

# Air conditioner

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## Installation manual

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AR\*\*BSHUMGM\*\*

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- Thank you for purchasing this Samsung air conditioner.
- Before operating this unit, please read this manual carefully and retain it for future reference.



**SAMSUNG**

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# Safety Information

California Proposition 65 Warning (US)

## WARNING

Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## WARNING

- Hazards or unsafe practices that may result in severe personal injury or death.

## CAUTION

- Hazards or unsafe practices that may result in minor personal injury or property damage.
- Carefully follow the precautions listed below because they are essential to guarantee the safety of the equipment.

## WARNING

- Always disconnect the air conditioner from the power supply before servicing it or accessing its internal components.
- Verify that installation and testing operations are performed by qualified personnel.
- Verify that the air conditioner is not installed in an easily accessible area.

## General information

## WARNING

- Carefully read the content of this manual before installing the air conditioner and store the manual in a safe place in order to be able to use it as reference after installation.
- For maximum safety, installers should always carefully read the following warnings.
- Store the operation and installation manual in a safe location and remember to hand it over to the new owner if the air conditioner is sold or transferred.
- This manual explains how to install an indoor unit with a split system with two SAMSUNG units. The use of other types of units with different control systems may damage the units and invalidate the warranty. The manufacturer shall not be responsible for damages arising from the use of non compliant units.
- The manufacturer shall not be responsible for damage originating from unauthorized changes or the improper connection of electric and requirements set forth in the "Operating limits" table, included in the manual, shall immediately invalidate the warranty.
- The air conditioner should be used only for the applications for which it has been designed: the indoor unit is not suitable to be installed in areas used for laundry.
- Do not use the units if damaged. If problems occur, switch the unit off and disconnect it from the power supply.
- In order to prevent electric shocks, fires or injuries, always stop the unit, disable the protection switch and contact SAMSUNG's technical support if the unit produces smoke, if the power cable is hot or damaged or if the unit is very noisy.
- Always remember to inspect the unit, electric connections, refrigerant tubes and protections regularly. These operations should be performed by qualified personnel only.
- The unit contains moving parts, which should always be kept out of the reach of children.
- Do not attempt to repair, move, alter or reinstall the unit. If performed by unauthorized personnel, these operations may cause electric shocks or fires.
- Do not place containers with liquids or other objects on the unit.
- All the materials used for the manufacture and packaging of the air conditioner are recyclable.
- The packing material and exhaust batteries of the remote controller(optional) must be disposed of in accordance with current laws.
- The air conditioner contains a refrigerant that has to be disposed of as special waste. At the end of its life cycle, the air conditioner must be disposed of in authorised centres or returned to the retailer so that it can be disposed of correctly and safely.
- Wear protective equipment (such as safety gloves, goggles, and headgear) during installation and maintenance works. Installation/repair technicians may be injured if protective equipment is not properly equipped.

# Safety Information

## Installing the unit



### WARNING

**IMPORTANT: When installing the unit, always remember to connect first the refrigerant tubes, then the electrical lines.**

- Always disassemble the electric lines before the refrigerant tubes.
  - Upon receipt, inspect the product to verify that it has not been damaged during transport. If the product appears damaged, DO NOT INSTALL it and immediately report the damage to the carrier or retailer (if the installer or the authorized technician has collected the material from the retailer.)
  - After completing the installation, always carry out a functional test and provide the instructions on how to operate the air conditioner to the user.
  - Do not use the air conditioner in environments with hazardous substances or close to equipment that release free flames to avoid the occurrence of fires, explosions or injuries.
  - Excessive indoor humidity or clogged condensate drain lines may cause water to drip from indoor units. Do not install the indoor unit where dripping could result in damage to property, such as above electronic equipment or other sensitive instruments
  - Our units should be installed in compliance with the spaces shown in the installation manual, to ensure accessibility from both sides and allow repairs or maintenance operations to be carried out. The unit's components should be accessible and easy to disassemble without endangering people and objects. For this reason, when provisions of the installation manual are not complied with, the cost required to access and repair the units (in SAFETY CONDITIONS, as set out in prevailing regulations) with harnesses, ladders, scaffolding or any other elevation system will NOT be considered part of the warranty and will be charged to the end customer.
- Verify that the voltage and frequency of the power supply comply with the specifications and that the installed power is sufficient to ensure the operation of any other domestic appliance connected to the same electric lines.
  - Always verify that the cut-off and protection switches are suitably dimensioned.
  - Verify that the air conditioner is connected to the power supply in accordance with the instructions provided in the wiring diagram included in the manual.
  - Always verify that electric connections (cable entry, section of leads, protections...) are compliant with the electric specifications and with the instructions provided in the wiring scheme. Always verify that all connections comply with the standards applicable to the installation of air conditioners.
  - Devices disconnected from the power supply should be completely disconnected in the condition of overvoltage category.
  - Be sure not to perform power cable modification, extension wiring, and multiple wire connection.
    - It may cause electric shock or fire due to poor connection, poor insulation, or current limit override.
    - When extension wiring is required due to power line damage, refer to "Step 14 Optional: Extending the power cable" in the installation manual.



