VRF Ducted Indoor Unit

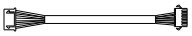
INSTRUCTION MANUAL

MY2025

Contents

Accessories and Parts Purchased Locally

Accessories

Name of accessories	Quantity	Image	Application
Installation instruction for indoor unit	1	A manual	(Please be sure to hand it to user.)
Insulating tube	2		Used to encase single joints of high and low pressure pipes.
Ribbon	6		Bind up cables and connecting pipes.
Dome insulated tip	6		Used to connect wires
X-type insulated tip	3		Used to connect wires
Brass joint nut	1		Used to connect pipe
Wire controller	1		Control A/C
Connecting pipe of electronic expansion valve	1		Connect electronic expansion valve and liquid side of indoor unit (Different models may have different sizes and calibers. Please install according to the real products.)
Connection wire for wire controller	1		The wire that connect the wire controller and PCB
Blank valve bag	3		Used to contain accessories.

Parts Purchased Locally

	Type	2.2kW~2.8kW	3.2kW~5.6kW	6.3kW~8.0kW	9.0kW~16.0kW	20.0kW~28.0kW	35.0kW~56.0kW
Cooper pipe	Liquid pipe (mm)	Φ6.35×0.8		Φ9.52×0.8		Φ12.7×0.8	Φ15.88×1.0
	Gas pipe (mm)	Φ9.52×0.8	Φ12.7×0.8	Φ15.88×1.0		Φ22.2×1.0	Φ28.6×1.2
PVC drainpipe	For the indoor unit drainpipe. The length is decided according to the actual need.						
Insulation bushing	Assort inner diameter respectively with relevant copper pipe and hard polyethylene plastic pipe. The thickness is usually 10 mm (above). It should be appropriately thickened in closed and wet areas.						

Correct disposal of this product

Do not dispose this product as unsorted municipal waste. Collection of such waste separately for special treatment is necessary.

1. Safety Precautionary Measures

⚠ WARNING

- The installation work must be done by the distributor or a professional worker.
  The installation worker must be equipped with all related knowledge as a wrong operation may cause fire risk, electric shock, injury or water leakage, etc.
  This appliance can be used by children aged 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge provided that they have been given proper supervision or instruction concerning the use of the appliance in a safe way and they understand the hazards involved. Children shall not play with the appliance. Cleaning and maintenance shall not be made by children without supervision.
- Parts purchased locally should be the products specified by our company.
  Retailed parts like humidifier should be the products specified by our company, the violation of which may cause fire, electric shock or water leakage, etc. The retailed products must be installed by professionals.
- If the unit has to be installed in a small room, suitable measures shall be done to make sure that any refrigerant leakage concentration happened in the room will not exceed the critical level.
  For detailed measures, place consult with the distributor.
- Connection of power supply must be complying with the rules specified by the local electrical authority.
  Required by law, there must be reliable ground works. If the ground is not proper, it may result in electric shock.
  For the appliances that are intended to be permanently connected to fixed wiring, and have a leakage current exceeding 10 mA, it shall advise the installation of a residual current device (RCD) having a rated residual operating current not exceeding 30 mA.
- If the air conditioner needs to be moved or reinstalled, please let the distributor or a professional worker do the job.
  Incorrect installation will cause fire risk, electric shock, injury or water leakage, etc.
- The user is not permitted to rebuild or repair the unit by himself/herself.
  Incorrect repair will cause fire risk, electric shock, injury or water leakage, etc, so repair must be performed by the distributor or a professional worker.
  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.

⚠ NOTICE

- Make sure that the water drainage pipe is usable.
  Incorrect installation of water drainage pipe will cause water leakage and furniture wetting, etc.
- Make sure that a current leakage protection switch is equipped.
  The current leakage protection switch must be equipped or there may be an electric shock.
- It mustn't be installed near any potential leakage of inflammable gas.
  If any inflammable gas leaks, there may be a fire risk around the indoor unit.
- Make sure that the foundation installation or suspending installation is firm and reliable.
  If the foundation or suspension is not firm and reliable enough, it may lead to a fall accident.
- Make sure that all electric cables are correctly connected.
  If any electric cable is incorrectly connected, it may lead to a damage to an electrical part.
- Exposure of this machine to water or other moisture before installation will cause short-circuit of electrical components.
  Don't store it in a humid basement or expose it to rain or water.
- If the refrigerant leaks during installation, the room must be ventilated at once.
  The leaked refrigerant may generate toxic gases if it contacts any flame.
- After installation, make sure that there is no refrigerant leakage.
  If the refrigerant gas enters and contacts a fire source such as a heater, a stove or an electric cooker, it may generate toxic gases.

2. Selection of Installation Site

2-1 Selection of Installation Site for Indoor Units

1) Provide enough space for installation and maintenance.
2) The ceiling is horizontal and the building construction can support the indoor unit.
3) Ventilation is accessible and the site is affected by extraneous air as minimal as possible.
4) Air stream can spread to every part of the room.
5) The connecting pipe and drainpipe are easy to be extracted.
6) No direct radiation of heat.

⚠ ATTENTION

- It may result in faults (if it's inevitable, please consult) if the unit is installed in the following:
- Place where there is mineral oil like cutting oil.
- Place like seaside where there is much salt in the air.
- Place where there is aggressive gas like sulfur gas.
- Place like a factory where power supply voltage severely fluctuates.
- In a car or a cabin.
- Place like a kitchen which is full of oil gas and oil bloom.
- Place where there is strong electromagnetic wave.
- Place where there is inflammable gas or material.
- Place where acidic or alkaline gas evaporates.
- Other special environments.
- This series of air conditioners are of comfort air conditioners. Do not use for computer, precision instrument, food, animals and plants, art and other special places.

⚠ ATTENTION

About electromagnetic compatibility order 89/336/EEC.
In order to avoid the trembling caused by compressor starting running (technical program), please install the outdoor unit according to the steps below:

- The unit power supply must be equipped with the qualified circuit breaker with earth leakage protection.
- The power supply switch of the unit cannot be connected to other electrical equipment.
- If there are restrictions for washing machines, air conditioners or induction cookers, please contact the power supply department to obtain the detailed license of installation provisions.
- The user power supply must be grounded.
- Please refer to the electricity range on product nameplate about the detailed specification of air conditioning power supply.

3. Installation of Indoor Unit

3-1 Installation Size of Indoor Units

A、 Appearance Size and Air Outlet Size of Short Ducted Unit:

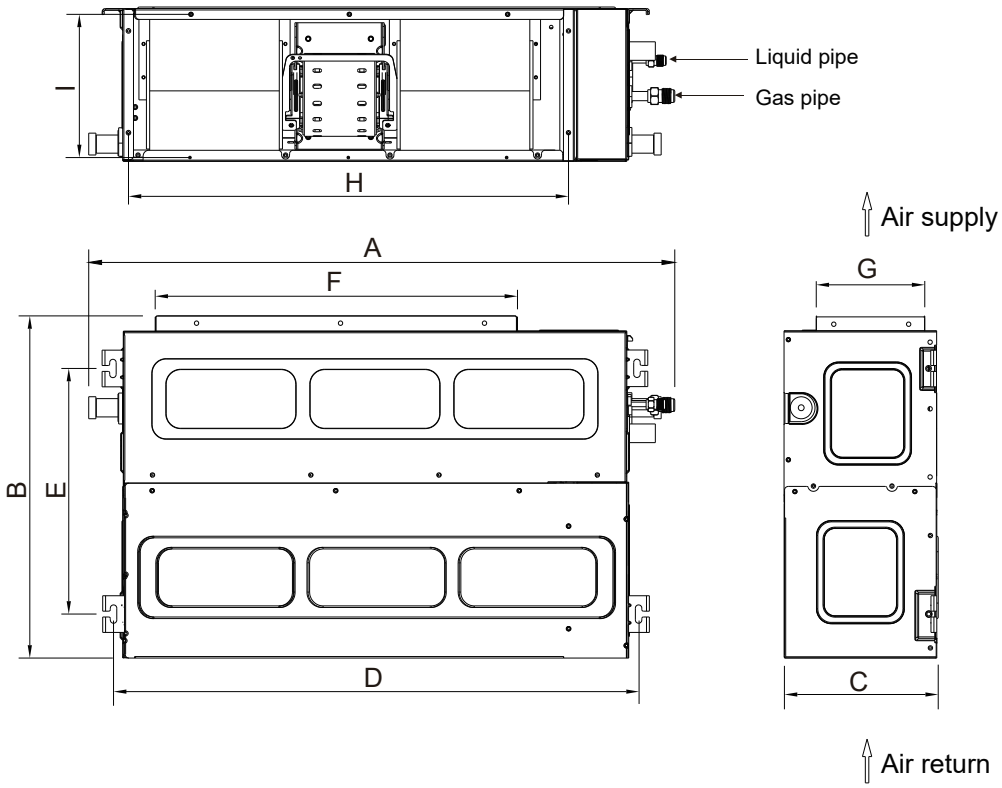


Table 3.1 Unit: mm

Size code / Model of indoor unit	Body size			Installation size		Air outlet size		Air return size	
	A	B	C	D	E	F	G	H	I
2.2kW～4.5kW	814	467	210	755	335	503	150	611	200
5.6kW	1010	467	210	955	335	705	150	811	200
7.1kW	1214	467	210	1155	335	905	150	1011	200

3. Installation of Indoor Unit

B、 Appearance Size and Air Outlet Size of Standard Static Pressure Ducted Unit:

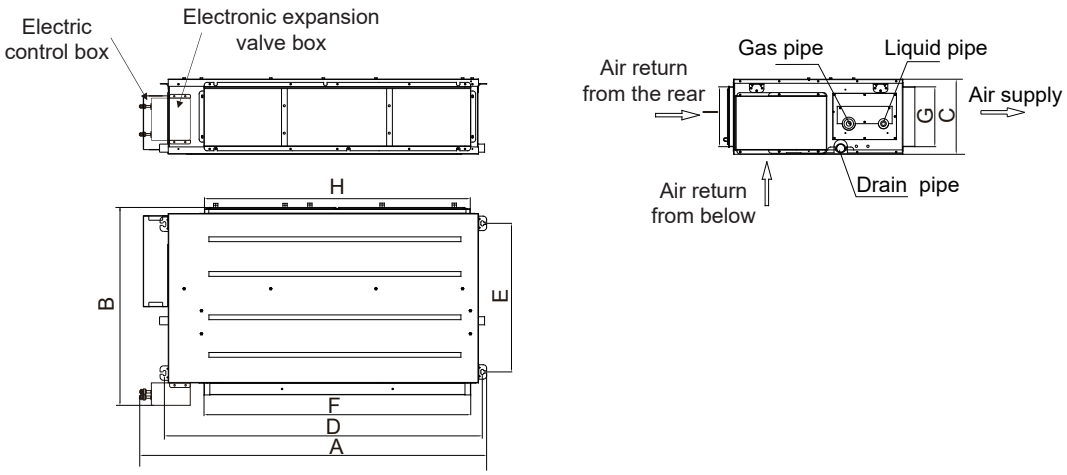


Table 3.2 Unit: mm

Size code / Model of indoor unit	Body size			Installation size		Air outlet size		Air return size	
	A	B	C	D	E	F	G	H	I
7.1kW～8.0kW	1209	680	260	1100	515	920	197	920	207
9.0kW～15.0kW	1445	680	260	1337	515	1156	197	1156	207

C、 Appearance Size and Air Outlet Size of High Static Pressure Ducted Unit (1):

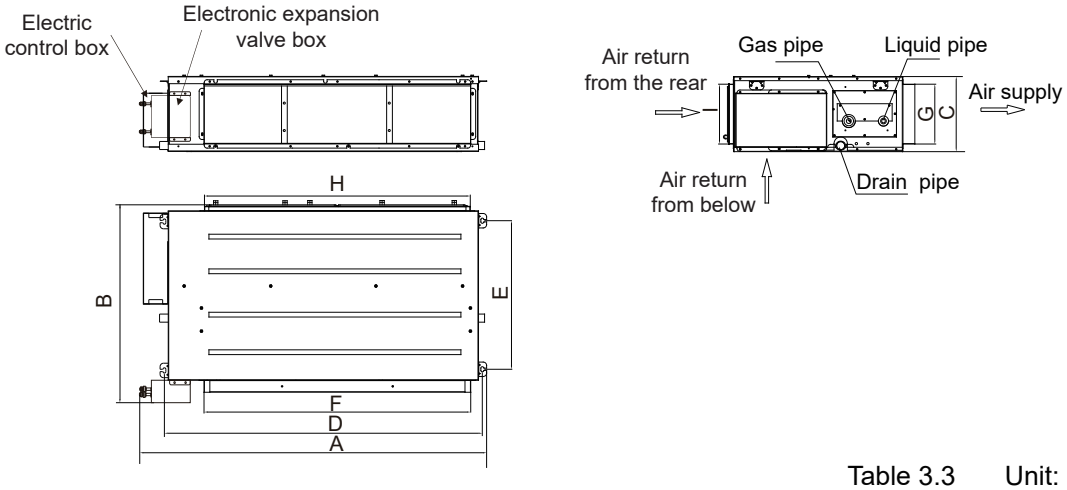


Table 3.3 Unit: mm

Size code / Model of indoor unit	Body size			Installation size		Air outlet size		Air return size	
	A	B	C	D	E	F	G	H	I
7.1kW～9.0kW	1445	680	260	1337	515	1156	197	1156	207

3. Installation of Indoor Unit

D、 Appearance Size and Air Outlet Size of High Static Pressure Ducted Unit (2):

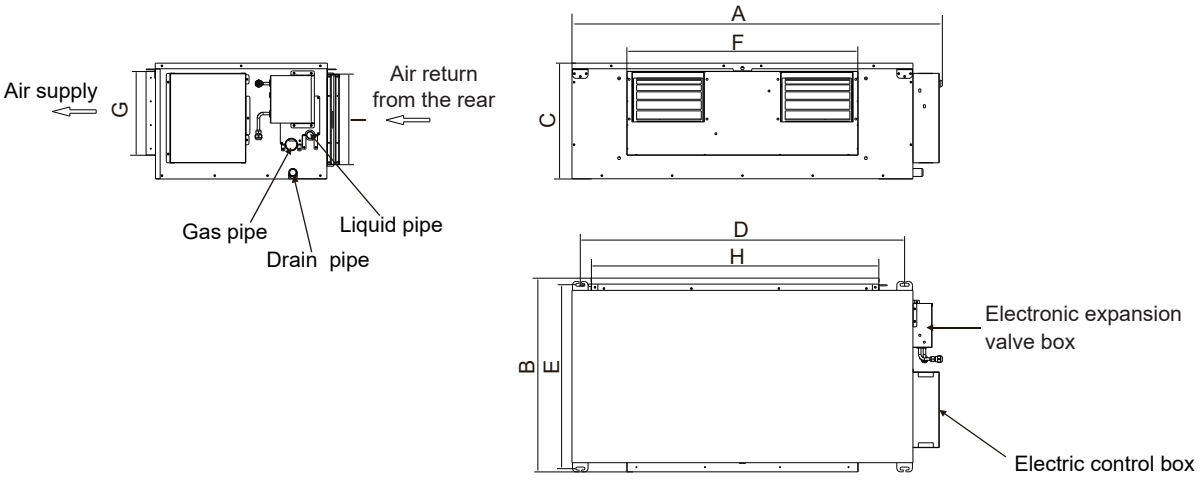


Table 3.4 Unit: mm

Size code / Model of indoor unit	Body size			Installation size		Air outlet size		Air return size	
	A	B	C	D	E	F	G	H	I
10.0kW～15.0kW	1190	620	370	1038	588	740	267	920	290

