

HITACHI

Operation Installation & Maintenance Manual

*VRF AIR CONDITIONERS
(HEAT PUMP)*

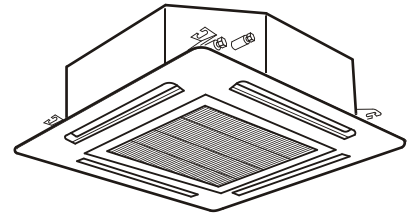
- INDOOR UNIT -

Type	Model	
4-Way Cassette	RCI-1.0FSKDN1Q	RCI-3.0FSKDN1Q
	RCI-1.5FSKDN1Q	RCI-4.0FSKDN1Q
	RCI-2.0FSKDN1Q	RCI-5.0FSKDN1Q
	RCI-2.3FSKDN1Q	RCI-6.0FSKDN1Q
	RCI-2.5FSKDN1Q	

This manual is exclusively prepared for R410A indoor unit. Please read this manual in conjunction with corresponding manual for outdoor unit.

IMPORTANT:

***READ AND UNDERSTAND
THIS MANUAL BEFORE
USING THE HEAT-PUMP
AIR CONDITIONER.
KEEP THIS MANUAL FOR
FUTURE REFERENCE.***



P01977Q

ORIGINAL INSTRUCTIONS



Declaration of Conformity (Manufacturer's Declaration)



Qingdao Hisense Hitachi Air-conditioning Systems Co., Ltd.

Add.: No. 218, Qianwangang Road, Economic and Technological Development Zone, Qingdao, China
declares under its sole responsibility that the air conditioning models to which this declaration relates:

RCI-1.0FSKDN1Q, RCI-1.5FSKDN1Q, RCI-2.0FSKDN1Q, RCI-2.3FSKDN1Q, RCI-2.5FSKDN1Q,
RCI-3.0FSKDN1Q, RCI-4.0FSKDN1Q, RCI-5.0FSKDN1Q, RCI-6.0FSKDN1Q

are in conformity with the following standard(s) or other normative document(s), provided that these
are used in accordance with our instructions:

EN 60335-1:2012/A2:2019
EN 60335-2-40:2003/A13:2012
EN 62233:2008
EN 55014-1:2017+A11:2020
EN IEC 61000-3-2:2019
EN 61000-3-3:2013+A1:2019
EN 55014-2:2015

following the provisions of:

2006/42/EC
2014/30/EU
2012/19/EU
2011/65/EU
2014/35/EU
1907/2006/EC

Directives, as amended.

Manufacturing number and manufacturing year: refer to model Nameplate.

Notes:

This declaration becomes invalid, if technical or operational modifications are introduced
without the manufacturer's consent.

Johnson Controls Hitachi Air Conditioning Europe SAS is authorized to compile technical file or
relevant technical documentation.

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HITACHI

Name, Surname : *Song Zhenxing*

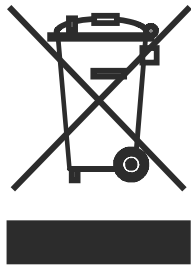
Position/ Title : Director

Date : Oct. 29, 2021

Specifications in this manual are subject to change without notice in order that HITACHI may bring the latest innovations to their customers.

Whilst every effort is made to ensure that all specifications are correct, printing errors are beyond HITACHI's control; HITACHI cannot be held responsible for these errors.

IMPORTANT NOTICE



Correct Disposal of this product

This marking indicates that this product should not be disposed with other household wastes. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmentally safe recycling.

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1 GENERAL INFORMATION

1.1 GENERAL NOTES

No part of this publication may be reproduced, copied, filed or transmitted in any shape or form without the permission of Qingdao Hisense Hitachi Air-conditioning Systems Co., Ltd.

Within the policy of continuous improvement of its products, Qingdao Hisense Hitachi Air-conditioning Systems Co., Ltd. reserves the right to make changes at any time without prior notification and without being compelled to introducing them into products subsequently sold. This document may therefore have been subject to amendments during the life of the product.

HITACHI makes every effort to offer correct, up-to-date documentation. Despite this, printing errors cannot be controlled by HITACHI and are not its responsibility.

As a result, some of the images or data used to illustrate this document may not refer to specific models. No claims will be accepted based on the data, illustrations and descriptions included in this manual.

No type of modification must be made to the equipment without prior, written authorisation from the manufacturer.

1.2 PRODUCT GUIDE

1.2.1 Prior check



NOTE

Check, depending on the name of the model, the type of air conditioning system fitted, the abbreviated code and reference in this instruction manual. This Manual only refers to RCI-(1.0- 6.0)FSKDN1Q units.

Check, in accordance with the Manuals included with the outdoor and indoor units, that all the information necessary for the correct installation of the system is included. If this is not the case, please contact your distributor.

1.3 SAFETY

1.3.1 Symbols used

During normal air conditioning system design work or unit installation, greater attention must be paid in certain situations requiring particular care in order to avoid injuries and damage to the unit, the installation or the building or property.

Situations that jeopardise the safety of those in the surrounding area or that put the unit itself at risk will be clearly indicated in this manual.

To indicate these situations, a series of special symbols will be used to clearly identify these situations.

Pay close attention to these symbols and to the messages following them, as your safety and that of others depends on it.



DANGER

- *The text following this symbol contains information and instructions relating directly to your safety and physical wellbeing.*
- *Not taking these instructions into account could lead to serious, very serious or even fatal injuries to you and others in the proximities of the unit.*

In the texts following the danger symbol you can also find information on safe procedures during unit installation.



CAUTION

- *The text following this symbol contains information and instructions relating directly to your safety and physical wellbeing.*
- *Not taking these instructions into account could lead to minor injuries to you and others in the proximities of the unit.*
- *Not taking these instructions into account could lead to unit damage.*

In the texts following the caution symbol you can also find information on safe procedures during unit installation.



NOTE

- *The text following this symbol contains information or instructions that may be of use or that require a more thorough explanation.*
- *Instructions regarding inspections to be made on unit parts or systems may also be included.*

1.3.2 Additional information about safety

DANGER

- **HITACHI is not able to foresee all the circumstances which may result in a potential danger.**
- **Do not pour water in the indoor or outdoor unit. These products are fitted with electric components. If water comes into contact with electric components, this will cause a serious electric shock.**
- **Do not handle or adjust the safety devices inside the indoor and outdoor units. The handling or adjustment of these devices may result in a serious accident.**
- **Do not open the service cover or access panel of the indoor and outdoor units without disconnecting the main supply.**
- **In the event of fire, switch off the mains, put out the fire immediately and contact your service supplier.**
- **Check that the earth cable is correctly connected.**
- **Connect the unit to a circuit breaker of the specified capacity.**

CAUTION

- Refrigerant leaks may hinder respiration as the gas displaces the air in the room. It is assumed that this heat pump air conditioner will be operated and serviced by English speaking people. If this is not the case, the customer should be add safety, caution and operating signs in the native language.
- Fit the indoor unit, the outdoor unit, the remote control and the cable at a minimum of 3 metres away from sources of strong radiation from electromagnetic waves, such as medical equipment.
- Do not use sprays, such as insecticides, varnishes or enamels or any other inflammable gas within a metre of the system.
- If the circuit breaker or supply fuse of the unit comes on frequently, stop the system and contact the service supplier.
- Do not carry out maintenance or inspection work yourself. This work must be carried out by qualified service personnel with suitable tools and resources for the work.
- Do not place any foreign material (branches, sticks, etc.) in the air inlet or outlet of the unit. These units are fitted with high speed fans and contact with any object is dangerous.

