

NRL
0280/0750
cooling only

R410A



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Variable Multi Flow

VMF

- **COMPACT VERSION**
- **HIGH EFFICIENCIES ALSO AT PARTIAL LOADS**
- **EASY AND FAST INSTALLATION**



Characteristics

Chillers for external installation for chilled water production with high performance scroll compressors and low electric absorption, axial fans, external copper coils with aluminum fins, plate heat exchangers.

In the units (with desuperheater or total recovery) it is also possible to produce free-hot water. The base-ment, the structure and the panelling are in steel treated with polyester anti-corrosion paints.

Versions

NRL_° standard
NRL_L Low noise
NRL_A High efficiency
NRL_E Low noise high efficiency

Operating range: Work at full load up to 46°C
 external air temperature (for more details please

refer to the technical documentation)

- Units with two refrigerant circuits designed to grant the maximum performance at full load, ensuring high efficiencies also at partial loads and giving continuity in case of stop of one of the two circuit.
- Standard Flow-switch, water filter and high and low pressure transducer.
- Possibility of integrated hydronic -kit, which includes the main hydraulic components; it is available in different configurations with or without buffer tank, one or two high and low head pumps.
- Microprocessor adjustment, with keyboard and LCD display, for easy consultation and intervention on the unit via a menu available in several languages.
 Adjustment includes complete management of

the alarms and their log.

- The presence of a programmable timer allows setting time bands of operation and a possible second set-point
- The temperature control takes place with the integral proportional logic, based on the water output temperature.
- Night Mode: it is possible to set a silenced operation profile.

Perfect for night operation, since it guarantees greater acoustic comfort in the evenings, and a high efficiency in the time of greater load.

Night Mode is standard on all low noise versions. For all other versions either the DCPX accessory or "J" inverter fan must be specified to allow Night Mode to operate.

Accessories

- **AER485P1:** RS-485 interface for supervising systems with MODBUS protocol.
- **PGD1:** Simplified remote panel. Allows control of basic unit functions and alarm notification.
- **MULTICHILLER_PCO:** 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.
- **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 net-

work;

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

- **DCPX:** Device for condensation temperature control, with continuous speed modulation of fans by using a pressure transducer.
- **GP:** Protective grille. Condenser coil external protection against accidental or hail damage.
- **VT:** anti-vibration support, to be fitted below

the sheet metal base of the unit.

Accessories factory fitted only

- **DRE:** Current soft starter device, Available only with power supply 400V/3N.
- **RIF:** Power factor correction. Connected in parallel to the motor allowing about 10% reduction of input current
- **PRM1:** 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.	0280	0300	0330	0350	0500	0550	0600	0650	0700	0750	
AER485P1		•	•	•	•	•	•	•	•	•	•	
PGD1		•	•	•	•	•	•	•	•	•	•	
TP3	All	standard	standard	standard	standard	standard	standard	standard	standard	standard	standard	
MULTICHILLER_PCO	All	•	•	•	•	•	•	•	•	•	•	
AERWEB300	All	•	•	•	•	•	•	•	•	•	•	
DCPX standard fan	(1) °	-	-	-	-	64	64	64	64	64	64	
	(1) L		inverter fan				standard	standard	standard	standard	standard	standard
	(1) A	-	-	-	-	64	64	64	64	64	64	
	(1) E		inverter fan				standard	standard	standard	standard	standard	
DCPX increased fans (M)	(1) °	-	-	-	-	64	64	64	64	64	65	
	(1) L	63	63	63	63	standard	standard	standard	standard	standard	standard	
	(1) A	-	-	-	-	64	64	64	64	65	65	
	(1) E	63	63	63	63	standard	standard	standard	standard	standard	standard	
GP	(2) ° - L	3	3	3	3	2 (x2)	2 (x2)	2 (x2)	2 (x2)	2 (x2)	10 (x3)	
	(2) A - E	3	4	4	4	2 (x2)	2 (x2)	2 (x2)	2 (x2)	2 (x3)	10 (x3)	
VT (00-P1-P4)	° - L	17	17	17	17	13	13	13	13	13	23	
	A - E	17	17	17	17	13	13	13	13	22	23	
VT (01-10)	° - L	13	13	13	13	10	10	10	10	10	23	
	A - E	13	13	13	13	10	10	10	10	22	23	
Accessories factory fitted only												
DRE	400V/3N	281	301	331	351	501	551	601	651	701	751	
RIF	Alls	50	50	50	51	52	52	53	53	53	53	
PRM1	Alls	•	•	•	•	•	•	•	•	•	•	

