Installation Manual

DC Inverter Ducted Air-Conditioning Unit

(09K~60KBtu/h)

Indoor Unit	Outdoor Unit
GFH09K3CI	GUHD09NK3CO
GFH12K3CI	GUHD12NK3CO
GFH18K3CI	GUHD18NK3CO
GFH24K3CI	GUHD24NK3CO
GFH30K3CI	GUHD30NK3CO
GFH36K3CI	GUHD36NK3CO
GFH36K3CI	GUHD36NM3CO
GFH42K3CI	GUHD42NK3CO
GFH42K3CI	GUHD42NM3CO
GFH48K3CI	GUHD48NK3CO
GFH48K3CI	GUHD48NM3CO
GFH60K3CI	GUHD60NM3CO

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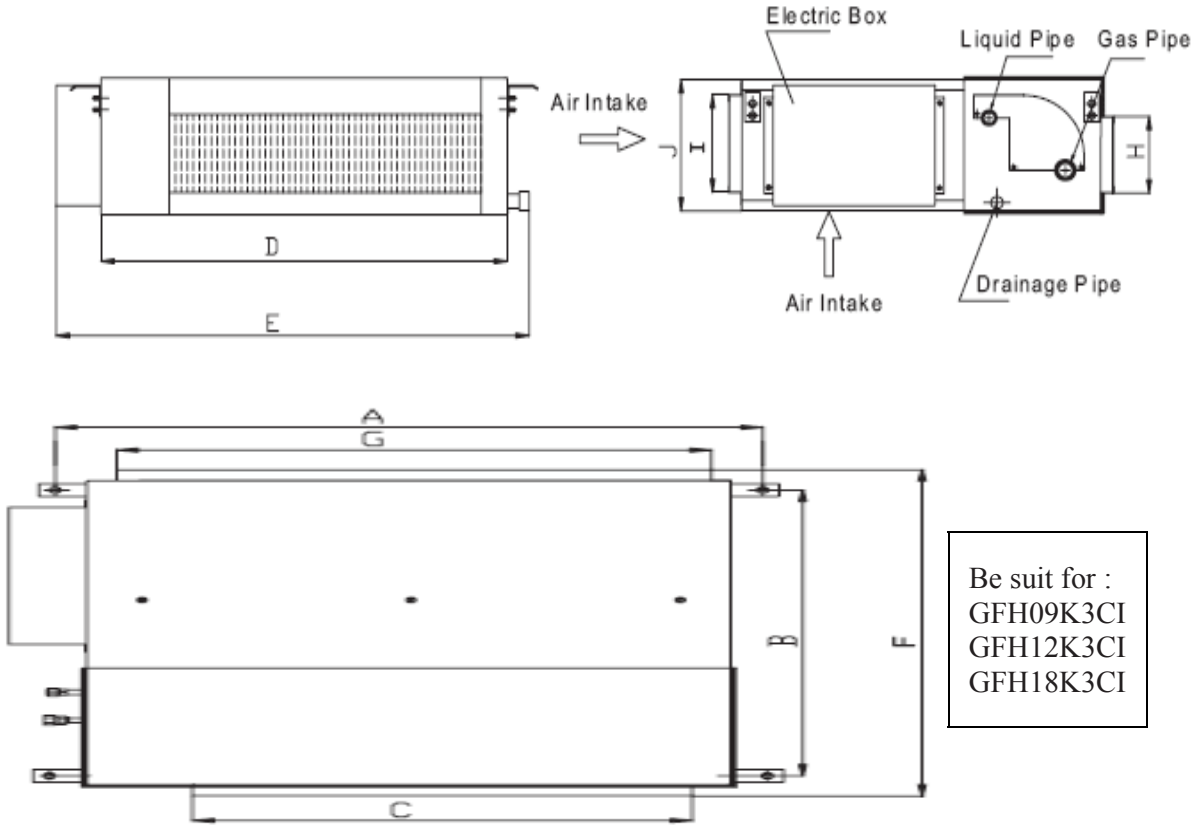
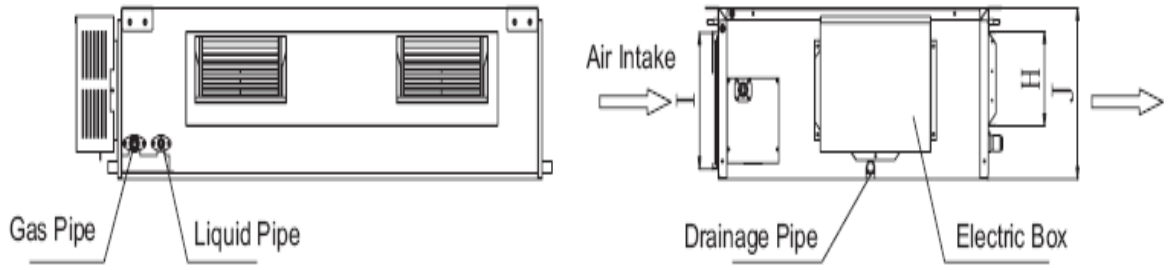


Be suit for :
GFH09K3CI
GFH12K3CI
GFH18K3CI

Fig.31



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GFH30K3CI
GFH36K3CI
GFH42K3CI
GFH48K3CI

