



Air conditioner Installation Instruction

MODEL NO. :- CS/CU-U25, U35, U50AKR Series.



THIS AIR CONDITIONER CONTAINS AND OPERATES WITH REFRIGERANT R32. THIS PRODUCT MUST ONLY BE INSTALLED OR SERVICED BY QUALIFIED PERSONNEL.

Refer to National, State, Territory and local legislation, regulations, codes, installation & operation manuals, before the installation, maintenance and/or service of this product.

SAFETY PRECAUTIONS

- Read the following "SAFETY PRECAUTIONS" carefully before installation.
Electrical work must be installed by a licensed electrician. Be sure to use the correct rating of the power plug and main circuit for the model to be installed.
The caution items stated here must be followed because these important contents are related to safety. The meaning of each indication used is as below.

Incorrect installation due to ignoring of the instruction will cause harm or damage, and the seriousness is classified by the following indications.

WARNING icons and descriptions: Caution showing possibility of causing death or serious injury; Caution showing possibility of causing injury or damage to properties only.

Prohibited and Allowed symbols: Symbol with white background denotes item that is PROHIBITED; Symbol with dark background denotes item that must be carried out.

- Carry out test running to confirm that no abnormally occurs after the installation. Then, explain to user the operation, care and maintenance as stated in instructions.

WARNING

- Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.
Do not install outdoor unit near handrail of veranda.
Do not use unspecified cord, modified cord, joint cord or extension cord for power supply cord.
Do not tie up the power supply cord into a bundle by band.
Do not insert your fingers or other objects into the unit, high speed rotating fan may cause injury.

CAUTION

- Engage authorized dealer or specialist for installation. If installation done by the user is incorrect, it will cause water leakage, electrical shock or fire.
For refrigeration system work, install according to this installation instructions strictly.
Use the attached accessories parts and specified parts for installation.
Install at a strong and firm location which is able to withstand weight of the set.

CAUTION

- Do not install the unit in a place where leakage of flammable gas may occur. In case gas leaks and accumulates at surrounding of the unit, it may cause fire.
Prevent liquid or vapor from entering sumps or sewers since vapor is heavier than air and may form suffocating atmospheres.
Do not release refrigerant during piping work for installation, re-installation and during repairing refrigeration parts.

CAUTION

- Carry out drainage piping as mentioned in installation instructions. If drainage is not perfect, water may enter the room and damage the furniture.
Select an installation location which is easy for maintenance.
Power supply connection to the room air conditioner.
Power supply cord 3 x 1.5 mm² (1.0 - 1.5kV), 3 x 2.5 mm² (2.0kV) type designation 60245 IEC 57 or heavier cord.

PRECAUTION FOR USING R32 REFRIGERANT

WARNING

- When connecting flare at indoor side, make sure that the flare connection is used only once, if torqued up and released, the flare must be remade.
The appliance shall be stored, installed and operated in a well ventilated room with indoor floor area larger than A_min (m²) (refer Table A) and without any continuously operating ignition source.
The mixing of different refrigerants within a system is prohibited.
Ensure that foreign matter (oil, water, etc.) does not enter the piping.

- Precautions shall be taken to avoid excessive vibration or pulsation to refrigerating piping.
Ensure protection devices, refrigerating piping and fittings are well protected against adverse environmental effects (such as the danger of water collecting and freezing in relief pipes or the accumulation of dirt and debris).
Expansion and contraction of long runs piping in refrigerating systems shall be designed and installed securely (mounted and guarded) to minimize the likelihood hydraulic shock damaging the system.

CAUTION

- General
Must ensure the installation of pipe-work shall be kept to a minimum. Avoid use dented pipe and do not allow acute bending.
Must ensure that pipe-work shall be protected from physical damage.
Must comply with national gas regulations, state municipal rules and legislation.
Must ensure mechanical connections be accessible for maintenance purposes.

- 2-1. Qualification of workers
Any qualified person who is involved with working on or breaking into a refrigerant circuit should hold a current valid certificate from an industry-accredited assessment authority.
2-2. Checks to the area
Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimised.
2-3. Work procedure
Work shall be undertaken under a controlled procedure so as to minimize the risk of a flammable gas or vapour being present while the work is being performed.

- 2-4. General work area
All maintenance staff and others working in the local area shall be instructed and supervised on the nature of work being carried out.
2-5. Checking for presence of refrigerant
The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially flammable atmospheres.
2-6. Presence of fire extinguisher
If any hot work is to be conducted on the refrigerating equipment or any associated parts, appropriate fire extinguishing equipment shall be available at hand.

- 2-7. No ignition sources
No person carrying out work in relation to a refrigerating system which involves exposing any pipe work that contains or has contained flammable refrigerant shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion.
2-8. Ventilated area
Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work.
2-9. Checks to the refrigerating equipment
Where electrical components are being changed, they shall be fit for the purpose and to the correct specification.
At all times the manufacturer's maintenance and service guidelines shall be followed.

- 2-10. Checks to electrical devices
Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures.
Initial safety checks shall include but not limit to:
That capacitors are discharged; this shall be done in a safe manner to avoid possibility of sparking.
That there is no live electrical contacts and wiring are exposed while charging, recovering or purging the system.
That there is continuity of earth bonding.

- 3. Repairs to sealed components
During repairs to sealed components, all electrical supplies shall be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc.
If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.
Particular attention shall be paid to the following to ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected.
Ensure that apparatus is mounted securely.
Ensure that seals or sealing materials have not degraded such that they no longer serve the purpose of preventing the ingress of flammable atmospheres.

