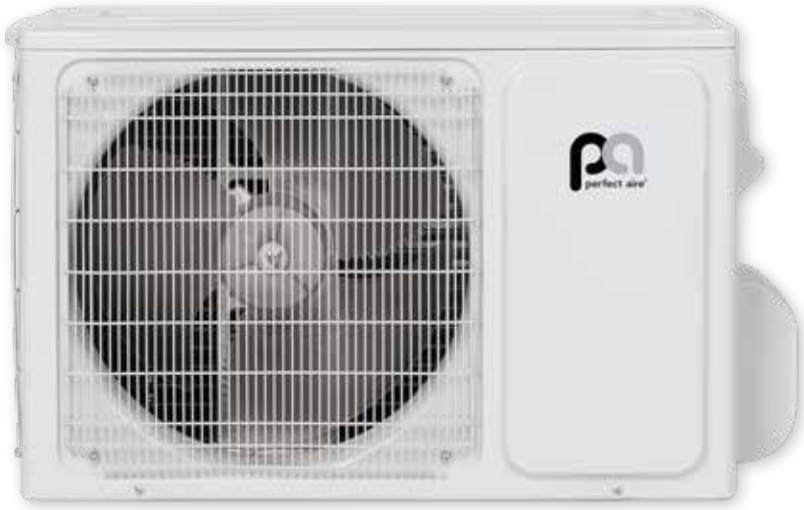
perfect aire®

OWNER'S MANUAL

SINGLE-ZONE DUCTLESS MINI-SPLIT SYSTEM



MODELS: 3PAMSH30B-SZW, 3PAMSH30B-SZO, 3PAMSH36B-SZW, 3PAMSH36B-SZO

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IMPORTANT NOTE: Please check the applicable models, technical data, F-GAS data, and manufacturer information on the indoor and outdoor product stickers before installation.

SAFETY INSTRUCTIONS

1. To guarantee the unit works normally, please read the manual carefully before installation, and try to install strictly according to this manual.
2. Do not let air enter the refrigeration system or discharge refrigerant when moving the air conditioner.
3. Properly ground the air conditioner.
4. Check the connecting cables and pipes carefully, make sure they are correct and firm before connecting the power of the air conditioner.
5. There must be an electrical disconnect switch.
6. After installing, the consumer must operate the air conditioner correctly according to this manual, keep a suitable storage for maintenance and moving of the air conditioner in the future.
7. The Fuse of the unit:

Model	Max Fuse
9K(115V)	Max Fuse is located on outdoor unit product sticker.
12K(115V)	
9K-12K(208/230V)	
18K(208/230V)	
24K-36K(208/230V)	

8. A residual current device (RCD) with the rating of above 10mA shall be incorporated in the fixed wiring according to the national rule.
9. Warning: Risk of electric shock can cause injury or death: Disconnect all remote electric power supplies before servicing.
10. The best length of the connecting pipe between the indoor unit and outdoor unit is less than 24.6ft (7.5 meters). It will affect the efficiency of the air conditioner if the distance longer than that length.
11. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
12. This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.
13. The batteries in remote control must be recycled or disposed of properly. Disposal of Scrap Batteries --- Please discard the batteries as sorted municipal waste at the accessible collection point.
14. If the appliance is fixed wiring, the appliance must be fitted with means for disconnection from the supply mains having a contact separation in all poles that provide full disconnection under over voltage category III conditions, and these means must be incorporated in the fixed wiring in accordance with the wiring rules.
15. 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.
16. The appliance shall be installed in accordance with local electrical safety regulations and National Electrical Codes (NEC).
17. The air conditioner must be installed by professional or qualified persons.
18. The appliance shall not be installed in the laundry room.
19. Regarding to installation, please refer to section “Installation instructions”.
20. Regarding to maintenance, please refer to section “Care and Maintenance”.

PREPARATION BEFORE USE

NOTE:

- When charging refrigerant into the system, make sure to charge in liquid state,if the refrigerant of the appliance is R410A. Otherwise, chemical composition of refrigerant (R410A) inside the system may change and thus affect performance of the air conditioner.
- According to the character of refrigerant (R410A,the value of GWP is 2088), the pressure of the tube is very high, so be sure to be careful when you install and repair 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.
- The air conditioner must be installed by trained, qualified installers and service mechanics.
- The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.

PRESET

Before using the air conditioner, be sure to check and preset the following.

- **Remote Control Presetting**
  Each time after the remote control is replaced with new batteries or is energized, remote control auto presetting heat pump. If the air conditioner you purchased is a Cooling Only one, heat pump remote control can also be used.
- **Back-light Function of Remote Control**
  Hold down any button on remote control to activate the back light. It automatically shuts off 10 seconds later.
- **Auto Restart Presetting**
  The system has an Auto-Restart function and will resume to previous settings once power has been restored.

SAFEGUARDING THE ENVIRONMENT

This appliance is made of recyclable or re-usable material. Scrapping must be carried out in compliance with local waste disposal regulations. Before scrapping it, make sure to cut off the mains cord so that the appliance cannot be re-used.

For more detailed information on handling and recycling this product, contact your local authorities who deal with the separate collection of rubbish or the shop where you bought the appliance.

SCRAPPING OF APPLIANCE

This marking indicates that this product should not be disposed with other household wastes throughout the North America. 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 environmental safe recycling.

SAFETY PRECAUTIONS

Symbols in this Use and Care Manual are interpreted as shown below.

Be sure not to do.

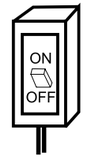
Pay attention to such a situation.

Grounding is essential.

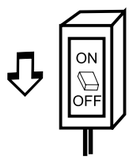
Warning: Incorrect handling could cause a serious hazard, such as death, serious injury, etc.

Use correct power supply in accordance with the rating plate requirement. Otherwise, serious faults or hazard may occur or a fire maybe break out.

Keep the power supply circuit breaker or plug from dirt. Connect the power supply cord to it firmly and correctly, lest an electric shock or a fire break out due to insufficient contact.

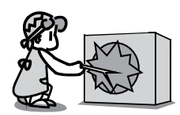


Do not use the power supply circuit breaker or pull off the plug to turn it off during operation.
This may cause a fire due to spark, etc.



Do not knit, pull or press the power supply cord, lest the power supply cord be broken. An electric shock or fire is probably caused by a broken power supply cord.

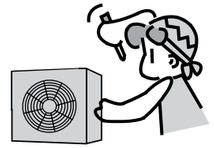
Never insert a stick or similar obstacle to the unit. Since the fan rotates at high speed, this may cause an injury.



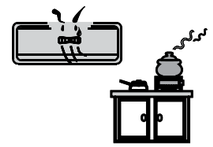
It is harmful to your health if the cool air reaches you for a long time. It is advisable to let the air flow be deflected to all the room.

Turn off the appliance by remote control firstly before cutting off power supply if malfunction occurs.

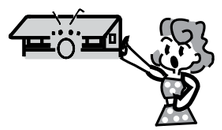
Do not repair the appliance by yourself. If this is done incorrectly, it may cause an electric shock, etc.



Prevent the airflow from reaching the gas burners and stove.

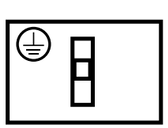


Do not touch the operation buttons when your hands are wet.



