R410A

Reversible heat pumps high efficency - Technical manual

- OUTDOOR UNIT
- HIGH EFFICIENCY
- PRODUCTION OF HOT WATER UP TO 65°C

NRK 0200-0700

AERMEC COMPANY QUALITY SYSTEM ICIM ISO 9001:2008 - Cert. n° 0128 CISQ IQNet AERMEC S.P.A.

CE

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Aermec
partecipa al Programma
EUROVENT: LCP
I prodotti interessati figurano sul sito
www.eurovent-certification.com

16.09.5167555_02

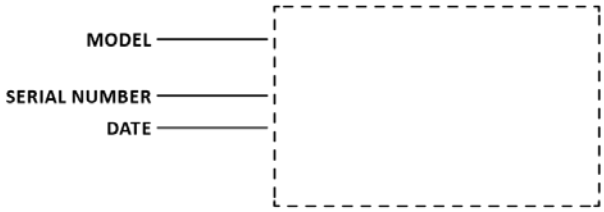
Dear Customer,
Thank you for choosing an AERMEC product. This product is the result of many years of experience and indepth engineering research, and it is built using top quality materials and advanced technologies.
In addition, the EC mark guarantees that our appliances fully comply with the requirements of the European Machinery Directive in terms of safety. We constantly monitor the quality level of our products, and as a result they are synonymous with Safety, Quality, and Reliability.
Product data may be subject to modifications deemed necessary for improving the product without the obligation to give prior notice.

Thank you again.
AERMEC S.p.A

AERMEC S.p.A.
37040 Bevilacqua (VR) Italy – Via Roma, 996
Tel. (+39) 0442 633111
Telefax 0442 93577–(+39) 0442 93566
www.aermec.com

EC DECLARATION OF CONFORMITY

NRK



We, the undersigned, hereby declare under our own responsibility that the assembly in question, defined as follows:

Name	**NRK**
Type	**Reversible Heat Pump**
Model	

To which this declaration refers, complies with all the provisions related to the following directives:

Direttiva Macchine: 2006/42/CE
Direttiva Compatibilità Elettromagnetica EMCD: 2014/30/UE
Direttiva PED in materia di attrezzature a pressione: 2014/68/UE

The above-mentioned declaration complies with the harmonised European standards:

CEI EN 60335-2-40: 2005
CEI EN 60335-2-40/A1: 2007
CEI EN 60335-2-40/A2: 2009
CEI EN 60335-2-40/A13: 2012
CEI EN 61000-6-1: 2007
CEI EN 61000-6-3: 2007
CEI EN 55014-1: 2008
CEI EN 55014-2: 1998
EN378-2: 2012
UNI EN 12735-1: 2010
UNI EN 14276-1: 2011

This declaration of conformity has been released under the exclusive responsibility of the manufacturer

The person authorised to compile the technical file is Luca Martin. The product, in agreement with Directive 97/23/CE, satisfies the Total quality Guarantee procedure (form H) with certificate no. 06/270-QT3664 Rev. 8 issued by the notified body n.1131 CEC via Pisacane 46 Legnano (MI) - Italy.

Bevilacqua (VR)

Commercial Director
Luigi Zucchi

Standards complied with WHEN DESIGNING and CONSTRUCTING the unit:
SAFETY

1. Machinery directive 2006/42/CE
2. Low voltage directive LVD 2006/95/CE
3. Electromagnetic compatibility directive EMC 2004/108/CE
4. Directive regarding pressurised-devices PED 97/23/CE, EN 378,
5. UNI12735, UNI14276

ELECTRIC PART

1. CEI EN 60335-2-40,
2. CEI EN 61000-6-1/2/3/4

ACOUSTIC PART

1. ISO DIS 9614/2 intensimetric method

PROTECTION RATING
IP24

REFRIGERANT
This unit contains fluoride gases with greenhouse effect covered by the Kyoto Protocol. Maintenance and disposal must only be performed by qualified staff, in compliance with standards in force.

1. DESCRIPTION OF THE UNIT

The reversible heating pumps of the NRK series were designed to meet the requirements of the systems where both cooled water for environment cooling and high temperature water for heating are required. The compressor with additional vapour admission in the compression cycle allows to obtain hot water temperatures up to 65°C and an increase of the operating limits with regards to outside temperatures of up to -20°C.

Maximum reliability
Multi-circuit unit designed to provide the maximum efficiency both with full load and partial loads, guaranteeing operating continuity should one of the circuits stop to facilitate maintenance.
Having several compressors and circuits ensures control of more steps of power yielded in both modes.

Renewable Energy for the redevelopment of the environments
These high temperature units are commonly used in the requalification of buildings where the replacement of centralised boilers is required, and preservation of the existing heating system (including radiators) is needed.
This scenario is frequent for buildings like schools or offices, but can also applied to residential complexes like condominiums, where requalification expenses need to be limited, while offering at the same time a renewable energetic source such as the heat pump. Another advantage is the possibility to manage hot water production for heating (or even domestic hot water) as well as the cooled water for summer conditioning with the same machine.

Integrated hydronic kit To get a solution that offers economic savings and facilitates the installation, these units may be configured with an integrated hydronic kit.
The kit consists of the main hydraulic components and is available in many configurations with single pump or with reserve pump, with low or high head and accumulator. (see configurator)

Extended operating range
Full operation with outside temperatures of up to -20°C and hot water production up to 65°C

MODEL
Basic model
Standard reversible heat pump without partial heat recovery.

Model with partial heat recovery (desuperheater)
Reversible heat pump complete with partial heat recovery. The refrigerant/water heat exchanger is placed in all circuits upstream the condenser and its size ensure heat recovery for hot water production which may be used as domestic hot water or other use.

VERSION
NRK_HA
Versions with high efficiency configurations beyond the A-class efficiency required by Eurovent.

NRK_HE
Low noise A-class high efficiency versions. This version is equipped with sound insulation dedicated to the compressor compartment and the reduction of the fan revolutions. Since the speed of the fans is electronically controlled, it will be automatically increased to keep ensuring good unit operation in the event of critical ambient conditions.

2. UNIT CONFIGURATOR

	Code
1,2,3	**NRK**
4,5,6,7	**SIZE**
	0200 - 0280 - 0300 - 0330 - 0350 - 0500 - 0550 - 0600 - 0650 - 0700 (1)
8	**FIELD OF APPLICATION**
°	Standard (leaving water temperature down to 4°C)
9	**MODEL**
H	Heat pumps
10	**TOTAL RECOVERY**
°	Without recovery
D	With desuperheater
11	**VERSION**
A	High efficiency
E	High efficiency in low noise operation
11	**COIL**
°	Aluminium
R	Copper
S	Tinned copper
V	In painted aluminium-copper (epoxy paint)
11	**FANS**
°	Standard
M	High static pressure (2)
J	High static pressure Inverter (3)
12	**POWER SUPPLY**
°	400V/3N/50Hz with circuit breakers
13,14	**System integrated hydronic module**
00	without pumps or buffer tank
01	Buffer tank and n° 1 low head pump
02	Buffer tank and n° 2 low head pump
03	Buffer tank and n° 1 high head pump
04	Buffer tank and n° 2 high head pump
05	n°1 low head pump and buffer tank (with holes for immersion heaters) (4)
06	n°2 low head pump and buffer tank (with holes for immersion heaters) (4)
07	n°1 low high pump and buffer tank (with holes for immersion heaters) (4)
08	n°2 low high pump and buffer tank (with holes for immersion heaters)(4)
P1	n° 1 low head pump
P2	n° 2 low head pump
P3	n° 1 high head pump
P4	n° 2 high head pump

(1) The size 0200-0280-0300-0330 only available in low noise version "HE"

(2) Only size 0200÷0330

(3) Only size 0350÷0700

(4) The buffer tank with holes and supplementary electric heaters leave the factory with plastic protection caps. Before loading the system, if the installation of an electric heater is not envisaged it is compulsory to replace the plastic caps.

	Description	0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
	FANS										
°	Standard	•	•	•	•	•	•	•	•	•	•
M	High static pressure	•	•	•	•	No	No	No	No	No	No
J	High static pressure Inverter	No	No	No	No	•	•	•	•	•	•

3. CECK LIST

Component	Model	TOTAL RECOVERY		HYDRONIC KIT				
	NOTE	Without recovery	with Desupherheater	00	01-03	02-04	P1-P3	P2-P4
REFRIGERANT CIRCUITS								
n°2 refrigerant circuit indipendenti ad R410A		•	•	•	•	•	•	•
Scroll compressor		•	•	•	•	•	•	•
Cycle reversing valve		•	•	•	•	•	•	•
High pressure trasducer		•	•	•	•	•	•	•
Low pressure trasducer		•	•	•	•	•	•	•
High pressure switch		•	•	•	•	•	•	•
Low pressure switch		-	-	-	-	-	-	-
Source side heat exchanger (Finned pack)		•	•	•	•	•	•	•
No-return valves		•	•	•	•	•	•	•
Deydrator filter		•	•	•	•	•	•	•
Indicator for liquid		•	•	•	•	•	•	•
Stafty valve HP branch		-	-	-	-	-	-	-
Stafty valve LP branch		•	•	•	•	•	•	•
Shut-off valves		•	•	•	•	•	•	•
Economiser electronic thermostatic valve		•	•	•	•	•	•	•
Economiser		•	•	•	•	•	•	•
Solenoid valve		•	•	•	•	•	•	•
Thermostatic valve		•	•	•	•	•	•	•
System side heat exchanger (plate exchanger)		•	•	•	•	•	•	•
Liquid storage tank		•	•	•	•	•	•	•
Liquid separators		•	•	•	•	•	•	•
Desuperheater (plate exchanger)		-	•	•	•	•	•	•
HYDRAULIC CIRCUIT								
System side								
System side heat exchanger (plate)		•	•	•	•	•	•	•
Electrical heater exchanger		•	•	•	•	•	•	•
Water filter		•	•	•	•	•	•	•
Flow switch		•	•	•	•	•	•	•
Pressure switch		-	-	-	-	-	-	-
Safety valve		-	-	-	•	•	-	-
Air vent valve		-	-	-	-	-	-	-
Automatic air vent valve		•	•	•	•	•	•	•
Charger plant		-	-	-	-	-	-	-
Probe inlet water temperature		•	•	•	•	•	•	•
Probe outlet water temperature		-	-	-	-	-	-	-
Buffer tank		-	-	-	•	•	-	-
n° 1 pump		-	-	-	•	-	•	-
n° 2 pumps (n°1 on, n°1 stand-by)		-	-	-	-	•	-	•
No-return valves		-	-	-	-	•	-	•
Expansion vessel		-	-	-	•	•	•	•
Discharge valve		•	•	•	•	•	•	•
Recovery side (Desuperheater if this)								
Recovery side heat exchanger (desuperheater)			•					
Electrical heater exchanger			•					
Water filter			•					
Flow switch			-					
Pressure switch			-					
Safety valve			-					
Air vent valve			-					
Automatic air vent valve			•					
Charger plant			-					
Probe inlet water temperature			-					
Probe outlet water temperature			-					
Buffer tank			-					
n° 1 pump			-					
n° 2 pumps (n°1 on, n°1 stand-by)			-					
no-return valves			-					
Expansion vessel			-					
Discharge valve			•					

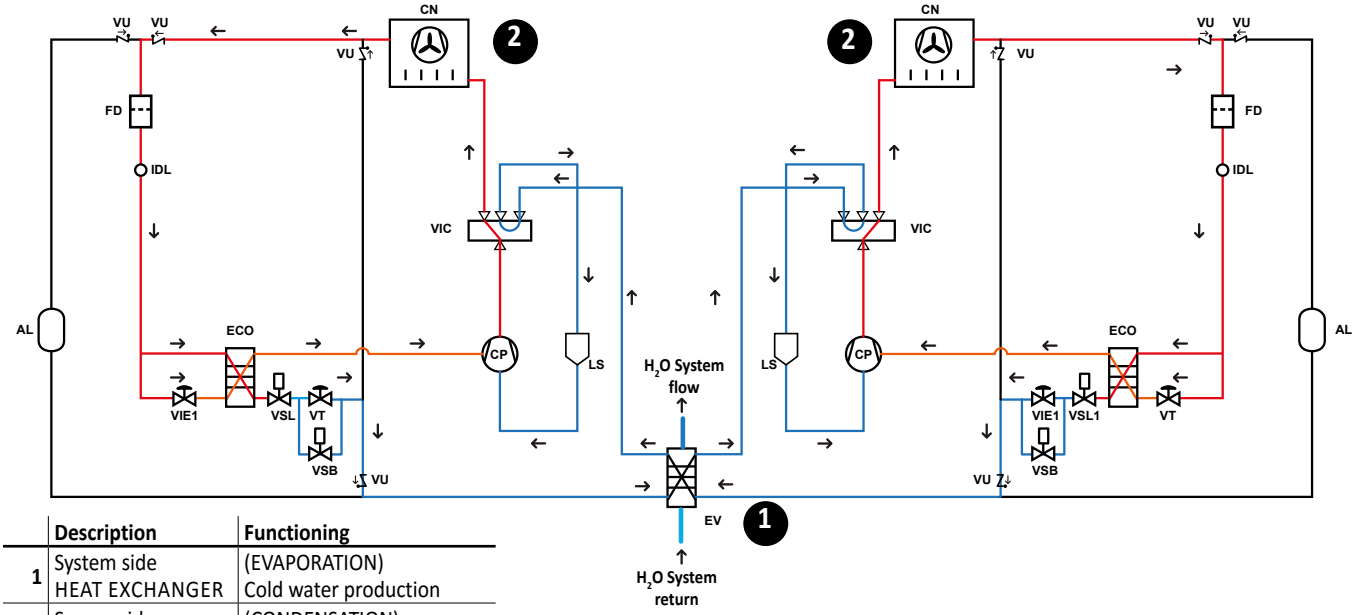
Component	Model	TOTAL RECOVERY		HYDRONIC KIT				
	NOTE	Without recovery	with Desupherheater	00	01-03	02-04	P1-P3	P2-P4
FAN GROUP								
Standard fans		•	•	•	•	•	•	•
High static pressure (with static pressure)	(1)	•	•	•	•	•	•	•
High static pressure Inverter (with static pressure)	(1)	•	•	•	•	•	•	•
Condensation pressure controller (DCPX)		•	•	•	•	•	•	•

- not available
- • standard

(1) For the availability of the **larger fans and inverters (depending on the size)**, please refer to the configurator

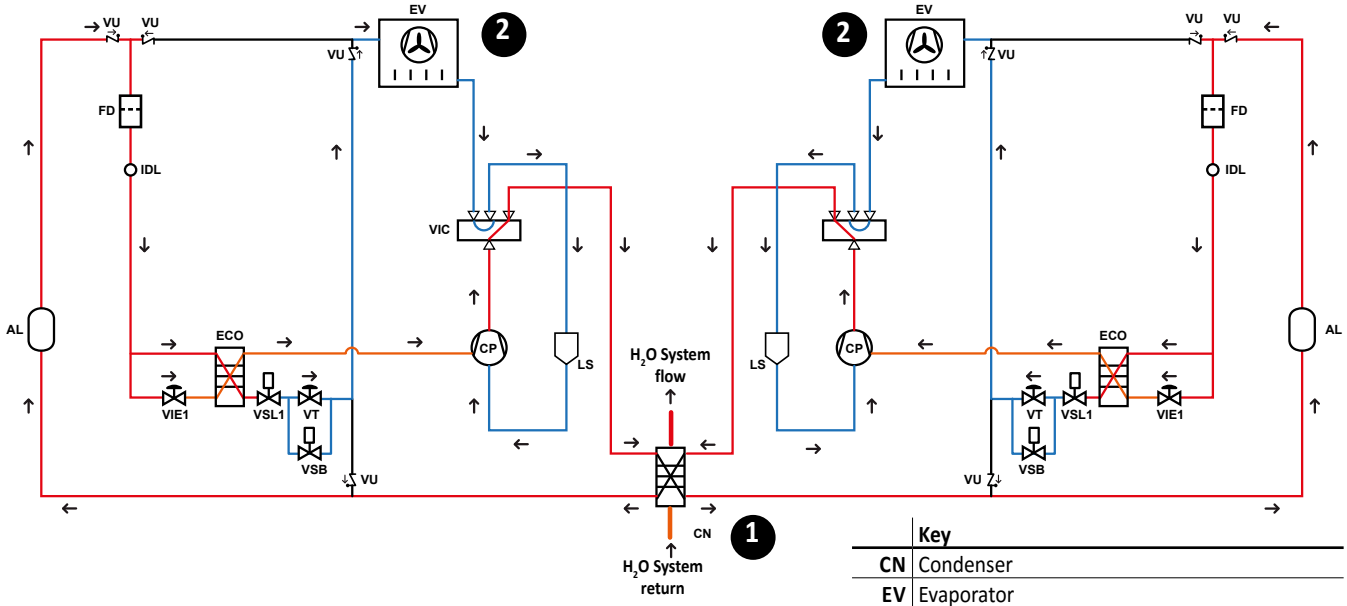
4. OPERATIONAL PRINCIPLE DIAGRAMS

4.1. (NRK0200÷0350) COLD WATER PRODUCTION ONLY TO SYSTEM



	Description	Functioning
1	System side HEAT EXCHANGER	(EVAPORATION) Cold water production
2	Source side HEAT EXCHANGER	(CONDENSATION) Heat exchange with air

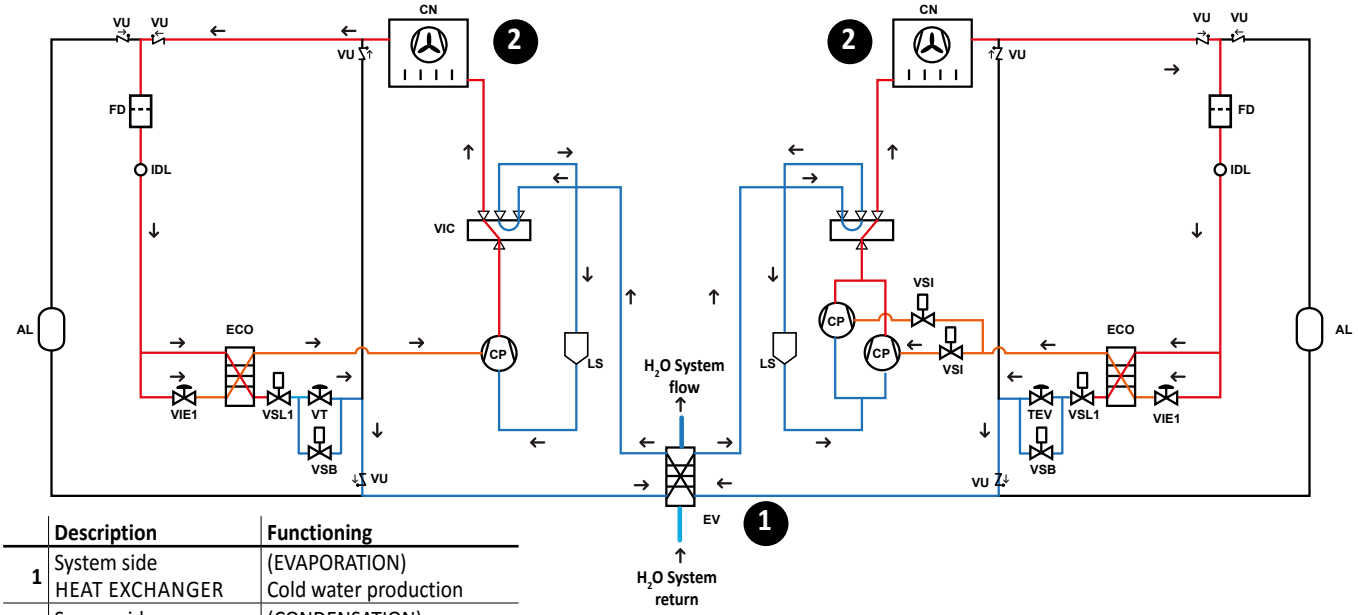
4.2. (NRK0200÷0350) HOT WATER PRODUCTION ONLY TO SYSTEM



	Description	Functioning
1	System side HEAT EXCHANGER	(CONDENSATION) Hot water production
2	Source side HEAT EXCHANGER	(EVAPORATION) Heat exchange with air