E、 Appearance Size and Air Outlet Size of High Static Pressure Ducted Unit (3):

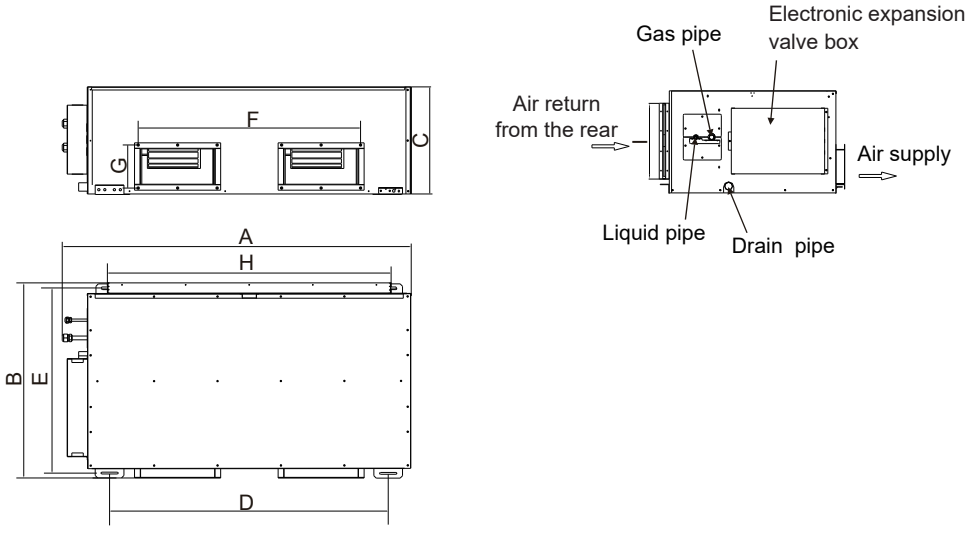


Table 3.5 Unit: mm

Size code / Model of indoor unit	Body size			Installation size		Air outlet size		Air return size	
	A	B	C	D	E	F	G	H	I
20.0kW～28.0kW	1440	811	448	1162	771	930	180	1186	320

3. Installation of Indoor Unit

F、 Appearance Size and Air Outlet Size of High Static Pressure Ducted Unit (4):

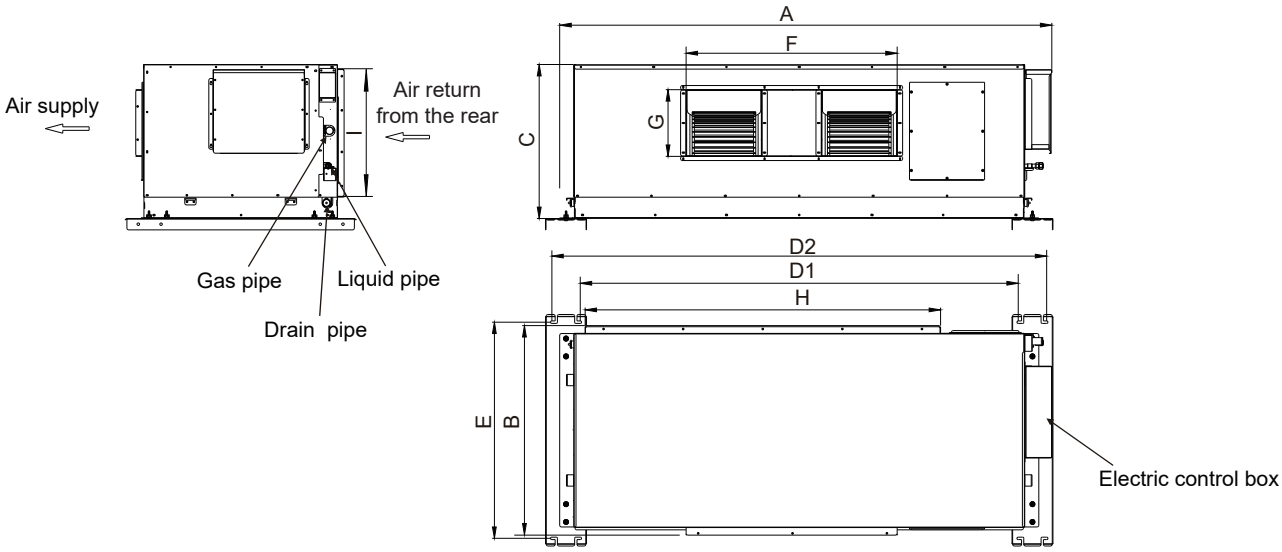


Table 3.6 Unit: mm

Size code / Model of indoor unit	Body size			Installation size			Air outlet size		Air return size	
	A	B	C	D1	D2	E	F	G	H	I
35.0～56.0kW	2165	916	676	1926	2176	950	928	292	1563	563

G、 Appearance Size and Air Outlet Size of Full Fresh Air Processor (1): The structure is the same as the high static pressure ducted unit 10.0kW～15.0kW

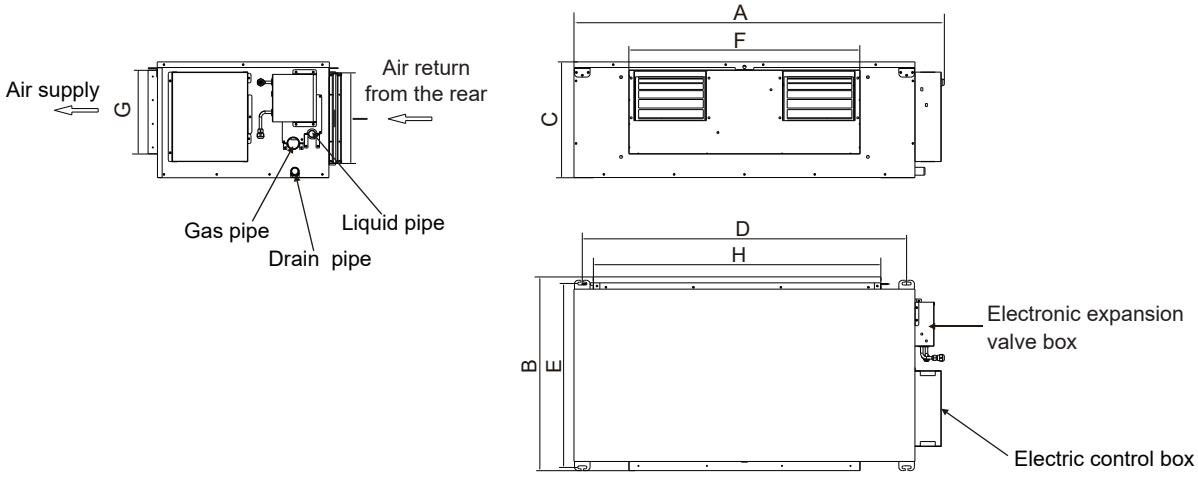


Table 3.7 Unit: mm

Size code / Model of indoor unit	Body size			Installation size		Air outlet size		Air return size	
	A	B	C	D	E	F	G	H	I
14.0kW	1190	620	370	1038	588	740	267	920	290

3. Installation of Indoor Unit

H、 Appearance Size and Air Outlet Size of Full Fresh Air Processor (2):

