INSTALLATION

INSTALLATION

1 INDOOR UNIT INSTALLATION

1.1 Installation of Duct Type

1.1.1 Before Installation

After receiving the machine, please check for any transport damage. If finding any surface or internal damage, please immediately report to the transport company or equipment company in writing.

After receiving the machine, please check the unit and accessories in reference to the packing list. Ensure that the model is correct and the machine is in good condition. Please also check if the specification and quantity of accessory parts are correct.

Determine the correct handling route and methods, thus to avoid damaging the unit or causing possible hazard. For the sake of protection and safety, it is suggested to move the unit with the packaging box. Even though it is not permitted to do like this under special occasions, do not remove the packaging box, thus to avoid loosening or falling during handling.

Confirm if the installing foundation is solid. When this unit is to be installed on the metal section of the building, make sure that the electrical insulation must comply with applicable standards.

Ensure that the place of installation is far from the area where the inflammable or explosive substances are stored, thus to avoid possible explosion or fire due to leakage.

1.1.2 Installation Site

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

The drainage pipe has convenient flow of water.

There is no obstacle blocking the return air inlet and exhaust outlet, so as to ensure sound air circulation.

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

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

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

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.)

1.1.3 Caution for Installation

Generally, the unit is installed indoor on ceiling. For ceiling mounting, ensure that the hangers on ceiling have adequate strength to support the weight of the unit.

To meet the noise and vibration requirements, the unit shall be installed by using rubber pad (thickness ≥20mm) and rubber connector.

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 Figure 3-1-1 for the installation of the expansion bolt.

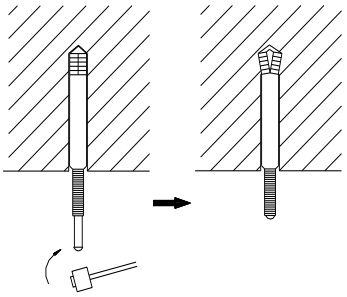


Figure 3-1-1

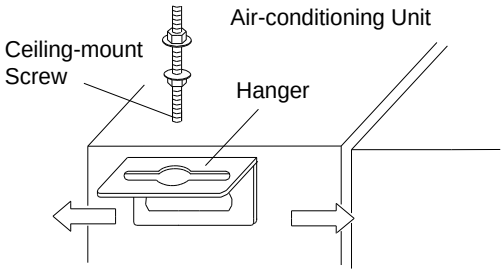


Figure 3-1-2

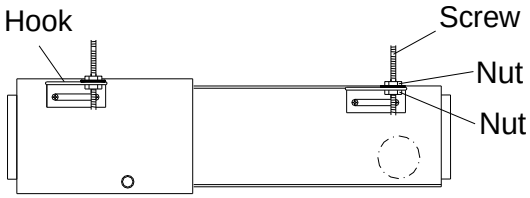


Figure 3-1-3

Install the hanger onto the indoor unit as Figure 3-1-2 and Figure 3-1-3 shows.

Install the indoor unit at the ceiling as Figure Figure 3-1-4 shows.

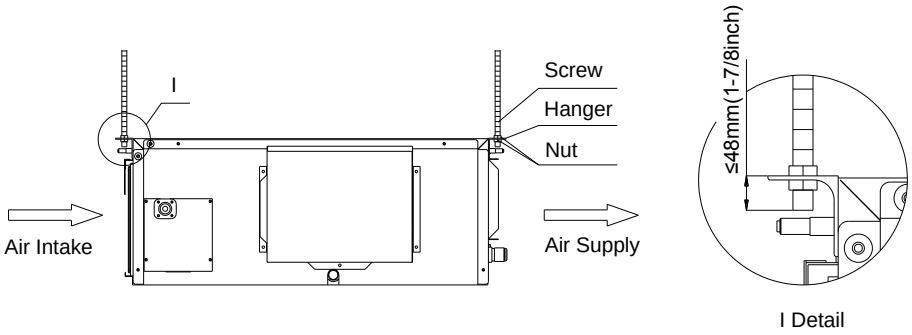


Figure 3-1-4

Precautions for unfavorable installation:

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.

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.

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.

Level inspection 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.

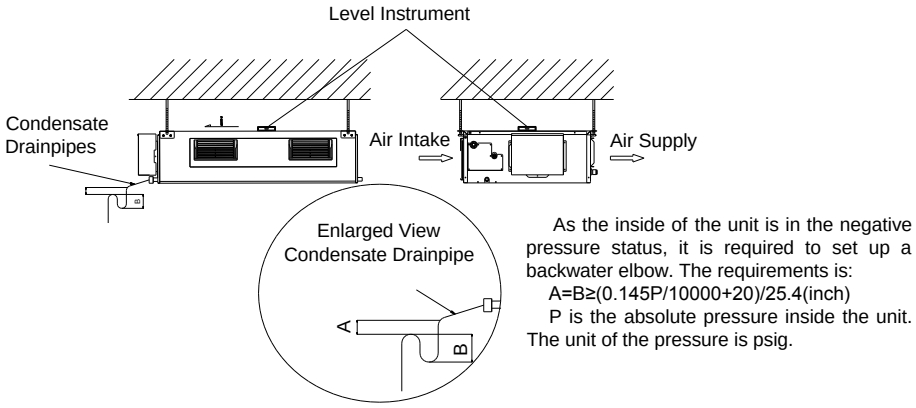
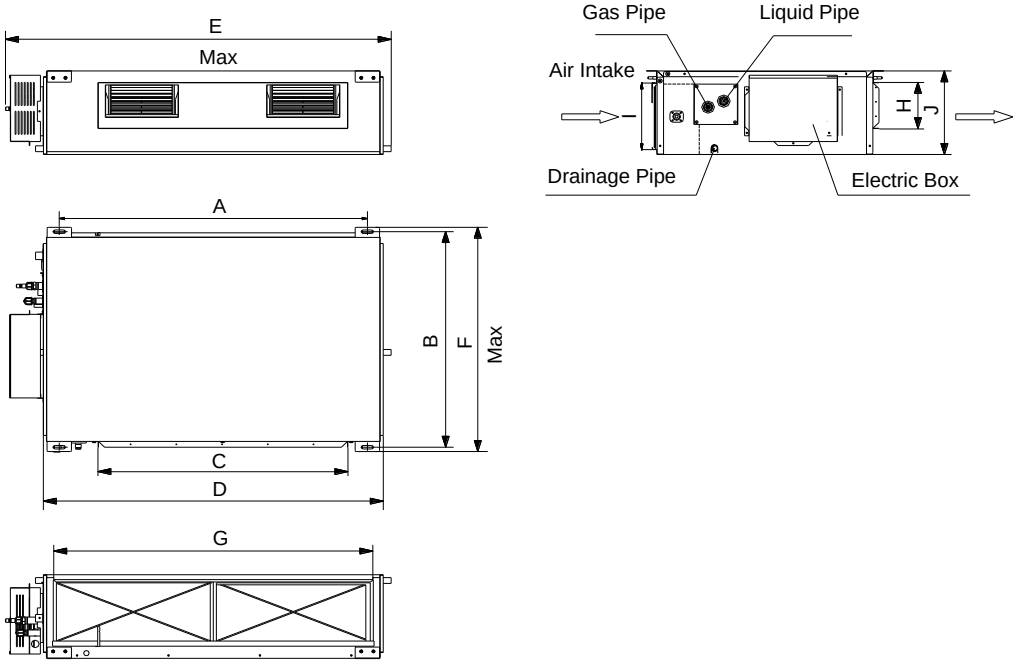