- 4. Repair to intrinsically safe components
Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use.
Intrinsically safe components are the only types that can be worked on while live in the presence of a flammable atmosphere.
The test apparatus shall be at the correct rating.
Replacement parts shall be in accordance with manufacturer's specifications.

- 5. Cabling
Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects.
6. Detection of flammable refrigerants
Under no circumstances shall potential sources of ignition be used in the searching or detection of refrigerant leaks.
A halide torch (or any other detector using a naked flame) shall not be used.

- 7. Removal and evacuation
When breaking into the refrigerant circuit to make repairs - or for any other purpose - conventional procedures shall be used.
Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its details.
It is recommended good practice that all refrigerants are recovered safely.

- 10. Labelling
Equipment shall be labelled stating that it has been de-commissioned and emptied of refrigerant.
The label shall be dated and signed.
Ensure that there are labels on the equipment stating the equipment contains flammable refrigerant.

Explanation of symbols displayed on the indoor unit or outdoor unit.

Symbol key for Warning, Caution, and Information symbols used in the manual.

Attached accessories

Table listing accessories: Installation plate (4), Battery (2), Remote control holder (1), Remote Control (1).

Table for Piping size: Applicable piping kit (CZ-3F5, 7BP), Gas (9.52 mm (3/8")), Liquid (6.35 mm (1/4")), etc.

SELECT THE BEST LOCATION

INDOOR UNIT

- Do not install the unit in excessive oil fume area such as kitchen, workshop and etc.
There should not be any heat source or steam near the unit.
A place where air circulation in the room is good.

OUTDOOR UNIT

- If an awning is built over the unit to prevent direct sunlight or rain, be careful that heat radiation from the condenser is not obstructed.
Keep the spaces indicated by arrows from wall, ceiling, fence or other obstacles.
Do not place any obstacles which may cause a short circuit of the discharged air.

Table A

Table A: Room area requirements based on capacity, piping size, and refrigerant charge. Columns include Model, Capacity, Piping size, Std. Length, Max. Elevation, Min. Piping Length, Max. Piping Length, Additional Refrigerant, Piping Length for add. gas, Max. Refrigerant Charge, and Indoor A_min.

(*) Systems with total refrigerant charge, m_c, lower than 1.84 kg are not subjected to any room area requirements.
Example: For U25***
If the unit is installed at 10 m distance, the quantity of additional refrigerant should be 25 g ... (10-7.5) m x 10 g/m = 25 g.

A_min = (m_c / (2.5 x (LFL)^0.6 x h_d))^2 not less than safety factor margin

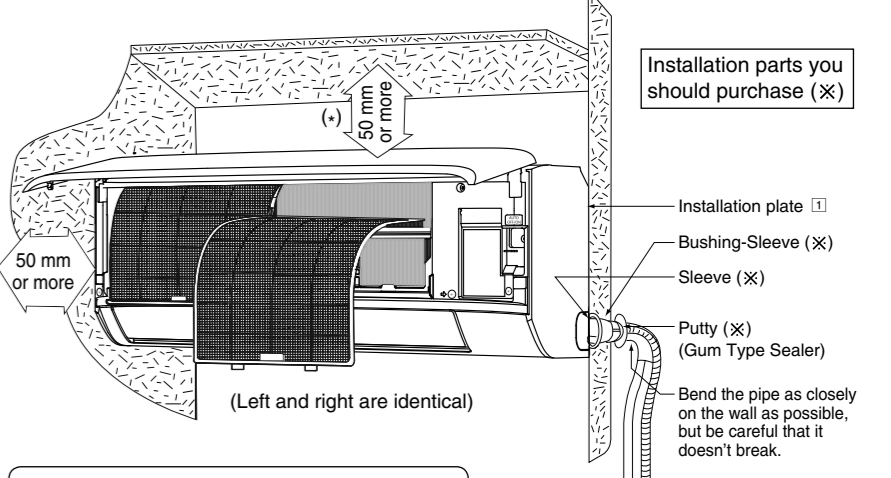
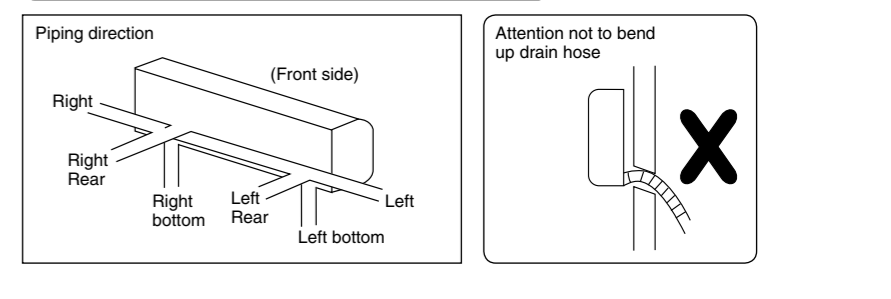
A_min = Required minimum room area, in m²
m_c = Refrigerant charge in appliance, in kg
LFL = Lower flammability limit (0.307 kg/m³)
h_d = Installation height of the appliance (1.8 m for wall mounted)
SF = Safety factor with a value of 0.75

** The required minimum room area, A_min, shall also be governed by the safety factor margin formula below :

A_min = m_c / (SF x LFL x h_d)

The higher value shall be taken when determining the room area.