### CAUTION

**Make sure that you earth the cables.**

- Do not connect the earth wire to the gas pipe, water pipe, lighting rod or telephone wire. If earthing is not complete, electric shock or fire may occur.

**Install the circuit breaker.**

- If the circuit breaker is not installed, electric shock or fire may occur.

**Make sure that the condensed water dripping from the drain hose runs out properly and safely.**

**Install the power cable and communication cable of the indoor and outdoor unit at least 1m away from the electric appliance.**

**Install the indoor unit away from lighting apparatus using the ballast.**

- If you use the wireless remote control, reception error may occur due to the ballast of the lighting apparatus.

**Do not use the indoor unit for preservation of food items, plants, equipment, and art works. This may cause deterioration of their quality.**

**Do not install the indoor unit if it has any drainage problem.**

## Power supply line, fuse or circuit breaker



### WARNING

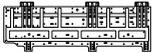
- Always make sure that the power supply is compliant with current safety standards. Always install the air conditioner in compliance with current local safety standards.
- Always verify that a suitable grounding connection is available.

# Installation Procedure

## Step 1 Checking and preparing accessories and tools

### Accessories

#### Accessories in the indoor unit package

<b>Installation plate (1)</b> 	<b>Remote control (1)</b> 
<b>Remote control battery (2)</b> 	<b>User Manual (1)</b> 
<b>Installation Manual (1)</b> 	<b>Remote Control Holder (1)</b> 
<b>Tapped Screws M4 x16 (2)</b> 	

### Tools

#### General tools

- Vacuum pump (Backward flowing prevention)
- Manifold gauge
- Stud finder
- Torque wrench
- Pipe cutter
- Reamer
- Pipe bender
- Spirit level
- Screwdriver
- Spanner
- Drill
- L-wrench
- Measuring tape

#### Tools for test operation

- Thermometer
- Resistance meter
- Electroscope

## Step 2 Choosing the installation location

### Installation location requirements

- There must be no obstacles near the air inlet and outlet.
- Install the indoor unit on a ceiling that can support its weight.
- Maintain sufficient clearance around the indoor unit.
- Before installing the indoor unit, be sure to check whether the chosen location is well-drained.

### WARNING

- Minimum installation height of indoor unit is 1.97 ft (0.6 m) for floor mounted, 5.9 ft (1.8 m) for wall, 7.22 ft (2.2 m) for ceiling.

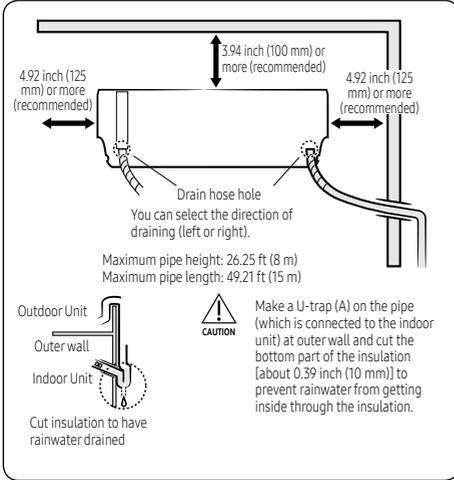
### CAUTION

**Do not install the air conditioner in following places.**

- The place where there is mineral oil or arsenic acid. Resin parts flame and the accessories may drop or water may leak. The capacity of the heat exchanger may reduce or the air conditioner may be out of order.
- The place where corrosive gas such as sulfurous acid gas generates from the vent pipe or air outlet. The copper pipe or connection pipe may corrode and refrigerant may leak.
- The place where there is a machine that generates electromagnetic waves. The air conditioner may not operate normally due to control system.
- The place where there is a danger of existing combustible gas, carbon fiber or flammable dust.
- The place where thinner or gasoline is handled. Gas may leak and it may cause fire.
- The place where animals may urinate on the product. Ammonia may be generated.
- The place where is close to heat sources.

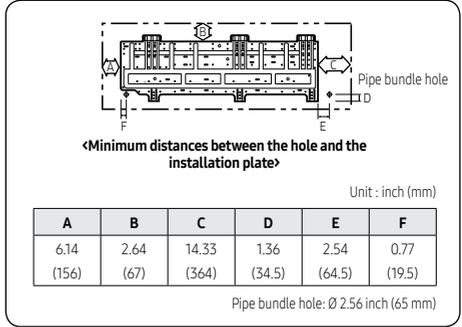
# Installation Procedure

## Overview of installation location requirements



## **CAUTION**

- If changing the pipe direction from left to right, do not drastically bent it but slowly turn it in the opposite direction as shown. Otherwise, the pipe may be damaged in the process.

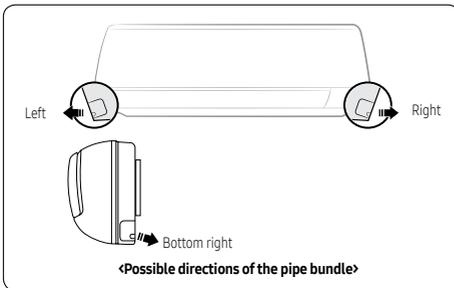


- Drill the hole.