Figure 3-1-5

1.1.4 Dimension Data

◆ For the units: GFH24S3GI、GFH24S3G1I



◆ For the units: GFH36S3GI,GFH36S3G1I,GFH42S3GI,GFH42S3G1I,GFH48S3GI,GFH48S3G1I

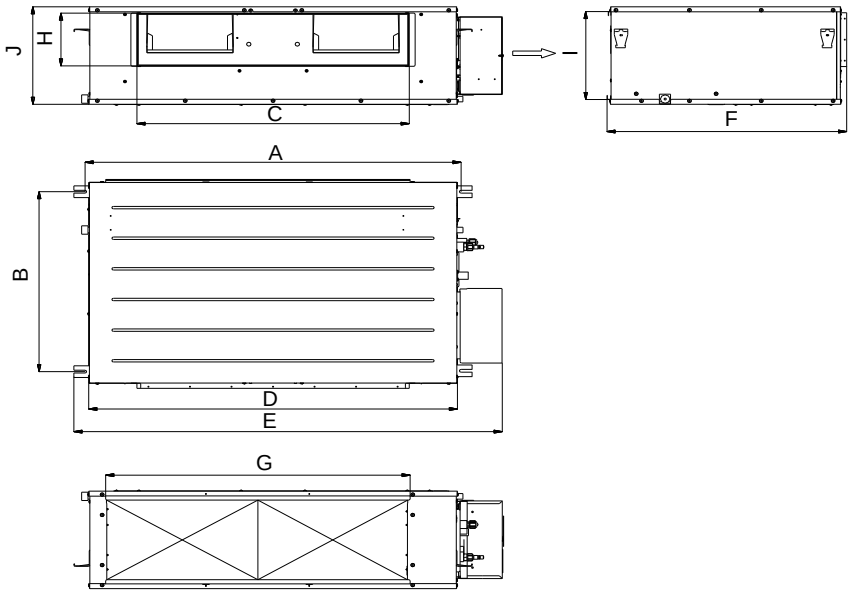


Figure 3-1-6

◆ For the units: GFH60S3GI,GFH60S3G1I

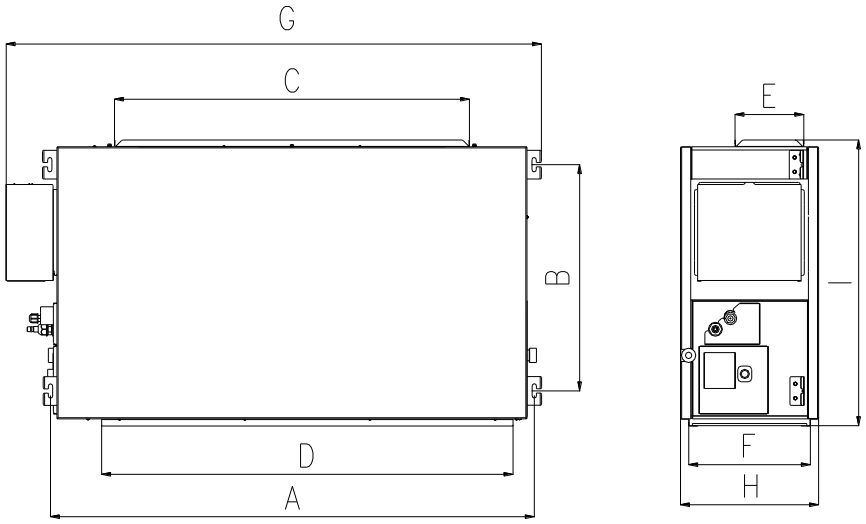


Table 3-1-1

Item / Model	A	B	C	D	E	F	G	H	I	J
GFH24S3GI GFH24S3G1I	1011	748	820	1115	1225	775	978	160	230	290
GFH36S3GI GFH36S3G1I	1175	646	852	1150	1340	750	953	190	316	350
GFH42S3GI GFH42S3G1I										
GFH48S3GI GFH48S3G1I										
GFH60S3GI GFH60S3G1I	1353	632	992	1150	192	340	1500	390	800	--

Table 3-1-2 Installation Accessories List for Duct-type Indoor Unit

Name & Shape	QTY	Notes
Installation and Operating Instructions	1	
Insulation materials for gas pipe	1	Used for gas pipe connector on indoor unit.
Insulation materials for liquid pipe	1	Used for liquid pipe connector on indoor unit.
Insulation materials for drainage pipe	2	Used for wrapping the condensate pipe and rubber plug.
Nut	1	To connect liquid pipe.
Nut	1	To connect gas pipe.
Nut M6 with gasket	8	Use for fixing the hanger hook.
Nut M10 with gasket	4	Use for fixing the hanger hook.
Nut M10	4	4 sets, used for ceiling mounting of the indoor unit.
spring gasket	4	
Hook	4	Used for ceiling mounting of the indoor unit.
Wired controller	1	
Screw M4	2	To fix the base plate of wired controller and installation hole of the wall together.

1.1.5 Installation Clearance Data

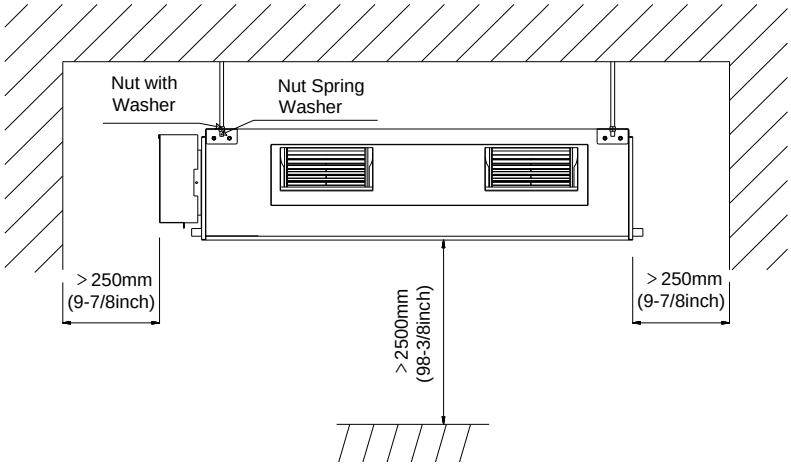


Figure 3-1-7

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

1.1.6 Drain Piping Work

Installation of Drainage Pipeline:

CAUTION!
Install the drain hose in accordance with the instructions in this installation manual and keep the area warm enough to prevent condensation. Problems with the piping may lead to water leaks.

(1) Install the drain hose with downward gradient (1/50 to 1/100) and no risers or traps are used for the hose.(Figure 3-1-8)

(2) Be sure there is no crack or leak on the drain hose to avoid the formation of air pocket.(Figure 3-1-8)

(3) When the hose is long, install supporters.(Figure 3-1-9)

(4) Always use the drain hose which has been insulated properly.

