

Product

No.	Name	No.	Name	No.	Name
1	Compressor	18	Liquid Temperature Sensor of the PHE	35	Water Tank
2	Discharge Temperature Sensor	19	Gas Temperature Sensor of the PHE	36	Leaving Water Temperature Sensor of the Solar System
3	High Pressure Switch	20	Plate-type Exchanger	37	Flow Switch for the Solar System
4	Pressure Sensor	21	Leaving Water Temperature of the PHE	38	Water Pump for the Solar System
5	4-way Valve	22	Entering Water Temperature of the PHE	39	Solar Panel
6	Finned Exchanger	23	Automatic Exhaust Valve	40	Solar Panel Temperature Sensor
7	Environment Temperature Sensor	24	Electric Heater	41	Entering Water Temperature for the Solar System
8	Defrosting Temperature Sensor	25	Safety Valve	42	Water Knockout Vessel
9	Filter	26	Expansion Tank	43	Electric 2-way Valve 1
10	Electrostatic Expansion Valve	27	Leaving Water Temperature of the Electric Heate	44	Floor Radiator
11	Filter	28	Water Pump	45	Water Collector
12	Liquid Valve	29	Flow Switch	46	FCU
13	Gas Valve	30	Leaving Water Pipe Connector	47	Pressure Differential Bypass Valve
14	Filter	31	Entering Water Pipe Connector	48	Water Tank Temperature Sensor 2
15	Vapor-liquid Separator	32	Water Filter	49	Liquid Valve Connector
16	Suction Temperature Sensor	33	Electric 3-way Valve 2	50	Gas Valve Connector
17	Pressure Sensor	34	Water Tank Temperature Sensor 1		

1.5 Technical Data

1.5.1 Parameter List

Model		GRS-CQ8.0Pd/NaE-K	GRS-CQ10Pd/NaE-K
Product Code		ER01001300	ER01001290
Capacity*1	Cooling(floor cooling)	kW	7.8
	Heating(floor heating)	kW	8

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Power Input*1	Cooling(floor cooling)	kW	1.95	2.1
	Heating(floor heating)	kW	1.778	2.273
EER*1(floor cooling)		W/W	3.9	4.0
COP*1(floor heating)		W/W	4.4	4.5
Capacity*2	Cooling(for Fan coil)	kW	6.3	7.2
	Heating(Fan coil or Radiator)	kW	7.6	9.5
Power Input*2	Cooling(for Fan coil)	kW	2.33	2.77
	Heating(Fan coil or Radiator)	kW	2.24	2.88
EER*2(for Fan coil)		W/W	2.6	2.7
COP*2(Fan coil or Radiator)		W/W	3.3	3.4
Refrigerant charge volume		kg	2.3	2.3
Sanitary water Temperature		°C	40~80	40~80
Outdoor Unit Model			GRS-CQ8.0Pd/NaE-K(O)	GRS-CQ10Pd/NaE-K(O)
Outdoor Unit Product Code			ER010W1300	ER010W1290
Sound Pressure Level	cooling	dB(A)	54	54
	heating	dB(A)	56	56
Dimensions (W×D×H)	Outline	mm	980×427×788	
	Packaged	mm	1097×862×477	
Net weight/Gross weight		kg	80/85	
Indoor Unit Model			GRS-CQ8.0Pd/NaE-K(I)	GRS-CQ10Pd/NaE-K(I)
Indoor Unit Product Code			ER010N1300	ER010N1290
Sound Pressure Level	cooling	dB(A)	31	31
	heating	dB(A)	31	31
Dimensions (W×D×H)	Outline	mm	981×324×500	
	Packaged	mm	1043×395×608	
Net weight/Gross weight		kg	56/65	

Notes

“*1” indicates the capacity and power input are tested based on the conditions below:

①Cooling

Indoor Water Temperature: 23°C/18°C; Outdoor Temperature: 35°CDB/24°CWB

②Heating

Indoor Water Temperature: 30°C/35°C; Outdoor Temperature: 7°CDB/6°CWB

“*2” indicates the capacity and power input are tested based on the conditions below:

①Cooling

Indoor Water Temperature: 12°C/7°C; Outdoor Temperature: 35°CDB/24°CWB

②Heating

Indoor Water Temperature: 40°C/45°C; Outdoor Temperature: 7°CDB/6°CWB

Model			GRS-CQ12Pd/NaE-K	GRS-CQ14Pd/NaE-K	GRS-CQ16Pd/NaE-K
Product Code			ER01001280	ER01001270	ER01001260
Capacity*1	Cooling(floor cooling)	kW	12.5	13.5	14.5
	Heating(floor)	kW	12	14	15.5

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	heating)				
Power Input* ¹	Cooling(floor cooling)	kW	3	3.4	3.8
	Heating(floor heating)	kW	2.8	3.3	3.75
EER* ¹ (floor cooling)		W/W	4.2	4	3.8
COP* ¹ (floor heating)		W/W	4.3	4.2	4.1
Capacity* ²	Cooling(for Fan coil)	kW	8.5	9	9.5
	Heating(Fan coil or Radiator)	kW	11.5	12.5	14.5
Power Input* ²	Cooling(for Fan coil)	kW	2.7	3	3.3
	Heating(Fan coil or Radiator)	kW	3.4	3.8	4.5
EER* ² (for Fan coil)		W/W	3.1	3	2.9
COP* ² (Fan coil or Radiator)		W/W	3.35	3.3	3.2
Refrigerant charge volume		Kg	3.6	3.6	3.6
Sanitary water Temperature		°C	40~80	40~80	40~80
Outdoor Unit Model			GRS-CQ12Pd/NaE-K(O)	GRS-CQ14Pd/NaE-K(O)	GRS-CQ16Pd/NaE-K(O)
Outdoor Unit Product Code			ER010W1280	ER010W1270	ER010W1260
Sound Pressure Level	cooling	dB(A)	56	56	56
	heating	dB(A)	58	58	58
Dimensions (W×D×H)	Outline	mm	900×412×1345		
	Packaged	mm	998×458×1515		
Net weight/Gross weight		kg	107/117		
Indoor Unit Model			GRS-CQ12Pd/NaE-K(I)	GRS-CQ14Pd/NaE- K(I)	GRS-CQ16Pd/NaE- K(I)
Indoor Unit Product Code			ER010N1280	ER010N1270	ER010N1260
Sound Pressure Level	cooling	dB(A)	31	31	31
	heating	dB(A)	31	31	31
Dimensions (W×D×H)	Outline	mm	981×324×500		
	Packaged	mm	1043×395×608		
Net weight/Gross weight		kg	57/66		

Notes

“*1” indicates the capacity and power input are tested based on the conditions below:

①Cooling

Indoor Water Temperature: 23°C/18°C; Outdoor Temperature: 35°CDB/24°CWB

②Heating

Indoor Water Temperature: 30°C/35°C; Outdoor Temperature: 7°CDB/6°CWB

“*2” indicates the capacity and power input are tested based on the conditions below:

①Cooling

Indoor Water Temperature: 12°C/7°C; Outdoor Temperature: 35°CDB/24°CWB

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②Heating

Indoor Water Temperature: 40°C/45°C; Outdoor Temperature: 7°CDB/6°CWB

Model			GRS-CQ12Pd/NaE-M	GRS-CQ14Pd/NaE-M	GRS-CQ16Pd/NaE-M
Product Code			ER01001250	ER01001240	ER01001230
Capacity*1	Cooling(floor cooling)	kW	13.5	14.5	15
	Heating(floor heating)	kW	12	14	15.5
Power Input*1	Cooling(floor cooling)	kW	3.55	3.95	4.2
	Heating(floor heating)	kW	2.8	3.35	3.85
EER*1(floor cooling)		W/W	3.8	3.7	3.6
COP*1(floor heating)		W/W	4.3	4.2	4.05
Capacity*2	Cooling(for Fan coil)	kW	10	10.5	11
	Heating(Fan coil or Radiator)	kW	12	13.5	14
Power Input*2	Cooling(for Fan coil)	kW	3.35	3.6	3.8
	Heating(Fan coil or Radiator)	kW	3.55	4.05	4.25
EER*2(for Fan coil)		W/W	3	2.95	2.9
COP*2(Fan coil or Radiator)		W/W	3.4	3.35	3.3
Refrigerant charge volume		Kg	3.6	3.6	3.6
Sanitary water Temperature		°C	40~80	40~80	40~80
Outdoor Unit Model			GRS-CQ12Pd/NaE-M(O)	GRS-CQ14Pd/NaE-M(O)	GRS-CQ16Pd/NaE-M(O)
Outdoor Unit Product Code			ER01001250	ER01001240	ER01001230
Sound Pressure Level	cooling	dB(A)	55	55	55
	heating	dB(A)	57	57	57
Dimensions (W×D×H)	Outline	mm	900×1345×412		
	Packaged	mm	998×1515×458		
Net weight/Gross weight		kg	114/124		
Indoor Unit Model			GRS-CQ12Pd/NaE-M(I)	GRS-CQ14Pd/NaE-M(I)	GRS-CQ16Pd/NaE-M(I)
Indoor Unit Product Code			ER01001250	ER01001240	ER01001230
Sound Pressure Level	cooling	dB(A)	31	31	31
	heating	dB(A)	31	31	31
Dimensions (W×D×H)	Outline	mm	981×324×500		
	Packaged	mm	1043×395×608		
Net weight/Gross weight		kg	58/67		

Notes

“*1” indicates the capacity and power input are tested based on the conditions below:

Product

①Cooling

Indoor Water Temperature: 23°C/18°C; Outdoor Temperature: 35°CDB/24°CWB

②Heating

Indoor Water Temperature: 30°C/35°C; Outdoor Temperature: 7°CDB/6°CWB

“*2” indicates the capacity and power input are tested based on the conditions below:

①Cooling

Indoor Water Temperature: 12°C/7°C; Outdoor Temperature: 35°CDB/24°CWB

②Heating

Indoor Water Temperature: 40°C/45°C; Outdoor Temperature: 7°CDB/6°CWB

1.5.2 Nominal Working Conditions

Item	Water Side		Air side	
	Entering Water Temp (°C)	Leaving Water Temperature (°C)	Dry Bulb Temperature (°C)	Wet Bulb Temperature (°C)
Floor Heating	30	35	7	6
FCU Heating	40	45	7	6
Floor Cooling	23	18	35	—
FCU Cooling	12	7	35	—
Water Heating	10	50	7	6

1.5.3 Operation Range

Item	Water Side	Air side
	Leaving Water Temperature (°C)	Environment Dry Bulb Temperature (°C)
Cooling	7~25	10~48
Heating	25~55	-22~35
Water Heating	40~80 (Water Tank Temperature)	-22~45

Note: when operating conditions are out of the range listed above, please contact GREE.

1.5.4 Electric Data

Model	Power Supply	Leakage Switch	Minimum Sectional Area of Earth Wire	Minimum Sectional Area of Power
	V,Ph,HZ	(A)	(mm ²)	(mm ²)
GRS-CQ8.0Pd/NaE-K(O)	220-240V,~,50Hz	25	3.3	2×3.3
GRS-CQ10Pd/NaE-K(O)		25	3.3	2×3.3
GRS-CQ8.0Pd/NaE-K(I)		50	13.3	2×13.3
GRS-CQ10Pd/NaE-K(I)		50	13.3	2×13.3
GRS-CQ12Pd/NaE-K(O)		35	8.4	2×8.4
GRS-CQ14Pd/NaE-K(O)		35	8.4	2×8.4
GRS-CQ16Pd/NaE-K(O)		35	8.4	2×8.4
GRS-CQ12Pd/NaE-K(I)		50	13.3	2×13.3
GRS-CQ14Pd/NaE-K(I)		50	13.3	2×13.3
GRS-CQ16Pd/NaE-K(I)		50	13.3	2×13.3
GRS-CQ12Pd/NaE-M(O)		380-415V,3N~,50Hz	25	3.3

