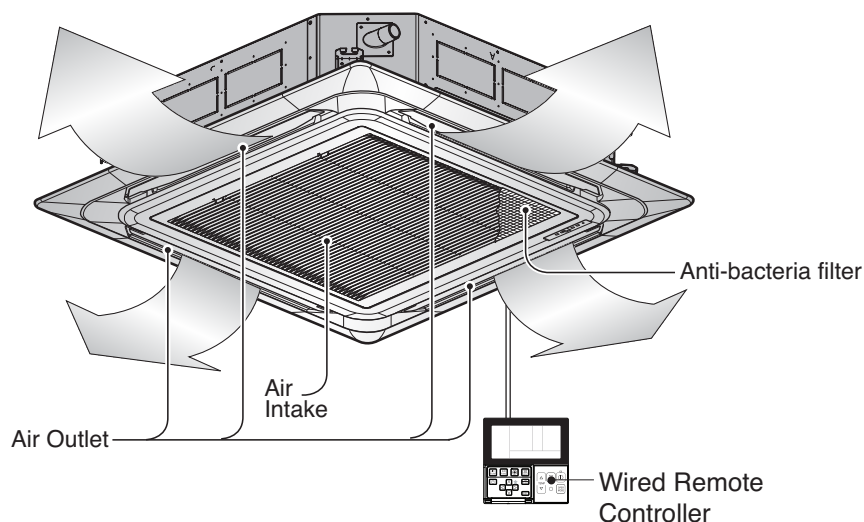


10. Installation

- 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

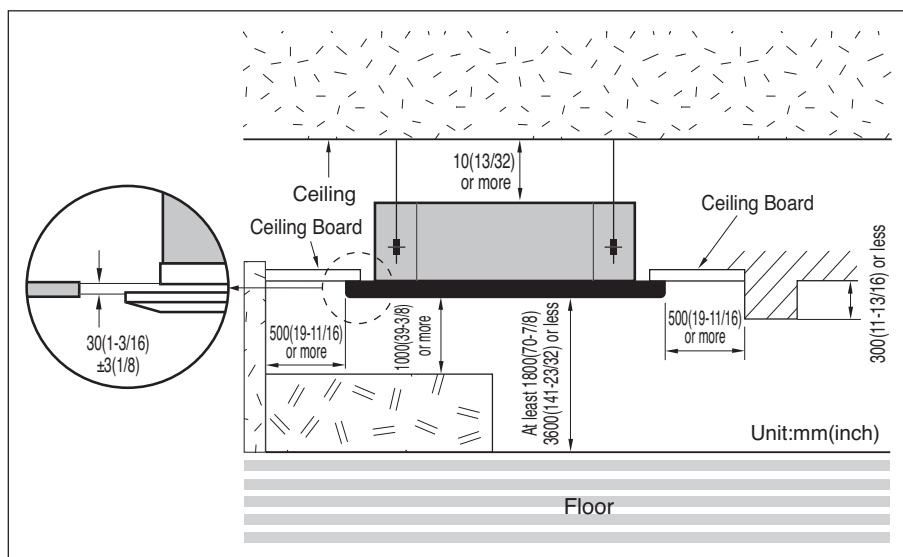
- Level
- Screw driver
- Electric drill
- Hole core drill
- Flaring Tool set
- Torque Wrenches
- Hexagonal Wrench
- Gas-leak detector
- Thermometer

