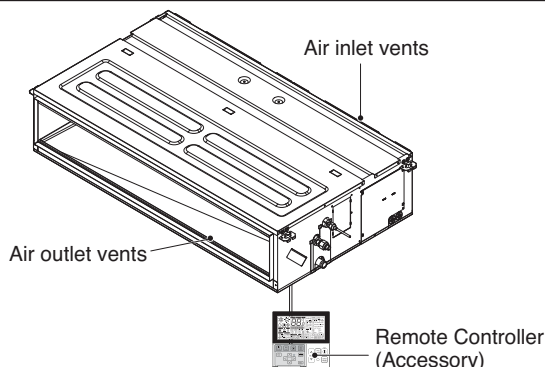


10. Installation

- Please read this instruction sheet completely before installing the product.
- When the power cord is damaged, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards by authorized personnel only.



Required Parts

- Connecting cable
- Pipes: Gas side
Liquid side
- Hanging Bolt
(W 3/8 or M10 length 650mm)
- Insulated drain hose
- Additional Drain hose

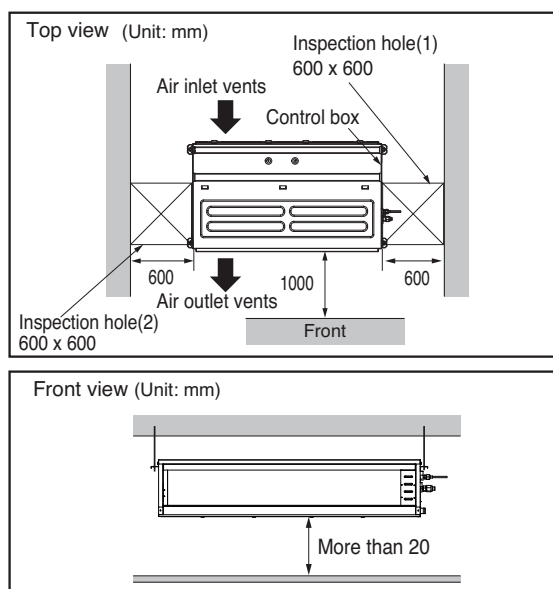
Required Tools

- Level
- Screw driver
- Electric drill
- Hole core drill
- Flaring Tool set
- Torque Wrenches
- Hexagonal Wrench
- Gas-leak detector
- Thermometer

10.1 Selection of the best location

Install the air conditioner 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 "H" 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.
- The servicing inspection hole in the ceiling should be as large as the product
- The selection of the servicing hole should be approved by the customer



[Inspection Hole Standard]

Number of in spection hole	Distance between false ceiling & actual ceiling	Remarks
1	More than 100cm	Sufficient space in the ceiling for servicing.
2	20cm to 100cm	Insufficient space. Difficult for servicing
Hole size should be more than the size of IDU.	Less than 20cm	Minimum height for motor replacement.