- This appliance must be used only by adult and capable people, having received the technical information or instructions to handle this appliance properly and safely.
- Children should be supervised to ensure that they do not play with the appliance.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- Means for disconnection from the supply mains, which have a contact separation in all poles that provide full disconnection under overvoltage category III conditions, must be incorporated in the fixed wiring in accordance with the wiring rules.
- The appliance shall be installed in accordance with national wiring regulations. The maximum working pressure is 4.15MPa. This maximum working pressure shall be considered when connecting the indoor unit to outdoor unit.
- The indoor unit is suitable for refrigerant R410A only and shall only be connected to outdoor unit suitable for the same refrigerant (R410A). Please refer to the instruction manual of the outdoor unit to be used combined with the indoor unit for the refrigerant charging.
- The unit is a partial unit air conditioner, complying with partial unit requirements of the International Standard, and must only be connected to other units that have been confirmed as complying with corresponding partial unit requirements of the International Standard.

NOTE

- The air in the room should be renewed and the room ventilated every 3 or 4 hours.
- The system fitter and specialist shall provide anti-leak safety in accordance with local regulations.
- The installer and system specialist shall secure safety against the refrigerant leakage according to local regulations or standards. The following standards may be applicable, if local regulations are not available. International Organization for Standardization, ISO5149 or European Standard, EN378 or Japan Standard, KHK0010.

1.4 IMPORTANT NOTICE

This air conditioner has been designed for standard air conditioning for human beings. For use in other applications, please contact your HITACHI dealer or service contractor.

The air conditioning system should only be installed by qualified personnel, with the necessary resources, tools and equipment, who are familiar with the safety procedures required to successfully carry out the installation.

PLEASE READ THE MANUAL AND THE FILES ON THE CD-ROM CAREFULLY BEFORE STARTING WORK ON THE INSTALLATION OF THE AIR CONDITIONING SYSTEM.

Failure to observe the instructions for installation, use and operation described in this documentation may result in operating failure including potentially serious faults, or even the destruction of the air conditioning system.

It is assumed that the air conditioning system will be installed and maintained by responsible personnel trained for the purpose. If this is not the case, the customer should include all the safety, caution and operating signs in the native language of the personnel responsible.

Do not install the unit in the following places, as this may lead to a fire, deformities, rusting or faults

Places where oil is present (including oil for machinery).

Places with a high concentration of sulphurous gas, such as spas.

Places where flammable gases may be generated or circulate

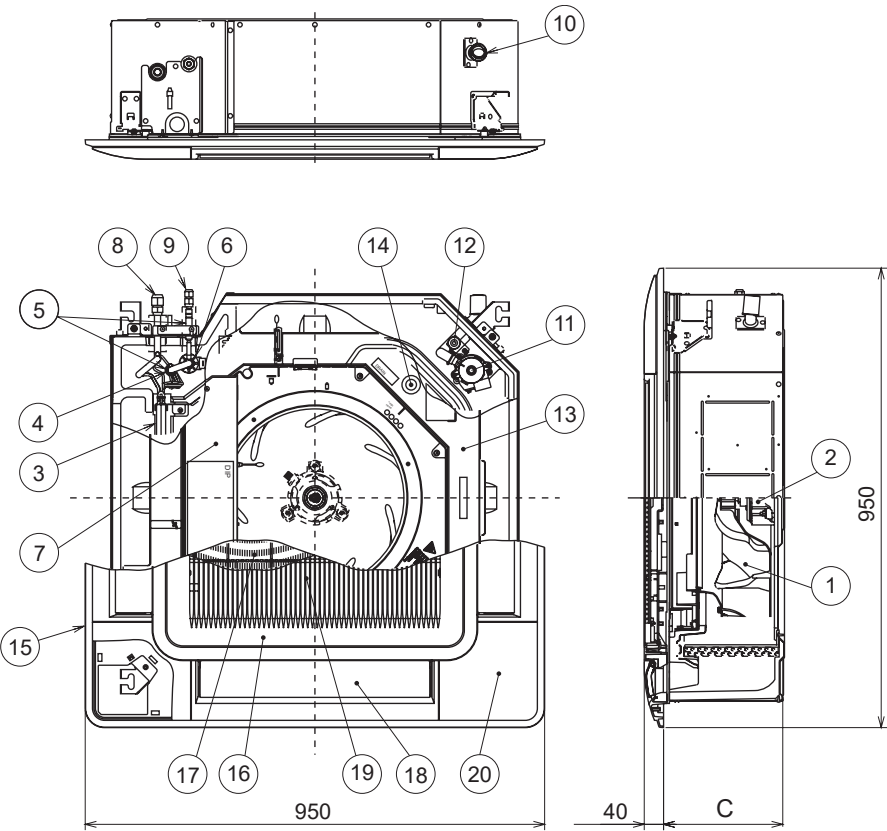
Places with a saline, acidic or alkaline atmosphere.

Do not install the unit in places where silicon gas is present.

Any silicon gas deposited on the surface of the heat exchanger will repel water. As a result, the condensate water will splash out of the collection tray and into the electrical box. Water leaks or electrical faults may eventually be caused.

Do not install the unit in a place where the current of expelled air directly affects animals or plants as they could be adversely affected.

2 NAME OF PARTS



Item.	Part Name	
1	Fan	
2	Fan Motor	
3	Heat Exchanger	
4	Distributor	
5	Strainer	
6	Micro-Computer Control Expansion Valve	
7	Electrical box	
8	Refrigerant Gas Pipe Connection	
9	Refrigerant Liquid Pipe Connection	
10	Drain Pipe Connection	
11	Drain Discharge Mechanism	
12	Float Switch	
13	Drain Pan	
14	Rubber Plug for Drain	
15	Air PanelP-N23NA2	
16	Air Inlet Grille	
17	Air Filter	
18	Air Outlet	
19	Air Inlet	
20	Cover for Corner Pocket	
C	RCI(1.0-2.5): 238	RCI(3.0-6.0): 288

3 INDOOR UNIT INSTALLATION

DANGER

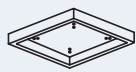
- Check to ensure that the accessories are packed with the indoor unit.
- Do not install the indoor units outdoors. If installed outdoors, an electric hazard or electric leakage will occur.
- Consider the air distribution from each indoor unit to the space of the room, and select a suitable location so that uniform air temperature in the room can be obtained. The unit must not be installed below 2.3 metres from the floor level, with a recommended installation height between 2.3 and 3 metres from the floor level. If the unit is installed higher than 3 meters, it is also recommended that a fan be utilised to obtain uniform air temperature in the room.
- Avoid obstacles which may hamper the air intake or the air discharge flow.
- Pay attention to the following points when the indoor units are installed in a hospital or other places where there are electronic waves from medical equipment, etc.
- Do not install the indoor units where electromagnetic wave is directly radiated to the electrical box, remote control cable or remote control switch.
- Prepare a steel box and install the remote control switch in it. Prepare a steel conduit tube and wire the remote control cable in it. Then connect the ground wire with the box and tube.
- Install a noise filter when the power supply emits harmful noises.
- This unit is exclusive non electrical heater type indoor unit. It is prohibited to install a electrical heater in the field.
- Do not put any foreign material into the indoor unit and check to ensure that none exist in the indoor unit before the installation and test running. Otherwise a fire or failure, etc., may occur.

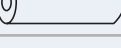
CAUTION

- Do not install the indoor units in a flammable environment to avoid a fire or an explosion.
- Check to ensure that the ceiling slab is strong enough. If not strong enough, the indoor unit may fall down on you.
- Do not install the indoor units in a machinery shop or kitchen where vapor from oil or mist flows to the indoor units. The oil will deposit on the heat exchanger, thereby reducing the indoor unit performance, and may deform. In the worst case, the oil damages the plastic parts of the indoor unit.
- To avoid any corrosive action to the heat exchangers, do not install the indoor units in an acid or alkaline environment.
- When lifting or moving the indoor unit, use appropriate slings to avoid damage and be careful not to damage the insulation material on units surface.