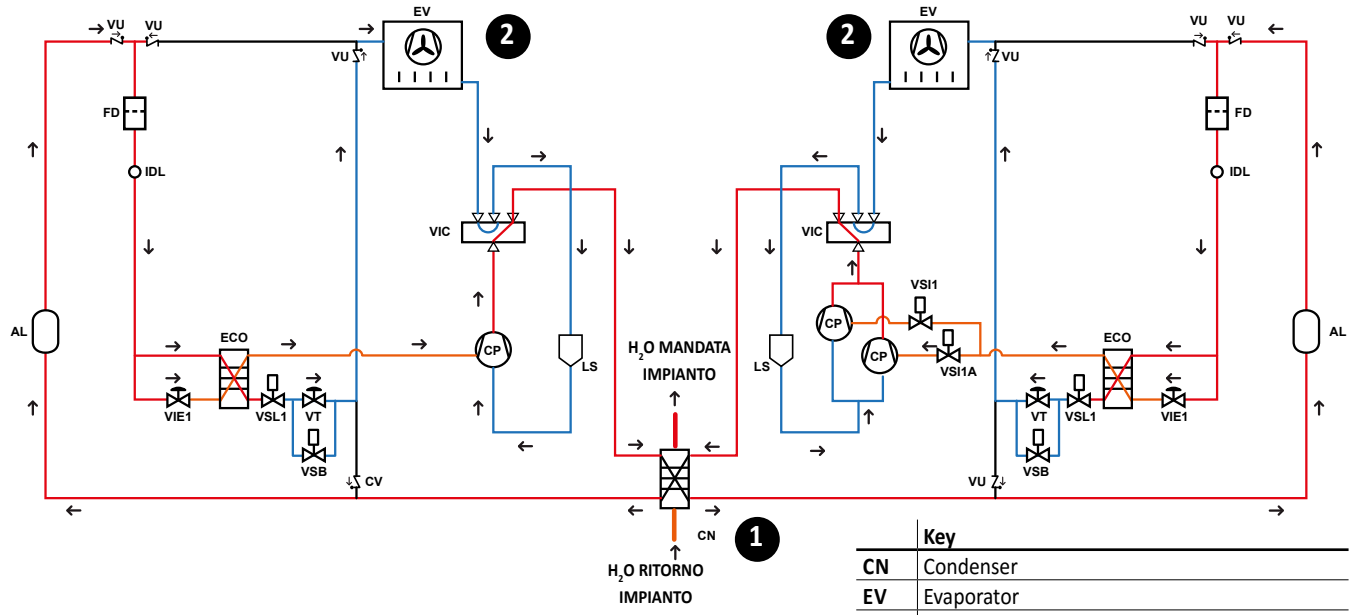
	Key
CN	Condenser
EV	Evaporator
CP	Compressor
AL	Liquid storage tank
VU	One-way valve
FD	Dehydrator filter
IDL	Liquid indicator
VIE	Economiser electronic thermostatic valve
ECO	Economizer
VSL	Solenoyd valve
VT	Thermostatic valve
VSB	Solenoid valve by-pass
LPT	Low pressure trasducer
LS	Liquid separator
VIC	Cycle reversing valve

4.3. (NRK0500) COLD WATER PRODUCTION ONLY TO SYSTEM



	Description	Functioning
1	System side HEAT EXCHANGER	(EVAPORATION) Cold water production
2	Source side HEAT EXCHANGER	(CONDENSATION) Heat exchange with air

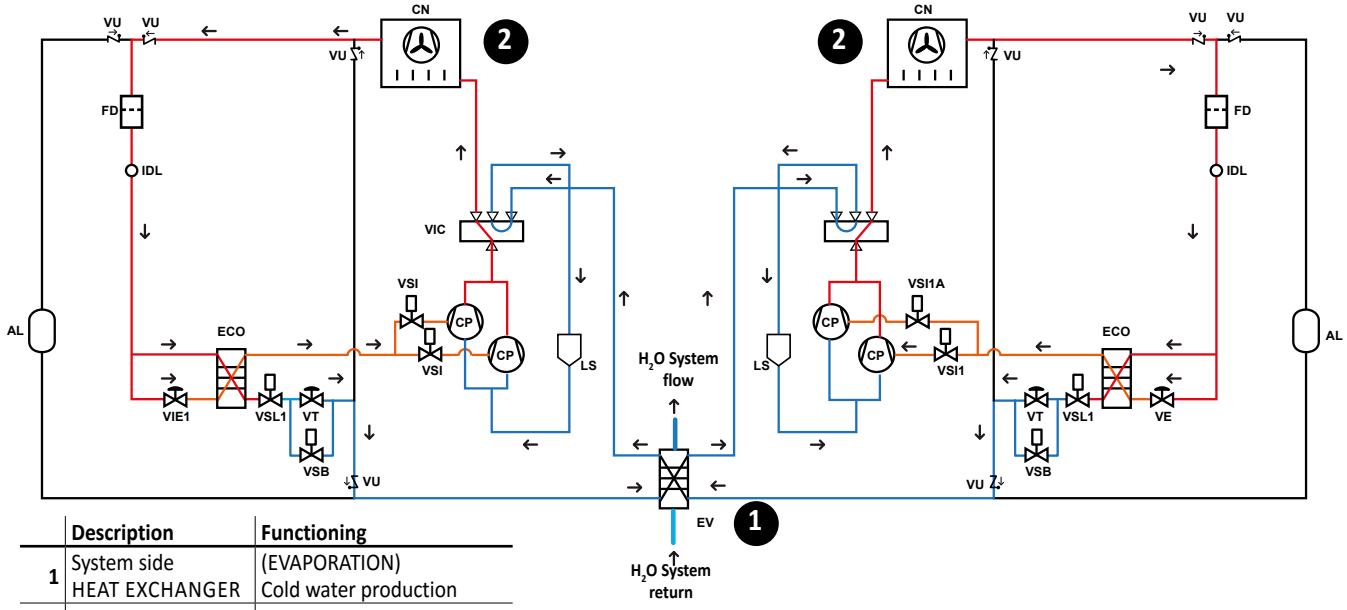
4.4. (NRK0500) HOT WATER PRODUCTION ONLY TO SYSTEM



	Description	Functioning
1	System side HEAT EXCHANGER	(CONDENSATION) Hot water production
2	Source side HEAT EXCHANGER	(EVAPORATION) Heat exchange with air

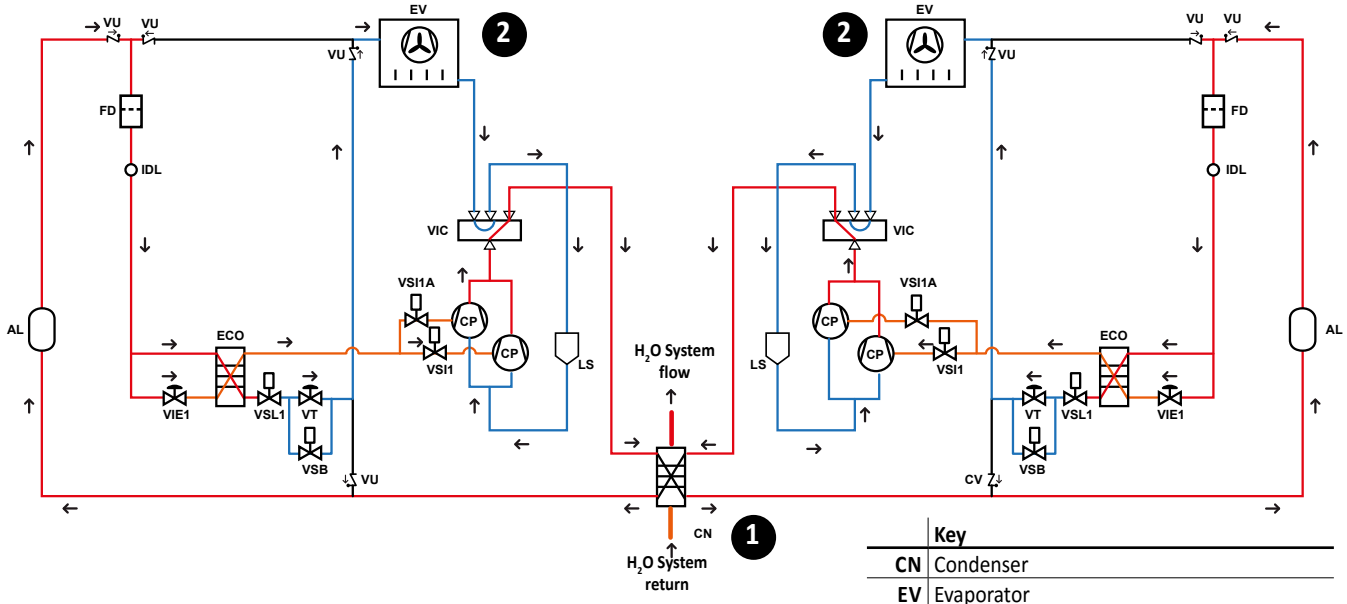
	Key
CN	Condenser
EV	Evaporator
CP	Compressor
AL	Liquid storage tank
VU	One-way valve
FD	Dehydrator filter
IDL	Liquid indicator
VIE	Economiser electronic thermostatic valve
ECO	Economizer
VSL	Solenoyd valve
VT	Thermostatic valve
VSB	Solenoid valve by-pass
LPT	Low pressure trasducer
LS	Liquid separator
VIC	Cycle reversing valve

4.5. (NRK0550÷0600) COLD WATER PRODUCTION ONLY TO SYSTEM



	Description	Functioning
1	System side HEAT EXCHANGER	(EVAPORATION) Cold water production
2	Source side HEAT EXCHANGER	(CONDENSATION) Heat exchange with air

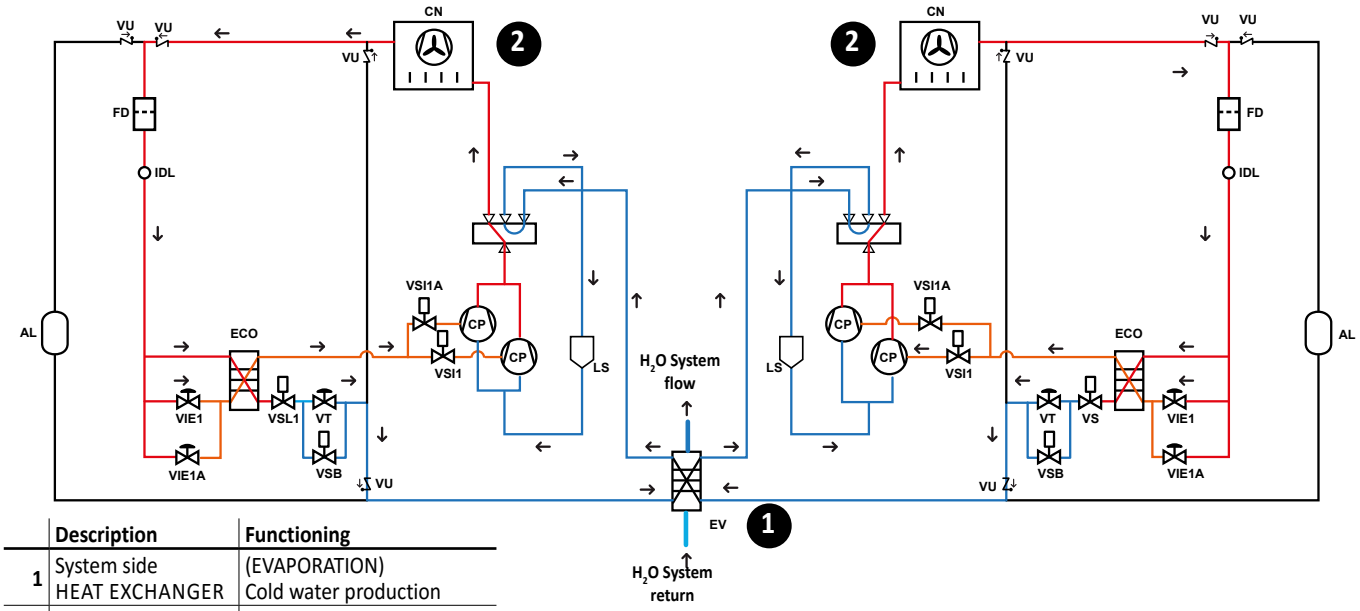
4.6. (NRK0550÷0600) HOT WATER PRODUCTION ONLY TO SYSTEM



	Description	Functioning
1	System side HEAT EXCHANGER	(CONDENSATION) Hot water production
2	Source side HEAT EXCHANGER	(EVAPORATION) Heat exchange with air

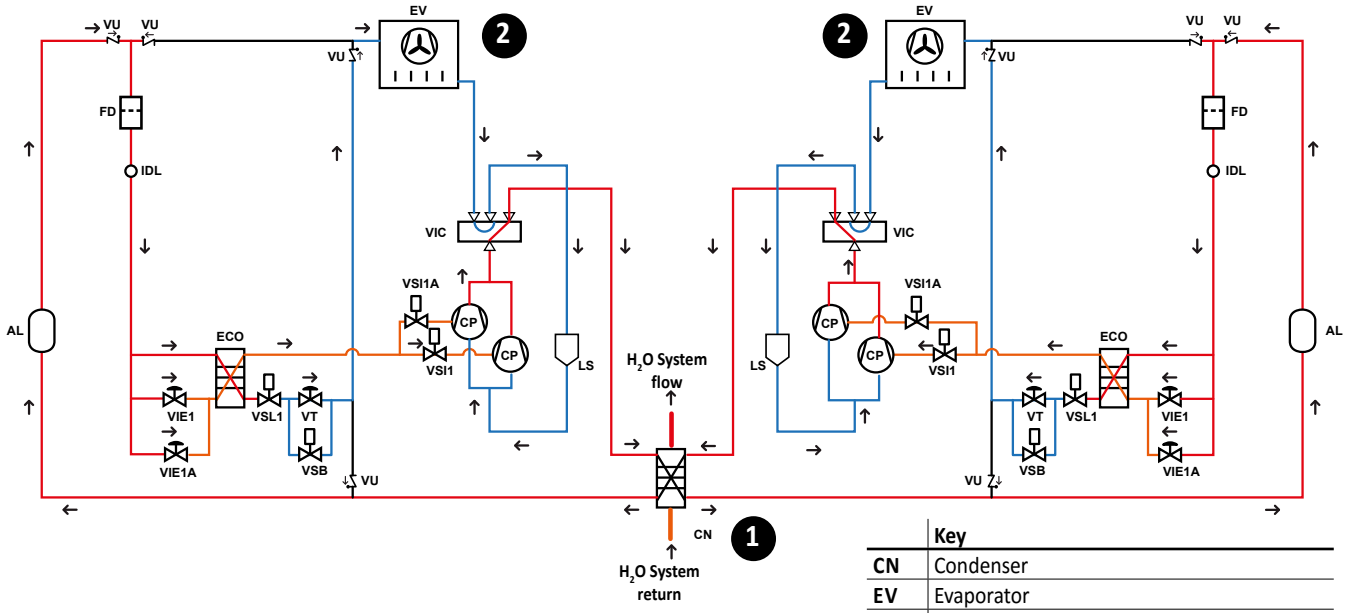
	Key
CN	Condenser
EV	Evaporator
CP	Compressor
AL	Liquid storage tank
VU	One-way valve
FD	Dehydrator filter
IDL	Liquid indicator
VIE	Economiser electronic thermostatic valve
ECO	Economizer
VSL	Solenoyd valve
VT	Thermostatic valve
VSB	Solenoid valve by-pass
VSI	Hot gas injection solenoid valves
LS	Liquid separator
VIC	Cycle reversing valve

4.7. (NRK0650÷0700) COLD WATER PRODUCTION ONLY TO SYSTEM



	Description	Functioning
1	System side HEAT EXCHANGER	(EVAPORATION) Cold water production
2	Source side HEAT EXCHANGER	(CONDENSATION) Heat exchange with air

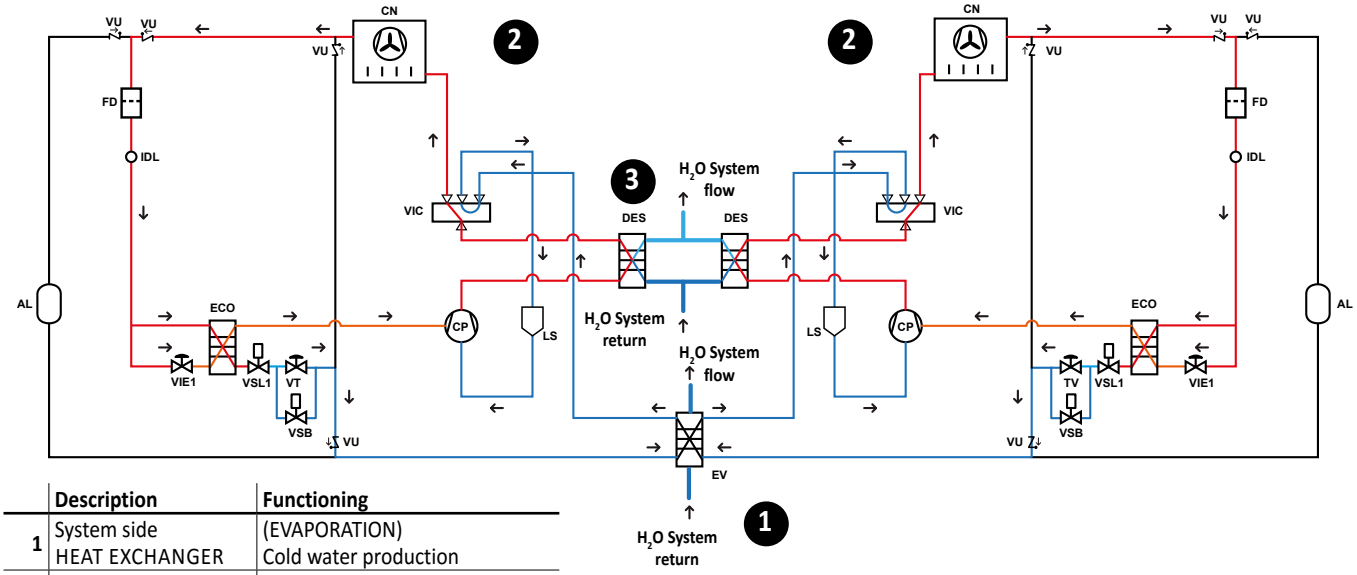
4.8. (NRK0650÷0700) HOT WATER PRODUCTION ONLY TO SYSTEM



	Description	Functioning
1	System side HEAT EXCHANGER	(CONDENSATION) Hot water production
2	Source side HEAT EXCHANGER	(EVAPORATION) Heat exchange with air

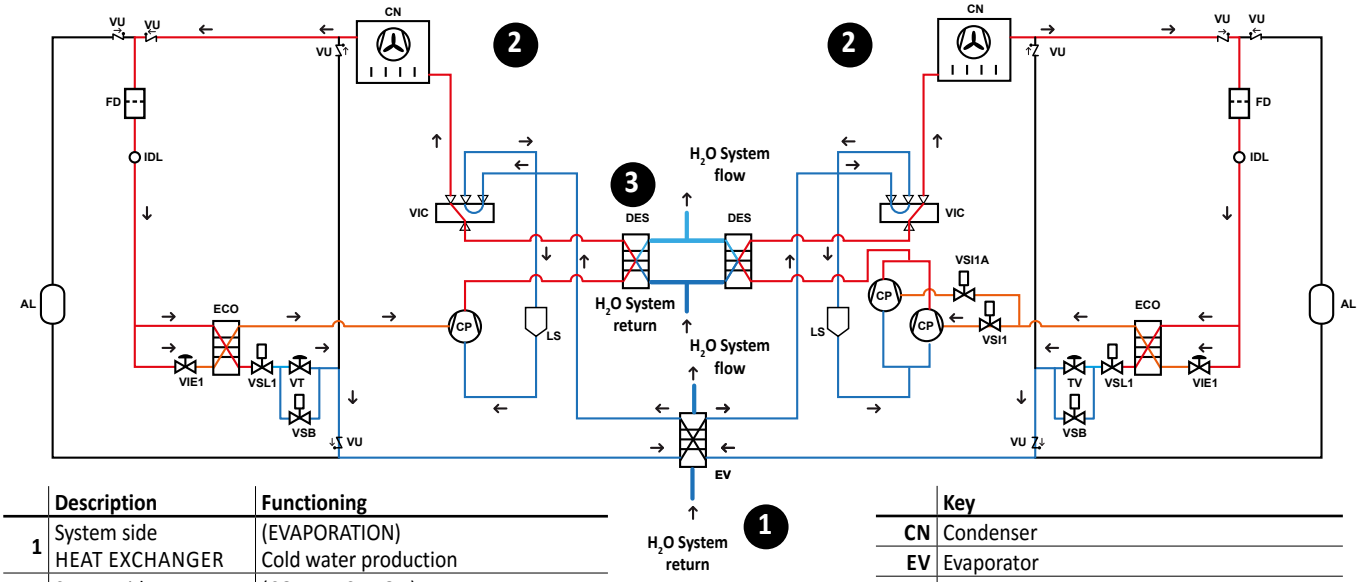
	Key
CN	Condenser
EV	Evaporator
CP	Compressor
AL	Liquid storage tank
VU	One-way valve
FD	Dehydrator filter
IDL	Liquid indicator
VIE	Economiser electronic thermostatic valve
ECO	Economizer
VSL	Solenoyd valve
VT	Thermostatic valve
VSB	Solenoid valve by-pass
VSI	Hot gas injection solenoid valves
LS	Liquid separator
VIC	Cycle reversing valve