## Step 3 Drilling a hole through the wall

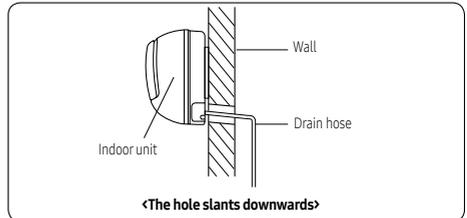
Before fixing the installation plate to a wall and then fixing the indoor unit to the installation plate, a window frame, or a gypsum board, you must determine the position of a hole [with 2.56 inch (65 mm) inner diameter] through which the pipe bundle (consisting of power and communication cables, refrigerant pipes, and drain hose) will pass and then drill that hole.

- Determine the position of a 2.56 inch (65 mm) hole in consideration of the possible directions of the pipe bundle and the minimum distances between the hole and the installation plate.



## **CAUTION**

- Be sure to drill only one hole.
- Make sure that the hole slants downwards so that the drain hose slants downwards to drain water well.



## Step 4 Fixing the installation plate

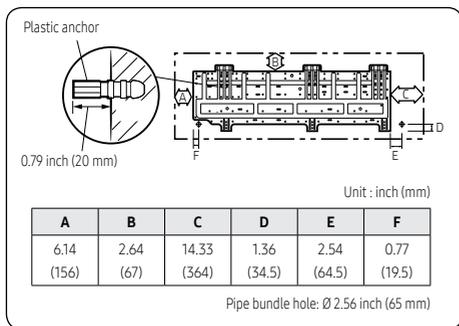
You can install the indoor unit on a wall, window frame, or gypsum board.

### WARNING

- Make sure that the wall, window frame, or gypsum board can withstand the weight of the indoor unit. If you install the indoor unit in a place where it is not strong enough to withstand the unit's weight, the unit could fall and cause injury.

#### When fixing the indoor unit on a wall

Fix the installation plate to the wall giving attention to the weight of the indoor unit.



### NOTE

- If you mount the plate to a concrete wall using plastic anchors, make sure that gaps between the wall and the plate, created by projected anchor, is less than 0.79 inch (20 mm).

#### When fixing the indoor unit on a window frame

- 1 Determine the positions of the wooden uprights to be attached to the window frame.
- 2 Attach the wooden uprights to the window frame giving attention to the weight of the indoor unit.
- 3 Attach the installation plate to the wooden upright using tapping screws.

#### When fixing the indoor unit on a gypsum board

- 1 Use stud finder to find out locations of the studs.
- 2 Fix the plate hanger on two studs.

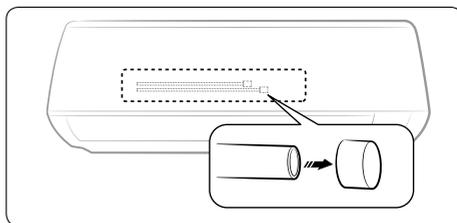
### CAUTION

- If you fix the indoor unit on a gypsum board, use only specified anchor bolts on reference positions. Otherwise, the gypsum surrounding the joints may crumble over time and cause the screws to be loosened and stripped. This may lead to physical injury or equipment damage.
- Search for other spots if there are less than two studs, or the distance between the studs are different from the plate hanger.
- Fix the installation plate without inclining to one side.

## Step 5 Purging the unit

Upon delivery, there may be inert gas inside the indoor unit. Purge the gas from the indoor unit before connecting the assembly pipe.

- Unscrew the caps at the end of each pipe. All inert gas exhausts from the indoor unit.



### NOTE

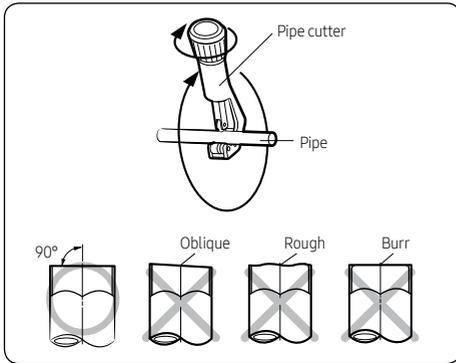
- To prevent dirt or foreign substances from getting into the pipes during installation, do NOT remove the caps completely until you are ready to connect the pipes.

# Installation Procedure

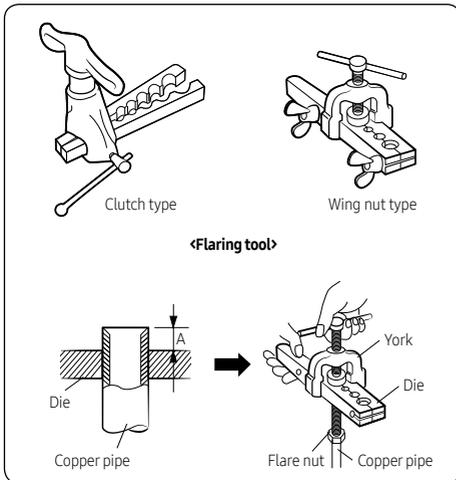
## Step 6 Cutting or flaring the pipes

(Unit: inch (mm))

- 1 Make sure that you prepared the required tools. (pipe cutter, reamer, flaring tool and pipe holder)
- 2 If you want to shorten the pipe, cut it using a pipe cutter ensuring that the cut edge remains at 90° with the side of the pipe. There are some examples of correctly and incorrectly cut edges below.