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GRS-CQ14Pd/NaE-M(O)		25	3.3	4×3.3
GRS-CQ16Pd/NaE-M(O)		25	3.3	4×3.3
GRS-CQ12Pd/NaE-M(I)		20	3.3	4×3.3
GRS-CQ14Pd/NaE-M(I)		20	3.3	4×3.3
GRS-CQ16Pd/NaE-M(I)		20	3.3	4×3.3

Notes

- ① Leakage Switch is necessary for additional installation. If circuit breakers with leakage protection are in use, action response time must be less than 0.1 second, leakage circuit must be 30mA.
- ② The above selected power cable diameters are determined based on assumption of distance from the distribution cabinet to the unit less than 75m. If cables are laid out in a distance of 75m to 150m, diameter of power cable must be increased to a further grade.
- ③ The power supply must be of rated voltage of the unit and special electrical line for air-conditioning.
- ④ All electrical installation shall be carried out by professional technicians in accordance with the local laws and regulations.
- ⑤ Ensure safe grounding and the grounding wire shall be connected with the special grounding equipment of the building and must be installed by professional technicians.
- ⑥ The specifications of the breaker and power cable listed in the table above are determined based on the maximum power (maximum amps) of the unit.
- ⑦ The specifications of the power cable listed in the table above are applied to the conduit-guarded multi-wire copper cable (like, YJV XLPE insulated power cable) used at 40°C and resistible to 90°C(see IEC 60364-5-52). If the working condition changes, they should be modified according to the related national standard.
- ⑧ The specifications of the breaker listed in the table above are applied to the breaker with the working temperature at 40°C. If the working condition changes, they should be modified according to the related national standard.

1.5.5 Capacity Correction

◆ Cooling Capacity Correction

GRS-CQ8.0Pd/NaE-K,GRS-CQ10Pd/NaE-K,GRS-CQ12Pd/NaE-K,GRS-CQ14Pd/NaE-K,
GRS-CQ16Pd/NaE-K,GRS-CQ12Pd/NaE-M,GRS-CQ14Pd/NaE-M,GRS-CQ16Pd/NaE-M.

Performance correction					
Leaving Chilled Water °C(°F)	Ambient Temperature °C(°F)				
	25(77)	30(86)	35(95)	40(104)	45(113)
5(41.0)	0.995	0.955	0.905	0.855	0.805
6(42.8)	1.045	1.005	0.955	0.905	0.855
7(44.6)	1.090	1.050	1.000	0.950	0.900
8(46.4)	1.145	1.102	1.052	1.000	0.950
9(48.2)	1.190	1.150	1.100	1.050	1.002
10(50.0)	1.245	1.200	1.150	1.100	1.050
11(51.8)	1.290	1.250	1.202	1.152	1.102
12(53.6)	1.340	1.300	1.252	1.200	1.152
13(55.4)	1.390	1.350	1.302	1.252	1.202

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14(57.2)	1.442	1.402	1.350	1.302	1.252
15(59.0)	1.490	1.450	1.400	1.350	1.302
18(64.4)	1.539	1.502	1.451	1.402	1.350

Computer of actual cooling capacity: actual cooling capacity = nominal cooling capacity x cooling capacity correction coefficient.