10. Installation

10.2 Ceiling dimension and hanging bolt location

■ Installation of Unit

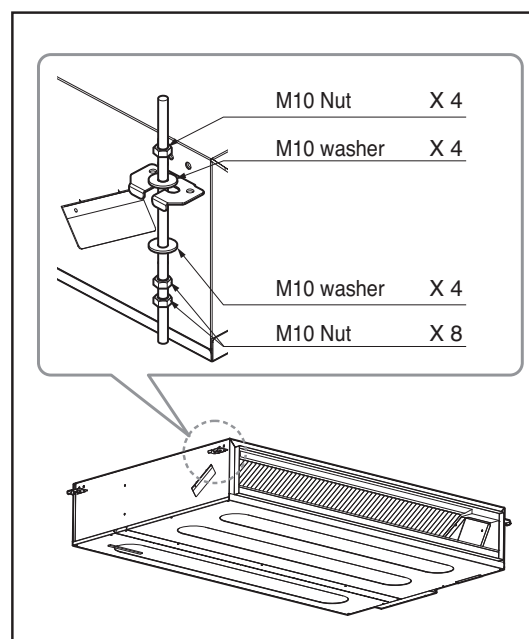
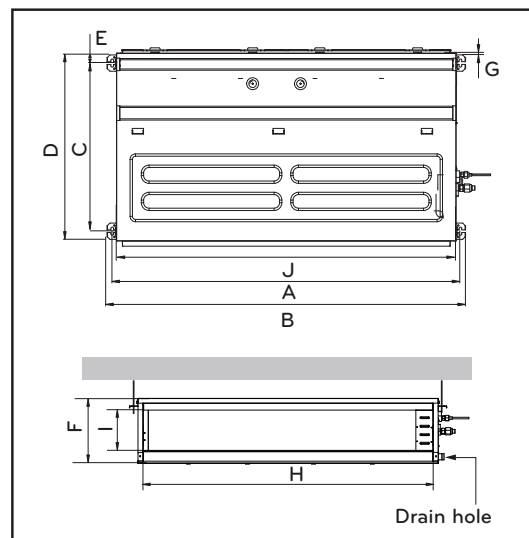
Install the unit above the ceiling correctly.

POSITION OF SUSPENSION BOLT

- Apply a joint-canvas between the unit and duct to absorb unnecessary vibration.
- Install the unit leaning to a drainage hole side as a figure for easy water drainage.
- 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.

(Unit:mm)

Dimension Chassis name	A	B	C	D	E	F	G	H	I	J
M1	933.4	971.6	619.2	700	30	270	15.2	858	201.4	900
M2	1283.4	1321.6	619.2	700	30	270	15.2	1208	201.4	1250
M3	1283.4	1321.6	619.2	700	30	360	15.2	1208	291.4	1250

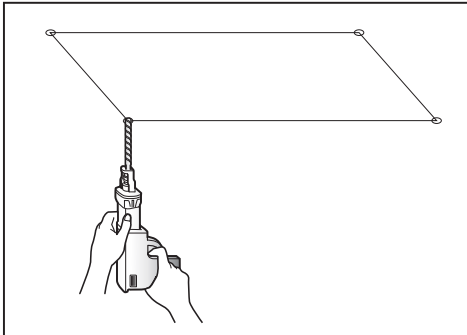


NOTE:

- Thoroughly study the following installation locations:
 1. In such places as restaurants and kitchens, considerable amount of oil steam and flour adhere to the fan, the fin of the heat exchanger, resulting in heat exchange reduction, spraying, dispersing of water drops, etc.
In these cases, take the following actions:
 - Make sure that the ventilation fan for smoke-collecting hood on a cooking table has sufficient capacity so that it draws oily steam which should not flow into the suction of the air conditioner.
 - Make enough distance from a cooking room to install the air conditioner in such a place where it may not suck in oil steam.
 2. Avoid installing air conditioner in such circumstances where cutting oil mist or iron powder is in suspension in factories, etc.
 3. Avoid places where inflammable gas is generated, flows in, is stored or vented.
 4. Avoid places where sulfurous acid gas or corrosive gas is generated.
 5. Avoid places near high frequency generators.

10. Installation

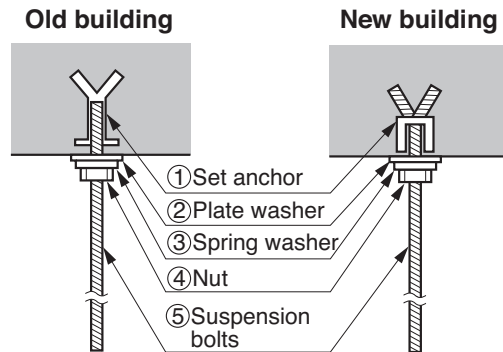
- Select and mark the position for fixing bolts.
- Drill the hole for set anchor on the face of ceiling.



CAUTION

Tighten the nut and bolt to prevent unit falling.

- 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.

