

FOR SERVICE PERSONNEL ONLY

HITACHI Inspire the Next SYSTEM SINGLE DUCTING UNIT AIR CONDITIONER INSTALLATION MANUAL

Indoor Unit RPI-30MH1
Outdoor Unit RAC-30MH1

- Carefully read through the procedures of proper installation before starting installation work.
- The sales agent should inform customers regarding the correct operation of installation.

Tools Needed For Installation Work

- \oplus \ominus Screwdriver
- Measuring Tape
- Knife
- Saw \bullet ϕ 65mm Power Drill
- Allen Key (10 4mm)
- Wrench (14, 17, 19, 22, 24, 27mm)
- Gas Leakage Detector
- Pipe Cutter
- Plastic Tape
- Pliers
- Flare Tool

SAFETY PRECAUTION

- Read the safety precautions carefully before operating the unit.
- The contents of this section are vital to ensure safety. Please pay special attention to the following sign.

- WARNING** Incorrect methods of installation may cause death or serious injury.
- CAUTION** Improper installation may result in serious consequence.

Be sure that the unit operates in proper condition after installation. Explain to customer the proper way of operating the unit as described in the user's guide.

WARNING

- Please request your sales agent or qualified technician to install your unit. Water leakage, short circuit or fire may occur if you do the installation work yourself.
- Please observe the instructions stated in the installation manual during the process of installation. Improper installation may cause water leakage, electric shock and fire.
- Make sure that the units are mounted at locations which are able to provide full support to the weight of the units. If not, the units may collapse and impose danger.
- Observe the rules and regulations of the electrical installation and the methods described in the installation manual when dealing with the electrical work. Use power cables approved by the authorities of your country.
- Be sure to use the specified wire for connecting the indoor and outdoor units. Please ensure that the connections are tight after the conductors of the wire are inserted into the terminals. Improper insertion and loose contact may cause over-heating and fire.
- Please use the specified components for installation work. Otherwise, the units may collapse or water leakage, electric shock and fire may occur.
- Be sure to use the specified piping set for R22. Otherwise, this may result in broken copper pipes or faults.
- When installing or removing an air conditioner, do not allow air or moisture to remain in the refrigeration cycle. Otherwise, pressure in the refrigeration cycle may become abnormally high so that a rupture may be caused.
- Be sure to ventilate fully if a refrigerant gas leak while at work. If the refrigerant gas comes into contact with fire, a poisonous gas may occur.
- After completion of installation work, check to make sure that there is no refrigeration gas leakage. If the refrigerant gas leaks into the room, coming into contact with fire in the fan-driven heater, space heater, etc., a poisonous gas may occur.
- Unauthorized modifications to the air conditioner may be dangerous. If a breakdown occurs please call a qualified air conditioner technician or electrician. Improper repairs may result in water leakage, electric shock and fire, etc.

CAUTION

- A circuit breaker or fuse (20A time delay) must be installed. Without a circuit breaker or fuse the danger of electric shock exists. A main switch with a contact gap of more than 3mm has to be installed in the power supply line to the outdoor unit.
- Do not install the unit near a location where there is flammable gas. The outdoor unit may catch fire if flammable gas leaks around it.
- Please ensure smooth flow of water when installing the drain hose.
- Piping shall be suitable supported with a maximum spacing of 1m between the supports.

THE CHOICE OF MOUNTING SITE (Please note the following matters and obtain permission from customer before installation).

WARNING

- The unit should be mounted at stable, non-vibratory location which can provide full support to the unit.

CAUTION

- No nearby heat source and no obstruction near the air outlet is allowed.
- The clearance distances from top, right and left are specified in figure below.
- The location must be convenient for water drainage and pipe connection with the Outdoor unit.
- To avoid interference from noise please place the unit and its remote controller at least 1m from the radio, television and inverter type fluorescent lamp.
- To avoid any error in signal transmission from the remote controller, please put the controller far away from high-frequency machines and high-power wireless systems.
- The installation height of indoor unit must be 2.3m or more in a non public area.

WARNING

- The outdoor unit must be mounted at a location which can support heavy weight. Otherwise, noise and vibration will increase.

CAUTION

- Do not expose the unit under direct sunshine or rain. Besides, ventilation must be good and clear of obstruction.
- The air blown out of the unit should not point directly to animals or plants.
- The clearances of the unit from top, left, right and front are specified in figure below. At least three of the above sides must be open air.
- Be sure that the hot air blown out of the unit and noise do not disturb the neighbourhood.
- Do not install at a location where there is flammable gas, steam, oil and smoke.
- The location must be convenient for water drainage.
- Place the outdoor unit and its connection wire at least 1m away from the antenna or signal line of television, radio or telephone. This is to avoid noise interference.

Accessories to indoor Unit:

| No. | Component's Name | Qty |
|-----|---------------------------------------|-----|
| ① | Washer(M10) | 8 |
| ② | Screw (4mm) | 16 |
| ③ | Hose Clamp | 1 |
| ④ | Insulation (22IDx130) | 1 |
| ⑤ | Insulation (43IDx130) | 1 |
| ⑥ | Binder | 10 |
| ⑦ | Remote Controller | 1 |
| ⑧ | Screw for holder of Remote Controller | 2 |

| | | |
|---|-------------------------|---|
| ⑨ | Filter Holder | 2 |
| ⑩ | Screw for Filter Holder | 2 |

Other optional parts for display panel & wireless remote control SPX-RCK4

| No. | Item | Quantity |
|-----|------------------------------|----------|
| ① | Display panel | 1 |
| ② | Panel installation plate | 1 |
| ③ | Panel cover | 1 |
| ④ | Remote controller (wireless) | 1 |
| ⑤ | Holder for remote control | 1 |
| ⑥ | 3.1 x 16 screw | 2 |

Names of Outdoor Components

| No. | Item | Qty |
|-----|------------|-----|
| ⑪ | Bush | 1 |
| ⑫ | Bush | 3 |
| ⑬ | Drain Pipe | 1 |

Dimension of Mounting Stand of the outdoor unit

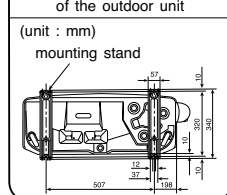


Figure showing the Installation of Indoor and Outdoor Unit.

CAUTION

- In case the pipe length is more than 5m, add refrigerant R22 at 35 gram per every meter exceeds. However, pipe length shall not exceed 50m.