◆ Heating Capacity Correction

GRS-CQ8.0Pd/NaE-K, GRS-CQ10Pd/NaE-K, GRS-CQ12Pd/NaE-K, GRS-CQ14Pd/NaE-K, GRS-CQ16Pd/NaE-K, GRS-CQ12Pd/NaE-M, GRS-CQ14Pd/NaE-M, GRS-CQ16Pd/NaE-M.

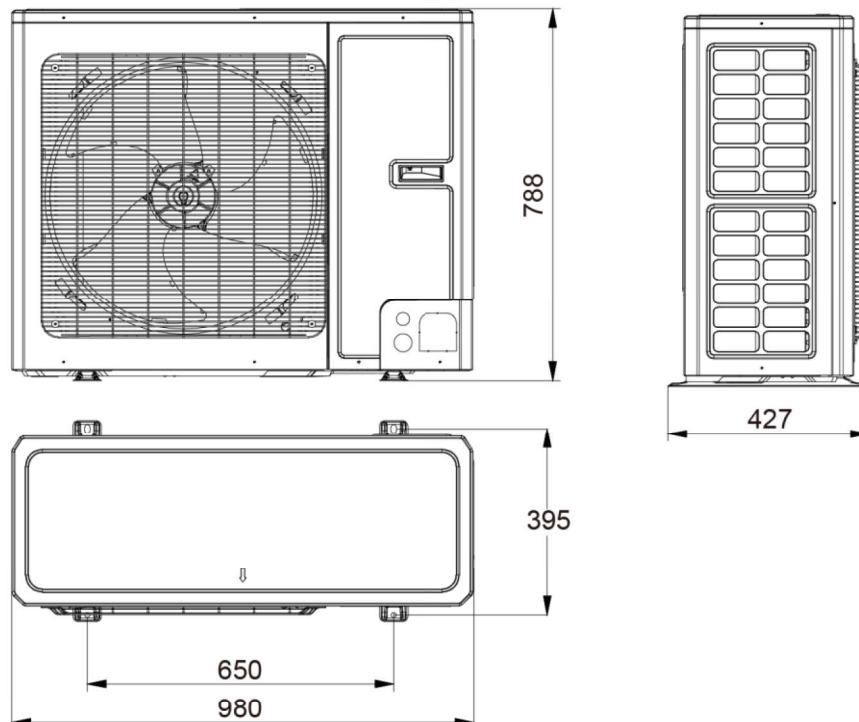
Performance Correction									
Outflow Heated Water °C(°F)	Ambient Temperature °C(°F)								
	-15(5)	-10(14)	-5(23)	0(32)	5(41.0)	10(50)	15(59.0)	20(68.0)	25(77.4)
30(86)	0.81	0.91	1.00	1.10	1.18	1.26	1.35	1.41	1.45
35(95)	0.74	0.84	0.93	1.03	1.11	1.19	1.28	1.36	1.41
40(104)	0.67	0.77	0.87	0.96	1.04	1.12	1.20	1.25	1.31
45(113)	0.60	0.70	0.80	0.89	0.97	1.05	1.13	1.19	1.25
50(122)	0.53	0.63	0.73	0.82	0.90	0.98	1.06	1.11	1.18
55(131)	0.46	0.56	0.66	0.74	0.83	0.90	0.98	1.05	1.10

Computer of actual heating capacity: actual heating capacity = nominal heating capacity x heating capacity correction coefficient.