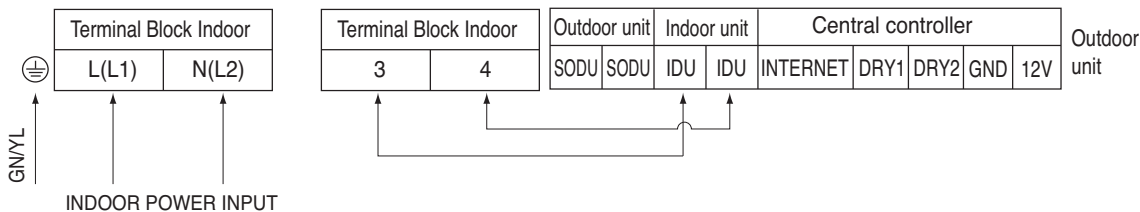


10.3 Connecting Cables between Indoor Unit and Outdoor Unit

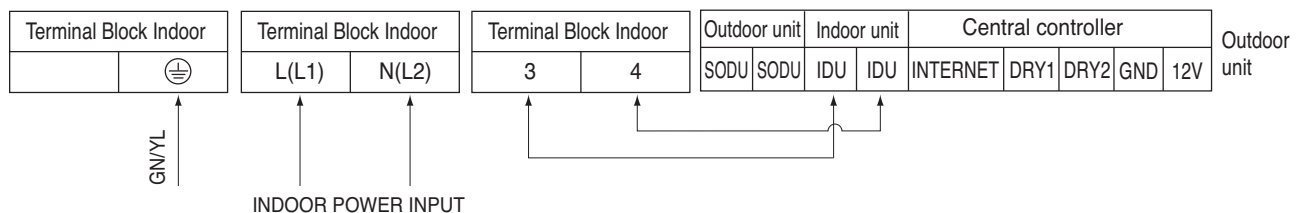
Connect the wires to the terminals on the control board individually according to the outdoor unit connection.

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

• M1 Chassis



• M2 / M3 Chassis



WARNING

Make sure that the screws of the terminal are not loose.

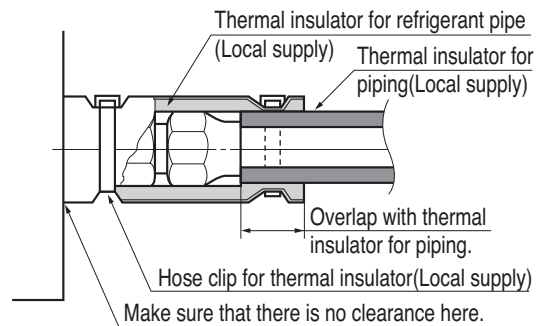
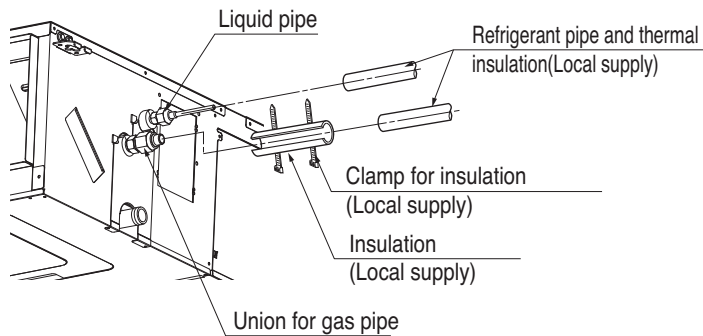
Clamping of cables

- 1) Arrange 2 power cables on the control panel.
- 2) First, fasten the steel clamp with a screw to the inner boss of control panel.
- 3) For the cooling model, fix the other side of the clamp with a screw strongly. For the heat pump model, put the 0.75mm² cable(thinner cable) on the clamp and tighten it with a plastic clamp to the other boss of the control panel.

