

- **Install an earth leakage breaker depending on the installation place.**
If an earth leakage breaker is not installed, it could cause electric shock.
- **Perform the drainage/piping work securely according to the installation manual.**
If there is defect in the drainage/piping work, water could drop from the unit, soaking and damaging household goods.
- **Do not touch the air inlet or the aluminum fins of the outdoor unit.**
This could cause injury.
- **Do not install the outdoor unit where small animals may live.**
If small animals enter and touch the electric parts inside the unit, it could cause a malfunction, smoke emission, or fire. Also, advise user to keep the area around the unit clean.
- **Do not operate the air conditioner during interior construction and finishing work, or while waxing the floor.**
Before operating the air conditioner, ventilate the room well after such work is performed. Otherwise, it may cause volatile elements to adhere inside the air conditioner, resulting in water leakage or scattering of dew.
- **To prevent damage from static electricity, touch a nearby metal body to discharge static electricity from yourself before touching the indoor unit equipped with the Wi-Fi interface.**
Static electricity from the human body may damage the Wi-Fi interface unit.
- **Do not use the indoor unit equipped with the Wi-Fi interface nearby other wireless devices, micro-waves, cordless phones, or facsimiles.**
It can cause malfunctions.

1-2. SELECTING THE INSTALLATION LOCATION

INDOOR UNIT

- Where airflow is not blocked.
- Where cool (or warm) air spreads over the entire room.
- Rigid wall without vibration.
- Where it is not exposed to direct sunshine. Do not expose to direct sunshine also during the period following unpacking to before use.
- Where easily drained.
- At a distance 1 m or more away from your TV and radio. Operation of the air conditioner may interfere with radio or TV reception. An amplifier may be required for the affected device.
- In a place as far away as possible from fluorescent and incandescent lights. In order to make the infrared remote control operate the air conditioner normally. The heat from the lights may cause deformation or the ultraviolet may cause deterioration.
- Where the air filter can be removed and replaced easily.
- Where it is away from the other heat or steam source.

REMOTE CONTROLLER

- Where it is easy to operate and easily visible.
- Where children cannot touch it.
- Select a position about 1.2 m above the floor and check that signals from the remote controller are surely received by the indoor unit from that position ('beep' or 'beep beep' receiving tone sounds). After that, attach remote controller holder to a pillar or wall and install wireless remote controller.

Note:
In rooms where inverter type fluorescent lamps are used, the signal from the wireless remote controller may not be received.

OUTDOOR UNIT

- Where it is not exposed to strong wind. If the outdoor unit is exposed to a wind during defrosting, the defrosting time will be longer.
- Where airflow is good and dustless.
- Where rain or direct sunlight can be avoided as much as possible.
- Where neighbours are not annoyed by operation sound or hot (or cool) air.
- Where rigid wall or support is available to prevent the increase of operation sound or vibration.
- Where there is no risk of combustible gas leakage.
- When installing the unit at a high level, be sure to secure the unit legs.
- Where it is at least 3 m away from the antenna of TV set or radio. Operation of the air conditioner may interfere with radio or TV reception in areas where reception is weak. An amplifier may be required for the affected device.
- Install the unit horizontally.
- Please install it in an area not affected by snowfall or blowing snow. In areas with heavy snow, please install a canopy, a pedestal and/or some baffle boards.

Note:
It is advisable to make a piping loop near outdoor unit so as to reduce vibration transmitted from there.

Note:

When operating the air conditioner in low outside temperature, be sure to follow the instructions described below.

- Never install the outdoor unit in a place where its air inlet/outlet side may be exposed directly to wind.
- To prevent exposure to wind, install the outdoor unit with its air inlet side facing the wall.
- To prevent exposure to wind, it is recommended to install a baffle board on the air outlet side of the outdoor unit.

Avoid the following places for installation where air conditioner trouble is liable to occur.