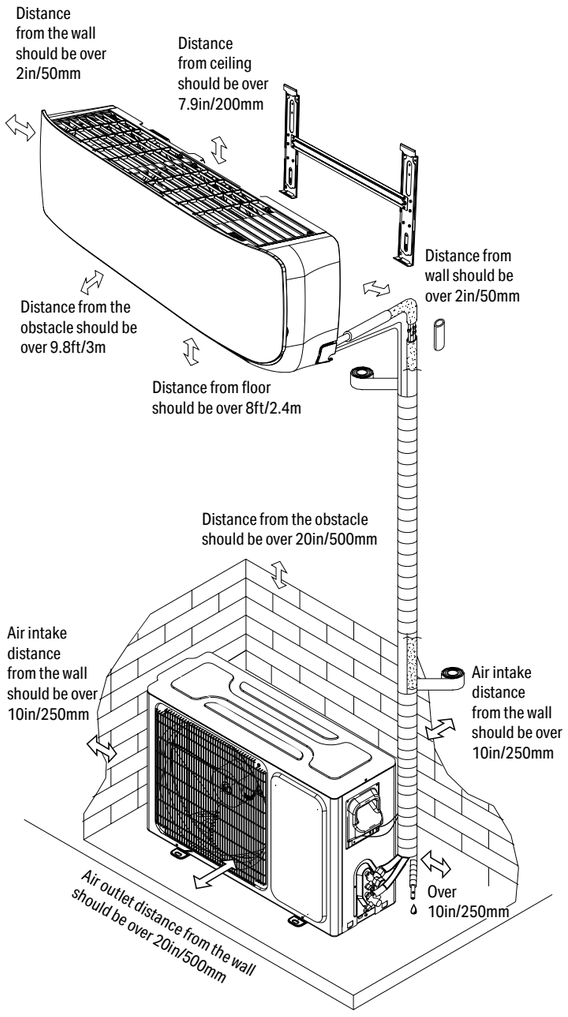
Do not put any objects on the outdoor unit.

It is the user's responsibility to make the appliance be grounded according to local codes or ordinances by a licensed technician.



INSTALLATION INSTRUCTIONS

INSTALLATION DIAGRAM



- Above figure is only a simple presentation of the unit, it may not match the external appearance of the unit you purchased.
- Installation must be performed in accordance with the national wiring standards by authorized personnel only.

BEST INSTALLATION PRACTICES

- A SURGE PROTECTOR IS HIGHLY RECOMMENDED TO PREVENT DAMAGE TO THE EQUIPMENT DUE TO ELECTRICAL FAILURE
- VERIFY THE WALL IS PLUMB. AN UNPLUMB WALL WILL CAUSE BLOWER WHEEL TO BE UNBALANCED
- NEVER USE WIRE NUTS ON THE COMMUNICATION CABLE. CRIMP TYPE CONNECTORS ARE ALLOWED
- WIRING BETWEEN INDOOR AND OUTDOOR UNITS IS POLARITY SENSITIVE.(EXAMPLE: IF INDOOR UNIT IS WIRED BLACK ON 1, RED ON 2 AND WHITE ON 3, IT NEEDS TO BE THE SAME ON THE OUTDOOR UNIT)
- A MINIMUM OF 16 AWG, STRANDED 4 WIRE, FT4 RATED, 300 VOLTS WIRE IS NEEDED
- BE SURE TO MAKE ALL FLARES WITH AN APPROVED 410A FLARING TOOL
- A MINIMUM OF 10 FT. LINE SET IS REQUIRED
- ON SINGLE-ZONE: IF LINE SET IS LONGER THAN 25 FT. YOU WILL NEED TO WEIGH IN THE RECOMMENDED AMOUNT OF REFRIGERANT. SEE INSTALLATION AND OPERATION MANUAL
- ON MULTI-ZONE: THERE IS ENOUGH REFRIGERANT FOR 25 FT. OF LINE SET PER ZONE (EXAMPLE: 3-ZONE = 75 FT. OF LINE SET)
- USE OIL OR NYLOG ON THE THREADS AND TORQUE NUTS TO THE PROPER SPECIFIED VALUE. SEE INSTALLATION AND OPERATION MANUAL
- ALWAYS USE THE SUCTION/GAS LINE TO ADD OR REMOVE REFRIGERANT
- TEST FOR LEAKS BY PRESSURIZING THE SYSTEM WITH MINIMUM 500 POUNDS OF NITROGEN AND HOLD FOR AT LEAST 60 MINUTES
- EVACUATE THE SYSTEM DOWN TO A MINIMUM OF 500 MICRONS AND HOLD FOR 30 MINUTES

INSTALLATION INSTRUCTIONS *(Continued)*

BOX PART BREAKDOWN

INDOOR UNIT BOX	
	(1) Indoor Evaporator
	(1) Mounting Bracket
	(1) Drain Joint
	(1) Drain Joint Rubber Seal
	(1) Remote Control
	(2) AAA Batteries for Remote Control

INDOOR UNIT BOX *(Continued)*	
	(1) Remote Control Wall Bracket
	(1) Bag of Wall Anchors & Screws
	(2) Flare Nuts

OUTDOOR UNIT BOX	
	(1) Outdoor Condenser
	(4) Anti-Vibration Pads

SUGGESTED TOOLS

In order to install your air-conditioner more conveniently and safely, you might use those special tools listed below.

- **Screw Driver**
- **Standard Wrench**
- **Hex Keys or Allen Wrenches**
- **Adjustable/Crescent Wrench**
- **Drill**
- **Drill Bits**
- **Torque wrench**
- **Vacuum Pump**
- **Manifold and Gauges**
- **Level**
- **Clamp on Amp Meter**
- **Safety Glasses**
- **Work Gloves**
- **Refrigerant Scale**
- **Pipe Cutter**
- **R410A Flaring Tool**
- **Micron Gauge**
- **Hole Saw**

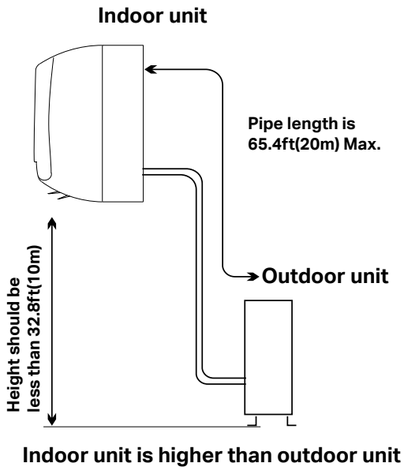
SITE INSTRUCTIONS

SITE FOR INSTALLING INDOOR UNIT

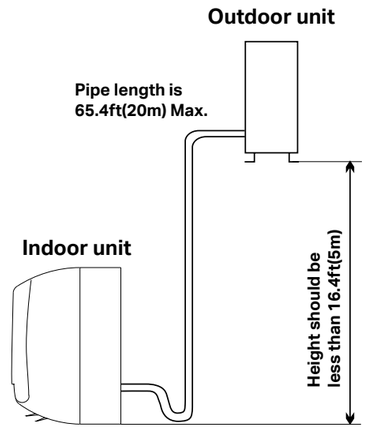
- Where there is no obstacle near the air outlet and air can be easily blown to every corner.
- Where piping and wall hole can be easily arranged.
- Keep the required space from the unit to the ceiling and wall according to the installation diagram on previous page.
- Where the air filter can be easily removed.
- Keep the unit and remote control 3.28ft(1m) or more apart from television, radio etc.
- Keep as far as possible from fluorescent lamps.
- Do not put anything near the air inlet to obstruct it from air absorption.
- Install on a wall that is strong enough to bear the weight of the unit.
- Install in a place that will not increase operation noise and vibration.
- Keep away from direct sunlight and heating sources. Do not place flammable materials or combustion apparatuses on top of the unit.

