

## NRK 0150/0700

Reversible heat pump  
Air/Water for outdoor installation  
Scroll compressors, Plate exchangers, Axial fans  
Cooling capacity from 8.8 to 39.7 ton  
Heating capacity from 116866 to 593235 BTU/h



- AIR COOLED REVERSIBLE HEAT PUMP
- PRODUCTION OF HOT WATER UP TO 149°F
- OPTIMIZED FOR OPERATION IN HEATING MODE
- HEATING OPERATION WITH EXTERNAL TEMPERATURES DOWN TO -4°F
- OPTION VERSION WITH BUILT-IN HYDRONIC KIT

### FEATURES

NRK is a dual-circuit heat pump charged with R410A gas and optimised for heating. It has axial fans to ensure the quietest possible machine operation, scroll compressors with a high yield and low electricity absorption and steam injection, a plate heat exchanger and finned pack copper/aluminium coils. The machine cools/heats water to supply the distribution system that is usually connected to fan coil type terminals or to a low-temperature radiant system. In addition, NRK can also produce hot water if it is fitted with a desuperheater, so it's ideal for residential and commercial contexts, especially the replacement of centralised boilers during the requalification of buildings.

#### Models

- NRK H Reversible heat pump

#### Version

- NRK H A High efficiency

- High efficiency scroll compressors with low power input, with steam injection.
- Heat exchangers optimised to benefit from the excellent heat transfer characteristics of R410A.
- Flow switch as standard supply.
- Water filter.
- Low and high pressure transducers.
- The built-in hydronic kit already contains the main water circuit components; for achieving both low or high head, and buffer tank.
- Fans for extremely quiet operation.
- Available fans equipped with inverter technology, units fitted as standard with fan speed controller.
- Microprocessor controls.
- Control from the leaving water temperature, with the possibility of selecting control of the entering water temperature.
- Condensing control in summer modulating signal based on pressure and compensated for external air temperature.
- Automatic rotation of compressors and pumps based on operating hours.
- Load limiting safety control.
- Metallic protective cabinet with anti-corrosion polyester paint.

## ACCESSORIES

### ACCESSORIES:

#### AER485P1

RS-485 interface for supervising systems with MODBUS protocol.

#### AERWEB300UL

AERWEB device allows the remote control of a chiller by means of a common PC through Ethernet connection, via a common browser; 4 models available:

**AERWEB300UL-6:** Web server for monitoring and controlling maximum 6 RS485 network devices;

**AERWEB300UL-18:** Web server for monitoring and controlling maximum 18 RS485 network devices;

**AERWEB300UL-6G:** Web server for monitoring and controlling maximum 6 RS485 network devices with integrated GPRS modem;

**AERWEB300UL-18G:** Web server for monitoring and controlling maximum 18 RS485 network devices with integrated GPRS modem;

#### PGD1

Allows you to control the chiller at a distance.

#### MULTICHILLER\_UL

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.

#### VT

Group of anti-vibration supports.

### ACCESSORIES MOUNTED IN THE FACTORY:

#### GP

kit with anti-intrusion grid for the short side of the unit.

#### DRENRK

It permits the reduction of the starting current needed by the machine in the start up phase..

#### RIFNRK

Current power factor correction. Connected in parallel to the motor, it allows a reduction of the input current (approx. 10%).

#### RESNRK

Anti-freeze electric resistance board. Installed inside the electric panel.

#### CRATE

Special wood cover for transport.

## ACCESSORIES COMPATIBILITY

NRK	0150	0300	0330	0350	0550	0600	0650	0700
<b>AER485P1</b>	n.a.	.	.	.	.	.	.	.
<b>AERWEB300UL</b>	.	.	.	.	.	.	.	.
<b>PGD1</b>	n.a.	.	.	.	.	.	.	.
<b>MULTICHILLER_UL</b>	n.a.	.	.	.	.	.	.	.
	00	15	.	.	.	.	.	.
<b>VT</b>	P1-P4	15	.	.	.	.	.	.
	01-04	15	.	.	.	.	.	.