- Where flammable gas could leak.
- Where there is much machine oil.
- Where oil is splashed or where the area is filled with oily smoke (such as cooking areas and factories, in which the properties of plastic could be changed and damaged).
- Salty places such as the seaside.
- Where sulfide gas is generated such as hot spring, sewage, waste water.
- Where there is high-frequency or wireless equipment.
- Where there is emission of high levels of VOCs, including phthalate compounds, formaldehyde, etc., which may cause chemical cracking.
- The appliance shall be stored so as to prevent mechanical damage from occurring.

1-3. SPECIFICATIONS

Model		Power supply *1			Wire specifications			Pipe size (thickness *4, *5)	Maximum amount of refrigerant charge *8
Indoor unit	Outdoor unit	Rated Voltage	Frequency	Breaker capacity	Power supply *2	Indoor/outdoor connecting wire *2	Demand control signal transmission cable *3	Gas / Liquid	
MSZ-AP22VG(K)D	-	230 V	50/60 Hz	10 A	3-core 1.0 mm ²	4-core 1.0 mm ²	0.5 - 1.5 mm ²	ø9.52 / 6.35 mm (0.8 mm)	-
MSZ-AP25VG(K)D	MUZ-AP25VG(D)								900 g
MSZ-AP35VG(K)D	MUZ-AP35VG(D)			1100 g					
MSZ-AP42VG(K)D	MUZ-AP42VG(D)								
MSZ-AP50VG(K)D	MUZ-AP50VG(D)			16 A	3-core 2.0 mm ²				

*1 Connect to the power switch which has a gap of 3 mm or more when open to interrupt the source power phase.
(When the power switch is shut off, it must interrupt all phases.)

*2 Use wires in conformity with design 60245 IEC 57.

*3 Use wires in conformity with design AS/NZS 5000.2.

*4 Never use pipes with thickness less than specified. The pressure resistance will be insufficient.

*5 Use a copper pipe or a copper-alloy seamless pipe.

*6 Be careful not to crush or bend the pipe during pipe bending.

*7 Refrigerant pipe bending radius must be 100 mm or more.

*8 If pipe length exceeds B m, additional refrigerant (R32) charge is required. (No additional charge is required for pipe length and less B m.)

Additional refrigerant = A × (pipe length (m) - B)

*9 Insulation material : Heat resisting foam plastic 0.045 specific gravity

*10 Be sure to use the insulation of specified thickness. Excessive thickness may cause incorrect installation of the indoor unit and insufficient thickness may cause dew drippage.

Pipe length and height difference		
Model	AP25/35/42	AP50
Max. pipe length	20 m	
Max. height difference	12 m	
Max. number of bends *6, *7	10	
Refrigerant adjustment A *8	20 g/m	
Insulation thickness *9, *10	8 mm	
Chargeless piping length B	10 m	15 m

1-4. INSTALLATION DIAGRAM

ACCESSORIES

Check the following parts before installation.

<Indoor unit>

(1)	Installation plate	1
(2)	Installation plate fixing screw 4 x 25 mm	5
(3)	Wireless remote controller	1
(4)	Felt tape (For left or left-rear piping)	1
(5)	Remote controller holder	1
(6)	Fixing screw for (5) 3.5 x 16 mm (Black)	2
(7)	Battery (AAA) for (3)	2
(8)	Air cleaning filter	2