The indoor piping should be insulated with the enclosed insulation pipe. (If the insulator is insufficient, please use commercial products.)

Be sure to completely seal any gap with putty.

Drain pipe must be installed separately. Insulate indoor part of pipe to prevent condensation.

The difference in height between the indoor and outdoor unit should be kept below 30m.

The connecting pipe, no matter big or small, should all be insulated with insulation pipe and then wrapped with vinyl tape. (The insulator will deteriorate if it is not wrapped with tape.)

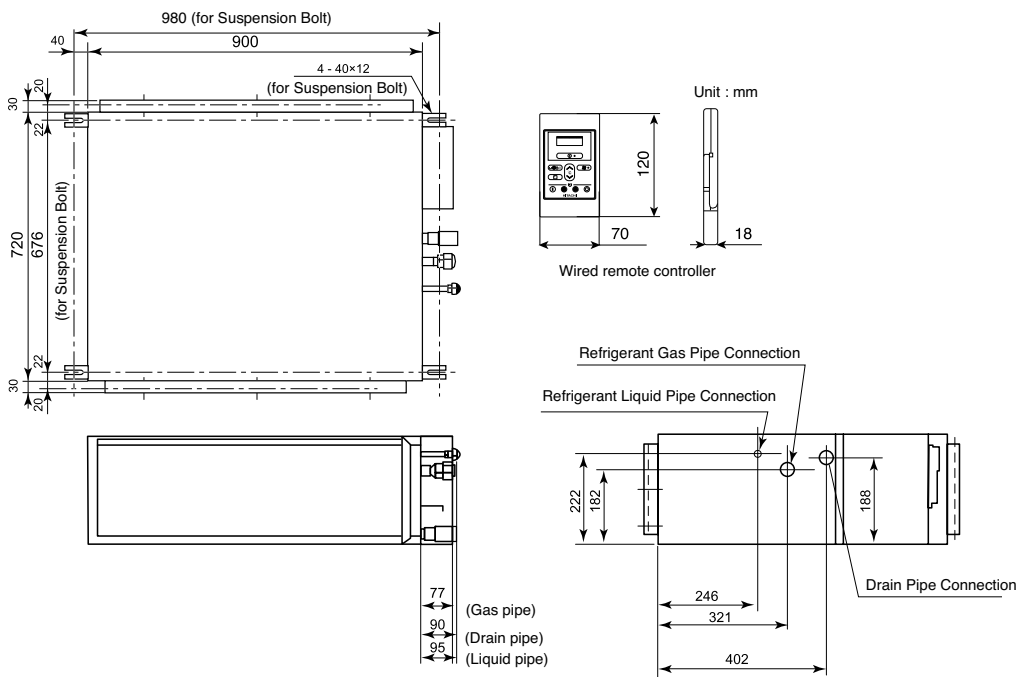
CAUTION

Always install the indoor unit level. Units not installed level may leak.

CAUTION

Discharge grille and suction grille shall be covered by insulation material to prevent water drop.

1 Opening on ceiling & suspension bolt

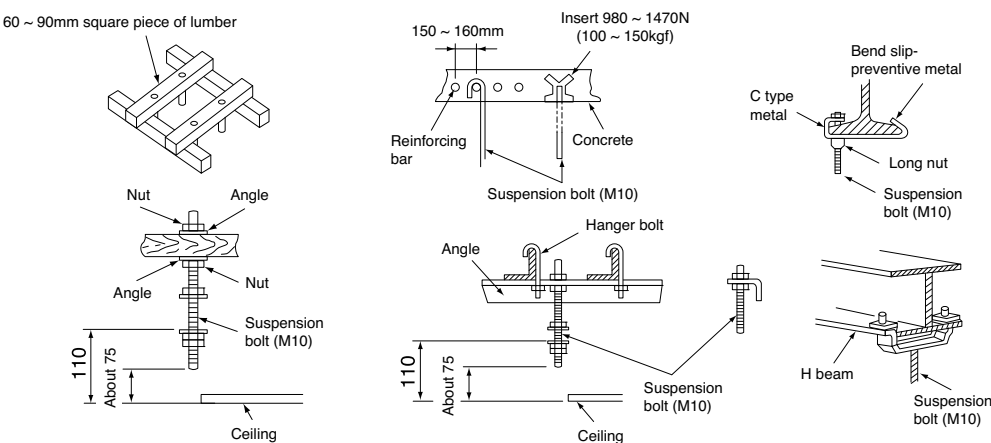


- Need a connecting work for refrigerant pipe, drain pipe and F cable in the ceiling after suspending the indoor unit. Arrange drain pipe, refrigerant pipe and F cable in their installation position.
- For finishing of opening on ceiling, arrange with builder in detail.
- If ceiling is already completed, connecting cables between indoor and outdoor, piping and drain piping must be done before fitting indoor unit.

2 Preparation for installing indoor unit

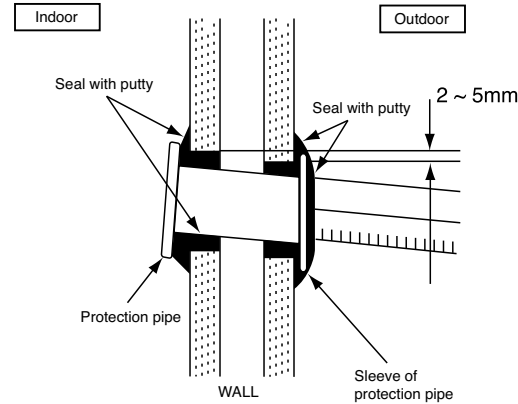
Installation of suspension bolts

- Be sure to reinforce furring of ceiling (frame : ceiling joints and supporter) to maintain level of ceiling and prevent vibration of ceiling plate.
- Suspension bolts should be purchased in the field.
- Refer to diagrams shown below for length of suspension bolts.
- In case of wooden frame
- In case of steel frame



Wall Penetration and Installation of Protection Pipe

- Drill a ϕ 65mm hole in wall which is slightly tilted towards the outdoor side. Drill the wall at a small angle.
- Cut the protection pipe according to the wall thickness.
- Empty gap in the sleeve of protection pipe should be completely sealed with putty to avoid dripping of rain water into the room.