### ACCESSORIES MOUNTED IN THE FACTORY

GP	n.a.	4	2 (x2)	2 (x2)	2 (x2)	2 (x3)	2 (x3)	2 (x3)
<b>DRENRK</b>	.	03007	03307	35557	35557	60657	60657	07007
<b>RIFNRK</b>	.	03007	03307	35557	35557	60657	60657	07007
<b>RESNRK</b>	.	03007	33707	33707	33707	33707	33707	33707
<b>CRATE</b>	n.a.	02	02	02	02	03	03	03

. Available

n.a. Not available.

## UNIT CONFIGURATOR

NAME	NRK
<b>SIZE</b>	0150 - 0300 - 0330 - 0350 - 0550 - 0600 - 0650 - 0700
<b>THERMOSTATIC VALVE</b>	
°	Mechanical, standard operations (produced water down to +4°C/39.2°F)
<b>MODELS</b>	
<b>H</b>	Reversible heat pump
<b>HEATING RECOVERY</b>	
°	Without recovery
<b>D</b>	With desuperheater
<b>VERSION</b>	
<b>A</b>	High efficiency
<b>COILS</b>	
°	Alluminium
<b>R</b>	Copper
<b>S</b>	Copper tin plated
<b>V</b>	Epoxy coated
<b>FANS</b>	
°	AC Type ( <i>Only for NRK 0150</i> )
<b>J</b>	Inverter fan

### POWER SUPPLY

**7** 460/3/60Hz with magnetic circuit breakers

### HYDRONIC KIT

- 00** Without hydronic kit
- 01** With storage tank and single low head pump
- 02** With storage tank and twin low head pumps (duty + standby)
- 03** With storage tank and single high head pump
- 04** With storage tank and twin high head pumps (duty + standby)
- P1** With single low head pump
- P2** With twin low head pumps (duty + standby)
- P3** With single high head pump
- P4** With twin high head pumps (duty + standby)

NRK	0150	0300	0330	0350	0550	0600	0650	0700
<b>00</b>	.	.	.	.	.	.	.	.
<b>01</b>	.	.	.	.	.	.	.	.
<b>02</b>	n.a.	.	.	.	.	.	.	.
<b>03</b>	.	.	.	.	.	.	.	.
<b>04</b>	n.a.	.	.	.	.	.	.	.
<b>P1</b>	.	.	.	.	.	.	.	.
<b>P2</b>	n.a.	.	.	.	.	.	.	.
<b>P3</b>	.	.	.	.	.	.	.	.
<b>P4</b>	n.a.	.	.	.	.	.	.	.

## TECHNICAL DATA

NRK		0150	0300	0330	0350	0550	0600	0650	0700
Cooling capacity	ton	8.8	16.1	19.0	21.5	24.0	32.3	36.6	39.7
Total input power	kW	9.6	20.2	23.7	27.0	29.9	40.3	49.9	58.1
EER	BTU/W	11.03	9.56	9.62	9.57	9.62	9.63	8.82	8.20
IPLV	BTU/W	14.92	13.51	13.61	13.42	13.37	13.79	12.74	11.24
Water flow rate	gpm	21	39	46	52	58	78	88	95
Total pressure drop without pump	p.s.i.	7.8	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Heating capacity	BTU/h	116866	231872	275841	304206	340426	463802	539671	593235
Total input power	kW	10.0	21.0	26.4	29.2	31.9	43.5	51.3	57.2
COP	BTU/W	11.7	11.1	10.4	10.4	10.7	10.7	10.5	10.4
Water flow rate	gpm	26.2	52.0	61.9	68.2	76.3	104.0	121.0	133.0
Total pressure drop without pump	p.s.i.	11.9	4.5	4.6	4.3	4.4	4.5	4.7	4.9

### ELECTRICAL DATA

#### Power supply 460V/3~/60Hz

Input current cooling mode	A	20	34	38	48	51	64	79	100
Input current heating mode	A	21	34	42	52	54	69	81	101
[LRA]	A	134	165	184	222	223	199	234	278
[MCA]	A	30	59	57	72	71	88	103	123
[MOP]	A	47	76	78	97	96	105	124	148
Recom fuse	A	45	75	75	90	90	100	110	125