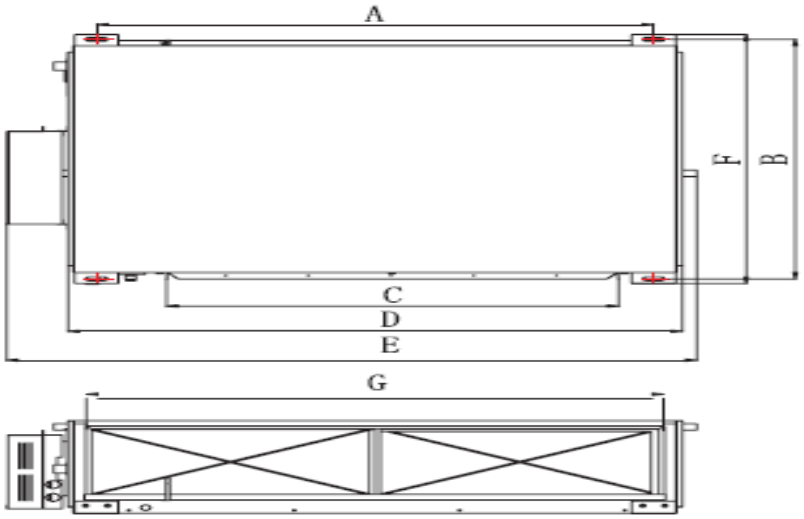


Fig.33

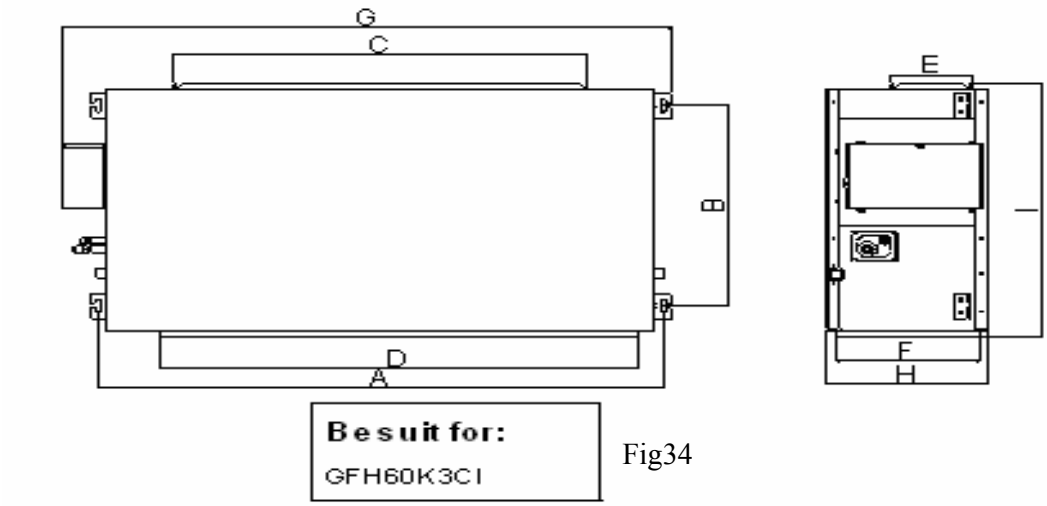


Fig34

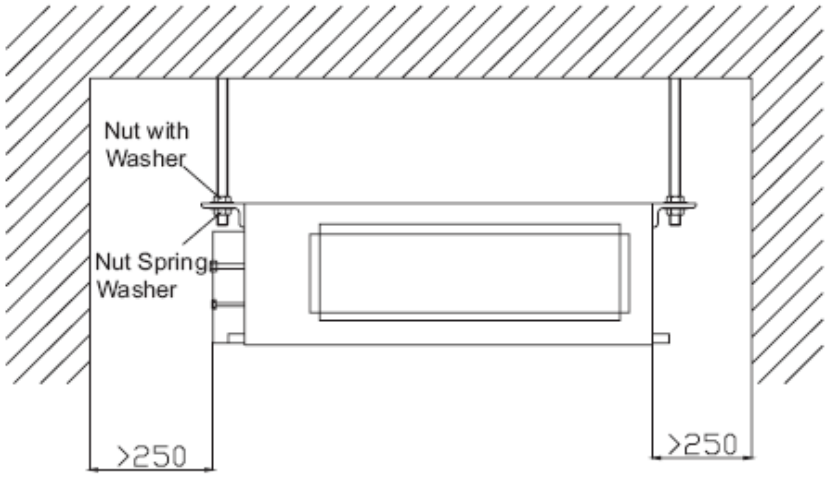
Table 5

Item / Model	A	B	C	D	E	F	G	H	I	J
GFH09K3CI	840	561	635	790	880	665	738	125	203	250
GFH12K3CI	932	430	738	892	980	721	738	125	203	266
GFH18K3CI	932	430	738	892	980	721	738	125	203	266
GFH24K3CI GFH30K3CI	1101	515	820	1159	1270	530	1002	160	235	268
GFH36K3CI	1011	748	820	1115	1226	775	979	160	231	290
GFH42K3CI										
GFH48K3CI	1015	788	820	1115	1226	815	979	160	261	330
GFH60K3CI	1353	632	992	1150	192	343	1463	389	799	--

Item / Model	Connecting Pipe	Drainage pipe(Diameter×wall thickness)

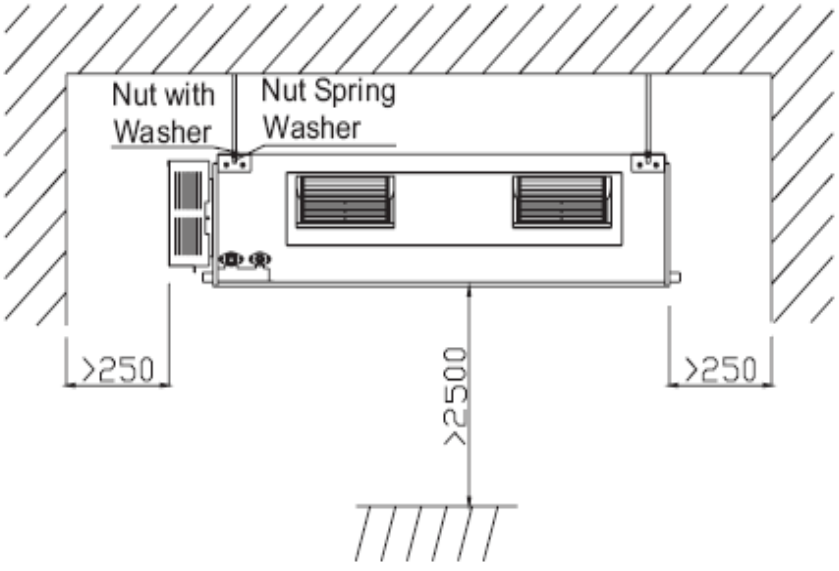
	Liquid	Gas	
GFH09K3CI	1/4”	3/8”	φ20×1.2
GFH12K3CI	1/4”	3/8”	φ30×1.5
GFH18K3CI	1/4”	1/2”	φ30×1.5
GFH24K3CI	3/8”	5/8”	φ20×1.2
GFH30K3CI			
GFH36K3CI	3/8”	5/8”	φ20×1.2
GFH42K3CI			
GFH48K3CI	3/8”	5/8”	φ30×1.5
GFH60K3CI	3/8”	3/4”	φ30×1.5

Dimension Requirement of the Installation Space of Indoor Unit



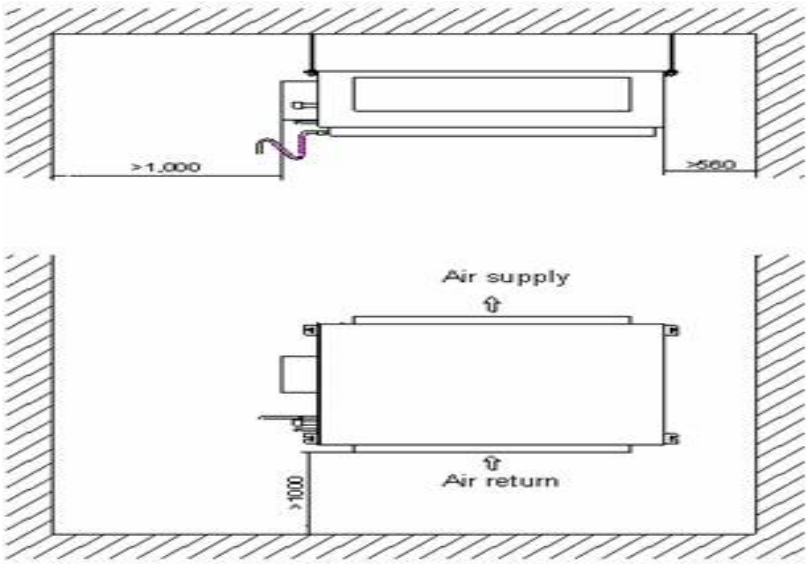
Be suit for :
GFH09K3CI
GFH12K3CI
GFH18K3CI

Fig.34



Be suit for :
GFH24K3CI
GFH30K3CI
GFH36K3CI
GFH42K3CI
GFH48K3CI

Fig.35

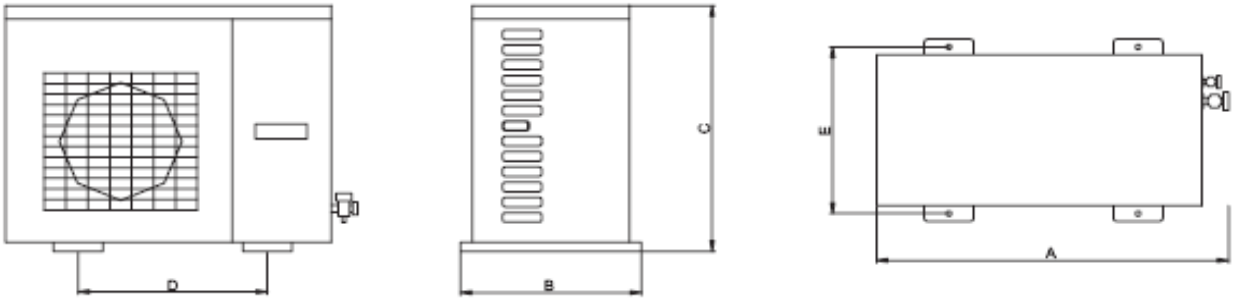


Be suit for :
GFH60K3CI

Fig.36

Warning： The height of installation for the indoor unit should be 2.5m above.