10.1 Selection of the best location

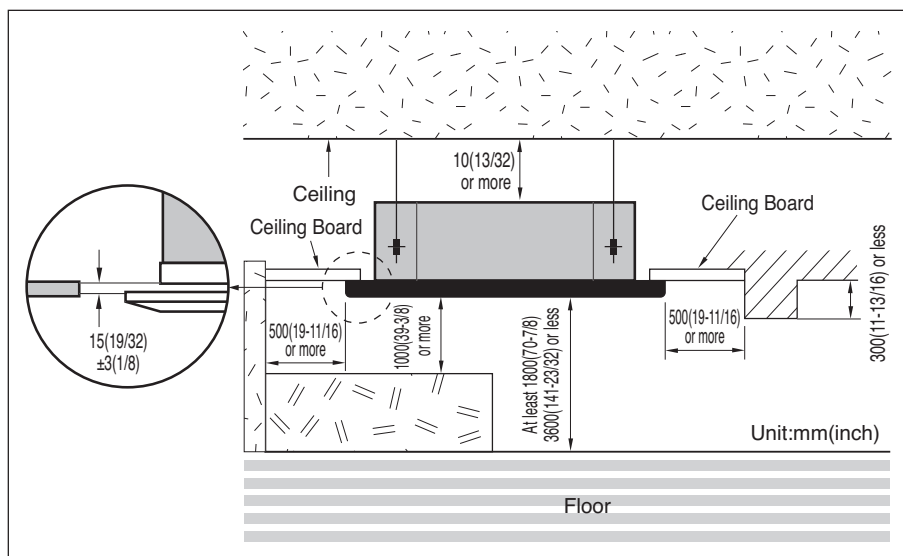
- If the temperature might rise above 30°C or the humidity might rise above RH 80%, attach the Dew-Protective kit or use another insulation to the indoor body.
 - ✱ Dew Protective kit is sold separately.
 - Use glass wool material or polyethylene foam and make sure at least 10mm thick.
- There should not be any heat source or steam near the unit.
- There should not be any obstacles to the air circulation.
- A place where air circulation in the room will be good.
- A place where drainage can be easily obtained.
- A place where noise prevention is taken into consideration.
- Do not install the unit near the door way.
- Ensure the spaces indicated by arrows from the wall, ceiling, or other obstacles.
- The indoor unit must have sufficient maintenance space.

10. Installation

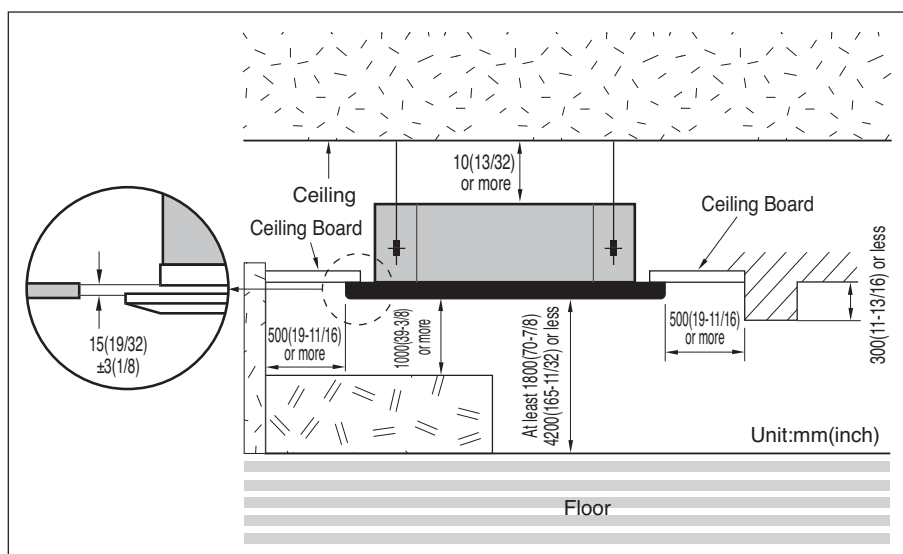
■ TQ/TR Chassis



■ TP Chassis



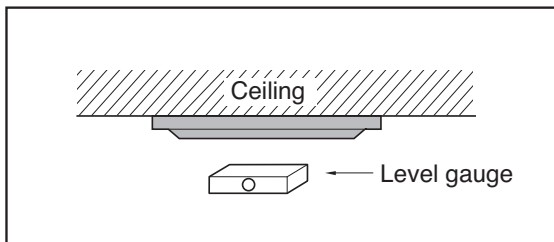
■ TM/TN Chassis



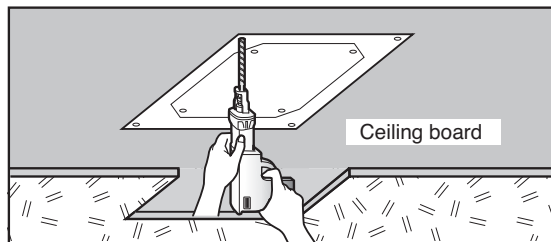
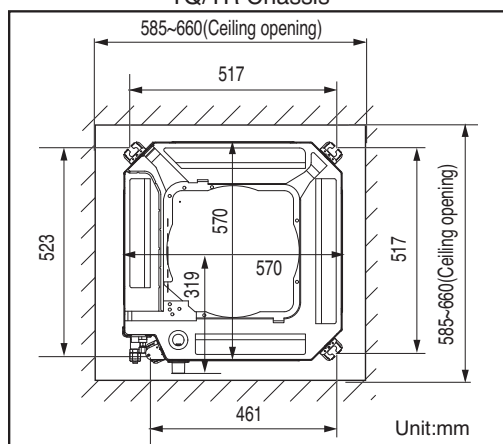
10. Installation

