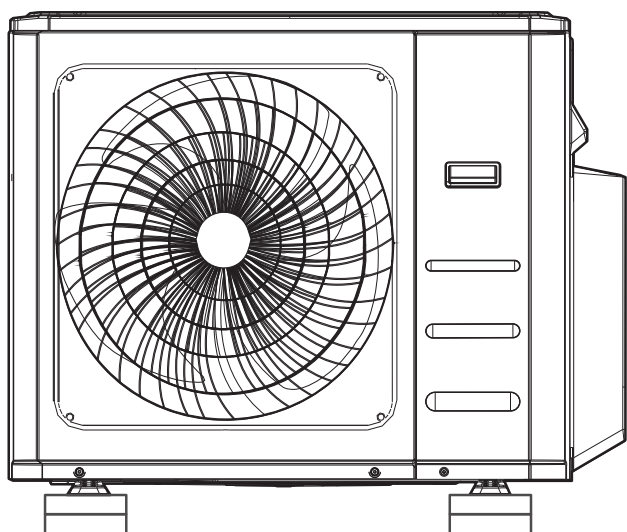


INVERTER ONE-FOUR SPLIT-TYPE AIR CONDITIONER

Installation & Owner's Manual

EXT4M80HR



Note

This manual has been created for informative purpose. The company declines every responsibility for the results of projecting or installation based on the explanations and the technical specifications given in this manual, is besides forbidden the reproduction under any form of the texts and of figures contained in this manual.



Made in Italy

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Read this manual

Inside you'll find many helpful hints on how to use and maintain your appliance properly. Just a little preventive care on your part can save you a great deal of time and money over the life of your appliance. These instructions may not cover every possible condition of use, so common sense and attention to safety is required when installing, operating and maintaining this product.

SAFETY PRECAUTIONS

It's really important you read Safety Precautions Before Operation and Installation. Incorrect installation due to ignoring instructions can cause serious damage or injury. The seriousness of potential damage or injuries is classified as either a **WARNING** or **CAUTION**.

Explanation of Symbols



WARNING

The signal word indicates a hazard with a medium level of risk which, if not avoided, may result in death or serious injury.



CAUTION

The signal word indicates a hazard with a low degree of risk which, if not avoided, may result in minor or moderate injury.

Read these operating instructions carefully and attentively before using/commis-sioning the unit and keep them in the immediate vicinity of the installation site or unit for later use! Latest revisions of the supplied documentation may be available on the regional Local Dealer Website. The original documentation is written in English. All other languages are translations.

WARNING

- 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 (European Union countries).
- 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.
- Make sure installation, servicing, maintenance, repair and applied materials follow the instructions from local distributors and, in addition, comply with applicable legislation and are performed by qualified persons only. In Europe and areas where IEC standards apply, EN/IEC 60335-2-40 is the applicable standard.

CAUTION

- This appliance is intended to be used by expert or trained users in shops, in light industry, and on farms, or for commercial and household use by lay persons.
- This document only describes installation instructions specific to the outdoor unit. For installation of the indoor unit (mounting the indoor unit, connecting the refrigerant piping to the indoor unit, connecting the electrical wiring to the indoor unit ...), see the installation manual of the indoor unit.

WARNING FOR PRODUCT USE

- If an abnormal situation arises (like a burning smell), immediately turn off the unit and disconnect the power. Call your dealer for instructions to avoid electric shock, fire or injury.
- Do not insert fingers, rods or other objects into the air inlet or outlet. This may cause injury, since the fan may be rotating at high speeds.
- Do not use flammable sprays such as hair spray, lacquer or paint near the unit. This may cause fire or combustion.
- Do not operate the air conditioner in places near or around combustible gases. Emitted gas may collect around the unit and cause explosion.
- Do not operate your air conditioner in a wet room such as a bathroom or laundry room. Too much exposure to water can cause electrical components to short circuit.
- Do not expose your body directly to cool air for a prolonged period of time.
- Do not allow children to play with the air conditioner. Children must be supervised around the unit at all times.
- If the air conditioner is used together with burners or other heating devices, thoroughly ventilate the room to avoid oxygen deficiency.
- In certain functional environments, such as kitchens, server rooms, etc., the use of specially designed air-conditioning units is highly recommended.