CAUTION

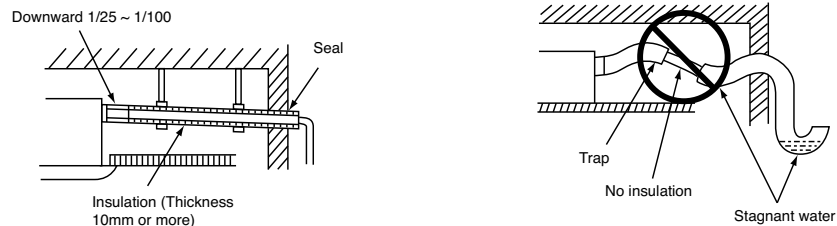
Be sure that the wire is not in contact with any metal in the wall. Please use the protection pipe as wire passing through the hollow part of the wall so as to prevent the possibility of damaged by mouse.

WARNING

Be sure to use protection pipe (commercial product). If connecting cables are touching metal lath inside the wall or inside the wall is hollow where mouse can bite cables, it can cause electrical shock or fire. If sealing is not complete, high humidity air from inside the wall or outside of the room can come in and cause water dripping.

Drain pipe installation

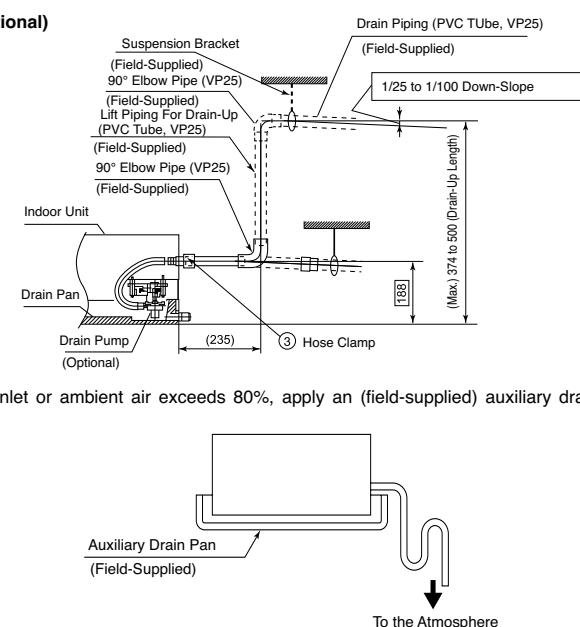
- Prepare polyvinyl chloride pipe with a 32mm outer diameter.
- Be sure to roll an insulation (thickness 10mm or more) for the drain pipe at indoor side.
- Always draw the drain pipe downward so that water flows smoothly. Fix it (ex. by hanger) to prevent a peak and trap.



- In case drain piping cannot be done smoothly due to obstacles, it can also be arranged outside of the main unit as shown in the drawing below.
- Maximum drain-up length shall not more than 500mm height.

Installation of Drain Pump (Optional)

- When the relative humidity of inlet or ambient air exceeds 80%, apply an (field-supplied) auxiliary drain pan beneath the indoor unit as shown below



3 Installation of Indoor Unit

Marking of the Positions of the Sling bolts and Piping Connections

1. Mark the positions of the sling bolts, refrigerant piping connections and drain connection.
2. Ceiling Work: it basically varies according to the building structure.

Consult with the architect or interior finish worker for more information on this.

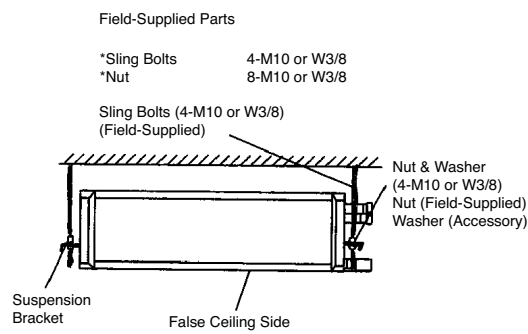
- (a) To maintain the appropriate levelness of the ceiling and preventing from the vibration, the additional reinforcement in the ground of ceiling (Building Frame) is essential.

Also, rubber cushion can be applied for the insufficient strength of the frame around the sling part on the ceiling.

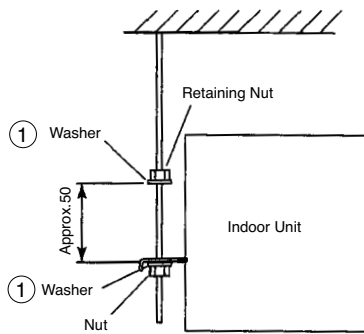
- (b) Provide a space for the air inlet grille, air outlet grille and maintenance work.
- (c) Do not suspend the indoor unit and electric light units from the same auxiliary supporting beams, and do not connect the suspension bolts on the indoor units. If connected, the light may flicker or the light unit may be rattled by vibration of the indoor units.

Mounting the indoor unit

Hanging indoor unit

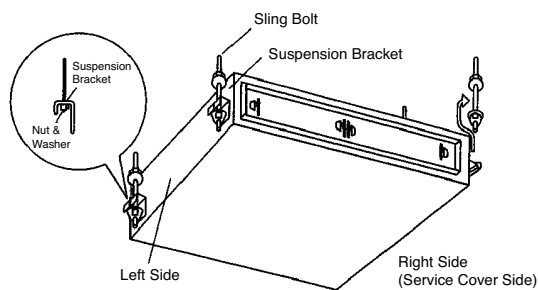


1. How to put Nuts or Sling Bolts
Put nuts on each of the four hanging bolts.



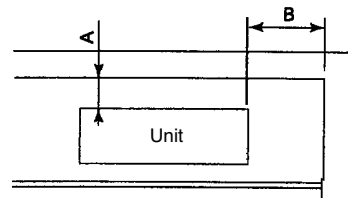
2. Hanging the Indoor unit

- Hook suspension bracket to the nut and washer of each hanging bolt, as shown, starting at the opposite side to service cover side.
- After checking that the nut and washer are correctly fixed by the retainers of the suspension bracket, hook the suspension bracket of the service cover side to the nut and washer. (Put the sling bolts away from the unit when hooking.)
- Piping and wiring work will be required in the ceiling after hanging the unit. Therefore, determine the drawing direction of pipe after selecting the installation location, particularly if the ceiling was existed. piping and wiring work should be carried out up to the connecting positions before hanging the unit.



