NRL
028/075

Reversible heat pump
Air/Water for outdoor installation
Scroll compressors, Plate exchangers, Axial fans
Cooling capacity 13.05÷49.56 ton
Heating capacity 166,000÷600,600 BTU/h

60Hz | HFC Refrigerant R410A | Intertek | AHRI

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

FEATURES

NRL_H is the range of reversible heat pumps for external installation for the chilled/heated water production with high performance scroll compressors and low electric absorption, axial fans, external copper coils with aluminum fins, plate heat exchangers.
IIn the units with desuperheater, but in cooling-only operation, it is possible to produce free hot water. The basement, the structure and the panelling are in steel treated with polyester anti-corrosion paint.

Models
- NRL_H Reversible heat pump

Versions
- NRL_HA High efficiency
- NRL_HE Low noise high efficiency

Operating range:

- Work at full load up to -15°C/5°F dry bulb external air temperature in winter season, up to 46°C/114,8°F in summer season.
- Hot water production up to 55°C/131°F.
(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 hydronik -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.

ACCESSORIES

MECHANICAL ACCESSORIES:

VT
Group of anti-vibration supports.
Select the VT model from the compatibility table.

AVX
Sprung anti-vibration supports. Select the AVX model from the compatibility table.

GP
Protection grille, protects the external coil from accidental knocks.

ELECTRICAL ACCESORIES:

AER485P1
RS-485 interface for supervision systems with MODBUS protocol.

AERNET: The device allows the control, the management and the remote monitoring of a Chiller with a PC, smartphone or tablet using Cloud connection. AERNET works as Master while every unit connected is configured as Slave (max. 6 unit); also, with a simple click is possible to save a log file with all the connected unit datas in the personal terminal for post analysis.

ACCESSORIES CAN ONLY BE FITTED IN THE FACTORY:

DRE
It allows the reduction of peak power necessary for the machine during start-up phase.

RIF
Power factor correction. Connected in parallel to the motor allowing about 10% reduction of input current.

MULTICHILLER_EVO: Control, switch-on and switch-off system of the single chillers where multiple units are installed in parallel, always ensuring constant flow rate to the evaporators

PRM1
It is a manual pressure switch electrically wired in series with the existing automatic high pressure switch on the compressor discharge pipe.

CRATE
Special wood cover for transport.

KRB
Electric anti-freeze resistance kit for coils, prevents the formation of ice.

For more information please contact us.

ACCESSORIES COMPATIBILITY

NRL_H		028HE	030HE	033HE	035HE	050HA	055HA	060HA	065HA	070HA	075HA
MECHANICAL ACCESSORIES:											
	Hydronic Kit										
VT/AVX	**00**	VT 17	VT 17	VT 17	VT 17	VT 13	VT 13	VT 22	VT 22	VT 22	AVX 7001
VT/AVX	**P2 / P4**	VT 17	VT 17	VT 17	VT 17	VT 13	VT 13	VT 22	VT 22	VT 22	AVX 7001
VT/AVX	**P1 / P3**	VT 17	VT 17	VT 17	VT 17	VT 13	VT 13	VT 22	VT 22	VT 22	AVX 7001
VT/AVX	**02 / 04**	VT 13	VT 13	VT 13	VT 13	VT 10	VT 10	VT 22	VT 22	VT 22	AVX 7002
VT/AVX	**01 / 03**	VT 13	VT 13	VT 13	VT 13	VT 10	VT 10	VT 22	VT 22	VT 22	AVX 7002
GP		3	4	4	4	2	2	2	2	2	10
ELECTRICAL ACCESORIES:											
AER485P1		•	•	•	•	•	•	•	•	•	•
AERNET		•	•	•	•	•	•	•	•	•	•
ACCESSORIES CAN ONLY BE FITTED IN THE FACTORY:											
DRE		281	301	331	351	501	551	601	651	701	751
RIF		50	50	50	51	52	52	53	53	53	53
MULTICHILLER_EVO		•	•	•	•	•	•	•	•	•	•
PRM1		•	•	•	•	•	•	•	•	•	•
CRATE01		•									
CRATE02			•	•	•	•	•				
CRATE03								•	•	•	
CRATE04											•
	Power supply										
KRB	**230/3/60**	611	612	612	612	613	613	614	614	614	615
KRB	**460/3/60**	811	812	812	812	813	813	814	814	814	815
KRB	**575/3/60**	811	812	812	812	813	813	814	814	814	815
KRB	**208/3/60**	911	912	912	912	913	913	914	914	914	915