2 Outline Dimensions

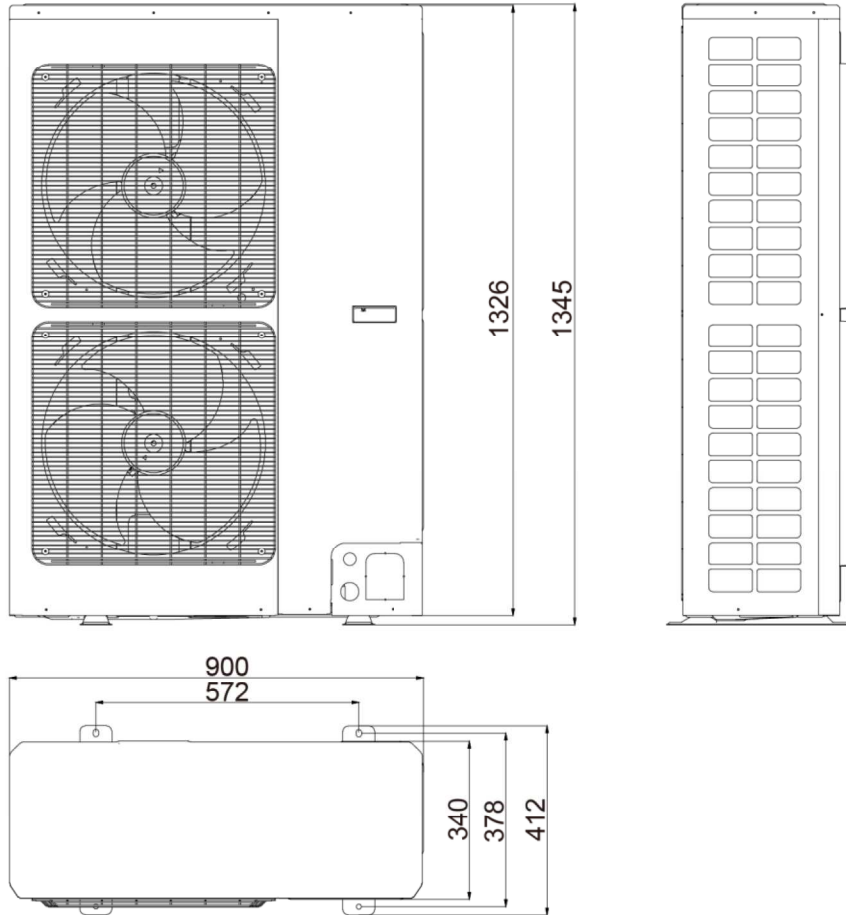
2.1 Outline dimensions of outdoor unit

- ◆ GRS-CQ8.0Pd/NaE-K(O), GRS-CQ10Pd/NaE-K(O)