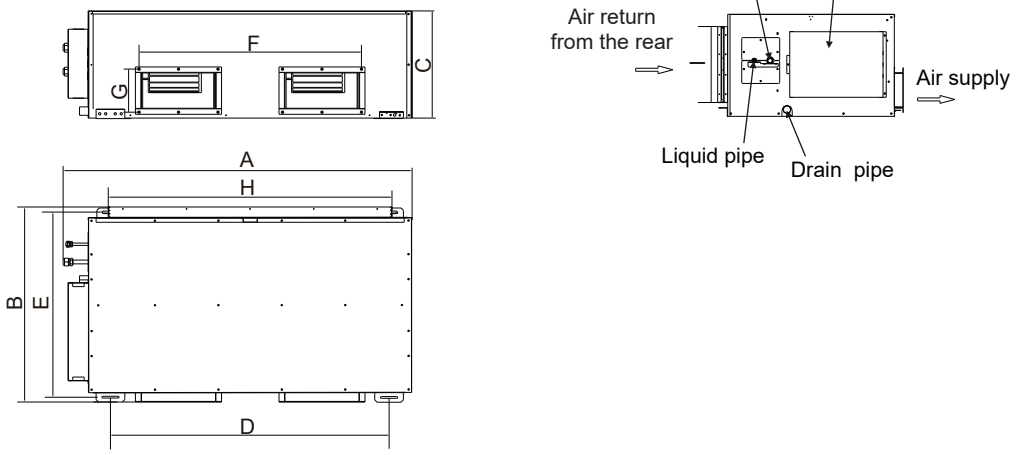


Table 3.8 Unit: mm

Size code / Model of indoor unit	Body size			Installation size		Air outlet size		Air return size	
	A	B	C	D	E	F	G	H	I
22.4kW～28.0kW	1440	811	448	1162	771	930	180	1174	272

I、 Appearance Size and Air Outlet Size of Full Fresh Air Processor (3):

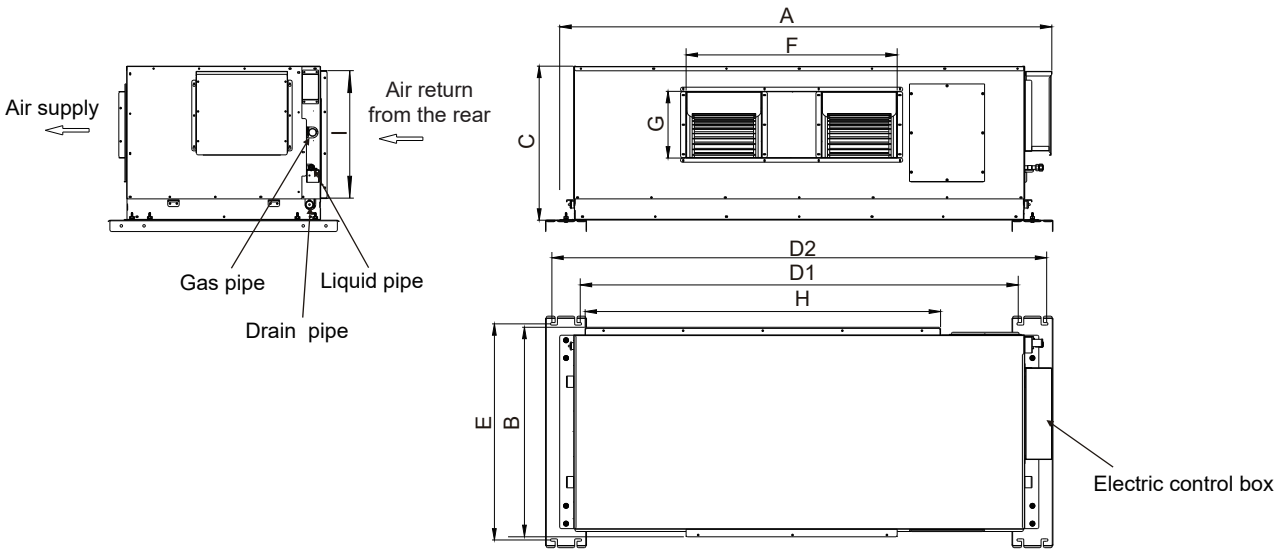


Table 3.9 Unit: mm

Size code / Model of indoor unit	Body size			Installation size			Air outlet size		Air return size	
	A	B	C	D1	D2	E	F	G	H	I
35.0～56.0kW	2165	916	676	1926	2176	950	928	292	1563	563

3. Installation of Indoor Unit

WARNING

- The air conditioner must be installed in a place of enough strength to support the equipment weight.
- If it lacks of strength, the equipment may fall down and cause some personal injury.
- For specific installation work to prevent wind or earthquake.
- Incorrect installation may cause some accident such as equipment falling down.

3-2 Installation of Main Body

3-2-1 Installation of Lifting Bolt with Φ10

1) Please use the lifting Bolt with Φ10.

2) Removal of Ceiling: For differences in building structure, please consult with interior decoration personnel for details.

a. Treatment of Ceiling: In order to ensure the levelness of ceiling and prevent ceiling vibration, it is necessary to reinforce the frame of the ceiling.

b. Cut and remove the ceiling frame.

c. After removing the ceiling frame, reinforce the end face, and further reinforce the frame used to fix the ceiling at both ends.

d. After the main body is hoisted, it is necessary to conduct piping and wiring operations in the ceiling. After selecting the installation position, determine the routing direction of the pipe. Especially in the case of existing ceiling, pull the refrigerant pipe, drain pipe, indoor and outdoor connecting cable and line control line to the connection location.

3-2-2 Indoor Unit Hoisting

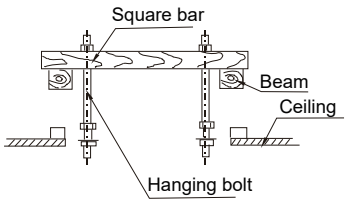
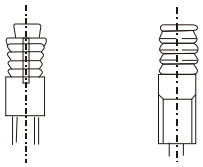
1) Use the pulley to lift the indoor unit onto the lifting bolts.

2) Install the indoor unit with certain levelness with the level meter. It may cause water leakage if the levelness cannot meet the requirement.

3-3 Installation Method of Lifting Bolts

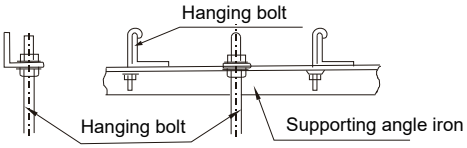
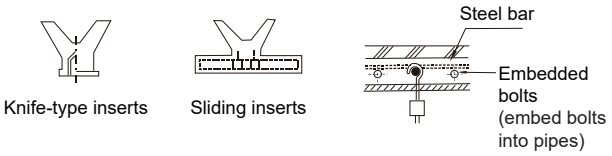
For the installation of lifting bolts, refer to the tables below (table 3.10 and 3.11).

Table 3.10

Wooden with steel skeleton	Occasions with original concrete billet
The hanging bolt square bar is arranged on the beam.  	Set with inlay appliances , embedded bolts. 

3. Installation of Indoor Unit

Table 3.11

Occasions with steel skeleton	Occasions with new concrete billet
Set and directly use the supporting angle iron.	Set with inlay appliances , embedded bolts.
	

NOTICE

- The bolt material is made of high-quality carbon steel (surface is galvanized or has undergone other anti-corrosive treatments) or stainless steel.
- Ceiling is different in different buildings, the detailed information should be consulted with decoration engineers.
- Fix the hanging bolts based on specific circumstances. Make sure that they are solid and reliable.

3-4 Adjustment of Air Return Box

The air return box of the low ESP ducted unit is as standard, but the filter is optional. There are two air return modes, one is to return air from the rear, which is the factory default, and the other is to return air from below, which requires to be adjusted on site. For the adjustment method, refer to the table below.

Remove the air return plate, the filter and the filter baffle.

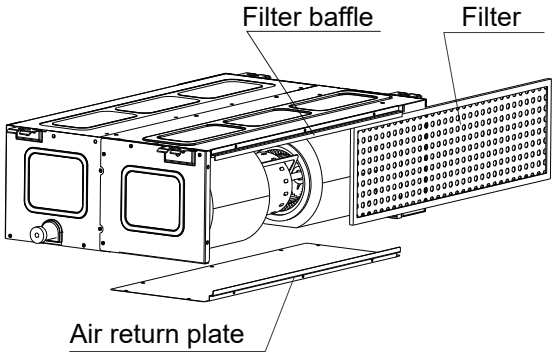


Figure. 3.1

Install the air return plate, the filter and the filter baffle.

