ENGLISH

MITSUBISHI ELECTRIC

REFRIGERANT R32

VG79N564H01

SPLIT-TYPE AIR CONDITIONERS

INSTALLATION MANUAL

Model names are indicated in 1-3.

Required Tools for Installation

Phillips screwdriver	4 mm hexagonal wrench
Level	Flare tool for R32, R410A
Scale	Gauge manifold for R32, R410A
Utility knife or scissors	Vacuum pump for R32, R410A
65 mm hole saw	Charge hose for R32, R410A
Torque wrench	Pipe cutter with reamer
Wrench (or spanner)	

1. BEFORE INSTALLATION

MEANINGS OF SYMBOLS DISPLAYED ON INDOOR UNIT AND/OR OUTDOOR UNIT

WARNING (Risk of fire)	This unit uses a flammable refrigerant. If refrigerant leaks and comes in contact with fire or heating part, it will create harmful gas and there is risk of fire.
	Read the OPERATING INSTRUCTIONS carefully before operation.
	Service personnel are required to carefully read the OPERATING INSTRUCTIONS and INSTALLATION MANUAL before operation.
	Further information is available in the OPERATING INSTRUCTIONS, INSTALLATION MANUAL, and the like.

1-1. THE FOLLOWING SHOULD ALWAYS BE OBSERVED FOR SAFETY

- Be sure to read "THE FOLLOWING SHOULD ALWAYS BE OBSERVED FOR SAFETY" before installing the air conditioner.
- Be sure to observe the warnings and cautions specified here as they include important items related to safety.
- After reading this manual, be sure to keep it together with the OPERATING INSTRUCTIONS for future reference.

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

- **Do not install the unit by yourself (user).**
  Incomplete installation could cause fire, electric shock, injury due to the unit falling, or leakage of water. Consult the dealer from whom you purchased the unit or a qualified installer.
- **Perform the installation securely referring to the installation manual.**
  Incomplete installation could cause fire, electric shock, injury due to the unit falling, or leakage of water.
- **When installing the unit, use appropriate protective equipment and tools for safety.**
  Failure to do so could cause injury.
- **Install the unit securely in a place which can bear the weight of the unit.**
  If the installation location cannot bear the weight of the unit, the unit could fall causing injury.
- **Do not alter the unit.**
  It may cause fire, electric shock, injury or water leakage.
- **Electrical work should be performed by a qualified, experienced electrician, according to the installation manual. Be sure to use an exclusive circuit. Do not connect other electrical appliances to the circuit.**
  If the capacity of the power circuit is insufficient or there is incomplete electrical work, it could result in a fire or an electric shock.
- **Earth the unit correctly.**
  Do not connect the earth to a gas pipe, water pipe, lightning rod, or telephone earth. Defective earthing could cause electric shock.
- **Do not damage the wires by applying excessive pressure with parts or screws.**
  Damaged wires could cause fire or electric shock.
- **Be sure to cut off the main power in case of setting up the indoor P.C. board or wiring works.**
  Failure to do so could cause electric shock.
- **Use the specified wires to connect the indoor and outdoor units securely and attach the wires firmly to the terminal block connecting sections so the stress of the wires is not applied to the sections. Do not extend the wires, or use intermediate connection.**
  Incomplete connecting and securing could cause fire.
- **Do not install the unit in a place where inflammable gas may leak.**
  If gas leaks and accumulates in the area around the unit, it could cause an explosion.
- **Do not use intermediate connection of the power cord or the extension cord and do not connect many devices to one AC outlet.**
  It could cause a fire or an electric shock due to defective contact, defective insulation, exceeding the permissible current, etc.
- **Be sure to use the parts provided or specified parts for the installation work.**
  The use of defective parts could cause an injury or leakage of water due to a fire, an electric shock, the unit falling, etc.
- **When plugging the power supply plug into the outlet, make sure that there is no dust, clogging, or loose parts in both the outlet and the plug. Make sure that the power supply plug is pushed completely into the outlet.**
  If there is dust, clogging, or loose parts on the power supply plug or the outlet, it could cause electric shock or fire. If loose parts are found on the power supply plug, replace it.
- **Attach the electrical cover to the indoor unit and the service panel to the outdoor unit securely.**
  If the electrical cover of the indoor unit and/or the service panel of the outdoor unit are not attached securely, it could result in a fire or an electric shock due to dust, water, etc.
- **When installing, relocating, or servicing the unit, make sure that no substance other than the specified refrigerant (R32) enters the refrigerant circuit.**
  Any presence of foreign substance such as air can cause abnormal pressure rise and may result in explosion or injury. The use of any refrigerant other than that specified for the system will cause mechanical failure, system malfunction, or unit breakdown. In the worst case, this could lead to a serious impediment to securing product safety.
- **Do not discharge the refrigerant into the atmosphere. If refrigerant leaks during installation, ventilate the room. Check that the refrigerant does not leak after installation has been completed.**
  If refrigerant leaks and comes in contact with fire or heating part of such a fan heater, kerosene heater, or cooking stove, it will create harmful gas.
- **Use appropriate tools and piping materials for installation.**
  The pressure of R32 is 1.6 times more than R22. Not using appropriate tools or materials and incomplete installation could cause the pipes to burst or injury.
- **When pumping down the refrigerant, stop the compressor before disconnecting the refrigerant pipes.**
  If the refrigerant pipes are disconnected while the compressor is running and the stop valve is open, air could be drawn in and the pressure in the refrigeration cycle could become abnormally high. This could cause the pipes to burst or injury.
- **When installing the unit, securely connect the refrigerant pipes before starting the compressor.**
  If the compressor is started before the refrigerant pipes are connected and when the stop valve is open, air could be drawn in and the pressure in the refrigeration cycle could become abnormally high. This could cause the pipes to burst or injury.
- **Fasten a flare nut with a torque wrench as specified in this manual.**
  If fastened too tight, a flare nut may break after a long period and cause refrigerant leakage.
- **The unit shall be installed in accordance with national wiring regulations.**
- **When using a gas burner or other flame-producing equipment, completely remove all of the refrigerant from the air conditioner and ensure that the area is well-ventilated.**
  If the refrigerant leaks and comes in contact with fire or heating part, it will create harmful gas and there is risk of fire.
- **Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.**
- **The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater.)**
- **Do not pierce or burn.**
- **Be aware that refrigerants may not contain an odor.**
- **Pipe-work shall be protected from physical damage.**
- **The installation of pipe-work shall be kept to a minimum.**
- **Compliance with national gas regulations shall be observed.**
- **Keep any required ventilation openings clear of obstruction.**

⚠ CAUTION (Could lead to serious injury in particular environments when operated incorrectly.)

- **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.

1-4. INSTALLATION DIAGRAM

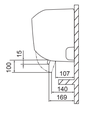
ACCESSORIES
Check the following parts before installation.