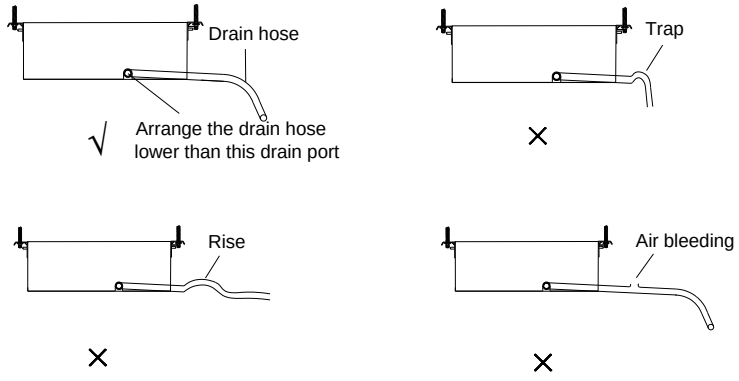


Figure 3-1-8

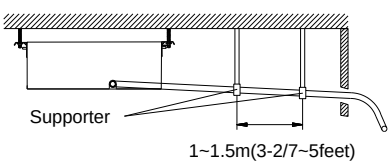


Figure 3-1-9

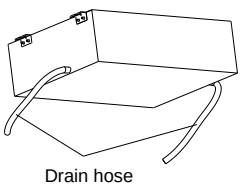
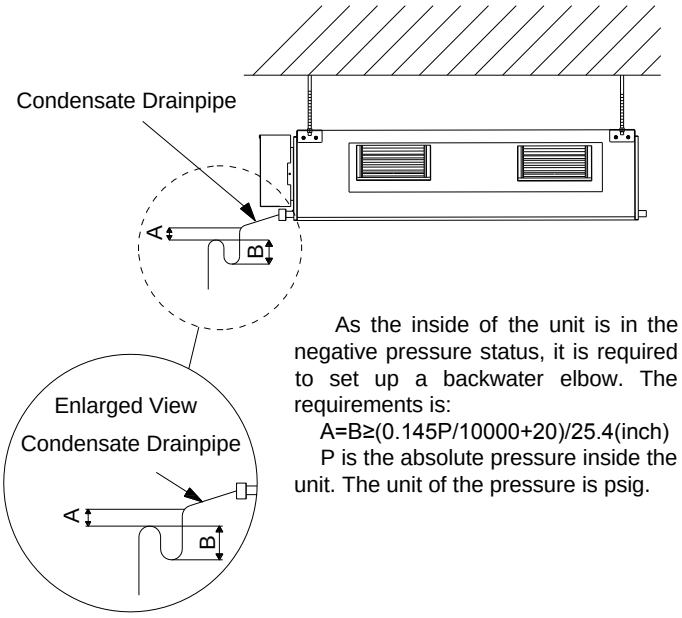


Figure 3-1-10



As the inside of the unit is in the negative pressure status, it is required to set up a backwater elbow. The requirements is:

A=B≥(0.145P/10000+20)/25.4(inch)

P is the absolute pressure inside the unit. The unit of the pressure is psig.

Figure 3-1-11

(5) Use a suitable drain hose, and see Table 3-2-4 for its size.

(6) There is a drain port on both the left and right sides. Select the drain port to match the local conditions.(Figure 3-1-10)

(7) When the unit is shipped from the factory, the drain port is defaulted to be the one on the left side (electric box side), the port on right side has been plugged.

(8) When using the drain port on the right side of the unit, reinstall the drain cap to the left side drain port.(Figure 3-1-12)

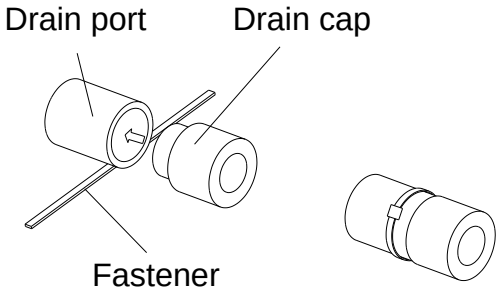


Figure 3-1-12

CAUTION!
Always check that the drain cap is installed to the unused drain port and is fastened with the nylon fastener. If the drain cap is not installed, or is not sufficiently fastened by the nylon fastener, water may drip during the cooling operation.

(9) Be sure to insulate where the drain port and the drain hose is connected.(Figure 3-1-13)

(10) The unused drain port also should be insulated properly.(Figure 3-1-14)

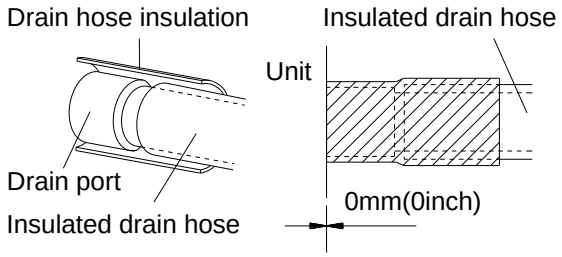


Figure 3-1-13

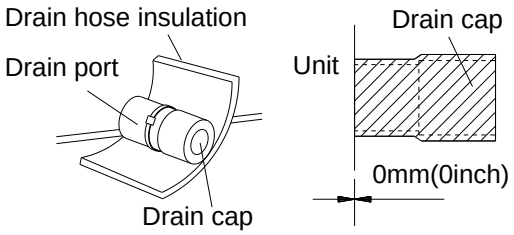


Figure 3-1-14

There is adhesive on one side of the insulation so that after removing the protective paper over it the insulation can be directly attached to the drain hose.

(11) Considerations for the unit with the condensate pump:

1) For the unit with the condensate pump, only one drain port at the side close to the electric box is prepared and only through it the drain hose can be connected.
2) See table 3 for the size of the drain port of the unit with the condensate pump, which is different from that of the unit without the condensate pump.
3) For the unit with the condensate pump, two drain ports at the bottom are defaulted to be factory plugged with drain caps. After the installation of the drain hose, these two drain ports also need to be insulated properly with the same way aforementioned.
4) The drain hose for the unit with the condensate pump should be arranged as shown in the figure below.

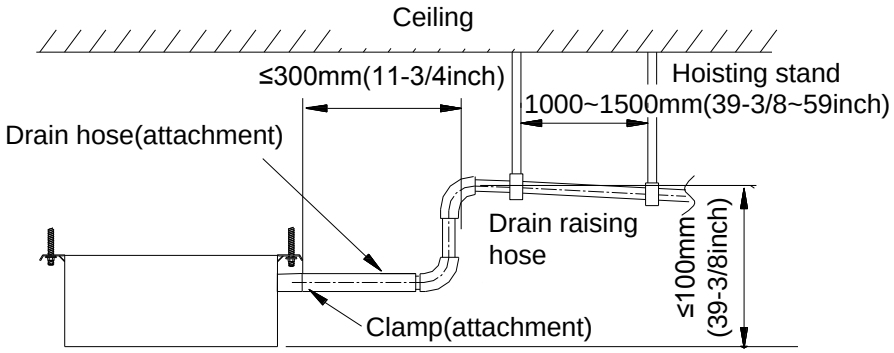


Figure 3-1-15

a) The vertical height of the drain hose should be 75mm or less so that it is unnecessary for the drain port to withstand additional force.

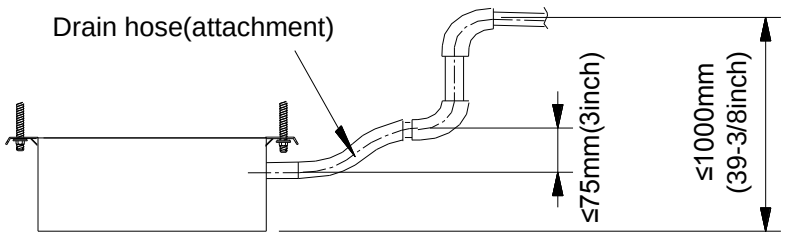


Figure 3-1-16

b) When multiple drain hoses are used, their installation should be performed as shown in the figure below.

