

INSTALLATION MANUAL

AIR CONDITIONER

Please read this installation manual completely before installing the product.
Installation work must be performed in accordance with the national wiring standards by authorized personnel only.
Please retain this installation manual for future reference after reading it thoroughly.

VENTILATOR

Original instruction

[Representative] LG Electronics Inc. EU Representative : LG Electronics European Shared Service Center B.V. Krijgsman 1, 1186 DM Amstelveen, The Netherlands

[Manufacturer] LG Electronics Inc. Changwon 2nd factory 84, Wanam-ro, Seongsan-gu, Changwon-si, Gyeongsangnam-do, KOREA

For more information, Refer to the CD or LG Web site (www.lg.com).



P/NO : MFL69268904

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Required Parts

- Screws
- Nuts
- Ceiling Fixing Bolt(M10~12)
- Washer
- Aluminium Tape
- Screws

Required Tools

- Screw Driver
- Spanner
- Cutter
- Cutter
- Screw Driver

Safety Precautions

To prevent injury to the user or other people and property damage, the following instructions must be followed.

Incorrect operation due to ignoring instruction will cause harm or damage. The seriousness is classified by the following indications.



CAUTION

This symbol indicates the possibility of injury or damage.



WARNING

Installation

Do not use a defective or underrated circuit breaker. Use this appliance on a dedicated circuit.

- There is risk of fire or electric shock.

For electrical work, contact the dealer, seller, a qualified electrician, or an Authorized Service Center.

- Do not disassemble or repair the product. There is risk of fire or electric shock.

Always ground the product.

- There is risk of fire or electric shock.

Install the panel and the cover of control box securely.

- There is risk of fire or electric shock.

Always install a dedicated circuit and breaker.

- Improper wiring or installation may cause fire or electric shock

Use the correctly rated breaker or fuse.

- There is risk of fire or electric shock.

Do not modify or extend the power cable.

- There is risk of fire or electric shock.

Do not install, remove, or re-install the unit by yourself (customer).

- There is risk of fire, electric shock, explosion, or injury.

Be cautious when unpacking and installing the product.

- Sharp edges could cause injury.

For installation, always contact the dealer or an Authorized Service Center.

- There is risk of fire, electric shock, explosion, or injury.

Do not install the product on a defective installation stand.

- It may cause injury, accident, or damage to the product.

Do not let the product run for a long time when the humidity is very high and a door or a window is left open.

- Moisture may condense and wet or damage furniture.

For re-installation of the installed product, always contact the dealer or an Authorized Service Center.

- There is risk of fire, electric shock, explosion or injury.

Do not open the maintenance cover of the main body during operation.

- Otherwise, it may cause electrical shock.

Use the outdoor air suction hole with the net installed to ensure that birds could not come in.

- Remove estrange things like the bird's nest. Otherwise, it may cause scarcity of indoor oxygen.

Install the air intake where polluted air can not be directly sucked in.

- It may cause various accidents, including suffocation, due to the suction of harmful gasses(CO, etc.)

Do not install this product in a refrigerated warehouse, heated swimming pool or other location where the temperature and humidity are significantly different.

- There is risk of electrical shock, malfunctioning.

Install this product in an environment where the temperature ranges from -15°C to $+45^{\circ}\text{C}$ and the relative humidity is less than 80%. It condensation is expected to form, heat up the fresh outside air using a duct heater etc.

Install this product in and environments where the outside air intake meets the following conditions: temperature range is between -15°C and $+40^{\circ}\text{C}$ and the relative humidity is 80% or less.

Use the designated electrical wires for the terminal board connections, and connect the wires securely so that they will not become disconnected. (Failure to ensure proper connections may cause fire.)

When passing metal ducts through wooden buildings clad with metal laths, wire laths or metal, these ducts must be installed in such a way that they will not make electrical contact with the metal laths, wire laths or metal sheets. (Power leakage can cause ignition)

Operation

Avoid fire equipment

- There is risk of fire.

When the product is soaked (flooded or submerged), contact an Authorized Service Center.

- There is risk of fire or electric shock.

Don't touch a dedicated circuit or breaker with wet hands.

- There is risk of electric shock.

When the product is not be used for a long time, disconnect the power supply plug or turn off the breaker.

- There is risk of product damage or failure, or unintended operation.

Do not store or use flammable gas or combustibles near the product.

- There is risk of fire or failure of product.

When flammable gas leaks, turn off the gas and open a window for ventilation before turn the product on.

- Do not use the telephone or turn switches on or off. There is risk of explosion or fire

Be cautious that water could not enter the product.

- There is risk of fire, electric shock, or product damage.

Turn the breaker off when cleaning or maintaining the product.

- There is risk of electric shock.

The outside ducts must be tilted at a gradient (1/30 or more) down toward the outdoor area from the ventilator unit, and properly insulated. (The entry of rain water may cause power leaks, fire or damage to household property.)

Glove should be worn when doing the installation work. (There is risk of injury.)

⚠ CAUTION

Installation

Don't connect the ground wire to the window frame or water cock.

- There is risk of electric shock.

Do not install the product at a smoky and oily place like kitchen or factory.

- Otherwise, oil may adhere to the filter or heating exchanger and cause trouble.

Install the product in an insulated space from outdoor air.

- In case of installing the product outside of the insulated layer, dewing occurs inside of the main body in winter. And it causes electrical shock or falling of condensed water.

Keep level even when installing the product.

- To avoid vibration or water leakage.

Use two or more people to lift and transport the product.

- Avoid personal injury.

Do not install the product where it will be exposed to sea wind (salt spray) directly.

- It may cause corrosion on the product. Corrosion, particularly on the condenser and evaporator fins, could cause product malfunction or inefficient operation.

Do not install the ventilation unit alone for controlling room temperature.

- If this is needed, install with another Indoor unit (air conditioner).

Operation

Use a soft cloth to clean. Do not use harsh detergents, wax or thinner, etc.

- Otherwise, color or surface of the product may deteriorate.

Clean the filter and the heat exchanger regularly and use the gloves for cleaning.

- Adhering to a mass of dust may cause the deterioration of air volume.

Do not use the product for special purposes, such as preserving foods, works of art, etc. It is a consumer ventilator, not a precision refrigeration system.

- There is risk of damage or loss of property.

Do not block the inlet or outlet of air flow.

- It may cause product failure.