<Outdoor unit>

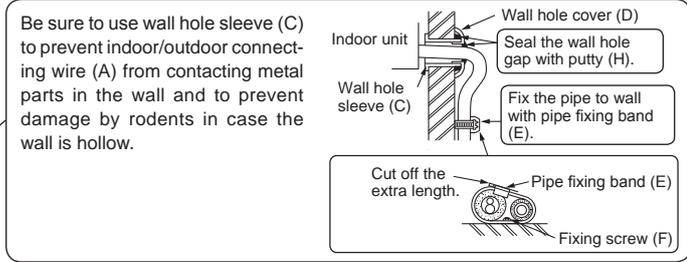
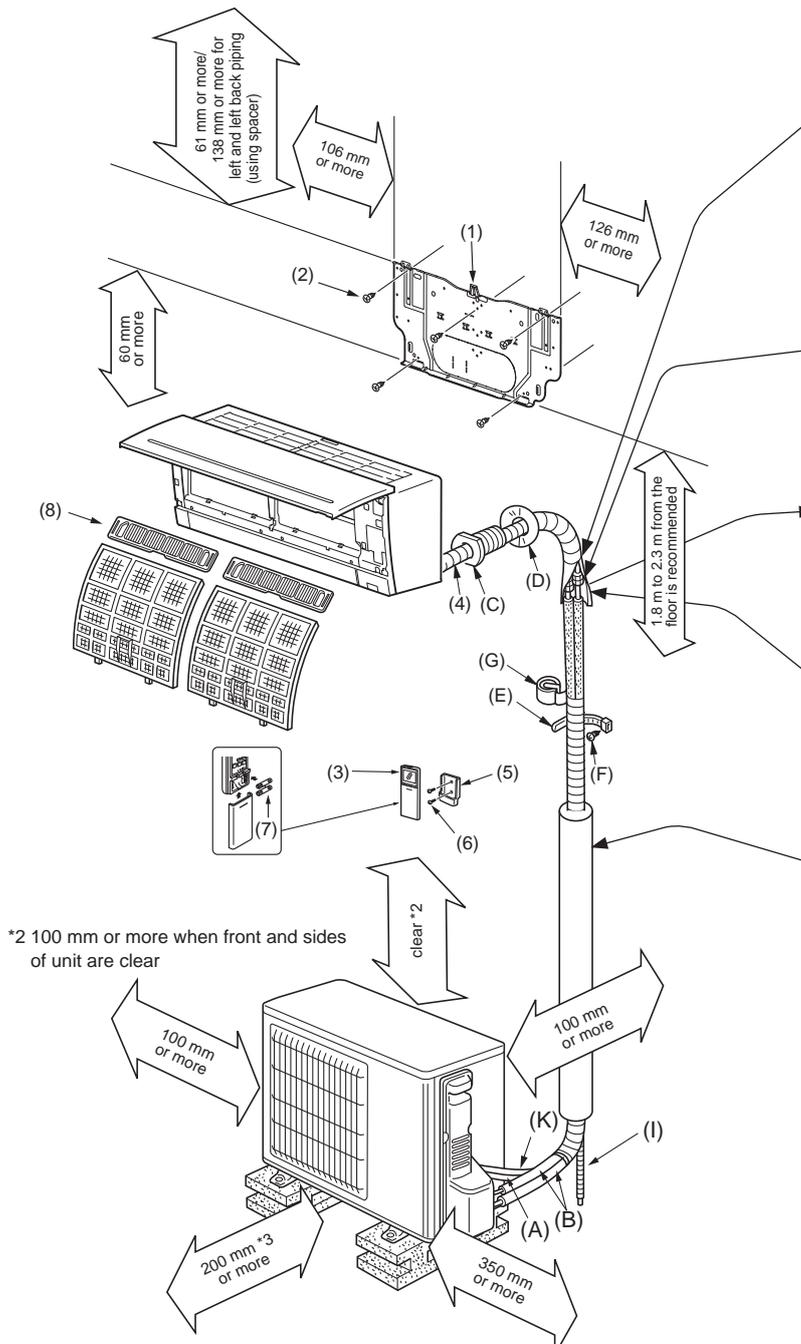
(9)	Drain socket	1
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PARTS TO BE PROVIDED AT YOUR SITE