(1) Standard in the models with desuperheater; In versions low noise; Not necessary fields with fans inverter

(2) (x2)(x3) the number in brackets indicates the quantity to order

Unit Configurator

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

Field	Code	15-16	Hydronic kit (7)
1,2,3	NRL	00	Without hydronic kit
4,5,6,7	Size	01	n°1 low head pump and buffer tank
	0280-0300-0330-0350-0500-0550-0600-0650-0700-0750 (3)	02	n°2 low head pump and buffer tank
8	Expansion valve	03	n°1 high head pump and buffer tank
	° Standard (leaving water temperature down to 4°C)	04	n°2 high head pump and buffer tank
	Y Low temperature (Low leaving liquid from 0°C down to -6°C) (4)	05	n°1 low head pump and buffer tank (with holes for immersion heaters)
	X Electronic expansion valve (leaving water temperature down to 4°C) contact head office for lower temperatures	06	n°2 low head pump and buffer tank (with holes for immersion heaters)
9	Model	07	n°1 high head pump and buffer tank (with holes for immersion heaters)
	° Chillers	08	n°2 high head pump and buffer tank (with holes for immersion heaters)
	C Condensing unit (5)	09	double hydraulic circuit
10	Heat recovery	10	double hydraulic circuit with holes for immersion heater
	° Without recovery	P1	n°1 low head pump
	D With Desuperheater	P2	n°2 low head pump
	T With Total Recovery	P3	n°1 high head pump
11	Versione	P4	n°2 high head pump
	° Compact		
	L Compact low noise		
	A High efficiency		
	E High efficiency in low noise operation		
12	Coil		
	° In aluminium		
	R In copper		
	S In tinned copper		
	V In painted aluminium-copper (epoxy paint)		
13	Fans (6)		
	° Standard		
	M Increased		
	J Inverter		
14	Power supply		
	° 400V/3N/50Hz with circuit breakers		
	1 220V/3/50Hz with circuit breakers		

(3) The sizes 0280-0300-0330-0350 are only low noise L/E with inverter fans

(4) **Temperature limit of produced water: -6°C version "°/L -8 version "A/E"**; The option Y is not compatible with the motocondensing units C; with the option D and T

(5) The motocondensing models are not configurable with the option D and T, and with the integrated hydronic-kit on the system's side.

(6) **On / off fan Standard**, standard sizes up 0500 to 0750

On / off fan Increased, option available for all sizes

Fans Inverter, standard sizes from 0280 to 0350, with no static pressure

Fans Inverter, option for sizes from 0500 to 0750 with static pressure

(7) Buffer tanks with holes for additional heaters are supplied from factory with plastics caps of protection, before system's loading, where the installation of one or all the heaters is not provided, it is mandatory to replace plastic caps with special caps, which are commonly available in the market.

Technical Data

Chillers			0280	0300	0330	0350	0500	0550	0600	0650	0700	0750
Cooling capacity	°	kW	-	-	-	-	96,4	102	125	136	155	189
	L	kW	52,6	62,6	67,5	80,4	86,5	92,4	112	126	143	173
	A	kW	-	-	-	-	97,4	103	128	142	162	194
	E	kW	56,6	64,6	73,6	82,5	89,5	94,5	116	128	149	179
Total power input	°	kW	-	-	-	-	35,4	38,9	46,7	54,7	61,0	70,6
	L	kW	20,7	23,01	26,5	28,9	38,9	43,0	51,5	58,2	65,6	76,1
	A	kW	-	-	-	-	30,7	34,8	40,8	45,4	53,2	63,2
	E	kW	17,1	19,7	22,1	25,5	33,5	37,2	44,9	52,3	57,3	69,0
EER	°	W/W	-	-	-	-	2,72	2,63	2,68	2,49	2,54	2,67
	L	W/W	2,54	2,72	2,54	2,78	2,22	2,15	2,18	2,17	2,18	2,27
	A	W/W	-	-	-	-	3,17	2,97	3,14	3,13	3,04	3,06
	E	W/W	3,30	3,27	3,32	3,23	2,67	2,54	2,59	2,45	2,60	2,59
ESEER	°	W/W	-	-	-	-	3,28	3,17	3,66	3,42	3,48	3,63
	L	W/W	3,01	3,22	3,01	3,29	3,27	3,17	3,66	3,42	3,48	3,65
	A	W/W	-	-	-	-	3,68	3,45	4,07	4,04	3,93	3,91
	E	W/W	3,75	3,72	3,80	3,68	3,65	3,43	3,97	3,95	3,83	3,82
Water flow rate	°	l/h	-	-	-	-	16680	17720	21670	23560	26830	32680
	L	l/h	9120	10840	11700	13930	14960	16000	19440	21840	24770	29928
	A	l/h	-	-	-	-	16860	17890	22190	24600	28040	33540
	E	l/h	9800	11180	12730	14280	15480	16340	20120	22190	25800	30960
Total pressure drop	°	kPa	-	-	-	-	53	59	64	61	74	86
	L	kPa	51	46	54	55	43	48	51	52	63	72
	A	kPa	-	-	-	-	44	49	54	60	68	88
	E	kPa	43	39	35	44	37	41	44	49	58	75