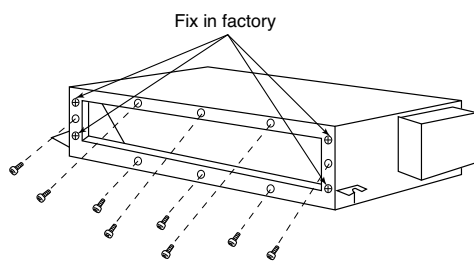
3. For reasons of the disaster prevention, the distance between under the roof and wall surface should be followed as shown in the below figure.

- Use the nonflammable material for the duct.



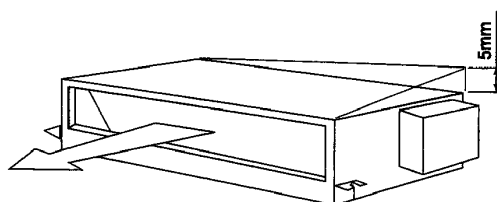
| | Material of the Wall, Frame | |
|---|-----------------------------|--------------|
| | Flammable | Nonflammable |
| A | Min. 100cm | Min. 10cm |
| B | Min. 60cm | Min. 5cm |

4. If decided to keep the flange at discharge side, fix screw ② at 8 positions. However, if decided not to keep the flange, remove 4 screws that fixed to the flange.



Adjusting of the Unit Level

1. Check to ensure that the foundation is flat, taking into account the maximum foundation gradient. If not, it will occur malfunction of float switch or not operation. Then it will drop the drain water from the ceiling.



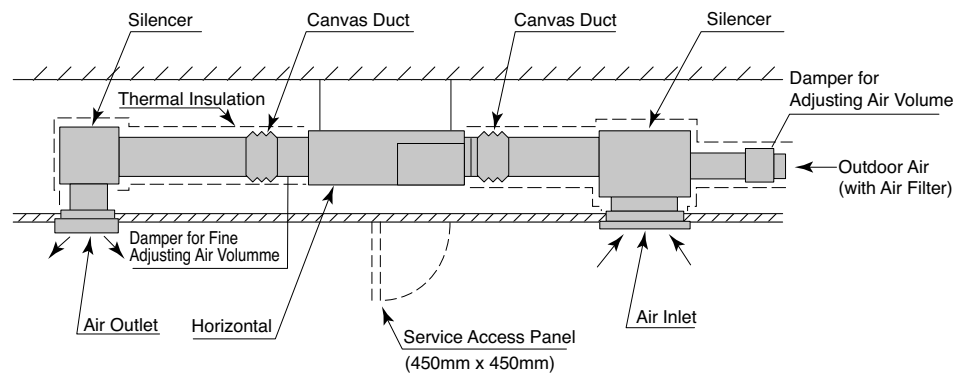
2. The unit should be installed so that the rear side of the unit is slightly (0mm to 5mm) lower than the front side, in order to avoid the incorrect position of the drain discharge.
 3. Tighten the bolts of the sling nuts with the suspension brackets after adjustment is completed. Special plastic paint must be applied to the bolts in order to prevent them from loosening.
- Keep the unit as well as relevant equipment covered with the vinyl cover during installation work.

Connecting Return Duct and Supply Duct

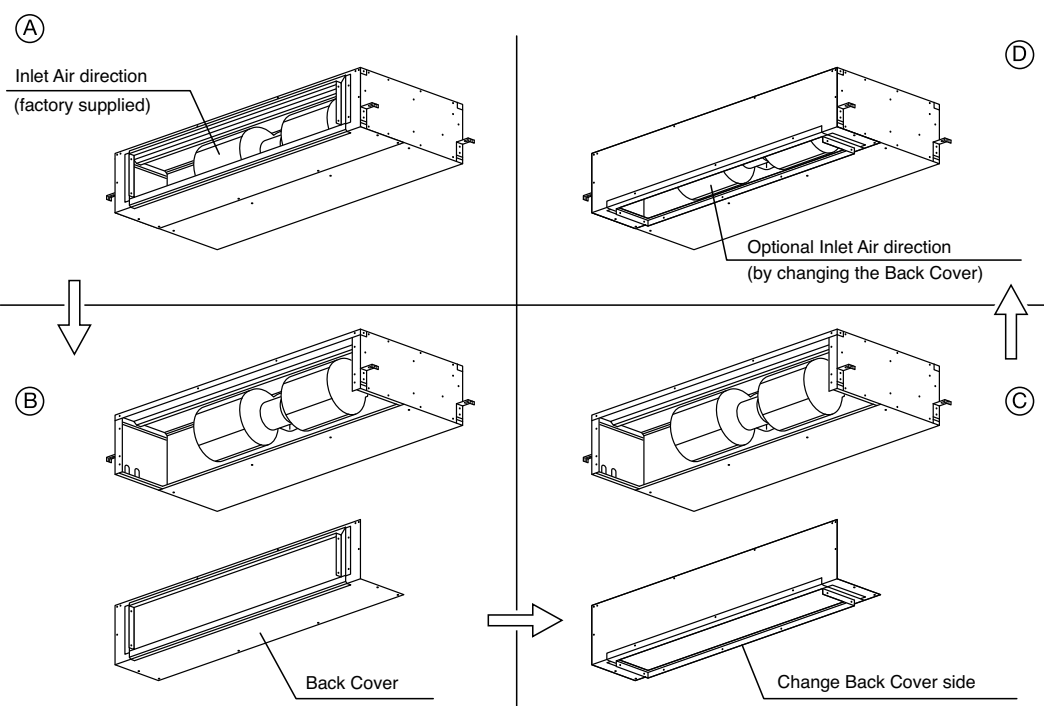
1. The return duct should be connected with the indoor through canvas ducts between inlet side of the indoor unit and ceiling of the room. The supply duct should be connected with the indoor unit through canvas ducts, in order to avoid abnormal sound vibration. The unit is equipped with a pre-drilled duct flange for the return and supply duct connection.
2. Attach the vibration proof rubber to Sling Bolt in order to avoid abnormal sound vibration.
3. Undamped natural frequency is 9 to 21 Hz.
4. Duct material should be non-flammable material.
5. Perform the heat insulation work over the duct and the duct flange for dew protection.

CAUTION

- If a lower sound level is further required, install silencer (field-supplied).
 - The facility design should be "Unit External static Pressure = Duct Pressure Loss Suction / Discharge Loss". If the duct pressure loss becomes under to the unit external static pressure, air speed will get larger and lead to the occurrence of louder noise, splashing water and activation of motor protection circuit, and if the unit external static pressure becomes under to the duct pressure loss, some problems such as inability to change the air speed may occur. Set the airflow control damper or shift the static pressure control switch to adjust to get almost equal level between the external static pressure and the duct pressure loss. (See "Setting of External Pressure" section for the details.)
 - Basically this unit is designed to install the ducts on the inlet side and the outlet side.
- Ask for more information for using the return ducts in the ceiling.