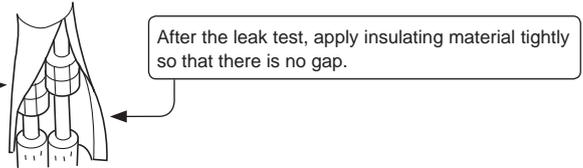
(A)	Indoor/outdoor unit connecting wire*1	1
(B)	Extension pipe	1
(C)	Wall hole sleeve	1
(D)	Wall hole cover	1
(E)	Pipe fixing band	2 to 5
(F)	Fixing screw for (E) 4 x 20 mm	2 to 5
(G)	Piping tape	1
(H)	Putty	1
(I)	Drain hose (or soft PVC hose, 15 mm inner diameter or hard PVC pipe VP16)	1 or 2
(J)	Refrigeration oil	1
(K)	Power supply cord*1	1

Note:

*1 Place indoor/outdoor unit connecting wire (A) and power supply cord (K) at least 1 m away from the TV antenna wire.

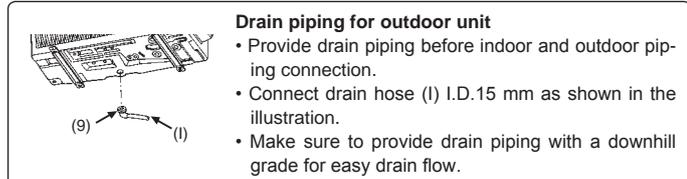
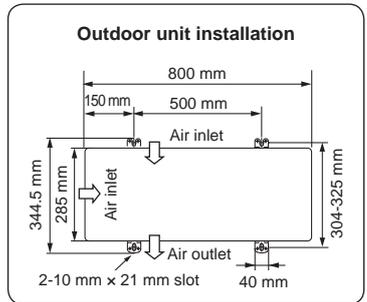


WARNING
To avoid risk of fire, flare connection should be installed outdoors. Reusable mechanical connectors and flared joints are not allowed indoors.



When the piping is to be attached to a wall containing metals (tin plated) or metal netting, use a chemically treated wooden piece 20 mm or thicker between the wall and the piping or wrap 7 to 8 turns of insulation vinyl tape around the piping. To use existing piping, perform COOL operation for 30 minutes and pump down before removing the old air conditioner. Remake flare according to the dimension for new refrigerant.

WARNING
To avoid risk of fire, embed or protect the refrigerant piping. External damage on the refrigerant piping can be cause of fire.



Note:
Install the unit horizontally. Do not use drain socket (9) in cold regions. Drain may freeze and make the fan stop. The outdoor unit produces condensate during the heating operation. Select the installation place to ensure to prevent the outdoor unit and/or the grounds from being wet by drain water or damaged by frozen drain water.

*2 100 mm or more when front and sides of unit are clear

*3 When any 2 sides of left, right and rear of unit are clear.

Appearance of the outdoor unit may differ from some models.

IMPORTANT NOTES

- Units should be installed by licensed contractor according to local code requirements.
- To comply with the requirements of Australian standard AS/NZS 3000 electrical installations (wiring rules), the electrical wiring required between the indoor and outdoor units must be installed by a licenced electrical contractor.
- Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

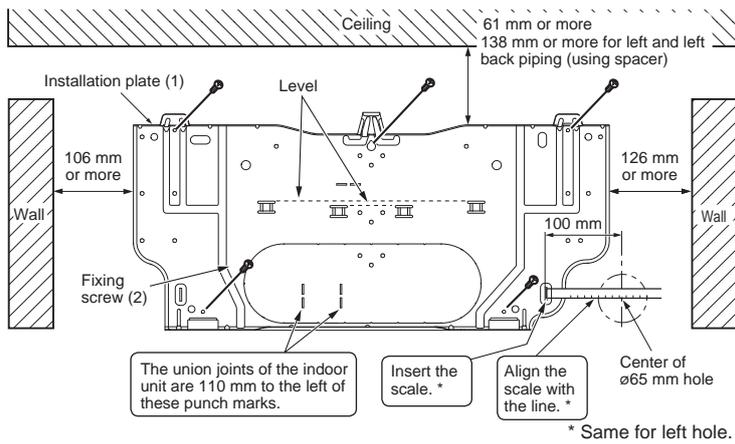
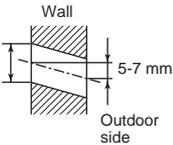
2. INDOOR UNIT INSTALLATION

