GREE
Change for life

Owner's Manual

Original Instructions

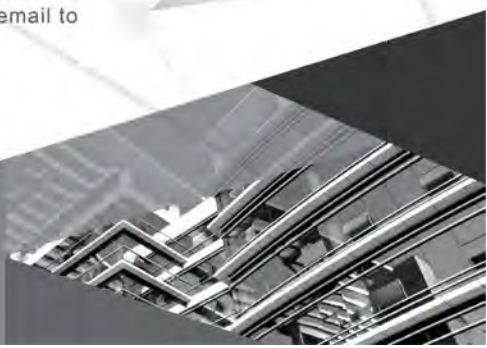
Energy Recovery Ventilation System

Models:
FHBQGL-D1.5DA-T
FHBQGL-D2.5DA-T
FHBQGL-D3.5DA-T
FHBQGL-D5DA-T

Thank you for choosing commercial air conditioners. Please read this Owner's Manual carefully before operation and retain it for future reference.

If you have lost the Owner's Manual, please contact the local agent or visit www.gree.com or send an email to global@cn.gree.com for the electronic version.

GREE ELECTRIC APPLIANCES,INC.OF ZHUHAI



To Users

Thank you for selecting Gree 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 appliance 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 responsibility for their safety. Children should be supervised to ensure that they do not play with the appliance.

(2) In order to ensure reliability of product, the product may consume some power under stand-by status for maintaining normal communication of system and preheating refrigerant and lubricant. If the product is not to be used for long, cut off the power supply; please energize and preheat the unit in advance before reusing it.

(3) Please properly select the model according to actual using environment, otherwise it may impact the using convenience.

(4) If the product needs to be installed, moved or maintained, please contact our designated dealer or local service center for professional support. Users should not disassemble or maintain the unit by themselves, otherwise it may cause relative damage, and our company will bear no responsibilities.

(5) 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. If there is adjustment in the product, please subject to actual product.

Exception Clauses

Manufacturer will bear no responsibilities when personal injury or property loss is caused by the following reasons:

(1) Damage the product due to improper use or misuse of the product.

(2) Alter, change, maintain or use the product with other equipment without abiding by the instruction manual of manufacturer.

(3) After verification, the defect of product is directly caused by corrosive gas.

(4) After verification, defects are due to improper operation during transportation of product.

(5) Operate, repair, maintain the unit without abiding by instruction manual or related regulations.

(6) After verification, the problem or dispute is caused by the quality specification or performance of parts and components that produced by other manufacturers.

(7) The damage is caused by natural calamities, bad using environment or force majeure.

Contents

1 Safety Notices (Please be Sure to Abide) ····· **1**

2 Product Introduction ····· **4**

2.1 Main Unit Structure ····· 6

2.2 Outline Dimension ····· 7

2.3 Product Performance Parameter ····· 8

2.4 Accessory List ····· 9

3 Installation ····· **9**

3.1 General Instruction ····· 9

3.2 Engineering Design ····· 9

4 Electric Installation ····· **16**

4.1 Unit External Wiring Diagram ····· 16

4.2 Electric Installation Demands ····· 16

4.3 Grounding Demands ····· 17

4.4 Wring Demands ····· 18

4.5 Demands for Selecting Communication Wire ····· 18

4.6 Wiring Work ····· 20

5 Operation and Maintenance ····· **24**

5.1 Check before Running Test ····· 25

5.2 Running Test ····· 25

5.3 Daily Maintenance ····· 25

5.4 Table of Error Codes ····· 26

1 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.

WARNING!

This product can't be installed at corrosive, inflammable or explosive environment or the place with special requirements, such as kitchen. Otherwise, it will affect the normal operation or shorten the service life of the unit, or even cause fire hazard or serious injury. As for above special places, please adopt special air conditioner with anti-corrosive or anti-explosion function.

	Follow this instruction to complete the installation work. Please carefully read this manual before unit startup and service.		Installation should be conducted by dealer or qualified personnel. Please do not attempt to install the unit by yourself. Improper handling may result in water leakage, electric shock or fire disaster etc.
	Before installation, please check if the power supply is in accordance with the requirements specified on the nameplate. And also take care of the power safety.		Make sure the unit can be earthed properly and soundly after plugging into the socket so as to avoid electric shock. Please do not connect the ground wire to gas pipe, water pipe, lightning rod or telephone line.

	Be sure to use the exclusive accessory and part to prevent the water leakage, electric shock and fire accidents.		Wire size of power cord should be large enough. The damaged power cord and connection wire should be replaced by exclusive cable.
	After connecting the power cord, please fix the electric box cover properly in order to avoid accident.		Do not expose the unit to the moist or corrosive circumstances.
	Never start up or shut off the unit by means of directly plug or unplug the power cord.		Please firstly connect the wired controller before energization, otherwise wired controller cannot be used.
	Do not allow children operate this unit.		Do not operate this unit with wet hands.
	Never spray or flush water towards unit; Otherwise, malfunction or electric shock may happen.		Once installation is finished, please check if the connection of power cord and communication line are correct to avoid electric shock, short circuit, fire hazard and other accidents.
	Turn off the unit or cut off the power supply before cleaning the unit, otherwise electric shock or injury may happen.		Do not insert fingers or objects into air outlet/inlet grille.

	Volatile liquid, such as diluent or gas will damage the unit appearance. Only use soft cloth with a little neutral detergent to clean the outer casing of unit.		User is not allowed to repair the unit. Fault service may cause electric shock or fire accidents. Please contact Gree appointed service center for help.
	For nonprofessionals, never touch the fan volute or other movable parts, as it may result in injury.		Please cut off the power supply when this unit is not used for a long time in consideration of safety.
	Please clean the filter periodically to keep it clean.		Install a bird screen or a similar device at the external air vent.
	Outdoor air inlet should be installed at the position where is far away from the discharge outlet of inflammable gas.		The air inlet should be installed at the position where the air won't flow back directly.
	Reserve the service port according to the dimension indicated by the installation instruction.		In order to avoid incomplete combustion, which may lead to intoxication, keep heating appliances away from the air flow of the unit.
	As for pipe fan and wall fan, please note that the gas must be flow back to indoors from the open air way or other fire equipment.		Please make sure that it can be used in special-purpose places (such as the places where there are precision instruments, food or fine arts).

