1. BEFORE INSTALLATION

**WARNING** (Could lead to death, serious injury, etc.)

- Do not install the unit by yourself (user).
- Incomplete connection and securing could cause fire.
- Do not install the unit in a place where inflammable gas may leak.
- Do not use refrigerant other than that specified for the unit like R410A.
- Do not discharge the refrigerant into the atmosphere, if refrigerant leaks during installation, ventilate the room. If refrigerant comes in contact with a fire, harmful gas could be released. Follow the procedure below.
  - Provide ventilation in accordance with EN376-1.
  - Check that the refrigerant does not leak after installation has been completed.
  - If refrigerant leaks indoors, and comes into contact with the fire, it could result in a fire.
1-4. INSTALLATION DIAGRAM

**ACCESSORIES**
Check the following parts before installation. 

- (1) Installation plate
- (2) Extension pipe
- (3) Wall hole sleeve
- (4) Wall hole cover
- (5) Drain socket
- (6) Air cleaning filter
- (7) Alumimum foil
- (8) Insulation strips
- (9) Air purifying device
- (10) Power supply cord
- (11) Connector
- (12) Liquid pipe
- (13) Gas pipe
- (14) Felt tape
- (15) Piping tape
- (16) Pipe fixing band
- (17) Fixing screw

**PARTS TO BE PROVIDED AT YOUR SITE**

- (A) Indoor/outdoor unit connecting wire
- (B) Extension pipe
- (C) Wall hole sleeve
- (D) Wall hole cover
- (E) Pipe fixing band
- (F) Fixing screw
- (G) Piping tape
- (H) Putty
- (I) Drain hose
- (J) Refrigeration oil
- (K) Power supply cord

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

Units should be installed by licensed contractors according to local code requirements.

2. INDOOR UNIT INSTALLATION

2-1. FIXING 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 damage.
- When bolts recessed in the concrete wall are to be utilized, secure installation plate (1) horizontally by tightening the fixing screws (2) firmly.
- If the recessed bolt is too long, change it for a shorter one available in the market.
- If the recessed bolt is too long, change it for a shorter one available in the market.
- Make sure to provide drain piping with a downhill grade for easy drain flow.

2-2. WALL HOLE DRILLING

1) Determine the wall hole position.
2) Drill a ø65 mm hole. The outdoor side should be 100 mm or more for new refrigerant.
3) Insert wall hole sleeve (C).
4) Insert wall hole sleeve (C) to prevent indoor/outdoor unit contacting wire (A) from contacting metal parts in the wall and to prevent damage by rodents in case the wall is hollow.

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.

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 another hole.
- When bolts recessed in the concrete wall are to be utilized, secure installation plate (1) horizontally by tightening the fixing screws (2) firmly.
- If the recessed bolt is too long, change it for a shorter one available in the market.

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.

**Drain piping for outdoor unit**

- **VE type only**
  - Provide drain piping before indoor and outdoor piping connection.
  - Connect drain hose (I) I.D.15 mm as shown in the illustration.
  - Make sure to provide drain piping with a downhill grade for easy drain flow.

**Note:**
Install the unit horizontally. Do not use drain socket (10) in cold regions. Drain may freeze and make the fan stop.

The outdoor unit produces condensate during the heating operation. Select the installation site to ensure to prevent the outdoor unit and/or the grounds from being wet by drain water or damaged by frozen drain water.

Appearance of the outdoor unit may differ from some models.

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**Image Description:**
- **Diagram 1:** Illustrates the installation sequence.
- **Diagram 2:** Shows the installation plate fixing process.
- **Diagram 3:** Details the wall hole drilling and sleeve insertion.
- **Diagram 4:** Explains connecting wire and drain piping techniques.

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3. OUTDOOR UNIT INSTALLATION

3-1. CONNECTING WIRES FOR OUTDOOR UNIT

1) Open the service panel.
2) Loosen terminal screw, and connect indoor/outdoor unit connecting wire (A) from the indoor unit correctly on 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 apparent, and no external force is conveyed to the connecting section of the terminal block.
3) Firmly tighten the terminal screws to prevent them from loosening. After tightening, pull the wires lightly to confirm that they do not move.
4) Connect power supply cord (K).
5) Fix indoor/outdoor unit connecting wire (A) and power supply cord (K) with the cord clamp.
6) Close the service panel securely.

3-2. FLARING WORK

1) Cut the copper pipe correctly with pipe cutter. (Fig. 1, 2)
2) Completely remove all burrs from the cut cross section of pipe. (Fig. 3)
3) Put the end of the copper pipe to downward direction as you remove burrs in order to avoid to let burrs drop in the piping.
4) Flaring work (Fig. 4, 5). Firmly hold copper pipe in the flaring tool. (Not possible to put them on after flaring work.)
5) Check:
   - If flare is noted to be defective, cut off the flared section and do flaring work again.
6) Smooth all round.

3-3. PIPE CONNECTION

1) Put the refrigerant piping and the drain hose together, then firmly apply felt tape (7) from the end. Don't make drain piping as shown below.
2) Hold the convex section at the end and pull the drain hose forward.
3) Put the drain cap into the rear left of the indoor unit. (Fig. 3)
4) Hold the flap marked by the arrows and pull out the drain hose.
5) Insert the drain hose fully into the drain pan at the rear right of the indoor unit. (Fig. 2)
6) Check if the hose is hooked securely to the projection of its inserting part at the drain pan.
7) 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.
8) 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)
9) Connect the refrigerant piping with the extension pipe (B). (If) Thrust the lower part of the indoor unit into the installation plate (1).