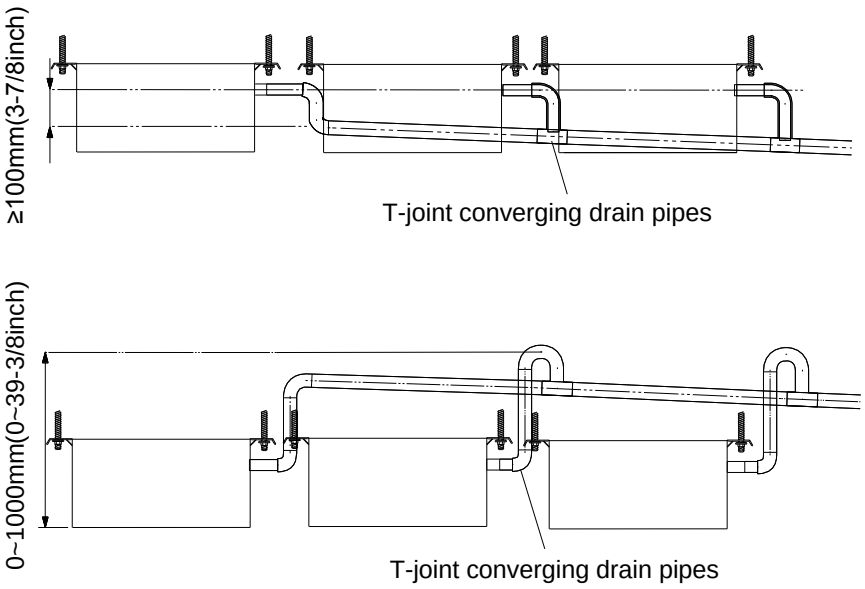


Figure 3-1-17

1.1.7 Installation of air duct

Dimensions of the Supply Air Outlet/Return Air Inlet

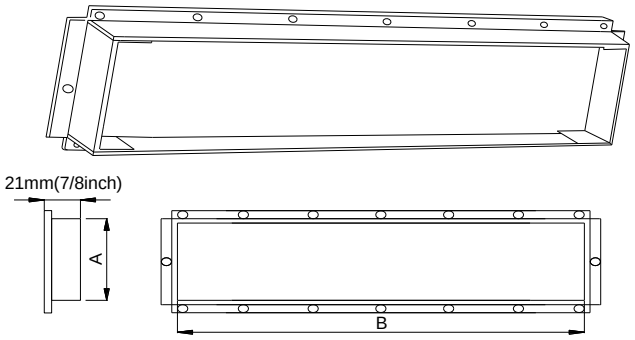


Figure 3-1-18 Supply Air Outlet

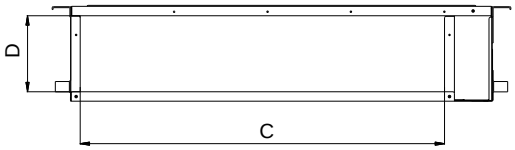


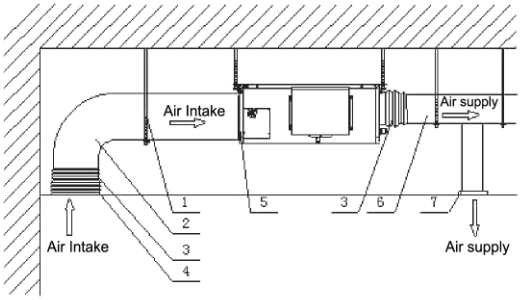
Figure 3-1-19 Return Air Inlet

Table 3-1-3

Item / Model	Supply Air Outlet		Return Air Inlet	
	A	B	C	D
GFH24S3GI GFH24S3G1I	158	818	950	206
GFH36S3GI GFH36S3G1I	190	850	941	286
GFH42S3GI GFH42S3G1I	190	850	941	286
GFH48S3GI GFH48S3G1I	190	850	941	286
GFH60S3GI GFH60S3G1I	190	990	1108	288

1.1.8 Installation of the Supply Air Duct

(1) Installation of the Rectangular Duct.



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		

Figure 3-1-20

CAUTION!
①. The maximum length of the duct means the maximum length of the supply air duct plus the maximum length of the return air duct.
②. The duct is rectangular and connected with the air inlet/outlet of the indoor unit. Among all supply air outlets, at least one should be kept open.

(2) The default installation location of the rectangular flange is at the back and the return air cover plate is at the bottom, as shown in Figure 3-1-21 .

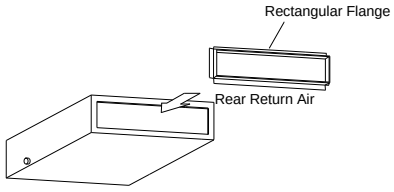


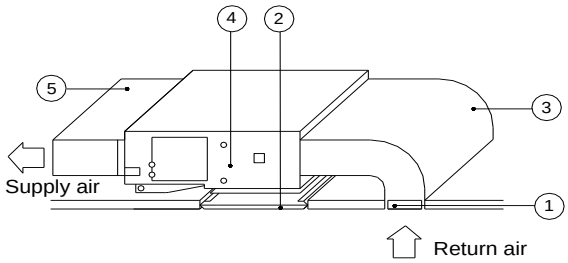
Figure 3-1-21

(3) If the bottom return air is desired, just change the place of the rectangular flange and the return air cover plate.

(4) Connect one end of the return air duct to the return air outlet of the unit by rivets and the other to the return air louver. For the sake of the convenience to freely adjust the height, a cutting of canvas duct will be helpful, which can be reinforced and folded by 8# iron wire

(5) More noise is likely to be produced in the bottom return air mode than the backward return air mode, so it is suggested to install a silencer and a static pressure box to minimize the noise.

(6) The installation method can be chosen with considering the conditions of the building and maintenance etc., as shown in Figure 3-1-22.



Install the return air duct(b)

Figure 3-1-22

Table 3-1-4 Installation of the return air duct

No.	Name	No.	Name
1	Return Air Inlet (with filter)	4	Indoor unit
2	Grille	5	Supply Air Duct
3	Return Air Duct		

2 OUTDOOR UNIT INSTALLATION

2.1 Before Installation

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After receiving the machine, please check the unit and accessories in reference to the packing list. Ensure that the model is correct and the machine is in good condition. Please also check if the specification and quantity of accessory parts are correct.

Determine the correct handling route and methods, thus to avoid damaging the unit or causing possible hazard. For the sake of protection and safety, it is suggested to move the unit with the packaging box. Even though it is not permitted to do like this under special occasions, do not remove the packaging box, thus to avoid loosening or falling during handling.

Confirm if the installing foundation is solid. When this unit is to be installed on the metal section of the building, make sure that the electrical insulation must comply with applicable standards.

Ensure that the place of installation is far from the area where the inflammable or explosive substances are stored, thus to avoid possible explosion or fire due to leakage.

2.2 Installation Site

⚠WARNING
①. Install the unit where it will not be tilted by more than 5°.
②. During installation, if the outdoor unit has to be exposed to strong wind, it must be fixed securely.

If possible, do not install the unit where it will be exposed to direct sunlight. (If necessary, install a blind that does not interfere with the air flow.)

(1) Install the outdoor unit in a place where it will be free from being dirty or getting wet by rain as much as possible.

(2) Install the outdoor unit where it is convenient to connect with the indoor unit.

(3) Install the outdoor unit where the condensate water can be drained out freely during heating

operation.

(4) Do not place animals and plants in the path of the warm air.

(5) Take the air conditioner weight into account and select a place where noise and vibration are small.

(6) Install the outdoor unit where is capable of withstanding the weight of the unit and generates as less noise and vibration as possible.

(7) Provide the space shown in Figure 3-2-1, so that the air flow is not blocked. Also for efficient operation, leave three of four directions of peripheral constructions open.