- Select the indoor unit position, fixing direction of air outlet so that cool/hot air reaches all the room. Standard position of the indoor unit is with the wall side on the ceiling.



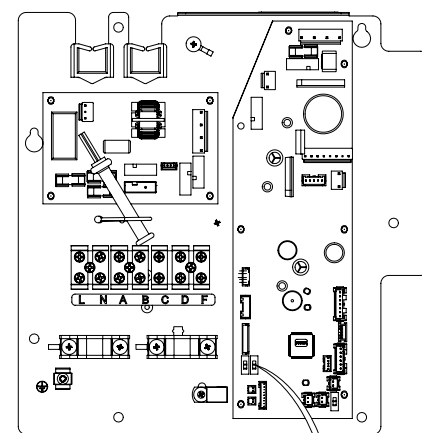
4 Connection of drain pipe

- (1) Securely glue connection part of drain hose and PVC pipe, using PVC adhesive.

CAUTION

- If gluing of drain hose and PVC pipe is too weak, water leakage may occur.

- (2) Be sure to wrap generally-available insulator (10mm or more of foamed polythylene) around drain hose, inside the house, for insulation heat.
- (3) Checking drain and water leakage. Perform after connecting power.
 - Add water to water pan of indoor unit.
- (4) Test run method
 - ① Turn power on
 - ② Remove lid of electric box and set the drain pump test run switch to TEST RUN.
 - ③ After checking the drainage, return the switch to NORMAL.
- (5) Perform test running of drain pump to check drainage operation.



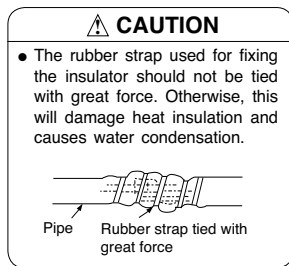
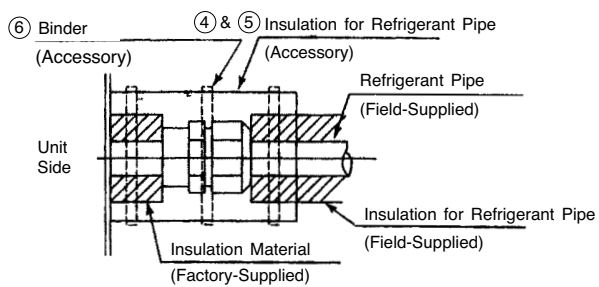
Drain pump test drive switch
 ↑ Normal
 ↓ Test

CAUTION

- If checking of drainage is omitted, water drop may occur.
- If drain pump test run is set to TEST RUN, drain pump may malfunction.

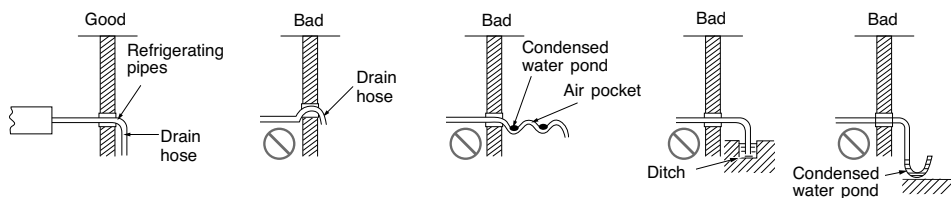
5 Pipe Connection

After connecting the refrigerant piping, seal the refrigerant pipes by using the factory-supplied insulation material.



6 Checking of drawing drain hose

- Connect the separate drain hose to the drain hose that is attached to the indoor unit.
- For keeping the smooth flowing of condensed water the drain hose should be inclined as shown in figure below.



CAUTION Please ensure the smooth flow of condensed water of the indoor unit during installation. (Carelessness may result in water leakage.)

CAUTION Be sure that the hose is not loosely connected or bent.

7 Checking procedure after installation

- Confirm the smooth water flowing from the drain hose by pouring some water into the evaporator pan.
- Arrange the penetrating part of the wall presentably with the bushing for refrigerating pipes and sealer which is belonging to the pipe set as shown in Fig. 7-1.

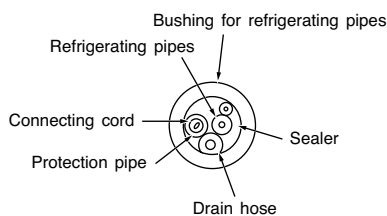


Fig. 7-1

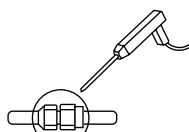


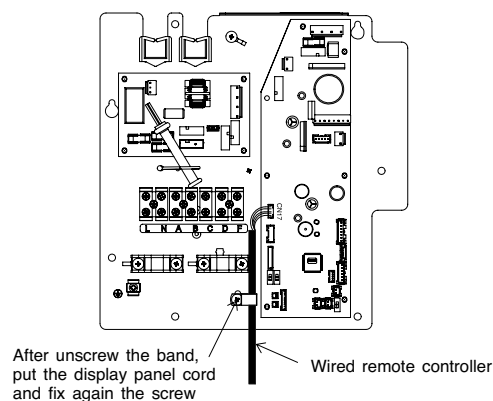
Fig. 7-2

CAUTION Be sure that the wire is not in contact with any metal in the wall. Please use the protection pipe as wire passing through the hollow part of the wall so as to prevent the possibility of damaged by mouse.

- Wind the inadhesive vinyl tape which is belonged to the pipe set round the refrigerating pipes and the connecting cord.
- Leakage checking of refrigerant at the coupling by gas leak detector or soapsuds, as shown in Fig. 7-2.
- Checking of evaporator coldness (cooling operation).
- Checking of warm wind from condenser (cooling operation)

8 Installation of wired remote controller

- Connection to the electrical box:
 - Remove the cover of electric box
 - Connect the connector of wired remote controller to CN17
 - Assemble back the cover of electrical box
- Wiring installation for wired remote controller (2 methods):
 - Wired remote controller casing can be opened by pressing the slots with minus screw driver (see below diagram)



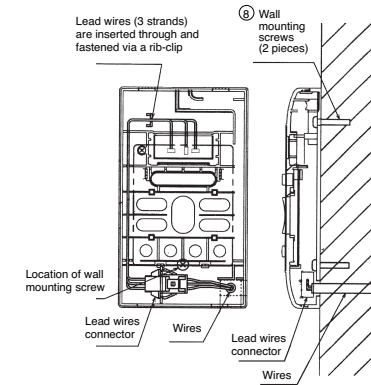
- Decide the fixing location of remote controller so that the length of wire shall be within 5 meters.