4.9. (NRK0200÷0350) COLD WATER PRODUCTION ONLY TO SYSTEM + HOT WATER with DESUPERHEATER



	Description	Functioning
1	System side HEAT EXCHANGER	(EVAPORATION) Cold water production
2	Source side HEAT EXCHANGER	(CONDENSATION) Heat exchange with air
3	Desuperheater side HEAT EXCHANGER	(CONDENSATION) Hot water production

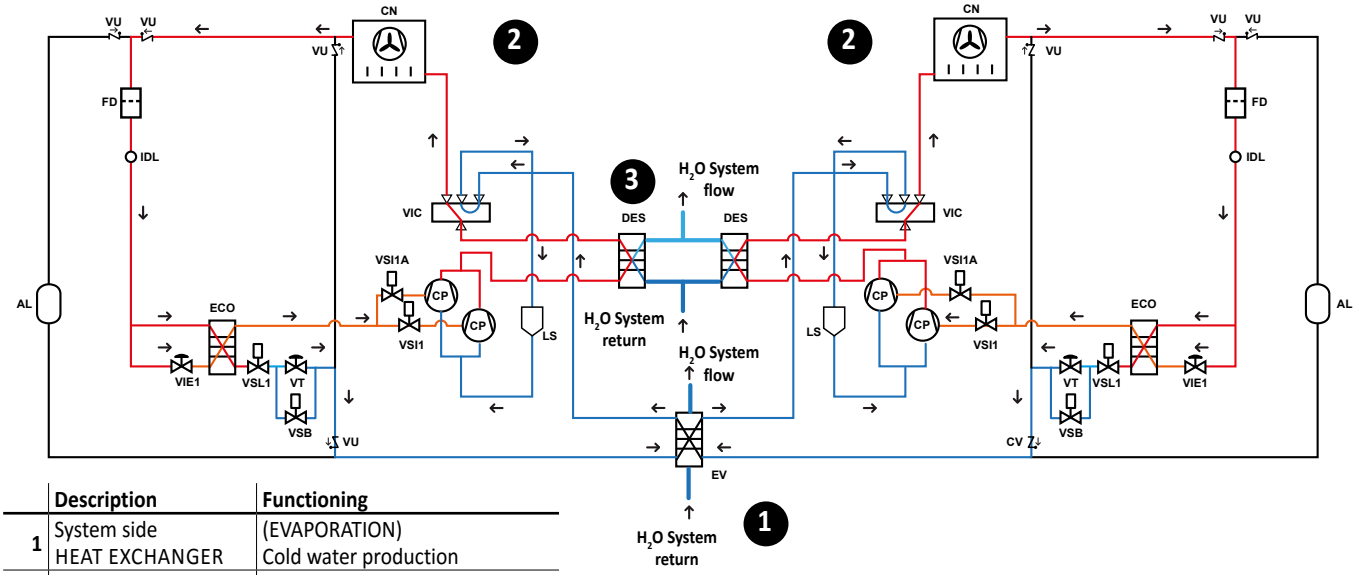
4.10. (NRK0500) COLD WATER PRODUCTION ONLY TO SYSTEM + HOT WATER with DESUPERHEATER



	Description	Functioning
1	System side HEAT EXCHANGER	(EVAPORATION) Cold water production
2	Source side HEAT EXCHANGER	(CONDENSATION) Heat exchange with air
3	Desuperheater side HEAT EXCHANGER	(CONDENSATION) Hot water production

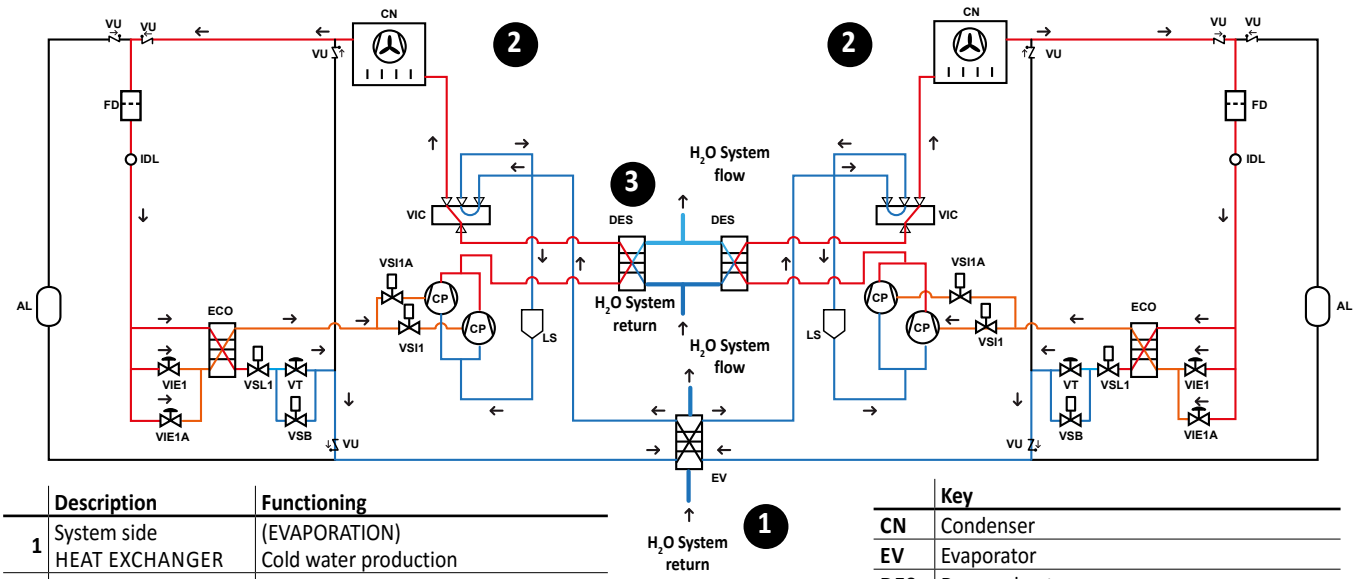
	Key
CN	Condenser
EV	Evaporator
DES	Desuperheater
CP	Compressor
AL	Liquid storage tank
VU	One-way valve
FD	Dehydrator filter
IDL	Liquid indicator
VIE	Economiser electronic thermostatic valve
ECO	Economizer
VSL	Solenoyd valve
VT	Thermostatic valve
VSB	Solenoid valve by-pass
LS	Liquid separator
VIC	Cycle reversing valve

4.11. (NRK0500÷0600) COLD WATER PRODUCTION ONLY TO SYSTEM + HOT WATER with DESUPERHEATER



	Description	Functioning
1	System side HEAT EXCHANGER	(EVAPORATION) Cold water production
2	Source side HEAT EXCHANGER	(CONDENSATION) Heat exchange with air
3	Desuperheater side HEAT EXCHANGER	(CONDENSATION) Hot water production

4.12. (NRK0650÷0700) COLD WATER PRODUCTION ONLY TO SYSTEM + HOT WATER with DESUPERHEATER



	Description	Functioning
1	System side HEAT EXCHANGER	(EVAPORATION) Cold water production
2	Source side HEAT EXCHANGER	(CONDENSATION) Heat exchange with air
3	Desuperheater side HEAT EXCHANGER	(CONDENSATION) Hot water production

	Key
CN	Condenser
EV	Evaporator
DES	Desuperheater
CP	Compressor
AL	Liquid storage tank
CV	One-way valve
F	Dehydrator filter
IDL	Liquid indicator
VE	Economiser electronic thermostatic valve
ECO	Economizer
VS	Solenoyd valve
TEV	Thermostatic valve
VSB	Solenoid valve by-pass
VSI	Hot gas injection solenoid valves
LS	Liquid separator
VIC	Cycle reversing valve

5. DESCRIPTION OF COMPONENTS

5.1. REFRIGERANT CIRCUIT

SCROLL COMPRESSORS
Rotary air-tight scroll type compressor, with vapour injection and two-pole electric motor.
All compressors come with casing resistance, electronic thermal protection with centralised manual resetting and twopole electric motor.

COOLING/HEATING EXCHANGER SYSTEM SIDE
Braze welded AISI 316 steel plate heat exchanger, insulated externally with closed cell neoprene anticondensation material. When the unit is not running, it is protected against formation of ice inside by an electric resistance.

5.1.1. WATER FEATURES

PH	**6-8**
Electric conductivity	Less than 200 S/m (25°C)
Chloride ions	Less than 50 ppm
Sulphuric acid ions	Less than 50 ppm
Total iron	Less than 0,3 ppm
Alkalinity M	Less than 50 ppm
Total hardness	Less than 50 ppm
Sulphur ions	None
Ammonia ions	None
Silicone ions	Less than 30 ppm

SOURCE SIDE HEAT EXCHANGER
Finned pack heat exchanger made with copper pipes and aluminium fins adequately spaced to ensure better heat exchange performance.

EXCHANGER SYSTEM SIDE
Braze welded AISI 316 steel plate heat exchanger, insulated externally with closed cell neoprene anticondensation material. When the unit is not running, it is protected against formation of ice inside by an electric resistance.

ECONOMIZER
Circuito economizzatore con scambiatore a piastre (AISI 316); consente di aumentare le prestazioni soprattutto agli elevati rapporti di compressione, ad esempio in caso di basse temperature esterne nel funzionamento invernale.

CYCLE REVERSING VALVE
4-way cycle reversing valve. Inverts the flow of refrigerant gas.

LIQUID STORAGE TANK
(always passed by)
Compensates the difference in volume between finned coil and plate exchanger, retaining excess liquid.

DEHYDRATOR FILTER
Hermetic-mechanical with cartridges made of ceramic and hygroscopic material, able to withhold impurities and any traces of humidity present in the cooling circuit.

NON-RETURN VALVES
Allows one-way flow of the refrigerant.

THERMOSTATIC VALVES
Mechanical valves, with external equaliser positioned at evaporator outlet, modulates the flow of gas to the evaporator, depending on the heat load, in order to ensure a correct heating level of the intake gas.

SOLENOID VALVES
The valve closes when the compressor switches off, blocking the flow of refrigerant gas to the evaporator, recovery and the coil.

LIQUID SEPARATOR
Positioned on compressor intake for protection against any return of refrigerant fluid, flooded start-up and functioning in the presence of liquids.

INDICATOR FOR LIQUID
Used to check presence of humidity in cooling circuit.

5.2. STRUCTURE AND FANS

SUPPORT STRUCTURE
Structure made of hot-dipped galvanised steel sheets, painted with polyester powders, built to guarantee easy accessibility for service and maintenance.

STANDARD FANS
Axial fans with IP 54 degree of protection, external rotor, helical blades, housed in nozzles, complete with accident-prevention protective screen. 6-pole electric motor with built-in circuit breaker.
They are equipped as standard with condensation check via a device that continuously adjusts the fans' speed.

LARGER FANS
Offer a useful head to avoid pressure drops of the aeraulic system if the fans need to be channelled.

LARGER INVERTER FANS
(available only from size 0500 to 0700).

5.3. STANDARD HYDRAULIC CIRCUIT

WATER FILTERS
Equipped with steel filtering mesh, prevents the heat exchangers both of the system side and the DHW/ heating system side from clogging.

FLOW SWITCHES
They have the task of controlling that there is water circulation inside the heat exchangers; if this is not the case, they block the unit.

AIR VENT VALVE
Mounted on the top of the hydraulic system; they discharge possible air pockets.

5.3.1. COMPONENTS OF HYDRAULIC CIRCUIT IN CONFIGURABLE VERSIONS

PUMPS
High or low static pressure.
It is possible to request a second pump to operate in standby for the first (twin pumps) with high or low pressure levels. The pumps work in programmed rotation and, in the event of a fault on the operating pump, switch-over is automatic.

EXPANSION VESSEL
With nitrogen pre-load membrane.

SAFETY VALVE
Equipped with a piped discharger, intervenes by discharging the over pressure in case of anomalous pressures.

SYSTEM BUFFER TANK
Made of steel to reduce heat loss and to eliminate the formation of condensation, insulated by thick polyurethane.
Supplied as per standard with 300W electric anti-freeze resistance (as low as -20°C outside temperature - 5°C tank water temperature) controlled by anti-freeze probe inserted in tank.

5.4. SAFETY AND CONTROL COMPONENTS

MANUALLY RESET HIGH PRESSURE SWITCH
With fixed calibration, placed on high pressure side of cooling circuit, inhibits functioning of compressor if abnormal work pressure occurs.

LOW PRESSURE TRANSDUCER
Placed on the low pressure side of the cooling circuit, it signals the work pressure to the control board generating a pre-warning in the case of anomalous pressures.

HIGH PRESSURE TRANSDUCER
Placed on the high pressure side of the cooling circuit, it signals the work pressure to the control board generating a pre-warning in the case of anomalous pressures.

DCPX CONDENSATION PRESSURE CONTROLLER
This accessory allows correct functioning with external temperatures lower than 10°C and as low as – 10°C.
It consists of an adjustment circuit board that varies the number of fan revs according to the condensation pressure read by the high pressure transducer, in order to keep it sufficiently high for correct unit functioning.
It also allows correct functioning in heating mode with external temperatures exceeding 30°C and up to 42°C.

5.5. ELECTRIC CONTROL AND POWER BOARD

Electric board in compliance with standards EN 60204-1/IEC 204-1, complete with:
- transformer for the control circuit,
- door lock main isolating switch,
- fuses and contactors for compressors and fans,
- terminals for REMOTE PANEL,
- spring type control circuit terminal board,
- outdoor electric board with double door and gaskets,
- electronic controller,
- evaporator pump and recovery pump control consent relay (only for versions without pump units),
- all numbered cables.

DOOR-LOCK ISOLATING SWITCH
The electric control board can be accessed by removing the voltage. Act on the opening lever of the control board itself. This lever can be locked using one or more padlocks during maintenance interventions to prevent the machine being powered up accidentally.

CONTROL KEYPAD
Micro-processor control system is the new function dedicated to the heat pumps with integrated logic for high temperature hot water production.
Beside the control buttons, the keyboard features an LCD display which allows to consult and adjust the unit with a multilevel menu and language option setting.
It controls:
- The temperature used by the system for environment heating and cooling, but also the temperature of the water if it is used as domestic hot water. The management of the various temperatures is carried out automatically based on the operating conditions of the machine and external inputs.
- Alarm management and log in order to always have a punctual diagnosis of the unit operation.
- Creation of operating time intervals, necessary for an efficient programming
- For defrosting, a self-adapting logic is used, which allows the adjustment of defrosting frequency for the benefit of efficiency.
- The unit can be supervised with...
- A dedicated keyboard for wall mounting (PGD1 accessory), which allows remote control of all functions.

- **NB: For further information refer to the user manual.**

6. ACCESSORIES

- **AER485P1** RS-485 interface for supervising systems with MODBUS protocol.

- **AERWEB300**
  Accessory AERWEB allows remote control of a chiller through a common PC and an ethernet connection over a common browser; 4 versions available:
  AERWEB300-6: Web server to monitor and remote control max. 6 units in RS485 network;
  AERWEB300-18: Web server to monitor and remote control max. 18 units in RS485 network**;**
  AERWEB300-6G: Web server to monitor and remote control max. 6 units in RS485 network with integrated GPRS modem;
  AERWEB300-18G: Web server to monitor and remote control max. 18 units in RS485 network ith integrated GPRS modem;

- **PGD1**: Graphical display, which allows complete management of the unit like the one on board the machine. Can be controlled up to 50 m away with a telephone cable, 200 m with a shielded AWG 24 cable

- **GP**: **PROTECTION GRIDS**
  Protect the external coil from blows and prevent access to the underlying area where the compressors and the chiller circuit are housed. Every kit includes two grids.

- **VT ANTI-VIBRATION MOUNTS**

Group of anti-vibration mounts

Accessories factory fitted only

- **DRE**: Electronic soft starter which reduces starting current by about 26%.
- **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

Mod. NRK		Vers.	0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
AER485P1		All	•	•	•	•	•	•	•	•	•	•
AERWEB300		All	•	•	•	•	•	•	•	•	•	•
PGD1		All	•	•	•	•	•	•	•	•	•	•
GP	(1)	All	3	3	4	4	2(x2)	2(x2)	2(x2)	2(x2)	2(x3)	2(x3)
VT (00)		All	17	17	17	17	13	13	13	13	22	22
VT (-P1-P2-P3-P4)			17	17	17	17	13	13	13	13	22	22
VT (01-02-03-04)		All	13	13	13	13	10	10	10	10	22	22
PRM1		All	•	•	•	•	•	•	•	•	•	•
Accessories factory fitted only												
DRE	(2)	All	201	281	301	331	351	501	551	601	651	701
RIF	(2)	All	55	56	54	57	65	58	59	60	61	61
PRM1		All	•	•	•	•	•	•	•	•	•	•

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

7. TECHNICAL DATA

Mod. NRK				0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
Cooling system side													
Cooling capacity		HA	Ton	-	-	-	-	21.3	25.3	28.7	33.3	37.8	42.1
		HE	Ton	10.2	14.2	16.8	18.8	21.0	27.7	28.4	32.4	37.2	41.2
Total input power		HA	kW	-	-	-	-	25,4	29,6	34,5	41,1	45,0	52,6
		HE	kW	11,7	17,5	19,6	22,4	27,7	32,5	38,1	45,8	49,5	58,1
EER		HA		-	-	-	-	10.1	10.2	10.0	9.7	10.1	9.6
		HE		10.3	9.8	10.3	10.1	9.0	9.2	8.9	8.5	9.0	8.5
Water flow rate		HA	gpm	-	-	-	-	57.2	67.3	77.0	89.0	101.1	112.3
		HE	gpm	27.0	38.2	45.1	50.1	56.4	66.2	75.6	86.8	99.1	110
Total pressure drop		HA	kPa	-	-	-	-	23	26	32	28	34	42
		HE	kPa	18	17	23	19	22	25	30	27	32	41
Useful head low head pump		HA	psi	-	-	-	-	14.5	19.9	16.5	15.5	19.4	15.4
		HE	psi	14.5	19.9	16.5	15.5	19.4	15.4	17.0	16.2	20.2	16.2
Useful head High head pump		HA	psi	-	-	-	-	20.2	25.4	22.2	29.0	26.5	23.4
		HE	psi	25.8	21.6	22.0	19.9	20.5	25.7	22.6	30.0	27.3	24.1

Heating system side													
Heating capacity		HA/HE	kW	42	60	70	78	88	104	119	137	156	175
Total input power		HA/HE	kW	12.	17.1	20.0	22.5	25.5	30.2	34.7	39.9	45.6	51.7
COP		HA/HE	W/W	3,49	3,49	3,48	3,48	3,45	3,44	3,43	3,43	3,42	3,38
Water flow rate		HA/HE	gpm	31.6	44.3	51.7	57.5	68.3	80.0	90.6	102.2	117.6	130.6
Total pressure drop		HA/HE	psi	3.5	3.2	4.4	3.6	4.6	5.2	6.4	5.4	6.5	8.3
Useful head low head pump		HA/HE	psi	18.6	13.5	14.1	11.5	11.7	16.7	12.3	11.2	14.1	8.0
Useful head High head pump		HA/HE	psi	24.2	19.1	19.9	17.1	17.5	22.5	18.4	24.7	21.6	16.8

Cooling with partial heat recovery (desuperheater if present))													
Recovery heating capacity	**(1)**	HA/HE	kW	20	26	29	32	40	46	49	58	70	77
Water flow rate		HA/HE	gpm	15.4	20.0	22.3	24.7	30.5	35.2	37.2	43.8	53.0	58.3
Total pressure drop	**(1)**	HA/HE	psi	1.5	2.5	3.2	3.9	2.2	2.9	3.3	4.3	3.3	4.2