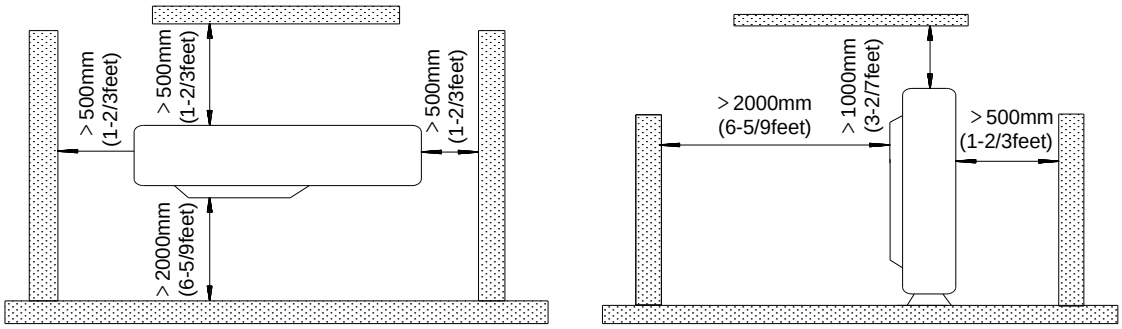


Figure 3-2-1

2.3 Caution for Installation

The outdoor unit shall be so installed that the air discharged out of the outdoor unit will not flow back and that enough space shall be maintained around the machine for repair;

The installing position shall be in good ventilation, so that the machine can breathe and exhaust enough air. Ensure that there is no obstruction at the inlet and outlet of the machine. If any, please remove the obstructions blocking the air inlet and outlet.

If the outdoor unit is installed on concrete or solid ground, it shall be fixed by using M10 bolts and nuts. And ensure that the machine is kept vertical and horizontal.

The outdoor unit must be lifted by using the designated lift hole. During lifting, take care to protect the air conditioner and avoid knocking the metal parts, thus to prevent rusting in the future.

To meet the noise and vibration requirements, the outdoor unit shall be installed by using rubber damping pad or spring damper.

To install the drainage pipe, please insert the drainage joint to the drainage hole on the outdoor chassis and connect a drainage pipe on the drainage joint. (The installing height of outdoor unit shall be at least 5cm if drainage joint is to be used).

To insert the pipe through the wall, the wall-cross tube must be installed.

The installing dimension shall comply with the installation requirements in these instructions. The outdoor unit must be fixed at the installing position.

The installation shall be done by specialist technicians.

2.4 Dimension Data

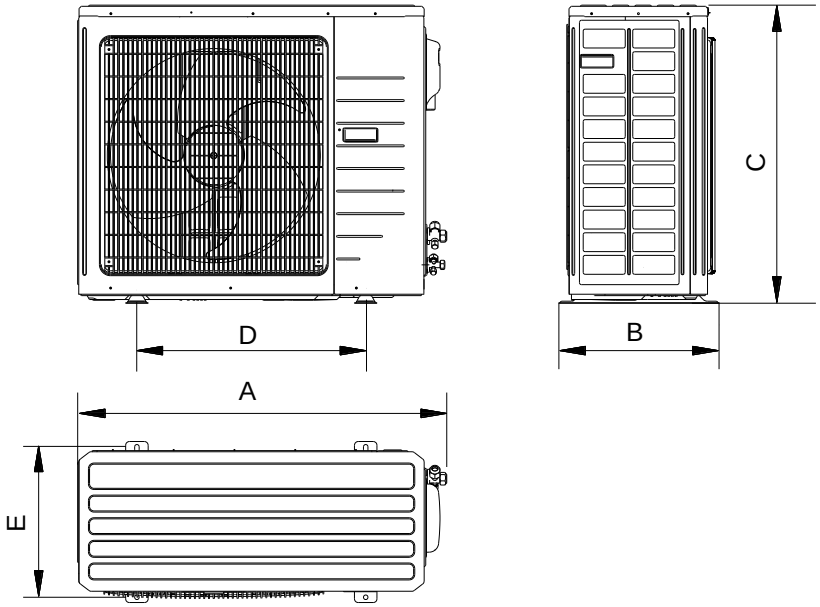


Figure 3-2-2

Table 3-2-1 Unit: mm

Item / Model	A	B	C	D	E
GUHD24NS3GO	1005	425	790	610	391
GUHD36NS3GO	1105	440	1105	631	401
GUHD42NS3GO					
GUHD48NS3GO	1085	425	1365	620	393
GUHD60NS3GO					

3 REFRIGERATION PIPING WORK

3.1 Refrigeration Piping Work Procedures and Caution in Connecting

3.1.1 Flare Processing

(1) Cut the connection pipe with the pipe cutter and remove the burrs.

(2) Hold the pipe downward to prevent cuttings from entering the pipe.

(3) Remove the flare nuts at the stop valve of the outdoor unit and inside the accessory bag of the indoor unit, then insert them to the connection pipe, after that, flare the connection pipe with a flaring tool.

(4) Check if the flare part is spread evenly and there are no cracks (see Figure 3-2-3).

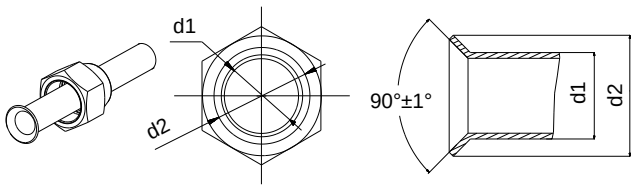


Figure 3-2-3

3.1.2 Bending Pipes

(1) The pipes are shaped by your hands. Be careful not to collapse them.

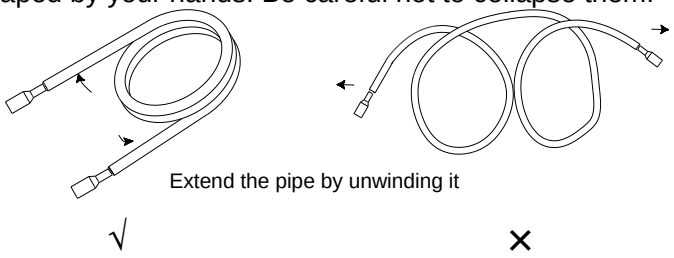


Figure 3-2-4

(2) Do not bend the pipes in an angle more than 90°.

(3) When pipes are repeatedly bent or stretched, the material will harden, making it difficult to bend or stretch them any more. Do not bend or stretch the pipes more than three times.

(4) When bending the pipe, do not bend it as is. The pipe will be collapsed. In this case, cut the heat insulating pipe with a sharp cutter as shown in Figure 3-2-5, and bend it after exposing the pipe. After bending the pipe as you want, be sure to put the heat insulating pipe back on the pipe, and secure it with tape.

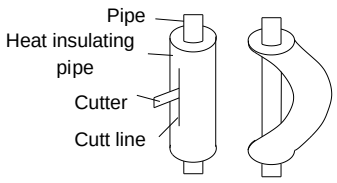


Figure 3-2-5

⚠CAUTION
To prevent breaking of the pipe, avoid sharp bends. Bend the pipe with a radius of curvature of 150mm or over.
If the pipe is bent repeatedly at the same place, it will break.

3.1.3 Connecting the Pipe at the Indoor Unit Side

Detach the caps and plugs from the pipes.

⚠CAUTION
①. Be sure to apply the pipe against the port on the indoor unit correctly. If the centering is improper, the flare nut cannot be tightened smoothly. If the flare nut is forced to turn, the threads will be damaged.
②. Do not remove the flare nut until the connection pipe is to be connected so as to prevent dust and impurities from coming into the pipe system.

When connecting the pipe to the unit or removing it from the unit, please do use both the spanner and the torque wrench.(Figure 3-2-6)

When connecting, smear both inside and outside of the flare nut with refrigeration oil, screw it hand tight and then tighten it with the spanner.

Refer to Table 10 to check if the wrench has been tightened properly (too tight would mangle the nut and lead to leakage).

Examine the connection pipe to see if it leaks, then take the treatment of heat insulation, as shown in the Figure 3-2-6.

Use the medium-sized sponge to insulate the coupler of the gas pipe.