1.1.2 Profile Dimensions of Outdoor Unit



Unit：mm

Fig. 37

Table 6

Item / Model	A	B	C	D	E
GUHD09NK3CO GUHD12NK3CO	776	320	540	510	286
GUHD18NK3CO	955	396	700	560	360
GUHD24NK3CO GUHD30NK3CO	980	427	790	610	395
GUHD36NK3CO GUHD36NM3CO	1107	440	1100	631	400
GUHD42NM3CO GUHD42NK3CO	1107	440	1100	631	400
GUHD48NK3CO GUHD48NM3CO	1085	427	1365	620	395
GUHD60NM3CO	1085	427	1365	620	395

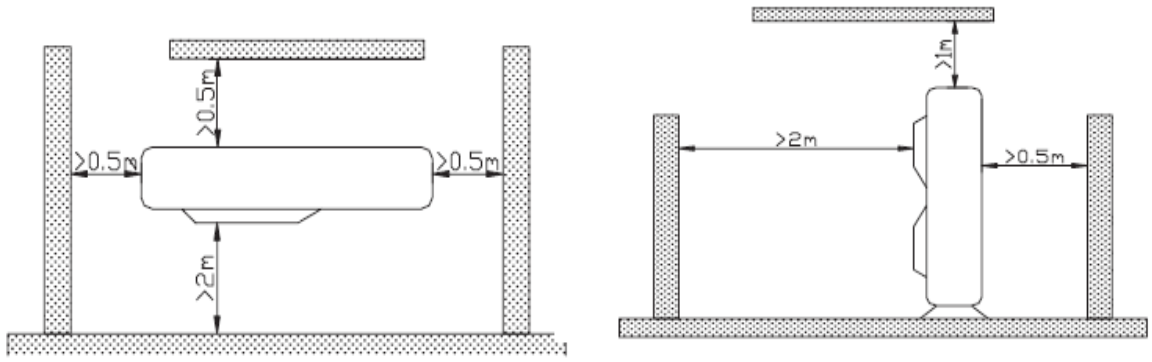


Fig.38

Unit Installation Instructions

Precautions on Installation of Outdoor Unit

To ensure the unit in proper function, selection of installation location must be in accordance with following principles:

(1) Outdoor unit shall be installed so that the air discharged by outdoor unit will not return and that sufficient space for repair shall be provided around the machine.

(2) The installation site must have good ventilation, so that the outdoor unit can take in and exhaust enough air. Ensure that there is no obstacle for the air intake and exhaust of the outdoor unit. If there is any obstacle blocking the air intake or exhaust, remove it.

(3) Place of installation shall be strong enough to support the weight of outdoor unit, and it shall be able to insulate noise and prevent vibration. Ensure that the wind and noise from the unit will not affect your neighbors.

(4) Avoid direct sunshine over the unit. It is better to set up a sun shield as the protection.

(5) Place of installation must be able to drain the rainwater and defrosting water.

(6) Place of installation must ensure the machine will not be buried under snow or subject to the influence of rubbish or oil fog.

(7) The installation site must be at a place where the air exhaust outlet does not face strong wind.

1.2 Installation of Indoor Unit

1.2.1 Selection of Installation Site

(1) Ensure the top hanging piece has strong strength to withstand the weight of the unit.

(2) The drainage pipe has convenient flow of water.

(3) There is no obstacle blocking the air intake and exhaust outlet, so as to ensure sound air circulation.

(4) The installation spaces required by the drawing must be ensured, so as to provide enough space for the service and maintenance.

(5) The installation site must be far away from heat source, leakage of inflammable gas or smoke.

(6) The indoor unit is of ceiling mount (indoor unit is hidden inside the ceiling).

(7) The indoor and outdoor units, the power cable and the connecting electrical lines must be at least 1 meter from any TV set or radio. This is to avoid image interference or noise of the TV set or radio. (Even if the distance is 1 meter, noise can also exist if there is strong electric wave.)

1.2.2 Installation of Indoor Unit

(1) Insert a M10 expansion bolt into the hole. Drive a nail into the bolt. Refer to the profile dimensions drawing of the indoor unit for the distance between the holes. Refer to Fig. 39 for the installation of the expansion bolt.

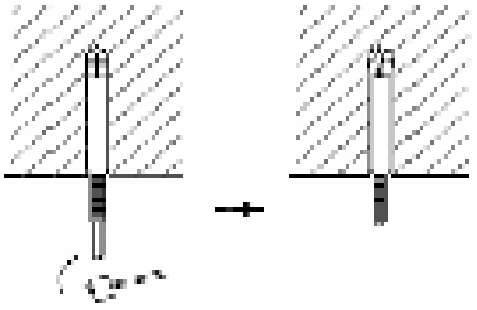


Fig.39

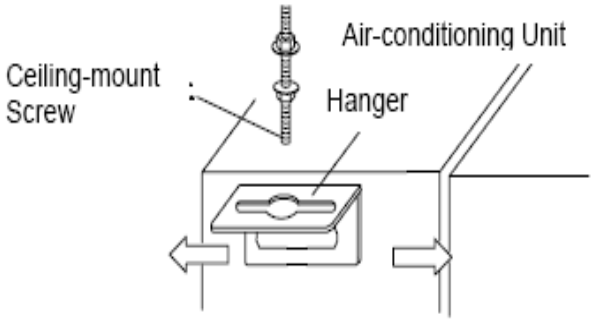


Fig.40

(2) Install the hanger onto the indoor unit as Fig.40 shows.
(3) Install the indoor unit at the ceiling as Fig.41 shows.

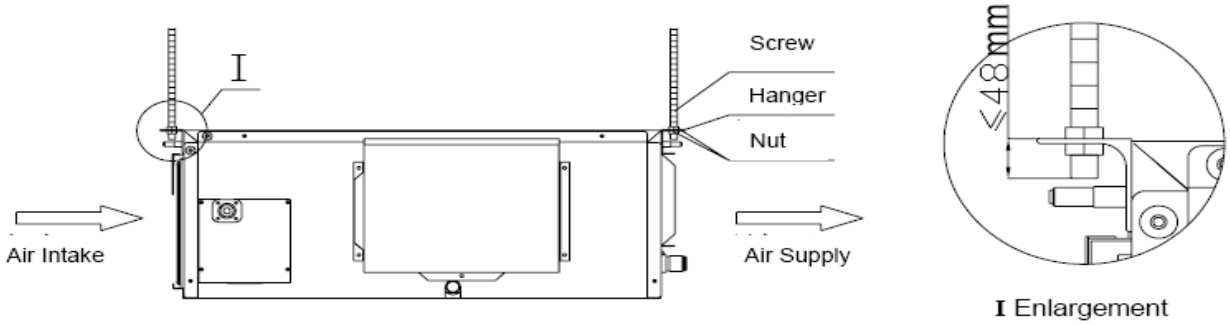


Fig.41

Precautions for unfavorable installation:

1. The preparation of all pipes (connecting pipes and drainage pipes) and cables (connecting lines of wire controller, indoor unit and outdoor unit) must be ready before the installation, so as to achieve smooth installation.