10.2 Ceiling opening dimensions and hanging bolt location

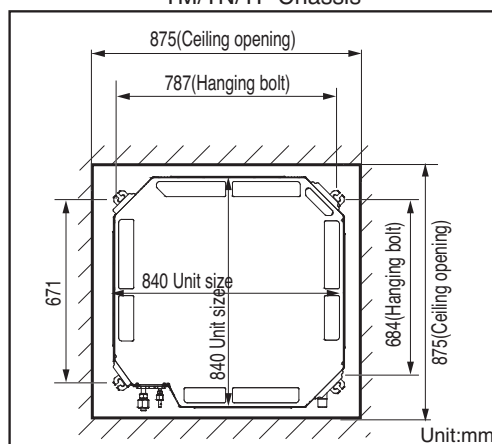
- The dimensions of the paper pattern for installation are the same as those of the ceiling opening dimensions.



TQ/TR Chassis



TM/TN/TP Chassis



CAUTION

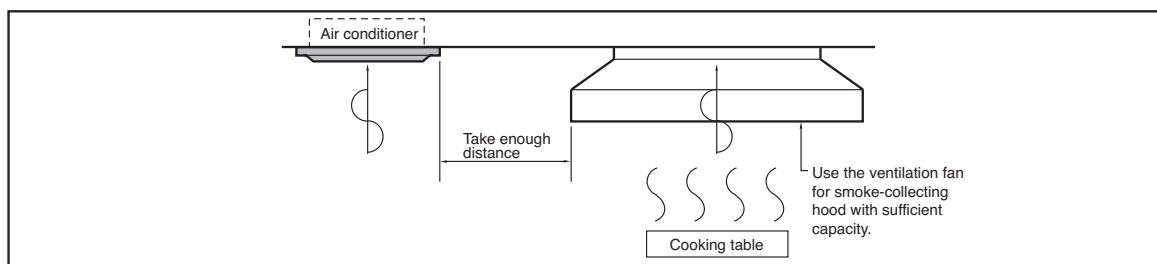
- This air-conditioner uses a drain pump.
- Install the unit horizontally using a level gauge.
- During the installation, care should be taken not to damage electric wires.

- Select and mark the position for fixing bolts and piping hole.
- Decide the position for fixing bolts slightly tilted to the drain direction after considering the direction of drain hose.
- Drill the hole for anchor bolt on the wall.

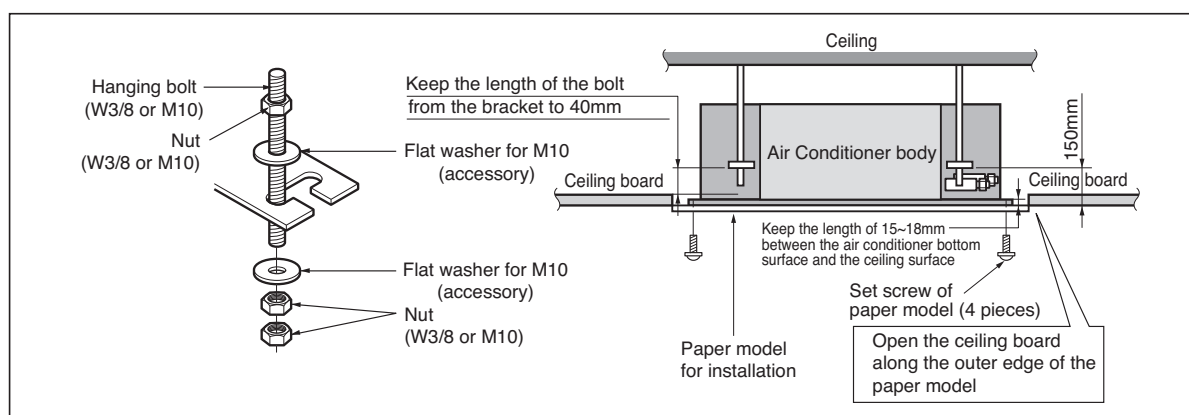
10. Installation

NOTE:

- Avoid the following installation location.
- 1. Such places as restaurants and kitchen where considerable amount of oil steam and flour is generated.
These may cause heat exchange efficiency reduction, or water drops, drain pump mal-function.
In these cases, take the following actions;
 - Make sure that ventilation fan is enough to cover all noxious gases from this place.
 - Ensure enough distance from the cooking room to install the air conditioner in such a place where it may not suck oily steam.