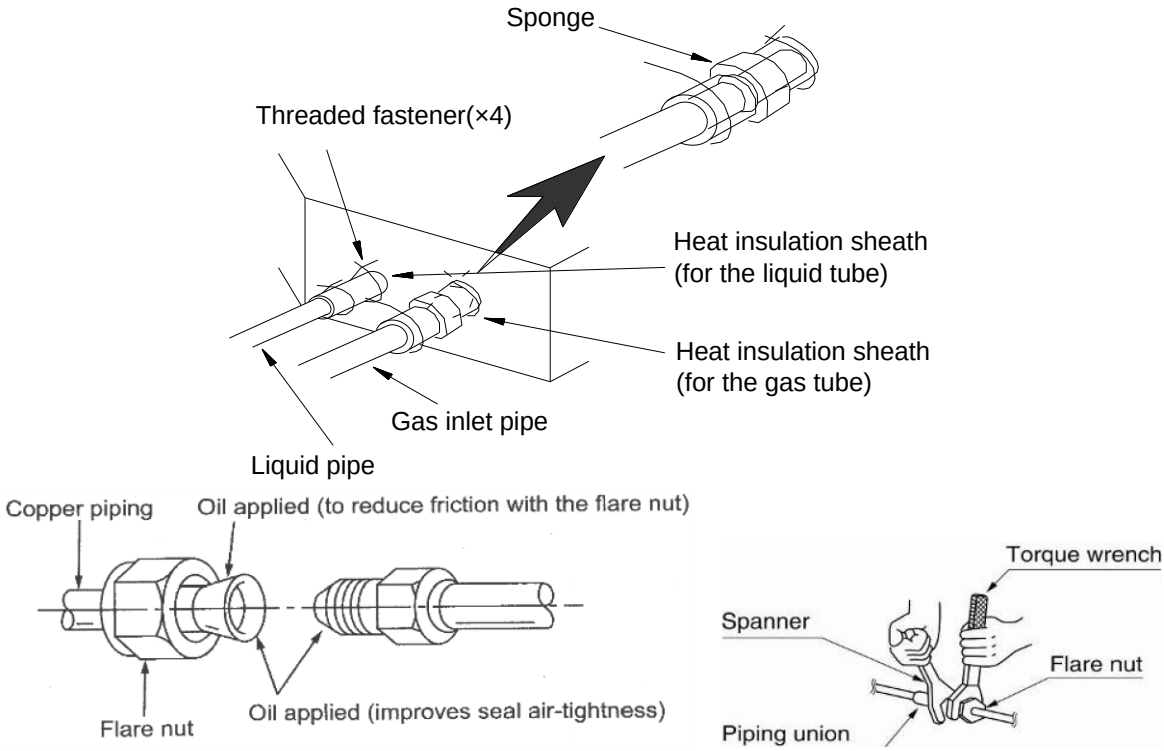


Figure 3-2-6

Table 3-2-2 Flare nut tightening torque

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)

Cautions
Be sure to connect the gas pipe after connecting the liquid pipe completely.

3.1.4 Connecting the Pipe at the Outdoor Side Unit

Tighten the flare nut of the connection pipe at the outdoor unit valve connector. The tightening method is the same as that as at the indoor side.

3.1.5 Checking the Pipe Connections for Gas Leaking

For both indoor and outdoor unit side, check the joints for gas leaking by the use of a gas leakage detector without fail when the pipes are connected.

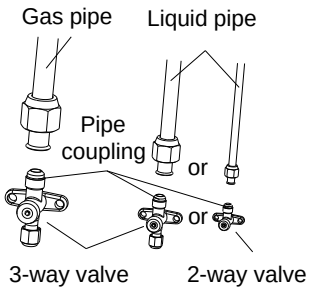


Figure 3-2-2

3.1.6 Heat Insulation on the Pipe Joints (Indoor Side Only)

Stick coupler heat insulation (large and small) to the place where connecting pipes.

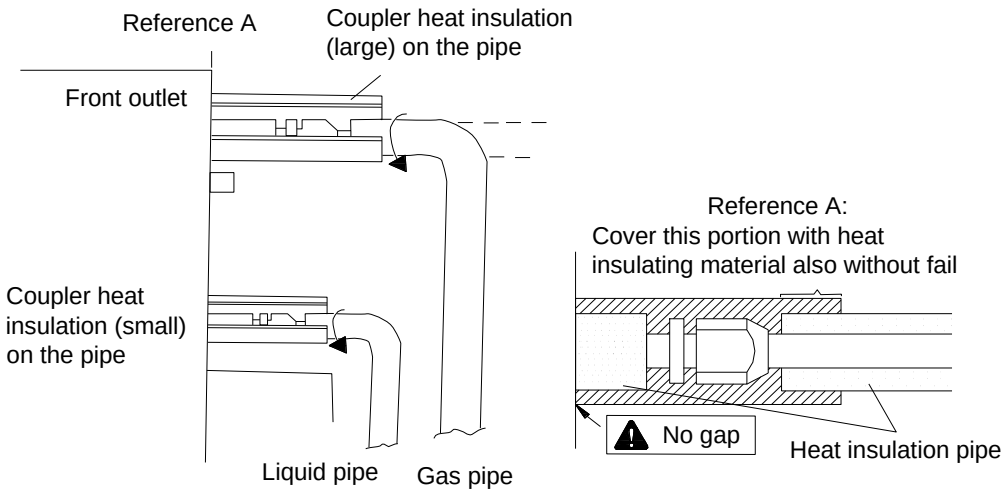


Figure 3-2-3

3.1.7 Vacuum and Gas Leakage Inspection

Cautions
Do not purge the air with refrigerants but use a vacuum pump to vacuum the installation! There is no extra refrigerant in the outdoor unit for air purging!

3.1.7.1 Vacuum

(1) Remove the caps of the liquid valve, gas valve and also the service port.

(2) Connect the hose at the low pressure side of the manifold valve assembly to the service port of the unit's gas valve, and meanwhile the gas and liquid valves should be kept closed in case of refrigerant leak.

(3) Connect the hose used for evacuation to the vacuum pump.

(4) Open the switch at the lower pressure side of the manifold valve assembly and start the vacuum pump. Meanwhile, the switch at the high pressure side of the manifold valve assembly should be kept closed, otherwise evacuation would fail.

(5) The evacuation duration depends on the unit's capacity, generally, 30 minutes for the 24/36k units, 45 minutes for the 42/48/60 units. And verify if the pressure gauge at the low pressure side of the manifold valve assembly reads -1.0Mp (-75cmHg), if not, it indicates there is leak somewhere. Then, close the switch fully and then stop the vacuum pump.

(6) Wait for some time to see if the system pressure can remain unchanged, 5 minutes for the 24/36k units, 10 minutes for the units more than 42k. During this time, the reading of the pressure gauge at the low pressure side can not be larger than 0.005Mp (0.38cmHg).

(7) Slightly open the liquid valve and let some refrigerant go to the connection pipe to balance the pressure inside and outside of the connection pipe, so that air will not come into the connection pipe when removing the hose. Note that the gas and liquid valve can be opened fully only after the manifold valve assembly is removed.

(8) Place back the caps of the liquid valve, gas valve and also the service port.