ELECTRICAL WARNINGS

- Only use the specified power cord. If the power cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- The product must be properly grounded at the time of installation, or electrical shock may occur.
- For all electrical work, follow all local and national wiring standards, regulations, and the Installation Manual. Connect cables tightly, and clamp them securely to prevent external forces from damaging the terminal. Improper electrical connections can overheat and cause fire, and may also cause shock. All electrical connections must be made according to the Electrical Connection Diagram located on the panels of the indoor and outdoor units.
- All wiring must be properly arranged to ensure that the control board cover can close properly. If the control board cover is not closed properly, it can lead to corrosion and cause the connection points on the terminal to heat up, catch fire, or cause electrical shock.
- Disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.
- Do not pull power cord to unplug unit. Hold the plug firmly and pull it from the outlet. Pulling directly on the cord can damage it, which can lead to fire or electric shock.
- Do not modify the length of the power supply cord or use an extension cord to power the unit.
- Do not share the electrical outlet with other appliances. Improper or insufficient power supply can cause fire or electrical shock.
- Keep power plug clean. Remove any dust or grime that accumulates on or around the plug. Dirty plugs can cause fire or electric shock.
- If connecting power to fixed wiring, an all-pole disconnection device which has at least 3mm clearances in all poles, and have a leakage current that may exceed 10mA, the residual current device(RCD) having a rated residual operating current not exceeding 30mA, and disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.

TAKE NOTE OF FUSE SPECIFICATIONS

The air conditioner's circuit board (PCB) is designed with a fuse to provide overcurrent protection. The specifications of the fuse are printed on the circuit board, such as : T20A/250VAC(for <24000Btu/h unit), T30A/250VAC(for >24000Btu/h unit)

NOTE: For the units with R32 refrigerant , only the blast-proof ceramic fuse can be used.

WARNINGS FOR PRODUCT INSTALLATION

- Installation must be performed by an authorized dealer or specialist. Defective installation can cause water leakage, electrical shock, or fire.
- Installation must be performed according to the installation instructions. Improper installation can cause water leakage, electrical shock, or fire.
- Contact an authorized service technician for repair or maintenance of this unit. This appliance shall be installed in accordance with national wiring regulations.
- Only use the included accessories, parts, and specified parts for installation. Using non-standard parts can cause water leakage, electrical shock, fire, and can cause the unit to fail.
- Install the unit in a firm location that can support the unit's weight. If the chosen location cannot support the unit's weight, or the installation is not done properly, the unit may drop and cause serious injury and damage.
- Install drainage piping according to the instructions in this manual. Improper drainage may cause water damage to your home and property.
- For units that have an auxiliary electric heater, do not install the unit within 1 meter (3 feet) of any combustible materials.
- Do not install the unit in a location that may be exposed to combustible gas leaks. If combustible gas accumulates around the unit, it may cause fire.
- Do not turn on the power until all work has been completed.
- When moving or relocating the air conditioner, consult experienced service technicians for disconnection and reinstallation of the unit.
- How to install the appliance to its support, please read the information for details in "indoor unit installation" and "outdoor unit installation" sections .

CAUTION

- Turn off the air conditioner and disconnect the power if you are not going to use it for a long time (when the ambient temperature in which the water tank is located is below 0°C, please empty the water in the tank to avoid freezing that may cause damage to the tank.).
- Turn off and unplug the unit during storms.
- Make sure that water condensation can drain unhindered from the unit.
- Do not operate the air conditioner with wet hands. This may cause electric shock.
- Do not use device for any other purpose than its intended use.
- Do not climb onto or place objects on top of the outdoor unit.
- Do not allow the air conditioner to operate for long periods of time with doors or windows open, or if the humidity is very high.