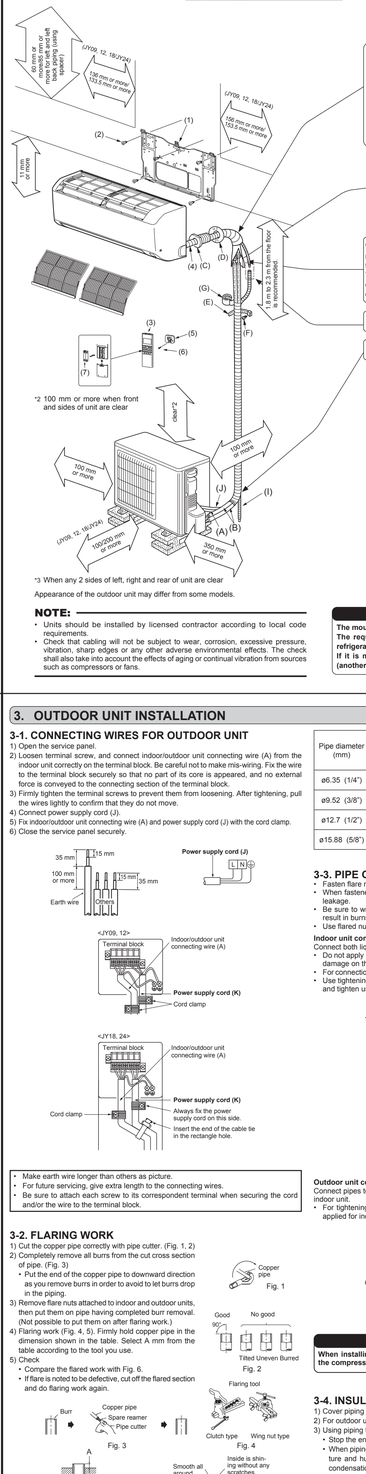
(1)	Installation plate	1
(2)	Installation plate fixing screw 4 × 25 mm	5
(3)	Wireless remote controller	1
(4)	Felt tape (For left or left-rear piping)	1
(5)	Remote controller holder	1
(6)	Fixing screw for (5) 3.5 × 16 mm (Black)	1
(7)	Battery (AAA) for (3)	2

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 × 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 VP30)	1 or 2
(J)	Power supply cord*1	1

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



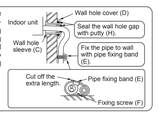


*2 100 mm or more when front and sides of unit are clear

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

Appearance of the outdoor unit may differ from some models.

Be sure to use wall hole sleeve (C) to prevent indoor/outdoor connecting wire (A) from contacting metal parts in the wall and to prevent damage by rodents in case the wall is hollow.



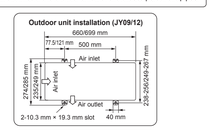
After the leak test, apply insulating material tightly so that there is no gap.

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 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.

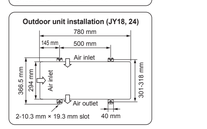
Cover the connection part with tape to prevent water from leaking.

Do not block the inlet of the outdoor unit with the excess part of the pipes.

Outdoor unit installation (JY09/12)



Outdoor unit installation (JY18, 24)



⚠ WARNING

The mounting height of an indoor unit must be 1.8 m or more.
The required minimum room area are determined according to the total refrigerant amount.
If it is more than 1.2 kg, refer to the R32 INSTALLATION PRECAUTION (another sheet).

NOTE:
- Units should be installed by licensed contractor according to local code requirements.
- 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

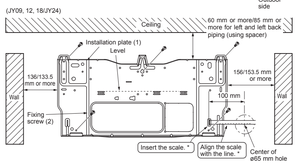
2-1. FIXING OF INSTALLATION PLATE

- 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

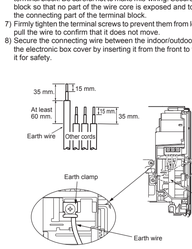
1) Determine the wall hole position.
2) Drill a ø65 mm hole. The outdoor side should be 5 to 7 mm lower than the indoor side.
3) Insert wall hole sleeve (C).

(JY09, 12, 18/JY24)



2-3. CONNECTING WIRES FOR INDOOR UNIT

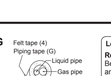
Detach the front cover, then connect the power cord to the indoor and outdoor units.
1) Remove the screw covers and both the left and right screws.
2) Detach the front panel.
3) Remove the electronic box cover.
4) Disconnect the power cord from the indoor/outdoor unit (A) at the back of the indoor unit, and connect the end of the power cord securely.
5) Unscrew the earth clamp, then route the earth wire through it, and tighten the screw back so that no part of the wire core is exposed and to prevent electrical leakage from the connecting part of the terminal block.
6) Unscrew the terminal block and route the indoor/outdoor connection wires (A) into the terminal block. Be careful not to make mis-wiring. Securely fasten the wires to the terminal block so that no part of the wire core is exposed and to prevent electrical leakage from the connecting part of the terminal block.
7) Firmly tighten the terminal screws to prevent them from loosening. After tightening, gently pull the wire to confirm that it does not move.
8) Secure the connecting wire between the indoor/outdoor unit (A) and the earth wire with the electronic box cover by inserting it from the front to the back and securely tightening it for safety.



- For future servicing, give extra length to the connecting wires.
- Make earth wire longer than others as picture.
- 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 corresponding 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.

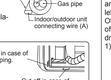
2-4. PIPE FORMING AND DRAIN PIPING

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

1) Put the refrigerant piping and the drain hose together, then firmly apply piping tape (G) from the end.
2) 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).
3) Check if the indoor unit is hooked securely on the installation plate (1) by moving the unit to left and right.
4) Thrust the lower part of the indoor unit into the installation plate (1).



Drain Piping
- Do not cut the drain hose of the unit. (Fig. 1)
- 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. 2)
- 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. 3)
- When connecting the drain hose to the hard vinyl chloride pipe, be sure to insert it securely into the pipe. (Fig. 4)
- Make sure that no stress is applied to the connecting portion of the drain hose after installing the indoor unit. Otherwise, breakage or water leakage may result.
- Be sure to use the drain hose attached to the indoor unit. Otherwise, water leakage or breakage due to chemical may result.
- Do not apply any agent on the drain port. Doing so may cause breakage.

Fig. 1

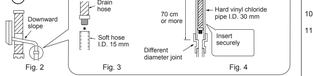
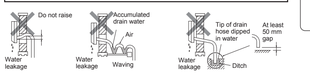


Fig. 2 Fig. 3 Fig. 4

Do not make drain piping as shown below.

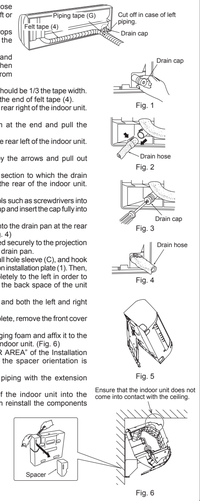


Do not put the drain pipe directly in a drainage ditch where Ammonia or Sulphuric gas may be generated. The evaporated corrosive gas may return to the indoor side through drain pipe and this may cause an unpleasant odor and corrosion on Heat exchanger may occur.

Left or left-rear piping

Remarks:
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.

