GREE
Change for life

Service Manual

VERSATI IV Split Type Air To Water Heat Pump

Models:

GRS-CQ4.0Pd/NhH3-E
GRS-CQ6.0Pd/NhH3-E
GRS-CQ8.0Pd/NhH3-E
GRS-CQ10Pd/NhH3-E
GRS-CQ12Pd/NhH3-E
GRS-CQ14Pd/NhH3-E
GRS-CQ12Pd/NhH3-E1
GRS-CQ14Pd/NhH3-E1
GRS-CQ16Pd/NhH3-E1
GRS-CQ8.0Pd/NhH3-M
GRS-CQ10Pd/NhH3-M
GRS-CQ12Pd/NhH3-M
GRS-CQ14Pd/NhH3-M
GRS-CQ12Pd/NhH3-M1
GRS-CQ14Pd/NhH3-M1
GRS-CQ16Pd/NhH3-M1

To Users

Thank you for selecting Gree's product. Please read this instruction manual carefully before installing and using the product, so as to master and correctly use the product. In order to guide you to correctly install and use our product and achieve expected operating effect, we hereby instruct as below:

(1) This equipment should be installed, operated or maintained by the qualified servicemen who have had specific training. During operation, all safety issues covered in the labels, User's Manual and other literature should be followed strictly. This equipment is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

(2) This product has gone through strict inspection and operational test before leaving the factory. In order to avoid damage due to improper disassembly and inspection, which may impact the normal operation of unit, please do not disassemble the unit by yourself. You can contact our designated dealer or local service center for professional support if necessary.

(3) When the product is faulted and cannot be operated, please contact our designated dealer or local service center as soon as possible by providing the following information..

- Contents of nameplate of product (model, cooling/heating capacity, product No., ex-factory date).
- Malfunction status (specify the situations before and after the error occurs).

(4) All the illustrations and information in the instruction manual are only for reference. In order to make the product better, we will continuously conduct improvement and innovation without further notice.

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Safety Notices (Please be sure to abide)

⚠ **WARNING**: If not abide strictly, it may cause severe damage to the unit or the people.

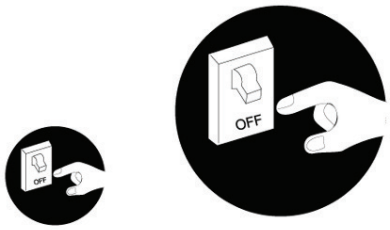
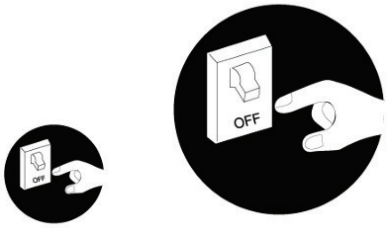
⚠ **NOTE**: If not abide strictly, it may cause slight or medium damage to the unit or the people.

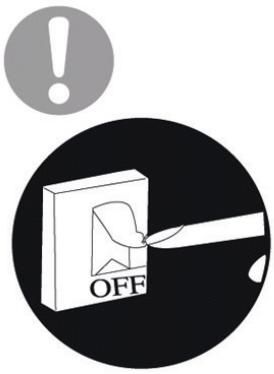
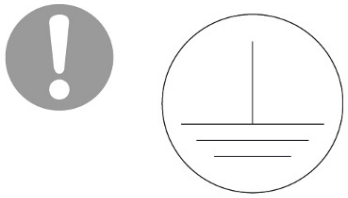
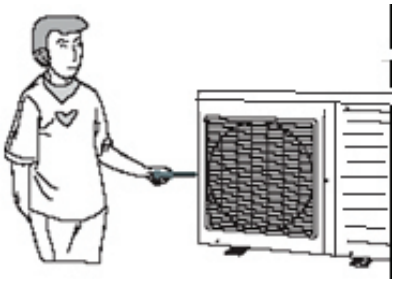
This sign indicates that the operation must be prohibited. Improper operation may cause severe damage or death to people

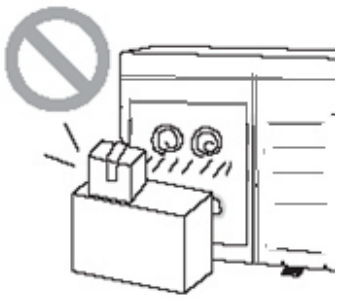
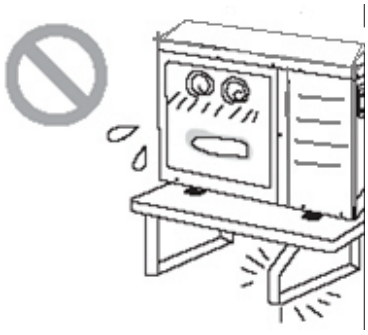
This sign indicates that the items must be observed. Improper operation may cause damage to people or property.

⚠ NOTE
After receipt of the unit, check it for appearance, unit model compared with your desire and attachments. Design and installation work of the unit must be performed by authorized personnel according to applicable laws and regulations and this Instruction. After installation work, the unit cannot be energized unless there is not any problem in check. Ensure periodical clean and maintenance of the unit after normal operation of the unit for longer life and reliable operation. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard. The appliance shall be installed in accordance with national wiring regulations. This product is a kind of comfort air conditioning, and is not allowed to be installed where there are corrosive, explosive and inflammable substances or smog; otherwise it would lead to operation failure, shortened service life, five hazard or even severe injuries. Special air conditions are required for where mentioned above.

	Correct Disposure
	This marking indicates that this product should not be disposed with other household wastes throughout the EU.To prevent possible harm to the environment or human health from uncontrolled waste disposal,recycle it responsibly to promote the sustainable reuse of material resources. To retuern your used device,please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling. R32:675

⚠ WARNING		
Once abnormality likeburning smell occurs, please cut off the power supply immediately and then contact with service center.  If the abnormality still exists, the unit may be damaged and electric shock or fire may result.	Don't operate the unit with wet hand. Otherwise, it may cause electric shock.	Before installation,please see if the voltage of local place accords with that on nameplate of unit and capacity of power supply, power cord or socket is suitable for input power of this unit.
Special circuit must be adopted for power supply to prevent fire. Do not use octopus multipurpose plug or mobile terminal board for wire connection.	Be sure to pull out the power plug and drain the indoor unit and water tank when unit is not in use for a long time.  Otherwise, the accumulated dust may cause overheating,fire or freeze of water tank or coaxial heater exchanger in winter.	Never damage the electric wire or use the one which is not specified. Otherwise, it may cause overheating or fire.

Before cleaning please cut off the power supply.  Otherwise, it may cause electric shock or damage.	The power supply must adopt special circuit with leakage switch and enough capacity.	User can not change power cord socket without prior consent. Wiring working must be done by professionals. Ensure good earthing and don't change earthing mode of unit.
Earthing: the unit must be earthed reliably ! The earthing wire should connect with special device of buildings.  If not, please ask the qualified personnel to install. Furthermore, don't connect earth wire to gas pipe, water pipe, drainage pipe or any other improper places which professional does not recognize.	Never insert any foreign matter into outdoor unit to avoid damage . And never insert your hands into the air outlet of outdoor unit. 	Don't attempt to repair the unit by yourself. Improper repair may cause electric shock or fire, so you should contact the service center to repair.

Don't step on the top of the unit or place anything on it. There is the danger of fall of things or people.	Never block the air inlet and outlet of unit.  It may reduce efficiency or cause stop of the unit and even fire.	Keep pressurized spray, gas holder and so on away from the unit above 1m . It may cause fire or explosion.
Please note whether the installation stand is firm enough or not.  If damaged, it may cause fall of the unit and injury of people.	Unit should be installed at the place with good ventilation to save energy.	When there is not water in water tank, never power the unit on to run.

⚠ WARNING

Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer. Should repair be necessary, contact your nearest authorized service centre. Any repairs carried out by unqualified personnel may be dangerous. The appliance shall be stored in a room without continuous operating ignition sources. (for example: open flames, an operating gas appliance or an operating electric heater.) Do not pierce or burn.

Appliance shall be installed, operated and stored in a room with a floor area larger than Xm .(Please refer to table “a” in section of “ Safety Operation of Inflammable Refrigerant” for space X.)

Appliance filled with flammable gas R32. For repairs, strictly follow manufacturer’s instructions only. Be aware that refrigrants not contain odour. Read specialist’s manual.

If a stationary appliance is not fitted with a supply cord and a plug, or with other means for disconnection from the supply mains having a contact separation in all poles that provides full disconnection under overvoltage category III conditions, the instructions shall state that means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

The appliance shall be stored in a well-ventilated area where the room size corresponds to the room area as specified for operation.

The appliance shall be stored in a room without continuously operating open flames (for example an operating gas appliance) and ignition sources (for example an operating electric heater).

The appliance shall be stored so as to prevent mechanical damage from occurring.

⚠ NOTE

	Appliance filled with flammable gas R32.
	Before use the appliance, read the owner’s manual first.
	Before install the appliance, read the installation manual first.
	Before repair the appliance, read the service manual first.

To realize the function of the air conditioner unit, a special refrigerant circulates in the system. The used refrigerant is the fluoride R32, which is specially cleaned.The refrigerant is flammable and inodorous. Furthermore, it can leads to explosion under certain conditions. But the flammability of the refrigerant is very low. It can be ignited only by fire.

Compared to common refrigerants, R32 is a nonpolluting refrigerant with no harm to the ozonosphere. The influence upon the greenhouse effect is also lower. R32 has got very good thermodynamic features which lead to a really high energy efficiency. The units therefore need a less filling.

Before installation, please check if the adopted power is accordance with that listed on nameplate, and check the safety of power.

The unit shall contact with the supply mains by a full disconnection device under overvoltage category Ⅲ.

Before using, please check and confirm if wires and water pipes are connected correctly to avoid water leakage, electric shock or fire etc.

Don’t operate the unit with wet hand, and don’t allow children to operate the unit.

The On/off in the instruction is for the operation to on and off button of PCB for users; cut off power means to stop supplying power to the unit.

Don’t directly expose the unit under the corrosive ambient with water or dampness.

Don’t operate the unit without water in water tank .The air outlet/inlet of unit cannot be blocked by other objects.

Never press the button with sharp objects to protect manual controller. Never use other wires instead of special communication line of the unit to protect control elements. Never clean the manual controller with benzene, thinner or chemical cloth to avoid fading of surface and failure of elements. Clean the unit with the cloth soaked in neutral eradicator. Slightly clean the display screen and connecting parts to avoid fading.

The power cord must be separated with the communication line.

Any person who is involved with working on or breaking into a refrigerant circuit should hold a current valid certificate from an industry-accredited assessment authority, which authorises their competence to handle refrigerants safely in accordance with an industry recognised assessment specification.

Servicing shall only be performed as recommended by the equipment manufacturer. Maintenance and repair requiring the assistance of other skilled personnel shall be carried out under the supervision of the person competent in the use of flammable refrigerants.

maximum and minimum water operating temperatures.

Item	Minimum water operating temperatures	Maximum water operating temperatures
Cooling	5°C	25°C
Heating	20°C	65°C
Water heating	40°C	80°C

maximum and minimum water operating pressures.

Item	Minimum water operating pressures	Maximum water operating pressures
Cooling	0.05MPa	0.25MPa
Heating		
Water heating		

maximum and minimum entering water pressures.

Item	Minimum entering water pressures	Maximum entering water pressures
Cooling	0.05MPa	0.25MPa
Heating		
Water heating		

The range of external static pressures at which the appliance was tested (add-on heat pumps, and appliances with supplementary heaters, only); If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

The appliance is intended to be permanently connected to the water mains and connected by a hose-set.

If there is any question, please contact with local dealer, authorized service center, agencies or our company directly.

1 Nomenclature

G	RS	-	C	Q	10	Pd	/	Nh	H3	-	E	(O)
1	2		3	4	5	6		7	8		9	10

No.	Description	Options
1	GREE	G-GREE
2	Air to Water Heat Pump	RS
3	Heating Mode	S= Static; C=Circulating
4	Function	Q=Multi-function; Omit=Single-function
5	Nominal Heating Capacity	10=10kW; 12=12kW;.....
6	Compressor Style	Pd=DC Inverter; Omit=On/Off
7	Refrigerant	Nh=R32
8	Design Serial Number	H3: generation
9	Power Supply and Fan Type	E/M=230/400V,~50Hz; E1/M1=230/400V,~50Hz (dual fan)
10	Indoor and Outdoor Unit Code	I=Indoor unit; O=Outdoor unit

2 Technical Data

2.1 Parameter List

Model			GRS-CQ4.0Pd/ NhH3-E	GRS-CQ6.0Pd/ NhH3-E	GRS-CQ8.0Pd/ NhH3-E	GRS-CQ10Pd/ NhH3-E
Product Code			ER01002690	ER01002680	ER01002650	ER01002660
Power Supply			230VAC, 50HZ	230VAC, 50HZ	230VAC, 50HZ	230VAC, 50HZ
Capacity*1	Cooling (floor cooling)	kW	4.50	6.50	8.40	10.20
	Heating (floor heating)	kW	4.30	6.20	8.30	10.20
Power Input*1	Cooling (floor cooling)	kW	0.83	1.24	1.58	2.04
	Heating (floor heating)	kW	0.77	1.15	1.61	2.15
EER*1(floor cooling)		w/w	5.60	5.40	5.15	4.75
COP*1(floor heating)		w/w	5.45	5.25	5.30	5.00
Capacity*2	Cooling (for fan coil)	kW	4.20	6.20	7.30	8.70
	Heating (fan coil or fadiator)	kW	4.20	6.00	8.20	10.00
Power Input*2	Cooling (for fan coil)	kW	1.05	1.55	1.83	2.20
	Heating (fan coil or radiator)	kW	1.18	1.79	2.41	3.08
EER*1(for fan coil)		w/w	3.55	3.35	3.40	3.25
COP*1(fan coil or radiator)		w/w	4.00	4.00	4.00	3.95
Sound Pressure Level	Cooling	dB(A)	56	56	53	55
	Heating	dB(A)	53	53	54	56
Outdoor Dimensions (W×D×H)	Outline	mm	1100×370×900	1100×370×900	993×385×960	993×385×960
	Packaged	mm	1093×498×905	1093×498×905	1153×478×1110	1153×478×1110
Indoor Dimensions (W×D×H)	Outline	mm	429×268×880	429×268×880	429×268×935	429×268×935
	Packaged	mm	1138×533×340	1138×533×340	1178×533×315	1178×533×315
Net weight/ Gross weight	Indoor	Kg	47/55	47/55	49/57	49/57
	Outdoor	Kg	61/69	61/69	79/89	79/89
Connecting Pipe	Gas	inch(mm)	1/2(12)	1/2(12)	5/8(16)	5/8(16)
	Liquid	inch(mm)	1/4(6)	1/4(6)	3/8(9.52)	3/8(9.52)
Refrigerant Charge Volume		kg	1.30	1.30	1.75	1.75
Operating Temperature Range	Cooling	°C	-15~48			
	Heating	°C	-30~35			
	Water Heating	°C	-30~45			

Model			GRS-CQ12Pd/ NhH3-E	GRS-CQ14Pd/ NhH3-E	GRS-CQ12Pd/ NhH3-E1	GRS-CQ14Pd/ NhH3-E1
Product Code			ER01002610	ER01002630	ER01002810	ER01002830
Power Supply			230VAC, 50HZ	230VAC, 50HZ	230VAC, 50HZ	230VAC, 50HZ
Capacity*1	Cooling (floor cooling)	kW	12.00	13.30	12.00	13.70
	Heating (floor heating)	kW	12.20	14.50	12.20	14.60
Power Input*1	Cooling (floor cooling)	kW	2.38	2.77	2.36	2.82
	Heating (floor heating)	kW	3.05	4.03	2.94	3.89
EER*1(floor cooling)		w/w	4.00	3.60	4.15	3.75
COP*1(floor heating)		w/w	5.05	4.80	5.08	4.85
Capacity*2	Cooling (for fan coil)	kW	11.20	12.00	11.10	12.00
	Heating (fan coil or radiator)	kW	12.30	14.00	12.30	14.20
Power Input*2	Cooling (for fan coil)	kW	2.95	3.26	2.88	3.12
	Heating (fan coil or radiator)	kW	4.24	5.09	4.17	4.81
EER*1(for fan coil)		w/w	2.90	2.75	2.95	2.95
COP*1(fan coil or radiator)		w/w	3.80	3.68	3.85	3.85
Sound Pressure Level	Cooling	dB(A)	57	57	55	56
	Heating	dB(A)	56	56	57	58
Outdoor Dimensions (W×D×H)	Outline	mm	993×385×960	993×385×960	900×345×1352	900×345×1352
	Packaged	mm	1153×478×1110	1153×478×1110	1043×453×1500	1043×453×1500
Indoor Dimensions (W×D×H)	Outline	mm	429×268×935	429×268×935	429×268×935	429×268×935
	Packaged	mm	1178×533×315	1178×533×315	1178×533×315	1178×533×315
Net Weight/ Gross Weight	Indoor	Kg	49/57	49/57	49/57	49/57
	Outdoor	Kg	96/106	96/106	106/117	106/117
Connecting Pipe	Gas	inch(mm)	5/8(16)	5/8(16)	5/8(16)	5/8(16)
	Liquid	inch(mm)	3/8(9.52)	3/8(9.52)	3/8(9.52)	3/8(9.52)
Refrigerant Charge Volume		kg	1.84	1.84	1.84	1.84
Operating Temperature Range	Cooling	°C	-15~48			
	Heating	°C	-30~35			
	Water Heating	°C	-30~45			

Model			GRS-CQ16Pd/ NhH3-E1	GRS-CQ8.0Pd/ NhH3-M	GRS-CQ10Pd/ NhH3-M	GRS-CQ12Pd/ NhH3-M
Product Code			ER01002870	ER01002670	ER01002640	ER01002620
Power Supply			230VAC, 50HZ	400VAC, 50HZ	400VAC, 50HZ	400VAC, 50HZ
Capacity*1	Cooling (floor cooling)	kW	14.60	8.40	10.00	12.00
	Heating (floor heating)	kW	16.00	8.30	10.20	12.20
Power Input*1	Cooling (floor cooling)	kW	3.21	1.70	2.04	2.38
	Heating (floor heating)	kW	4.32	1.69	2.19	3.05
EER*1(floor cooling)		w/w	3.70	4.90	4.65	4.00
COP*1(floor heating)		w/w	4.55	4.95	4.90	5.05
Capacity*2	Cooling (for fan coil)	kW	13.40	7.30	8.70	11.20
	Heating (fan coil or radiator)	kW	16.00	8.20	10.00	12.30
Power Input*2	Cooling (for fan coil)	kW	3.62	1.83	2.26	2.95
	Heating (fan coil or radiator)	kW	6.04	2.51	3.15	4.24
EER*1(for Fan coil)		w/w	2.65	3.27	3.17	2.90
COP*1(Fan coil or Radiator)		w/w	3.70	4.00	3.85	3.80
Sound Pressure Level	Cooling	dB(A)	56	53	55	57
	Heating	dB(A)	58	54	56	56
Outdoor Dimensions (W×D×H)	Outline	mm	900×345×1352	993×385×960	993×385×960	993×385×960
	Packaged	mm	1043×453×1500	1153×478×1110	1153×478×1110	1153×478×1110
Indoor Dimensions (W×D×H)	Outline	mm	429×268×935	429×268×935	429×268×935	429×268×935
	Packaged	mm	1178×533×315	1178×533×315	1178×533×315	1178×533×315
Net Weight/ Gross Weight	Indoor	Kg	49/57	51/59	51/59	51/59
	Outdoor	Kg	106/117	90/100	90/100	102/112
Connecting Pipe	Gas	inch(mm)	5/8(16)	5/8(16)	5/8(16)	5/8(16)
	Liquid	inch(mm)	3/8(9.52)	3/8(9.52)	3/8(9.52)	3/8(9.52)
Refrigerant Charge Volume		Kg	1.84	1.75	1.75	1.84
Operating Temperature Range	Cooling	°C	-15~48			
	Heating	°C	-30~35			
	Water Heating	°C	-30~45			

Model			GRS-CQ14Pd/ NhH3-M	GRS-CQ12Pd/ NhH3-M1	GRS-CQ14Pd/ NhH3-M1	GRS-CQ16Pd/ NhH3-M1
Product Code			ER01002600	ER01002800	ER01002820	ER01002860
Power Supply			400VAC, 50HZ	400VAC, 50HZ	400VAC, 50HZ	400VAC, 50HZ
Capacity*1	Cooling (floor cooling)	kW	13.30	12.50	13.80	14.90
	Heating (floor heating)	kW	14.50	12.20	14.60	16.00
Power Input*1	Cooling (floor cooling)	kW	2.77	2.48	2.88	3.24
	Heating (floor heating)	kW	4.03	3.05	3.89	4.44
EER*1(floor cooling)		w/w	3.60	4.00	3.75	3.60
COP*1(floor heating)		w/w	4.80	5.04	4.80	4.60
Capacity*2	Cooling (for fan coil)	kW	12.00	11.20	12.00	13.50
	Heating (fan coil or radiator)	kW	14.00	12.30	14.20	16.00
Power Input*2	Cooling (for fan coil)	kW	3.26	2.95	3.16	3.65
	Heating (fan coil or radiator)	kW	5.09	4.17	5.16	6.04
EER*1(for fan coil)		w/w	2.75	2.95	2.75	2.65
COP*1(fan coil or radiator)		w/w	3.68	3.80	3.80	3.70
Sound Pressure Level	Cooling	dB(A)	57	55	56	56
	Heating	dB(A)	56	57	58	58
Outdoor Dimensions (W×D×H)	Outline	mm	993×385×960	900×345×1352	900×345×1352	900×345×1352
	Packaged	mm	1153×478×1110	1043×453×1500	1043×453×1500	1043×453×1500
Indoor Dimensions (W×D×H)	Outline	mm	429×268×935	429×268×935	429×268×935	429×268×935
	Packaged	mm	1178×533×315	1178×533×315	1178×533×315	1178×533×315
Net Weight/ Gross Weight	Indoor	Kg	51/59	51/59	51/59	51/59
	Outdoor	Kg	102/112	111/122	111/122	111/122
Connecting Pipe	Gas	inch(mm)	5/8(16)	5/8(16)	5/8(16)	5/8(16)
	Liquid	inch(mm)	3/8(9.52)	3/8(9.52)	3/8(9.52)	3/8(9.52)
Refrigerant Charge Volume		Kg	1.84	1.84	1.84	1.84
Operating Temperature Range	Cooling	°C	-15~48			
	Heating	°C	-30~35			
	Water Heating	°C	-30~45			

Notes:

1* Capacites and power inputs are based on the following conditions

- Cooling conditions
  - Outdoor air temperature 35°C DB/-WB
  - Entering water temperature 23°C
  - Leaving water temperature 18°C
- Heating conditions
  - Outdoor air temperature 7°CDB/6°CWB
  - Entering water temperature 30°C
  - Leaving water temperature 35°C
  - Standing piping length 5m

2* Capacites and power inputs are based on the following conditions

- Cooling conditions
  - Outdoor air temperature 35°C DB/-WB
  - Entering water temperature 12°C
  - Leaving water temperature 7°C
- Heating conditions
  - Outdoor air temperature 7°C DB/6°C WB
  - Entering water temperature 40°C
  - Leaving water temperature 45°C
  - Standing piping length 5m

2.2 Temperature Sensor Parameter

Displayed Name	Range	Nominal working datas			Remark
		Cooling	Heating	Hot water	
T-outdoor	-40~150	-17~50	-35~37	-27~45	temperature sensor resistance 15K
T-suction	-40~150	5~30	-35~20	-25~30	temperature sensor resistance 20K
T-discharge	-30~150	30~102	35~102	35~102	temperature sensor resistance 50K
T-defrost	-40~150	20~57	-35~30	-25~40	temperature sensor resistance 20K
T-water in PE	-30~150	10~30	20~65	20~55	temperature sensor resistance 20K
T-water out PE	-30~150	5~25	25~60	25~60	temperature sensor resistance 20K
T-optional water Sen.	-30~150	5~25	25~60	25~60	temperature sensor resistance 50K
T-tank ctrl.	-30~150	/	/	10~80	temperature sensor resistance 50K
T-floor debug	-30~150	/	25~45	/	/
Debug time	-0~100	/	12~72	/	/
T-liquid pipe	-30~150	5~25	20~57	20~57	temperature sensor resistance 20K
T-gas pipe	-30~150	30~102	35~102	35~102	temperature sensor resistance 20K
T-economizer in	-30~150	no EVI under cooling	-20~55	-20~55	temperature sensor resistance 20K
T-economizer out	-30~150	no EVI under cooling	-20~55	-20~55	temperature sensor resistance 20K
T-remote room	-30~150	18~30	18~30	18~30	/
Dis. Pressure	-40~70	25~60	25~62	25~62	/
T-weather depend	-30~150	7~25	25~60	/	based on calculation

2.3 Work Pressure

Component	Range
High pressure sensor	4.5/3.8MPa(gauge)
Low pressure switch (cooling)	0.45/0.55MPa(gauge)
Low pressure switch (heating)	0.1/0.2 MPa(gauge)

2.4 Capacity, Power and Efficiency

(1) Single-phase units for cooling. Please see the table below.

(2) Three-phase units for cooling. Please see the table below.

(3) Single-phase units for heating. Please see the table below.

(4) Three-phase units for heating. Please see the table below.

(1) Single-phase units for cooling

GRS-CQ4.0Pd/NhH3-E

Ambient Temp(°C)	Outflow Water(°C)	7			8			9			10			11			12			13			14			15			18			20			23			25		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-15	Capacity	2.41	2.10	2.10	2.53	2.20	2.20	2.60	2.27	2.27	2.70	2.36	2.36	2.82	2.46	2.46	2.96	2.59	2.59	3.06	2.67	2.67	3.21	2.80	2.80	3.35	2.92	2.92	3.61	3.15	3.15	3.92	3.42	3.42	3.99	3.48	3.48	4.07	3.55	3.55
	Power	0.41	0.36	0.35	0.42	0.36	0.36	0.42	0.36	0.36	0.42	0.36	0.36	0.42	0.37	0.37	0.43	0.37	0.37	0.43	0.38	0.37	0.44	0.38	0.38	0.45	0.39	0.39	0.45	0.39	0.39	0.46	0.40	0.40	0.44	0.38	0.38	0.43	0.37	0.37
	Efficiency	5.85	5.88	5.92	6.06	6.09	6.13	6.26	6.29	6.33	6.46	6.49	6.54	6.66	6.69	6.74	6.86	6.90	6.94	7.07	7.10	7.15	7.27	7.30	7.35	7.47	7.51	7.56	8.08	8.11	8.17	8.47	8.51	8.57	9.08	9.12	9.19	9.48	9.53	9.59
-10	Capacity	2.94	2.56	2.56	3.08	2.69	2.69	3.18	2.77	2.77	3.30	2.88	2.88	3.44	3.00	3.00	3.62	3.16	3.16	3.74	3.26	3.26	3.91	3.41	3.41	4.09	3.57	3.57	4.41	3.84	3.84	4.79	4.18	4.18	4.88	4.25	4.25	4.96	4.33	4.33
	Power	0.60	0.52	0.52	0.61	0.53	0.52	0.60	0.53	0.52	0.61	0.53	0.52	0.62	0.53	0.53	0.63	0.55	0.54	0.63	0.55	0.54	0.64	0.56	0.55	0.65	0.57	0.56	0.65	0.56	0.56	0.67	0.58	0.58	0.64	0.56	0.55	0.62	0.54	0.54
	Efficiency	4.91	4.94	4.97	5.09	5.11	5.15	5.26	5.28	5.32	5.43	5.45	5.49	5.59	5.62	5.66	5.76	5.79	5.83	5.93	5.96	6.00	6.10	6.13	6.17	6.27	6.30	6.35	6.78	6.81	6.86	7.12	7.15	7.20	7.62	7.66	7.71	7.96	8.00	8.06
-5	Capacity	3.47	3.03	3.03	3.64	3.18	3.18	3.75	3.27	3.27	3.89	3.40	3.40	4.07	3.55	3.55	4.27	3.73	3.73	4.41	3.85	3.85	4.62	4.03	4.03	4.83	4.21	4.21	5.20	4.54	4.54	5.65	4.93	4.93	5.76	5.02	5.02	5.86	5.11	5.11
	Power	0.76	0.66	0.65	0.77	0.67	0.66	0.77	0.67	0.66	0.77	0.67	0.66	0.78	0.68	0.67	0.80	0.69	0.69	0.80	0.69	0.69	0.81	0.71	0.70	0.83	0.72	0.71	0.82	0.72	0.71	0.85	0.74	0.74	0.81	0.70	0.70	0.79	0.69	0.68
	Efficiency	4.58	4.60	4.63	4.74	4.76	4.79	4.89	4.92	4.95	5.05	5.08	5.11	5.21	5.23	5.27	5.37	5.39	5.43	5.53	5.55	5.59	5.68	5.71	5.75	5.84	5.87	5.91	6.32	6.35	6.39	6.63	6.66	6.70	7.10	7.13	7.18	7.42	7.45	7.50
0	Capacity	4.19	3.05	2.77	4.40	3.21	2.91	4.54	3.30	3.00	4.71	3.43	3.11	4.91	3.58	3.25	5.17	3.76	3.41	5.33	3.89	3.52	5.59	4.07	3.69	5.84	4.25	3.86	6.29	4.58	4.15	6.84	4.98	4.51	6.96	5.07	4.60	7.09	5.16	4.68
	Power	1.04	0.73	0.66	1.05	0.75	0.67	1.05	0.74	0.67	1.05	0.75	0.67	1.07	0.76	0.68	1.09	0.77	0.70	1.09	0.77	0.70	1.11	0.79	0.71	1.13	0.80	0.72	1.13	0.80	0.72	1.17	0.83	0.75	1.11	0.79	0.71	1.08	0.77	0.69
	Efficiency	4.04	4.16	4.18	4.18	4.30	4.33	4.32	4.44	4.48	4.46	4.59	4.62	4.60	4.73	4.76	4.74	4.87	4.91	4.88	5.02	5.05	5.02	5.16	5.20	5.16	5.30	5.34	5.58	5.73	5.77	5.85	6.02	6.06	6.27	6.45	6.49	6.55	6.73	6.78
5	Capacity	4.51	3.29	2.98	4.74	3.45	3.13	4.88	3.55	3.22	5.06	3.69	3.34	5.29	3.85	3.49	5.56	4.05	3.67	5.74	4.18	3.79	6.01	4.38	3.97	6.28	4.57	4.15	6.77	4.93	4.47	7.35	5.36	4.86	7.49	5.45	4.95	7.62	5.55	5.03
	Power	1.25	0.89	0.80	1.27	0.90	0.81	1.27	0.90	0.81	1.27	0.90	0.81	1.29	0.91	0.82	1.32	0.93	0.84	1.32	0.94	0.84	1.35	0.95	0.86	1.37	0.97	0.87	1.36	0.97	0.87	1.41	1.00	0.90	1.34	0.95	0.86	1.31	0.93	0.83
	Efficiency	3.60	3.70	3.72	3.72	3.83	3.85	3.85	3.96	3.98	3.97	4.08	4.11	4.09	4.21	4.24	4.22	4.34	4.37	4.34	4.47	4.50	4.47	4.59	4.62	4.59	4.72	4.75	4.96	5.10	5.14	5.21	5.36	5.39	5.58	5.74	5.78	5.83	5.99	6.03
10	Capacity	5.32	4.14	2.86	5.58	4.35	3.01	5.75	4.48	3.10	5.96	4.64	3.21	6.23	4.85	3.35	6.55	5.10	3.53	6.76	5.26	3.64	7.08	5.51	3.81	7.40	5.76	3.98	7.97	6.21	4.29	8.66	6.75	4.67	8.82	6.87	4.75	8.98	6.99	4.84
	Power	0.75	0.57	0.38	0.76	0.58	0.39	0.76	0.58	0.39	0.77	0.58	0.39	0.78	0.59	0.39	0.79	0.60	0.40	0.79	0.60	0.40	0.81	0.61	0.41	0.82	0.62	0.42	0.82	0.62	0.42	0.85	0.64	0.43	0.81	0.61	0.41	0.79	0.59	0.40
	Efficiency	7.06	7.26	7.49	7.31	7.52	7.75	7.55	7.77	8.01	7.79	8.02	8.26	8.04	8.27	8.52	8.28	8.52	8.78	8.52	8.77	9.04	8.77	9.02	9.30	9.01	9.27	9.56	9.74	10.02	10.33	10.22	10.52	10.84	10.95	11.27	11.61	11.44	11.77	12.13
15	Capacity	5.27	4.10	2.84	5.54	4.31	2.98	5.70	4.44	3.07	5.92	4.61	3.19	6.18	4.81	3.33	6.50	5.06	3.50	6.71	5.22	3.61	7.02	5.47	3.78	7.34	5.71	3.95	7.91	6.16	4.26	8.59	6.69	4.63	8.75	6.81	4.71	8.91	6.94	4.80
	Power	0.83	0.63	0.42	0.84	0.64	0.43	0.84	0.64	0.43	0.85	0.64	0.43	0.86	0.65	0.44	0.87	0.66	0.44	0.88	0.66	0.45	0.89	0.68	0.45	0.91	0.69	0.46	0.90	0.68	0.46	0.94	0.71	0.48	0.89	0.67	0.45	0.87	0.66	0.44
	Efficiency	6.34	6.52	6.72	6.56	6.75	6.95	6.78	6.97	7.18	6.99	7.20	7.42	7.21	7.42	7.65	7.43	7.65	7.88	7.65	7.87	8.11	7.87	8.10	8.34	8.09	8.32	8.58	8.74	9.00	9.27	9.17	9.44	9.73	9.83	10.11	10.42	10.27	10.56	10.89
20	Capacity	5.06	3.94	2.72	5.31	4.13	2.86	5.47	4.26	2.95	5.67	4.42	3.06	5.93	4.61	3.19	6.23	4.85	3.35	6.43	5.01	3.46	6.74	5.24	3.63	7.04	5.48	3.79	7.58	5.90	4.08	8.24	6.42	4.44	8.39	6.53	4.52	8.55	6.65	4.60
	Power	1.05	0.79	0.53	1.07	0.81	0.53	1.06	0.80	0.53	1.07	0.81	0.53	1.08	0.82	0.54	1.10	0.83	0.55	1.11	0.84	0.55	1.13	0.85	0.56	1.14	0.87	0.57	1.14	0.86	0.57	1.18	0.89	0.59	1.12	0.85	0.56	1.09	0.83	0.55
	Efficiency	4.82	4.96	5.18	4.99	5.13	5.36	5.15	5.30	5.54	5.32	5.47	5.72	5.48	5.64	5.90	5.65	5.82	6.08	5.82	5.99	6.26	5.98	6.16	6.44	6.15	6.33	6.62	6.65	6.84	7.15	6.97	7.18	7.50	7.47	7.69	8.04	7.81	8.03	8.40
25	Capacity	5.14	4.11	2.49	5.39	4.32	2.61	5.56	4.45	2.69	5.76	4.61	2.79	6.02	4.82	2.92	6.33	5.07	3.07	6.53	5.23	3.17	6.84	5.48	3.32	7.15	5.72	3.47	7.70	6.17	3.74	8.37	6.70	4.06	8.53	6.83	4.13	8.68	6.95	4.21
	Power	1.07	0.83	0.48	1.08	0.84	0.49	1.08	0.84	0.49	1.08	0.84	0.49	1.10	0.85	0.49	1.12	0.87	0.50	1.12	0.87	0.51	1.14	0.89	0.52	1.16	0.90	0.52	1.16	0.90	0.52	1.20	0.93	0.54	1.14	0.89	0.51	1.11	0.86	0.50
	Efficiency	4.82	4.96	5.18	4.99	5.13	5.36	5.15	5.30	5.54	5.32	5.47	5.72	5.48	5.64	5.90	5.65	5.82	6.08	5.82	5.99	6.26	5.98	6.16	6.44	6.15	6.33	6.62	6.65	6.84	7.15	6.97	7.18	7.50	7.47	7.69	8.04	7.81	8.03	8.40
30	Capacity	5.04	4.04	2.44	5.29	4.24	2.57	5.45	4.37	2.64	5.66	4.53	2.74	5.91	4.73	2.86	6.21	4.97	3.01	6.41	5.13	3.11	6.71	5.37	3.25	7.02	5.62	3.40	7.56	6.05	3.67	8.22	6.58	3.98	8.37	6.70	4.06	8.52	6.82	4.13
	Power	1.23	0.96	0.55	1.25	0.97	0.56	1.24	0.97	0.56	1.25	0.97	0.56	1.26	0.98	0.57	1.29	1.00	0.58	1.29	1.01	0.58	1.32	1.02	0.59	1.34	1.04	0.60	1.34	1.04	0.60	1.38	1.08	0.62	1.31	1.02	0.59	1.28	1.00	0.58
	Efficiency	4.10	4.22	4.41	4.25	4.37	4.57	4.39	4.52	4.72	4.53	4.66	4.87	4.67	4.81	5.03	4.81	4.95	5.18	4.95	5.10	5.33	5.10	5.25	5.48	5.24	5.39	5.64	5.66	5.83	6.09	5.94	6.12	6.39	6.37	6.55	6.85	6.65	6.84	7.15
35	Capacity	5.20	4.20	2.33	5.46	4.45	2.44	5.63	4.59	2.52	5.83	4.76	2.61	6.09	4.97	2.73	6.41	5.23	2.87	6.61	5.40	2.96	6.93	5.65	3.10	7.24	5.90	3.24	7.80	4.50	3.49	8.47	6.91	3.79	8.63	7.04	3.86	8.79	7.17	3.93
	Power	1.48	1.18	0.61	1.50	1.19	0.62	1.49	1.18	0.61	1.50	1.19	0.62	1.52	1.20	0.62	1.55	1.23	0.64	1.55	1.23	0.64	1.58	1.25	0.65	1.61	1.27	0.66	1.60	0.80	0.66	1.66	1.32	0.68	1.58	1.25	0.65	1.54	1.22	0.63
	Efficiency	3.52	3.55	3.84	3.65	3.76	3.97	3.77	3.88	4.11	3.89	4.01	4.24	4.01	4.13	4.37	4.13	4.26	4.50	4.26	4.38	4.64	4.38	4.51	4.77	4.50	4.63	4.90	4.86	5.60	5.30	5.10	5.25	5.56	5.47	5.63	5.96	5.71	5.88	6.22
40	Capacity	4.30	3.42	2.12	4.51	3.60	2.22	4.65	3.71	2.29	4.82	3.84	2.38	5.03	4.01	2.48	5.29	4.22	2.61	5.46	4.36	2.69	5.72	4.56	2.82	5.98	4.77	2.95	6.44	5.14	3.18	7.00	5.58	3.45	7.13	5.68	3.52	7.26	5.79	3.58
	Power	1.50	1.16	0.69	1.52	1.18	0.70	1.52	1.18	0.70	1.53	1.18	0.70	1.55	1.20	0.71	1.58	1.22	0.72	1.58	1.22	0.73	1.61	1.25	0.74	1.64	1.27	0.75	1.63	1.26	0.75	1.69	1.31	0.78	1.61	1.24	0.74	1.57	1.21	0.72
	Efficiency	2.86	2.95	3.07	2.96	3.05	3.18	3.06	3.15	3.28	3.16	3.25	3.39	3.26	3.35	3.50	3.36	3.45	3.60	3.45	3.56	3.71	3.55	3.66	3.81	3.65	3.76	3.92	3.95	4.06	4.24	4.14	4.26	4.45	4.44	4.57	4.76	4.64	4.77	4.98
45	Capacity	2.85	2.08	1.89	3.00	2.18	1.98	3.09	2.25	2.04	3.20	2.33	2.12	3.35	2.44	2.21	3.52	2.56	2.32	3.63	2.64	2.40	3.80	2.77	2.51	3.97	2.89	2.62	4.28	3.12	2.83	4.65	3.39	3.07	4.74	3.45	3.13	4.82	3.51	3.19
	Power	1.22	0.87	0.78	1.24	0.88	0.79	1.24	0.88	0.79	1.24	0.88	0.79	1.26	0.89	0.80	1.28	0.91	0.82	1.29	0.91	0.82	1.31	0.93	0.84	1.33	0.94	0.85	1.33	0.94	0.85	1.38	0.97	0.88	1.31	0.93	0.83	1.27	0.90	0.81
	Efficiency	2.34	2.40	2.42	2.42	2.49	2.50	2.50	2.57	2.59	2.58	2.65	2.67	2.66	2.73	2.75	2.74	2.82	2.84	2.82	2.90	2.92	2.90	2.98	3.00	2.98	3.07	3.09	3.22	3.31	3.34	3.38	3.48	3.50	3.62	3.73	3.75	3.79	3.89	3.92
48	Capacity	2.68	1.95	1.77	2.81	2.05	1.86	2.90	2.11	1.91	3.00	2.19	1.98	3.14	2.29	2.07	3.30	2.40	2.18	3.41	2.48	2.25	3.57	2.60	2.36	3.73	2.72	2.46	4.02	2.93	2.65	4.37	3.18	2.88	4.45	3.24	2.94	4.53	3.30	2.99
	Power	1.36	0.97	0.87	1.38	0.98	0.88	1.38	0.98	0.88	1.39	0.98	0.88	1.40	0.99	0.89	1.43	1.01	0.91	1.44	1.02	0.92	1.46	1.04	0.93	1.49	1.05	0.95	1.48	1.05	0.94	1.53	1.09	0.98	1.46	1.03	0.93	1.42	1.01	0.91
	Efficiency	1.97	2.02	2.03	2.03	2.09	2.11	2.10	2.16	2.18	2.17	2.23	2.25	2.24	2.30	2.32	2.31	2.37	2.39	2.37	2.44	2.46	2.44	2.51	2.53	2.51	2.58	2.60	2.71	2.79	2.81	2.85	2.93	2.95	3.05	3.14	3.16	3.18	3.27	3.30

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Ambient Temp(°C)	Outflow Water(°C)	7			8			9			10			11			12			13			14			15			18			20			23			25		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-15	Capacity	3.63	3.51	2.10	3.82	3.69	2.20	3.93	3.80	2.27	4.08	3.94	2.36	4.26	4.12	2.46	4.48	4.33	2.59	4.62	4.47	2.67	4.84	4.68	2.80	5.06	4.89	2.92	5.45	5.27	3.15	5.92	5.72	3.42	6.03	5.83	3.48	6.14	5.94	3.55
	Power	0.64	0.62	0.35	0.65	0.63	0.36	0.65	0.63	0.36	0.65	0.63	0.36	0.66	0.64	0.37	0.68	0.65	0.37	0.68	0.65	0.37	0.69	0.66	0.38	0.70	0.67	0.39	0.70	0.67	0.39	0.72	0.70	0.40	0.69	0.66	0.38	0.67	0.65	0.37
	Efficiency	5.65	5.67	5.92	5.85	5.87	6.13	6.04	6.07	6.33	6.23	6.27	6.54	6.43	6.46	6.74	6.62	6.66	6.94	6.82	6.85	7.15	7.01	7.05	7.35	7.21	7.24	7.56	7.79	7.83	8.17	8.18	8.22	8.57	8.76	8.80	9.19	9.15	9.20	9.59
-10	Capacity	4.44	4.29	2.56	4.66	4.50	2.69	4.80	4.64	2.77	4.98	4.81	2.88	5.20	5.02	3.00	5.47	5.28	3.16	5.64	5.45	3.26	5.91	5.71	3.41	6.18	5.97	3.57	6.66	6.43	3.84	7.23	6.99	4.18	7.37	7.12	4.25	7.50	7.25	4.33
	Power	0.94	0.90	0.52	0.95	0.91	0.52	0.95	0.91	0.52	0.95	0.91	0.52	0.96	0.93	0.53	0.98	0.94	0.54	0.99	0.95	0.54	1.00	0.96	0.55	1.02	0.98	0.56	1.02	0.98	0.56	1.05	1.01	0.58	1.00	0.96	0.55	0.98	0.94	0.54
	Efficiency	4.74	4.77	4.97	4.91	4.93	5.15	5.07	5.10	5.32	5.24	5.26	5.49	5.40	5.43	5.66	5.56	5.59	5.83	5.73	5.75	6.00	5.89	5.92	6.17	6.05	6.08	6.35	6.54	6.58	6.86	6.87	6.90	7.20	7.36	7.39	7.71	7.69	7.72	8.06
-5	Capacity	5.24	5.06	3.03	5.50	5.32	3.18	5.67	5.48	3.27	5.88	5.68	3.40	6.14	5.93	3.55	6.46	6.24	3.73	6.67	6.44	3.85	6.98	6.74	4.03	7.29	7.05	4.21	7.86	7.59	4.54	8.54	8.25	4.93	8.70	8.40	5.02	8.86	8.56	5.11
	Power	1.19	1.14	0.65	1.20	1.16	0.66	1.20	1.15	0.66	1.21	1.16	0.66	1.22	1.17	0.67	1.25	1.20	0.69	1.25	1.20	0.69	1.27	1.22	0.70	1.29	1.24	0.71	1.29	1.24	0.71	1.34	1.28	0.74	1.27	1.22	0.70	1.24	1.19	0.68
	Efficiency	4.42	4.44	4.63	4.57	4.59	4.79	4.72	4.75	4.95	4.88	4.90	5.11	5.03	5.05	5.27	5.18	5.21	5.43	5.33	5.36	5.59	5.49	5.51	5.75	5.64	5.67	5.91	6.10	6.12	6.39	6.40	6.43	6.70	6.85	6.89	7.18	7.16	7.19	7.50
0	Capacity	6.95	6.76	2.77	7.29	7.09	2.91	7.52	7.31	3.00	7.79	7.58	3.11	8.14	7.92	3.25	8.56	8.32	3.41	8.84	8.59	3.52	9.25	9.00	3.69	9.67	9.41	3.86	10.42	10.14	4.15	11.32	11.01	4.51	11.53	11.22	4.60	11.74	11.42	4.68
	Power	1.79	1.73	0.66	1.82	1.76	0.67	1.81	1.75	0.67	1.82	1.76	0.67	1.84	1.78	0.68	1.88	1.82	0.70	1.89	1.83	0.70	1.92	1.86	0.71	1.95	1.89	0.72	1.95	1.88	0.72	2.02	1.95	0.75	1.92	1.85	0.71	1.87	1.81	0.69
	Efficiency	3.88	3.90	4.18	4.02	4.03	4.33	4.15	4.17	4.48	4.28	4.30	4.62	4.42	4.44	4.76	4.55	4.57	4.91	4.68	4.71	5.05	4.82	4.84	5.20	4.95	4.98	5.34	5.35	5.38	5.77	5.62	5.64	6.06	6.02	6.05	6.49	6.29	6.32	6.78
5	Capacity	7.47	7.27	2.98	7.85	7.63	3.13	8.08	7.86	3.22	8.38	8.15	3.34	8.76	8.52	3.49	9.21	8.95	3.67	9.50	9.24	3.79	9.95	9.68	3.97	10.40	10.12	4.15	11.21	10.90	4.47	12.18	11.85	4.86	12.40	12.06	4.95	12.63	12.28	5.03
	Power	2.16	2.09	0.80	2.20	2.13	0.81	2.19	2.12	0.81	2.20	2.13	0.81	2.23	2.16	0.82	2.27	2.20	0.84	2.28	2.21	0.84	2.32	2.25	0.86	2.36	2.28	0.87	2.35	2.28	0.87	2.44	2.36	0.90	2.32	2.24	0.86	2.26	2.18	0.83
	Efficiency	3.45	3.47	3.72	3.57	3.59	3.85	3.69	3.71	3.98	3.81	3.83	4.11	3.93	3.95	4.24	4.05	4.07	4.37	4.17	4.19	4.50	4.29	4.31	4.62	4.41	4.43	4.75	4.76	4.79	5.14	5.00	5.02	5.39	5.36	5.38	5.78	5.59	5.62	6.03
10	Capacity	7.18	6.98	2.86	7.54	7.33	3.01	7.77	7.56	3.10	8.06	7.84	3.21	8.42	8.19	3.35	8.85	8.60	3.53	9.13	8.88	3.64	9.56	9.30	3.81	9.99	9.72	3.98	10.77	10.48	4.29	11.70	11.38	4.67	11.92	11.59	4.75	12.13	11.80	4.84
	Power	1.06	1.02	0.38	1.07	1.04	0.39	1.07	1.04	0.39	1.08	1.04	0.39	1.09	1.05	0.39	1.11	1.08	0.40	1.11	1.08	0.40	1.13	1.10	0.41	1.15	1.12	0.42	1.15	1.11	0.42	1.19	1.15	0.43	1.13	1.10	0.41	1.10	1.07	0.40
	Efficiency	6.79	6.82	7.49	7.02	7.06	7.75	7.26	7.29	8.01	7.49	7.53	8.26	7.73	7.77	8.52	7.96	8.00	8.78	8.19	8.24	9.04	8.43	8.47	9.30	8.66	8.71	9.56	9.37	9.41	10.33	9.83	9.88	10.84	10.53	10.58	11.61	11.00	11.05	12.13
15	Capacity	7.12	6.93	2.84	7.48	7.27	2.98	7.71	7.50	3.07	7.99	7.77	3.19	8.35	8.12	3.33	8.77	8.53	3.50	9.06	8.81	3.61	9.49	9.23	3.78	9.91	9.64	3.95	10.68	10.39	4.26	11.61	11.29	4.63	11.82	11.50	4.71	12.04	11.71	4.80
	Power	1.17	1.13	0.42	1.19	1.15	0.43	1.18	1.14	0.43	1.19	1.15	0.43	1.20	1.16	0.44	1.23	1.19	0.44	1.23	1.19	0.45	1.25	1.21	0.45	1.28	1.23	0.46	1.27	1.23	0.46	1.32	1.27	0.48	1.25	1.21	0.45	1.22	1.18	0.44
	Efficiency	6.09	6.12	6.72	6.30	6.34	6.95	6.51	6.55	7.18	6.72	6.76	7.42	6.93	6.97	7.65	7.14	7.18	7.88	7.35	7.39	8.11	7.56	7.60	8.34	7.77	7.81	8.58	8.41	8.45	9.27	8.82	8.86	9.73	9.45	9.50	10.42	9.87	9.92	10.89
20	Capacity	6.83	6.64	2.72	7.17	6.98	2.86	7.39	7.19	2.95	7.66	7.45	3.06	8.00	7.79	3.19	8.41	8.18	3.35	8.69	8.45	3.46	9.10	8.85	3.63	9.51	9.25	3.79	10.24	9.96	4.08	11.13	10.83	4.44	11.34	11.03	4.52	11.54	11.23	4.60
	Power	1.27	1.23	0.46	1.28	1.24	0.46	1.28	1.24	0.46	1.29	1.25	0.47	1.30	1.26	0.47	1.33	1.29	0.48	1.33	1.29	0.48	1.36	1.31	0.49	1.38	1.34	0.50	1.38	1.33	0.50	1.43	1.38	0.52	1.35	1.31	0.49	1.32	1.28	0.48
	Efficiency	5.39	5.42	5.95	5.58	5.61	6.16	5.77	5.80	6.36	5.96	5.99	6.57	6.14	6.17	6.77	6.33	6.36	6.98	6.51	6.55	7.18	6.70	6.73	7.39	6.89	6.92	7.60	7.44	7.48	8.21	7.81	7.85	8.62	8.37	8.41	9.23	8.74	8.79	9.64
25	Capacity	6.25	6.08	2.49	6.56	6.38	2.61	6.76	6.57	2.69	7.01	6.82	2.79	7.32	7.12	2.92	7.70	7.49	3.07	7.95	7.73	3.17	8.32	8.09	3.32	8.69	8.46	3.47	9.37	9.11	3.74	10.18	9.90	4.06	10.37	10.09	4.13	10.56	10.27	4.21
	Power	1.34	1.30	0.48	1.36	1.32	0.49	1.36	1.31	0.49	1.36	1.32	0.49	1.38	1.33	0.49	1.41	1.36	0.50	1.41	1.37	0.51	1.44	1.39	0.52	1.46	1.41	0.52	1.46	1.41	0.52	1.51	1.46	0.54	1.43	1.39	0.51	1.40	1.35	0.50
	Efficiency	4.66	4.69	5.18	4.83	4.85	5.36	4.99	5.01	5.54	5.15	5.17	5.72	5.31	5.34	5.90	5.47	5.50	6.08	5.63	5.66	6.26	5.79	5.82	6.44	5.95	5.98	6.62	6.44	6.47	7.15	6.75	6.79	7.50	7.23	7.27	8.04	7.56	7.59	8.40
30	Capacity	6.13	5.96	2.44	6.44	6.26	2.57	6.63	6.45	2.64	6.88	6.69	2.74	7.18	6.99	2.86	7.55	7.35	3.01	7.80	7.58	3.11	8.16	7.94	3.25	8.53	8.30	3.40	9.19	8.94	3.67	9.99	9.72	3.98	10.17	9.90	4.06	10.36	10.08	4.13
	Power	1.54	1.49	0.55	1.57	1.51	0.56	1.56	1.51	0.56	1.57	1.52	0.56	1.59	1.54	0.57	1.62	1.57	0.58	1.63	1.57	0.58	1.65	1.60	0.59	1.68	1.63	0.60	1.68	1.62	0.60	1.74	1.68	0.62	1.65	1.60	0.59	1.61	1.56	0.58
	Efficiency	3.97	3.99	4.41	4.11	4.13	4.57	4.25	4.27	4.72	4.39	4.41	4.87	4.52	4.55	5.03	4.66	4.68	5.18	4.80	4.82	5.33	4.93	4.96	5.48	5.07	5.10	5.64	5.48	5.51	6.09	5.75	5.78	6.39	6.16	6.19	6.85	6.44	6.47	7.15
35	Capacity	5.84	6.20	2.33	6.13	6.13	2.44	6.32	6.32	2.52	6.55	6.55	2.61	6.84	6.84	2.73	7.19	7.19	2.87	7.43	7.43	2.96	7.78	7.78	3.10	8.13	8.13	3.24	8.76	6.50	3.49	9.52	9.52	3.79	9.69	9.69	3.86	9.87	9.87	3.93
	Power	1.77	1.85	0.61	1.79	1.74	0.62	1.79	1.73	0.61	1.80	1.74	0.62	1.82	1.76	0.62	1.86	1.80	0.64	1.86	1.81	0.64	1.90	1.84	0.65	1.93	1.87	0.66	1.92	1.20	0.66	1.99	1.93	0.68	1.89	1.83	0.65	1.84	1.79	0.63
	Efficiency	3.30	3.35	3.84	3.42	3.53	3.97	3.53	3.64	4.11	3.64	3.76	4.24	3.76	3.88	4.37	3.87	4.00	4.50	3.98	4.11	4.64	4.10	4.23	4.77	4.21	4.35	4.90	4.55	5.40	5.30	4.78	4.93	5.56	5.12	5.28	5.96	5.35	5.52	6.22
40	Capacity	5.09	4.95	2.12	5.35	5.20	2.22	5.51	5.36	2.29	5.72	5.55	2.38	5.97	5.80	2.48	6.28	6.10	2.61	6.48	6.30	2.69	6.79	6.59	2.82	7.09	6.89	2.95	7.64	7.42	3.18	8.30	8.07	3.45	8.46	8.22	3.52	8.61	8.36	3.58
	Power	1.84	1.78	0.69	1.87	1.81	0.70	1.87	1.80	0.70	1.87	1.81	0.70	1.90	1.83	0.71	1.94	1.87	0.72	1.94	1.88	0.73	1.98	1.91	0.74	2.01	1.94	0.75	2.00	1.94	0.75	2.08	2.01	0.78	1.97	1.91	0.74	1.92	1.86	0.72
	Efficiency	2.76	2.78	3.07	2.86	2.87	3.18	2.96	2.97	3.28	3.05	3.07	3.39	3.15	3.16	3.50	3.24	3.26	3.60	3.34	3.35	3.71	3.43	3.45	3.81	3.53	3.55	3.92	3.81	3.83	4.24	4.00	4.02	4.45	4.29	4.31	4.76	4.48	4.50	4.98
45	Capacity	3.95	3.82	1.89	4.15	4.01	1.98	4.28	4.14	2.04	4.44	4.29	2.12	4.63	4.48	2.21	4.87	4.71	2.32	5.03	4.86	2.40	5.27	5.09	2.51	5.50	5.32	2.62	5.93	5.74	2.83	6.44	6.23	3.07	6.56	6.35	3.13	6.68	6.46	3.19
	Power	1.75	1.69	0.78	1.78	1.71	0.79	1.77	1.71	0.79	1.78	1.72	0.79	1.81	1.74	0.80	1.84	1.77	0.82	1.85	1.78	0.82	1.88	1.81	0.84	1.91	1.84	0.85	1.91	1.84	0.85	1.97	1.90	0.88	1.88	1.81	0.83	1.83	1.76	0.81
	Efficiency	2.25	2.26	2.42	2.33	2.34	2.50	2.41	2.42	2.59	2.49	2.50	2.67	2.57	2.58	2.75	2.64	2.66	2.84	2.72	2.73	2.92	2.80	2.81	3.00	2.88	2.89	3.09	3.11	3.12	3.34	3.26	3.28	3.50	3.50	3.51	3.75	3.65	3.67	3.92
48	Capacity	3.71	3.59	1.77	3.89	3.77	1.86	4.01	3.88	1.91	4.16	4.03	1.98	4.35	4.20	2.07	4.57	4.42	2.18	4.72	4.56	2.25	4.94	4.78	2.36	5.16	4.99	2.46	5.56	5.38	2.65	6.05	5.85	2.88	6.16	5.96	2.94	6.27	6.06	2.99
	Power	1.96	1.88	0.87	1.99	1.91	0.88	1.98	1.91	0.88	1.99	1.91	0.88	2.01	1.94	0.89	2.06	1.98	0.91	2.06	1.98	0.92	2.10	2.02	0.93	2.13	2.05	0.95	2.13	2.05	0.94	2.20	2.12	0.98	2.09	2.02	0.93	2.04	1.96	0.91
	Efficiency	1.90	1.90	2.03	1.96	1.97	2.11	2.03	2.04	2.18	2.09	2.10	2.25	2.16	2.17	2.32	2.22	2.23	2.39	2.29	2.30	2.46	2.35	2.37	2.53	2.42	2.43	2.60	2.62	2.63	2.81	2.74	2.76	2.95	2.94	2.96	3.16	3.07	3.09	3.30

GRS-CQ8.0Pd/NhH3-E

Ambient Temp(°C)	Outflow Water(°C)	7			8			9			10			11			12			13			14			15			18			20			23			25		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-15	Capacity	1.85	1.78	1.45	1.91	1.84	1.50	1.92	1.85	1.51	1.96	1.89	1.54	1.99	1.92	1.57	2.02	1.94	1.59	2.03	1.96	1.60	2.05	1.97	1.61	2.07	1.99	1.63	2.10	2.03	1.66	2.25	2.17	1.77	2.58	2.49	2.03	2.68	2.58	2.11
	Power	0.34	0.32	0.25	0.34	0.32	0.25	0.33	0.31	0.25	0.32	0.31	0.24	0.32	0.30	0.24	0.31	0.30	0.24	0.31	0.29	0.23	0.30	0.29	0.23	0.30	0.28	0.22	0.28	0.27	0.21	0.28	0.27	0.21	0.30	0.29	0.23	0.30	0.29	0.23
	Efficiency	5.49	5.54	5.74	5.68	5.73	5.94	5.87	5.92	6.14	6.06	6.11	6.34	6.25	6.31	6.54	6.44	6.50	6.73	6.63	6.69	6.93	6.82	6.88	7.13	7.01	7.07	7.33	7.58	7.64	7.92	7.95	8.02	8.31	8.52	8.59	8.91	8.90	8.97	9.30
-10	Capacity	2.02	1.95	1.59	2.08	2.01	1.64	2.10	2.02	1.65	2.14	2.06	1.68	2.18	2.10	1.72	2.21	2.13	1.74	2.22	2.14	1.75	2.24	2.16	1.76	2.26	2.18	1.78	2.30	2.22	1.81	2.46	2.37	1.94	2.83	2.72	2.22	2.93	2.82	2.30
	Power	0.44	0.42	0.33	0.44	0.42	0.33	0.43	0.41	0.32	0.42	0.40	0.32	0.42	0.40	0.31	0.41	0.39	0.31	0.40	0.38	0.30	0.39	0.37	0.29	0.38	0.37	0.29	0.36	0.35	0.27	0.37	0.35	0.28	0.40	0.38	0.30	0.39	0.37	0.29
	Efficiency	4.61	4.65	4.82	4.77	4.81	4.99	4.93	4.97	5.16	5.09	5.13	5.32	5.25	5.29	5.49	5.41	5.46	5.65	5.57	5.62	5.82	5.73	5.78	5.99	5.89	5.94	6.15	6.36	6.42	6.65	6.68	6.73	6.98	7.15	7.22	7.48	7.47	7.54	7.81
-5	Capacity	3.06	2.95	2.41	3.16	3.04	2.48	3.18	3.06	2.50	3.24	3.12	2.55	3.30	3.18	2.60	3.34	3.22	2.63	3.36	3.24	2.65	3.39	3.27	2.67	3.43	3.30	2.69	3.49	3.36	2.74	3.73	3.60	2.94	4.28	4.13	3.37	4.43	4.27	3.49
	Power	0.71	0.68	0.54	0.71	0.68	0.53	0.69	0.66	0.52	0.68	0.65	0.51	0.68	0.65	0.51	0.66	0.63	0.50	0.65	0.62	0.49	0.64	0.61	0.48	0.62	0.60	0.47	0.59	0.56	0.44	0.60	0.57	0.45	0.64	0.61	0.48	0.64	0.61	0.48
	Efficiency	4.29	4.33	4.49	4.44	4.48	4.65	4.59	4.63	4.80	4.74	4.78	4.96	4.89	4.93	5.11	5.04	5.08	5.27	5.19	5.23	5.42	5.33	5.38	5.58	5.48	5.53	5.73	5.93	5.98	6.20	6.22	6.27	6.50	6.66	6.72	6.97	6.96	7.02	7.28
0	Capacity	4.64	4.33	3.11	4.78	4.47	3.20	4.82	4.50	3.23	4.91	4.59	3.29	5.01	4.67	3.35	5.06	4.73	3.39	5.10	4.76	3.42	5.14	4.80	3.45	5.19	4.85	3.48	5.28	4.93	3.54	5.65	5.28	3.79	6.49	6.06	4.35	6.72	6.27	4.50
	Power	1.23	1.13	0.76	1.22	1.12	0.76	1.19	1.10	0.74	1.18	1.08	0.73	1.16	1.07	0.72	1.14	1.05	0.71	1.12	1.03	0.70	1.10	1.01	0.68	1.08	0.99	0.67	1.01	0.93	0.63	1.03	0.95	0.64	1.11	1.02	0.69	1.10	1.01	0.68
	Efficiency	3.78	3.84	4.07	3.91	3.97	4.21	4.05	4.10	4.35	4.18	4.24	4.49	4.31	4.37	4.63	4.44	4.50	4.77	4.57	4.63	4.91	4.70	4.77	5.05	4.83	4.90	5.19	5.22	5.29	5.61	5.48	5.56	5.89	5.87	5.95	6.31	6.13	6.22	6.59
5	Capacity	5.62	5.25	3.77	5.80	5.42	3.89	5.85	5.46	3.92	5.96	5.57	3.99	6.07	5.67	4.07	6.14	5.73	4.11	6.19	5.78	4.14	6.24	5.83	4.18	6.30	5.88	4.22	6.41	5.99	4.29	6.86	6.41	4.60	7.87	7.35	5.27	8.15	7.61	5.46
	Power	1.67	1.54	1.04	1.67	1.53	1.04	1.62	1.50	1.01	1.60	1.48	1.00	1.58	1.46	0.99	1.56	1.43	0.97	1.52	1.40	0.95	1.49	1.37	0.93	1.47	1.35	0.91	1.38	1.27	0.86	1.41	1.30	0.88	1.51	1.39	0.94	1.50	1.38	0.93
	Efficiency	3.37	3.41	3.62	3.48	3.53	3.74	3.60	3.65	3.87	3.72	3.77	3.99	3.83	3.89	4.12	3.95	4.01	4.24	4.06	4.12	4.37	4.18	4.24	4.49	4.30	4.36	4.62	4.64	4.71	4.99	4.87	4.94	5.24	5.22	5.30	5.61	5.45	5.53	5.86
10	Capacity	8.06	7.23	4.84	8.32	7.46	5.00	8.38	7.52	5.04	8.54	7.66	5.13	8.71	7.81	5.23	8.80	7.90	5.29	8.87	7.95	5.33	8.95	8.03	5.38	9.03	8.10	5.43	9.19	8.24	5.52	9.83	8.82	5.91	11.29	10.12	6.78	11.69	10.48	7.02
	Power	1.22	1.07	0.67	1.22	1.07	0.66	1.19	1.04	0.65	1.17	1.03	0.64	1.16	1.01	0.63	1.14	0.99	0.62	1.11	0.97	0.61	1.09	0.96	0.60	1.07	0.94	0.58	1.01	0.88	0.55	1.03	0.90	0.56	1.10	0.96	0.60	1.09	0.96	0.60
	Efficiency	6.59	6.77	7.27	6.82	7.00	7.53	7.05	7.24	7.78	7.28	7.47	8.03	7.50	7.70	8.28	7.73	7.94	8.53	7.96	8.17	8.78	8.19	8.40	9.03	8.41	8.64	9.28	9.10	9.34	10.04	9.54	9.80	10.53	10.23	10.50	11.28	10.68	10.97	11.79
15	Capacity	7.92	7.11	4.76	8.18	7.33	4.91	8.24	7.39	4.95	8.40	7.53	5.05	8.56	7.68	5.14	8.65	7.76	5.20	8.72	7.82	5.24	8.80	7.89	5.28	8.87	7.96	5.33	9.03	8.10	5.43	9.67	8.67	5.81	11.09	9.95	6.67	11.49	10.31	6.90
	Power	1.34	1.17	0.73	1.34	1.17	0.73	1.30	1.14	0.71	1.29	1.12	0.70	1.27	1.11	0.69	1.25	1.09	0.68	1.22	1.07	0.66	1.20	1.05	0.65	1.18	1.03	0.64	1.11	0.97	0.60	1.13	0.99	0.61	1.21	1.06	0.66	1.20	1.05	0.65
	Efficiency	5.92	6.07	6.53	6.12	6.29	6.76	6.33	6.49	6.98	6.53	6.70	7.21	6.73	6.91	7.43	6.94	7.12	7.66	7.14	7.33	7.88	7.35	7.54	8.11	7.55	7.75	8.33	8.16	8.38	9.01	8.56	8.79	9.45	9.18	9.42	10.13	9.59	9.84	10.58
20	Capacity	7.58	6.80	4.55	7.82	7.02	4.70	7.88	7.07	4.74	8.03	7.21	4.83	8.19	7.34	4.92	8.28	7.42	4.97	8.34	7.48	5.01	8.41	7.55	5.05	8.49	7.61	5.10	8.64	7.75	5.19	9.25	8.29	5.56	10.61	9.52	6.38	10.99	9.86	6.60
	Power	1.45	1.26	0.79	1.44	1.26	0.79	1.41	1.23	0.77	1.39	1.21	0.76	1.37	1.20	0.75	1.35	1.18	0.73	1.32	1.15	0.72	1.29	1.13	0.70	1.27	1.11	0.69	1.20	1.04	0.65	1.22	1.06	0.66	1.31	1.14	0.71	1.29	1.13	0.70
	Efficiency	5.24	5.38	5.78	5.42	5.57	5.98	5.60	5.75	6.18	5.78	5.94	6.38	5.96	6.12	6.58	6.15	6.31	6.78	6.33	6.49	6.98	6.51	6.68	7.18	6.69	6.87	7.38	7.23	7.42	7.98	7.59	7.79	8.37	8.13	8.34	8.97	8.49	8.72	9.37
25	Capacity	7.88	7.44	4.47	8.14	7.68	4.61	8.20	7.74	4.65	8.36	7.89	4.74	8.51	8.04	4.83	8.61	8.13	4.88	8.67	8.19	4.92	8.75	8.26	4.96	8.83	8.33	5.01	8.99	8.48	5.10	9.62	9.08	5.45	11.04	10.42	6.26	11.43	10.79	6.48
	Power	1.75	1.63	0.89	1.75	1.63	0.89	1.71	1.59	0.86	1.68	1.57	0.85	1.66	1.55	0.84	1.63	1.52	0.83	1.60	1.49	0.81	1.57	1.46	0.79	1.54	1.43	0.78	1.45	1.35	0.73	1.48	1.37	0.75	1.58	1.47	0.80	1.57	1.46	0.79
	Efficiency	4.50	4.56	5.04	4.65	4.72	5.21	4.81	4.88	5.39	4.96	5.04	5.56	5.12	5.19	5.73	5.27	5.35	5.91	5.43	5.51	6.08	5.58	5.67	6.25	5.74	5.82	6.43	6.20	6.30	6.95	6.51	6.61	7.29	6.97	7.08	7.81	7.28	7.39	8.16
30	Capacity	8.84	7.67	4.35	9.12	7.91	4.49	9.19	7.97	4.52	9.37	8.12	4.61	9.55	8.28	4.69	9.65	8.37	4.75	9.73	8.43	4.78	9.81	8.51	4.83	9.90	8.58	4.87	10.08	8.74	4.96	10.79	9.35	5.30	12.38	10.73	6.09	12.82	11.11	6.30
	Power	2.41	2.00	1.01	2.40	2.00	1.01	2.34	1.95	0.99	2.31	1.92	0.97	2.29	1.90	0.96	2.24	1.86	0.94	2.20	1.82	0.92	2.15	1.79	0.91	2.11	1.76	0.89	1.99	1.65	0.84	2.03	1.69	0.85	2.17	1.81	0.91	2.16	1.79	0.91
	Efficiency	3.67	3.83	4.29	3.80	3.96	4.44	3.92	4.10	4.59	4.05	4.23	4.74	4.18	4.36	4.88	4.30	4.49	5.03	4.43	4.62	5.18	4.56	4.76	5.33	4.68	4.89	5.48	5.06	5.28	5.92	5.31	5.55	6.21	5.69	5.94	6.66	5.94	6.21	6.95
35	Capacity	8.42	7.30	4.14	8.69	7.53	4.27	8.76	7.59	4.31	8.93	7.74	4.39	9.09	7.88	4.47	9.19	7.97	4.52	9.26	8.03	4.55	9.35	8.10	4.60	9.43	8.18	4.64	9.60	8.40	4.72	10.27	8.91	5.05	11.79	10.22	5.80	12.21	10.59	6.00
	Power	2.64	2.15	1.11	2.63	2.19	1.11	2.57	2.13	1.08	2.53	2.10	1.07	2.50	2.08	1.05	2.46	2.04	1.03	2.40	2.00	1.01	2.36	1.96	0.99	2.32	1.92	0.97	2.18	1.63	0.92	2.22	1.85	0.94	2.38	1.98	1.00	2.36	1.96	0.99
	Efficiency	3.19	3.40	3.73	3.30	3.45	3.86	3.41	3.56	3.99	3.52	3.68	4.12	3.63	3.79	4.25	3.74	3.91	4.38	3.85	4.02	4.50	3.96	4.14	4.63	4.07	4.25	4.76	4.40	5.15	5.15	4.62	4.82	5.40	4.95	5.17	5.79	5.17	5.40	6.04
40	Capacity	5.22	4.82	3.23	5.39	4.97	3.33	5.43	5.01	3.36	5.53	5.11	3.42	5.64	5.21	3.49	5.70	5.26	3.53	5.74	5.30	3.55	5.79	5.35	3.58	5.84	5.40	3.62	5.95	5.50	3.68	6.37	5.88	3.94	7.31	6.75	4.52	7.57	6.99	4.68
	Power	1.91	1.74	1.08	1.91	1.73	1.08	1.86	1.69	1.05	1.84	1.67	1.04	1.81	1.65	1.03	1.78	1.62	1.01	1.74	1.58	0.99	1.71	1.55	0.97	1.68	1.52	0.95	1.58	1.43	0.89	1.61	1.46	0.91	1.73	1.57	0.98	1.71	1.55	0.97
	Efficiency	2.73	2.78	2.98	2.82	2.87	3.09	2.92	2.97	3.19	3.01	3.06	3.29	3.11	3.16	3.40	3.20	3.26	3.50	3.29	3.35	3.60	3.39	3.45	3.71	3.48	3.54	3.81	3.76	3.83	4.12	3.95	4.02	4.32	4.23	4.31	4.63	4.42	4.50	4.84
45	Capacity	3.16	3.09	2.82	3.26	3.19	2.91	3.29	3.21	2.93	3.35	3.27	2.98	3.41	3.33	3.04	3.45	3.37	3.07	3.48	3.40	3.10	3.51	3.43	3.12	3.54	3.46	3.15	3.60	3.52	3.21	3.86	3.77	3.43	4.43	4.32	3.94	4.58	4.48	4.08
	Power	1.37	1.33	1.20	1.36	1.33	1.19	1.33	1.29	1.16	1.31	1.28	1.15	1.30	1.26	1.14	1.27	1.24	1.12	1.25	1.21	1.09	1.22	1.19	1.07	1.20	1.17	1.05	1.13	1.10	0.99	1.15	1.12	1.01	1.23	1.20	1.08	1.22	1.19	1.07
	Efficiency	2.31	2.32	2.35	2.39	2.40	2.43	2.47	2.48	2.51	2.55	2.56	2.59	2.63	2.64	2.68	2.71	2.72	2.76	2.79	2.80	2.84	2.87	2.88	2.92	2.95	2.96	3.00	3.19	3.20	3.24	3.35	3.36	3.40	3.59	3.60	3.65	3.75	3.76	3.81
48	Capacity	2.93	2.86	2.61	3.02	2.95	2.69	3.05	2.97	2.71	3.11	3.03	2.76	3.16	3.09	2.82	3.20	3.12	2.85	3.22	3.15	2.87	3.25	3.17	2.90	3.28	3.20	2.92	3.34	3.26	2.97	3.57	3.49	3.18	4.10	4.00	3.65	4.25	4.15	3.78
	Power	1.51	1.47	1.32	1.50	1.46	1.32	1.46	1.43	1.28	1.45	1.41	1.27	1.43	1.39	1.25	1.40	1.37	1.23	1.37	1.34	1.20	1.35	1.31	1.18	1.32	1.29	1.16	1.24	1.21	1.09	1.27	1.24	1.11	1.36	1.32	1.19	1.35	1.31	1.18
	Efficiency	1.95	1.95	1.98	2.01	2.02	2.05	2.08	2.09	2.11	2.15	2.15	2.18	2.21	2.22	2.25	2.28	2.29	2.32	2.35	2.36	2.39	2.42	2.42	2.46	2.48	2.49	2.52	2.68	2.69	2.73	2.82	2.82	2.86	3.02	3.03	3.07	3.15	3.16	3.20