⚠ WARNING FOR USING R32 REFRIGERANT

- When flammable refrigerant are employed, appliance shall be stored in a well-ventilated area where the room size corresponds to the room area as specified for operation.

For R32 refrigerator models:

Appliance shall be installed, operated and stored in a room with a floor area larger than $X \text{ m}^2$.

Appliance shall not be installed in an unventilated space, if that space is smaller than $X \text{ m}^2$ (Please see the following form).

Amount of refrigerant to be charged (kg)	Installation height (m)	Minimum room area (m ²)	Amount of refrigerant to be charged (kg)	Installation height (m)	Minimum room area (m ²)
1.0	0.6 /1.8 /2.2	9 /1 /1	1.95	0.6 /1.8 /2.2	33 /4 /2.5
1.05	0.6 /1.8 /2.2	9.5 /1.5 /1	2.0	0.6 /1.8 /2.2	34.5 /4 /3
1.1	0.6 /1.8 /2.2	10.5 /1.5 /1	2.05	0.6 /1.8 /2.2	36 /4 /3
1.15	0.6 /1.8 /2.2	11.5 /1.5 /1	2.1	0.6 /1.8 /2.2	38 /4.5 /3
1.2	0.6 /1.8 /2.2	12.5 /1.5 /1	2.15	0.6 /1.8 /2.2	40 /4.5 /3
1.25	0.6 /1.8 /2.2	13.5 /1.5 /1	2.2	0.6 /1.8 /2.2	41.5 /5 /3.5
1.3	0.6 /1.8 /2.2	14.5 /2 /1.5	2.25	0.6 /1.8 /2.2	43.5 /5 /3.5
1.35	0.6 /1.8 /2.2	16 /2 /1.5	2.3	0.6 /1.8 /2.2	45.5 /5 /3.5
1.4	0.6 /1.8 /2.2	17 /2 /1.5	2.35	0.6 /1.8 /2.2	47.5 /5.5 /4
1.45	0.6 /1.8 /2.2	18 /2 /1.5	2.4	0.6 /1.8 /2.2	49.5 /5.5 /4
1.5	0.6 /1.8 /2.2	19.5 /2.5 /1.5	2.45	0.6 /1.8 /2.2	51.5 /6 /4
1.55	0.6 /1.8 /2.2	21 /2.5 /2	2.5	0.6 /1.8 /2.2	54 /6 /4
1.6	0.6 /1.8 /2.2	22 /2.5 /2	2.55	0.6 /1.8 /2.2	56 /6.5 /4.5
1.65	0.6 /1.8 /2.2	23.5 /3 /2	2.6	0.6 /1.8 /2.2	58 /6.5 /4.5
1.7	0.6 /1.8 /2.2	25 /3 /2	2.65	0.6 /1.8 /2.2	60.5 /7 /4.5
1.75	0.6 /1.8 /2.2	26.5 /3 /2	2.7	0.6 /1.8 /2.2	63 /7 /5
1.8	0.6 /1.8 /2.2	28 /3.5 /2.5	2.75	0.6 /1.8 /2.2	65 /7.5 /5
1.85	0.6 /1.8 /2.2	29.5 /3.5 /2.5	2.8	0.6 /1.8 /2.2	67.5 /7.5 /5
1.9	0.6 /1.8 /2.2	31 /3.5 /2.5	2.85	0.6 /1.8 /2.2	70 /8 /5.5

- Reusable mechanical connectors and flared joints are not allowed indoors. (**EN** Standard Requirements).
- When mechanical connectors are reused indoors, sealing parts shall be renewed. When flared joints are reused indoors, the flare part shall be re-fabricated. (**IEC** Standard Requirements)
- Mechanical connectors used indoors shall comply with ISO 14903.