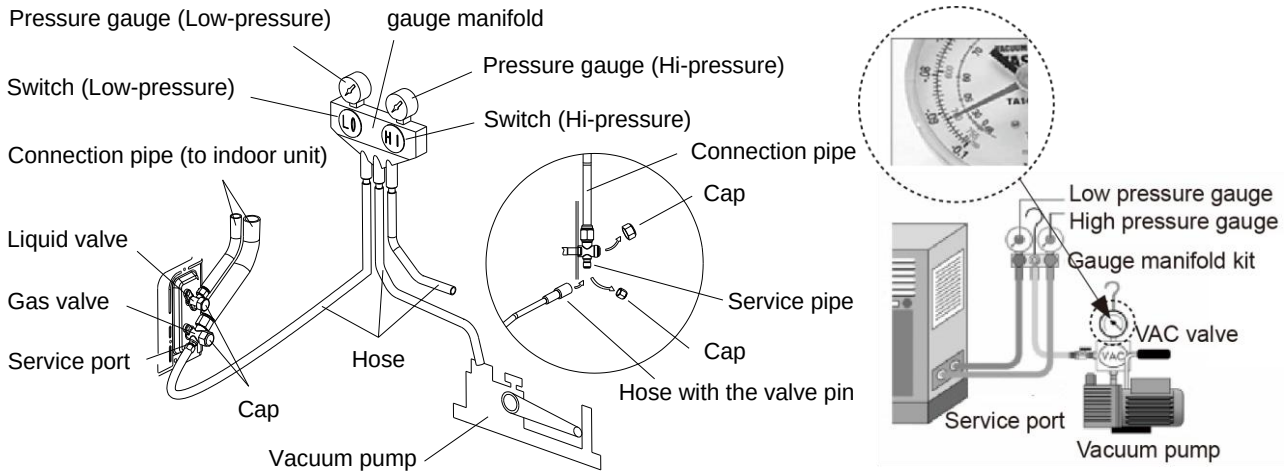


Figure 3-2-4

Note: For the large-sized unit, it has the service port for both the gas valve and the liquid valve. During evacuation, it is available to connect two hoses of the manifold valve assembly to two service ports to quicken the evacuating speed.

3.1.7.2 Additional Charge

Refrigerant suitable for a piping length of 7.5m is charged in the outdoor unit at the factory.

When the piping is longer than 9.5 m, additional charging is necessary.

For the additional amount, see Table 3-2-3.

Table 3-2-3

Item \ Model	Additional Refrigerant Amount for Extra Pipe
24-60K	60g/m

When the height difference between the indoor unit and outdoor unit is larger than 10 meters, an oil bend should be employed for every 6 meters.

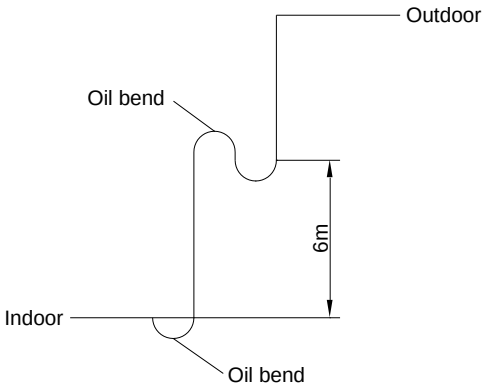


Figure 3-2-5

3.2 Specification of Connection Pipe

Table 3-2-4

Item / Model		Size of Fitting Pipe inch		Max. Pipe Length m	Max. Height Difference between Indoor Unit and Outdoor Unit m	Drainage pipe(Outer Diameter × wall thickness) mm
		Liquid	Gas			
GFH24S3GI GFH24S3G1I	GUHD24NS3GO	3/8	5/8	50	15	Φ20X1.2
GFH36S3GI GFH36S31I	GUHD36NS3GO	3/8	5/8	50	15	Φ20X1.2
GFH42S3GI GFH42S3G1I	GUHD42NS3GO	3/8	5/8	50	30	Φ20X1.2
GFH48S3GI GFH48S3G1I	GUHD48NS3GO	3/8	5/8	50	30	Φ20X1.2
GFH60S3GI GFH60S3G1I	GUHD60NS3GO	3/8	3/4	50	30	Φ30X1.5

The connection pipe should be insulated with proper water-proof insulating material.

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

4 ELECTRIC WIRING WORK

4.1 Wiring Precautions

Warning
① Before obtaining access to terminals, all supply circuits must be disconnected.
② The rated voltage of the unit is as shown as Table 1-4-1 and Table 1-4-2
③ Before turning on, verify that the voltage is within the 198~264V range(for single phrase unit) .
④ Always use a special branch circuit and install a special receptacle to supply power to the air conditioner.
⑤ Use a special branch circuit breaker and receptacle matched to the capacity of the air conditioner.
⑥ The special branch circuit breaker is installed in the permanent wiring. Always use a circuit that can trip all the poles of the wiring and has an isolation distance of at least 3 mm between the contacts of each pole.
⑦ Perform wiring work in accordance with standards so that the air conditioner can be operated safely and positively.
⑧ Install a leakage special branch circuit breaker in accordance with the related laws and regulations and electric company standards.

Cautions
① The power source capacity must be the sum of the air conditioner current and the current of other electrical appliances. When the current contracted capacity is insufficient, change the contracted capacity.
② When the voltage is low and the air conditioner is difficult to start, contact the power company to raise the voltage.

4.2 Electrical Wiring

(1) For solid core wiring (Figure 3-2-6)

1) Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation about 25 mm (15/16") .

2) Using a screwdriver, remove the terminal screw(s) on the terminal board.

3) Using pliers, bend the solid wire to form a loop suitable for the terminal screw.

4) Shape the loop wire properly, place it on the terminal board and tighten securely with the terminal screw using a screwdriver.

(2) For strand wiring (Figure 3-2-6)

1) Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation about 10 mm (3/8") .
2) Using a screwdriver, remove the terminal screw (s) on the terminal board.
3) Using a round terminal fastener or pliers, securely clamp a round terminal to each stripped wire end.
4) Position the round terminal wire, and replace and tighten the terminal screw with a screwdriver.(Figure 3-2-7)

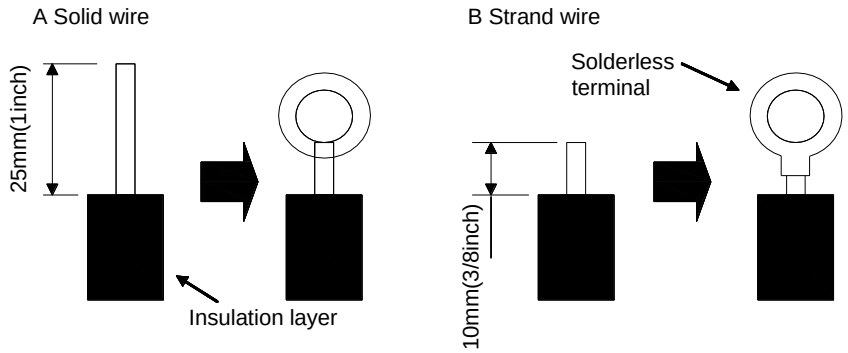


Figure 3-2-6

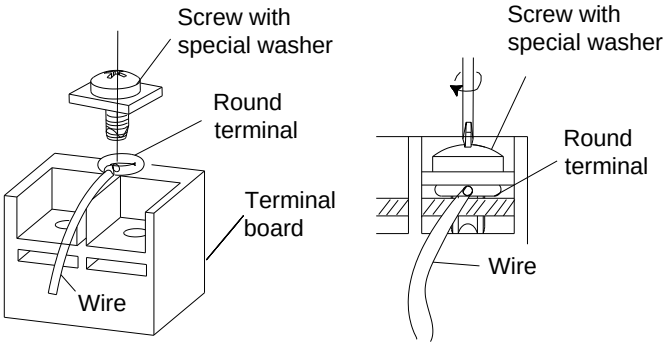


Figure 3-2-7

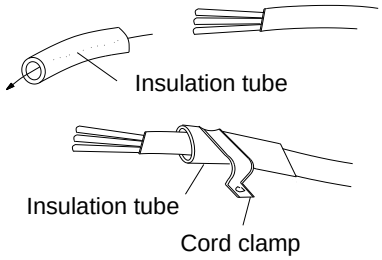


Figure 3-2-8

(3) How to fix connection cord and power cord by cord clamp

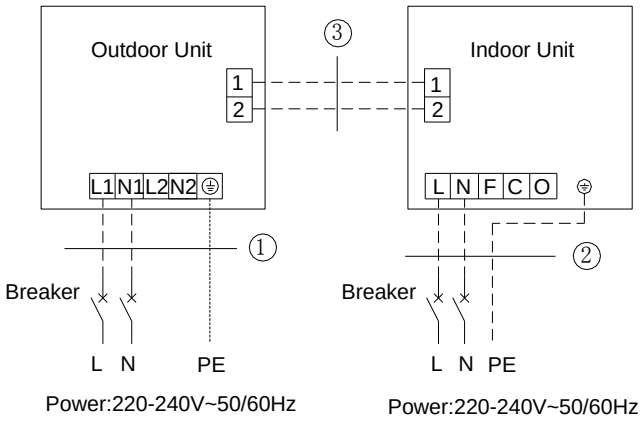
After passing the connection cord and power cord through the insulation tube, fasten it with the cord clamp.(Figure 3-2-8)