### GENERAL DATA

#### COMPRESSOR

Compressor	Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Compressor	n°	1	2	2	2	2	4	4	4
Circuit	n°	1	2	2	2	2	2	2	2
Refrigerant gas	Type	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A

#### EXCHANGER

Exchanger	Type	Plate	Plate	Plate	Plate	Plate	Plate	Plate	Plate
Quantity	n°	1	1	1	1	1	1	1	1
Min. water flow	gpm	contact us	8.6	11.9	15.9	15.9	22.2	22.2	23.8
Max. water flow	gpm	61.6	263.3	263.3	263.3	263.3	263.3	263.3	263.3
Water content	gal	0.5	1.7	2.2	2.9	2.9	3.9	3.9	4.1
Water connection (in/out)	ø	contact us							
Crankcase heater	n°/W	1/40	1/150	1/150	1/150	1/150	1/150	1/150	1/150

#### FANS (°)

Fans	Type	Axial	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Numbers	n°	2	contact us	contact us	contact us	contact us	contact us	contact us	contact us
Air flow rate in cooling mode	cfm	8064	contact us	contact us	contact us	contact us	contact us	contact us	contact us

#### FANS (J)

Fans	Type	Axial	Axial	Axial	Axial	Axial	Axial	Axial	Axial
Numbers	n°	2	8	2	2	2	3	3	3
Air flow rate in cooling mode	cfm	8064	23190	22366	21954	21954	33314	37904	37904

#### SOUND DATA

Sound power	dB(A)	contact us	contact us	contact us	contact us	contact us	contact us	contact us	contact us
Sound pressure 10m/33ft	dB(A)	contact us	contact us	contact us	contact us	contact us	contact us	contact us	contact us

#### COOLING MODE: AHRI CONDITION std 550/551

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

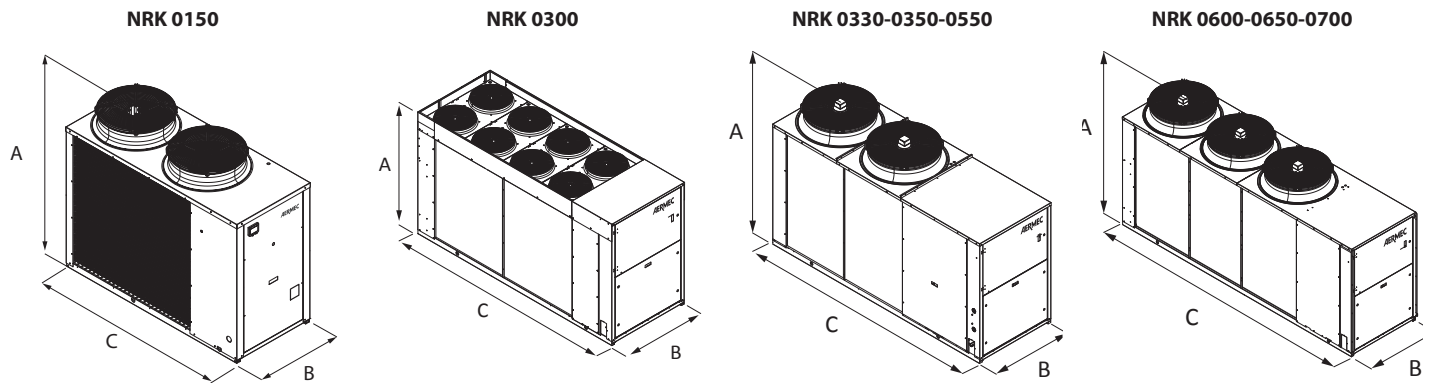
#### HEATING MODE:

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

n.a. Not Available

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

## DIMENSIONS AND WEIGHT



The designs are representative of some structural work, more information is available in the technical documentation

NRK	hydronic kit			0150	0300	0330	0350	0550	0600	0650	0700	
Height	00	A	in	62,3	63,3	73,9	73,9	73,9	73,9	73,9	73,9	
Width	00	B	in	34,3	43,3	43,3	43,3	43,3	43,3	43,3	43,3	
Depth	00	C	in	72,9	128,1	131,2	131,2	131,2	170,6	170,6	170,6	
Weight	00	-	lbs								please contact us	