2-1. FIXING OF INSTALLATION PLATE

- Find a structural material (such as a stud) in the wall and fix installation plate (1) horizontally by tightening the fixing screws (2) firmly.
- To prevent installation plate (1) from vibrating, be sure to install the fixing screws in the holes indicated in the illustration. For added support, fixing screws may also be installed in other holes.
- When the knockout is removed, apply vinyl tape to the knockout edges to prevent damaging the wires.
- When bolts recessed in the concrete wall are to be utilized, secure installation plate (1) using 11 × 20 · 11 × 26 oval hole (450 mm pitch).
- If the recessed bolt is too long, change it for a shorter one available in the market.

2-2. WALL HOLE DRILLING

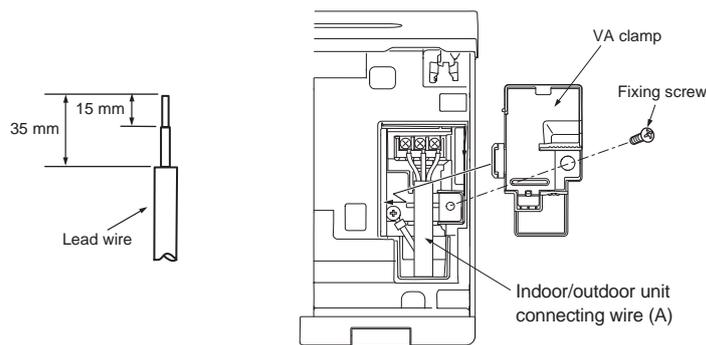
- Determine the wall hole position.
- Drill a $\phi 65$ mm hole. The outdoor side should be 5 to $\phi 65$ mm 7 mm lower than the indoor side.
- Insert wall hole sleeve (C).



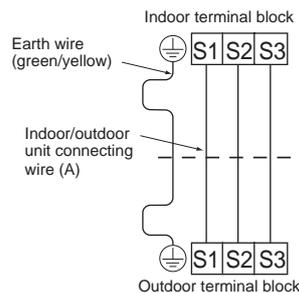
2-3. CONNECTING WIRES FOR INDOOR UNIT

You can connect indoor/outdoor lead wire without removing the front panel.

- Open the front panel.
- Remove VA clamp.
- Pass indoor/outdoor unit connecting wire (A) from the back of the indoor unit and process the end of the wire.
- Loosen terminal screw, and connect first the earth wire, then indoor/outdoor unit connecting wire (A) to the terminal block. Be careful not to make mis-wiring. Fix the wire to the terminal block securely so that no part of its core is appeared, and no external force is conveyed to the connecting section of the terminal block.
- Firmly tighten the terminal screws to prevent them from loosening. After tightening, pull the wires lightly to confirm that they do not move.
- Secure indoor/outdoor unit connecting wire (A) and the earth wire with the VA clamp. Never fail to hook the left claw of the VA clamp. Attach the VA clamp securely.



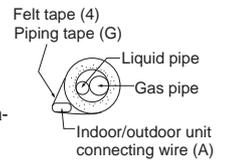
- For future servicing, give extra length to the connecting wires.
 - Make earth wire a little longer than others. (More than 60 mm)
 - Do not fold the excess wire, or cram it into small space. Take caution not to damage the wires.
 - Be sure to attach each screw to its correspondent terminal when securing the cord and/or the wire to the terminal block.
- Note:** Do not place the wires between the indoor unit and the installation plate (1). Damaged wire could cause heat generation or fire.