⚠ DISPOSAL AND RECYCLING

Important instructions for environment(European Disposal Guidelines)

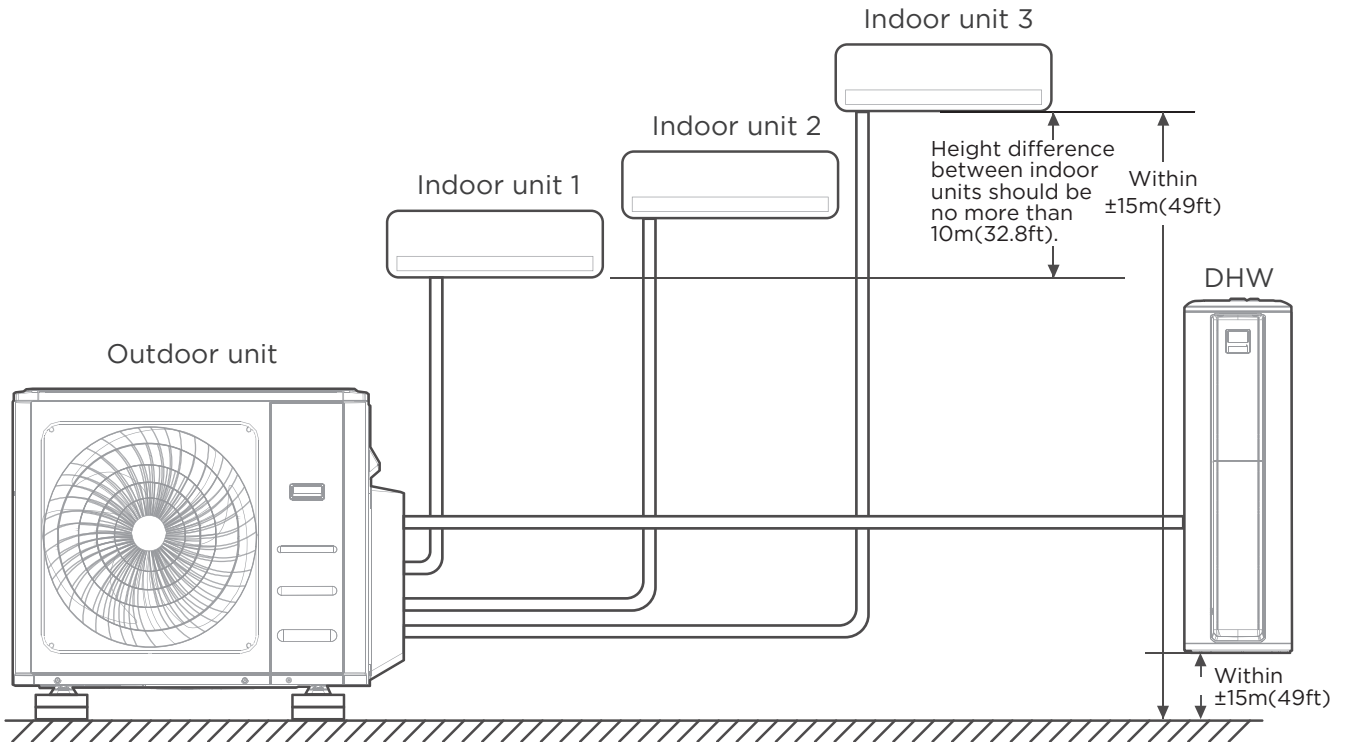
Compliance with the WEEE Directive and Disposing of the Waster Product:
This product complies with EU WEEE Directive. This product bears a classification symbol for waster electrical and electronic equipment (WEEE).

This symbol indicates that this product shall not be disposed with other household wastes at the end of its service life. Used device must be returned to official collection point for recycling of electrical electronic devices. To find these collection systems please contact to your local authorities or retailer where the product was purchased. Each household performs important role in recovering and recycling of old appliance. Appropriate disposal of used appliance helps prevent potential negative consequences for the environment and human health.