2. Drill an opening on the ceiling. Maybe it is required to support the ceiling to ensure the evenness of it and avoid the vibration of it. Consult with the user or a construction company for details.

3. In case the strength of ceiling is not enough, use angle iron sections to set up a beam support. Place the unit at the beam and fix it.

1.2.3 Level Check of the Indoor Unit

After the indoor unit is installed, it is required to check the level of the whole unit. The unit must be placed horizontally, but the condensate pipe shall be installed obliquely, so as to facilitate the drainage of condensate.

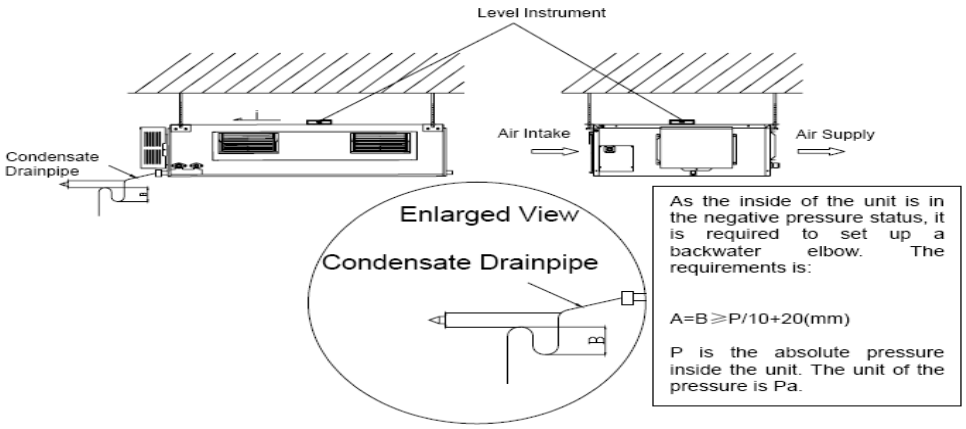
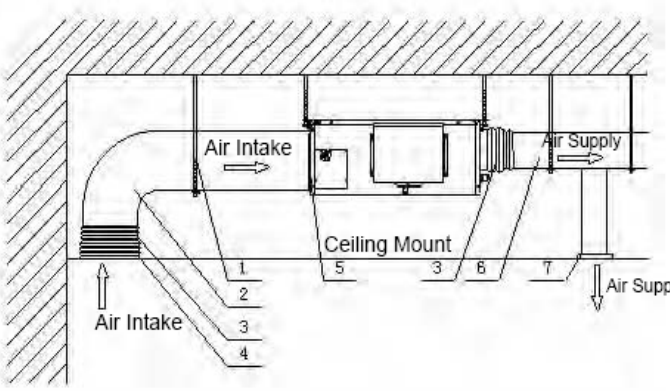


Fig.42

1

1.2.4 Installation of Rectangular Air Pipe



No.	Name	No.	Name
1	Hanger	5	Filter
2	Air Intake Pipe	6	Main Air Supply Pipe
3	Canvas Air Pipe	7	Air Supply Outlet
4	Air Intake		

Fig.43

Cautions:

The air supply pipe, the air intake pipe and the fresh air pipe must be covered with a layer of thermal insulation, so as to avoid thermal leakage and condensation. Firstly apply liquid nail on the pipes, then attach the thermal insulation cotton with a layer of tinfoil. Use the liquid nail cover to fix it. Lastly use tinfoil adhesive tape to carefully seal the joints; other good thermal insulation materials can also be used.

The air supply pipes and the air intake pipes shall be fixed to the prefabricated boards of the ceiling by using iron supports. The joints of the pipes must be sealed by glue so as to avoid leakage.

The design and installation of air pipes must be in conformity with the relevant state engineering criteria.

he edge of the air intake pipe must be at least 150mm away from the wall. The air intake must be covered with filter.

Silencing and shock absorption shall be considered in the design and installation of the air pipes. Additionally, the noise source must be far away from where people stay. The air intake shall not be located above the place where users stay (offices and rest places, etc.).

1.2.5 Installation of Drainage Pipeline

(1) The Drainage Pipeline shall be installed with an inclining angel of 5 ~ 10°, so as to facilitate the drainage of condensate. The joints of the Drainage Pipeline must be covered by thermal insulation materials to avoid generation of exterior condensate. (As shown in Fig.44)

(2) A Drainage outlet is located at both the left and right sides of the indoor unit. After selecting one Drainage outlet, the other outlet shall be blocked by rubber plug. Bundle the blocked outlet with string to avoid leakage, and also use thermal insulation materials to wrap the blocked outlet.

(3) When shipped out from factory, both the Drainage outlets are blocked by rubber plugs.

(4) When connecting the drainage pipe with the unit, do not apply excessive force to the pipeline at the side of the unit. The fixing position of the pipeline shall be near the unit.

(5) Purchase general-purpose hard PVC pipe locally to be used as the drainage pipeline. When carrying out connection, place the end of the PVC pipeline into the drainage hole. Use flexible drainage tube and tighten it with thread loop. Never use adhesive to connect the drainage hole and the flexible drainage tube.

(6) When the laid drainage pipe is used for multiple units, the common pipe shall be about 100mm lower than the drainage outlet of each set of unit. A pipe with thicker wall shall be used for such purpose.

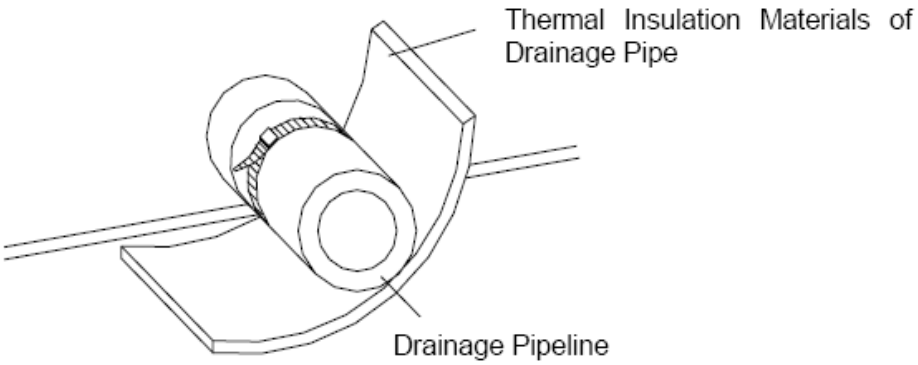


Fig.44 Thermal Insulation of Drainage Pipeline

Cautions: The joint of Drainage Pipeline must not have leakage.

1.2.6Testing of Drainage System

(1)After the electrical installation is completed, carry out the testing of the drainage system.