1) 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).
2) 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.
3) 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.
4) 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.
5) 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.
6) 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. (Fig. 5)
7) Remove the screw covers and both the left and right screws.
8) After the installation is complete, remove the front cover of the unit.
9) Cut the spacer from packaging foam and affix it to the Installation plate to lift the indoor unit. (Fig. 6)
   • Place it on the "SPACER AREA" of the Installation plate, making sure that the spacer orientation is correct.
10) Connect the refrigerant piping with the extension pipe (B).
11) Thrust the lower part of the indoor unit into the installation plate (1), then reinstall the components by following the steps in reverse order.



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 appeared, 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 (J).
5) Fix indoor/outdoor unit connecting wire (A) and power supply cord (J) with the cord clamp.
6) Close the service panel securely.

Terminal block
Indoor/outdoor unit connecting wire (A)
Power supply cord (K)
Cord clamp

Terminal block
Indoor/outdoor unit connecting wire (A)
Power supply cord (K)
Cord clamp
Always fix the power supply cord on this side.
Insert the end of the cable tie in the rectangle hole.

- Make earth wire longer than others as picture.
- For future servicing, give extra length to the connecting wires.
- Be sure to attach each screw to its correspondent terminal when securing the cord and/or the wire to the terminal block.

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)
   • 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.
3) Remove flare nuts attached to indoor and outdoor units, then put them on pipe having completed burr removal. (Not possible to put them on after flaring work.)
4) Flaring work (Fig. 4, 5). Firmly hold copper pipe in the dimension shown in the table. Select A mm from the table according to the tool you use.
5) Check
   • Compare the flared work with Fig. 6.
   • If flare is noted to be defective, cut off the flared section and do flaring work again.

Fig. 1

Fig. 2

Fig. 3

Fig. 4

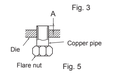


Fig. 5

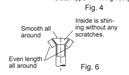


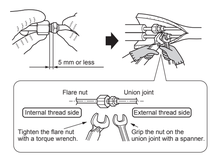
Fig. 6

Pipe diameter (mm)	Nut (mm)	A (mm) Clutch type tool for R32, R410A	A (mm) Clutch type tool for R22	A (mm) Wing nut type tool for R22	Tightening torque N•m	Tightening torque kgf•cm
ø6.35 (1/4")	17	0 to 0.5	1.0 to 1.5	1.5 to 2.0	13.7 to 17.7	140 to 180
ø9.52 (3/8")	22				34.3 to 41.2	350 to 420
ø12.7 (1/2")	26			2.0 to 2.5	49.0 to 56.4	500 to 575
ø15.88 (5/8")	29				73.5 to 78.4	750 to 800

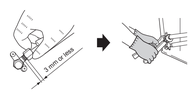
3-3. PIPE CONNECTION

- Fasten flare nut with a torque wrench as specified in the table.
- When fastened too tight, flare nut may break after a long period and cause refrigerant leakage.
- Be sure to wrap insulation around the piping. Direct contact with the bare piping may result in burns or frostbite.
- Use flared nut installed to this indoor unit.

Indoor unit connection
Connect both liquid and gas pipings to indoor unit.
- Do not apply refrigeration oil on screw threads. Excessive tightening torque will result in damage on the screw.
- For connection, first align the center, then tighten the first 3 to 4 turns of flare nut by hand.
- Use tightening torque table above as a guideline for indoor unit side union joint section, and tighten using two wrenches. Excessive tightening damages the flare section.



Outdoor unit connection
Connect pipes to stop valve pipe joint of the outdoor unit in the same manner applied for indoor unit.
- For tightening, use a torque wrench or spanner and use the same tightening torque applied for indoor unit.



⚠ WARNING

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

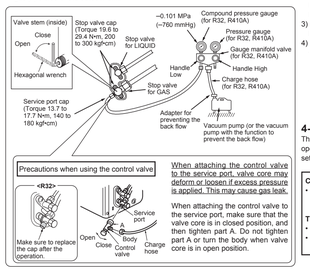
3-4. INSULATION AND TAPING

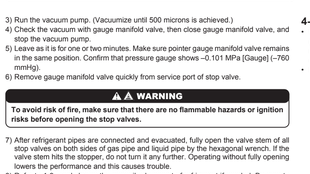
1) Cover piping joints with pipe cover.
2) For outdoor unit side, surely insulate every piping including valves.
3) Using piping tape (G), apply taping starting from the entry of outdoor unit.
   • Stop the end of piping tape (G) with tape (with adhesive agent attached).
   • When piping have to be arranged through above ceiling, closet or where the temperature and humidity are high, wind additional commercially sold insulation to prevent condensation.

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 valve and vacuum pump to service port of stop valve on the gas pipe side of the outdoor unit.





3) Run the vacuum pump. (Vacuumize until 500 microns is achieved.)
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.

⚠⚠ WARNING

To avoid risk of fire, make sure that there are no flammable hazards or ignition risks before opening the stop valves.

7) After refrigerant pipes are connected and evacuated, fully open the valve stem of all stop valves on both sides of gas pipe and liquid pipe by the hexagonal wrench. If the valve stem hits the stopper, do not turn it any further. Operating without fully opening lowers the performance and this causes trouble.
8) Refer to 1-3., and charge the prescribed amount of refrigerant if needed. Be sure to charge slowly with liquid refrigerant. Otherwise, composition of the refrigerant in the system may be changed and affect performance of the air conditioner.
9) Tighten cap of service port to obtain the initial status.
10) Leak test.

4-2. TEST RUN

1) Insert power supply plug into the power outlet and/or turn on the breaker.
2) Press the E.O. SW. Test run will be performed for 30 minutes. If the left lamp of the operation indicator blinks every 0.5 seconds, inspect the indoor/outdoor unit connecting wire (A) for mis-wiring. After the test run, emergency mode (set temperature 24°C) will start.
3) To stop operation, press the E.O. SW several times until all LED lamps turn off. Refer to operating instructions for details.
4) Checking the remote (infrared) signal reception.
   • Press the OFF/ON button on the remote controller (3) and check that an electronic sound is heard from the indoor unit. Press the OFF/ON button again to turn the air conditioner off.
   • Once the compressor stops, the restart preventive device operates so the compressor will not operate for 3 minutes to protect the air conditioner.

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.

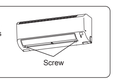
4-4. EXPLANATION TO THE USER

- 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.

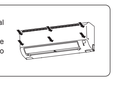
5. RELOCATION AND MAINTENANCE

5-1. REMOVING AND INSTALLING THE PANEL ASSEMBLY

Removal procedure
1) Remove the 2 screws which fix the panel assembly.
2) Remove the panel assembly. Be sure to remove its bottom end first.



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.



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/or turn off the breaker. After 15 seconds, connect the power supply plug and/or turn on the breaker, and 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 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.

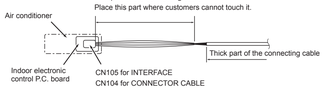
⚠ WARNING

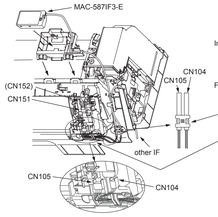
When pumping down the refrigerant, stop the compressor before disconnecting the refrigerant pipes. The compressor may burst if air etc. get into it.