	If anything abnormal happens (such as burning smell), please power off the unit and cut off the main power supply, and then immediately contact Gree appointed service center. If abnormality keeps going, the unit might be damaged and lead to electric shock or fire.		Due to the limitation of the detection principle of the air quality testing instrument, the air quality testing instrument will inevitably have different deviation for the places where there are humidifier and aromatherapy machine. The actual performance of the unit is normal. Please feel free to use it.

2 Product Introduction

Energy recovery ventilation system is a kind of device that purifies and precools or preheats outdoor fresh air. The unit is equipped with filters and a set of high-efficiency energy recovery cores. When the fan is running, outdoor fresh air and indoor discharged air enter into the unit along the ducts through outdoor air inlet port and indoor air discharge port. Outdoor fresh air and indoor discharged air are filtrated through filters inside the unit. The purified outdoor fresh air is sent to the indoors after sufficient heat and humidity exchange with indoor discharged air in energy recovery cores, so as to reduce the load of fresh air to achieve energy saving.

The unit adopts DC motor and constant air volume control technology to maintain fresh air volume constant when the filter is dirty in a certain degree. The unit structure design is flexible with lower maintenance way, so that the maintenance of filter and motor is simple. Internal unit adopts inner insulation design, to prevent condensation in summer and winter, as well as reducing noise.

The product accords with Rule (EU) 1253–2014、(EU) 1254–2014.

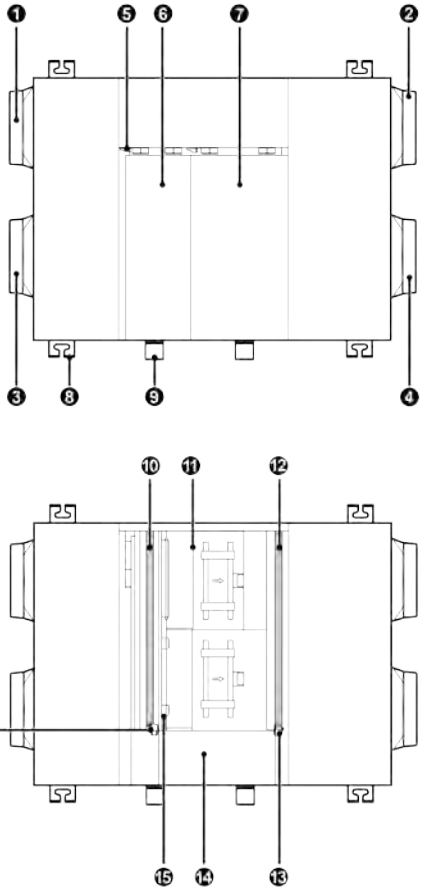
Table1 Function List

Function	Model	Remark
	FHBQGL-D1.5DA-T FHBQGL-D2.5DA-T FHBQGL-D3.5DA-T FHBQGL-D5DA-T	
Operation control	√	—
Linkage control	○	This function is available when the unit is operating with Gree VRF system
Auto control	○	This function is available when the unit is operating with Gree air box
Fan speed	√	—
Heat recovery operation mode	√	—
Bypass operation mode	√	—
Discharge operation mode	√	—
Positive and negative pressure mode	√	—
Air quality detection	○	This function is available when the unit is operating with Gree air box
Dehaze	√	—
Filter cleaning/replacing reminder	√	—
Timer	√	—
Group control	○	This function is available when the unit is operating with Gree VRF system or virtual outdoor unit
Slave wired controller	○	—
Centralized control	○	This function is available when the unit is operating with Gree centralized controller
Long-distance control	○	This function is available when the unit is operating with Gree long-distance monitoring system
Lock	√	—
Shield	√	—
Memory	√	—
Auxiliary heating	×	—
Healthy	×	—
Humidification	×	—
Dehumidification	×	—

Remark: √-Standard function, ○-Optional function, ×-Not available.

2.1 Main Unit Structure

Main structure diagram of main unit is as below.



No.	Name	No.	Name
1	Exhaust air outlet port	9	Clasp
2	Extract air inlet port	10	Outdoor air filter
3	Outdoor air inlet port	11	Energy recovery core
4	Supply air outlet port	12	Extract air filter
5	Limiting sheet of maintenance panel	13	Filter damper
6	Maintenance panel 1	14	Electric box
7	Maintenance panel 2	15	Limiting sheet of core
8	Hook	16	Filter damper