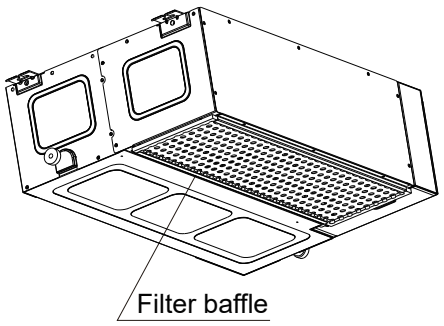


Figure. 3.2

3. Installation of Indoor Unit

The air return box of the standard static pressure ducted unit and the high static pressure ducted unit 7.1kW, 8.0kW and 9.0kW is as standard. There are two air return modes, the one is the air return from back, which is the factory default, and the other is air return from below, which shall be adjusted in the field. For the adjustment method, refer to the table below.

Remove the air return plate, the filter and the filter baffle.

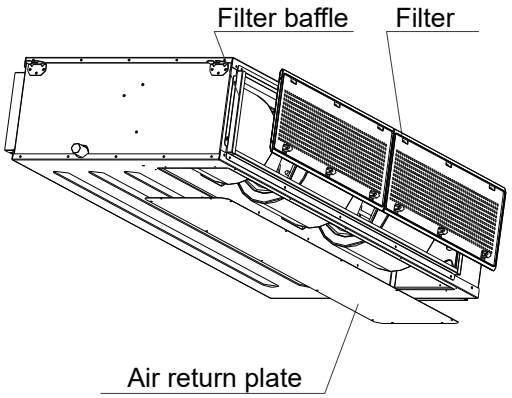


Figure. 3.3

Install the air return plate, the filter and the filter baffle.

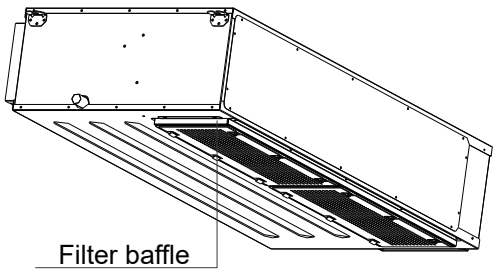


Figure. 3.4

The air return box of the high static pressure ducted unit 10.0kW～28.0kW is as standard. There is only one air return mode, namely, air return from back, which is the factory default. The high static pressure ducted unit 35.0kW ～56.0kW and the fresh air processor is not configured with any air return box.

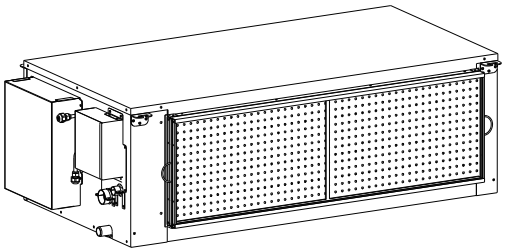


Figure. 3.5

3-5 Hanging of Indoor Unit

1)Adjust the location of the nut, and determine the space between the washer (lower side) and the ceiling according to the actual construction situation. Refer to Figure 3.6.

2)Hang the nut of the lifting bolt in the long round hole to install the lug.

3)Confirm the levelness of the main body by the level meter (strictly prohibit the declination toward the non-drain side. It had better decline toward the drain side). Refer to Figure 3.7.

3. Installation of Indoor Unit

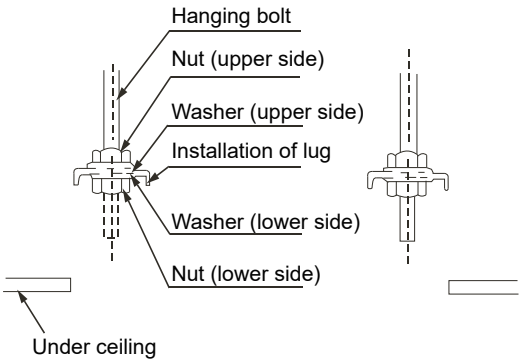


Figure 3.6

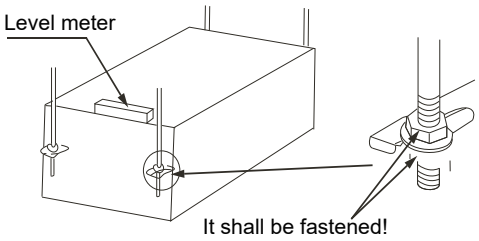


Figure 3.7

4)The high static pressure ducted unit 35.0kW～56.0kW and the fresh air 35.0kW～56.0kW need use hanger plate to install. The hanger plate is as standard. (The hanger plate should be installed when hoisting, and use the eight lifting bolt with φ10). Refer to Figure 3.8.

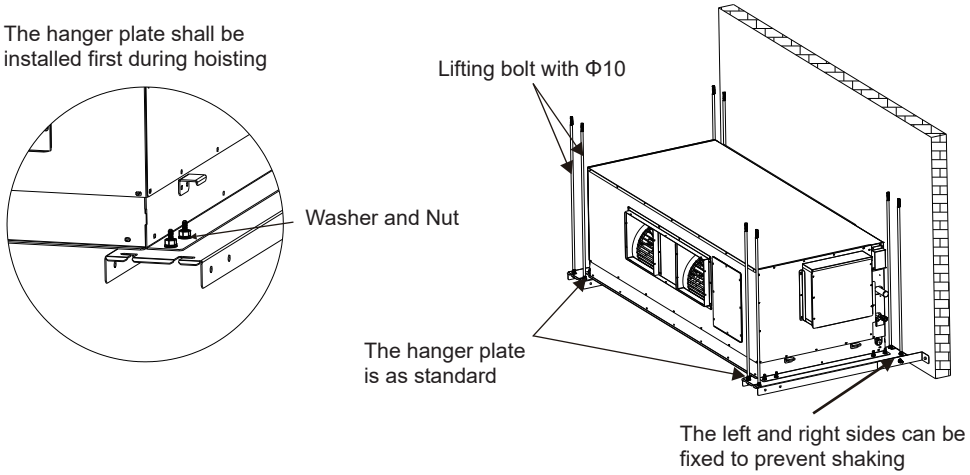


Figure 3.8

3-6 Air Intake Panel of Air Return Box

NOTICE

1) When making the air intake panel of the air return box, pay attention to maintain the parallelism between the air intake grille angle and the air intake direction. Refer to Figure 3.9.

2) There shall be no angle between the air grille angle and the air intake direction. Otherwise, it may increase noise. Figure 3.10 shows the incorrect making method of the intake grille.

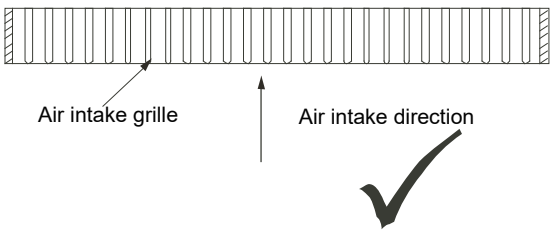


Figure 3.9

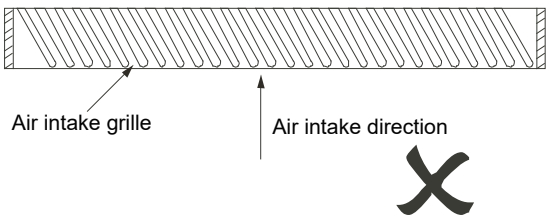


Figure 3.10

4. Drain Pipe Layout

4-1 Installation of Drainpipes for Indoor Units

1) The drain outlet is of PTI pipe thread, and PVC pipe can be used. Users can purchase the drain pipe of appropriate length from the dealer or local after-sales service center, or purchase it from the market directly.