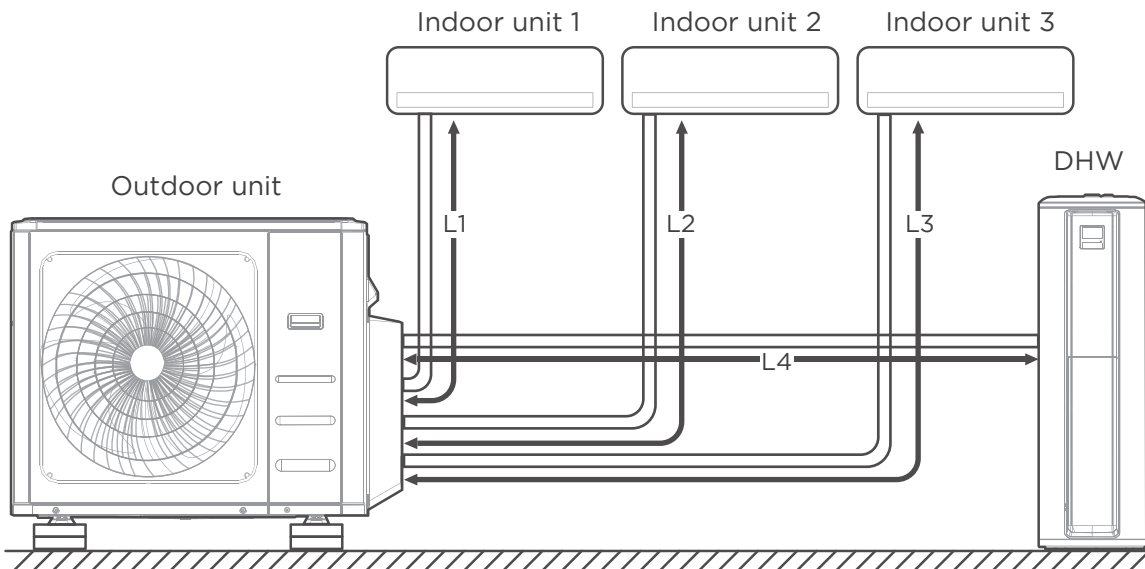


SPECIFICATIONS

NOTE: For multi-split type air conditioners, one outdoor unit can be matched to different types of indoor units. All of the pictures in this manual are for demonstration purposes only. Your air conditioner may be slightly different, if similar in shape. The following pages introduce several kinds of indoor units that can be matched with the outdoor units.



When installing multiple indoor units with a single outdoor unit, ensure that the length of the refrigerant pipe and the drop height between the indoor and outdoor units meet the requirements illustrated in the next page diagram:



Piping length

L1/L2/L3/L4: Piping length is the one-way length of liquid piping.

$L1+L2+L3+L4 = \text{Maximum } 80\text{m}$

Minimum piping length for each indoor unit is 3m(5m for DHW).

