

1.5 Technical Data

1.5.1 Parameter List

Model			GRS-CQ4.0Pd/ NhG-K	GRS-CQ6.0Pd /NhG-K	GRS-CQ8.0Pd /NhG-K	GRS-CQ10Pd/ NhG-K
Product Code			ER01001350	ER01001360	ER01001370	ER01001410
Capacity* ¹	Cooling(floor cooling)	kW	3.8	5.8	6.8	8.8
	Heating(floor heating)	kW	4	6	7.5	10
Power Input* ¹	Cooling(floor cooling)	kW	0.82	1.32	1.55	1.96
	Heating(floor heating)	kW	0.78	1.20	1.63	2.15
EER* ¹ (floor cooling)		W/W	4.65	4.4	4.4	4.5
COP* ¹ (floor heating)		W/W	5.1	5.0	4.6	4.65
Capacity* ²	Cooling(for Fan coil)	kW	3	4	5	7.8
	Heating(Fan coil or Radiator)	kW	4	6	7.5	10
Power Input* ²	Cooling(for Fan coil)	kW	0.94	1.27	1.56	2.48
	Heating(Fan coil or Radiator)	kW	0.98	1.56	2.00	2.67
EER* ² (for Fan coil)		W/W	3.2	3.15	3.2	3.15
COP* ² (Fan coil or Radiator)		W/W	4.1	3.85	3.75	3.75
Refrigerant charge volume		kg	0.87			2.2
Sanitary water Temperature		°C	40~80°C			
Sound Pressure Level	cooling	dB(A)	56			59
	heating	dB(A)	58			61
Dimension s (W×D×H)	Outline	mm	1150×345×758			1200×460×878
	Packaged	mm	1258×488×900			1288×588×1020
Net weight/Gross weight		kg	96/109			151/166
Model			GRS-CQ12Pd/ NhG-K	GRS-CQ14Pd/ NhG-K	GRS-CQ16Pd/ NhG-K	GRS-CQ10Pd/ NhG-M
Product Code			ER01001400	ER01001390	ER01001380	ER01001420
Capacity* ¹	Cooling(floor cooling)	kW	11	12.5	14.5	8.8
	Heating(floor heating)	kW	12	14	15.5	10
Power Input* ¹	Cooling(floor cooling)	kW	2.56	3.05	3.82	1.96
	Heating(floor heating)	kW	2.64	3.22	3.60	2.15
EER* ¹ (floor cooling)		W/W	4.2	4	3.7	4.5
COP* ¹ (floor heating)		W/W	4.55	4.35	4.30	4.65

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Capacity* ²	Cooling(for Fan coil)	kW	9.5	12	13	7.8
	Heating(Fan coil or Radiator)	kW	12	14	15.5	10
Power Input* ²	Cooling(for Fan coil)	kW	3.11	4.14	4.73	2.48
	Heating(Fan coil or Radiator)	kW	3.48	4.18	4.70	2.67
EER* ² (for Fan coil)		W/W	3.05	2.9	2.75	3.15
COP* ² (Fan coil or Radiator)		W/W	3.6	3.55	3.40	3.75
Refrigerant charge volume		kg	2.2			
Sanitary water Temperature		°C	40~80°C			
Sound Pressure Level	cooling	dB(A)	59			
	heating	dB(A)	61			
Dimension s (W×D×H)	Outline	mm	1200×460×878			
	Packaged	mm	1288×588×1020			
Net weight/Gross weight		kg	151/166			
Model			GRS-CQ12Pd/ NhG-M	GRS-CQ14Pd/ NhG-M	GRS-CQ16Pd/ NhG-M	
Product Code			ER010001340	ER010001430	ER010001440	
Capacity* ¹	Cooling(floor cooling)	kW	11	12.5	14.5	
	Heating(floor heating)	kW	12	14	15.5	
Power Input* ¹	Cooling(floor cooling)	kW	2.56	3.05	3.82	
	Heating(floor heating)	kW	2.64	3.22	3.60	
EER* ¹ (floor cooling)		W/W	4.2	4.2	4	
COP* ¹ (floor heating)		W/W	4.5	4.55	4.35	
Capacity* ²	Cooling(for Fan coil)	kW	9.5	12	13	
	Heating(Fan coil or Radiator)	kW	12	14	15.5	
Power Input* ²	Cooling(for Fan coil)	kW	3.11	4.14	4.73	
	Heating(Fan coil or Radiator)	kW	3.48	4.18	4.70	
EER* ² (for Fan coil)		W/W	3	3.05	2.9	
COP* ² (Fan coil or Radiator)		W/W	3.5	3.6	3.55	
Refrigerant charge volume		kg	2.2			
Sanitary water Temperature		°C	40~80°C			
Sound Pressure	cooling	dB(A)	59			
	heating	dB(A)	61			

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Level				
Dimension s (W×D×H)	Outline	mm	1200×460×878	
	Packaged	mm	1288×588×1020	
Net weight/Gross weight		kg	151/166	

Notes

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

(1) Cooling

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

(2) Heating

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:

(1) Cooling

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

(2) Heating

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

1.5.2 Nominal Working Conditions

Item	Water Side		Heat Source/User Side	
	Entering Water Temp (°C)	Leaving Water Temperature (°C)	Dry Bulb Temperature (°C)	Wet Bulb Temperature (°C)
FCU Cooling	12	7	35	—
FCU Heating	40	45	7	6
Floor Cooling	23	18	35	—
Floor Heating	30	35	7	6
Water Heating	53	-	7	6

1.5.3 Operation Range

Item	Water Side	Heat Source/User Side
	Leaving Water Temperature (°C)	Environment Dry Bulb Temperature (°C)
Cooling	7~25	10~48
Heating	25~60	-25~35
Water Heating	40~80 (Water Tank Temperature)	-25~45

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-CQ4.0d/NhG-K	220-240V,~,50Hz	16	1.5	2×1.5
GRS-CQ6.0Pd/NhG-K		16	1.3	2×1.5
GRS-CQ8.0Pd/NhG-K		16	1.3	2×1.5
GRS-CQ10Pd/NhG-K		40	6.0	2×6.0
GRS-CQ12Pd/NhG-K		40	6.0	2×6.0

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GRS-CQ14Pd/NhG-K		40	6.0	2×6.0
GRS-CQ16Pd/NhG-K		40	6.0	2×6.0
GRS-CQ10Pd/NhG-M	380-415V,3N~,50Hz	16	1.5	4×1.5
GRS-CQ12Pd/NhG-M		16	1.5	4×1.5
GRS-CQ14Pd/NhG-M		16	1.5	4×1.5
GRS-CQ16Pd/NhG-M		16	1.5	4×1.5

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-CQ4.0Pd/NhG-K, GRS-CQ6.0Pd/NhG-K, GRS-CQ6.0Pd/NhG-K, GRS-CQ10Pd/NhG-K, GRS-CQ12Pd/NhG-K, GRS-CQ14Pd/NhG-K, GRS-CQ16Pd/NhG-K, GRS-CQ10Pd/NhG-M, GRS-CQ12Pd/NhG-M, GRS-CQ14Pd/NhG-M, GRS-CQ16Pd/NhG-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

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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
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

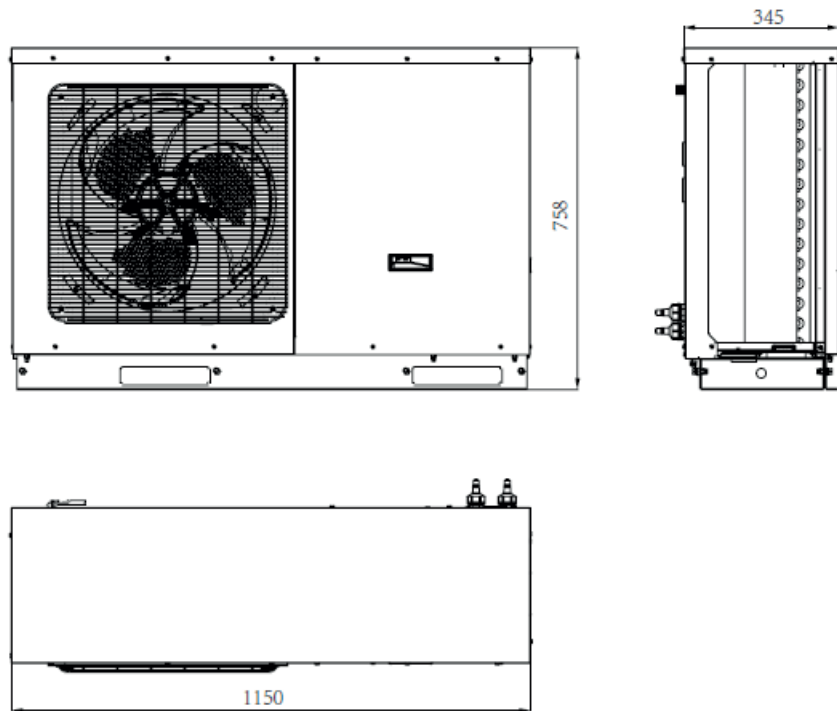
GRS-CQ4.0Pd/NhG-K, GRS-CQ6.0Pd/NhG-K, GRS-CQ6.0Pd/NhG-K, GRS-CQ10Pd/NhG-K, GRS-CQ12Pd/NhG-K, GRS-CQ14Pd/NhG-K, GRS-CQ16Pd/NhG-K, GRS-CQ10Pd/NhG-M, GRS-CQ12Pd/NhG-M, GRS-CQ14Pd/NhG-M, GRS-CQ16Pd/NhG-M

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

- ◆ GRS-CQ4.0Pd/NhG-K, GRS-CQ6.0Pd/NhG-K, GRS-CQ8.0Pd/NhG-K



- ◆ GRS-CQ10Pd/NhG-K, GRS-CQ12Pd/NhG-K, GRS-CQ14Pd/NhG-K, GRS-CQ16Pd/NhG-K
GRS-CQ10Pd/NhG-M, GRS-CQ12Pd/NhG-M, GRS-CQ14Pd/NhG-M, GRS-CQ16Pd/NhG-M