SITE FOR INSTALLING OUTDOOR UNIT

- Where it is convenient to install and well ventilated.
- Avoid installing it where flammable gas could leak.
- Keep the required distance apart from the wall.
- Keep the outdoor unit away from greasy dirt, vulcanization gas exit.
- Avoid installing it by the roadside where there is a risk of muddy water.
- A fixed base where it is not subject to increased operation noise.
- Where there is not any blockage of the air outlet.
- Avoid installing under direct sunlight, in an aisle or sideway, or near heat sources and ventilation fans. Keep away from flammable materials, thick oil fog, and wet or uneven places.
- In case the pipe length is more than 24.6ft(7.5m), the refrigerant should be charged additionally, according to below table.



Indoor unit is higher than outdoor unit



Outdoor unit is higher than indoor unit

MODEL	REQUIRED AMOUNT OF ADDITIONAL REFRIGERANT OZ/FT
9K-18K	0.22
24K	0.32
30K-36K	0.43

If the height or pipe length is out of the scope of the table, please consult the merchant.

INDOOR UNIT INSTALLATION

1. INSTALLING THE MOUNTING PLATE

MOUNTING PLATE INSTRUCTIONS

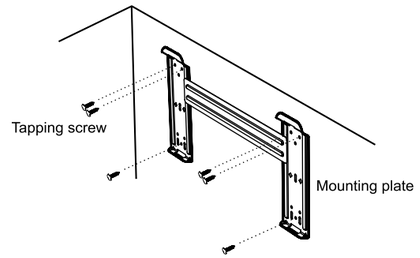
- Decide an installing location for the mounting plate according to the indoor unit location and piping direction.

  NOTE: It is recommended to install screw anchors for sheet rock, concrete block, brick and such type of wall.

- Keep the mounting plate horizontal with a horizontal level or dropping line.
- Mark the center of the indoor unit on mounting plate for future reference.

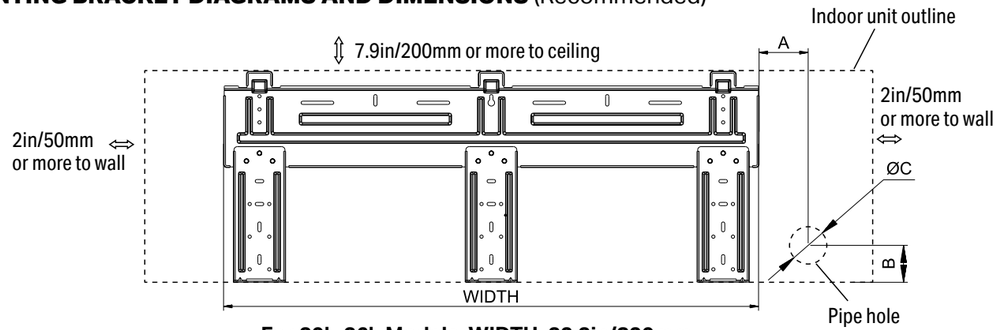
  NOTE: The center of the mounting bracket may not be the center of the indoor unit.

- Install mounting plate to the wall with a minimum of six screws, evenly spaced to properly support indoor unit weight.

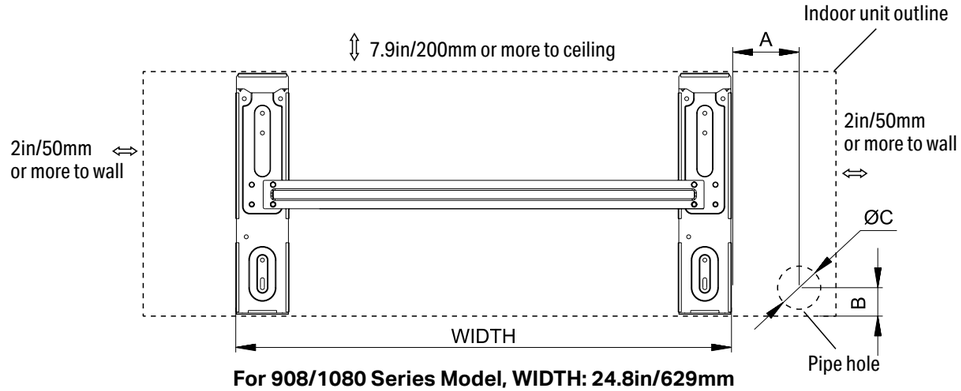


NOTE: The shape of your mounting plate may be different from the one above, but the installation method is similar.

MOUNTING BRACKET DIAGRAMS AND DIMENSIONS (Recommended)

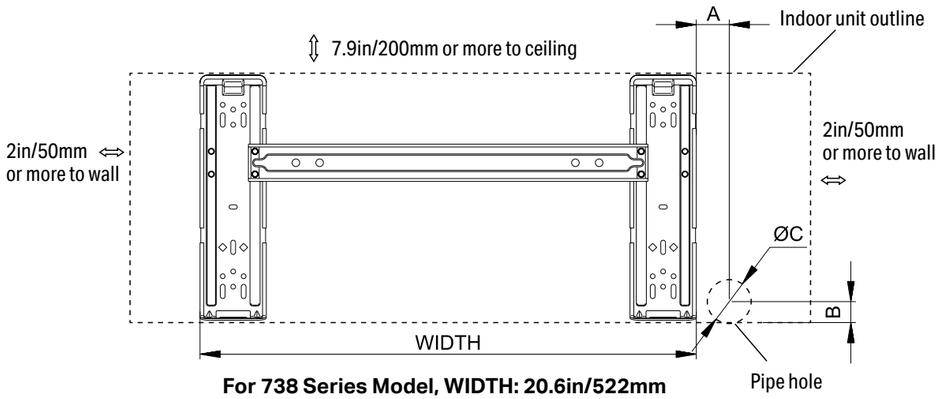


For 30k-36k Models, WIDTH: 32.3in/820mm



For 908/1080 Series Model, WIDTH: 24.8in/629mm

MOUNTING BRACKET DIAGRAMS AND DIMENSIONS (Recommended)



For 738 Series Model, WIDTH: 20.6in/522mm
For 808 Series Model, WIDTH: 23.3in/592mm

MOUNTING PLATE INSTRUCTIONS ON WOODEN WALL

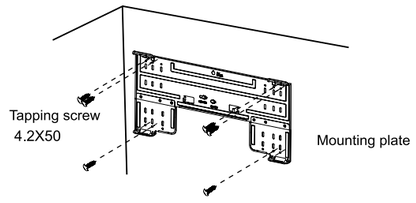
- Decide an installing location for the mounting plate according to the indoor unit location and piping direction.

  NOTE: It is recommended to install screw anchors for sheet rock, concrete block, brick and such type of wall.

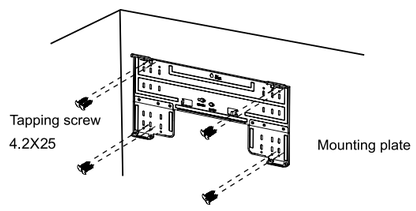
- Keep the mounting plate horizontal with a horizontal level or dropping line.
- Mark the center of the indoor unit on mounting plate for future reference.