2.2 Outline Dimension

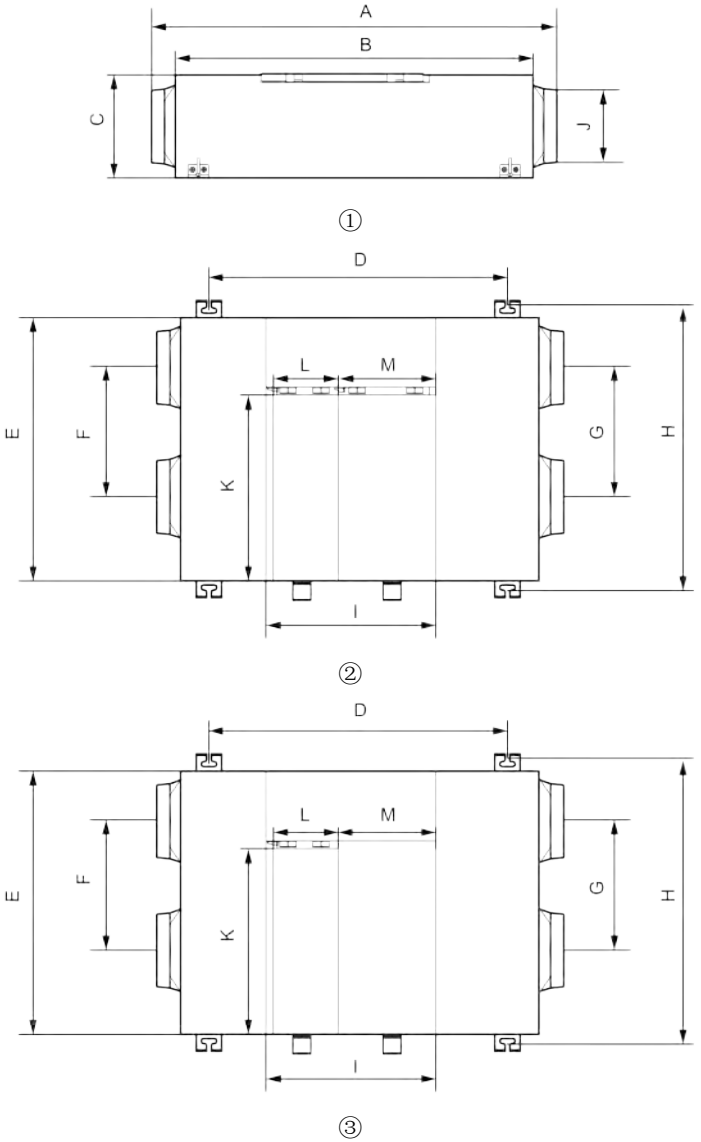


Fig.1 Outline Dimension

Fig② is the front view of maintenance panel of FHBQGL-D3.5DA-T and FHBQGL-D5DA-T;

Fig③ is the front view of maintenance panel of FHBQGL-D1.5DA-T and FHBQGL-D2.5DA-T.

Table2 Outline Dimension

Unit: mm

Model	A	B	C	D	E	F
FHBQGL-D1.5DA-T	1326	1160	220	1000	700	318
FHBQGL-D2.5DA-T	1326	1160	220	1000	700	318
FHBQGL-D3.5DA-T	1366	1200	240	897	785	424
FHBQGL-D5DA-T	1584	1385	240	1203	785	383

Model	G	H	I	J	K	L	M
FHBQGL-D1.5DA-T	311	740	636	150	470	216	388
FHBQGL-D2.5DA-T	311	740	636	150	470	216	388
FHBQGL-D3.5DA-T	377	825	650	150	555	277	343
FHBQGL-D5DA-T	366	825	653	185	555	248	375

2.3 Product Performance Parameter

Table3 Performance Parameters

Model	Power supply	Power (W)	Air volume (m^3/h)	External static pressure (Pa)	Sound power level (dB)	Thermal efficiency(nominal flow rate)	Thermal efficiency(reference flow rate)	Net weight (kg)
FHBQGL-D1.5DA-T	208-230V～,60Hz; 220-240V～,50Hz	50	150	100	43	80%	90%	50
FHBQGL-D2.5DA-T		105	250	100	50	75%	79%	50
FHBQGL-D3.5DA-T		155	350	100	55	76%	—	60
FHBQGL-D5DA-T		250	500	100	57	73%	—	71.5

NOTES!

① Sound power level noise is tested in semi-anechoic room according to related test method specified in standard EN ISO 3744. Actual noise may be various due to actual environment influence.

② Thermal efficiency is tested according to related test method and temperature condition specified in standard EN 13141-7:2010. Actual thermal efficiency may be various due to actual temperature condition.

③ Specifications may be changed due to product improvement. Please refer to nameplates of the units.

④ The nominal static pressure is the static pressure tested acquiescently when leaving the factory, other high-level filter might affect unit performance parameter.

2.4 Accessory List

Table4 Accessory list

Unit: pc

Model	Wired controller	Nut M10 with washer	Nut M10	Flat washer 10	Spring washer 10
FHBQGL-D1.5DA-T	1	4	4	4	4
FHBQGL-D2.5DA-T	1	4	4	4	4
FHBQGL-D3.5DA-T	1	4	4	4	4
FHBQGL-D5DA-T	1	4	4	4	4

NOTE! The package carbon of unit can be used for locating the unit during installation.

3 Installation

3.1 General Instruction

User should consign the model selection and engineering design to professional HVAC engineers and employ experienced constructor to complete the construction. The design and construction should be in accordance with relevant national norms, regulations.

3.2 Engineering Design

PVC ducts for outdoor air inlet and indoor air supply shall be equipped by the user. As the unit adopts DC motor, air volume can keep constant in a certain system resistance range. If system resistance exceeds this range, air volume will be lower

as resistance gets bigger. When the air flow goes through the ducts, the ducts will generate resistance to the air flow. If the duct length is too long, duct diameter is too small and elbows are too many, air resistance in the duct will increase and air volume will be decreased. To avoid performance degradation, please follow the following recommended principles for installation and design:

(1) The total length of air inlet duct and air return duct shall be designed according to the characteristics of the site. The resistance of the air duct shall not exceed the static pressure requirement of the unit. The air duct should be made of nonflammable or non-combustible materials.

(2) Elbow shall be set as little as possible. Elbow quantity in each duct line shall be within 3. The bent part of elbow should be designed as a circular arc, avoiding a 90° right-angle bend.

(3) Try to avoid using it if the resistance difference of pipeline at both sides of air outlet of fresh air unit is big.

(4) The outer wall of the ducts connected to the outdoor side (fresh air inlet duct and discharged air outlet duct) should be insulated; the installation should be inclined to the outdoors with a slope of 1/100~1/50 to prevent rainwater intrusion.

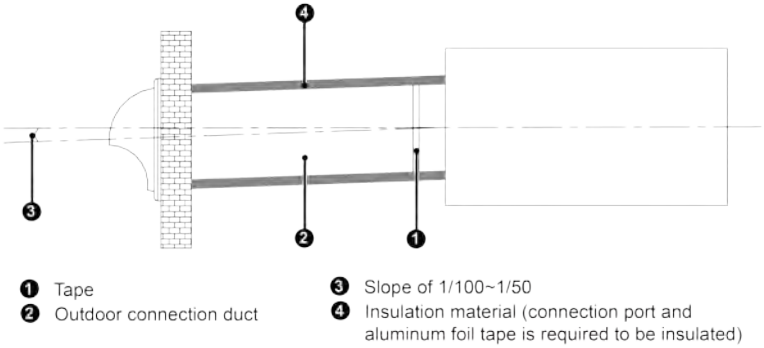


Fig.2 Installation Diagram of Outdoor Connection Duct

(5) The internal wall of duct shall be smooth, not afford to dust and not folded. Outdoor air inlet port shall be installed in the area where is convenient for maintenance.