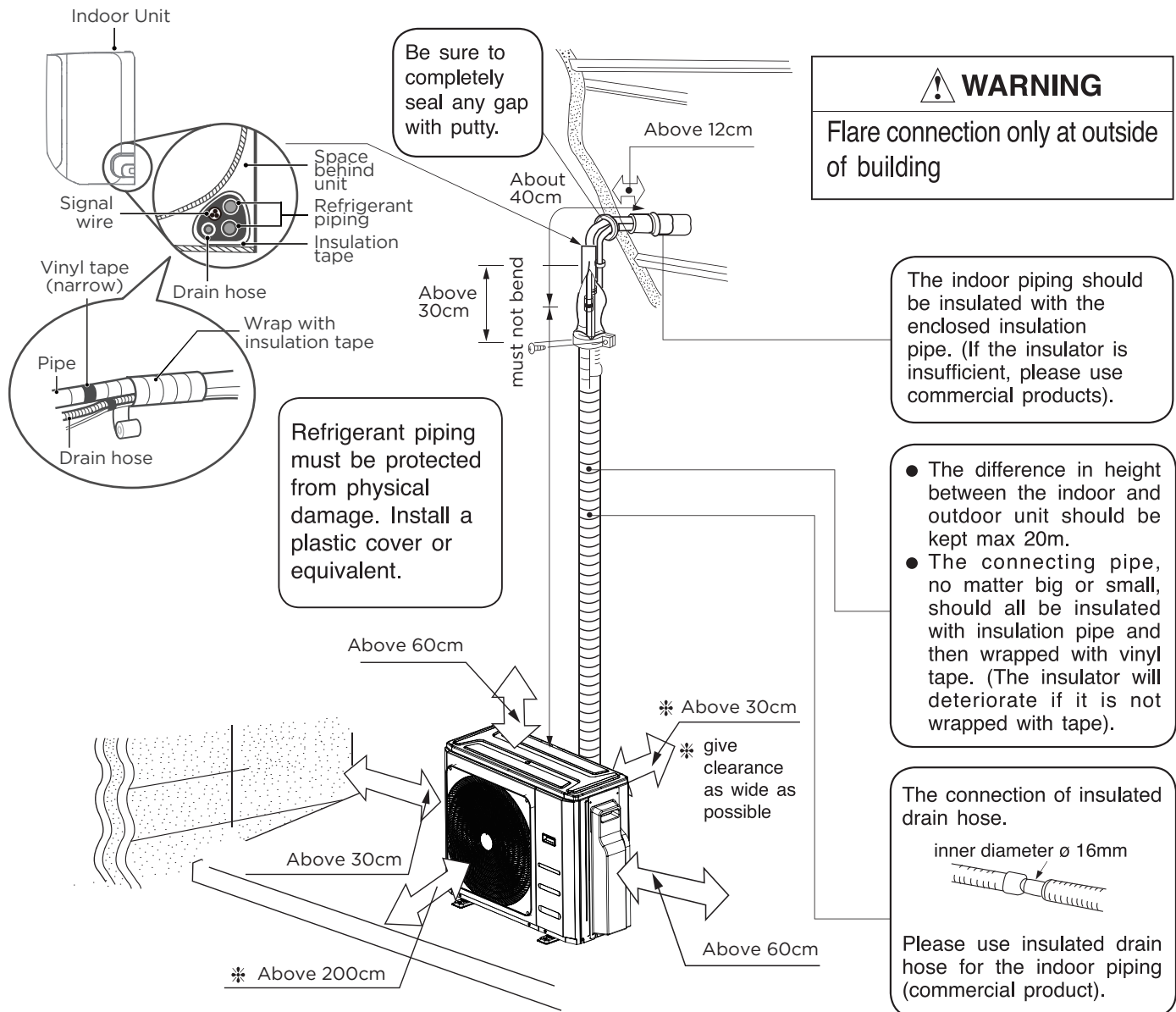
Maximum piping length for each indoor unit is 35m(20m for DHW).

⚠ CAUTION

- The standard pipe length is 7.5m.
- The product can be used with one DHW.
- The product can be used with an Air Conditioner unit.
- The product can be used with both a DHW and an Air Conditioner.

NOTE: See the technical manual or ask your local service provider for details of the specific internal machine combinations.

Installation Diagram



NOTE: The installation must be performed in accordance with the requirement of local and national standards. The installation may be slightly different in different areas.

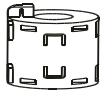
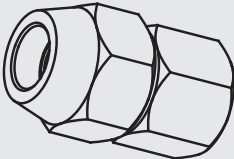
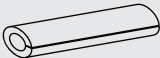
⚠ CAUTION

- To prevent wall damage, use a stud finder to locate studs.
- A minimum pipe run of 3 metres is required to minimise vibration & excessive noise.
- Two of the A, B, and C air circulation pathways must be free from obstructions at all times.
- This illustration is for demonstration purposes only.
- The actual shape of your air conditioner may be slightly different.
- Copper lines must be independently insulated.