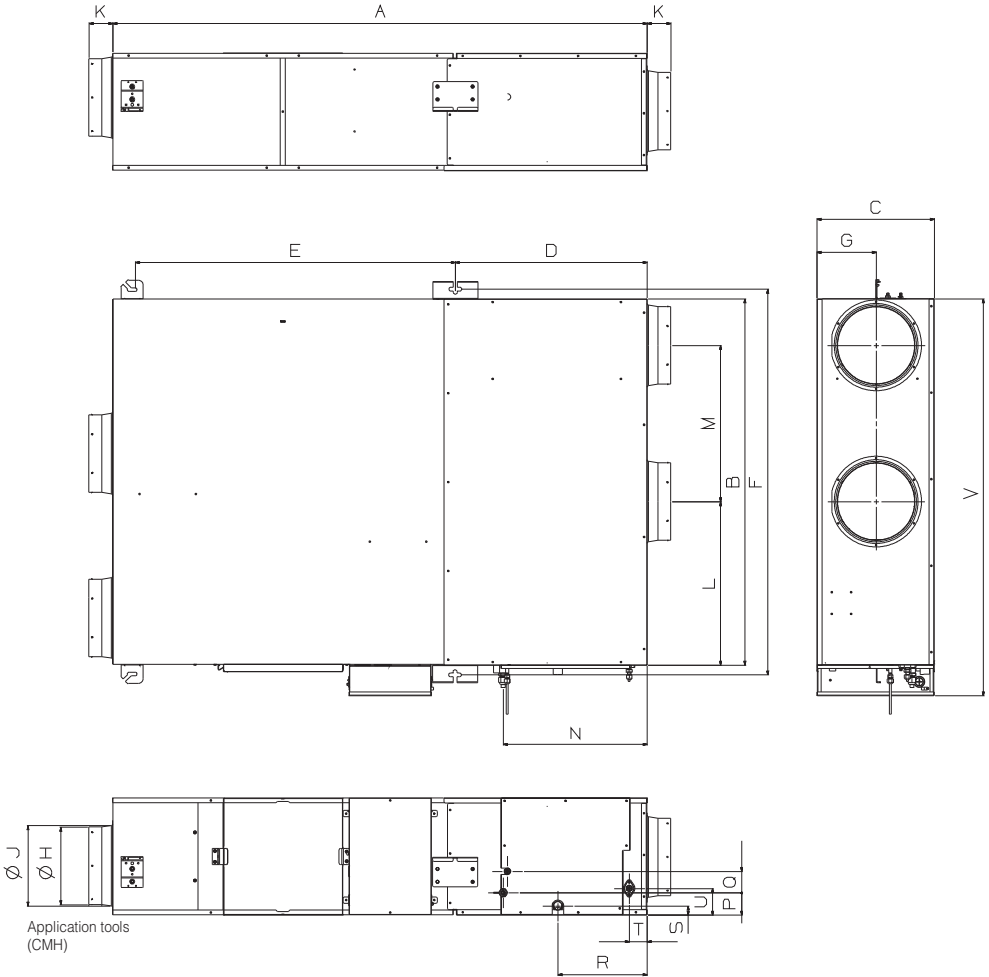
Do not step on or put anything on the product.

- There is risk of personal injury and failure of product.

Introduction

Feature Dimension Diagram

**Model : LZ-H050GXN4, LZ-H080GXN4, LZ-H100GXN4
LZ-H050GXH4, LZ-H080GXH4, LZ-H100GXH4**

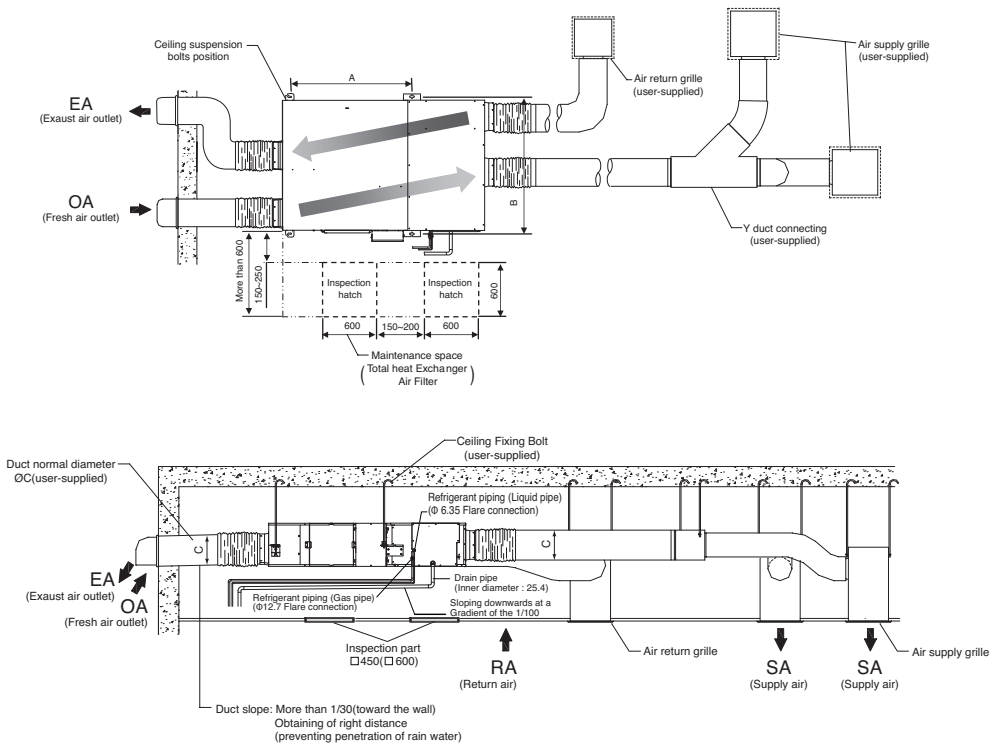


Unit : mm

Model	Figure			Pitch of Suspension Fixture				Duct Connection Flange			Duct Pitch		Pipe Connection		Drain Hose Connection		Water Supply Piping Connection		Width	Weight	
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T			U
LZ-H050GXN4/LZ-H050GXH4	1667	1140	365	599	1006	1204	185	242	252	74	510	488	449	70	67	278	29	55	83	1239	105
LZ-H080GXN4/LZ-H080GXH4																					
LZ-H100GXN4/LZ-H100GXH4																					

Standard drawing of installation

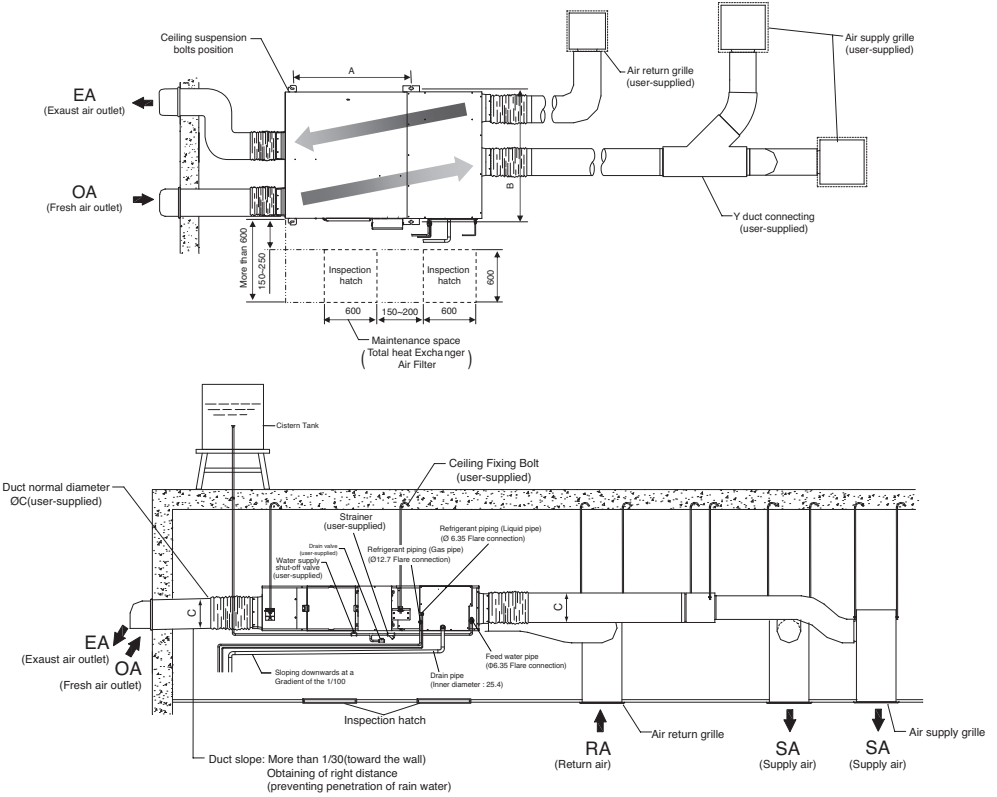
LZ-H050GXN4 / LZ-H080GXN4 / LZ-H100GXN4



[Unit : mm]