GRS-CQ10Pd/NhH3-E

Ambient Temp(°C)	Outflow Water(°C)	7			8			9			10			11			12			13			14			15			18			20			23			25		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-15	Capacity	1.98	1.85	1.45	2.04	1.91	1.50	2.06	1.92	1.51	2.10	1.96	1.54	2.14	1.99	1.57	2.16	2.02	1.59	2.18	2.03	1.60	2.20	2.05	1.61	2.21	2.07	1.63	2.25	2.10	1.66	2.41	2.25	1.77	2.77	2.58	2.03	2.87	2.68	2.11
	Power	0.37	0.34	0.25	0.36	0.34	0.25	0.36	0.33	0.25	0.35	0.32	0.24	0.35	0.32	0.24	0.34	0.31	0.24	0.33	0.31	0.23	0.33	0.30	0.23	0.32	0.30	0.22	0.30	0.28	0.21	0.31	0.28	0.21	0.33	0.30	0.23	0.33	0.30	0.23
	Efficiency	5.41	5.49	5.74	5.60	5.68	5.94	5.79	5.87	6.14	5.98	6.06	6.34	6.16	6.25	6.54	6.35	6.44	6.73	6.54	6.63	6.93	6.72	6.82	7.13	6.91	7.01	7.33	7.47	7.58	7.92	7.84	7.95	8.31	8.40	8.52	8.91	8.77	8.90	9.30
-10	Capacity	2.16	2.02	1.59	2.23	2.08	1.64	2.25	2.10	1.65	2.29	2.14	1.68	2.34	2.18	1.72	2.36	2.21	1.74	2.38	2.22	1.75	2.40	2.24	1.76	2.42	2.26	1.78	2.47	2.30	1.81	2.64	2.46	1.94	3.03	2.83	2.22	3.14	2.93	2.30
	Power	0.48	0.44	0.33	0.47	0.44	0.33	0.46	0.43	0.32	0.46	0.42	0.32	0.45	0.42	0.31	0.44	0.41	0.31	0.43	0.40	0.30	0.43	0.39	0.29	0.42	0.38	0.29	0.39	0.36	0.27	0.40	0.37	0.28	0.43	0.40	0.30	0.43	0.39	0.29
	Efficiency	4.55	4.61	4.82	4.70	4.77	4.99	4.86	4.93	5.16	5.02	5.09	5.32	5.18	5.25	5.49	5.33	5.41	5.65	5.49	5.57	5.82	5.65	5.73	5.99	5.80	5.89	6.15	6.27	6.36	6.65	6.58	6.68	6.98	7.05	7.15	7.48	7.37	7.47	7.81
-5	Capacity	3.28	3.06	2.41	3.38	3.16	2.48	3.41	3.18	2.50	3.47	3.24	2.55	3.54	3.30	2.60	3.58	3.34	2.63	3.60	3.36	2.65	3.64	3.39	2.67	3.67	3.43	2.69	3.73	3.49	2.74	4.00	3.73	2.94	4.59	4.28	3.37	4.75	4.43	3.49
	Power	0.77	0.71	0.54	0.77	0.71	0.53	0.75	0.69	0.52	0.74	0.68	0.51	0.73	0.68	0.51	0.72	0.66	0.50	0.70	0.65	0.49	0.69	0.64	0.48	0.68	0.62	0.47	0.64	0.59	0.44	0.65	0.60	0.45	0.70	0.64	0.48	0.69	0.64	0.48
	Efficiency	4.23	4.29	4.49	4.38	4.44	4.65	4.53	4.59	4.80	4.67	4.74	4.96	4.82	4.89	5.11	4.97	5.04	5.27	5.11	5.19	5.42	5.26	5.33	5.58	5.40	5.48	5.73	5.84	5.93	6.20	6.13	6.22	6.50	6.57	6.66	6.97	6.86	6.96	7.28
0	Capacity	5.17	4.64	3.11	5.33	4.78	3.20	5.37	4.82	3.23	5.48	4.91	3.29	5.58	5.01	3.35	5.64	5.06	3.39	5.68	5.10	3.42	5.74	5.14	3.45	5.79	5.19	3.48	5.89	5.28	3.54	6.30	5.65	3.79	7.23	6.49	4.35	7.49	6.72	4.50
	Power	1.40	1.23	0.76	1.40	1.22	0.76	1.36	1.19	0.74	1.35	1.18	0.73	1.33	1.16	0.72	1.31	1.14	0.71	1.28	1.12	0.70	1.25	1.10	0.68	1.23	1.08	0.67	1.16	1.01	0.63	1.18	1.03	0.64	1.27	1.11	0.69	1.26	1.10	0.68
	Efficiency	3.68	3.78	4.07	3.81	3.91	4.21	3.94	4.05	4.35	4.07	4.18	4.49	4.19	4.31	4.63	4.32	4.44	4.77	4.45	4.57	4.91	4.58	4.70	5.05	4.70	4.83	5.19	5.08	5.22	5.61	5.33	5.48	5.89	5.72	5.87	6.31	5.97	6.13	6.59
5	Capacity	6.27	5.62	3.77	6.47	5.80	3.89	6.52	5.85	3.92	6.65	5.96	3.99	6.77	6.07	4.07	6.85	6.14	4.11	6.90	6.19	4.14	6.96	6.24	4.18	7.02	6.30	4.22	7.15	6.41	4.29	7.65	6.86	4.60	8.78	7.87	5.27	9.09	8.15	5.46
	Power	1.91	1.67	1.04	1.91	1.67	1.04	1.86	1.62	1.01	1.84	1.60	1.00	1.81	1.58	0.99	1.78	1.56	0.97	1.74	1.52	0.95	1.71	1.49	0.93	1.68	1.47	0.91	1.58	1.38	0.86	1.61	1.41	0.88	1.73	1.51	0.94	1.71	1.50	0.93
	Efficiency	3.28	3.37	3.62	3.39	3.48	3.74	3.51	3.60	3.87	3.62	3.72	3.99	3.73	3.83	4.12	3.85	3.95	4.24	3.96	4.06	4.37	4.07	4.18	4.49	4.19	4.30	4.62	4.52	4.64	4.99	4.75	4.87	5.24	5.09	5.22	5.61	5.31	5.45	5.86
10	Capacity	9.14	8.54	4.84	9.43	8.81	5.00	9.50	8.88	5.04	9.69	9.05	5.13	9.87	9.22	5.23	9.98	9.33	5.29	10.05	9.40	5.33	10.14	9.48	5.38	10.23	9.57	5.43	10.42	9.74	5.52	11.15	10.42	5.91	12.79	11.96	6.78	13.25	12.38	7.02
	Power	1.44	1.32	0.67	1.43	1.31	0.66	1.40	1.28	0.65	1.38	1.26	0.64	1.36	1.25	0.63	1.34	1.22	0.62	1.31	1.20	0.61	1.28	1.18	0.60	1.26	1.15	0.58	1.19	1.09	0.55	1.21	1.11	0.56	1.30	1.19	0.60	1.29	1.18	0.60
	Efficiency	6.36	6.49	7.27	6.58	6.72	7.53	6.80	6.94	7.78	7.02	7.17	8.03	7.24	7.39	8.28	7.46	7.62	8.53	7.68	7.84	8.78	7.90	8.06	9.03	8.11	8.29	9.28	8.77	8.96	10.04	9.20	9.40	10.53	9.86	10.07	11.28	10.30	10.52	11.79
15	Capacity	8.98	8.40	4.76	9.27	8.66	4.91	9.34	8.73	4.95	9.52	8.90	5.05	9.70	9.07	5.14	9.81	9.17	5.20	9.88	9.23	5.24	9.97	9.32	5.28	10.06	9.40	5.33	10.24	9.57	5.43	10.96	10.24	5.81	12.57	11.75	6.67	13.02	12.17	6.90
	Power	1.57	1.44	0.73	1.57	1.44	0.73	1.53	1.40	0.71	1.51	1.38	0.70	1.49	1.37	0.69	1.47	1.34	0.68	1.43	1.31	0.66	1.41	1.29	0.65	1.38	1.26	0.64	1.30	1.19	0.60	1.33	1.21	0.61	1.42	1.30	0.66	1.41	1.29	0.65
	Efficiency	5.71	5.83	6.53	5.90	6.03	6.76	6.10	6.23	6.98	6.30	6.43	7.21	6.50	6.63	7.43	6.69	6.84	7.66	6.89	7.04	7.88	7.09	7.24	8.11	7.28	7.44	8.33	7.87	8.04	9.01	8.26	8.44	9.45	8.85	9.04	10.13	9.24	9.44	10.58
20	Capacity	8.59	8.03	4.55	8.87	8.29	4.70	8.93	8.35	4.74	9.11	8.51	4.83	9.28	8.67	4.92	9.38	8.77	4.97	9.45	8.83	5.01	9.54	8.91	5.05	9.62	8.99	5.10	9.79	9.15	5.19	10.48	9.80	5.56	12.03	11.24	6.38	12.46	11.64	6.60
	Power	1.70	1.56	0.79	1.70	1.55	0.79	1.65	1.51	0.77	1.63	1.49	0.76	1.61	1.48	0.75	1.58	1.45	0.73	1.55	1.42	0.72	1.52	1.39	0.70	1.49	1.37	0.69	1.40	1.29	0.65	1.43	1.31	0.66	1.53	1.40	0.71	1.52	1.39	0.70
	Efficiency	5.05	5.16	5.78	5.23	5.34	5.98	5.40	5.52	6.18	5.58	5.70	6.38	5.75	5.88	6.58	5.93	6.05	6.78	6.10	6.23	6.98	6.28	6.41	7.18	6.45	6.59	7.38	6.97	7.12	7.98	7.32	7.47	8.37	7.84	8.01	8.97	8.19	8.36	9.37
25	Capacity	9.09	7.88	4.47	9.38	8.14	4.61	9.46	8.20	4.65	9.64	8.36	4.74	9.82	8.51	4.83	9.93	8.61	4.88	10.00	8.67	4.92	10.09	8.75	4.96	10.18	8.83	5.01	10.37	8.99	5.10	11.09	9.62	5.45	12.73	11.04	6.26	13.19	11.43	6.48
	Power	2.11	1.75	0.89	2.11	1.75	0.89	2.05	1.71	0.86	2.03	1.68	0.85	2.00	1.66	0.84	1.97	1.63	0.83	1.92	1.60	0.81	1.89	1.57	0.79	1.85	1.54	0.78	1.74	1.45	0.73	1.78	1.48	0.75	1.91	1.58	0.80	1.89	1.57	0.79
	Efficiency	4.31	4.50	5.04	4.46	4.65	5.21	4.61	4.81	5.39	4.75	4.96	5.56	4.90	5.12	5.73	5.05	5.27	5.91	5.20	5.43	6.08	5.35	5.58	6.25	5.50	5.74	6.43	5.94	6.20	6.95	6.24	6.51	7.29	6.68	6.97	7.81	6.98	7.28	8.16
30	Capacity	9.60	8.95	4.35	9.90	9.23	4.49	9.98	9.30	4.52	10.17	9.48	4.61	10.36	9.66	4.69	10.48	9.77	4.75	10.56	9.84	4.78	10.65	9.93	4.83	10.75	10.02	4.87	10.94	10.20	4.96	11.71	10.91	5.30	13.44	12.52	6.09	13.92	12.97	6.30
	Power	2.70	2.45	1.01	2.69	2.45	1.01	2.63	2.39	0.99	2.59	2.36	0.97	2.56	2.33	0.96	2.51	2.28	0.94	2.46	2.24	0.92	2.41	2.19	0.91	2.37	2.15	0.89	2.23	2.03	0.84	2.28	2.07	0.85	2.44	2.21	0.91	2.42	2.20	0.91
	Efficiency	3.55	3.65	4.29	3.68	3.77	4.44	3.80	3.90	4.59	3.92	4.02	4.74	4.05	4.15	4.88	4.17	4.28	5.03	4.29	4.40	5.18	4.41	4.53	5.33	4.54	4.65	5.48	4.90	5.03	5.92	5.15	5.28	6.21	5.51	5.66	6.66	5.76	5.91	6.95
35	Capacity	9.14	8.70	4.14	9.43	8.79	4.27	9.51	8.86	4.31	9.69	9.03	4.39	9.87	9.20	4.47	9.98	9.30	4.52	10.05	9.37	4.55	10.15	9.46	4.60	10.24	9.54	4.64	10.42	10.20	4.72	11.15	10.39	5.05	12.80	11.93	5.80	13.25	12.35	6.00
	Power	2.96	2.68	1.11	2.95	2.68	1.11	2.88	2.61	1.08	2.84	2.58	1.07	2.81	2.55	1.05	2.75	2.50	1.03	2.69	2.45	1.01	2.64	2.40	0.99	2.60	2.36	0.97	2.44	2.15	0.92	2.49	2.26	0.94	2.67	2.43	1.00	2.65	2.40	0.99
	Efficiency	3.09	3.25	3.73	3.20	3.28	3.86	3.30	3.39	3.99	3.41	3.50	4.12	3.52	3.61	4.25	3.62	3.72	4.38	3.73	3.83	4.50	3.84	3.94	4.63	3.94	4.05	4.76	4.26	4.75	5.15	4.47	4.59	5.40	4.79	4.92	5.79	5.01	5.14	6.04
40	Capacity	5.77	5.37	3.23	5.96	5.55	3.33	6.00	5.59	3.36	6.12	5.70	3.42	6.23	5.80	3.49	6.30	5.87	3.53	6.35	5.91	3.55	6.41	5.97	3.58	6.46	6.02	3.62	6.58	6.13	3.68	7.04	6.56	3.94	8.08	7.52	4.52	8.37	7.79	4.68
	Power	2.17	1.99	1.08	2.17	1.98	1.08	2.11	1.93	1.05	2.09	1.91	1.04	2.06	1.89	1.03	2.02	1.85	1.01	1.98	1.81	0.99	1.94	1.78	0.97	1.91	1.74	0.95	1.80	1.64	0.89	1.83	1.67	0.91	1.96	1.79	0.98	1.94	1.78	0.97
	Efficiency	2.66	2.70	2.98	2.75	2.80	3.09	2.84	2.89	3.19	2.93	2.99	3.29	3.02	3.08	3.40	3.12	3.17	3.50	3.21	3.27	3.60	3.30	3.36	3.71	3.39	3.45	3.81	3.67	3.73	4.12	3.85	3.92	4.32	4.12	4.20	4.63	4.30	4.38	4.84
45	Capacity	3.92	3.78	2.82	4.05	3.90	2.91	4.08	3.93	2.93	4.16	4.01	2.98	4.24	4.08	3.04	4.28	4.13	3.07	4.32	4.16	3.10	4.36	4.20	3.12	4.39	4.23	3.15	4.47	4.31	3.21	4.79	4.61	3.43	5.49	5.29	3.94	5.69	5.48	4.08
	Power	1.77	1.69	1.20	1.76	1.69	1.19	1.72	1.64	1.16	1.70	1.62	1.15	1.68	1.60	1.14	1.65	1.57	1.12	1.61	1.54	1.09	1.58	1.51	1.07	1.55	1.48	1.05	1.46	1.40	0.99	1.49	1.42	1.01	1.60	1.53	1.08	1.58	1.51	1.07
	Efficiency	2.22	2.24	2.35	2.30	2.31	2.43	2.37	2.39	2.51	2.45	2.47	2.59	2.52	2.55	2.68	2.60	2.62	2.76	2.68	2.70	2.84	2.75	2.78	2.92	2.83	2.85	3.00	3.06	3.09	3.24	3.21	3.24	3.40	3.44	3.47	3.65	3.59	3.62	3.81
48	Capacity	3.64	3.50	2.61	3.75	3.61	2.69	3.78	3.64	2.71	3.85	3.71	2.76	3.93	3.78	2.82	3.97	3.83	2.85	4.00	3.85	2.87	4.03	3.89	2.90	4.07	3.92	2.92	4.14	3.99	2.97	4.43	4.27	3.18	5.09	4.90	3.65	5.27	5.08	3.78
	Power	1.95	1.86	1.32	1.94	1.86	1.32	1.89	1.81	1.28	1.87	1.79	1.27	1.85	1.77	1.25	1.81	1.73	1.23	1.78	1.70	1.20	1.74	1.66	1.18	1.71	1.63	1.16	1.61	1.54	1.09	1.64	1.57	1.11	1.76	1.68	1.19	1.74	1.67	1.18
	Efficiency	1.87	1.88	1.98	1.93	1.95	2.05	2.00	2.01	2.11	2.06	2.08	2.18	2.12	2.14	2.25	2.19	2.21	2.32	2.25	2.27	2.39	2.32	2.34	2.46	2.38	2.40	2.52	2.57	2.60	2.73	2.70	2.72	2.86	2.89	2.92	3.07	3.02	3.05	3.20

GRS-CQ12Pd/NhH3-E

Ambient Temp(°C)	Outflow Water(°C)	7			8			9			10			11			12			13			14			15			18			20			23			25		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-15	Capacity	5.20	4.70	4.70	5.37	4.85	4.85	5.53	5.01	5.01	5.70	5.16	5.16	5.87	5.31	5.31	6.03	5.46	5.46	6.20	5.61	5.61	6.37	5.76	5.76	6.53	5.91	5.91	7.00	6.33	6.33	7.37	6.66	6.66	7.83	7.08	7.08	8.14	7.36	7.36
	Power	1.11	1.00	1.00	1.11	1.00	0.99	1.11	0.99	0.99	1.10	0.99	0.99	1.10	0.99	0.99	1.10	0.99	0.98	1.10	0.99	0.98	1.10	0.98	0.98	1.09	0.98	0.98	1.08	0.97	0.97	1.09	0.98	0.97	1.08	0.97	0.97	1.07	0.96	0.96
	Efficiency	4.68	4.71	4.73	4.84	4.88	4.89	5.01	5.04	5.06	5.17	5.20	5.22	5.33	5.36	5.38	5.49	5.53	5.54	5.65	5.69	5.71	5.81	5.85	5.87	5.97	6.01	6.03	6.46	6.50	6.52	6.78	6.82	6.84	7.26	7.31	7.33	7.58	7.63	7.66
-10	Capacity	5.13	4.63	4.63	5.29	4.78	4.78	5.45	4.93	4.93	5.62	5.08	5.08	5.78	5.22	5.22	5.95	5.37	5.37	6.11	5.52	5.52	6.27	5.67	5.67	6.44	5.82	5.82	6.90	6.23	6.23	7.26	6.56	6.56	7.72	6.97	6.97	8.02	7.24	7.24
	Power	1.30	1.17	1.17	1.30	1.17	1.16	1.30	1.16	1.16	1.29	1.16	1.16	1.29	1.16	1.16	1.29	1.16	1.15	1.29	1.16	1.15	1.29	1.15	1.15	1.28	1.15	1.15	1.27	1.14	1.14	1.28	1.14	1.14	1.27	1.14	1.13	1.26	1.13	1.13
	Efficiency	3.93	3.96	3.97	4.07	4.09	4.11	4.20	4.23	4.25	4.34	4.37	4.38	4.47	4.50	4.52	4.61	4.64	4.66	4.75	4.78	4.79	4.88	4.91	4.93	5.02	5.05	5.07	5.42	5.46	5.48	5.69	5.73	5.75	6.10	6.14	6.16	6.37	6.41	6.43
-5	Capacity	5.05	4.56	4.56	5.21	4.70	4.70	5.37	4.85	4.85	5.53	4.99	4.99	5.70	5.14	5.14	5.86	5.29	5.29	6.02	5.43	5.43	6.18	5.58	5.58	6.34	5.72	5.72	6.80	6.13	6.13	7.15	6.45	6.45	7.60	6.86	6.86	7.90	7.13	7.13
	Power	1.38	1.24	1.23	1.38	1.23	1.23	1.37	1.23	1.23	1.37	1.23	1.22	1.37	1.23	1.22	1.36	1.22	1.22	1.36	1.22	1.22	1.36	1.22	1.21	1.36	1.22	1.21	1.35	1.21	1.20	1.35	1.21	1.21	1.34	1.20	1.20	1.33	1.19	1.19
	Efficiency	3.66	3.68	3.70	3.79	3.81	3.83	3.91	3.94	3.95	4.04	4.07	4.08	4.17	4.19	4.21	4.29	4.32	4.34	4.42	4.45	4.46	4.55	4.58	4.59	4.67	4.70	4.72	5.05	5.08	5.10	5.30	5.34	5.35	5.68	5.72	5.74	5.93	5.97	5.99
0	Capacity	4.77	4.28	3.72	4.92	4.42	3.84	5.08	4.56	3.96	5.23	4.70	4.08	5.38	4.83	4.20	5.53	4.97	4.32	5.69	5.11	4.44	5.84	5.24	4.56	5.99	5.38	4.68	6.42	5.77	5.01	6.75	6.07	5.27	7.18	6.45	5.61	7.46	6.70	5.82
	Power	1.47	1.31	1.11	1.46	1.31	1.11	1.46	1.30	1.11	1.46	1.30	1.10	1.45	1.30	1.10	1.45	1.30	1.10	1.45	1.29	1.10	1.45	1.29	1.10	1.44	1.29	1.09	1.43	1.28	1.09	1.44	1.28	1.09	1.43	1.27	1.08	1.42	1.26	1.07
	Efficiency	3.25	3.27	3.35	3.36	3.38	3.46	3.47	3.50	3.58	3.59	3.61	3.69	3.70	3.72	3.81	3.81	3.84	3.93	3.92	3.95	4.04	4.03	4.06	4.16	4.15	4.17	4.27	4.48	4.51	4.62	4.70	4.73	4.85	5.04	5.07	5.19	5.26	5.30	5.42
5	Capacity	4.53	4.05	3.52	4.68	4.18	3.64	4.82	4.31	3.75	4.97	4.44	3.86	5.11	4.57	3.98	5.26	4.70	4.09	5.40	4.83	4.20	5.55	4.96	4.31	5.69	5.09	4.43	6.10	5.46	4.74	6.42	5.74	4.99	6.82	6.11	5.31	7.09	6.34	5.51
	Power	1.57	1.39	1.18	1.56	1.39	1.18	1.56	1.39	1.18	1.56	1.38	1.17	1.55	1.38	1.17	1.55	1.38	1.17	1.55	1.38	1.17	1.54	1.37	1.17	1.54	1.37	1.16	1.53	1.36	1.15	1.53	1.36	1.16	1.52	1.35	1.15	1.51	1.34	1.14
	Efficiency	2.89	2.91	2.98	2.99	3.01	3.08	3.09	3.11	3.18	3.19	3.21	3.29	3.29	3.31	3.39	3.39	3.41	3.49	3.49	3.51	3.60	3.59	3.61	3.70	3.69	3.71	3.80	3.99	4.02	4.11	4.19	4.21	4.31	4.48	4.51	4.62	4.68	4.72	4.83
10	Capacity	10.53	9.62	8.05	10.86	9.93	8.30	11.20	10.24	8.56	11.54	10.54	8.82	11.87	10.85	9.08	12.21	11.16	9.33	12.55	11.47	9.59	12.89	11.77	9.85	13.22	12.08	10.11	14.17	12.95	10.83	14.91	13.62	11.39	15.85	14.49	12.12	16.46	15.04	12.58
	Power	1.84	1.66	1.34	1.84	1.65	1.34	1.83	1.65	1.34	1.83	1.64	1.33	1.83	1.64	1.33	1.82	1.64	1.33	1.82	1.63	1.33	1.82	1.63	1.32	1.81	1.63	1.32	1.80	1.61	1.31	1.80	1.62	1.31	1.79	1.61	1.30	1.78	1.60	1.30
	Efficiency	5.71	5.81	5.99	5.91	6.01	6.20	6.11	6.21	6.40	6.31	6.42	6.61	6.50	6.62	6.82	6.70	6.82	7.02	6.90	7.02	7.23	7.10	7.22	7.44	7.29	7.42	7.64	7.88	8.02	8.26	8.27	8.41	8.67	8.86	9.02	9.29	9.26	9.42	9.70
15	Capacity	10.09	9.22	7.71	10.41	9.52	7.96	10.74	9.81	8.21	11.06	10.11	8.45	11.38	10.40	8.70	11.71	10.70	8.95	12.03	10.99	9.20	12.35	11.29	9.44	12.68	11.58	9.69	13.58	12.41	10.38	14.29	13.06	10.92	15.20	13.89	11.62	15.78	14.42	12.06
	Power	1.97	1.77	1.44	1.96	1.76	1.43	1.96	1.76	1.43	1.95	1.76	1.43	1.95	1.75	1.42	1.95	1.75	1.42	1.94	1.75	1.42	1.94	1.74	1.42	1.94	1.74	1.41	1.92	1.72	1.40	1.92	1.73	1.40	1.91	1.72	1.39	1.90	1.71	1.39
	Efficiency	5.13	5.22	5.37	5.31	5.40	5.56	5.48	5.58	5.75	5.66	5.76	5.93	5.84	5.94	6.12	6.01	6.12	6.30	6.19	6.30	6.49	6.37	6.48	6.67	6.55	6.66	6.86	7.08	7.20	7.41	7.42	7.55	7.78	7.96	8.09	8.34	8.31	8.45	8.71
20	Capacity	9.83	8.98	7.51	10.15	9.27	7.75	10.46	9.56	8.00	10.77	9.85	8.24	11.09	10.13	8.48	11.40	10.42	8.72	11.72	10.71	8.96	12.03	11.00	9.20	12.35	11.28	9.44	13.23	12.09	10.11	13.92	12.72	10.64	14.81	13.53	11.32	15.38	14.05	11.75
	Power	2.16	1.94	1.58	2.16	1.94	1.57	2.15	1.93	1.57	2.15	1.93	1.57	2.14	1.93	1.56	2.14	1.92	1.56	2.14	1.92	1.56	2.13	1.92	1.56	2.13	1.91	1.55	2.11	1.90	1.54	2.12	1.90	1.54	2.10	1.89	1.53	2.09	1.88	1.52
	Efficiency	4.54	4.62	4.76	4.70	4.78	4.93	4.86	4.94	5.09	5.01	5.10	5.25	5.17	5.26	5.42	5.33	5.42	5.58	5.48	5.58	5.75	5.64	5.74	5.91	5.80	5.90	6.07	6.27	6.37	6.57	6.58	6.69	6.89	7.05	7.17	7.38	7.36	7.49	7.71
25	Capacity	9.88	9.40	7.18	10.20	9.70	7.41	10.51	10.00	7.64	10.83	10.30	7.87	11.15	10.60	8.10	11.46	10.90	8.33	11.78	11.20	8.56	12.10	11.50	8.79	12.41	11.80	9.02	13.30	12.65	9.67	13.99	13.30	10.17	14.88	14.15	10.82	15.46	14.70	11.23
	Power	2.52	2.38	1.73	2.52	2.37	1.73	2.51	2.36	1.72	2.51	2.36	1.72	2.50	2.35	1.72	2.50	2.35	1.71	2.49	2.34	1.71	2.49	2.34	1.71	2.48	2.34	1.71	2.46	2.32	1.69	2.47	2.32	1.69	2.45	2.31	1.68	2.44	2.29	1.67
	Efficiency	3.92	3.96	4.14	4.05	4.09	4.29	4.19	4.23	4.43	4.32	4.37	4.58	4.46	4.50	4.72	4.59	4.64	4.86	4.73	4.78	5.00	4.86	4.91	5.15	5.00	5.05	5.29	5.40	5.46	5.72	5.67	5.73	6.00	6.07	6.14	6.43	6.34	6.41	6.72
30	Capacity	11.17	10.71	6.78	11.53	11.05	7.00	11.88	11.40	7.22	12.24	11.74	7.43	12.60	12.08	7.65	12.96	12.42	7.87	13.31	12.77	8.09	13.67	13.11	8.30	14.03	13.45	8.52	15.03	14.42	9.13	15.82	15.17	9.60	16.82	16.13	10.22	17.47	16.75	10.61
	Power	3.49	3.31	1.92	3.48	3.30	1.92	3.48	3.30	1.91	3.47	3.29	1.91	3.46	3.28	1.90	3.45	3.28	1.90	3.45	3.27	1.90	3.44	3.27	1.89	3.44	3.26	1.89	3.41	3.23	1.87	3.42	3.24	1.88	3.39	3.22	1.86	3.37	3.20	1.85
	Efficiency	3.20	3.23	3.53	3.31	3.34	3.65	3.42	3.46	3.78	3.53	3.57	3.90	3.64	3.68	4.02	3.75	3.79	4.14	3.86	3.90	4.26	3.97	4.01	4.38	4.08	4.13	4.51	4.41	4.46	4.87	4.63	4.68	5.11	4.96	5.01	5.48	5.18	5.24	5.72
35	Capacity	10.95	11.20	6.65	11.30	10.84	6.86	11.65	11.17	7.08	12.00	11.51	7.29	12.35	11.84	7.50	12.70	12.18	7.71	13.05	12.52	7.93	13.40	12.85	8.14	13.75	13.19	8.35	14.74	12.00	8.95	15.51	14.87	9.42	16.49	15.81	10.01	17.13	16.42	10.40
	Power	3.94	3.86	2.17	3.93	3.73	2.16	3.92	3.72	2.15	3.91	3.71	2.15	3.90	3.70	2.15	3.90	3.70	2.14	3.89	3.69	2.14	3.88	3.68	2.13	3.88	3.68	2.13	3.84	3.00	2.11	3.85	3.65	2.12	3.82	3.63	2.10	3.80	3.61	2.09
	Efficiency	2.78	2.90	3.07	2.88	2.91	3.18	2.97	3.01	3.28	3.07	3.10	3.39	3.17	3.20	3.50	3.26	3.30	3.60	3.36	3.39	3.71	3.45	3.49	3.81	3.55	3.59	3.92	3.84	4.00	4.24	4.03	4.07	4.45	4.31	4.36	4.76	4.50	4.55	4.97
40	Capacity	7.57	6.92	5.79	7.81	7.14	5.97	8.05	7.36	6.16	8.30	7.58	6.34	8.54	7.80	6.53	8.78	8.02	6.71	9.02	8.24	6.90	9.26	8.47	7.08	9.51	8.69	7.27	10.19	9.31	7.79	10.72	9.79	8.19	11.40	10.42	8.71	11.84	10.82	9.05
	Power	3.23	2.90	2.36	3.22	2.89	2.35	3.21	2.89	2.34	3.21	2.88	2.34	3.20	2.87	2.33	3.19	2.87	2.33	3.19	2.86	2.33	3.18	2.86	2.32	3.18	2.85	2.32	3.15	2.83	2.30	3.16	2.84	2.30	3.13	2.82	2.29	3.12	2.80	2.27
	Efficiency	2.34	2.38	2.46	2.43	2.47	2.54	2.51	2.55	2.63	2.59	2.63	2.71	2.67	2.71	2.80	2.75	2.80	2.88	2.83	2.88	2.97	2.91	2.96	3.05	2.99	3.04	3.14	3.23	3.29	3.39	3.39	3.45	3.56	3.64	3.70	3.81	3.80	3.86	3.98
45	Capacity	5.33	5.22	4.92	5.50	5.38	5.08	5.67	5.55	5.24	5.84	5.72	5.39	6.01	5.88	5.55	6.18	6.05	5.71	6.35	6.22	5.87	6.52	6.39	6.02	6.69	6.55	6.18	7.17	7.02	6.62	7.54	7.39	6.97	8.02	7.86	7.41	8.33	8.16	7.70
	Power	2.79	2.72	2.54	2.78	2.72	2.54	2.78	2.71	2.53	2.77	2.70	2.53	2.77	2.70	2.52	2.76	2.69	2.52	2.76	2.69	2.51	2.75	2.68	2.51	2.75	2.68	2.50	2.72	2.66	2.48	2.73	2.66	2.49	2.71	2.64	2.47	2.69	2.63	2.46
	Efficiency	1.91	1.92	1.93	1.98	1.98	2.00	2.04	2.05	2.07	2.11	2.11	2.14	2.17	2.18	2.20	2.24	2.25	2.27	2.30	2.31	2.34	2.37	2.38	2.40	2.44	2.44	2.47	2.63	2.64	2.67	2.76	2.77	2.80	2.96	2.97	3.00	3.09	3.10	3.13
48	Capacity	4.61	4.51	4.26	4.76	4.66	4.39	4.90	4.80	4.53	5.05	4.95	4.66	5.20	5.09	4.80	5.35	5.23	4.94	5.49	5.38	5.07	5.64	5.52	5.21	5.79	5.67	5.35	6.20	6.07	5.73	6.52	6.39	6.03	6.94	6.80	6.41	7.21	7.06	6.66
	Power	2.87	2.80	2.62	2.86	2.79	2.61	2.85	2.79	2.60	2.85	2.78	2.60	2.84	2.77	2.59	2.84	2.77	2.59	2.83	2.76	2.58	2.83	2.76	2.58	2.82	2.76	2.57	2.80	2.73	2.55	2.81	2.74	2.56	2.79	2.72	2.54	2.77	2.70	2.52
	Efficiency	1.61	1.61	1.63	1.66	1.67	1.68	1.72	1.72	1.74	1.77	1.78	1.80	1.83	1.83	1.85	1.88	1.89	1.91	1.94	1.95	1.96	1.99	2.00	2.02	2.05	2.06	2.08	2.22	2.22	2.25	2.33	2.33	2.36	2.49	2.50	2.52	2.60	2.61	2.64

GRS-CQ14Pd/NhH3-E

Ambient Temp(°C)	Outflow Water°C)	7			8			9			10			11			12			13			14			15			18			20			23			25		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-15	Capacity	5.41	4.90	4.70	5.58	5.05	4.85	5.75	5.21	5.01	5.92	5.37	5.16	6.10	5.52	5.31	6.27	5.68	5.46	6.44	5.84	5.61	6.62	5.99	5.76	6.79	6.15	5.91	7.28	6.59	6.33	7.65	6.93	6.66	8.14	7.37	7.08	8.45	7.66	7.36
	Power	1.16	1.05	1.00	1.16	1.04	0.99	1.16	1.04	0.99	1.15	1.04	0.99	1.15	1.04	0.99	1.15	1.03	0.98	1.15	1.03	0.98	1.15	1.03	0.98	1.14	1.03	0.98	1.13	1.02	0.97	1.14	1.02	0.97	1.13	1.02	0.97	1.12	1.01	0.96
	Efficiency	4.65	4.68	4.73	4.81	4.84	4.89	4.97	5.01	5.06	5.13	5.17	5.22	5.29	5.33	5.38	5.45	5.49	5.54	5.61	5.65	5.71	5.77	5.81	5.87	5.93	5.97	6.03	6.42	6.46	6.52	6.73	6.78	6.84	7.21	7.26	7.33	7.53	7.58	7.66
-10	Capacity	5.33	4.82	4.63	5.50	4.97	4.78	5.67	5.13	4.93	5.84	5.28	5.08	6.01	5.44	5.22	6.18	5.59	5.37	6.35	5.74	5.52	6.52	5.90	5.67	6.69	6.05	5.82	7.17	6.49	6.23	7.54	6.82	6.56	8.02	7.26	6.97	8.33	7.54	7.24
	Power	1.36	1.23	1.17	1.36	1.22	1.16	1.36	1.22	1.16	1.35	1.22	1.16	1.35	1.22	1.16	1.35	1.21	1.15	1.35	1.21	1.15	1.34	1.21	1.15	1.34	1.21	1.15	1.33	1.20	1.14	1.33	1.20	1.14	1.32	1.19	1.13	1.32	1.18	1.13
	Efficiency	3.90	3.93	3.97	4.04	4.07	4.11	4.18	4.20	4.25	4.31	4.34	4.38	4.44	4.47	4.52	4.58	4.61	4.66	4.71	4.75	4.79	4.85	4.88	4.93	4.98	5.02	5.07	5.39	5.42	5.48	5.65	5.69	5.75	6.06	6.10	6.16	6.33	6.37	6.43
-5	Capacity	5.25	4.74	4.56	5.41	4.89	4.70	5.58	5.05	4.85	5.75	5.20	4.99	5.92	5.35	5.14	6.09	5.50	5.29	6.25	5.65	5.43	6.42	5.81	5.58	6.59	5.96	5.72	7.06	6.38	6.13	7.43	6.72	6.45	7.90	7.14	6.86	8.21	7.42	7.13
	Power	1.44	1.30	1.23	1.44	1.29	1.23	1.44	1.29	1.23	1.43	1.29	1.22	1.43	1.28	1.22	1.43	1.28	1.22	1.42	1.28	1.22	1.42	1.28	1.21	1.42	1.28	1.21	1.41	1.26	1.20	1.41	1.27	1.21	1.40	1.26	1.20	1.39	1.25	1.19
	Efficiency	3.64	3.66	3.70	3.76	3.79	3.83	3.89	3.91	3.95	4.01	4.04	4.08	4.14	4.17	4.21	4.26	4.29	4.34	4.39	4.42	4.46	4.52	4.55	4.59	4.64	4.67	4.72	5.02	5.05	5.10	5.26	5.30	5.35	5.64	5.68	5.74	5.89	5.93	5.99
0	Capacity	5.22	4.45	3.72	5.39	4.59	3.84	5.55	4.74	3.96	5.72	4.88	4.08	5.89	5.02	4.20	6.06	5.16	4.32	6.22	5.31	4.44	6.39	5.45	4.56	6.56	5.59	4.68	7.03	5.99	5.01	7.39	6.30	5.27	7.86	6.70	5.61	8.16	6.96	5.82
	Power	1.63	1.37	1.11	1.63	1.37	1.11	1.63	1.36	1.11	1.62	1.36	1.10	1.62	1.36	1.10	1.62	1.36	1.10	1.61	1.35	1.10	1.61	1.35	1.10	1.61	1.35	1.09	1.59	1.34	1.09	1.60	1.34	1.09	1.59	1.33	1.08	1.58	1.32	1.07
	Efficiency	3.19	3.25	3.35	3.31	3.36	3.46	3.42	3.47	3.58	3.53	3.59	3.69	3.64	3.70	3.81	3.75	3.81	3.93	3.86	3.92	4.04	3.97	4.03	4.16	4.08	4.15	4.27	4.41	4.48	4.62	4.62	4.70	4.85	4.96	5.04	5.19	5.18	5.26	5.42
5	Capacity	4.96	4.21	3.52	5.12	4.35	3.64	5.28	4.48	3.75	5.44	4.62	3.86	5.59	4.75	3.98	5.75	4.89	4.09	5.91	5.02	4.20	6.07	5.16	4.31	6.23	5.29	4.43	6.67	5.67	4.74	7.02	5.97	4.99	7.47	6.35	5.31	7.76	6.59	5.51
	Power	1.74	1.46	1.18	1.74	1.45	1.18	1.74	1.45	1.18	1.73	1.45	1.17	1.73	1.44	1.17	1.73	1.44	1.17	1.72	1.44	1.17	1.72	1.44	1.17	1.72	1.43	1.16	1.70	1.42	1.15	1.71	1.43	1.16	1.69	1.41	1.15	1.68	1.41	1.14
	Efficiency	2.84	2.89	2.98	2.94	2.99	3.08	3.04	3.09	3.18	3.14	3.19	3.29	3.24	3.29	3.39	3.33	3.39	3.49	3.43	3.49	3.60	3.53	3.59	3.70	3.63	3.69	3.80	3.92	3.99	4.11	4.12	4.19	4.31	4.41	4.48	4.62	4.61	4.68	4.83
10	Capacity	11.43	11.07	8.05	11.80	11.43	8.30	12.17	11.78	8.56	12.53	12.13	8.82	12.90	12.49	9.08	13.26	12.84	9.33	13.63	13.20	9.59	14.00	13.55	9.85	14.36	13.91	10.11	15.39	14.90	10.83	16.19	15.68	11.39	17.22	16.67	12.12	17.88	17.32	12.58
	Power	2.04	1.96	1.34	2.03	1.95	1.34	2.03	1.95	1.34	2.02	1.94	1.33	2.02	1.94	1.33	2.01	1.94	1.33	2.01	1.93	1.33	2.01	1.93	1.32	2.00	1.93	1.32	1.99	1.91	1.31	1.99	1.91	1.31	1.98	1.90	1.30	1.97	1.89	1.30
	Efficiency	5.62	5.66	5.99	5.81	5.85	6.20	6.01	6.05	6.40	6.20	6.24	6.61	6.39	6.44	6.82	6.59	6.63	7.02	6.78	6.83	7.23	6.98	7.02	7.44	7.17	7.22	7.64	7.75	7.80	8.26	8.13	8.19	8.67	8.71	8.77	9.29	9.10	9.16	9.70
15	Capacity	10.96	10.61	7.71	11.31	10.95	7.96	11.66	11.29	8.21	12.01	11.63	8.45	12.37	11.97	8.70	12.72	12.31	8.95	13.07	12.65	9.20	13.42	12.99	9.44	13.77	13.33	9.69	14.75	14.29	10.38	15.52	15.03	10.92	16.51	15.98	11.62	17.14	16.60	12.06
	Power	2.18	2.09	1.44	2.17	2.09	1.43	2.16	2.08	1.43	2.16	2.08	1.43	2.15	2.07	1.42	2.15	2.07	1.42	2.15	2.06	1.42	2.14	2.06	1.42	2.14	2.06	1.41	2.12	2.04	1.40	2.13	2.05	1.40	2.11	2.03	1.39	2.10	2.02	1.39
	Efficiency	5.04	5.08	5.37	5.22	5.25	5.56	5.39	5.43	5.75	5.56	5.60	5.93	5.74	5.78	6.12	5.91	5.95	6.30	6.09	6.13	6.49	6.26	6.30	6.67	6.43	6.48	6.86	6.96	7.00	7.41	7.30	7.35	7.78	7.82	7.87	8.34	8.17	8.22	8.71
20	Capacity	10.68	10.34	7.51	11.02	10.67	7.75	11.36	11.00	8.00	11.70	11.33	8.24	12.05	11.66	8.48	12.39	11.99	8.72	12.73	12.32	8.96	13.07	12.66	9.20	13.41	12.99	9.44	14.37	13.92	10.11	15.12	14.64	10.64	16.08	15.57	11.32	16.70	16.17	11.75
	Power	2.39	2.30	1.58	2.39	2.29	1.57	2.38	2.29	1.57	2.37	2.28	1.57	2.37	2.28	1.56	2.37	2.27	1.56	2.36	2.27	1.56	2.36	2.27	1.56	2.35	2.26	1.55	2.33	2.24	1.54	2.34	2.25	1.54	2.32	2.23	1.53	2.31	2.22	1.52
	Efficiency	4.46	4.50	4.76	4.62	4.65	4.93	4.77	4.81	5.09	4.93	4.96	5.25	5.08	5.12	5.42	5.24	5.27	5.58	5.39	5.43	5.75	5.54	5.58	5.91	5.70	5.74	6.07	6.16	6.20	6.57	6.46	6.51	6.89	6.93	6.97	7.38	7.23	7.28	7.71
25	Capacity	10.69	9.88	7.18	11.03	10.20	7.41	11.38	10.51	7.64	11.72	10.83	7.87	12.06	11.15	8.10	12.40	11.46	8.33	12.74	11.78	8.56	13.09	12.10	8.79	13.43	12.41	9.02	14.39	13.30	9.67	15.14	13.99	10.17	16.10	14.88	10.82	16.72	15.46	11.23
	Power	2.78	2.52	1.73	2.77	2.52	1.73	2.76	2.51	1.72	2.76	2.51	1.72	2.75	2.50	1.72	2.75	2.50	1.71	2.74	2.49	1.71	2.74	2.49	1.71	2.73	2.48	1.71	2.71	2.46	1.69	2.72	2.47	1.69	2.70	2.45	1.68	2.68	2.44	1.67
	Efficiency	3.85	3.92	4.14	3.98	4.05	4.29	4.11	4.19	4.43	4.25	4.32	4.58	4.38	4.46	4.72	4.51	4.59	4.86	4.65	4.73	5.00	4.78	4.86	5.15	4.91	5.00	5.29	5.31	5.40	5.72	5.57	5.67	6.00	5.97	6.07	6.43	6.23	6.34	6.72
30	Capacity	11.93	11.63	6.78	12.32	12.00	7.00	12.70	12.37	7.22	13.08	12.74	7.43	13.46	13.12	7.65	13.84	13.49	7.87	14.23	13.86	8.09	14.61	14.23	8.30	14.99	14.60	8.52	16.06	15.65	9.13	16.90	16.47	9.60	17.97	17.51	10.22	18.66	18.19	10.61
	Power	3.80	3.68	1.92	3.79	3.67	1.92	3.78	3.66	1.91	3.77	3.65	1.91	3.77	3.64	1.90	3.76	3.64	1.90	3.75	3.63	1.90	3.75	3.62	1.89	3.74	3.62	1.89	3.71	3.59	1.87	3.72	3.60	1.88	3.69	3.57	1.86	3.67	3.55	1.85
	Efficiency	3.14	3.16	3.53	3.25	3.27	3.65	3.36	3.38	3.78	3.47	3.49	3.90	3.57	3.60	4.02	3.68	3.71	4.14	3.79	3.82	4.26	3.90	3.93	4.38	4.01	4.04	4.51	4.33	4.36	4.87	4.55	4.58	5.11	4.87	4.91	5.48	5.09	5.12	5.72
35	Capacity	11.70	12.00	6.65	12.07	11.76	6.86	12.45	12.13	7.08	12.82	12.49	7.29	13.20	12.86	7.50	13.57	13.22	7.71	13.95	13.59	7.93	14.32	13.95	8.14	14.70	14.32	8.35	15.75	13.30	8.95	16.57	16.14	9.42	17.62	17.17	10.01	18.30	17.83	10.40
	Power	4.29	4.36	2.17	4.27	4.13	2.16	4.26	4.12	2.15	4.25	4.12	2.15	4.25	4.11	2.15	4.24	4.10	2.14	4.23	4.09	2.14	4.22	4.09	2.13	4.22	4.08	2.13	4.44	3.69	2.11	4.19	4.05	2.12	4.16	4.02	2.10	4.14	4.00	2.09
	Efficiency	2.73	2.75	3.07	2.83	2.85	3.18	2.92	2.94	3.28	3.01	3.04	3.39	3.11	3.13	3.50	3.20	3.23	3.60	3.30	3.32	3.71	3.39	3.42	3.81	3.48	3.51	3.92	3.55	3.60	4.24	3.95	3.98	4.45	4.24	4.27	4.76	4.42	4.46	4.97
40	Capacity	8.22	7.57	5.79	8.48	7.81	5.97	8.75	8.05	6.16	9.01	8.30	6.34	9.27	8.54	6.53	9.54	8.78	6.71	9.80	9.02	6.90	10.06	9.26	7.08	10.33	9.51	7.27	11.07	10.19	7.79	11.64	10.72	8.19	12.38	11.40	8.71	12.86	11.84	9.05
	Power	3.57	3.23	2.36	3.56	3.22	2.35	3.55	3.21	2.34	3.54	3.21	2.34	3.54	3.20	2.33	3.53	3.19	2.33	3.52	3.19	2.33	3.52	3.18	2.32	3.51	3.18	2.32	3.48	3.15	2.30	3.49	3.16	2.30	3.46	3.13	2.29	3.44	3.12	2.27
	Efficiency	2.30	2.34	2.46	2.38	2.43	2.54	2.46	2.51	2.63	2.54	2.59	2.71	2.62	2.67	2.80	2.70	2.75	2.88	2.78	2.83	2.97	2.86	2.91	3.05	2.94	2.99	3.14	3.18	3.23	3.39	3.34	3.39	3.56	3.57	3.64	3.81	3.73	3.80	3.98
45	Capacity	5.66	5.33	4.92	5.84	5.50	5.08	6.02	5.67	5.24	6.20	5.84	5.39	6.39	6.01	5.55	6.57	6.18	5.71	6.75	6.35	5.87	6.93	6.52	6.02	7.11	6.69	6.18	7.62	7.17	6.62	8.02	7.54	6.97	8.53	8.02	7.41	8.85	8.33	7.70
	Power	3.00	2.79	2.54	2.99	2.78	2.54	2.98	2.78	2.53	2.97	2.77	2.53	2.97	2.77	2.52	2.96	2.76	2.52	2.96	2.76	2.51	2.95	2.75	2.51	2.95	2.75	2.50	2.92	2.72	2.48	2.93	2.73	2.49	2.91	2.71	2.47	2.89	2.69	2.46
	Efficiency	1.89	1.91	1.93	1.96	1.98	2.00	2.02	2.04	2.07	2.09	2.11	2.14	2.15	2.17	2.20	2.22	2.24	2.27	2.28	2.30	2.34	2.35	2.37	2.40	2.41	2.44	2.47	2.61	2.63	2.67	2.74	2.76	2.80	2.93	2.96	3.00	3.06	3.09	3.13
48	Capacity	4.90	4.61	4.26	5.05	4.76	4.39	5.21	4.90	4.53	5.37	5.05	4.66	5.52	5.20	4.80	5.68	5.35	4.94	5.84	5.49	5.07	5.99	5.64	5.21	6.15	5.79	5.35	6.59	6.20	5.73	6.93	6.52	6.03	7.37	6.94	6.41	7.66	7.21	6.66
	Power	3.08	2.87	2.62	3.07	2.86	2.61	3.06	2.85	2.60	3.06	2.85	2.60	3.05	2.84	2.59	3.05	2.84	2.59	3.04	2.83	2.58	3.03	2.83	2.58	3.03	2.82	2.57	3.00	2.80	2.55	3.01	2.81	2.56	2.99	2.79	2.54	2.97	2.77	2.52
	Efficiency	1.59	1.61	1.63	1.65	1.66	1.68	1.70	1.72	1.74	1.76	1.77	1.80	1.81	1.83	1.85	1.87	1.88	1.91	1.92	1.94	1.96	1.97	1.99	2.02	2.03	2.05	2.08	2.19	2.22	2.25	2.30	2.33	2.36	2.47	2.49	2.52	2.58	2.60	2.64

GRS-CQ12Pd/NhH3-E1

Ambient Temp(°C)	Outflow Water(°C)	7			8			9			10			11			12			13			14			15			18			20			23			25		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-15	Capacity	5.43	4.92	4.83	5.61	5.08	4.98	5.78	5.24	5.13	5.95	5.39	5.29	6.13	5.55	5.44	6.30	5.71	5.60	6.48	5.87	5.75	6.65	6.02	5.91	6.82	6.18	6.06	7.31	6.62	6.50	7.69	6.97	6.83	8.18	7.41	7.27	8.50	7.70	7.55
	Power	1.07	0.96	0.96	1.07	0.96	0.96	1.07	0.95	0.96	1.06	0.95	0.96	1.06	0.95	0.95	1.06	0.95	0.95	1.06	0.95	0.95	1.06	0.95	0.95	1.05	0.94	0.95	1.05	0.94	0.94	1.05	0.94	0.94	1.04	0.93	0.94	1.03	0.93	0.93
	Efficiency	5.07	5.13	5.01	5.25	5.31	5.18	5.42	5.49	5.36	5.60	5.67	5.53	5.77	5.84	5.70	5.95	6.02	5.87	6.12	6.20	6.05	6.30	6.37	6.22	6.47	6.55	6.39	7.00	7.08	6.91	7.34	7.43	7.25	7.87	7.96	7.77	8.22	8.32	8.11
-10	Capacity	5.35	4.84	4.75	5.52	5.00	4.90	5.70	5.15	5.05	5.87	5.31	5.21	6.04	5.46	5.36	6.21	5.62	5.51	6.38	5.77	5.66	6.55	5.93	5.81	6.72	6.08	5.97	7.21	6.52	6.39	7.58	6.86	6.73	8.06	7.30	7.15	8.37	7.58	7.43
	Power	1.26	1.12	1.13	1.25	1.12	1.13	1.25	1.12	1.12	1.25	1.12	1.12	1.25	1.11	1.12	1.24	1.11	1.12	1.24	1.11	1.12	1.24	1.11	1.11	1.24	1.11	1.11	1.23	1.10	1.10	1.23	1.10	1.10	1.22	1.09	1.10	1.21	1.08	1.09
	Efficiency	4.26	4.31	4.21	4.41	4.46	4.35	4.55	4.61	4.50	4.70	4.76	4.64	4.85	4.91	4.79	4.99	5.06	4.93	5.14	5.20	5.08	5.29	5.35	5.22	5.43	5.50	5.37	5.88	5.95	5.80	6.16	6.24	6.09	6.61	6.69	6.52	6.90	6.98	6.81
-5	Capacity	5.27	4.77	4.67	5.44	4.92	4.82	5.61	5.07	4.97	5.78	5.23	5.12	5.95	5.38	5.27	6.12	5.53	5.42	6.29	5.68	5.57	6.45	5.84	5.72	6.62	5.99	5.87	7.10	6.42	6.29	7.47	6.75	6.62	7.94	7.18	7.04	8.25	7.46	7.31
	Power	1.33	1.19	1.19	1.33	1.18	1.19	1.32	1.18	1.19	1.32	1.18	1.19	1.32	1.18	1.18	1.32	1.17	1.18	1.31	1.17	1.18	1.31	1.17	1.18	1.31	1.17	1.17	1.30	1.16	1.16	1.30	1.16	1.17	1.29	1.15	1.16	1.28	1.15	1.15
	Efficiency	3.97	4.01	3.92	4.10	4.15	4.05	4.24	4.29	4.19	4.38	4.43	4.32	4.51	4.57	4.46	4.65	4.71	4.59	4.79	4.85	4.73	4.92	4.99	4.86	5.06	5.12	5.00	5.47	5.54	5.40	5.74	5.81	5.67	6.15	6.23	6.08	6.43	6.50	6.35
0	Capacity	4.97	4.47	3.89	5.13	4.62	4.02	5.29	4.76	4.14	5.44	4.90	4.27	5.60	5.05	4.39	5.76	5.19	4.51	5.92	5.33	4.64	6.08	5.48	4.76	6.24	5.62	4.89	6.69	6.02	5.24	7.03	6.34	5.51	7.48	6.74	5.86	7.77	7.00	6.09
	Power	1.42	1.26	1.09	1.42	1.26	1.08	1.41	1.26	1.08	1.41	1.25	1.08	1.41	1.25	1.08	1.40	1.25	1.07	1.40	1.25	1.07	1.40	1.24	1.07	1.40	1.24	1.07	1.38	1.23	1.06	1.39	1.24	1.06	1.38	1.23	1.05	1.37	1.22	1.05
	Efficiency	3.50	3.54	3.59	3.62	3.67	3.71	3.74	3.79	3.84	3.86	3.91	3.96	3.98	4.03	4.08	4.10	4.16	4.21	4.22	4.28	4.33	4.35	4.40	4.45	4.47	4.52	4.58	4.83	4.89	4.95	5.07	5.13	5.19	5.43	5.50	5.56	5.67	5.74	5.81
5	Capacity	4.72	4.23	3.68	4.87	4.37	3.80	5.02	4.51	3.92	5.17	4.64	4.04	5.32	4.78	4.15	5.47	4.91	4.27	5.63	5.05	4.39	5.78	5.18	4.51	5.93	5.32	4.63	6.35	5.70	4.96	6.68	6.00	5.22	7.11	6.38	5.55	7.38	6.62	5.76
	Power	1.52	1.34	1.15	1.51	1.34	1.15	1.51	1.34	1.15	1.50	1.33	1.15	1.50	1.33	1.14	1.50	1.33	1.14	1.50	1.33	1.14	1.49	1.32	1.14	1.49	1.32	1.14	1.48	1.31	1.13	1.48	1.31	1.13	1.47	1.30	1.12	1.46	1.30	1.11
	Efficiency	3.11	3.15	3.19	3.22	3.26	3.30	3.33	3.37	3.41	3.44	3.48	3.52	3.54	3.59	3.63	3.65	3.70	3.74	3.76	3.81	3.85	3.87	3.92	3.96	3.97	4.02	4.07	4.30	4.35	4.40	4.51	4.56	4.62	4.83	4.89	4.95	5.05	5.11	5.17
10	Capacity	10.56	10.02	8.41	10.90	10.34	8.68	11.24	10.66	8.95	11.58	10.98	9.22	11.92	11.30	9.49	12.25	11.62	9.76	12.59	11.94	10.02	12.93	12.26	10.29	13.27	12.58	10.56	14.22	13.49	11.32	14.96	14.19	11.91	15.91	15.09	12.66	16.52	15.67	13.15
	Power	1.73	1.60	1.31	1.72	1.60	1.31	1.72	1.59	1.30	1.71	1.59	1.30	1.71	1.59	1.30	1.71	1.58	1.30	1.70	1.58	1.29	1.70	1.58	1.29	1.70	1.57	1.29	1.68	1.56	1.28	1.69	1.57	1.28	1.67	1.55	1.27	1.67	1.54	1.27
	Efficiency	6.12	6.26	6.42	6.34	6.48	6.64	6.55	6.69	6.86	6.76	6.91	7.08	6.97	7.13	7.30	7.18	7.34	7.53	7.39	7.56	7.75	7.60	7.77	7.97	7.82	7.99	8.19	8.45	8.64	8.85	8.87	9.06	9.29	9.50	9.71	9.95	9.92	10.14	10.40
15	Capacity	10.13	9.60	8.06	10.45	9.91	8.32	10.77	10.22	8.58	11.10	10.53	8.84	11.42	10.83	9.09	11.75	11.14	9.35	12.07	11.45	9.61	12.40	11.76	9.87	12.72	12.06	10.13	13.63	12.93	10.85	14.34	13.60	11.42	15.25	14.46	12.14	15.84	15.02	12.61
	Power	1.84	1.71	1.40	1.84	1.70	1.40	1.83	1.70	1.39	1.83	1.70	1.39	1.83	1.69	1.39	1.82	1.69	1.38	1.82	1.69	1.38	1.82	1.69	1.38	1.81	1.68	1.38	1.80	1.67	1.37	1.80	1.67	1.37	1.79	1.66	1.36	1.78	1.65	1.35
	Efficiency	5.50	5.62	5.76	5.69	5.81	5.96	5.88	6.01	6.16	6.07	6.20	6.36	6.26	6.40	6.55	6.45	6.59	6.75	6.64	6.78	6.95	6.82	6.98	7.15	7.01	7.17	7.35	7.58	7.75	7.95	7.96	8.13	8.34	8.53	8.72	8.93	8.90	9.10	9.33
20	Capacity	9.86	9.36	7.85	10.18	9.66	8.10	10.50	9.96	8.36	10.81	10.25	8.61	11.13	10.55	8.86	11.44	10.85	9.11	11.76	11.15	9.36	12.07	11.45	9.61	12.39	11.75	9.86	13.28	12.59	10.57	13.97	13.25	11.12	14.86	14.09	11.83	15.43	14.63	12.28
	Power	2.03	1.88	1.54	2.02	1.88	1.54	2.02	1.87	1.53	2.01	1.87	1.53	2.01	1.86	1.53	2.00	1.86	1.52	2.00	1.86	1.52	2.00	1.85	1.52	1.99	1.85	1.52	1.98	1.83	1.50	1.98	1.84	1.51	1.97	1.83	1.49	1.96	1.81	1.49
	Efficiency	4.87	4.98	5.10	5.04	5.15	5.28	5.21	5.32	5.45	5.37	5.49	5.63	5.54	5.66	5.81	5.71	5.84	5.98	5.88	6.01	6.16	6.04	6.18	6.33	6.21	6.35	6.51	6.72	6.87	7.04	7.05	7.20	7.38	7.55	7.72	7.91	7.89	8.06	8.26
25	Capacity	9.43	8.94	7.51	9.73	9.23	7.75	10.03	9.51	7.99	10.33	9.80	8.23	10.64	10.09	8.47	10.94	10.37	8.71	11.24	10.66	8.95	11.54	10.95	9.19	11.84	11.23	9.43	12.69	12.04	10.10	13.35	12.66	10.63	14.20	13.47	11.30	14.75	13.99	11.74
	Power	2.22	2.06	1.69	2.22	2.06	1.69	2.21	2.05	1.68	2.21	2.05	1.68	2.20	2.04	1.67	2.20	2.04	1.67	2.20	2.04	1.67	2.19	2.03	1.67	2.19	2.03	1.66	2.17	2.01	1.65	2.18	2.02	1.65	2.16	2.00	1.64	2.15	1.99	1.63
	Efficiency	4.24	4.33	4.44	4.39	4.49	4.60	4.53	4.63	4.75	4.68	4.78	4.90	4.83	4.93	5.06	4.97	5.08	5.21	5.12	5.23	5.36	5.26	5.38	5.52	5.41	5.53	5.67	5.85	5.98	6.13	6.14	6.27	6.43	6.58	6.72	6.89	6.87	7.02	7.20
30	Capacity	11.32	10.87	7.09	11.68	11.22	7.32	12.05	11.57	7.54	12.41	11.92	7.77	12.77	12.26	8.00	13.13	12.61	8.22	13.50	12.96	8.45	13.86	13.31	8.68	14.22	13.66	8.90	15.24	14.64	9.54	16.03	15.40	10.04	17.05	16.38	10.68	17.71	17.01	11.09
	Power	3.49	3.28	1.87	3.48	3.27	1.87	3.47	3.27	1.86	3.47	3.26	1.86	3.46	3.25	1.86	3.45	3.25	1.85	3.45	3.24	1.85	3.44	3.24	1.85	3.44	3.23	1.84	3.41	3.20	1.83	3.41	3.21	1.83	3.39	3.19	1.82	3.37	3.17	1.81
	Efficiency	3.24	3.31	3.78	3.36	3.43	3.92	3.47	3.54	4.05	3.58	3.66	4.18	3.69	3.77	4.31	3.80	3.88	4.44	3.92	4.00	4.57	4.03	4.11	4.70	4.14	4.23	4.83	4.48	4.57	5.22	4.70	4.80	5.48	5.03	5.14	5.87	5.26	5.37	6.13
35	Capacity	11.10	11.10	6.95	11.46	11.00	7.17	11.81	11.34	7.39	12.17	11.68	7.62	12.52	12.02	7.84	12.88	12.37	8.06	13.23	12.71	8.28	13.59	13.05	8.51	13.94	13.39	8.73	14.94	12.00	9.35	15.72	15.09	9.84	16.72	16.05	10.47	17.36	16.67	10.87
	Power	3.94	3.76	2.11	3.92	3.69	2.11	3.92	3.68	2.10	3.91	3.67	2.10	3.90	3.67	2.09	3.89	3.66	2.09	3.89	3.65	2.09	3.88	3.65	2.08	3.87	3.64	2.08	3.84	2.89	2.06	3.85	3.62	2.07	3.82	3.59	2.05	3.80	3.57	2.04
	Efficiency	2.82	2.95	3.29	2.92	2.98	3.41	3.02	3.08	3.52	3.11	3.18	3.63	3.21	3.28	3.75	3.31	3.38	3.86	3.41	3.48	3.97	3.50	3.58	4.09	3.60	3.68	4.20	3.89	4.15	4.54	4.08	4.17	4.76	4.38	4.47	5.10	4.57	4.67	5.33
40	Capacity	7.60	7.20	6.05	7.84	7.43	6.24	8.08	7.66	6.43	8.32	7.90	6.63	8.57	8.13	6.82	8.81	8.36	7.01	9.05	8.59	7.21	9.30	8.82	7.40	9.54	9.05	7.59	10.22	9.70	8.14	10.75	10.20	8.56	11.44	10.85	9.11	11.88	11.27	9.46
	Power	3.02	2.81	2.30	3.01	2.80	2.29	3.01	2.79	2.29	3.00	2.78	2.28	3.00	2.78	2.28	2.99	2.77	2.27	2.98	2.77	2.27	2.98	2.76	2.26	2.97	2.76	2.26	2.95	2.74	2.24	2.96	2.74	2.25	2.93	2.72	2.23	2.92	2.71	2.22
	Efficiency	2.51	2.57	2.63	2.60	2.66	2.72	2.69	2.75	2.81	2.77	2.84	2.91	2.86	2.92	3.00	2.95	3.01	3.09	3.03	3.10	3.18	3.12	3.19	3.27	3.21	3.28	3.36	3.47	3.54	3.63	3.64	3.72	3.81	3.90	3.98	4.08	4.07	4.16	4.27
45	Capacity	5.55	5.47	5.14	5.73	5.64	5.31	5.91	5.82	5.47	6.08	5.99	5.64	6.26	6.17	5.80	6.44	6.34	5.97	6.62	6.52	6.13	6.79	6.69	6.30	6.97	6.87	6.46	7.47	7.36	6.92	7.86	7.74	7.28	8.36	8.24	7.75	8.68	8.55	8.04
	Power	2.66	2.61	2.48	2.65	2.60	2.47	2.65	2.59	2.47	2.64	2.59	2.46	2.64	2.58	2.46	2.63	2.58	2.45	2.63	2.57	2.45	2.62	2.57	2.45	2.62	2.56	2.44	2.60	2.54	2.42	2.60	2.55	2.43	2.58	2.53	2.41	2.57	2.52	2.39
	Efficiency	2.09	2.10	2.07	2.16	2.17	2.15	2.23	2.24	2.22	2.30	2.32	2.29	2.37	2.39	2.36	2.45	2.46	2.43	2.52	2.53	2.50	2.59	2.61	2.57	2.66	2.68	2.65	2.88	2.90	2.86	3.02	3.04	3.00	3.24	3.25	3.22	3.38	3.40	3.36
48	Capacity	4.80	4.73	4.45	4.95	4.88	4.59	5.11	5.03	4.73	5.26	5.18	4.88	5.41	5.33	5.02	5.57	5.49	5.16	5.72	5.64	5.30	5.88	5.79	5.44	6.03	5.94	5.59	6.46	6.37	5.99	6.80	6.70	6.30	7.23	7.12	6.70	7.51	7.40	6.96
	Power	2.74	2.68	2.55	2.73	2.67	2.54	2.72	2.67	2.54	2.72	2.66	2.53	2.71	2.66	2.53	2.71	2.65	2.52	2.70	2.65	2.52	2.70	2.64	2.51	2.69	2.64	2.51	2.67	2.61	2.49	2.68	2.62	2.49	2.66	2.60	2.48	2.64	2.59	2.46
	Efficiency	1.75	1.76	1.74	1.82	1.83	1.80	1.88	1.89	1.86	1.94	1.95	1.93	2.00	2.01	1.99	2.06	2.07	2.05	2.12	2.13	2.11	2.18	2.19	2.17	2.24	2.25	2.23	2.42	2.44	2.41	2.54	2.56	2.52	2.72	2.74	2.71	2.84	2.86	2.83