GRADO DI PROTEZIONE													
IP				24	24	24	24	24	24	24	24	24	24

ELECTRICAL DATA	**(2)**												
Power supply		**V/ph/Hz**		400V/3N/50Hz ± 10									
Total input current in cooling mode		HA		-	-	-	-	55	61	66	72	86	107
		HE		28	38	42	49	60	67	73	80	95	119
Total input current in heating mode		HA/HE		24	34	38	44	54	59	64	70	85	106
Maximum current (FLA)		All	A	40	49	61	74	75	85	94	114	144	147
Starting current (LRA)		All	A	124	146	175	215	216	226	191	228	285	288
COMPRESSORS													
Compressor			type	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
			n°	2	2	2	2	2	3	4	4	4	4
Circuit			n°	2	2	2	2	2	2	2	2	2	2
Capacity control	**C1**		%	50	50	50	50	50	28,3	25	25	25	25
			%	-	-	-	-	-	28,3	25	25	25	25
	C2		%	50	50	50	50	50	43,4	25	25	25	25
			%	-	-	-	-	-	-	25	25	25	25
Refrigerant			type	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
		C1	lbs	17.2	18.5	19.8	19.8	33.1	39.7	39.7	39.7	52.9	55.1
		C2	lbs	17.2	18.5	19.8	19.8	33.1	39.7	39.7	39.7	52.9	55.1
Oil			type	POE 160 SZ									
			lbs	8.0	14.33	14.33	14.33	14.33	21.5	28.7	28.7	28.7	28.7

Cooling (14511:2011)
Evaporator water temperature (in/out) 12°C/7°C; External air temperature 35°C
Heating (14511:2011)
Condenser water temperature (in/out) 40°C/45°C; External air temperature 7°C b.s./6°C b.u.
Cooling with desuperheater
Evaporator water temperature (in/out) 12°C/7°C; External air temperature 35°C; Desuperheater water temperature (in/out) 40°C/45°C
(1) The data is comprehensive (take into account both circuits)
(2) Unit standard versions without hydronic module integrated
- not supply

Mod. NRK				0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
EXCHANGER SYSTEM SIDE													
Exchanger			type	plate	plate	plate	plate	plate	plate	plate	plate	plate	plate
			n°	1	1	1	1	1	1	1	1	1	1
			dm³	6,5	6,5	8,4	8,4	10,8	10,8	15,6	15,6	18	18
Hydraulic connections (in/out)		Victaulic	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	2”1/2
DESUPERHEATER RECOVERY SIDE HEAT EXCHANGERS if supplied													
Exchanger			type	plate	plate	plate	plate	plate	plate	plate	plate	plate	plate
			n°	2	2	2	2	2	2	2	2	2	2
			dm³	4,8	4,8	4,8	4,8	8,2	10,5	10,5	10,5	19	19
Hydraulic connections (in/out)	**(3)**	Victaulic	ø										
HYDRONIC MODULE SYSTEM SIDE													
BUFFER TANK													
Buffer tank			l	300	300	300	300	500	500	500	500	500	500
Electric heater			n°/W	1/300	1/300	1/300	1/300	1/300	1/300	1/300	1/300	1/300	1/300
LOW HEAD PUMP		(P1-P2)											
Input power (nom.)			kW	1,1	1,1	1,1	1,1	1,1	1,5	1,5	1,5	1,9	1,9
Input current (max.)			A	2,45	2,45	2,51	2,51	2,51	3,41	3,41	3,41	4,53	4,53
HIGH HEAD PUMP		(P3-P4)											
Input power (nom.)			kW	1,5	1,5	1,5	1,5	1,5	1,9	1,9	3,0	3,0	3,0
Input current (max.)			A	3,08	3,08	3,41	3,41	3,41	4,53	4,53	5,86	5,86	5,86
EXPANSION VESSEL													
Expansion vessel			n°	1	1	1	1	1	1	1	1	1	1
			l	24	24	24	24	24	24	24	24	24	24
SAFETY VALVE (only for versions with accumulator)													
Safety valve			n°/bar	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6
STANDARD FANS AXIAL													
fans			type	Inverter	Inverter	Inverter	Inverter	On/Off	On/Off	On/Off	On/Off	On/Off	On/Off
			n°	4	6	8	8	2	2	2	2	3	3
Air flow rate cooling mode		HA	m³/h	-	-	-	-	37000	36500	36500	36500	58000	58000
		HE	m³/h	14000	20000	26000	26000	21100	21400	22400	22400	31900	31900
Air flow rate heating mode		HA/HE	m³/h	14000	20000	26000	26000	37000	36500	36500	36500	58000	58000
Input power			kW	-	-	-	-	3,4	3,4	3,4	3,4	3,4	5,1
Input current			A	-	-	-	-	7,2	7,2	7,2	7,2	7,2	10,8
INVERTER FANS													
High static pressure			Pa	-	-	-	-	80	80	80	80	80	80
SOUND DATA													
Cooling mode													
Sound power		HA	dB(A)	-	-	-	-	82	82	82	83	85	85
		HE	dB(A)	74	74	75	75	74	74	74	75	77	77
Sound pressure		HA	dB(A)	-	-	-	-	50	50	50	51	53	53
		HE	dB(A)	42	42	43	43	42	42	42	43	45	45
Heating mode	**(4)**												
Sound power		HA/HE	dB(A)	74	74	75	75	82	82	82	83	85	85
Sound pressure		HA/HE	dB(A)	42	42	43	43	50	50	50	51	53	53
DIMENSIONS													
Height			mm	1606	1606	1606	1606	1875	1875	1875	1875	1875	1875
Width			mm	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100
Depth			mm	2700	2700	3250	3250	3330	3330	3330	3330	4330	4330
Weight when empty	**(2)**			804	876	960	967	1118	1264	1325	1367	1562	1597

(2) Unit standard versions without hydronic module integrated
(3) The desuperheater are connected by a hydraulic collector
(4) Cooling mode – The ‘HE’ version is low noise with temperature 12/7°C -35°C Heating mode – The ‘HE’ version is low noise witth temperature > 25°

Sound power

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

Sound pressure

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

Nota: Per maggiori informazioni fare riferimento al programma di selezione Magellano o alla documentazione tecnica disponibile sul sito www.aermec.com

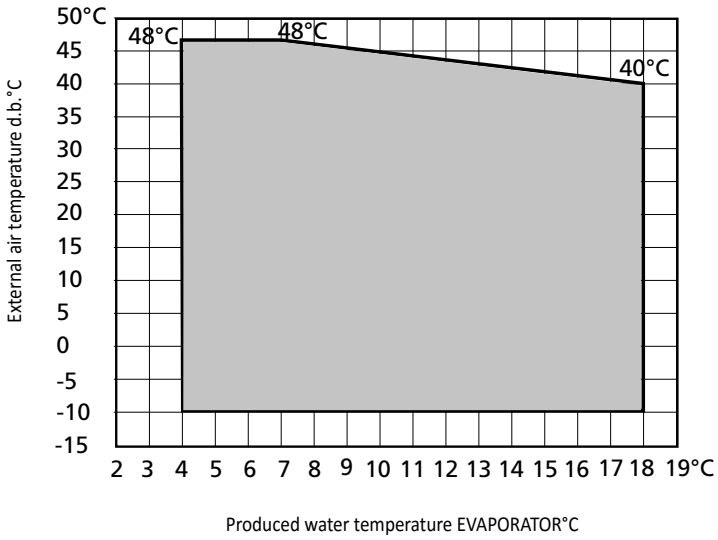
8. OPERATIONAL LIMITS

8.1. COOLING MODE [1]

The units, in standard configuration, are not suitable for installation in salty environments.
For functioning limits, please refer to the diagrams, valid for Δt = 5°C.

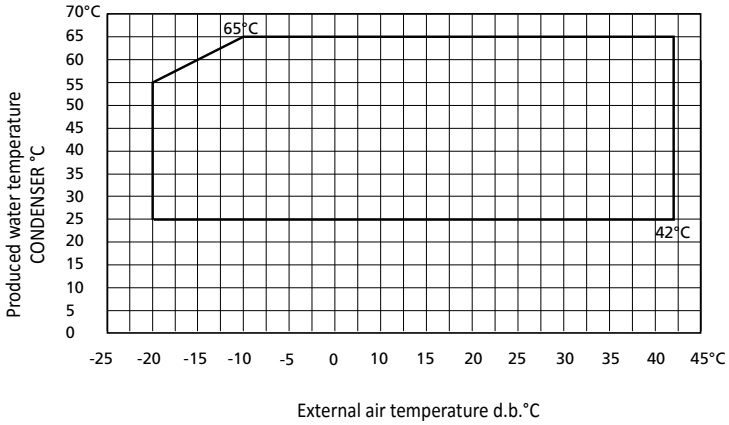
ATTENTION
Contact our technical sales department if the unit needs to operated outside the operating limits.

ATTENTION
In windy areas, for correct operation of DCPX it is recommended to install a windbreak barrier.
It should be installed if wind velocity is beyond 2.5 m/s.



8.2. HEATING MODE [1]

Nota:
1 In SUMMER mode, the unit can be started with external air 46°C and inlet water 35°C.
In WINTER AND RECOVERY MODE, the unit can be started with external air -20°C and inlet water 20°C.
In these conditions, operation is only allowed for a short mount of time and to bring the system to the proper temperature.
To shorten this operation, it is recommended to install a three-way valve which makes it possible to bypass the water from the utilities to the plant, until achieving conditions which allow the unit to work within the allowed operating limits.



9. OUTPUTS AND INPUTS DIFFERENT THAN THE RATED VALUES WITH (ΔT 5°C)

COOLING MODE

	TAE	10°C					25°C					35°C					40°C					48°C				
		Pc	Pe	EER	Qn	Pdc	Pc	Pe	EER	Qn	Pdc	Pc	Pe	EER	Qn	Pdc	Pc	Pe	EER	Qn	Pdc	Pc	Pe	EER	Qn	Pdc
	TWP	kW	kW	W/W	gpm	kPa	kW	kW	W/W	gpm	kPa	kW	kW	W/W	l/h	kPa	kW	kW	W/W	l/h	kPa	kW	kW	W/W	l/h	kPa
NRK0200HA	4°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0280HA	4°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0300HA	4°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0330HA	4°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0350HA	4°C	80	14,04	5,69	60.7	26	73	20,15	3,60	55.1	21	69	25,01	2,78	11981	19	68	27,80	2,44	11705	18	65	32,92	1,96	11161	17
NRK0500HA	4°C	95	16,23	5,88	72.6	30	88	23,31	3,79	67.1	26	83	29,16	2,84	14271	22	80	32,62	2,45	13784	21	76	39,10	1,93	13052	19
NRK0550HA	4°C	109	18,81	5,79	82.8	36	102	27,01	3,76	77.3	32	96	34,02	2,81	16501	28	92	38,25	2,41	15920	26	86	46,31	1,87	14917	23
NRK0600HA	4°C	123	21,90	5,60	93.2	31	114	32,26	3,53	86.4	27	108	40,37	2,68	18651	24	105	45,15	2,32	18050	23	97	54,18	1,80	16809	20
NRK0650HA	4°C	140	24,55	5,71	106.7	37	129	35,27	3,65	22245	32	122	43,98	2,78	21127	28	119	49,17	2,41	20483	27	111	59,00	1,88	19178	23
NRK0700HA	4°C	159	28,89	5,52	121.4	49	147	41,38	3,55	25402	42	137	51,47	2,67	23750	36	133	57,44	2,31	22958	34	126	68,66	1,84	21836	31
NRK0200HA	5°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0280HA	5°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0300HA	5°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0330HA	5°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0350HA	5°C	83	14,41	5,73	62.8	27	75	20,34	3,68	12921	23	71	25,09	2,85	12331	21	70	27,84	2,51	12037	20	66	32,89	2,02	11472	18
NRK0500HA	5°C	98	16,64	5,88	74.4	31	90	23,49	3,84	15595	27	85	29,22	2,90	14611	23	82	32,63	2,51	14128	22	78	39,06	1,99	13414	20
NRK0550HA	5°C	111	19,27	5,78	84.8	38	104	27,20	3,81	17896	33	97	34,08	2,86	16829	29	94	38,26	2,46	16251	27	88	46,27	1,91	15271	24
NRK0600HA	5°C	127	22,00	5,75	96.2	33	117	32,47	3,61	20231	28	111	40,69	2,73	19207	26	108	45,53	2,37	18593	24	100	54,67	1,84	17340	21
NRK0650HA	5°C	145	25,07	5,79	110.3	40	133	35,63	3,73	22961	34	126	44,26	2,85	21786	30	122	49,42	2,48	21119	28	115	59,21	1,94	19782	25
NRK0700HA	5°C	164	29,58	5,53	124.8	52	151	41,79	3,60	26025	44	141	51,75	2,72	24348	38	136	57,67	2,37	23557	36	130	68,82	1,89	22457	33
NRK0200HA	7°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0280HA	7°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0300HA	7°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0330HA	7°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0350HA	7°C	88	15,29	5,76	67.6	31	79	20,90	3,79	13677	25	75	25,43	2,96	12981	23	73	28,13	2,61	12673	22	70	33,07	2,11	12069	20
NRK0500HA	7°C	103	17,64	5,81	78.0	34	94	24,07	3,92	16284	29	89	29,57	3,00	15275	26	86	32,91	2,60	14790	24	82	39,22	2,08	14108	22
NRK0550HA	7°C	116	20,41	5,70	88.6	42	108	27,82	3,87	18577	36	101	34,46	2,94	17485	32	98	38,55	2,54	16905	29	93	46,46	1,99	15973	26
NRK0600HA	7°C	134	22,18	6,04	101.9	37	124	32,82	3,76	21337	32	117	41,11	2,85	20208	28	113	46,14	2,46	19588	27	106	55,47	1,91	18310	23
NRK0650HA	7°C	154	26,26	5,86	117.5	45	141	36,55	3,85	24294	38	133	45,00	2,96	22972	34	129	50,15	2,57	22294	32	121	59,88	2,02	20897	28
NRK0700HA	7°C	172	31,18	5,52	130.9	57	158	42,92	3,67	27244	48	148	52,61	2,81	25512	42	143	58,47	2,45	24716	40	137	69,52	1,97	23651	36
NRK0200HA	10°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0280HA	10°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0300HA	10°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0330HA	10°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0350HA	10°C	95	16,70	5,72	16504	37	85	21,91	3,89	14723	29	81	26,27	3,07	13932	26	79	28,84	2,72	13562	25					
NRK0500HA	10°C	110	19,30	5,68	18952	39	100	25,18	3,97	17286	33	94	30,43	3,09	16215	29	91	33,65	2,71	15735	27					
NRK0550HA	10°C	124	22,35	5,53	21388	47	113	29,05	3,90	19587	40	107	35,38	3,02	18437	35	104	39,36	2,63	17882	33					
NRK0600HA	10°C	144	22,49	6,41	24925	43	132	33,23	3,97	22814	36	125	41,78	2,99	21582	32	121	46,83	2,58	20898	30					
NRK0650HA	10°C	166	28,08	5,92	28726	53	151	38,05	3,97	26094	43	143	46,41	3,07	24644	39	138	51,46	2,68	23863	36					
NRK0700HA	10°C	184	33,73	5,46	31877	66	168	44,87	3,74	29012	54	157	54,34	2,89	27169	48	153	60,07	2,54	26361	45					
NRK0200HA	15°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0280HA	15°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0300HA	15°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0330HA	15°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0350HA	15°C	106	18,05	5,90	18404	46	94	22,88	4,11	16265	36	89	27,06	3,28	15318	32	86	29,58	2,92	14897	30					
NRK0500HA	15°C	122	21,19	5,74	21021	49	110	26,37	4,15	18934	39	103	31,33	3,28	17737	35	100	34,45	2,90	17240	33					
NRK0550HA	15°C	136	24,82	5,48	23531	57	123	30,52	4,04	21311	47	116	36,46	3,19	20096	42	113	40,33	2,81	19574	39					
NRK0600HA	15°C	160	23,49	6,79	27585	53	145	34,05	4,25	24983	43	136	42,62	3,20	23537	38	132	47,72	2,76	22780	36					
NRK0650HA	15°C	184	29,79	6,19	31905	65	166	39,46	4,22	28762	53	157	47,75	3,28	27052	47	151	52,80	2,87	26166	44					
NRK0700HA	15°C	204	36,40	5,62	35393	81	184	46,81	3,93	31826	65	172	56,06	3,07	29740	57	167	61,75	2,70	28880	54					
NRK0200HA	18°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0280HA	18°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0300HA	18°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0330HA	18°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0350HA	18°C	112	17,47	6,42	19407	51	99	22,23	4,45	17087	39	93	26,42	3,52	16069	35	90	28,95	3,12	15627	33					
NRK0500HA	18°C	129	20,95	6,16	22317	55	115	25,85	4,46	19948	44	108	30,71	3,52	18657	38	105	33,82	3,10	18140	36					
NRK0550HA	18°C	144	24,92	5,77	24877	64	130	30,14	4,30	22420	52	122	35,92	3,41	21175	46	120	39,76	3,01	20676	44					
NRK0600HA	18°C	168	24,65	6,83	29133	59	152	34,88	4,35	26232	48	143	43,32	3,29	24655	42	138	48,38	2,85	23853	39					
NRK0650HA	18°C	195	29,08	6,70	33737	72	175	38,69	4,53	30297	58	165	47,03	3,50	28439	51	159	52,13	3,05	27493	48					
NRK0700HA	18°C	216	35,68	6,07	37494	91	193	45,87	4,21	33451	72	180	55,09	3,27	31185	63	175	60,83	2,88	30275	59					

RANGE OUTSIDE THE LIMITS OF OPERATION

DATA 14511:2011
Glycol 0%
Pc Cooling capacity
Pe Input power
TWP °C Leaving water temperature EVAPORATOR °C (Δt 5°C)
TAE °C External air temperature b.s. °C
- The size NRK0200HA÷0330HA only available in low noise version "HE"

DEPOSIT FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	1	0,98	0,94
Input power correction factors	1	0,98	0,95

ΔT WATER DIFFERENT THAN NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	1	1,02	1,03
Input power correction factors	0,99	1	1,01	1,02