  NOTE: The center of the mounting bracket may not be the center of the indoor unit.

- Install mounting plate to the wall with a minimum of six screws, evenly spaced to properly support indoor unit weight.



Concrete/Brick Wall

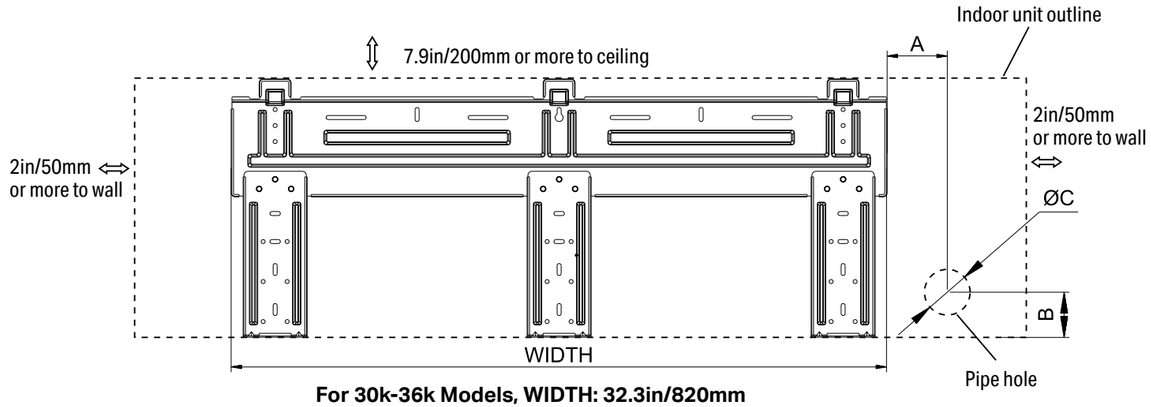


Wooden Wall

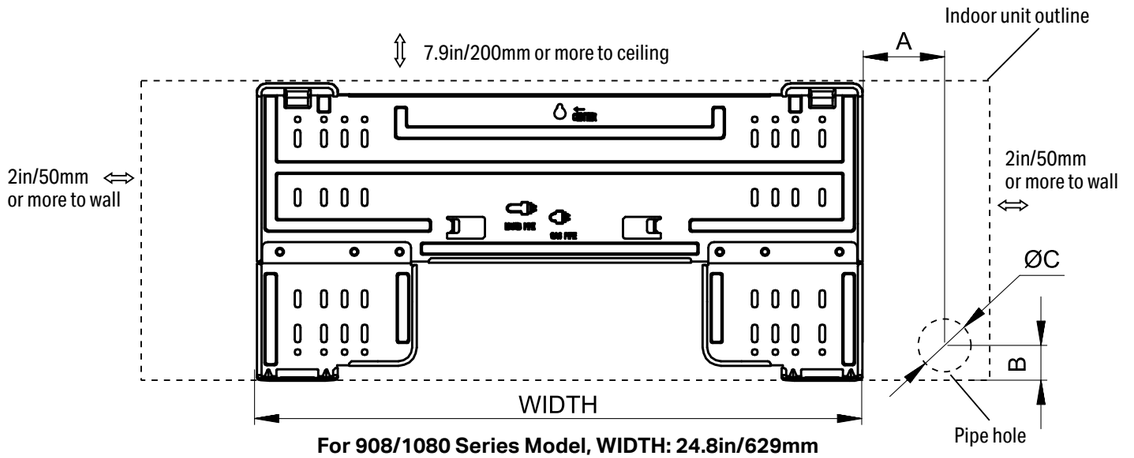
NOTE: The shape of your mounting plate may be different from the one above, but the installation method is similar.

NOTE: As the above figure shown, the six holes matched with tapping screw on the mounting plate must be used to fix the mounting plate, the others are prepared.

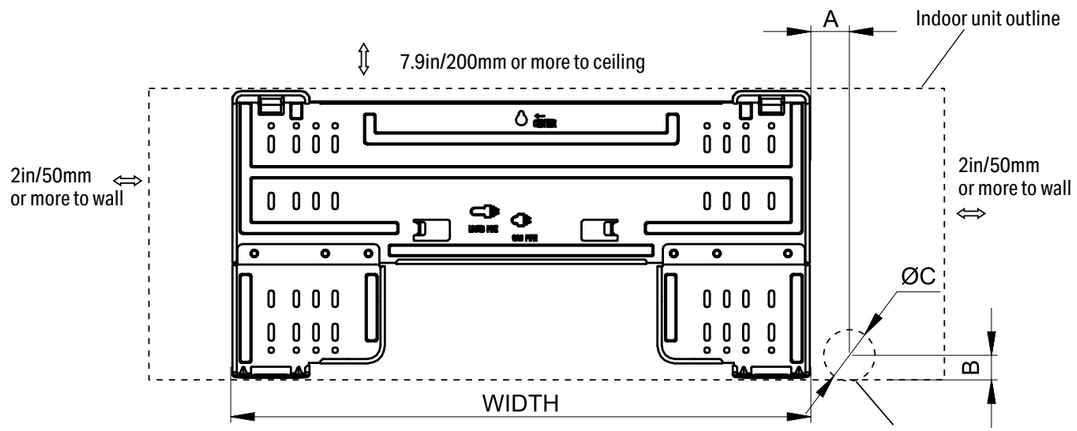
MOUNTING BRACKET DIAGRAMS AND DIMENSIONS ON WOODEN WALL (Recommended)



For 30k-36k Models, WIDTH: 32.3in/820mm



For 908/1080 Series Model, WIDTH: 24.8in/629mm



For 738 Series Model, WIDTH: 20.6in/522mm
For 808 Series Model, WIDTH: 23.3in/592mm

2. DRILL A HOLE IN WALL FOR INTERCONNECTING PIPING, DRAIN & WIRING

- Decide the position of the hole for piping according to the location of mounting plate.
- Drill a hole in the wall. The hole should tilt a little downward toward outside to allow for appropriate water drainage.
- Install a sleeve through the wall hole to keep the wall tidy and clean.

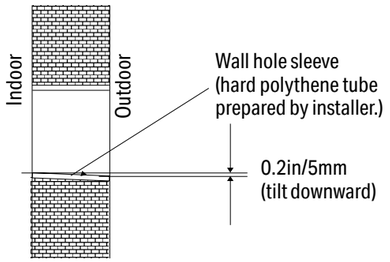
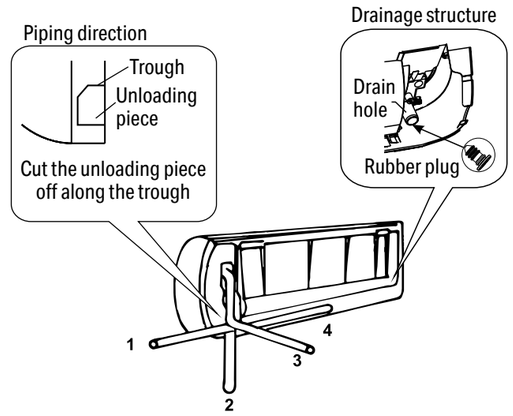


