				290	274	257	251	
Jseful pump head	4 -	HL				310	297	280	276	
igh-head (**)	(kPa)	HA	225	269	269	266	246	241	232	
ign nead ()		HE	247	293		289		261	255	
			24/	293	293		272			
	/ In	H				93.5	93.5	95.0	95.0	
ound power	(dBA)	HL				90.5	90.5	92.0	92.0	
		HA	91.5	93.3	94.5	94.0	93.5	95.0	97.0	
		HE	86.0	87.8	89.0	88.5	88.0	89.5	91.5	

Mod. NRL		Vers.	2000	2250	2500	2800	3000	3300	3600	
		Н				62	61.5	63.0	65.0	
Sound pressure	(dBA)	HL				59	58.5	60.0	62.0	
		HA	59.5	61.3	62.5	62	61.5	63.0	65.0	
		HE	54.0	55.8	57.0	56.5	56.0	57.5	59.5	

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

- Heating:
- water outlet temperature 45 °C
- outside air temp 7 °C D.B. 6 °C W.B.;
- $\Delta t = 5$ °C.
- 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			Vers.	200	225	250	280	300	330	360	
Height (mm)	()		H - HL	-	-	-	2450	2450	2450	2450	
	(111111)	C	HA - HE	2450	2450	2450	2450	2450	2450	2450	
Width (mm	(2222)	Λ	H - HL	-	-	-	2200	2200	2200	2200	
	(111111)	Α	HA -HE	2200	2200	2200	2200	2200	2200	2200	
Depth (r	(mm)	В	H - HL	-	-	-	8100	8100	8100	8100	
	(mm)		HA - HE	6400	7250	8100	8100	8100	11100	11100	
Weight when empty		(1,0)	H - HL	-	-	-	6080	6490	6660	6880	
		(kg)	HA-HE	4930	5360	5780	6190	6630	7710	7980	

^{**} The useful head is calculated in the cooling mode