（2)During the test, check if the water correctly flows through the pipelines. Carefully observe the joints to ensure that there is no leakage. If the unit is to be installed in a new house, carry out testing before decorating the ceiling.

1.2.7 Selection of Connecting Pipe

The refrigerant is R410A, GWP=2020 ODP=0

Table 7

Item / Model	Size of Fitting Pipe(Inch)		Max. Pipe Length (m)	Max. Height Difference between Indoor Unit and Outdoor Unit m	Amount of Additional Refrigerant to be Filled (For Extra Length of Pipe)
	Liquid	Gas			
GFH09K3CI GUHD09NK3CO	1/4”	3/8”	20	15	30g/m
GFH12K3CI GUHD12NK3CO	1/4”	3/8”			
GFH18K3CI GUHD18NK3CO	1/4”	1/2”			
GFH24K3CI GUHD24NK3CO GFH30K3CI GUHD30NK3CO	3/8”	5/8”	30	15	60g/m
GFH36K3CI GUHD36NK3CO GFH36K3CI GUHD36NM3CO	3/8”	5/8”			
GFH42K3CI GUHD42NK3CO GUH42K3CI	3/8”	5/8”	50	30	60g/m

GUHD42NM3CO					
GFH48K3CI GUHD48NK3CO GFH48K3CI GUHD48NM3CO	3/8”	5/8”			
GFH60K3CI GUHD60NM3CO	3/8”	3/4”	50	30	60 g/m

Note :

1. The standard pipe length is 5m. When the length (L) of the connecting pipe is less than or equals 7m, there is no need to add refrigerant. If the connecting pipe is longer than7m, it is required to add refrigerant. In the above table, the amounts of refrigerant to be added for the models are listed for each additional meter of pipe length.

2. The pipe wall thickness shall be 0.5-1.0 mm and the pipe wall shall be able to withstand the pressure of 6.0 MPa.

3. The longer the connecting pipe, the lower the cooling effect and the heating effect..

1.2.8 Connection of Pipeline

1. Align the flared end of the copper pipe with the center of the thread joint. Manually tighten the flared end nut.

2. Use torque spanner to tighten the flared end nut until the spanner clatters (Fig.45).

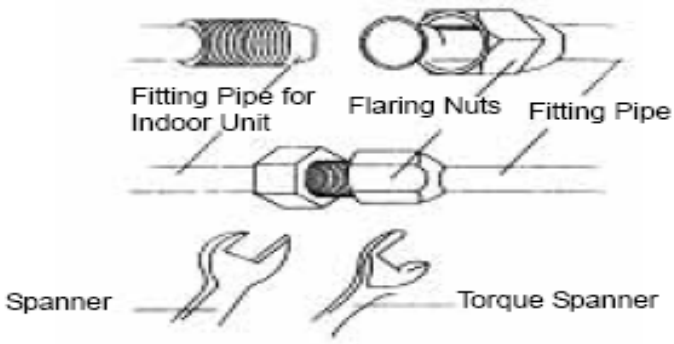


Fig.45

The following table describes the torques for tightening nuts of different pipe diameters.

Table 8

Pipe Diameter	Tightening Torque
1/4″ (Inch)	15-30 (N·m)
3/8″ (Inch)	35-40 (N·m)
5/8″ (Inch)	60-65 (N·m)
1/2″ (Inch)	45-50 (N·m)

3/4″ (Inch)	70-75 (N·m)
7/8″ (Inch)	80-85 (N·m)

3. The bending angle of the fitting pipe shall not be too large, and otherwise the pipe may break. Please use a bender when bending the fitting pipes.

4. Use sponge to wrap the connecting pipe and joint, Then use plastic tape to bundle the sponge.

1.2.9 Air Purging

The purpose of the air purging is to get rid of moisture and air in the system, otherwise moisture and air may cause ineffectiveness of the compressor which directly affects the cooling capacity.

1. Purging by Using Vacuum

1) Take out the nut cover of the inlet for refrigerant.

2) Connect the tube of the vacuum watch with the vacuum pump, having the low-pressure end linking to the inlet for refrigerant. As shown in figure on right.

3) Starting the vacuum pump, when the indicator turns to-1 bar, closing the low pressure handle and stopping vacuum. Keep for 15 minutes, ensuring the pressure of the vacuum watch remains.

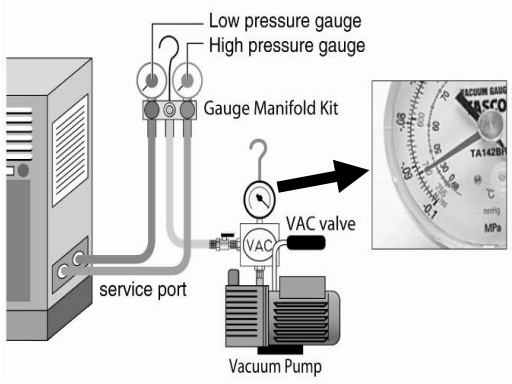


Fig.46

4) Take out the valve cover of the gas valve together with the liquid valve.

5) Loosing the cord of liquid valve until the pressure rise to 0 bar.

6) Dismantle the tube from the cover of the inlet for refrigerant then, tighten the cover.

7) Loose the valve cord of the gas valve as well as the liquid valve entirely.

8) Tighten the valve cover of the gas valve and liquid valve so as to check whether leakage occurred.

2. Gap Leakage Check

Check if it leaks or not by applying soapsuds on every joint and then inspect carefully. After the check, wipe them off completely.

Cover the indoor unit joint with pipe insulation and four plastic bands to prevent condensing at joints.

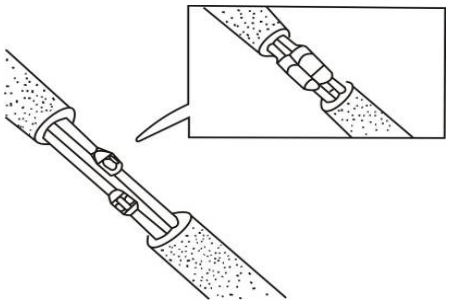


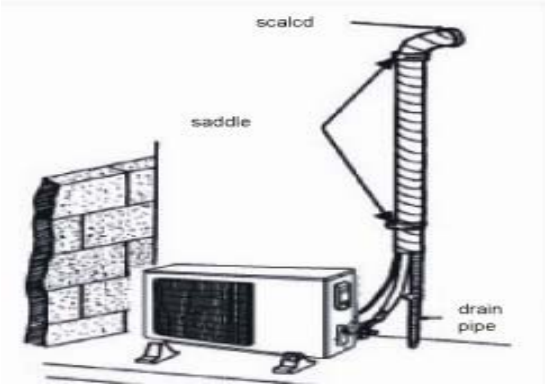
Fig.47

1.2.10 Liquid Pipe and Drain Pipe

If the outdoor unit is installed lower than the indoor unit (See Fig.48)

1) A drain pipe should be above ground and the end of the pipe does not dip into water. All pipes must be restrained to the wall by saddles.

2) Taping pipes must be done from bottom to top.



3) All pipes are bound together by tape and restrained to wall by saddles.

Fig.48

If the outdoor unit is installed higher than the indoor unit (See Fig.49)

1) Taping should be done from lower to the upper part.

2) All pipes are bound and taped together and also should be trapped to prevent water from returning to the room (See Fig.50)

3) Restraint all pipes to the wall with saddles.