Table of Wall Hole Mounting size per Unit Size

UNIT MODEL	SIZE A	SIZE B	SIZE C
	IN/MM	IN/MM	IN/MM
738 Series	2.68/68	1.3/33	2.7/70
808 Series	2.75/70	1.38/35	2.7/70
908 Series	5.4/137	1.57/40	2.7/70
1080 Series	6.7/170	1.57/40	2.7/70
30k-36k Series	2.52/64	1.62/41.2	2.7/70

3. PIPING AND DRAIN HOSE CONNECTIONS TO INDOOR UNIT

- Run the piping (liquid and gas pipe) and cables through the wall hole from outside or put them through from inside after indoor piping and cables connection is complete to connect to the outdoor unit.
- Decide whether to cut the unloading piece off in accordance with the piping direction. (as shown below)

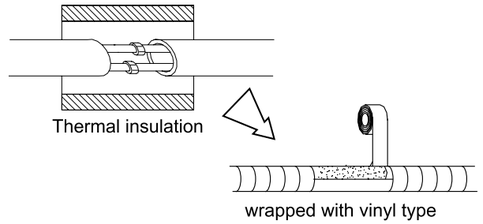


NOTE: When installing the pipe at the directions 1, 2 or 4, cut the corresponding unloading piece off the indoor unit base.

- After connecting the piping , install the drain hose. Then connect the power cords. After connecting, wrap the piping, cords and drain hose together with thermal insulation materials.

NOTE: Both sides drainage structure is standard. For both sides drainage structure, it can be chosen for right, left or both sides drainage connection. If choosing both sides drainage connection, another proper drain hose is needed as there is only one drain hose offered by factory. If choosing one side drainage connection, make sure the drain hole on the other side is well plugged.

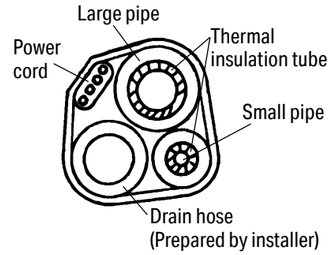
- **PIPING JOINTS THERMAL INSULATION:** Wrap the piping joints with thermal insulation materials and then wrap with a vinyl tape.

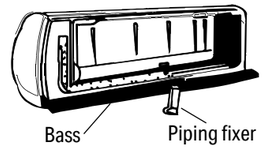


- **PIPING THERMAL INSULATION:**
  a. Place the drain hose under the piping.
  b. Insulation material uses polythene foam over 6mm in thickness.

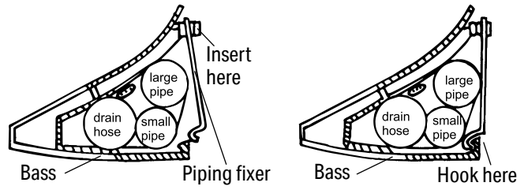
  NOTE: Drain hose is prepared by installer.

- Do not arrange the drain pipe in a way that leaves it twisted, sticking out or waving around. Do not immerse the end of it in water.
- If an extension drain hose is connected to the drain pipe, make sure to insulate when passing along the indoor unit.
- When the piping is directed to the right, piping, power Cord and drain pipe should be thermal insulated and fixed onto the back of the unit with a piping fixer.





A. Insert the pipe fixer to the slot.



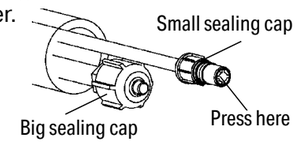
B. Press to hook the pipe fixer onto the base.

PIPING CONNECTION:

a. Before unscrewing the big and the small sealing caps, press the small sealing cap with the finger until the exhaust noise stops, and then loosen the finger.

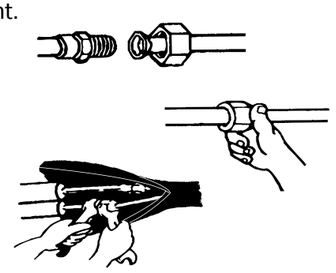
b. Connect indoor unit pipes with two wrenches. Pay special attention to the allowed torque as shown below to prevent the pipes, connectors and flare nuts from being deformed and damaged.

c. Pre-tighten them with fingers at first, then use the wrenches.



If you don't hear the exhaust noise, please contact with the merchant.

MODEL	PIPE SIZE	TORQUE	NUT WIDTH
9K-18K	Liquid Side (1/4)	11~15ft - lbs	5/8
24K-36K	Liquid Side (3/8)	22~26ft - lbs	7/8
9K-12K	Gas Side (3/8)	22~26ft - lbs	7/8
18K	Gas Side (1/2)	37~41ft - lbs	47/50
24K-36K	Gas Side (5/8)	44~48ft - lbs	1 1/10
36K	Gas Side (3/4)	52~55ft - lbs	1 13/50

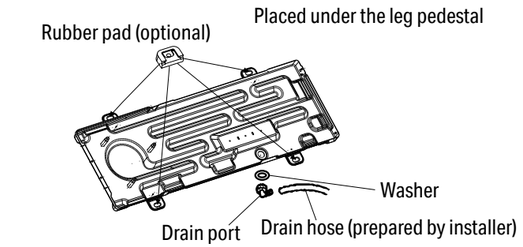


NOTE: Dimensions are in “inch” unless otherwise stated in the table.

OUTDOOR UNIT INSTALLATION

1. INSTALL CONDENSATE DRAIN FOR OUTDOOR UNIT

The condensate drains from the outdoor unit when the unit operates in heating mode. In order not to disturb your neighbor and protect the environment, install a drain port and a drain hose to direct the condensate water. Just install the drain port and rubber washer to the chassis of the outdoor unit, then connect a drain hose to the port as the right figure demonstrates.



2. INSTALL GROUND PAD OR WALL HANGERS

1. Determine proper location for outdoor unit.
2. Follow all instructions provided by manufacturer for installing wall hangers rubber pad.
3. Verify the wall hangers or rubber pad can safely support the weight of the outdoor unit.
4. Verify the wall hangers or rubber pad is level and meets all outdoor dimensional clearance.
5. Fix with bolts and nuts tightly on a flat and strong floor.

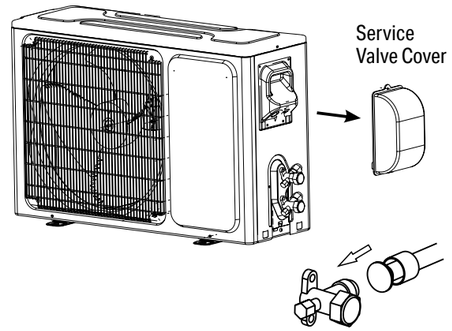
If installed on the wall or roof, make sure to fix the supporter well to prevent it from shaking due to serious vibration or strong wind.

⚠ WARNING

Florida wind load requirements state that outdoor unit must be anchored to concrete pad using four 3/8-in diameter power wedge bolt plus(or equivalent) with 1-in diameter fender washers. Anchor bolts must be embedded into 3000 PSI minimum concrete at a distance of 4 1/2- in from any concrete edge. The concrete thickness must exceed 1.5 times the anchor depth. Always check local ordinances for additional or updated requirements

3. PIPING CONNECTIONS TO OUTDOOR UNIT

- Remove service valve cover to access the service valves and refrigerant ports.
- Carefully bend and adjust length of refrigerant pipes to meet outdoor unit service valves connection with proper tools to avoid kinks.
- Apply a small amount of refrigerant oil to the flare connection on the refrigerant pipe.
- Properly align piping and tighten flare nut using a standard wrench and a torque wrench as shown in the indoor piping section.
- Carefully tighten flare nuts to correct torque level referring to the following Torque Table:



Torque Table

PIPE DIAMETER INCH(MM)	NUT SIZE INCH(MM)	TIGHTENING TORQUE FT-LBS
1/4(6.35)	1/4(17)	11 to 15
3/8(9.5)	3/8(22)	22 to 26
1/2(12.7)	1/2(25)	37 to 41
5/8(15.9)	5/8(29)	44 to 48
3/4(19)	3/4(32)	52 to 55

NOTE: Over tightening may damage flare connections and cause leaks.