GRS-CQ14Pd/NhH3-E1

Ambient Temp(°C)	Outflow Water(°C)	7			8			9			10			11			12			13			14			15			18			20			23			25		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-15	Capacity	5.63	5.11	4.83	5.81	5.28	4.98	5.99	5.44	5.13	6.17	5.60	5.29	6.35	5.77	5.44	6.53	5.93	5.60	6.71	6.10	5.75	6.89	6.26	5.91	7.07	6.42	6.06	7.58	6.88	6.50	7.97	7.24	6.83	8.48	7.70	7.27	8.81	8.00	7.55
	Power	1.12	1.01	0.96	1.12	1.01	0.96	1.12	1.00	0.96	1.12	1.00	0.96	1.11	1.00	0.95	1.11	1.00	0.95	1.11	1.00	0.95	1.11	0.99	0.95	1.11	0.99	0.95	1.10	0.98	0.94	1.10	0.99	0.94	1.09	0.98	0.94	1.09	0.97	0.93
	Efficiency	5.01	5.07	5.01	5.18	5.25	5.18	5.36	5.42	5.36	5.53	5.60	5.53	5.70	5.77	5.70	5.87	5.95	5.87	6.05	6.12	6.05	6.22	6.30	6.22	6.39	6.47	6.39	6.91	7.00	6.91	7.25	7.34	7.25	7.77	7.87	7.77	8.11	8.22	8.11
-10	Capacity	5.55	5.03	4.75	5.73	5.19	4.90	5.90	5.36	5.05	6.08	5.52	5.21	6.26	5.68	5.36	6.44	5.84	5.51	6.61	6.00	5.66	6.79	6.16	5.81	6.97	6.32	5.97	7.47	6.78	6.39	7.86	7.13	6.73	8.35	7.58	7.15	8.68	7.87	7.43
	Power	1.32	1.18	1.13	1.32	1.18	1.13	1.31	1.18	1.12	1.31	1.17	1.12	1.31	1.17	1.12	1.30	1.17	1.12	1.30	1.17	1.12	1.30	1.17	1.11	1.30	1.16	1.11	1.29	1.15	1.10	1.29	1.16	1.10	1.28	1.15	1.10	1.27	1.14	1.09
	Efficiency	4.21	4.26	4.21	4.35	4.41	4.35	4.50	4.55	4.50	4.64	4.70	4.64	4.79	4.85	4.79	4.93	4.99	4.93	5.08	5.14	5.08	5.22	5.29	5.22	5.37	5.43	5.37	5.80	5.88	5.80	6.09	6.16	6.09	6.52	6.61	6.52	6.81	6.90	6.81
-5	Capacity	5.46	4.95	4.67	5.64	5.11	4.82	5.81	5.27	4.97	5.99	5.43	5.12	6.16	5.59	5.27	6.34	5.75	5.42	6.51	5.90	5.57	6.69	6.06	5.72	6.86	6.22	5.87	7.36	6.67	6.29	7.74	7.01	6.62	8.23	7.46	7.04	8.55	7.75	7.31
	Power	1.40	1.25	1.19	1.39	1.25	1.19	1.39	1.24	1.19	1.39	1.24	1.19	1.38	1.24	1.18	1.38	1.24	1.18	1.38	1.23	1.18	1.38	1.23	1.18	1.37	1.23	1.17	1.36	1.22	1.16	1.36	1.22	1.17	1.35	1.21	1.16	1.35	1.21	1.15
	Efficiency	3.92	3.97	3.92	4.05	4.10	4.05	4.19	4.24	4.19	4.32	4.38	4.32	4.46	4.51	4.46	4.59	4.65	4.59	4.73	4.79	4.73	4.86	4.92	4.86	5.00	5.06	5.00	5.40	5.47	5.40	5.67	5.74	5.67	6.08	6.15	6.08	6.35	6.43	6.35
0	Capacity	5.24	4.64	3.89	5.41	4.79	4.02	5.57	4.93	4.14	5.74	5.08	4.27	5.91	5.23	4.39	6.08	5.38	4.51	6.24	5.53	4.64	6.41	5.68	4.76	6.58	5.82	4.89	7.05	6.24	5.24	7.42	6.57	5.51	7.89	6.98	5.86	8.19	7.25	6.09
	Power	1.53	1.33	1.09	1.53	1.32	1.08	1.52	1.32	1.08	1.52	1.32	1.08	1.52	1.31	1.08	1.51	1.31	1.07	1.51	1.31	1.07	1.51	1.31	1.07	1.51	1.30	1.07	1.49	1.29	1.06	1.50	1.30	1.06	1.49	1.29	1.05	1.48	1.28	1.05
	Efficiency	3.42	3.50	3.59	3.54	3.62	3.71	3.66	3.74	3.84	3.78	3.86	3.96	3.90	3.98	4.08	4.01	4.10	4.21	4.13	4.22	4.33	4.25	4.35	4.45	4.37	4.47	4.58	4.72	4.83	4.95	4.96	5.07	5.19	5.31	5.43	5.56	5.55	5.67	5.81
5	Capacity	4.98	4.39	3.68	5.14	4.53	3.80	5.29	4.67	3.92	5.45	4.81	4.04	5.61	4.95	4.15	5.77	5.09	4.27	5.93	5.23	4.39	6.09	5.37	4.51	6.25	5.51	4.63	6.70	5.91	4.96	7.05	6.21	5.22	7.49	6.61	5.55	7.78	6.86	5.76
	Power	1.63	1.41	1.15	1.63	1.41	1.15	1.63	1.40	1.15	1.62	1.40	1.15	1.62	1.40	1.14	1.62	1.39	1.14	1.61	1.39	1.14	1.61	1.39	1.14	1.61	1.39	1.14	1.59	1.37	1.13	1.60	1.38	1.13	1.59	1.37	1.12	1.58	1.36	1.11
	Efficiency	3.05	3.11	3.19	3.15	3.22	3.30	3.26	3.33	3.41	3.36	3.44	3.52	3.47	3.54	3.63	3.57	3.65	3.74	3.68	3.76	3.85	3.78	3.87	3.96	3.89	3.97	4.07	4.20	4.30	4.40	4.41	4.51	4.62	4.73	4.83	4.95	4.94	5.05	5.17
10	Capacity	11.82	10.91	8.41	12.20	11.26	8.68	12.58	11.61	8.95	12.96	11.96	9.22	13.33	12.31	9.49	13.71	12.66	9.76	14.09	13.01	10.02	14.47	13.36	10.29	14.85	13.71	10.56	15.91	14.69	11.32	16.74	15.45	11.91	17.80	16.44	12.66	18.49	17.07	13.15
	Power	2.02	1.81	1.31	2.01	1.80	1.31	2.01	1.80	1.30	2.01	1.79	1.30	2.00	1.79	1.30	2.00	1.79	1.30	1.99	1.78	1.29	1.99	1.78	1.29	1.99	1.78	1.29	1.97	1.76	1.28	1.98	1.77	1.28	1.96	1.75	1.27	1.95	1.74	1.27
	Efficiency	5.85	6.05	6.42	6.05	6.26	6.64	6.26	6.47	6.86	6.46	6.67	7.08	6.66	6.88	7.30	6.86	7.09	7.53	7.06	7.30	7.75	7.27	7.51	7.97	7.47	7.72	8.19	8.07	8.34	8.85	8.47	8.75	9.29	9.08	9.38	9.95	9.48	9.80	10.40
15	Capacity	11.33	10.46	8.06	11.70	10.80	8.32	12.06	11.13	8.58	12.42	11.47	8.84	12.78	11.80	9.09	13.15	12.14	9.35	13.51	12.47	9.61	13.87	12.81	9.87	14.23	13.14	10.13	15.25	14.08	10.85	16.05	14.82	11.42	17.07	15.76	12.14	17.73	16.36	12.61
	Power	2.16	1.93	1.40	2.15	1.92	1.40	2.15	1.92	1.39	2.14	1.91	1.39	2.14	1.91	1.39	2.13	1.91	1.38	2.13	1.90	1.38	2.13	1.90	1.38	2.12	1.90	1.38	2.11	1.88	1.37	2.11	1.89	1.37	2.10	1.87	1.36	2.08	1.86	1.35
	Efficiency	5.25	5.43	5.76	5.43	5.61	5.96	5.61	5.80	6.16	5.80	5.99	6.36	5.98	6.18	6.55	6.16	6.36	6.75	6.34	6.55	6.95	6.52	6.74	7.15	6.70	6.93	7.35	7.25	7.49	7.95	7.60	7.86	8.34	8.15	8.42	8.93	8.51	8.79	9.33
20	Capacity	11.04	10.19	7.85	11.39	10.52	8.10	11.75	10.84	8.36	12.10	11.17	8.61	12.45	11.50	8.86	12.81	11.82	9.11	13.16	12.15	9.36	13.51	12.48	9.61	13.87	12.80	9.86	14.86	13.72	10.57	15.63	14.43	11.12	16.63	15.35	11.83	17.27	15.94	12.28
	Power	2.37	2.12	1.54	2.37	2.12	1.54	2.36	2.11	1.53	2.36	2.11	1.53	2.35	2.10	1.53	2.35	2.10	1.52	2.34	2.09	1.52	2.34	2.09	1.52	2.34	2.09	1.52	2.32	2.07	1.50	2.32	2.07	1.51	2.30	2.06	1.49	2.29	2.05	1.49
	Efficiency	4.65	4.81	5.10	4.81	4.97	5.28	4.97	5.14	5.45	5.13	5.30	5.63	5.29	5.47	5.81	5.45	5.64	5.98	5.61	5.80	6.16	5.78	5.97	6.33	5.94	6.13	6.51	6.42	6.63	7.04	6.73	6.96	7.38	7.21	7.45	7.91	7.54	7.79	8.26
25	Capacity	10.55	9.74	7.51	10.89	10.05	7.75	11.23	10.37	7.99	11.56	10.68	8.23	11.90	10.99	8.47	12.24	11.30	8.71	12.58	11.61	8.95	12.92	11.92	9.19	13.25	12.24	9.43	14.20	13.11	10.10	14.94	13.79	10.63	15.89	14.67	11.30	16.50	15.24	11.74
	Power	2.61	2.33	1.69	2.60	2.32	1.69	2.59	2.32	1.68	2.59	2.31	1.68	2.58	2.31	1.67	2.58	2.30	1.67	2.57	2.30	1.67	2.57	2.29	1.67	2.56	2.29	1.66	2.54	2.27	1.65	2.55	2.28	1.65	2.53	2.26	1.64	2.51	2.25	1.63
	Efficiency	4.05	4.19	4.44	4.19	4.33	4.60	4.33	4.48	4.75	4.47	4.62	4.90	4.61	4.76	5.06	4.75	4.91	5.21	4.89	5.05	5.36	5.03	5.20	5.52	5.17	5.34	5.67	5.59	5.78	6.13	5.86	6.06	6.43	6.28	6.49	6.89	6.56	6.78	7.20
30	Capacity	12.54	12.24	7.09	12.94	12.63	7.32	13.34	13.02	7.54	13.74	13.42	7.77	14.14	13.81	8.00	14.54	14.20	8.22	14.94	14.59	8.45	15.34	14.98	8.68	15.74	15.37	8.90	16.87	16.48	9.54	17.75	17.33	10.04	18.88	18.43	10.68	19.61	19.14	11.09
	Power	4.10	3.86	1.87	4.09	3.85	1.87	4.08	3.84	1.86	4.07	3.83	1.86	4.06	3.82	1.86	4.05	3.81	1.85	4.05	3.81	1.85	4.04	3.80	1.85	4.03	3.79	1.84	4.00	3.76	1.83	4.01	3.77	1.83	3.98	3.74	1.82	3.96	3.72	1.81
	Efficiency	3.06	3.17	3.78	3.17	3.29	3.92	3.27	3.39	4.05	3.38	3.50	4.18	3.48	3.61	4.31	3.59	3.72	4.44	3.69	3.83	4.57	3.80	3.94	4.70	3.90	4.05	4.83	4.22	4.38	5.22	4.43	4.60	5.48	4.75	4.92	5.87	4.96	5.14	6.13
35	Capacity	12.29	12.00	6.95	12.68	12.38	7.17	13.08	12.77	7.39	13.47	13.15	7.62	13.86	13.54	7.84	14.26	13.92	8.06	14.65	14.30	8.28	15.04	14.69	8.51	15.44	15.07	8.73	16.54	13.70	9.35	17.40	16.99	9.84	18.51	18.07	10.47	19.22	18.77	10.87
	Power	4.62	4.21	2.11	4.61	4.34	2.11	4.60	4.33	2.10	4.59	4.32	2.10	4.58	4.31	2.09	4.57	4.30	2.09	4.56	4.29	2.09	4.55	4.28	2.08	4.55	4.28	2.08	4.51	3.65	2.06	4.52	4.25	2.07	4.48	4.22	2.05	4.46	4.20	2.04
	Efficiency	2.66	2.85	3.29	2.75	2.86	3.41	2.84	2.95	3.52	2.94	3.05	3.63	3.03	3.14	3.75	3.12	3.24	3.86	3.21	3.33	3.97	3.30	3.43	4.09	3.40	3.52	4.20	3.67	3.75	4.54	3.85	4.00	4.76	4.13	4.28	5.10	4.31	4.47	5.33
40	Capacity	8.50	7.85	6.05	8.77	8.10	6.24	9.04	8.35	6.43	9.32	8.60	6.63	9.59	8.85	6.82	9.86	9.10	7.01	10.13	9.35	7.21	10.40	9.61	7.40	10.68	9.86	7.59	11.44	10.56	8.14	12.04	11.11	8.56	12.80	11.82	9.11	13.29	12.27	9.46
	Power	3.54	3.16	2.30	3.53	3.16	2.29	3.52	3.15	2.29	3.52	3.14	2.28	3.51	3.14	2.28	3.50	3.13	2.27	3.50	3.12	2.27	3.49	3.12	2.26	3.48	3.11	2.26	3.45	3.09	2.24	3.46	3.09	2.25	3.44	3.07	2.23	3.42	3.05	2.22
	Efficiency	2.40	2.48	2.63	2.48	2.57	2.72	2.57	2.65	2.81	2.65	2.74	2.91	2.73	2.82	3.00	2.82	2.91	3.09	2.90	2.99	3.18	2.98	3.08	3.27	3.06	3.17	3.36	3.31	3.42	3.63	3.48	3.59	3.81	3.72	3.85	4.08	3.89	4.02	4.27
45	Capacity	5.91	5.69	5.14	6.10	5.87	5.31	6.29	6.05	5.47	6.48	6.24	5.64	6.67	6.42	5.80	6.86	6.60	5.97	7.05	6.78	6.13	7.24	6.97	6.30	7.43	7.15	6.46	7.96	7.66	6.92	8.37	8.06	7.28	8.90	8.57	7.75	9.25	8.90	8.04
	Power	2.89	2.75	2.48	2.88	2.74	2.47	2.87	2.73	2.47	2.87	2.73	2.46	2.86	2.72	2.46	2.86	2.72	2.45	2.85	2.71	2.45	2.85	2.71	2.45	2.84	2.70	2.44	2.82	2.68	2.42	2.82	2.68	2.43	2.80	2.66	2.41	2.79	2.65	2.39
	Efficiency	2.05	2.07	2.07	2.12	2.15	2.15	2.19	2.22	2.22	2.26	2.29	2.29	2.33	2.36	2.36	2.40	2.43	2.43	2.47	2.50	2.50	2.54	2.57	2.57	2.61	2.65	2.65	2.83	2.86	2.86	2.96	3.00	3.00	3.18	3.22	3.22	3.32	3.36	3.36
48	Capacity	5.11	4.92	4.45	5.28	5.08	4.59	5.44	5.24	4.73	5.60	5.39	4.88	5.77	5.55	5.02	5.93	5.71	5.16	6.10	5.87	5.30	6.26	6.02	5.44	6.42	6.18	5.59	6.88	6.62	5.99	7.24	6.97	6.30	7.70	7.41	6.70	8.00	7.70	6.96
	Power	2.97	2.82	2.55	2.96	2.81	2.54	2.95	2.81	2.54	2.95	2.80	2.53	2.94	2.80	2.53	2.94	2.79	2.52	2.93	2.79	2.52	2.93	2.78	2.51	2.92	2.78	2.51	2.90	2.75	2.49	2.90	2.76	2.49	2.88	2.74	2.48	2.87	2.72	2.46
	Efficiency	1.72	1.74	1.74	1.78	1.80	1.80	1.84	1.86	1.86	1.90	1.93	1.93	1.96	1.99	1.99	2.02	2.05	2.05	2.08	2.11	2.11	2.14	2.17	2.17	2.20	2.23	2.23	2.38	2.41	2.41	2.49	2.52	2.52	2.67	2.71	2.71	2.79	2.83	2.83

GRS-CQ16Pd/NhH3-E1

Ambient Temp(°C)	Outflow Water(°C)	7			8			9			10			11			12			13			14			15			18			20			23			25		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-15	Capacity	6.64	5.77	4.83	6.86	5.96	4.98	7.07	6.14	5.13	7.28	6.33	5.29	7.49	6.51	5.44	7.71	6.70	5.60	7.92	6.88	5.75	8.13	7.07	5.91	8.34	7.25	6.06	8.94	7.77	6.50	9.41	8.17	6.83	10.01	8.69	7.27	10.39	9.03	7.55
	Power	1.42	1.19	0.96	1.42	1.19	0.96	1.41	1.19	0.96	1.41	1.19	0.96	1.41	1.18	0.95	1.40	1.18	0.95	1.40	1.18	0.95	1.40	1.18	0.95	1.40	1.17	0.95	1.38	1.16	0.94	1.39	1.17	0.94	1.38	1.16	0.94	1.37	1.15	0.93
	Efficiency	4.68	4.84	5.01	4.84	5.01	5.18	5.01	5.17	5.36	5.17	5.34	5.53	5.33	5.51	5.70	5.49	5.67	5.87	5.65	5.84	6.05	5.81	6.01	6.22	5.97	6.17	6.39	6.46	6.67	6.91	6.78	7.00	7.25	7.26	7.50	7.77	7.58	7.84	8.11
-10	Capacity	6.55	5.68	4.75	6.76	5.86	4.90	6.96	6.05	5.05	7.17	6.23	5.21	7.38	6.41	5.36	7.59	6.59	5.51	7.80	6.77	5.66	8.01	6.96	5.81	8.22	7.14	5.97	8.81	7.65	6.39	9.27	8.05	6.73	9.86	8.56	7.15	10.24	8.89	7.43
	Power	1.67	1.40	1.13	1.66	1.40	1.13	1.66	1.39	1.12	1.65	1.39	1.12	1.65	1.39	1.12	1.65	1.38	1.12	1.64	1.38	1.12	1.64	1.38	1.11	1.64	1.38	1.11	1.62	1.36	1.10	1.63	1.37	1.10	1.62	1.36	1.10	1.61	1.35	1.09
	Efficiency	3.93	4.06	4.21	4.07	4.20	4.35	4.20	4.34	4.50	4.34	4.48	4.64	4.47	4.62	4.79	4.61	4.76	4.93	4.75	4.90	5.08	4.88	5.04	5.22	5.02	5.18	5.37	5.42	5.60	5.80	5.69	5.88	6.09	6.10	6.30	6.52	6.37	6.58	6.81
-5	Capacity	6.45	5.59	4.67	6.65	5.77	4.82	6.86	5.95	4.97	7.07	6.13	5.12	7.27	6.31	5.27	7.48	6.49	5.42	7.69	6.67	5.57	7.89	6.85	5.72	8.10	7.02	5.87	8.68	7.53	6.29	9.13	7.92	6.62	9.71	8.42	7.04	10.08	8.75	7.31
	Power	1.76	1.48	1.19	1.76	1.47	1.19	1.75	1.47	1.19	1.75	1.47	1.19	1.75	1.47	1.18	1.74	1.46	1.18	1.74	1.46	1.18	1.74	1.46	1.18	1.73	1.45	1.17	1.72	1.44	1.16	1.72	1.45	1.17	1.71	1.44	1.16	1.70	1.43	1.15
	Efficiency	3.66	3.78	3.92	3.79	3.91	4.05	3.91	4.04	4.19	4.04	4.18	4.32	4.17	4.31	4.46	4.29	4.44	4.59	4.42	4.57	4.73	4.55	4.70	4.86	4.67	4.83	5.00	5.05	5.22	5.40	5.30	5.48	5.67	5.68	5.87	6.08	5.93	6.13	6.35
0	Capacity	6.49	5.89	3.89	6.69	6.07	4.02	6.90	6.26	4.14	7.11	6.45	4.27	7.32	6.64	4.39	7.52	6.83	4.51	7.73	7.02	4.64	7.94	7.20	4.76	8.15	7.39	4.89	8.73	7.92	5.24	9.18	8.33	5.51	9.77	8.86	5.86	10.14	9.21	6.09
	Power	2.08	1.86	1.09	2.07	1.86	1.08	2.07	1.85	1.08	2.07	1.85	1.08	2.06	1.84	1.08	2.06	1.84	1.07	2.05	1.84	1.07	2.05	1.83	1.07	2.05	1.83	1.07	2.03	1.82	1.06	2.03	1.82	1.06	2.02	1.81	1.05	2.01	1.80	1.05
	Efficiency	3.12	3.16	3.59	3.23	3.27	3.71	3.33	3.38	3.84	3.44	3.49	3.96	3.55	3.60	4.08	3.66	3.71	4.21	3.76	3.82	4.33	3.87	3.93	4.45	3.98	4.04	4.58	4.30	4.36	4.95	4.51	4.58	5.19	4.84	4.90	5.56	5.05	5.12	5.81
5	Capacity	6.16	5.57	3.68	6.36	5.75	3.80	6.56	5.93	3.92	6.75	6.11	4.04	6.95	6.28	4.15	7.15	6.46	4.27	7.34	6.64	4.39	7.54	6.82	4.51	7.74	7.00	4.63	8.29	7.50	4.96	8.72	7.89	5.22	9.28	8.39	5.55	9.64	8.71	5.76
	Power	2.25	1.98	1.15	2.25	1.97	1.15	2.24	1.97	1.15	2.24	1.97	1.15	2.23	1.96	1.14	2.23	1.96	1.14	2.22	1.95	1.14	2.22	1.95	1.14	2.22	1.95	1.14	2.20	1.93	1.13	2.20	1.94	1.13	2.19	1.92	1.12	2.17	1.91	1.11
	Efficiency	2.74	2.81	3.19	2.83	2.91	3.30	2.93	3.01	3.41	3.02	3.11	3.52	3.11	3.20	3.63	3.21	3.30	3.74	3.30	3.40	3.85	3.40	3.49	3.96	3.49	3.59	4.07	3.77	3.88	4.40	3.96	4.07	4.62	4.24	4.36	4.95	4.43	4.56	5.17
10	Capacity	13.43	12.90	8.41	13.86	13.31	8.68	14.29	13.72	8.95	14.72	14.14	9.22	15.15	14.55	9.49	15.58	14.96	9.76	16.01	15.38	10.02	16.44	15.79	10.29	16.87	16.20	10.56	18.08	17.36	11.32	19.02	18.26	11.91	20.23	19.43	12.66	21.01	20.17	13.15
	Power	2.44	2.30	1.31	2.44	2.29	1.31	2.43	2.28	1.30	2.42	2.28	1.30	2.42	2.28	1.30	2.42	2.27	1.30	2.41	2.27	1.29	2.41	2.26	1.29	2.40	2.26	1.29	2.38	2.24	1.28	2.39	2.25	1.28	2.37	2.23	1.27	2.36	2.22	1.27
	Efficiency	5.50	5.62	6.42	5.69	5.81	6.64	5.88	6.01	6.86	6.07	6.20	7.08	6.26	6.39	7.30	6.45	6.59	7.53	6.64	6.78	7.75	6.83	6.98	7.97	7.02	7.17	8.19	7.59	7.75	8.85	7.96	8.13	9.29	8.53	8.71	9.95	8.91	9.10	10.40
15	Capacity	12.88	12.37	8.06	13.29	12.76	8.32	13.70	13.16	8.58	14.11	13.55	8.84	14.52	13.95	9.09	14.94	14.34	9.35	15.35	14.74	9.61	15.76	15.14	9.87	16.17	15.53	10.13	17.33	16.64	10.85	18.23	17.51	11.42	19.39	18.62	12.14	20.14	19.34	12.61
	Power	2.61	2.45	1.40	2.60	2.45	1.40	2.60	2.44	1.39	2.59	2.44	1.39	2.59	2.43	1.39	2.58	2.43	1.38	2.58	2.42	1.38	2.57	2.42	1.38	2.57	2.41	1.38	2.54	2.39	1.37	2.55	2.40	1.37	2.53	2.38	1.36	2.52	2.37	1.35
	Efficiency	4.94	5.04	5.76	5.11	5.22	5.96	5.28	5.39	6.16	5.45	5.56	6.36	5.62	5.74	6.55	5.79	5.91	6.75	5.96	6.09	6.95	6.13	6.26	7.15	6.30	6.43	7.35	6.81	6.96	7.95	7.15	7.30	8.34	7.66	7.82	8.93	8.00	8.17	9.33
20	Capacity	12.54	12.05	7.85	12.94	12.43	8.10	13.35	12.82	8.36	13.75	13.20	8.61	14.15	13.59	8.86	14.55	13.97	9.11	14.95	14.36	9.36	15.35	14.74	9.61	15.75	15.13	9.86	16.88	16.21	10.57	17.76	17.06	11.12	18.89	18.14	11.83	19.62	18.84	12.28
	Power	2.87	2.70	1.54	2.86	2.69	1.54	2.85	2.68	1.53	2.85	2.68	1.53	2.84	2.67	1.53	2.84	2.67	1.52	2.83	2.66	1.52	2.83	2.66	1.52	2.82	2.66	1.52	2.80	2.63	1.50	2.81	2.64	1.51	2.79	2.62	1.49	2.77	2.60	1.49
	Efficiency	4.37	4.46	5.10	4.52	4.62	5.28	4.67	4.77	5.45	4.83	4.93	5.63	4.98	5.08	5.81	5.13	5.24	5.98	5.28	5.39	6.16	5.43	5.54	6.33	5.58	5.70	6.51	6.03	6.16	7.04	6.33	6.46	7.38	6.78	6.93	7.91	7.08	7.23	8.26
25	Capacity	11.99	11.51	7.51	12.37	11.88	7.75	12.76	12.25	7.99	13.14	12.62	8.23	13.52	12.99	8.47	13.91	13.35	8.71	14.29	13.72	8.95	14.67	14.09	9.19	15.06	14.46	9.43	16.14	15.50	10.10	16.98	16.30	10.63	18.05	17.34	11.30	18.75	18.01	11.74
	Power	3.15	2.96	1.69	3.14	2.95	1.69	3.13	2.95	1.68	3.13	2.94	1.68	3.12	2.93	1.67	3.11	2.93	1.67	3.11	2.92	1.67	3.10	2.92	1.67	3.10	2.91	1.66	3.07	2.89	1.65	3.08	2.90	1.65	3.06	2.87	1.64	3.04	2.86	1.63
	Efficiency	3.81	3.89	4.44	3.94	4.02	4.60	4.07	4.16	4.75	4.20	4.29	4.90	4.33	4.43	5.06	4.47	4.56	5.21	4.60	4.69	5.36	4.73	4.83	5.52	4.86	4.96	5.67	5.25	5.37	6.13	5.51	5.63	6.43	5.91	6.03	6.89	6.17	6.30	7.20
30	Capacity	13.29	13.67	7.09	13.72	14.11	7.32	14.14	14.54	7.54	14.57	14.98	7.77	14.99	15.42	8.00	15.42	15.85	8.22	15.84	16.29	8.45	16.27	16.73	8.68	16.69	17.17	8.90	17.89	18.40	9.54	18.82	19.35	10.04	20.02	20.58	10.68	20.79	21.38	11.09
	Power	4.53	4.62	1.87	4.52	4.61	1.87	4.51	4.60	1.86	4.50	4.59	1.86	4.49	4.58	1.86	4.48	4.57	1.85	4.47	4.57	1.85	4.47	4.56	1.85	4.46	4.55	1.84	4.42	4.51	1.83	4.43	4.52	1.83	4.40	4.49	1.82	4.37	4.46	1.81
	Efficiency	2.93	2.96	3.78	3.04	3.06	3.92	3.14	3.16	4.05	3.24	3.26	4.18	3.34	3.36	4.31	3.44	3.47	4.44	3.54	3.57	4.57	3.64	3.67	4.70	3.74	3.77	4.83	4.05	4.08	5.22	4.25	4.28	5.48	4.55	4.59	5.87	4.75	4.79	6.13
35	Capacity	13.03	13.40	6.95	13.45	13.83	7.17	13.86	14.26	7.39	14.28	14.69	7.62	14.70	15.12	7.84	15.11	15.54	8.06	15.53	15.97	8.28	15.95	16.40	8.51	16.37	16.83	8.73	17.54	14.60	9.35	18.45	18.97	9.84	19.62	20.18	10.47	20.38	20.96	10.87
	Power	5.11	5.06	2.11	5.09	5.20	2.11	5.08	5.19	2.10	5.07	5.18	2.10	5.06	5.17	2.09	5.05	5.16	2.09	5.04	5.15	2.09	5.04	5.14	2.08	5.03	5.13	2.08	4.98	3.95	2.06	5.00	5.10	2.07	4.96	5.06	2.05	4.93	5.03	2.04
	Efficiency	2.55	2.65	3.29	2.64	2.66	3.41	2.73	2.75	3.52	2.82	2.84	3.63	2.90	2.93	3.75	2.99	3.01	3.86	3.08	3.10	3.97	3.17	3.19	4.09	3.26	3.28	4.20	3.52	3.70	4.54	3.69	3.72	4.76	3.96	3.99	5.10	4.13	4.16	5.33
40	Capacity	9.66	9.27	6.05	9.97	9.57	6.24	10.28	9.87	6.43	10.58	10.16	6.63	10.89	10.46	6.82	11.20	10.76	7.01	11.51	11.05	7.21	11.82	11.35	7.40	12.13	11.65	7.59	13.00	12.48	8.14	13.67	13.13	8.56	14.54	13.97	9.11	15.10	14.50	9.46
	Power	4.28	4.03	2.30	4.27	4.01	2.29	4.26	4.00	2.29	4.25	4.00	2.28	4.24	3.99	2.28	4.23	3.98	2.27	4.23	3.97	2.27	4.22	3.97	2.26	4.21	3.96	2.26	4.18	3.93	2.24	4.19	3.94	2.25	4.16	3.91	2.23	4.13	3.88	2.22
	Efficiency	2.26	2.30	2.63	2.33	2.38	2.72	2.41	2.46	2.81	2.49	2.54	2.91	2.57	2.62	3.00	2.65	2.70	3.09	2.72	2.78	3.18	2.80	2.86	3.27	2.88	2.94	3.36	3.11	3.18	3.63	3.27	3.34	3.81	3.50	3.57	4.08	3.66	3.73	4.27
45	Capacity	6.35	6.13	5.14	6.55	6.32	5.31	6.76	6.52	5.47	6.96	6.72	5.64	7.16	6.91	5.80	7.37	7.11	5.97	7.57	7.30	6.13	7.77	7.50	6.30	7.97	7.70	6.46	8.55	8.25	6.92	8.99	8.68	7.28	9.56	9.23	7.75	9.93	9.58	8.04
	Power	3.18	3.03	2.48	3.17	3.02	2.47	3.16	3.01	2.47	3.16	3.01	2.46	3.15	3.00	2.46	3.14	3.00	2.45	3.14	2.99	2.45	3.13	2.99	2.45	3.13	2.98	2.44	3.10	2.96	2.42	3.11	2.96	2.43	3.09	2.94	2.41	3.07	2.92	2.39
	Efficiency	2.00	2.02	2.07	2.07	2.09	2.15	2.14	2.16	2.22	2.20	2.23	2.29	2.27	2.30	2.36	2.34	2.37	2.43	2.41	2.44	2.50	2.48	2.51	2.57	2.55	2.58	2.65	2.76	2.79	2.86	2.89	2.93	3.00	3.10	3.14	3.22	3.24	3.28	3.36
48	Capacity	5.49	5.30	4.45	5.67	5.47	4.59	5.84	5.64	4.73	6.02	5.81	4.88	6.19	5.98	5.02	6.37	6.15	5.16	6.55	6.32	5.30	6.72	6.49	5.44	6.90	6.66	5.59	7.39	7.13	5.99	7.78	7.50	6.30	8.27	7.98	6.70	8.59	8.29	6.96
	Power	3.27	3.11	2.55	3.26	3.11	2.54	3.25	3.10	2.54	3.24	3.09	2.53	3.24	3.09	2.53	3.23	3.08	2.52	3.23	3.07	2.52	3.22	3.07	2.51	3.22	3.06	2.51	3.19	3.04	2.49	3.20	3.05	2.49	3.17	3.02	2.48	3.15	3.01	2.46
	Efficiency	1.68	1.70	1.74	1.74	1.76	1.80	1.80	1.82	1.86	1.85	1.88	1.93	1.91	1.94	1.99	1.97	2.00	2.05	2.03	2.05	2.11	2.09	2.11	2.17	2.14	2.17	2.23	2.32	2.35	2.41	2.43	2.46	2.52	2.61	2.64	2.71	2.72	2.76	2.83

(2) Three-phase units for cooling

GRS-CQ8.0Pd/NhH3-M

Ambient Temp(°C)	Outflow Water(°C)	7			8			9			10			11			12			13			14			15			18			20			23			25		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-15	Capacity	1.80	1.72	1.36	1.85	1.78	1.40	1.87	1.79	1.41	1.90	1.83	1.44	1.94	1.86	1.47	1.96	1.88	1.49	1.97	1.90	1.50	1.99	1.91	1.51	2.01	1.93	1.52	2.05	1.97	1.55	2.19	2.10	1.66	2.51	2.41	1.90	2.60	2.50	1.97
	Power	0.35	0.34	0.26	0.35	0.33	0.26	0.34	0.33	0.25	0.34	0.32	0.25	0.33	0.32	0.24	0.33	0.31	0.24	0.32	0.31	0.23	0.31	0.30	0.23	0.31	0.29	0.22	0.29	0.28	0.21	0.29	0.28	0.22	0.32	0.30	0.23	0.31	0.30	0.23
	Efficiency	5.13	5.15	5.30	5.31	5.33	5.49	5.49	5.51	5.67	5.67	5.68	5.86	5.84	5.86	6.04	6.02	6.04	6.22	6.20	6.22	6.40	6.37	6.39	6.59	6.55	6.57	6.77	7.08	7.10	7.32	7.43	7.45	7.68	7.96	7.99	8.23	8.32	8.34	8.60
-10	Capacity	1.96	1.89	1.49	2.03	1.95	1.54	2.04	1.96	1.55	2.08	2.00	1.58	2.12	2.04	1.61	2.14	2.06	1.62	2.16	2.08	1.64	2.18	2.09	1.65	2.20	2.11	1.67	2.24	2.15	1.70	2.40	2.30	1.81	2.75	2.64	2.08	2.85	2.74	2.16
	Power	0.46	0.44	0.33	0.45	0.44	0.33	0.44	0.42	0.32	0.44	0.42	0.32	0.43	0.41	0.32	0.42	0.41	0.31	0.42	0.40	0.30	0.41	0.39	0.30	0.40	0.38	0.29	0.38	0.36	0.28	0.38	0.37	0.28	0.41	0.39	0.30	0.41	0.39	0.30
	Efficiency	4.31	4.32	4.45	4.46	4.47	4.61	4.61	4.62	4.76	4.76	4.77	4.92	4.91	4.92	5.07	5.06	5.07	5.22	5.20	5.22	5.38	5.35	5.37	5.53	5.50	5.52	5.69	5.95	5.97	6.15	6.24	6.26	6.45	6.69	6.71	6.91	6.98	7.01	7.22
-5	Capacity	2.97	2.86	2.25	3.07	2.95	2.32	3.09	2.97	2.34	3.15	3.03	2.39	3.21	3.09	2.43	3.25	3.12	2.46	3.27	3.14	2.48	3.30	3.17	2.50	3.33	3.20	2.52	3.39	3.26	2.57	3.63	3.49	2.75	4.16	4.00	3.15	4.31	4.14	3.27
	Power	0.74	0.71	0.54	0.74	0.71	0.54	0.72	0.69	0.53	0.71	0.68	0.52	0.70	0.67	0.52	0.69	0.66	0.51	0.67	0.65	0.49	0.66	0.63	0.49	0.65	0.62	0.48	0.61	0.59	0.45	0.62	0.60	0.46	0.67	0.64	0.49	0.66	0.63	0.49
	Efficiency	4.01	4.03	4.15	4.15	4.17	4.29	4.29	4.31	4.44	4.43	4.44	4.58	4.57	4.58	4.72	4.71	4.72	4.87	4.85	4.86	5.01	4.99	5.00	5.15	5.12	5.14	5.29	5.54	5.56	5.72	5.81	5.83	6.01	6.23	6.25	6.44	6.50	6.52	6.72
0	Capacity	4.55	4.21	2.85	4.70	4.34	2.94	4.73	4.38	2.96	4.83	4.46	3.02	4.92	4.54	3.08	4.97	4.59	3.11	5.01	4.63	3.14	5.05	4.67	3.16	5.10	4.71	3.19	5.19	4.80	3.25	5.55	5.13	3.48	6.37	5.89	3.99	6.60	6.10	4.13
	Power	1.29	1.17	0.76	1.28	1.17	0.76	1.25	1.14	0.74	1.23	1.13	0.73	1.22	1.11	0.72	1.20	1.09	0.71	1.17	1.07	0.69	1.15	1.05	0.68	1.13	1.03	0.67	1.06	0.97	0.63	1.08	0.99	0.64	1.16	1.06	0.69	1.15	1.05	0.68
	Efficiency	3.54	3.59	3.74	3.67	3.71	3.87	3.79	3.84	4.00	3.91	3.96	4.13	4.03	4.08	4.26	4.16	4.21	4.39	4.28	4.33	4.51	4.40	4.45	4.64	4.52	4.58	4.77	4.89	4.95	5.16	5.13	5.19	5.41	5.50	5.56	5.80	5.74	5.81	6.06
5	Capacity	5.52	5.11	3.46	5.70	5.27	3.57	5.74	5.31	3.60	5.86	5.41	3.67	5.97	5.51	3.73	6.03	5.57	3.78	6.08	5.62	3.80	6.13	5.67	3.84	6.19	5.72	3.87	6.30	5.82	3.94	6.74	6.23	4.22	7.73	7.15	4.84	8.01	7.40	5.01
	Power	1.75	1.60	1.04	1.75	1.60	1.04	1.70	1.56	1.01	1.68	1.54	1.00	1.66	1.52	0.99	1.63	1.49	0.97	1.60	1.46	0.95	1.57	1.43	0.93	1.54	1.40	0.91	1.45	1.32	0.86	1.48	1.35	0.88	1.58	1.44	0.94	1.57	1.43	0.93
	Efficiency	3.15	3.19	3.33	3.26	3.30	3.44	3.37	3.41	3.56	3.48	3.52	3.67	3.59	3.63	3.79	3.70	3.74	3.90	3.81	3.85	4.02	3.92	3.96	4.13	4.02	4.07	4.25	4.35	4.40	4.59	4.56	4.62	4.82	4.89	4.95	5.16	5.11	5.17	5.39
10	Capacity	8.04	7.10	4.45	8.30	7.33	4.59	8.36	7.39	4.62	8.52	7.53	4.71	8.68	7.67	4.80	8.78	7.76	4.86	8.84	7.81	4.89	8.92	7.88	4.94	9.00	7.95	4.98	9.16	8.10	5.07	9.81	8.66	5.42	11.25	9.94	6.22	11.65	10.30	6.45
	Power	1.30	1.12	0.66	1.29	1.12	0.66	1.26	1.09	0.65	1.24	1.08	0.64	1.23	1.06	0.63	1.21	1.04	0.62	1.18	1.02	0.61	1.16	1.00	0.59	1.14	0.98	0.58	1.07	0.93	0.55	1.09	0.94	0.56	1.17	1.01	0.60	1.16	1.00	0.59
	Efficiency	6.20	6.34	6.69	6.42	6.56	6.92	6.63	6.78	7.15	6.85	7.00	7.38	7.06	7.22	7.61	7.27	7.43	7.85	7.49	7.65	8.08	7.70	7.87	8.31	7.92	8.09	8.54	8.56	8.75	9.23	8.98	9.18	9.68	9.62	9.83	10.38	10.05	10.27	10.84
15	Capacity	7.90	6.98	4.37	8.15	7.20	4.51	8.22	7.26	4.54	8.37	7.40	4.63	8.53	7.54	4.72	8.63	7.62	4.77	8.69	7.68	4.81	8.77	7.75	4.85	8.85	7.82	4.89	9.01	7.96	4.98	9.64	8.52	5.33	11.06	9.77	6.12	11.46	10.12	6.34
	Power	1.42	1.23	0.73	1.42	1.22	0.73	1.38	1.19	0.71	1.36	1.18	0.70	1.35	1.16	0.69	1.32	1.14	0.68	1.29	1.12	0.66	1.27	1.10	0.65	1.25	1.08	0.64	1.17	1.01	0.60	1.20	1.03	0.61	1.28	1.11	0.66	1.27	1.10	0.65
	Efficiency	5.57	5.69	6.00	5.76	5.89	6.21	5.95	6.08	6.42	6.14	6.28	6.63	6.34	6.48	6.83	6.53	6.67	7.04	6.72	6.87	7.25	6.91	7.06	7.46	7.10	7.26	7.66	7.68	7.85	8.28	8.06	8.24	8.69	8.63	8.82	9.31	9.02	9.22	9.73
20	Capacity	7.56	6.68	4.18	7.80	6.89	4.31	7.86	6.94	4.35	8.01	7.08	4.43	8.16	7.21	4.51	8.25	7.29	4.56	8.31	7.34	4.60	8.39	7.41	4.64	8.46	7.48	4.68	8.61	7.61	4.77	9.22	8.15	5.10	10.58	9.35	5.85	10.96	9.68	6.06
	Power	1.53	1.33	0.79	1.53	1.32	0.78	1.49	1.29	0.76	1.47	1.27	0.75	1.45	1.26	0.75	1.43	1.23	0.73	1.40	1.21	0.72	1.37	1.18	0.70	1.35	1.16	0.69	1.27	1.09	0.65	1.29	1.12	0.66	1.38	1.20	0.71	1.37	1.19	0.70
	Efficiency	4.93	5.04	5.32	5.10	5.21	5.50	5.27	5.39	5.69	5.44	5.56	5.87	5.61	5.74	6.05	5.78	5.91	6.24	5.95	6.08	6.42	6.12	6.26	6.60	6.29	6.43	6.79	6.80	6.95	7.34	7.14	7.29	7.70	7.65	7.82	8.25	7.99	8.16	8.62
25	Capacity	7.91	7.42	4.10	8.16	7.66	4.24	8.22	7.72	4.27	8.38	7.86	4.35	8.54	8.01	4.43	8.63	8.10	4.48	8.70	8.16	4.51	8.78	8.24	4.56	8.85	8.31	4.60	9.01	8.46	4.68	9.64	9.05	5.01	11.07	10.39	5.75	11.46	10.76	5.95
	Power	1.86	1.73	0.89	1.85	1.72	0.88	1.81	1.68	0.86	1.78	1.66	0.85	1.76	1.64	0.84	1.73	1.61	0.83	1.69	1.57	0.81	1.66	1.54	0.79	1.63	1.52	0.78	1.54	1.43	0.73	1.57	1.46	0.75	1.68	1.56	0.80	1.66	1.55	0.79
	Efficiency	4.25	4.29	4.63	4.40	4.44	4.79	4.55	4.59	4.95	4.69	4.74	5.11	4.84	4.89	5.27	4.99	5.04	5.43	5.13	5.18	5.59	5.28	5.33	5.75	5.43	5.48	5.91	5.87	5.92	6.39	6.16	6.22	6.70	6.60	6.66	7.18	6.89	6.96	7.50
30	Capacity	9.00	7.69	3.99	9.29	7.93	4.12	9.36	7.99	4.15	9.54	8.15	4.23	9.72	8.30	4.31	9.83	8.39	4.36	9.90	8.45	4.39	9.99	8.53	4.43	10.08	8.61	4.47	10.26	8.76	4.55	10.98	9.38	4.87	12.60	10.76	5.59	13.05	11.14	5.79
	Power	2.57	2.12	1.01	2.57	2.12	1.01	2.50	2.06	0.98	2.47	2.04	0.97	2.44	2.01	0.96	2.40	1.98	0.94	2.34	1.93	0.92	2.30	1.90	0.90	2.26	1.86	0.89	2.13	1.75	0.84	2.17	1.79	0.85	2.32	1.91	0.91	2.30	1.90	0.91
	Efficiency	3.50	3.62	3.94	3.62	3.75	4.08	3.74	3.87	4.22	3.86	4.00	4.35	3.98	4.12	4.49	4.10	4.25	4.63	4.22	4.37	4.76	4.34	4.50	4.90	4.46	4.62	5.04	4.82	5.00	5.44	5.06	5.25	5.71	5.42	5.62	6.12	5.67	5.87	6.39
35	Capacity	8.57	7.30	3.80	8.84	7.55	3.92	8.91	7.61	3.95	9.08	7.76	4.03	9.26	7.91	4.10	9.36	7.99	4.15	9.43	8.05	4.18	9.51	8.13	4.22	9.60	8.20	4.26	9.77	8.40	4.33	10.46	8.93	4.64	12.00	10.25	5.32	12.43	10.61	5.51
	Power	2.82	2.23	1.11	2.81	2.32	1.10	2.74	2.26	1.08	2.71	2.23	1.06	2.67	2.20	1.05	2.62	2.16	1.03	2.57	2.12	1.01	2.52	2.08	0.99	2.47	2.04	0.97	2.33	1.71	0.92	2.38	1.96	0.93	2.54	2.10	1.00	2.52	2.08	0.99
	Efficiency	3.04	3.27	3.43	3.15	3.26	3.55	3.25	3.37	3.67	3.36	3.48	3.79	3.46	3.59	3.91	3.57	3.69	4.02	3.67	3.80	4.14	3.78	3.91	4.26	3.88	4.02	4.38	4.20	4.90	4.73	4.40	4.56	4.97	4.72	4.89	5.32	4.93	5.10	5.56
40	Capacity	5.18	4.73	2.96	5.34	4.89	3.06	5.39	4.92	3.08	5.49	5.02	3.14	5.59	5.11	3.20	5.66	5.17	3.24	5.70	5.21	3.26	5.75	5.26	3.29	5.80	5.30	3.32	5.90	5.40	3.38	6.32	5.78	3.62	7.25	6.63	4.15	7.51	6.87	4.30
	Power	2.02	1.82	1.08	2.02	1.82	1.08	1.97	1.77	1.05	1.94	1.75	1.04	1.92	1.73	1.02	1.88	1.70	1.01	1.84	1.66	0.98	1.81	1.63	0.97	1.78	1.60	0.95	1.67	1.50	0.89	1.70	1.53	0.91	1.83	1.64	0.97	1.81	1.63	0.97
	Efficiency	2.56	2.60	2.74	2.65	2.69	2.84	2.74	2.78	2.93	2.83	2.87	3.03	2.91	2.96	3.12	3.00	3.05	3.22	3.09	3.14	3.31	3.18	3.23	3.41	3.27	3.32	3.50	3.53	3.59	3.79	3.71	3.76	3.97	3.97	4.03	4.26	4.15	4.21	4.45
45	Capacity	2.96	2.89	2.58	3.06	2.98	2.67	3.08	3.01	2.69	3.14	3.06	2.74	3.20	3.12	2.79	3.24	3.16	2.82	3.26	3.18	2.84	3.29	3.21	2.87	3.32	3.24	2.89	3.38	3.29	2.95	3.62	3.53	3.15	4.15	4.05	3.62	4.30	4.19	3.75
	Power	1.39	1.35	1.20	1.38	1.35	1.19	1.35	1.31	1.16	1.33	1.30	1.15	1.32	1.28	1.13	1.29	1.26	1.11	1.26	1.23	1.09	1.24	1.21	1.07	1.22	1.18	1.05	1.15	1.11	0.99	1.17	1.14	1.01	1.25	1.22	1.08	1.24	1.21	1.07
	Efficiency	2.14	2.14	2.16	2.21	2.22	2.24	2.28	2.29	2.31	2.36	2.36	2.39	2.43	2.44	2.46	2.51	2.51	2.53	2.58	2.59	2.61	2.65	2.66	2.68	2.73	2.73	2.76	2.95	2.96	2.98	3.09	3.10	3.13	3.31	3.32	3.35	3.46	3.47	3.50
48	Capacity	2.75	2.68	2.39	2.83	2.76	2.47	2.86	2.78	2.49	2.91	2.84	2.54	2.97	2.89	2.59	3.00	2.92	2.61	3.02	2.95	2.63	3.05	2.97	2.66	3.08	3.00	2.68	3.13	3.05	2.73	3.35	3.27	2.92	3.85	3.75	3.35	3.98	3.88	3.47
	Power	1.53	1.49	1.32	1.52	1.48	1.31	1.49	1.44	1.28	1.47	1.43	1.26	1.45	1.41	1.25	1.42	1.38	1.23	1.39	1.35	1.20	1.37	1.33	1.18	1.34	1.30	1.16	1.26	1.23	1.09	1.29	1.25	1.11	1.38	1.34	1.19	1.37	1.33	1.18
	Efficiency	1.80	1.80	1.82	1.86	1.87	1.88	1.92	1.93	1.94	1.98	1.99	2.01	2.05	2.05	2.07	2.11	2.11	2.13	2.17	2.18	2.20	2.23	2.24	2.26	2.29	2.30	2.32	2.48	2.49	2.51	2.60	2.61	2.63	2.79	2.80	2.82	2.91	2.92	2.95

GRS-CQ10Pd/NhH3-M

Ambient Temp(°C)	Outflow Water(°C)	7			8			9			10			11			12			13			14			15			18			20			23			25		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-15	Capacity	1.94	1.80	1.36	2.00	1.85	1.40	2.02	1.87	1.41	2.06	1.90	1.44	2.10	1.94	1.47	2.12	1.96	1.49	2.14	1.97	1.50	2.16	1.99	1.51	2.18	2.01	1.52	2.21	2.05	1.55	2.37	2.19	1.66	2.72	2.51	1.90	2.82	2.60	1.97
	Power	0.38	0.35	0.26	0.38	0.35	0.26	0.37	0.34	0.25	0.37	0.34	0.25	0.36	0.33	0.24	0.36	0.33	0.24	0.35	0.32	0.23	0.34	0.31	0.23	0.34	0.31	0.22	0.32	0.29	0.21	0.32	0.29	0.22	0.35	0.32	0.23	0.34	0.31	0.23
	Efficiency	5.07	5.13	5.30	5.25	5.31	5.49	5.42	5.49	5.67	5.60	5.67	5.86	5.77	5.84	6.04	5.95	6.02	6.22	6.12	6.20	6.40	6.30	6.37	6.59	6.47	6.55	6.77	7.00	7.08	7.32	7.34	7.43	7.68	7.87	7.96	8.23	8.22	8.32	8.60
-10	Capacity	2.12	1.96	1.49	2.19	2.03	1.54	2.21	2.04	1.55	2.25	2.08	1.58	2.29	2.12	1.61	2.32	2.14	1.62	2.34	2.16	1.64	2.36	2.18	1.65	2.38	2.20	1.67	2.42	2.24	1.70	2.59	2.40	1.81	2.97	2.75	2.08	3.08	2.85	2.16
	Power	0.50	0.46	0.33	0.50	0.45	0.33	0.49	0.44	0.32	0.48	0.44	0.32	0.47	0.43	0.32	0.46	0.42	0.31	0.45	0.42	0.30	0.45	0.41	0.30	0.44	0.40	0.29	0.41	0.38	0.28	0.42	0.38	0.28	0.45	0.41	0.30	0.45	0.41	0.30
	Efficiency	4.26	4.31	4.45	4.41	4.46	4.61	4.55	4.61	4.76	4.70	4.76	4.92	4.85	4.91	5.07	4.99	5.06	5.22	5.14	5.20	5.38	5.29	5.35	5.53	5.43	5.50	5.69	5.88	5.95	6.15	6.16	6.24	6.45	6.61	6.69	6.91	6.90	6.98	7.22
-5	Capacity	3.22	2.97	2.25	3.32	3.07	2.32	3.35	3.09	2.34	3.41	3.15	2.39	3.47	3.21	2.43	3.51	3.25	2.46	3.54	3.27	2.48	3.57	3.30	2.50	3.60	3.33	2.52	3.67	3.39	2.57	3.92	3.63	2.75	4.50	4.16	3.15	4.66	4.31	3.27
	Power	0.81	0.74	0.54	0.81	0.74	0.54	0.79	0.72	0.53	0.78	0.71	0.52	0.77	0.70	0.52	0.76	0.69	0.51	0.74	0.67	0.49	0.73	0.66	0.49	0.71	0.65	0.48	0.67	0.61	0.45	0.68	0.62	0.46	0.73	0.67	0.49	0.73	0.66	0.49
	Efficiency	3.97	4.01	4.15	4.10	4.15	4.29	4.24	4.29	4.44	4.38	4.43	4.58	4.51	4.57	4.72	4.65	4.71	4.87	4.79	4.85	5.01	4.92	4.99	5.15	5.06	5.12	5.29	5.47	5.54	5.72	5.74	5.81	6.01	6.15	6.23	6.44	6.43	6.50	6.72
0	Capacity	5.15	4.55	2.85	5.32	4.70	2.94	5.36	4.73	2.96	5.46	4.83	3.02	5.56	4.92	3.08	5.63	4.97	3.11	5.67	5.01	3.14	5.72	5.05	3.16	5.77	5.10	3.19	5.87	5.19	3.25	6.29	5.55	3.48	7.21	6.37	3.99	7.47	6.60	4.13
	Power	1.49	1.29	0.76	1.48	1.28	0.76	1.45	1.25	0.74	1.43	1.23	0.73	1.41	1.22	0.72	1.38	1.20	0.71	1.35	1.17	0.69	1.33	1.15	0.68	1.30	1.13	0.67	1.23	1.06	0.63	1.25	1.08	0.64	1.34	1.16	0.69	1.33	1.15	0.68
	Efficiency	3.47	3.54	3.74	3.59	3.67	3.87	3.71	3.79	4.00	3.83	3.91	4.13	3.95	4.03	4.26	4.07	4.16	4.39	4.19	4.28	4.51	4.31	4.40	4.64	4.42	4.52	4.77	4.78	4.89	5.16	5.02	5.13	5.41	5.38	5.50	5.80	5.62	5.74	6.06
5	Capacity	6.25	5.52	3.46	6.45	5.70	3.57	6.50	5.74	3.60	6.63	5.86	3.67	6.75	5.97	3.73	6.83	6.03	3.78	6.88	6.08	3.80	6.94	6.13	3.84	7.00	6.19	3.87	7.13	6.30	3.94	7.63	6.74	4.22	8.75	7.73	4.84	9.06	8.01	5.01
	Power	2.03	1.75	1.04	2.02	1.75	1.04	1.97	1.70	1.01	1.95	1.68	1.00	1.92	1.66	0.99	1.89	1.63	0.97	1.85	1.60	0.95	1.81	1.57	0.93	1.78	1.54	0.91	1.67	1.45	0.86	1.71	1.48	0.88	1.83	1.58	0.94	1.81	1.57	0.93
	Efficiency	3.08	3.15	3.33	3.19	3.26	3.44	3.30	3.37	3.56	3.41	3.48	3.67	3.51	3.59	3.79	3.62	3.70	3.90	3.72	3.81	4.02	3.83	3.92	4.13	3.94	4.02	4.25	4.26	4.35	4.59	4.47	4.56	4.82	4.79	4.89	5.16	5.00	5.11	5.39
10	Capacity	9.23	8.56	4.45	9.53	8.84	4.59	9.60	8.91	4.62	9.79	9.08	4.71	9.97	9.25	4.80	10.08	9.35	4.86	10.15	9.42	4.89	10.25	9.51	4.94	10.34	9.59	4.98	10.52	9.76	5.07	11.26	10.45	5.42	12.92	11.99	6.22	13.39	12.42	6.45
	Power	1.53	1.39	0.66	1.52	1.39	0.66	1.48	1.36	0.65	1.47	1.34	0.64	1.45	1.32	0.63	1.42	1.30	0.62	1.39	1.27	0.61	1.36	1.25	0.59	1.34	1.22	0.58	1.26	1.15	0.55	1.29	1.17	0.56	1.38	1.26	0.60	1.37	1.25	0.59
	Efficiency	6.05	6.14	6.69	6.26	6.36	6.92	6.47	6.57	7.15	6.67	6.78	7.38	6.88	6.99	7.61	7.09	7.21	7.85	7.30	7.42	8.08	7.51	7.63	8.31	7.72	7.84	8.54	8.34	8.48	9.23	8.75	8.89	9.68	9.38	9.53	10.38	9.80	9.95	10.84
15	Capacity	9.07	8.42	4.37	9.36	8.69	4.51	9.44	8.75	4.54	9.62	8.92	4.63	9.80	9.09	4.72	9.91	9.19	4.77	9.98	9.26	4.81	10.07	9.34	4.85	10.16	9.43	4.89	10.34	9.60	4.98	11.07	10.27	5.33	12.70	11.79	6.12	13.16	12.21	6.34
	Power	1.67	1.53	0.73	1.67	1.52	0.73	1.63	1.48	0.71	1.61	1.47	0.70	1.59	1.45	0.69	1.56	1.42	0.68	1.52	1.39	0.66	1.49	1.36	0.65	1.47	1.34	0.64	1.38	1.26	0.60	1.41	1.29	0.61	1.51	1.38	0.66	1.50	1.37	0.65
	Efficiency	5.43	5.51	6.00	5.61	5.71	6.21	5.80	5.90	6.42	5.99	6.09	6.63	6.18	6.28	6.83	6.36	6.47	7.04	6.55	6.66	7.25	6.74	6.85	7.46	6.93	7.04	7.66	7.49	7.61	8.28	7.86	7.98	8.69	8.42	8.55	9.31	8.79	8.93	9.73
20	Capacity	8.68	8.05	4.18	8.96	8.31	4.31	9.03	8.37	4.35	9.20	8.54	4.43	9.37	8.70	4.51	9.48	8.79	4.56	9.55	8.86	4.60	9.63	8.94	4.64	9.72	9.02	4.68	9.89	9.18	4.77	10.59	9.82	5.10	12.15	11.27	5.85	12.58	11.68	6.06
	Power	1.81	1.65	0.79	1.80	1.64	0.78	1.76	1.60	0.76	1.73	1.58	0.75	1.71	1.56	0.75	1.68	1.54	0.73	1.65	1.50	0.72	1.61	1.47	0.70	1.58	1.45	0.69	1.49	1.36	0.65	1.52	1.39	0.66	1.63	1.49	0.71	1.62	1.48	0.70
	Efficiency	4.81	4.88	5.32	4.97	5.05	5.50	5.14	5.22	5.69	5.30	5.39	5.87	5.47	5.56	6.05	5.64	5.73	6.24	5.80	5.90	6.42	5.97	6.06	6.60	6.13	6.23	6.79	6.63	6.74	7.34	6.96	7.07	7.70	7.45	7.58	8.25	7.79	7.91	8.62
25	Capacity	9.26	7.91	4.10	9.55	8.16	4.24	9.63	8.22	4.27	9.81	8.38	4.35	10.00	8.54	4.43	10.11	8.63	4.48	10.18	8.70	4.51	10.27	8.78	4.56	10.37	8.85	4.60	10.55	9.01	4.68	11.29	9.64	5.01	12.96	11.07	5.75	13.42	11.46	5.95
	Power	2.26	1.86	0.89	2.25	1.85	0.88	2.19	1.81	0.86	2.17	1.78	0.85	2.14	1.76	0.84	2.10	1.73	0.83	2.05	1.69	0.81	2.02	1.66	0.79	1.98	1.63	0.78	1.86	1.54	0.73	1.90	1.57	0.75	2.04	1.68	0.80	2.02	1.66	0.79
	Efficiency	4.10	4.25	4.63	4.25	4.40	4.79	4.39	4.55	4.95	4.53	4.69	5.11	4.67	4.84	5.27	4.81	4.99	5.43	4.96	5.13	5.59	5.10	5.28	5.75	5.24	5.43	5.91	5.66	5.87	6.39	5.94	6.16	6.70	6.37	6.60	7.18	6.65	6.89	7.50
30	Capacity	9.84	9.11	3.99	10.15	9.41	4.12	10.23	9.48	4.15	10.43	9.66	4.23	10.63	9.84	4.31	10.74	9.95	4.36	10.82	10.03	4.39	10.92	10.12	4.43	11.02	10.21	4.47	11.22	10.39	4.55	12.00	11.12	4.87	13.77	12.76	5.59	14.27	13.22	5.79
	Power	2.87	2.61	1.01	2.86	2.60	1.01	2.79	2.54	0.98	2.76	2.50	0.97	2.72	2.47	0.96	2.67	2.43	0.94	2.62	2.37	0.92	2.57	2.33	0.90	2.52	2.29	0.89	2.37	2.15	0.84	2.42	2.20	0.85	2.59	2.35	0.91	2.57	2.33	0.91
	Efficiency	3.43	3.50	3.94	3.55	3.62	4.08	3.67	3.74	4.22	3.78	3.86	4.35	3.90	3.98	4.49	4.02	4.10	4.63	4.14	4.22	4.76	4.26	4.34	4.90	4.37	4.46	5.04	4.73	4.82	5.44	4.96	5.06	5.71	5.32	5.42	6.12	5.55	5.67	6.39
35	Capacity	9.37	8.70	3.80	9.67	8.96	3.92	9.74	9.03	3.95	9.93	9.20	4.03	10.12	9.37	4.10	10.23	9.48	4.15	10.31	9.55	4.18	10.40	9.63	4.22	10.49	9.72	4.26	10.68	10.00	4.33	11.43	10.59	4.64	13.12	12.15	5.32	13.59	12.59	5.51
	Power	3.14	2.74	1.11	3.14	2.85	1.10	3.06	2.78	1.08	3.02	2.74	1.06	2.98	2.71	1.05	2.93	2.66	1.03	2.86	2.60	1.01	2.81	2.55	0.99	2.76	2.51	0.97	2.60	2.15	0.92	2.65	2.41	0.93	2.84	2.58	1.00	2.81	2.55	0.99
	Efficiency	2.98	3.17	3.43	3.08	3.15	3.55	3.19	3.25	3.67	3.29	3.36	3.79	3.39	3.46	3.91	3.50	3.57	4.02	3.60	3.67	4.14	3.70	3.78	4.26	3.80	3.88	4.38	4.11	4.65	4.73	4.32	4.40	4.97	4.62	4.72	5.32	4.83	4.93	5.56
40	Capacity	5.80	5.36	2.96	5.98	5.53	3.06	6.03	5.57	3.08	6.14	5.68	3.14	6.26	5.79	3.20	6.33	5.85	3.24	6.37	5.89	3.26	6.43	5.95	3.29	6.49	6.00	3.32	6.61	6.11	3.38	7.07	6.54	3.62	8.11	7.50	4.15	8.40	7.77	4.30
	Power	2.31	2.11	1.08	2.30	2.10	1.08	2.24	2.05	1.05	2.22	2.02	1.04	2.19	2.00	1.02	2.15	1.96	1.01	2.10	1.92	0.98	2.06	1.88	0.97	2.02	1.85	0.95	1.91	1.74	0.89	1.94	1.77	0.91	2.08	1.90	0.97	2.06	1.88	0.97
	Efficiency	2.51	2.54	2.74	2.60	2.63	2.84	2.69	2.72	2.93	2.77	2.81	3.03	2.86	2.90	3.12	2.95	2.98	3.22	3.03	3.07	3.31	3.12	3.16	3.41	3.21	3.25	3.50	3.47	3.51	3.79	3.64	3.68	3.97	3.90	3.95	4.26	4.07	4.12	4.45
45	Capacity	3.81	3.67	2.58	3.94	3.78	2.67	3.97	3.81	2.69	4.04	3.89	2.74	4.12	3.96	2.79	4.17	4.00	2.82	4.20	4.03	2.84	4.23	4.07	2.87	4.27	4.11	2.89	4.35	4.18	2.95	4.65	4.47	3.15	5.34	5.13	3.62	5.53	5.31	3.75
	Power	1.84	1.76	1.20	1.84	1.76	1.19	1.79	1.71	1.16	1.77	1.69	1.15	1.75	1.67	1.13	1.71	1.64	1.11	1.68	1.61	1.09	1.64	1.58	1.07	1.61	1.55	1.05	1.52	1.46	0.99	1.55	1.49	1.01	1.66	1.59	1.08	1.65	1.58	1.07
	Efficiency	2.07	2.08	2.16	2.15	2.15	2.24	2.22	2.22	2.31	2.29	2.30	2.39	2.36	2.37	2.46	2.43	2.44	2.53	2.50	2.51	2.61	2.57	2.58	2.68	2.65	2.65	2.76	2.86	2.87	2.98	3.00	3.01	3.13	3.22	3.23	3.35	3.36	3.37	3.50
48	Capacity	3.53	3.40	2.39	3.65	3.50	2.47	3.68	3.53	2.49	3.75	3.60	2.54	3.82	3.67	2.59	3.86	3.71	2.61	3.89	3.74	2.63	3.92	3.77	2.66	3.96	3.80	2.68	4.03	3.87	2.73	4.31	4.14	2.92	4.95	4.75	3.35	5.12	4.92	3.47
	Power	2.03	1.94	1.32	2.02	1.94	1.31	1.97	1.89	1.28	1.95	1.86	1.26	1.92	1.84	1.25	1.89	1.81	1.23	1.85	1.77	1.20	1.81	1.74	1.18	1.78	1.70	1.16	1.67	1.60	1.09	1.71	1.64	1.11	1.83	1.75	1.19	1.81	1.74	1.18
	Efficiency	1.74	1.75	1.82	1.80	1.81	1.88	1.86	1.87	1.94	1.93	1.93	2.01	1.99	1.99	2.07	2.05	2.05	2.13	2.11	2.11	2.20	2.17	2.17	2.26	2.23	2.23	2.32	2.41	2.41	2.51	2.52	2.53	2.63	2.71	2.71	2.82	2.83	2.83	2.95