(6) If the user wants the indoor noise as small as possible, the muffler shall be applied in the connection joints of air ducts. Please consult with a

professional as there are many kinds of muffler. When suitable mufflers are installed, the noise at air outlet port can be reduced by 4~6 dB.

(7) The air filter inside the unit shall be replaced regularly. Therefore, in design and installation, the maintenance space should be left under the unit. The dimension of maintenance space is shown as below.

NOTE!

When installing FHBQGL-D1.5DA-T and FHBQGL-D2.5DA-T in ceiling, maintenance panel 1 and maintenance panel 2 should be completely exposed to the maintenance port, so that the user can remove the maintenance panel 2 with a screwdriver.

Unit: mm

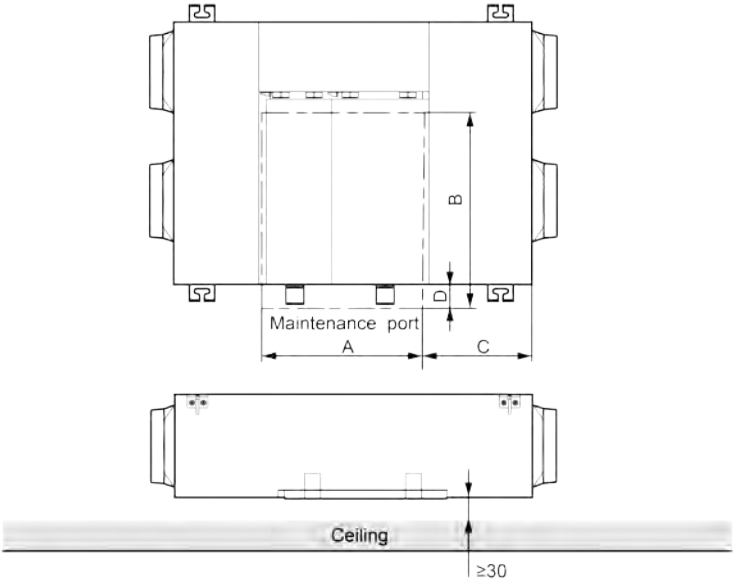


Fig.3 Maintenance Port Illustration

Unit: mm

Model	A	B	C	D
FHBQGL-D1.5DA-T	600	600	260	80
FHBQGL-D2.5DA-T	600	600	260	80
FHBQGL-D3.5DA-T	600	600	315	80
FHBQGL-D5DA-T	600	600	410	80

(8) The unit shall adopt ceiling installation with installation height of 2.3m from the floor.

(9) Use expansion bolts for fixing with the ceiling. Installation steps are as below:

1) Drill 4 holes at the installation position: hole diameter please refer to the diameter of expansion bolt and the depth is about 60~70mm.

Unit: mm

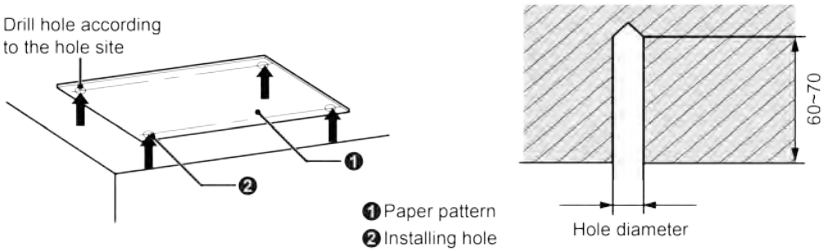


Fig.4 Sectional View of Drilling Hole

2) Use expansion bolts for fixing with the ceiling. Installation steps are as below:

NOTE!

The length of bolt can be selected according to installation height. Bolts are provided by the user.

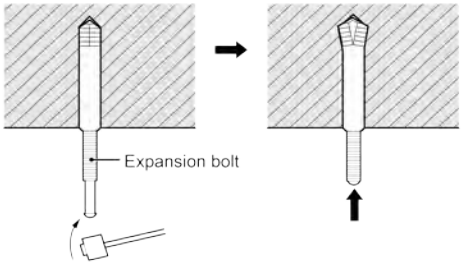


Fig.5 Sectional View for Installing Expansion Bolt

3) The unit is installed in the bolts at the ceiling of the room and is fixed by the nuts provided with other accessories.

Unit: mm

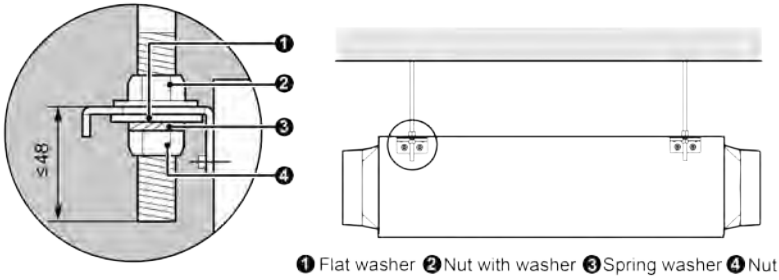


Fig.6 Hanging Frame Placing Diagram

(10) The unit is installed in the bolts at the ceiling of the room and is fixed by the nuts provided with other accessories.

Unit: mm

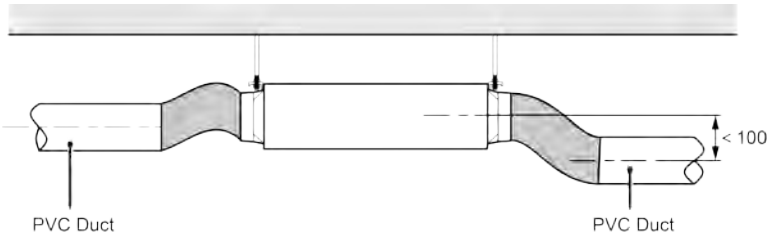


Fig.7 Installation Diagram of Hoses

Installation diagram of the system is as follow:



Fig.8 Installation Diagram of the System

NOTE! Do not put through power until all installation works are done.