POWER AND WIRING

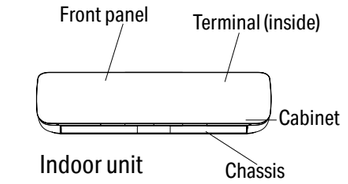
CONNECTING OF THE CABLE

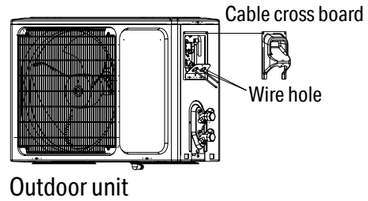
Outdoor Unit

Connect the communication cable to the indoor unit by connecting the wires to the terminals on the control board individually in accordance with the outdoor unit connection.

Indoor Unit

1. Remove the cable cross board from the unit by loosening the screw. Connect the wires to the terminals on the control board individually as follows.
2. Secure the communication cable onto the condenser with cable clamp.
3. Reinstall the cable cross board to the original position with the screw.
4. Use a recognized circuit breaker between the power source and the unit. A disconnecting device to adequately disconnect all supply lines must be fitted.





The figures in this manual are based on the external view of a standard model. Consequently, the shape may differ from that of the air conditioner you have selected.

CAUTION:

1. Never fail to have an individual power circuit specifically for the air conditioner. As for the method of wiring, refer to the circuit diagram posted on the inside of the access door .
2. Confirm that the cable thickness is as specified in the power source specification.
3. Check the wires and make sure that they are all tightly fastened after cable connection.
4. Be sure to install an earth leakage circuit breaker in wet or moist areas.

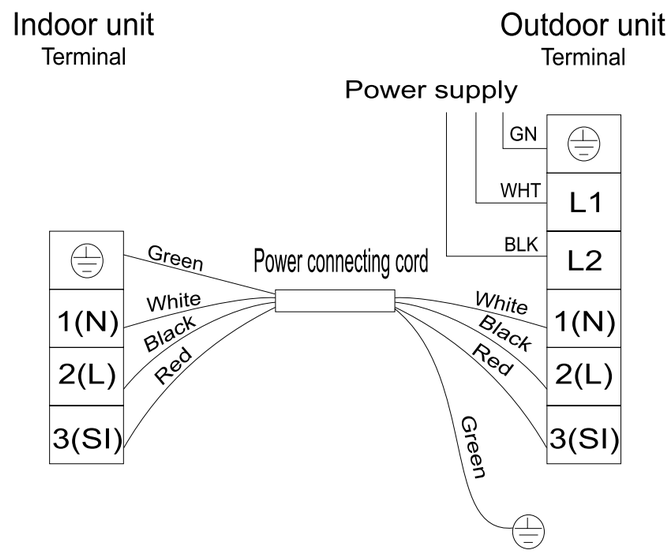
Cable Specifications

CAPACITY (BTUH)	INCOMING POWER		COMMUNICATION CABLE	
	TYPE	NORMAL CROSS-SECTIONAL AREAS	TYPE	NORMAL CROSS-SECTIONAL AREAS
9K-12K (208/230V)	In North America, choose the outdoor power cable type according to the local electrical codes and regulations.		SJ TW	4x14 AWG
18K (208/230V)			SJ TW	4x14 AWG
24K-36K (208/230V)			SJ TW	4x14 AWG
9K,12K (115V)			SJ TW	4x14 AWG

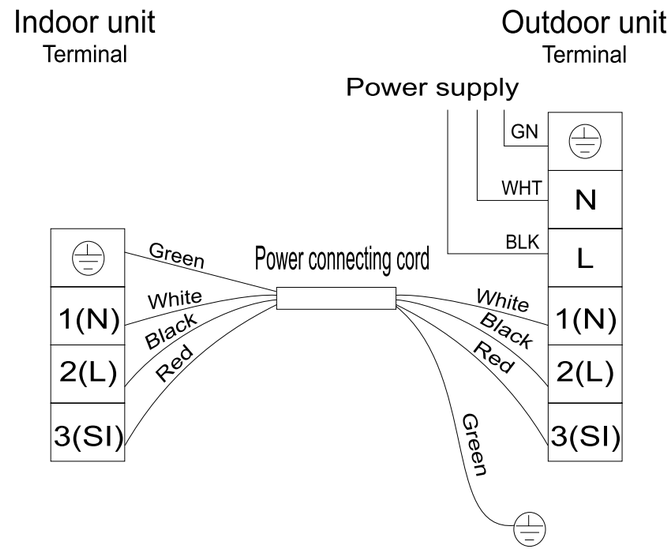
WIRING DIAGRAM

Make sure that the color of the wires in the outdoor unit and terminal No. are the same as those of the indoor unit.

1. 208/230V



2. 115V



The diagram is reference only, and the actual terminal shall prevail.

EVACUATION INSTRUCTIONS

Before using a manifold gauge and a vacuum pump, read their operation manuals to make sure you know how to use them properly.

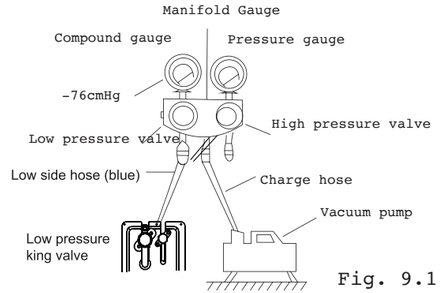


Fig. 9.1

1. Using a valve core removal tool with a micron gauge port attach it to the low side valve and remove the valve core. Then attach your micron gauge to the appropriate port.
2. Connect the manifolds low side hose (blue) to the other end of the valve core removal tool
3. Open the Low Pressure side of the manifold gauge. Keep the High Pressure side closed.
4. Turn on the vacuum pump to evacuate the system.
5. Run the vacuum pump until your Micron Gauge reads 400 microns
6. Isolate the valve core removal tool and watch if the pressure rises: if it rises over 500 microns keep running the vacuum. The goal is to stabilize with no rise in pressure and stay at 500 microns
7. After you have achieved a proper vacuum open the valves on the condenser using a 5 mm allen wrench turning them counter clockwise until it stops

OPEN VALVE STEMS GENTLY

When opening the valve stems, turn the hexagonal wrench until it hits against the stopper. **DO NOT** try to force the valve to open further.

8. Replace the schrader valve back into the low side service port. You are now finished with a proper vacuum and you can remove your hoses.
9. Tighten valve caps by hand, then tighten it completely using an adjustable wrench.

START-UP

TEST OPERATION

Perform test operation after completing gas leak and electrical safety check.

1. Turn on electrical disconnect to outdoor unit.
2. Push the “ON/OFF” button on Remote Controller to begin testing.
3. Push MODE button, select COOLING, HEATING, FAN mode to confirm all functions.