2) When connecting the drain outlet and the drain pipe, please use auxiliary sealing materials and casing pipes. When connecting the drain pipe, use hard PVC adhesive and verify that there are no leaks.

3) The drain pipe joint and drain pipe of the main body (especially for the indoor part) shall be bundled with insulating sleeve and tightened with fastening belt to prevent the ingress of air from condensing.

4) To prevent the condensed water from flowing into the air conditioner, the drain pipe shall be inclined toward the outdoor side (drainage side), and the inclination is 1/100 or more. It shall not display any projection or water accumulation (see Figure 4.1a).

5) Don't pull hard when you connect the drain pipe, to prevent the main body from being stressed. The drain pipe shall be pulled out horizontally within 20m. In addition, it is necessary to set a support point every 0.8 - 1.0m to prevent deflection of the drain pipe (see Figure 4.1b).

6) See Figure 4.2 for the piping when you install the drain pipe in a centralized manner.

7) The height from the end of drain pipe to the ground or the bottom of drain groove shall be greater than 50mm and shall not be put into water. When the condensed water is directly discharged into the drainage ditch, the drain pipe shall be bent upward into a U-shaped water seal to prevent odor from entering the room via the drain pipe.

8) In a humid environment, make sure to cover the whole area of the indoor unit with another additional water pan (available on the market).

NOTICE

Various interfaces of the drain system shall be sealed, to prevent water leakage.

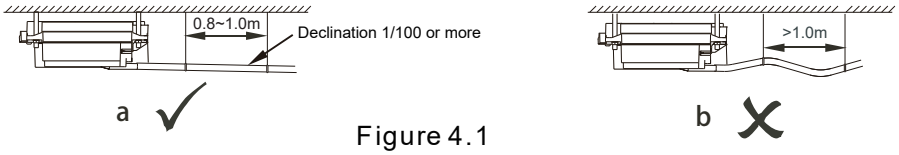
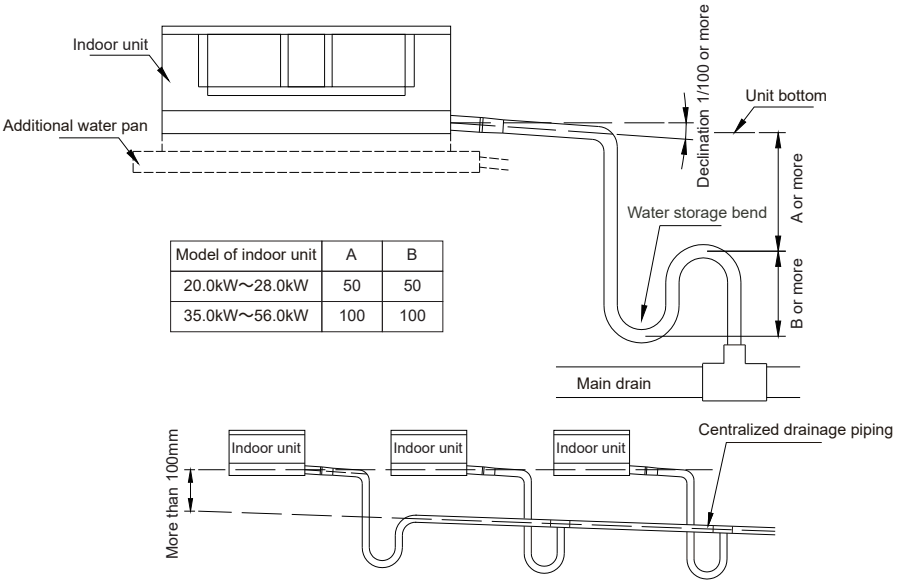


Figure 4.1



Model of indoor unit	A	B
20.0kW～28.0kW	50	50
35.0kW～56.0kW	100	100

Figure 4.2

4-2 Drain Test

4-2-1 Before testing, ensure that the drain pipe is unblocked, and check whether the plane interface is well sealed.

4-2-2 The drainage test shall be carried out before the ceiling is arranged for the new room.

1) The drainage test shall be carried out before the ceiling is arranged for the new room.

2) Check whether the drainage outlet drains normally and whether each interface leaks water.

5. Install Connecting Pipes and Electronic Throttle

5-1 Requirements for the connecting length and drop height of the tubing of both indoor and outdoor units

1) Please refer to the allowed length of tubing in the instruction of outdoor unit.
2) Please refer to the allowed drop height of tubing in the instruction of outdoor unit.

NOTICE

- During the installation process, keep the air, dust and other impurities from getting into the pipeline system.
- Fix the indoor and outdoor units before installing the connecting pipe.
- Keep dry while installing the connecting pipes and keep the water from getting into the pipeline system.
- The connecting pipes must be wrapped by heat insulator. (Usually, the thickness is more than 10 mm, which is even thicker in closed humid area.)

5-2 Material and Size of Tubing

Table 5.1

Type	2.2kW~2.8kW	3.2kW~5.6kW	6.3kW~8.0kW	9.0kW~16.0kW	20.0kW~28.0kW	35.0kW~56.0kW
Liquid pipe (mm)	Φ6.35×0.8		Φ9.52×0.8		Φ12.7×0.8	Φ15.88×1.0
Gas pipe (mm)	Φ9.52×0.8	Φ12.7×0.8	Φ15.88×1.0		Φ22.2×1.0	Φ28.6×1.2

5-3 Procedures for Connecting Pipes

5-3-1 Measure the needed length of connecting pipes, and connect them according to the following methods. (For details, see the “Tubing Connection” column)

1) Connect the indoor unit before connecting the outdoor unit.

a. Pay attention to the configuration of winding tubing so as not to damage the tubing and its insulation layer.

b. Smear the refrigerator oil (it must be engine oil which is compatible with the cooling medium of this type) on the outside surface of flared joint and the conical surface of connecting nuts and screw it 3 or 4 rounds with your hand (Fig. 5.1) before screwing the flared nut up.

c. Use two spanners at the same time when connecting or taking the tubing down.

d. The interface of the indoor unit can't bear all the weight of the connecting tubing, because if the interface is over-burdened, it will affect the cooling or heating effects of the indoor unit.

2) The stop valve of the outdoor unit should be completely shut down (as the default state when leaving the factory). Unscrew the nut from the stop valve and connect the flared tube at once (within 5 minutes).

3) After connecting the refrigerant tubing to both indoor and outdoor units, eliminate the air according to the column of “Vacuum Supply”, then screw the nut up.

a. Notes for flexible coupling:

① The winding angle should be less than 90° (Fig. 5.2).

② Its sinuosity had better be in the centre of the pipe range, and its bending radius should be more than 3.5 D (diameter of the pipeline).

③ Don't bend the flexible coupling pipe for more than 3 times.

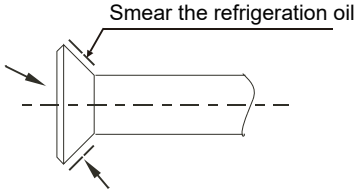


Figure 5.1

Bend the pipe with thumb

Figure 5.2

5. Install Connecting Pipes and Electronic Throttle

b. Bending thin-wall connecting pipe (Fig. 5.3).

① Cut away a notch of a required size in the insulated tubing at the place of sinuosity when operating with the sinuosity, then expose the pipeline (wrap it up with binder after it gets bent).

② Bend radius as much as possible so as to avoid squash or destruction.

③ Use the pipe bender to make close sinuosity.

c. Use the copper pipe sold in the market:

When using the copper pipe purchased from the market, you must use the same type of insulating material (the thickness is often more than 10 mm, which is even thicker in closed humid areas.).