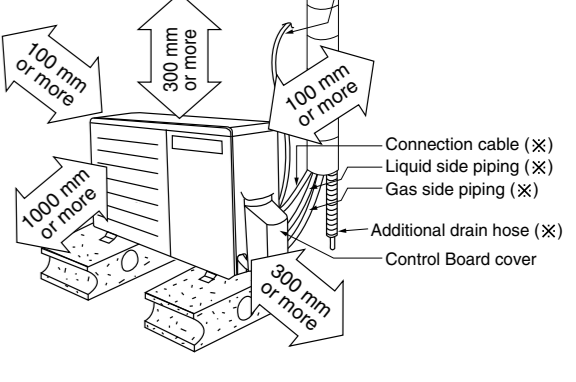
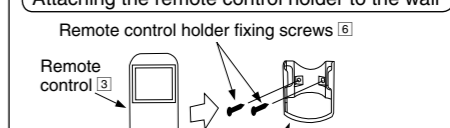
Indoor/Outdoor Unit Installation Diagram



Insulation of piping connections

- Carry out insulation after checking for gas leaks and secure with vinyl tape.

Attaching the remote control holder to the wall



- It is advisable to avoid more than 2 blockage directions.
For better ventilation & multiple-outdoor installation, please consult authorized dealer/specialist.

This illustration is for explanation purposes only. The indoor unit will actually face a different way.

(-) If holder at the rear of chassis (Refer column "4 Indoor Unit Installation") need to use this, this distance shall be 65 mm or more.

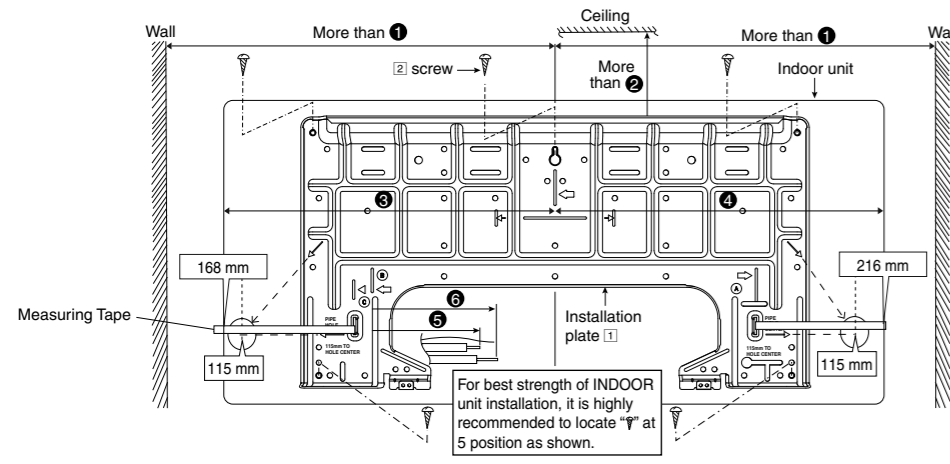
INDOOR UNIT

1 SELECT THE BEST LOCATION

(Refer to "Select the best location" section)

2 HOW TO FIX INSTALLATION PLATE

The mounting wall shall be strong and solid enough to prevent it from vibration.



Model	Dimension					
	1	2	3	4	5	6
U25***, U35***, U50***	465 mm	70 mm (+)	365 mm	415 mm	10 mm	70 mm

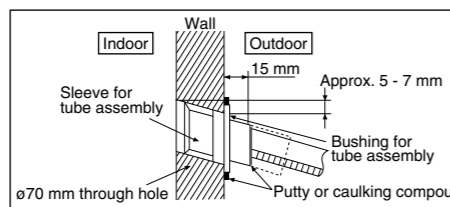
- The center of installation plate should be at more than ① at right and left of the wall. The distance from installation plate edge to ceiling should be more than ②. From installation plate center to unit's left side is ③. From installation plate center to unit's right side is ④. ⑤: For left side piping, piping connection for liquid should be about ⑤ from this line. ⑥: For left side piping, piping connection for gas should be about ⑥ from this line. 1. Mount the installation plate on the wall with 5 screws or more (at least 5 screws). (If mounting the unit on the concrete wall, consider using anchor bolts.)
- Always mount the installation plate horizontally by aligning the marking-off line with the thread and using a level gauge.
 - Drill the piping plate hole with $\phi 70$ mm hole-core drill.
 - Line according to the left and right side of the installation plate.
 - The meeting point of the extended line is the center of the hole. Another method is by putting measuring tape at position as shown in the diagram above. The hole center is obtained by measuring the distance namely 115 mm for left and right hole respectively.
 - Drill the piping hole at either the right or the left and the hole should be slightly slanting to the outdoor side.

3 TO DRILL A HOLE IN THE WALL AND INSTALL A SLEEVE OF PIPING

- Insert the piping sleeve to the hole.
- Bush the sleeve.
- Cut the sleeve until it extrudes about 15 mm from the wall.

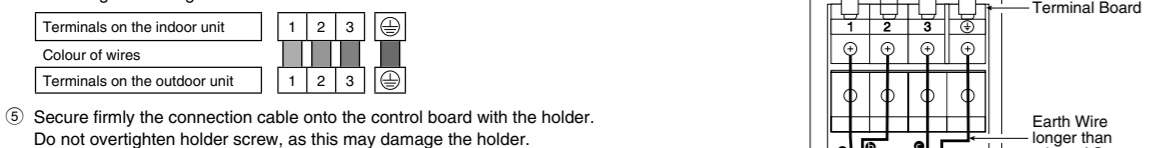
CAUTION
When the wall is hollow, please be sure to use the sleeve for tube assembly to prevent dangers caused by mice biting the connection cable.