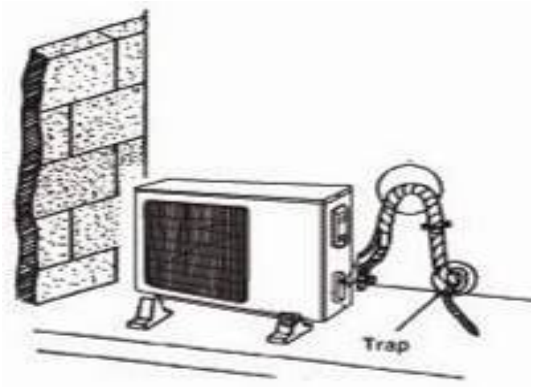


Fig.49

1.2.11 Installation of Protective Layer of Connecting Pipe

1. To avoid generation of condensate on the connecting pipe and avoid leakage, the big pipe and the small pipe of the connecting pipe must be covered by thermal insulation materials, be bundled by adhesive tape, and be isolated from air.

2. The joint connecting to the indoor unit must be wrapped by thermal insulation material. There shall be no gap between the connecting pipe joint and the wall of the indoor unit. Refer to Fig.50.

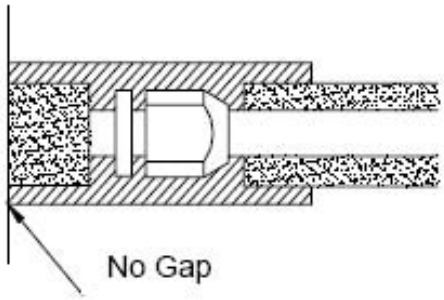


Fig.50

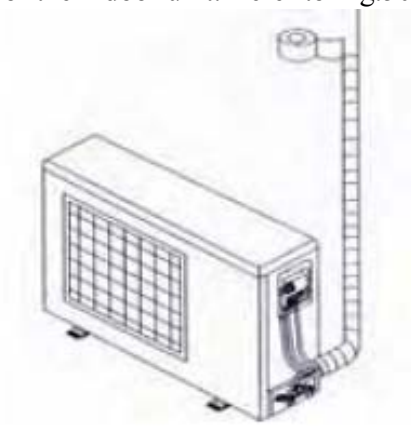


Fig.51

Cautions: After the pipes are wrapped by protective materials, never bend the pipes to form very small angle, and otherwise the pipes may crack or break.

3. Use adhesive tape to wrap the pipes:

(1) Use adhesive tape to bundle the connecting pipe and the cables together. To prevent condensate from overflowing out from the drainage pipe, separate the drainage pipe firm the connecting pipe and the cables.

(2)Use thermal insulation tape to wrap the pipes from the bottom of the outdoor unit until the upper end of the pipe where the pipe enters the wall. When wrapping thermal insulation tape, the later circle

of tape must cover half of the front circle of tape (Refer to Fig.51).

(3)Wrapped pipe must be fixed to wall using pipe clamps.

Cautions:

（1）Do not wrap the protective tape too tight, and otherwise the efficiency of thermal insulation may be decreased. Ensure that the condensate drainage flexible tube is separate from the bundled pipes.

（2）After the protective work is completed and the pipes are wrapped, use seal material to block the hole in the wall, so as to prevent rain and wind from entering the room.

1.2.12 Position and Method of Installing Wire Controller

1. One end of the control wire of the wire controller is connected with main board of electric box of indoor unit inside, it should be tightened by wire clamp, the other end should be connected with the wire controller (installation sketch map as shown in below). The control wire be used for the indoor unit and wire controller, which is special, the length is 8 meters, the material be adopted for the control wire should be metallic substance. The wire controller could not be disassembled and the control wire be used for the wire controller should not be changed by users optionally, the installation and maintenance should be carried out by the professional personnel.

2. First select an installation position. According to the size of the control wire of the wire controller, leave a recess or a embedded wire hole to bury the control wire.

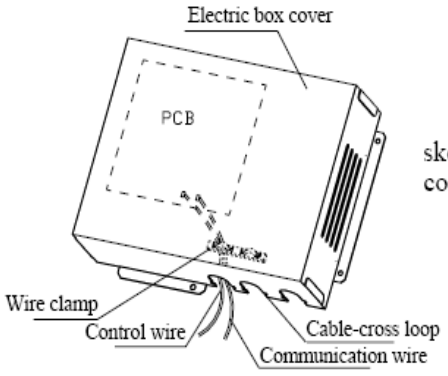
3. If the control wire between the wire controller and the indoor unit is surface-mounted, use 1# metallic pipe and make matching recess in the wall (refer to Fig.52; If concealed installation is adopted, 1# metallic pipe can be used (Refer to Fig.53).

4. No matter if surface mounting or concealed mounting is selected, it is required to drill 2 holes (in the same level) which distance shall be the same as the distance (60mm) of installation holes in the bottom plate of the wire controller. Then insert a wood plug into each hole. Fix the bottom plate of the wire controller to the wall by using the two holes. Plug the control wire onto the control panel.

Lastly install the panel of the wire controller.

Caution:

During the installation of the bottom plate of the wire controller, pay attention to the direction of the bottom plate. The plate's side with two notches must be at the lower position, and otherwise the panel of the wire controller cannot be correctly installed.



sketch map for indoor unit communication wire

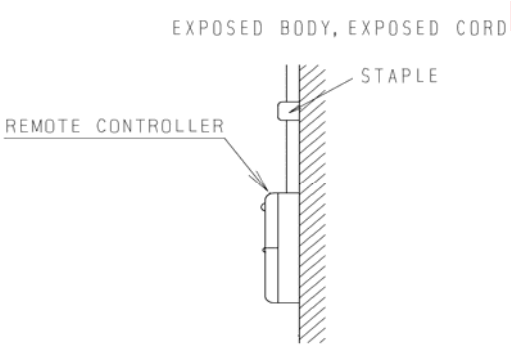


Fig.52 Surface mounting of Cable

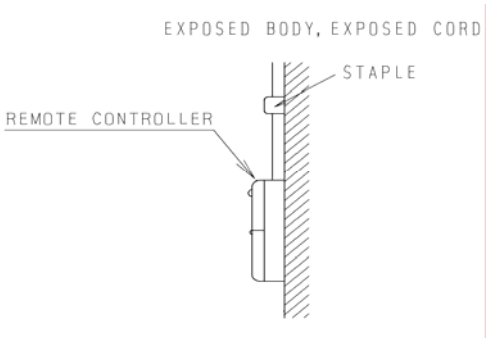


Fig.53 Concealed mounting of Cable

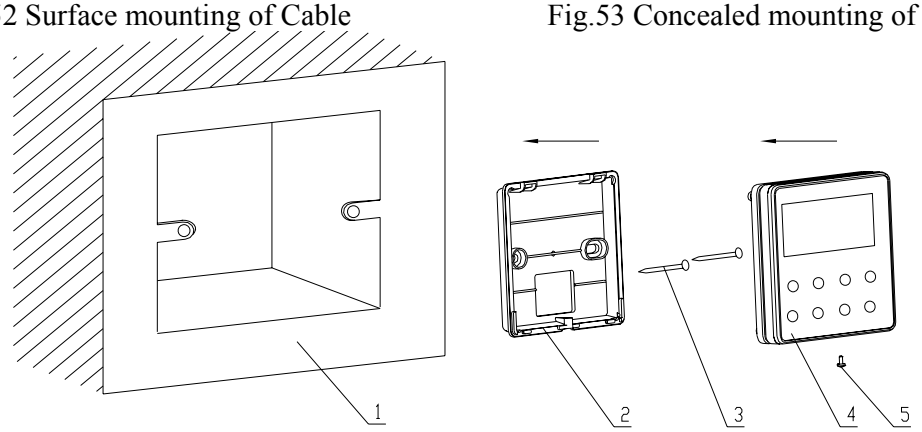


Fig.54Sketch for Installation of Wired Controller

Table 9

No.	Name
1	Wall Surface
2	Bottom Plate of Wire Controller
3	Screw M4X10
4	Panel of Wire Controller
5	Screw ST2.2X6.5

Cautions:

1. The communication distance between the main board and the wire controller is 8 meters.

2. The wire controller shall not be installed in a place where there is water drop or large amount of water vapor.

1.3 Electrical Installation

Cautions: Before installing the electrical equipment, please pay attention to the following matterswhich have been specially pointed out by our designers:

（1）Check to see if the power supply used conforms to the rated power supply specified on the nameplate.