3.1 UNIT INSTALLATION

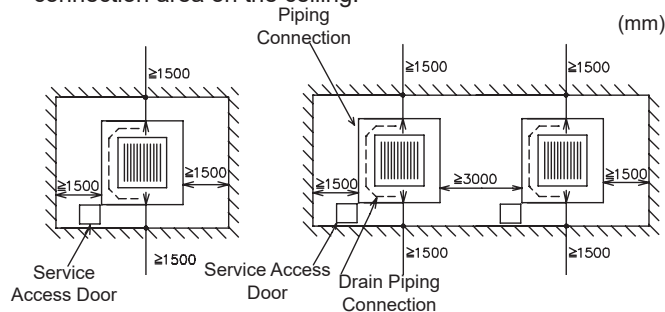
3.1.1 Factory-Supplied Accessories

Accessory		Qty.	Purpose
Pattern Board (Carton Board)		1	For adjusting space of false ceiling opening and position of the unit
Checking Scale		1	
Washer with Insulation Material (M10)		4	For unit installation
Washer (M10)		4	
Drain Hose		1	For Drain Hose Connection
Hose Clamp		1	

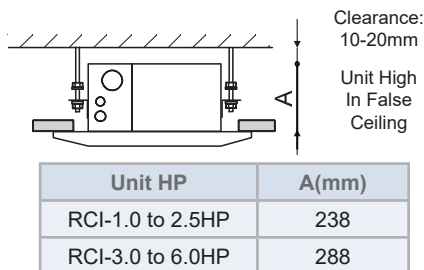
Accessory		Qty.	Purpose
Pipe insulation		1	For refrigerant piping connection
Pipe insulation		1	
Cord clamp		2	For fixing remote control switch wiring, louver sensor and insulation of piping
Cord clamp		6	
Insulation (5Tx50x200)		1	For covering wiring connection
Insulation (5Tx270x270)		1	For covering drain connection

3.1.2 Initial Check

- Install the indoor unit with a proper clearance around it paying careful attention of installation direction for the piping, wiring and maintenance working space, as shown below.
- Provide a service access door near the unit piping connection area on the ceiling.



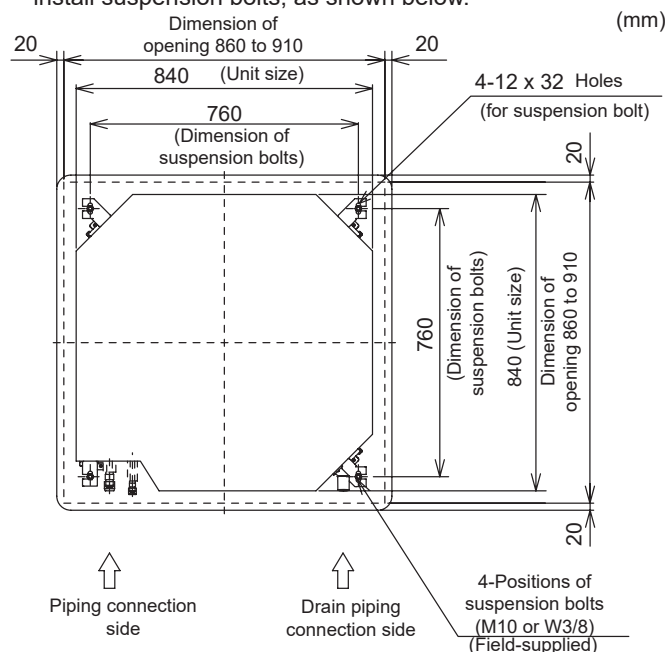
- Check space between ceiling and false ceiling is enough as indicated below.
- Check the ceiling surface is flat for the air panel installation work.



Check down slope Pitch of Drain Piping is following the specifications indicated in chapter "5 DRAIN PIPING".

◆ Opening Of False Ceiling

- Cut out the area for the indoor unit in the false ceiling and install suspension bolts, as shown below.

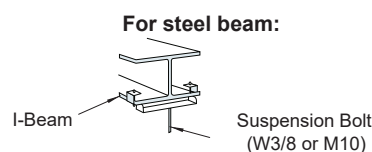
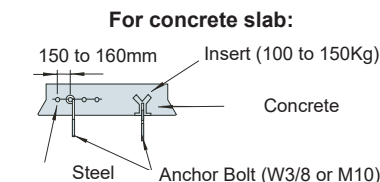


- Check to ensure that the ceiling is horizontally level, otherwise water can not flow .
- Strengthen the opening parts of the false ceiling.

3.1.3 Installation

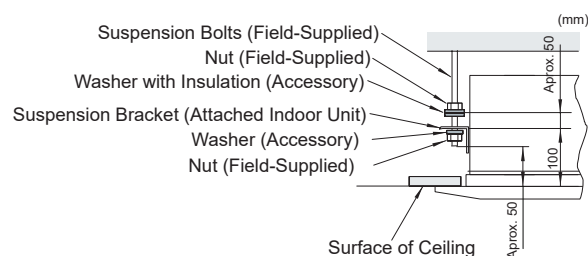
◆ Mounting of Suspension Bolts

Mount suspension bolts using M10 (W3/8) as size, as shown.

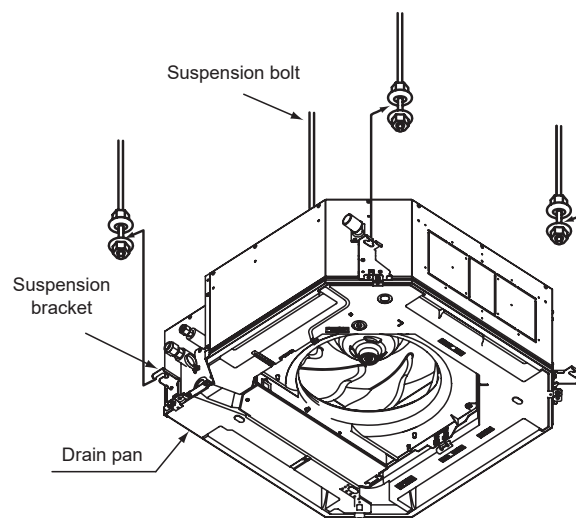


◆ Mounting of Indoor Unit

- Mount the nuts and the washers to the suspension bolts. Put the washer so that the surface with insulation can faces downwards as shown below:



- Consider piping connection side before lift indoor unit.
- Lift the indoor unit by hoist, and do not put any force on the drain pan.
- Secure the indoor unit using the nuts and washers.

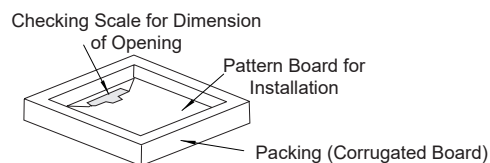


i NOTE

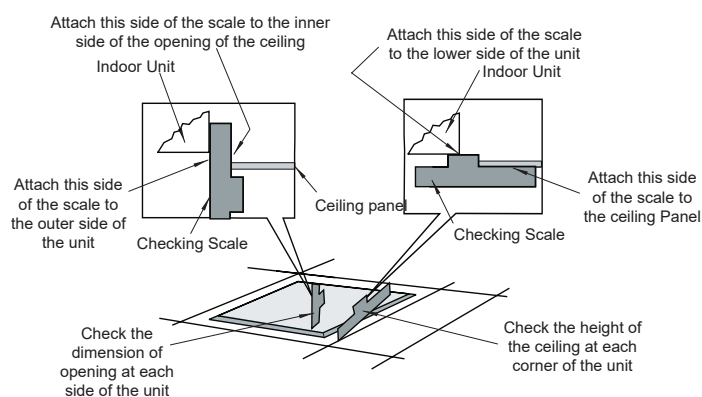
- If a false ceiling has already been installed, complete all piping and wiring work inside the ceiling before hooking-up the indoor unit.
- Secure the indoor unit using the nuts, and flat washers.