- Finish by sealing the sleeve with putty or caulking compound at the final stage.



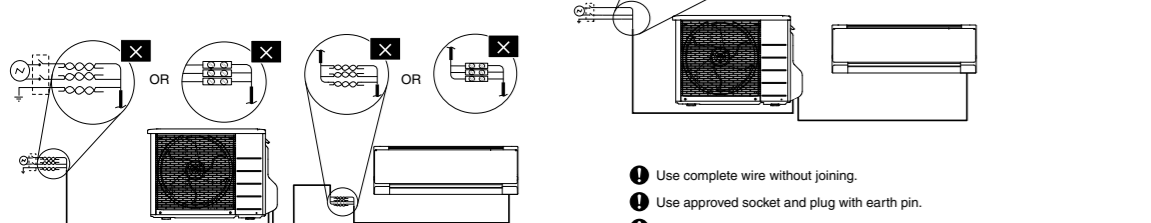
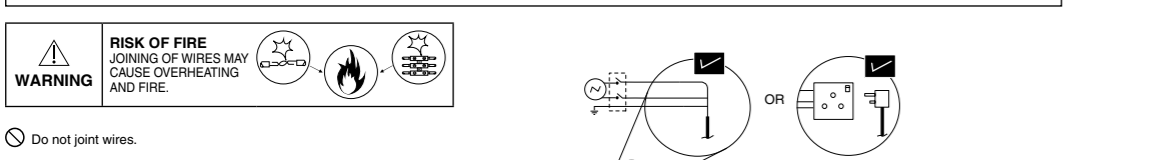
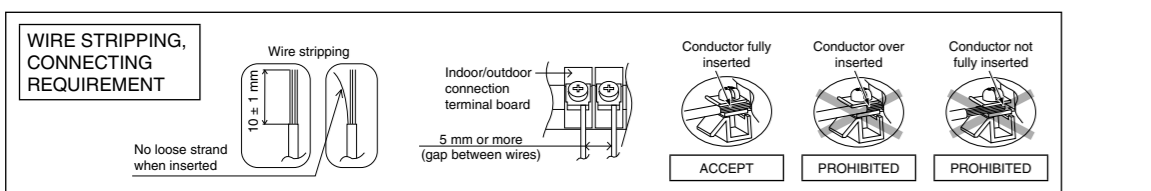
5 CONNECT THE CABLE TO THE INDOOR UNIT

- The inside and outside connection cable can be connected without removing the front grille.
- Connection cable between indoor unit and outdoor unit shall be approved polychloroprene sheathed 4 x 1.5 mm² flexible cord, type designation 60245 IEC 57 or heavier cord. Do not use joint connection cable. Replace the wire if the existing wire (from concealed wiring, or otherwise) is too short. Allowable connection cable length of each indoor unit shall be 30 m or less.
- Bind all the indoor and outdoor connection cable with tape and route the connection cable via the left side escapement.
- Remove the tapes and connect the connection cable between indoor unit and outdoor unit according to the diagram below.



Terminals on the indoor unit	1	2	3	4
Colour of wires	Blue	Black	Red	Green
Terminals on the outdoor unit	1	2	3	4
Colour of wires	Blue	Black	Red	Green

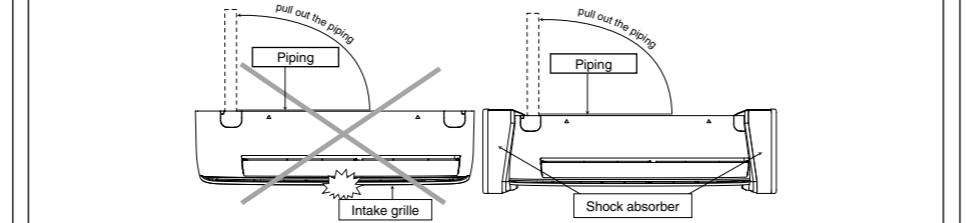
- Secure firmly the connection cable onto the control board with the holder. Do not overtighten holder screw, as this may damage the holder.



- Use complete wire without joining.
- Use approved socket and plug with earth pin.
- Wire connection in this area must follow to national wiring rules.

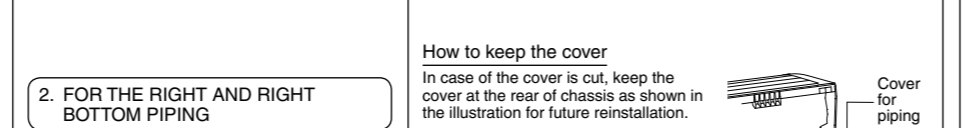
4 INDOOR UNIT INSTALLATION

- Pull out the Indoor piping
- Do not turn over the unit without shock absorber during pull out the piping. It may cause intake grille damage.
 - Use shock absorber during pull out the piping to protect the intake grille from damage.