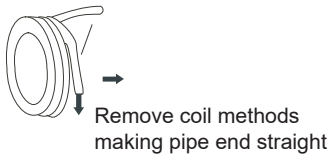


Figure 5.3

5-3-2 Pipe Arrangement

1) It is necessary to bend pipes or drill holes on the wall. The section surface of bent pipe should not exceed 1/3 of original section surface. When drilling the wall or a board, ensure to set protection bushings. Welding lines are not allowed to be made within the protection bushings. When drilling the external wall for the pipes, ensure to seal it tightly with binder so as to prevent impurities from entering the pipe. The pipe should be insulated by appropriate and suitable insulating tube.

2) The encased connecting pipe should get through the hole on the wall from outside and enter into the room. Arrange the pipes carefully. Don't destroy the pipes.

5-4 Connection of Pipes

5-4-1 Flaring

1) Cut off the pipe with a pipe cutting knife (See Figure 5.4).

2) Insert the pipe into the connected flared nut (Table 5.2).

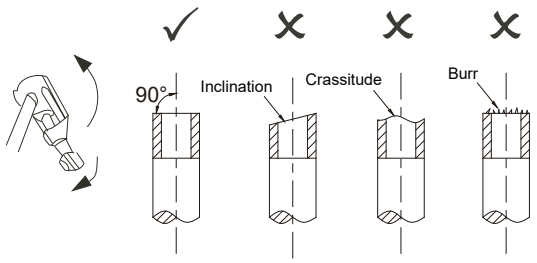
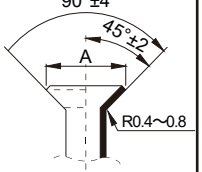


Figure 5.4

Table 5.2

External diameter (mm)	A(mm)	
	Maximum	Minimum
Φ6.35	8.7	8.3
Φ9.52	12.4	12.0
Φ12.7	15.8	15.4
Φ15.88	19.0	18.6
Φ19.05	23.3	22.9



5-4-2 Fasten Nuts

Aim at the connecting pipe and screw up the nuts with hand and then screw them up with a wrench as shown in Figure 5.5.

NOTICE

In accordance with the installation conditions, too much torque will damage the loudspeaker and too little torque will cause air leakage. Please ensure that the tightening torque is in accordance with Table 5.3.

Table: 5.3

pipes size (mm)	Tightening torque (N.m)
Φ6.35	10 ～ 12
Φ9.52	15 ～ 18
Φ12.7	20 ～ 23
Φ15.88	28 ～ 32
Φ19.05	35 ～ 40

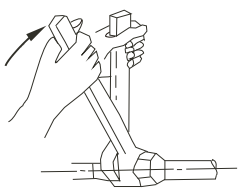


Figure 5.5

5. Install Connecting Pipes and Electronic Throttle

5-5 Installation of Electronic Throttle Component and Connecting Pipe Assembly

5-5-1 Schematic Diagram for Installation of Electronic Throttle Component

The electronic throttle components of Standard Static Pressure Ducted Unit, High Static Pressure Ducted Unit 7.1kW～15.0kW and Full Fresh Air Processor 14.0kW have been installed in the main body during the shipment. For the details, refer to Figure 5.6 - 5.7. It is only necessary to align the connecting nut of the electronic expansion valve with the liquid pipe connector of the main body evaporator during the installation of the entire unit. Furthermore, it shall be tightened by the torque wrench.

The electronic expansion valve of Short Ducted Unit, High Static Pressure Ducted Unit 20.0kW～56.0kW and Full Fresh Air Processor 22.4kW～56.0kW has been welded in the evaporator of the body inside. It isn't necessary the connecting nut of the electronic expansion valve during the installation of the entire unit.

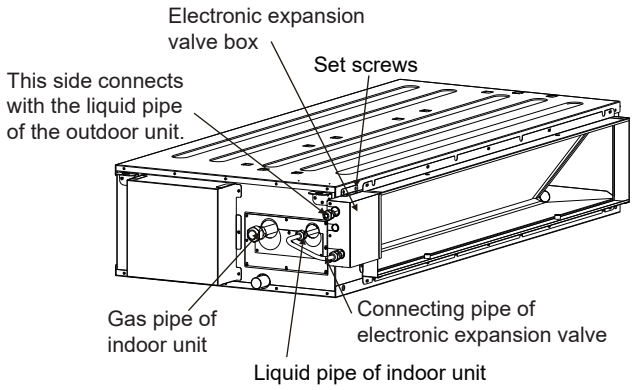


Figure 5.6 Standard Static Pressure Ducted Unit and High Static Pressure Ducted Unit 7.1kW～9.0kW

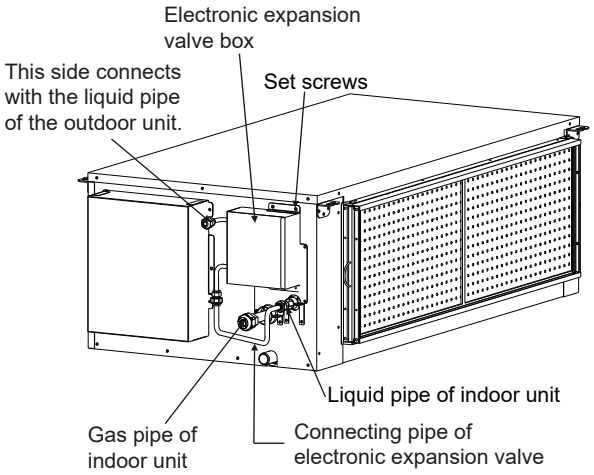


Figure 5.7 High Static Pressure Ducted Unit 10.0kW ～15.0kW and Full Fresh Air Processor 14.0kW

5-6 Leakage Test

After having installed the refrigerant pipe, connect it before the outdoor unit. Inject nitrogen with certain pressure (4.0 MPa) from the gas pipe side and the liquid pipe side at the same time to take a leakage test for 24 hours.

5-7 Vacuum Supply

Connect the refrigerant pipe with the two sides of gas pipe and liquid pipe of outdoor, use a vacuum pump to vacuum from the two sides of gas pipe and liquid pipe of outdoor at the same time.

⚠ NOTICE

Never use the refrigerant sealed in the outdoor unit to vacuum.

5. Install Connecting Pipes and Electronic Throttle

5-8 Valve Switch

Use the 5 mm hex socket to open and close the valve of the outdoor unit.

5-9 Leak Detection

When detecting a leakage, detect leaks in the valves at the interface of the pipe joints with soap bubbles.

5-10 Insulation

Insulate the gas pipe side and the liquid pipe side. When refrigerating, the temperature of gas pipe side and liquid pipe side should be low. To prevent condensation, please fully insulate (see Figure 5.8).

1) The gas pipe must be made from insulated materials which can resist more than 120℃.

2) Please seamlessly insulate the connecting parts of the indoor unit single joints with the accessorial insulating tube.

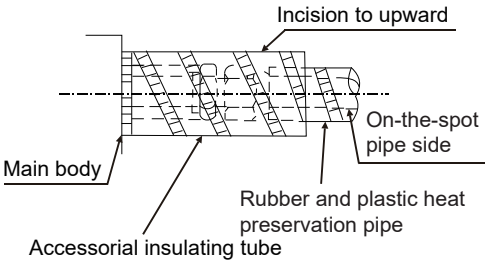


Figure 5.8

6. Connection of Electricity

6-1 Electric Wiring

NOTICE

- The air conditioning applies special power supply and the power supply voltage should conform to the rated voltage.
- The external power supply circuit of air conditioning must have ground wire. The power supply's ground wire of indoor unit should be connected accurately with external circuit.
- Wiring should be installed by professional technicians according to labelling of circuit diagram.
- The connected fixed circuit must be furnished with an all-pole disconnection equipment with at least 3mm trigger distance.
- Install the protective equipment of creepage in accordance with the standard of national electrical equipment technology.
- The power and signal lines should be appropriately arranged in good order, and cannot interfere with each other.
- Meanwhile, they cannot connect with the connecting pipes and the valve body. At the same time, two wires cannot be connected, unless they are welded firmly and wrapped with the insulating tapes.
- After the installation is completed, before plugging to power supply, please check carefully and make sure that everything is fine.