SYSTEM CHECKS

1. Conceal refrigerant pipes where possible.
2. Make sure drain hose slopes downward along entire length.
3. Ensure all refrigerant pipes and connections are properly insulated.
4. Fasten pipes to outside wall, when possible.
5. Seal and weatherproof wall hole which the interconnecting wires and refrigerant pipes pass through.

INDOOR UNIT

1. Do all Remote controller’s buttons function properly?
2. Do the display panel lights work properly?
3. Does the swing louver function properly?
4. Does the drain work?

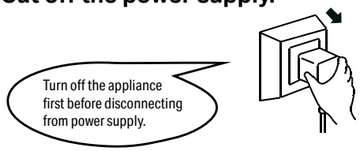
OUTDOOR UNIT

1. Push the mode button to COOL and adjust the room setting to 61°F (16°C) deg. wait up to 3 minutes from compressor time guard. Does compressor and outdoor fan turn on in cooling mode?
2. Push the mode button to HEAT and adjust the room setting to 85°F(30°C) deg. wait up to 3 minutes for compressor time guard. Does compressor and outdoor fan turn on in heat mode?

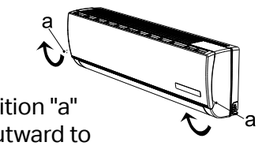
CARE AND MAINTENANCE

FRONT PANEL MAINTENANCE

1 **Cut off the power supply.**



2



Grasp position "a" and pull outward to remove the front panel.

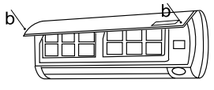
3 **Wipe with a soft and dry cloth.**

Use soft moisture cloth to clean if the front panel is very dirty.

4 **Never use volatile substance such as gasoline or polishing powder to clean the appliance.**

5 **Never sprinkle water onto the indoor unit.**

6 **Reinstall and shut the front panel.**



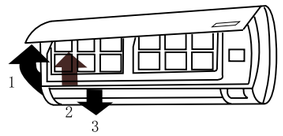
Reinstall and shut the front panel by pressing position "b" downward.

AIR FILTER MAINTENANCE

It is necessary to clean the air filter after using it for about 200 hours.

Clean it as follows:

1 **Stop the appliance and remove the air filter.**



1. Open the front panel.
2. Press the handle of the filter gently from the front.
3. Grasp the handle and slide out the filter.

2 **Clean and reinstall the air filter.**

If the dirt is conspicuous, wash it with a solution of detergent in lukewarm water. After cleaning, dry well in shade.

3 **Close the front panel again.**

Clean the air filter every two weeks if the air conditioner operates in an extremely dusty environment.

PROTECTION

OPERATING CONDITION

OPERATING TEMPERATURE

TEMPERATURE		COOLING OPERATION	HEATING OPERATION	DRYING OPERATION
Indoor temperature	max	90°F (32°C)	81°F (27°C)	90°F (32°C)
	min	70°F (21°C)	45°F (7°C)	64°F (18°C)
Outdoor temperature	max	115°F (46°C)	75°F (24°C)	115°F (46°C)
	min	*note	5°F (-15°C)	70°F (21°C)

NOTE :

*Optimum performance will be achieved within these operating temperature. If air conditioner is used outside of the above conditions, the protective device may trip and stop the appliance.

*For some models, can keep cooling at 5°F (-15°C) outdoor ambient via unique design. Normally, optimum cooling performance will be achieved above 70°F (21°C). Please consult the merchant to get more information.

*For some models, can keep heating at 5°F (-15°C) outdoor ambient , some models heat at -4°F (-20°C) outdoor ambient, even heat at lower outdoor ambient

The temperature of some products is allowed beyond the range. In specific situation, please consult the merchant. When relative humidity is above 80%, if the air conditioner runs in COOLING or DRY mode with door or window opened for a long time, dew may drip down from the outlet.

NOISE POLLUTION

- Install the air conditioner at a place that can bear its weight in order to operate more quietly.
- Install the outdoor unit at a place where the air discharged and the operation noise would not annoy your neighbors.
- Do not place any obstacles in front of the air outlet of the outdoor unit lest it increases the noise level.

FEATURES OF PROTECTOR

1. The protective device will work at following cases.
   - Restarting the unit at once after operation stops or changing mode during operation, you need to wait for 3 minutes.
   - Connect to power supply and turn on the unit at once, it may start 20 seconds later.
2. If all operation has stopped, press ON/OFF button again to restart, Timer should be set again if it has been canceled.

FEATURES OF HEATING MODE

PREHEAT

At the beginning of the HEATING operation, the warm airflow from the indoor unit may be discharged 2-10 minutes later after it warms up.

DEFROST

In HEATING operation the appliance will defrost (de-ice) automatically to raise efficiency. This procedure usually lasts 2-10 minutes. During defrosting, fans stop operation. After defrosting completes, it returns to HEATING mode automatically.

ENERGY SAVING TIPS

1 RELAXING ROOM TEMPERATURE AT NIGHT IS OK:
During the nighttime hours you don't require the same level of conscious cooling or heating. Try using Sleep mode to gradually relax room temperature and allow the unit to run less and save energy.

2 CURTAINS AND SHADES:
In the summer, you need to block the effects of the sun. Close window curtains and shades on the south and west side of your home to help block solar heat. In winter, the sun is your friend. Open curtains and shades to allow solar heat into your room.

3 CLOSE DOORS:
If you don't need to heat and cool your whole home, confine the heating and cooling to one room by closing doors. Limit the space you're heating and cooling to specified capability of the unit.

4 SERVICE THE UNIT:
Some basic maintenance might be all you need. The outdoor unit will greatly benefit from a good hosing out, especially in treed areas where seeds and other debris can stick to coil fins and make the unit work harder!

5 REARRANGE THE ROOM:
Furniture that obstructs airflow means you could be heating and cooling the back of a chair or the front of a sofa instead of the actual living space. Use the swing louvers to help direct the air in the right direction for the room; remove or rearrange obstacles blocking airflow.

6 TRY 75 DEGREES:
75°F (24°C) is a good point for an air conditioner to run at its optimal performance level. Even a 1-degree change in temperature can make your unit use more energy!

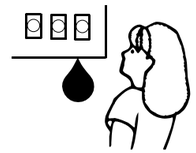
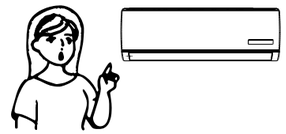
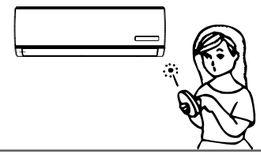
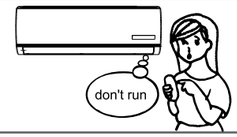
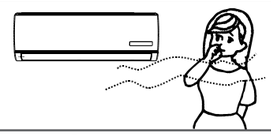
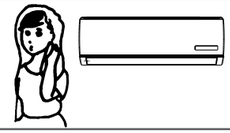
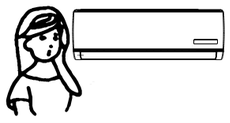
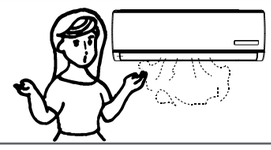
7 LIGHTING:
Turning lights off can help reduce your heat. Each light bulb is a tiny heater. Your air conditioner must waste energy overcoming the heat from your lights to reach and hold your desired room temperature.