HEATING MODE

	TAE	-20°C					-10°C					0°C					7°C					10°C				
		Ph	Pe	COP	Qn	Pdc	Ph	Pe	COP	Qn	Pdc	Ph	Pe	COP	Qn	Pdc	Ph	Pe	COP	Qn	Pdc	Ph	Pe	COP	Qn	Pdc
	TWP	kW	kW		l/h	kPa	kW	kW	W/W	l/h	kPa	kW	kW	W/W	l/h	kPa	kW	kW	W/W	l/h	kPa	kW	kW	W/W	l/h	kPa
NRK0200HA	**25°C**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0280HA	**25°C**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0300HA	**25°C**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0330HA	**25°C**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0350HA	**25°C**	48	17,36	2,77	8252	9	60	17,04	3,51	10257	14	59	16,44	3,61	10187	14	85	17,18	4,94	14529	28	90	16,97	5,30	15416	32
NRK0500HA	**25°C**	57	20,31	2,82	9818	11	69	19,63	3,54	11910	16	69	18,61	3,71	11837	15	99	19,56	5,04	16903	31	104	20,11	5,17	17786	35
NRK0550HA	**25°C**	64	22,83	2,82	11040	13	79	21,57	3,66	13542	19	78	20,56	3,78	13316	18	111	21,74	5,09	18962	37	118	22,70	5,19	20184	42
NRK0600HA	**25°C**	75	26,30	2,85	12846	11	93	25,25	3,69	15989	18	92	24,25	3,77	15696	17	129	25,20	5,11	22049	34	132	24,65	5,35	22579	35
NRK0650HA	**25°C**	86	30,45	2,82	14708	14	106	29,63	3,58	18173	21	104	28,66	3,64	17889	20	147	29,97	4,90	25129	40	157	30,32	5,16	26797	46
NRK0700HA	**25°C**	97	34,50	2,81	16655	18	120	33,91	3,54	20577	27	117	32,76	3,57	20054	26	165	34,29	4,80	28171	51	170	34,38	4,94	29045	55
NRK0200HA	**35°C**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0280HA	**35°C**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0300HA	**35°C**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0330HA	**35°C**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0350HA	**35°C**	50	20,34	2,44	8507	10	62	20,39	3,04	10622	15	61	19,96	3,05	10434	15	86	20,75	4,14	15683	33	92	20,80	4,40	15683	33
NRK0500HA	**35°C**	60	24,09	2,48	10246	12	73	23,90	3,06	12526	17	72	23,28	3,08	12293	17	101	24,55	4,12	18290	37	107	24,60	4,34	18290	37
NRK0550HA	**35°C**	67	28,27	2,39	11573	14	83	27,44	3,04	14281	21	82	26,36	3,10	14021	20	115	28,19	4,07	20836	45	122	28,26	4,31	20836	45
NRK0600HA	**35°C**	76	31,30	2,42	13003	12	96	31,01	3,09	16410	19	95	30,44	3,13	16324	18	133	31,84	4,17	23403	38	137	31,87	4,29	23403	38
NRK0650HA	**35°C**	89	36,33	2,44	15224	15	110	35,96	3,06	18880	23	109	35,12	3,09	18604	22	151	36,12	4,19	27048	47	158	36,18	4,37	27048	47
NRK0700HA	**35°C**	100	40,66	2,46	17153	19	125	40,90	3,05	21364	30	122	40,08	3,04	20856	28	170	41,98	4,04	30074	58	176	42,05	4,18	30074	58
NRK0200HA	**40°C**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0280HA	**40°C**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0300HA	**40°C**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0330HA	**40°C**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0350HA	**40°C**	50	22,17	2,27	8625	10	63	22,41	2,82	10823	16	62	22,09	2,80	10612	15	87	23,09	3,77	14892	30	92	23,05	3,97	15683	33
NRK0500HA	**40°C**	61	26,52	2,30	10462	12	75	26,53	2,83	12872	18	73	26,10	2,81	12553	17	103	27,13	3,78	17567	34	107	27,33	3,91	18290	37
NRK0550HA	**40°C**	69	31,45	2,19	11821	14	85	30,86	2,77	14631	22	84	29,85	2,81	14375	21	117	30,94	3,78	20038	41	122	30,96	3,93	20836	45
NRK0600HA	**40°C**	77	34,60	2,21	13144	12	97	34,61	2,80	16628	19	97	34,14	2,84	16620	19	135	35,72	3,78	23103	37	137	35,78	3,82	23403	38
NRK0650HA	**40°C**	90	40,00	2,25	15453	15	112	39,85	2,82	19235	24	110	39,12	2,82	18941	23	154	40,98	3,75	26330	44	158	41,16	3,84	27048	47
NRK0700HA	**40°C**	101	44,46	2,28	17379	20	127	45,10	2,82	21779	31	124	44,51	2,78	21234	29	173	46,68	3,70	29517	56	176	46,70	3,76	30074	58
NRK0200HA	**45°C**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0280HA	**45°C**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0300HA	**45°C**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0330HA	**45°C**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0350HA	**45°C**	51	24,22	2,10	8724	10	64	24,63	2,61	11025	16	63	24,44	2,58	10812	16	**88**	**25,53**	**3,45**	**15506**	**32**	93	25,60	3,65	15980	34
NRK0500HA	**45°C**	62	29,25	2,12	10649	12	77	29,44	2,62	13215	19	75	29,17	2,56	12818	18	**104**	**30,26**	**3,44**	**18160**	**36**	110	30,35	3,62	18815	39
NRK0550HA	**45°C**	70	34,85	2,01	12041	15	87	34,54	2,53	14952	23	86	33,64	2,55	14711	22	**119**	**34,75**	**3,43**	**20577**	**44**	126	34,58	3,64	21546	48
NRK0600HA	**45°C**	78	38,36	2,02	13323	12	98	38,61	2,54	16847	20	99	38,19	2,58	16900	20	**137**	**39,92**	**3,43**	**23211**	**37**	141	40,23	3,50	24113	40
NRK0650HA	**45°C**	91	44,10	2,07	15648	16	114	44,18	2,59	19577	24	112	43,57	2,58	19262	24	**156**	**45,58**	**3,42**	**26704**	**45**	163	45,72	3,57	27975	50
NRK0700HA	**45°C**	102	48,68	2,10	17568	20	130	49,73	2,60	22188	32	126	49,37	2,55	21593	30	**175**	**51,69**	**3,39**	**29661**	**57**	180	51,84	3,47	30784	61
NRK0200HA	**55°C**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0280HA	**55°C**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0300HA	**55°C**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0330HA	**55°C**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0350HA	**55°C**	51	28,85	1,78	8828	11	66	29,60	2,24	11389	17	66	29,63	2,21	11236	17	91	30,86	2,96	15618	33	95	31,17	3,06	16340	36
NRK0500HA	**55°C**	63	35,55	1,78	10847	13	80	35,99	2,24	13798	21	78	35,88	2,16	13311	19	108	37,10	2,91	18463	37	113	36,96	3,05	19295	41
NRK0550HA	**55°C**	72	42,14	1,71	12343	16	90	42,46	2,12	15456	25	89	41,82	2,13	15273	24	124	43,06	2,87	21150	46	130	42,84	3,03	22228	51
NRK0600HA	**55°C**	80	47,00	1,71	13785	13	101	47,58	2,12	17281	21	102	47,26	2,15	17406	21	141	49,28	2,87	24211	41	145	49,59	2,93	24906	43
NRK0650HA	**55°C**	93	53,51	1,73	15891	16	118	54,03	2,18	20176	26	116	53,60	2,16	19838	25	161	55,90	2,88	27594	48	170	55,70	3,05	29042	54
NRK0700HA	**55°C**	104	58,24	1,78	17778	20	134	60,09	2,23	22926	34	130	60,11	2,16	22239	32	181	62,82	2,88	30933	62	186	63,15	2,95	31879	66
NRK0200HA	**65°C**	**RANGE OUTSIDE THE LIMITS OF OPERATION**					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0280HA	**65°C**						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0300HA	**65°C**						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0330HA	**65°C**						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRK0350HA	**65°C**						68	35,16	1,93	11642	18	68	35,27	1,92	11616	18	94	36,66	2,57	16159	35	98	37,14	2,64	16796	38
NRK0500HA	**65°C**						82	43,29	1,90	14095	22	80	42,98	1,86	13672	21	111	44,39	2,50	19021	40	115	44,03	2,61	19662	42
NRK0550HA	**65°C**						92	50,77	1,80	15693	25	91	50,32	1,81	15598	25	127	51,79	2,45	21726	49	133	52,24	2,55	22798	54
NRK0600HA	**65°C**						103	57,43	1,80	17691	22	104	57,38	1,81	17822	22	146	59,57	2,45	24948	43	152	59,03	2,57	25980	47
NRK0650HA	**65°C**						120	65,24	1,84	20589	27	119	64,80	1,83	20312	26	166	67,30	2,47	28433	51	174	66,36	2,62	29712	56
NRK0700HA	**65°C**						137	71,64	1,91	23454	36	133	71,80	1,85	22770	34	186	74,82	2,49	31874	66	199	75,36	2,64	34060	75

DATA 14511:2011
Glycol 0%
Pc Heating capacity
Pe Input power
TWP °C Leaving water temperature CONDENSER °C (Δt 5°C)
TAE °C External air temperature b.s. °C
- The size NRK0200HA÷0330HA only available in low noise version "HE"

DEPOSIT FACTORS [K*m2]/[W]	**0,00005**	**0,0001**	**0,0002**
Heating capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

ΔT WATER DIFFERENT THAN NOMINAL (ΔT 5°C)	**3**	**5**	**8**	**10**
Heating capacity correction factors	0,99	**1**	1,01	1,02
Input power correction factors	1,01	**1**	0,98	0,96

HEATING MODE

	TAE	15°C					20°C					30°C					42°C									
		Ph	Pe	COP	Qn	Pdc	Ph	Pe	COP	Qn	Pdc	Ph	Pe	COP	Qn	Pdc	Ph	Pe	COP	Qn	Pdc	Ph	Pe	COP	Qn	Pdc
	TWP	kW	kW	W/W	l/h	kPa	kW	kW	W/W	l/h	kPa	kW	kW	W/W	l/h	kPa	kW	kW	W/W	l/h	kPa	kW	kW	W/W	l/h	kPa
NRK0200HA	25°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0280HA	25°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0300HA	25°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0330HA	25°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0350HA	25°C	98	17,08	5,76	16833	38	106	17,19	6,17	18156	44	116	17,38	6,70	19913	53	111	17,45	6,37	19009	49					
NRK0500HA	25°C	113	20,23	5,58	19329	41	122	20,35	5,97	20791	47	132	20,56	6,42	22589	56	121	20,59	5,86	20655	47					
NRK0550HA	25°C	129	22,78	5,66	22074	50	139	22,82	6,08	23719	58	151	22,59	6,67	25747	68	144	21,25	6,80	24687	63					
NRK0600HA	25°C	143	24,34	5,86	24426	41	156	24,10	6,49	26746	50	180	24,02	7,51	30831	66	176	25,06	7,01	30064	63					
NRK0650HA	25°C	170	30,51	5,59	29167	54	184	30,70	5,98	31406	63	202	31,11	6,49	34501	76	196	31,24	6,26	33429	71					
NRK0700HA	25°C	183	34,58	5,31	31378	64	201	34,89	5,75	34268	76	231	35,60	6,49	39427	101	229	35,82	6,39	39078	99					
NRK0200HA	35°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0280HA	35°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0300HA	35°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0330HA	35°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0350HA	35°C	100	20,87	4,80	17149	40	108	20,99	5,16	18537	46	120	21,19	5,65	20475	57	116	21,25	5,47	19876	53					
NRK0500HA	35°C	116	24,73	4,69	19860	43	125	24,86	5,03	21375	50	137	25,08	5,45	23356	60	127	25,09	5,07	21779	52					
NRK0550HA	35°C	133	27,78	4,78	22716	53	143	27,78	5,13	24366	61	155	27,51	5,62	26444	72	149	26,27	5,68	25518	67					
NRK0600HA	35°C	147	31,56	4,66	25161	44	160	31,45	5,08	27355	52	182	31,43	5,78	31083	67	174	32,19	5,39	29700	61					
NRK0650HA	35°C	171	37,24	4,59	29254	54	183	37,43	4,89	31327	62	199	37,80	5,28	34083	74	191	37,84	5,04	32593	68					
NRK0700HA	35°C	188	42,26	4,46	32202	67	204	42,57	4,79	34814	78	230	43,18	5,32	39198	99	220	43,20	5,09	37531	91					
NRK0200HA	40°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0280HA	40°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0300HA	40°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0330HA	40°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0350HA	40°C	101	23,19	4,36	17300	40	109	23,32	4,69	18706	47	121	23,55	5,14	20703	58	118	23,62	5,01	20219	55					
NRK0500HA	40°C	118	27,49	4,28	20139	45	127	27,64	4,59	21683	52	139	27,88	4,98	23760	62	131	27,92	4,68	22365	55					
NRK0550HA	40°C	135	30,95	4,36	23066	55	145	30,91	4,68	24719	63	157	30,64	5,12	26825	74	152	29,40	5,17	25969	70					
NRK0600HA	40°C	149	35,81	4,16	25498	45	162	35,78	4,52	27656	53	183	35,84	5,10	31256	68	173	36,50	4,75	29627	61					
NRK0650HA	40°C	173	41,40	4,18	29632	56	185	41,61	4,45	31670	64	201	42,00	4,79	34353	75	192	42,05	4,56	32768	68					
NRK0700HA	40°C	190	46,97	4,05	32511	68	205	47,29	4,34	35044	79	229	47,91	4,79	39161	99	217	47,89	4,52	36981	88					
NRK0200HA	45°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0280HA	45°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0300HA	45°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0330HA	45°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0350HA	45°C	102	25,68	3,97	17453	34	110	25,90	4,26	18866	48	122	26,15	4,67	20902	59	120	26,26	4,57	20509	57					
NRK0500HA	45°C	119	30,44	3,92	20417	37	129	30,69	4,19	21990	53	141	30,98	4,56	24165	64	134	31,06	4,32	22957	58					
NRK0550HA	45°C	137	34,39	3,98	23420	45	147	34,45	4,26	25078	65	159	34,15	4,66	27213	76	155	32,94	4,69	26430	72					
NRK0600HA	45°C	151	40,28	3,75	25848	39	164	40,43	4,05	27986	54	184	40,59	4,54	31492	69	173	41,18	4,21	29658	61					
NRK0650HA	45°C	176	45,84	3,84	30145	47	188	46,22	4,07	32179	66	204	46,67	4,37	34852	77	194	46,76	4,16	33249	70					
NRK0700HA	45°C	192	51,98	3,70	32868	58	207	52,50	3,94	35363	81	230	53,16	4,33	39294	100	215	53,14	4,04	36697	87					
NRK0200HA	55°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0280HA	55°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0300HA	55°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0330HA	55°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0350HA	55°C	104	31,38	3,31	17779	43	112	31,58	3,55	19175	50	124	31,94	3,89	21228	61	122	32,15	3,81	20942	59					
NRK0500HA	55°C	122	37,20	3,29	20934	48	132	37,45	3,52	22570	56	146	37,87	3,85	24949	68	141	38,08	3,71	24122	64					
NRK0550HA	55°C	141	42,67	3,30	24100	60	151	42,54	3,54	25770	68	164	42,18	3,88	27970	81	160	41,01	3,90	27339	77					
NRK0600HA	55°C	156	50,03	3,12	26688	49	169	50,32	3,35	28836	58	189	50,75	3,72	32257	72	176	51,29	3,43	30133	63					
NRK0650HA	55°C	183	56,06	3,26	31303	62	196	56,44	3,46	33426	71	212	57,09	3,72	36270	84	204	57,37	3,56	34861	77					
NRK0700HA	55°C	199	63,59	3,14	34080	75	214	64,08	3,35	36618	87	237	64,94	3,65	40417	106	218	65,04	3,36	37276	90					
NRK0200HA	65°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0280HA	65°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0300HA	65°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0330HA	65°C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
NRK0350HA	65°C	106	37,43	2,84	18161	44	114	37,72	3,02	19498	51	126	38,22	3,29	21485	62	124	38,58	3,22	21208	61					
NRK0500HA	65°C	125	44,37	2,81	21344	50	135	44,71	3,01	23048	58	150	45,32	3,31	25642	72	147	45,73	3,22	25209	70					
NRK0550HA	65°C	144	51,95	2,78	24671	63	154	51,71	2,98	26357	72	168	51,28	3,27	28630	84	165	50,10	3,29	28159	82					
NRK0600HA	65°C	163	59,77	2,73	27875	54	176	60,34	2,92	30102	63	196	61,14	3,21	33574	78	183	61,75	2,97	31324	68					
NRK0650HA	65°C	188	66,86	2,81	32191	66	202	67,40	3,00	34531	76	221	68,34	3,24	37801	91	216	68,91	3,13	36891	87					
NRK0700HA	65°C	214	75,88	2,82	36538	86	230	76,5	3,01	39281	100	254	77,7	3,26	43269	121	234	78,12	3,00	39970	103					

DATA 14511:2011
Glycol 0%
Ph Heating capacity
Pe Input power
TWP °C Leaving water temperature CONDENSER °C (Δt 5°C)
TAE °C External air temperature b.s. °C
Functionemet with DCPX

DEPOSIT FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	1	0,98	0,94
Input power correction factors	1	0,98	0,95

ΔT WATER DIFFERENT THAN NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0,99	1	1,01	1,02
Input power correction factors	1,01	1	0,98	0,96

HE VERSION

COOLING MODE

	TAE	10°C					25°C					35°C					40°C					48°C				
		Pc	Pe	EER	Qn	Pdc	Pc	Pe	EER	Qn	Pdc	Pc	Pe	EER	Qn	Pdc	Pc	Pe	EER	Qn	Pdc	Pc	Pe	EER	Qn	Pdc
	TWP	kW	kW	W/W	l/h	kPa	kW	kW	W/W	l/h	kPa	kW	kW	W/W	l/h	kPa	kW	kW	W/W	l/h	kPa	kW	kW	W/W	l/h	kPa
NRK0200HE	4°C	39	6,24	6,22	6709	21	36	9,14	3,89	6131	18	33	11,52	2,84	5656	15	31	12,99	2,43	5436	14	30	15,86	1,88	5155	13
NRK0280HE	4°C	52	9,38	5,50	8904	17	48	13,62	3,56	8364	15	47	17,26	2,69	8024	14	45	19,46	2,32	7784	13	42	23,66	1,77	7222	11
NRK0300HE	4°C	65	10,48	6,17	11162	27	59	15,40	3,82	10164	23	55	19,26	2,83	9413	19	53	21,54	2,45	9098	18	51	25,86	1,96	8770	17
NRK0330HE	4°C	72	12,09	5,94	12386	22	66	17,48	3,77	11375	19	61	21,94	2,79	10554	16	59	24,62	2,39	10161	15	56	29,76	1,87	9622	13
NRK0350HE	4°C	79	15,27	5,15	13591	25	72	21,95	3,26	12350	21	68	27,24	2,51	11813	19	67	30,29	2,21	11541	18	64	35,88	1,78	11005	16
NRK0500HE	4°C	94	17,79	5,28	16221	29	87	25,58	3,40	15000	25	81	32,02	2,54	14043	22	79	35,82	2,19	13565	20	74	42,96	1,73	12845	18
NRK0550HE	4°C	107	20,78	5,14	18473	35	100	29,89	3,34	17235	31	94	37,67	2,49	16206	27	91	42,36	2,14	15635	25	85	51,31	1,65	14649	22
NRK0600HE	4°C	120	24,37	4,91	20643	30	111	35,95	3,09	19150	25	105	45,01	2,34	18191	23	102	50,35	2,03	17605	22	95	60,44	1,57	16395	19
NRK0650HE	4°C	137	26,98	5,10	23745	36	126	38,81	3,25	21797	30	120	48,41	2,48	20702	27	116	54,13	2,15	20071	26	109	64,99	1,68	18792	22
NRK0700HE	4°C	156	31,83	4,92	27046	47	144	45,64	3,16	24920	40	135	56,81	2,37	23300	35	130	63,41	2,06	22522	33	124	75,83	1,64	21422	30
NRK0200HE	5°C	40	6,27	6,38	6912	22	37	9,20	3,98	6314	19	34	11,60	2,90	5810	16	32	13,08	2,47	5570	15	30	15,97	1,90	5249	13
NRK0280HE	5°C	53	9,57	5,54	9158	18	50	13,69	3,64	8594	16	48	17,29	2,76	8245	15	46	19,48	2,38	8002	14	43	23,66	1,82	7438	12
NRK0300HE	5°C	67	10,52	6,32	11494	29	61	15,50	3,91	10478	24	56	19,40	2,90	9703	21	54	21,70	2,50	9372	19	52	26,06	2,00	9014	18
NRK0330HE	5°C	74	12,30	6,00	12736	24	68	17,63	3,84	11693	20	63	22,06	2,85	10845	17	60	24,74	2,45	10438	16	57	29,87	1,92	9874	14
NRK0350HE	5°C	81	15,68	5,20	14074	27	74	22,15	3,33	12741	22	70	27,33	2,58	12159	20	69	30,33	2,27	11869	19	66	35,85	1,83	11312	17
NRK0500HE	5°C	96	18,24	5,28	16632	30	89	25,78	3,45	15347	26	83	32,09	2,60	14379	23	81	35,84	2,25	13903	21	76	42,91	1,78	13200	19
NRK0550HE	5°C	109	21,29	5,14	18905	37	102	30,09	3,38	17575	32	96	37,73	2,54	16527	28	92	42,37	2,18	15960	26	87	51,25	1,70	14998	23
NRK0600HE	5°C	123	24,48	5,04	21319	32	114	36,18	3,16	19733	27	109	45,36	2,39	18733	24	105	50,77	2,07	18134	23	98	60,98	1,61	16912	20
NRK0650HE	5°C	142	27,54	5,16	24554	38	130	39,20	3,32	22498	32	124	48,72	2,54	21347	29	120	54,41	2,20	20693	27	112	65,21	1,72	19384	24
NRK0700HE	5°C	161	32,57	4,93	27761	50	148	46,09	3,21	25531	42	138	57,12	2,42	23887	37	134	63,66	2,10	23110	35	128	76,00	1,68	22031	31
NRK0200HE	7°C	42	6,31	6,70	7309	25	39	9,30	4,16	6680	21	**36**	**11,74**	**3,03**	**6130**	**18**	34	13,24	2,56	5842	16	32	16,16	1,95	5447	14
NRK0280HE	7°C	56	10,04	5,58	9664	21	52	13,94	3,76	9047	18	**50**	**17,46**	**2,88**	**8668**	**17**	49	19,62	2,49	8426	16	46	23,80	1,91	7856	14
NRK0300HE	7°C	70	10,61	6,62	12136	32	64	15,66	4,10	11087	27	**59**	**19,58**	**3,03**	**10234**	**23**	57	21,96	2,61	9903	21	55	26,39	2,08	9484	20
NRK0330HE	7°C	78	12,78	6,08	13419	26	71	18,01	3,96	12312	22	**66**	**22,38**	**2,95**	**11377**	**19**	64	25,07	2,54	10977	18	60	30,21	1,99	10364	16
NRK0350HE	7°C	87	16,63	5,22	14996	30	78	22,75	3,43	13485	25	**74**	**27,70**	**2,68**	**12799**	**22**	72	30,65	2,36	12496	21	69	36,03	1,91	11900	19
NRK0500HE	7°C	101	19,34	5,22	17444	33	93	26,42	3,51	16024	28	**87**	**32,47**	**2,69**	**15032**	**25**	84	36,14	2,33	14555	23	80	43,09	1,87	13883	21
NRK0550HE	7°C	114	22,55	5,07	19753	40	106	30,77	3,43	18245	34	**100**	**38,14**	**2,61**	**17172**	**30**	96	42,69	2,25	16602	28	91	51,46	1,77	15687	25
NRK0600HE	7°C	131	24,67	5,30	22585	35	121	36,56	3,30	20811	30	**114**	**45,83**	**2,49**	**19710**	**27**	111	51,45	2,15	19105	25	103	61,87	1,67	17859	22
NRK0650HE	7°C	151	28,84	5,23	26072	43	138	40,20	3,43	23805	36	**131**	**49,53**	**2,64**	**22509**	**32**	127	55,20	2,29	21844	30	119	65,94	1,80	20476	27
NRK0700HE	7°C	169	34,33	4,91	29176	55	155	47,33	3,27	26727	46	**145**	**58,05**	**2,50**	**25028**	**41**	140	64,54	2,17	24248	38	134	76,76	1,75	23203	35
NRK0200HE	10°C	46	6,34	7,18	7873	29	42	9,41	4,43	7213	24	38	11,91	3,20	6582	20	36	13,43	2,70	6253	18					
NRK0280HE	10°C	60	10,85	5,56	10410	24	56	14,45	3,89	9701	21	54	17,87	3,01	9288	19	52	20,01	2,61	9023	18					
NRK0300HE	10°C	75	10,74	7,01	13026	37	69	15,85	4,35	11930	31	64	19,88	3,21	11040	27	62	22,25	2,77	10633	25					
NRK0330HE	10°C	83	13,54	6,15	14391	30	76	18,65	4,10	13192	25	71	23,02	3,07	12218	22	68	25,70	2,65	11740	20					
NRK0350HE	10°C	94	18,16	5,19	16273	36	84	23,85	3,52	14517	28	80	28,61	2,78	13737	25	77	31,42	2,46	13373	24					
NRK0500HE	10°C	108	21,15	5,10	18650	38	98	27,63	3,56	17010	32	92	33,40	2,77	15957	28	90	36,95	2,43	15485	26					
NRK0550HE	10°C	121	24,69	4,92	21005	45	111	32,13	3,46	19236	38	105	39,16	2,68	18107	34	102	43,58	2,33	17562	32					
NRK0600HE	10°C	141	24,99	5,63	24310	41	129	37,01	3,48	22252	34	122	46,56	2,62	21050	31	118	52,20	2,26	20382	29					
NRK0650HE	10°C	163	30,83	5,28	28147	50	148	41,84	3,54	25568	42	140	51,07	2,74	24147	37	135	56,64	2,39	23382	35					
NRK0700HE	10°C	181	37,13	4,87	31272	63	165	49,47	3,33	28462	52	154	59,95	2,57	26653	46	150	66,29	2,26	25862	43					
NRK0200HE	15°C	50	6,37	7,87	8668	35	46	9,55	4,85	8002	30	42	12,12	3,48	7282	25	40	13,67	2,91	6884	22					
NRK0280HE	15°C	67	11,96	5,61	11582	30	62	15,13	4,09	10683	25	59	18,42	3,20	10175	23	57	20,55	2,78	9873	21					
NRK0300HE	15°C	82	11,13	7,39	14214	44	75	16,20	4,66	13053	37	70	20,24	3,45	12057	32	67	22,63	2,96	11578	29					
NRK0330HE	15°C	92	14,29	6,40	15821	36	84	19,33	4,34	14477	31	77	23,74	3,26	13382	26	74	26,47	2,81	12837	24					
NRK0350HE	15°C	105	19,61	5,35	18147	44	93	24,90	3,73	16038	35	87	29,47	2,97	15104	31	85	32,21	2,64	14689	29					
NRK0500HE	15°C	120	23,21	5,15	20686	47	108	28,93	3,73	18632	38	101	34,38	2,94	17455	33	98	37,82	2,60	16966	32					
NRK0550HE	15°C	134	27,41	4,87	23110	55	121	33,75	3,59	20930	45	114	40,34	2,83	19737	40	111	44,64	2,49	19223	38					
NRK0600HE	15°C	156	26,08	5,97	26905	50	141	37,90	3,72	24367	41	133	47,48	2,80	22956	37	129	53,19	2,42	22218	34					
NRK0650HE	15°C	181	32,68	5,53	31262	62	163	43,38	3,76	28182	51	153	52,52	2,92	26507	45	148	58,10	2,55	25638	42					
NRK0700HE	15°C	201	40,02	5,01	34722	78	181	51,58	3,50	31222	63	169	61,84	2,73	29176	55	164	68,13	2,41	28332	52					
NRK0200HE	18°C	52	6,39	8,16	9020	38	48	9,62	5,03	8378	33	44	12,22	3,61	7623	27	42	13,80	3,02	7193	24					
NRK0280HE	18°C	71	12,11	5,83	12217	33	65	15,08	4,29	11182	28	61	18,32	3,35	10603	25	59	20,45	2,91	10271	23					
NRK0300HE	18°C	85	11,56	7,35	14687	47	78	16,53	4,72	13492	40	72	20,51	3,51	12437	34	69	22,88	3,01	11918	31					
NRK0330HE	18°C	96	14,05	6,81	16531	40	87	19,11	4,57	15104	33	81	23,60	3,42	13940	28	77	26,37	2,93	13357	26					
NRK0350HE	18°C	111	18,98	5,83	19135	49	97	24,19	4,03	16848	38	92	28,76	3,19	15844	34	89	31,53	2,83	15409	32					
NRK0500HE	18°C	127	22,94	5,54	21962	53	114	28,34	4,01	19631	42	106	33,70	3,15	18360	37	103	37,12	2,78	17851	35					
NRK0550HE	18°C	141	27,51	5,13	24432	62	127	33,32	3,82	22018	50	120	39,74	3,03	20796	45	117	44,00	2,67	20306	42					
NRK0600HE	18°C	164	27,37	6,00	28415	56	148	38,82	3,81	25585	45	139	48,26	2,88	24047	40	135	53,91	2,50	23265	38					
NRK0650HE	18°C	191	31,87	5,99	33057	70	172	42,51	4,04	29687	56	161	51,72	3,12	27866	49	156	57,35	2,72	26939	46					
NRK0700HE	18°C	212	39,19	5,42	36783	87	190	50,52	3,75	32817	70	177	60,74	2,91	30593	61	172	67,10	2,56	29701	57					