6. CONNECTING THE INTERFACE/CONNECTOR CABLE TO THE AIR CONDITIONER

- Connect the INTERFACE/CONNECTOR CABLE to the Indoor electronic control P.C. board of the air conditioner with the connecting cable.
- Cutting or extending the connecting cable of the INTERFACE/CONNECTOR CABLE results in defects in connecting.
  Do not bundle the connecting cable together with power supply cord, indoor/outdoor connecting wire, and/or earth wire. Keep as much distance as possible between the connecting cable and those wires.
- The thin part of the connecting cable should be stored and placed where customers cannot touch it.

Connecting





1) Remove the front panel.
2) Disconnect CN151 (and CN152) connectors from the electronic control P.C. Board of the indoor unit.
3) Pull the electronic control P.C. board holder of the indoor unit in 90 degrees and remove it.

In case of MAC-587IF3-E
1. Install the interface base to the groove on the water channel.
2. Install the interface into the base.
3. Route the connecting wires through the holder as shown in the figure.

For other interfaces
1. Route the connecting wires through the holder as shown in the figure.

4) Secure all wires with cable ties.
5) Connect the wires to CN105 and/or CN104 on the indoor unit's electronic control P.C. board.
6) Reinstall the electronic control P.C. board holder and connect the wires to CN151 (and CN152) connector.
7) Organize any excess connecting wires as shown in the figure.
8) Reinstall the front panel of the appliance.

⚠ WARNING

Fix the connecting cable at the prescribed position securely. Incorrect installation may cause electric shock, fire, and/or malfunction.

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). When the remote controller holder is supplied, install it at a position from which the indoor unit can receive signals.

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 inl

中文

MITSUBISHI ELECTRIC

REFRIGERANT R32

VG79N564H01

於 1-3 中說明機型名稱。

分體式冷暖氣機
安裝手冊

安裝所需工具	
十字形螺絲起子	4 mm 六角扳手
水平儀	R32，R410A 專用擴口工具
卷尺	R32，R410A 專用雙錶閥
美工刀或剪刀	R32，R410A 專用真空泵
65 mm 孔鋸	R32，R410A 專用填充軟管
扭矩扳手	切管器（附鑽頭）
扳手（或扳鉗）	

1. 安裝前

室內機組與/或室外機組上顯示的符號含義

⚠	警告（火災危險）	本機使用易燃製冷劑。如果發現製冷劑洩漏並接觸到火源或熱源，可能產生有害氣體並有火災危險。
📖	運轉之前，請仔細閱讀操作手冊。	
🔧	維修人員操作之前應仔細閱讀操作手冊及安裝手冊。	
ℹ	操作手冊、安裝手冊等資料中有可用的詳細資訊。	

1-1. 為確保安全，請注意以下事項
- 安裝冷暖氣機之前，請務必閱讀「為確保安全，請注意以下事項」。
- 請遵守警告和注意等事項，這些對安全非常重要。
- 閱讀本手冊之後，請將本手冊與操作手冊一併妥善保管，以供日後參考。

⚠ 警告（可能導致死亡、嚴重傷害等。）

- **請勿自行（由使用者）安裝機組。**
  安裝不當，可能導致火災、觸電、因機組掉落導致受傷、漏水等。請聯絡冷暖氣機經銷商或合格的安裝技師進行安裝。
- **請參閱安裝手冊穩固安裝。**
  安裝不當，可能導致火災、觸電、因機組掉落導致受傷、漏水等。
- **安裝機組時，應使用適當的防護設備和工具以確保安全。**
  否則可能會導致受傷。
- **請將機組安裝在可承受其重量的位置。**
  如果安裝位置無法承受機組重量，機組可能會掉落，導致受傷。
- **名稱不要改裝本機組。**
  這可能會導致火災、觸電、人身傷害或漏水。
- **應由合格有經驗的電氣技術人員按照安裝手冊的指示進行電氣工作。務必使用專用電路。請勿將其他電器設備連接到電路。**
  如果電路承受能力不足，或者配電不當，可能導致火災或觸電。
- **將機組正確接地。**
  請勿將地線連接到燃氣管、水管、避雷針或電話地線。接地不當可能導致觸電。接地不當可能導致觸電。
- **請勿對零件或螺釘過度施力，造成接線損壞。**
  接線損壞可能導致火災或觸電。
- **安裝室內電路板或接線時，務必關閉主電源。**
  否則可能導致觸電。
- **使用指定接線牢固連接室內和室外機組，並將接線固定在接線板的連接部位，以免接線自身的重力施加在該部位。請勿延長接線或從中途引線。**
  連接和固定不當可能導致火災。
- **請勿將機組安裝在可能會洩漏易燃氣體的位置。**
  如果氣體洩漏，並積聚在機組周圍，可能導致爆炸。
- **請勿在電源線中途引線或使用延長線，也不要與多台設備共用一個交流電源插座。**
  這可能會因接觸不良、絕緣不良或電流超載等，造成火災或觸電。
- **請務必使用廠商提供的零件或指定用於安裝的零件。**
  使用有缺陷的零件，可能因火災、觸電、機組掉落等而導致受傷或漏水。
- **將電源插頭插入插座時，確保插座和插頭均未粘附灰塵或異物，也沒有零件鬆脫。確保電源插頭完全插入插座。**
  如果電源插頭或插座粘附灰塵或異物，或有零件鬆脫，可能導致觸電或火災。如果電源插頭的零件鬆脫，請立即更換。
- **牢固安裝室內機組的電氣蓋和室外機組的維修面板。**
  如果室內機組的電氣蓋和/或室外機組的維修面板未妥善安裝，可能會因灰塵和水分等導致火災或觸電。
- **名稱安裝、移機或維修機組時，除指定的製冷劑(R32)外，確保沒有其他異物進入製冷劑循環系統內。**
  任何異物（如空氣）均可令壓力異常上升，導致爆炸或受傷。使用任何非系統專用的製冷劑，會導致機械故障、系統故障或機組損壞。最壞的情況下，此舉可能導致嚴重損害對產品安全的保障。
- **請勿將製冷劑排放到大氣中。如果安裝期間製冷劑洩漏，應對室內進行通風。安裝完成後，確保製冷劑沒有洩漏。**
  如果發現製冷劑洩漏並接觸到火源或暖風機、煤油爐、煮食爐等熱源，可能產生有害氣體。
- **使用適當的工具和管道材料進行安裝。**
  R32 的壓力為 R22 的 1.6 倍。使用不適當的工具或材料，而且安裝不當，可能導致管道爆裂或人身傷害。
- **回收製冷劑時，先停止壓縮機，再拔除製冷劑管。**
  如果在壓縮機運轉而且截止閥開啟時拔除製冷劑管，可能會吸入空氣，造成製冷劑循環系統的壓力異常上升。這會導致管道爆裂或人身傷害。
- **安裝機組時，先牢固安裝製冷劑管，再啟動壓縮機。**
  如果在截止閥開啟時且連接製冷劑管之前啟動壓縮機，可能會吸入空氣，造成製冷劑循環系統的壓力異常上升。這會導致管道爆裂或人身傷害。
- **使用本手冊指定的扭矩扳手擰緊擴口螺帽。**
  若過度擰緊，擴口螺帽可能會在一段長時間之後斷裂，並導致製冷劑外洩。
- **請遵守當地的接線規定安裝機組。**
- **當使用燃氣灶或其他產生火焰的設備時，須完全清除冷暖氣機中的所有製冷劑，並確保該區域通風良好。**
  如果發現製冷劑洩漏並接觸到火源或熱源，可能產生有害氣體並有火災危險。
- **名稱除製造商建議的方式以外，不得以任何其他方式來加速除霜過程或清潔。**
- **名稱本設備應保管於無連續運作點火源（例如：明火、運作中的燃氣設備或電加熱器）的房間內。**
- **請勿拆解或燃燒。**
- **請注意製冷劑可能無味。**
- **名稱應保護管道，使其不遭受物理損傷。**
- **名稱管道安裝應保持在最小值。**
- **名稱應遵守國家燃氣法規。**
- **名稱使任何所需的通風口保持暢通。**