◆ Adjusting of Space Between Indoor Units and False Ceiling Opening

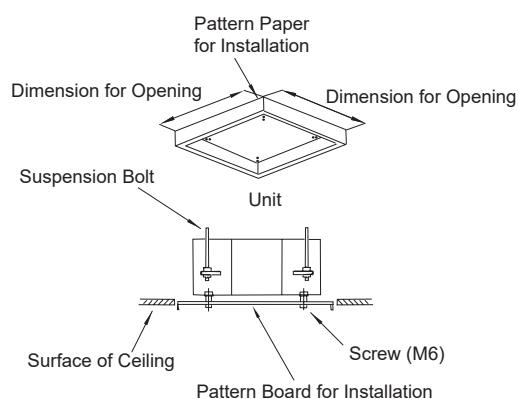
- Adjust the indoor unit to the correct position while checking with the pattern for installation.



◆ For ceiling already completed with panels.



◆ Ceiling not completed with panels yet.

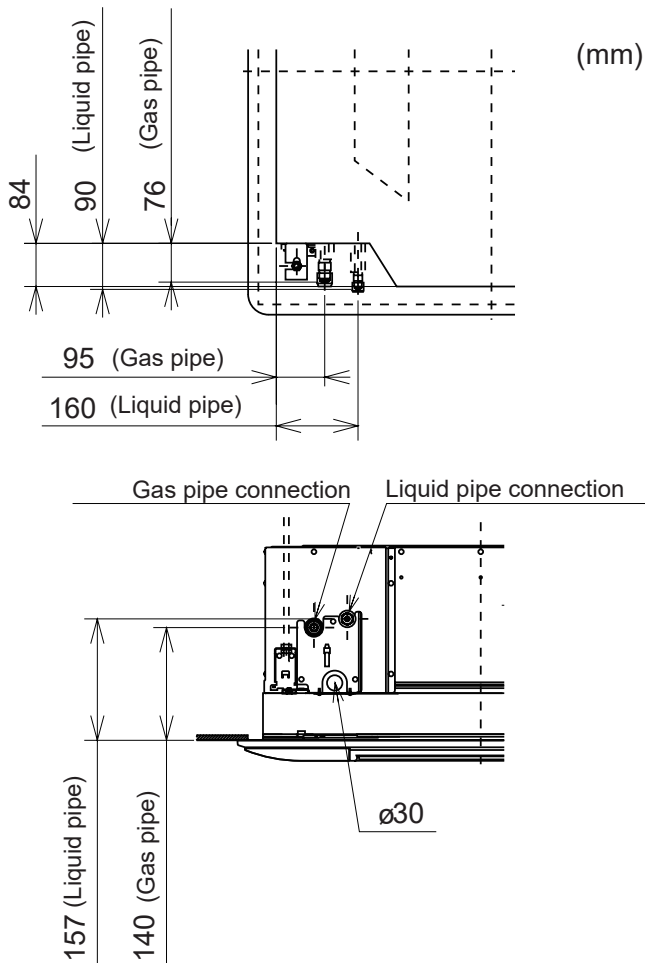


- Tighten the nuts of the suspension brackets after the adjustment is completed. Apply LOCK-TIGHT paint to the bolts and nuts in order to prevent them from loosening. If not done, abnormal noises or sounds may occur and the indoor unit may come loose.

4 REFRIGERANT PIPING

4.1 PIPING CONNECTION

4.1.1 Piping Position



4.1.2 Size of piping connection

◆ Piping size

	mm (in)	
	Liquid piping	Gas piping
RCI-(1.0-2.0)	Ø 6.35 (1/4)	Ø 12.70 (1/2)
RCI-(2.3-6.0)	Ø 9.52 (3/8)	Ø 15.88 (5/8)

◆ Thickness of Copper Pipes

Ø (in)	Ø (mm)	Thickness (mm)
1/4	6.35	0.80
3/8	9.53	0.80
1/2	12.70	0.80
5/8	15.88	1.00

Flare Pipe Dimensions

	Ø (in)	Ø (mm)	A +0/-0.4 (mm)
	1/4	6.35	9.1
	3/8	9.52	13.2
	1/2	12.70	16.6
	5/8	15.88	19.7

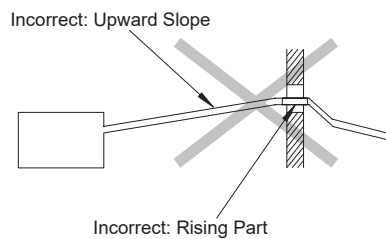
◆ Flare Nut Dimensions

	Nominal diameter (in)	Nominal diameter (mm)	B (mm)
	1/4	6.35	17
	3/8	9.53	22
	1/2	12.70	26
	5/8	15.88	29

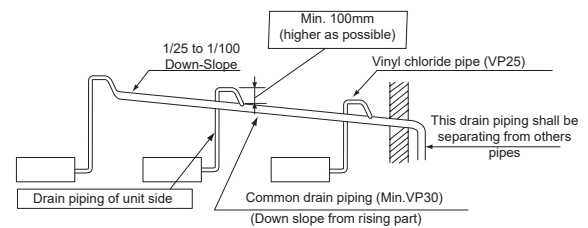
5 DRAIN PIPING

5.1 GENERAL INFORMATION

INCORRECT



CORRECT



⚠ CAUTION

- Do not create an upper-slope or rise for the drain piping, since drain water will flow back to the unit and leakage to the room will occur when the unit operation is stopped.
- Do not connect the drain pipe with sanitary or sewage piping or any other drainage piping.
- When the common drain piping is connected with other indoor units, the connected position of each indoor unit must be higher than the common piping. The pipe size of the common drain pipe must be large enough according to the unit size and number of unit.
- Drain piping will require insulating if the drain is installed in a location where condensation forming on the outside of drain pipe may drop and cause damage. The insulation for the drain pipe must be selected to insure vapor sealing and prevent condensation forming.
- Drain trap should be installed next to indoor unit. This trap must be designed to good practice and be checked with water (charged) and tested for correct flow. Do not tie or clamp the drain pipe and refrigerant pipe together.

i NOTE

Install drainage in accordance with national and local codes.

After performing drain piping work and electrical wiring, check to ensure that water flows smoothly as in the following procedure

◆ Checking with Drain-Up Mechanism and Float Switch

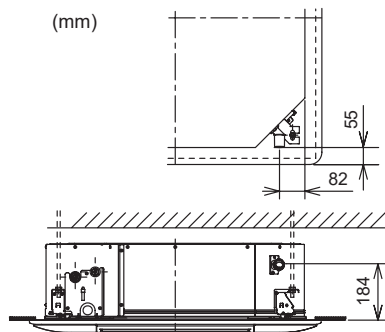
- Switch ON the power supply.
- Pour approximately 2.0 to 2.5 liters of water gradually into the drain pan, then float switch up and drain pump start working automatically.
- Check to ensure that the water flows smoothly inside the transparent drain pipe connection whether no water leakage occurs. When water cannot be found at the end of the drain piping, pour more water smoothly into the drain pan.
- If the water overflows from the drain pan, recheck the drain piping.
- Switch OFF the power supply after.

i NOTE

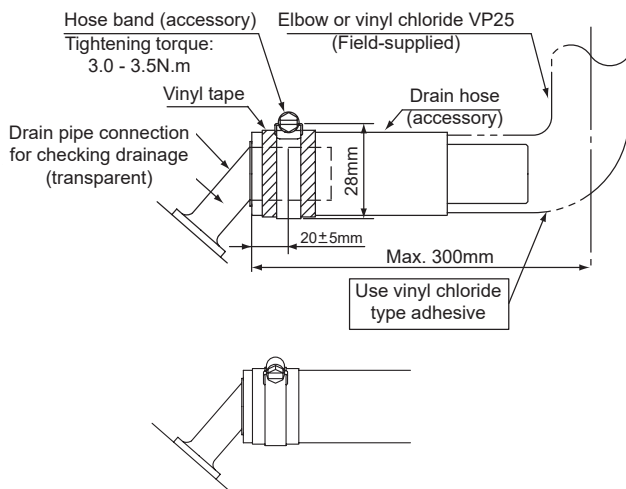
Pay attention to the thickness of the insulation when the left side piping is performed. If it is too thick, piping can not be installed in the unit.