（2）The capacity of the power supply must be large enough. The section area of fitting line in the room shall be larger than 2.5mmP

（3）The lines must be installed by professional personnel.

An electricity leakage protection switch and an air switch with gap between electrode heads larger than 3mm shall be installed in the fixed line.

1. Connection of signal wire

（1）Use wire stripper to strip the insulation layer (25mm long) from the end of the signal wire.

（2）Remove the screw at the terminal board of the air-conditioning unit.

（3）Use pliers to bend the end of the signal wire so that a loop matching the screw size is formed.

（4）Put the screw through the loop of the signal wire and fix the loop at the terminal board.

2. Connection of multiple twisted wires

（1）Use wire stripper to strip the insulation layer (10mm long) from the end of the multiple twisted wires.

（2）Remove the screw at the terminal board of the air-conditioning unit.

（3）Use crimping pliers to connect a terminal (matching the size of the screw) at the end of the multiple twisted wires.

（4）Put the screw through the terminal of the multiple twisted wires and fix the terminal at the terminal board.

Warning:

If the power supply flexible line or the signal line of the equipment is damaged, only use special flexible line to replace it.

1. Before connecting lines, read the voltages of the relevant parts on the nameplate. Then carry out line connection according to the schematic diagram.

2. The air-conditioning unit shall have special power supply line which shall be equipped with electricity leakage switch and air switch, so as to deal with overload conditions.

3. The air-conditioning unit must have grounding to avoid hazard owing to insulation failure.

4. All fitting lines must use crimp terminals or single wire. If multiple twisted wires are connected to terminal board, arc may arise.

5. All line connections must conform to the schematic diagram of lines. Wrong connection may cause abnormal operation or damage of the air-conditioning unit.

6. Do not let any cable contact the refrigerant pipe, the compressor and moving parts such as fan.

7. Do not change the internal line connections inside the air-conditioning unit. The manufacturer shall not be liable for any loss or abnormal operation arising from wrong line connections.

1.3.1 Power Cable Connection:

1. Air-conditioning unit with single-phase power supply

（1）Remove the front-side panel of the outdoor unit.

（2）Pass the cable though rubber ring.

（3）Connect the power supply cable to the “L, N” terminals and the grounding screw on the metal electric box.

（4）Use cable fastener to bundle and fix the cable.

2. Air-conditioning unit with 3-phase power supply

（1）Remove the front-side panel of the outdoor unit.

（2）Attach rubber ring to the cable-cross hole of the outdoor unit.

（3）Pass the cable through rubber ring.

（4）Connect the power cable to the terminal marked “L1,L2,L3 & N”. Connect earth wire to the earthed terminal screw on the electric box.

（5）Use cable fastener to bundle and fix the cable.

Cautions:

Take great care when carrying out the following connections, so as to avoid malfunction of the air-conditioning unit because of electromagnetic interference.

(1) The signal line of the wire controller must be separated from the power line and the connecting line between the indoor unit and the outdoor unit.

(2) In case the unit is installed in a place vulnerable by electromagnetic interference, it is better to use shielded cable or double-twisted cable as the signal line of the wire controller.

1.3.2 Connection of Signal Line of Wire Controller

1. Open the cover of the electric box of the indoor unit.

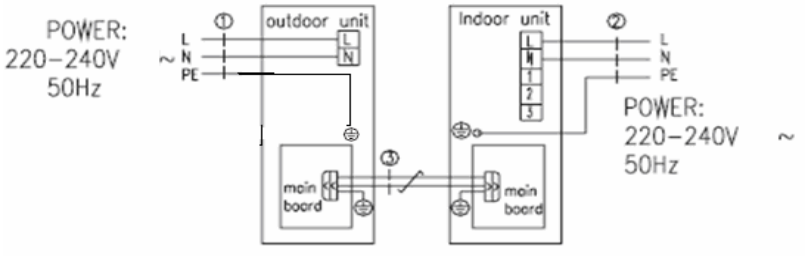
2. Pull the signal cable of the wire controller through the rubber ring.

3. Plug the signal line of the wire controller onto the 4-bit pin socket at the circuit board of the indoor unit.

4. Use cable fastener to bundle and fix the signal cable of the wire controller.

1.3.3 Cable Connecting Diagram of Unit

The section area of cables selected by users must not be smaller than the specifications shown diagram. The signal wire between indoor and outdoor unit shall be installed in the shielded bushing Schematic Diagram of Unit Line Connection:



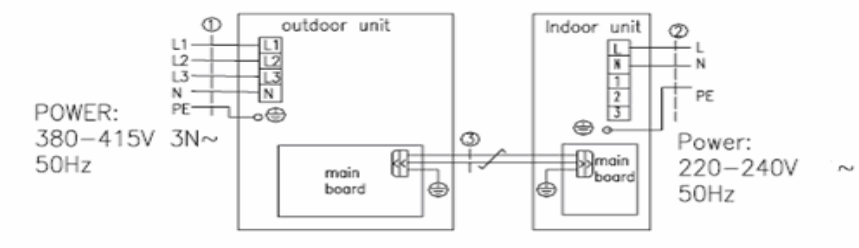
GUHD09NK3CO + GFH09K3CI
GUHD12NK3CO + GFH12K3CI
GUHD18NK3CO + GFH18K3CI
GUHD24NK3CO + GFH24K3CI
GUHD30NK3CO + GFH30K3CI
GUHD36NK3CO + GFH36K3CI
GUHD42NK3CO + GFH42K3CI
GUHD48NK3CO + GFH48K3CI

GUHD09NK3CO + GFH09K3CI GUHD12NK3CO + GFH12K3CI
1.Power cord 3×2.5 mm^2(H07RN-F) 2.Power cord 3×1.0 mm^2(H05VV-F)
3. Communication Cords 2×AWG 24#

GUHD18NK3CO + GFH18K3CI
1.Power cord 3×4 mm^2(H07RN-F) 2.Power cord 3×1.0 mm^2(H05VV-F)
3. Communication Cords 2×AWG 24#

GUHD24NK3CO + GFH24K3CI
1.Power cord 3×4 mm^2(H07RN-F) 2.Power cord 3×1.5 mm^2(H05VV-F)
3. Communication Cords 2×AWG 24#

GUHD30NK3CO + GFH30K3CI GUHD36NK3CO + GFH36K3CI GUHD42NK3CO + GFH42K3CI GUHD48NK3CO + GFH48K3CI
1.Power cord 3×6 mm^2(H07RN-F) 2.Power cord 3×1.5 mm^2(H05VV-F)
3. Communication Cords 2×AWG 24#



GUHD36NM3CO+ GFH36K3CI
GUHD42NM3CO+ GFH42K3CI

GUHD36NM3CO+ GFH36K3CI	GUHD42NM3CO+ GFH42K3CI
GUHD48NM3CO+ GFH48K3CI	GUHD60NM3CO+ GFH60K3CI
1.Power cord 5×4 mm^2(H07RN-F)	2.Power cord 3×1.5 mm^2(H05VV-F)
3. Communication Cords 2×AWG 24#	

The following table recommended by the model selection manual is about how to select the air switch and power cable.