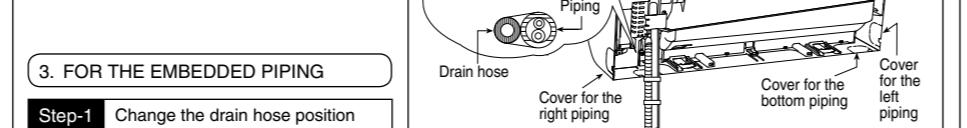
1. FOR THE RIGHT REAR PIPING

- Pull out the Indoor piping
- Install the Indoor Unit
- Secure the Indoor Unit
- Insert the connection cable



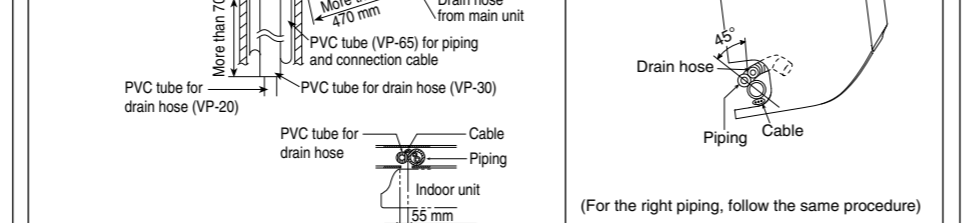
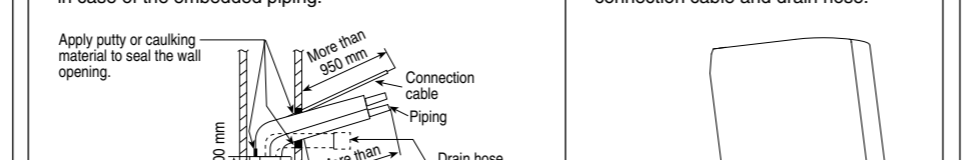
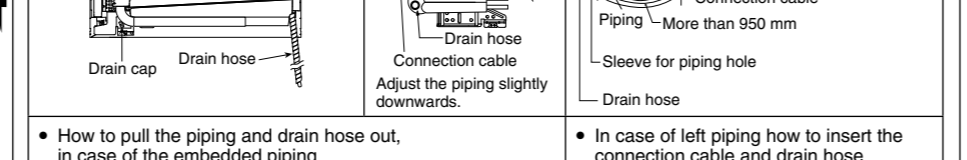
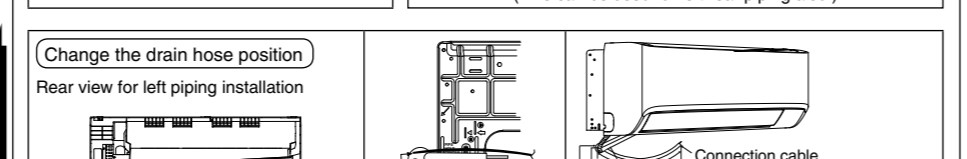
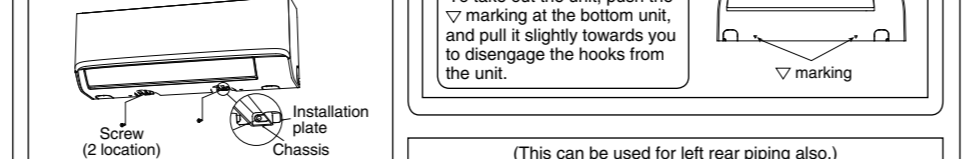
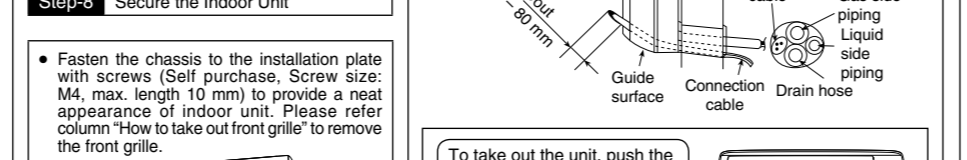
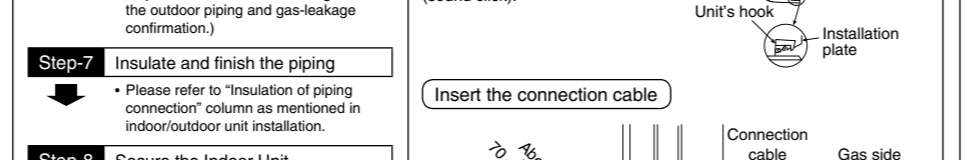
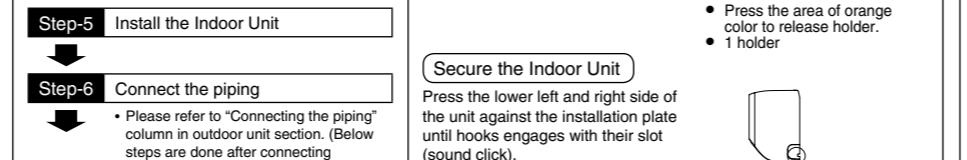
2. FOR THE RIGHT AND RIGHT BOTTOM PIPING

- Pull out the Indoor piping
- Install the Indoor Unit
- Insert the connection cable
- Secure the Indoor Unit



3. FOR THE EMBEDDED PIPING

- Change the drain hose position
- Bend the embedded piping
- Pull the connection cable into indoor unit
- Cut and flare the embedded piping
- Install the Indoor Unit
- Connect the piping
- Insulate and finish the piping
- Secure the Indoor Unit



- Apply putty or caulking material to seal the wall opening.
- Use complete wire without joining.
- Use approved socket and plug with earth pin.
- Wire connection in this area must follow to national wiring rules.

OUTDOOR UNIT

1 SELECT THE BEST LOCATION

(Refer to "Select the best location" section)

2 INSTALL THE OUTDOOR UNIT

- After selecting the best location, start installation to Indoor/Outdoor Unit Installation Diagram.
- Fix the unit on concrete or rigid frame firmly and horizontally by bolt nut (10 mm).
- Make sure unit install in balance level to ensure that water flow out from unit drainage hole.
- When installing at roof, please consider strong wind and earthquake. Please fasten the installation stand firmly with bolt, screws or nails.