5.2 DRAIN PIPE CONNECTION

- 1 The position of the drain pipe connection is shown below

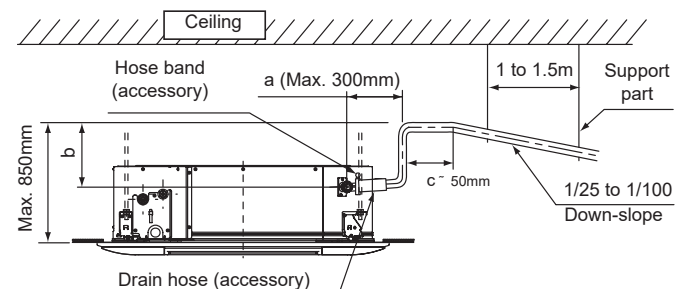


- 2 Prepare a polyvinyl chloride pipe with a 32mm outer diameter.
- 3 Fasten the tubing to the drain hose with an adhesive and the factory-supplied clamp.



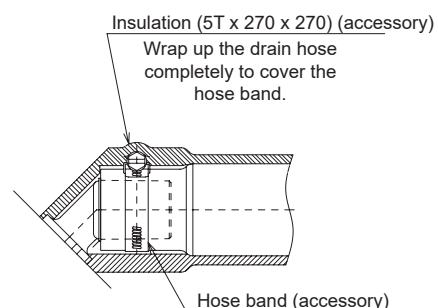
- 4 The drain piping must be performed with a down-slope pitch of 1/25 to 1/100.

- 5 $a+b+c \leq 1100\text{mm}$



- 6 Do not apply excessive force to the Drain Pipe connection. It could cause a damage.
- 7 Do not use a bent or twisted Drain Hose. It will cause water leakage.
- 8 Insulate the drain pipe after connecting the drain hose.

(mm)



i NOTE

If there is excessive clearance between the drain pipe connection and the drain hose, add a sealing material between both parts in order to fit and not deform the drain hose.

6 ELECTRICAL WIRING

6.1 GENERAL INFORMATION

DANGER

- Turn off the main power switch to the indoor unit and the outdoor unit and wait for at least 10 minutes before electrical wiring work or a periodical check is performed.
- Check to ensure that the indoor fan and the outdoor fan have stopped before electrical wiring work or a periodical check is performed.
- Protect the wires, drain pipe, electrical parts, etc. from rats or other small animals. If not protected, rats may gnaw at unprotected parts and at the worst, a fire will occur.

CAUTION

- Install an ELB (Earth Leakage Breaker) in the power source line.
- Use twisted shielded pair cable or shield pair cable for transmission wires between the indoor and the outdoor units, and connect the shielded part to the earth screw in the electrical box of the indoor unit as shown below.
- Wrap the field supplied insulation around the wires, and plug the wiring connection hole with the seal material to protect the product from any condensate water or insects.
- Tightly secure the wires with the cord clamp inside the indoor unit.
- Lead the wires through the knockout hole in the side cover when using conduit.
- Secure the cable of the remote control switch using the cord clamp inside the electrical box.

◆ General Check

- 1 Make sure that the field-selected electrical components (main power switches, circuit breakers, wires, conduit connectors and wire terminals) have been properly selected. Make sure that the components follow local codes and regulations.
- 2 Check to ensure that the power supply voltage is within +/- 10% of the rated voltage.
- 3 Check the capacity of the electrical wires. If the power source capacity is too low, the system cannot be started due to the voltage drop.
- 4 Field Minimum Wire Sizes for Power Source.

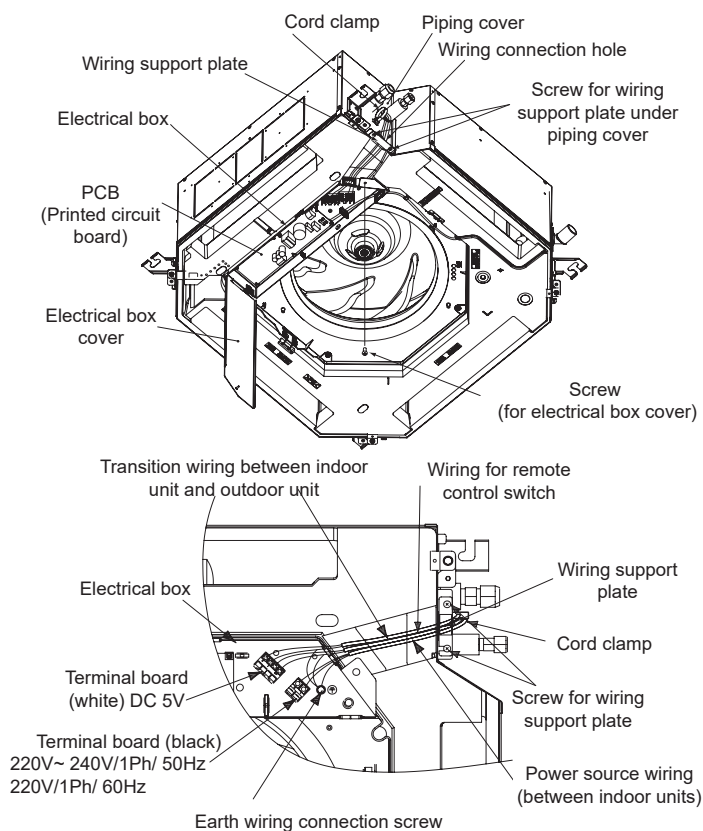
Total Current (A)	Wire (mm ²)	※1 DO NOT connect wires in series when the current exceeds 63A.
$I \leq 6$	2.5	
$6 < I \leq 10$	2.5	
$10 < I \leq 16$	2.5	
$16 < I \leq 25$	4	
$25 < I \leq 32$	6	
$32 < I \leq 40$	10	
$40 < I \leq 63$	16	
$63 < I$	※1	

Note:

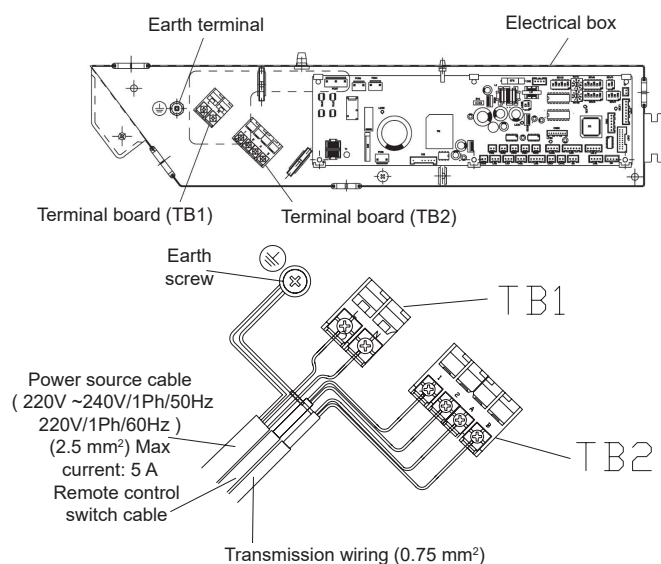
- (1) Field wiring shall be in conformity to local laws and regulations, and all wiring operations must be performed by qualified professionals.
 - (2) Refer to relevant standards for above-noted power cord size.
 - (3) Where power cord is connected through junction box, be sure to determine the total current and choose wires based on the table below.
 - (4) As a minimum, the chosen power cord shall be compliant with requirements on neoprene sheathed wire #57 as stated in IEC 60245-1, while the power cord shall be made from copper conductor.
 - (5) The wiring specifications for weak-current communication circuit shall not be lower than that for RVV(S)P shielded wires or equivalent, and the shielding layer shall be grounded.
 - (6) A switch that can ensure all-pole disconnection shall be installed between power supply and air conditioning unit in such a manner that the contact spacing shall not be less than 3mm.
 - (7) Once the power cord is damaged, the dealer or the professionals from designated maintenance department must be contacted in a timely manner for repair and replacement.
 - (8) For the installation of power cord, the ground wire must be longer than the current-carrying conductor.
- 5 Check to ensure that the ground wire is connected.