Warning! :

The section area of cables selected by users must not be smaller than the specifications shown in the table below.

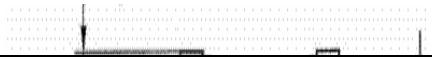
Table 10

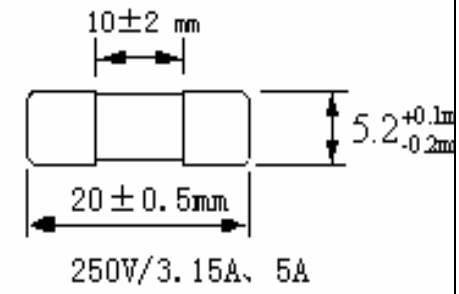
Model	Power Supply	Capability of Air Switch(A) (Outdoor/Indoor)	Minimum Sectional Area Of Earth Wire (mm^2) (Outdoor/Indoor)
GUHD09NK3CO	220-240V ~ 50HZ	16/6	2.5/1.0
GUHD12NK3CO		16/6	2.5/1.0
GUHD18NK3CO		20/6	4.0/1.0
GUHD24NK3CO		20/10	4.0/1.5
GUHD30NK3CO		32/10	6.0/1.5
GUHD36NK3CO		32/10	6.0/1.5
GUHD42NK3CO		32/10	6.0/1.5
GUHD48NK3CO		32/10	6.0/1.5
GUHD36NM3CO	380-415V 3N ~ 50Hz	20/10	4.0/1.5
GUHD42NM3CO		20/10	4.0/1.5
GUHD48NM3CO		20/10	4.0/1.5
GUHD60NM3CO		20/10	4.0/1.5

Note: The parameters of the power cord listed above are only applicable to the BV single-core power cord which is laid within the plastic bushing and used at 40℃, and those of the air switch are applicable to the one which also is used at 40℃. If the actual installation conditions changes, please refer to the instructions of the power cord and the air switch.

Rated Parameters and Outline Dimensions of the Fuse

Table 11

Unit	Code	Rated parameter	Dimensions
GUHD09NK3CO GUHD12NK3CO	46010408/	250V/15A	

GUHD24NK3CO	46010014/ 46010023	250V/3.15A、 250V/30A	
GUHD30NK3CO	46010014/ 46010023	250V/3.15A、 250V/30A	
GUHD36NK3CO	46010014/ 46010023	250V/3.15A	
GUHD36NM3CO	46010014/ 46010023	250V/3.15A	
GUHD42NK3CO	46010014	250V/3.15A	
GUHD42NM3CO	46010014	250V/3.15A	
GUHD48NK3CO	46010014	250V/3.15A	
GUHD48NM3CO	46010013	250V/5A	
GUHD60NM3CO	46010013	250V/5A	
All the indoor units	46010013	250V/5A	

II Troubleshooting and Maintenance

If your air-conditioning unit suffers from abnormal operation or failure, please first check the flowing points before repair:

Table 12

Failure	Possible Reasons
The unit cannot be started.	①The power supply is not connected. ②Electrical leakage of air-conditioning unit causes tripping of leakage switch. ③The operating keys are locked. ④The control loop has failure.
The unit operates for a while and then stops.	①There is obstacle in front of the condenser. ②The control loop is abnormal. ③Cooling operation is selected when the outdoor ambient temperature is above 43□.
Poor cooling effect.	①The air filter is dirty or blocked. ②There is heat source or too many people inside the room. ③The door or window is open. ④There is obstacle at the air intake or outlet. ⑤The set temperature is too high thus cooling is hindered. ⑥There is refrigerant leakage. ⑦The performance of room temperature sensor becomes worse
Poor heating effect	①The air filter is dirty or blocked. ② The door or window is not firmly closed. ③The set room temperature is too low thus heating is hindered. ④There is refrigerant leakage. ⑤The outdoor ambient temperature is lower than -5□. ⑥Control line is abnormal.

Note:

After carrying out the check of the above items and taking relevant measures to solve the problems found but the air-conditioning unit still does not function well, please stop the operation of the unit immediately and contact the local service agency designated. Only ask professional serviceman to check and repair the unit.

Routine Maintenance

1. Cleaning the Air Filter(Operating by the professional)

Do not disassemble the air filter when cleaning it. Otherwise failure may be caused

If the air-conditioning unit is used in an environment with much dust, you should clean the air filter frequently (once every two weeks).

⚠ **Cautions: You shall pay attention to the following matters when cleaning the air-conditioning unit.**

① Cut off all power supply before contacting the line connecting equipment.

② Only clean the air-conditioning unit after the unit is shut off and the power supply is disconnected. Otherwise electrical shock or injury may be caused.

③ Do not use water to clean the air-conditioning unit. Otherwise there may be electrical shock.

④ Take care when cleaning the air-conditioning unit. Use a steady stepping stand.

2. Maintenance at the Beginning of Operating Season

Check the air inlet and outlet of the indoor and outdoor units to confirm there is no blockage.

Check to see if the grounding wire is in good condition;(Operating by the professional)

Check to see if the line connection is in good condition;(Operating by the professional)

Check if there is any word displaying on the LCD of the wire controller after connecting the unit to power supply.

Note: If there is any abnormal condition, ask after sales to offer guidance.

3. Maintenance at the End of the Operational Season

When the weather is clear, operate the unit under fan mode for half a day, so as to dry the inside of the unit.

If not to use the air-conditioning unit for a long time, please cut off the power supply. Now the words on the LCD of the wire controller shall disappear.

Appendix

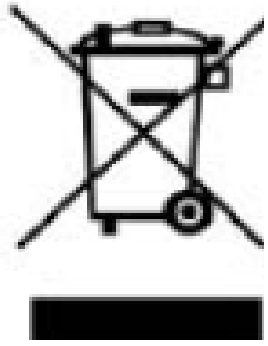
Air conditioner nominal working condition and working range:

Table 13

Test condition	Indoor side		Outdoor side	
	DB(℃)	WB(℃)	DB(℃)	WB(℃)
Nominal cooling	27	19	35	24
Nominal heating	20	--	7	6
Rated cooling	32	23	43	30
Low temp. cooling	21	15	18	--
Rated heating	27	--	24	18
Low temp. heating	20	--	-7	-8

Note:

1. The design of this unit conforms to the requirements of EN14511 standard.
2. The air volume is measured at the relevant standard external static pressure.
3. Cooling (heating) capacity stated above is measured under nominal working conditions corresponding to standard external static pressure. The parameters are subject to change with the improvement of products, in which case the values on nameplate shall prevail.



This product must not be disposed together with the domestic waste. This product has to be disposed at an authorized place for recycling of electrical and electronic appliances.