Model	A	B	C
LZ-H050GXN4			
LZ-H080GXN4	1006	1204	250
LZ-H100GXN4			

LZ-H050GXH4 / LZ-H080GXH4 / LZ-H100GXH4



[Unit : mm]

Model	A	B	C
LZ-H050GXH4	1006	1204	250
LZ-H080GXH4			
LZ-H100GXH4			

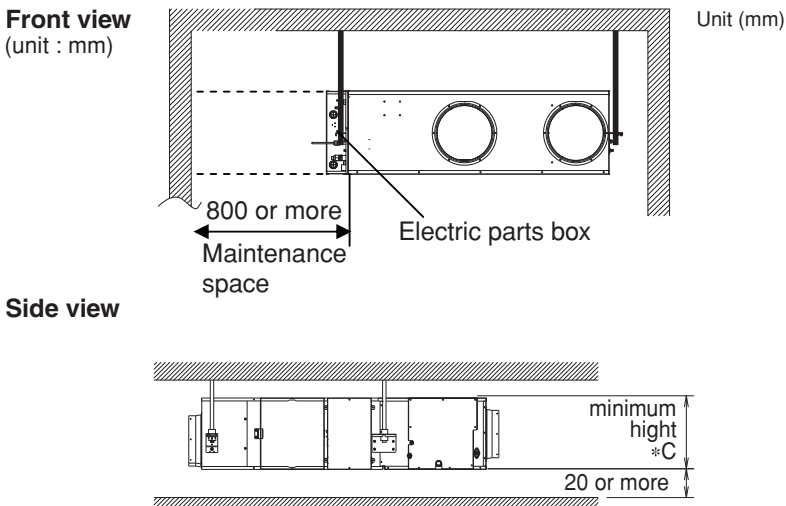
Installation

Read completely, then follow step by step.

Selection of the best location

Install the ventilator in the location that satisfies the following conditions.

- The place shall easily bear a load exceeding four times the indoor unit's weight.
- The place shall be able to inspect the unit as the figure.
- The place where the unit shall be leveled.
- The place shall allow easy water drainage. (Suitable dimension “*C” is necessary to get a slope to drain as figure.)
- The place shall easily connect with the outdoor unit.
- The place where the unit is not affected by an electrical noise.
- The place where air circulation in the room will be good .
- There should not be any heat source or steam near the unit.



CAUTION

In case that the unit is installed near the sea, the installation parts may be corroded by salt. The installation parts (and the unit) should be taken appropriate anti-corrosion measures.

Ceiling dimension and hanging bolt location

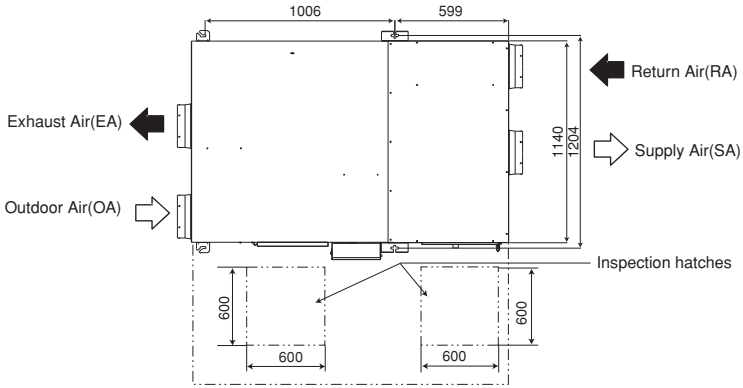
Installation of Unit

Install the unit above the ceiling correctly.

CASE 1

POSITION OF SUSPENSION BOLT

- Apply a Flexible duct between the unit and duct to absorb unnecessary vibration.

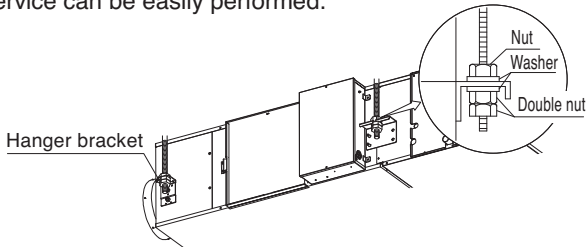


CASE 2

- Install the unit leaning to a drainage hole side as a figure for easy water drainage.

POSITION OF CONSOLE BOLT

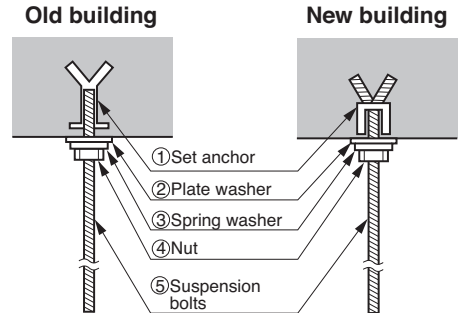
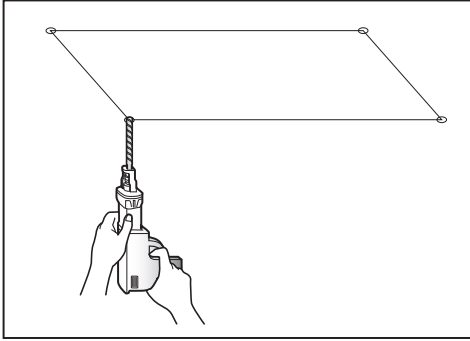
- A place where the unit will be leveled and that can support the weight of the unit.
- A place where the unit can withstand its vibration.
- A place where service can be easily performed.



- Avoid installing air conditioner in such circumstances where cutting oil mist or iron powder is in suspension in factories, etc.
- Avoid places where inflammable gas is generated, flows in, is stored or vented.
- Avoid places where sulfurous acid gas or corrosive gas is generated.
- Avoid places near high frequency generators.

Indoor Unit Installation

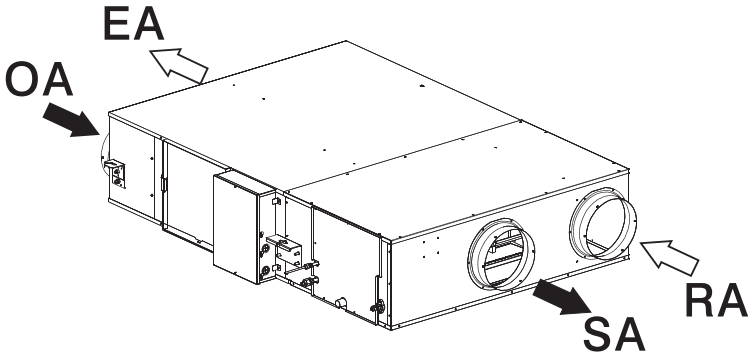
- Select and mark the position for fixing bolts.
- Drill the hole for set anchor on the face of ceiling.
- Insert the set anchor and washer onto the suspension bolts for locking the suspension bolts on the ceiling.
- Mount the suspension bolts to the set anchor firmly.
- Secure the installation plates onto the suspension bolts (adjust level roughly) using nuts, washers and spring washers.



CAUTION

Tighten the nut and bolt to prevent unit falling.