6.2 ELECTRICAL WIRING CONNECTION FOR INDOOR UNIT

- 1 The electrical wiring connection for the indoor unit is shown below.

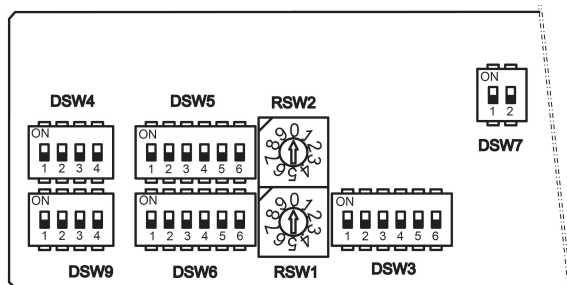


- 2 Remove the electrical box cover (1 screw).
- 3 Loosen two (2) screws for the wiring support plate.
- 4 Connect the cable of an optional remote control switch or an optional extension cable to the terminals inside the electrical box through the connecting hole in the cabinet.
- 5 Connect the power supply and earth wires to the terminals in the electrical box.
- 6 Connect the wires between the indoor unit and the outdoor unit to the terminals in the electrical box.



6.3 SETTINGS OF DIP SWITCHES

◆ Quantity and Position of Dip Switches



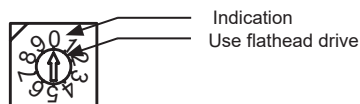
◆ Factory setting

⚠ CAUTION

Before setting dips switches, firstly turn off power source and set the position of the dips switches. If the switches are set without turning off the power source, the contents of the setting are invalid.

i NOTE

- The mark "■" indicates position of dips switches. Figures show setting before shipment or after selection.
- Indication position of rotatory switches



◆ DSW3: Capacity Code Setting

No setting is required. This dip switch is utilized for setting the capacity code which corresponds to the Horse Power of the indoor unit.

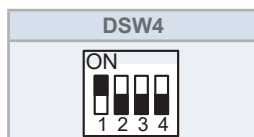
Factory setting:

DSW3			
1.0 HP	1.5 HP	2.0 HP	2.3 HP
ON 1 2 3 4 5 6	ON 1 2 3 4 5 6	ON 1 2 3 4 5 6	ON 1 2 3 4 5 6
2.5 HP	3.0 HP	4.0 HP	5.0 HP
1 2 3 4 5 6	ON 1 2 3 4 5 6	ON 1 2 3 4 5 6	ON 1 2 3 4 5 6
6.0 HP			
ON 1 2 3 4 5 6			

◆ DSW4: Unit Model Code Setting

No setting is required. This switch is utilized for setting the model code which corresponds to the indoor unit type.

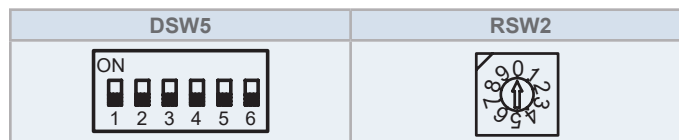
Factory setting:



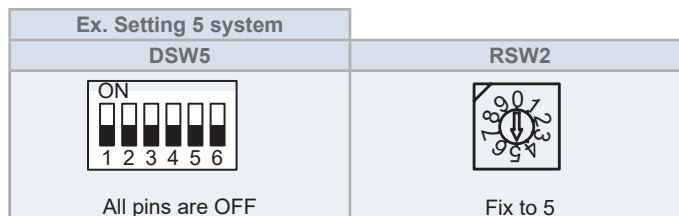
◆ DSW5 and RSW2: Refrigerant Cycle No. Setting

Setting is required.

Factory setting:



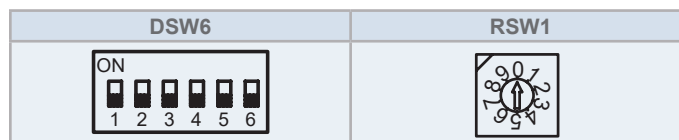
DSW5 and RSW2 can be set up to 63.



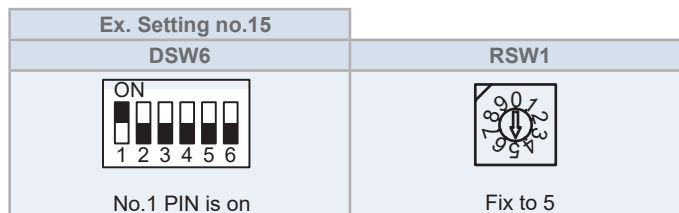
◆ DSW6 and RSW1: Unit No. Setting

Setting is required.

Factory setting:



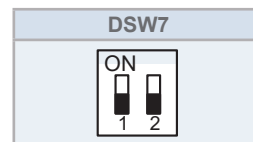
DSW6 and RSW1 can be set up to 63



◆ DSW7: Fuse Recover

No setting is required.

Factory setting:

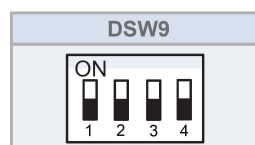


In case of applying high voltage to the terminal 1,2 of TB2, the fuse (0.5) on the PCB is cut. In such a case, firstly correct the wiring to TB2 and then turn ON #1 (as showing beside)



◆ DSW9

Factory setting:



7 REMOTE CONTROLLER OPERATION

HITACHI recommends PC-ARFPE remote control (optional) in order to obtain the maximum RCI-(1.0-6.0)FSKDN1Q performance.

For detailed functions should be referred to remote control Installation and Operation Manual.

7.1 HIGH SPEED SETTING FUNCTION

This function allow to set the air flow volume higher than normal air flow volume steps. It is for high height ceiling on site. Set the fan speed from control remote function selection menu depending on a ceiling height as shown in the table below.

Ceiling Height		Setting of Remote Control Switch
1.0 to 3.0HP	4.0 to 6.0HP	
Below 2.7m	Below 3.2m	Standard
2.7 to 3.0m	3.2 to 3.6m	High Speed (1)
3.0 to 3.5m	3.6 to 4.2m	High Speed (2)

7.2 CIRCULATION FUNCTION AT HEATING THERMO-OFF

This function maintains the fan operation by the set air flow volume at the heating Thermo-OFF. It is for improvement of temperature distribution at high height ceiling site.

7.3 SETTING THE FILTER INDICATION INTERVAL

The FILTER interval indication on the remote control switch can be set in several interval. Referred to remote control Installation and Operation Manual.

7.4 INDIVIDUAL LOUVER SETTING

The individual control setting for each louver is available with PC-ARFPE remote control. Referred to remote control Installation and Operation Manual.

8 INSTALLATION OF OPTIONAL AIR PANEL: P-N23NA2

8.1 FACTORY-SUPPLIED ACCESSORIES

CAUTION

When the air panel is unpacked, place it on insulation material, etc. to protect the sealing insulation from scratches

Check to ensure that the accessories are packed with the air panel.

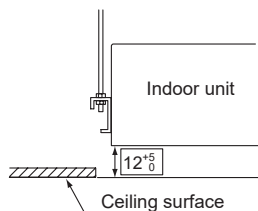
Accessory	P-N23NA2	Purpose
Long Screw (M6 Cross Screw) 	4	For fixing air pane

If any of these accessories are not packed in the packing, please contact your contractor.