UNIT CONFIGURATOR

NAME	**NRL**
SIZE	028 - 030 - 033 - 035 - 050 - 055 - 060 - 065 - 070 - 075
COMPRESSOR	
0	R410A standard compressor
THERMOSTATIC VALVE	
°	Standard mechanical thermostatic valve with produced water up to 39,2°F / +4°C
X	Electronic thermostatic valve with produced water up to 14°F / -10°C **(1)**
MODELS	
H	Heat pump
HEATHING RECOVERY	
°	Without Recovery
D	With Desuperheater **(2)**
VERSION	
A	High efficiency (not available for size 028 ÷ 035)
E	High efficiency low noise (data on demand for size 050 ÷ 075)
COILS	
°	Alluminium
R	Copper
S	Copper tin plated
V	Epoxy coated

FANS	
°	Standard **(3)**
I	Inverter fan, speed modulating for condensation control **(4)**
POWER SUPPLY	
6	230/3/60 With magnet circuit breakers
7	460/3/60 With magnet circuit breakers
8	575/3/60 With magnet circuit breakers
9	208/3/60 With magnet circuit breakers
HYDRONIC KIT	
00	Without hydronic kit
01	Tank and single low head pump
02	Tank and single low head pump and reserve pump
03	Tank and single high head pump
04	Tank and single high head pump and reserve pump
P1	Single low head pump
P2	Single low head pump and reserve pump
P3	Single high head pump
P4	Single high head pump and reserve pump

(1) Contact the factory for temperatures below 4°C/39.2°F.
(2) With heating recovery Desuperheater, the inverter fans (I) are mandatory.
(2) D are not compatible with (X) thermostatic valve.
(3) Standard fans are not available for power supply 208/3/60.
(4) Inverter fan is mandatory for power supply 208/3/60.