Cooling (14511:2013)

Evaporator water temperature (in/out) 12°C/7°C; External air temperature 35°C

Condensing unit			0280		0300		0330		0350		0500		0550		0600		0650		0700		0750	
			C1	C2	C1	C2	C1	C2	C1	C2	C1	C2	C1	C2	C1	C2	C1	C2	C1	C2	C1	C2
Cooling capacity	°	kW	-	-	-	-	-	-	57,0/43,0	65,0/41,0	65,0/65,0	70,5/70,5	80,5/80,5	196								
	L	kW	27,5/27,5	37,0/28,0	35,0/35,0	41,5/41,5	51,0/39,0	58,0/38,0	58,0/58,0	65,5/65,5	74,0/74,0	179										
	A	kW	-	-	-	-	57,5/43,5	65,5/41,5	66,5/66,5	73,5/73,5	84,0/84,0	201										
	E	kW	29,5/29,5	38,0/29,0	38,0/38,0	42,5/42,5	53,0/40,0	60,0/38,0	60,5/60,5	66,5/66,5	77,5/77,5	185										
Total power input	°	kW	-	-	-	-	-	-	35,11	38,54	46,31	54,39	60,54	70								
	L	kW	20,48	22,80	26,33	28,66	38,85	42,88	51,36	58,12	65,38	76										
	A	kW	-	-	-	-	30,47	34,51	40,46	45,00	52,77	62										
	E	kW	16,95	19,57	22,00	25,33	33,40	37,03	44,70	52,06	57,11	69										
EER	°	W/W	-	-	-	-	-	-	2,85	2,75	2,80	2,59	2,65	2,80								
	L	W/W	2,67	2,85	2,66	2,91	2,31	2,23	2,27	2,25	2,27	2,37										
	A	W/W	-	-	-	-	3,31	3,10	3,28	3,27	3,18	3,22										
	E	W/W	3,46	3,42	3,47	3,38	2,78	2,64	2,70	2,55	2,71	2,70										

Connections

Gas line	Ø	28/28	28/28	28/28	28/28	35/28	35/28	35/35	35/35	42/42	42/42
liquid line	Ø	15,88/15,88	15,88/15,88	15,88/15,88	18/18	18/18	18/18	22/22	22/22	28/28	28/28

Cooling:

Evaporating temperature 5°C; External air temperature 35°C

			0280	0300	0330	0350	0500	0550	0600	0650	0700	0750
Electrical data												
Total input current	(1) °	A	-	-	-	-	63	67	81	88	100	122
	(1) L	A	36	40	44	51	70	75	90	99	111	113
	(1) A	A	-	-	-	-	55	60	71	77	90	113
	(1) E	A	30	34	37	45	60	64	78	89	97	109
Maximum current (FLA)	A	46	53	58	63	76	81	100	112	122	144	
Starting current (LRA)	A	155	184	190	200	214	220	232	243	261	320	
Compressors												
Compressors	type											
	n°	2	2	2	2	3	3	4	4	4	4	
Circuits	n°	2	2	2	2	2	2	2	2	2	2	
Refrigerant	type											
System side exchanger												
Exchanger	type											
	n°	1	1	1	1	1	1	1	1	1	1	
hydraulic connections	(1) (in/out) Ø	2"½	2"½	2"½	2"½	2"½	2"½	2"½	2"½	2"½	2"½	3"