8 IS ANYONE HOME?
If possible, while you're away turn your unit to Auto mode and make sure windows and drapes are closed. Although the room temperature will be uncomfortable for a few minutes when you come home, the unit will have the room back to your desired temperature in no time.

9 DON'T FORGET THE FAN:
The fan is much like a car. The faster it runs, the more energy is consumed. Sometimes we need the car to go fast, but slow is good enough most of the time. Try saving money by using the comfortable quiet low fan speed as much as possible.

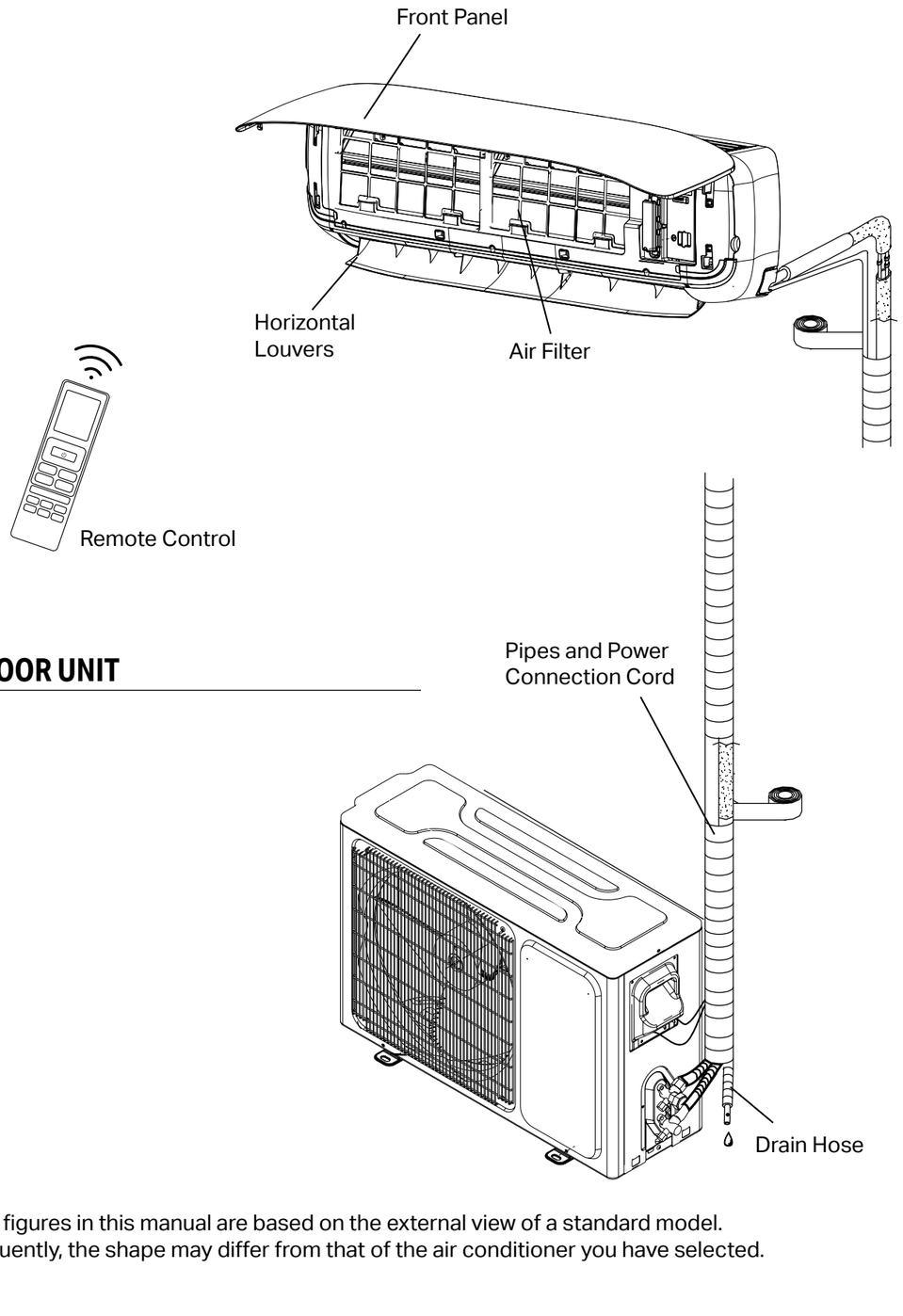
TROUBLESHOOTING

The following cases may not always be a malfunction, please check it before asking for service.

PROBLEM	SOLUTION
Does not run 	• If the protector trip or fuse is blown,please wait 3 minutes and start again. The protector device may be preventing unit from working. • The batteries in the remote control may be dead • Check to see if the appliance is properly plugged in.
No cooling or heating air 	• Is the air filter dirty? • Are the intakes and outlets of the air conditioner blocked? • Is the temperature set properly? • Are doors or windows open?
Ineffective control 	• If there is strong interference (from excessive static electricity discharge or power supply voltage abnormality), the appliance may operate abnormally. Disconnect the power supply and connect back 3 minutes later.
Does not operate immediately 	• Changing mode during operation, 3 minutes will delay.
Peculiar odor 	• This odor may come from another source such as furniture, cigarette etc, which is sucked in the unit and blows out with the air.
A sound of flowing water 	• Caused by the flow of refrigerant in the air conditioner. Not a cause for concern. • Sound of defrosting during heating mode.
Cracking sound is heard 	• The sound may be generated by the expansion or contraction of the front panel due to change of temperature.
Spraying mist from the outlet 	• Mist appears when the air in the room becomes very cold. This is because of the cool air discharged from the indoor unit during COOLING or DRY modes.
The compressor indicator lights on constantly, running indicator flashes and indoor fan stops.	• The unit is shifting from heating mode to defrost. The indicator will light off and return to heating mode.

IDENTIFICATION OF PARTS

INDOOR UNIT



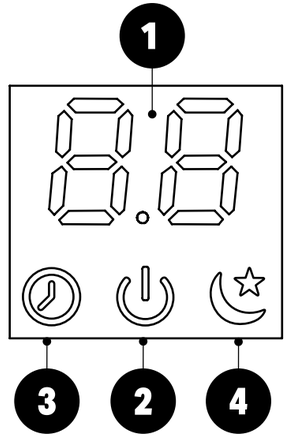
OUTDOOR UNIT

The figures in this manual are based on the external view of a standard model. Consequently, the shape may differ from that of the air conditioner you have selected.

DISPLAY INTRODUCTION

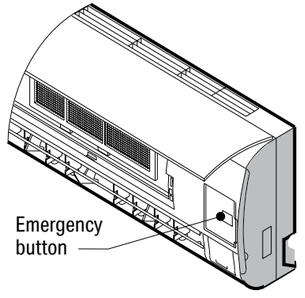
88	**Temperature indicator** Display set temperature. It shows FC after 200 hours of usage as reminder to clean the filter. After filter cleaning press the filter reset button located on the indoor unit behind the front panel in order to reset the display (optional).	1
	Running indicator It lights up when the AC is running. It flashes during defrosting.	2
	Timer indicator It lights up during set time.	3
	Sleep indicator It lights up in sleep mode.	4

DISPLAY SCREEN



The symbols may be different from these models, but the functions are similar.

EMERGENCY BUTTON



ON/OFF To let the AC run or stop by pressing the button.

The symbols may be different from these models, but the functions are similar.

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