RANGE OUT OF LIMITS OF OPERATION

DATA 14511:2011
Glycol 0%
Pc Cooling capacity
Pe Input power
TWP °C Leaving water temperature EVAPORATOR °C (Δt 5°C)
TAE °C External air temperature b.s. °C
- The size NRK0200HA÷0330HA only available in low noise version "HE"

DEPOSIT FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	1	0,98	0,94
Input power correction factors	1	0,98	0,95

ΔT WATER DIFFERENT THAN NOMINAL (ΔT 5°C)	3	5	8	10
Cooling capacity correction factors	0,99	1	1,02	1,03
Input power correction factors	0,99	1	1,01	1,02

HEATING MODE

	TAE	-20°C					-10°C					0°C					7°C					10°C				
		Ph	Pe	COP	Qn	Pdc	Ph	Pe	COP	Qn	Pdc	Ph	Pe	COP	Qn	Pdc	Ph	Pe	COP	Qn	Pdc	Ph	Pe	COP	Qn	Pdc
	TWP	kW	kW	W/W	l/h	kPa	kW	kW	W/W	l/h	kPa	kW	kW	W/W	l/h	kPa	kW	kW	W/W	l/h	kPa	kW	kW	W/W	l/h	kPa
NRK0200HA	25°C	23	7,67	3,03	3989	7	29	7,45	3,86	4925	11	29	7,14	4,00	4898	11	41	7,38	5,50	6949	23	43	7,32	5,90	7392	26
NRK0280HA	25°C	32	11,07	2,90	5512	7	39	10,43	3,77	6739	10	39	9,92	3,91	6653	10	55	10,45	5,27	9447	20	58	10,58	5,53	10022	22
NRK0300HA	25°C	38	13,09	2,89	6497	9	47	12,62	3,75	8124	14	47	12,08	3,85	7975	14	65	12,56	5,21	11203	27	69	12,55	5,49	11784	30
NRK0330HA	25°C	43	14,71	2,95	7451	8	54	14,29	3,76	9202	12	53	13,82	3,81	9028	12	74	14,46	5,11	12662	23	78	14,63	5,31	13311	26
NRK0350HA	25°C	48	17,36	2,77	8252	9	60	17,04	3,51	10257	14	59	16,44	3,61	10187	14	85	17,18	4,94	14529	28	90	16,97	5,30	15416	32
NRK0500HA	25°C	57	20,31	2,82	9818	11	69	19,63	3,54	11910	16	69	18,61	3,71	11837	15	99	19,56	5,04	16903	31	104	20,11	5,17	17786	35
NRK0550HA	25°C	64	22,83	2,82	11040	13	79	21,57	3,66	13542	19	78	20,56	3,78	13316	18	111	21,74	5,09	18962	37	118	22,70	5,19	20184	42
NRK0600HA	25°C	75	26,30	2,85	12846	11	93	25,25	3,69	15989	18	92	24,25	3,77	15696	17	129	25,20	5,11	22049	34	132	24,65	5,35	22579	35
NRK0650HA	25°C	86	30,45	2,82	14708	14	106	29,63	3,58	18173	21	104	28,66	3,64	17889	20	147	29,97	4,90	25129	40	157	30,32	5,16	26797	46
NRK0700HA	25°C	97	34,50	2,81	16655	18	120	33,91	3,54	20577	27	117	32,76	3,57	20054	26	165	34,29	4,80	28171	51	170	34,38	4,94	29045	55
NRK0200HA	35°C	24	9,35	2,55	4098	8	30	9,25	3,22	5112	12	29	9,04	3,25	5042	12	41	8,87	4,66	7510	27	44	8,89	4,93	7510	27
NRK0280HA	35°C	34	13,82	2,43	5757	7	42	13,43	3,11	7171	11	41	12,89	3,18	7030	11	57	13,28	4,33	10336	24	60	13,30	4,54	10336	24
NRK0300HA	35°C	38	15,69	2,45	6586	9	49	15,52	3,17	8435	16	48	15,20	3,18	8294	15	67	15,62	4,32	12100	32	71	15,65	4,52	12100	32
NRK0330HA	35°C	45	17,73	2,53	7699	9	56	17,52	3,19	9589	13	55	17,16	3,18	9349	13	76	17,87	4,25	13651	27	80	17,90	4,45	13651	27
NRK0350HA	35°C	50	20,34	2,44	8507	10	62	20,39	3,04	10622	15	61	19,96	3,05	10434	15	86	20,75	4,14	15683	33	92	20,80	4,40	15683	33
NRK0500HA	35°C	60	24,09	2,48	10246	12	73	23,90	3,06	12526	17	72	23,28	3,08	12293	17	101	24,55	4,12	18290	37	107	24,60	4,34	18290	37
NRK0550HA	35°C	67	28,27	2,39	11573	14	83	27,44	3,04	14281	21	82	26,36	3,10	14021	20	115	28,19	4,07	20836	45	122	28,26	4,31	20836	45
NRK0600HA	35°C	76	31,30	2,42	13003	12	96	31,01	3,09	16410	19	95	30,44	3,13	16324	18	133	31,84	4,17	23403	38	137	31,87	4,29	23403	38
NRK0650HA	35°C	89	36,33	2,44	15224	15	110	35,96	3,06	18880	23	109	35,12	3,09	18604	22	151	36,12	4,19	27048	47	158	36,18	4,37	27048	47
NRK0700HA	35°C	100	40,66	2,46	17153	19	125	40,90	3,05	21364	30	122	40,08	3,04	20856	28	170	41,98	4,04	30074	58	176	42,05	4,18	30074	58
NRK0200HA	40°C	24	10,47	2,31	4155	8	30	10,41	2,91	5201	13	30	10,24	2,92	5125	12	42	10,72	3,90	7163	24	44	10,71	4,10	7510	27
NRK0280HA	40°C	34	15,40	2,20	5821	7	43	15,16	2,82	7332	12	42	14,67	2,87	7212	11	59	15,19	3,86	10055	22	60	15,15	3,98	10336	24
NRK0300HA	40°C	38	17,34	2,21	6573	9	50	17,30	2,88	8554	16	49	17,06	2,89	8444	16	69	17,85	3,84	11738	30	71	17,86	3,96	12100	32
NRK0330HA	40°C	45	19,61	2,31	7789	9	57	19,51	2,92	9774	14	56	19,23	2,89	9529	13	77	20,15	3,83	13225	25	80	20,58	3,87	13651	27
NRK0350HA	40°C	50	22,17	2,27	8625	10	63	22,41	2,82	10823	16	62	22,09	2,80	10612	15	87	23,09	3,77	14892	30	92	23,05	3,97	15683	33
NRK0500HA	40°C	61	26,52	2,30	10462	12	75	26,53	2,83	12872	18	73	26,10	2,81	12553	17	103	27,13	3,78	17567	34	107	27,33	3,91	18290	37
NRK0550HA	40°C	69	31,45	2,19	11821	14	85	30,86	2,77	14631	22	84	29,85	2,81	14375	21	117	30,94	3,78	20038	41	122	30,96	3,93	20836	45
NRK0600HA	40°C	77	34,60	2,21	13144	12	97	34,61	2,80	16628	19	97	34,14	2,84	16620	19	135	35,72	3,78	23103	37	137	35,78	3,82	23403	38
NRK0650HA	40°C	90	40,00	2,25	15453	15	112	39,85	2,82	19235	24	110	39,12	2,82	18941	23	154	40,98	3,75	26330	44	158	41,16	3,84	27048	47
NRK0700HA	40°C	101	44,46	2,28	17379	20	127	45,10	2,82	21779	31	124	44,51	2,78	21234	29	173	46,68	3,70	29517	56	176	46,70	3,76	30074	58
NRK0200HA	45°C	25	11,76	2,09	4218	8	31	11,73	2,63	5290	13	30	11,57	2,63	5214	13	**42**	**11,91**	**3,53**	**7173**	**24**	45	12,13	3,68	7638	27
NRK0280HA	45°C	34	17,10	1,99	5852	8	43	17,02	2,56	7460	12	43	16,60	2,59	7381	12	**60**	**16,89**	**3,53**	**10056**	**22**	63	17,10	3,67	10748	25
NRK0300HA	45°C	38	19,20	1,98	6520	9	50	19,29	2,62	8649	16	50	19,10	2,62	8587	16	**69**	**19,65**	**3,52**	**11738**	**30**	73	20,03	3,64	12471	34
NRK0330HA	45°C	46	21,73	2,11	7849	9	58	21,73	2,67	9945	14	57	21,53	2,63	9713	14	**78**	**22,21**	**3,52**	**13060**	**25**	82	23,06	3,57	14097	29
NRK0350HA	45°C	51	24,22	2,10	8724	10	64	24,63	2,61	11025	16	63	24,44	2,58	10812	16	**88**	**25,53**	**3,45**	**15506**	**32**	93	25,60	3,65	15980	34
NRK0500HA	45°C	62	29,25	2,12	10649	12	77	29,44	2,62	13215	19	75	29,17	2,56	12818	18	**104**	**30,26**	**3,44**	**18160**	**36**	110	30,35	3,62	18815	39
NRK0550HA	45°C	70	34,85	2,01	12041	15	87	34,54	2,53	14952	23	86	33,64	2,55	14711	22	**119**	**34,75**	**3,43**	**20577**	**44**	126	34,58	3,64	21546	48
NRK0600HA	45°C	78	38,36	2,02	13323	12	98	38,61	2,54	16847	20	99	38,19	2,58	16900	20	**137**	**39,92**	**3,43**	**23211**	**37**	141	40,23	3,50	24113	40
NRK0650HA	45°C	91	44,10	2,07	15648	16	114	44,18	2,59	19577	24	112	43,57	2,58	19262	24	**156**	**45,58**	**3,42**	**26704**	**45**	163	45,72	3,57	27975	50
NRK0700HA	45°C	102	48,68	2,10	17568	20	130	49,73	2,60	22188	32	126	49,37	2,55	21593	30	**175**	**51,69**	**3,39**	**29661**	**57**	180	51,84	3,47	30784	61
NRK0200HA	55°C	25	14,82	1,72	4369	9	32	14,78	2,16	5476	14	31	14,62	2,15	5397	14	44	15,23	2,86	7446	26	46	15,29	2,98	7793	29
NRK0280HA	55°C	34	20,74	1,64	5820	7	44	21,01	2,12	7631	13	45	20,75	2,15	7660	13	62	21,36	2,91	10628	25	65	21,35	3,05	11154	27
NRK0300HA	55°C	37	23,47	1,56	6297	9	51	23,76	2,15	8765	17	52	23,67	2,18	8844	17	72	24,68	2,91	12302	33	75	24,81	3,03	12869	36
NRK0330HA	55°C	46	26,58	1,72	7859	9	60	26,77	2,23	10229	15	59	26,72	2,20	10069	15	81	27,86	2,92	13914	28	85	28,64	2,97	14582	31
NRK0350HA	55°C	51	28,85	1,78	8828	11	66	29,60	2,24	11389	17	66	29,63	2,21	11236	17	91	30,86	2,96	15618	33	95	31,17	3,06	16340	36
NRK0500HA	55°C	63	35,55	1,78	10847	13	80	35,99	2,24	13798	21	78	35,88	2,16	13311	19	108	37,10	2,91	18463	37	113	36,96	3,05	19295	41
NRK0550HA	55°C	72	42,14	1,71	12343	16	90	42,46	2,12	15456	25	89	41,82	2,13	15273	24	124	43,06	2,87	21150	46	130	42,84	3,03	22228	51
NRK0600HA	55°C	80	47,00	1,71	13785	13	101	47,58	2,12	17281	21	102	47,26	2,15	17406	21	141	49,28	2,87	24211	41	145	49,59	2,93	24906	43
NRK0650HA	55°C	93	53,51	1,73	15891	16	118	54,03	2,18	20176	26	116	53,60	2,16	19838	25	161	55,90	2,88	27594	48	170	55,70	3,05	29042	54
NRK0700HA	55°C	104	58,24	1,78	17778	20	134	60,09	2,23	22926	34	130	60,11	2,16	22239	32	181	62,82	2,88	30933	62	186	63,15	2,95	31879	66
NRK0200HA	65°C	**RANGE OUT OF LIMITS OF OPERATION**					33	18,32	1,81	5690	15	33	18,07	1,80	5575	15	45	18,67	2,39	7645	28	47	18,76	2,49	7991	30
NRK0280HA	65°C						45	25,22	1,78	7707	13	46	25,07	1,82	7815	13	64	25,80	2,47	10909	26	67	25,83	2,59	11449	29
NRK0300HA	65°C						51	28,78	1,78	8781	17	53	28,77	1,84	9055	18	74	29,87	2,48	12676	35	78	30,05	2,58	13267	39
NRK0330HA	65°C						61	32,53	1,86	10394	16	60	32,53	1,86	10366	16	84	33,76	2,48	14358	30	88	34,94	2,51	15039	33
NRK0350HA	65°C						68	35,16	1,93	11642	18	68	35,27	1,92	11616	18	94	36,66	2,57	16159	35	98	37,14	2,64	16796	38
NRK0500HA	65°C						82	43,29	1,90	14095	22	80	42,98	1,86	13672	21	111	44,39	2,50	19021	40	115	44,03	2,61	19662	42
NRK0550HA	65°C						92	50,77	1,80	15693	25	91	50,32	1,81	15598	25	127	51,79	2,45	21726	49	133	52,24	2,55	22798	54
NRK0600HA	65°C						103	57,43	1,80	17691	22	104	57,38	1,81	17822	22	146	59,57	2,45	24948	43	152	59,03	2,57	25980	47
NRK0650HA	65°C						120	65,24	1,84	20589	27	119	64,80	1,83	20312	26	166	67,30	2,47	28433	51	174	66,36	2,62	29712	56
NRK0700HA	65°C						137	71,64	1,91	23454	36	133	71,80	1,85	22770	34	186	74,82	2,49	31874	66	199	75,36	2,64	34060	75

DATA 14511:2011
Glycol 0%
Ph Heating capacity
Pe Input power
TWP °C Leaving water temperature CONDENSER °C (Δt 5°C)
TAE °C External air temperature b.s. °C

DEPOSIT FACTORS [K*m2]/[W]	0,00005	0,0001	0,0002
Cooling capacity correction factors	1	0,98	0,94
Input power correction factors	1	0,98	0,95

ΔT WATER DIFFERENT THAN NOMINAL (ΔT 5°C)	3	5	8	10
Heating capacity correction factors	0,99	1	1,01	1,02
Input power correction factors	1,01	1	0,98	0,96