⚠ 注意（在某些特定環境中操作不當，可能導致嚴重傷害。）

- **視乎安裝位置而定，安裝接地漏電斷路器。**
  未安裝接地漏電斷路器，可能會導致觸電。
- **按照安裝手冊的指示，妥善鋪設排水管。**
  如果排水管鋪設不當，機組可能會滴水，滴濕及損壞家具。
- **請勿接觸室外機組的進風口或鋁片。**
  否則可能會導致受傷。
- **請勿在飼養小動物的位置安裝室外機組。**
  如果小動物進入並接觸機組內的電氣零件，可能導致故障、冒煙或火災。此外，建議使用者保持機組周圍整潔。
- **室內工程和裝修期間，或者地板打蠟時名稱請勿運轉冷暖氣機。**
  進行該等工作後，運轉冷暖氣機前請先為房間妥善通風。否則，揮發性元素可能會黏附在冷暖氣機內部，導致漏水或凝露積聚。

1-4. 安裝圖

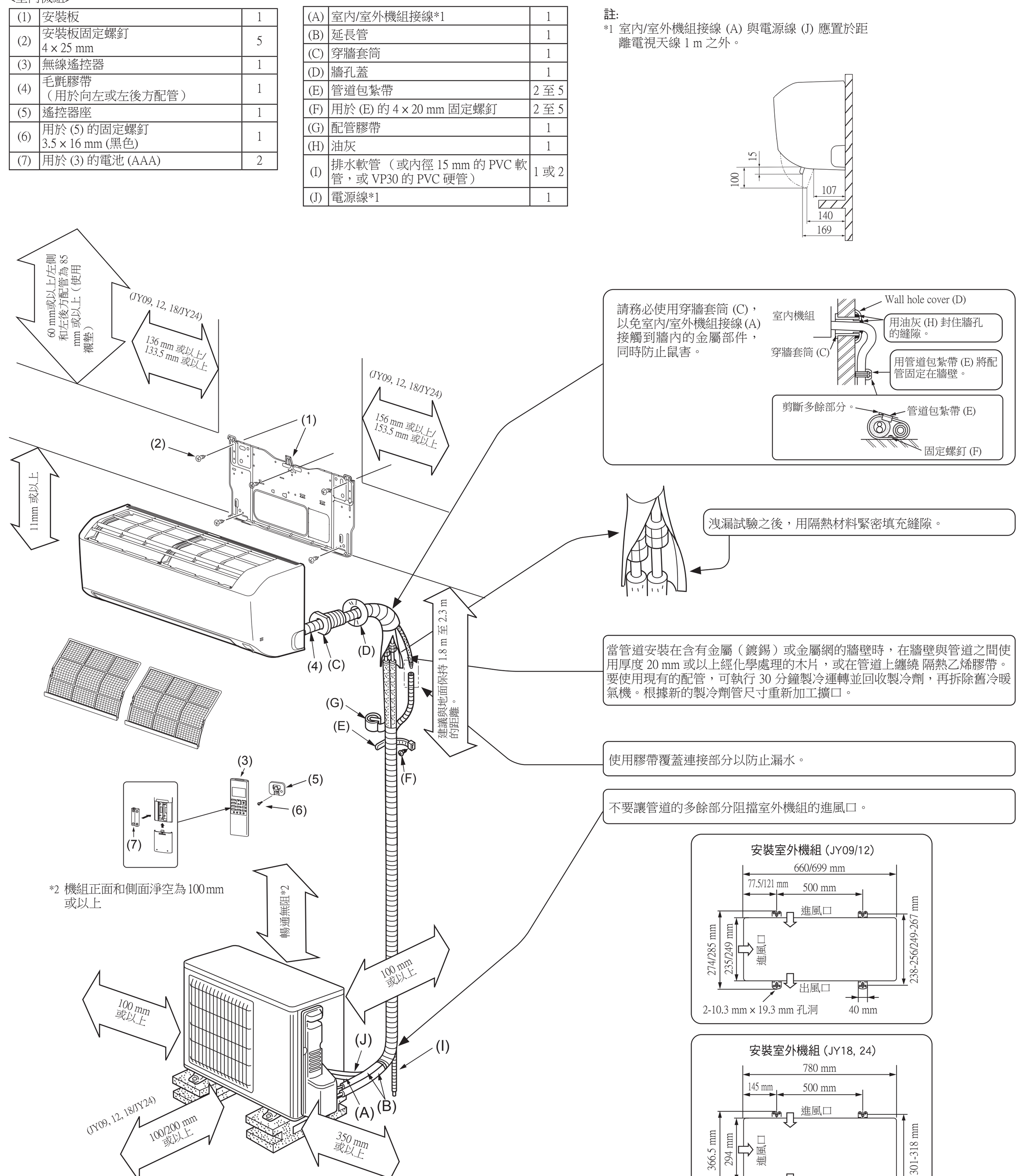
配件
安裝前請先檢查下列零件。
<室內機組>

(1)	安裝板	1
(2)	安裝板固定螺釘 4 × 25 mm	5
(3)	無線遙控器	1
(4)	毛氈膠帶（用於向左或左後方配管）	1
(5)	遙控器座	1
(6)	用於 (5) 的固定螺釘 3.5 × 16 mm (黑色)	1
(7)	用於 (3) 的電池 (AAA)	2

現場提供的零件

(A)	室內/室外機組接線*1	1
(B)	延長管	1
(C)	穿牆套筒	1
(D)	牆孔蓋	1
(E)	管道包紮帶	2 至 5
(F)	用於 (E) 的 4 × 20 mm 固定螺釘	2 至 5
(G)	配管膠帶	1
(H)	油灰	1
(I)	排水軟管（或內徑 15 mm 的 PVC 軟管，或 VP30 的 PVC 硬管）	1 或 2
(J)	電源線*1	1

