

# Refrigerant R410A Cassette Type SPLIT TYPE AIR CONDITIONER INSTALLATION INSTRUCTION SHEET

(PART NO. 936538806)

**WARNING** This mark indicates procedures which, if improperly performed, might lead to the death or serious injury of the user.  
**CAUTION** This mark indicates procedures which, if improperly performed, might possibly result in personal harm to the user or damage to property.

**This air conditioner uses new refrigerant R410A.**

The basic installation work procedures are the same as conventional refrigerant (R22) models.

- Since the working pressure is 1.8 times higher than that of conventional refrigerant (R22) models, some of the piping and accessories are different from those used for R22 models. See the table below.
- Especially when replacing a conventional refrigerant (R22) model with a new refrigerant R410A model, always replace the conventional piping and flare nuts with the R410A piping and flare nuts.
- Models that use refrigerant R410A have a different charging port thread diameter to prevent erroneous charging with conventional refrigerant (R22) and for safety. Therefore, check beforehand. (The charging port thread diameter for R410A is 1/2 UNF 20 threads per inch.)
- Be more careful that foreign matter (oil, water, etc.) does not enter the piping than with refrigerant (R22) models. Also, when starting up piping, accurately seal the connection by greasing, testing, etc.
- When charging the refrigerant, take into account the slight change in the composition of the gas and liquid phases, and always charge from the liquid phase side where composition is stable.

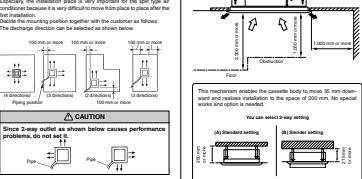
Special tools for R410A	Contents of operation
Gas manifold	Pressure is high and cannot be measured with a conventional gauge. To prevent erroneous reading of other refrigerants, the diameter of each port has been changed.
Charge hose	As an air conditioner using R410A medium pressure, the working pressure is 1.8 times higher than that of conventional refrigerant (R22). It is necessary to choose suitable materials.
Refrigerant pipe	As an air conditioner using R410A medium pressure, the working pressure is 1.8 times higher than that of conventional refrigerant (R22). It is necessary to choose suitable materials.
Gas valve	As an air conditioner using R410A medium pressure, the working pressure is 1.8 times higher than that of conventional refrigerant (R22). It is necessary to choose suitable materials.

Thickness of Annealed Copper Pipes (R410A)	Thickness
6.35 mm (1/4 in.)	0.80 mm
9.52 mm (3/8 in.)	0.80 mm
12.70 mm (1/2 in.)	0.80 mm
15.88 mm (5/8 in.)	1.00 mm
19.05 mm (3/4 in.)	1.00 mm

- WARNING**
- For the air conditioner to operate satisfactorily, install it as outlined in this installation instruction sheet.
  - Connect the indoor unit and outdoor unit with the air conditioner piping and cords available standards parts. This installation instruction sheet describes the correct connection using the installation set available from our standard parts.
  - Installation work must be performed in accordance with national safety standards by authorized personnel only.
  - If refrigerant leaks while work is being carried out, ventilate the area if the refrigerant comes in contact with a flame. It produces a toxic gas.
  - Do not use an extension cord.
  - Do not use the power cord as installation work is complete.
  - Be careful not to scratch the air conditioner when handling it.
  - After installation, explain correct operation to the customer, using the operating manual.
  - Let the customer keep this installation instruction sheet because it is used when the air conditioner is serviced or moved.

## SELECTING THE MOUNTING POSITION

- WARNING**
- Install a place that can withstand the weight of the indoor and outdoor units and install positively so that the units will not topple or tilt.
  - Do not install where there is the danger of combustible gas leakage.
  - Do not install near heat sources.
  - If children under 10 years old may approach the unit, take preventive measures so that they cannot reach the unit.



This structure enables the cassette body to mount 50 mm diameter and thicker insulation to the space of 300 mm. No special tools and option is needed.

You can select 2-way setting.