CAUTION Do not cut the provided wire. Excess wire should be properly wound and fitted at safe place. Do not join the wire with additional wire.

Wiring installation illustrations

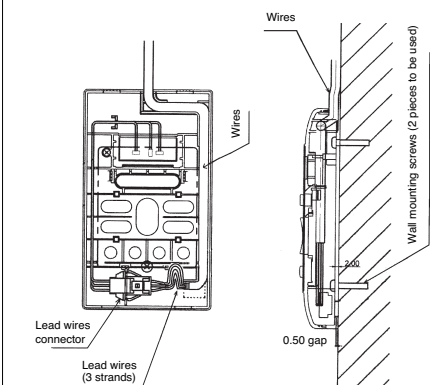
Wall recessed wiring installation (Supplied)

- When connecting the wires via the wall's recessed slot;
 - Fix the bottom casing to the wall by provided screw.
 - Assemble the top casing to the fixed bottom casing. (Refer to the illustration below for detail installation)



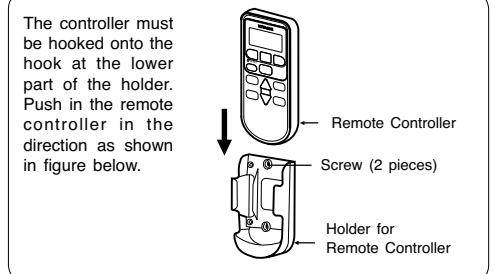
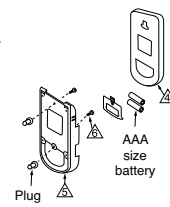
Inside top wiring installation (Alternative)

- When the wires to be connected from the inside top portion of top casing;
 - Break off a perforated aperture located at the top portion of the bottom casing by nipper. Smoothen the aperture by cutter.
 - Fix the bottom casing to the wall by provided screw.
 - Connect the wires to the lead wires connector.
 - Mount the wires through the provided slot on top casing.
 - Assemble the top casing to the fixed bottom casing (Refer to the illustration below for detail installation)



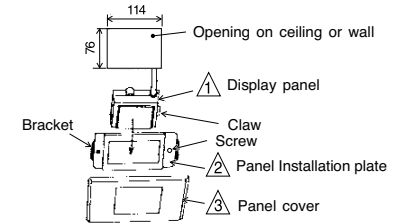
9 Installation of wireless remote controller (optional)

- The remote controller can be placed in its holder which is fixed on wall or beam.
- To operate the remote controller at its holder, please ensure that the unit can receive signal transmitted from the controller at the place where the holder is to be fixed. The unit will beep when signal is received from the remote controller. The signal transmission is weakened by the fluorescent light. Therefore, during the installation of the remote control holder, please switch on the light, even during day time, to determine the mounting location of the holder.

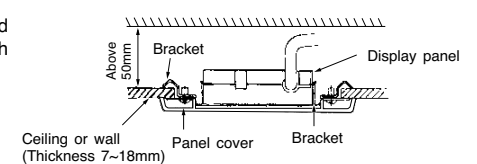


Installation of display panel (Optional)

- Select an installation position on ceiling or wall where there is no obstacle to interrupt signal reception.
- Loosen screws of panel installation plate so that bracket can be slightly moved.
- Match the display panel to panel installation plate so the fixing claws on the panel are securely hooked.
- Match brackets to the opening on ceiling or wall and tighten screws until bracket is firmly secured to ceiling material.
- Install the panel cover so inside claws are securely hooked to the panel installation plate.
- Conduct the indoor unit side housing of display panel cord to the electric box of the indoor unit and connect it with the housing at the side of the unit.



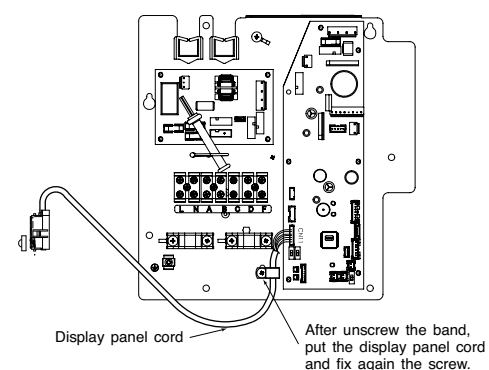
CROSS SECTION



CAUTION Please disconnect wired remote controller connector at CN17 if to use wireless remote controller.

Connection of discharge duct and display panel lead wires (Optional)

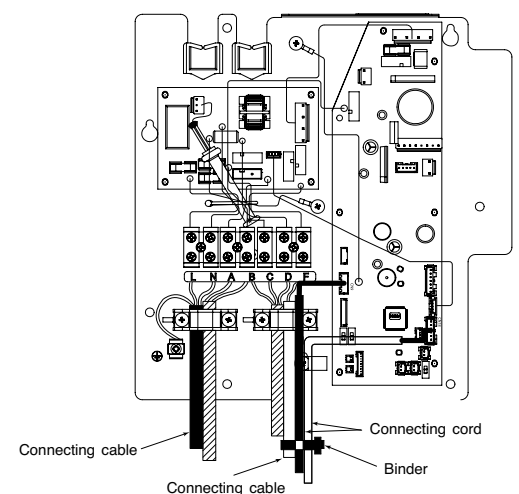
- Connect the motor connector of discharge duct to the connector CN8 (see diagram on the right).
- Attach the connector of this panel to the connector CN11 on the control PWB.
- Be sure to fix the motor lead wire of discharge duct using fixing band. (For full duct type and semi duct type connect only display panel.)



10 When connecting the HA System / H-Link

(Refer diagram below)

- A separately purchased HA Connection Cord (Service part component part number (RAS-N22V100)) is required to get connect to the HA-System.
- As for connecting to H-Link, a separately purchased RAC adapter is required.
- To install the wiring, the electrical box cover must be opened. (As for HA-System, connect to CN9 whereas for the RAC adapter, connect to CN18).
- The connection cord and power cables are to be arranged and tied up as per the diagram as shown below.
- Please refer to the respective user manuals of the H-System and the RAC adapter, for further details.
- Please refer to the user manual for instructions on the removal and installation of the electrical box.