Filter and core dimension and replacing time:

Table5 Specification of Filter and Core

Unit: mm

Model	Filter	Energe recovery core
FHBQGL-D1.5DA-T	255×103×28.3	255×204×360
FHBQGL-D2.5DA-T	255×103×28.3	255×204×360
FHBQGL-D3.5DA-T	295×103×28.3	295×204×360
FHBQGL-D5DA-T	295×135×28.3	295×200×400
Recommended reolacing time	Cleaning and replacing reminder by wired controller	2 years



Filter



Energy Recovery Core

Method for replacing energy recovery core and filter as shown in the figure, open the limiting sheet of maintenance panel; open the clasp and take off maintenance panel 1 and 2 (for model FHBQGL-D1.5DA-T and FHBQGL-D2.5DA-T, remove the fixing screw of maintenance panel 2 with a screwdriver); rotate filter damper to replace filter; loosen the limiting sheet of core with a screwdriver and pull away the sheet to replace the energy recovery core.

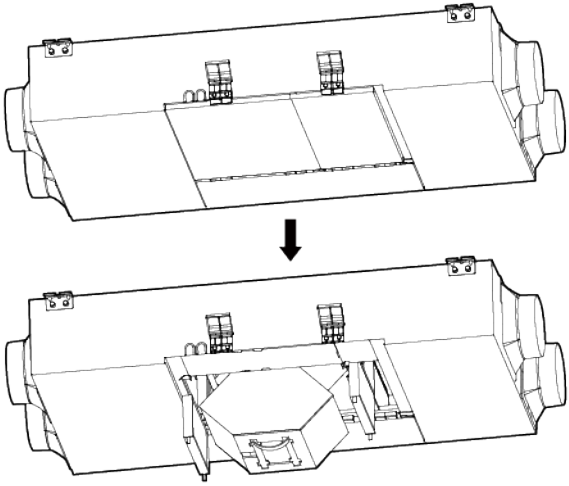


Fig.9 Filter and Core Replacing Diagram

Method for repairing motor: after main power supply is cut off for 5mins, open and remove maintenance panel ①, remove energy recovery cores and filters → remove electric box ②, pull out the motor wiring terminal on the mainboard → remove filter installation plate ③ → pull out the motor installation plate ④.

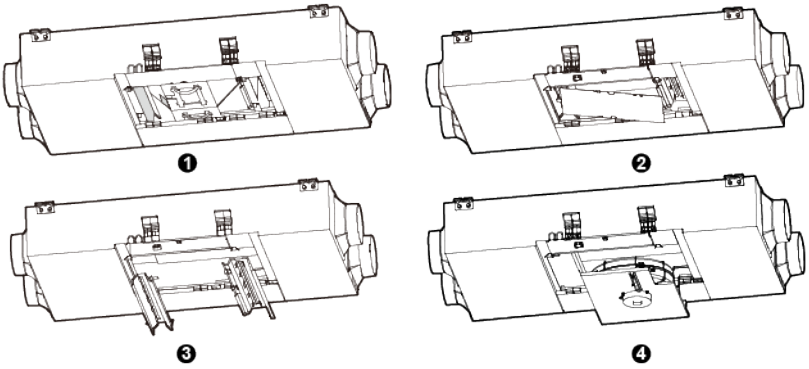


Fig.10 Motor Maintenance Diagram

WARNING!

When the maintenance panel shall be opened during maintenance (e.g. cleaning, replacing filter, repairing motor and electric box), please remove maintenance panel completely to avoid accidents.

4 Electric Installation

4.1 Unit External Wiring Diagram

External wiring diagram (when it is not corresponding to the electric diagram of wiring box, please refer to the electric diagram of wiring box).

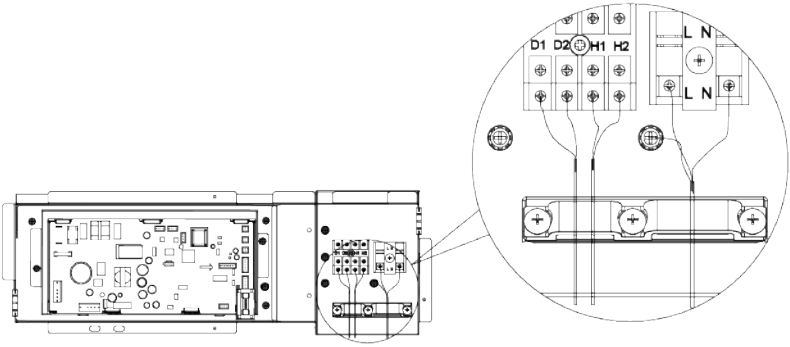


Fig.11 External Wiring Diagram

4.2 Electric Installation Demands

(1) Install units according to national wiring codes.

(2) Power cord must be reliably secured to avoid stress on wire terminal. Do not pull the power cord with force.

(3) Size of power cord must be large enough. A damaged power cord or connection wire must be replaced by specialized electrical cords.

(4) Wiring of wired controller shall be arranged in wire groove or adopt concealed installation.

(5) All electrical installation must be performed by qualified personnel in accordance with local laws, regulations and this manual.

(6) Units must be properly grounded to specialized grounding device in the building. Please ask professionals to install.

(7) Air switch and circuit breaker that can disconnect power of the whole system must be installed.

(8) During installation, please install all-pole disconnection device with contact separation not less than 3mm in the power supply circuit.

(9) Air switch should have both magnetic trip and thermal trip functions so as to protect the unit when short circuit or overload occurs.

(10) During field wiring, please follow the wiring diagram that is attached on the unit.

(11) 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.