Since 2-way setting is allowed, however, some performance problems do not set.

## STANDARD PARTS

The following installation parts are furnished. Use them as required.

Name and Size	Qty	Application
Cover for heat insulation	2	For indoor side pipe joint
Special nut A (4-way type)	4	For installing indoor unit
Special nut B (slender type)	4	For installing indoor unit
Template	4	For cutting hole-casting
Blower cover insulation	2	For discharge air
Hook key	2	For installing intake grille
Blower	1	For the remote controller cord
Remote controller	1	
Drain pipe (2-way type)	2	For installing the remote controller cord
Remote controller cord	1	For connecting the remote controller

## OUTDOOR UNIT ACCESSORIES

Down pipe	1	For outdoor unit piping work. May be supplied according to the model.
Down cap	1	

## OPTIONS

The following options are available.

- ADDITIONAL GRILLE Z551\* (1/2-1/4-1/4) (P/N 936538806)

## INSTALLATION PROCEDURE

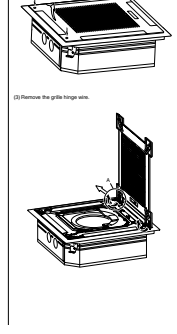
Install the air conditioner as follows.

### 1. INDOOR UNIT INSTALLATION

- WARNING**
- Install the air conditioner in a location which can withstand a load of at least five times the weight of the main unit and which will not empty sound or vibration. If the installation location is not strong enough, the indoor unit may fall and cause injury.
  - If the pipe is done with the panel frame only, there is a risk that the unit will come loose. Please take care.

**REMOVING THE INTAKE GRILLE**

- Push the intake grille pushpin (see piece).
- Open the intake grille.
- Remove the grille pushpin.



### 2. INSTALLING DRAIN PIPE

The maximum lengths of this product are shown in the following table. If the units are further apart than this, correct operation cannot be guaranteed.

Discharge	Gas	Pipe length (MAX)	Maximum height (Maximum indoor-outdoor)
Liquid	Gas	15 m	15 m
6.35 mm (1/4 in.)	15.88 mm (5/8 in.)	25 m	15 m

**CAUTION**

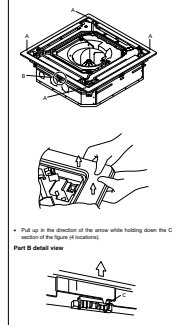
Install heat insulation around both the gas and liquid pipes. Failure to do so may cause water leakage.

**CAUTION**

Install heat insulation with heat resistance above 120°C (Retro-reflective material only).

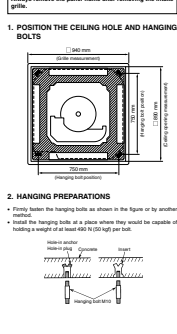
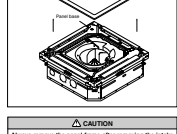
In addition, if the humidity level at the installation location of the refrigerant piping is expected to exceed 50%, install heat insulation around the refrigerant piping. If the expected humidity level is 70% or more, use heat insulation that is 1.2 mm or thicker and the expected humidity exceeds 80%. Use heat insulation that is 20 mm or thicker.

If heat insulation is used that is not as thick as specified, condensation may form on the surface of the insulation. In addition, use heat insulation with heat conductivity of 0.045 W/m·K or less (at 20°C).



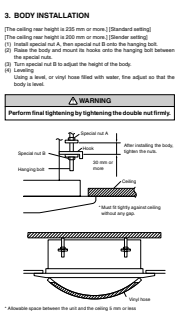
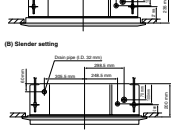
### 2. OUTDOOR UNIT CONNECTION CORD AND PIPE CONNECTION PREPARATIONS

(1) Remove outdoor unit terminal cover.



### 3. BODY INSTALLATION

The ceiling has height is 205 mm or more. (Standard setting)



### INSTALLING THE PANEL FRAME

With slender setting, turn the panel frame 90° as shown in the diagram below.