TECHNICAL DATA

NRL H		028HE	030HE	033HE	035HE	050HA	055HA	060HA	065HA	070HA	075HA
Cooling capacity	ton	13.05	15.44	17.54	22.15	24.85	28.95	35.15	40.78	45.13	49.56
Total input power	kW	15.05	17.46	20.07	25.85	29.03	34.39	41.28	47.66	53.57	58.51
Cooling total input current	A	30	35	39	46	49	56	70	77	85	96
EER	BTU/W	10.41	10.61	10.49	10.28	10.27	10.10	10.22	10.27	10.11	10.17
IPLV	BTU/W	14.32	14.43	14.40	14.21	15.86	15.54	15.77	15.66	14.81	14.67
Water flow rate	gpm	31.22	36.94	41.96	52.99	59.45	69.26	84.09	97.56	108.0	118.6
Total pressure drop without pump	ft H_2O	4.35	6.02	5.69	6.69	7.03	8.36	12.0	15.1	18.7	20.4
Heating capacity	BTU/h	166,000	196,700	220,600	267,300	310,800	358,600	430,900	482,000	549,900	600,600
Total input power	kW	16.08	19.08	21.39	28.45	31.48	37.69	44.70	51.04	58.10	61.35
Heating total input current	A	22	31	29	45	46	56	66	76	80	87
COP	kW/kW	3.025	3.021	3.022	2.754	2.893	2.788	2.825	2.768	2.774	2.869
Water flow rate	gpm	37.22	44.12	49.46	59.95	69.70	80.42	96.63	108.1	123.3	134.7
Total pressure drop without pump	ft H_2O	6.18	8.59	7.90	8.56	9.66	11.3	15.9	18.5	24.4	26.3
ELECTRICAL DATA											
Power supply 460V/3~/60Hz with standard fan											
[LRA]	A	124	154	158	187	186	195	191	220	228	268
[MCA]	A	40	60	60	70	70	75	90	100	110	125
[MOP]	A	50	60	70	80	80	90	100	110	125	125
Power supply 460V/3~/60Hz with inverter fan											
[LRA]	A	127	158	163	192	186	195	192	221	229	269
[MCA]	A	45	60	60	70	70	75	90	100	110	125
[MOP]	A	50	70	75	90	80	90	100	110	125	125
GENERAL DATA											
COMPRESSOR											
Compressor	Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Compressor	n°	2	2	2	2	3	3	4	4	4	4
Circuit	n°	2	2	2	2	2	2	2	2	2	2
Refigerant gas	Type	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
EXCHANGER											
Exchanger	Type	Plate	Plate	Plate	Plate	Plate	Plate	Plate	Plate	Plate	Plate
Quantity	n°	1	1	1	1	1	1	1	1	1	1
Min. water flow	gpm	22.34	26.13	28.78	32.56	39.00	41.65	51.12	57.55	64.75	77.24
Max. water flow	gpm	74.47	87.09	95.93	108.54	130.00	138.84	170.39	191.85	215.83	257.48
Water content	gal										
Water connection (grooved in/out)	ø	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	3"
Crankcase heater	n°/W										
FANS											
Fans	Type	Axial	Axial	Axial	Axial	Axial	Axial	Axial	Axial	Axial	Axial
Numbers	n°	6	8	8	8	2	2	3	3	3	4
Air flow rate in cooling mode	cfm	14,597	19,305	19,305	18,717	24,956	24,956	37,669	37,669	37,669	51,206
SOUND DATA											
Sound power	dB(A)	74	76	77	78	83	84	85	86	86	87
Sound pressure 10m/33ft	dB(A)	42	44	45	46	51	52	53	54	54	55

COOLING MODE: AHRI CONDITION std 550/590 (I-P)
Evaporator water temperature (in/out): 12.26°C, 54.1°F / 6.67°C, 44.1°F - Dry bulb ambient air temperature: 35°C, 95°F

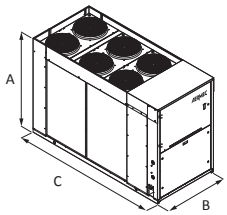
HEATING MODE:
Evaporator water temperature (in/out): 40°C, 104°F / 45°C, 113°F - Dry bulb ambient air temperature: 7°C, 44.6°F

(The data indicated can be modified at any time by Aermec if deemed necessary).

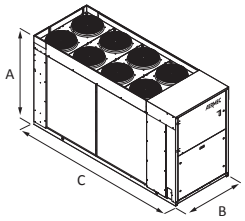
DIMENSIONS AND WEIGHT

NRL			028HE	030HE	033HE	035HE	050HA	055HA	060HA	065HA	070HA	075HA
Height	A	in	63	63	63	63	74	74	74	74	74	78
Width	B	in	43	43	43	43	43	43	43	43	43	59
Depth	C	in	97	116	116	116	119	119	158	158	158	211
Weight		lbs	1.590	1.766	1.775	1.949	2.178	2.218	2.864	2.996	2.930	4.542

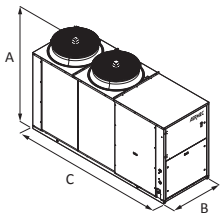
• NRL 028 HE



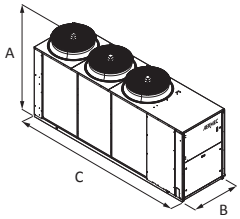
• NRL 0330 - 033 - 035 HE



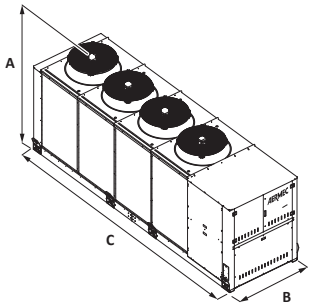
• NRL 050 - 055 HA



• NRL 060 - 065 - 070 HA



• NRL 075 HA



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