2. Avoid installing air conditioner in such places where cooking oil or iron powder is generated.
3. Avoid places where inflammable gas is generated.
4. Avoid place where noxious gas is generated.
5. Avoid places near high frequency generators.



- The following parts are locally purchased.

- ① Hanging Bolt - W 3/8 or M10
- ② Nut - W 3/8 or M10
- ③ Spring Washer - M10
- ④ Plate Washer - M10

CAUTION

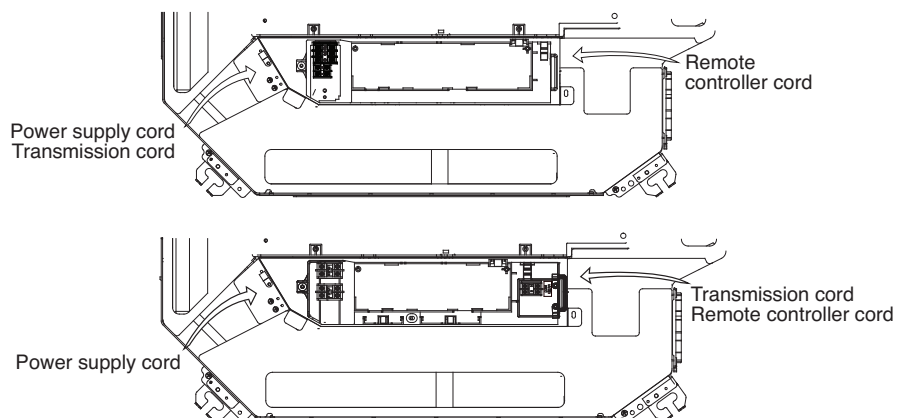
- Tighten the nut and bolt to prevent the unit from falling.

10. Installation

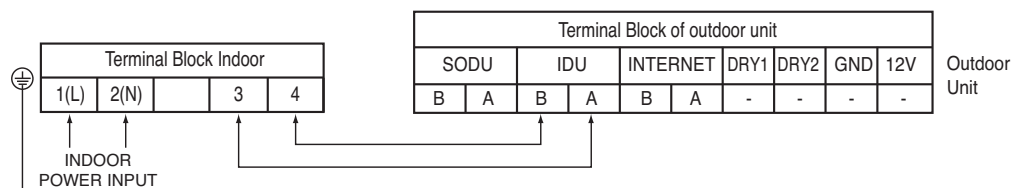
10.3 Wiring Connection

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

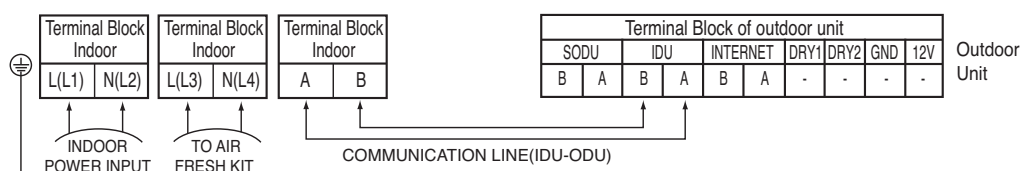
- Ensure that the color of the wires of outdoor unit and the terminal No. are the same as those of indoor unit respectively.