3-4. INSULATION AND TAPING

1) Cover piping joints with pipe cover.
2) For outdoor unit side, surely insulate every piping including valves.
3) Stop the end of piping tape (G) with tape (with adhesive agent attached).
4) Be sure to wrap insulation around the piping. Direct contact with the bare piping may result in burns or frostbite.
5) 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.

3-5. OTHER THINGS TO KNOW

- When installing the unit, securely connect the refrigerant pipes before starting the compressor.

WARNING

- Do not make drain piping as shown below.
4. PURGING PROCEDURES, LEAK TEST, AND TEST RUN

4-1. PURGING PROCEDURES AND LEAK TEST

1) Remove service port cap of stop valve on the side of the outdoor unit gas pipe. (The stop valves are fully closed and covered in caps in initial state.)
2) Connect gauge manifold valves and vacuum pump to service port of stop valve on the gas pipe side of the outdoor unit.

3) Run the vacuum pump. (Vacuumize for more than 15 minutes.)
4) Check the vacuum with gauge manifold valve, then close gauge manifold valve, and stop the vacuum pump.
5) Leave as it is for one or two minutes. Make sure pointer gauge manifold valve remains in the same position. Confirm that pressure gauge shows –0.101 MPa [Gauge] (~760 mmHg).
6) Remove gauge manifold valve quickly from service port of stop valve.

3) Close the stop valve on the gas pipe side of the outdoor unit almost completely so that it can be easily closed fully when the pressure gauge shows 0 MPa [Gauge] (~0 kgf/cm2).
4) Start the emergency COOL operation.

To start the emergency operation in COOL mode, disconnect the power supply plug and turn off the breaker. After 15 seconds, connect the power supply plug and turn on the breaker. Then press the E.O. SW once. (The emergency COOL operation can be performed continuously for up to 30 minutes.)

4-3. AUTO RESTART FUNCTION

This product is equipped with an auto restart function. When the power supply is stopped during operation such as during blackouts, the function automatically starts operation in the previous setting once the power supply is resumed. (Refer to the operating instructions for details.)

Caution:
- After test run or remote signal reception check, turn off the unit with the E.O. SW or the remote controller before turning off the power supply. Not doing so will cause the unit to start operation automatically when power supply is resumed.
- To the user
  - After installing the unit, make sure to explain the user about auto restart function.
  - If auto restart function is unnecessary, it can be deactivated. Consult the service representative to deactivate the function. Refer to the service manual for details.

4-4. SETTING THE INSTALLATION POSITION

Be sure to set the remote controller in accordance with the installed position of the indoor unit.

Installation position:
- Left: Distance to objects (wall, cabinet, etc.) is less than 50 cm to the left
- Center: Distance to objects (wall, cabinet, etc.) is more than 50 cm to the left and right
- Right: Distance to objects (wall, cabinet, etc.) is less than 50 cm to the right

Note:
The installation position can be set only when all the following conditions are met:
- The remote controller is powered off.
- Weekly timer is set.
- Weekly timer is not being edited.

4-5. EXPLANATION TO THE USER

- Using the OPERATING INSTRUCTIONS, explain to the user how to use the air conditioner (how to use the remote controller, how to remove the air filters, how to remove or put the remote controller in the remote controller holder, how to clean, precautions for operation, etc.).
- Recommend the user to read the OPERATING INSTRUCTIONS carefully.

5. RELOCATION AND MAINTENANCE

5-1. REMOVING AND INSTALLING THE PANEL ASSEMBLY

Removal procedure
1) Unlock the upper and lower vanes as shown in (1) and (2) using a thin instrument. Then, remove the upper and lower vanes.
2) Remove the front panel.
3) Remove the 5 screws which fix the panel assembly.
4) The panel assembly consists of 3 components. Remove them in the following order: right, left, and center. To remove the right component, pull out the right top corner. To remove the left component, pull out the left bottom corner. To remove the center bottom component, detach the hook on its upper center part.

Installation procedure
1) Install the panel assembly following the removal procedure in reverse.
2) Be sure to press the positions as indicated by the arrows in order to attach the assembly completely to the unit.
3) Install the front panel and the horizontal vanes.

5-2. REMOVING THE INDOOR UNIT

Remove the bottom of the indoor unit from the installation plate.
When releasing the corner part, release both left and right bottom corner part of indoor unit and pull it downward and forward as shown in the figure on the right.

5-3. PUMPING DOWN

When relocating or disposing of the air conditioner, pump down the system following the procedure below so that no refrigerant is released into the atmosphere.
1) Connect the gauge manifold valve to the service port of the stop valve on the gas pipe side of the outdoor unit.
2) Fully close the stop valve on the liquid pipe side of the outdoor unit.
3) Close the stop valve on the gas pipe side of the outdoor unit almost completely so that it can be easily closed fully when the pressure gauge shows 0 MPa [Gauge] (~0 kgf/cm2).
4) Start the emergency COOL operation.

To start the emergency operation in COOL mode, disconnect the power supply plug and turn off the breaker. After 15 seconds, connect the power supply plug and turn on the breaker, then press the E.O. SW once. (The emergency COOL operation can be performed continuously for up to 30 minutes.)
5) Fully close the stop valve on the gas pipe side of the outdoor unit when the pressure gauge shows 0.05 to 0.0 MPa [Gauge] (approx. 0.5 to 0 kgf/cm2).
6) Stop the emergency COOL operation.

Press the E.O. SW several times until all LED lamps turn off. Refer to operating instructions for details.

**WARNING**

When pumping down the refrigerant, stop the compressor before disconnecting the refrigerant pipes. The compressor may burst if air etc. get into it.