10. Installation

THERMAL INSULATION

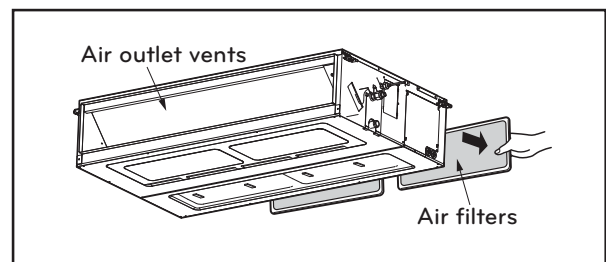
All thermal insulation must comply with local requirement.

INDOOR UNIT

10.4 Checking the Drainage

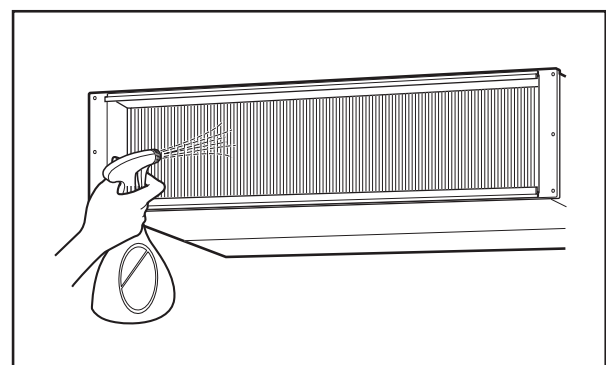
1) Checking the Drainage

1. Remove the Air Filter.



2. Check the drainage.

- Spray one or two glasses of water on the evaporator.
- Ensure that water flows through drain hose of indoor unit without any leakage.



10. Installation

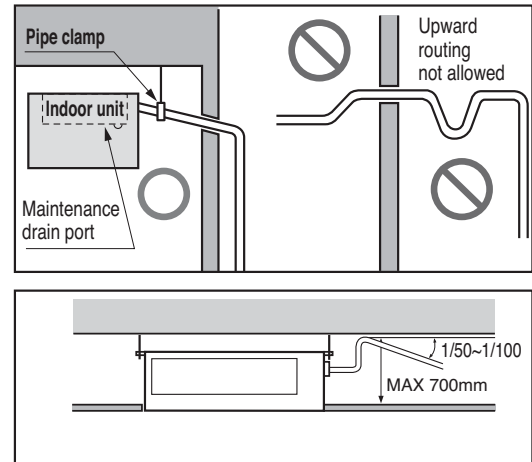
10.5 Indoor Unit Drain Piping

- Drain piping must have down-slope (1/50 to 1/100): be sure not to provide up-and-down slope to prevent reversal flow.
- During drain piping connection, be careful not to exert extra force on the drain port on the indoor unit.
- The outside diameter of the drain connection on the indoor unit is 32mm.

Piping material: Polyvinyl chloride pipe inner diameters Ø 25mm and pipe fittings

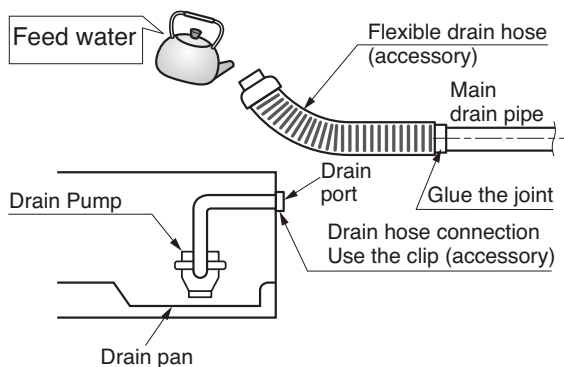
- Be sure to install heat insulation on the drain piping.

Heat insulation material: Polyethylene foam with thickness more than 8 mm.