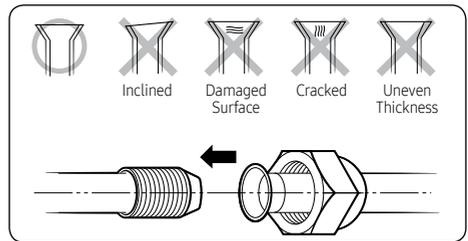


- 3 To prevent a gas leak, remove all burrs at the cut edge of the pipe using a reamer.
- 4 Carry out flaring work using flaring tool as shown below.

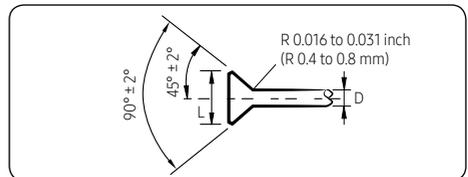


Outer diameter	A		
	Flare tool for R-410A clutch type	Conventional flare tool	
		Clutch type	Wing nut type
Ø1/4 (6.35)	0~0.02 (0~0.5)	0.04~0.06 (1.0~1.5)	0.06~0.08 (1.5~2.0)
Ø3/8 (9.52)	0~0.02 (0~0.5)	0.04~0.06 (1.0~1.5)	0.06~0.08 (1.5~2.0)
Ø1/2 (12.70)	0~0.02 (0~0.5)	0.04~0.06 (1.0~1.5)	0.06~0.08 (1.5~2.0)
Ø5/8 (15.88)	0~0.02 (0~0.5)	0.04~0.06 (1.0~1.5)	0.06~0.08 (1.5~2.0)

- 5 Check if you flared the pipe correctly. There are some examples of incorrectly flared pipes below.



- 6 Align the pipes and tighten the flare nuts first manually and then with a torque wrench, applying the following torque.



Outer diameter, D [inch (mm)]	Connection Torque		Flare dimension, L [inch (mm)]
	kgf·cm	[lbf·ft (N·m)]	
Ø1/4 (6.35)	140~180	10.3 to 13.3 (14 to 18)	0.34 to 0.36 (8.7 to 9.1)
Ø3/8 (9.52)	350~430	25.1 to 31.0 (34 to 42)	0.50 to 0.52 (12.8 to 13.2)
Ø1/2 (12.70)	500~620	36.1 to 45.0 (49 to 61)	0.64 to 0.65 (16.2 to 16.6)
Ø5/8 (15.88)	690~830	50.2 to 60.5 (68 to 82)	0.76 to 0.78 (19.3 to 19.7)

## ⚠ CAUTION

- In case of needing brazing, you must work with nitrogen gas blowing.

### Step 7 Connecting the refrigerant pipe

Connect indoor and outdoor units with field-supplied copper pipes by means of flare connections. Use insulated seamless refrigeration grade pipe only, (Cu DHP type according to ISO1337), degreased and deoxidized, suitable for operating pressures of at least 4200 kPa and for burst pressure of at least 20700 kPa. Under no circumstances must sanitary type copper pipe be used.

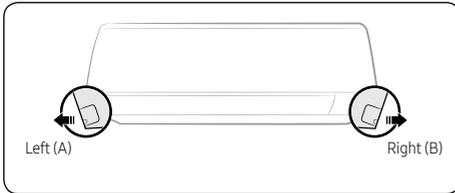
There are 2 refrigerant pipes of different diameters:

- The smaller one is for the liquid refrigerant
- The larger one is for the gas refrigerant

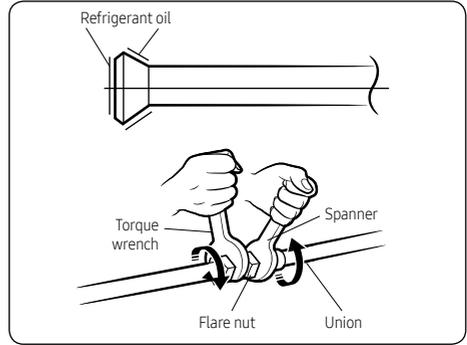
A short pipe is already fitted to the air conditioner. You may need to extend the pipe using the assembly pipe. (optional)

The connection procedure for the refrigerant pipe varies according to the exit position of the pipe when facing the wall:

- Left(A)
- Right(B)
- Rear



- 1 Cut out the appropriate knock-out piece on the rear of the indoor unit unless you connect the pipe directly from the rear.
- 2 Smooth the cut edges.
- 3 Remove the protection caps of the pipes and connect the assembly pipe to each pipe. Tighten the nuts first with your hands, and then with a torque wrench, applying the following torque:



Outer diameter [inch (mm)]	Torque [lb•ft (N•m)]	Torque (kgf•cm)
Ø 1/4 (6.35)	10.3 to 13.3 (14 to 18)	140~180
Ø 3/8 (9.52)	25.1 to 31.0 (34 to 42)	350~430
Ø 1/2 (12.70)	36.1 to 45.0 (49 to 61)	500~620
Ø 5/8 (15.88)	50.2 to 60.5 (68 to 82)	690~830

#### 📖 NOTE

- If you want to shorten or extend pipes, refer to Step 6 Cutting or flaring the pipes.
- 4 Cut off the remaining foam insulation.
  - 5 If necessary, bend the pipe to fit along the bottom of the indoor unit. Then pull it out through the appropriate hole.
    - The pipe should not project from the rear of the indoor unit.
    - The bending radius should be 3.94 inch (100 mm) or more.
  - 6 Pass the pipe through the hole in the wall.
  - 7 For further details on how to connect to the outdoor unit and purge the air, refer to Step 4 Purging the unit.

#### 📖 NOTE

- The pipe will be insulated and fixed permanently into position after finishing the installation and the gas leak test; refer to page 10 for further details.
- DO NOT WALL UP THE PIPE CONNECTION!  
All refrigerant pipe connection must be easy accessible and serviceable.

# Installation Procedure

## Step 8 Performing leak test

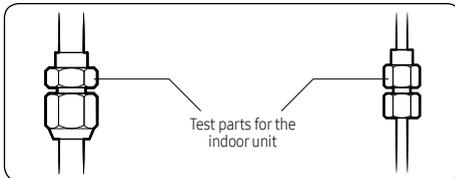
### Leak test

#### LEAK TEST WITH NITROGEN (before opening valves)

In order to detect basic refrigerant leaks, before recreating the vacuum and recirculating the R-410A, it's responsible of installer to pressurize the whole system with nitrogen (using a pressure regulator) at a pressure above 4.1MPa (gauge).

#### LEAK TEST WITH R-410A (after opening valves)

Before opening valves, discharge all the nitrogen into the system and create vacuum. After opening valves check leaks using a leak detector for refrigerant R-410A.



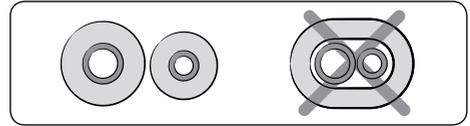
## CAUTION

- Discharge all the nitrogen to create a vacuum and charge the system.

## Step 9 Wrapping the pipes with the insulation

After checking for gas leaks in the system, insulate the pipe, hose and cables. Then place the indoor unit on the installation plate.

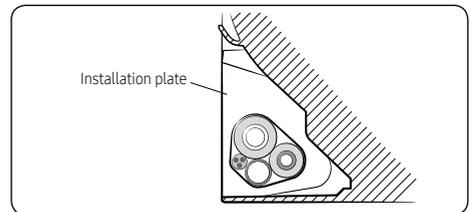
- To avoid condensation problems, place heat-resistant polyethylene foam separately around each refrigerant pipe in the lower part of the indoor unit.



- Wrap the refrigerant pipe and the drain hose in the rear of the indoor unit with the absorbent pad.

### NOTE

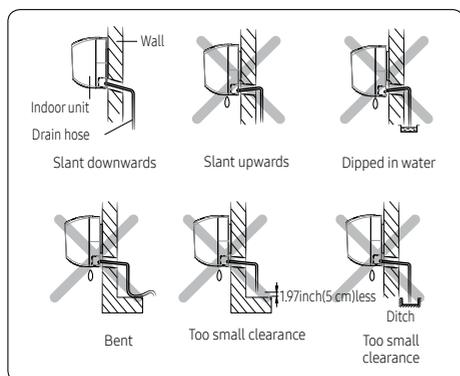
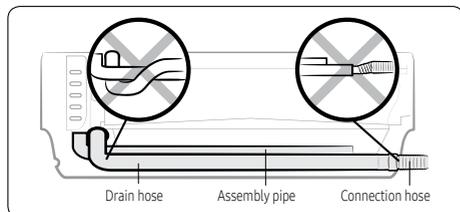
- Wind the pipe and hose three times to the end of the indoor unit with the absorbent pad. [0.79 inch (20 mm) interval]
- Wind the pipe, assembly cable and drain hose with insulation tape.
  - Place the bundle (the pipe, assembly cable and drain hose) in the lower part of the indoor unit carefully so it doesn't project from the rear of the indoor unit.



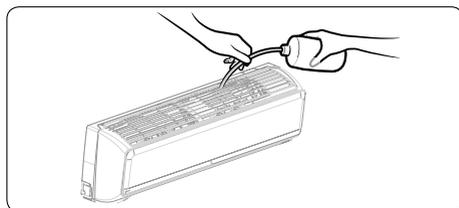
- Hook the indoor unit to the installation plate and move the unit to the right and left until it is securely in place.
- Wrap the rest of the pipe with vinyl tape.
- Attach the pipe to the wall using clamps (optional).