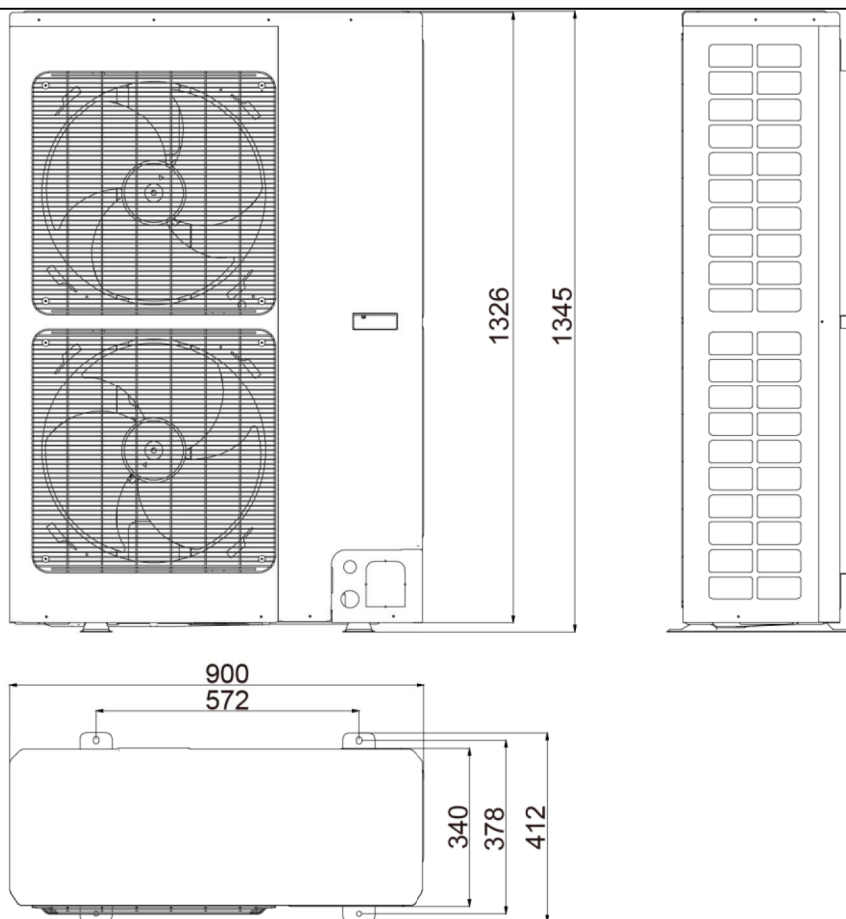
Product

- ◆ GRS-CQ12Pd/NaE-K(O), GRS-CQ14Pd/NaE-K(O) , GRS-CQ16Pd/NaE-K(O)



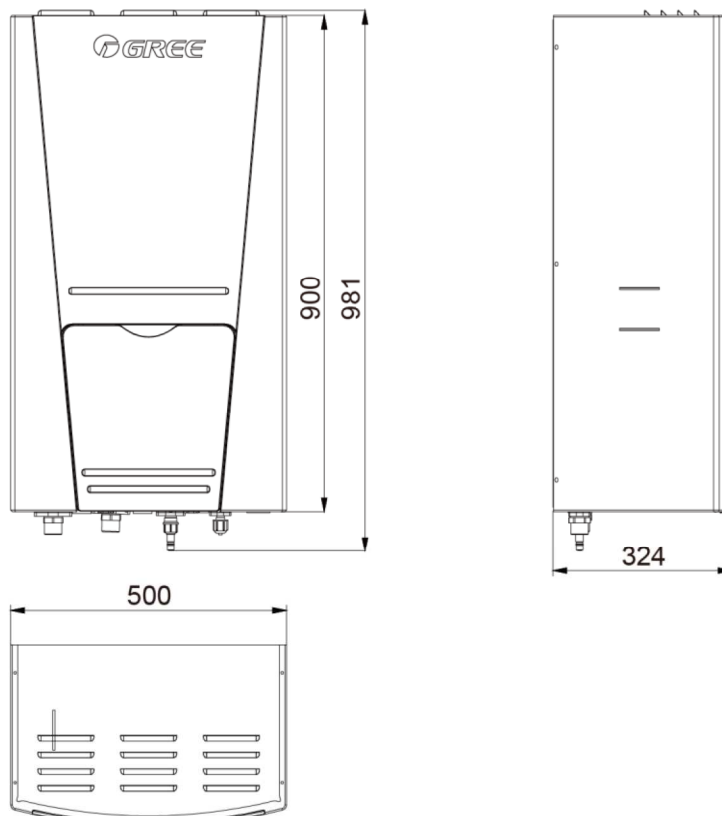
- ◆ GRS-CQ12Pd/NaE-M(O), GRS-CQ14Pd/NaE-M(O) , GRS-CQ16Pd/NaE-M(O)