Model	A	B	C	D
U25***, U35***	570 mm	105 mm	18.5 mm	320 mm
U50***	540 mm	160 mm	18.5 mm	330 mm



3 CONNECT THE PIPING

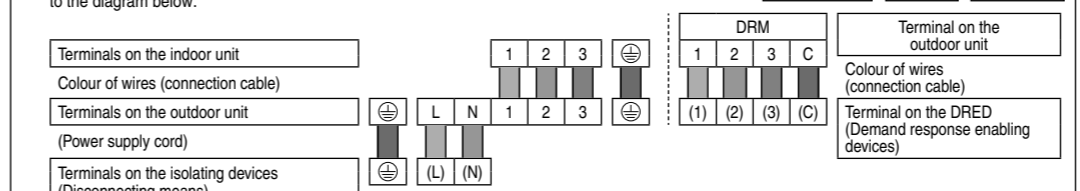
Connecting The Piping to Indoor

- For connection joint of all models
Please make flare after inserting flare nut (locate at joint portion of tube assembly) onto the copper pipe. (In case of using long piping)
- Connect the piping
Align the center of piping and sufficiently tighten the flare nut with piping.
Further tighten the flare nut with torque wrench in specified torque as stated in the table.
- Additional Precautions For R32 Models when connecting by flaring at indoor side
Ensure to do the re-flaring of pipes before connecting to units to avoid leakage.
Seal sufficiently the flare nut (both gas and liquid sides) with neutral cure (Alkoxy type) & ammonia-free silicone sealant and insulation material to avoid the gas leak caused by freezing.
Neutral cure (Alkoxy type) & ammonia-free silicone sealant is only to be applied after pressure testing and cleaning up by following instructions of sealant, only to the outside of the connection. The aim is to prevent moisture from entering the connection joint and possible occurrence of freezing. Curing sealant will take some time. Make sure sealant will not peel off when wrapping the insulation.

Piping size	Torque
6.35 mm (1/4")	[18 N·m (1.8 kgf·m)]
9.52 mm (3/8")	[42 N·m (4.3 kgf·m)]
12.7 mm (1/2")	[55 N·m (5.6 kgf·m)]
15.88 mm (5/8")	[65 N·m (6.6 kgf·m)]
19.05 mm (3/4")	[100 N·m (10.2 kgf·m)]

5 CONNECT THE CABLE TO THE OUTDOOR UNIT

- Remove the control board cover from the unit by loosening the screw.
- Connect the power supply through Isolating Devices (Disconnecting means).
Connect approved type polychloroprene sheathed power supply cord 3 x 1.5 mm² (1.0 - 1.5HP), 3 x 2.5 mm² (2.0HP) type designation 60245 IEC 57 or heavier cord to the terminal board, and connect the other end of the cord to Isolating Devices (Disconnecting means).
Do not use joint power supply cord. Replace the wire if the existing wire (from concealed wiring, or otherwise) is too short.
In unavoidable case, joining of power supply cord between isolating devices and terminal board of air conditioner shall be done by using approved socket and plug with earth pin rated 15/16 A (1.0 - 1.5HP) or 16 A (2.0HP). Wiring work to both socket and plug must follow to national wiring standard.
- Connection cable between indoor unit and outdoor unit shall be approved polychloroprene sheathed 4 x 1.5 mm² flexible cord, type designation 60245 IEC 57 or heavier cord. Do not use joint connection cable. Replace the wire if the existing wire (from concealed wiring, or otherwise) is too short. Allowable connection cable length of each indoor unit shall be 30 m or less.
- Demand control signal transmission cable between outdoor unit and DRED (Demand response enabling devices) shall be double insulation layer, polychloroprene sheathed (>50V) or type designation ASN25 50000.2 with size 4 x (0.5 mm² to 2.0 mm²) cable, where the maximum allowable length is 30 m.
- Connect the power supply cord and connection cable between indoor unit and outdoor unit according to the diagram below.



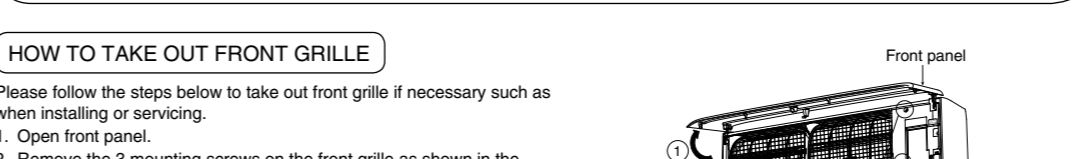
- Secure the power supply cord and connection cable onto the control board with the holder.
- Attach the control board cover back to the original position with screw.
- For wire stripping and connection requirement, refer to instruction ⑤ of indoor unit.
- Note: Isolating Devices (Disconnecting means) should have minimum 3.0 mm contact gap.
Earth wire shall be Yellow/Green (Y/G) in colour and longer than other AC wires for safety reason.
Always ensure all above connections compliant with national wire rules.

6 PIPING INSULATION

- Please carry out insulation at pipe connection portion as mentioned in Indoor/Outdoor Unit Installation Diagram. Please wrap the insulated piping end to prevent water from going inside the piping.
- If drain hose or connecting piping is in the room (where dew may form), please increase the insulation by using POLY-E FOAM with thickness 6 mm or above.