Drain test

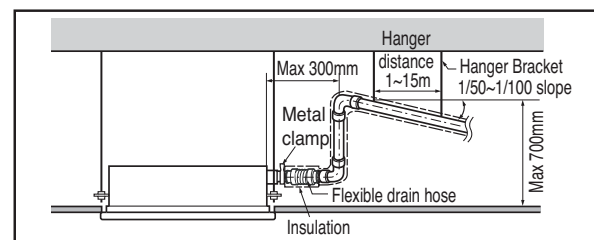
The air conditioner uses a drain pump to drain water.
Use the following procedure to test the drain pump operation:



- Connect the main drain pipe to the exterior and leave it provisionally until the test comes to an end.
- Feed water to the flexible drain hose and check the piping for leakage.
- Be sure to check the drain pump for normal operation and noise when electrical wiring is complete.
- When the test is complete, connect the flexible drain hose to the drain port on the indoor unit.

CAUTION

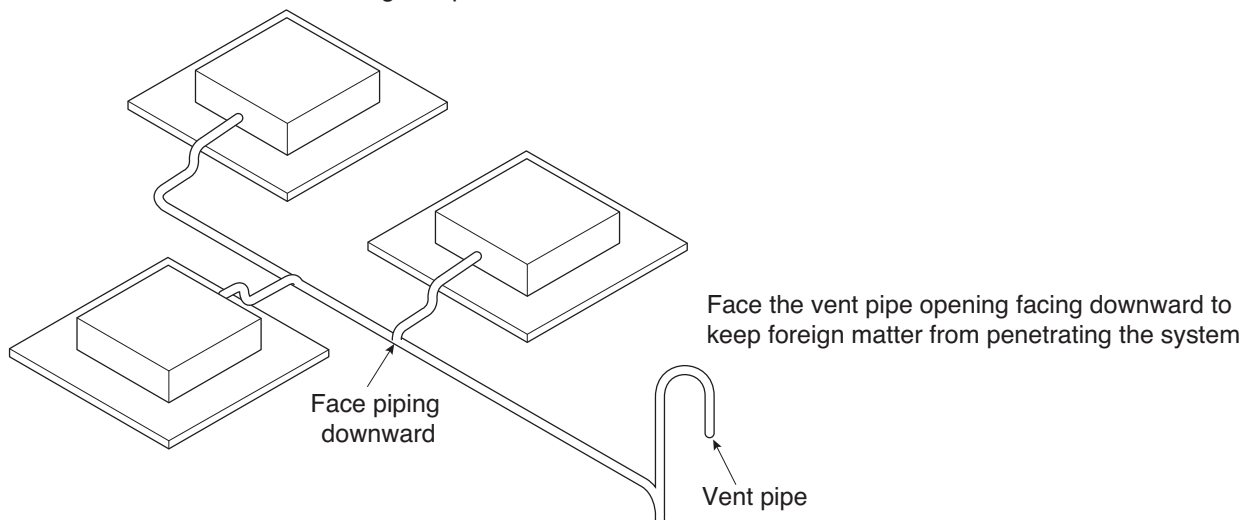
The supplied flexible drain hose should not be strained.
A strained hose may cause leakage of water.



10. Installation

10.6 Ground drain piping

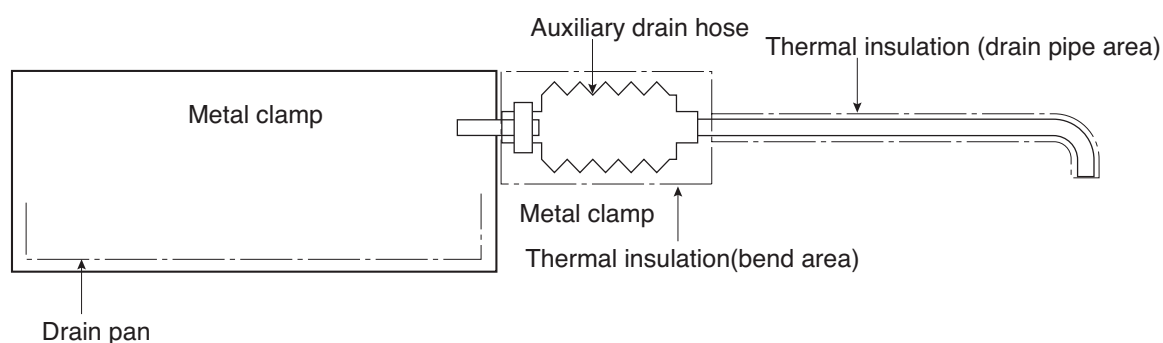
- a) It is standard work practice to make connections to the main pipe from above. The pipe down from the combination should be as large as possible.