Warning
①. Before starting work, check that power is not being supplied to the indoor unit and outdoor unit.
②. Match the terminal block numbers and connection cord colors with those of the indoor unit side. ③. Erroneous wiring may cause burning of the electric parts.
④. Connect the connection cords firmly to the terminal block. Imperfect installation may cause a fire.
⑤. Always fasten the outside covering of the connection cord with cord clamps. (If the insulator is not clamped, electric leakage may occur.)
⑥. Always connect the ground wire.

(4) Electric wiring between the indoor and outdoor units

◆ Single-phase units

1) Separate Power Supply for indoor unit and outdoor unit:



24k-60k

GUHD24NS3GO+GFH24S3GI/GFH24S3G1I
①. Power cord 3×2.5mm^2(H07RN-F)
②. Power cord 3×1.0mm^2(H05RN-F)
③. Communication Cords 2×0.75mm^2(H05RN-F)

GUHD36NS3GO+GFH36S3GI/GFH36S3G1I
GUHD42NS3GO+GFH42S3GI/GFH42S3G1I
①. Power cord 3×4.0mm^2(H07RN-F)
②. Power cord 3×1.0mm^2(H05RN-F)
③. Communication Cords 2×0.75mm^2(H05RN-F)

GUHD48NS3GO+GFH48S3GI/GFH48S3G1I
GUHD60NS3GO+GFH60S3GI/GFH60S3G1I
①. Power cord 3×6.0mm^2(H07RN-F)
②. Power cord 3×1.0mm^2(H05RN-F)
③. Communication Cords 2×0.75mm^2(H05RN-F)

2) The Power supply for indoor unitis from outdoor unit.

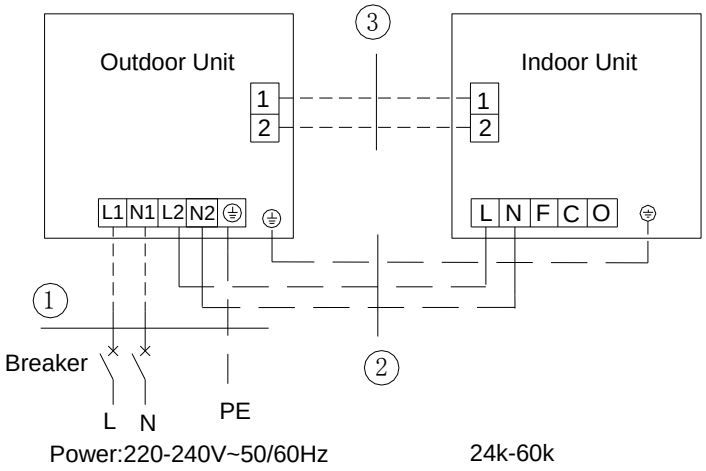


Figure 3-2-9

(5) Electric wiring of indoor unit side

Remove the electric box cover from the electric box sub-assy and then connect the wire.

◆ Duct Type Unit：

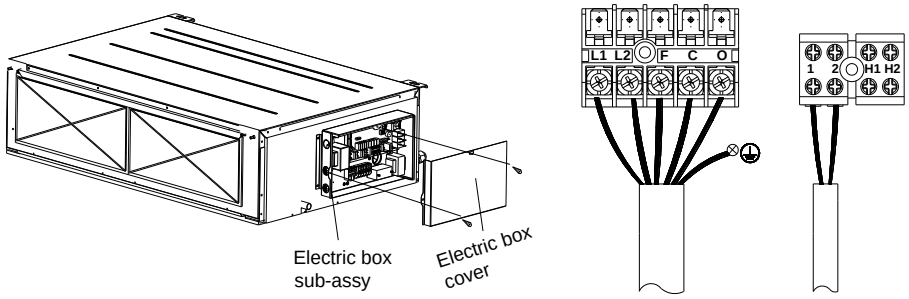


Figure 3-2-10

The F, C, O connect to the COMMOM, CLOSE and OPEN terminal of the fresh air valve respectively.

Warning
①. The power cord and the wire of the fresh air valve are high-voltage, while the communication cord and connection wire of the wired controller are low-voltage. They should run separately against electromagnetic interference.
②. The high-voltage and low-voltage lines should pass through the rubber rings at different electric box covers.
③. Do not bundle the connection wire of the wired controller and the communication cord together, or arrange them in parallel, otherwise improper operation would occur.
④. The high-voltage and low-voltage lines should be fixed separately and securely, with internal big clamps for the former and small clamps for the latter.
⑤. Tighten the indoor/outdoor connection cord and power cord respectively on the terminal boards with screws. Faulty connection may cause a fire.
⑥. If the indoor unit connection cord (to the outdoor unit) and power supply are wired incorrectly, the air conditioner may be damaged.
⑦. Connect the indoor unit connection cord properly based on the corresponding marks as shown in Figure 3-2-9.
⑧. Ground both the indoor and outdoor units by attaching a ground wire.
⑨. Unit shall be grounded in compliance with the applicable local and national codes.

(6) Electric wiring of outdoor unit side

Note: When connecting the power supply cord, make sure that the phase of the power supply matches with the exact terminal board. If not, the compressor will rotate reversely and run improperly.

Remove the big handle 24k /front board(36-60k) of the outdoor unit and insert the end of the communication cord and the power cable into the terminal board.

Single phase:

1) Separate Power Supply for indoor unit and outdoor unit:

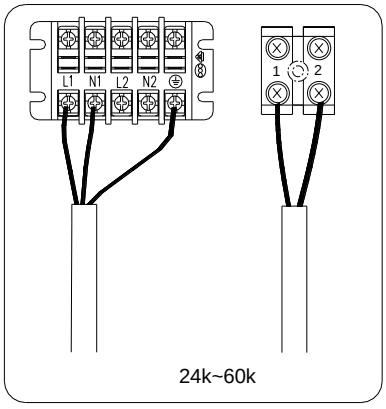
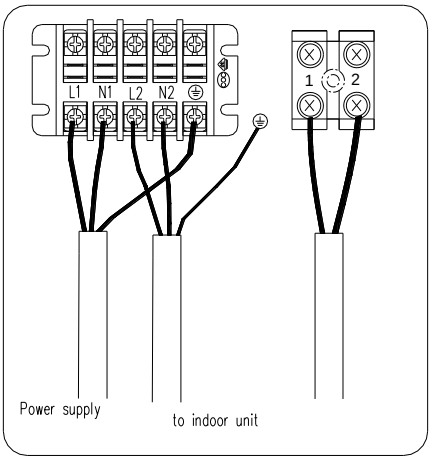


Figure 3-2-13

2) The Power supply for indoor unitis from outdoor unit.



Power lines should go along the right side plate. Communication lines between indoor and outdoor units also should go along the right side plate and keep away from power lines.