11 Protection of lead wire

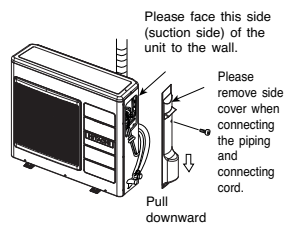
Wrap aluminum tape around PVC tube between electric box and indoor unit (cord band).

12 Operation test

- Please ensure that the air conditioner is in normal operating condition during the operation test.
- Explain to your customer the proper operation procedures as described in the user's manual.
- If the indoor unit does not operate, check to see that the connections are correct.

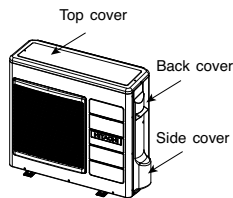
CAUTION Trial run should be conducted on one unit at a time to check for incorrect wiring of connecting cord.

- Please mount the outdoor unit on stable ground to prevent vibration and increase of noise level.
- Decide the location for piping after sorting out the different types of pipe available.
- Open the side plate by unscrewing the screws as shown below.



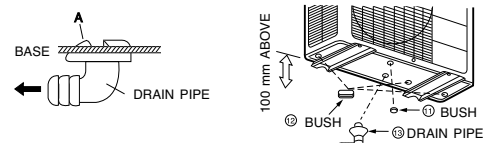
CAUTION

- Please make sure to remove all spacers inside the unit.
- Open the Top, Back and Side cover of the unit.
 - Pull out the spacers inside. (Spacers are only for transportation purpose).
 - If not remove, vibration and noise will occur.



CONDENSED WATER DISPOSAL OF OUTDOOR UNIT

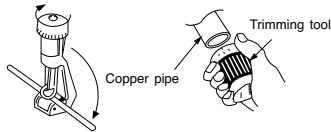
- There are holes on the base of Outdoor unit for condensed water to exhaust.
- In order to flow condensed water to the drain, the unit is installed on a stand or a block so that the unit is 100mm above the ground as shown figure. Join the drain pipe to one hole.
- At first insert one portion of the hook to the base (Portion A), then pull the drain pipe in the direction shown by the arrow while inserting the hook into the base. After installation, check whether the drain pipe cling to the base firmly.



- When using in cold region, etc. In cold region with severe cold climate and heavy snow, water discharged from heat exchanger freeze on the base surface and this may affect drainage. In such a region, remove bush on the bottom face of outdoor unit for better drainage. When using drainpipe, consult our dealer.

1 Preparation of Pipe

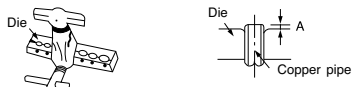
- Use a pipe cutter to cut the copper pipe.



CAUTION

- Jagged edge will cause leakage.
- Point the side to be trimmed downwards during trimming to prevent copper chips from entering the pipe.

- Before flaring, please put on the flare nut.



- Please use exclusive tool

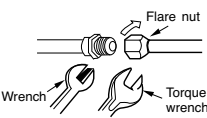
| Outer Diameter (mm) | A (mm) | |
|---------------------|-----------------------|--------------------|
| | Imperial flaring tool | Rigid flaring tool |
| 6.35 | 0.8 - 1.5mm | 0 - 0.5mm |
| 15.8 | 1.0 - 2.0mm | 0 - 1.0mm |

2 Pipe Connection

CAUTION

In case of removing flare nut of an indoor unit, first remove a nut of small diameter side, or a seal cap of big diameter side will fly out. Prevent water from entering into the piping when working.

- Please be careful when bending the copper pipe.
- Screw in manually while adjusting the center. After that, use of torque wrench to tighten the connection.

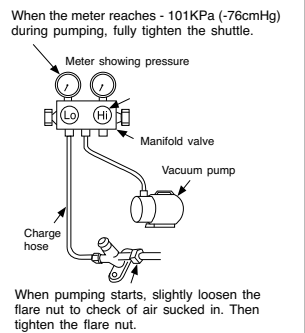


| | Outer dia. of pipe | Torque N-m (kgf·cm) |
|-----------------|------------------------------------|--|
| Small dia. side | 6.35 (1/4") | 13.7 - 18.6 (140 - 190) |
| Large dia. side | 15.88 (5/8") | 49.0 - 58.8 (500 - 600) |
| Valve head cap | Small dia. side Large dia. side | 19.0 - 21.0 (194 ~ 214) 29.0 - 31.0 (296 ~ 316) |
| Valve core cap | | 9.0 (92) |

3 Removal Of Air From The Pipe And Gas Leakage Inspection

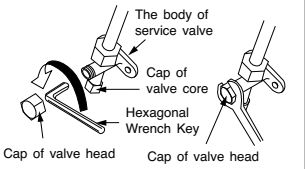
Procedures of using Vacuum Pump for Air Removal

- As shown in right figure, remove the cap of valve core. Then, connect the charge hose. Remove the cap of valve head. Connect the vacuum pump adapter to the vacuum pump and connect the charge hose to the adapter.



- Fully tighten the "Hi" shuttle of the manifold valve and completely unscrew the "Lo" shuttle. Run the vacuum pump for about 10-15 minutes, then completely tighten the "Lo" shuttle and switch off the vacuum pump.

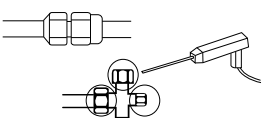
- Completely unscrew the spindle of the service valve (at 2 places) in anti-clockwise direction to allow the flow of coolant (using Hexagonal Wrench key).



- Remove the Charge hose and tighten the cap of valve head. Check the cap's periphery if there is any gas leakage. The task is then completed.

Gas Leakage Inspection

Please use gas leakage detector to check if leakage occurs at the connection of Flare nut as shown on the right.