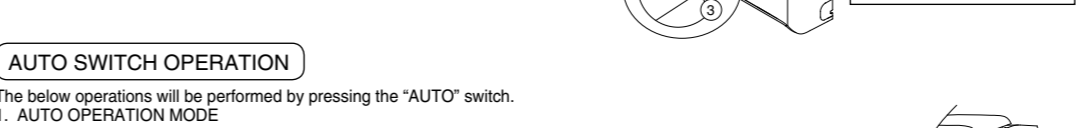
CUTTING AND FLARING THE PIPING

- Please cut using pipe cutter and then remove the burrs.
- Remove the burrs by using reamer. If burrs is not removed, gas leakage may be caused. Turn the piping end and avoid the metal powder entering the pipe.
- Please make flare after inserting the flare nut onto the copper pipes.



HOW TO TAKE OUT FRONT GRILLE

- Please follow the steps below to take out front grille if necessary such as when installing or servicing.
- Open front panel.
 - Remove the 3 mounting screws on the front grille as shown in the illustration at right.
 - Slide the 3 lock knobs on the upside of front grille to unlock position.
 - Pull the front grille towards you to remove the front grille.



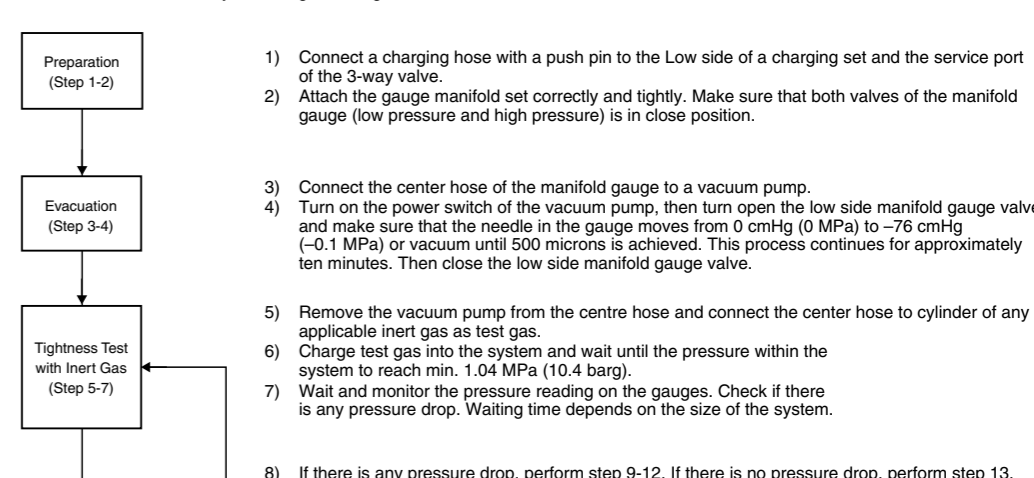
AUTO SWITCH OPERATION

- The below operations will be performed by pressing the "AUTO" switch.
- AUTO OPERATION MODE**
The Auto operation will be activated immediately once the Auto Switch is pressed and release within 5 sec..
 - TEST RUN OPERATION (FOR PUMP DOWN/SERVICING PURPOSE)**
The Test Run operation will be activated if the Auto Switch is pressed continuously for more than 5 sec. to below 8 sec.. A "peep" sound will occur at the fifth sec., in order to identify the starting of Test Run operation.
 - REMOTE CONTROLLER RECEIVING SOUND ON/OFF**
The ON/OFF of Remote controller receiving sound can be change over by the following steps:
a) Press "AUTO" switch continuously for more than 16 sec. to below 21 sec..
A "peep", "peep", "peep", "peep" sound will occur at the sixteenth sec.
b) Press the "AC Reset" button once, "peep" sound will occur indicates that Remote controller receiving sound setting mode is activated.
c) Press "AUTO" switch again. Everytime "AUTO" switch is pressed (within 60 sec. interval), Remote controller receiving sound status will be reversed between ON and OFF.
Long "peep" sound indicates that Remote controller receiving sound is ON.
Short "peep" sound indicates that Remote controller receiving sound is OFF.

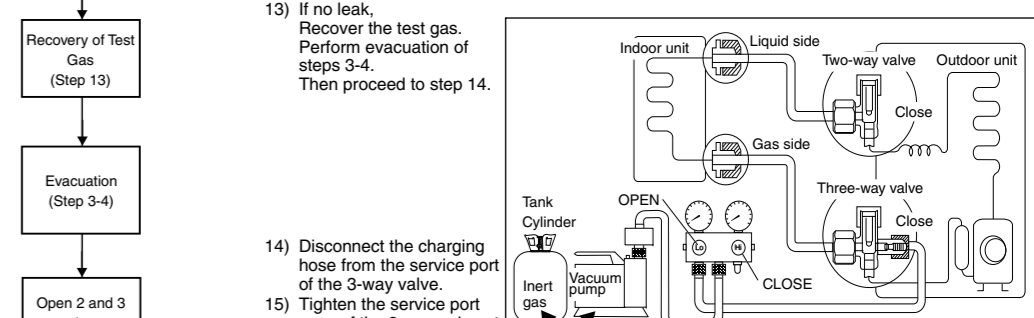
4 AIR TIGHTNESS TEST ON THE REFRIGERATING SYSTEM

- Do not purge the air with refrigerants but use a vacuum pump to vacuum the installation.
- There is no extra refrigerant in the outdoor unit for air purging.

- Before system is charged with refrigerant and before the refrigerating system is put into operation, below site test procedure and acceptance criteria shall be verified by the certified technicians, and/or the installer.
- Be sure to check whole system for gas leakage.