FUNZIONAMENTO A CALDO

	TAE	15°C					20°C					30°C					42°C									
		Ph	Pe	COP	Qn	Pdc	Ph	Pe	COP	Qn	Pdc	Ph	Pe	COP	Qn	Pdc	Ph	Pe	COP	Qn	Pdc	Ph	Pe	COP	Qn	Pdc
	TWP	kW	kW	W/W	l/h	kPa	kW	kW	W/W	l/h	kPa	kW	kW	W/W	l/h	kPa	kW	kW	W/W	l/h	kPa	kW	kW	W/W	l/h	kPa
NRK0200HA	**25°C**	47	7,23	6,52	8063	31	51	7,14	7,12	8687	36	56	7,03	7,90	9494	42	56	7,03	7,90	9494	42					
NRK0280HA	**25°C**	64	10,82	5,88	10899	26	68	11,06	6,18	11701	30	75	11,44	6,52	12762	36	75	11,44	6,52	12762	36					
NRK0300HA	**25°C**	75	12,50	5,98	12786	36	80	12,45	6,46	13759	41	88	12,38	7,15	15126	50	88	12,38	7,15	15126	50					
NRK0330HA	**25°C**	84	14,75	5,68	14349	30	89	14,86	6,00	15270	34	96	15,07	6,37	16421	39	96	15,07	6,37	16421	39					
NRK0350HA	**25°C**	98	17,08	5,76	16833	38	106	17,19	6,17	18156	44	116	17,38	6,70	19913	53	116	17,38	6,70	19913	53					
NRK0500HA	**25°C**	113	20,23	5,58	19329	41	122	20,35	5,97	20791	47	132	20,56	6,42	22589	56	132	20,56	6,42	22589	56					
NRK0550HA	**25°C**	129	22,78	5,66	22074	50	139	22,82	6,08	23719	58	151	22,59	6,67	25747	68	151	22,59	6,67	25747	68					
NRK0600HA	**25°C**	143	24,34	5,86	24426	41	156	24,10	6,49	26746	50	180	24,02	7,51	30831	66	180	24,02	7,51	30831	66					
NRK0650HA	**25°C**	170	30,51	5,59	29167	54	184	30,70	5,98	31406	63	202	31,11	6,49	34501	76	202	31,11	6,49	34501	76					
NRK0700HA	**25°C**	183	34,58	5,31	31378	64	201	34,89	5,75	34268	76	231	35,60	6,49	39427	101	231	35,60	6,49	39427	101					
NRK0200HA	**35°C**	48	9,38	5,11	8199	32	52	9,33	5,55	8848	37	57	9,28	6,14	9729	45	57	9,28	6,14	9729	45					
NRK0280HA	**35°C**	65	13,51	4,83	11179	28	70	13,65	5,11	11949	31	76	13,89	5,45	12951	37	76	13,89	5,45	12951	37					
NRK0300HA	**35°C**	77	15,89	4,82	13096	38	82	15,86	5,18	14062	43	90	15,82	5,70	15410	52	90	15,82	5,70	15410	52					
NRK0330HA	**35°C**	86	18,56	4,63	14708	32	91	18,76	4,87	15647	36	98	19,13	5,14	16831	41	98	19,13	5,14	16831	41					
NRK0350HA	**35°C**	100	20,87	4,80	17149	40	108	20,99	5,16	18537	46	120	21,19	5,65	20475	57	120	21,19	5,65	20475	57					
NRK0500HA	**35°C**	116	24,73	4,69	19860	43	125	24,86	5,03	21375	50	137	25,08	5,45	23356	60	137	25,08	5,45	23356	60					
NRK0550HA	**35°C**	133	27,78	4,78	22716	53	143	27,78	5,13	24366	61	155	27,51	5,62	26444	72	155	27,51	5,62	26444	72					
NRK0600HA	**35°C**	147	31,56	4,66	25161	44	160	31,45	5,08	27355	52	182	31,43	5,78	31083	67	182	31,43	5,78	31083	67					
NRK0650HA	**35°C**	171	37,24	4,59	29254	54	183	37,43	4,89	31327	62	199	37,80	5,28	34083	74	199	37,80	5,28	34083	74					
NRK0700HA	**35°C**	188	42,26	4,46	32202	67	204	42,57	4,79	34814	78	230	43,18	5,32	39198	99	230	43,18	5,32	39198	99					
NRK0200HA	**40°C**	48	10,69	4,52	8262	32	52	10,66	4,89	8916	37	57	10,64	5,40	9818	45	57	10,64	5,40	9818	45					
NRK0280HA	**40°C**	66	15,22	4,36	11372	28	71	15,32	4,63	12135	32	77	15,51	4,95	13126	38	77	15,51	4,95	13126	38					
NRK0300HA	**40°C**	78	17,90	4,34	13278	39	83	17,89	4,65	14245	44	91	17,88	5,10	15593	53	91	17,88	5,10	15593	53					
NRK0330HA	**40°C**	87	20,87	4,18	14936	33	93	21,13	4,39	15887	37	100	21,61	4,62	17095	43	100	21,61	4,62	17095	43					
NRK0350HA	**40°C**	101	23,19	4,36	17300	40	109	23,32	4,69	18706	47	121	23,55	5,14	20703	58	121	23,55	5,14	20703	58					
NRK0500HA	**40°C**	118	27,49	4,28	20139	45	127	27,64	4,59	21683	52	139	27,88	4,98	23760	62	139	27,88	4,98	23760	62					
NRK0550HA	**40°C**	135	30,95	4,36	23066	55	145	30,91	4,68	24719	63	157	30,64	5,12	26825	74	157	30,64	5,12	26825	74					
NRK0600HA	**40°C**	149	35,81	4,16	25498	45	162	35,78	4,52	27656	53	183	35,84	5,10	31256	68	183	35,84	5,10	31256	68					
NRK0650HA	**40°C**	173	41,40	4,18	29632	56	185	41,61	4,45	31670	64	201	42,00	4,79	34353	75	201	42,00	4,79	34353	75					
NRK0700HA	**40°C**	190	46,97	4,05	32511	68	205	47,29	4,34	35044	79	229	47,91	4,79	39161	99	229	47,91	4,79	39161	99					
NRK0200HA	**45°C**	49	12,10	4,02	8324	26	53	12,14	4,33	8977	38	58	12,14	4,77	9890	46	58	12,14	4,77	9890	46					
NRK0280HA	**45°C**	68	17,07	3,96	11583	24	72	17,18	4,20	12346	34	78	17,35	4,49	13339	39	78	17,35	4,49	13339	39					
NRK0300HA	**45°C**	79	20,02	3,93	13473	31	84	20,11	4,20	14444	46	92	20,13	4,59	15799	55	92	20,13	4,59	15799	55					
NRK0330HA	**45°C**	89	23,36	3,79	15183	26	94	23,76	3,97	16150	38	102	24,37	4,17	17387	44	102	24,37	4,17	17387	44					
NRK0350HA	**45°C**	102	25,68	3,97	17453	34	110	25,90	4,26	18866	48	122	26,15	4,67	20902	59	122	26,15	4,67	20902	59					
NRK0500HA	**45°C**	119	30,44	3,92	20417	37	129	30,69	4,19	21990	53	141	30,98	4,56	24165	64	141	30,98	4,56	24165	64					
NRK0550HA	**45°C**	137	34,39	3,98	23420	45	147	34,45	4,26	25078	65	159	34,15	4,66	27213	76	159	34,15	4,66	27213	76					
NRK0600HA	**45°C**	151	40,28	3,75	25848	39	164	40,43	4,05	27986	54	184	40,59	4,54	31492	69	184	40,59	4,54	31492	69					
NRK0650HA	**45°C**	176	45,84	3,84	30145	47	188	46,22	4,07	32179	66	204	46,67	4,37	34852	77	204	46,67	4,37	34852	77					
NRK0700HA	**45°C**	192	51,98	3,70	32868	58	207	52,50	3,94	35363	81	230	53,16	4,33	39294	100	230	53,16	4,33	39294	100					
NRK0200HA	**55°C**	49	15,36	3,22	8455	34	53	15,40	3,45	9091	39	58	15,47	3,78	9993	47	58	15,47	3,78	9993	47					
NRK0280HA	**55°C**	70	21,31	3,29	12006	32	75	21,34	3,50	12788	36	81	21,52	3,76	13824	42	81	21,52	3,76	13824	42					
NRK0300HA	**55°C**	81	24,93	3,26	13890	42	87	25,02	3,48	14879	48	95	25,14	3,79	16265	58	95	25,14	3,79	16265	58					
NRK0330HA	**55°C**	92	29,19	3,14	15707	36	98	29,70	3,29	16711	41	105	30,66	3,44	18020	47	105	30,66	3,44	18020	47					
NRK0350HA	**55°C**	104	31,38	3,31	17779	43	112	31,58	3,55	19175	50	124	31,94	3,89	21228	61	124	31,94	3,89	21228	61					
NRK0500HA	**55°C**	122	37,20	3,29	20934	48	132	37,45	3,52	22570	56	146	37,87	3,85	24949	68	146	37,87	3,85	24949	68					
NRK0550HA	**55°C**	141	42,67	3,30	24100	60	151	42,54	3,54	25770	68	164	42,18	3,88	27970	81	164	42,18	3,88	27970	81					
NRK0600HA	**55°C**	156	50,03	3,12	26688	49	169	50,32	3,35	28836	58	189	50,75	3,72	32257	72	189	50,75	3,72	32257	72					
NRK0650HA	**55°C**	183	56,06	3,26	31303	62	196	56,44	3,46	33426	71	212	57,09	3,72	36270	84	212	57,09	3,72	36270	84					
NRK0700HA	**55°C**	199	63,59	3,14	34080	75	214	64,08	3,35	36618	87	237	64,94	3,65	40417	106	237	64,94	3,65	40417	106					
NRK0200HA	**65°C**	50	18,89	2,66	8607	35	54	18,98	2,84	9205	40	59	19,12	3,08	10053	48	59	19,12	3,08	10053	48					
NRK0280HA	**65°C**	72	25,77	2,80	12344	34	77	25,80	2,98	13170	38	84	26,05	3,21	14300	45	84	26,05	3,21	14300	45					
NRK0300HA	**65°C**	84	30,27	2,77	14320	45	90	30,43	2,95	15339	52	98	30,69	3,20	16782	62	98	30,69	3,20	16782	62					
NRK0330HA	**65°C**	95	35,72	2,65	16212	38	101	36,46	2,77	17264	43	109	37,84	2,88	18666	51	109	37,84	2,88	18666	51					
NRK0350HA	**65°C**	106	37,43	2,84	18161	44	114	37,72	3,02	19498	51	126	38,22	3,29	21485	62	126	38,22	3,29	21485	62					
NRK0500HA	**65°C**	125	44,37	2,81	21344	50	135	44,71	3,01	23048	58	150	45,32	3,31	25642	72	150	45,32	3,31	25642	72					
NRK0550HA	**65°C**	144	51,95	2,78	24671	63	154	51,71	2,98	26357	72	168	51,28	3,27	28630	84	168	51,28	3,27	28630	84					
NRK0600HA	**65°C**	163	59,77	2,73	27875	54	176	60,34	2,92	30102	63	196	61,14	3,21	33574	78	196	61,14	3,21	33574	78					
NRK0650HA	**65°C**	188	66,86	2,81	32191	66	202	67,40	3,00	34531	76	221	68,34	3,24	37801	91	221	68,34	3,24	37801	91					
NRK0700HA	**65°C**	214	75,88	2,82	36538	86	230	76,54	3,01	39281	100	254	77,73	3,26	43269	121	254	77,73	3,26	43269	121					

DATA 14511:2011
Glycol 0%
Ph Heating capacity
Pe Input power
TWP °C Leaving water temperature CONDENSER °C (Δt 5°C)
TAE °C External air temperature b.s. °C
Functionemet with DCPX

DEPOSIT FACTORS [K*m2]/[W]	**0,00005**	**0,0001**	**0,0002**
Cooling capacity correction factors	**1**	0,98	0,94
Input power correction factors	**1**	0,98	0,95

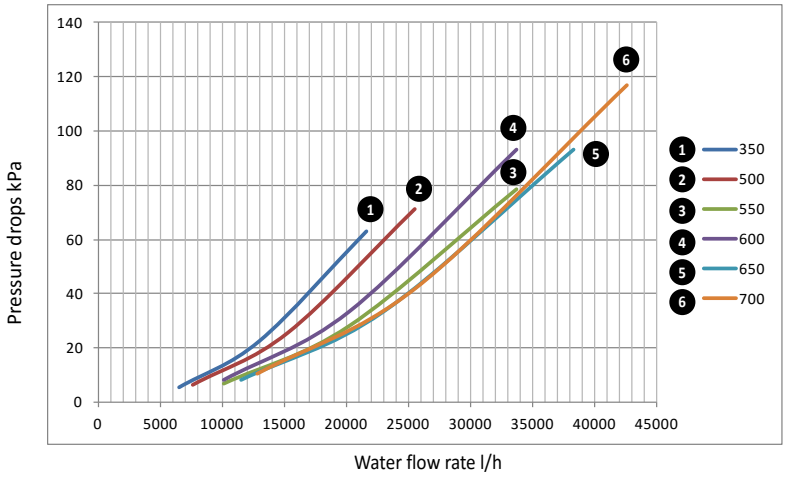
ΔT WATER DIFFERENT THAN NOMINAL (ΔT 5°C)	**3**	**5**	**8**	**10**
Heating capacity correction factors	0,99	**1**	1,01	1,02
Input power correction factors	1,01	**1**	0,98	0,96

10. TOTAL PRESSURE DROPS

10.1. SYSTEM SIDE COLD WATER PRODUCTION (HA VERSION)

Evaporator inlet water temperature	7°C
Evaporator outlet water temperature	12°C
External air temperature	35 °C
Average water temperature	10° C

For temperatures other than 10°C, use the corrective factors table.

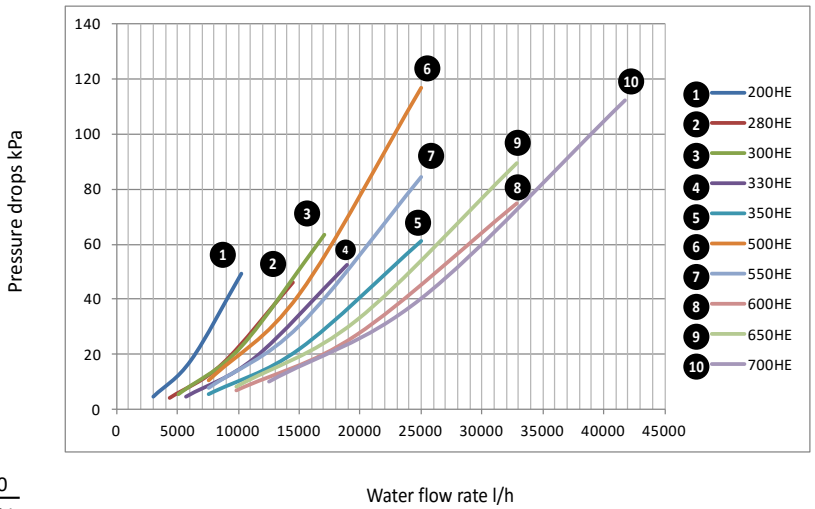


Average water temperature	5	**10**	15	20	30	40	50
Multiplicative coefficients	1,02	**1**	0,98	0,97	0,95	0,93	0,91

10.2. SYSTEM SIDE COLD WATER PRODUCTION (HE VERSION)

Evaporator inlet water temperature	7°C
Evaporator outlet water temperature	12°C
External air temperature	35 °C
Average water temperature	10° C

For temperatures other than 10°C, use the corrective factors table.



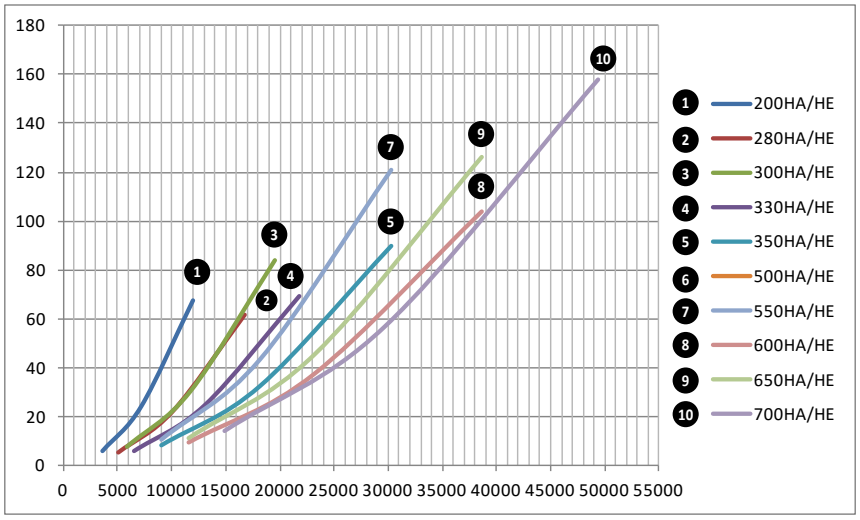
Average water temperature	5	**10**	15	20	30	40	50
Multiplicative coefficients	1,02	**1**	0,98	0,97	0,95	0,93	0,91

10.3. HOT WATER PRODUCTION SYSTEM INSIDE (HA/HE VERSION)

Condenser inlet water temperature 40°C
Condenser outlet water temperature 45°C
External air temperature 7°C b.s. 6°C b.u.

Average water temperature 43° C

For temperatures other than 43°C, use the corrective factors table.

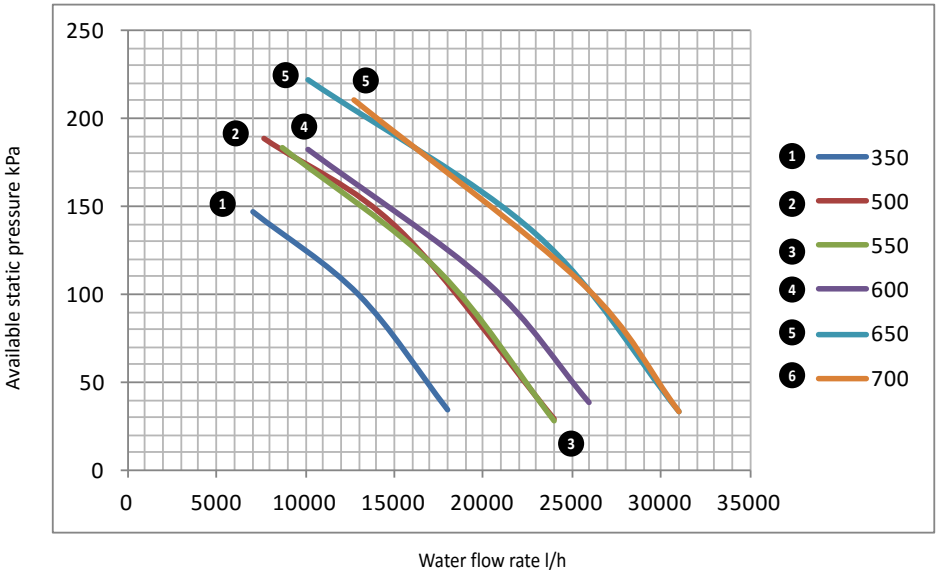


Average water temperature	23	28	33	38	**43**	48	53	58
Multiplicative coefficients	1,04	1,03	1,02	1,01	**1,00**	0,99	0,98	0,97

11. USEFUL STATIC PRESSURES

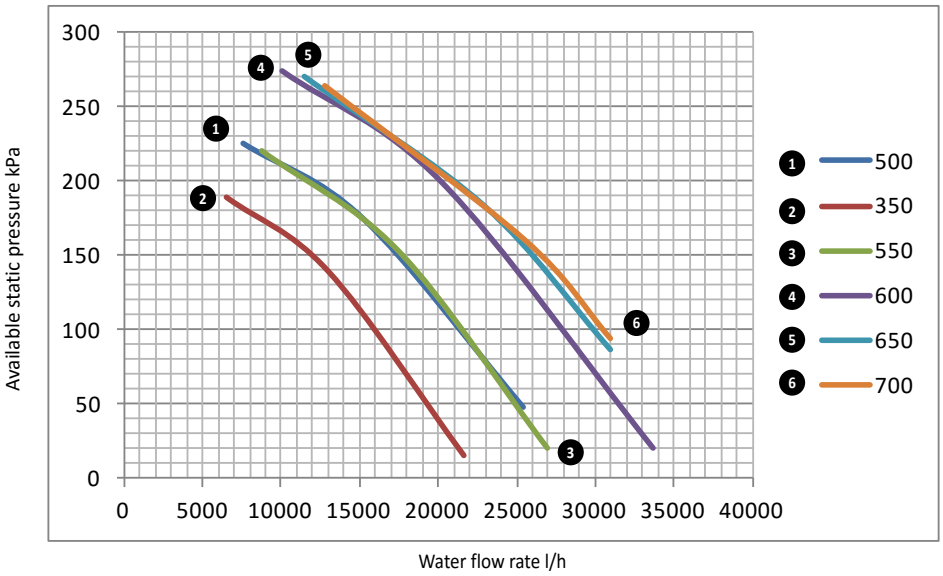
11.1. LOW STATIC PRESSURE PUMPS IN COOLING MODE HA VERSION (SYSTEM SIDE)