- b) The pipe work should be kept as short as possible and the number of indoor units per group kept to a minimum.

10.7 Use of an auxiliary drain hose(flexible)

- a) To connect drain pipe to the drain socket on the indoor unit, an auxiliary flexible drain hose should be used. auxiliary flexible drain hose allows that the drain pipe can be connected to the socket without breaking by excessive strain.



✳ Important points

- The drain pipe should be at least equal in size to that of the indoor unit.
- The drain pipe is thermally insulated to prevent the formation of condensation inside the pipe.
- The drain up mechanism should be fitted before the indoor unit is installed and when the electricity has been connected some water should be added to the drain pan and the drain pump to check and see if it is functioning correctly.
- All connections should be secure. (Special care is needed with PVC pipe)
- Insulate auxiliary drain hose with thermal insulation band.

10. Installation

WIRED REMOTE CONTROLLER INSTALLATION

- Since the room temperature sensor is in the remote controller, the remote controller box should be installed in a place away from direct sunlight, high humidity and direct supply of cold air to maintain proper space temperature. Install the remote controller about 5ft(1.5m) above the floor in an area with good air circulation at an average temperature.

Do not install the remote controller where it can be affected by:

- Drafts, or dead spots behind doors and in corners.
- Hot or cold air from ducts.
- Radiant heat from sun or appliances.
- Concealed pipes and chimneys.
- Uncontrolled areas such as an outside wall behind the remote controller.
- This remote controller is equipped with a seven segment LED. display. For proper display of the remote controller LED's, the remote controller should be installed properly as shown in Fig.1.
(The standard height is 1.2~1.5 m from floor level.)

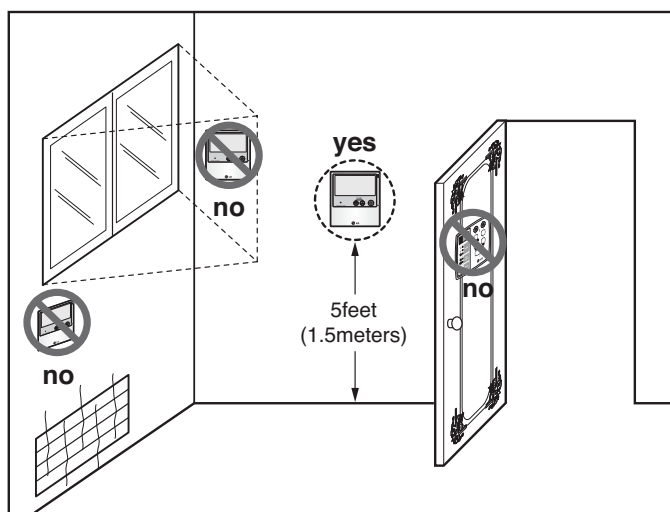
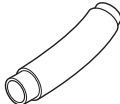
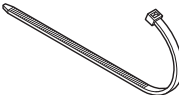
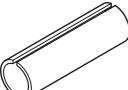
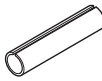


Fig.1 Typical locations for remote controller

11. Accessories

Standard Accessories

Name	Drain hose	Clamp metal	Washer for hanging bracket	Clamp (Tie Wrap)	Insulation for fitting	(Other)
Quantity	1 EA	1 EA	8 EA	4 EA	1 SET	
Shape					 for gas pipe  for liquid pipe	• Owner's manual • Installation manual

CAUTION

- Use only those accessories (Standard or optional) which have designated specifications.