- Connect a charging hose with a push pin to the Low side of a charging set and the service port of the 3-way valve.
- Attach the gauge manifold set correctly and tightly. Make sure that both valves of the manifold gauge (low pressure and high pressure) is in close position.
- Connect the center hose of the manifold gauge to a vacuum pump.
- Turn on the power switch of the vacuum pump, then turn open the low side manifold gauge valve and make sure that the needle in the gauge moves from 0 cmHg (0 MPa) to -76 cmHg (-0.1 MPa) or vacuum unit 500 microns is achievable. This process continues for approximately ten minutes. Then close the low side manifold gauge valve.
- Remove the vacuum pump from the center hose and connect the center hose to cylinder of any applicable inert gas as test.
- Charge test gas into the system and wait until the pressure within the system to reach min. 1.04 MPa (10.4 barg).
- Wait and monitor the pressure reading on the gauges. Check if there is any pressure drop. Waiting time depends on the size of the system.
- If there is any pressure drop, perform step 9-12. If there is no pressure drop, perform step 13.
- Use Gas Leak Detector to check for leaks. Must use the detection equipment with a sensitivity of 5 grams per year of test gas or better.
- Move the probe along the air conditioning system to check for leaks, and mark for repair.
- Any leak detected and marked shall be repaired.
- After repair, repeat evacuation steps 3-4 and tightness test steps 5-7. Check the pressure drop as in step 8.
- If no leak, Recover the test gas. Perform evacuation of steps 3-4. Then proceed to step 14.
- Disconnect the charging hose from the service port of the 3-way valve.
- Tighten the service port caps of the 3-way valve at a torque of 18 N·m with a torque wrench.
- Remove the valve caps of both of the 2-way valve and 3-way valve.
- Open both of the valves, using a hexagonal wrench (4 mm). It is recommended to allow refrigerant slowly flow into the refrigerant system to prevent refrigerant freezing. Slightly open 2-way valve for 5 seconds then close the valve. Repeat this action for 3 cycles then fully open the valve.
- Mount back the valve caps onto the 2-way valve and the 3-way valve to complete this process.



- Notes:
Recommended use of any of the following leak detector,
I) Universal Sniffer leak detector
II) Electronic halogen leak detector
III) Ultrasonic Leak Detector

CHECK THE DRAINAGE

- Open front panel and remove air filters.
- Drainage checking can be carried out without removing the front grille.
- Pour a glass of water into the drain tray-styrofoam.
- Ensure that water flows out from drain hose of the indoor unit.

EVALUATION OF THE PERFORMANCE

- Operate the unit at cooling/heating operation mode for fifteen minutes or more.
- Measure the temperature of the intake and discharge air.
- Ensure the difference between the intake temperature and the discharge is more than 8 °C during Cooling operation or more than 14 °C during Heating operation.

INSTALLATION OF ANTI-BACTERIAL FILTER

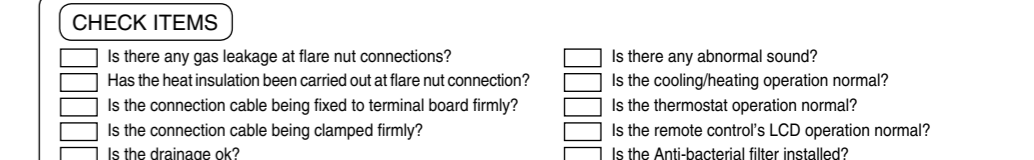
- Open the front panel.
- Remove the air filters.
- Put the Anti-bacterial filter into place as shown in illustration at right.

IN CASE OF REUSING EXISTING REFRIGERANT PIPING

- Observe the followings to decide reusing the existing refrigerant piping.
- Poor refrigerant piping could result in product failure.
- In the circumstances listed below, do not reuse any refrigerant piping. Instead, make sure to install a new piping.
 - Heat insulation is not provided for either liquid-side or gas-side piping or both.
 - The existing refrigerant pipe has been left in an open condition.
 - The diameter and thickness of the existing refrigerant piping does not meet the requirement.
 - The piping length and elevation does not meet the requirement.
- Perform proper pump down before reuse piping.
- In the circumstances listed below, clean it thoroughly before reuse.
 - The compressor has a failure history.
 - Oil color is darkened. (ASTM 4.0 and above).
 - The existing air-conditioner is gas/oil heat pump type.
- Do not reuse the flare to prevent gas leak. Make sure to install a new flare.
- If there is a welded part on the existing refrigerant piping, conduct a gas leak check on the welded part.
- Replace deteriorated heat insulating material with a new one. Heat insulating material is required for both liquid-side and gas-side piping.

Proper Pump Down Method

- Operate air conditioner at cooling mode for 10 - 15 minutes.
- After 10 - 15 minutes of pre operation, close 2 way valve. After 3 minutes, close 3 way valve.
- Take out air conditioner unit.
- Install New Refrigerant air conditioner.



CHECK ITEMS

- Is there any gas leakage at flare nut connections?
- Has the heat insulation been carried out at flare nut connection?
- Is the connection cable being fixed to terminal board firmly?
- Is the connection cable being clamped firmly?
- Is the drainage ok? (Refer to "Check the drainage" section)
- Is the earth wire connection properly done?
- Is the indoor unit properly hooked to the installation plate?
- Is the power supply voltage complied with rated value?
- Is there any abnormal sound?
- Is the cooling/heating operation normal?
- Is the thermostat operation normal?
- Is the remote control's LCD operation normal?
- Is the Anti-bacterial filter installed?