• TQ/TR Chassis



• TM/TN/TP Chassis



⚠ WARNING

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

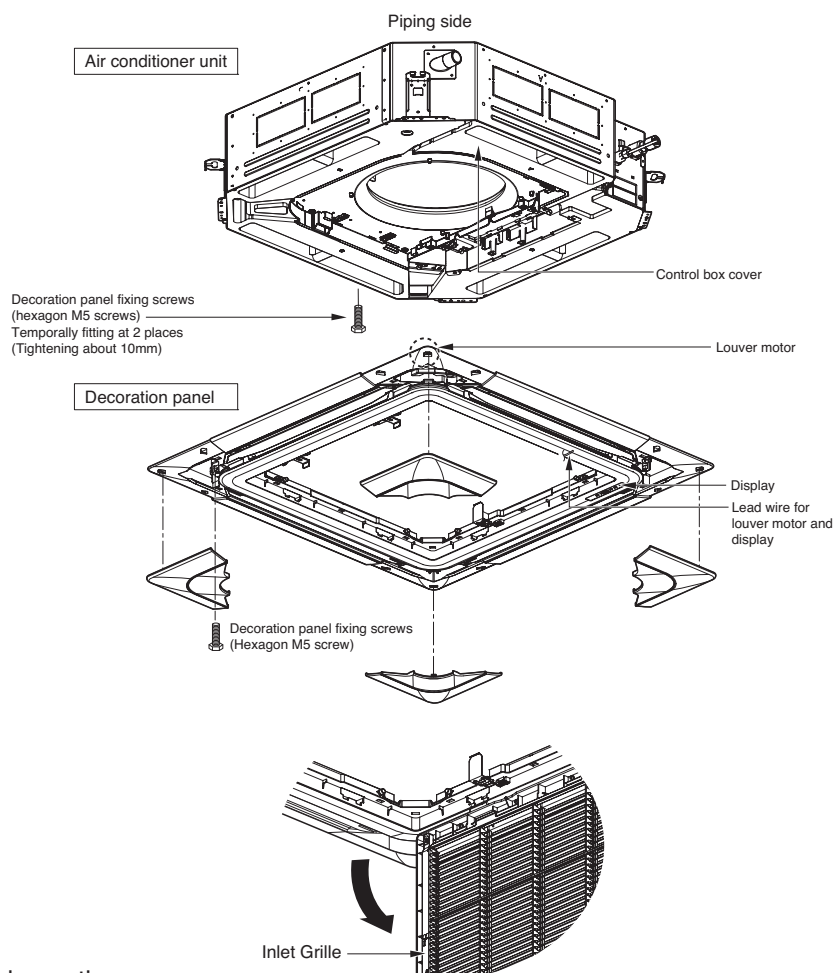
10. Installation

10.4 Installation of Decoration Panel

The decoration panel has its installation direction.

Before installing the decoration panel, always remove the paper template.

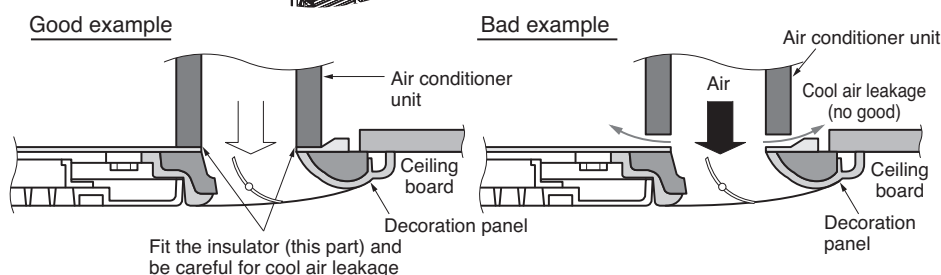
1. Temporarily fix two decoration panel fixing screws (hexagon M5 screw) on the unit body. (Tighten by amount 10mm in length.)
The fixing screws (hexagon M5 screw) are included in the indoor unit box.
2. Remove the air inlet grille from the decoration panel. (Remove the hook for the air inlet grille cord.)
3. Hook the decoration panel key hole () on the screws fixed in step above, and slide the panel so that the screws reach the key hole edge.
4. Retighten completely two temporarily fixed screws and other two screws. (Total 4 screws)
5. Connect the louver motor connector and display connector.
6. After tightening these screws, install the air inlet grille (including the air filter).



CAUTION

Install certainly the decoration panel.
Cool air leakage causes sweating.

⇒ Water drops fall.



10. Installation

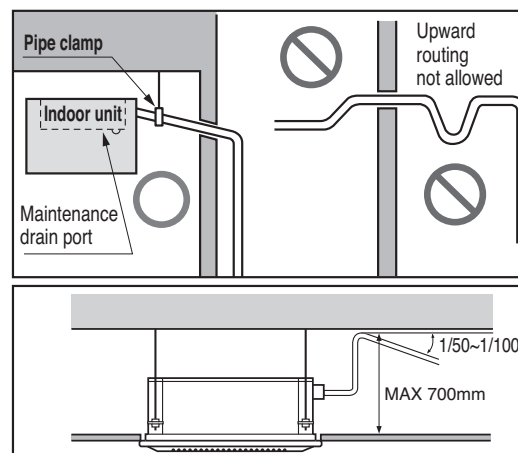
10.5 Indoor Unit Drain Piping

- 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.