4.3 Grounding Demands

(1) Reliable grounding must be ensured. The yellow-green wire inside the unit is a ground wire, so it shall not be used for other purposes nor shall it be cut. Do not tighten it with tapping screws; otherwise it will cause risk of electric shock.

(2) Grounding resistance must follow relevant requirements of the sales countries and regions.

(3) Power supply must provide reliable grounding terminal. Do not connect the ground wire to the following: 1) Water pipe; 2) Gas pipe; 3) Drain pipe; 4) Other places that are deemed as not reliable by professional personnel.

⚠ WARNING!

Before installation and maintenance, please cut off power supply to avoid electric shock. Please use the wire according to related configuration requirement. Otherwise it may lead to unit malfunction and hazards such as electric shock and fire hazard.

Specical statement
If the users alter the electric control system by themselves without prior consent of our company, our company will not bear any responsibility for the abnormal results caused by this.

4.4 Wring Demands

Dimension of power cord and capacity of air switch.

Model	Power specification	Air switch capacity	Ground wire	Power cord
			Mininum sectional area	Mininum sectional area
FHBQGL-D1.5DA-T	208-230V～,60Hz; 220-240V～,50Hz	6A	1mm^2	1mm^2
FHBQGL-D2.5DA-T		6A	1mm^2	1mm^2
FHBQGL-D3.5DA-T		6A	1mm^2	1mm^2
FHBQGL-D5DA-T		6A	1mm^2	1mm^2

NOTES!

① Selection of circuit breaker and power cord in the above table is based upon unit's maximum power (maximum current).

② Specification of power cord is based on the working condition where ambient temperature is 40℃ and multi-core copper cable (working temperature is 90℃, e.g. power cable with YJV cross-linked copper, insulated PE and PVC sheath) is lying on the surface of slot. If working condition is changed, please adjust the specification according to national standard.

③ Specification of circuit breaker is based on the working condition where ambient temperature of circuit breaker is 40℃. If working condition is changed, please adjust the specification accordingly.

④ Install cut-off device near the unit. The minimum distance between each stage of cut-off device should be 3mm.

4.5 Demands for Selecting Communication Wire

If this unit is to be connected to VRF, please refer to these demands.

NOTE! If the unit is installed in a place with strong electromagnetic interference, shielded wire must be used as the communication wire between the unit and wired controller and shielded twisted pair line as the communication wire

between the unit and VRF outdoor unit.

(1) Selection of communication wire between unit and wired controller.

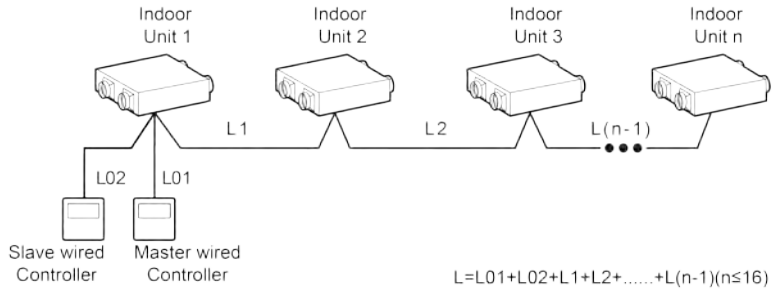


Fig.12 Connection between Wired Controller and Unit

Table6 Wired Controller Communication Wire Selection

Wire material type	Total length of communication line between indoor unit and wired controller L (m)	Wire size (mm^2)	Material standard	Remarks
Light/Ordinary polyvinyl chloride sheathed cord. (60227 IEC 52 /60227 IEC 53)	L≤250m	2×0.75 mm^2~2× 1.25 mm^2	IEC 60227-5:2007	(1)Total length of communication line can't exceed 250m. (2)The cord shall be Circular cord (the cores shall be twisted together). (3)If unit is installed in places with intense magnetic field or strong interference, it is necessary to use shielded wire.

(2) Selection of communication wire between unit and VRF ODU

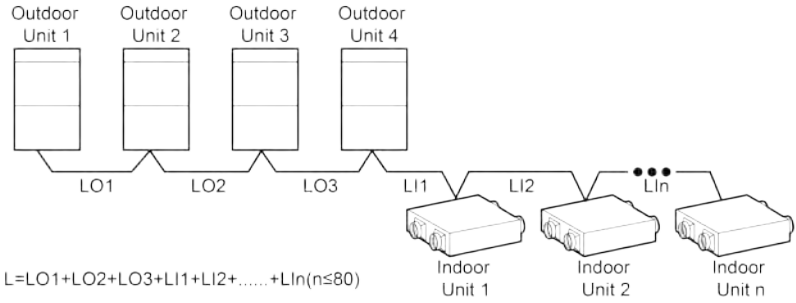


Fig.13 Connection between Unit and VRF ODU

Table7 Selection of Communication Wire between Unit and VRF ODU

Material Type	Total Length L (m) of Communication Cable between Indoor Unit and Indoor (Outdoor) Unit	Wire size (mm^2)	Material Standard	Remarks
Light/Ordinary polyvinyl chloride sheathed cord. (60227 IEC 52 /60227 IEC 53)	L≤1000m	≥2×0.75	IEC 60227-5:2007	1. If the wire diameter is enlarged to 2×1 mm^2, the total communication line length can reach 1500 m. 2. The cord shall be Circular cord (the cores shall be twisted together). 3. If unit is installed in places with intense magnetic field or strong interference, it is necessary to use shielded wire.

4.6 Wiring Work

(1) The unit must be grounded securely, or it may cause electric shock.

(2) Please carefully read the nameplate and the wiring diagram before carry out the wiring work, incorrect wiring could cause malfunction or even damage the unit.

(3) The capacity of power supply must be sufficient and the sectional area of wires in the room should be above 1mm^2.

(4) The unit should be powered by independent circuit and specific socket.

(5) The wiring should be in accordance with related regulations in order to ensure the units operate reliably.

(6) Install circuit breaker for branch circuit according to related regulations and electrical standards.

(7) All wiring must use pressure terminal or single wire. Multi-twisted wire that connects directly to the wiring board may cause fire hazard.