GRS-CQ12Pd/NhH3-M

Ambient Temp(°C)	Outflow Water(°C)	7			8			9			10			11			12			13			14			15			18			20			23			25		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-15	Capacity	5.20	4.70	4.70	5.37	4.85	4.85	5.53	5.01	5.01	5.70	5.16	5.16	5.87	5.31	5.31	6.03	5.46	5.46	6.20	5.61	5.61	6.37	5.76	5.76	6.53	5.91	5.91	7.00	6.33	6.33	7.37	6.66	6.66	7.83	7.08	7.08	8.14	7.36	7.36
	Power	1.11	1.00	1.00	1.11	1.00	0.99	1.11	0.99	0.99	1.10	0.99	0.99	1.10	0.99	0.99	1.10	0.99	0.98	1.10	0.99	0.98	1.10	0.98	0.98	1.09	0.98	0.98	1.08	0.97	0.97	1.09	0.98	0.97	1.08	0.97	0.97	1.07	0.96	0.96
	Efficiency	4.68	4.71	4.73	4.84	4.88	4.89	5.01	5.04	5.06	5.17	5.20	5.22	5.33	5.36	5.38	5.49	5.53	5.54	5.65	5.69	5.71	5.81	5.85	5.87	5.97	6.01	6.03	6.46	6.50	6.52	6.78	6.82	6.84	7.26	7.31	7.33	7.58	7.63	7.66
-10	Capacity	5.13	4.63	4.63	5.29	4.78	4.78	5.45	4.93	4.93	5.62	5.08	5.08	5.78	5.22	5.22	5.95	5.37	5.37	6.11	5.52	5.52	6.27	5.67	5.67	6.44	5.82	5.82	6.90	6.23	6.23	7.26	6.56	6.56	7.72	6.97	6.97	8.02	7.24	7.24
	Power	1.30	1.17	1.17	1.30	1.17	1.16	1.30	1.16	1.16	1.29	1.16	1.16	1.29	1.16	1.16	1.29	1.16	1.15	1.29	1.16	1.15	1.29	1.15	1.15	1.28	1.15	1.15	1.27	1.14	1.14	1.28	1.14	1.14	1.27	1.14	1.13	1.26	1.13	1.13
	Efficiency	3.93	3.96	3.97	4.07	4.09	4.11	4.20	4.23	4.25	4.34	4.37	4.38	4.47	4.50	4.52	4.61	4.64	4.66	4.75	4.78	4.79	4.88	4.91	4.93	5.02	5.05	5.07	5.42	5.46	5.48	5.69	5.73	5.75	6.10	6.14	6.16	6.37	6.41	6.43
-5	Capacity	5.05	4.56	4.56	5.21	4.70	4.70	5.37	4.85	4.85	5.53	4.99	4.99	5.70	5.14	5.14	5.86	5.29	5.29	6.02	5.43	5.43	6.18	5.58	5.58	6.34	5.72	5.72	6.80	6.13	6.13	7.15	6.45	6.45	7.60	6.86	6.86	7.90	7.13	7.13
	Power	1.38	1.24	1.23	1.38	1.23	1.23	1.37	1.23	1.23	1.37	1.23	1.22	5.38	1.23	1.22	1.36	1.22	1.22	1.36	1.22	1.22	1.36	1.22	1.21	1.36	1.22	1.21	1.35	1.21	1.20	1.35	1.21	1.21	1.34	1.20	1.20	1.33	1.19	1.19
	Efficiency	3.66	3.68	3.70	3.79	3.81	3.83	3.91	3.94	3.95	4.04	4.07	4.08	5.11	4.19	4.21	4.29	4.32	4.34	4.42	4.45	4.46	4.55	4.58	4.59	4.67	4.70	4.72	5.05	5.08	5.10	5.30	5.34	5.35	5.68	5.72	5.74	5.93	5.97	5.99
0	Capacity	4.77	4.28	3.72	4.92	4.42	3.84	5.08	4.56	3.96	5.23	4.70	4.08	5.38	4.83	4.20	5.53	4.97	4.32	5.69	5.11	4.44	5.84	5.24	4.56	5.99	5.38	4.68	6.42	5.77	5.01	6.75	6.07	5.27	7.18	6.45	5.61	7.46	6.70	5.82
	Power	1.47	1.31	1.11	1.46	1.31	1.11	1.46	1.30	1.11	1.46	1.30	1.10	1.45	1.30	1.10	1.45	1.30	1.10	1.45	1.29	1.10	1.45	1.29	1.10	1.44	1.29	1.09	1.43	1.28	1.09	1.44	1.28	1.09	1.43	1.27	1.08	1.42	1.26	1.07
	Efficiency	3.25	3.27	3.35	3.36	3.38	3.46	3.47	3.50	3.58	3.59	3.61	3.69	3.70	3.72	3.81	3.81	3.84	3.93	3.92	3.95	4.04	4.03	4.06	4.16	4.15	4.17	4.27	4.48	4.51	4.62	4.70	4.73	4.85	5.04	5.07	5.19	5.26	5.30	5.42
5	Capacity	4.53	4.05	3.52	4.68	4.18	3.64	4.82	4.31	3.75	4.97	4.44	3.86	5.11	4.57	3.98	5.26	4.70	4.09	5.40	4.83	4.20	5.55	4.96	4.31	5.69	5.09	4.43	6.10	5.46	4.74	6.42	5.74	4.99	6.82	6.11	5.31	7.09	6.34	5.51
	Power	1.57	1.39	1.18	1.56	1.39	1.18	1.56	1.39	1.18	1.56	1.38	1.17	1.55	1.38	1.17	1.55	1.38	1.17	1.55	1.38	1.17	1.54	1.37	1.17	1.54	1.37	1.16	1.53	1.36	1.15	1.53	1.36	1.16	1.52	1.35	1.15	1.51	1.34	1.14
	Efficiency	2.89	2.91	2.98	2.99	3.01	3.08	3.09	3.11	3.18	3.19	3.21	3.29	3.29	3.31	3.39	3.39	3.41	3.49	3.49	3.51	3.60	3.59	3.61	3.70	3.69	3.71	3.80	3.99	4.02	4.11	4.19	4.21	4.31	4.48	4.51	4.62	4.68	4.72	4.83
10	Capacity	10.53	9.62	8.05	10.86	9.93	8.30	11.20	10.24	8.56	11.54	10.54	8.82	11.87	10.85	9.08	12.21	11.16	9.33	12.55	11.47	9.59	12.89	11.77	9.85	13.22	12.08	10.11	14.17	12.95	10.83	14.91	13.62	11.39	15.85	14.49	12.12	16.46	15.04	12.58
	Power	1.84	1.66	1.34	1.84	1.65	1.34	1.83	1.65	1.34	1.83	1.64	1.33	1.83	1.64	1.33	1.82	1.64	1.33	1.82	1.63	1.33	1.82	1.63	1.32	1.81	1.63	1.32	1.80	1.61	1.31	1.80	1.62	1.31	1.79	1.61	1.30	1.78	1.60	1.30
	Efficiency	5.71	5.81	5.99	5.91	6.01	6.20	6.11	6.21	6.40	6.31	6.42	6.61	6.50	6.62	6.82	6.70	6.82	7.02	6.90	7.02	7.23	7.10	7.22	7.44	7.29	7.42	7.64	7.88	8.02	8.26	8.27	8.41	8.67	8.86	9.02	9.29	9.26	9.42	9.70
15	Capacity	10.09	9.22	7.71	10.41	9.52	7.96	10.74	9.81	8.21	11.06	10.11	8.45	11.38	10.40	8.70	11.71	10.70	8.95	12.03	10.99	9.20	12.35	11.29	9.44	12.68	11.58	9.69	13.58	12.41	10.38	14.29	13.06	10.92	15.20	13.89	11.62	15.78	14.42	12.06
	Power	1.97	1.77	1.44	1.96	1.76	1.43	1.96	1.76	1.43	1.95	1.76	1.43	1.95	1.75	1.42	1.95	1.75	1.42	1.94	1.75	1.42	1.94	1.74	1.42	1.94	1.74	1.41	1.92	1.72	1.40	1.92	1.73	1.40	1.91	1.72	1.39	1.90	1.71	1.39
	Efficiency	5.13	5.22	5.37	5.31	5.40	5.56	5.48	5.58	5.75	5.66	5.76	5.93	5.84	5.94	6.12	6.01	6.12	6.30	6.19	6.30	6.49	6.37	6.48	6.67	6.55	6.66	6.86	7.08	7.20	7.41	7.42	7.55	7.78	7.96	8.09	8.34	8.31	8.45	8.71
20	Capacity	9.83	8.98	7.51	10.15	9.27	7.75	10.46	9.56	8.00	10.77	9.85	8.24	11.09	10.13	8.48	11.40	10.42	8.72	11.72	10.71	8.96	12.03	11.00	9.20	12.35	11.28	9.44	13.23	12.09	10.11	13.92	12.72	10.64	14.81	13.53	11.32	15.38	14.05	11.75
	Power	2.16	1.94	1.58	2.16	1.94	1.57	2.15	1.93	1.57	2.15	1.93	1.57	2.14	1.93	1.56	2.14	1.92	1.56	2.14	1.92	1.56	2.13	1.92	1.56	2.13	1.91	1.55	2.11	1.90	1.54	2.12	1.90	1.54	2.10	1.89	1.53	2.09	1.88	1.52
	Efficiency	4.54	4.62	4.76	4.70	4.78	4.93	4.86	4.94	5.09	5.01	5.10	5.25	5.17	5.26	5.42	5.33	5.42	5.58	5.48	5.58	5.75	5.64	5.74	5.91	5.80	5.90	6.07	6.27	6.37	6.57	6.58	6.69	6.89	7.05	7.17	7.38	7.36	7.49	7.71
25	Capacity	9.88	9.40	7.18	10.20	9.70	7.41	10.51	10.00	7.64	10.83	10.30	7.87	11.15	10.60	8.10	11.46	10.90	8.33	11.78	11.20	8.56	12.10	11.50	8.79	12.41	11.80	9.02	13.30	12.65	9.67	13.99	13.30	10.17	14.88	14.15	10.82	15.46	14.70	11.23
	Power	2.52	2.38	1.73	2.52	2.37	1.73	2.51	2.36	1.72	2.51	2.36	1.72	2.50	2.35	1.72	2.50	2.35	1.71	2.49	2.34	1.71	2.49	2.34	1.71	2.48	2.34	1.71	2.46	2.32	1.69	2.47	2.32	1.69	2.45	2.31	1.68	2.44	2.29	1.67
	Efficiency	3.92	3.96	4.14	4.05	4.09	4.29	4.19	4.23	4.43	4.32	4.37	4.58	4.46	4.50	4.72	4.59	4.64	4.86	4.73	4.78	5.00	4.86	4.91	5.15	5.00	5.05	5.29	5.40	5.46	5.72	5.67	5.73	6.00	6.07	6.14	6.43	6.34	6.41	6.72
30	Capacity	11.17	10.71	6.78	11.53	11.05	7.00	11.88	11.40	7.22	12.24	11.74	7.43	12.60	12.08	7.65	12.96	12.42	7.87	13.31	12.77	8.09	13.67	13.11	8.30	14.03	13.45	8.52	15.03	14.42	9.13	15.82	15.17	9.60	16.82	16.13	10.22	17.47	16.75	10.61
	Power	3.49	3.31	1.92	3.48	3.30	1.92	3.48	3.30	1.91	3.47	3.29	1.91	3.46	3.28	1.90	3.45	3.28	1.90	3.45	3.27	1.90	3.44	3.27	1.89	3.44	3.26	1.89	3.41	3.23	1.87	3.42	3.24	1.88	3.39	3.22	1.86	3.37	3.20	1.85
	Efficiency	3.20	3.23	3.53	3.31	3.34	3.65	3.42	3.46	3.78	3.53	3.57	3.90	3.64	3.68	4.02	3.75	3.79	4.14	3.86	3.90	4.26	3.97	4.01	4.38	4.08	4.13	4.51	4.41	4.46	4.87	4.63	4.68	5.11	4.96	5.01	5.48	5.18	5.24	5.72
35	Capacity	10.95	11.20	6.65	11.30	10.84	6.86	11.65	11.17	7.08	12.00	11.51	7.29	12.35	11.84	7.50	12.70	12.18	7.71	13.05	12.52	7.93	13.40	12.85	8.14	13.75	13.19	8.35	14.74	12.00	8.95	15.51	14.87	9.42	16.49	15.81	10.01	17.13	16.42	10.40
	Power	3.94	3.86	2.17	3.93	3.73	2.16	3.92	3.72	2.15	3.91	3.71	2.15	3.90	3.70	2.15	3.90	3.70	2.14	3.89	3.69	2.14	3.88	3.68	2.13	3.88	3.68	2.13	3.84	3.09	2.11	3.85	3.65	2.12	3.82	3.63	2.10	3.80	3.61	2.09
	Efficiency	2.78	2.90	3.07	2.88	2.91	3.18	2.97	3.01	3.28	3.07	3.10	3.39	3.17	3.20	3.50	3.26	3.30	3.60	3.36	3.39	3.71	3.45	3.49	3.81	3.55	3.59	3.92	3.84	3.88	4.24	4.03	4.07	4.45	4.31	4.36	4.76	4.50	4.55	4.97
40	Capacity	7.57	6.92	5.79	7.81	7.14	5.97	8.05	7.36	6.16	8.30	7.58	6.34	8.54	7.80	6.53	8.78	8.02	6.71	9.02	8.24	6.90	9.26	8.47	7.08	9.51	8.69	7.27	10.19	9.31	7.79	10.72	9.79	8.19	11.40	10.42	8.71	11.84	10.82	9.05
	Power	3.23	2.90	2.36	3.22	2.89	2.35	3.21	2.89	2.34	3.21	2.88	2.34	3.20	2.87	2.33	3.19	2.87	2.33	3.19	2.86	2.33	3.18	2.86	2.32	3.18	2.85	2.32	3.15	2.83	2.30	3.16	2.84	2.30	3.13	2.82	2.29	3.12	2.80	2.27
	Efficiency	2.34	2.38	2.46	2.43	2.47	2.54	2.51	2.55	2.63	2.59	2.63	2.71	2.67	2.71	2.80	2.75	2.80	2.88	2.83	2.88	2.97	2.91	2.96	3.05	2.99	3.04	3.14	3.23	3.29	3.39	3.39	3.45	3.56	3.64	3.70	3.81	3.80	3.86	3.98
45	Capacity	5.33	5.22	4.92	5.50	5.38	5.08	5.67	5.55	5.24	5.84	5.72	5.39	6.01	5.88	5.55	6.18	6.05	5.71	6.35	6.22	5.87	6.52	6.39	6.02	6.69	6.55	6.18	7.17	7.02	6.62	7.54	7.39	6.97	8.02	7.86	7.41	8.33	8.16	7.70
	Power	2.79	2.72	2.54	2.78	2.72	2.54	2.78	2.71	2.53	2.77	2.70	2.53	2.77	2.70	2.52	2.76	2.69	2.52	2.76	2.69	2.51	2.75	2.68	2.51	2.75	2.68	2.50	2.72	2.66	2.48	2.73	2.66	2.49	2.71	2.64	2.47	2.69	2.63	2.46
	Efficiency	1.91	1.92	1.93	1.98	1.98	2.00	2.04	2.05	2.07	2.11	2.11	2.14	2.17	2.18	2.20	2.24	2.25	2.27	2.30	2.31	2.34	2.37	2.38	2.40	2.44	2.44	2.47	2.63	2.64	2.67	2.76	2.77	2.80	2.96	2.97	3.00	3.09	3.10	3.13
48	Capacity	4.61	4.51	4.26	4.76	4.66	4.39	4.90	4.80	4.53	5.05	4.95	4.66	5.20	5.09	4.80	5.35	5.23	4.94	5.49	5.38	5.07	5.64	5.52	5.21	5.79	5.67	5.35	6.20	6.07	5.73	6.52	6.39	6.03	6.94	6.80	6.41	7.21	7.06	6.66
	Power	2.87	2.80	2.62	2.86	2.79	2.61	2.85	2.79	2.60	2.85	2.78	2.60	2.84	2.77	2.59	2.84	2.77	2.59	2.83	2.76	2.58	2.83	2.76	2.58	2.82	2.76	2.57	2.80	2.73	2.55	2.81	2.74	2.56	2.79	2.72	2.54	2.77	2.70	2.52
	Efficiency	1.61	1.61	1.63	1.66	1.67	1.68	1.72	1.72	1.74	1.77	1.78	1.80	1.83	1.83	1.85	1.88	1.89	1.91	1.94	1.95	1.96	1.99	2.00	2.02	2.05	2.06	2.08	2.22	2.22	2.25	2.33	2.33	2.36	2.49	2.50	2.52	2.60	2.61	2.64

GRS-CQ14Pd/NhH3-M

Ambient Temp(°C)	Outflow Water(°C)	7			8			9			10			11			12			13			14			15			18			20			23			25		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-15	Capacity	5.41	4.90	4.70	5.58	5.05	4.85	5.75	5.21	5.01	5.92	5.37	5.16	6.10	5.52	5.31	6.27	5.68	5.46	6.44	5.84	5.61	6.62	5.99	5.76	6.79	6.15	5.91	7.28	6.59	6.33	7.65	6.93	6.66	8.14	7.37	7.08	8.45	7.66	7.36
	Power	1.16	1.05	1.00	1.16	1.04	0.99	1.16	1.04	0.99	1.15	1.04	0.99	1.15	1.04	0.99	1.15	1.03	0.98	1.15	1.03	0.98	1.15	1.03	0.98	1.14	1.03	0.98	1.13	1.02	0.97	1.14	1.02	0.97	1.13	1.02	0.97	1.12	1.01	0.96
	Efficiency	4.65	4.68	4.73	4.81	4.84	4.89	4.97	5.01	5.06	5.13	5.17	5.22	5.29	5.33	5.38	5.45	5.49	5.54	5.61	5.65	5.71	5.77	5.81	5.87	5.93	5.97	6.03	6.42	6.46	6.52	6.73	6.78	6.84	7.21	7.26	7.33	7.53	7.58	7.66
-10	Capacity	5.33	4.82	4.63	5.50	4.97	4.78	5.67	5.13	4.93	5.84	5.28	5.08	6.01	5.44	5.22	6.18	5.59	5.37	6.35	5.74	5.52	6.52	5.90	5.67	6.69	6.05	5.82	7.17	6.49	6.23	7.54	6.82	6.56	8.02	7.26	6.97	8.33	7.54	7.24
	Power	1.36	1.23	1.17	1.36	1.22	1.16	1.36	1.22	1.16	1.35	1.22	1.16	1.35	1.22	1.16	1.35	1.21	1.15	1.35	1.21	1.15	1.34	1.21	1.15	1.34	1.21	1.15	1.33	1.20	1.14	1.33	1.20	1.14	1.32	1.19	1.13	1.32	1.18	1.13
	Efficiency	3.90	3.93	3.97	4.04	4.07	4.11	4.18	4.20	4.25	4.31	4.34	4.38	4.44	4.47	4.52	4.58	4.61	4.66	4.71	4.75	4.79	4.85	4.88	4.93	4.98	5.02	5.07	5.39	5.42	5.48	5.65	5.69	5.75	6.06	6.10	6.16	6.33	6.37	6.43
-5	Capacity	5.25	4.74	4.56	5.41	4.89	4.70	5.58	5.05	4.85	5.75	5.20	4.99	5.92	5.35	5.14	6.09	5.50	5.29	6.25	5.65	5.43	6.42	5.81	5.58	6.59	5.96	5.72	7.06	6.38	6.13	7.43	6.72	6.45	7.90	7.14	6.86	8.21	7.42	7.13
	Power	1.44	1.30	1.23	1.44	1.29	1.23	1.44	1.29	1.23	1.43	1.29	1.22	1.43	1.28	1.22	1.43	1.28	1.22	1.42	1.28	1.22	1.42	1.28	1.21	1.42	1.28	1.21	1.41	1.26	1.20	1.41	1.27	1.21	1.40	1.26	1.20	1.39	1.25	1.19
	Efficiency	3.64	3.66	3.70	3.76	3.79	3.83	3.89	3.91	3.95	4.01	4.04	4.08	4.14	4.17	4.21	4.26	4.29	4.34	4.39	4.42	4.46	4.52	4.55	4.59	4.64	4.67	4.72	5.02	5.05	5.10	5.26	5.30	5.35	5.64	5.68	5.74	5.89	5.93	5.99
0	Capacity	5.22	4.45	3.72	5.39	4.59	3.84	5.55	4.74	3.96	5.72	4.88	4.08	5.89	5.02	4.20	6.06	5.16	4.32	6.22	5.31	4.44	6.39	5.45	4.56	6.56	5.59	4.68	7.03	5.99	5.01	7.39	6.30	5.27	7.86	6.70	5.61	8.16	6.96	5.82
	Power	1.63	1.37	1.11	1.63	1.37	1.11	1.63	1.36	1.11	1.62	1.36	1.10	1.62	1.36	1.10	1.62	1.36	1.10	1.61	1.35	1.10	1.61	1.35	1.10	1.61	1.35	1.09	1.59	1.34	1.09	1.60	1.34	1.09	1.59	1.33	1.08	1.58	1.32	1.07
	Efficiency	3.19	3.25	3.35	3.31	3.36	3.46	3.42	3.47	3.58	3.53	3.59	3.69	3.64	3.70	3.81	3.75	3.81	3.93	3.86	3.92	4.04	3.97	4.03	4.16	4.08	4.15	4.27	4.41	4.48	4.62	4.62	4.70	4.85	4.96	5.04	5.19	5.18	5.26	5.42
5	Capacity	4.96	4.21	3.52	5.12	4.35	3.64	5.28	4.48	3.75	5.44	4.62	3.86	5.59	4.75	3.98	5.75	4.89	4.09	5.91	5.02	4.20	6.07	5.16	4.31	6.23	5.29	4.43	6.67	5.67	4.74	7.02	5.97	4.99	7.47	6.35	5.31	7.76	6.59	5.51
	Power	1.74	1.46	1.18	1.74	1.45	1.18	1.74	1.45	1.18	1.73	1.45	1.17	1.73	1.44	1.17	1.73	1.44	1.17	1.72	1.44	1.17	1.72	1.44	1.17	1.72	1.43	1.16	1.70	1.42	1.15	1.71	1.43	1.16	1.69	1.41	1.15	1.68	1.41	1.14
	Efficiency	2.84	2.89	2.98	2.94	2.99	3.08	3.04	3.09	3.18	3.14	3.19	3.29	3.24	3.29	3.39	3.33	3.39	3.49	3.43	3.49	3.60	3.53	3.59	3.70	3.63	3.69	3.80	3.92	3.99	4.11	4.12	4.19	4.31	4.41	4.48	4.62	4.61	4.68	4.83
10	Capacity	11.43	11.07	8.05	11.80	11.43	8.30	12.17	11.78	8.56	12.53	12.13	8.82	12.90	12.49	9.08	13.26	12.84	9.33	13.63	13.20	9.59	14.00	13.55	9.85	14.36	13.91	10.11	15.39	14.90	10.83	16.19	15.68	11.39	17.22	16.67	12.12	17.88	17.32	12.58
	Power	2.04	1.96	1.34	2.03	1.95	1.34	2.03	1.95	1.34	2.02	1.94	1.33	2.02	1.94	1.33	2.01	1.94	1.33	2.01	1.93	1.33	2.01	1.93	1.32	2.00	1.93	1.32	1.99	1.91	1.31	1.99	1.91	1.31	1.98	1.90	1.30	1.97	1.89	1.30
	Efficiency	5.62	5.66	5.99	5.81	5.85	6.20	6.01	6.05	6.40	6.20	6.24	6.61	6.39	6.44	6.82	6.59	6.63	7.02	6.78	6.83	7.23	6.98	7.02	7.44	7.17	7.22	7.64	7.75	7.80	8.26	8.13	8.19	8.67	8.71	8.77	9.29	9.10	9.16	9.70
15	Capacity	10.96	10.61	7.71	11.31	10.95	7.96	11.66	11.29	8.21	12.01	11.63	8.45	12.37	11.97	8.70	12.72	12.31	8.95	13.07	12.65	9.20	13.42	12.99	9.44	13.77	13.33	9.69	14.75	14.29	10.38	15.52	15.03	10.92	16.51	15.98	11.62	17.14	16.60	12.06
	Power	2.18	2.09	1.44	2.17	2.09	1.43	2.16	2.08	1.43	2.16	2.08	1.43	2.15	2.07	1.42	2.15	2.07	1.42	2.15	2.06	1.42	2.14	2.06	1.42	2.14	2.06	1.41	2.12	2.04	1.40	2.13	2.05	1.40	2.11	2.03	1.39	2.10	2.02	1.39
	Efficiency	5.04	5.08	5.37	5.22	5.25	5.56	5.39	5.43	5.75	5.56	5.60	5.93	5.74	5.78	6.12	5.91	5.95	6.30	6.09	6.13	6.49	6.26	6.30	6.67	6.43	6.48	6.86	6.96	7.00	7.41	7.30	7.35	7.78	7.82	7.87	8.34	8.17	8.22	8.71
20	Capacity	10.68	10.34	7.51	11.02	10.67	7.75	11.36	11.00	8.00	11.70	11.33	8.24	12.05	11.66	8.48	12.39	11.99	8.72	12.73	12.32	8.96	13.07	12.66	9.20	13.41	12.99	9.44	14.37	13.92	10.11	15.12	14.64	10.64	16.08	15.57	11.32	16.70	16.17	11.75
	Power	2.39	2.30	1.58	2.39	2.29	1.57	2.38	2.29	1.57	2.37	2.28	1.57	2.37	2.28	1.56	2.37	2.27	1.56	2.36	2.27	1.56	2.36	2.27	1.56	2.35	2.26	1.55	2.33	2.24	1.54	2.34	2.25	1.54	2.32	2.23	1.53	2.31	2.22	1.52
	Efficiency	4.46	4.50	4.76	4.62	4.65	4.93	4.77	4.81	5.09	4.93	4.96	5.25	5.08	5.12	5.42	5.24	5.27	5.58	5.39	5.43	5.75	5.54	5.58	5.91	5.70	5.74	6.07	6.16	6.20	6.57	6.46	6.51	6.89	6.93	6.97	7.38	7.23	7.28	7.71
25	Capacity	10.69	9.88	7.18	11.03	10.20	7.41	11.38	10.51	7.64	11.72	10.83	7.87	12.06	11.15	8.10	12.40	11.46	8.33	12.74	11.78	8.56	13.09	12.10	8.79	13.43	12.41	9.02	14.39	13.30	9.67	15.14	13.99	10.17	16.10	14.88	10.82	16.72	15.46	11.23
	Power	2.78	2.52	1.73	2.77	2.52	1.73	2.76	2.51	1.72	2.76	2.51	1.72	2.75	2.50	1.72	2.75	2.50	1.71	2.74	2.49	1.71	2.74	2.49	1.71	2.73	2.48	1.71	2.71	2.46	1.69	2.72	2.47	1.69	2.70	2.45	1.68	2.68	2.44	1.67
	Efficiency	3.85	3.92	4.14	3.98	4.05	4.29	4.11	4.19	4.43	4.25	4.32	4.58	4.38	4.46	4.72	4.51	4.59	4.86	4.65	4.73	5.00	4.78	4.86	5.15	4.91	5.00	5.29	5.31	5.40	5.72	5.57	5.67	6.00	5.97	6.07	6.43	6.23	6.34	6.72
30	Capacity	11.93	11.63	6.78	12.32	12.00	7.00	12.70	12.37	7.22	13.08	12.74	7.43	13.46	13.12	7.65	13.84	13.49	7.87	14.23	13.86	8.09	14.61	14.23	8.30	14.99	14.60	8.52	16.06	15.65	9.13	16.90	16.47	9.60	17.97	17.51	10.22	18.66	18.19	10.61
	Power	3.80	3.68	1.92	3.79	3.67	1.92	3.78	3.66	1.91	3.77	3.65	1.91	3.77	3.64	1.90	3.76	3.64	1.90	3.75	3.63	1.90	3.75	3.62	1.89	3.74	3.62	1.89	3.71	3.59	1.87	3.72	3.60	1.88	3.69	3.57	1.86	3.67	3.55	1.85
	Efficiency	3.14	3.16	3.53	3.25	3.27	3.65	3.36	3.38	3.78	3.47	3.49	3.90	3.57	3.60	4.02	3.68	3.71	4.14	3.79	3.82	4.26	3.90	3.93	4.38	4.01	4.04	4.51	4.33	4.36	4.87	4.55	4.58	5.11	4.87	4.91	5.48	5.09	5.12	5.72
35	Capacity	11.70	12.00	6.65	12.07	11.76	6.86	12.45	12.13	7.08	12.82	12.49	7.29	13.20	12.86	7.50	13.57	13.22	7.71	13.95	13.59	7.93	14.32	13.95	8.14	14.70	14.32	8.35	15.75	13.30	8.95	16.57	16.14	9.42	17.62	17.17	10.01	18.30	17.83	10.40
	Power	4.29	4.36	2.17	4.27	4.13	2.16	4.26	4.12	2.15	4.25	4.12	2.15	4.25	4.11	2.15	4.24	4.10	2.14	4.23	4.09	2.14	4.22	4.09	2.13	4.22	4.08	2.13	4.44	3.69	2.11	4.19	4.05	2.12	4.16	4.02	2.10	4.14	4.00	2.09
	Efficiency	2.73	2.75	3.07	2.83	2.85	3.18	2.92	2.94	3.28	3.01	3.04	3.39	3.11	3.13	3.50	3.20	3.23	3.60	3.30	3.32	3.71	3.39	3.42	3.81	3.48	3.51	3.92	3.55	3.60	4.24	3.95	3.98	4.45	4.24	4.27	4.76	4.42	4.46	4.97
40	Capacity	8.22	7.57	5.79	8.48	7.81	5.97	8.75	8.05	6.16	9.01	8.30	6.34	9.27	8.54	6.53	9.54	8.78	6.71	9.80	9.02	6.90	10.06	9.26	7.08	10.33	9.51	7.27	11.07	10.19	7.79	11.64	10.72	8.19	12.38	11.40	8.71	12.86	11.84	9.05
	Power	3.57	3.23	2.36	3.56	3.22	2.35	3.55	3.21	2.34	3.54	3.21	2.34	3.54	3.20	2.33	3.53	3.19	2.33	3.52	3.19	2.33	3.52	3.18	2.32	3.51	3.18	2.32	3.48	3.15	2.30	3.49	3.16	2.30	3.46	3.13	2.29	3.44	3.12	2.27
	Efficiency	2.30	2.34	2.46	2.38	2.43	2.54	2.46	2.51	2.63	2.54	2.59	2.71	2.62	2.67	2.80	2.70	2.75	2.88	2.78	2.83	2.97	2.86	2.91	3.05	2.94	2.99	3.14	3.18	3.23	3.39	3.34	3.39	3.56	3.57	3.64	3.81	3.73	3.80	3.98
45	Capacity	5.66	5.33	4.92	5.84	5.50	5.08	6.02	5.67	5.24	6.20	5.84	5.39	6.39	6.01	5.55	6.57	6.18	5.71	6.75	6.35	5.87	6.93	6.52	6.02	7.11	6.69	6.18	7.62	7.17	6.62	8.02	7.54	6.97	8.53	8.02	7.41	8.85	8.33	7.70
	Power	3.00	2.79	2.54	2.99	2.78	2.54	2.98	2.78	2.53	2.97	2.77	2.53	2.97	2.77	2.52	2.96	2.76	2.52	2.96	2.76	2.51	2.95	2.75	2.51	2.95	2.75	2.50	2.92	2.72	2.48	2.93	2.73	2.49	2.91	2.71	2.47	2.89	2.69	2.46
	Efficiency	1.89	1.91	1.93	1.96	1.98	2.00	2.02	2.04	2.07	2.09	2.11	2.14	2.15	2.17	2.20	2.22	2.24	2.27	2.28	2.30	2.34	2.35	2.37	2.40	2.41	2.44	2.47	2.61	2.63	2.67	2.74	2.76	2.80	2.93	2.96	3.00	3.06	3.09	3.13
48	Capacity	4.90	4.61	4.26	5.05	4.76	4.39	5.21	4.90	4.53	5.37	5.05	4.66	5.52	5.20	4.80	5.68	5.35	4.94	5.84	5.49	5.07	5.99	5.64	5.21	6.15	5.79	5.35	6.59	6.20	5.73	6.93	6.52	6.03	7.37	6.94	6.41	7.66	7.21	6.66
	Power	3.08	2.87	2.62	3.07	2.86	2.61	3.06	2.85	2.60	3.06	2.85	2.60	3.05	2.84	2.59	3.05	2.84	2.59	3.04	2.83	2.58	3.03	2.83	2.58	3.03	2.82	2.57	3.00	2.80	2.55	3.01	2.81	2.56	2.99	2.79	2.54	2.97	2.77	2.52
	Efficiency	1.59	1.61	1.63	1.65	1.66	1.68	1.70	1.72	1.74	1.76	1.77	1.80	1.81	1.83	1.85	1.87	1.88	1.91	1.92	1.94	1.96	1.97	1.99	2.02	2.03	2.05	2.08	2.19	2.22	2.25	2.30	2.33	2.36	2.47	2.49	2.52	2.58	2.60	2.64

GRS-CQ12Pd/NhH3-M1

Ambient Temp(°C)	Outflow Water(°C)	7			8			9			10			11			12			13			14			15			18			20			23			25		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-15	Capacity	5.24	4.67	4.61	5.40	4.82	4.76	5.57	4.97	4.90	5.74	5.12	5.05	5.91	5.27	5.20	6.07	5.42	5.35	6.24	5.57	5.49	6.41	5.72	5.64	6.58	5.87	5.79	7.05	6.29	6.20	7.41	6.62	6.52	7.89	7.04	6.94	8.19	7.31	7.21
	Power	1.12	0.99	0.97	1.11	0.98	0.97	1.11	0.98	0.96	1.11	0.98	0.96	1.10	0.98	0.96	1.10	0.97	0.96	1.10	0.97	0.96	1.10	0.97	0.95	1.10	0.97	0.95	1.09	0.96	0.94	1.09	0.96	0.95	1.08	0.96	0.94	1.08	0.95	0.93
	Efficiency	4.70	4.74	4.76	4.86	4.91	4.92	5.02	5.07	5.09	5.18	5.24	5.25	5.35	5.40	5.42	5.51	5.56	5.58	5.67	5.73	5.75	5.83	5.89	5.91	5.99	6.05	6.07	6.48	6.54	6.57	6.80	6.87	6.89	7.29	7.36	7.38	7.61	7.69	7.71
-10	Capacity	5.16	4.60	4.54	5.32	4.75	4.68	5.49	4.89	4.83	5.65	5.04	4.97	5.82	5.19	5.12	5.98	5.33	5.26	6.15	5.48	5.41	6.31	5.63	5.55	6.48	5.78	5.70	6.94	6.19	6.11	7.31	6.51	6.42	7.77	6.93	6.83	8.07	7.19	7.09
	Power	1.31	1.15	1.14	1.30	1.15	1.13	1.30	1.15	1.13	1.30	1.15	1.13	1.30	1.14	1.12	1.29	1.14	1.12	1.29	1.14	1.12	1.29	1.14	1.12	1.29	1.14	1.12	1.28	1.13	1.11	1.28	1.13	1.11	1.27	1.12	1.10	1.26	1.11	1.10
	Efficiency	3.94	3.98	4.00	4.08	4.12	4.14	4.22	4.26	4.27	4.35	4.40	4.41	4.49	4.53	4.55	4.63	4.67	4.69	4.76	4.81	4.82	4.90	4.95	4.96	5.03	5.08	5.10	5.44	5.50	5.51	5.71	5.77	5.79	6.12	6.18	6.20	6.39	6.45	6.47
-5	Capacity	5.08	4.53	4.46	5.24	4.67	4.61	5.41	4.82	4.75	5.57	4.96	4.89	5.73	5.11	5.04	5.90	5.25	5.18	6.06	5.39	5.32	6.22	5.54	5.46	6.38	5.68	5.61	6.84	6.09	6.01	7.20	6.41	6.32	7.65	6.82	6.72	7.95	7.08	6.98
	Power	1.38	1.22	1.20	1.38	1.22	1.20	1.38	1.21	1.19	1.37	1.21	1.19	1.37	1.21	1.19	1.37	1.21	1.19	1.37	1.20	1.18	1.36	1.20	1.18	1.36	1.20	1.18	1.35	1.19	1.17	1.35	1.19	1.17	1.34	1.18	1.16	1.34	1.18	1.16
	Efficiency	3.67	3.71	3.72	3.80	3.84	3.85	3.93	3.97	3.98	4.05	4.09	4.11	4.18	4.22	4.24	4.31	4.35	4.36	4.43	4.48	4.49	4.56	4.61	4.62	4.69	4.73	4.75	5.07	5.12	5.13	5.32	5.37	5.39	5.70	5.75	5.77	5.95	6.01	6.03
0	Capacity	4.83	4.31	3.64	4.98	4.45	3.76	5.14	4.59	3.87	5.29	4.73	3.99	5.45	4.86	4.11	5.60	5.00	4.22	5.76	5.14	4.34	5.91	5.28	4.46	6.07	5.42	4.57	6.50	5.80	4.90	6.84	6.11	5.15	7.27	6.49	5.48	7.55	6.74	5.69
	Power	1.49	1.31	1.08	1.48	1.31	1.07	1.48	1.31	1.07	1.48	1.30	1.07	1.47	1.30	1.07	1.47	1.30	1.07	1.47	1.30	1.06	1.47	1.30	1.06	1.46	1.29	1.06	1.45	1.28	1.05	1.45	1.29	1.05	1.44	1.28	1.05	1.44	1.27	1.04
	Efficiency	3.25	3.28	3.38	3.36	3.40	3.50	3.47	3.51	3.61	3.59	3.62	3.73	3.70	3.74	3.85	3.81	3.85	3.96	3.92	3.96	4.08	4.03	4.07	4.20	4.15	4.19	4.31	4.48	4.53	4.66	4.70	4.75	4.89	5.04	5.09	5.24	5.26	5.32	5.48
5	Capacity	4.59	4.08	3.45	4.74	4.21	3.56	4.88	4.34	3.67	5.03	4.47	3.78	5.18	4.60	3.89	5.32	4.73	4.00	5.47	4.86	4.11	5.62	5.00	4.22	5.76	5.13	4.33	6.18	5.49	4.64	6.50	5.78	4.88	6.91	6.15	5.19	7.18	6.38	5.39
	Power	1.59	1.40	1.15	1.58	1.39	1.14	1.58	1.39	1.14	1.58	1.39	1.14	1.57	1.38	1.14	1.57	1.38	1.13	1.57	1.38	1.13	1.56	1.38	1.13	1.56	1.38	1.13	1.55	1.36	1.12	1.55	1.37	1.12	1.54	1.36	1.11	1.53	1.35	1.11
	Efficiency	2.89	2.92	3.01	2.99	3.02	3.11	3.09	3.12	3.22	3.19	3.22	3.32	3.29	3.32	3.42	3.39	3.42	3.53	3.49	3.53	3.63	3.59	3.63	3.73	3.69	3.73	3.84	3.99	4.03	4.15	4.19	4.23	4.35	4.48	4.53	4.67	4.68	4.73	4.87
10	Capacity	10.41	9.74	7.87	10.74	10.05	8.12	11.07	10.36	8.37	11.40	10.68	8.62	11.74	10.99	8.87	12.07	11.30	9.12	12.40	11.61	9.38	12.74	11.92	9.63	13.07	12.23	9.88	14.01	13.11	10.59	14.73	13.79	11.14	15.67	14.67	11.84	16.27	15.23	12.30
	Power	1.82	1.68	1.30	1.82	1.67	1.30	1.81	1.67	1.29	1.81	1.66	1.29	1.80	1.66	1.29	1.80	1.66	1.29	1.80	1.65	1.28	1.79	1.65	1.28	1.79	1.65	1.28	1.78	1.63	1.27	1.78	1.64	1.27	1.77	1.63	1.26	1.76	1.62	1.26
	Efficiency	5.71	5.81	6.05	5.91	6.01	6.26	6.11	6.21	6.47	6.31	6.42	6.67	6.50	6.62	6.88	6.70	6.82	7.09	6.90	7.02	7.30	7.10	7.22	7.51	7.29	7.42	7.72	7.88	8.02	8.34	8.27	8.41	8.75	8.86	9.02	9.38	9.26	9.42	9.80
15	Capacity	9.98	9.34	7.54	10.30	9.64	7.78	10.61	9.94	8.02	10.93	10.23	8.26	11.25	10.53	8.51	11.57	10.83	8.75	11.89	11.13	8.99	12.21	11.43	9.23	12.53	11.73	9.47	13.43	12.57	10.15	14.13	13.22	10.68	15.02	14.06	11.36	15.60	14.60	11.79
	Power	1.95	1.79	1.39	1.94	1.79	1.39	1.94	1.78	1.38	1.93	1.78	1.38	1.93	1.77	1.38	1.92	1.77	1.37	1.92	1.77	1.37	1.92	1.76	1.37	1.91	1.76	1.37	1.90	1.75	1.36	1.90	1.75	1.36	1.89	1.74	1.35	1.88	1.73	1.34
	Efficiency	5.13	5.22	5.43	5.31	5.40	5.61	5.48	5.58	5.80	5.66	5.76	5.99	5.84	5.94	6.18	6.01	6.12	6.36	6.19	6.30	6.55	6.37	6.48	6.74	6.55	6.66	6.93	7.08	7.20	7.49	7.42	7.55	7.86	7.96	8.09	8.42	8.31	8.45	8.79
20	Capacity	9.72	9.10	7.35	10.03	9.39	7.58	10.34	9.68	7.82	10.65	9.97	8.05	10.96	10.26	8.29	11.27	10.55	8.52	11.58	10.84	8.76	11.89	11.13	8.99	12.21	11.43	9.23	13.08	12.24	9.89	13.76	12.88	10.40	14.64	13.70	11.06	15.20	14.23	11.49
	Power	2.14	1.97	1.53	2.13	1.96	1.52	2.13	1.96	1.52	2.12	1.96	1.52	2.12	1.95	1.51	2.12	1.95	1.51	2.11	1.94	1.51	2.11	1.94	1.51	2.11	1.94	1.50	2.09	1.92	1.49	2.09	1.93	1.49	2.08	1.91	1.48	2.07	1.90	1.48
	Efficiency	4.54	4.62	4.81	4.70	4.78	4.97	4.86	4.94	5.14	5.01	5.10	5.30	5.17	5.26	5.47	5.33	5.42	5.64	5.48	5.58	5.80	5.64	5.74	5.97	5.80	5.90	6.13	6.27	6.37	6.63	6.58	6.69	6.96	7.05	7.17	7.45	7.36	7.49	7.79
25	Capacity	9.29	8.69	7.02	9.59	8.97	7.24	9.88	9.25	7.47	10.18	9.53	7.69	10.48	9.81	7.92	10.77	10.09	8.14	11.07	10.36	8.37	11.37	10.64	8.59	11.67	10.92	8.82	12.50	11.70	9.45	13.15	12.31	9.94	13.99	13.09	10.57	14.53	13.60	10.98
	Power	2.35	2.16	1.68	2.34	2.15	1.67	2.34	2.15	1.67	2.33	2.15	1.67	2.33	2.14	1.66	2.32	2.14	1.66	2.32	2.13	1.66	2.31	2.13	1.65	2.31	2.13	1.65	2.29	2.11	1.64	2.30	2.11	1.64	2.28	2.10	1.63	2.27	2.09	1.62
	Efficiency	3.96	4.02	4.19	4.09	4.16	4.33	4.23	4.30	4.48	4.37	4.44	4.62	4.50	4.58	4.76	4.64	4.72	4.91	4.78	4.86	5.05	4.91	5.00	5.20	5.05	5.14	5.34	5.46	5.55	5.78	5.73	5.83	6.06	6.14	6.24	6.49	6.41	6.52	6.78
30	Capacity	11.73	11.42	6.63	12.11	11.79	6.84	12.48	12.16	7.05	12.86	12.52	7.27	13.23	12.89	7.48	13.61	13.25	7.69	13.98	13.62	7.90	14.36	13.98	8.12	14.73	14.35	8.33	15.79	15.38	8.92	16.61	16.18	9.39	17.67	17.20	9.98	18.35	17.87	10.37
	Power	3.81	3.51	1.86	3.79	3.50	1.85	3.79	3.49	1.85	3.78	3.48	1.85	3.77	3.48	1.84	3.76	3.47	1.84	3.76	3.47	1.84	3.75	3.46	1.83	3.74	3.45	1.83	3.71	3.42	1.81	3.72	3.43	1.82	3.69	3.41	1.81	3.67	3.39	1.79
	Efficiency	3.08	3.25	3.57	3.19	3.37	3.69	3.30	3.48	3.81	3.40	3.59	3.94	3.51	3.71	4.06	3.62	3.82	4.18	3.72	3.93	4.30	3.83	4.04	4.43	3.93	4.15	4.55	4.25	4.49	4.92	4.46	4.71	5.16	4.78	5.05	5.53	4.99	5.27	5.78
35	Capacity	11.50	11.20	6.50	11.87	11.56	6.71	12.24	11.92	6.92	12.60	12.28	7.12	12.97	12.63	7.33	13.34	12.99	7.54	13.71	13.35	7.75	14.08	13.71	7.96	14.44	14.07	8.16	15.48	12.50	8.75	16.28	15.86	9.20	17.32	16.87	9.79	17.99	17.52	10.17
	Power	4.29	3.80	2.10	4.28	3.95	2.09	4.27	3.94	2.09	4.26	3.93	2.08	4.25	3.92	2.08	4.24	3.91	2.07	4.24	3.91	2.07	4.23	3.90	2.07	4.22	3.89	2.06	4.19	3.13	2.05	4.20	3.87	2.05	4.17	3.84	2.04	4.14	3.82	2.02
	Efficiency	2.68	2.95	3.10	2.77	2.93	3.21	2.87	3.03	3.32	2.96	3.12	3.42	3.05	3.22	3.53	3.14	3.32	3.64	3.24	3.42	3.74	3.33	3.51	3.85	3.42	3.61	3.96	3.70	4.00	4.28	3.88	4.10	4.49	4.16	4.39	4.81	4.34	4.59	5.02
40	Capacity	7.48	7.00	5.66	7.72	7.23	5.84	7.96	7.45	6.02	8.20	7.68	6.20	8.44	7.90	6.38	8.68	8.12	6.56	8.92	8.35	6.74	9.16	8.57	6.92	9.40	8.80	7.10	10.07	9.43	7.61	10.59	9.92	8.01	11.27	10.55	8.52	11.70	10.95	8.84
	Power	3.19	2.94	2.28	3.18	2.93	2.27	3.18	2.92	2.27	3.17	2.92	2.26	3.16	2.91	2.26	3.16	2.91	2.25	3.15	2.90	2.25	3.15	2.90	2.25	3.14	2.89	2.24	3.11	2.87	2.22	3.12	2.87	2.23	3.10	2.85	2.21	3.08	2.84	2.20
	Efficiency	2.34	2.38	2.48	2.43	2.47	2.57	2.51	2.55	2.65	2.59	2.63	2.74	2.67	2.71	2.82	2.75	2.80	2.91	2.83	2.88	2.99	2.91	2.96	3.08	2.99	3.04	3.17	3.23	3.29	3.42	3.39	3.45	3.59	3.64	3.70	3.85	3.80	3.86	4.02
45	Capacity	5.33	5.18	4.81	5.50	5.35	4.96	5.67	5.51	5.12	5.84	5.68	5.27	6.01	5.84	5.43	6.18	6.01	5.58	6.35	6.17	5.73	6.52	6.34	5.89	6.69	6.51	6.04	7.17	6.97	6.47	7.54	7.33	6.81	8.02	7.80	7.24	8.33	8.10	7.52
	Power	2.76	2.68	2.46	2.76	2.67	2.46	2.75	2.66	2.45	2.74	2.66	2.45	2.74	2.65	2.44	2.73	2.65	2.44	2.73	2.64	2.43	2.72	2.64	2.43	2.72	2.64	2.42	2.70	2.61	2.40	2.70	2.62	2.41	2.68	2.60	2.39	2.67	2.58	2.38
	Efficiency	1.93	1.93	1.95	2.00	2.00	2.02	2.06	2.07	2.09	2.13	2.14	2.16	2.19	2.20	2.22	2.26	2.27	2.29	2.33	2.34	2.36	2.39	2.40	2.43	2.46	2.47	2.49	2.66	2.67	2.70	2.79	2.80	2.83	2.99	3.00	3.03	3.12	3.13	3.16
48	Capacity	4.61	4.48	4.16	4.76	4.62	4.29	4.90	4.77	4.43	5.05	4.91	4.56	5.20	5.05	4.69	5.35	5.20	4.83	5.49	5.34	4.96	5.64	5.48	5.09	5.79	5.63	5.22	6.20	6.03	5.60	6.52	6.34	5.89	6.94	6.75	6.26	7.21	7.01	6.51
	Power	2.84	2.75	2.53	2.83	2.75	2.52	2.83	2.74	2.52	2.82	2.73	2.51	2.82	2.73	2.51	2.81	2.72	2.50	2.80	2.72	2.50	2.80	2.71	2.50	2.80	2.71	2.49	2.77	2.69	2.47	2.78	2.69	2.48	2.76	2.67	2.46	2.74	2.66	2.44
	Efficiency	1.62	1.63	1.64	1.68	1.68	1.70	1.73	1.74	1.76	1.79	1.80	1.81	1.85	1.85	1.87	1.90	1.91	1.93	1.96	1.96	1.98	2.01	2.02	2.04	2.07	2.08	2.10	2.24	2.25	2.27	2.35	2.36	2.38	2.52	2.52	2.55	2.63	2.64	2.66

GRS-CQ14Pd/NhH3-M1

Ambient Temp(°C)	Outflow Water(°C)	7			8			9			10			11			12			13			14			15			18			20			23			25		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-15	Capacity	5.47	4.93	4.61	5.65	5.09	4.76	5.82	5.24	4.90	6.00	5.40	5.05	6.17	5.56	5.20	6.35	5.72	5.35	6.53	5.87	5.49	6.70	6.03	5.64	6.88	6.19	5.79	7.37	6.63	6.20	7.75	6.98	6.52	8.24	7.42	6.94	8.56	7.71	7.21
	Power	1.18	1.05	0.97	1.17	1.05	0.97	1.17	1.04	0.96	1.17	1.04	0.96	1.17	1.04	0.96	1.16	1.04	0.96	1.16	1.04	0.96	1.16	1.03	0.95	1.16	1.03	0.95	1.15	1.02	0.94	1.15	1.03	0.95	1.14	1.02	0.94	1.14	1.01	0.93
	Efficiency	4.65	4.70	4.76	4.81	4.86	4.92	4.97	5.02	5.09	5.13	5.18	5.25	5.29	5.35	5.42	5.45	5.51	5.58	5.61	5.67	5.75	5.77	5.83	5.91	5.93	5.99	6.07	6.42	6.48	6.57	6.73	6.80	6.89	7.21	7.29	7.38	7.53	7.61	7.71
-10	Capacity	5.39	4.85	4.54	5.57	5.01	4.68	5.74	5.16	4.83	5.91	5.32	4.97	6.08	5.47	5.12	6.26	5.63	5.26	6.43	5.78	5.41	6.60	5.94	5.55	6.77	6.09	5.70	7.26	6.53	6.11	7.64	6.87	6.42	8.12	7.31	6.83	8.44	7.59	7.09
	Power	1.38	1.23	1.14	1.38	1.23	1.13	1.37	1.22	1.13	1.37	1.22	1.13	1.37	1.22	1.12	1.37	1.22	1.12	1.36	1.21	1.12	1.36	1.21	1.12	1.36	1.21	1.12	1.35	1.20	1.11	1.35	1.20	1.11	1.34	1.19	1.10	1.33	1.19	1.10
	Efficiency	3.90	3.94	4.00	4.04	4.08	4.14	4.18	4.22	4.27	4.31	4.35	4.41	4.44	4.49	4.55	4.58	4.63	4.69	4.71	4.76	4.82	4.85	4.90	4.96	4.98	5.03	5.10	5.39	5.44	5.51	5.65	5.71	5.79	6.06	6.12	6.20	6.33	6.39	6.47
-5	Capacity	5.31	4.77	4.46	5.48	4.93	4.61	5.65	5.08	4.75	5.82	5.23	4.89	5.99	5.39	5.04	6.16	5.54	5.18	6.33	5.69	5.32	6.50	5.84	5.46	6.67	6.00	5.61	7.15	6.43	6.01	7.52	6.76	6.32	8.00	7.19	6.72	8.31	7.47	6.98
	Power	1.46	1.30	1.20	1.46	1.30	1.20	1.45	1.29	1.19	1.45	1.29	1.19	1.45	1.29	1.19	1.45	1.29	1.19	1.44	1.28	1.18	1.44	1.28	1.18	1.44	1.28	1.18	1.43	1.27	1.17	1.43	1.27	1.17	1.42	1.26	1.16	1.41	1.25	1.16
	Efficiency	3.64	3.67	3.72	3.76	3.80	3.85	3.89	3.93	3.98	4.01	4.05	4.11	4.14	4.18	4.24	4.26	4.31	4.36	4.39	4.43	4.49	4.52	4.56	4.62	4.64	4.69	4.75	5.02	5.07	5.13	5.26	5.32	5.39	5.64	5.70	5.77	5.89	5.95	6.03
0	Capacity	5.16	4.51	3.64	5.33	4.65	3.76	5.49	4.80	3.87	5.66	4.94	3.99	5.82	5.09	4.11	5.99	5.23	4.22	6.15	5.37	4.34	6.32	5.52	4.46	6.48	5.66	4.57	6.95	6.07	4.90	7.31	6.38	5.15	7.77	6.79	5.48	8.07	7.05	5.69
	Power	1.62	1.39	1.08	1.61	1.38	1.07	1.61	1.38	1.07	1.60	1.38	1.07	1.60	1.38	1.07	1.60	1.37	1.07	1.59	1.37	1.06	1.59	1.37	1.06	1.59	1.37	1.06	1.58	1.35	1.05	1.58	1.36	1.05	1.57	1.35	1.05	1.56	1.34	1.04
	Efficiency	3.19	3.25	3.38	3.31	3.36	3.50	3.42	3.47	3.61	3.53	3.59	3.73	3.64	3.70	3.85	3.75	3.81	3.96	3.86	3.92	4.08	3.97	4.03	4.20	4.08	4.15	4.31	4.41	4.48	4.66	4.62	4.70	4.89	4.96	5.04	5.24	5.18	5.26	5.48
5	Capacity	4.90	4.27	3.45	5.06	4.40	3.56	5.22	4.54	3.67	5.37	4.68	3.78	5.53	4.81	3.89	5.69	4.95	4.00	5.84	5.09	4.11	6.00	5.22	4.22	6.16	5.36	4.33	6.60	5.74	4.64	6.94	6.04	4.88	7.38	6.43	5.19	7.67	6.67	5.39
	Power	1.72	1.48	1.15	1.72	1.47	1.14	1.72	1.47	1.14	1.71	1.47	1.14	1.71	1.46	1.14	1.71	1.46	1.13	1.70	1.46	1.13	1.70	1.45	1.13	1.70	1.45	1.13	1.68	1.44	1.12	1.69	1.44	1.12	1.67	1.43	1.11	1.66	1.42	1.11
	Efficiency	2.84	2.89	3.01	2.94	2.99	3.11	3.04	3.09	3.22	3.14	3.19	3.32	3.24	3.29	3.42	3.33	3.39	3.53	3.43	3.49	3.63	3.53	3.59	3.73	3.63	3.69	3.84	3.92	3.99	4.15	4.12	4.19	4.35	4.41	4.48	4.67	4.61	4.68	4.87
10	Capacity	11.86	10.77	7.87	12.24	11.11	8.12	12.62	11.46	8.37	13.00	11.80	8.62	13.38	12.15	8.87	13.76	12.49	9.12	14.13	12.84	9.38	14.51	13.18	9.63	14.89	13.53	9.88	15.96	14.50	10.59	16.79	15.25	11.14	17.86	16.22	11.84	18.55	16.84	12.30
	Power	2.16	1.90	1.30	2.15	1.90	1.30	2.15	1.89	1.29	2.14	1.89	1.29	2.14	1.89	1.29	2.13	1.88	1.29	2.13	1.88	1.28	2.13	1.88	1.28	2.12	1.87	1.28	2.10	1.86	1.27	2.11	1.86	1.27	2.09	1.85	1.26	2.08	1.84	1.26
	Efficiency	5.50	5.66	6.05	5.69	5.85	6.26	5.88	6.05	6.47	6.07	6.24	6.67	6.26	6.44	6.88	6.45	6.63	7.09	6.64	6.83	7.30	6.83	7.02	7.51	7.02	7.22	7.72	7.59	7.80	8.34	7.96	8.19	8.75	8.53	8.77	9.38	8.91	9.16	9.80
15	Capacity	11.37	10.32	7.54	11.73	10.65	7.78	12.10	10.98	8.02	12.46	11.32	8.26	12.82	11.65	8.51	13.19	11.98	8.75	13.55	12.31	8.99	13.91	12.64	9.23	14.28	12.97	9.47	15.30	13.90	10.15	16.10	14.62	10.68	17.12	15.55	11.36	17.78	16.15	11.79
	Power	2.30	2.03	1.39	2.30	2.03	1.39	2.29	2.02	1.38	2.29	2.02	1.38	2.28	2.02	1.38	2.28	2.01	1.37	2.27	2.01	1.37	2.27	2.00	1.37	2.27	2.00	1.37	2.25	1.98	1.36	2.25	1.99	1.36	2.24	1.97	1.35	2.22	1.96	1.34
	Efficiency	4.94	5.08	5.43	5.11	5.25	5.61	5.28	5.43	5.80	5.45	5.60	5.99	5.62	5.78	6.18	5.79	5.95	6.36	5.96	6.13	6.55	6.13	6.30	6.74	6.30	6.48	6.93	6.81	7.00	7.49	7.15	7.35	7.86	7.66	7.87	8.42	8.00	8.22	8.79
20	Capacity	11.07	10.06	7.35	11.43	10.38	7.58	11.78	10.70	7.82	12.14	11.02	8.05	12.49	11.34	8.29	12.85	11.67	8.52	13.20	11.99	8.76	13.55	12.31	8.99	13.91	12.63	9.23	14.91	13.54	9.89	15.68	14.24	10.40	16.68	15.15	11.06	17.32	15.73	11.49
	Power	2.53	2.24	1.53	2.53	2.23	1.52	2.52	2.23	1.52	2.52	2.22	1.52	2.51	2.22	1.51	2.51	2.21	1.51	2.50	2.21	1.51	2.50	2.20	1.51	2.49	2.20	1.50	2.47	2.18	1.49	2.48	2.19	1.49	2.46	2.17	1.48	2.45	2.16	1.48
	Efficiency	4.37	4.50	4.81	4.52	4.65	4.97	4.67	4.81	5.14	4.83	4.96	5.30	4.98	5.12	5.47	5.13	5.27	5.64	5.28	5.43	5.80	5.43	5.58	5.97	5.58	5.74	6.13	6.03	6.20	6.63	6.33	6.51	6.96	6.78	6.97	7.45	7.08	7.28	7.79
25	Capacity	10.58	9.61	7.02	10.92	9.92	7.24	11.26	10.23	7.47	11.60	10.53	7.69	11.94	10.84	7.92	12.28	11.15	8.14	12.62	11.46	8.37	12.95	11.77	8.59	13.29	12.07	8.82	14.25	12.94	9.45	14.99	13.61	9.94	15.94	14.48	10.57	16.55	15.03	10.98
	Power	2.78	2.46	1.68	2.77	2.45	1.67	2.77	2.44	1.67	2.76	2.44	1.67	2.75	2.43	1.66	2.75	2.43	1.66	2.74	2.42	1.66	2.74	2.42	1.65	2.74	2.42	1.65	2.71	2.39	1.64	2.72	2.40	1.64	2.70	2.38	1.63	2.68	2.37	1.62
	Efficiency	3.81	3.92	4.19	3.94	4.05	4.33	4.07	4.19	4.48	4.20	4.32	4.62	4.33	4.46	4.76	4.47	4.59	4.91	4.60	4.73	5.05	4.73	4.86	5.20	4.86	5.00	5.34	5.25	5.40	5.78	5.51	5.67	6.06	5.91	6.07	6.49	6.17	6.34	6.78
30	Capacity	13.16	12.24	6.63	13.58	12.63	6.84	14.00	13.02	7.05	14.42	13.42	7.27	14.84	13.81	7.48	15.26	14.20	7.69	15.68	14.59	7.90	16.11	14.98	8.12	16.53	15.37	8.33	17.71	16.48	8.92	18.63	17.33	9.39	19.82	18.43	9.98	20.58	19.14	10.37
	Power	4.58	4.03	1.86	4.56	4.02	1.85	4.55	4.01	1.85	4.54	4.00	1.85	4.53	3.99	1.84	4.53	3.99	1.84	4.52	3.98	1.84	4.51	3.97	1.83	4.50	3.97	1.83	4.46	3.93	1.81	4.48	3.94	1.82	4.44	3.91	1.81	4.42	3.89	1.79
	Efficiency	2.88	3.04	3.57	2.98	3.14	3.69	3.07	3.25	3.81	3.17	3.35	3.94	3.27	3.46	4.06	3.37	3.56	4.18	3.47	3.67	4.30	3.57	3.77	4.43	3.67	3.88	4.55	3.97	4.19	4.92	4.16	4.40	5.16	4.46	4.71	5.53	4.66	4.92	5.78
35	Capacity	12.90	12.00	6.50	13.31	12.38	6.71	13.73	12.77	6.92	14.14	13.15	7.12	14.55	13.54	7.33	14.96	13.92	7.54	15.38	14.30	7.75	15.79	14.69	7.96	16.20	15.07	8.16	17.36	13.80	8.75	18.27	16.99	9.20	19.43	18.07	9.79	20.18	18.77	10.17
	Power	5.16	4.36	2.10	5.15	4.53	2.09	5.13	4.52	2.09	5.12	4.51	2.08	5.11	4.50	2.08	5.10	4.50	2.07	5.09	4.49	2.07	5.09	4.48	2.07	5.08	4.47	2.06	5.03	3.68	2.05	5.05	4.45	2.05	5.01	4.41	2.04	4.98	4.39	2.02
	Efficiency	2.50	2.75	3.10	2.59	2.73	3.21	2.67	2.82	3.32	2.76	2.91	3.42	2.85	3.01	3.53	2.93	3.10	3.64	3.02	3.19	3.74	3.11	3.28	3.85	3.19	3.37	3.96	3.45	3.75	4.28	3.62	3.82	4.49	3.88	4.10	4.81	4.05	4.28	5.02
40	Capacity	8.53	7.74	5.66	8.80	7.99	5.84	9.07	8.24	6.02	9.34	8.49	6.20	9.62	8.73	6.38	9.89	8.98	6.56	10.16	9.23	6.74	10.44	9.48	6.92	10.71	9.73	7.10	11.48	10.42	7.61	12.07	10.96	8.01	12.84	11.66	8.52	13.33	12.11	8.84
	Power	3.65	3.34	2.28	3.64	3.33	2.27	3.63	3.32	2.27	3.62	3.31	2.26	3.62	3.31	2.26	3.61	3.30	2.25	3.60	3.29	2.25	3.60	3.29	2.25	3.59	3.28	2.24	3.56	3.26	2.22	3.57	3.26	2.23	3.54	3.24	2.21	3.52	3.22	2.20
	Efficiency	2.34	2.32	2.48	2.42	2.40	2.57	2.50	2.48	2.65	2.58	2.56	2.74	2.66	2.64	2.82	2.74	2.72	2.91	2.82	2.80	2.99	2.90	2.88	3.08	2.98	2.96	3.17	3.22	3.20	3.42	3.38	3.36	3.59	3.62	3.60	3.85	3.79	3.76	4.02
45	Capacity	5.70	5.40	4.81	5.88	5.57	4.96	6.06	5.75	5.12	6.25	5.92	5.27	6.43	6.09	5.43	6.61	6.27	5.58	6.79	6.44	5.73	6.97	6.61	5.89	7.16	6.78	6.04	7.67	7.27	6.47	8.07	7.65	6.81	8.58	8.14	7.24	8.91	8.45	7.52
	Power	3.00	2.82	2.46	3.00	2.81	2.46	2.99	2.81	2.45	2.98	2.80	2.45	2.98	2.79	2.44	2.97	2.79	2.44	2.97	2.78	2.43	2.96	2.78	2.43	2.96	2.78	2.42	2.93	2.75	2.40	2.94	2.76	2.41	2.92	2.74	2.39	2.90	2.72	2.38
	Efficiency	1.90	1.92	1.95	1.96	1.98	2.02	2.03	2.05	2.09	2.09	2.11	2.16	2.16	2.18	2.22	2.22	2.25	2.29	2.29	2.31	2.36	2.36	2.38	2.43	2.42	2.44	2.49	2.62	2.64	2.70	2.75	2.77	2.83	2.94	2.97	3.03	3.07	3.10	3.16
48	Capacity	4.93	4.67	4.16	5.09	4.82	4.29	5.24	4.97	4.43	5.40	5.12	4.56	5.56	5.27	4.69	5.72	5.42	4.83	5.87	5.57	4.96	6.03	5.72	5.09	6.19	5.87	5.22	6.63	6.29	5.60	6.98	6.62	5.89	7.42	7.04	6.26	7.71	7.31	6.51
	Power	3.09	2.90	2.53	3.08	2.89	2.52	3.07	2.88	2.52	3.07	2.88	2.51	3.06	2.87	2.51	3.05	2.87	2.50	3.05	2.86	2.50	3.04	2.86	2.50	3.04	2.85	2.49	3.01	2.83	2.47	3.02	2.84	2.48	3.00	2.81	2.46	2.98	2.80	2.44
	Efficiency	1.60	1.61	1.64	1.65	1.67	1.70	1.71	1.72	1.76	1.76	1.78	1.81	1.82	1.83	1.87	1.87	1.89	1.93	1.93	1.95	1.98	1.98	2.00	2.04	2.04	2.06	2.10	2.20	2.22	2.27	2.31	2.33	2.38	2.48	2.50	2.55	2.59	2.61	2.66