註:
*1 室內/室外機組接線 (A) 與電源線 (J) 應置於距離電視天線 1 m 之外。



*2 機組正面和側面淨空為 100 mm 或以上

*3 機組左、右或後方的任何兩面均為淨空

室外機組觀可能與某些機型不同。

註:
- 機組必須按照當地規定由持有執照的承包商安裝。 安裝。
- 確保佈線不會遭受磨損、腐蝕、過大壓力、振動、尖銳邊緣或任何其他不利的環境影響。該檢查還應該考慮壓縮機或風扇等來源的老化或持續振動的影響。

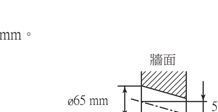
⚠⚠ 警告

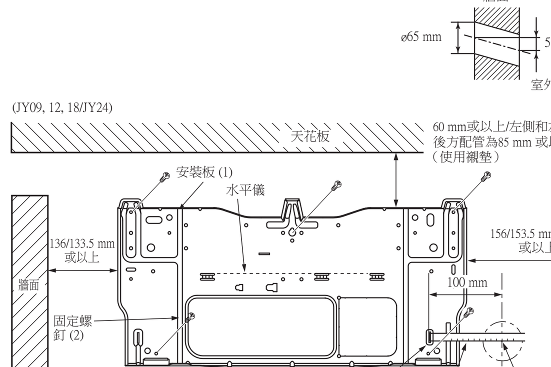
室內機組的安裝高度必須為 1.8 m 或以上。
所需的最小房間面積是根據製冷劑總量來確定。
如果超過 1.2 kg，請參閱 R32 安裝注意事項（另一張表）。

2. 安裝室內機組

2-1. 固定安 裝板
- 於牆上的結構部分（如壁柱），將安裝板 (1) 水平固定，擰緊固定螺釘 (2)。
- 為防止安裝板 (1) 振動，務必將固定螺釘裝入圖中所示的牆孔內。如需額外支撐，也可將固定螺釘裝入其他牆孔內。
- 如不使用安裝孔，用乙烯膠帶貼住安裝孔邊緣，以免損壞接線。
- 採用埋入水泥牆壁的膨脹螺栓時，應使用 450 mm 間距的 11 × 20、11 × 26 橢圓孔以固定安裝板 (1)。
- 如果膨脹螺栓太長，請改用市面的短螺栓。

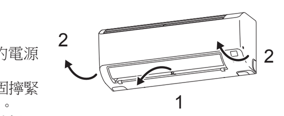
2-2. 在牆壁上鑽孔
1) 確定牆孔的位置。
2) 鑽出直徑 ø65 mm 的孔。室外應比室內低 5 至 7 mm。
3) 插入穿牆套筒 (C)。

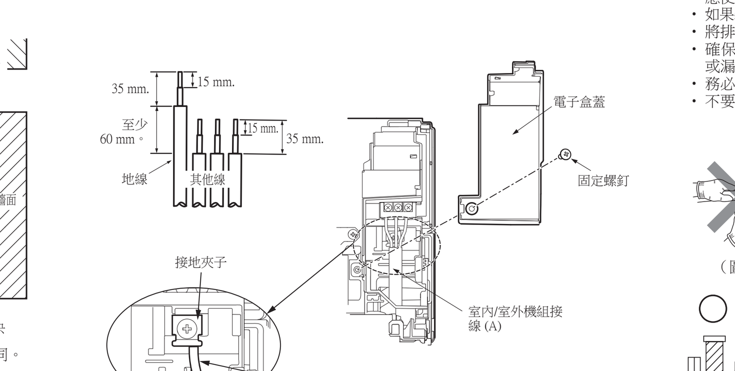




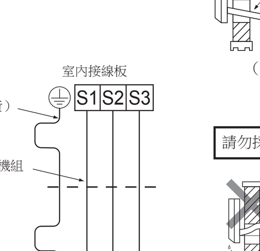
* 左孔相同。

2-3. 連接室內機組接線
拆下前蓋，然後將電源線連接到室內和室外機組。
1) 取下螺絲蓋，並擰下左右螺絲。
2) 拆下前面板。
3) 取下電子盒蓋。
4) 在室內機組背後斷開室內/室外機組 (A) 的電源線，並牢固連接電源線端。
5) 擰下接地夾子，然後把地線穿進去，並牢固擰緊螺絲，確保地線牢固地連接到接地夾子上。
6) 擰下接線板，將室內/室外接線 (A) 穿進接線板。請謹慎小心，以免連接錯誤。將接線牢牢固定到接線板，使得金屬線芯的任何部分都不暴露，且防止接線板的連接部分不漏電。
7) 擰緊接線螺釘，以免鬆脫。擰緊後，輕拉接線以確認其不會移動。
8) 藉由電子盒蓋固定室內/室外機組 (A) 和地線之間的接線，方法是從前到後插入接線，並牢牢擰緊以確保安全。

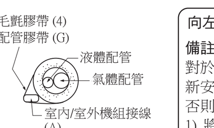




- 為便於日後維修，應為接線預留額外長度。
- 如圖，使地線長於其他線。
- 請勿摺疊過長接線，或將其塞入狹小的空間。請注意不要損壞接線。
- 將接線固定在接線板上時，務必將每顆螺釘擰入相應的接線位中。
  註: 請勿將接線置於室內機組與安裝板 (1) 之間。接線損壞會導致發熱或火災。



2-4. 管道排列和排水管鋪設

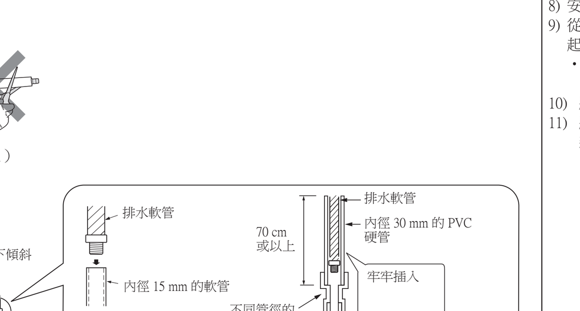


管道排列
- 將排水軟管鋪設在製冷劑管下方。
- 確保排水軟管沒有隆起或盤曲。
- 請勿拉扯軟管當包紮管道。
- 排水軟管穿過室內時，務必在管道上包上隔熱材料（另行購買）。

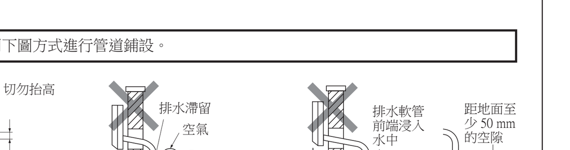
向後、向右或向下配管
1) 將製冷劑管和排水軟管一起放入，然後由末端開始用配管膠帶 (G) 進行包紮。
2) 將管道和排水軟管插入穿牆套筒 (C)，並將室內機組上半部分掛在安裝板 (1) 上。
3) 左右移動室內機組，確認機組是否牢固掛在安裝板 (1) 上。
4) 將室內機組的下半部分推入安裝板 (1)。