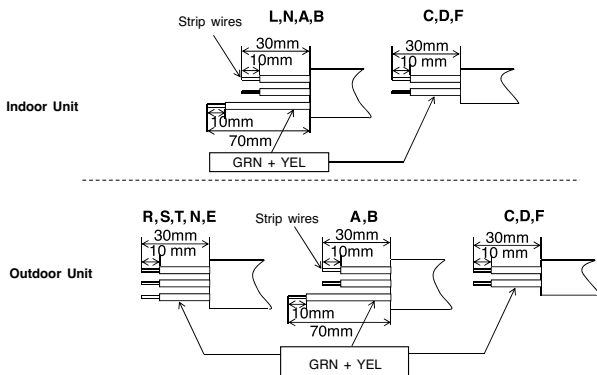
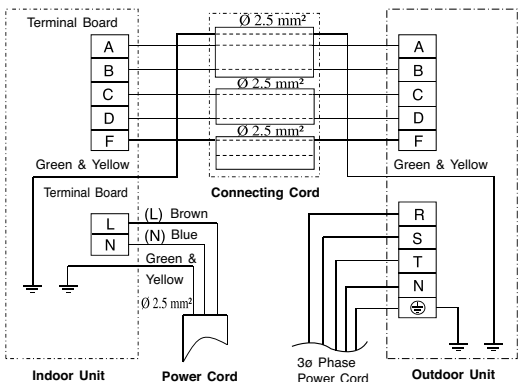


If gas leakage occurs, further tighten the connection to stop leakage.

WARNING • THIS APPLIANCE MUST BE EARTHED.

Procedures of Wiring

Power is supplied from Outdoor Unit



WARNING

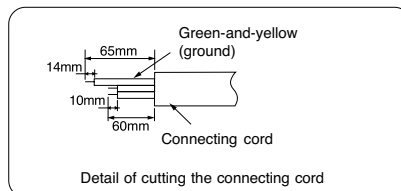
- The naked part of the wire core should be 10 mm and fix it to the terminal tightly. Then try to pull the individual wire to check if the contact is tight. Improper insertion may burn the terminal.
- Be sure to use only power cables approved from the authorities in your country. For example in Germany: Cable type: NYM 3x1.5mm², (fuse = 20A time delay)
- Please refer to the installation manual for wire connection to the terminals of the units. The cabling must meet the standards of electrical installation.
- There is a AC voltage of 220-240V between the L and N terminals (indoor unit) and 380V between R,S,T,N terminals (outdoor unit). Therefore, before servicing, be sure to remove the power cord from the AC outlet or switch off the main switch.
- Do not make any connection in the middle of the connecting power cord. It may cause the wire over heated, emit smoke and fire.

Wiring Of The Indoor Unit

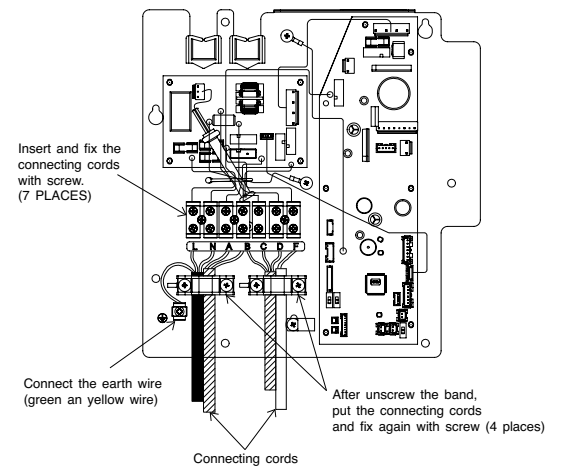
- For wire connection of the Indoor unit, you need to remove electrical cover.

Method to remove electrical cover

- Remove the cover of the electric box.
- Connect the connecting cords.
- Assemble the cover of electric box.



WARNING • THIS APPLIANCE MUST BE EARTHED.

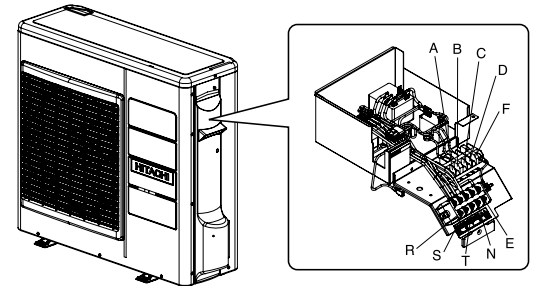


Wiring Of The Outdoor Unit

- Please remove the side cover for wire connection.

WARNING

- If you cannot attach the side cover due to the connecting cord, press the connecting cord in direction to the front panel to fix it.
- Be sure that the hooks of the side cover is fixed in certainly. Otherwise water leakage may occur and this causes short circuit or faults.
- The connecting cord should not touch to service valve and pipes. (It becomes high temperature in heating operation.)



Checking for the electric source and the voltage range

- Before installation, the power source must be checked and necessary wiring work must be completed. To make the proper wiring capacity, use the wire gauges list below for the lead-in from a pole transformer and for the wiring from a switch board of fuse box to the outlet in consideration of the locked rotor current.

IMPORTANT

| Cable length | Wire cross-section |
|--------------|--------------------|
| up to 15m | 2.5mm ² |
| up to 25m | 4.0mm ² |

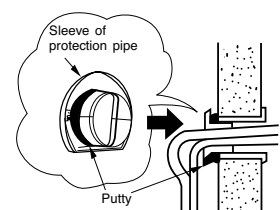
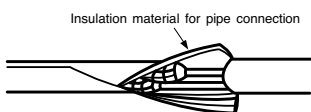
- Investigate the power supply capacity and other electrical conditions at the installation location. Depending on the model of room air conditioner to be installed, request the customer to make arrangements for the necessary electrical work etc. The electrical work includes the wiring work up the outlet. In localities where electrical conditions are poor, use of a voltage regulation is recommended.

IMPORTANT

| |
|---------------------|
| Fuse Capacity |
| 20A time delay fuse |

1 Insulation And Maintenance Of Pipe Connection

- The connected terminals should be completed sealed with heat insulator and then tied up with rubber strap.
- Please tie the pipe and power line together with vinyl tape as shown in the figure showing the installation of Indoor and Outdoor units. Then fix their position with holders.
- To enhance the heat insulation and to prevent water condensation, please cover the outdoor part of the drain hose and pipe with insulation pipe.
- Completely seal any gap with putty.



2 Power Source And Operation Test

Power Source

CAUTION

- Please use a new socket. Accident may occur due to the use of old socket because of poor contact.
- Please plug in and then remove the plug for 2 - 3 times. This is to ensure that the plug is completely plugged into the socket.
- Keep additional length for the power cord and do not render the plug under external force as this may cause poor contact.
- Do not fix the power cord with U-shape nail.