2-4. PIPE FORMING AND DRAIN PIPING

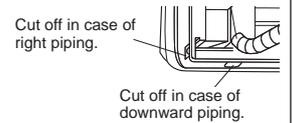
Pipe Forming

- Place the drain hose below the refrigerant piping.
- Make sure that the drain hose is not heaved or snaked.
- Do not pull the hose when applying the tape.
- When the drain hose passes the room, be sure to wrap insulation material (obtainable at a store) around it.



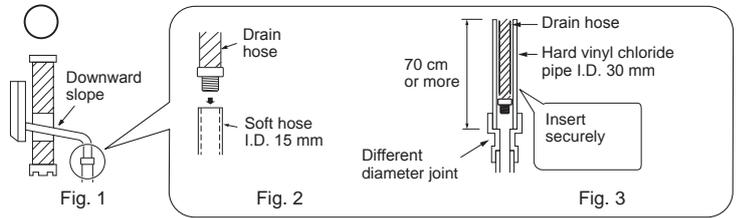
Rear, right, or downward piping

- Put the refrigerant piping and the drain hose together, then firmly apply piping tape (G) from the end.
- Insert the piping and the drain hose into the wall hole sleeve (C), and hook the upper part of the indoor unit on the installation plate (1).
- Check if the indoor unit is hooked securely on the installation plate (1) by moving the unit to left and right.
- Thrust the lower part of the indoor unit into the installation plate (1).

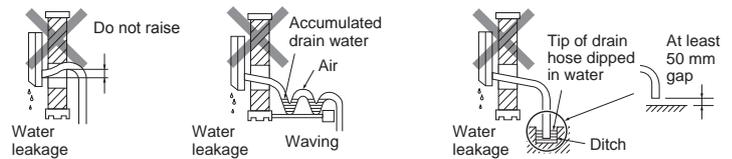


Drain Piping

- If the extension drain hose has to pass through a room, be sure to wrap it with commercially sold insulation.
- The drain hose should point downward for easy drain flow. (Fig. 1)
- If the drain hose provided with the indoor unit is too short, connect it with drain hose (I) that should be provided at your site. (Fig. 2)
- When connecting the drain hose to the hard vinyl chloride pipe, be sure to insert it securely into the pipe. (Fig. 3)



Do not make drain piping as shown below.



Left or left-rear piping

Note:

Be sure to reattach the drain hose and the drain cap in case of left or left-rear piping. Otherwise, it could cause drops of water to drip down from the drain hose.

- Put the refrigerant piping and the drain hose together, then firmly apply felt tape (4) from the end. Felt tape (4) overlap width should be 1/3 the tape width. Use a bandage stopper at the end of felt tape (4).
- Pull out the drain cap at the rear right of the indoor unit. (Fig. 1)
 - Hold the convex section at the end and pull the drain cap.
- Pull out the drain hose at the rear left of the indoor unit. (Fig. 2)
 - Hold the claw marked by the arrows and pull out the drain hose forward.
- Put the drain cap into the section to which the drain hose is to be attached at the rear of the indoor unit. (Fig. 3)
 - Insert not sharp-edged tools such as screwdrivers into the hole at the end of the cap and insert the cap fully into the drain pan.
- Insert the drain hose fully into the drain pan at the rear right of the indoor unit. (Fig. 4)
 - Check if the hose is hooked securely to the projection of its inserting part at the drain pan.
- Insert the drain hose into wall hole sleeve (C), and hook the upper part of indoor unit on installation plate (1). Then, move the indoor unit completely to the left in order to make placing the piping in the back space of the unit easier.
- Cut out a piece of cardboard from the shipping box, roll it up, hook it onto the back rib, and use it as a spacer to lift the indoor unit. (Fig. 5)
- Connect the refrigerant piping with the extension pipe (B).
- Thrust the lower part of the indoor unit into the installation plate (1).