向右配管時切掉此部分。
向下配管時切掉此部分。

排水管道鋪設
- 不要剪切機組的排水軟管。（圖 1）
- 如果延長排水軟管需穿過室內，請務必使用市面的隔熱材料對軟管進行包紮。
- 應使排水軟管形成往下傾斜狀態，以便排水順暢。（圖 2）
- 如果裝在室內機組上的排水軟管太短，可採用現場提供的排水軟管 (I) 進行連接。（圖 3）
- 將排水軟管連接到 PVC 硬管時，將其牢固插入管內。（圖 4）
- 確保在安裝室內機組後不向排水軟管的連接部分施加壓力。否則，可能導致破損或漏水。
- 務必使用連接到室內機組的排水軟管。否則，可能會因化學物質導致漏水或破損。
- 不要在排水口上塗抹任何藥劑。這樣做會導致破損。



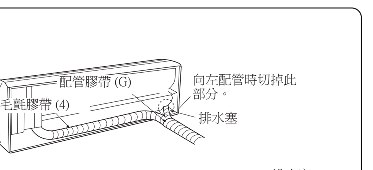
請勿採用下圖方式進行管道鋪設。

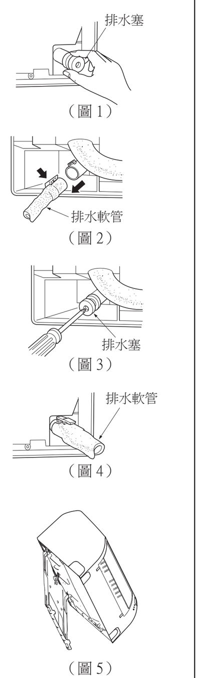


不要將排水管直接放入可能產生氨氣或硫酸氣體的排水溝中。蒸發的腐蝕性氣體可能透過排水管回到室內側，這可能導致熱交換器上產生異味和發生腐蝕。

向左或左後方配管

備註:
對於向左或左後方配管，請務必重新安裝排水軟管和排水塞。
否則排水軟管可能會漏水。
1) 將製冷劑管和排水軟管一起放入，然後由末端開始用毛氈膠帶 (4) 進行包紮。
   毛氈膠帶 (4) 包裹的闊度必須是膠帶闊度的 1/3。
   毛氈膠帶 (4) 末端必須使用膠布固定。
2) 拉出室內機組右後方的排水塞。（圖 1）
   - 拿住末端凸起的部分，然後拉出排水塞。
3) 拉出室內機組左後方的排水軟管。（圖 2）
   - 握住箭頭標示的卡爪，然後向前拉出排水軟管。
4) 將排水塞塞入室內機組後方要連接排水軟管的部位。（圖 3）
   - 用螺絲起子等邊緣不尖銳的工具頂住排水塞，將其完全推入排水盤。
5) 將排水軟管完全插入室內機組右後方的排水盤。（圖 4）
   - 確認排水軟管是否牢固卡住排水盤的突出部分。
6) 將排水軟管插入穿牆套筒 (C)，並將室內機組上半部分掛在安裝板 (1) 上。然後，將室內機組整體向左移動，以便收納機組後方的管道。（圖 5）
7) 取下螺絲蓋，並擰下左右螺絲。
8) 安裝完成後，取下機組前蓋。
9) 從包裝泡沫剪切下襯墊，並將其固定到安裝板上，以提起室內機組。（圖 6）
   - 將其放在安裝板的「襯墊區域」，確保襯墊朝向正確無誤。
10) 將製冷劑管連接延長管 (B)。
11) 將室內機組下部推入安裝板 (1)，然後按相反的步驟重新安裝各組件。





確保室內機組不與天花板接觸。

1-2. 選擇安裝位置

室內機組
- 空氣流通的位置。
- 冷（或暖）空氣能夠遍佈整個房間的位置。
- 穩固不振動的牆壁。
- 不受陽光直射的位置。從拆卸包裝到使用之前，機器均不得受到陽光直射。
- 方便排水的位置。
- 距離電視機和收音機 1 m 或以上的位置。機器運轉時可能會干擾電台或電視信號接收。受影響的設備可能需要加裝信號放大器。
- 盡量遠離熒光燈或白熾燈的位置。以使紅外線遙控器能夠正常操作冷暖氣機。否則從燈光散發出的熱量可能會導致變形，紫外線則可能引起老化。
- 便於取出及重新安裝過濾網的位置。
- 遠離其他熱源或產生蒸汽的位置。

遙控器
- 便於操作和明顯可見的位置。
- 孩童無法觸及的位置。
- 選擇高出地面 1.2 m 的位置，確認遙控器發出的信號是否由該位置的室內機組接收（「嗶」或「嗶嗶」聲為接收鳴聲）。如提供遙控器座，須在室內機組可接收訊號的位置安裝遙控器座。

註:
如果室內使用轉換器類型的熒光燈，可能無法接收無線遙控器發出的信號。

室外機組
- 不受強風吹襲的位置。如果室外機組在除霜期間曝露於風中，則除霜時間將更長。
- 通風良好且灰塵少的位置。
- 盡量不受雨淋或陽光直射的位置。
- 運轉噪音和熱（或冷）氣不會影響鄰居的位置。
- 有堅固的牆壁或支撐物可承受運轉噪音或振動的位置。
- 沒有可燃氣體外洩危險的位置。
- 在高處安裝時，務必固定機組支架。
- 距離電視機或收音機天線至少 3 m 的位置。在信號接收較弱的位置，冷暖氣機可能會干擾電台或電視信號接收。受影響的設備可能需要加裝信號放大器。
- 水平安裝機組的位置。
- 請將機組安裝在不受下雪或暴風雪影響的位置。安裝在容易積雪的位置時，請加裝頂篷、底座和/或一些擋板。

註:
建議在室外機組附近設置環狀管道，以降低室外機組發出的振動。

註:
在室外溫度較低的環境下運轉冷暖氣機時，務必遵守以下指示。
- 切勿將室外機組安裝在進風口/出風口可能受風直吹的位置。
- 為避免受風直吹，安裝室外機組時必須使進風口面向牆壁。
- 為避免受風直吹，建議在室外機組的出風口安裝擋板。

安裝冷暖氣機時，應避免安裝在下列容易引起故障的位置。
- 可能會洩漏易燃氣體。
- 放置較多機油。
- 會濺出油份或充滿油煙（如廚房和工廠，機組的塑膠特性可能會改變，甚至損壞）。
- 海邊等鹽分較多。
- 溫泉、污水、廢水等產生硫化氣體。
- 放置高頻或無線器材。
- 釋放大量 VOC，包括鄰苯二甲酸酯化合物、甲醛等，可能導致機組化學裂解的位置。
- 本設備應在防止發生機械損害的條件下進行保管。