GRS-CQ16Pd/NhH3-M1

Ambient Temp(°C)	Outflow Water(°C)	7			8			9			10			11			12			13			14			15			18			20			23			25		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-15	Capacity	6.66	5.70	4.61	6.88	5.88	4.76	7.09	6.06	4.90	7.30	6.24	5.05	7.52	6.43	5.20	7.73	6.61	5.35	7.94	6.79	5.49	8.16	6.97	5.64	8.37	7.15	5.79	8.97	7.67	6.20	9.44	8.07	6.52	10.04	8.58	6.94	10.42	8.91	7.21
	Power	1.51	1.26	0.97	1.51	1.26	0.97	1.51	1.25	0.96	1.50	1.25	0.96	1.50	1.25	0.96	1.50	1.25	0.96	1.50	1.24	0.96	1.49	1.24	0.95	1.49	1.24	0.95	1.48	1.23	0.94	1.48	1.23	0.95	1.47	1.22	0.94	1.46	1.22	0.93
	Efficiency	4.40	4.52	4.76	4.55	4.68	4.92	4.70	4.84	5.09	4.86	4.99	5.25	5.01	5.15	5.42	5.16	5.31	5.58	5.31	5.46	5.75	5.46	5.62	5.91	5.62	5.77	6.07	6.07	6.24	6.57	6.37	6.55	6.89	6.83	7.02	7.38	7.13	7.33	7.71
-10	Capacity	6.57	5.61	4.54	6.78	5.79	4.68	6.99	5.97	4.83	7.20	6.15	4.97	7.41	6.32	5.12	7.62	6.50	5.26	7.83	6.68	5.41	8.04	6.86	5.55	8.25	7.04	5.70	8.84	7.55	6.11	9.30	7.94	6.42	9.89	8.44	6.83	10.27	8.77	7.09
	Power	1.78	1.48	1.14	1.77	1.47	1.13	1.77	1.47	1.13	1.76	1.47	1.13	1.76	1.46	1.12	1.76	1.46	1.12	1.75	1.46	1.12	1.75	1.45	1.12	1.75	1.45	1.12	1.73	1.44	1.11	1.74	1.44	1.11	1.73	1.43	1.10	1.72	1.42	1.10
	Efficiency	3.69	3.80	4.00	3.82	3.93	4.14	3.95	4.06	4.27	4.08	4.19	4.41	4.21	4.33	4.55	4.33	4.46	4.69	4.46	4.59	4.82	4.59	4.72	4.96	4.72	4.85	5.10	5.10	5.24	5.51	5.35	5.50	5.79	5.73	5.89	6.20	5.99	6.16	6.47
-5	Capacity	6.47	5.52	4.46	6.67	5.69	4.61	6.88	5.87	4.75	7.09	6.05	4.89	7.30	6.22	5.04	7.50	6.40	5.18	7.71	6.58	5.32	7.92	6.75	5.46	8.12	6.93	5.61	8.71	7.43	6.01	9.16	7.81	6.32	9.74	8.31	6.72	10.12	8.63	6.98
	Power	1.88	1.56	1.20	1.87	1.56	1.20	1.87	1.55	1.19	1.87	1.55	1.19	1.86	1.55	1.19	1.86	1.54	1.19	1.86	1.54	1.18	1.85	1.54	1.18	1.85	1.53	1.18	1.83	1.52	1.17	1.84	1.53	1.17	1.82	1.51	1.16	1.81	1.51	1.16
	Efficiency	3.44	3.54	3.72	3.56	3.66	3.85	3.68	3.78	3.98	3.80	3.91	4.11	3.92	4.03	4.24	4.04	4.15	4.36	4.15	4.27	4.49	4.27	4.39	4.62	4.39	4.52	4.75	4.75	4.88	5.13	4.98	5.12	5.39	5.34	5.49	5.77	5.58	5.73	6.03
0	Capacity	6.66	5.99	3.64	6.87	6.18	3.76	7.09	6.38	3.87	7.30	6.57	3.99	7.51	6.76	4.11	7.73	6.95	4.22	7.94	7.14	4.34	8.15	7.33	4.46	8.36	7.53	4.57	8.96	8.07	4.90	9.43	8.48	5.15	10.03	9.02	5.48	10.42	9.37	5.69
	Power	2.25	2.00	1.08	2.25	1.99	1.07	2.24	1.99	1.07	2.24	1.98	1.07	2.23	1.98	1.07	2.23	1.98	1.07	2.23	1.97	1.06	2.22	1.97	1.06	2.22	1.97	1.06	2.20	1.95	1.05	2.20	1.95	1.05	2.19	1.94	1.05	2.18	1.93	1.04
	Efficiency	2.95	3.00	3.38	3.06	3.10	3.50	3.16	3.21	3.61	3.26	3.31	3.73	3.36	3.41	3.85	3.46	3.52	3.96	3.57	3.62	4.08	3.67	3.72	4.20	3.77	3.83	4.31	4.08	4.14	4.66	4.28	4.34	4.89	4.58	4.65	5.24	4.79	4.86	5.48
5	Capacity	6.33	5.67	3.45	6.53	5.85	3.56	6.73	6.03	3.67	6.93	6.22	3.78	7.14	6.40	3.89	7.34	6.58	4.00	7.54	6.76	4.11	7.74	6.94	4.22	7.95	7.12	4.33	8.52	7.63	4.64	8.96	8.03	4.88	9.53	8.54	5.19	9.90	8.87	5.39
	Power	2.41	2.13	1.15	2.40	2.12	1.14	2.39	2.12	1.14	2.39	2.11	1.14	2.38	2.11	1.14	2.38	2.10	1.13	2.38	2.10	1.13	2.37	2.10	1.13	2.37	2.09	1.13	2.35	2.07	1.12	2.35	2.08	1.12	2.34	2.06	1.11	2.32	2.05	1.11
	Efficiency	2.63	2.67	3.01	2.72	2.76	3.11	2.81	2.85	3.22	2.90	2.94	3.32	2.99	3.04	3.42	3.08	3.13	3.53	3.17	3.22	3.63	3.26	3.31	3.73	3.36	3.41	3.84	3.63	3.68	4.15	3.81	3.86	4.35	4.08	4.14	4.67	4.26	4.32	4.87
10	Capacity	13.92	13.55	7.87	14.36	13.99	8.12	14.81	14.42	8.37	15.25	14.85	8.62	15.70	15.29	8.87	16.14	15.72	9.12	16.59	16.15	9.38	17.03	16.59	9.63	17.48	17.02	9.88	18.73	18.24	10.59	19.70	19.19	11.14	20.96	20.41	11.84	21.76	21.20	12.30
	Power	2.66	2.55	1.30	2.65	2.54	1.30	2.65	2.53	1.29	2.64	2.53	1.29	2.64	2.52	1.29	2.63	2.52	1.29	2.63	2.51	1.28	2.62	2.51	1.28	2.62	2.50	1.28	2.60	2.48	1.27	2.60	2.49	1.27	2.58	2.47	1.26	2.57	2.46	1.26
	Efficiency	5.23	5.32	6.05	5.41	5.51	6.26	5.59	5.69	6.47	5.77	5.88	6.67	5.95	6.06	6.88	6.13	6.24	7.09	6.31	6.43	7.30	6.49	6.61	7.51	6.67	6.80	7.72	7.21	7.35	8.34	7.57	7.71	8.75	8.11	8.26	9.38	8.47	8.63	9.80
15	Capacity	13.34	12.99	7.54	13.77	13.41	7.78	14.19	13.82	8.02	14.62	14.24	8.26	15.05	14.65	8.51	15.47	15.07	8.75	15.90	15.49	8.99	16.33	15.90	9.23	16.76	16.32	9.47	17.96	17.49	10.15	18.89	18.40	10.68	20.09	19.57	11.36	20.86	20.32	11.79
	Power	2.84	2.72	1.39	2.84	2.71	1.39	2.83	2.71	1.38	2.82	2.70	1.38	2.82	2.69	1.38	2.81	2.69	1.37	2.81	2.68	1.37	2.80	2.68	1.37	2.80	2.68	1.37	2.77	2.65	1.36	2.78	2.66	1.36	2.76	2.64	1.35	2.75	2.62	1.34
	Efficiency	4.69	4.78	5.43	4.85	4.94	5.61	5.02	5.11	5.80	5.18	5.27	5.99	5.34	5.44	6.18	5.50	5.60	6.36	5.66	5.77	6.55	5.82	5.93	6.74	5.99	6.10	6.93	6.47	6.59	7.49	6.79	6.92	7.86	7.28	7.41	8.42	7.60	7.74	8.79
20	Capacity	13.00	12.66	7.35	13.41	13.06	7.58	13.83	13.47	7.82	14.24	13.87	8.05	14.66	14.28	8.29	15.07	14.68	8.52	15.49	15.09	8.76	15.91	15.49	8.99	16.32	15.90	9.23	17.49	17.03	9.89	18.40	17.92	10.40	19.57	19.06	11.06	20.32	19.79	11.49
	Power	3.13	2.99	1.53	3.12	2.98	1.52	3.11	2.98	1.52	3.11	2.97	1.52	3.10	2.96	1.51	3.09	2.96	1.51	3.09	2.95	1.51	3.08	2.95	1.51	3.08	2.94	1.50	3.05	2.92	1.49	3.06	2.92	1.49	3.04	2.90	1.48	3.02	2.89	1.48
	Efficiency	4.15	4.23	4.81	4.30	4.38	4.97	4.44	4.53	5.14	4.59	4.67	5.30	4.73	4.82	5.47	4.87	4.96	5.64	5.02	5.11	5.80	5.16	5.26	5.97	5.30	5.40	6.13	5.73	5.84	6.63	6.01	6.13	6.96	6.44	6.57	7.45	6.73	6.86	7.79
25	Capacity	12.42	12.10	7.02	12.82	12.48	7.24	13.21	12.87	7.47	13.61	13.26	7.69	14.01	13.64	7.92	14.41	14.03	8.14	14.80	14.42	8.37	15.20	14.81	8.59	15.60	15.19	8.82	16.72	16.28	9.45	17.59	17.13	9.94	18.70	18.22	10.57	19.42	18.92	10.98
	Power	3.43	3.28	1.68	3.42	3.27	1.67	3.42	3.27	1.67	3.41	3.26	1.67	3.40	3.25	1.66	3.39	3.25	1.66	3.39	3.24	1.66	3.38	3.23	1.65	3.38	3.23	1.65	3.35	3.20	1.64	3.36	3.21	1.64	3.33	3.19	1.63	3.31	3.17	1.62
	Efficiency	3.62	3.69	4.19	3.74	3.81	4.33	3.87	3.94	4.48	3.99	4.07	4.62	4.12	4.20	4.76	4.24	4.32	4.91	4.37	4.45	5.05	4.49	4.58	5.20	4.62	4.70	5.34	4.99	5.09	5.78	5.24	5.34	6.06	5.61	5.72	6.49	5.86	5.97	6.78
30	Capacity	14.08	13.77	6.63	14.53	14.21	6.84	14.98	14.65	7.05	15.43	15.09	7.27	15.88	15.53	7.48	16.33	15.97	7.69	16.78	16.41	7.90	17.23	16.85	8.12	17.68	17.30	8.33	18.95	18.53	8.92	19.93	19.50	9.39	21.20	20.74	9.98	22.01	21.54	10.37
	Power	5.10	4.77	1.86	5.09	4.76	1.85	5.07	4.75	1.85	5.06	4.74	1.85	5.05	4.73	1.84	5.04	4.72	1.84	5.03	4.71	1.84	5.03	4.70	1.83	5.02	4.69	1.83	4.97	4.65	1.81	4.99	4.67	1.82	4.95	4.63	1.81	4.92	4.60	1.79
	Efficiency	2.76	2.89	3.57	2.86	2.99	3.69	2.95	3.09	3.81	3.05	3.19	3.94	3.14	3.29	4.06	3.24	3.39	4.18	3.33	3.49	4.30	3.43	3.59	4.43	3.52	3.68	4.55	3.81	3.98	4.92	4.00	4.18	5.16	4.28	4.48	5.53	4.47	4.68	5.78
35	Capacity	13.80	13.50	6.50	14.24	13.93	6.71	14.68	14.36	6.92	15.12	14.80	7.12	15.57	15.23	7.33	16.01	15.66	7.54	16.45	16.09	7.75	16.89	16.52	7.96	17.33	16.96	8.16	18.57	14.90	8.75	19.54	19.12	9.20	20.78	20.33	9.79	21.58	21.11	10.17
	Power	5.75	5.09	2.10	5.73	5.36	2.09	5.72	5.35	2.09	5.71	5.34	2.08	5.70	5.33	2.08	5.69	5.32	2.07	5.68	5.31	2.07	5.67	5.30	2.07	5.66	5.29	2.06	5.61	4.14	2.05	5.62	5.26	2.05	5.58	5.22	2.04	5.55	5.19	2.02
	Efficiency	2.40	2.65	3.10	2.48	2.60	3.21	2.57	2.68	3.32	2.65	2.77	3.42	2.73	2.86	3.53	2.82	2.94	3.64	2.90	3.03	3.74	2.98	3.12	3.85	3.06	3.20	3.96	3.31	3.60	4.28	3.48	3.63	4.49	3.72	3.89	4.81	3.89	4.07	5.02
40	Capacity	10.01	9.74	5.66	10.33	10.06	5.84	10.65	10.37	6.02	10.97	10.68	6.20	11.29	10.99	6.38	11.61	11.30	6.56	11.93	11.61	6.74	12.25	11.93	6.92	12.57	12.24	7.10	13.47	13.12	7.61	14.17	13.80	8.01	15.07	14.67	8.52	15.65	15.24	8.84
	Power	4.67	4.46	2.28	4.65	4.45	2.27	4.64	4.44	2.27	4.63	4.43	2.26	4.62	4.42	2.26	4.61	4.41	2.25	4.61	4.40	2.25	4.60	4.40	2.25	4.59	4.39	2.24	4.55	4.35	2.22	4.56	4.36	2.23	4.53	4.33	2.21	4.50	4.31	2.20
	Efficiency	2.14	2.18	2.48	2.22	2.26	2.57	2.29	2.34	2.65	2.37	2.41	2.74	2.44	2.49	2.82	2.51	2.56	2.91	2.59	2.64	2.99	2.66	2.71	3.08	2.74	2.79	3.17	2.96	3.01	3.42	3.10	3.16	3.59	3.33	3.39	3.85	3.47	3.54	4.02
45	Capacity	6.22	5.96	4.81	6.41	6.15	4.96	6.61	6.34	5.12	6.81	6.53	5.27	7.01	6.72	5.43	7.21	6.91	5.58	7.41	7.10	5.73	7.61	7.29	5.89	7.81	7.48	6.04	8.37	8.02	6.47	8.80	8.44	6.81	9.36	8.97	7.24	9.72	9.32	7.52
	Power	3.34	3.17	2.46	3.33	3.16	2.46	3.33	3.16	2.45	3.32	3.15	2.45	3.31	3.14	2.44	3.31	3.14	2.44	3.30	3.13	2.43	3.30	3.13	2.43	3.29	3.12	2.42	3.26	3.09	2.40	3.27	3.10	2.41	3.25	3.08	2.39	3.23	3.06	2.38
	Efficiency	1.86	1.88	1.95	1.92	1.94	2.02	1.99	2.01	2.09	2.05	2.07	2.16	2.12	2.14	2.22	2.18	2.20	2.29	2.24	2.27	2.36	2.31	2.33	2.43	2.37	2.40	2.49	2.56	2.59	2.70	2.69	2.72	2.83	2.88	2.91	3.03	3.01	3.04	3.16
48	Capacity	5.38	5.15	4.16	5.55	5.32	4.29	5.72	5.48	4.43	5.89	5.65	4.56	6.06	5.81	4.69	6.24	5.98	4.83	6.41	6.14	4.96	6.58	6.31	5.09	6.75	6.47	5.22	7.24	6.93	5.60	7.61	7.30	5.89	8.10	7.76	6.26	8.41	8.06	6.51
	Power	3.44	3.26	2.53	3.43	3.25	2.52	3.42	3.25	2.52	3.41	3.24	2.51	3.41	3.23	2.51	3.40	3.23	2.50	3.39	3.22	2.50	3.39	3.21	2.50	3.38	3.21	2.49	3.35	3.18	2.47	3.36	3.19	2.48	3.34	3.17	2.46	3.32	3.15	2.44
	Efficiency	1.56	1.58	1.64	1.62	1.63	1.70	1.67	1.69	1.76	1.73	1.74	1.81	1.78	1.80	1.87	1.83	1.85	1.93	1.89	1.91	1.98	1.94	1.96	2.04	2.00	2.02	2.10	2.16	2.18	2.27	2.26	2.29	2.38	2.43	2.45	2.55	2.53	2.56	2.66

(3) Single-phase units for heating

GRS-CQ4.0Pd/NhH3-E																														
Outflow Water(°C)			25			30			35			40			45			50			55			60			65		
Capacity level			max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
Ambient Temp(°C)	-30	Capacity	1.90	1.67	0.96	1.88	1.66	0.95	1.86	1.64	0.94	1.83	1.61	0.92	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
		Power	0.99	0.85	0.46	1.08	0.93	0.50	1.20	1.04	0.56	1.34	1.15	0.62	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
		Efficiency	1.92	1.96	2.09	1.74	1.77	1.89	1.55	1.58	1.68	1.37	1.39	1.48	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-25	Capacity	2.30	2.02	1.16	2.27	2.00	1.15	2.25	1.98	1.14	2.21	1.94	1.11	2.18	1.92	1.10	/	/	/	/	/	/	/	/	/	/	/	/
		Power	1.09	0.94	0.51	1.19	1.03	0.56	1.32	1.14	0.62	1.47	1.27	0.69	1.64	1.42	0.77	/	/	/	/	/	/	/	/	/	/	/	/
		Efficiency	2.11	2.15	2.29	1.91	1.95	2.07	1.70	1.74	1.85	1.50	1.53	1.62	1.33	1.35	1.44	/	/	/	/	/	/	/	/	/	/	/	/
	-20	Capacity	2.75	2.42	1.39	2.73	2.40	1.38	2.70	2.38	1.37	2.65	2.33	1.34	2.62	2.30	1.32	2.59	2.28	1.31	2.54	2.23	1.28	/	/	/	/	/	/
		Power	1.39	1.20	0.65	1.52	1.31	0.71	1.69	1.45	0.79	1.88	1.62	0.87	2.10	1.81	0.98	2.31	1.99	1.08	2.60	2.24	1.21	/	/	/	/	/	/
		Efficiency	1.99	2.03	2.16	1.79	1.83	1.95	1.60	1.63	1.74	1.41	1.44	1.53	1.25	1.27	1.36	1.12	1.14	1.22	0.98	1.00	1.06	/	/	/	/	/	/
	-15	Capacity	3.17	2.79	1.62	3.14	2.76	1.61	3.11	2.73	1.59	3.05	2.68	1.56	3.02	2.65	1.54	2.99	2.62	1.53	2.92	2.57	1.50	2.86	2.51	1.47	/	/	/
		Power	1.34	1.16	0.63	1.47	1.27	0.70	1.63	1.40	0.77	1.82	1.56	0.86	2.03	1.75	0.96	2.24	1.93	1.06	2.52	2.16	1.19	2.78	2.39	1.31	/	/	/
		Efficiency	2.36	2.41	2.56	2.13	2.18	2.31	1.91	1.95	2.06	1.68	1.71	1.82	1.49	1.52	1.61	1.33	1.36	1.44	1.16	1.19	1.26	1.03	1.05	1.11	/	/	/
	-10	Capacity	3.63	3.18	1.86	3.59	3.15	1.84	3.56	3.12	1.82	3.48	3.06	1.78	3.45	3.03	1.77	3.41	3.00	1.75	3.34	2.93	1.71	3.27	2.87	1.67	/	/	/
		Power	1.27	1.09	0.60	1.39	1.20	0.66	1.54	1.33	0.73	1.72	1.48	0.81	1.92	1.65	0.91	2.11	1.82	1.00	2.38	2.04	1.12	2.63	2.26	1.24	/	/	/
		Efficiency	2.86	2.92	3.10	2.58	2.64	2.80	2.31	2.35	2.50	2.03	2.07	2.20	1.80	1.84	1.95	1.62	1.65	1.75	1.41	1.44	1.52	1.25	1.27	1.35	/	/	/
	-7	Capacity	4.15	3.64	2.12	4.10	3.60	2.10	4.06	3.57	2.08	3.98	3.50	2.04	3.94	3.46	2.02	3.90	3.43	2.00	3.82	3.35	1.96	3.74	3.28	1.91	/	/	/
		Power	1.28	1.10	0.61	1.41	1.21	0.66	1.56	1.34	0.74	1.74	1.49	0.82	1.94	1.67	0.92	2.14	1.84	1.01	2.40	2.07	1.13	2.65	2.28	1.25	/	/	/
		Efficiency	3.23	3.30	3.50	2.92	2.98	3.16	2.61	2.66	2.82	2.30	2.34	2.49	2.03	2.08	2.20	1.83	1.86	1.98	1.59	1.62	1.72	1.41	1.44	1.53	/	/	/
	-2	Capacity	4.34	3.76	2.42	4.30	3.73	2.40	4.26	3.69	2.37	4.17	3.62	2.33	4.13	3.58	2.30	4.09	3.54	2.28	4.00	3.47	2.23	3.92	3.39	2.18	/	/	/
		Power	0.97	0.82	0.51	1.06	0.90	0.55	1.18	1.00	0.62	1.31	1.12	0.69	1.47	1.25	0.77	1.62	1.37	0.84	1.82	1.54	0.95	2.01	1.71	1.05	/	/	/
		Efficiency	4.48	4.57	4.78	4.04	4.13	4.32	3.61	3.68	3.86	3.18	3.24	3.39	2.82	2.87	3.01	2.53	2.58	2.70	2.20	2.25	2.35	1.95	1.99	2.08	/	/	/
	2	Capacity	4.82	4.18	2.69	4.77	4.14	2.66	4.72	4.09	2.63	4.63	4.01	2.58	4.58	3.97	2.55	4.53	3.93	2.53	4.44	3.85	2.47	4.34	3.77	2.42	/	/	/
		Power	1.02	0.87	0.53	1.12	0.95	0.58	1.24	1.05	0.65	1.38	1.17	0.72	1.54	1.31	0.80	1.70	1.44	0.89	1.91	1.62	1.00	2.11	1.79	1.10	/	/	/
		Efficiency	4.73	4.83	5.05	4.27	4.36	4.56	3.81	3.89	4.07	3.36	3.42	3.58	2.97	3.04	3.18	2.67	2.72	2.85	2.33	2.37	2.48	2.06	2.10	2.20	/	/	/
	7	Capacity	5.07	4.28	3.32	5.02	4.24	3.28	4.97	4.30	3.25	4.87	4.11	3.19	4.82	4.20	3.15	4.77	4.03	3.12	4.67	4.20	3.06	4.57	3.86	2.99	4.47	3.78	2.93
		Power	0.79	0.65	0.49	0.86	0.71	0.54	0.96	0.79	0.60	1.06	0.88	0.67	1.19	1.05	0.74	1.31	1.08	0.82	1.47	1.40	0.92	1.63	1.35	1.02	1.83	1.51	1.15
		Efficiency	6.45	6.58	6.73	5.82	5.94	6.08	5.20	5.45	5.43	4.58	4.67	4.78	4.06	4.00	4.24	3.64	3.71	3.80	3.17	3.00	3.31	2.81	2.86	2.93	2.44	2.49	2.55
	10	Capacity	5.32	4.49	3.48	5.27	4.45	3.45	5.22	4.40	3.41	5.11	4.32	3.34	5.06	4.27	3.31	5.01	4.23	3.21	4.91	4.14	3.21	4.80	4.05	3.14	4.70	3.96	3.07
		Power	0.79	0.66	0.50	0.87	0.72	0.54	0.96	0.80	0.60	1.07	0.89	0.67	1.20	0.99	0.75	1.32	1.10	0.92	1.49	1.23	0.93	1.64	1.36	1.03	1.85	1.53	1.16
		Efficiency	6.71	6.84	7.00	6.06	6.18	6.33	5.41	5.52	5.65	4.76	4.85	4.97	4.22	4.30	4.41	3.79	3.86	3.48	3.30	3.36	3.45	2.92	2.98	3.05	2.54	2.59	2.65
	15	Capacity	5.42	4.49	3.46	5.36	4.45	3.43	5.31	4.40	3.39	5.20	4.32	3.33	5.15	4.27	3.29	5.10	4.23	3.19	4.99	4.14	3.19	4.89	4.05	3.12	4.78	3.96	3.05
		Power	0.72	0.59	0.45	0.79	0.64	0.49	0.88	0.71	0.54	0.98	0.80	0.60	1.09	0.89	0.68	1.20	0.98	0.83	1.35	1.10	0.84	1.50	1.22	0.93	1.68	1.37	1.04
		Efficiency	7.50	7.65	7.74	6.77	6.91	7.00	6.05	6.17	6.25	5.32	5.43	5.50	4.72	4.81	4.87	4.23	4.32	3.85	3.69	3.76	3.81	3.27	3.33	3.37	2.84	2.90	2.94
	20	Capacity	6.06	5.03	3.87	6.01	4.98	3.84	5.95	4.93	3.80	5.83	4.83	3.72	5.77	4.78	3.69	5.71	4.73	3.57	5.59	4.63	3.57	5.47	4.54	3.50	5.35	4.44	3.42
		Power	0.74	0.60	0.46	0.81	0.66	0.50	0.90	0.73	0.56	1.00	0.81	0.62	1.12	0.91	0.69	1.23	1.00	0.85	1.38	1.12	0.86	1.53	1.24	0.95	1.72	1.40	1.06
		Efficiency	8.21	8.38	8.49	7.42	7.57	7.66	6.62	6.76	6.84	5.83	5.95	6.02	5.17	5.27	5.34	4.64	4.73	4.22	4.04	4.12	4.17	3.58	3.65	3.70	3.11	3.18	3.22
	25	Capacity	6.30	5.22	4.02	6.23	5.17	3.98	6.17	5.12	3.94	6.05	5.02	3.87	5.99	4.96	3.83	5.93	4.91	3.71	5.80	4.81	3.71	5.68	4.71	3.63	/	/	/
		Power	0.72	0.58	0.44	0.78	0.64	0.49	0.87	0.71	0.54	0.97	0.79	0.60	1.08	0.88	0.67	1.19	0.97	0.82	1.34	1.09	0.83	1.48	1.20	0.92	/	/	/
		Efficiency	8.80	8.98	9.09	7.95	8.11	8.21	7.10	7.24	7.33	6.25	6.37	6.45	5.54	5.65	5.72	4.97	5.07	4.52	4.33	4.42	4.47	3.83	3.91	3.96	/	/	/
	30	Capacity	6.87	5.58	5.44	6.80	5.52	5.38	6.74	5.47	5.33	6.60	5.36	5.22	6.53	5.30	5.17	6.47	5.25	5.01	6.33	5.14	5.01	6.20	5.03	4.90	/	/	/
		Power	0.73	0.58	0.57	0.80	0.64	0.62	0.89	0.71	0.69	0.99	0.79	0.77	1.11	0.88	0.86	1.22	0.97	1.06	1.38	1.09	1.07	1.52	1.21	1.18	/	/	/
		Efficiency	9.36	9.54	9.56	8.45	8.62	8.64	7.55	7.70	7.71	6.64	6.77	6.79	5.89	6.00	6.02	5.28	5.39	4.75	4.60	4.69	4.70	4.08	4.16	4.16	/	/	/
	35	Capacity	7.00	5.68	5.54	6.93	5.62	5.48	6.86	5.57	5.43	6.72	5.45	5.32	6.65	5.40	5.26	6.59	5.34	5.11	6.45	5.23	5.10	6.31	5.12	4.99	/	/	/
		Power	0.70	0.56	0.54	0.77	0.61	0.60	0.85	0.68	0.66	0.95	0.76	0.74	1.06	0.85	0.82	1.17	0.93	1.01	1.32	1.05	1.02	1.46	1.16	1.13	/	/	/
		Efficiency	9.95	10.15	10.17	8.99	9.17	9.18	8.03	8.18	8.20	7.06	7.20	7.22	6.26	6.38	6.40	5.62	5.73	5.05	4.90	4.99	5.00	4.33	4.42	4.43	/	/	/

GRS-CQ6.0Pd/NhH3-E

Ambient Temp(°C)	Outflow Water(°C)	25			30			35			40			45			50			55			60			65		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-30	Capacity	2.18	2.08	0.96	2.16	2.06	0.95	2.14	2.04	0.94	2.10	2.00	0.92	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Power	1.16	1.10	0.46	1.28	1.21	0.50	1.42	1.34	0.56	1.58	1.49	0.62	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.87	1.89	2.09	1.69	1.71	1.89	1.51	1.53	1.68	1.33	1.34	1.48	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
-25	Capacity	2.63	2.51	1.16	2.61	2.49	1.15	2.58	2.46	1.14	2.53	2.41	1.11	2.51	2.39	1.10	/	/	/	/	/	/	/	/	/	/	/	/
	Power	1.28	1.21	0.51	1.40	1.33	0.56	1.56	1.47	0.62	1.73	1.64	0.69	1.94	1.83	0.77	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	2.06	2.08	2.29	1.86	1.87	2.07	1.66	1.67	1.85	1.46	1.47	1.62	1.29	1.31	1.44	/	/	/	/	/	/	/	/	/	/	/	/
-20	Capacity	3.16	3.02	1.39	3.13	2.99	1.38	3.10	2.96	1.37	3.04	2.90	1.34	3.01	2.87	1.32	2.98	2.84	1.31	2.91	2.78	1.28	/	/	/	/	/	/
	Power	1.63	1.54	0.65	1.79	1.69	0.71	1.99	1.88	0.79	2.21	2.09	0.87	2.47	2.33	0.98	2.72	2.57	1.08	3.06	2.89	1.21	/	/	/	/	/	/
	Efficiency	1.94	1.95	2.16	1.75	1.76	1.95	1.56	1.58	1.74	1.37	1.39	1.53	1.22	1.23	1.36	1.09	1.10	1.22	0.95	0.96	1.06	/	/	/	/	/	/
-15	Capacity	3.47	3.30	1.62	3.44	3.27	1.61	3.41	3.24	1.59	3.34	3.17	1.56	3.30	3.14	1.54	3.27	3.11	1.53	3.20	3.04	1.50	3.13	2.98	1.47	/	/	/
	Power	1.49	1.41	0.63	1.64	1.54	0.70	1.82	1.71	0.77	2.02	1.91	0.86	2.26	2.13	0.96	2.49	2.35	1.06	2.80	2.64	1.19	3.09	2.92	1.31	/	/	/
	Efficiency	2.33	2.35	2.56	2.10	2.12	2.31	1.88	1.89	2.06	1.65	1.67	1.82	1.46	1.48	1.61	1.31	1.32	1.44	1.14	1.15	1.26	1.01	1.02	1.11	/	/	/
-10	Capacity	3.97	3.78	1.86	3.93	3.74	1.84	3.89	3.70	1.82	3.81	3.63	1.78	3.78	3.59	1.77	3.74	3.55	1.75	3.66	3.48	1.71	3.58	3.41	1.67	/	/	/
	Power	1.41	1.33	0.60	1.55	1.46	0.66	1.71	1.62	0.73	1.91	1.80	0.81	2.13	2.01	0.91	2.35	2.22	1.00	2.64	2.49	1.12	2.92	2.75	1.24	/	/	/
	Efficiency	2.81	2.84	3.10	2.54	2.57	2.80	2.27	2.29	2.50	2.00	2.02	2.20	1.77	1.79	1.95	1.59	1.60	1.75	1.38	1.40	1.52	1.23	1.24	1.35	/	/	/
-7	Capacity	4.54	4.32	2.12	4.49	4.27	2.10	4.45	4.23	2.08	4.36	4.15	2.04	4.31	4.10	2.02	4.27	4.06	2.00	4.18	3.98	1.96	4.09	3.89	1.91	/	/	/
	Power	1.43	1.34	0.61	1.56	1.47	0.66	1.73	1.63	0.74	1.93	1.82	0.82	2.16	2.03	0.92	2.38	2.24	1.01	2.67	2.52	1.13	2.95	2.78	1.25	/	/	/
	Efficiency	3.18	3.21	3.50	2.87	2.90	3.16	2.57	2.59	2.82	2.26	2.28	2.49	2.00	2.02	2.20	1.80	1.81	1.98	1.57	1.58	1.72	1.39	1.40	1.53	/	/	/
-2	Capacity	4.79	4.53	2.42	4.74	4.49	2.40	4.69	4.45	2.37	4.60	4.36	2.33	4.55	4.31	2.30	4.51	4.27	2.28	4.41	4.18	2.23	4.32	4.09	2.18	/	/	/
	Power	1.09	1.02	0.51	1.19	1.12	0.55	1.32	1.24	0.62	1.47	1.38	0.69	1.64	1.54	0.77	1.81	1.70	0.84	2.04	1.91	0.95	2.25	2.11	1.05	/	/	/
	Efficiency	4.41	4.45	4.78	3.98	4.02	4.32	3.55	3.59	3.86	3.13	3.16	3.39	2.77	2.80	3.01	2.49	2.51	2.70	2.17	2.19	2.35	1.92	1.94	2.08	/	/	/
2	Capacity	5.31	5.03	2.69	5.26	4.98	2.66	5.21	4.93	2.63	5.10	4.83	2.58	5.05	4.78	2.55	5.00	4.74	2.53	4.90	4.64	2.47	4.79	4.54	2.42	/	/	/
	Power	1.14	1.07	0.53	1.25	1.17	0.58	1.39	1.30	0.65	1.55	1.45	0.72	1.73	1.62	0.80	1.90	1.79	0.89	2.14	2.01	1.00	2.36	2.22	1.10	/	/	/
	Efficiency	4.65	4.70	5.05	4.20	4.24	4.56	3.75	3.79	4.07	3.30	3.33	3.58	2.93	2.95	3.18	2.63	2.65	2.85	2.29	2.31	2.48	2.03	2.05	2.20	/	/	/
7	Capacity	6.48	6.12	3.32	6.41	6.06	3.28	6.35	6.20	3.25	6.22	5.88	3.19	6.16	6.00	3.15	6.10	5.76	3.12	5.97	6.00	3.06	5.84	5.52	2.99	5.72	5.40	2.93
	Power	1.04	0.98	0.49	1.14	1.07	0.54	1.27	1.18	0.60	1.41	1.32	0.67	1.57	1.50	0.74	1.74	1.63	0.82	1.95	2.00	0.92	2.16	2.02	1.02	2.42	2.28	1.15
	Efficiency	6.22	6.26	6.73	5.62	5.66	6.08	5.02	5.25	5.43	4.41	4.44	4.78	3.91	4.00	4.24	3.51	3.54	3.80	3.06	3.00	3.31	2.71	2.73	2.93	2.36	2.37	2.55
10	Capacity	6.80	6.43	3.48	6.73	6.36	3.45	6.67	6.30	3.41	6.53	6.17	3.34	6.47	6.11	3.31	6.40	6.05	3.21	6.27	5.92	3.21	6.13	5.80	3.14	6.00	5.67	3.07
	Power	1.05	0.99	0.50	1.15	1.08	0.54	1.28	1.20	0.60	1.42	1.34	0.67	1.59	1.49	0.75	1.75	1.65	0.92	1.97	1.85	0.93	2.18	2.04	1.03	2.45	2.30	1.16
	Efficiency	6.47	6.51	7.00	5.84	5.88	6.33	5.22	5.25	5.65	4.59	4.62	4.97	4.07	4.10	4.41	3.65	3.68	3.48	3.18	3.20	3.45	2.82	2.84	3.05	2.45	2.47	2.65
15	Capacity	6.96	6.55	3.88	6.89	6.49	3.84	6.82	6.42	3.80	6.68	6.29	3.73	6.62	6.23	3.69	6.55	6.17	3.58	6.41	6.04	3.57	6.28	5.91	3.50	6.14	5.78	3.42
	Power	0.96	0.90	0.50	1.05	0.98	0.55	1.17	1.09	0.61	1.30	1.21	0.68	1.45	1.35	0.76	1.60	1.49	0.93	1.80	1.68	0.94	1.99	1.85	1.04	2.23	2.08	1.17
	Efficiency	7.25	7.32	7.74	6.55	6.61	7.00	5.85	5.90	6.25	5.15	5.19	5.50	4.56	4.60	4.87	4.09	4.13	3.85	3.57	3.60	3.81	3.16	3.19	3.37	2.75	2.77	2.94
20	Capacity	7.79	7.34	4.34	7.71	7.26	4.30	7.64	7.19	4.26	7.48	7.05	4.17	7.41	6.98	4.13	7.33	6.90	4.01	7.18	6.76	4.00	7.03	6.62	3.92	6.87	6.47	3.83
	Power	0.98	0.92	0.51	1.07	1.00	0.56	1.19	1.11	0.62	1.33	1.24	0.69	1.48	1.38	0.77	1.63	1.53	0.95	1.84	1.71	0.96	2.03	1.90	1.06	2.28	2.13	1.19
	Efficiency	7.94	8.02	8.49	7.18	7.24	7.66	6.41	6.46	6.84	5.64	5.69	6.02	5.00	5.04	5.34	4.48	4.53	4.22	3.91	3.94	4.17	3.46	3.49	3.70	3.01	3.04	3.22
25	Capacity	8.09	7.62	4.51	8.01	7.54	4.46	7.93	7.47	4.42	7.77	7.32	4.33	7.69	7.24	4.29	7.61	7.17	4.16	7.45	7.02	4.15	7.29	6.87	4.07	/	/	/
	Power	0.95	0.89	0.50	1.04	0.97	0.54	1.16	1.08	0.60	1.29	1.20	0.67	1.44	1.34	0.75	1.58	1.48	0.92	1.78	1.66	0.93	1.97	1.84	1.03	/	/	/
	Efficiency	8.51	8.59	9.09	7.69	7.76	8.21	6.86	6.93	7.33	6.04	6.10	6.45	5.35	5.40	5.72	4.81	4.85	4.52	4.19	4.23	4.47	3.71	3.74	3.96	/	/	/
30	Capacity	8.31	7.73	5.44	8.23	7.65	5.38	8.15	7.58	5.33	7.99	7.43	5.22	7.91	7.35	5.17	7.82	7.27	5.01	7.66	7.12	5.01	7.50	6.97	4.90	/	/	/
	Power	0.91	0.84	0.57	1.00	0.92	0.62	1.10	1.02	0.69	1.23	1.13	0.77	1.37	1.26	0.86	1.51	1.39	1.06	1.70	1.57	1.07	1.88	1.73	1.18	/	/	/
	Efficiency	9.16	9.24	9.56	8.27	8.34	8.64	7.38	7.45	7.71	6.50	6.56	6.79	5.76	5.81	6.02	5.17	5.21	4.75	4.50	4.54	4.70	3.99	4.02	4.16	/	/	/
35	Capacity	8.47	7.87	5.54	8.38	7.79	5.48	8.30	7.72	5.43	8.13	7.56	5.32	8.05	7.48	5.26	7.97	7.41	5.11	7.80	7.25	5.10	7.64	7.10	4.99	/	/	/
	Power	0.87	0.80	0.54	0.95	0.88	0.60	1.06	0.97	0.66	1.18	1.08	0.74	1.31	1.21	0.82	1.45	1.34	1.01	1.63	1.50	1.02	1.80	1.66	1.13	/	/	/
	Efficiency	9.74	9.82	10.17	8.79	8.87	9.18	7.85	7.92	8.20	6.91	6.97	7.22	6.12	6.18	6.40	5.50	5.55	5.05	4.79	4.83	5.00	4.24	4.28	4.43	/	/	/

GRS-CQ8.0Pd/NhH3-E

Ambient Temp(°C)	Outflow Water(°C)	25			30			35			40			45			50			55			60			65		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-30	Capacity	3.69	3.42	1.48	3.66	3.38	1.46	3.62	3.35	1.45	3.59	3.32	1.43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Power	2.40	2.16	0.78	2.58	2.33	0.84	2.91	2.62	0.95	3.28	2.95	1.07	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.54	1.58	1.89	1.42	1.46	1.74	1.24	1.28	1.53	1.09	1.12	1.34	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
-25	Capacity	4.27	3.95	1.71	4.23	3.91	1.69	4.19	3.87	1.67	4.15	3.84	1.66	4.10	3.80	1.64	/	/	/	/	/	/	/	/	/	/	/	/
	Power	2.18	1.97	0.71	2.35	2.12	0.76	2.66	2.39	0.86	2.99	2.69	0.97	3.29	2.97	1.07	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.96	2.01	2.40	1.80	1.85	2.21	1.58	1.62	1.94	1.39	1.43	1.70	1.25	1.28	1.53	/	/	/	/	/	/	/	/	/	/	/	/
-20	Capacity	5.20	4.81	2.07	5.14	4.76	2.05	5.09	4.71	2.03	5.04	4.66	2.01	4.99	4.62	1.99	4.94	4.57	1.97	4.89	4.52	1.95	/	/	/	/	/	/
	Power	2.37	2.13	0.77	2.55	2.30	0.83	2.88	2.59	0.94	3.24	2.92	1.05	3.57	3.22	1.16	3.93	3.54	1.28	4.46	4.02	1.45	/	/	/	/	/	/
	Efficiency	2.19	2.25	2.69	2.02	2.07	2.48	1.77	1.82	2.17	1.56	1.60	1.91	1.40	1.44	1.72	1.26	1.29	1.54	1.10	1.13	1.35	/	/	/	/	/	/
-15	Capacity	5.45	5.15	2.35	5.39	5.10	2.33	5.34	5.05	2.31	5.29	5.00	2.28	5.23	4.95	2.26	5.18	4.90	2.24	5.13	4.85	2.21	4.91	4.65	2.12	/	/	/
	Power	2.08	1.93	0.75	2.24	2.08	0.81	2.53	2.34	0.91	2.85	2.64	1.03	3.14	2.91	1.13	3.46	3.20	1.25	3.92	3.63	1.41	4.47	4.15	1.62	/	/	/
	Efficiency	2.62	2.67	3.13	2.41	2.46	2.88	2.11	2.15	2.52	1.86	1.90	2.22	1.67	1.70	1.99	1.50	1.53	1.79	1.31	1.34	1.56	1.10	1.12	1.31	/	/	/
-10	Capacity	7.05	6.66	3.04	6.98	6.60	3.01	6.91	6.53	2.98	6.84	6.47	2.95	6.77	6.40	2.92	6.70	6.34	2.89	6.63	6.27	2.86	6.36	6.01	2.74	/	/	/
	Power	2.27	2.10	0.82	2.44	2.27	0.88	2.76	2.56	1.00	3.10	2.88	1.12	3.42	3.17	1.24	3.77	3.49	1.36	4.27	3.96	1.54	4.88	4.52	1.76	/	/	/
	Efficiency	3.11	3.17	3.71	2.85	2.91	3.41	2.50	2.56	2.99	2.20	2.25	2.63	1.98	2.02	2.37	1.78	1.81	2.13	1.55	1.58	1.86	1.30	1.33	1.56	/	/	/
-7	Capacity	8.44	7.98	3.64	8.35	7.90	3.61	8.27	7.80	3.57	8.19	7.74	3.54	8.11	7.70	3.50	8.02	7.59	3.46	7.94	7.51	3.43	7.61	7.20	3.29	/	/	/
	Power	2.58	2.39	0.93	2.78	2.58	1.00	3.14	2.91	1.13	3.53	3.27	1.27	3.89	3.67	1.41	4.29	3.97	1.55	4.86	4.50	1.75	5.55	5.14	2.00	/	/	/
	Efficiency	3.27	3.34	3.91	3.01	3.07	3.59	2.64	2.68	3.15	2.32	2.37	2.77	2.08	2.10	2.49	1.87	1.91	2.24	1.63	1.67	1.95	1.37	1.40	1.64	/	/	/
-2	Capacity	8.89	8.37	4.06	8.80	8.29	4.02	8.71	8.21	3.98	8.62	8.13	3.94	8.54	8.05	3.90	8.45	7.96	3.86	8.36	7.88	3.82	8.02	7.55	3.66	/	/	/
	Power	2.34	2.17	0.91	2.53	2.34	0.98	2.85	2.64	1.11	3.21	2.97	1.25	3.54	3.27	1.38	3.89	3.61	1.52	4.41	4.09	1.72	5.04	4.67	1.97	/	/	/
	Efficiency	3.79	3.86	4.44	3.48	3.55	4.08	3.06	3.11	3.58	2.69	2.74	3.15	2.41	2.46	2.83	2.17	2.21	2.54	1.89	1.93	2.22	1.59	1.62	1.86	/	/	/
2	Capacity	8.94	8.42	4.08	8.85	8.34	4.04	8.76	8.26	4.00	8.67	8.17	3.96	8.59	8.09	3.92	8.50	8.01	3.88	8.41	7.93	3.84	8.06	7.60	3.68	/	/	/
	Power	2.12	1.96	0.82	2.28	2.11	0.89	2.57	2.38	1.00	2.89	2.68	1.13	3.19	2.95	1.24	3.51	3.25	1.37	3.98	3.69	1.55	4.55	4.21	1.77	/	/	/
	Efficiency	4.22	4.30	4.95	3.88	3.95	4.55	3.41	3.47	3.99	3.00	3.05	3.51	2.69	2.74	3.15	2.42	2.46	2.83	2.11	2.15	2.47	1.77	1.80	2.08	/	/	/
7	Capacity	9.52	8.47	4.61	9.42	8.38	4.57	9.33	8.30	4.52	9.24	8.22	4.47	9.14	8.20	4.43	9.05	8.05	4.38	8.96	7.97	4.34	8.58	7.64	4.16	6.62	5.89	3.21
	Power	1.50	1.29	0.63	1.62	1.39	0.68	1.83	1.57	0.77	2.06	1.76	0.87	2.27	2.05	0.96	2.50	2.14	1.05	2.83	2.42	1.19	3.24	2.77	1.36	3.82	3.27	1.61
	Efficiency	6.32	6.57	7.28	5.81	6.04	6.69	5.10	5.30	5.87	4.49	4.66	5.17	4.03	4.00	4.64	3.62	3.76	4.17	3.16	3.29	3.64	2.65	2.76	3.05	1.73	1.80	2.00
10	Capacity	10.47	9.31	5.07	10.37	9.22	5.02	10.26	9.13	4.97	10.16	9.04	4.92	10.06	8.95	4.87	9.96	8.86	4.77	9.85	8.76	4.77	9.44	8.40	4.57	7.29	6.48	3.53
	Power	1.59	1.36	0.67	1.71	1.47	0.72	1.93	1.66	0.81	2.18	1.86	0.92	2.40	2.05	1.01	2.64	2.26	1.25	3.00	2.56	1.26	3.42	2.93	1.44	4.04	3.46	1.70
	Efficiency	6.58	6.83	7.57	6.05	6.28	6.96	5.30	5.51	6.10	4.67	4.85	5.37	4.19	4.35	4.82	3.77	3.91	3.81	3.29	3.42	3.78	2.76	2.87	3.17	1.80	1.87	2.08
15	Capacity	9.61	9.44	5.49	9.52	9.35	5.43	9.42	9.26	5.38	9.33	9.17	5.33	9.24	9.07	5.27	9.14	8.98	5.17	9.05	8.89	5.16	8.67	8.52	4.95	6.69	6.57	3.82
	Power	1.25	1.22	0.64	1.34	1.31	0.69	1.51	1.48	0.78	1.70	1.66	0.88	1.88	1.83	0.97	2.07	2.02	1.20	2.34	2.29	1.21	2.68	2.62	1.39	3.16	3.09	1.64
	Efficiency	7.72	7.76	8.52	7.10	7.14	7.83	6.22	6.26	6.87	5.48	5.51	6.04	4.92	4.95	5.43	4.42	4.44	4.29	3.86	3.88	4.26	3.24	3.25	3.57	2.12	2.13	2.34
20	Capacity	9.77	9.60	5.58	9.68	9.51	5.52	9.58	9.41	5.47	9.49	9.32	5.41	9.39	9.23	5.36	9.30	9.13	5.25	9.20	9.04	5.25	8.82	8.66	5.03	6.80	6.68	3.88
	Power	1.22	1.20	0.63	1.32	1.29	0.68	1.49	1.45	0.77	1.67	1.64	0.87	1.85	1.80	0.96	2.03	1.99	1.18	2.31	2.25	1.19	2.63	2.57	1.36	3.11	3.04	1.61
	Efficiency	7.98	8.03	8.81	7.34	7.38	8.10	6.44	6.47	7.10	5.66	5.70	6.25	5.09	5.11	5.61	4.57	4.60	4.44	3.99	4.01	4.40	3.35	3.37	3.69	2.19	2.20	2.41
25	Capacity	10.02	9.84	5.72	9.92	9.74	5.66	9.82	9.65	5.60	9.72	9.55	5.55	9.62	9.45	5.49	9.53	9.36	5.38	9.43	9.26	5.38	9.04	8.88	5.16	/	/	/
	Power	1.15	1.12	0.60	1.24	1.21	0.64	1.40	1.37	0.72	1.57	1.54	0.81	1.73	1.69	0.90	1.91	1.87	1.11	2.17	2.12	1.12	2.47	2.42	1.28	/	/	/
	Efficiency	8.71	8.76	9.61	8.01	8.05	8.83	7.02	7.06	7.75	6.18	6.21	6.82	5.55	5.58	6.12	4.99	5.01	4.84	4.35	4.38	4.80	3.65	3.67	4.03	/	/	/
30	Capacity	10.61	10.38	7.38	10.50	10.28	7.30	10.40	10.18	7.23	10.30	10.07	7.16	10.19	9.97	7.09	10.09	9.87	6.94	9.98	9.77	6.94	9.57	9.36	6.65	/	/	/
	Power	1.13	1.10	0.74	1.21	1.18	0.80	1.37	1.33	0.90	1.54	1.50	1.01	1.70	1.65	1.12	1.87	1.82	1.38	2.12	2.06	1.39	2.42	2.36	1.59	/	/	/
	Efficiency	9.43	9.46	9.97	8.67	8.70	9.17	7.60	7.63	8.04	6.69	6.72	7.08	6.01	6.03	6.35	5.40	5.42	5.02	4.71	4.73	4.99	3.95	3.97	4.18	/	/	/
35	Capacity	11.20	10.96	7.79	11.09	10.86	7.72	10.99	10.75	7.64	10.88	10.64	7.56	10.77	10.53	7.49	10.66	10.43	7.34	10.55	10.32	7.33	10.11	9.89	7.03	/	/	/
	Power	1.15	1.12	0.75	1.23	1.20	0.81	1.39	1.36	0.92	1.57	1.53	1.03	1.73	1.69	1.14	1.90	1.86	1.41	2.16	2.10	1.42	2.47	2.40	1.62	/	/	/
	Efficiency	9.77	9.81	10.34	8.98	9.02	9.50	7.88	7.91	8.34	6.94	6.96	7.34	6.23	6.25	6.58	5.60	5.62	5.21	4.89	4.90	5.17	4.10	4.11	4.33	/	/	/

GRS-CQ10Pd/NhH3-E

Ambient Temp(°C)	Outflow Water(°C)	25			30			35			40			45			50			55			60			65		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-30	Capacity	3.92	3.88	1.48	3.88	3.84	1.46	3.85	3.80	1.45	3.81	3.76	1.43	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Power	2.61	2.56	0.78	2.81	2.76	0.84	3.17	3.12	0.95	3.57	3.51	1.07	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.50	1.51	1.89	1.38	1.39	1.74	1.21	1.22	1.53	1.07	1.07	1.34	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
-25	Capacity	4.54	4.48	1.71	4.49	4.44	1.69	4.45	4.40	1.67	4.40	4.35	1.66	4.36	4.31	1.64	/	/	/	/	/	/	/	/	/	/	/	/
	Power	2.38	2.34	0.71	2.56	2.52	0.76	2.89	2.84	0.86	3.25	3.20	0.97	3.59	3.52	1.07	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.91	1.92	2.40	1.75	1.76	2.21	1.54	1.55	1.94	1.35	1.36	1.70	1.21	1.22	1.53	/	/	/	/	/	/	/	/	/	/	/	/
-20	Capacity	5.52	5.45	2.07	5.46	5.40	2.05	5.41	5.35	2.03	5.35	5.29	2.01	5.30	5.24	1.99	5.25	5.19	1.97	5.19	5.13	1.95	/	/	/	/	/	/
	Power	2.58	2.53	0.77	2.78	2.73	0.83	3.14	3.08	0.94	3.53	3.47	1.05	3.89	3.82	1.16	4.29	4.21	1.28	4.86	4.77	1.45	/	/	/	/	/	/
	Efficiency	2.14	2.15	2.69	1.97	1.98	2.48	1.72	1.74	2.17	1.52	1.53	1.91	1.36	1.37	1.72	1.22	1.23	1.54	1.07	1.08	1.35	/	/	/	/	/	/
-15	Capacity	6.18	5.59	2.35	6.12	5.54	2.33	6.06	5.48	2.31	6.00	5.43	2.28	5.94	5.37	2.26	5.88	5.32	2.24	5.82	5.26	2.21	5.57	5.04	2.12	/	/	/
	Power	2.47	2.15	0.75	2.66	2.32	0.81	3.00	2.62	0.91	3.38	2.95	1.03	3.73	3.25	1.13	4.10	3.58	1.25	4.65	4.05	1.41	5.32	4.63	1.62	/	/	/
	Efficiency	2.50	2.60	3.13	2.30	2.39	2.88	2.02	2.09	2.52	1.77	1.84	2.22	1.59	1.65	1.99	1.43	1.49	1.79	1.25	1.30	1.56	1.05	1.09	1.31	/	/	/
-10	Capacity	8.00	7.24	3.04	7.92	7.17	3.01	7.84	7.10	2.98	7.76	7.02	2.95	7.68	6.95	2.92	7.61	6.88	2.89	7.53	6.81	2.86	7.21	6.53	2.74	/	/	/
	Power	2.70	2.35	0.82	2.90	2.53	0.88	3.28	2.86	1.00	3.69	3.21	1.12	4.07	3.54	1.24	4.48	3.90	1.36	5.08	4.42	1.54	5.80	5.05	1.76	/	/	/
	Efficiency	2.97	3.08	3.71	2.73	2.83	3.41	2.39	2.48	2.99	2.10	2.19	2.63	1.89	1.96	2.37	1.70	1.76	2.13	1.48	1.54	1.86	1.24	1.29	1.56	/	/	/
-7	Capacity	9.57	8.66	3.64	9.48	8.58	3.61	9.39	8.50	3.57	9.29	8.41	3.54	9.20	8.40	3.50	9.10	8.24	3.46	9.01	8.15	3.43	8.63	7.81	3.29	/	/	/
	Power	3.07	2.67	0.93	3.30	2.88	1.00	3.73	3.27	1.13	4.19	3.65	1.27	4.62	4.20	1.41	5.09	4.44	1.55	5.77	5.03	1.75	6.59	5.75	2.00	/	/	/
	Efficiency	3.12	3.24	3.91	2.87	2.98	3.59	2.52	2.60	3.15	2.22	2.30	2.77	1.99	2.00	2.49	1.79	1.86	2.24	1.56	1.62	1.95	1.31	1.36	1.64	/	/	/
-2	Capacity	10.16	9.40	4.06	10.06	9.31	4.02	9.96	9.21	3.98	9.86	9.12	3.94	9.76	9.03	3.90	9.66	8.94	3.86	9.56	8.85	3.82	9.16	8.48	3.66	/	/	/
	Power	2.81	2.53	0.91	3.03	2.73	0.98	3.42	3.08	1.11	3.84	3.46	1.25	4.24	3.82	1.38	4.67	4.20	1.52	5.29	4.76	1.72	6.04	5.44	1.97	/	/	/
	Efficiency	3.62	3.71	4.44	3.32	3.41	4.08	2.92	3.00	3.58	2.57	2.64	3.15	2.30	2.37	2.83	2.07	2.13	2.54	1.81	1.86	2.22	1.52	1.56	1.86	/	/	/
2	Capacity	10.22	9.75	4.08	10.12	9.65	4.04	10.02	9.56	4.00	9.92	9.46	3.96	9.82	9.37	3.92	9.72	9.27	3.88	9.62	9.18	3.84	9.22	8.79	3.68	/	/	/
	Power	2.54	2.35	0.82	2.73	2.54	0.89	3.08	2.86	1.00	3.47	3.22	1.13	3.82	3.55	1.24	4.21	3.91	1.37	4.77	4.43	1.55	5.45	5.06	1.77	/	/	/
	Efficiency	4.03	4.14	4.95	3.71	3.81	4.55	3.25	3.34	3.99	2.86	2.94	3.51	2.57	2.64	3.15	2.31	2.37	2.83	2.02	2.07	2.47	1.69	1.74	2.08	/	/	/
7	Capacity	10.68	10.40	4.61	10.57	10.30	4.57	10.47	10.20	4.52	10.37	10.10	4.47	10.26	10.00	4.43	10.16	9.89	4.38	10.05	9.79	4.34	9.63	9.38	4.16	7.43	7.24	3.21
	Power	1.75	1.67	0.63	1.89	1.80	0.68	2.13	2.04	0.77	2.40	2.29	0.87	2.65	2.53	0.96	2.91	2.78	1.05	3.30	3.15	1.19	3.77	3.60	1.36	4.45	4.25	1.61
	Efficiency	6.09	6.21	7.28	5.60	5.71	6.69	4.91	5.00	5.87	4.32	4.41	5.17	3.88	3.95	4.64	3.49	3.56	4.17	3.04	3.11	3.64	2.55	2.61	3.05	1.67	1.70	2.00
10	Capacity	11.75	10.47	5.07	11.63	10.37	5.02	11.52	10.26	4.97	11.40	10.16	4.92	11.29	10.06	4.87	11.17	9.96	4.77	11.06	9.85	4.77	10.60	9.44	4.57	8.18	7.29	3.53
	Power	1.86	1.59	0.67	2.00	1.71	0.72	2.26	1.93	0.81	2.54	2.18	0.92	2.80	2.40	1.01	3.08	2.64	1.25	3.49	3.00	1.26	3.99	3.42	1.44	4.71	4.04	1.70
	Efficiency	6.33	6.58	7.57	5.82	6.05	6.96	5.11	5.30	6.10	4.49	4.67	5.37	4.03	4.19	4.82	3.63	3.77	3.81	3.17	3.29	3.78	2.66	2.76	3.17	1.74	1.80	2.08
15	Capacity	10.56	10.48	5.53	10.46	10.37	5.48	10.36	10.27	5.42	10.25	10.17	5.37	10.15	10.07	5.32	10.05	9.96	5.21	9.94	9.86	5.21	9.53	9.45	4.99	7.35	7.29	3.85
	Power	1.40	1.38	0.65	1.51	1.49	0.70	1.70	1.68	0.79	1.91	1.89	0.89	2.11	2.08	0.98	2.32	2.29	1.21	2.63	2.60	1.22	3.01	2.97	1.40	3.55	3.51	1.65
	Efficiency	7.56	7.59	8.52	6.95	6.98	7.83	6.10	6.12	6.87	5.36	5.38	6.04	4.82	4.83	5.43	4.33	4.34	4.29	3.78	3.79	4.26	3.17	3.18	3.57	2.07	2.08	2.34
20	Capacity	10.74	10.65	5.62	10.63	10.55	5.57	10.53	10.44	5.51	10.42	10.34	5.46	10.32	10.23	5.40	10.21	10.13	5.30	10.11	10.03	5.29	9.69	9.61	5.07	7.48	7.41	3.92
	Power	1.37	1.36	0.64	1.48	1.46	0.69	1.67	1.65	0.78	1.88	1.86	0.87	2.07	2.05	0.96	2.28	2.25	1.19	2.59	2.56	1.20	2.95	2.92	1.37	3.49	3.45	1.62
	Efficiency	7.82	7.85	8.81	7.19	7.21	8.10	6.30	6.33	7.10	5.55	5.57	6.25	4.98	5.00	5.61	4.48	4.49	4.44	3.91	3.92	4.40	3.28	3.29	3.69	2.14	2.15	2.41
25	Capacity	10.92	10.83	5.72	10.81	10.72	5.66	10.70	10.61	5.60	10.59	10.51	5.55	10.49	10.40	5.49	10.38	10.30	5.38	10.27	10.19	5.38	9.85	9.77	5.16	/	/	/
	Power	1.28	1.26	0.60	1.38	1.36	0.64	1.56	1.54	0.72	1.75	1.73	0.81	1.93	1.91	0.90	2.13	2.10	1.11	2.41	2.38	1.12	2.75	2.72	1.28	/	/	/
	Efficiency	8.53	8.56	9.61	7.84	7.87	8.83	6.88	6.90	7.75	6.05	6.08	6.82	5.43	5.45	6.12	4.88	4.90	4.84	4.26	4.28	4.80	3.58	3.59	4.03	/	/	/
30	Capacity	12.00	11.54	7.38	11.88	11.43	7.30	11.76	11.31	7.23	11.64	11.20	7.16	11.52	11.09	7.09	11.41	10.97	6.94	11.29	10.86	6.94	10.82	10.41	6.65	/	/	/
	Power	1.31	1.24	0.74	1.41	1.34	0.80	1.59	1.51	0.90	1.79	1.70	1.01	1.97	1.88	1.12	2.17	2.07	1.38	2.46	2.34	1.39	2.81	2.68	1.59	/	/	/
	Efficiency	9.19	9.28	9.97	8.45	8.53	9.17	7.41	7.48	8.04	6.52	6.58	7.08	5.86	5.91	6.35	5.26	5.31	5.02	4.60	4.64	4.99	3.85	3.89	4.18	/	/	/
35	Capacity	12.67	12.19	7.79	12.55	12.07	7.72	12.42	11.95	7.64	12.30	11.83	7.56	12.17	11.71	7.49	12.05	11.59	7.34	11.92	11.47	7.33	11.43	10.99	7.03	/	/	/
	Power	1.33	1.27	0.75	1.43	1.37	0.81	1.62	1.54	0.92	1.82	1.73	1.03	2.01	1.91	1.14	2.21	2.11	1.41	2.50	2.39	1.42	2.86	2.73	1.62	/	/	/
	Efficiency	9.53	9.61	10.34	8.76	8.84	9.50	7.68	7.75	8.34	6.76	6.82	7.34	6.07	6.13	6.58	5.45	5.50	5.21	4.76	4.81	5.17	3.99	4.03	4.33	/	/	/

GRS-CQ12Pd/NhH3-E

Ambient Temp(°C)	Outflow Water(°C)	25			30			35			40			45			50			55			60			65		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-30	Capacity	4.77	4.60	2.69	4.87	4.70	2.74	4.92	4.74	2.77	4.87	4.70	2.74	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Power	3.51	3.33	1.68	3.90	3.70	1.86	4.41	4.19	2.11	4.96	4.71	2.37	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.36	1.38	1.60	1.25	1.27	1.47	1.12	1.13	1.32	0.98	1.00	1.16	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
-25	Capacity	5.55	5.35	3.13	5.67	5.47	3.19	5.72	5.52	3.23	5.67	5.47	3.19	5.61	5.41	3.16	/	/	/	/	/	/	/	/	/	/	/	/
	Power	3.52	3.34	1.68	3.91	3.71	1.87	4.42	4.20	2.12	4.98	4.73	2.38	5.42	5.15	2.59	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.58	1.60	1.86	1.45	1.47	1.71	1.29	1.31	1.53	1.14	1.16	1.34	1.03	1.05	1.22	/	/	/	/	/	/	/	/	/	/	/	/
-20	Capacity	6.80	6.56	3.84	6.94	6.70	3.91	7.01	6.76	3.95	6.94	6.70	3.91	6.87	6.63	3.88	6.80	6.56	3.84	6.80	6.56	3.84	/	/	/	/	/	/
	Power	4.03	3.83	1.93	4.48	4.26	2.14	5.07	4.82	2.42	5.71	5.42	2.73	6.21	5.90	2.97	6.83	6.49	3.27	7.81	7.42	3.73	/	/	/	/	/	/
	Efficiency	1.69	1.71	1.99	1.55	1.57	1.83	1.38	1.40	1.63	1.22	1.24	1.43	1.11	1.12	1.30	1.00	1.01	1.17	0.87	0.88	1.03	/	/	/	/	/	/
-15	Capacity	7.77	7.48	4.54	7.93	7.64	4.63	8.01	7.71	4.68	7.93	7.64	4.63	7.85	7.56	4.59	7.77	7.48	4.54	7.77	7.48	4.54	7.69	7.41	4.49	/	/	/
	Power	3.80	3.61	1.91	4.22	4.02	2.13	4.78	4.54	2.41	5.38	5.11	2.71	5.85	5.56	2.95	6.44	6.12	3.24	7.36	6.99	3.70	8.19	7.79	4.12	/	/	/
	Efficiency	2.04	2.07	2.37	1.88	1.90	2.18	1.68	1.70	1.95	1.47	1.49	1.71	1.34	1.36	1.56	1.21	1.22	1.40	1.06	1.07	1.23	0.94	0.95	1.09	/	/	/
-10	Capacity	9.58	9.23	5.60	9.78	9.42	5.71	9.87	9.51	5.77	9.78	9.42	5.71	9.68	9.32	5.66	9.58	9.23	5.60	9.58	9.23	5.60	9.48	9.13	5.54	/	/	/
	Power	3.77	3.58	1.90	4.19	3.98	2.11	4.74	4.51	2.39	5.33	5.07	2.68	5.80	5.52	2.92	6.38	6.07	3.21	7.30	6.94	3.67	8.12	7.72	4.09	/	/	/
	Efficiency	2.54	2.58	2.95	2.33	2.36	2.71	2.08	2.11	2.42	1.83	1.86	2.13	1.67	1.69	1.94	1.50	1.52	1.74	1.31	1.33	1.52	1.17	1.18	1.35	/	/	/
-7	Capacity	10.48	10.10	6.13	10.70	10.31	6.25	10.81	10.40	6.32	10.70	10.31	6.25	10.59	10.30	6.19	10.48	10.10	6.13	10.48	10.10	6.13	10.37	9.99	6.06	/	/	/
	Power	3.33	3.16	1.68	3.70	3.52	1.86	4.19	4.00	2.11	4.71	4.48	2.37	5.13	4.90	2.58	5.64	5.36	2.84	6.44	6.13	3.24	7.18	6.82	3.61	/	/	/
	Efficiency	3.15	3.19	3.66	2.89	2.93	3.36	2.58	2.60	3.00	2.27	2.30	2.64	2.07	2.10	2.40	1.86	1.88	2.16	1.63	1.65	1.89	1.45	1.47	1.68	/	/	/
-2	Capacity	10.90	10.33	6.88	11.13	10.54	7.02	11.24	10.65	7.09	11.13	10.54	7.02	11.02	10.43	6.95	10.90	10.33	6.88	10.90	10.33	6.88	10.79	10.22	6.81	/	/	/
	Power	2.80	2.61	1.56	3.11	2.90	1.74	3.52	3.28	1.97	3.96	3.69	2.21	4.31	4.02	2.41	4.74	4.42	2.65	5.42	5.05	3.03	6.04	5.62	3.37	/	/	/
	Efficiency	3.89	3.96	4.40	3.58	3.64	4.04	3.19	3.25	3.60	2.81	2.86	3.17	2.55	2.60	2.88	2.30	2.34	2.59	2.01	2.05	2.27	1.79	1.82	2.02	/	/	/
2	Capacity	11.88	11.25	7.49	12.13	11.49	7.65	12.25	11.60	7.73	12.13	11.49	7.65	12.00	11.37	7.57	11.88	11.25	7.49	11.88	11.25	7.49	11.76	11.14	7.42	/	/	/
	Power	2.75	2.56	1.54	3.06	2.85	1.71	3.46	3.22	1.93	3.89	3.62	2.17	4.24	3.95	2.37	4.66	4.34	2.60	5.32	4.96	2.98	5.93	5.52	3.31	/	/	/
	Efficiency	4.32	4.39	4.88	3.97	4.03	4.48	3.54	3.60	4.00	3.12	3.17	3.52	2.83	2.88	3.20	2.55	2.59	2.88	2.23	2.27	2.52	1.98	2.02	2.24	/	/	/
7	Capacity	12.50	11.83	8.82	12.76	12.08	9.00	12.89	12.20	9.09	12.76	12.08	9.00	12.63	12.30	8.91	12.50	11.83	8.82	12.50	12.00	8.82	12.37	11.71	8.73	12.25	11.59	8.64
	Power	2.12	1.94	1.37	2.36	2.16	1.53	2.67	2.42	1.73	3.00	2.75	1.94	3.27	3.24	2.12	3.60	3.29	2.33	4.11	3.87	2.66	4.57	4.18	2.96	5.07	4.64	3.28
	Efficiency	5.89	6.10	6.42	5.41	5.60	5.89	4.83	5.05	5.26	4.25	4.40	4.63	3.86	3.80	4.21	3.48	3.60	3.79	3.04	3.10	3.31	2.70	2.80	2.95	2.42	2.50	2.63
10	Capacity	12.88	12.19	9.08	13.14	12.44	9.27	13.28	12.57	9.36	13.14	12.44	9.27	13.01	12.31	9.18	12.88	12.19	8.99	12.88	12.19	9.08	12.75	12.06	8.99	12.61	11.94	8.89
	Power	2.13	1.95	1.38	2.37	2.17	1.54	2.68	2.45	1.74	3.02	2.76	1.95	3.29	3.00	2.13	3.61	3.30	2.63	4.13	3.78	2.67	4.60	4.20	2.98	5.10	4.66	3.30
	Efficiency	6.04	6.25	6.58	5.54	5.74	6.04	4.95	5.13	5.39	4.36	4.51	4.74	3.96	4.10	4.31	3.56	3.69	3.42	3.12	3.23	3.40	2.77	2.87	3.02	2.48	2.56	2.70
15	Capacity	13.11	12.05	10.14	13.38	12.30	10.35	13.51	12.42	10.45	13.38	12.30	10.35	13.24	12.17	10.24	13.11	12.05	10.04	13.11	12.05	10.14	12.97	11.92	10.04	12.84	11.80	9.93
	Power	1.94	1.75	1.42	2.16	1.95	1.58	2.44	2.20	1.78	2.75	2.48	2.01	2.99	2.70	2.18	3.29	2.97	2.70	3.76	3.39	2.74	4.19	3.77	3.06	4.64	4.18	3.39
	Efficiency	6.75	6.88	7.16	6.19	6.32	6.57	5.53	5.64	5.86	4.87	4.96	5.16	4.42	4.51	4.69	3.98	4.06	3.72	3.48	3.55	3.69	3.10	3.16	3.28	2.77	2.82	2.93
20	Capacity	14.36	13.20	11.11	14.66	13.47	11.34	14.81	13.61	11.45	14.66	13.47	11.34	14.51	13.34	11.22	14.36	13.20	11.00	14.36	13.20	11.11	14.21	13.06	11.00	14.06	12.93	10.88
	Power	2.00	1.80	1.46	2.23	2.01	1.62	2.52	2.27	1.84	2.83	2.55	2.07	3.09	2.78	2.25	3.39	3.06	2.78	3.88	3.49	2.83	4.32	3.89	3.15	4.79	4.31	3.49
	Efficiency	7.17	7.32	7.60	6.58	6.72	6.98	5.88	6.00	6.23	5.17	5.28	5.49	4.70	4.80	4.99	4.23	4.32	3.95	3.70	3.78	3.93	3.29	3.36	3.49	2.94	3.00	3.12
25	Capacity	15.73	14.46	12.17	16.05	14.75	12.42	16.22	14.90	12.54	16.05	14.75	12.42	15.89	14.61	12.29	15.73	14.46	12.05	15.73	14.46	12.17	15.57	14.31	12.04	/	/	/
	Power	2.07	1.87	1.51	2.30	2.07	1.68	2.60	2.35	1.90	2.93	2.64	2.14	3.19	2.88	2.33	3.51	3.16	2.88	4.01	3.61	2.93	4.47	4.02	3.26	/	/	/
	Efficiency	7.59	7.75	8.05	6.97	7.11	7.39	6.22	6.35	6.60	5.48	5.59	5.81	4.98	5.08	5.28	4.48	4.57	4.18	3.92	4.00	4.16	3.49	3.56	3.70	/	/	/
30	Capacity	15.71	15.16	13.23	16.04	15.47	13.50	16.20	15.63	13.64	16.04	15.47	13.50	15.88	15.32	13.36	15.71	15.16	13.09	15.71	15.16	13.23	15.55	15.00	13.09	/	/	/
	Power	1.95	1.86	1.58	2.17	2.07	1.76	2.45	2.34	1.99	2.76	2.64	2.23	3.01	2.87	2.43	3.31	3.16	3.01	3.78	3.61	3.06	4.21	4.02	3.41	/	/	/
	Efficiency	8.06	8.14	8.37	7.40	7.47	7.69	6.60	6.67	6.86	5.81	5.87	6.04	5.28	5.33	5.49	4.75	4.80	4.35	4.16	4.20	4.32	3.70	3.73	3.84	/	/	/
35	Capacity	16.55	15.97	13.93	16.89	16.30	14.22	17.06	16.46	14.36	16.89	16.30	14.22	16.72	16.13	14.07	16.55	15.97	13.79	16.55	15.97	13.93	16.38	15.81	13.79	/	/	/
	Power	1.98	1.89	1.60	2.20	2.10	1.78	2.49	2.38	2.02	2.80	2.67	2.27	3.05	2.91	2.47	3.35	3.20	3.05	3.83	3.66	3.10	4.27	4.08	3.45	/	/	/
	Efficiency	8.36	8.45	8.70	7.68	7.75	7.98	6.86	6.92	7.13	6.03	6.09	6.27	5.49	5.54	5.70	4.94	4.99	4.52	4.32	4.36	4.49	3.84	3.88	3.99	/	/	/