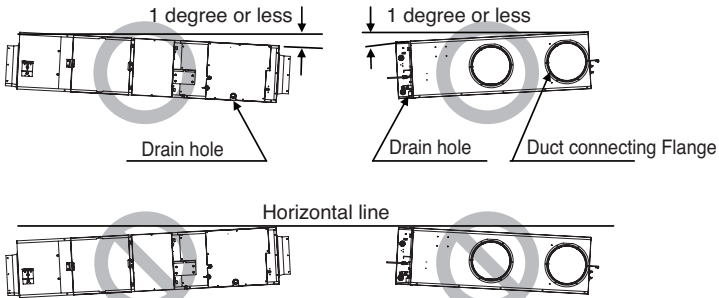
- Attach the hanger bracket to the suspension bolt. Be sure to fix it securely by using nuts and washers (locally procured) from the upper and lower sides of the hanger bracket.
- Install the unit after checking the indoor (SA/RA) and outdoor (EA/OA) in accordance with the figure duct direction label.



- Adjust the height of the unit. (Tighten the double nuts securely.)
- Check the unit is horizontally level.

CAUTION

- Install declination of the ventilation unit with DX coil is very important for the drain
- Minimum thickness of the insulation for the connecting pipe shall be 10mm.



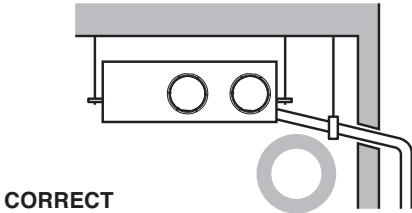
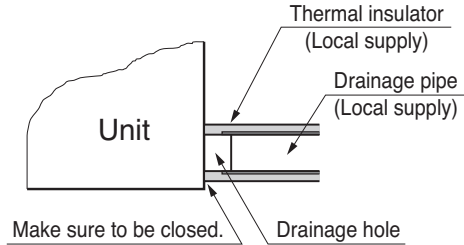
- Tighten the upper nut.

CAUTION

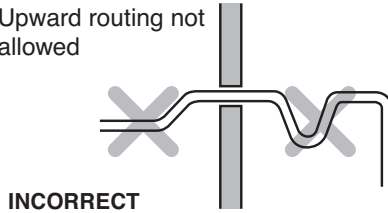
Use a level instrument to make sure that the unit is level and that the tilt (down slope) to the drain piping connection is within 1 degree. (Refer to above figures.)
One thing to watch out for in particular is if it is installed so that the slope is not in the Direction of the drain piping, as this might cause leaking.)

Drain Piping and Water Supply Work

- Always lay the drain with downward inclination (1/100 to 1/50). Prevent any upward flow or reverse flow in any part.
- 10mm or thicker formed thermal insulator shall always be provided for the drain pipe.



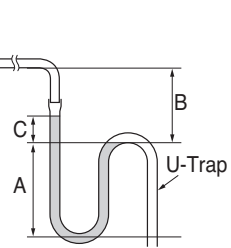
- Upward routing not allowed



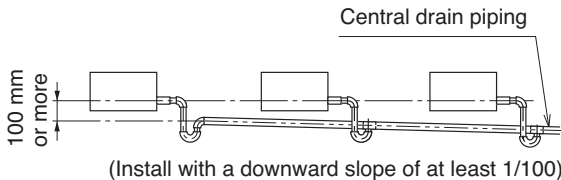
- Install the P-Trap (or U-Trap) to prevent a water leakage caused by the blocking of intake air filter.

Applied U-Trap Dimension

- $A \geq 70 \text{ mm}$
- $B \geq 2C$
- $C \geq 2 \times \text{SP}$
- SP = External Pressure (mmAq)
- Ex) External Pressure = 10 mmAq
- $A \geq 70 \text{ mm}$
- $B \geq 40 \text{ mm}$
- $C \geq 20 \text{ mm}$



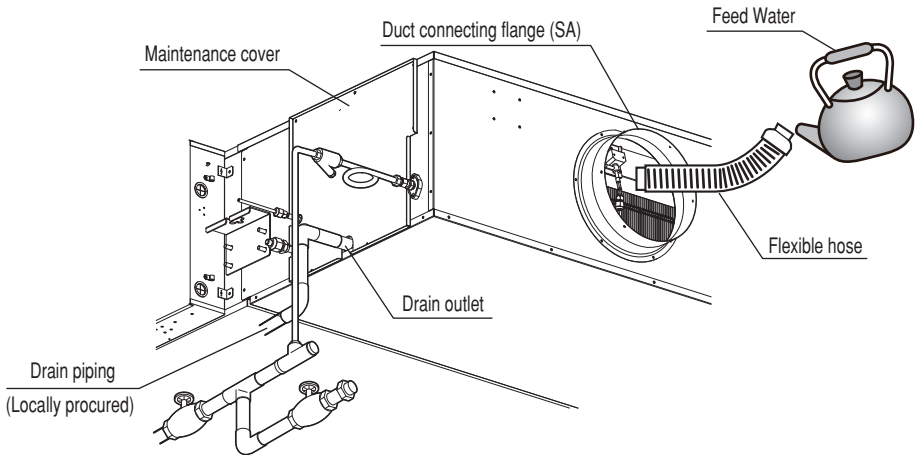
- Keep the drain pipe short and sloping downwards at a gradient of at least 1/100 to prevent air pockets from forming.
- If converging multiple drain pipes, install according to the procedure shown below. (Install a drain trap for each indoor unit.)



CAUTION

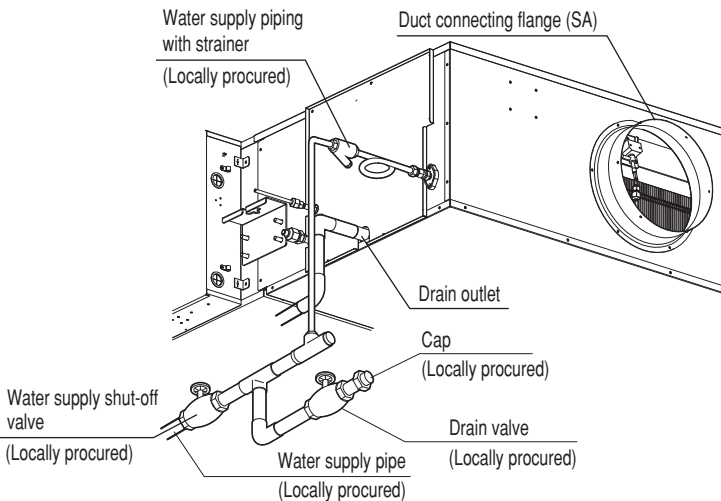
Check the drainage

- Test the drainage by pouring 1000cc of water into the drain pan through the inspection hole by removing the maintenance cover (8 screws) or through the outlet duct joint of supply air to room (SA).
- Make sure that heat insulation work is executed on the Indoor drain piping and Drain outlet to prevent any possibility water leakage due to dew condensation.



Install the water supply piping

- Connect the water supply with strainer, other pipes and valves (locally procured) to the indoor unit as shown in the figure at below.

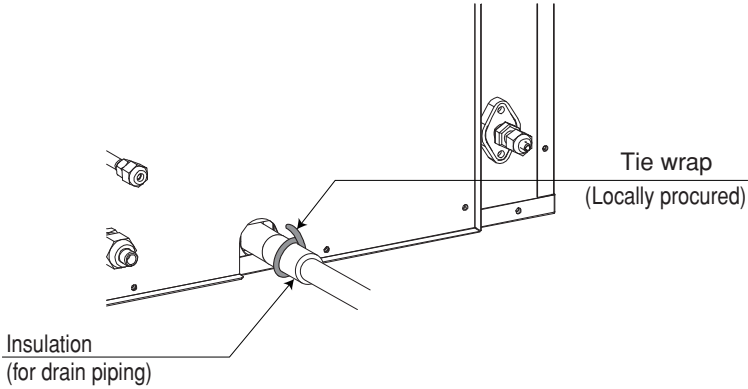


CAUTION

When installing the water supply piping, wash the pipes with tap water so that all dirt is removed from them or install a drain valve somewhere along the piping and drain the pipes thoroughly until the water flowing through them is clear. Make sure no cutting oils or detergents get into the pipes.