(8) Keep cable away from fan and other motional parts.

(9) Do not alter the inner wires of unit.

(10) If the unit is installed in places with strong electromagnetic interference, it's recommended to use twin-twisted shield wire. During wire connection, please pay attention that the metal shield layer of the twin-twisted wire

must be grounded (outer case) in order to prevent the unit from electromagnetic interference.

(11) The communication wires should be separated from power cord and connection wire between indoor unit and outdoor unit.

(12) If the project needs higher static pressure, you can install booster fan.

4.6.1 Power Cord Connection

All indoor units must be unified of power supply so that they can be powered ON/OFF at the same time.

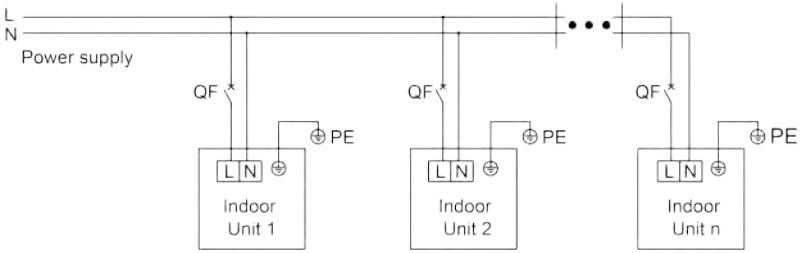


Fig.14 Wiring Diagram

NOTE! Energy recovery ventilation system can be operated independently or with VRF indoor units. Max indoor unit quantity n is according to the outdoor unit capacity. For more details, please refer to the unit capacity configuration.

For units with single-phase power supply:

(1) Detach the electric box cover.

(2) Connect the power cord to terminal "L, N" and grounding screw.

(3) Fix the power cord with wire clamp.

4.6.2 Connection of Wire and Wring Board Terminal

(1) Connection of single branch wire

1) Use a stripper to strip away about 25mm of the insulation layer at the end of single branch line so that the single-core wire can be exposed.

2) Remove the wiring screws on the patch board.

3) Shape the tail of wire into ring by needle nose plier, and keep the gauge of ring in accordance with screw.

4) Lead the screw across the circle of the single branch line and fix it on the wiring board.

(2) Connection of multi-twisted wire

1) Use a wired stripper to strip away about 10mm of the insulation layer at the end of multi-twisted wire.
2) Loosen the wiring screws on wiring board.
3) Use a round terminal fastener or pliers to securely fasten the round terminal with each core wire of the multi-core wire.
4) Confirm the position of each core wire on the round terminal and then use a screwdriver to tighten the terminal screw.

Unit: mm(inch)

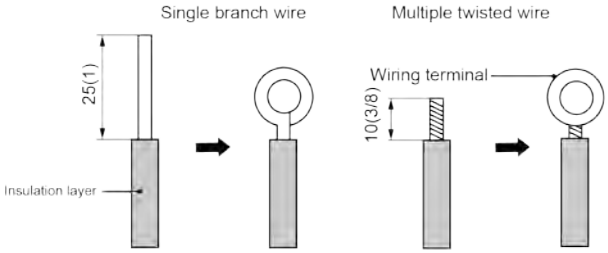


Fig.15 Wire Connection

4.6.3 Connection of Communication Wire

Detach the electric box cover:

(1) Connect the communication wire to terminal H1 and H2 of indoor 4-bit wiring board, as shown in the following figure.

(2) Fix the communication wire of wired controller with the wire clamp of electric box.

(3) If the unit is equipped with air box, connect the communication wire of air box to terminal H1 and H2, and then fix the communication wire with the wire clamp (HBS network can connect 2 air boxes in maximum).

(4) (when connecting to can1 network and linking to VRF are needed, please refer to this wiring diagram) Connect the communication wire to terminal D1 and D2 of indoor 4-bit wiring board, as shown in the following figure.

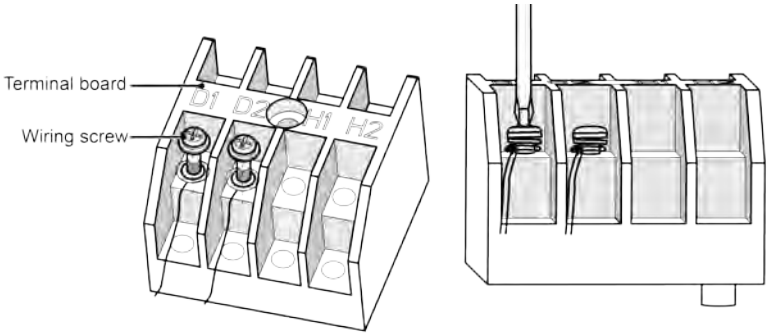


Fig.16 Wiring Board

(5) Fix the communication cable with clamp of electric box.

(6) In order to ensure the reliability of communication between IDU and ODU and the communication among each IDU, add a matched resistance (supplied in a package before ex-factory) on the wiring board of the last indoor unit in a series connection. The matched resistance should be connected in parallel between terminal screw D1 and D2, as shown in the following figure.

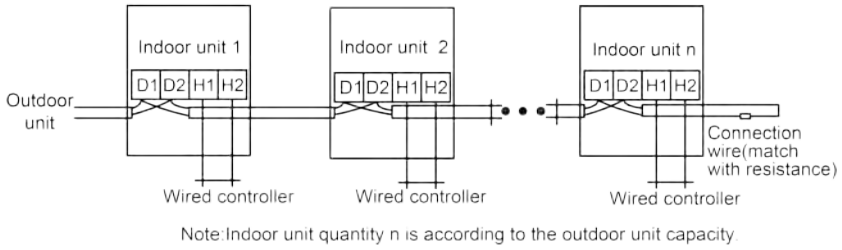


Fig.17 Communication Wire Interface

NOTES!

① One energy recovery ventilation system can connect two wired controllers that must be set as master one and slave one.

② When the indoor unit is controlled by two wired controllers, the addresses of the two wired controllers should be different through address setting. Address 1 is for main wired controller; Address 2 is for

slave wired controller. Detailed setting please refer to the owner's manual of wired controller.