Evaporator inlet water temperature	7°C
Evaporator outlet water temperature	12°C
External air temperature	35 °C
Average water temperature	10° C

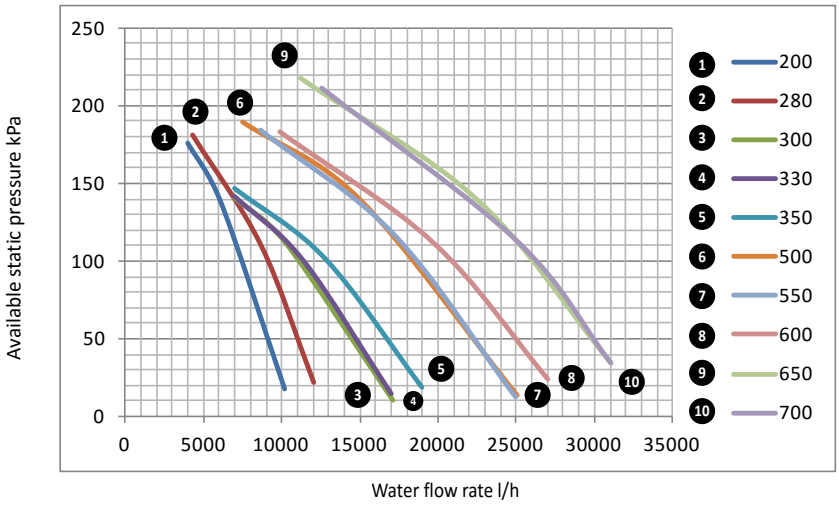


11.2. HIGH STATIC PRESSURE PUMPS IN COOLING MODE HA VERSION (SYSTEM SIDE)

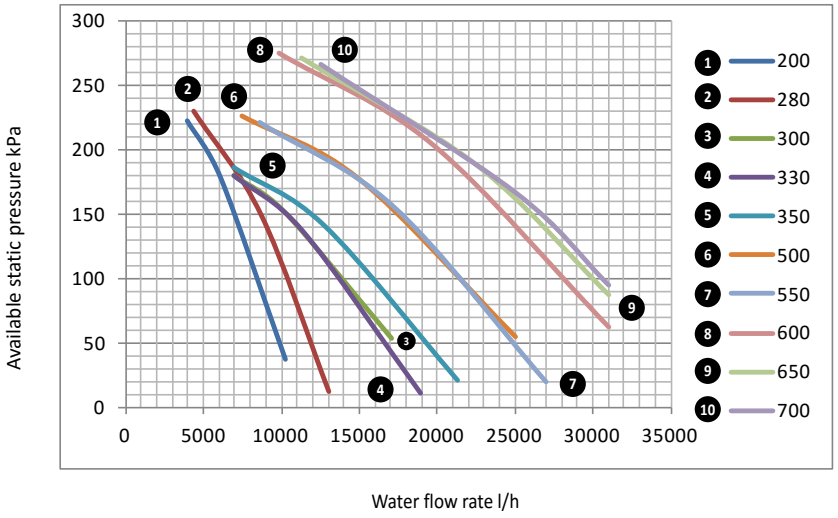
Evaporator inlet water temperature	7°C
Evaporator outlet water temperature	12°C
External air temperature	35 °C
Average water temperature	10° C



11.3. LOW STATIC PRESSURE PUMPS IN COOLING MODE HE VERSION (SYSTEM SIDE)

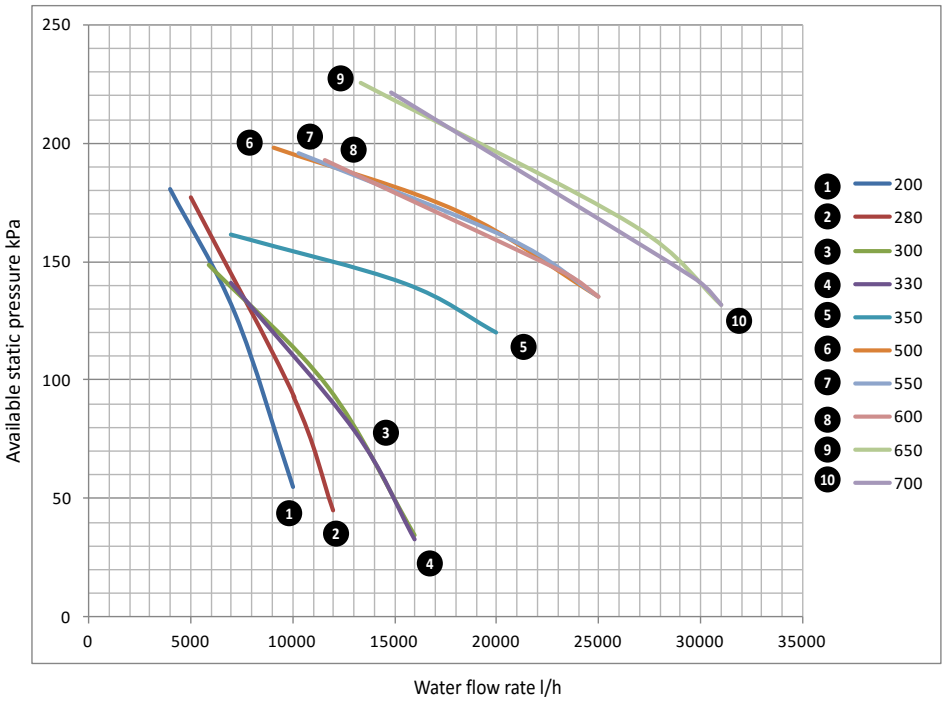


11.4. HIGH STATIC PRESSURE PUMPS IN COOLING MODE HE VERSION (SYSTEM SIDE)

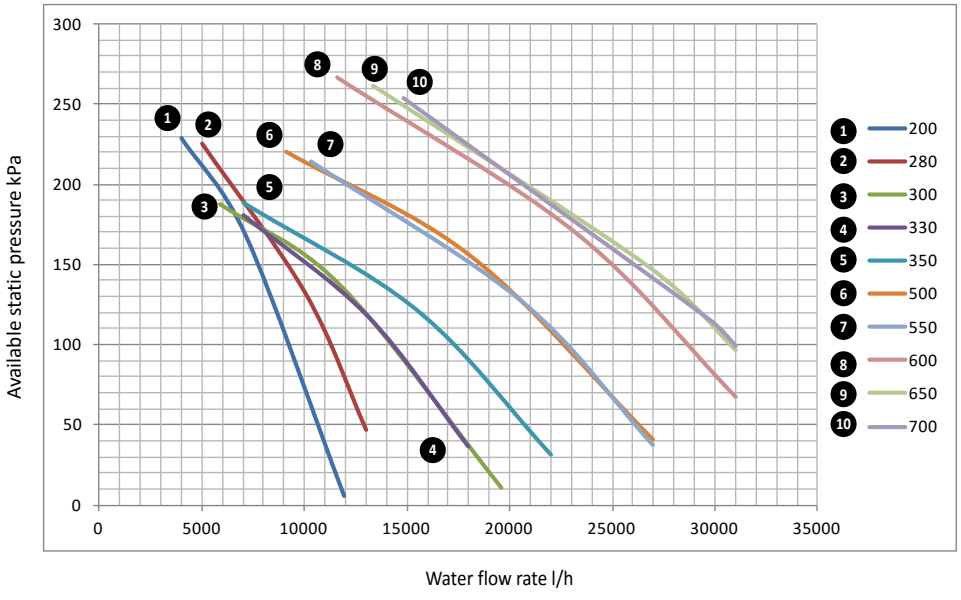


11.5. LOW STATIC PRESSURE PUMPS IN HEATING MODE HA VERSION (SYSTEM SIDE)

Condenser inlet water temperature	7°C
Condenser outlet water temperature	12°C
External air temperature	°C b.s. 6°C b.u.
Average water temperature	43° C



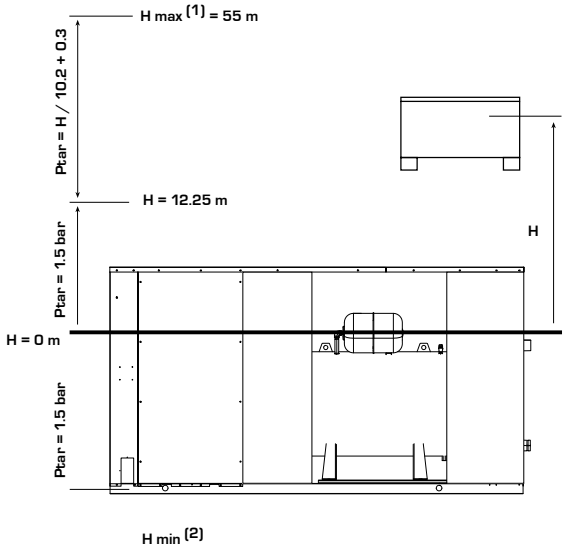
11.6. HIGH STATIC PRESSURE PUMPS IN HEATING MODE HA/HE VERSION (SYSTEM SIDE)



12. EXPANSION VESSEL CALIBRATION

11.6.1. EXPANSION VESSEL CALIBRATION

Standard pre-load pressure value of the expansion vessel is 1.5 bar, whereas volume is 24 litres.
Maximum pressure 6 bar.
Calibration of the vessel must be regulated using the maximum level difference (H) of the user (see diagram) by using the following formula:
p (calibration) [bar] = H [m] / 10.2 + 0.3.
For example: if level difference (H) is equal to 20 m, the calibration value of the vessel will be 2.3 bar.
If calibration value obtained from formula is less than 1.5 bar (that is for H < 12.25), keep calibration as standard.



KEY

(1) Check that highest installation is not higher than 55 metres.

(2) Ensure that lowest installation can withstand global pressure in that position

13. MINIMUM WATER CONTENT

NRK		0200	0280	0300	0330	0350	0500	0550	0600	0650	0700
Number of compressors	n°	2	2	2	2	2	3	4	4	4	4
Minimum water content admitted COLD SIDE	l/kW	7	7	7	7	7	7	7	7	7	7
Minimum water content admitted the HOT SIDE	l/kW	10	10	10	10	10	10	10	10	10	10
Minimum water content admitted the HOT SIDE	l/kW	14	14	14	14	14	14	14	14	14	14

ATTENTION
It is recommended to design systems with high water content (minimum recommended values shown in table), to limit:
1. The hourly number of inversions between functioning modes.
2. Decrease in water temperature during winter defrost cycles.

14. GLICOLE

IT

SOLUZIONI DI GLICOLE ETILENICO

FUNZIONAMENTO A FREDDO

FATTORI CORRETIVI CON SOLUZIONI DI GLICOLE ETILENICO												
Freezing Point	°C	0	-4,9	-7,7	-10,6	-13,6	-16,9	-20,7	-25,2	-30,5	-36,7	-44,1
Percentuale glicole etilenico	%	0	10	15	20	25	30	35	40	45	50	55
Qwc	-	1,000	0,994	0,998	1,006	1,016	1,030	1,046	1,063	1,082	1,103	1,124
Pc	-	1,000	0,990	0,985	0,980	0,975	0,970	0,965	0,960	0,955	0,950	0,945
Pa	-	1,000	0,996	0,994	0,992	0,990	0,988	0,986	0,984	0,982	0,980	0,978
Dp	-	1,000	1,068	1,105	1,152	1,212	1,285	1,373	1,477	1,598	1,738	1,897

FUNZIONAMENTO A CALDO

FATTORI CORRETIVI CON SOLUZIONI DI GLICOLE ETILENICO												
Freezing Point	°C	0	-4,9	-7,7	-10,6	-13,6	-16,9	-20,7	-25,2	-30,5	-36,7	-44,1
Percentuale glicole etilenico	%	0	10	15	20	25	30	35	40	45	50	55
Qwh	-	1,000	1,011	1,019	1,030	1,044	1,061	1,079	1,099	1,120	1,143	1,165
Ph	-	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Pa	-	1,000	1,002	1,003	1,004	1,005	1,007	1,008	1,010	1,012	1,015	1,018
Dp	-	1,000	1,063	1,104	1,153	1,212	1,280	1,358	1,446	1,544	1,652	1,771

Qwc: fattore correttivo portata d'acqua (temperatura media dell'acqua di 9,5°C)
Qwh: fattore correttivo portata d'acqua (temperatura media dell'acqua di 42,5°C)
Pc: fattore correttivo potenza frigorifera
Ph: fattore correttivo potenza termica
Pa: fattore correttivo potenza assorbita
Dp: perdite di carico

SOLUZIONI DI GLICOLE PROPILENICO

FUNZIONAMENTO A FREDDO

FATTORI CORRETIVI CON SOLUZIONI DI GLICOLE PROPILENICO												
Freezing Point	°C	0	-3	-4,8	-7,2	-10,1	-13,5	-17,5	-22,1	-27,2	-32,9	-39,2
Percentuale glicole propilenico	%	0	10	15	20	25	30	35	40	45	50	55
Qwc	-	1,000	0,984	0,984	0,985	0,988	0,993	1,000	1,009	1,021	1,035	1,053
Pc	-	1,000	0,985	0,978	0,970	0,963	0,955	0,947	0,939	0,932	0,924	0,916
Pa	-	1,000	0,996	0,994	0,992	0,990	0,988	0,986	0,984	0,982	0,980	0,978
Dp	-	1,000	1,035	1,065	1,100	1,139	1,182	1,230	1,281	1,338	1,398	1,462

FUNZIONAMENTO A CALDO

FATTORI CORRETIVI CON SOLUZIONI DI GLICOLE PROPILENICO												
Freezing Point	°C	0	-3	-4,8	-7,2	-10,1	-13,5	-17,5	-22,1	-27,2	-32,9	-39,2
Percentuale glicole propilenico	%	0	10	15	20	25	30	35	40	45	50	55
Qwh	-	1,000	1,009	1,014	1,022	1,030	1,041	1,054	1,069	1,087	1,108	1,132
Ph	-	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Pa	-	1,000	1,003	1,004	1,005	1,007	1,009	1,011	1,014	1,018	1,023	1,029
Dp	-	1,000	1,021	1,049	1,079	1,110	1,143	1,179	1,216	1,256	1,298	1,343

Qw: fattore correttivo portata d'acqua (temperatura media dell'acqua di 9,5°C)
Qwh: fattore correttivo portata d'acqua (temperatura media dell'acqua di 42,5°C)
Pc: fattore correttivo potenza frigorifera
Ph: fattore correttivo potenza termica
Pa: fattore correttivo potenza assorbita
Dp: perdite di carico

15. DATI SONORI

ATTENZIONE
I dati di rumore sono calcolati con ventilatori STANDARD!.

Sound power
Aermec determines sound power values in agreement with the 9614-2 Standard, in compliance with that requested by Eurovent certification.

Pressione sonora
Pressione sonora in campo libero su piano riflettente (fatt. direzionalità Q=2) in accordo con la normativa ISO 3744.

Cooling mode – The 'HE' version is low noise with temperature 12/7°C -35°C
Heating mode – The 'HE' version is low noise with temperature > 25°

NRP	VERS.	Total sound levels			Octave band [Hz]						
		Pot. dB(A)	Pressure..		125	250	500	1000	2000	4000	8000
			dB(A) 10 m	dB(A) 1 m	Sound potential for central band [dB] (A) frequency						
COOLING MODE FUNCTIONING											
0200	**HE**	74	42	57	72,2	61,1	66,4	63,5	61,0	50,0	43,7
0280	**HE**	74	42	57	72,2	61,1	66,4	63,5	61,0	50,0	43,7
0300	**HE**	75	43	57	73,1	62,2	67,1	64,3	62,0	51,0	44,5
0330	**HE**	75	43	57	73,1	62,0	67,1	64,3	62,1	51,3	44,8
0350	**HE**	74	42	56	60,9	63,9	66,9	68,8	67,1	63,3	56,9
0500	**HE**	74	42	56	61,4	64,6	68,1	68,8	67,2	63,3	56,9
0550	**HE**	74	42	56	61,6	65,1	68,2	68,9	67,2	63,5	57,4
0600	**HE**	75	43	57	62,1	65,1	68,5	69,1	68,4	65,5	61,5
0650	**HE**	77	45	58	65,7	67,6	68,6	69,8	71,4	65,7	62,0
0700	**HE**	77	45	58	65,7	67,6	68,6	69,8	71,4	65,7	62,0
0350	**HA**	82	50	64	68,1	69,8	74,0	76,7	76,5	74,1	63,8
0500	**HA**	82	50	64	68,1	69,8	74,0	76,7	76,5	74,1	63,8
0550	**HA**	82	50	64	68,1	69,9	75,0	77,5	76,5	72,0	61,0
0600	**HA**	83	51	65	69,4	70,6	75,1	77,9	78,0	74,6	64,1
0650	**HA**	85	53	66	72,9	73,2	78,0	78,3	80,0	76,6	65,2
0700	**HA**	85	53	66	72,9	73,2	78,0	78,3	80,0	76,6	65,2
FUNCTIONING IN HEATING MODE											
0200	**HE**	74	42	57	72,2	61,1	66,4	63,5	61,0	50,0	43,7
0280	**HE**	74	42	57	72,2	61,1	66,4	63,5	61,0	50,0	43,7
0300	**HE**	75	43	57	73,1	62,2	67,1	64,3	62,0	51,0	44,5
0330	**HE**	75	43	57	73,1	62,0	67,1	64,3	62,1	51,3	44,8
0350	**HE**	82	50	64	68,1	69,8	74,0	76,7	76,5	74,1	63,8
0500	**HE**	82	50	64	68,1	69,8	74,0	76,7	76,5	74,1	63,8
0550	**HE**	82	50	64	68,1	69,9	75,0	77,5	76,5	72,0	61,0
0600	**HE**	83	51	65	69,4	70,6	75,1	77,9	78,0	74,6	64,1
0650	**HE**	85	53	66	72,9	73,2	78,0	78,3	80,0	76,6	65,2
0700	**HE**	85	53	66	72,9	73,2	78,0	78,3	80,0	76,6	65,2
0350	**HA**	82	50	64	68,1	69,8	74,0	76,7	76,5	74,1	63,8
0500	**HA**	82	50	64	68,1	69,8	74,0	76,7	76,5	74,1	63,8
0550	**HA**	82	50	64	68,1	69,9	75,0	77,5	76,5	72,0	61,0
0600	**HA**	83	51	65	69,4	70,6	75,1	77,9	78,0	74,6	64,1
0650	**HA**	85	53	66	72,9	73,2	78,0	78,3	80,0	76,6	65,2
0700	**HA**	85	53	66	72,9	73,2	78,0	78,3	80,0	76,6	65,2

16. CALIBRATIONS OF SAFETY AND CONTROL PARAMETERS

COOLING SET	min	Max.	default
Water inlet temperature (cooling mode)	4 °C	18 °C	7° C

HEATING SET			
Water inlet temperature (heating mode)	25 °C	65 °C	45 °C

ANTI-FREEZE ALARM INTERVENTION			
Intervention temperature on EVAPORATOR side	-15 °C	4 °C	3 °C

TOTAL DIFFERENTIAL			
Proportional temperature band within which the compressors are activated and deactivated	3 °C	10 °C	5 °C

		0200	**0280**	**0300**	**0330**	**0350**	**0500**	**0550**	**0600**	**0650**	**0700**
COMPRESSOR MAGNET CIRCUIT BREAKERS											
MTC1	A	17	23	24	28	33	23	28	24	28	33
MTC1A	A	-	-	-	-	-	23	23	24	28	33
MTC2	A	17	23	24	28	33	33	23	24	28	33
MTC2A	A	-	-	-	-	-		23	24	28	33
MANUALLY RESET HIGH PRESSURE SWITCH											
PA	bar	40	40	40	40	40	40	40	40	40	40
HIGH PRESSURE TRANSDUCER											
TAP	Bar	39	39	39	39	39	39	39	39	39	39
LOW PRESSURE TRANSDUCER											
TBP	bar	2	2	2	2	2	2	2	2	2	2
COOLING CIRCUIT SAFETY VALVES											
BP	bar	30	30	30	30	30	30	30	30	30	30
MAGNETOTHERMIC FANS											
VERSION		4	6	8	8	8	8	8	8	12	12

AERMEC S.p.A.
37040 Bevilacqua (VR) Italia–Via Roma, 996
Tel. (+39) 0442 633111
Telefax 0442 93730–(+39) 0442 93566
www.aermec.com - info@aermec.com