Insulate all piping that passes indoors

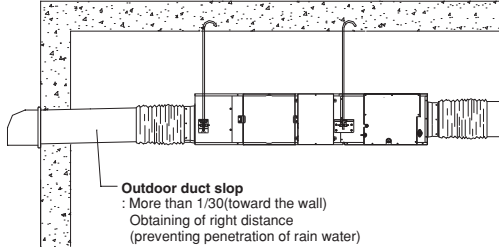
- After checking that the drain piping connections do no leakage, insulate them using the insulation. (Tighten with a clamp material)
- Wrap the drain piping with insulation to prevent condensation from forming.

**CAUTION**

When installing the water supply piping, wash the pipes with tap water so that all dirt is removed from them or install a drain valve somewhere along the piping and drain the pipes thoroughly until the water flowing through them is clear. Make sure no cutting oils or detergents get into the pipes.

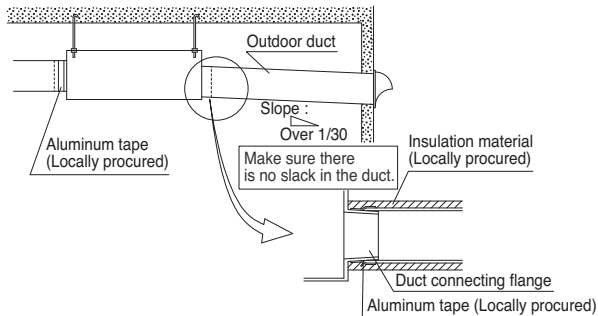
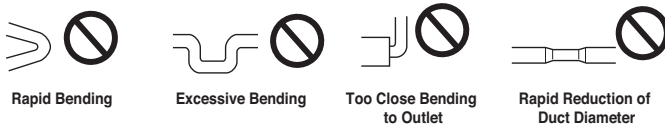
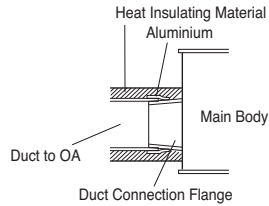
Duct Connection

- After securely connect the duct with the duct connection flange, wrap it with a commercial aluminium tape so that air cannot be leaked.
- Adjust the duct from the ceiling so that no force is applied to the main body of the ventilation system.
- Always use two ducts at the outdoor with the heat insulating material for prevention of dewing.



CAUTION

- Check that there are no foreign materials (paper, vinyl, etc) or cutoff powders in the duct before connecting the duct.
- Take care so that shock may not be applied to the damper plate within the main body when performing the duct connection work.
- It is recommended to perform adiabatic treatment even to the duct pipe at the indoor side where ambient temperature is expected when the main body of the ventilation system for cooling in summer.
- Take care so that work may not be performed as in the left figure. Otherwise, it may cause reduction of air volume or abnormal noise.



- The change of air discharge grill's location should be examined when the cold draft from air discharge grill is feared. The fan is driving while defrost operation, and the cold air is often blowing.

Connecting Pipes

Preparation of Piping

Main cause of gas leakage is defect in flaring work. Carry out correct flaring work in the following procedure.

Cut the pipes and the cable.

- Use the accessory piping kit or the pipes purchased locally.
- Measure the distance between the indoor and the outdoor unit.
- Cut the pipes a little longer than measured distance.
- Cut the cable 1.5m longer than the pipe length.

Burrs removal

- Completely remove all burrs from the cut cross section of pipe/tube.
- Put the end of the copper tube/pipe to downward direction as you remove burrs in order to avoid to let burrs drop in the tubing.

Putting nut on

- Remove flare nuts attached to indoor and outdoor units, then put them on pipe/tube having completed burr removal.
- (Not possible to put them on after flaring work)

Flaring work

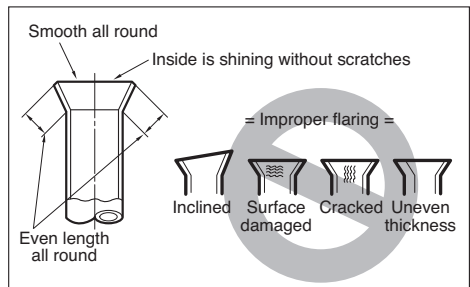
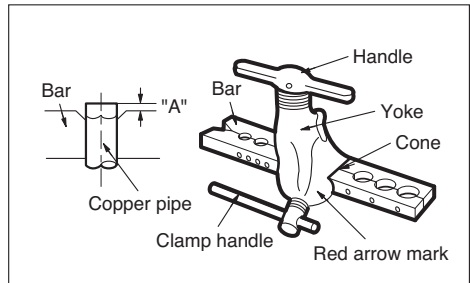
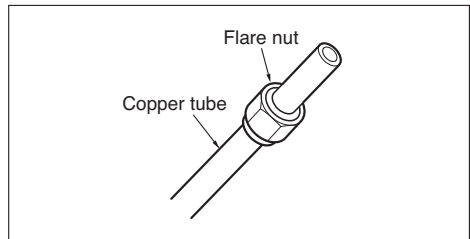
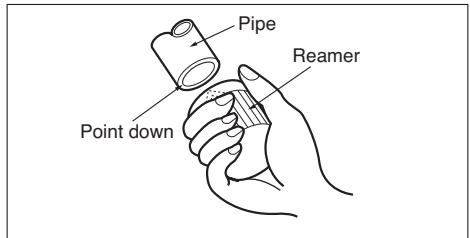
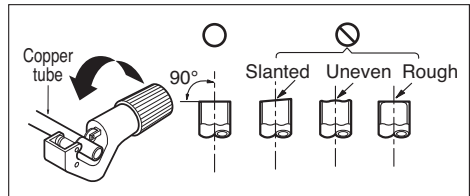
- Carry out flaring work using dedicated flaring tool for R-410A as shown below.

Outside diameter		"A"
mm	inch	mm
Ø6.35	1/4	1.1~1.3
Ø9.52	3/8	1.5~1.7
Ø12.7	1/2	1.6~1.8
Ø15.88	5/8	1.6~1.8
Ø19.05	3/4	1.9~2.1

Firmly hold copper tube in a bar(or die) as indicated dimension in the table above.

Check

- Compare the flared work with figure below.
- If flare is noted to be defective, cut off the flared section and do flaring work again.

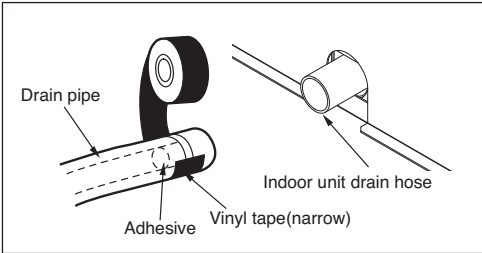
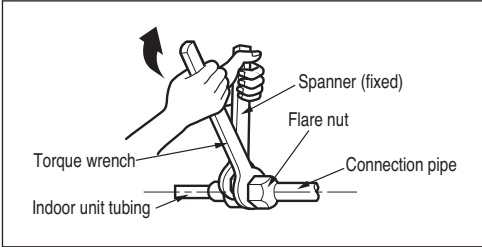
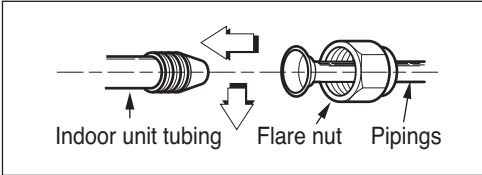


Connecting the pipings to the indoor unit and drain hose to drain pipe

- Align the center of the pipings and sufficiently tighten the flare nut by hand.
- Tighten the flare nut with a wrench.