GRS-CQ14Pd/NhH3-E

Ambient Temp(°C)	Outflow Water(°C)	25			30			35			40			45			50			55			60			65		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-30	Capacity	5.56	5.38	2.96	5.68	5.49	3.02	5.74	5.54	3.05	5.68	5.49	3.02	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Power	4.39	4.19	1.94	4.89	4.66	2.16	5.53	5.27	2.44	6.22	5.93	2.74	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.27	1.28	1.53	1.16	1.18	1.40	1.04	1.05	1.25	0.91	0.93	1.10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
-25	Capacity	6.39	6.18	3.40	6.52	6.31	3.47	6.59	6.37	3.51	6.52	6.31	3.47	6.46	6.24	3.44	/	/	/	/	/	/	/	/	/	/	/	/
	Power	4.32	4.12	1.91	4.81	4.58	2.12	5.44	5.18	2.40	6.12	5.83	2.70	6.66	6.35	2.94	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.48	1.50	1.78	1.36	1.38	1.64	1.21	1.23	1.46	1.07	1.08	1.29	0.97	0.98	1.17	/	/	/	/	/	/	/	/	/	/	/	/
-20	Capacity	7.72	7.46	4.11	7.88	7.61	4.19	7.95	7.69	4.24	7.88	7.61	4.19	7.80	7.54	4.15	7.72	7.46	4.11	7.72	7.46	4.11	/	/	/	/	/	/
	Power	4.87	4.64	2.15	5.41	5.16	2.39	6.12	5.84	2.70	6.89	6.57	3.04	7.50	7.15	3.31	8.25	7.86	3.64	9.43	8.99	4.16	/	/	/	/	/	/
	Efficiency	1.59	1.61	1.91	1.46	1.48	1.76	1.30	1.32	1.57	1.14	1.16	1.38	1.04	1.05	1.25	0.94	0.95	1.13	0.82	0.83	0.99	/	/	/	/	/	/
-15	Capacity	8.54	8.44	4.81	8.71	8.61	4.91	8.80	8.70	4.96	8.71	8.61	4.91	8.63	8.52	4.86	8.54	8.44	4.81	8.54	8.44	4.81	8.45	8.35	4.76	/	/	/
	Power	4.38	4.31	2.10	4.87	4.79	2.33	5.51	5.42	2.64	6.20	6.10	2.97	6.75	6.64	3.23	7.43	7.31	3.55	8.49	8.35	4.06	9.45	9.30	4.52	/	/	/
	Efficiency	1.95	1.96	2.30	1.79	1.80	2.11	1.60	1.60	1.88	1.41	1.41	1.66	1.28	1.28	1.51	1.15	1.15	1.36	1.01	1.01	1.19	0.89	0.90	1.05	/	/	/
-10	Capacity	10.41	10.29	5.87	10.63	10.50	5.99	10.74	10.61	6.05	10.63	10.50	5.99	10.52	10.40	5.93	10.41	10.29	5.87	10.41	10.29	5.87	10.31	10.19	5.81	/	/	/
	Power	4.27	4.20	2.04	4.75	4.67	2.27	5.37	5.29	2.57	6.04	5.95	2.89	6.58	6.48	3.15	7.24	7.12	3.46	8.27	8.14	3.96	9.21	9.06	4.40	/	/	/
	Efficiency	2.44	2.45	2.87	2.24	2.25	2.64	2.00	2.01	2.36	1.76	1.77	2.07	1.60	1.61	1.89	1.44	1.45	1.70	1.26	1.26	1.48	1.12	1.12	1.32	/	/	/
-7	Capacity	11.35	11.22	6.40	11.59	11.45	6.53	11.70	11.60	6.60	11.59	11.45	6.53	11.47	11.40	6.47	11.35	11.22	6.40	11.35	11.22	6.40	11.23	11.10	6.34	/	/	/
	Power	3.74	3.68	1.79	4.16	4.09	1.99	4.70	4.64	2.25	5.29	5.20	2.53	5.76	5.70	2.75	6.34	6.23	3.03	7.24	7.12	3.46	8.06	7.93	3.85	/	/	/
	Efficiency	3.04	3.05	3.58	2.79	2.80	3.29	2.49	2.50	2.94	2.19	2.20	2.58	1.99	2.00	2.35	1.79	1.80	2.11	1.57	1.57	1.85	1.39	1.40	1.64	/	/	/
-2	Capacity	12.22	11.32	7.14	12.47	11.56	7.29	12.60	11.67	7.36	12.47	11.56	7.29	12.34	11.44	7.22	12.22	11.32	7.14	12.22	11.32	7.14	12.09	11.21	7.07	/	/	/
	Power	3.23	2.91	1.62	3.59	3.23	1.81	4.06	3.66	2.04	4.57	4.11	2.30	4.97	4.48	2.50	5.47	4.93	2.75	6.25	5.63	3.15	6.96	6.27	3.50	/	/	/
	Efficiency	3.79	3.89	4.40	3.48	3.58	4.04	3.10	3.19	3.60	2.73	2.81	3.17	2.48	2.55	2.88	2.23	2.30	2.59	1.95	2.01	2.27	1.74	1.79	2.02	/	/	/
2	Capacity	12.82	11.88	7.49	13.09	12.13	7.65	13.22	12.25	7.73	13.09	12.13	7.65	12.95	12.00	7.57	12.82	11.88	7.49	12.82	11.88	7.49	12.69	11.76	7.42	/	/	/
	Power	3.05	2.75	1.54	3.39	3.06	1.71	3.84	3.46	1.93	4.32	3.89	2.17	4.70	4.24	2.37	5.17	4.66	2.60	5.91	5.32	2.98	6.58	5.93	3.31	/	/	/
	Efficiency	4.20	4.32	4.88	3.86	3.97	4.48	3.44	3.54	4.00	3.03	3.12	3.52	2.75	2.83	3.20	2.48	2.55	2.88	2.17	2.23	2.52	1.93	1.98	2.24	/	/	/
7	Capacity	13.98	13.06	8.82	14.27	13.33	9.00	14.41	14.50	9.09	14.27	13.33	9.00	14.12	14.00	8.91	13.98	13.06	8.82	13.98	14.00	8.82	13.83	12.92	8.73	13.69	12.79	8.64
	Power	2.46	2.25	1.37	2.73	2.50	1.53	3.09	3.02	1.73	3.48	3.18	1.94	3.79	3.80	2.12	4.17	3.81	2.33	4.76	4.59	2.66	5.30	4.85	2.96	5.88	5.37	3.28
	Efficiency	5.69	5.81	6.42	5.22	5.33	5.89	4.66	4.80	5.26	4.10	4.19	4.63	3.73	3.68	4.21	3.36	3.43	3.79	2.94	3.05	3.31	2.61	2.67	2.95	2.33	2.38	2.63
10	Capacity	14.40	13.45	9.08	14.69	13.73	9.27	14.84	13.86	9.36	14.69	13.73	9.27	14.55	13.59	9.18	14.40	13.45	8.99	14.40	13.45	9.08	14.25	13.31	8.99	14.10	13.17	8.89
	Power	2.47	2.26	1.38	2.75	2.51	1.54	3.11	2.84	1.74	3.50	3.20	1.95	3.81	3.48	2.13	4.19	3.83	2.63	4.78	4.38	2.67	5.33	4.87	2.98	5.90	5.40	3.30
	Efficiency	5.83	5.95	6.58	5.35	5.46	6.04	4.78	4.88	5.39	4.20	4.29	4.74	3.82	3.90	4.31	3.44	3.51	3.42	3.01	3.07	3.40	2.67	2.73	3.02	2.39	2.44	2.70
15	Capacity	14.17	13.11	10.14	14.46	13.38	10.35	14.61	13.51	10.45	14.46	13.38	10.35	14.31	13.24	10.24	14.17	13.11	10.04	14.17	13.11	10.14	14.02	12.97	10.04	13.87	12.84	9.93
	Power	2.15	1.94	1.42	2.39	2.16	1.58	2.70	2.44	1.78	3.04	2.75	2.01	3.31	2.99	2.18	3.64	3.29	2.70	4.16	3.76	2.74	4.63	4.19	3.06	5.13	4.64	3.39
	Efficiency	6.60	6.75	7.16	6.06	6.19	6.57	5.41	5.53	5.86	4.76	4.87	5.16	4.33	4.42	4.69	3.89	3.98	3.72	3.41	3.48	3.69	3.03	3.10	3.28	2.70	2.77	2.93
20	Capacity	15.52	14.36	11.11	15.84	14.66	11.34	16.00	14.81	11.45	15.84	14.66	11.34	15.68	14.51	11.22	15.52	14.36	11.00	15.52	14.36	11.11	15.36	14.21	11.00	15.20	14.06	10.88
	Power	2.21	2.00	1.46	2.46	2.23	1.62	2.78	2.52	1.84	3.13	2.83	2.07	3.41	3.09	2.25	3.75	3.39	2.78	4.29	3.88	2.83	4.77	4.32	3.15	5.29	4.79	3.49
	Efficiency	7.01	7.17	7.60	6.44	6.58	6.98	5.75	5.88	6.23	5.06	5.17	5.49	4.60	4.70	4.99	4.14	4.23	3.95	3.62	3.70	3.93	3.22	3.29	3.49	2.87	2.94	3.12
25	Capacity	17.00	15.73	12.17	17.35	16.05	12.42	17.53	16.22	12.54	17.35	16.05	12.42	17.18	15.89	12.29	17.00	15.73	12.05	17.00	15.73	12.17	16.82	15.57	12.04	/	/	/
	Power	2.29	2.07	1.51	2.55	2.30	1.68	2.88	2.60	1.90	3.24	2.93	2.14	3.53	3.19	2.33	3.88	3.51	2.88	4.43	4.01	2.93	4.94	4.47	3.26	/	/	/
	Efficiency	7.43	7.59	8.05	6.82	6.97	7.39	6.09	6.22	6.60	5.36	5.48	5.81	4.87	4.98	5.28	4.38	4.48	4.18	3.83	3.92	4.16	3.41	3.49	3.70	/	/	/
30	Capacity	17.10	15.71	13.23	17.45	16.04	13.50	17.63	16.20	13.64	17.45	16.04	13.50	17.27	15.88	13.36	17.10	15.71	13.09	17.10	15.71	13.23	16.92	15.55	13.09	/	/	/
	Power	2.16	1.95	1.58	2.41	2.17	1.76	2.72	2.45	1.99	3.06	2.76	2.23	3.34	3.01	2.43	3.67	3.31	3.01	4.19	3.78	3.06	4.67	4.21	3.41	/	/	/
	Efficiency	7.90	8.06	8.37	7.25	7.40	7.69	6.47	6.60	6.86	5.70	5.81	6.04	5.18	5.28	5.49	4.66	4.75	4.35	4.08	4.16	4.32	3.62	3.70	3.84	/	/	/
35	Capacity	18.01	16.55	13.93	18.38	16.89	14.22	18.57	17.06	14.36	18.38	16.89	14.22	18.19	16.72	14.07	18.01	16.55	13.79	18.01	16.55	13.93	17.82	16.38	13.79	/	/	/
	Power	2.20	1.98	1.60	2.44	2.20	1.78	2.76	2.49	2.02	3.11	2.80	2.27	3.38	3.05	2.47	3.72	3.35	3.05	4.25	3.83	3.10	4.74	4.27	3.45	/	/	/
	Efficiency	8.20	8.36	8.70	7.53	7.68	7.98	6.72	6.86	7.13	5.91	6.03	6.27	5.38	5.49	5.70	4.84	4.94	4.52	4.23	4.32	4.49	3.76	3.84	3.99	/	/	/

GRS-CQ12Pd/NhH3-E1

Ambient Temp(°C)	Outflow Water(°C)	25			30			35			40			45			50			55			60			65		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-30	Capacity	5.58	4.98	3.18	5.70	5.09	3.24	5.76	5.14	3.28	5.70	5.09	3.24	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Power	3.94	3.35	1.88	4.38	3.73	2.09	4.96	4.22	2.36	5.57	4.74	2.65	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.42	1.49	1.69	1.30	1.36	1.55	1.16	1.22	1.39	1.02	1.07	1.22	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
-25	Capacity	6.37	5.68	3.62	6.50	5.80	3.70	6.57	5.86	3.74	6.50	5.80	3.70	6.43	5.74	3.66	/	/	/	/	/	/	/	/	/	/	/	/
	Power	3.89	3.31	1.85	4.32	3.68	2.06	4.89	4.16	2.33	5.50	4.68	2.62	5.99	5.10	2.85	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.64	1.72	1.96	1.50	1.58	1.80	1.34	1.41	1.60	1.18	1.24	1.41	1.07	1.13	1.28	/	/	/	/	/	/	/	/	/	/	/	/
-20	Capacity	7.62	6.80	4.34	7.78	6.94	4.43	7.86	7.01	4.47	7.78	6.94	4.43	7.70	6.87	4.38	7.62	6.80	4.34	7.62	6.80	4.34	/	/	/	/	/	/
	Power	4.36	3.71	2.08	4.85	4.13	2.31	5.48	4.67	2.61	6.17	5.25	2.94	6.72	5.72	3.20	7.39	6.29	3.52	8.44	7.19	4.02	/	/	/	/	/	/
	Efficiency	1.75	1.83	2.09	1.60	1.68	1.92	1.43	1.50	1.71	1.26	1.32	1.51	1.15	1.20	1.37	1.03	1.08	1.23	0.90	0.95	1.08	/	/	/	/	/	/
-15	Capacity	7.92	7.82	5.05	8.09	7.98	5.16	8.17	8.06	5.21	8.09	7.98	5.16	8.00	7.90	5.10	7.92	7.82	5.05	7.92	7.82	5.05	7.84	7.74	5.00	/	/	/
	Power	3.63	3.57	2.03	4.04	3.97	2.26	4.57	4.49	2.56	5.14	5.05	2.88	5.60	5.50	3.13	6.16	6.05	3.45	7.04	6.92	3.94	7.84	7.70	4.38	/	/	/
	Efficiency	2.18	2.19	2.48	2.00	2.01	2.28	1.79	1.79	2.04	1.57	1.58	1.79	1.43	1.44	1.63	1.29	1.29	1.47	1.13	1.13	1.28	1.00	1.00	1.14	/	/	/
-10	Capacity	9.60	9.48	6.12	9.80	9.67	6.25	9.90	9.77	6.31	9.80	9.67	6.25	9.70	9.57	6.18	9.60	9.48	6.12	9.60	9.48	6.12	9.50	9.38	6.06	/	/	/
	Power	3.56	3.49	1.99	3.95	3.88	2.21	4.47	4.39	2.50	5.03	4.94	2.82	5.48	5.38	3.07	6.02	5.92	3.37	6.89	6.77	3.85	7.67	7.53	4.29	/	/	/
	Efficiency	2.70	2.71	3.08	2.48	2.49	2.82	2.21	2.22	2.52	1.95	1.96	2.22	1.77	1.78	2.02	1.59	1.60	1.82	1.39	1.40	1.59	1.24	1.24	1.41	/	/	/
-7	Capacity	10.44	10.30	6.66	10.66	10.52	6.79	10.76	10.63	6.86	10.66	10.52	6.79	10.55	10.41	6.73	10.44	10.30	6.66	10.44	10.30	6.66	10.33	10.20	6.59	/	/	/
	Power	3.13	3.08	1.75	3.48	3.42	1.95	3.94	3.87	2.20	4.43	4.35	2.48	4.82	4.74	2.70	5.30	5.21	2.97	6.06	5.96	3.39	6.75	6.63	3.78	/	/	/
	Efficiency	3.34	3.35	3.80	3.06	3.08	3.49	2.73	2.75	3.12	2.41	2.42	2.74	2.19	2.20	2.49	1.97	1.98	2.24	1.72	1.73	1.96	1.53	1.54	1.74	/	/	/
-2	Capacity	11.62	11.46	7.41	11.86	11.70	7.56	11.98	11.82	7.64	11.86	11.70	7.56	11.74	11.58	7.48	11.62	11.46	7.41	11.62	11.46	7.41	11.50	11.35	7.33	/	/	/
	Power	2.93	2.88	1.64	3.26	3.20	1.82	3.69	3.62	2.06	4.15	4.08	2.32	4.52	4.44	2.53	4.97	4.88	2.78	5.68	5.58	3.18	6.32	6.21	3.54	/	/	/
	Efficiency	3.96	3.98	4.51	3.64	3.65	4.14	3.25	3.26	3.70	2.86	2.87	3.26	2.60	2.61	2.96	2.34	2.35	2.66	2.05	2.05	2.33	1.82	1.83	2.07	/	/	/
2	Capacity	11.90	11.74	7.59	12.14	11.98	7.74	12.27	12.10	7.82	12.14	11.98	7.74	12.02	11.86	7.66	11.90	11.74	7.59	11.90	11.74	7.59	11.77	11.62	7.51	/	/	/
	Power	2.71	2.66	1.51	3.01	2.96	1.68	3.40	3.35	1.91	3.83	3.76	2.14	4.17	4.10	2.33	4.59	4.51	2.57	5.24	5.15	2.93	5.84	5.74	3.27	/	/	/
	Efficiency	4.39	4.41	5.01	4.03	4.05	4.60	3.60	3.62	4.10	3.17	3.18	3.61	2.88	2.89	3.28	2.59	2.60	2.95	2.27	2.28	2.59	2.02	2.03	2.30	/	/	/
7	Capacity	13.25	11.83	8.92	13.52	12.08	9.11	13.66	12.20	9.20	13.52	12.08	9.11	13.39	12.30	9.02	13.25	11.83	8.92	13.25	12.00	8.92	13.11	11.71	8.83	12.98	11.59	8.74
	Power	2.24	1.91	1.35	2.49	2.12	1.51	2.82	2.40	1.70	3.18	2.70	1.92	3.46	3.19	2.09	3.80	3.24	2.30	4.35	3.87	2.62	4.84	4.12	2.92	5.36	4.56	3.24
	Efficiency	5.90	6.20	6.59	5.42	5.69	6.05	4.84	5.08	5.40	4.26	4.47	4.75	3.87	3.85	4.32	3.48	3.66	3.89	3.05	3.10	3.40	2.71	2.84	3.02	2.42	2.54	2.70
10	Capacity	13.65	12.19	9.19	13.93	12.44	9.38	14.07	12.57	9.48	13.93	12.44	9.38	13.79	12.31	9.29	13.65	12.19	9.10	13.65	12.19	9.19	13.51	12.06	9.10	13.37	11.94	9.00
	Power	2.25	1.92	1.36	2.51	2.13	1.51	2.84	2.41	1.71	3.19	2.71	1.93	3.47	2.96	2.10	3.82	3.25	2.59	4.37	3.72	2.64	4.86	4.14	2.93	5.39	4.59	3.25
	Efficiency	6.05	6.35	6.75	5.56	5.83	6.20	4.96	5.21	5.54	4.37	4.58	4.87	3.97	4.17	4.43	3.57	3.75	3.51	3.13	3.28	3.49	2.78	2.92	3.10	2.48	2.60	2.77
15	Capacity	13.30	12.23	10.26	13.57	12.48	10.47	13.71	12.60	10.58	13.57	12.48	10.47	13.43	12.35	10.37	13.30	12.23	10.16	13.30	12.23	10.26	13.16	12.10	10.16	13.02	11.97	10.05
	Power	1.93	1.74	1.40	2.15	1.93	1.55	2.43	2.18	1.76	2.73	2.46	1.98	2.98	2.67	2.15	3.27	2.94	2.66	3.74	3.36	2.71	4.17	3.74	3.01	4.62	4.15	3.34
	Efficiency	6.88	7.05	7.35	6.32	6.47	6.74	5.64	5.78	6.02	4.96	5.08	5.30	4.51	4.62	4.82	4.06	4.16	3.81	3.55	3.64	3.79	3.16	3.23	3.37	2.82	2.89	3.01
20	Capacity	14.57	13.40	11.24	14.87	13.67	11.48	15.02	13.81	11.59	14.87	13.67	11.48	14.72	13.53	11.36	14.57	13.40	11.13	14.57	13.40	11.24	14.42	13.26	11.13	14.27	13.12	11.01
	Power	1.99	1.79	1.44	2.21	1.99	1.60	2.50	2.25	1.81	2.82	2.53	2.04	3.07	2.76	2.22	3.37	3.03	2.75	3.86	3.46	2.79	4.29	3.86	3.11	4.76	4.27	3.44
	Efficiency	7.32	7.49	7.81	6.72	6.87	7.17	6.00	6.14	6.40	5.28	5.40	5.63	4.80	4.91	5.12	4.32	4.42	4.05	3.78	3.87	4.03	3.36	3.44	3.58	3.00	3.07	3.20
25	Capacity	15.96	14.67	12.32	16.29	14.97	12.57	16.45	15.12	12.70	16.29	14.97	12.57	16.12	14.82	12.44	15.96	14.67	12.19	15.96	14.67	12.32	15.79	14.52	12.19	/	/	/
	Power	2.06	1.85	1.49	2.29	2.06	1.66	2.59	2.33	1.87	2.91	2.62	2.11	3.17	2.85	2.29	3.49	3.13	2.84	3.99	3.58	2.88	4.44	3.99	3.21	/	/	/
	Efficiency	7.75	7.93	8.27	7.11	7.28	7.59	6.35	6.50	6.78	5.59	5.72	5.96	5.08	5.20	5.42	4.57	4.68	4.29	4.00	4.10	4.27	3.56	3.64	3.80	/	/	/
30	Capacity	15.95	15.38	13.39	16.28	15.70	13.66	16.44	15.86	13.80	16.28	15.70	13.66	16.11	15.54	13.52	15.95	15.38	13.25	15.95	15.38	13.39	15.78	15.22	13.25	/	/	/
	Power	1.93	1.85	1.56	2.15	2.05	1.73	2.43	2.32	1.96	2.74	2.61	2.20	2.98	2.85	2.40	3.28	3.13	2.97	3.74	3.58	3.02	4.17	3.98	3.36	/	/	/
	Efficiency	8.25	8.33	8.60	7.57	7.64	7.89	6.76	6.83	7.05	5.95	6.01	6.20	5.41	5.46	5.64	4.87	4.91	4.46	4.26	4.30	4.44	3.79	3.82	3.95	/	/	/
35	Capacity	16.80	16.20	14.10	17.14	16.53	14.39	17.32	16.70	14.54	17.14	16.53	14.39	16.97	16.37	14.25	16.80	16.20	13.96	16.80	16.20	14.10	16.62	16.03	13.95	/	/	/
	Power	1.96	1.87	1.58	2.18	2.08	1.76	2.47	2.36	1.99	2.78	2.65	2.23	3.02	2.89	2.43	3.32	3.17	3.01	3.80	3.63	3.06	4.23	4.04	3.41	/	/	/
	Efficiency	8.56	8.65	8.93	7.86	7.94	8.20	7.02	7.09	7.32	6.18	6.24	6.44	5.62	5.67	5.85	5.05	5.10	4.64	4.42	4.46	4.61	3.93	3.97	4.10	/	/	/

GRS-CQ14Pd/NhH3-E1

Ambient Temp(°C)		Outflow Water(°C)	25			30			35			40			45			50			55			60			65		
		Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
	-30	Capacity	5.92	5.78	3.18	6.04	5.90	3.24	6.10	5.96	3.28	6.04	5.90	3.24	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
		Power	4.29	4.15	1.88	4.77	4.61	2.09	5.39	5.21	2.36	6.07	5.87	2.65	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
		Efficiency	1.38	1.40	1.69	1.27	1.28	1.55	1.13	1.14	1.39	1.00	1.01	1.22	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-25	Capacity	6.75	6.60	3.62	6.89	6.73	3.70	6.95	6.80	3.74	6.89	6.73	3.70	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
		Power	4.23	4.09	1.85	4.70	4.55	2.06	5.32	5.15	2.33	5.99	5.79	2.62	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
		Efficiency	1.59	1.61	1.96	1.46	1.48	1.80	1.31	1.32	1.60	1.15	1.16	1.41	1.05	1.06	1.28	/	/	/	/	/	/	/	/	/	/	/	/
	-20	Capacity	8.08	7.90	4.34	8.24	8.06	4.43	8.33	8.14	4.47	8.24	8.06	4.43	8.16	7.98	4.38	8.08	7.90	4.34	8.08	7.90	4.34	/	/	/	/	/	/
		Power	4.75	4.59	2.08	5.28	5.10	2.31	5.97	5.77	2.61	6.71	6.49	2.94	7.31	7.07	3.20	8.04	7.77	3.52	9.19	8.89	4.02	/	/	/	/	/	/
		Efficiency	1.70	1.72	2.09	1.56	1.58	1.92	1.39	1.41	1.71	1.23	1.24	1.51	1.12	1.13	1.37	1.00	1.02	1.23	0.88	0.89	1.08	/	/	/	/	/	/
	-15	Capacity	8.88	8.56	5.05	9.06	8.74	5.16	9.15	8.82	5.21	9.06	8.74	5.16	8.97	8.65	5.10	8.88	8.56	5.05	8.88	8.56	5.05	8.79	8.47	5.00	/	/	/
		Power	4.27	4.05	2.03	4.75	4.51	2.26	5.37	5.10	2.56	6.04	5.74	2.88	6.58	6.25	3.13	7.24	6.87	3.45	8.27	7.85	3.94	9.21	8.74	4.38	/	/	/
		Efficiency	2.08	2.11	2.48	1.91	1.94	2.28	1.70	1.73	2.04	1.50	1.52	1.79	1.36	1.38	1.63	1.23	1.25	1.47	1.07	1.09	1.28	0.95	0.97	1.14	/	/	/
	-10	Capacity	10.76	10.37	6.12	10.98	10.59	6.25	11.09	10.69	6.31	10.98	10.59	6.25	10.87	10.48	6.18	10.76	10.37	6.12	10.76	10.37	6.12	10.65	10.27	6.06	/	/	/
		Power	4.18	3.97	1.99	4.65	4.41	2.21	5.26	4.99	2.50	5.91	5.61	2.82	6.44	6.11	3.07	7.08	6.72	3.37	8.09	7.68	3.85	9.01	8.55	4.29	/	/	/
		Efficiency	2.58	2.62	3.08	2.36	2.40	2.82	2.11	2.14	2.52	1.86	1.89	2.22	1.69	1.71	2.02	1.52	1.54	1.82	1.33	1.35	1.59	1.18	1.20	1.41	/	/	/
	-7	Capacity	11.70	11.28	6.66	11.94	11.51	6.79	12.06	11.62	6.86	11.94	11.51	6.79	11.82	11.38	6.73	11.70	11.28	6.66	11.70	11.28	6.66	11.58	11.16	6.59	/	/	/
		Power	3.68	3.49	1.75	4.09	3.88	1.95	4.63	4.39	2.20	5.20	4.94	2.48	5.67	5.37	2.70	6.23	5.92	2.97	7.12	6.76	3.39	7.93	7.53	3.78	/	/	/
		Efficiency	3.18	3.23	3.80	2.92	2.97	3.49	2.61	2.65	3.12	2.30	2.33	2.74	2.09	2.12	2.49	1.88	1.91	2.24	1.64	1.67	1.96	1.46	1.48	1.74	/	/	/
	-2	Capacity	13.02	12.55	7.41	13.29	12.81	7.56	13.42	12.94	7.64	13.29	12.81	7.56	13.15	12.68	7.48	13.02	12.55	7.41	13.02	12.55	7.41	12.88	12.42	7.33	/	/	/
		Power	3.45	3.27	1.64	3.83	3.64	1.82	4.33	4.12	2.06	4.88	4.63	2.32	5.31	5.04	2.53	5.84	5.54	2.78	6.67	6.34	3.18	7.43	7.06	3.54	/	/	/
		Efficiency	3.78	3.84	4.51	3.47	3.52	4.14	3.10	3.14	3.70	2.72	2.77	3.26	2.48	2.52	2.96	2.23	2.26	2.66	1.95	1.98	2.33	1.73	1.76	2.07	/	/	/
	2	Capacity	13.33	12.85	7.59	13.61	13.12	7.74	13.74	13.25	7.82	13.61	13.12	7.74	13.47	12.99	7.66	13.33	12.85	7.59	13.33	12.85	7.59	13.19	12.72	7.51	/	/	/
		Power	3.18	3.02	1.51	3.54	3.36	1.68	4.00	3.80	1.91	4.50	4.27	2.14	4.90	4.65	2.33	5.39	5.12	2.57	6.16	5.85	2.93	6.86	6.51	3.27	/	/	/
		Efficiency	4.19	4.26	5.01	3.85	3.91	4.60	3.44	3.49	4.10	3.02	3.07	3.61	2.75	2.79	3.28	2.47	2.51	2.95	2.16	2.20	2.59	1.92	1.95	2.30	/	/	/
	7	Capacity	14.00	14.16	8.92	14.29	14.45	9.11	14.43	14.60	9.20	14.29	14.45	9.11	14.14	14.20	9.02	14.00	14.16	8.92	14.00	14.00	8.92	13.85	14.02	8.83	13.71	13.87	8.74
		Power	2.42	2.39	1.35	2.69	2.66	1.51	3.04	3.01	1.70	3.42	3.39	1.92	3.73	3.74	2.09	4.10	4.06	2.30	4.69	4.59	2.62	5.22	5.16	2.92	5.78	5.72	3.24
		Efficiency	5.78	5.92	6.59	5.31	5.43	6.05	4.74	4.85	5.40	4.17	4.27	4.75	3.79	3.80	4.32	3.41	3.49	3.89	2.99	3.05	3.40	2.65	2.72	3.02	2.37	2.43	2.70
	10	Capacity	14.14	14.30	9.01	14.43	14.60	9.20	14.57	14.75	9.29	14.43	14.60	9.20	14.28	14.45	9.11	14.14	14.30	8.92	14.14	14.30	9.01	13.99	14.16	8.92	13.85	14.01	8.83
		Power	2.39	2.36	1.33	2.65	2.62	1.48	3.00	2.97	1.68	3.37	3.34	1.89	3.67	3.63	2.06	4.04	4.00	2.54	4.62	4.57	2.58	5.14	5.09	2.88	5.70	5.64	3.19
		Efficiency	5.93	6.06	6.75	5.44	5.57	6.20	4.86	4.97	5.54	4.28	4.37	4.87	3.89	3.98	4.43	3.50	3.58	3.51	3.06	3.13	3.49	2.72	2.78	3.10	2.43	2.49	2.77
	15	Capacity	14.93	14.45	11.16	15.23	14.75	11.39	15.39	14.90	11.50	15.23	14.75	11.39	15.08	14.60	11.27	14.93	14.45	11.04	14.93	14.45	11.16	14.77	14.30	11.04	14.62	14.16	10.93
		Power	2.19	2.10	1.52	2.43	2.33	1.69	2.75	2.64	1.91	3.10	2.97	2.15	3.37	3.24	2.34	3.71	3.56	2.89	4.24	4.07	2.94	4.72	4.53	3.27	5.23	5.02	3.63
		Efficiency	6.82	6.88	7.35	6.26	6.32	6.74	5.59	5.64	6.02	4.92	4.96	5.30	4.47	4.51	4.82	4.02	4.06	3.81	3.52	3.55	3.79	3.13	3.16	3.37	2.79	2.82	3.01
	20	Capacity	15.05	14.57	11.24	15.36	14.87	11.48	15.51	15.02	11.59	15.36	14.87	11.48	15.20	14.72	11.36	15.05	14.57	11.13	15.05	14.57	11.24	14.89	14.42	11.13	14.74	14.27	11.01
		Power	2.08	1.99	1.44	2.31	2.21	1.60	2.61	2.50	1.81	2.94	2.82	2.04	3.20	3.07	2.22	3.52	3.37	2.75	4.02	3.86	2.79	4.48	4.29	3.11	4.96	4.76	3.44
		Efficiency	7.24	7.32	7.81	6.65	6.72	7.17	5.94	6.00	6.40	5.22	5.28	5.63	4.75	4.80	5.12	4.27	4.32	4.05	3.74	3.78	4.03	3.32	3.36	3.58	2.97	3.00	3.20
	25	Capacity	16.48	15.96	12.32	16.82	16.29	12.57	16.99	16.45	12.70	16.82	16.29	12.57	16.65	16.12	12.44	16.48	15.96	12.19	16.48	15.96	12.32	16.31	15.79	12.19	/	/	/
		Power	2.15	2.06	1.49	2.39	2.29	1.66	2.70	2.59	1.87	3.04	2.91	2.11	3.31	3.17	2.29	3.64	3.49	2.84	4.16	3.99	2.88	4.63	4.44	3.21	/	/	/
		Efficiency	7.67	7.75	8.27	7.04	7.11	7.59	6.29	6.35	6.78	5.53	5.59	5.96	5.03	5.08	5.42	4.53	4.57	4.29	3.96	4.00	4.27	3.52	3.56	3.80	/	/	/
	30	Capacity	16.79	16.50	13.39	17.14	16.84	13.66	17.31	17.01	13.80	17.14	16.84	13.66	16.96	16.67	13.52	16.79	16.50	13.25	16.79	16.50	13.39	16.62	16.33	13.25	/	/	/
		Power	2.07	2.02	1.56	2.30	2.25	1.73	2.60	2.54	1.96	2.93	2.86	2.20	3.19	3.11	2.40	3.50	3.42	2.97	4.00	3.91	3.02	4.46	4.36	3.36	/	/	/
		Efficiency	8.12	8.17	8.60	7.45	7.50	7.89	6.66	6.69	7.05	5.86	5.89	6.20	5.32	5.36	5.64	4.79	4.82	4.46	4.19	4.22	4.44	3.73	3.75	3.95	/	/	/
	35	Capacity	17.69	17.38	14.10	18.05	17.74	14.39	18.23	17.92	14.54	18.05	17.74	14.39	17.87	17.56	14.25	17.69	17.38	13.96	17.69	17.38	14.10	17.50	17.20	13.95	/	/	/
		Power	2.10	2.05	1.58	2.33	2.28	1.76	2.64	2.58	1.99	2.97	2.90	2.23	3.23	3.16	2.43	3.55	3.47	3.01	4.06	3.97	3.06	4.52	4.42	3.41	/	/	/
		Efficiency	8.43	8.48	8.93	7.74	7.79	8.20	6.91	6.95	7.32	6.08	6.12	6.44	5.53	5.56	5.85	4.98	5.00	4.64	4.35	4.38	4.61	3.87	3.89	4.10	/	/	/

GRS-CQ16d/NhH3-E1

Ambient Temp(°C)	Outflow Water(°C)	25			30			35			40			45			50			55			60			65		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-30	Capacity	6.46	6.31	3.39	6.59	6.44	3.46	6.66	6.51	3.50	6.59	6.44	3.46	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Power	4.73	4.58	2.00	5.26	5.09	2.23	5.96	5.76	2.52	6.70	6.48	2.83	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.36	1.38	1.69	1.25	1.27	1.55	1.12	1.13	1.39	0.98	1.00	1.22	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
-25	Capacity	7.31	7.14	3.84	7.46	7.29	3.92	7.53	7.37	3.96	7.46	7.29	3.92	7.38	7.22	3.88	/	/	/	/	/	/	/	/	/	/	/	/
	Power	4.64	4.48	1.96	5.15	4.98	2.18	5.83	5.64	2.47	6.56	6.34	2.77	7.14	6.90	3.02	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.58	1.59	1.96	1.45	1.46	1.80	1.29	1.31	1.60	1.14	1.15	1.41	1.03	1.05	1.28	/	/	/	/	/	/	/	/	/	/	/	/
-20	Capacity	8.67	8.47	4.55	8.85	8.65	4.65	8.94	8.74	4.69	8.85	8.65	4.65	8.76	8.56	4.60	8.67	8.47	4.55	8.67	8.47	4.55	/	/	/	/	/	/
	Power	5.15	4.98	2.18	5.73	5.54	2.42	6.48	6.26	2.74	7.29	7.05	3.08	7.94	7.67	3.36	8.73	8.44	3.69	9.98	9.64	4.22	/	/	/	/	/	/
	Efficiency	1.68	1.70	2.09	1.54	1.56	1.92	1.38	1.39	1.71	1.21	1.23	1.51	1.10	1.12	1.37	0.99	1.00	1.23	0.87	0.88	1.08	/	/	/	/	/	/
-15	Capacity	9.59	9.47	5.27	9.78	9.67	5.37	9.88	9.76	5.43	9.78	9.67	5.37	9.68	9.57	5.32	9.59	9.47	5.27	9.59	9.47	5.27	9.49	9.37	5.21	/	/	/
	Power	4.68	4.61	2.12	5.21	5.12	2.36	5.89	5.79	2.67	6.63	6.52	3.00	7.22	7.10	3.27	7.94	7.81	3.59	9.07	8.92	4.11	10.10	9.93	4.57	/	/	/
	Efficiency	2.05	2.06	2.48	1.88	1.89	2.28	1.68	1.69	2.04	1.48	1.48	1.79	1.34	1.35	1.63	1.21	1.21	1.47	1.06	1.06	1.28	0.94	0.94	1.14	/	/	/
-10	Capacity	11.54	11.40	6.34	11.77	11.63	6.47	11.89	11.75	6.53	11.77	11.63	6.47	11.65	11.52	6.40	11.54	11.40	6.34	11.54	11.40	6.34	11.42	11.28	6.27	/	/	/
	Power	4.55	4.48	2.06	5.06	4.98	2.29	5.72	5.63	2.59	6.44	6.33	2.91	7.01	6.90	3.17	7.71	7.58	3.49	8.81	8.67	3.99	9.81	9.65	4.44	/	/	/
	Efficiency	2.54	2.55	3.08	2.33	2.34	2.82	2.08	2.09	2.52	1.83	1.84	2.22	1.66	1.67	2.02	1.50	1.50	1.82	1.31	1.32	1.59	1.16	1.17	1.41	/	/	/
-7	Capacity	12.51	12.36	6.87	12.77	12.62	7.01	12.90	12.74	7.08	12.77	12.62	7.01	12.64	12.48	6.94	12.51	12.36	6.87	12.51	12.36	6.87	12.38	12.23	6.80	/	/	/
	Power	3.99	3.93	1.81	4.44	4.37	2.01	5.02	4.98	2.27	5.65	5.56	2.56	6.15	6.09	2.79	6.77	6.66	3.06	7.73	7.61	3.50	8.61	8.47	3.90	/	/	/
	Efficiency	3.13	3.15	3.80	2.88	2.89	3.49	2.57	2.56	3.12	2.26	2.27	2.74	2.05	2.05	2.49	1.85	1.86	2.24	1.62	1.62	1.96	1.44	1.44	1.74	/	/	/
-2	Capacity	13.49	13.32	7.41	13.76	13.60	7.56	13.90	13.74	7.64	13.76	13.60	7.56	13.62	13.46	7.48	13.49	13.32	7.41	13.49	13.32	7.41	13.35	13.19	7.33	/	/	/
	Power	3.63	3.57	1.64	4.03	3.97	1.82	4.56	4.49	2.06	5.13	5.05	2.32	5.59	5.50	2.53	6.14	6.04	2.78	7.02	6.91	3.18	7.82	7.69	3.54	/	/	/
	Efficiency	3.72	3.74	4.51	3.41	3.43	4.14	3.05	3.06	3.70	2.68	2.69	3.26	2.44	2.45	2.96	2.19	2.20	2.66	1.92	1.93	2.33	1.71	1.71	2.07	/	/	/
2	Capacity	13.81	13.65	7.59	14.10	13.93	7.74	14.24	14.07	7.82	14.10	13.93	7.74	13.95	13.79	7.66	13.81	13.65	7.59	13.81	13.65	7.59	13.67	13.50	7.51	/	/	/
	Power	3.35	3.29	1.51	3.72	3.66	1.68	4.21	4.14	1.91	4.74	4.66	2.14	5.16	5.07	2.33	5.67	5.58	2.57	6.48	6.38	2.93	7.22	7.10	3.27	/	/	/
	Efficiency	4.13	4.14	5.01	3.79	3.80	4.60	3.38	3.40	4.10	2.98	2.99	3.61	2.71	2.72	3.28	2.44	2.45	2.95	2.13	2.14	2.59	1.89	1.90	2.30	/	/	/
7	Capacity	15.68	15.52	8.92	16.01	15.84	9.11	16.17	16.00	9.20	16.01	15.84	9.11	15.85	16.00	9.02	15.68	15.52	8.92	15.68	15.70	8.92	15.52	15.36	8.83	15.36	15.20	8.74
	Power	2.84	2.80	1.35	3.16	3.11	1.51	3.58	3.52	1.70	4.02	3.96	1.92	4.38	4.32	2.09	4.82	4.74	2.30	5.51	5.23	2.62	6.13	6.03	2.92	6.80	6.68	3.24
	Efficiency	5.51	5.55	6.59	5.06	5.10	6.05	4.52	4.55	5.40	3.98	4.00	4.75	3.62	3.70	4.32	3.25	3.28	3.89	2.85	3.00	3.40	2.53	2.55	3.02	2.26	2.28	2.70
10	Capacity	16.16	15.99	9.19	16.49	16.32	9.38	16.66	16.48	9.48	16.49	16.32	9.38	16.32	16.15	9.29	16.16	15.99	9.10	16.16	15.99	9.19	15.99	15.82	9.10	15.82	15.66	9.00
	Power	2.86	2.81	1.36	3.18	3.12	1.51	3.59	3.53	1.71	4.04	3.98	1.93	4.40	4.33	2.10	4.84	4.76	2.59	5.53	5.44	2.64	6.16	6.06	2.93	6.83	6.71	3.25
	Efficiency	5.65	5.69	6.75	5.19	5.22	6.20	4.63	4.66	5.54	4.08	4.10	4.87	3.71	3.73	4.43	3.34	3.36	3.51	2.92	2.94	3.49	2.59	2.61	3.10	2.32	2.33	2.77
15	Capacity	16.30	16.07	10.98	16.63	16.40	11.20	16.80	16.57	11.32	16.63	16.40	11.20	16.47	16.24	11.09	16.30	16.07	10.87	16.30	16.07	10.98	16.13	15.91	10.86	15.96	15.74	10.75
	Power	2.48	2.43	1.49	2.75	2.70	1.66	3.11	3.06	1.88	3.50	3.44	2.11	3.81	3.75	2.30	4.19	4.12	2.85	4.79	4.71	2.89	5.34	5.24	3.22	5.92	5.81	3.57
	Efficiency	6.58	6.61	7.35	6.04	6.07	6.74	5.40	5.42	6.02	4.75	4.77	5.30	4.32	4.34	4.82	3.89	3.90	3.81	3.40	3.41	3.79	3.02	3.03	3.37	2.70	2.71	3.01
20	Capacity	16.70	16.46	11.24	17.04	16.80	11.48	17.21	16.97	11.59	17.04	16.80	11.48	16.87	16.63	11.36	16.70	16.46	11.13	16.70	16.46	11.24	16.52	16.29	11.13	16.35	16.12	11.01
	Power	2.39	2.34	1.44	2.65	2.60	1.60	3.00	2.95	1.81	3.38	3.32	2.04	3.68	3.61	2.22	4.04	3.97	2.75	4.62	4.54	2.79	5.14	5.05	3.11	5.70	5.60	3.44
	Efficiency	7.00	7.03	7.81	6.42	6.45	7.17	5.74	5.76	6.40	5.05	5.07	5.63	4.59	4.61	5.12	4.13	4.15	4.05	3.61	3.63	4.03	3.21	3.23	3.58	2.87	2.88	3.20
25	Capacity	18.29	18.03	12.32	18.66	18.40	12.57	18.85	18.59	12.70	18.66	18.40	12.57	18.47	18.22	12.44	18.29	18.03	12.19	18.29	18.03	12.32	18.10	17.85	12.19	/	/	/
	Power	2.47	2.42	1.49	2.74	2.69	1.66	3.10	3.05	1.87	3.49	3.43	2.11	3.80	3.73	2.29	4.18	4.11	2.84	4.78	4.69	2.88	5.32	5.22	3.21	/	/	/
	Efficiency	7.41	7.44	8.27	6.80	6.83	7.59	6.07	6.10	6.78	5.35	5.37	5.96	4.86	4.88	5.42	4.37	4.39	4.29	3.83	3.84	4.27	3.40	3.42	3.80	/	/	/
30	Capacity	17.91	20.43	13.39	18.28	20.85	13.66	18.47	21.06	13.80	18.28	20.85	13.66	18.10	20.64	13.52	17.91	20.43	13.25	17.91	20.43	13.39	17.73	20.22	13.25	/	/	/
	Power	2.25	2.68	1.56	2.50	2.98	1.73	2.82	3.37	1.96	3.18	3.79	2.20	3.46	4.13	2.40	3.80	4.54	2.97	4.35	5.19	3.02	4.84	5.78	3.36	/	/	/
	Efficiency	7.98	7.63	8.60	7.32	7.00	7.89	6.54	6.25	7.05	5.75	5.50	6.20	5.23	5.00	5.64	4.71	4.50	4.46	4.12	3.94	4.44	3.66	3.50	3.95	/	/	/
35	Capacity	18.87	21.52	14.10	19.26	21.96	14.39	19.45	22.18	14.54	19.26	21.96	14.39	19.06	21.74	14.25	18.87	21.52	13.96	18.87	21.52	14.10	18.67	21.30	13.95	/	/	/
	Power	2.28	2.72	1.58	2.53	3.02	1.76	2.87	3.42	1.99	3.22	3.85	2.23	3.51	4.19	2.43	3.86	4.60	3.01	4.41	5.26	3.06	4.91	5.86	3.41	/	/	/
	Efficiency	8.28	7.92	8.93	7.60	7.27	8.20	6.79	6.49	7.32	5.97	5.71	6.44	5.43	5.19	5.85	4.89	4.67	4.64	4.28	4.09	4.61	3.80	3.63	4.10	/	/	/

(4) Three-phase units for heating

GRS-CQ8.0Pd/NhH3-M																														
Outflow Water(°C)			25			30			35			40			45			50			55			60			65		
Capacity level			max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
Ambient Temp(°C)	-30	Capacity	3.88	3.56	1.32	3.85	3.53	1.31	3.81	3.49	1.30	3.77	3.46	1.28	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
		Power	2.49	2.27	0.81	2.69	2.45	0.87	3.03	2.77	0.98	3.41	3.11	1.10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
		Efficiency	1.56	1.57	1.64	1.43	1.44	1.51	1.26	1.26	1.32	1.11	1.11	1.16	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-25	Capacity	4.49	4.12	1.53	4.45	4.08	1.51	4.40	4.04	1.50	4.36	4.00	1.48	4.31	3.96	1.47	/	/	/	/	/	/	/	/	/	/	/	/
		Power	2.27	2.07	0.73	2.45	2.23	0.79	2.76	2.52	0.89	3.11	2.83	1.00	3.43	3.13	1.11	/	/	/	/	/	/	/	/	/	/	/	/
		Efficiency	1.98	1.99	2.08	1.82	1.83	1.91	1.59	1.60	1.68	1.40	1.41	1.48	1.26	1.27	1.33	/	/	/	/	/	/	/	/	/	/	/	/
	-20	Capacity	5.46	5.01	1.86	5.41	4.96	1.84	5.36	4.91	1.82	5.30	4.86	1.80	5.25	4.82	1.79	5.19	4.77	1.77	5.14	4.72	1.75	/	/	/	/	/	/
		Power	2.46	2.25	0.80	2.65	2.42	0.86	3.00	2.73	0.97	3.37	3.07	1.09	3.72	3.39	1.20	4.09	3.73	1.32	4.64	4.23	1.50	/	/	/	/	/	/
		Efficiency	2.22	2.23	2.34	2.04	2.05	2.15	1.79	1.80	1.88	1.57	1.58	1.66	1.41	1.42	1.49	1.27	1.28	1.34	1.11	1.11	1.17	/	/	/	/	/	/
	-15	Capacity	5.68	5.34	2.11	5.62	5.28	2.09	5.57	5.23	2.07	5.51	5.18	2.04	5.46	5.13	2.02	5.40	5.08	2.00	5.35	5.02	1.98	5.12	4.81	1.90	/	/	/
		Power	2.19	2.05	0.78	2.36	2.21	0.84	2.66	2.49	0.94	3.00	2.81	1.06	3.31	3.09	1.17	3.64	3.41	1.29	4.13	3.86	1.46	4.71	4.41	1.67	/	/	/
		Efficiency	2.59	2.60	2.71	2.38	2.39	2.50	2.09	2.10	2.19	1.84	1.85	1.93	1.65	1.66	1.73	1.48	1.49	1.55	1.30	1.30	1.36	1.09	1.09	1.14	/	/	/
	-10	Capacity	7.35	6.91	2.73	7.28	6.84	2.70	7.21	6.77	2.67	7.14	6.70	2.65	7.06	6.64	2.62	6.99	6.57	2.59	6.92	6.50	2.57	6.63	6.23	2.46	/	/	/
		Power	2.39	2.24	0.85	2.58	2.41	0.91	2.91	2.72	1.03	3.27	3.06	1.16	3.61	3.38	1.28	3.97	3.72	1.41	4.50	4.21	1.59	5.14	4.81	1.82	/	/	/
		Efficiency	3.07	3.09	3.22	2.83	2.84	2.96	2.48	2.49	2.60	2.18	2.19	2.28	1.96	1.97	2.05	1.76	1.77	1.84	1.54	1.54	1.61	1.29	1.29	1.35	/	/	/
	-7	Capacity	8.80	8.27	3.26	8.71	8.19	3.23	8.63	8.11	3.20	8.54	8.02	3.17	8.45	7.94	3.14	8.37	7.86	3.10	8.28	7.78	3.07	7.94	7.46	2.94	/	/	/
		Power	2.72	2.54	0.96	2.93	2.74	1.04	3.31	3.09	1.17	3.72	3.48	1.32	4.10	3.84	1.45	4.52	4.23	1.60	5.12	4.79	1.81	5.85	5.47	2.07	/	/	/
		Efficiency	3.24	3.25	3.39	2.98	2.99	3.12	2.61	2.62	2.73	2.30	2.31	2.41	2.06	2.07	2.16	1.85	1.86	1.94	1.62	1.62	1.69	1.36	1.36	1.42	/	/	/
	-2	Capacity	9.21	8.63	3.64	9.12	8.54	3.60	9.03	8.46	3.56	8.94	8.37	3.53	8.85	8.29	3.49	8.76	8.20	3.46	8.67	8.12	3.42	8.31	7.78	3.28	/	/	/
		Power	2.49	2.32	0.94	2.69	2.50	1.02	3.03	2.82	1.15	3.41	3.18	1.29	3.76	3.50	1.42	4.14	3.86	1.57	4.70	4.37	1.78	5.37	5.00	2.03	/	/	/
		Efficiency	3.69	3.71	3.85	3.39	3.41	3.54	2.98	3.00	3.10	2.62	2.64	2.73	2.35	2.37	2.45	2.11	2.13	2.20	1.85	1.86	1.93	1.55	1.56	1.61	/	/	/
	2	Capacity	9.26	8.67	3.66	9.17	8.59	3.62	9.08	8.50	3.58	8.99	8.42	3.55	8.90	8.33	3.51	8.81	8.25	3.48	8.72	8.16	3.44	8.35	7.82	3.30	/	/	/
		Power	2.25	2.10	0.85	2.42	2.26	0.92	2.74	2.55	1.04	3.08	2.87	1.16	3.39	3.16	1.28	3.74	3.48	1.41	4.24	3.94	1.60	4.84	4.51	1.83	/	/	/
		Efficiency	4.11	4.14	4.29	3.78	3.81	3.95	3.32	3.34	3.46	2.92	2.94	3.05	2.62	2.64	2.73	2.36	2.37	2.46	2.06	2.07	2.15	1.73	1.74	1.80	/	/	/
	7	Capacity	9.80	8.47	4.13	9.71	8.38	4.09	9.61	8.30	4.05	9.51	8.22	4.01	9.42	8.20	3.97	9.32	8.05	3.93	9.23	7.97	3.89	8.84	7.64	3.73	6.82	5.89	2.88
		Power	1.61	1.38	0.65	1.73	1.49	0.70	1.96	1.68	0.80	2.20	1.89	0.90	2.43	2.05	0.99	2.67	2.29	1.09	3.03	2.60	1.23	3.46	2.97	1.41	4.09	3.50	1.66
		Efficiency	6.09	6.14	6.31	5.60	5.64	5.80	4.91	4.95	5.09	4.32	4.36	4.48	3.88	4.00	4.02	3.49	3.51	3.61	3.04	3.07	3.16	2.55	2.57	2.65	1.67	1.68	1.73
	10	Capacity	10.78	9.31	4.54	10.68	9.22	4.50	10.57	9.13	4.46	10.47	9.04	4.41	10.36	8.95	4.37	10.25	8.86	4.28	10.15	8.76	4.28	9.73	8.40	4.10	7.51	6.48	3.16
		Power	1.70	1.46	0.69	1.83	1.57	0.75	2.07	1.77	0.84	2.33	2.00	0.95	2.57	2.20	1.04	2.83	2.42	1.29	3.21	2.75	1.30	3.66	3.14	1.49	4.32	3.70	1.76
		Efficiency	6.33	6.38	6.56	5.82	5.87	6.03	5.11	5.15	5.29	4.49	4.53	4.66	4.03	4.07	4.18	3.63	3.66	3.31	3.17	3.19	3.28	2.66	2.68	2.75	1.74	1.75	1.80
	15	Capacity	9.67	9.48	4.92	9.58	9.39	4.87	9.48	9.29	4.82	9.39	9.20	4.77	9.29	9.11	4.72	9.20	9.02	4.63	9.10	8.92	4.63	8.73	8.55	4.43	6.73	6.60	3.42
		Power	1.34	1.31	0.67	1.45	1.42	0.72	1.63	1.60	0.81	1.84	1.80	0.91	2.03	1.98	1.00	2.23	2.18	1.24	2.53	2.47	1.25	2.89	2.83	1.43	3.41	3.34	1.69
		Efficiency	7.20	7.21	7.38	6.62	6.63	6.79	5.80	5.81	5.96	5.11	5.12	5.24	4.58	4.59	4.70	4.12	4.13	3.72	3.60	3.61	3.69	3.02	3.02	3.10	1.97	1.98	2.02
	20	Capacity	9.84	9.64	5.00	9.74	9.54	4.95	9.64	9.45	4.90	9.55	9.36	4.85	9.45	9.26	4.80	9.35	9.17	4.71	9.26	9.07	4.70	8.87	8.69	4.51	6.85	6.71	3.48
		Power	1.32	1.29	0.65	1.42	1.39	0.70	1.61	1.57	0.80	1.81	1.77	0.90	1.99	1.95	0.99	2.20	2.15	1.22	2.49	2.43	1.23	2.84	2.78	1.41	3.36	3.28	1.66
		Efficiency	7.44	7.46	7.64	6.84	6.86	7.02	6.00	6.01	6.16	5.28	5.29	5.42	4.74	4.75	4.87	4.26	4.27	3.85	3.72	3.73	3.82	3.12	3.13	3.20	2.04	2.04	2.09
	25	Capacity	10.08	9.88	5.12	9.98	9.78	5.07	9.88	9.68	5.02	9.78	9.59	4.97	9.69	9.49	4.92	9.59	9.39	4.82	9.49	9.30	4.82	9.09	8.91	4.62	/	/	/
		Power	1.24	1.21	0.61	1.34	1.31	0.66	1.51	1.48	0.75	1.70	1.66	0.84	1.87	1.83	0.93	2.06	2.02	1.15	2.34	2.29	1.16	2.67	2.61	1.32	/	/	/
		Efficiency	8.12	8.13	8.33	7.46	7.48	7.66	6.55	6.56	6.72	5.76	5.77	5.91	5.17	5.18	5.31	4.65	4.66	4.20	4.06	4.07	4.17	3.40	3.41	3.49	/	/	/
	30	Capacity	10.35	10.07	6.61	10.25	9.97	6.54	10.14	9.87	6.48	10.04	9.77	6.42	9.94	9.67	6.35	9.84	9.58	6.22	9.74	9.48	6.22	9.33	9.08	5.96	/	/	/
		Power	1.21	1.18	0.76	1.31	1.27	0.82	1.47	1.44	0.93	1.66	1.61	1.05	1.83	1.78	1.15	2.02	1.96	1.43	2.28	2.22	1.44	2.61	2.54	1.64	/	/	/
		Efficiency	8.53	8.53	8.65	7.84	7.84	7.95	6.88	6.88	6.97	6.05	6.05	6.14	5.43	5.43	5.51	4.88	4.88	4.36	4.26	4.26	4.32	3.58	3.58	3.63	/	/	/
	35	Capacity	10.93	10.64	6.98	10.82	10.53	6.91	10.71	10.43	6.84	10.61	10.32	6.78	10.50	10.22	6.71	10.39	10.11	6.57	10.29	10.01	6.57	9.86	9.59	6.30	/	/	/
		Power	1.24	1.20	0.78	1.33	1.30	0.84	1.50	1.46	0.95	1.69	1.65	1.07	1.86	1.81	1.17	2.05	2.00	1.46	2.33	2.26	1.47	2.66	2.59	1.68	/	/	/
		Efficiency	8.84	8.84	8.96	8.13	8.13	8.24	7.13	7.13	7.23	6.27	6.27	6.36	5.63	5.63	5.71	5.06	5.06	4.52	4.42	4.42	4.48	3.71	3.71	3.76	/	/	/

GRS-CQ10Pd/NhH3-M

Ambient Temp(°C)	Outflow Water(°C)	25			30			35			40			45			50			55			60			65		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-30	Capacity	4.06	4.10	1.32	4.02	4.06	1.31	3.98	4.02	1.30	3.94	3.98	1.28	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Power	2.63	2.64	0.81	2.83	2.85	0.87	3.19	3.21	0.98	3.59	3.61	1.10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.55	1.55	1.64	1.42	1.43	1.51	1.25	1.25	1.32	1.10	1.10	1.16	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
-25	Capacity	4.70	4.74	1.53	4.65	4.69	1.51	4.61	4.64	1.50	4.56	4.60	1.48	4.51	4.55	1.47	/	/	/	/	/	/	/	/	/	/	/	/
	Power	2.39	2.41	0.73	2.58	2.59	0.79	2.91	2.93	0.89	3.27	3.29	1.00	3.61	3.63	1.11	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.96	1.97	2.08	1.81	1.81	1.91	1.58	1.59	1.68	1.39	1.40	1.48	1.25	1.25	1.33	/	/	/	/	/	/	/	/	/	/	/	/
-20	Capacity	5.71	5.76	1.86	5.66	5.70	1.84	5.60	5.65	1.82	5.55	5.59	1.80	5.49	5.53	1.79	5.43	5.48	1.77	5.38	5.42	1.75	/	/	/	/	/	/
	Power	2.59	2.61	0.80	2.79	2.81	0.86	3.15	3.17	0.97	3.55	3.57	1.09	3.91	3.94	1.20	4.31	4.34	1.32	4.88	4.91	1.50	/	/	/	/	/	/
	Efficiency	2.20	2.21	2.34	2.02	2.03	2.15	1.78	1.78	1.88	1.56	1.57	1.66	1.40	1.41	1.49	1.26	1.26	1.34	1.10	1.10	1.17	/	/	/	/	/	/
-15	Capacity	6.39	5.85	2.11	6.33	5.79	2.09	6.26	5.74	2.07	6.20	5.68	2.04	6.14	5.62	2.02	6.07	5.57	2.00	6.01	5.51	1.98	5.76	5.28	1.90	/	/	/
	Power	2.47	2.26	0.78	2.66	2.44	0.84	3.00	2.75	0.94	3.38	3.10	1.06	3.73	3.41	1.17	4.10	3.76	1.29	4.65	4.26	1.46	5.31	4.87	1.67	/	/	/
	Efficiency	2.59	2.59	2.71	2.38	2.38	2.50	2.09	2.09	2.19	1.84	1.84	1.93	1.65	1.65	1.73	1.48	1.48	1.55	1.29	1.29	1.36	1.08	1.08	1.14	/	/	/
-10	Capacity	8.27	7.57	2.73	8.19	7.50	2.70	8.10	7.43	2.67	8.02	7.35	2.65	7.94	7.28	2.62	7.86	7.20	2.59	7.78	7.13	2.57	7.46	6.83	2.46	/	/	/
	Power	2.70	2.47	0.85	2.90	2.66	0.91	3.28	3.00	1.03	3.69	3.38	1.16	4.06	3.72	1.28	4.48	4.10	1.41	5.07	4.65	1.59	5.80	5.31	1.82	/	/	/
	Efficiency	3.07	3.07	3.22	2.82	2.82	2.96	2.47	2.47	2.60	2.18	2.18	2.28	1.95	1.95	2.05	1.76	1.76	1.84	1.53	1.53	1.61	1.29	1.29	1.35	/	/	/
-7	Capacity	9.90	9.07	3.26	9.80	8.98	3.23	9.70	8.89	3.20	9.60	8.80	3.17	9.51	8.71	3.14	9.41	8.62	3.10	9.31	8.53	3.07	8.93	8.18	2.94	/	/	/
	Power	3.06	2.81	0.96	3.30	3.02	1.04	3.72	3.41	1.17	4.19	3.84	1.32	4.62	4.23	1.45	5.09	4.66	1.60	5.77	5.28	1.81	6.59	6.04	2.07	/	/	/
	Efficiency	3.23	3.23	3.39	2.97	2.97	3.12	2.60	2.60	2.73	2.29	2.29	2.41	2.06	2.06	2.16	1.85	1.85	1.94	1.61	1.61	1.69	1.35	1.35	1.42	/	/	/
-2	Capacity	10.44	9.80	3.64	10.34	9.71	3.60	10.23	9.61	3.56	10.13	9.51	3.53	10.03	9.42	3.49	9.93	9.32	3.46	9.83	9.23	3.42	9.42	8.84	3.28	/	/	/
	Power	2.84	2.67	0.94	3.06	2.87	1.02	3.45	3.24	1.15	3.88	3.65	1.29	4.28	4.02	1.42	4.72	4.43	1.57	5.35	5.02	1.78	6.11	5.73	2.03	/	/	/
	Efficiency	3.68	3.68	3.85	3.38	3.38	3.54	2.96	2.96	3.10	2.61	2.61	2.73	2.34	2.34	2.45	2.10	2.10	2.20	1.84	1.84	1.93	1.54	1.54	1.61	/	/	/
2	Capacity	10.50	9.75	3.66	10.40	9.65	3.62	10.29	9.56	3.58	10.19	9.46	3.55	10.09	9.37	3.51	9.98	9.27	3.48	9.88	9.18	3.44	9.47	8.79	3.30	/	/	/
	Power	2.56	2.38	0.85	2.76	2.56	0.92	3.11	2.89	1.04	3.50	3.25	1.16	3.86	3.59	1.28	4.25	3.95	1.41	4.82	4.48	1.60	5.51	5.12	1.83	/	/	/
	Efficiency	4.10	4.10	4.29	3.77	3.77	3.95	3.30	3.30	3.46	2.91	2.91	3.05	2.61	2.61	2.73	2.35	2.35	2.46	2.05	2.05	2.15	1.72	1.72	1.80	/	/	/
7	Capacity	10.86	10.30	4.13	10.76	10.20	4.09	10.65	10.20	4.05	10.54	10.00	4.01	10.44	10.00	3.97	10.33	9.80	3.93	10.22	9.70	3.89	9.80	9.29	3.73	7.56	7.17	2.88
	Power	1.79	1.70	0.65	1.93	1.83	0.70	2.18	2.08	0.80	2.45	2.32	0.90	2.70	2.60	0.99	2.98	2.82	1.09	3.37	3.20	1.23	3.85	3.65	1.41	4.55	4.31	1.66
	Efficiency	6.06	6.06	6.31	5.57	5.57	5.80	4.89	4.90	5.09	4.30	4.30	4.48	3.86	3.85	4.02	3.47	3.47	3.61	3.03	3.03	3.16	2.54	2.54	2.65	1.66	1.66	1.73
10	Capacity	11.95	11.33	4.54	11.83	11.22	4.50	11.72	11.11	4.46	11.60	11.00	4.41	11.48	10.89	4.37	11.36	10.78	4.28	11.25	10.67	4.28	10.78	10.22	4.10	8.32	7.89	3.16
	Power	1.89	1.80	0.69	2.04	1.94	0.75	2.30	2.18	0.84	2.59	2.46	0.95	2.86	2.71	1.04	3.15	2.98	1.29	3.57	3.38	1.30	4.08	3.87	1.49	4.81	4.56	1.76
	Efficiency	6.31	6.31	6.56	5.80	5.80	6.03	5.09	5.09	5.29	4.48	4.48	4.66	4.02	4.02	4.18	3.61	3.61	3.31	3.15	3.15	3.28	2.64	2.64	2.75	1.73	1.73	1.80
15	Capacity	10.43	10.56	4.96	10.33	10.46	4.91	10.22	10.36	4.86	10.12	10.25	4.81	10.02	10.15	4.76	9.92	10.05	4.67	9.82	9.94	4.67	9.41	9.53	4.47	7.26	7.35	3.45
	Power	1.46	1.47	0.67	1.57	1.59	0.72	1.77	1.79	0.82	1.99	2.02	0.92	2.20	2.22	1.01	2.42	2.45	1.25	2.74	2.77	1.26	3.14	3.17	1.44	3.70	3.74	1.70
	Efficiency	7.15	7.17	7.38	6.58	6.59	6.79	5.77	5.78	5.96	5.08	5.09	5.24	4.56	4.57	4.70	4.10	4.10	3.72	3.58	3.58	3.69	3.00	3.01	3.10	1.96	1.97	2.02
20	Capacity	10.60	10.74	5.04	10.50	10.63	4.99	10.39	10.53	4.94	10.29	10.42	4.89	10.19	10.32	4.84	10.08	10.21	4.74	9.98	10.11	4.74	9.56	9.69	4.55	7.38	7.48	3.51
	Power	1.43	1.45	0.66	1.54	1.56	0.71	1.74	1.76	0.80	1.96	1.98	0.90	2.16	2.19	1.00	2.38	2.41	1.23	2.70	2.73	1.24	3.08	3.12	1.42	3.64	3.68	1.68
	Efficiency	7.40	7.41	7.64	6.80	6.81	7.02	5.97	5.98	6.16	5.25	5.26	5.42	4.71	4.72	4.87	4.24	4.24	3.85	3.70	3.71	3.82	3.10	3.11	3.20	2.03	2.03	2.09
25	Capacity	10.78	10.92	5.12	10.67	10.81	5.07	10.56	10.70	5.02	10.46	10.59	4.97	10.35	10.49	4.92	10.25	10.38	4.82	10.14	10.27	4.82	9.72	9.85	4.62	/	/	/
	Power	1.34	1.35	0.61	1.44	1.45	0.66	1.62	1.64	0.75	1.83	1.85	0.84	2.01	2.04	0.93	2.22	2.24	1.15	2.51	2.54	1.16	2.87	2.90	1.32	/	/	/
	Efficiency	8.07	8.09	8.33	7.42	7.43	7.66	6.51	6.52	6.72	5.73	5.74	5.91	5.14	5.15	5.31	4.62	4.63	4.20	4.03	4.04	4.17	3.38	3.39	3.49	/	/	/
30	Capacity	11.51	11.41	6.61	11.39	11.30	6.54	11.28	11.18	6.48	11.17	11.07	6.42	11.05	10.96	6.35	10.94	10.85	6.22	10.83	10.74	6.22	10.38	10.29	5.96	/	/	/
	Power	1.36	1.35	0.76	1.46	1.45	0.82	1.65	1.64	0.93	1.86	1.84	1.05	2.05	2.03	1.15	2.26	2.24	1.43	2.56	2.53	1.44	2.93	2.89	1.64	/	/	/
	Efficiency	8.46	8.48	8.65	7.78	7.79	7.95	6.82	6.84	6.97	6.00	6.02	6.14	5.39	5.40	5.51	4.84	4.85	4.36	4.23	4.24	4.32	3.55	3.55	3.63	/	/	/
35	Capacity	12.15	12.05	6.98	12.03	11.93	6.91	11.91	11.81	6.84	11.80	11.69	6.78	11.68	11.58	6.71	11.56	11.46	6.57	11.44	11.34	6.57	10.96	10.87	6.30	/	/	/
	Power	1.39	1.37	0.78	1.49	1.48	0.84	1.68	1.67	0.95	1.90	1.88	1.07	2.09	2.07	1.17	2.30	2.28	1.46	2.61	2.58	1.47	2.98	2.95	1.68	/	/	/
	Efficiency	8.77	8.79	8.96	8.06	8.08	8.24	7.07	7.09	7.23	6.22	6.24	6.36	5.59	5.60	5.71	5.02	5.03	4.52	4.38	4.39	4.48	3.68	3.68	3.76	/	/	/

GRS-CQ12Pd/NhH3-M

Ambient Temp(°C)	Outflow Water(°C)	25			30			35			40			45			50			55			60			65		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-30	Capacity	4.77	4.60	2.69	4.87	4.70	2.74	4.92	4.74	2.77	4.87	4.70	2.74	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Power	3.51	3.33	1.68	3.90	3.70	1.86	4.41	4.19	2.11	4.96	4.71	2.37	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.36	1.38	1.60	1.25	1.27	1.47	1.12	1.13	1.32	0.98	1.00	1.16	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
-25	Capacity	5.55	5.35	3.13	5.67	5.47	3.19	5.72	5.52	3.23	5.67	5.47	3.19	5.61	5.41	3.16	/	/	/	/	/	/	/	/	/	/	/	/
	Power	3.52	3.34	1.68	3.91	3.71	1.87	4.42	4.20	2.12	4.98	4.73	2.38	5.42	5.15	2.59	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.58	1.60	1.86	1.45	1.47	1.71	1.29	1.31	1.53	1.14	1.16	1.34	1.03	1.05	1.22	/	/	/	/	/	/	/	/	/	/	/	/
-20	Capacity	6.80	6.56	3.84	6.94	6.70	3.91	7.01	6.76	3.95	6.94	6.70	3.91	6.87	6.63	3.88	6.80	6.56	3.84	6.80	6.56	3.84	/	/	/	/	/	/
	Power	4.03	3.83	1.93	4.48	4.26	2.14	5.07	4.82	2.42	5.71	5.42	2.73	6.21	5.90	2.97	6.83	6.49	3.27	7.81	7.42	3.73	/	/	/	/	/	/
	Efficiency	1.69	1.71	1.99	1.55	1.57	1.83	1.38	1.40	1.63	1.22	1.24	1.43	1.11	1.12	1.30	1.00	1.01	1.17	0.87	0.88	1.03	/	/	/	/	/	/
-15	Capacity	7.77	7.48	4.54	7.93	7.64	4.63	8.01	7.71	4.68	7.93	7.64	4.63	7.85	7.56	4.59	7.77	7.48	4.54	7.77	7.48	4.54	7.69	7.41	4.49	/	/	/
	Power	3.80	3.61	1.91	4.22	4.02	2.13	4.78	4.54	2.41	5.38	5.11	2.71	5.85	5.56	2.95	6.44	6.12	3.24	7.36	6.99	3.70	8.19	7.79	4.12	/	/	/
	Efficiency	2.04	2.07	2.37	1.88	1.90	2.18	1.68	1.70	1.95	1.47	1.49	1.71	1.34	1.36	1.56	1.21	1.22	1.40	1.06	1.07	1.23	0.94	0.95	1.09	/	/	/
-10	Capacity	9.58	9.23	5.60	9.78	9.42	5.71	9.87	9.51	5.77	9.78	9.42	5.71	9.68	9.32	5.66	9.58	9.23	5.60	9.58	9.23	5.60	9.48	9.13	5.54	/	/	/
	Power	3.77	3.58	1.90	4.19	3.98	2.11	4.74	4.51	2.39	5.33	5.07	2.68	5.80	5.52	2.92	6.38	6.07	3.21	7.30	6.94	3.67	8.12	7.72	4.09	/	/	/
	Efficiency	2.54	2.58	2.95	2.33	2.36	2.71	2.08	2.11	2.42	1.83	1.86	2.13	1.67	1.69	1.94	1.50	1.52	1.74	1.31	1.33	1.52	1.17	1.18	1.35	/	/	/
-7	Capacity	10.48	10.10	6.13	10.70	10.31	6.25	10.81	10.41	6.32	10.70	10.31	6.25	10.59	10.20	6.19	10.48	10.10	6.13	10.48	10.10	6.13	10.37	9.99	6.06	/	/	/
	Power	3.33	3.16	1.68	3.70	3.52	1.86	4.19	3.98	2.11	4.71	4.48	2.37	5.13	4.87	2.58	5.64	5.36	2.84	6.44	6.13	3.24	7.18	6.82	3.61	/	/	/
	Efficiency	3.15	3.19	3.66	2.89	2.93	3.36	2.58	2.62	3.00	2.27	2.30	2.64	2.07	2.09	2.40	1.86	1.88	2.16	1.63	1.65	1.89	1.45	1.47	1.68	/	/	/
-2	Capacity	10.90	10.33	6.88	11.13	10.54	7.02	11.24	10.65	7.09	11.13	10.54	7.02	11.02	10.43	6.95	10.90	10.33	6.88	10.90	10.33	6.88	10.79	10.22	6.81	/	/	/
	Power	2.80	2.61	1.56	3.11	2.90	1.74	3.52	3.28	1.97	3.96	3.69	2.21	4.31	4.02	2.41	4.74	4.42	2.65	5.42	5.05	3.03	6.04	5.62	3.37	/	/	/
	Efficiency	3.89	3.96	4.40	3.58	3.64	4.04	3.19	3.25	3.60	2.81	2.86	3.17	2.55	2.60	2.88	2.30	2.34	2.59	2.01	2.05	2.27	1.79	1.82	2.02	/	/	/
2	Capacity	11.88	11.25	7.49	12.13	11.49	7.65	12.25	11.60	7.73	12.13	11.49	7.65	12.00	11.37	7.57	11.88	11.25	7.49	11.88	11.25	7.49	11.76	11.14	7.42	/	/	/
	Power	2.75	2.56	1.54	3.06	2.85	1.71	3.46	3.22	1.93	3.89	3.62	2.17	4.24	3.95	2.37	4.66	4.34	2.60	5.32	4.96	2.98	5.93	5.52	3.31	/	/	/
	Efficiency	4.32	4.39	4.88	3.97	4.03	4.48	3.54	3.60	4.00	3.12	3.17	3.52	2.83	2.88	3.20	2.55	2.59	2.88	2.23	2.27	2.52	1.98	2.02	2.24	/	/	/
7	Capacity	12.50	11.83	8.82	12.76	12.08	9.00	12.89	12.20	9.09	12.76	12.08	9.00	12.63	12.30	8.91	12.50	11.83	8.82	12.50	12.00	8.82	12.37	11.71	8.73	12.25	11.59	8.64
	Power	2.12	1.94	1.37	2.36	2.16	1.53	2.67	2.42	1.73	3.00	2.75	1.94	3.27	3.24	2.12	3.60	3.29	2.33	4.11	3.87	2.66	4.57	4.18	2.96	5.07	4.64	3.28
	Efficiency	5.89	6.10	6.42	5.41	5.60	5.89	4.83	5.05	5.26	4.25	4.40	4.63	3.86	3.80	4.21	3.48	3.60	3.79	3.04	3.10	3.31	2.70	2.80	2.95	2.42	2.50	2.63
10	Capacity	12.88	12.19	9.08	13.14	12.44	9.27	13.28	12.57	9.36	13.14	12.44	9.27	13.01	12.31	9.18	12.88	12.19	8.99	12.88	12.19	9.08	12.75	12.06	8.99	12.61	11.94	8.89
	Power	2.13	1.95	1.38	2.37	2.17	1.54	2.68	2.45	1.74	3.02	2.76	1.95	3.29	3.00	2.13	3.61	3.30	2.63	4.13	3.78	2.67	4.60	4.20	2.98	5.10	4.66	3.30
	Efficiency	6.04	6.25	6.58	5.54	5.74	6.04	4.95	5.13	5.39	4.36	4.51	4.74	3.96	4.10	4.31	3.56	3.69	3.42	3.12	3.23	3.40	2.77	2.87	3.02	2.48	2.56	2.70
15	Capacity	13.11	12.05	10.14	13.38	12.30	10.35	13.51	12.42	10.45	13.38	12.30	10.35	13.24	12.17	10.24	13.11	12.05	10.04	13.11	12.05	10.14	12.97	11.92	10.04	12.84	11.80	9.93
	Power	1.94	1.75	1.42	2.16	1.95	1.58	2.44	2.20	1.78	2.75	2.48	2.01	2.99	2.70	2.18	3.29	2.97	2.70	3.76	3.39	2.74	4.19	3.77	3.06	4.64	4.18	3.39
	Efficiency	6.75	6.88	7.16	6.19	6.32	6.57	5.53	5.64	5.86	4.87	4.96	5.16	4.42	4.51	4.69	3.98	4.06	3.72	3.48	3.55	3.69	3.10	3.16	3.28	2.77	2.82	2.93
20	Capacity	14.36	13.20	11.11	14.66	13.47	11.34	14.81	13.61	11.45	14.66	13.47	11.34	14.51	13.34	11.22	14.36	13.20	11.00	14.36	13.20	11.11	14.21	13.06	11.00	14.06	12.93	10.88
	Power	2.00	1.80	1.46	2.23	2.01	1.62	2.52	2.27	1.84	2.83	2.55	2.07	3.09	2.78	2.25	3.39	3.06	2.78	3.88	3.49	2.83	4.32	3.89	3.15	4.79	4.31	3.49
	Efficiency	7.17	7.32	7.60	6.58	6.72	6.98	5.88	6.00	6.23	5.17	5.28	5.49	4.70	4.80	4.99	4.23	4.32	3.95	3.70	3.78	3.93	3.29	3.36	3.49	2.94	3.00	3.12
25	Capacity	15.73	14.46	12.17	16.05	14.75	12.42	16.22	14.90	12.54	16.05	14.75	12.42	15.89	14.61	12.29	15.73	14.46	12.05	15.73	14.46	12.17	15.57	14.31	12.04	/	/	/
	Power	2.07	1.87	1.51	2.30	2.07	1.68	2.60	2.35	1.90	2.93	2.64	2.14	3.19	2.88	2.33	3.51	3.16	2.88	4.01	3.61	2.93	4.47	4.02	3.26	/	/	/
	Efficiency	7.59	7.75	8.05	6.97	7.11	7.39	6.22	6.35	6.60	5.48	5.59	5.81	4.98	5.08	5.28	4.48	4.57	4.18	3.92	4.00	4.16	3.49	3.56	3.70	/	/	/
30	Capacity	15.71	15.16	13.23	16.04	15.47	13.50	16.20	15.63	13.64	16.04	15.47	13.50	15.88	15.32	13.36	15.71	15.16	13.09	15.71	15.16	13.23	15.55	15.00	13.09	/	/	/
	Power	1.95	1.86	1.58	2.17	2.07	1.76	2.45	2.34	1.99	2.76	2.64	2.23	3.01	2.87	2.43	3.31	3.16	3.01	3.78	3.61	3.06	4.21	4.02	3.41	/	/	/
	Efficiency	8.06	8.14	8.37	7.40	7.47	7.69	6.60	6.67	6.86	5.81	5.87	6.04	5.28	5.33	5.49	4.75	4.80	4.35	4.16	4.20	4.32	3.70	3.73	3.84	/	/	/
35	Capacity	16.55	15.97	13.93	16.89	16.30	14.22	17.06	16.46	14.36	16.89	16.30	14.22	16.72	16.13	14.07	16.55	15.97	13.79	16.55	15.97	13.93	16.38	15.81	13.79	/	/	/
	Power	1.98	1.89	1.60	2.20	2.10	1.78	2.49	2.38	2.02	2.80	2.67	2.27	3.05	2.91	2.47	3.35	3.20	3.05	3.83	3.66	3.10	4.27	4.08	3.45	/	/	/
	Efficiency	8.36	8.45	8.70	7.68	7.75	7.98	6.86	6.92	7.13	6.03	6.09	6.27	5.49	5.54	5.70	4.94	4.99	4.52	4.32	4.36	4.49	3.84	3.88	3.99	/	/	/