## Step 10 Installing and connecting the drain hose

- 1 Install the drain hose.

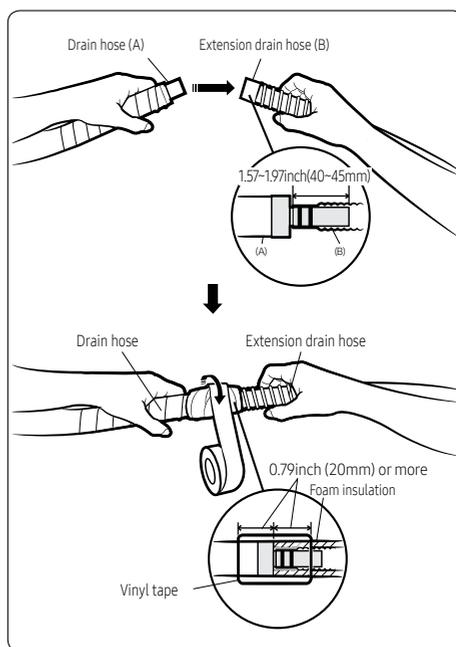


- 2 Pour water into the drain pan. Check whether the hose is well drained.



- Inadequate installation may cause water leakage.
- If the drain hose is routed inside the room, insulate the hose so that dripping condensation does not damage the furniture or floors.
- Do not box in or cover the drain hose connection. Drain hose connection must be easily accessible and serviceable.

## Step 11 Optional: Extending the drain hose



## ⚠ CAUTION

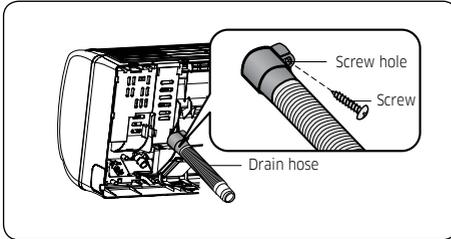
- Make sure that the indoor unit is in upright position when you pour water to check for leakage. Make sure that the water does not overflow onto the electrical part.
- If the diameter of the connection hose is smaller than the product's drain hose, water leakage may occur.

# Installation Procedure

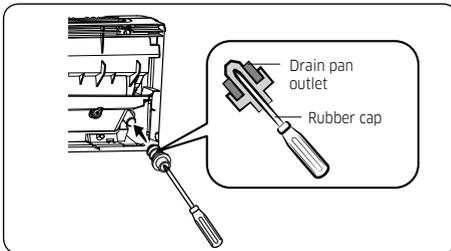
## Step 12 Optional: Changing the direction of the drain hose

Change the direction only when it is necessary.

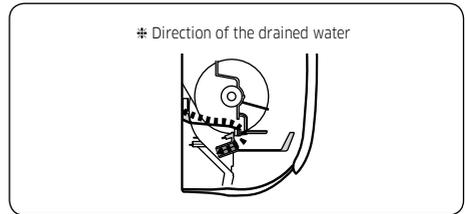
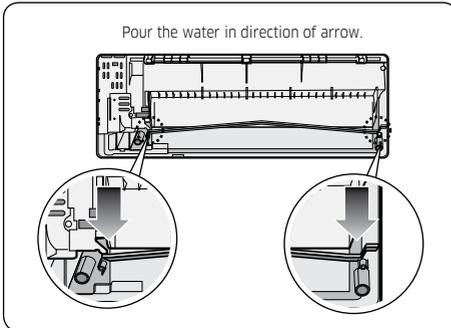
- 1 Detach the rubber cap with the flyer.



- 2 Detach the drain hose by pulling it and turning to the left.
- 3 Insert the drain hose by fixing it into the groove of the drain hose and the outlet of the drain pan.



- 4 Attach the rubber cap with a screwdriver by turning it to the right until it fixes to the end of the groove.
- 5 Check for leakage on both side of the drain outlet.



## ⚠ CAUTION

- Make sure that the indoor unit is in upright position when you pour water to check for leakage. Make sure that the water does not overflow onto the electrical part.

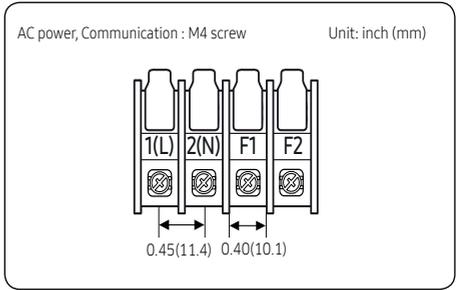
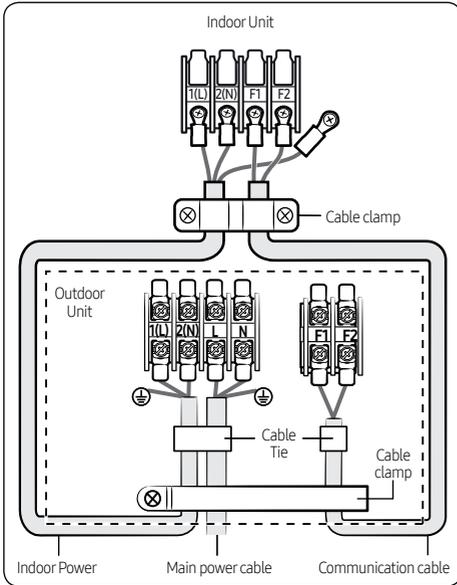
## Step 13 Connecting the power and communication cables

## ⚠ CAUTION

- Always remember to connect the refrigerant pipes before performing the electric connections. When disconnecting the system, always disconnect the electric cables before disconnecting the refrigerant pipes.
- Always remember to connect the air conditioner to the grounding system before performing the electric connections. Use a crimp ring terminal at the end of each wire.