Outside diameter		Torque kg·m
mm	inch	
Ø6.35	1/4	1.8~2.5
Ø9.52	3/8	3.4~4.2
Ø12.7	1/2	5.5~6.6
Ø15.88	5/8	6.6~8.2
Ø19.05	3/4	9.9~12.1

- When extending the drain hose at the indoor unit, install the drain pipe.

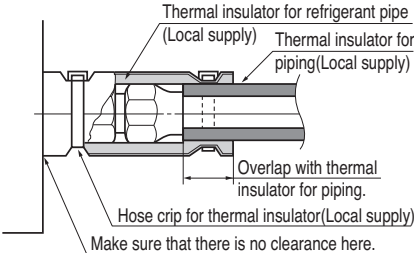
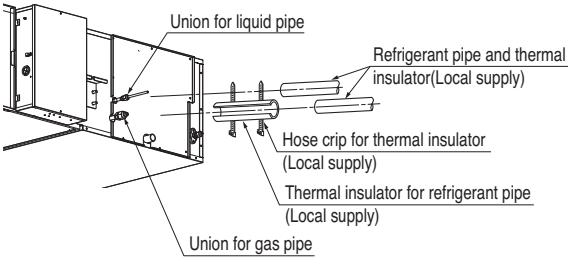


Insulation, Others

THERMAL INSULATION

All thermal insulation must comply with local requirement.

- Insulate the joint and tubes completely

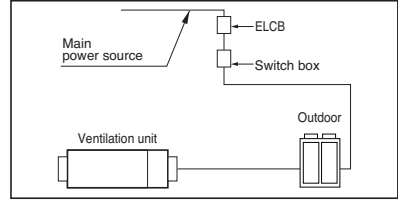


Wiring Connection

Electrical Wiring

Perform the electrical wiring work according to the electrical wiring connection.

- All wiring must comply with local requirements.
- Select a power source that is capable of supplying the current required by the ventilator.
- Use a recognized ELCB(Electric Leakage Circuit Breaker) between the power source and the unit. A disconnection device to adequately disconnect all supply lines must be fitted.
- Model of circuit breaker recommended by authorized personnel only

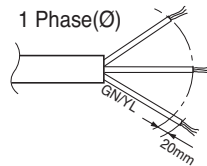


Ventilation unit				Power supply		Fan motor	
Model	Hz	Volts	Voltage range	MCA	MOP	kW	FLA
LZ-H050GXN4 / LZ-H050GXH4	50	220-240 V	Max. 264V Min. 198V	2.8	8	0.2x2	1.25x2
LZ-H080GXN4 / LZ-H080GXH4				2.8	8	0.2x2	1.25x2
LZ-H100GXN4 / LZ-H100GXH4				2.8	8	0.2x2	1.25x2

MCA : Min. Circuit Amps (A) ; MOP : Maximum Over current Protection
 kW : Fan Motor Rated Output (kW) ; FLA : Full Load Amps (A)

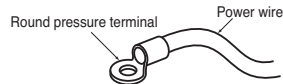
Wire Specification

Power Cable Specification : The power cord connected to the outdoor unit should be complied with IEC 60245 or HD 22.4 S4(Rubber insulated cord, type 60245 IEC 66 or H07RN-F)



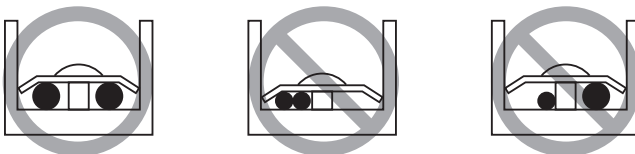
Precautions when laying power wiring

Use round pressure terminals for connections to the power terminal block.



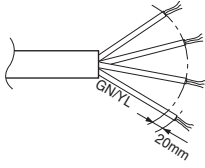
When none are available, follow the instructions below.

- Do not connect wiring of different thicknesses to the power terminal block. (Slack in the power wiring may cause abnormal heat.)
- When connecting wiring which is the same thickness, do as shown in the figure below.



Wiring Connection

Connecting Cable Specification : The connecting cable, being used to connect the indoor unit and outdoor unit, should be complied with IEC 60335-1 standard (This equipment shall be provided with a cord set complying with the national regulation).



If the supply cable is damaged, it must be replaced by a special cable or assembly available from the manufacturer or its service agent.

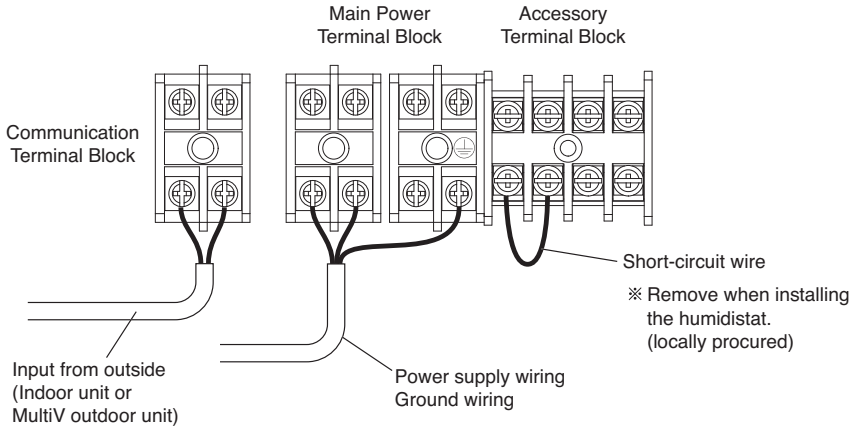


WARNING

Make sure that the screws of the terminal are free from looseness.

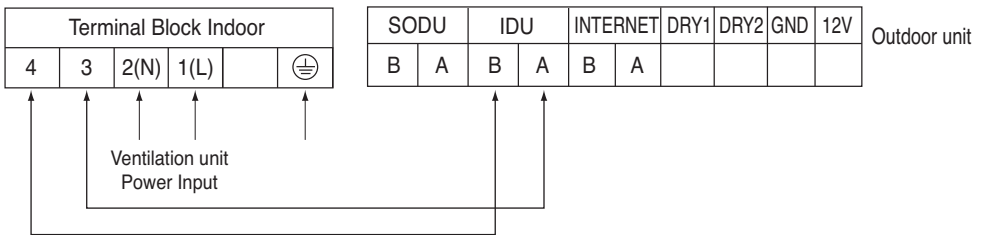
Method to Connect Wiring

- Pass the power supply wiring and the ground wiring through the wiring through-hole into the electrical parts box and secure with the included clamping material after connecting the wires to terminal blocks.



Connect the wires to the terminals on the control board individually according to the outdoor unit connection.

- Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively.



CAUTION

The Power cord connected to the unit should be selected according to the following specifications .