GRS-CQ14Pd/NhH3-M

Ambient Temp(°C)	Outflow Water(°C)	25			30			35			40			45			50			55			60			65		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-30	Capacity	5.56	5.38	2.96	5.68	5.49	3.02	5.74	5.54	3.05	5.68	5.49	3.02	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Power	4.39	4.19	1.94	4.89	4.66	2.16	5.53	5.27	2.44	6.22	5.93	2.74	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.27	1.28	1.53	1.16	1.18	1.40	1.04	1.05	1.25	0.91	0.93	1.10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
-25	Capacity	6.39	6.18	3.40	6.52	6.31	3.47	6.59	6.37	3.51	6.52	6.31	3.47	6.46	6.24	3.44	/	/	/	/	/	/	/	/	/	/	/	/
	Power	4.32	4.12	1.91	4.81	4.58	2.12	5.44	5.18	2.40	6.12	5.83	2.70	6.66	6.35	2.94	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.48	1.50	1.78	1.36	1.38	1.64	1.21	1.23	1.46	1.07	1.08	1.29	0.97	0.98	1.17	/	/	/	/	/	/	/	/	/	/	/	/
-20	Capacity	7.72	7.46	4.11	7.88	7.61	4.19	7.95	7.69	4.24	7.88	7.61	4.19	7.80	7.54	4.15	7.72	7.46	4.11	7.72	7.46	4.11	/	/	/	/	/	/
	Power	4.87	4.64	2.15	5.41	5.16	2.39	6.12	5.84	2.70	6.89	6.57	3.04	7.50	7.15	3.31	8.25	7.86	3.64	9.43	8.99	4.16	/	/	/	/	/	/
	Efficiency	1.59	1.61	1.91	1.46	1.48	1.76	1.30	1.32	1.57	1.14	1.16	1.38	1.04	1.05	1.25	0.94	0.95	1.13	0.82	0.83	0.99	/	/	/	/	/	/
-15	Capacity	8.54	8.44	4.81	8.71	8.61	4.91	8.80	8.70	4.96	8.71	8.61	4.91	8.63	8.52	4.86	8.54	8.44	4.81	8.54	8.44	4.81	8.45	8.35	4.76	/	/	/
	Power	4.38	4.31	2.10	4.87	4.79	2.33	5.51	5.42	2.64	6.20	6.10	2.97	6.75	6.64	3.23	7.43	7.31	3.55	8.49	8.35	4.06	9.45	9.30	4.52	/	/	/
	Efficiency	1.95	1.96	2.30	1.79	1.80	2.11	1.60	1.60	1.88	1.41	1.41	1.66	1.28	1.28	1.51	1.15	1.15	1.36	1.01	1.01	1.19	0.89	0.90	1.05	/	/	/
-10	Capacity	10.41	10.29	5.87	10.63	10.50	5.99	10.74	10.61	6.05	10.63	10.50	5.99	10.52	10.40	5.93	10.41	10.29	5.87	10.41	10.29	5.87	10.31	10.19	5.81	/	/	/
	Power	4.27	4.20	2.04	4.75	4.67	2.27	5.37	5.29	2.57	6.04	5.95	2.89	6.58	6.48	3.15	7.24	7.12	3.46	8.27	8.14	3.96	9.21	9.06	4.40	/	/	/
	Efficiency	2.44	2.45	2.87	2.24	2.25	2.64	2.00	2.01	2.36	1.76	1.77	2.07	1.60	1.61	1.89	1.44	1.45	1.70	1.26	1.26	1.48	1.12	1.12	1.32	/	/	/
-7	Capacity	11.35	11.22	6.40	11.59	11.45	6.53	11.70	11.57	6.60	11.59	11.45	6.53	11.47	11.33	6.47	11.35	11.22	6.40	11.35	11.22	6.40	11.23	11.10	6.34	/	/	/
	Power	3.74	3.68	1.79	4.16	4.09	1.99	4.70	4.63	2.25	5.29	5.20	2.53	5.76	5.67	2.75	6.34	6.23	3.03	7.24	7.12	3.46	8.06	7.93	3.85	/	/	/
	Efficiency	3.04	3.05	3.58	2.79	2.80	3.29	2.49	2.50	2.94	2.19	2.20	2.58	1.99	2.00	2.35	1.79	1.80	2.11	1.57	1.57	1.85	1.39	1.40	1.64	/	/	/
-2	Capacity	12.22	11.32	7.14	12.47	11.56	7.29	12.60	11.67	7.36	12.47	11.56	7.29	12.34	11.44	7.22	12.22	11.32	7.14	12.22	11.32	7.14	12.09	11.21	7.07	/	/	/
	Power	3.23	2.91	1.62	3.59	3.23	1.81	4.06	3.66	2.04	4.57	4.11	2.30	4.97	4.48	2.50	5.47	4.93	2.75	6.25	5.63	3.15	6.96	6.27	3.50	/	/	/
	Efficiency	3.79	3.89	4.40	3.48	3.58	4.04	3.10	3.19	3.60	2.73	2.81	3.17	2.48	2.55	2.88	2.23	2.30	2.59	1.95	2.01	2.27	1.74	1.79	2.02	/	/	/
2	Capacity	12.82	11.88	7.49	13.09	12.13	7.65	13.22	12.25	7.73	13.09	12.13	7.65	12.95	12.00	7.57	12.82	11.88	7.49	12.82	11.88	7.49	12.69	11.76	7.42	/	/	/
	Power	3.05	2.75	1.54	3.39	3.06	1.71	3.84	3.46	1.93	4.32	3.89	2.17	4.70	4.24	2.37	5.17	4.66	2.60	5.91	5.32	2.98	6.58	5.93	3.31	/	/	/
	Efficiency	4.20	4.32	4.88	3.86	3.97	4.48	3.44	3.54	4.00	3.03	3.12	3.52	2.75	2.83	3.20	2.48	2.55	2.88	2.17	2.23	2.52	1.93	1.98	2.24	/	/	/
7	Capacity	13.98	13.06	8.82	14.27	13.33	9.00	14.41	14.50	9.09	14.27	13.33	9.00	14.12	14.00	8.91	13.98	13.06	8.82	13.98	14.00	8.82	13.83	12.92	8.73	13.69	12.79	8.64
	Power	2.46	2.25	1.37	2.73	2.50	1.53	3.09	3.02	1.73	3.48	3.18	1.94	3.79	3.68	2.12	4.17	3.81	2.33	4.76	4.59	2.66	5.30	4.85	2.96	5.88	5.37	3.28
	Efficiency	5.69	5.81	6.42	5.22	5.33	5.89	4.66	4.80	5.26	4.10	4.19	4.63	3.73	3.81	4.21	3.36	3.43	3.79	2.94	3.05	3.31	2.61	2.67	2.95	2.33	2.38	2.63
10	Capacity	14.40	13.45	9.08	14.69	13.73	9.27	14.84	13.86	9.36	14.69	13.73	9.27	14.55	13.59	9.18	14.40	13.45	8.99	14.40	13.45	9.08	14.25	13.31	8.99	14.10	13.17	8.89
	Power	2.47	2.26	1.38	2.75	2.51	1.54	3.11	2.84	1.74	3.50	3.20	1.95	3.81	3.48	2.13	4.19	3.83	2.63	4.78	4.38	2.67	5.33	4.87	2.98	5.90	5.40	3.30
	Efficiency	5.83	5.95	6.58	5.35	5.46	6.04	4.78	4.88	5.39	4.20	4.29	4.74	3.82	3.90	4.31	3.44	3.51	3.42	3.01	3.07	3.40	2.67	2.73	3.02	2.39	2.44	2.70
15	Capacity	14.17	13.11	10.14	14.46	13.38	10.35	14.61	13.51	10.45	14.46	13.38	10.35	14.31	13.24	10.24	14.17	13.11	10.04	14.17	13.11	10.14	14.02	12.97	10.04	13.87	12.84	9.93
	Power	2.15	1.94	1.42	2.39	2.16	1.58	2.70	2.44	1.78	3.04	2.75	2.01	3.31	2.99	2.18	3.64	3.29	2.70	4.16	3.76	2.74	4.63	4.19	3.06	5.13	4.64	3.39
	Efficiency	6.60	6.75	7.16	6.06	6.19	6.57	5.41	5.53	5.86	4.76	4.87	5.16	4.33	4.42	4.69	3.89	3.98	3.72	3.41	3.48	3.69	3.03	3.10	3.28	2.70	2.77	2.93
20	Capacity	15.52	14.36	11.11	15.84	14.66	11.34	16.00	14.81	11.45	15.84	14.66	11.34	15.68	14.51	11.22	15.52	14.36	11.00	15.52	14.36	11.11	15.36	14.21	11.00	15.20	14.06	10.88
	Power	2.21	2.00	1.46	2.46	2.23	1.62	2.78	2.52	1.84	3.13	2.83	2.07	3.41	3.09	2.25	3.75	3.39	2.78	4.29	3.88	2.83	4.77	4.32	3.15	5.29	4.79	3.49
	Efficiency	7.01	7.17	7.60	6.44	6.58	6.98	5.75	5.88	6.23	5.06	5.17	5.49	4.60	4.70	4.99	4.14	4.23	3.95	3.62	3.70	3.93	3.22	3.29	3.49	2.87	2.94	3.12
25	Capacity	17.00	15.73	12.17	17.35	16.05	12.42	17.53	16.22	12.54	17.35	16.05	12.42	17.18	15.89	12.29	17.00	15.73	12.05	17.00	15.73	12.17	16.82	15.57	12.04	/	/	/
	Power	2.29	2.07	1.51	2.55	2.30	1.68	2.88	2.60	1.90	3.24	2.93	2.14	3.53	3.19	2.33	3.88	3.51	2.88	4.43	4.01	2.93	4.94	4.47	3.26	/	/	/
	Efficiency	7.43	7.59	8.05	6.82	6.97	7.39	6.09	6.22	6.60	5.36	5.48	5.81	4.87	4.98	5.28	4.38	4.48	4.18	3.83	3.92	4.16	3.41	3.49	3.70	/	/	/
30	Capacity	17.10	15.71	13.23	17.45	16.04	13.50	17.63	16.20	13.64	17.45	16.04	13.50	17.27	15.88	13.36	17.10	15.71	13.09	17.10	15.71	13.23	16.92	15.55	13.09	/	/	/
	Power	2.16	1.95	1.58	2.41	2.17	1.76	2.72	2.45	1.99	3.06	2.76	2.23	3.34	3.01	2.43	3.67	3.31	3.01	4.19	3.78	3.06	4.67	4.21	3.41	/	/	/
	Efficiency	7.90	8.06	8.37	7.25	7.40	7.69	6.47	6.60	6.86	5.70	5.81	6.04	5.18	5.28	5.49	4.66	4.75	4.35	4.08	4.16	4.32	3.62	3.70	3.84	/	/	/
35	Capacity	18.01	16.55	13.93	18.38	16.89	14.22	18.57	17.06	14.36	18.38	16.89	14.22	18.19	16.72	14.07	18.01	16.55	13.79	18.01	16.55	13.93	17.82	16.38	13.79	/	/	/
	Power	2.20	1.98	1.60	2.44	2.20	1.78	2.76	2.49	2.02	3.11	2.80	2.27	3.38	3.05	2.47	3.72	3.35	3.05	4.25	3.83	3.10	4.74	4.27	3.45	/	/	/
	Efficiency	8.20	8.36	8.70	7.53	7.68	7.98	6.72	6.86	7.13	5.91	6.03	6.27	5.38	5.49	5.70	4.84	4.94	4.52	4.23	4.32	4.49	3.76	3.84	3.99	/	/	/

GRS-CQ12Pd/NhH3-M1

Ambient Temp(°C)	Outflow Water(°C)	25			30			35			40			45			50			55			60			65		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-30	Capacity	6.22	5.47	3.18	6.35	5.58	3.24	6.41	5.64	3.28	6.35	5.58	3.24	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Power	4.78	4.01	2.06	5.32	4.45	2.29	6.01	5.04	2.59	6.76	5.67	2.92	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.30	1.36	1.54	1.19	1.25	1.42	1.07	1.12	1.26	0.94	0.98	1.11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
-25	Capacity	7.09	6.23	3.62	7.24	6.36	3.70	7.31	6.43	3.74	7.24	6.36	3.70	7.17	6.30	3.66	/	/	/	/	/	/	/	/	/	/	/	/
	Power	4.67	3.91	2.01	5.19	4.35	2.24	5.87	4.92	2.53	6.60	5.53	2.85	7.19	6.03	3.10	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.52	1.59	1.80	1.39	1.46	1.65	1.25	1.31	1.48	1.10	1.15	1.30	1.00	1.05	1.18	/	/	/	/	/	/	/	/	/	/	/	/
-20	Capacity	8.49	7.46	4.34	8.67	7.62	4.43	8.75	7.69	4.47	8.67	7.62	4.43	8.58	7.54	4.38	8.49	7.46	4.34	8.49	7.46	4.34	/	/	/	/	/	/
	Power	5.21	4.37	2.25	5.80	4.86	2.50	6.56	5.49	2.83	7.38	6.18	3.18	8.03	6.73	3.46	8.83	7.40	3.81	10.09	8.46	4.35	/	/	/	/	/	/
	Efficiency	1.63	1.71	1.93	1.50	1.57	1.77	1.34	1.40	1.58	1.17	1.23	1.39	1.07	1.12	1.27	0.96	1.01	1.14	0.84	0.88	1.00	/	/	/	/	/	/
-15	Capacity	8.69	8.56	5.05	8.87	8.74	5.16	8.96	8.82	5.21	8.87	8.74	5.16	8.78	8.65	5.10	8.69	8.56	5.05	8.69	8.56	5.05	8.60	8.47	5.00	/	/	/
	Power	4.23	4.14	2.18	4.71	4.61	2.42	5.32	5.21	2.74	5.99	5.86	3.08	6.52	6.38	3.36	7.17	7.02	3.69	8.20	8.02	4.22	9.13	8.93	4.70	/	/	/
	Efficiency	2.05	2.07	2.32	1.88	1.90	2.13	1.68	1.69	1.90	1.48	1.49	1.67	1.35	1.35	1.52	1.21	1.22	1.37	1.06	1.07	1.20	0.94	0.95	1.06	/	/	/
-10	Capacity	10.53	10.37	6.12	10.75	10.59	6.25	10.86	10.69	6.31	10.75	10.59	6.25	10.64	10.48	6.18	10.53	10.37	6.12	10.53	10.37	6.12	10.43	10.27	6.06	/	/	/
	Power	4.10	4.01	2.11	4.56	4.46	2.35	5.16	5.05	2.65	5.80	5.68	2.98	6.32	6.18	3.25	6.95	6.80	3.57	7.94	7.77	4.08	8.84	8.65	4.55	/	/	/
	Efficiency	2.57	2.59	2.90	2.36	2.37	2.66	2.11	2.12	2.38	1.85	1.86	2.09	1.68	1.70	1.90	1.52	1.53	1.71	1.33	1.33	1.50	1.18	1.19	1.33	/	/	/
-7	Capacity	11.45	11.28	6.66	11.69	11.51	6.79	11.81	11.63	6.86	11.69	11.51	6.79	11.57	11.40	6.73	11.45	11.28	6.66	11.45	11.28	6.66	11.34	11.16	6.59	/	/	/
	Power	3.58	3.50	1.84	3.98	3.89	2.05	4.50	4.41	2.32	5.07	4.96	2.61	5.52	5.40	2.84	6.07	5.94	3.12	6.93	6.78	3.57	7.72	7.55	3.97	/	/	/
	Efficiency	3.20	3.22	3.61	2.94	2.96	3.32	2.62	2.64	2.96	2.31	2.32	2.61	2.10	2.11	2.37	1.89	1.90	2.13	1.65	1.66	1.87	1.47	1.48	1.66	/	/	/
-2	Capacity	12.28	11.35	7.14	12.54	11.58	7.29	12.66	11.70	7.36	12.54	11.58	7.29	12.41	11.46	7.21	12.28	11.35	7.14	12.28	11.35	7.14	12.16	11.23	7.07	/	/	/
	Power	3.13	2.81	1.61	3.48	3.12	1.79	3.93	3.54	2.02	4.43	3.98	2.28	4.82	4.33	2.48	5.30	4.76	2.73	6.06	5.44	3.12	6.74	6.06	3.47	/	/	/
	Efficiency	3.93	4.04	4.44	3.61	3.71	4.07	3.22	3.31	3.64	2.83	2.91	3.20	2.58	2.65	2.91	2.32	2.38	2.62	2.03	2.08	2.29	1.80	1.85	2.04	/	/	/
2	Capacity	12.59	11.63	7.32	12.85	11.87	7.47	12.98	11.99	7.54	12.85	11.87	7.47	12.72	11.75	7.39	12.59	11.63	7.32	12.59	11.63	7.32	12.46	11.51	7.24	/	/	/
	Power	2.89	2.60	1.49	3.21	2.89	1.65	3.63	3.27	1.87	4.09	3.67	2.10	4.45	4.00	2.29	4.90	4.40	2.52	5.60	5.03	2.88	6.23	5.60	3.20	/	/	/
	Efficiency	4.36	4.48	4.92	4.00	4.11	4.52	3.57	3.67	4.04	3.14	3.23	3.55	2.86	2.94	3.23	2.57	2.64	2.91	2.25	2.31	2.54	2.00	2.06	2.26	/	/	/
7	Capacity	14.41	11.83	8.92	14.71	12.08	9.11	14.86	12.20	9.20	14.71	12.08	9.11	14.56	12.30	9.02	14.41	11.83	8.92	14.41	12.00	8.92	14.27	11.71	8.83	14.12	11.59	8.74
	Power	2.46	1.91	1.38	2.74	2.12	1.53	3.10	2.40	1.73	3.48	2.70	1.95	3.79	3.24	2.12	4.17	3.24	2.33	4.77	3.81	2.67	5.31	4.12	2.97	5.88	4.56	3.29
	Efficiency	5.86	6.20	6.48	5.38	5.69	5.95	4.80	5.08	5.31	4.22	4.47	4.67	3.84	3.80	4.25	3.46	3.66	3.82	3.02	3.15	3.35	2.69	2.84	2.97	2.40	2.54	2.66
10	Capacity	14.85	12.19	9.19	15.15	12.44	9.38	15.31	12.57	9.48	15.15	12.44	9.38	15.00	12.31	9.29	14.85	12.19	9.10	14.85	12.19	9.19	14.69	12.06	9.10	14.54	11.94	9.00
	Power	2.47	1.92	1.38	2.75	2.13	1.54	3.11	2.41	1.74	3.50	2.71	1.96	3.81	2.96	2.13	4.19	3.25	2.64	4.79	3.72	2.68	5.33	4.14	2.98	5.91	4.59	3.31
	Efficiency	6.00	6.35	6.64	5.51	5.83	6.10	4.92	5.21	5.44	4.33	4.58	4.79	3.94	4.17	4.35	3.54	3.75	3.45	3.10	3.28	3.43	2.76	2.92	3.05	2.46	2.60	2.72
15	Capacity	14.14	12.79	10.26	14.44	13.06	10.47	14.58	13.19	10.58	14.44	13.06	10.47	14.29	12.93	10.37	14.14	12.79	10.16	14.14	12.79	10.26	14.00	12.66	10.16	13.85	12.53	10.05
	Power	2.07	1.82	1.42	2.30	2.03	1.58	2.60	2.29	1.79	2.93	2.58	2.01	3.19	2.81	2.19	3.50	3.09	2.71	4.00	3.53	2.75	4.46	3.93	3.06	4.94	4.36	3.40
	Efficiency	6.84	7.02	7.22	6.28	6.44	6.63	5.61	5.75	5.92	4.94	5.06	5.21	4.49	4.60	4.74	4.04	4.14	3.75	3.53	3.62	3.73	3.14	3.22	3.32	2.80	2.88	2.96
20	Capacity	15.50	14.02	11.24	15.82	14.31	11.48	15.98	14.45	11.59	15.82	14.31	11.48	15.66	14.16	11.36	15.50	14.02	11.13	15.50	14.02	11.24	15.34	13.87	11.13	15.18	13.73	11.01
	Power	2.13	1.88	1.46	2.37	2.09	1.63	2.68	2.36	1.84	3.02	2.66	2.07	3.28	2.90	2.26	3.61	3.18	2.79	4.13	3.64	2.84	4.60	4.05	3.16	5.09	4.49	3.50
	Efficiency	7.27	7.46	7.68	6.68	6.85	7.05	5.96	6.11	6.29	5.25	5.38	5.54	4.77	4.89	5.03	4.29	4.40	3.99	3.76	3.85	3.96	3.34	3.42	3.52	2.98	3.06	3.15
25	Capacity	16.97	15.35	12.32	17.32	15.67	12.57	17.50	15.83	12.70	17.32	15.67	12.57	17.15	15.51	12.44	16.97	15.35	12.19	16.97	15.35	12.32	16.80	15.20	12.19	/	/	/
	Power	2.20	1.94	1.51	2.45	2.16	1.68	2.77	2.44	1.91	3.12	2.75	2.14	3.40	2.99	2.33	3.73	3.29	2.89	4.27	3.76	2.93	4.75	4.19	3.27	/	/	/
	Efficiency	7.70	7.90	8.13	7.07	7.25	7.46	6.31	6.48	6.66	5.56	5.70	5.86	5.05	5.18	5.33	4.55	4.66	4.22	3.98	4.08	4.20	3.54	3.63	3.73	/	/	/
30	Capacity	16.69	15.99	13.39	17.03	16.32	13.66	17.21	16.49	13.80	17.03	16.32	13.66	16.86	16.16	13.52	16.69	15.99	13.25	16.69	15.99	13.39	16.52	15.83	13.25	/	/	/
	Power	2.03	1.93	1.58	2.26	2.14	1.76	2.56	2.42	1.99	2.87	2.73	2.24	3.13	2.97	2.44	3.44	3.27	3.02	3.93	3.73	3.07	4.38	4.16	3.41	/	/	/
	Efficiency	8.22	8.29	8.45	7.54	7.61	7.76	6.73	6.80	6.93	5.93	5.98	6.10	5.39	5.44	5.54	4.85	4.90	4.39	4.24	4.28	4.37	3.77	3.81	3.88	/	/	/
35	Capacity	17.58	16.84	14.10	17.94	17.19	14.39	18.12	17.36	14.54	17.94	17.19	14.39	17.76	17.02	14.25	17.58	16.84	13.96	17.58	16.84	14.10	17.40	16.67	13.95	/	/	/
	Power	2.06	1.96	1.61	2.29	2.17	1.79	2.59	2.46	2.02	2.92	2.77	2.27	3.18	3.01	2.47	3.49	3.31	3.06	3.99	3.79	3.11	4.44	4.22	3.46	/	/	/
	Efficiency	8.53	8.61	8.78	7.83	7.91	8.06	6.99	7.06	7.20	6.15	6.21	6.33	5.59	5.65	5.76	5.03	5.08	4.56	4.40	4.45	4.53	3.92	3.95	4.03	/	/	/

GRS-CQ14Pd/NhH3-M1

Ambient Temp(°C)	Outflow Water(°C)	25			30			35			40			45			50			55			60			65		
	Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
-30	Capacity	6.64	6.47	3.18	6.77	6.60	3.24	6.84	6.67	3.28	6.77	6.60	3.24	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Power	4.87	4.69	1.91	5.41	5.21	2.12	6.12	5.90	2.40	6.89	6.64	2.70	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.36	1.38	1.66	1.25	1.27	1.53	1.12	1.13	1.36	0.98	1.00	1.20	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
-25	Capacity	7.57	7.38	3.62	7.73	7.53	3.70	7.80	7.61	3.74	7.73	7.53	3.70	7.65	7.46	3.66	/	/	/	/	/	/	/	/	/	/	/	/
	Power	4.80	4.63	1.88	5.34	5.15	2.09	6.04	5.82	2.37	6.79	6.55	2.66	7.40	7.13	2.90	/	/	/	/	/	/	/	/	/	/	/	/
	Efficiency	1.58	1.59	1.92	1.45	1.46	1.77	1.29	1.31	1.58	1.14	1.15	1.39	1.03	1.05	1.26	/	/	/	/	/	/	/	/	/	/	/	/
-20	Capacity	9.06	8.83	4.34	9.25	9.02	4.43	9.34	9.11	4.47	9.25	9.02	4.43	9.15	8.93	4.38	9.06	8.83	4.34	9.06	8.83	4.34	/	/	/	/	/	/
	Power	5.39	5.19	2.11	5.99	5.77	2.35	6.77	6.53	2.66	7.62	7.35	2.99	8.30	8.00	3.25	9.13	8.80	3.58	10.43	10.05	4.09	/	/	/	/	/	/
	Efficiency	1.68	1.70	2.05	1.54	1.56	1.89	1.38	1.39	1.68	1.21	1.23	1.48	1.10	1.12	1.35	0.99	1.00	1.21	0.87	0.88	1.06	/	/	/	/	/	/
-15	Capacity	9.89	9.49	5.05	10.09	9.68	5.16	10.19	9.78	5.21	10.09	9.68	5.16	9.99	9.58	5.10	9.89	9.49	5.05	9.89	9.49	5.05	9.79	9.39	5.00	/	/	/
	Power	4.80	4.53	2.07	5.33	5.04	2.30	6.04	5.70	2.60	6.79	6.41	2.93	7.39	6.98	3.19	8.13	7.68	3.50	9.29	8.78	4.00	10.35	9.77	4.46	/	/	/
	Efficiency	2.06	2.09	2.44	1.89	1.92	2.24	1.69	1.72	2.00	1.49	1.51	1.76	1.35	1.37	1.60	1.22	1.24	1.44	1.06	1.08	1.26	0.95	0.96	1.12	/	/	/
-10	Capacity	11.98	11.50	6.12	12.23	11.74	6.25	12.35	11.85	6.31	12.23	11.74	6.25	12.11	11.62	6.18	11.98	11.50	6.12	11.98	11.50	6.12	11.86	11.38	6.06	/	/	/
	Power	4.70	4.44	2.02	5.22	4.93	2.25	5.91	5.58	2.55	6.64	6.28	2.86	7.23	6.83	3.12	7.96	7.52	3.43	9.09	8.59	3.92	10.12	9.56	4.36	/	/	/
	Efficiency	2.55	2.59	3.03	2.34	2.38	2.78	2.09	2.12	2.48	1.84	1.87	2.18	1.67	1.70	1.98	1.51	1.53	1.79	1.32	1.34	1.56	1.17	1.19	1.39	/	/	/
-7	Capacity	13.03	12.50	6.66	13.30	12.76	6.79	13.44	12.89	6.86	13.30	12.76	6.79	13.17	12.63	6.73	13.03	12.50	6.66	13.03	12.50	6.66	12.90	12.38	6.59	/	/	/
	Power	4.13	3.90	1.78	4.59	4.34	1.98	5.20	4.91	2.24	5.85	5.52	2.52	6.37	6.01	2.74	7.00	6.62	3.02	8.00	7.56	3.45	8.91	8.42	3.84	/	/	/
	Efficiency	3.15	3.20	3.74	2.90	2.94	3.43	2.58	2.63	3.06	2.27	2.31	2.70	2.07	2.10	2.45	1.86	1.89	2.21	1.63	1.65	1.93	1.45	1.47	1.72	/	/	/
-2	Capacity	14.50	13.53	7.41	14.80	13.80	7.56	14.95	13.94	7.64	14.80	13.80	7.56	14.65	13.67	7.48	14.50	13.53	7.41	14.50	13.53	7.41	14.35	13.39	7.33	/	/	/
	Power	3.87	3.52	1.67	4.31	3.91	1.86	4.87	4.43	2.10	5.48	4.98	2.36	5.97	5.42	2.57	6.56	5.96	2.83	7.50	6.81	3.23	8.35	7.59	3.60	/	/	/
	Efficiency	3.74	3.84	4.44	3.44	3.53	4.07	3.07	3.15	3.64	2.70	2.77	3.20	2.46	2.52	2.91	2.21	2.27	2.62	1.93	1.99	2.29	1.72	1.76	2.04	/	/	/
2	Capacity	14.85	13.85	7.59	15.16	14.14	7.74	15.31	14.28	7.82	15.16	14.14	7.74	15.00	13.99	7.66	14.85	13.85	7.59	14.85	13.85	7.59	14.70	13.71	7.51	/	/	/
	Power	3.57	3.25	1.54	3.97	3.61	1.71	4.50	4.08	1.94	5.06	4.60	2.18	5.51	5.00	2.37	6.06	5.50	2.61	6.92	6.29	2.98	7.71	7.00	3.32	/	/	/
	Efficiency	4.15	4.27	4.92	3.81	3.92	4.52	3.40	3.50	4.04	3.00	3.08	3.55	2.72	2.80	3.23	2.45	2.52	2.91	2.15	2.20	2.54	1.91	1.96	2.26	/	/	/
7	Capacity	15.36	14.16	8.92	15.67	14.45	9.11	15.83	14.60	9.20	15.67	14.45	9.11	15.51	14.20	9.02	15.36	14.16	8.92	15.36	14.00	8.92	15.20	14.02	8.83	15.04	13.87	8.74
	Power	2.68	2.40	1.38	2.98	2.67	1.53	3.37	3.04	1.73	3.79	3.40	1.95	4.13	3.74	2.12	4.54	4.07	2.33	5.19	4.52	2.67	5.77	5.18	2.97	6.40	5.74	3.29
	Efficiency	5.73	5.89	6.48	5.26	5.41	5.95	4.70	4.80	5.31	4.14	4.25	4.67	3.76	3.80	4.25	3.38	3.48	3.82	2.96	3.10	3.35	2.63	2.70	2.97	2.35	2.42	2.66
10	Capacity	15.51	14.30	9.01	15.83	14.60	9.20	15.99	14.75	9.29	15.83	14.60	9.20	15.67	14.45	9.11	15.51	14.30	8.92	15.51	14.30	9.01	15.35	14.16	8.92	15.19	14.01	8.83
	Power	2.64	2.37	1.36	2.93	2.63	1.51	3.32	2.98	1.71	3.73	3.35	1.92	4.07	3.65	2.09	4.47	4.01	2.59	5.11	4.59	2.63	5.69	5.11	2.93	6.31	5.66	3.24
	Efficiency	5.88	6.04	6.64	5.40	5.54	6.10	4.82	4.95	5.44	4.24	4.36	4.79	3.85	3.96	4.35	3.47	3.56	3.45	3.04	3.12	3.43	2.70	2.77	3.05	2.41	2.48	2.72
15	Capacity	15.97	15.37	11.16	16.30	15.69	11.39	16.46	15.85	11.50	16.30	15.69	11.39	16.13	15.53	11.27	15.97	15.37	11.04	15.97	15.37	11.16	15.80	15.22	11.04	15.64	15.06	10.93
	Power	2.36	2.25	1.54	2.62	2.50	1.72	2.96	2.83	1.94	3.34	3.18	2.19	3.63	3.46	2.38	3.99	3.81	2.94	4.56	4.35	2.99	5.08	4.84	3.33	5.63	5.37	3.69
	Efficiency	6.77	6.84	7.22	6.22	6.28	6.63	5.55	5.61	5.92	4.89	4.94	5.21	4.44	4.49	4.74	4.00	4.04	3.75	3.50	3.53	3.73	3.11	3.14	3.32	2.78	2.80	2.96
20	Capacity	16.10	15.50	11.24	16.43	15.82	11.48	16.59	15.98	11.59	16.43	15.82	11.48	16.26	15.66	11.36	16.10	15.50	11.13	16.10	15.50	11.24	15.93	15.34	11.13	15.76	15.18	11.01
	Power	2.24	2.13	1.46	2.49	2.37	1.63	2.81	2.68	1.84	3.16	3.02	2.07	3.44	3.28	2.26	3.79	3.61	2.79	4.33	4.13	2.84	4.82	4.60	3.16	5.34	5.09	3.50
	Efficiency	7.20	7.27	7.68	6.61	6.68	7.05	5.90	5.96	6.29	5.19	5.25	5.54	4.72	4.77	5.03	4.25	4.29	3.99	3.72	3.76	3.96	3.30	3.34	3.52	2.95	2.98	3.15
25	Capacity	17.63	16.97	12.32	17.99	17.32	12.57	18.17	17.50	12.70	17.99	17.32	12.57	17.81	17.15	12.44	17.63	16.97	12.19	17.63	16.97	12.32	17.45	16.80	12.19	/	/	/
	Power	2.31	2.20	1.51	2.57	2.45	1.68	2.91	2.77	1.91	3.27	3.12	2.14	3.56	3.40	2.33	3.92	3.73	2.89	4.48	4.27	2.93	4.99	4.75	3.27	/	/	/
	Efficiency	7.62	7.70	8.13	7.00	7.07	7.46	6.25	6.31	6.66	5.50	5.56	5.86	5.00	5.05	5.33	4.50	4.55	4.22	3.94	3.98	4.20	3.50	3.54	3.73	/	/	/
30	Capacity	17.75	17.40	13.39	18.12	17.76	13.66	18.30	17.94	13.80	18.12	17.76	13.66	17.93	17.58	13.52	17.75	17.40	13.25	17.75	17.40	13.39	17.57	17.22	13.25	/	/	/
	Power	2.19	2.14	1.58	2.44	2.38	1.76	2.76	2.69	1.99	3.11	3.03	2.24	3.38	3.30	2.44	3.72	3.62	3.02	4.25	4.14	3.07	4.73	4.61	3.41	/	/	/
	Efficiency	8.09	8.14	8.45	7.42	7.47	7.76	6.63	6.67	6.93	5.83	5.87	6.10	5.30	5.33	5.54	4.77	4.80	4.39	4.18	4.20	4.37	3.71	3.73	3.88	/	/	/
35	Capacity	18.70	18.33	14.10	19.08	18.71	14.39	19.28	18.90	14.54	19.08	18.71	14.39	18.89	18.52	14.25	18.70	18.33	13.96	18.70	18.33	14.10	18.50	18.14	13.95	/	/	/
	Power	2.23	2.17	1.61	2.48	2.41	1.79	2.80	2.73	2.02	3.15	3.07	2.27	3.43	3.34	2.47	3.77	3.68	3.06	4.31	4.20	3.11	4.80	4.68	3.46	/	/	/
	Efficiency	8.40	8.45	8.78	7.71	7.75	8.06	6.88	6.92	7.20	6.06	6.09	6.33	5.51	5.54	5.76	4.96	4.99	4.56	4.34	4.36	4.53	3.85	3.88	4.03	/	/	/

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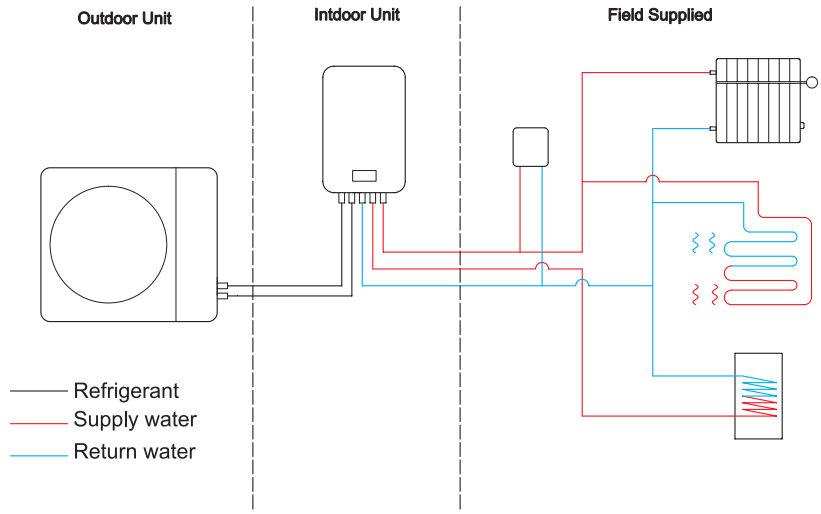
Ambient Temp(°C)		Outflow Water(°C)	25			30			35			40			45			50			55			60			65		
		Capacity level	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min	max	nom	min
	-30	Capacity	7.26	7.08	3.39	7.41	7.23	3.46	7.49	7.30	3.50	7.41	7.23	3.46	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
		Power	5.39	5.19	2.04	5.99	5.77	2.26	6.77	6.53	2.56	7.62	7.35	2.88	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
		Efficiency	1.35	1.36	1.66	1.24	1.25	1.53	1.11	1.12	1.36	0.97	0.98	1.20	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	-25	Capacity	8.22	8.02	3.84	8.39	8.18	3.92	8.47	8.26	3.96	8.39	8.18	3.92	8.30	8.10	3.88	/	/	/	/	/	/	/	/	/	/	/	/
		Power	5.27	5.09	1.99	5.86	5.65	2.22	6.63	6.40	2.51	7.46	7.20	2.82	8.13	7.84	3.07	/	/	/	/	/	/	/	/	/	/	/	/
		Efficiency	1.56	1.58	1.92	1.43	1.45	1.77	1.28	1.29	1.58	1.12	1.14	1.39	1.02	1.03	1.26	/	/	/	/	/	/	/	/	/	/	/	/
	-20	Capacity	9.75	9.51	4.55	9.95	9.70	4.65	10.05	9.80	4.69	9.95	9.70	4.65	9.85	9.61	4.60	9.75	9.51	4.55	9.75	9.51	4.55	/	/	/	/	/	/
		Power	5.86	5.65	2.22	6.52	6.28	2.46	7.37	7.11	2.79	8.29	8.00	3.14	9.03	8.71	3.41	9.93	9.58	3.76	11.35	10.94	4.29	/	/	/	/	/	/
		Efficiency	1.66	1.68	2.05	1.53	1.54	1.89	1.36	1.38	1.68	1.20	1.21	1.48	1.09	1.10	1.35	0.98	0.99	1.21	0.86	0.87	1.06	/	/	/	/	/	/
	-15	Capacity	10.72	10.58	5.27	10.95	10.80	5.37	11.06	10.91	5.43	10.95	10.80	5.37	10.84	10.69	5.32	10.72	10.58	5.27	10.72	10.58	5.27	10.61	10.47	5.21	/	/	/
		Power	5.30	5.19	2.16	5.89	5.77	2.40	6.67	6.53	2.71	7.50	7.35	3.05	8.17	8.00	3.32	8.98	8.80	3.65	10.26	10.06	4.17	11.43	11.20	4.65	/	/	/
		Efficiency	2.02	2.04	2.44	1.86	1.87	2.24	1.66	1.67	2.00	1.46	1.47	1.76	1.33	1.34	1.60	1.19	1.20	1.44	1.05	1.05	1.26	0.93	0.94	1.12	/	/	/
	-10	Capacity	12.91	12.73	6.34	13.17	13.00	6.47	13.31	13.13	6.53	13.17	13.00	6.47	13.04	12.87	6.40	12.91	12.73	6.34	12.91	12.73	6.34	12.77	12.60	6.27	/	/	/
		Power	5.15	5.05	2.09	5.72	5.61	2.33	6.48	6.35	2.63	7.28	7.14	2.96	7.93	7.77	3.23	8.72	8.55	3.55	9.97	9.77	4.06	11.10	10.88	4.52	/	/	/
		Efficiency	2.51	2.52	3.03	2.30	2.32	2.78	2.05	2.07	2.48	1.81	1.82	2.18	1.64	1.66	1.98	1.48	1.49	1.79	1.29	1.30	1.56	1.15	1.16	1.39	/	/	/
	-7	Capacity	14.00	13.81	6.87	14.29	14.09	7.01	14.43	14.24	7.08	14.29	14.09	7.01	14.14	13.95	6.94	14.00	13.81	6.87	14.00	13.81	6.87	13.85	13.67	6.80	/	/	/
		Power	4.52	4.43	1.84	5.02	4.92	2.04	5.68	5.57	2.31	6.39	6.27	2.60	6.96	6.82	2.83	7.66	7.50	3.11	8.75	8.58	3.56	9.74	9.55	3.96	/	/	/
		Efficiency	3.10	3.12	3.74	2.84	2.86	3.43	2.54	2.56	3.06	2.23	2.25	2.70	2.03	2.04	2.45	1.83	1.84	2.21	1.60	1.61	1.93	1.42	1.43	1.72	/	/	/
	-2	Capacity	15.09	14.89	7.41	15.40	15.19	7.56	15.55	15.35	7.64	15.40	15.19	7.56	15.24	15.04	7.48	15.09	14.89	7.41	15.09	14.89	7.41	14.93	14.73	7.33	/	/	/
		Power	4.10	4.02	1.67	4.56	4.47	1.86	5.16	5.06	2.10	5.81	5.69	2.36	6.32	6.20	2.57	6.95	6.81	2.83	7.95	7.79	3.23	8.85	8.67	3.60	/	/	/
		Efficiency	3.68	3.70	4.44	3.38	3.40	4.07	3.01	3.03	3.64	2.65	2.67	3.20	2.41	2.43	2.91	2.17	2.18	2.62	1.90	1.91	2.29	1.69	1.70	2.04	/	/	/
	2	Capacity	15.45	15.25	7.59	15.77	15.56	7.74	15.93	15.72	7.82	15.77	15.56	7.74	15.61	15.40	7.66	15.45	15.25	7.59	15.45	15.25	7.59	15.29	15.09	7.51	/	/	/
		Power	3.79	3.71	1.54	4.21	4.13	1.71	4.76	4.67	1.94	5.36	5.25	2.18	5.84	5.72	2.37	6.42	6.29	2.61	7.33	7.19	2.98	8.17	8.00	3.32	/	/	/
		Efficiency	4.08	4.11	4.92	3.75	3.77	4.52	3.34	3.37	4.04	2.94	2.96	3.55	2.68	2.69	3.23	2.41	2.42	2.91	2.11	2.12	2.54	1.87	1.89	2.26	/	/	/
	7	Capacity	17.47	15.52	8.92	17.83	15.84	9.11	18.01	16.00	9.20	17.83	15.84	9.11	17.65	16.00	9.02	17.47	15.52	8.92	17.47	16.00	8.92	17.29	15.36	8.83	17.11	15.20	8.74
		Power	3.20	2.72	1.38	3.55	3.02	1.53	4.02	3.48	1.73	4.52	3.85	1.95	4.92	4.32	2.12	5.42	4.61	2.33	6.19	5.33	2.67	6.89	5.86	2.97	7.64	6.50	3.29
		Efficiency	5.47	5.71	6.48	5.02	5.24	5.95	4.48	4.60	5.31	3.94	4.12	4.67	3.58	3.70	4.25	3.23	3.37	3.82	2.82	3.00	3.35	2.51	2.62	2.97	2.24	2.34	2.66
	10	Capacity	17.99	15.99	9.19	18.36	16.32	9.38	18.55	16.48	9.48	18.36	16.32	9.38	18.18	16.15	9.29	17.99	15.99	9.10	17.99	15.99	9.19	17.81	15.82	9.10	17.62	15.66	9.00
		Power	3.21	2.73	1.38	3.57	3.04	1.54	4.04	3.44	1.74	4.54	3.86	1.96	4.95	4.21	2.13	5.44	4.63	2.64	6.22	5.29	2.68	6.93	5.89	2.98	7.68	6.53	3.31
		Efficiency	5.60	5.85	6.64	5.14	5.37	6.10	4.59	4.80	5.44	4.04	4.22	4.79	3.67	3.84	4.35	3.31	3.45	3.45	2.89	3.02	3.43	2.57	2.69	3.05	2.30	2.40	2.72
	15	Capacity	17.73	17.44	10.98	18.10	17.80	11.20	18.28	17.98	11.32	18.10	17.80	11.20	17.91	17.62	11.09	17.73	17.44	10.87	17.73	17.44	10.98	17.55	17.26	10.86	17.36	17.08	10.75
		Power	2.72	2.65	1.52	3.02	2.95	1.69	3.42	3.34	1.91	3.84	3.76	2.15	4.18	4.09	2.34	4.60	4.50	2.90	5.26	5.14	2.94	5.85	5.72	3.28	6.49	6.34	3.63
		Efficiency	6.53	6.57	7.22	5.99	6.03	6.63	5.35	5.39	5.92	4.71	4.74	5.21	4.28	4.31	4.74	3.85	3.88	3.75	3.37	3.39	3.73	3.00	3.02	3.32	2.68	2.69	2.96
	20	Capacity	18.16	17.87	11.24	18.54	18.24	11.48	18.72	18.42	11.59	18.54	18.24	11.48	18.35	18.05	11.36	18.16	17.87	11.13	18.16	17.87	11.24	17.97	17.68	11.13	17.79	17.50	11.01
		Power	2.62	2.56	1.46	2.91	2.84	1.63	3.29	3.22	1.84	3.70	3.62	2.07	4.03	3.94	2.26	4.43	4.34	2.79	5.07	4.96	2.84	5.64	5.52	3.16	6.25	6.12	3.50
		Efficiency	6.94	6.98	7.68	6.37	6.41	7.05	5.69	5.72	6.29	5.01	5.04	5.54	4.55	4.58	5.03	4.10	4.12	3.99	3.58	3.61	3.96	3.19	3.21	3.52	2.84	2.86	3.15
	25	Capacity	19.89	19.57	12.32	20.30	19.97	12.57	20.51	20.18	12.70	20.30	19.97	12.57	20.10	19.77	12.44	19.89	19.57	12.19	19.89	19.57	12.32	19.69	19.37	12.19	/	/	/
		Power	2.71	2.65	1.51	3.01	2.94	1.68	3.40	3.33	1.91	3.83	3.74	2.14	4.17	4.08	2.33	4.59	4.48	2.89	5.24	5.12	2.93	5.84	5.71	3.27	/	/	/
		Efficiency	7.35	7.40	8.13	6.75	6.79	7.46	6.02	6.06	6.66	5.30	5.33	5.86	4.82	4.85	5.33	4.34	4.36	4.22	3.80	3.82	4.20	3.37	3.39	3.73	/	/	/
	30	Capacity	19.16	22.33	13.39	19.56	22.79	13.66	19.76	23.03	13.80	19.56	22.79	13.66	19.36	22.56	13.52	19.16	22.33	13.25	19.16	22.33	13.39	18.96	22.10	13.25	/	/	/
		Power	2.42	2.95	1.58	2.69	3.28	1.76	3.04	3.71	1.99	3.42	4.18	2.24	3.72	4.55	2.44	4.10	5.00	3.02	4.68	5.72	3.07	5.21	6.37	3.41	/	/	/
		Efficiency	7.93	7.56	8.45	7.28	6.94	7.76	6.50	6.20	6.93	5.72	5.45	6.10	5.20	4.96	5.54	4.68	4.46	4.39	4.09	3.91	4.37	3.64	3.47	3.88	/	/	/
	35	Capacity	20.18	23.53	14.10	20.60	24.01	14.39	20.81	24.25	14.54	20.60	24.01	14.39	20.39	23.77	14.25	20.18	23.53	13.96	20.18	23.53	14.10	19.98	23.28	13.95	/	/	/
		Power	2.45	3.00	1.61	2.73	3.33	1.79	3.08	3.77	2.02	3.47	4.24	2.27	3.78	4.62	2.47	4.15	5.08	3.06	4.75	5.80	3.11	5.29	6.46	3.46	/	/	/
		Efficiency	8.23	7.85	8.78	7.56	7.21	8.06	6.75	6.44	7.20	5.94	5.66	6.33	5.40	5.15	5.76	4.86	4.63	4.56	4.25	4.05	4.53	3.78	3.60	4.03	/	/	/

3 Operation Principle



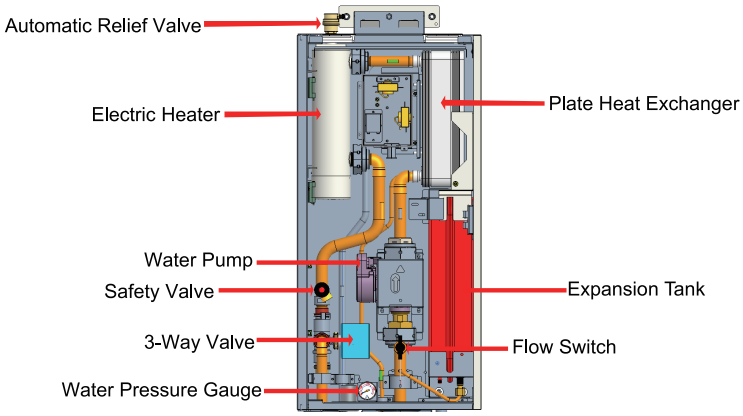
No.	Name	No.	Name
1	Outdoor unit	4	Radiator
2	Indoor unit	5	Underfloor coils
3	Other thermal	6	Buffer tank

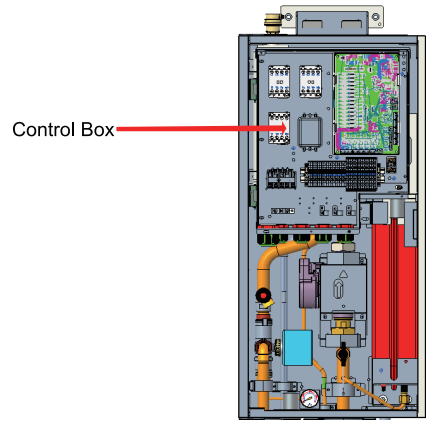
Notes

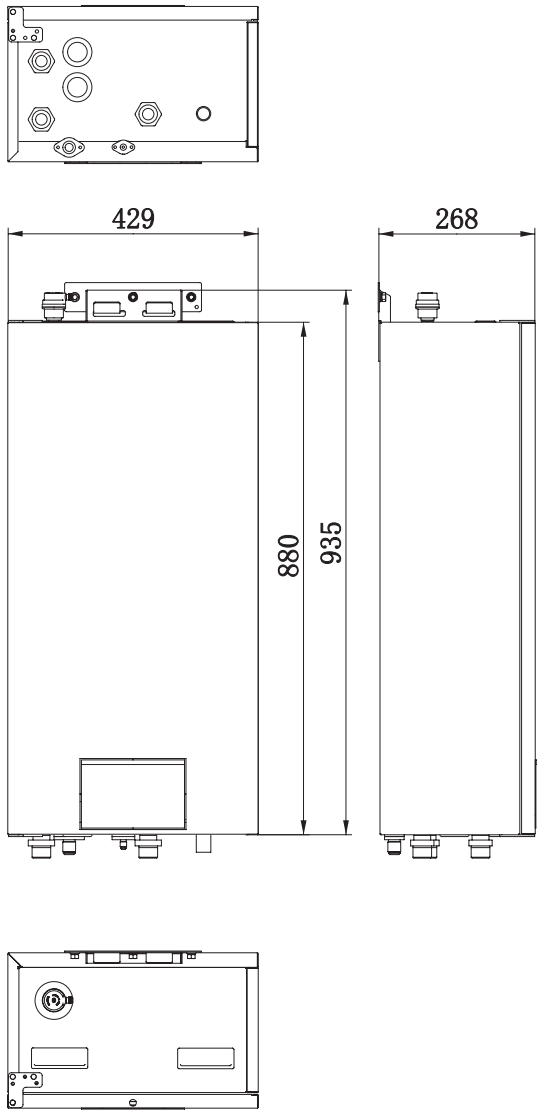
(e) Water mixing accessories are optional parts. When they are required, please contact the manufacturer. The diagram above is just for reference and actual installation depends on the project's field.Buffer tank specifications should be calculated based on 8-10L/KW.

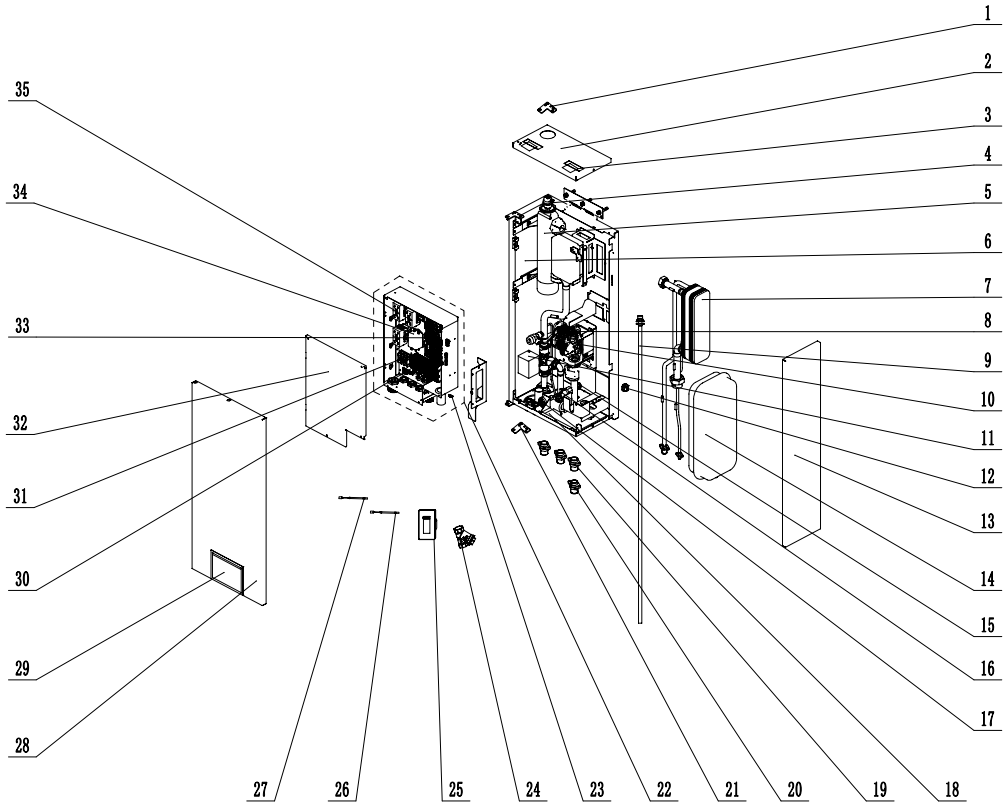
4 Main Components

4.1 Indoor Units






429
268
880
935

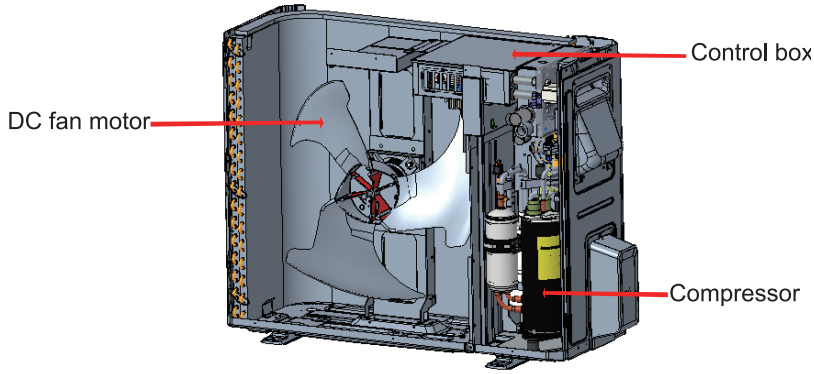


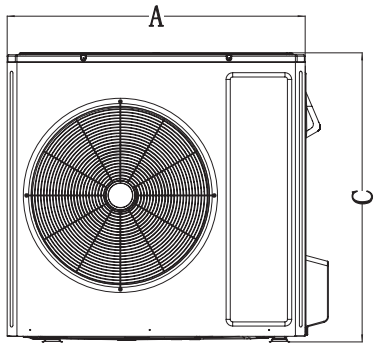
No.	Name
1	Connection Sheet Sub-Assy
2	Connection Board
3	controller holder
4	Auto Air Outlet Valve
5	Electric Heater
6	Connection Sheet Sub-Assy
7	Plate-type Heat Exchanger Sub-Assy
8	Water Pump
9	Drainage Pipe Sub-assy
10	Relief Valve
11	Electric starter of water valve
12	Sealing Cap(Pressure Warning)
13	Connection Board
14	Expansion Drum
15	Water Pipe Connector
16	Flow switch
17	Water Pressure Gauge
18	Connection Sheet Sub-Assy
19	Water Pipe Connector
20	Water Pipe Connector
21	Connection Sheet Sub-Assy
22	Electric Box Assy
23	Jumper
24	Strainer
25	Receiver Board
26	Temperature Sensor
27	Temperature Sensor
28	Front Panel Assy

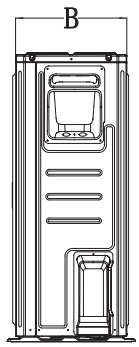
29	Display Board
30	Terminal Board
31	Terminal Board
32	Supporter
33	Main Board
34	Filter
35	Bipolar AC Contactor

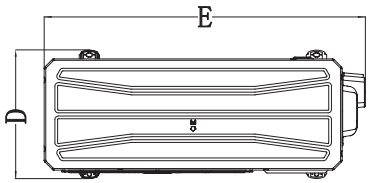
4.2 Outdoor Units

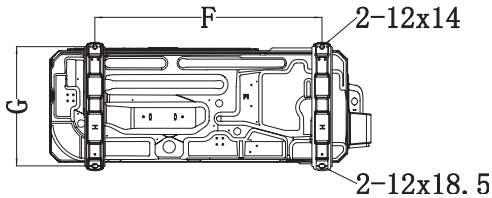
(1) Outdoor Units with a Single Fan





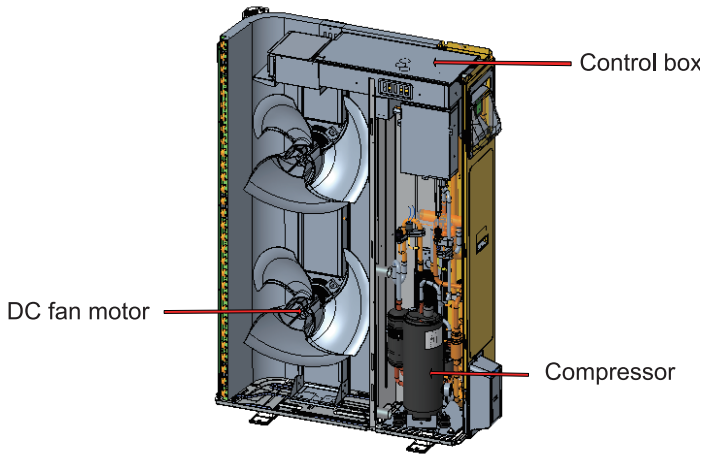


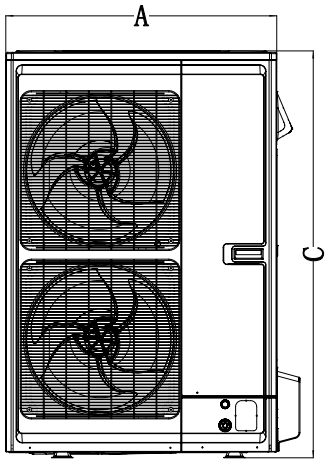


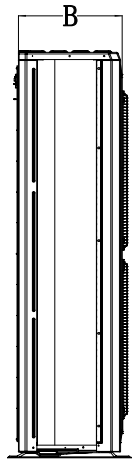


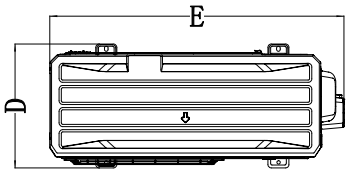
Model	A	B	C	D	E	F	G
GRS-CQ4.0Pd/NhH3-E GRS-CQ6.0Pd/NhH3-E	924	385	746	427	1000	610	397
GRS-CQ8.0Pd/NhH3-E GRS-CQ10Pd/NhH3-E GRS-CQ12Pd/NhH3-E GRS-CQ14Pd/NhH3-E GRS-CQ10Pd/NhH3-M GRS-CQ12Pd/NhH3-M GRS-CQ14Pd/NhH3-M	993	385	960	427	1067	755	397

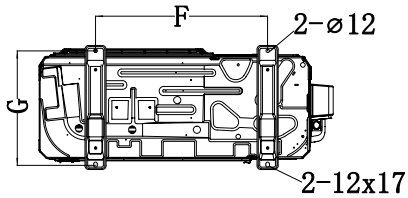
(2) Outdoor Units with Dual Fans











Model	A	B	C	D	E	F	G
GRS-CQ12Pd/NhH3-E1 GRS-CQ14Pd/NhH3-E1 GRS-CQ16Pd/NhH3-E1 GRS-CQ12Pd/NhH3-M1 GRS-CQ14Pd/NhH3-M1 GRS-CQ16Pd/NhH3-M1	900	345	1352	412	977	572	378

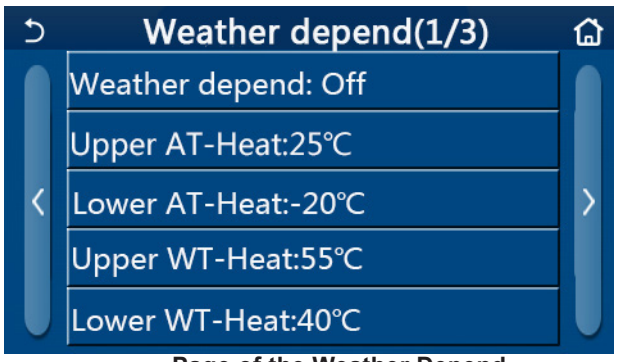
5 Electric Wiring

Please see the wiring diagrams stuck to the unit for actual wiring guides.

6 Introduction to Functional Parameters

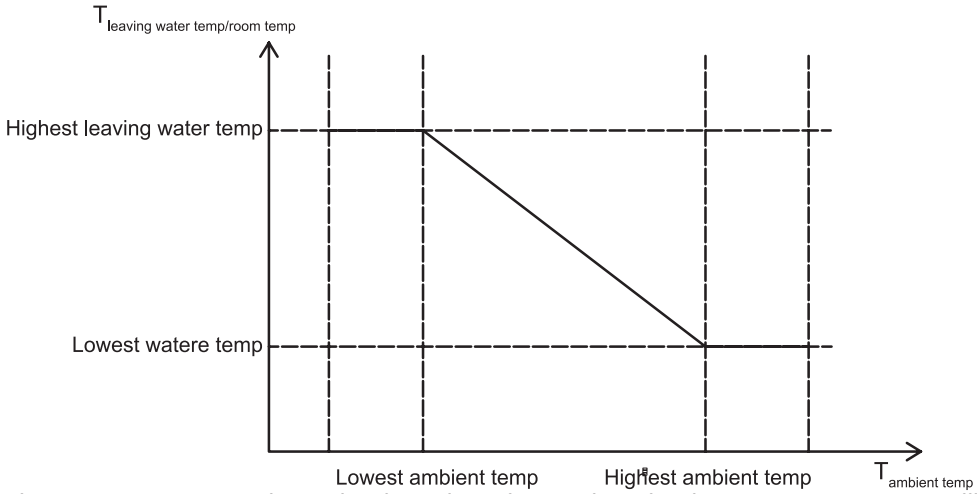
6.1 Weather depend

At the function setting page, by touching “Weather depend”, there will be a choice box, where it is able to set it to “On” or “Off”, and also it is able to set the weather-dependent temperature.



Page of the Weather Depend

There are totally 13 settable parameters for “Weather depend”. The first one is the on-off value, and the others are digital values, including upper and lower ambient temperature (AT), water temperature (WT) and room temperature (RT) limits at both heating and cooling modes.



Based on the temperature set point under the selected control mode, the target temperature will vary as the ambient temperature changes.

When “Leaving water temperature” is selected as the control mode, there comes to three conditions.

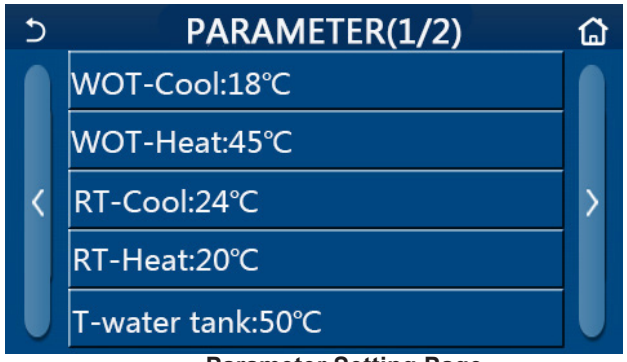
(1) If the actual temperature is higher than 25°C, the leaving water temperature will be 40°C;

(2) If the actual temperature is higher -20°C but lower than 25°C, the leaving water temperature will be within 55°C-40°C;

(3) If the actual temperature is lower than-20°C, the leaving water temperature will be 55°C.

6.2 User Parameter Setting

At the menu page, by touching "**PARAMETER**", it will back to the parameter setting page, as shown in the figure below.