The indoor unit is powered through the outdoor unit by means of a H05RN-F connection cable (or a more power model), with insulation in synthetic rubber and a jacket in polychloroprene (neoprene), in accordance with the requirements specified in the standard EN 60335-2-40.

- 1 Remove the screw on the electrical component box and remove the cover plate.
- 2 Route the connection cord through the side of the indoor unit and connect the cable to the terminals refer to the figure below.
- 3 Route the other end of the cable to the outdoor unit through the ceiling & the hole on the wall.
- 4 Reassemble the electrical component box cover, carefully tightening the screw.

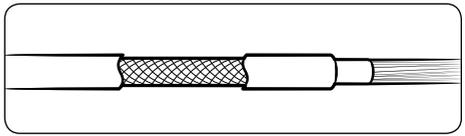


	Tightening torque	
	N-m	lbfft
M3.5	0.8 to 1.2	0.59 to 0.89
M4	1.2 to 1.8	0.89 to 1.1

(1N·m=10kgf·cm)

- Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord. (Code designation IEC:60245 IEC 57 / CENELEC: H05RN-F)
- Since it has the external power supply, refer to the outdoor unit installation manual for MAIN POWER.

Indoor power supply		
Power supply	Max/Min(V)	Indoor power cable
208 to 230V, 60Hz	±10%	0.0012inch <sup>2</sup> †(0.75mm <sup>2</sup> †), 3 wires
Communication cable		
0.0012inch <sup>2</sup> †(0.75mm <sup>2</sup> †), 2 wires		



### ⚠ CAUTION

- When installing the indoor unit in a computer room or network room, use the double shielded communication cable (tape aluminum / polyester braid + copper) of FROHH2R type.

Installation Procedure

# Installation Procedure

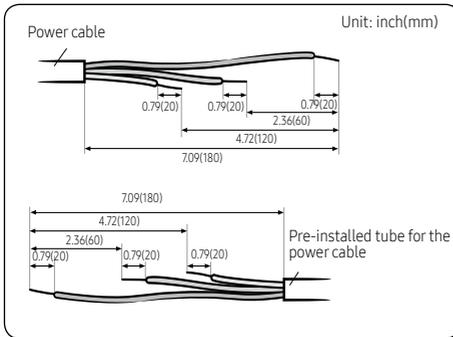
## Step 14 Optional: Extending the power cable

1 Prepare the following tools.

Tools	Spec	Shape
Crimping pliers	MH-14	
Connection sleeve	0.79x0.26inch (20x06.5mm) (HxOD)	
Insulation tape	Width 0.75inch(19mm)	
Contraction tube	2.76x0.31 inch (70x08.0mm) (LxOD)	

2 As shown in the figure, peel off the shields from the rubber and wire of the power cable.

- Peel off 0.79 inch (20 mm) of cable shields from the pre-installed tube.

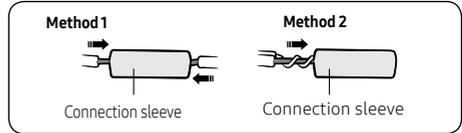


### CAUTION

- For information about the power cable specifications for indoor and outdoor units, refer to the installation manual.
- After peeling off cable wires from the pre-installed tube, insert a contraction tube.

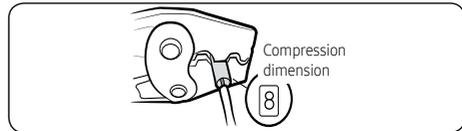
3 Insert both sides of core wire of the power cable into the connection sleeve.

- **Method 1:** Push the core wire into the sleeve from both sides.
- **Method 2:** Twist the wire cores together and push it into the sleeve.

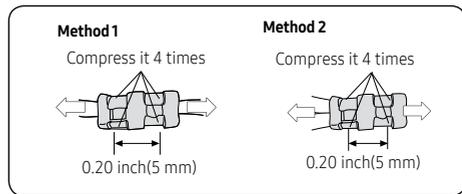


### CAUTION

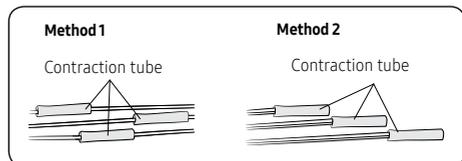
- If cable wires are connected without using connecting sleeves, their contact area becomes reduced, or corrosion develops on the outer surfaces of the wires (copper wires) over a long time. This may cause an increase of resistance (reduction of passing current) and consequently may result in a fire.
- 4 Using a crimping tool, compress the two points and flip it over and compress another two points in the same location.
  - The compression dimension should be 0.31 inch (8.0 mm).