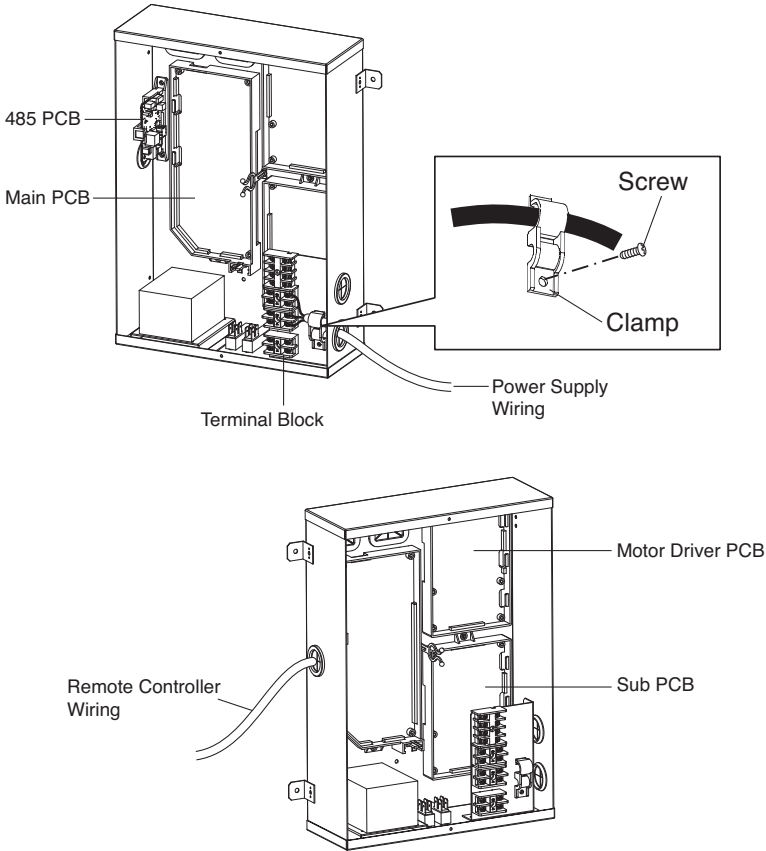
WARNING

Make sure that the screws of the terminal are free from looseness.

Clamping of cables

Arrange 2 power cables on the control panel.

First, fasten the Plastic clamp with screw to the inner boss of control panel.



CAUTION

- See “Label Circuit” on the backside of the cover of control box for electric wiring work.
- Be sure to attach the sealing material or putty (locally procured) to hole of wiring to prevent the infiltration of water as well as any insects and other small creatures from outside. Otherwise a short-circuit may occur inside the control box.
- When clamping the wires, be sure no pressure is applied to the wire connections by using the included clamping material to make appropriate clamps. Also, when wiring, make sure the lid on the control box fits snugly by arranging the wires neatly and attaching the control box cover firmly. When attaching the cover of control box, make sure no wires get caught in the edges. Pass wiring through the wiring through holes to prevent damage to them.
- Make sure the remote controller wiring, the wiring between the units, and other electrical wiring do not pass through the same locations outside of the unit, separating them by at least 50mm, otherwise electrical noise (external static) could cause mistaken operation or breakage.

Wiring for the Humidity Regulator (Locally Procured)

<LZ-H***GXH series only>

Pass into the electric parts box together with the power wire through the power wiring through-hole. Remove the short-circuit wires on the accessory terminal block and connect the wiring for the humidity regulator.

Secure with cramping material together with the power wire.

Wiring specifications	Sheathed wire (should be complied with IEC60245 standard)
Size	0.75 - 1.25 mm ²
Length	MAX. 100 m
External contact specifications	Normally closed contact (Current tolerance 10 mA - 0.5 A)



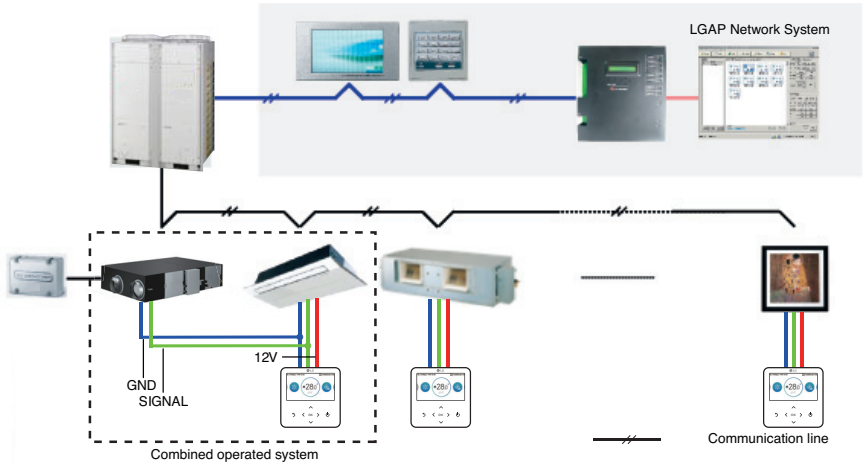
CAUTION

- If using humidistat, install one per ventilation unit.
Controlling more than one ventilation unit with a single humidity controller may prevent normal humidity operation and cause water leakage, etc.

Wiring Example

- This unit can be used as part of the combined operation system used together with indoor units (Multi-V system air conditioners), or as an independent system for processing outside air.

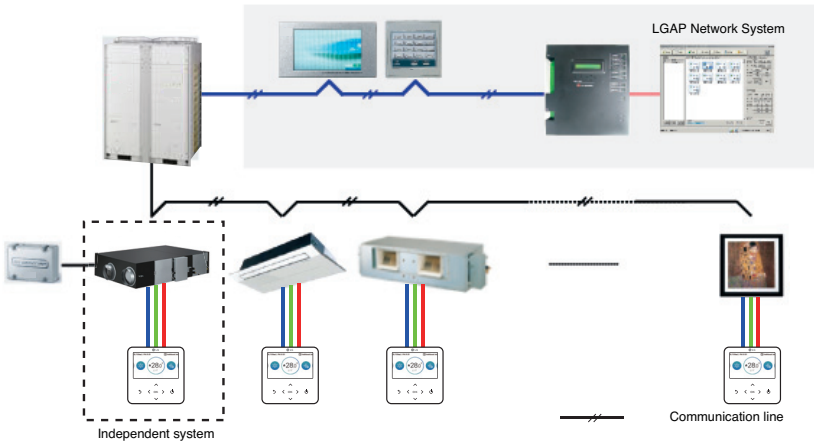
<Combined operation system with Multi-V system (connected with ventilation units and standard indoor units in a single refrigerant circuit)>



⚠ CAUTION

When this ventilation unit is combined with Multi V Plus 2 Series, sometimes the system does not cooling operate for self protection in low ambient temperature when the capacity of IDU, which is connected to ventilation unit, is less than or equal to 10% of total capacity of all IDUs. In this case, the capacity of the IDU connected to ventilation unit should be higher than 10% of total capacity of all IDUs

<Independent system (connected only with a ventilation unit in a single refrigerant circuit)>

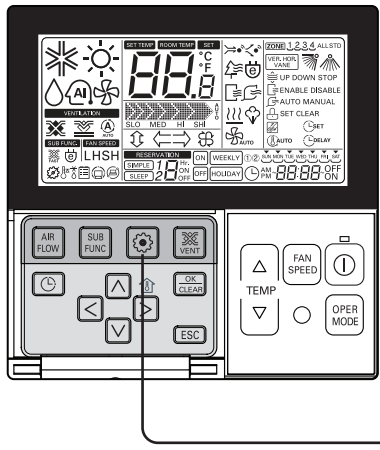



Installer Setting and Test Run


Installer setting -How to enter installer setting mode

CAUTION
 Installer setting mode is to set the detail function of the remote controller.
 If the installer setting mode is not set correctly, it can cause problems to the product, user injury or property damage. This must be set by a certificated installer, and any installation or change that is carried out by a non-certificated person should be responsible for the results. In this case, free service cannot be provided.