8.2 INSTALLATION

◆ Check the indoor unit height from the false ceiling surface

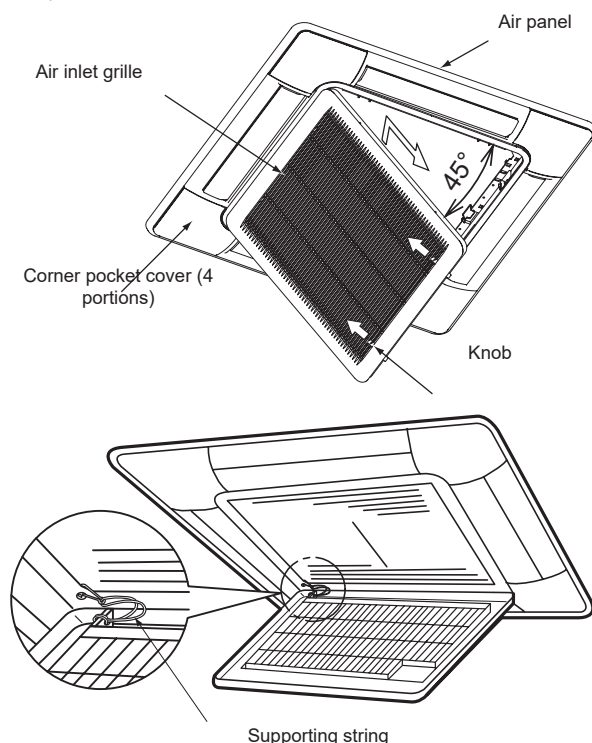
Check the distance between the indoor unit and the false ceiling. It is 12+5mm as shown below.



If not, adjust the distance by using the checking scale with maintaining the levelness of the indoor unit.

◆ Removing Air Intake Grille from Air Panel.

- 1 Push both ends of knobs at the air inlet grille toward the arrow direction, open the air inlet grille until the angle of approximately 45° from the air panel surface. After lifting the air inlet grille keeping it inclined, draw the air inlet grille forward. (Remove the filament tape (4 portions) fixing the air filter.).



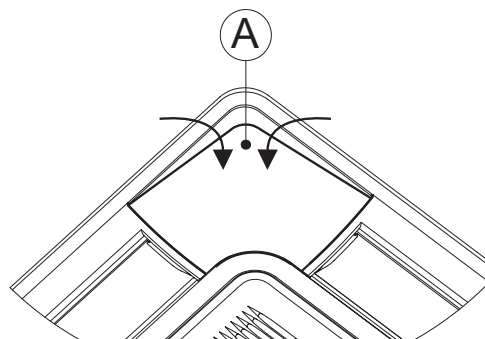
- 2 Lift the grille keeping it inclined
- 3 Draw the grille towards the open space after lifting.

i NOTE

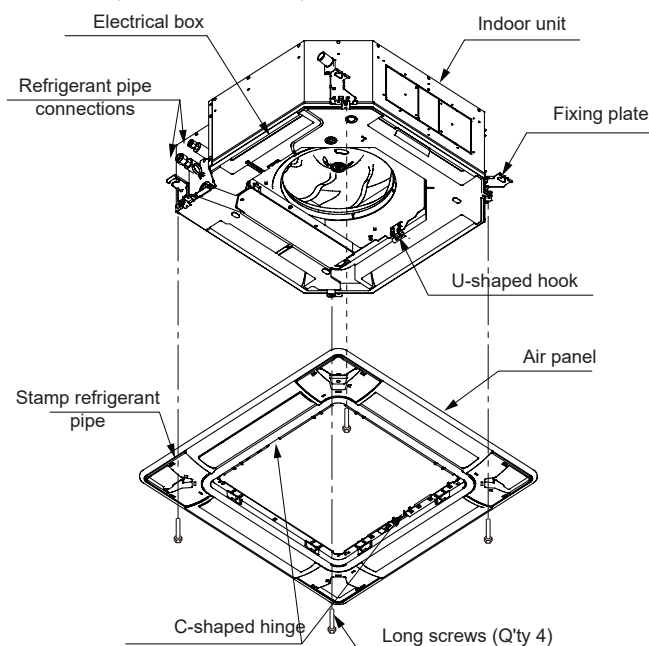
Perform the attaching work in the reverse procedure of removing for install the air intake grille. The air inlet grille can be attached from any 4 directions by rotating it. The air intake grille direction can be selected freely.

◆ Installing Air Panel

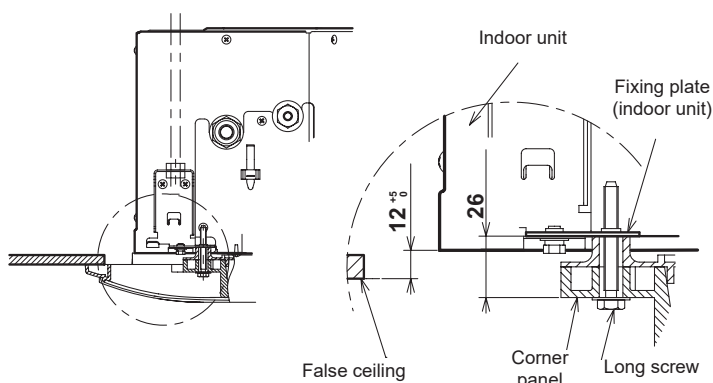
- 1 Remove the cover of the corner pocket (4 portions). Remove pulling A part toward the arrow direction.



- 2 Pull down the U-shaped hook (at 2 positions) located at the indoor unit side.
- 3 Mount the air panel temporarily. Fit the corner position of the refrigerant pipe connection at the indoor unit and the position stamped as "Ref. Pipe". Then, catch the C-shaped hinges (2 portions) onto the U-shaped hooks (2 portions).
- 4 Fix the air panel to the fixing plate by factory supplied long screws (M6 cross screws).

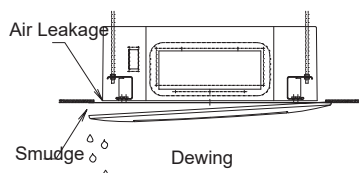


- 5 Tighten the long screws until touching the stopper to the fixing plate. Check to ensure that the distance between the fixing plate undersurface and the corner panel undersurface is 26mm.
- 6 When tightening the long screws to prevent air leakage and to be no gap between the false ceiling surface and the indoor unit, the inner circumference of the air panel (the position to attach the air inlet grille) may be slightly deformed. However, it is not abnormality.

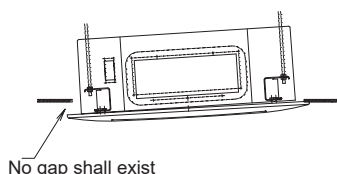


⚠ CAUTION

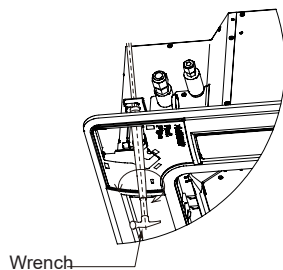
- If tighten long screws insufficient, may cause something wrong as below.



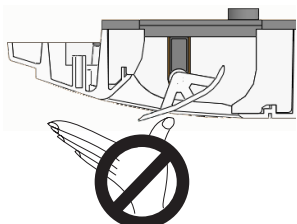
- If any gap has even though tighten long screws sufficient, readjust the height of indoor unit.



- It's able to adjust the indoor unit height by using wrench from the corner pocket.



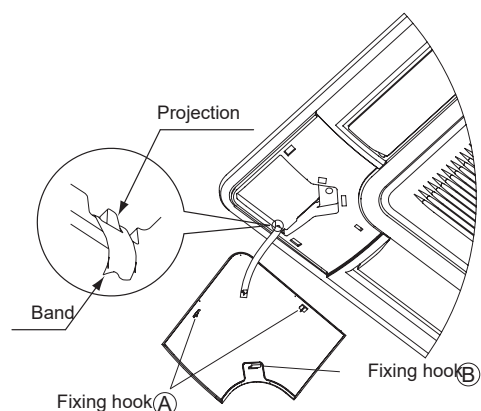
- Too considerable adjustment of height cause dewing from drain-pan.
- Do not turn the air louver by hand. If moved, the louver mechanism would be damaged.