(1) Data of the versions without hydronic module integrated

Technical Data

		0280	0300	0330	0350	0500	0550	0600	0650	0700	0750
Fans standard											
fans	type	axial									
	° n°	-	-	-	-	2	2	2	2	2	3
	L n°	4	4	4	6	2	2	2	2	2	3
	A n°	-	-	-	-	2	2	2	2	3	3
	E n°	6	6	8	8	2	2	2	2	3	3
Air flow rate cooling mode	° m³/h	-	-	-	-	34600	34600	34600	34600	33600	51400
	L m³/h	14200	14200	14200	20200	28400	28700	27700	29400	28600	42700
	A m³/h	-	-	-	-	34100	34100	32600	32600	50000	49000
	E m³/h	22000	22000	27000	27000	21100	22200	21800	22800	32500	35300
Hydronic kit											
Buffer tank	l	300	300	300	300	500	500	500	500	500	700
Useful static pressure	kPa	For more information, refer to the technical documentation									
Sound data											
Sound power	° dB(A)	-	-	-	-	82	82	82	83	83	85
	L dB(A)	73	73	74	75	77	77	77	78	78	80
	A dB(A)	-	-	-	-	82	82	82	83	85	85
	E dB(A)	74	74	75	76	74	74	74	75	77	77
Sound pressure	° dB(A)	-	-	-	-	50	50	50	51	51	53
	L dB(A)	41	41	42	43	45	45	45	46	46	48
	A dB(A)	-	-	-	-	50	50	50	51	53	53
	E dB(A)	42	42	43	44	42	42	42	43	45	45
Power supply	V/ph/Hz	400V/3N/50Hz									

Sound power (cooling operation)

Aermec determines sound power values on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification.

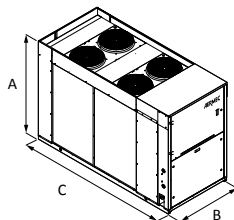
Sound pressure (cooling operation)

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

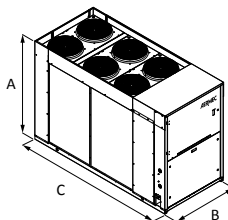
Note: For more information, refer to the selection program or the technical documentation available on the website www.aermec.com

Dimensions (mm)

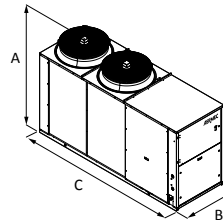
NRL 0280-0300-0330 L



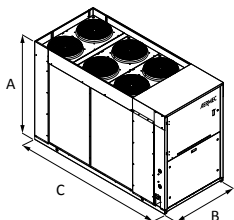
NRL 0350 L



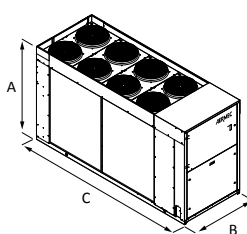
NRL 0500-0550-0600-0650-0700 °/L



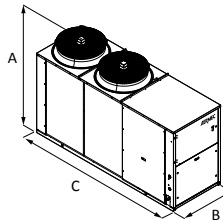
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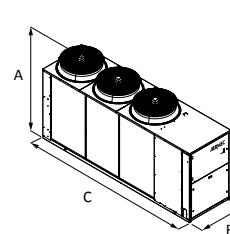
NRL 0330-0350 E



NRL 0500-0550-0600-0650 A/E



NRL 0700 A/E - 0750 °/L/A/E



Mod. NRL	Vers.	0280	0300	0330	0350	0500	0550	0600	0650	0700	0750
Height	(mm) A	All	1606	1606	1606	1606	1875	1875	1875	1875	1975
Width	(mm) B	All	1100	1100	1100	1100	1100	1100	1100	1100	1500
Length	(mm) C ° / L / C		2450	2450	2450	2450	3010	3010	3010	3010	4350
	A / E / C		2450	2950	2950	2950	3010	3010	3010	3010	4010
Weight empty	(kg) ° / L		675	684	688	704	868	872	968	983	1091
	A / E		686	751	761	767	955	959	1142	1155	1323

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

Aermec S.p.A.

Via Roma, 996 - 37040 Bevilacqua (VR) - Italy

Tel 0442633111 - Fax 044293577

www.aermec.com