PRODUCTION INSTALLATION

ACCESSORIES

The air conditioning system comes with the following accessories. Use all of the installation parts and accessories to install the air conditioner. Improper installation may result in water leakage, electrical shock and fire, or cause the equipment to fail. The items are not included with the air conditioner must be purchased separately.

Name of Accessories	Q'ty(pc)	Shape	Name of Accessories	Q'ty(pc)	Shape
Manual	1~4		Drain joint (some models)	1	
Installation plate (some models)	1		Seal ring (some models)	1	
Plastic expansion sheath (some models)	5-8 (depending on models)		Magnetic ring (Hitch it on the connective cable between indoor unit and outdoor unit after installation.) (some models)	Varies by model	
Self-Tapping Screw A (some models)	5-8 (depending on models)				
Transfer connector (packed with the indoor or outdoor unit, depending on models) NOTE: Pipe size may differ from appliance to appliance. To meet different pipe size requirements, sometimes the pipe connections need a transfer connector installed on the outdoor unit .	Optional part (one piece/ one indoor unit) Optional part (1-5 pieces for outdoor unit, depending on models)		Cord protection rubber ring (If the cord clamp cannot fasten on a small cord, use the cord protection rubber ring [supplied with accessories] to wrap around the cord. Then fix it in place with the cord clamp.) (some models)	1	

Optional accessories

There are two types of remote controls: wired and wireless.

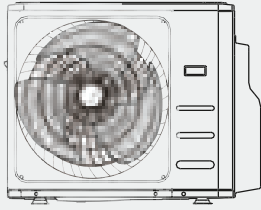
Select a remote controller based on customer preferences and requirements and install in an appropriate place.

Refer to catalogues and technical literature for guidance on selecting a suitable remote controller.

Name	Shape		Quantity(PC)
Connecting pipe assembly	Liquid side	Φ 6.35(1/4in)	Parts you must purchase separately. Consult the dealer about the proper pipe size of the unit you purchased.
		Φ 9.52(3/8in)	
	Gas side	Φ 9.52(3/8in)	
		Φ 12.7(1/2in)	
		Φ 16(5/8in)	