6-2 Specification of Power Supply

The specifications of power supply wires recommend the following in Table 6.1. Wirings may be overheated and the machine will break down if the capacity is too small.

Table 6.1

Project / Mode	Power supply of indoor part					Connecting wire		Ground wire
	Power supply	Power switch		Power Cord		Signal wire of indoor and outdoor units		
		Capacity	Fuse	Below 20 m	Below 50 m	Number	Wire diameter	
2.2～15.0kW	Single-phase	15A	15A	2.5mm²×2	4mm²×2	1	Two-core shielded cable 0.75 mm²	Single wire 2.5 mm²
20.0～28.0kW	Single-phase	15A	15A	2.5mm²×2	4mm²×2			Single wire 4.0 mm²
35.0～56.0kW	Three-phase	15A	15A	2.5mm²×4	4mm²×4			Single wire 2.5 mm²

WARNING

As you view this manual, along with the wiring instructions presented in this section, keep in mind that: all the field-installed wiring must conform to National Electric Code (NEC) guidelines, and any applicable state and local codes. Be sure to satisfy proper equipment grounding requirements per NEC.

6-3 Wiring Suggestion of Signal Wire for Indoor Unit

1) The shielded wire should be used as signal wire. Using other wires may cause signal interference and malfunction.

2) Connect the shielding layer of shielded wire into one line and then connect it to port E of terminal. (See Figure 6.1)

3) It is forbidden to tie the signal wire with the refrigerant pipe, power supply wire etc. When the power supply wire is paved in parallel with the signal wire, they should keep a distance of more than 300 mm to avoid interference of signal sources.

4) The signal wire cannot form a closed circuit.

5) The signal wire contains polarity, so be careful when connecting the wires. The signal wire of indoor unit should be connected to the ports labelled "P, Q, E" . And they should conform to the ports labelled "P, Q, E" of the main machine of the outdoor unit and cannot be connected wrongly.

6. Connection of Electricity

6) Please use the two-core twisted shielded pair cable (not less than 0.75 mm²) as the signal wire of the indoor and outdoor units. Because it contains polarity, it should be connected properly. The signal wire of the indoor and outdoor units can only be led out from the main machine of outdoor unit and connected to all indoor units of a same system.

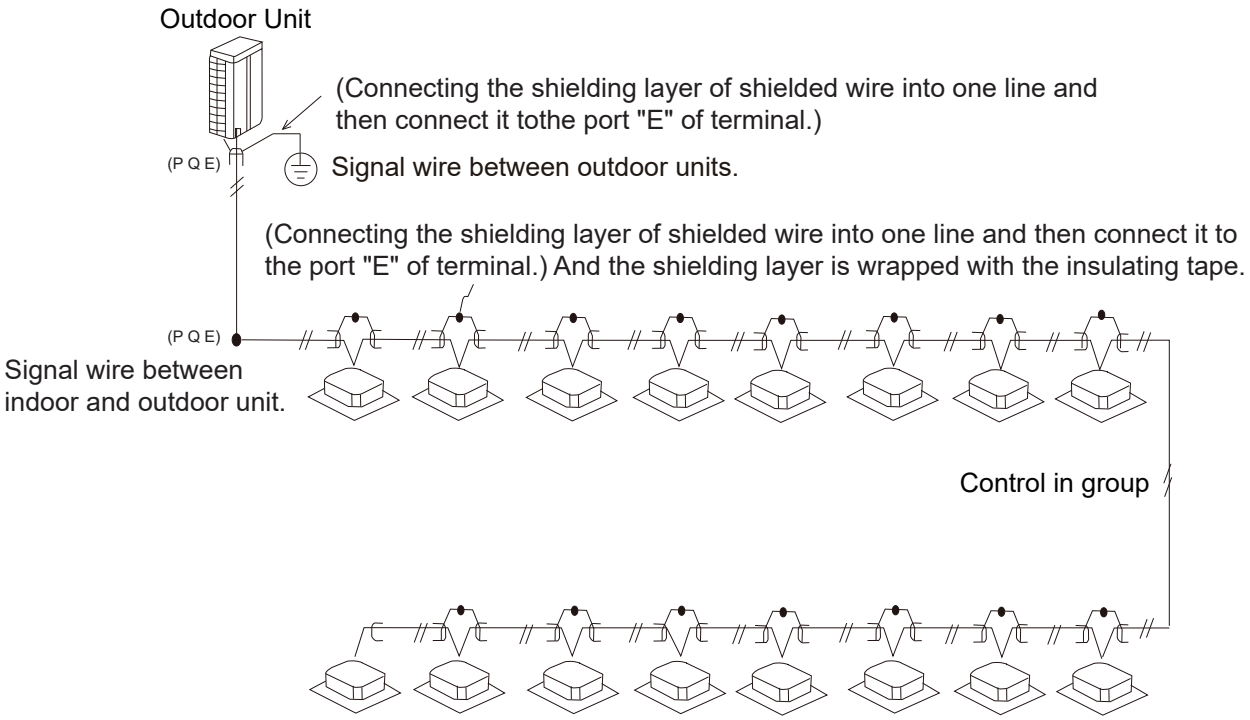


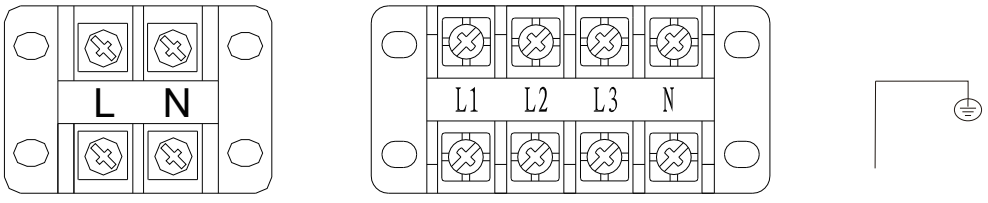
Figure 6.1

6-4 Wiring Suggestion of Power Supply for Indoor Units

1) The indoor unit power supply in the same system must be in the same circuit and switched on or off at the same time, or the system service life may be shortened and the machine may fail in starting up.

2) The power supply, current leakage protector and manual switch connected to the same outdoor unit must be with the versatility.

3) The power supply wires should be connected to the terminal labelled “L, N” , ground wire of power supply should be connected to electricity control box “⏚”.



Single-phase power Three-phase power Ground

6-5 Handling of Wiring Interfaces

The wiring interfaces should be sealed with insulated materials. Failure to seal will cause condensation.

7. Fault Code Table

7-1 Display with Fault

Definition of malfunction	Contents appearing
The first time to switch on and there is no address	FE
Errors of phase sequence or fault of losing phase	E0
Communication failure of indoor and outdoor units	E1
T1 sensor fault	E2
T2 sensor fault	E3
T2B sensor fault	E4
Malfunction of outdoor unit	E5
Testing fault of zero-crossing signal	E6
EEPROM malfunction	E7
Wind testing fault of PG electric motor	E8
Communication fault of wire controller	E9
Alarming fault of water level switch	EE
Model conflict	EF

7-2 Display of LED

The LED running indicators shine slowly when it is electrified and reset. All of them will go out when on standby, while starting up, they will light up. When it is anti-cold or defrosting, the preheating light /defrost light will turn on. If the timing function is turned on, the timing light will light up. When it encounters a fault, it manifests the following contents:

Definition of malfunction	Contents appearing
The first time to switch on and there is no address	The LED timing light and running light shine slowly at the same time.
Communication failure of indoor and outdoor units	The LED timing light shines quickly
Fault of indoor temperature sensor	The LED running shines quickly
Alarming fault of water level	The LED alarming light shines quickly
Mode impact fault	The LED defrost light shines quickly
Outdoor unit fault	The LED alarming light shines slowly
EEPROM malfunction	The LED defrost light shines slowly

It shines slowly with a cycle of 2 seconds and quickly with a cycle of 0.4 second.