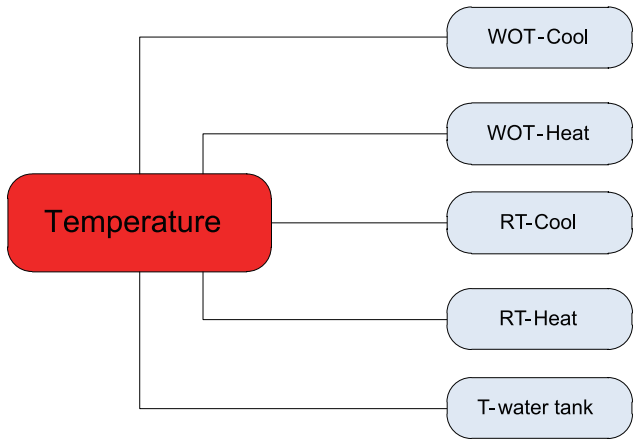
Parameter Setting Page

No.	Full Name	Displayed Name	Range (°C)	Range (°F)	Default	Remarks
1	Leaving water temperature for cooling	WOT-Cool	5~25°C	41~77°F	18°C/64°F	
2	Leaving water temperature for heating	WOT-Heat	20~65°C	68~149°F	45°C/113°F	
3	Room temperature for cooling	RT-Cool	18~30°C	64~86°F	24°C/75°F	
4	Room temperature for heating	RT-Heat	18~30°C	64~86°F	20°C/68°F	
5	Water tank temperature	T-water tank	40~80°C	104~176°F	50°C/122°F	
6	Leaving water temperature difference for cooling	ΔT-Cool	2~10°C	36~50°F	5°C/41°F	
7	Leaving water temperature difference for heating	ΔT-Heat	2~10°C	36~50°F	10°C/50°F	
8	Leaving water temperature difference for water heating	ΔT-hot water	2~25°C	36~77°F	5°C/41°F	
9	Room temperature control difference	ΔT-Room temp	1~5°C	34~41°F	2°C/36°F	
10	Temperature difference between actual and target water for cooling	ΔWT-Cool AT	-10~0°C	14~32°F	-5°C/23°F	
11	Temperature difference between actual and target water for heating	ΔWT-Heat AT	0~15°C	32~59°F	5°C/41°F	
12	Temperature difference between actual and target water for water heating	ΔWT-hot water AT	0~15°C	32~59°F	5°C/41°F	
13	Minimal allowable water temperature by users	WT min	5~25°C	41~77°F	5°C/41°F	
14	Maximal allowable water temperature by users for heating	WT-Heat max	20~65°C	68~149°F	65°C/149°F	

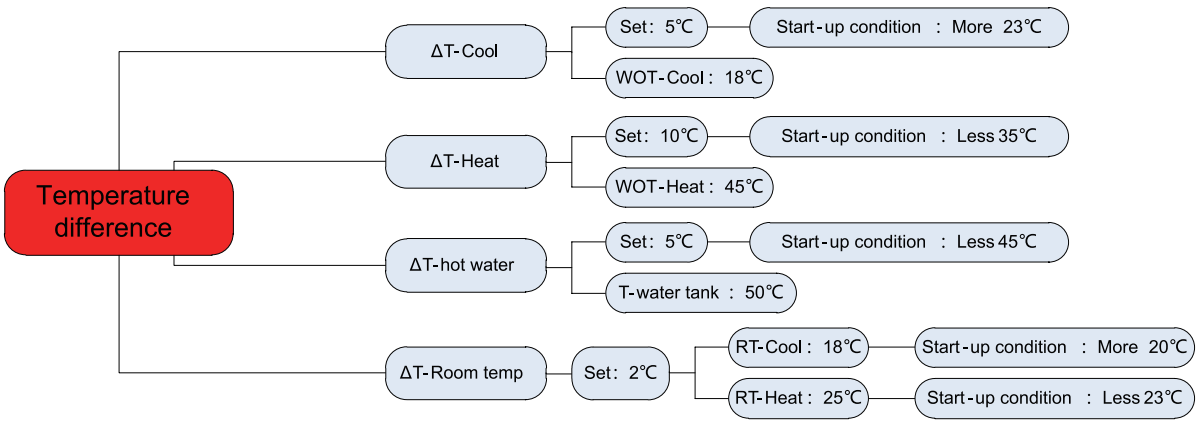
No.	Full Name	Displayed Name	Range (°C)	Range (°F)	Default	Remarks
15	Maximal allowable water temperature by users for water heating	WT-Hot water max	40~80°C	104~176°F	80°C/176°F	
16	Leaving water temperature setting range for cooling	WOT-Cool Range	5~25°C	41~77°F	10°C/50°F	
17	Leaving water temperature setting range for heating	WOT-Heat Range	20~65°C	68~149°F	55°C/131°F	
18	Leaving water temperature setting range for water heating	T-water tank Range	40~80°C	104~176°F	60°C/140°F	

Parameters from No.10 to No.19 are for setting target water temperature under the SG function. When SG (smart grid) has been activated, the unit after receiving the grid signal will go under the control as stated below.

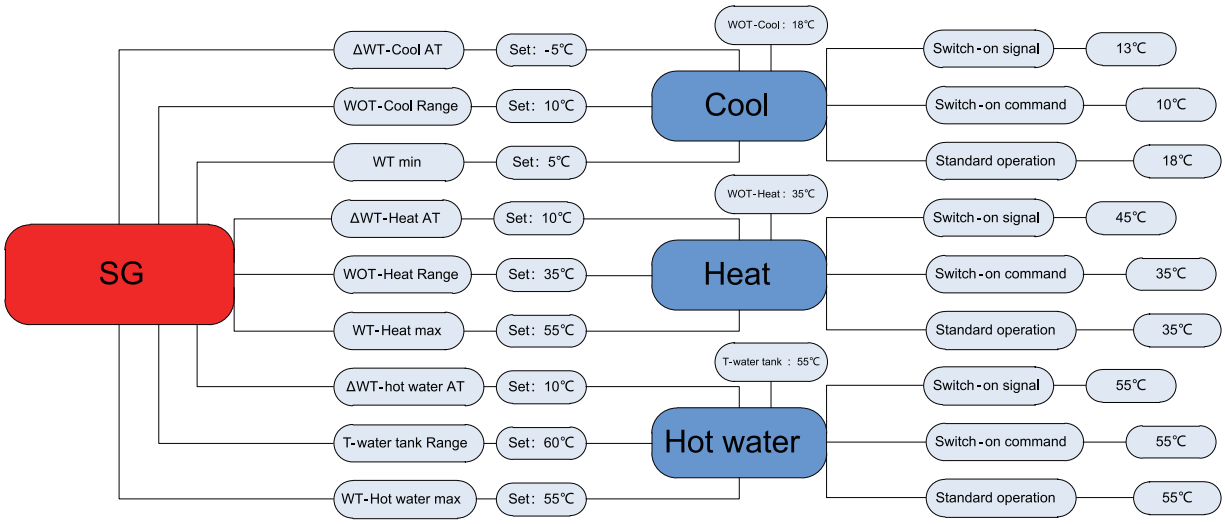
6.2.1 Temperature



6.2.2 Temperature difference

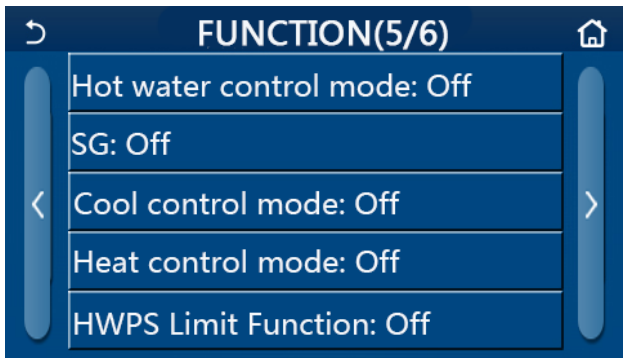


6.2.3 SG



6.3 SG function

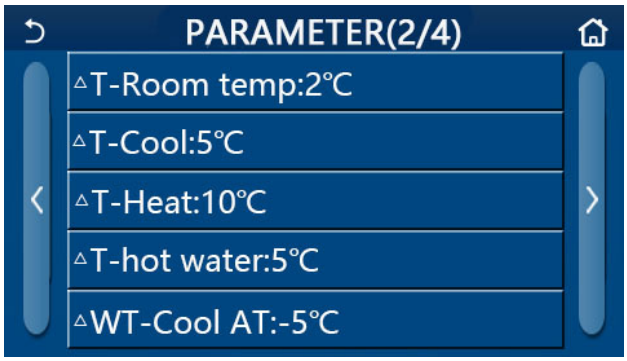
At the menu page, by touching “Commissionining” and then entering the correct password (000048), the following page will be accessed to, as shown in the figure below.

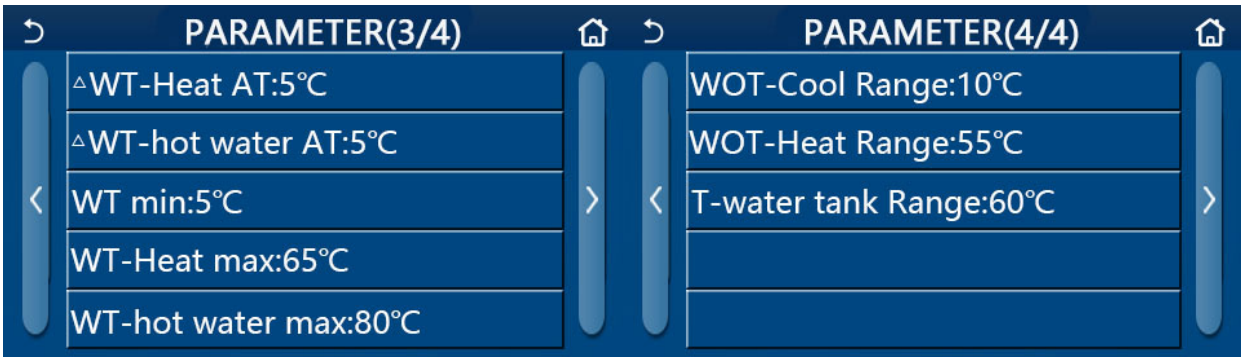


SG smart grid	EVU Photovoltaic signal	Command	Remarks
1	0	Switch-off command	Switch-off command
0	0	Standard operation	Switch-on command
0	1	Switch-on signal	Switch-on signal
1	1	Switch-on command	Switch-on signal

Running mode	Target water temperature			
	Switch-on signal	Switch-on command	Standard operation	Switch-off command
Cool	Take the larger between (WOT-Cool+ΔWT-Cool AT) and WT min.	Take the larger between WOT-Cool Range and WT min.	WOT-Cool	/
Heat	Take the smaller between (WOT-Heat+ΔWT-Heat AT) and WT-Heat max.	When the electric heater works, take the smaller between WOT-Heat Range and WT- Heat max.	WOT-Heat	/
		When the electric heater does not work, take the smaller between WOT-Heat Range and Tmax.Tmax is the highest leaving water temperature corresponding to the current ambient temperature.		/

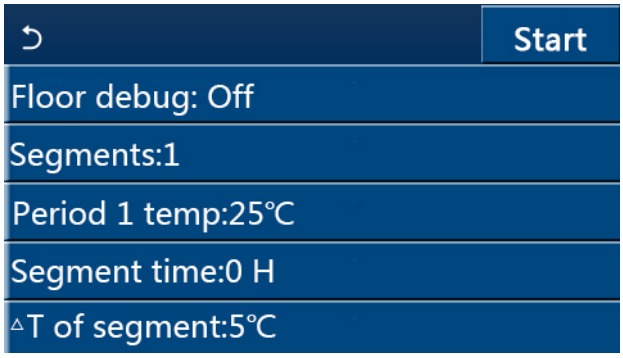
Hot water	Take the smaller between (T-water tank+ΔWT-hot water AT) and WT-hot water max.	When the electric heater works, take the smaller between T-water tank Range and WT- hot water max.	T-water tank	/
		When the electric heater does not work, take the smaller between T-water tank Range and T-HP max.		/





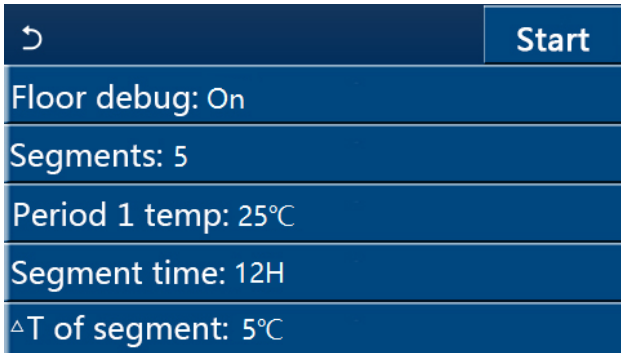
6.4 Floor debug

At the commissioning parameter setting page, by touching “Floor debug”, the control panel will go to the corresponding setting page.



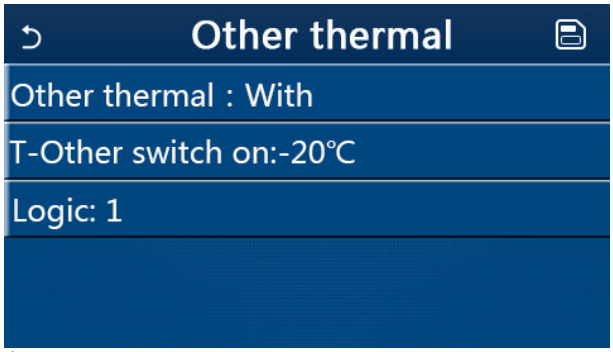
No.	Full Name	Displayed Name	Range	Default	Accuracy
1	Floor debug switch	Floor debug	On/Off	Off	/
2	Quantity of segments	Segments	1~10	1	1
3	Temperature of the first segment	Period 1 temp	25~35°C/ 77~95°F	25°C/ 77°F	1°C
4	Duration of each segment	Segment time	12~72 hours	0	12 hours
5	Temperature difference of each segment	ΔT of segment	2~10°C/ 36~50°F	5°C/ 41°F	1°C

When parameters of “Floor debug” are set as follows, they indicates that “Floor debug” is activated, the initial temperature is 25 °C, the number of operation segments is 5, temperature difference during each segment is 5 °C, and operation time of each segment is 12 hours. The operation will be carried out as follows. The initial temperature is 25 °C,and will be increased by 5 °C for each 12 hours, and finally to 45 °C, and then the temperature will be reduced to the initial temperature with the same time. The final temperature is determined as the initial temperature plus (number of segments -1) multiplied by temperature difference set point.



6.5 Other thermal

At the commissioning parameter setting page, by touching “Other thermal”, the control panel will go to the corresponding setting page.



Other thermal: With/Without

T-Other swtich on:-20°C(settable)

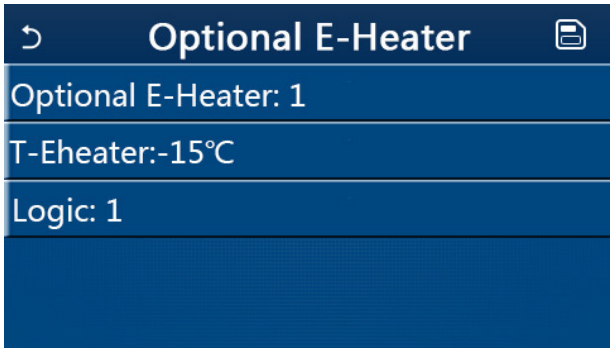
Logic: 1/2/3

For example, when the other thermal is turned on and the ambient temperature is less than -20 □, the heat pump will be turned off, and the system will execute the command according to the selected logic; logic 1: the other thermal only performs heating in the combined mode (hot water priority), and hot water is heated by the water tank heater according to the conditions;

logic 2: the other thermal under the combined mode (hot water priority) makes hot water first, and then switches to heating; logic 3: the unit only sends the start signal to the other thermal , but the two-way and three-way valves are closed (out of control).

6.6 Optional E-Heater

At the commissioning parameter setting page, by touching “Optional E-Heater”, the control panel will go to the corresponding setting page.



Optional E-heater:/1/2

T-Eheater:15-20°C(settable)

Logic:1/2

For example, when the optional E-Heater is selected as 1 and the ambient temperature is less than -15°C, the system will turn on one group and execute the command according to the selected logic; logic 1: the compressor stops and only the optional E-Heater starts; logic 2: the optional E-Heater starts and the compressor continues to run.

7 Commissioning

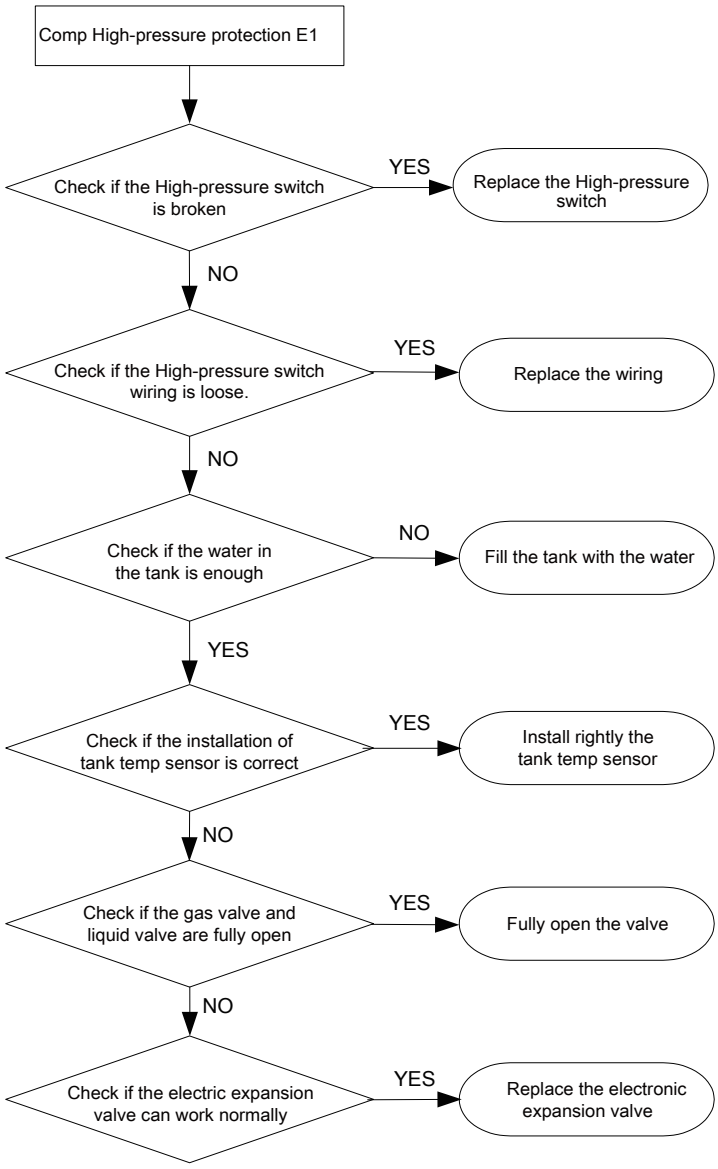
7.1 Error Code List

No.	Full Name	Displayed Name	Error Code
1	Ambient temperature sensor error	Ambient sensor	F4
2	Defrosting temperature sensor error	Defrost sensor	d6
3	Discharge temperature sensor error	Discharge sensor	F7
4	Suction temperature sensor error	Suction sensor	F5
5	Economizer inlet temperature sensor	Econ. in sens.	F2
6	Economizer outlet temperature sensor	Econ. out sens.	F6
7	Fan error	Outdoor fan	EF
8	High pressure protection	High pressure	E1
9	Low pressure protection	Low pressure	E3
10	High discharge protection	Hi-discharge	E4
11	Capacity DIP switch error	Capacity DIP	c5
12	Communication error between the outdoor and indoor main boards	ODU-IDU Com.	E6
13	Communication error between the outdoor main board and the drive board	Drive-main com.	P6
14	Communication error between the display panel and indoor main board	IDU Com.	E6
15	High pressure sensor error	HI-pre. sens.	Fc
16	Leaving water temperature sensor error for the plate type heat exchanger of the heat pump	Temp-HELW	F9
17	Leaving water temperature sensor error for the auxiliary electric heat of the heat pump	Temp-AHLW	dH
18	Entering water temperature sensor error of the plate type heat exchanger of the heat pump	Temp-HEEW	No error code but displayed on control pannel
19	Water tank temperature sensor error ("NA" for mini chillers)	Tank sens.	FE
20	Remote room temperature sensor error	T-Remote Air	F3
21	Protection for the flow switch of the heat pump	HP-Water Switch	Ec
22	Welding protection to the auxiliary electric heater 1 of the heat pump	Auxi. heater 1	EH
23	Welding protection to the auxiliary electric heater 2 of the heat pump	Auxi. heater 2	EH
24	Welding protection to the water tank electric heater	Auxi. -WTH	EH
25	DC bus under-voltage or voltage drop error	DC under-vol.	PL
26	DC bus over-voltage	DC over-vol.	PH
27	AC current protection (input side)	AC curr. pro.	PA
28	IPM defective	IPM defective	H5
29	PFC defective	PFC defective	Hc
30	Start failure	Start failure	Lc
31	Phase loss	Phase loss	Ld
32	Jumper cap error	Jumper cap error	c5
33	Driver resetting	Driver reset	P0
34	Compressor overcurrent	Com. over-cur.	P5
35	Overspeed	Overspeed	LF
36	Current sensing circuit error or current sensor error	Current sen.	Pc

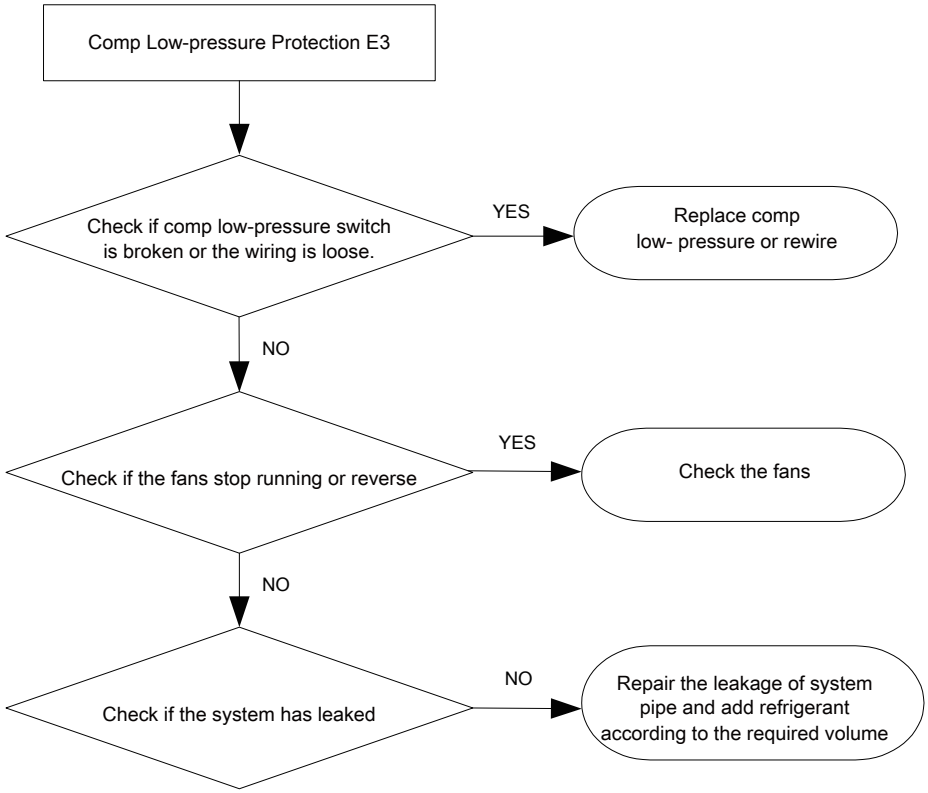
No.	Full Name	Displayed Name	Error Code
37	Desynchronization	Desynchronize	H7
38	Compressor stalling	Comp. stalling	LE
39	Radiator or IPM or PFC over-temperature	Overtemp.-mod.	P8
40	Radiator or IPM or PFC temperature sensor error	T-mod. sensor	P7
41	Charging circuit error	Charge circuit	Pu
42	AC input voltage error	AC voltage	PP
43	Ambient temperature sensor error at the drive board	Temp-driver	PF
44	AC contactor protection or input over-zero error	AC contactor	P9
45	Temperature drift protection	Temp. drift	PE
46	Sensor connection protection (the current sensor fails to be connected with the corresponding phase U and or phase V)	Sensor con.	Pd
47	Communication error between the display panel and the outdoor unit	ODU Com.	E6
48	Refrigerant vapor line temperature sensor error	Temp RGL	F0
49	Refrigerant liquid line temperature sensor error	Temp RLL	F1
50	4-way valve error	4-way valve	U7

7.2 Flow Chart of Troubleshooting

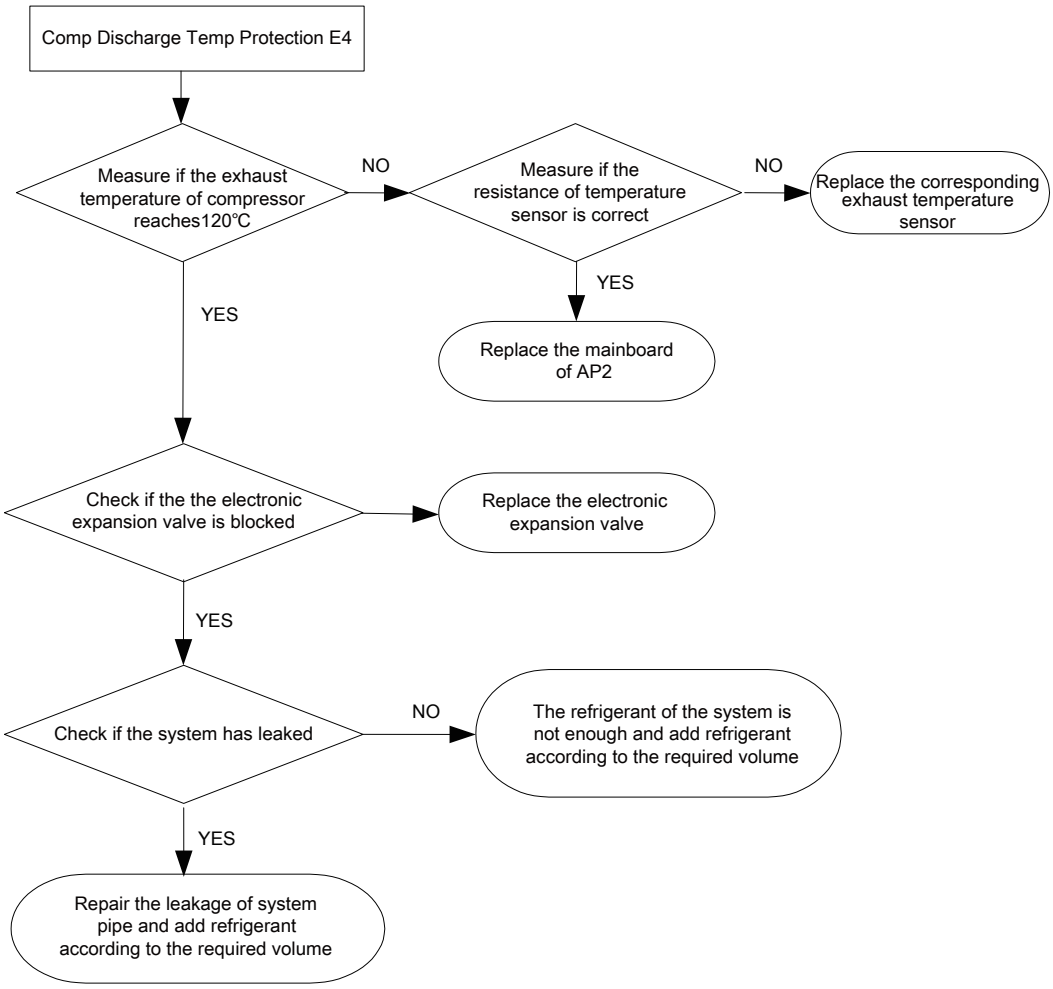
(1) Compressor High-pressure Protection E1



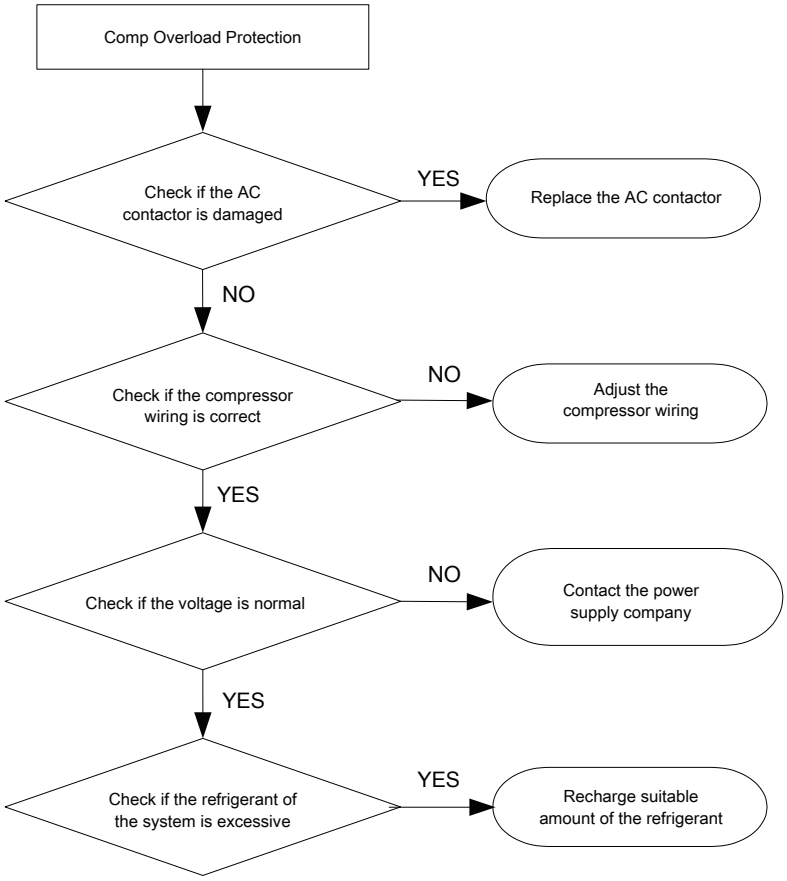
(2) Compressor Low- pressure Protection E3



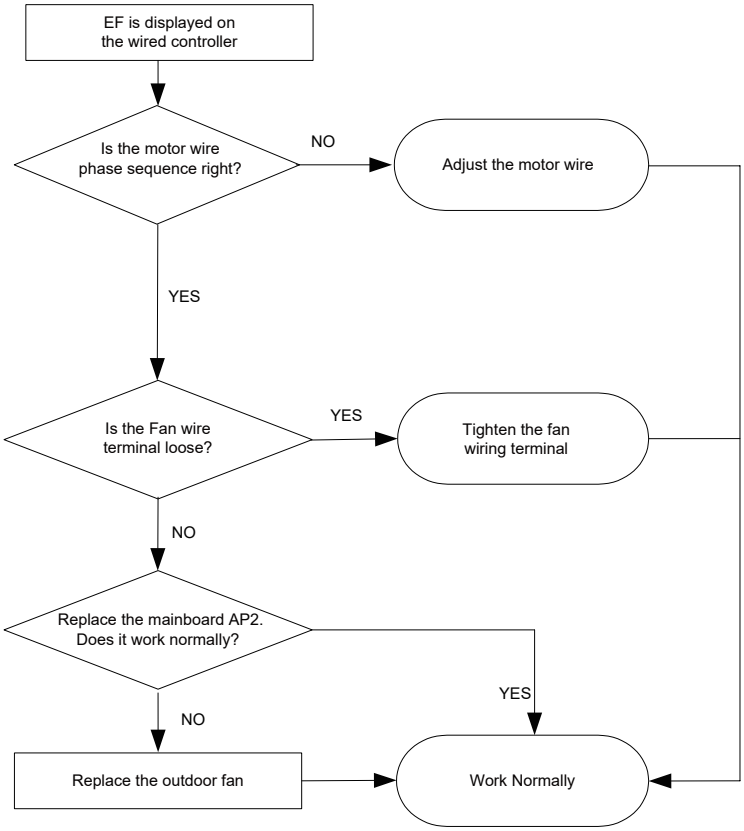
(3) Compressor Discharge Temp Protection E4



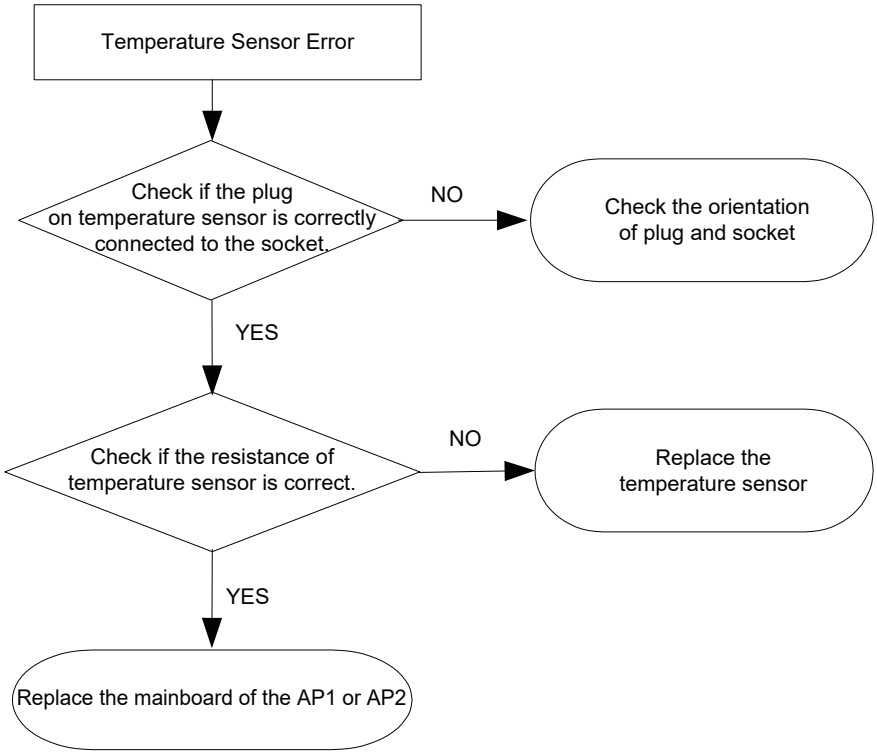
(4) Overload Protection of Compressor or Driver Error



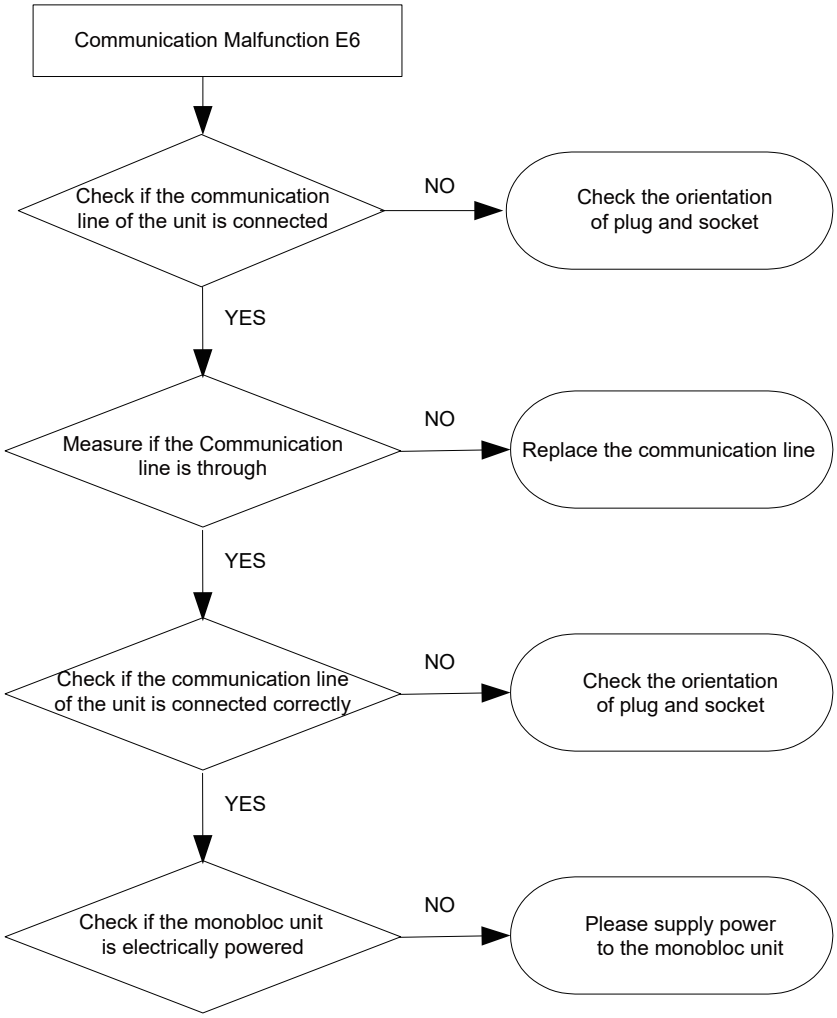
(5) DC Fan Error EF



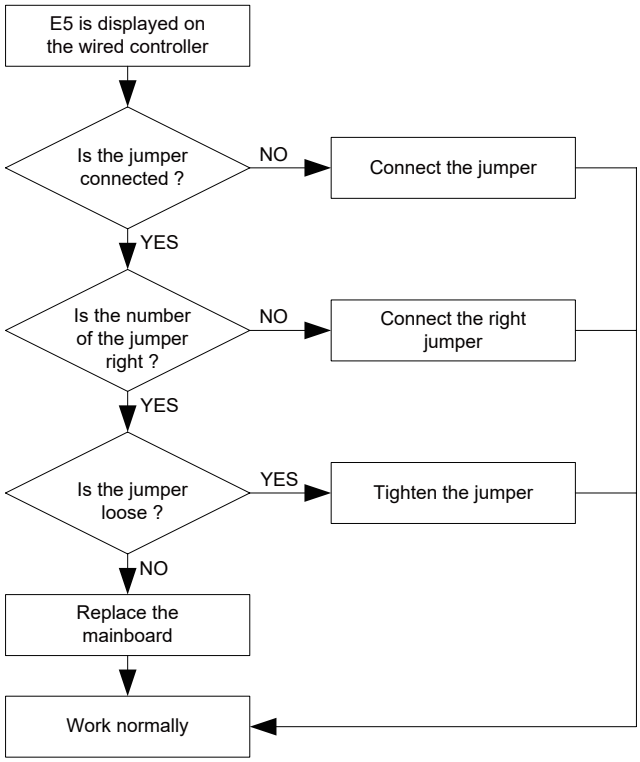
(6) Temperature Sensor Error



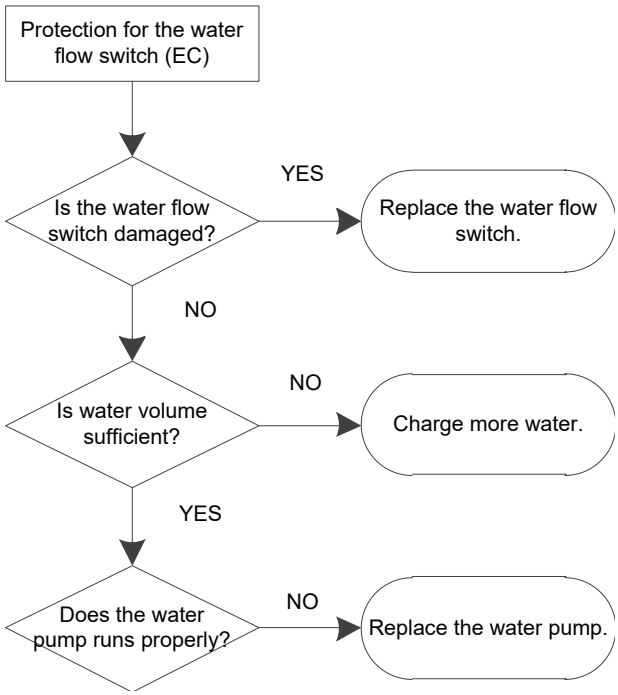
(7) Communication Malfunction E6



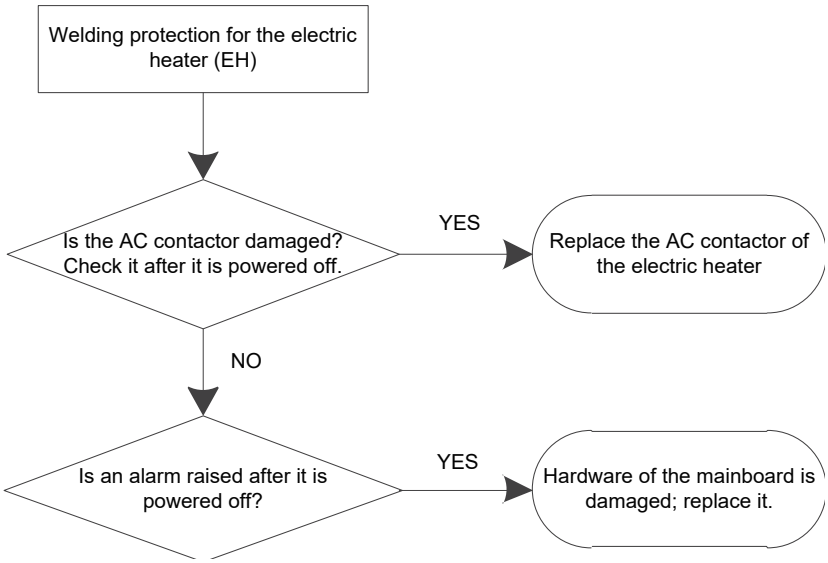
(8) Capacity Switch Error (Code:"C5")



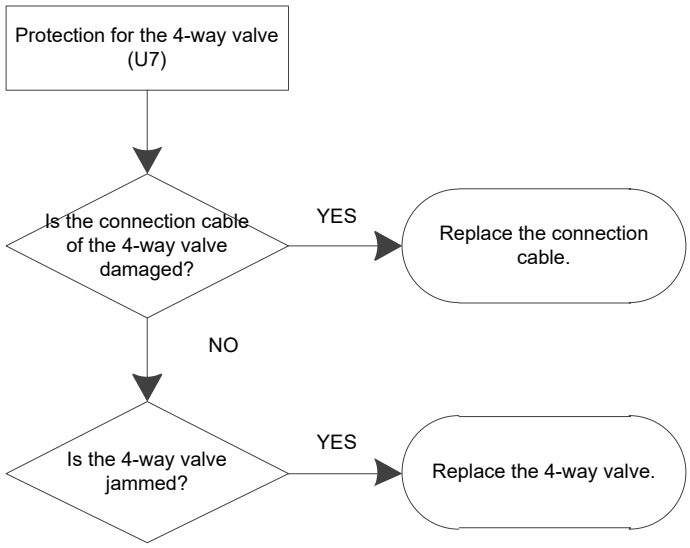
(9) Protection for the water flow switch (Code:"EC")



(10) Welding protection for the electric heater (Code:"EH")

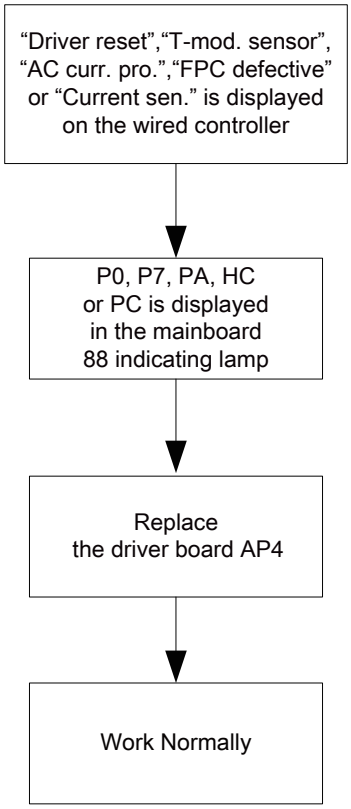


(11) Protection for the 4-way valve (Code:"U7")

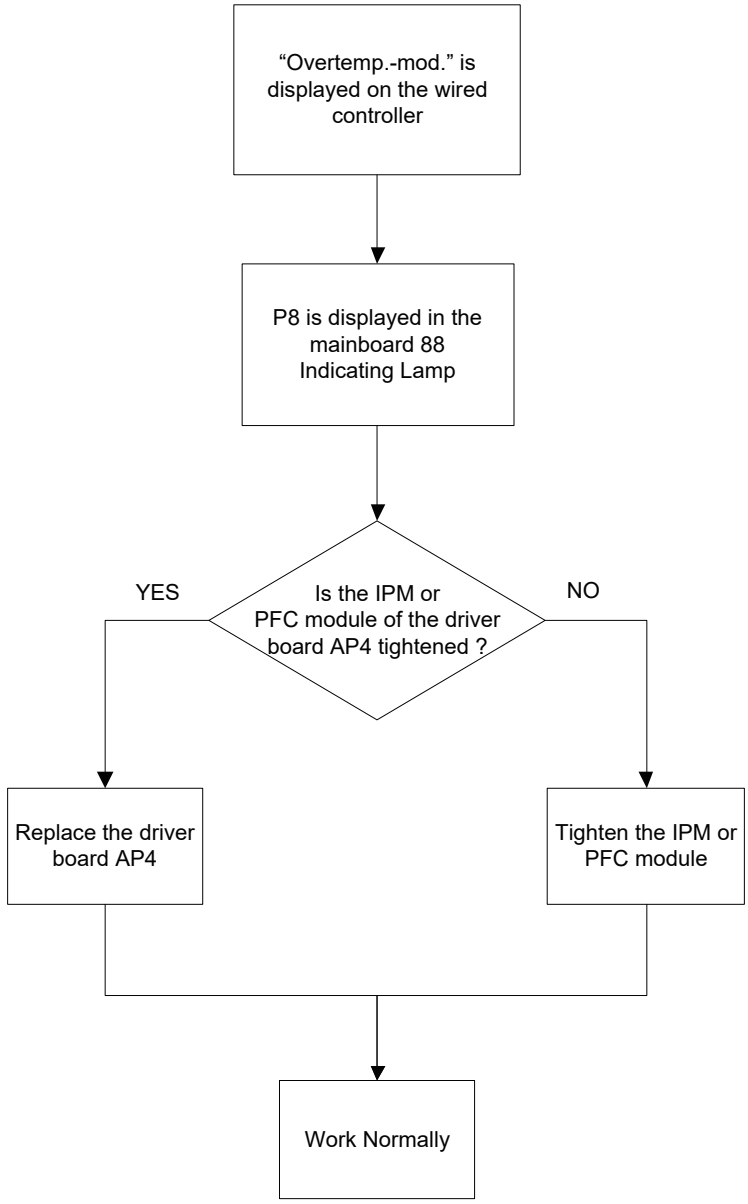


7.3 Diagnosis of Drive

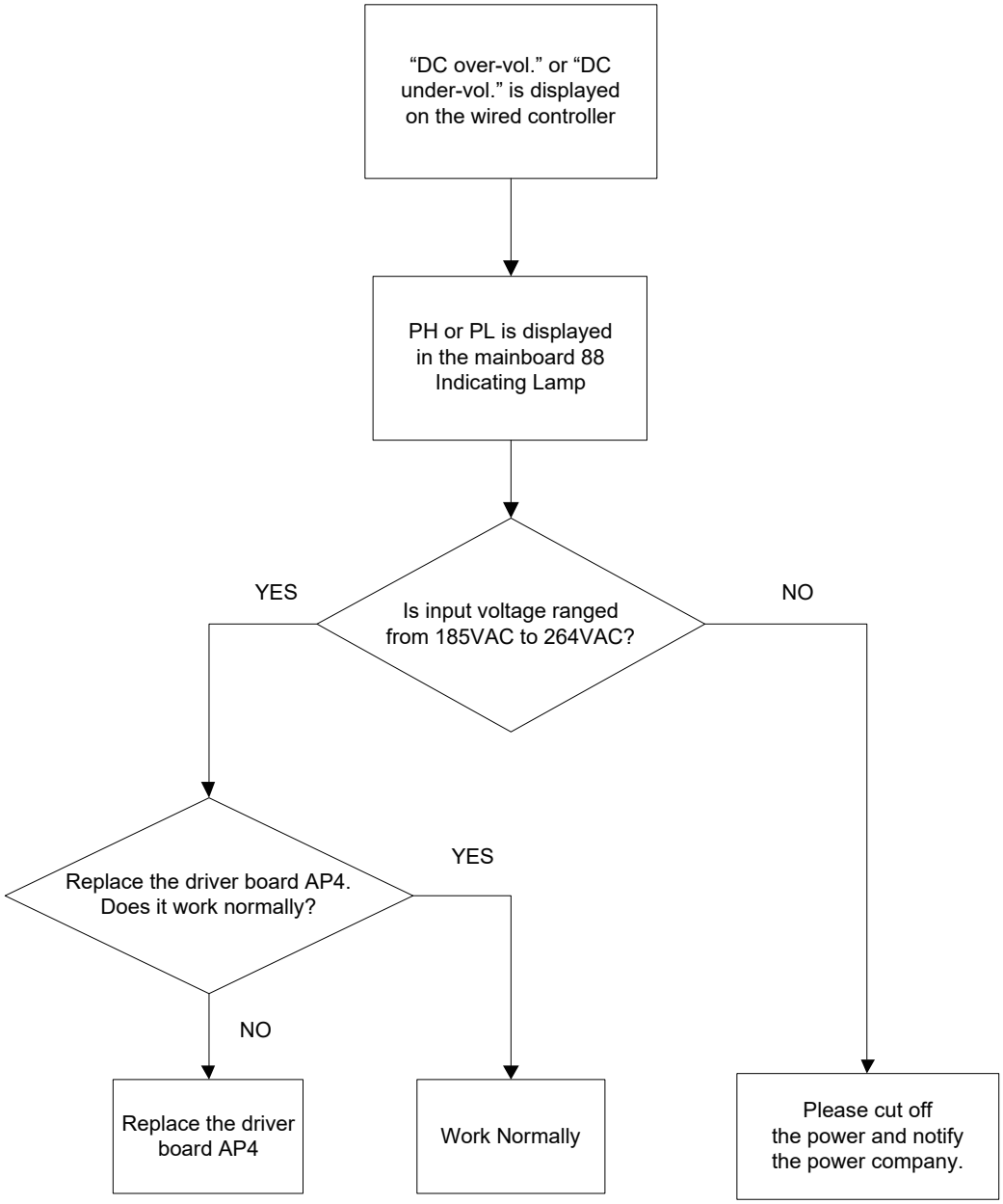
(1) Drive Module Reset(Code:"P0") ; IPM or PFC Temperature Sensor Error(Code:"P7") ; AC Current Protection (Input Side)(Code:"PA"); Current Sense Circuit Error(code:"PC"); PFC Protection(Code:"HC")



(2) IPM or PFC Over-temperature Protection(Code:"P8")

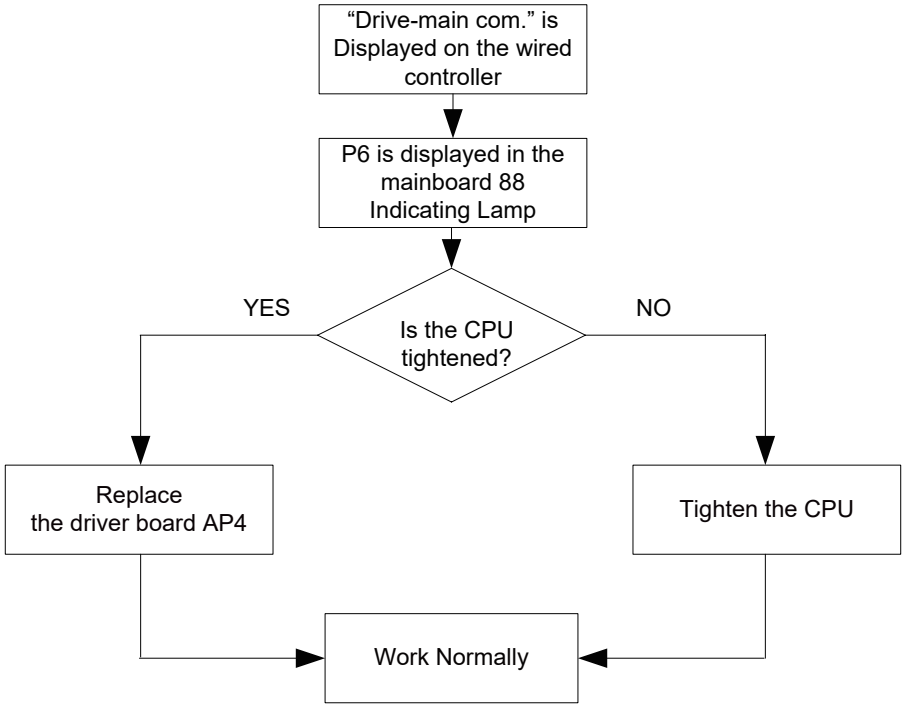


(3) DC Busbar Over-voltage Protection(Code:"PH") ; DC Busbar Under-voltage Protection (Code:"PL")

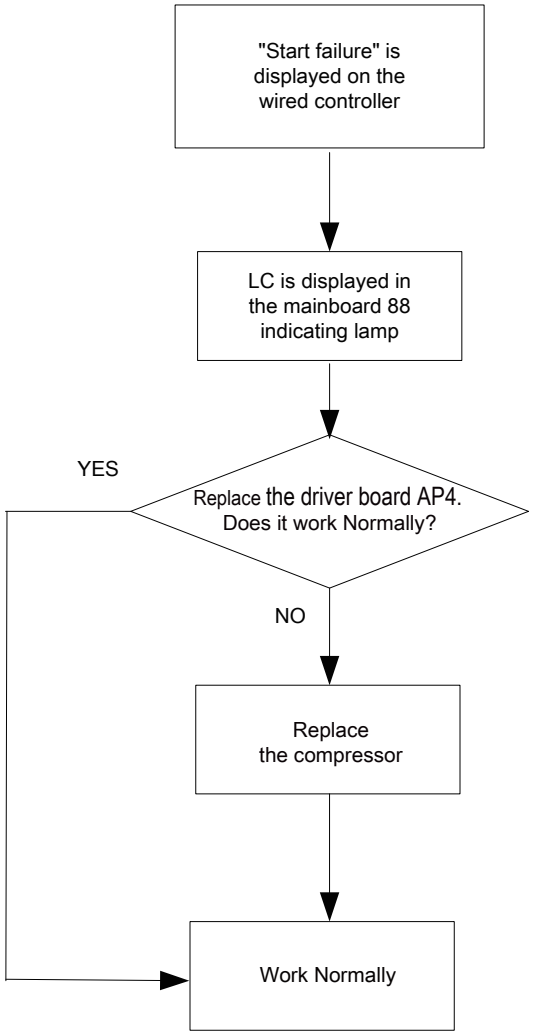


Note: three-phase input voltage is in the range from 320VAC to 475VAC.

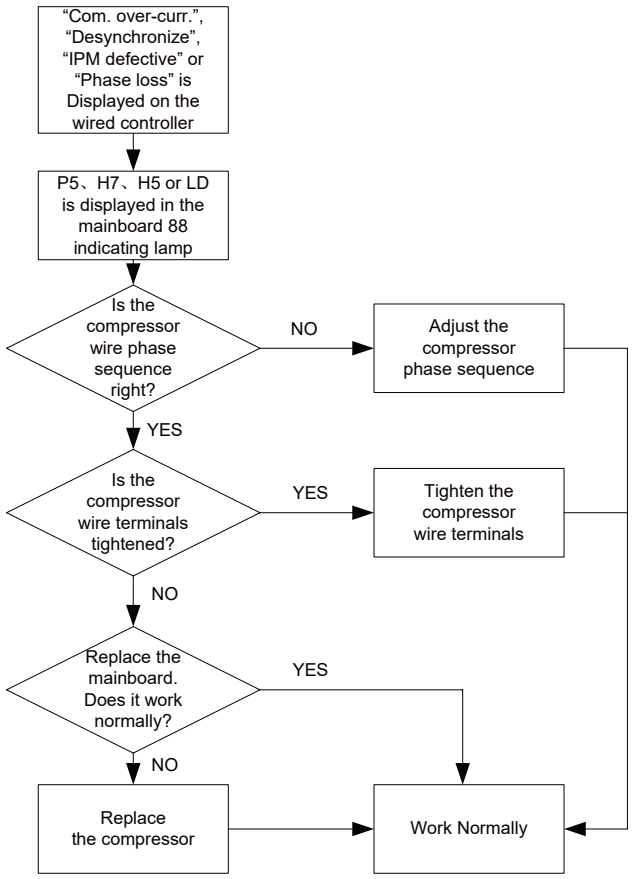
(4) Drive-to-main-control Communication Error(Code:"P6")



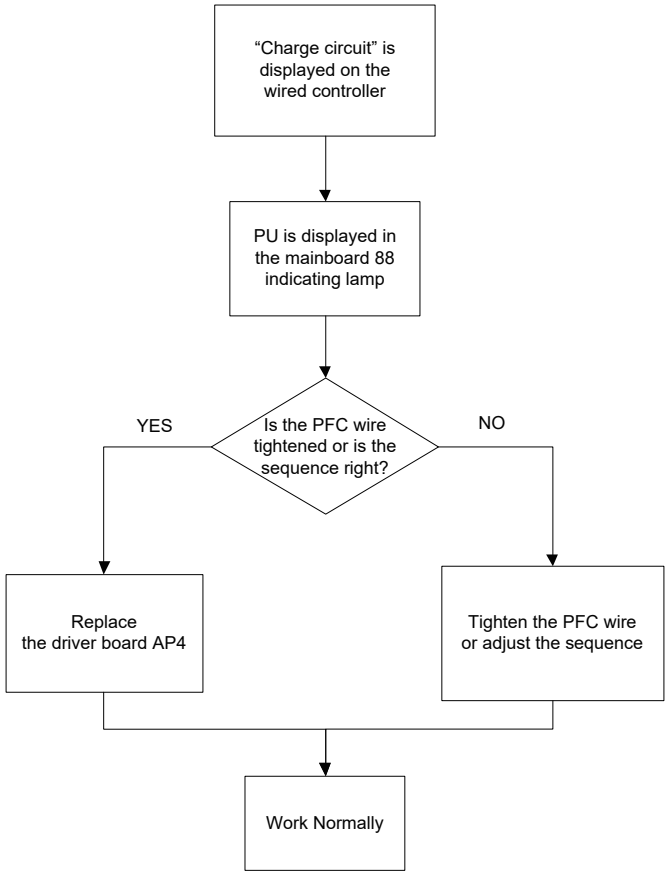
(5) Compressor Startup Failure(code:"LC")



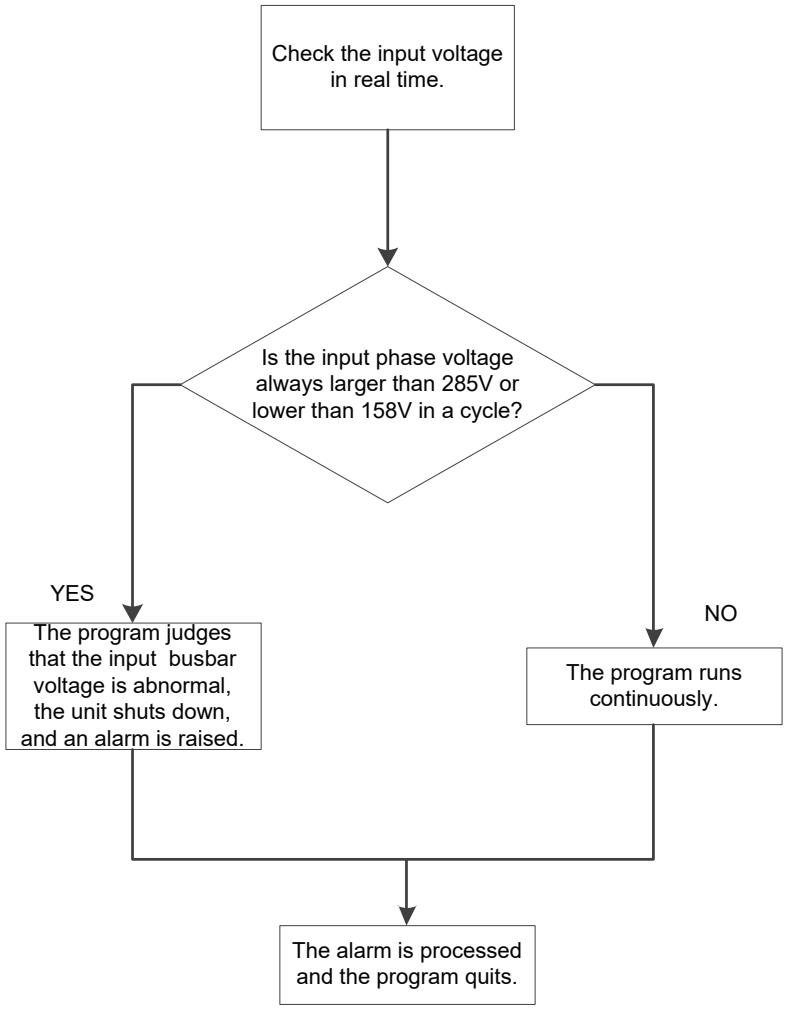
(6) Compressor Current Protection (Code:"P5"); Compressor Motor Desynchronizing (Code:"H7"); IPM Protection (Code:"H5"); Phase Loss (Code:"LD")



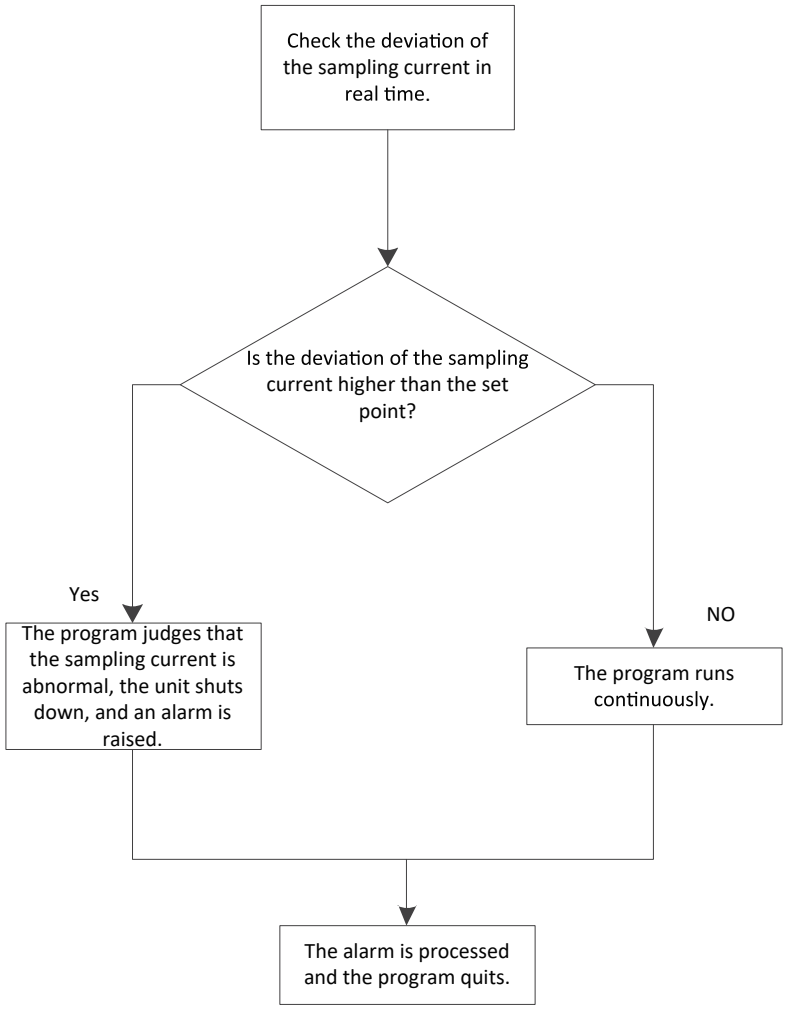
(7) Charging Circuit Error(Code:"PU")



(8) PP1


Check the input voltage in real time.
Is the input phase voltage always larger than 285V or lower than 158V in a cycle?
YES
NO
The program judges that the input busbar voltage is abnormal, the unit shuts down, and an alarm is raised.
The program runs continuously.
The alarm is processed and the program quits.

(9) PD2



8 Daily Maintenance

In order to avoid damage of unit, all protecting devices in the unit have been set before packaging and delivering. so the user should never adjust or remove them.

For the first startup of the unit or next startup of unit after long-period stop (above 1 day) by cutting off the power, please electrify the unit in advance to preheat the unit for more than 8hr

Never put sundries on the unit and accessories. Keep dry, clean and ventilated around the unit.

Remove the dust accumulated on the condenser fin timely to ensure performance of unit and to avoid stop of unit for protection.

In order to avoid protection or damage of unit caused by blockage of water system, clean the filter in water system periodically and frequently check water replenishing device.

In order to ensure anti-freezing protection, never cut off the power if ambient temperature is below zero in winter.

In order to avoid frost crack of the unit, water in the unit and pipeline system should be drained regularly. In addition, open the end cap of water tank for drainage.

Never frequently make the unit on/off and close manual valve of water system during operation of unit by users.

Ensure frequently check the working condition of each part to see if there is oil stain at pipeline joint and charge valve to avoid leakage of refrigerant.

If users are not able to handle the malfunction of the unit, please timely contact with authorized service center of company.

⚠ NOTE

The water pressure gage is installed in returning water line in the indoor unit, Please adjust the hydraulics system pressure according to next item:

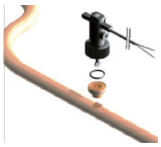
(1) If the pressure is less than 0.5 bar, please recharge the water immediately;

(2) When recharging, the hydraulics system pressure should be not more than 2.5 Bar.

9 Repair

9.1 Key Components

Picture	Name	Function
	Compressor	It is the heart of the cooling system, mainly used to turn the low-temperature, low-pressure refrigerant vapor to high-temperature high-pressure vapor and then discharge it to the evaporator. The two-stage enthalpy-adding compressor is adopted herein, which can improve the heating performance of the unit largely.
	Electronic Expansion Valve	It is one of four main components and used to turn the hi-pressure liquid refrigerant to low-temperature, low-pressure vapor-liquid mixture and adjust the refrigerant flow rate entering the evaporator.
	Gas-liquid Separator	It is installed at the side of the suction line, and used to prevent liquid refrigerant entering the compressor, otherwise, the wet compression or the liquid slugging may occur.
	4-way Valve	It is used to switch flow direction of refrigrant and then realize switchover between cooling and heating. It also can be used for defrosting through the counterflow.
	Plate Heat Exchanger	It is the water-refrigerant plate type heat exchanger, used to liquefy the high-temperature high-pressure vapor refrigerant or evaporate the low-temperature low pressure liquid refrigerant. Heat of condensation is taken away by circulation water and heat for evaporation is supplied also by circulation water.
	Water Pump	It is the power equipment for water circulation.
	Expansion Vessel	It is used to keep stable pressure of the water system. The tank is charged with a certain volume of nitrogen which is separated from the water side with a gasbag. When pressure of the water side exceeds the nitrogen pressure, the gasbag will expand and water enters into the tank so as to lower the pressure of the water system. In contract, when pressure of the water system goes down, nitrogen in the tank will expel water out to the water system.

Picture	Name	Function
	Flow Switch	It is used to prevent the heat exchanger from being frozen owing to reduced water flow rate. When the flow rate goes down to the point at which the flow switch will act, the switch will trip off and the unit will raise an alarm and shut down.
	Economizer	It is used in heating mode and water heating mode but NOT used in cooling mode.On one side,it can increase the subcooling before EXV,and on the other side it can improve efficiency in heating circuit.
	Safety Valve	It is used to prevent the pressure of circulation water from increasing unusually. When the pressure is larger than the set point (0.3MPa), this valve will open to relieve water pressure.
	Exhaust Valve	It is used to expel air trapped inside the water system to make sure normal operation of the system. It is usually installed at the highest point of the system.

9.2 Charging and Discharging of Refrigerant

The unit has been charged with refrigerant before delivery. Overcharging or undercharging will cause the compressor to run improperly or be damaged. When refrigerant is required to be charged or discharged for installation, maintenance and other reasons, please follow steps below and nominal charged volume on the nameplate.

Discharging: remove metal sheets of the outer casing, connect a hose to the check valve on outdoor unit and then discharge refrigerant:

⚠ NOTE

- Discharge is allowed unless the unit has been stopped. (Cut off the power and repower it 1 minutes later)
- Protective measures should be taken during discharging to avoid frost bites.
- When discharging is finished, if vacuuming cannot be done immediately, remove the hose to avoid air or foreign matters entering the unit.
- Vacuuming: when discharging is finished, use hoses to connect the charging valve, manometer and vacuum pump to vacuum the unit.
- When vacuuming is finished, pressure inside the unit should be kept lower than 80Pa for at least 30 minutes to make sure there is no leak. Either charging valve 1 or charging valve 2 can be used for vacuuming.
- When vacuuming is finished and it is certain that there is no leak, charging can be done.

◆ Leak Detection Methods

The following leak detection methods are deemed acceptable for systems containing flammable refrigerants.

Electronic leak detector shall be used to detect flammable refrigerant, but the sensitivity may not be adequate, or may need re-calibration (Detection equipment shall be calibrated in a refrigerant-free area).

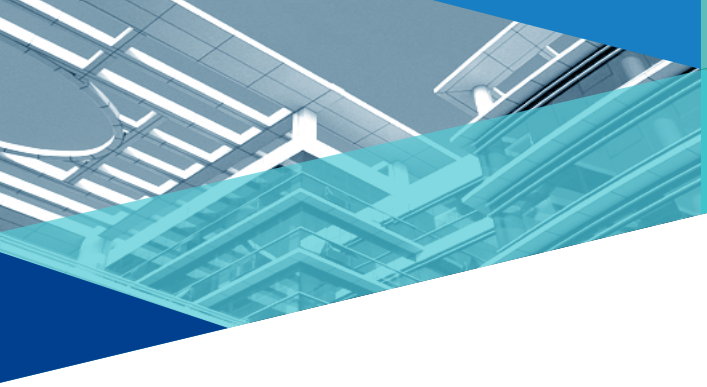
Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used.

Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed and the appropriate percentage of gas (25% maximum) is confirmed.

Leak detection fluids are suitable for us with most refrigerant but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work.

If a leak is suspected, all naked flames shall be removed / extinguished. If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak. Oxygen free nitrogen (OFN) shall then be purged through the system both before and during the brazing process.

Note: before and during operation, use an appropriate refrigerant leak detector to monitor the operation area and make sure the technicians can be well aware of any potential or actual leakage of inflammable gas. Make sure the leak detecting device is applicable to inflammable refrigerant. For example, it should be free of sparks, completely sealed and safe in nature.



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