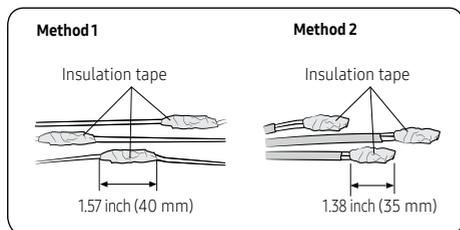
- After compressing it, pull both sides of the wire to make sure it is firmly pressed.



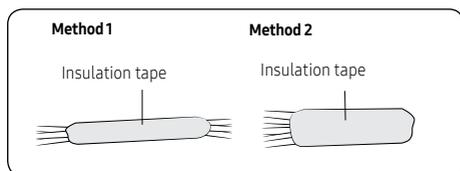
5 Apply heat to the contraction tube to contract it.



- 6 Wrap it with the insulation tape twice or more and position your contraction tube in the middle of the insulation tape. Three or more layers of insulation are required.



- 7 After tube contraction work is completed, wrap it with the insulation tape to finish.



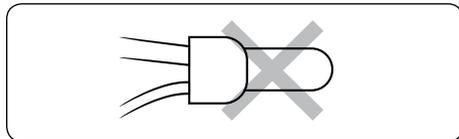
## CAUTION

- Make sure that the connection parts are not exposed to outside.
- Be sure to use insulation tape and a contraction tube made of approved reinforced insulating materials that have the same level of withstand voltage with the power cable. (Comply with the local regulations on extensions.)



## WARNING

- In case of extending the electric wire, please DO NOT use a round-shaped Pressing socket.
  - Incomplete wire connections can cause electric shock or a fire.



# Troubleshooting

## Detection of errors

- ◆ If an error occurs during the operation, an LED flickers and the operation is stopped except the LED.
- ◆ If you re-operate the air conditioner, it operates normally at first, then detect an error again.

## LED Display on the receiver & display unit

### LED Display

- ◆ If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
- ◆ If you re-operate the air conditioner, it operates normally at first, then detect an error again.
- ◆ When E108 error occurs, change the address and reset the system.Ex.) When address of the indoor unit #1 and #2 are set as 5, address of the indoor unit #1 will become 5 and indoor unit #2 will display E108, A002.

● On   ● Flickering   ✕ Off

<u>Abnormal condition</u>	<u>Error code</u>	<u>LED Display</u>		
				
Error on indoor temperature sensor (Short or Open)	E121	✕	●	✕
1. Error on Eva-in sensor (Short or Open) 2. Error on Eva-out sensor (Short or Open) 3. Discharge sensor error (Short or Open)	E122 E123 E126	●	●	✕
Indoor fan error	E154	✕	✕	●
1. Error on outdoor temperature sensor (Short or Open) 2. Error on cond sensor 3. Error on discharge sensor Other outdoor unit sensor error that is not on the above list	E221 E237 E251	●	✕	●
1. When there is no communication between the indoor-outdoor units for 2 minutes 2. Communication error received from the outdoor unit 3. 3 minute tracking error on outdoor unit 4. Communication error after tracking due to unmatching number of installed units 5. Error due to repeated communication address 6. Communication address not confirmed Other outdoor unit communication error that is not on the above list	E101 E102 E202 E201 E108 E109	✕	●	●
Self diagnosis error display 1. Error due to opened EEV (2nd detection) 2. Error due to closed EEV (2nd detection) 3. Eva in sensor is detached 4. Eva out sensor is detached 5. Thermal fuse error (Open)	E151 E152 E128 E129 E198	●	●	●

Appendix

<b>Abnormal condition</b>	<b>Error code</b>	<b>LED Display</b>		
				
1. COND mid sensor is detached	E241			
2. Refrigerant leakage (2nd detection)	E554			
3. Abnormally high temperature on Cond (2nd detection)	E450			
4. Low pressure s/w (2nd detection)	E451			
5. Abnormally high temperature on discharged air on outdoor unit (2nd detection)	E416			
6. Indoor operation stop due to unconfirmed error on outdoor unit	E559			
7. Error due to reverse phase detection	E425			
8. Comp stop due to freeze detection (6th detection)	E403			
9. High pressure sensor is detached	E301	●	◐	◐
10. Low pressure sensor is detached	E306			
11. Outdoor unit compression ratio error	E428			
12. Outdoor sump down_1 prevention control	E413			
13. Compressor down due to low pressure sensor prevention control_1	E410			
14. Simultaneous opening of cooling/heating MCU SOL valve (1st detection)	E180			
15. Simultaneous opening of cooling/heating MCU SOL valve (2nd detection)	E181			
16. External floating Switch error	E665			
Other outdoor unit self-diagnosis error that is not on the above list				
EEPROM error	E162	◐	◐	◐

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