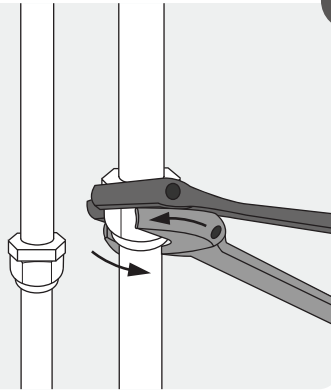
Installation summary

1



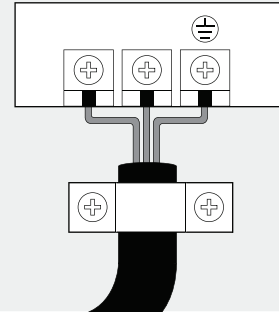
Install the outdoor unit

2



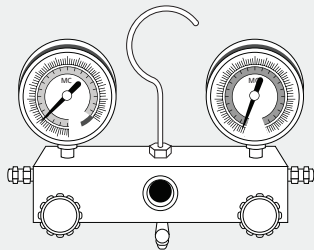
Connect the refrigerant pipes

3



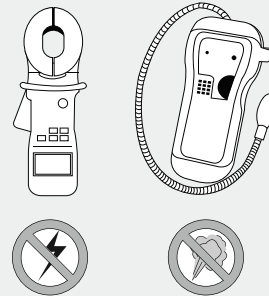
Connect the wires

4



Evacuate the refrigeration system

5



Perform a test run

Install Your Outdoor Unit

1

Select installation location

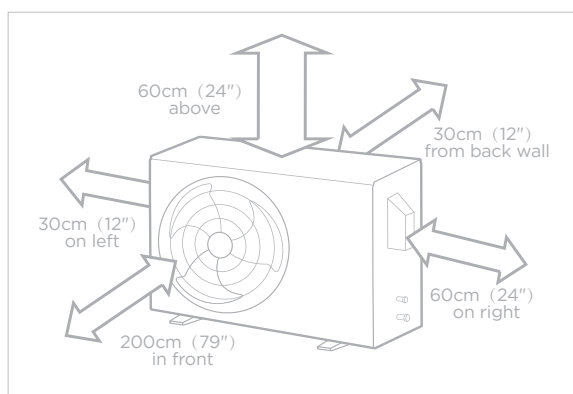
⚠ WARNING

Installation shall be done by an installer, the choice of materials and installation shall comply with the applicable legislation. In Europe, EN378 is the applicable standard.

NOTE : PRIOR TO INSTALLATION

Before installing the outdoor unit, you must choose an appropriate location. The following are standards that will help you choose an appropriate location for the unit.

Proper installation locations meet the following standards:



☒ Good air circulation and ventilation.



☒ Firm and solid—the location can support the unit and will not vibrate.



☒ Noise from the unit will not disturb other people.



☒ Protected from prolonged periods of direct sunlight or rain.



☒ Where snowfall is anticipated, take appropriate measures to prevent ice buildup and coil damage.

NOTE Install the unit by following local codes and regulations , there may be differ slightly between different regions.

The outdoor unit is designed for outdoor installation only, and for ambient temperatures within the following ranges (unless otherwise specified in the operation manual of the connected indoor unit):

DX operation range	
Cooling mode	Heating mode
-15~50°C	-15~24°C
DHW operation range	
-15~43°C	

⚠ CAUTION:

SPECIAL CONSIDERATIONS FOR EXTREME WEATHER

If the unit is exposed to heavy wind:

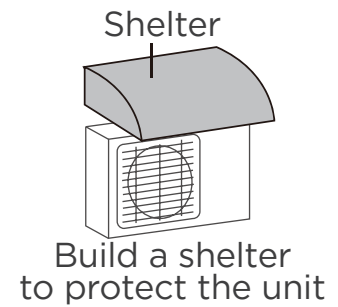
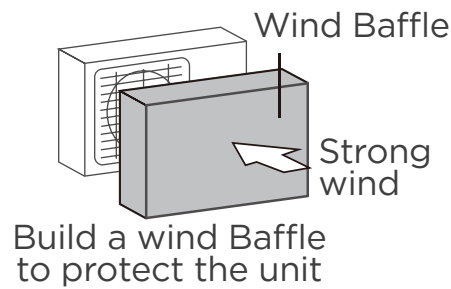
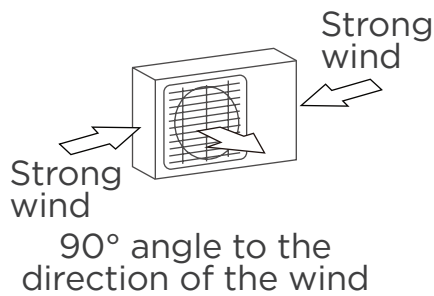
Install unit so that air outlet fan is at a 90° angle to the direction of the wind. If needed, build a barrier in front of the unit to protect it from extremely heavy winds. See Figures below.

If the unit is frequently exposed to heavy rain or snow:

Build a shelter above the unit to protect it from the rain or snow. Be careful not to obstruct air flow around the unit.

If the unit is frequently exposed to salty air(seaside):

Use outdoor unit that is specially designed to resist corrosion.



DO NOT install unit in the following locations:

- ⊘ Near an obstacle that will block air inlets and outlets.
- ⊘ Near animals or plants that will be harmed by hot air discharge.
- ⊘ In a location that is exposed to large amounts of dust
- ⊘ Near a public street, crowded areas, or where noise from the unit will disturb others.
- ⊘ Near any source of combustible gas.
- ⊘ In a location exposed to a excessive amounts of salty air.



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