Product



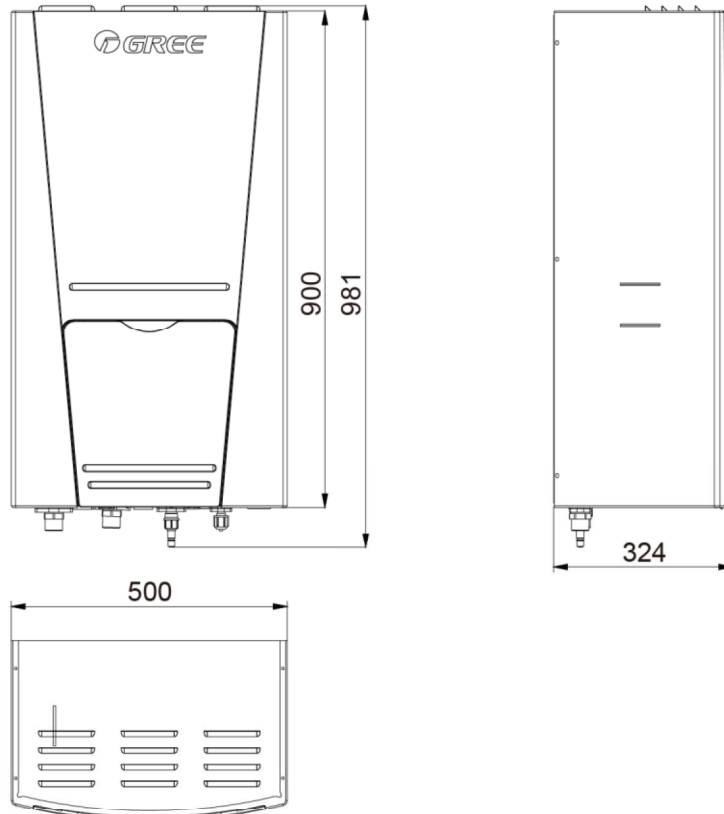
2.2 Outline dimensions of indoor unit

- ◆ GRS-CQ8.0Pd/NaE-K(I), GRS-CQ10Pd/NaE-K(I)

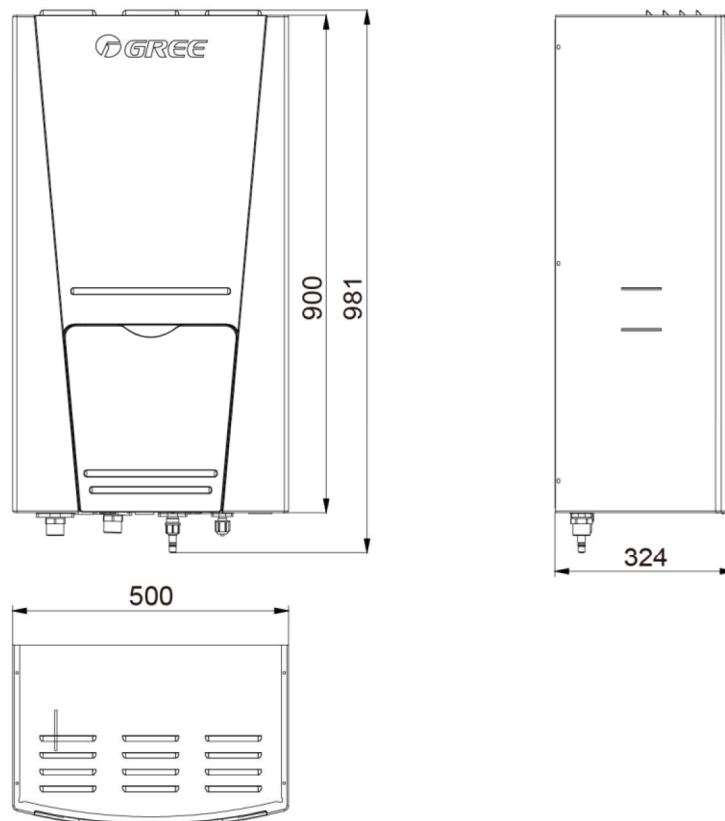


Product

- ◆ GRS-CQ12Pd/NaE-K(I), GRS-CQ14Pd/NaE-K(I), GRS-CQ16Pd/NaE-K(I)



- ◆ GRS-CQ12Pd/NaE-M(I), GRS-CQ14Pd/NaE-M(I), GRS-CQ16Pd/NaE-M(I)



3 Explosive Views and Part Lists

- (1) GRS-CQ8.0Pd/NaE-K(I), GRS-CQ10Pd/NaE-K(I)