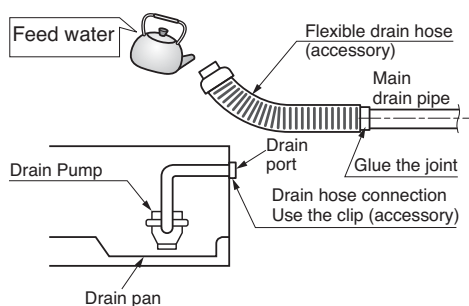
Heat insulation material: Polyethylene foam with thickness more than 8 mm.



Drain test

The air conditioner uses a drain pump to drain water.

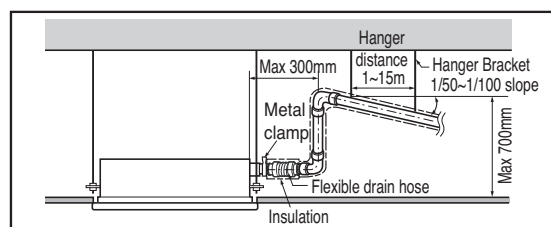
Use the following procedure to test the drain pump operation:



- 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 operating 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

⚠ CAUTION

After the confirmation of the above conditions, prepare the wiring as follows:

- 1) Never fail to have separate power specially for the air conditioner. As for the method of wiring, follow the circuit diagram pasted on the inside of control box cover.
- 2) Provide a circuit breaker switch between power source and the unit.
- 3) The screw which fasten the wiring in the casing of electrical fittings are liable to come loose from vibrations to which the unit is subjected during the course of transportation. Check them and make sure that they are all tightly fastened. (If they are loose, it could give rise to burn-out of the wires.)
- 4) Confirm the specification of power source
- 5) Confirm that electrical capacity is sufficient.
- 6) Be sure that the starting voltage is maintained at more than 90 percent of the rated voltage marked on the name plate.
- 7) Confirm that the cable thickness is as specified in the power sources specification.
(Particularly note the relation between cable length and thickness.)
- 8) Do not install the leakage breaker in a place which is wet or moist.
Water or moist may cause short circuit.
- 9) The following troubles would be caused by voltage drop-down.
 - Vibration of a magnetic switch, damage on the contact point there of, fuse breaking, disturbance to the normal function of a overload protection device.
 - Proper starting power is not given to the compressor.

HAND OVER

Teach the customer the operation and maintenance procedures, using the operation manual (air filter cleaning, temperature control, etc.).

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.)

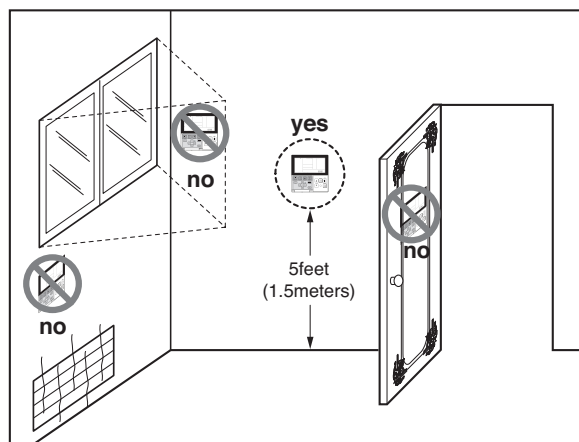
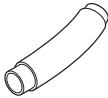
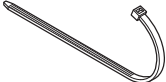
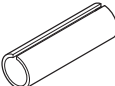
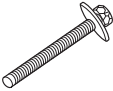


Fig.1 Typical locations for remote controller

11. Accessories

Standard Accessories

Name	Drain hose	Clamp metal	Washer for hanging bracket	Clamp (Tie Wrap)	Insulation for fitting	Bolt	(Other)
Quantity	1 EA	2 EA	8 EA	4 EA	1 SET	4 EA	
Shape					 for gas pipe  for liquid pipe		• Paper pattern for installation • Owner's manual • Installation manual

CAUTION

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