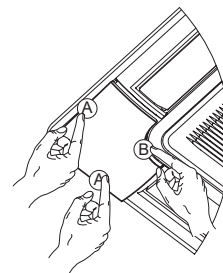
8.2.1 Attachment of Corner Pocket Cover

Attach the corner pocket covers after the air panel is mounted completely.

- Catch the band at the rear side of the corner pocket cover onto the projection at the air panel as shown.



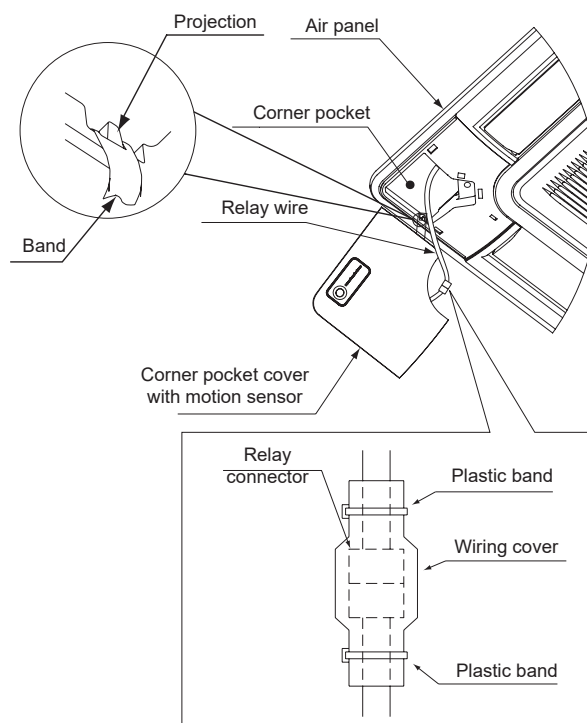
- Insert and push the fixing hooks (2 portions) at (A) to the air panel and insert and push the fixing hook (1 portion) at (B) to the air panel.



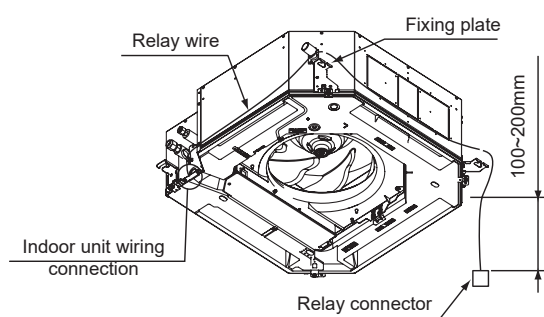
◆ Attachment of corner pocket cover with motion sensor PS-MSK2 on the air panel model P-N23NA2

The corner pocket cover with motion sensor can be attached to any of corners. Determine the attaching place as user's request.

- Connect the relay wire (attached in the air panel) to CN10 in the electrical box.



Run the relay wire to the corner pocket cover with motion sensor through the top of fixing plate for the indoor units. Set a length of 100mm to 200mm from the indoor unit to the relay connector.



Clamp the extra length of the relay wire by the plastic band and store it at inside the ceiling.

- b. Draw out the relay wire from the corner pocket of the air panel. Connect the wiring for motion sensor at the corner pocket cover to the relay connector. After connecting, cover the relay connector connection by the wiring cover and fix the wiring cover by the plastic bands

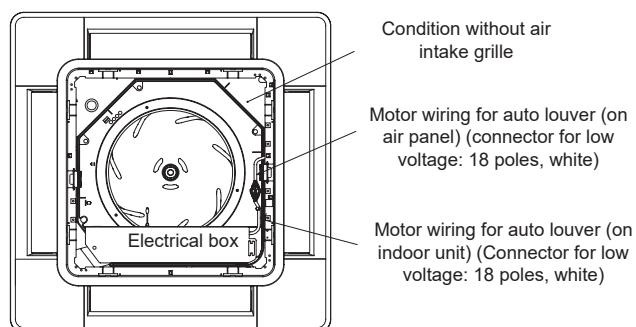
- c. Catch the band at the rear side of the corner pocket cover with motion sensor onto the projection at the air panel.
- d. While pushing the wiring into the corner pocket, insert the fixing hooks (2 portions) at ① to the square hole at the air panel, and push the corner pocket cover. Then, insert and push the fixing hook (1 portion) at ② to the square hole at the air panel.

i NOTE

- Catch securely the band onto the projection. If not, the corner pocket cover may fall down when removing it so that may cause injury.
- Catch securely the fixing hooks of the corner pocket cover to the air panel. If not, the fixing hooks will be damaged.

8.3 WIRING CONNECTION FOR AIR PANEL

- 1 The following connectors are used in the air panel. Remove the tape fixing the wiring connectors on the air panel and pull out them as shown in the figure below. Connect them with the wiring connectors on the indoor unit.
- 2 After completing the wiring connection of the air panel, attach the air inlet grille. Perform the attaching work in the reverse procedure of removing.



9 MAINTENANCE

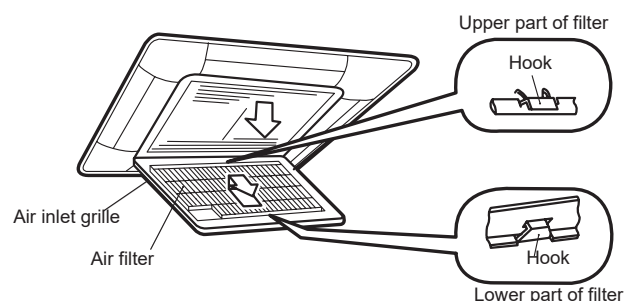
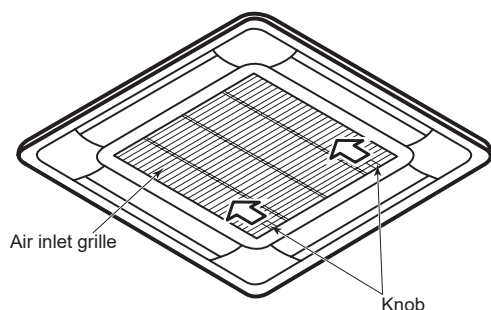
When the indication, "FILTER" is shown on the display of the remote control switch, take out the air filter according to the indicated steps for each unit.

Do not operate the system without the air filter to protect the indoor unit heat exchanger against being clogged.

Turn OFF the main power switch before taking out the filter. (The previous operation mode may appear).

9.1 TAKE OUT THE FILTER

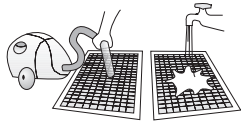
- 1 Open the air inlet grille after pushing the two knobs toward the arrow mark.
- 2 Hold the lower side of the air inlet grille keeping it inclined. Remove the hooks of air filter from the air inlet grille and remove the air filter.



9.2 CLEAN THE FILTER

Clean the air filter according to the following steps

- 1 Use a vacuum cleaner or let water flow onto the air filter for removing the dirt from the air filter.



CAUTION

Do not use hot water higher than approximately 40°C

- 2 Dry the air filter in the shade after shaking off moisture.
- 3 Do not use cleaner or other chemicals.
- 4 After the air filter is dried, attach and close correctly to the air inlet grille.

9.3 RESET OF FILTER INDICATION

After cleaning the air filter, reset the filter sign according the remote control procedure

9.4 SAFETY AND CONTROL DEVICE SETTING

Model			RCI-(1.0-6.0)FSKDN1Q
For Control Circuit			
Fuse			
Capacity		A	5
Freeze Protection			
Thermostat	Cut-Out	°C	0
	Cut-In	°C	14
Thermostat			
Differential		°C	2



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