Accessory Model: PQRCVSL0/PQRCVSL0QW



- 1** If pressing  button long for 3 seconds, it enters into remote controller setter setup mode.
 - If pressing once shortly, it enters into user setup mode. Please press more than 3 seconds for sure.
- 2** When you enter the setting mode initially, Function code is displayed on the bottom of the LCD screen.

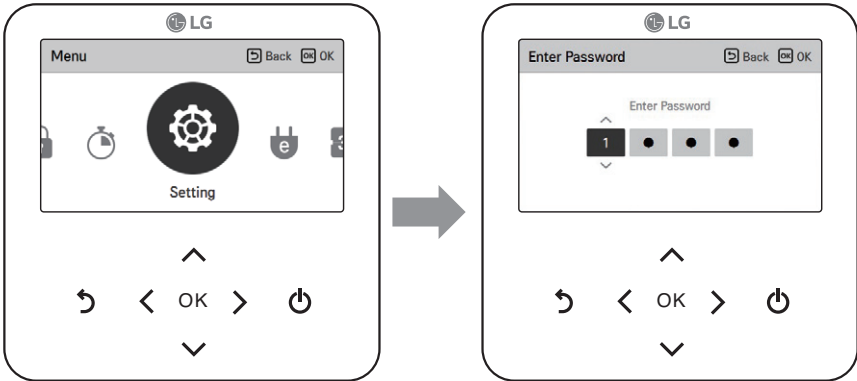


 ↓ ↓
 Function code Value

- Some categories of the menu may not be displayed according to the function of the product, or the menu name may be different.
- For more details, refer to the remote controller manual.

Accessory Model: PREMTB100

- In the menu screen, press [←,→(left/right)] button to select the setting category, and press [^ (up)] button for 3 seconds to enter the password input screen for the installer setting.
- Input the password and press [OK] button to move to the installer setting list.



※ Installer setting password

Main screen → menu → setting → service → RMC version information → SW Version

Example) SW version : 1.00.1 a

In the above case, the password is 1001.

- Some categories of the menu may not be displayed according to the function of the product, or the menu name may be different.
- For more details, refer to the remote controller manual.

Available accessories

Remote controller (PQRCVSL0/PQRCVSL0QW/ PREMTB100)

CO₂ sensor (AHCS100H0)

Installer Setting – Function explanation

Test Run

When installing the product, test operation for checking the installation status

Setting Address of Central Control

When connecting central control, it sets the address of central control address of indoor unit.

Supply/Exhaust ESP setting

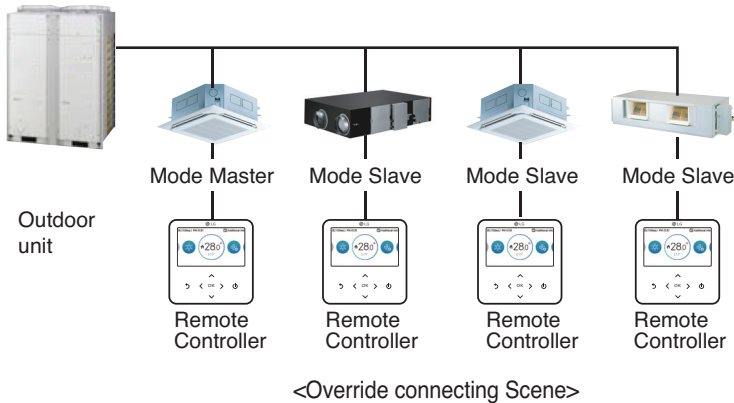
Set the E.S.P.(RPM) value of air conditioner indoor unit.

Production Direction

Set the installation direction of ventilation indoor unit.

Override Setting

Set the Override condition by setting the Mode Master/Slave of indoor unit.



Zone Stats

Set the wind strength option of indoor unit as Variable or fixed.

Selecting Celsius or Fahrenheit

Control the temperature control unit by changing it Celsius ↔ Fahrenheit.

Humidification for Singlar Ventilation

Set the power supply to humidification When operating Singular ventilation of Direct Expansion or General Ventilation unit.

- When Humidification for ventilation is set

In case of connection with General Ventilation : When operation is On, you can control the humidification

In case of connection with Direct Expansion Ventilation: When ventilation is operated only, you can control the humidification. (When operating DX Coil, impossible to control humidification)

Humidification for Heat Mode Ventilation

Set the Humidification for Heat mode of direct expansion ventilation as automatic setting or manual setting.

- Automatic setting

If air conditioner operation mode is set as heat, it automatically switches on the humidification.

- Manual setting

If air conditioner operation mode is set as heat, you could turn on the humidification manually. (When it is set as heat mode, even the humidification is on, you cannot turn it off manually.)

- Humidification cancellation

In case of the cancellation of heating operation, the product is off.

- Power failure compensation

When power failure compensation, receive the automatic/manual data from the indoor unit to set the Value.

Run the humidifier

<LZ-H***GXH series only>

Check that the water supply piping is connected securely.

Open the water supply shut-off valve. (No water will be supplied at this time.)

Run the ERV™ unit in heating mode. (See the operating manual included with the indoor unit for details on how to run the unit in heating mode.) The water supply will start and the humidifier will begin operation.

After starting heating (humidifying), the sound of the water supply solenoid valve will be heard at intervals of several minutes (a clicking sound), so listening for that clicking sound let the unit run for 30 minutes to make sure that humidifying operation is normal.





CAUTION

If carpentry work is not completed when a test run is finished, tell the customer not to run the humidifier for the protection of indoor unit and ERV™ until it is completed.

If the humidifier is run, paint, particles generated from adhesive and other materials used for carpentry work may cause ERV™ to get dirty, causing splash or leakage of water.

In case of finding a problem at a test run

Symptom	Check Item	Counter-measure
The Product doesn't work	Is power not supplied?	Supply Power
The Product doesn't work through you press the 'ON' switch	Is the Indoor temperature less than 45°C or more than 40°C?	It's standby mode for protecting Total Heat Exchanger.
Even though you change the fan speed, the operation mode doesn't change and it changes to 'Auto or Low'	Is the Indoor temperature less than -10°C or more than 45°C?	It's operation mode to protect Total Heat Exchanger.
Even though you push the button of remote controller, any function doesn't work.	Is the icon "  " displaying on remote controller?	It's Child Lock mode. Refer to Remote controller.
	Is the icon "  " displaying on remote controller? Does the message "HL" display on remote controller when you push the button.	It's centralized control mode. You can't control on remote controller.

Airborne Noise Emission

The A-weighted sound pressure emitted by this product is below 70 dB.

** The noise level can vary depending on the site.

The figures quoted are emission level and are not necessarily safe working levels. Whilst there is a correlation between the emission and exposure levels, this cannot be used reliably to determine whether or not further precautions are required. Factor that influence the actual level of exposure of the workforce include the characteristics of the work room and the other sources of noise, i.e. the number of equipment and other adjacent processes and the length of time for which an operator exposed to the noise. Also, the permissible exposure level can vary from country to country. This information, however, will enable the user of the equipment to make a better evaluation of the hazard and risk.

Limiting concentration

Limiting concentration is the limit of Freon gas concentration where immediate measures can be taken without hurting human body when refrigerant leaks in the air. The limiting concentration shall be described in the unit of kg/m³ (Freon gas weight per unit air volume) for facilitating calculation

Limiting concentration: 0.44kg/m³(R410A)

■ Calculate refrigerant concentration

$$\text{Refrigerant concentration} = \frac{\text{Total amount of replenished refrigerant in refrigerant facility (kg)}}{\text{Capacity of smallest room where indoor unit is installed (m}^3\text{)}}$$