③ One wired controller can control 16 fresh air units in maximum at the same time (this function is only available when the unit is connected to VRF system or virtual outdoor unit).

④ If the fresh air units are not connected to VRF system, while the wired controller shall control several fresh air units, the fresh air units shall connect with virtual outdoor unit; connect one end of communication wire with the virtual outdoor unit and the other end to terminal D1 and D2; other units connect to terminal D1 and D2 through communication wire.

5 Operation and Maintenance

After finishing engineering installation, please check the wire connection and arrange running test.

Notices for operation condition: the suggested operating outdoor temperature range is -25°C ~40°C; if outdoor fresh air temperature is above 40°C or lower than -25°C, the induced fresh air may influence indoor ambient comfort. It is suggested to close the fresh air unit.

The cleaning reminder cycle of filter can be set according to local air pollution status. Setting way is as below: according to the operation steps of owner's manual of wired controller, enter parameter setting P49 interface; for the areas where outdoor pollution is not so serious, set P49 to 04 and filter cleaning will be reminded once in every 2 months of accumulative operation time; for the areas where outdoor pollution is serious, set P49 to 05 and filter cleaning will be reminded once in every one month of accumulative operation time; for the areas and seasons with serious outdoor pollution, set P49 to 06 and filter cleaning will be reminded once in every half month of accumulative operation time; if filter cleaning reminder cycle hasn't been set, wired controller will default P49 as 04.

Maintenance notices of filter: after cleaning, user shall clear the cleaning reminder on wired controller. Detailed operation instructions please refer to the operation steps of owner's manual of wired controller.

5.1 Check before Running Test

5.1.1 Check Pipeline System

Check if the following items according to project design diagram and this owner's manual: if the arrangement of ducts are correct; if the equipment is hung reliably; if the hanging frame is coated with anti-rust paint; check if there is sufficient space in the unit for replacing filter; if the installation location of duct mufflers comply with the instructions besides this manual; check if there is foreign objects or installation tools inside the duct or unit or at the top of the duct or unit; check if the air ports are installed reliably.

5.1.2 Check Circuit System

According to the electric wiring diagram in this manual, check if the power cord complies with related requirements, if the wiring way is correct, if the joint is secured, if the power voltage is normal.

5.2 Running Test

(1) Turn on the unit for running test after connecting power. For detailed operation instructions of wired controller, please refer to the user's manual of wired controller.

(2) If there is abnormal situation, please cut off power immediately and refer to the troubleshooting.

5.3 Daily Maintenance

If air volume becomes smaller apparently during operation, please consider replacing the filter as there may be much dust accumulated in the filter. The setting of replacing cycle can be achieved in the display or can be decided according to the actual status of each area. For the replacing method, please refer to the instructions mentioned above. Please close the sealing door after replacing the filter.

WARNING!

Before installation and maintenance, please cut off power supply to avoid electric shock. Please use the wire according to related configuration requirement. Otherwise it may lead to unit malfunction and hazards such as electric shock and fire hazard.

After finishing debugging and running test, the user can use the equipment normally. If the unit has following errors, please check below items before asking for service:

Table8 Troubleshooting

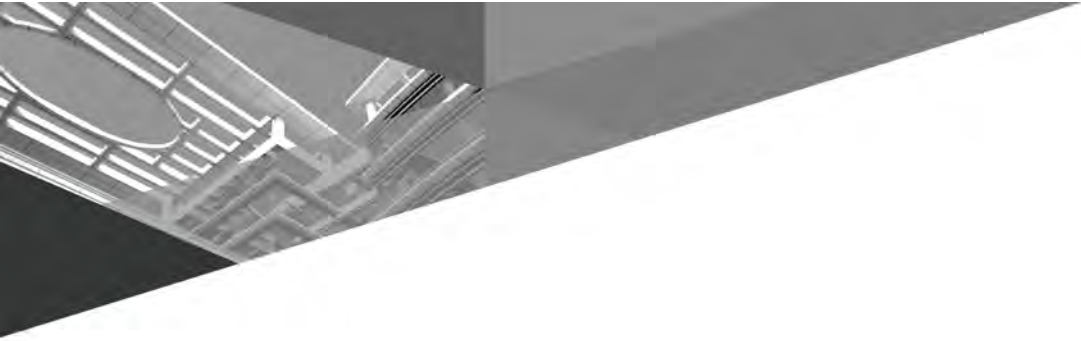
Phenomenon	Possible causes	Solution
After operating for a period, air volume becomes smaller apparently	Much dust is accumulated in the filter	Replace or clean the filter
Wind noise appears at the air port	Air port is loose	Fix the air port again
The equipment cannot be started	There is no power supply or power cord is connected wrongly	Resume power supply and check the power cord according to the diagram
	Terminal of mainboard transformer is loose	Reconnect the terminal of transformer
	Communication error (C0)	Check the wiring between wired controller and mainboard

5.4 Table of Error Codes

Table9 Table of Error Code

Error Code	Content	Error Code	Content
L1	Motor protection	y7	Fresh air inlet temperature sensor error
L4	Abnormal power supply for wired controller	CF	Multiple master ODUs error
L9	Quantity of group control indoor units setting error	LA	Indoor units incompatibility error
d1	Indoor PCB error	d3	Indoor ambient temperature sensor error (return air/inlet air temperature sensor error)
d9	Jumper cap error	dA	Indoor unit network address error
dH	Wired controller PCB error	C0	Communication error (including communication error between IDU and ODU, between IDU and wired controller, between wired controller and air box)
db	Engineering debugging	L5	Freeze protection
C5	IDU engineering code conflict	b8	Outdoor humidity sensor error
y8	Main error of indoor air box sensor	CP	Multiple master wired controller error

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.



GREE

GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI

Add: West Jinji Rd, Qianshan, Zhuhai,Guangdong, China, 519070
Tel: (+86-756) 8522218
Fax: (+86-756) 8669426
E-mail: global@cn.gree.com www.gree.com

600037060023