1-3. 規格

模型		電源*1			接線規格		配管尺寸（厚度 *3, *4）	製冷劑最大填充量 *7
室內機組	室外機組	額定電壓	頻率	斷路器容量	電源*2	室內/室外接線 *2	氣體管/液體管	
MSY-JY09VF	MUY-JY09VF	220 V	50 Hz	10 A	三芯1.0 mm²	四芯 1.0 mm²	ø9.52/6.35 mm (0.8 mm)	485
MSY-JY12VF	MUY-JY12VF							625
MSY-JY18VF	MUY-JY18VF	220 V	50 Hz	10 A	三芯1.0 mm²	四芯 1.0 mm²	ø12.7/6.35 mm (0.8 mm)	745
MSY-JY24VF	MUY-JY24VF			16 A	三芯2.0 mm²			1145

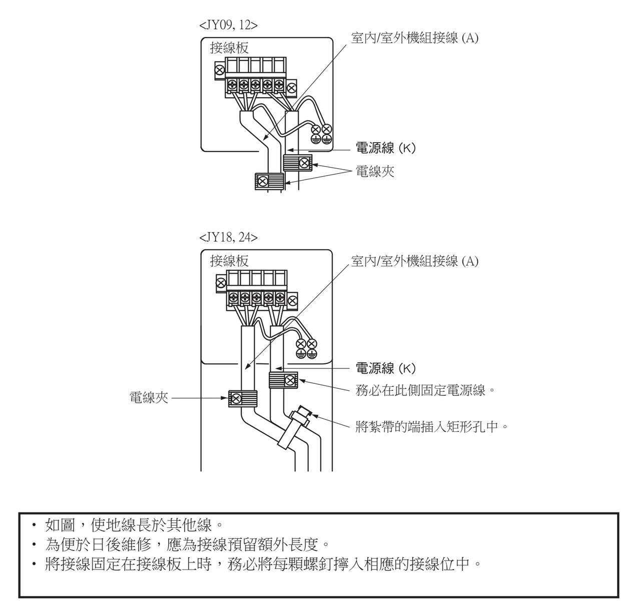
*1 連接電源開關，並保持 3 mm 或以上的間隔，以中斷電源。（關閉電源開關時，必須中斷所有電源。）
*2 使用符合 60245 IEC 57 設計的接線。
*3 切勿使用低於指定厚度的配管。否則抗壓能力可能不足。
*4 使用銅管或銅合金無縫管。
*5 小心不要在製作配管彎角時造成配管碎裂或彎曲。
*6 製冷劑管的彎曲半徑必須為 100 mm 或以上。
*7 如果管長超過 7.5 m，需填充額外製冷劑 (R32)。（管長少於 7.5 m，無需填充額外製冷劑。）
　額外製冷劑＝A × (管長 (m) － 7.5)
*8 隔熱材料：比重為 0.045 的隔熱發泡膠
*9 請務必使用指定厚度的隔熱材料。材料過厚可能導致室內機組安裝不當，厚度不足則可能導致滴水。

(JY09/JY12, 18/JY24)

管長和高度差	
管長上限	20/20/30 m
高度差上限	12/12/15 m
彎管數量上限 *5, *6	10
製冷劑調整 A *7	5/10/10 g/m
隔熱材料厚度 *8, *9	8 mm

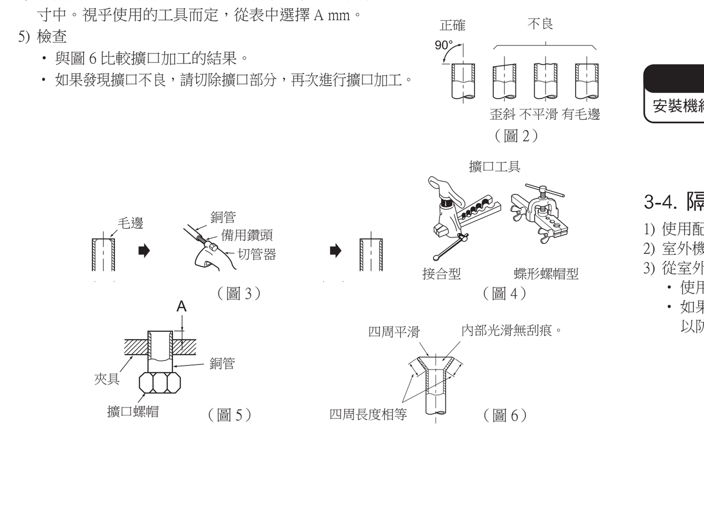
3. 安裝室外機組

3-1. 連接室外機組電線
1) 打開維修面板。
2) 鬆開接線螺釘，將室內機組的室內/室外機組接線 (A) 正確連接到接線板。請謹慎小心，以免連接錯誤。將電線固定在接線板，不露出線芯的所有部位，也不要對接線板的連接部分施加外力。
3) 擰緊接線螺釘，以免鬆脫。擰緊之後，輕拉電線，確保不會移動。
4) 連接電源線 (J)。
5) 用電線夾固定室內/室外機組接線 (A) 和電源線 (J)。
6) 關緊維修面板。



- 如圖，使地線長於其他線。
- 為便於日後維修，應為接線預留額外長度。
- 將接線固定在接線板上時，務必將每顆螺釘擰入相應的接線位中。

3-2. 擴口加工
1) 使用切管器正確切割銅管。（圖 1、2）
2) 完全清除銅管切口的毛邊。（圖 3）
   - 清除毛邊時，將銅管開口朝下，以免毛邊掉入銅管內。
3) 取下室內和室外機組的擴口螺帽，然後將其套入已清除毛邊的銅管上。（擴口加工完成之後便無法旋入。）
4) 進行擴口加工（圖 4、5）。將銅管牢固卡入表中所示的尺寸中。視乎使用的工具而定，從表中選擇 A mm。
5) 檢查
   - 與圖 6 比較擴口加工的結果。
   - 如果發現擴口不良，請切除擴口部分，再次進行擴口加工。



管徑 (mm)	螺帽 (mm)	A (mm)			扭矩	
		R32，R410A 專用接合型工具	R22 專用接合型工具	R22 專用蝶形螺帽型工具	N・m	kgf・cm
ø6.35 (1/4")	17	0 至 0.5	1.0 至 1.5	1.5 至 2.0	13.7 至 17.7	140 至 180
ø9.52 (3/8")	22				34.3 至 41.2	350 至 420
ø12.7 (1/2")	26			2.0 至 2.5	49.0 至 56.4	500 至 575
ø15.88 (5/8")	29				73.5 至 78.4	750 至 800

3-3. 管道連接
- 使用表中指定的扭矩扳手擰緊擴口螺帽。
- 若過度擰緊，擴口螺帽可能會在一段長時間之後斷裂，並導致製冷劑外洩。
- 務必為管道包上隔熱材料。直接接觸裸露的管道，可能會導致燙傷或凍傷。
- 使用安裝到此室內機組的擴口螺帽。

室內機組連接
將液體管和氣體管連接到室內機組。
- 請勿在螺紋上塗抹冷凍油。過度擰緊會導致螺釘損壞。
- 連接時，先對準中心，然後用手擰緊螺帽 3 至 4 圈。
- 參考上方扭矩表，使用兩把扳手擰緊室內機組接管接頭部分。請勿過度擰緊，以免損壞擴口部分。

室外機組連接
與室內機組相同方法，將配管連接到室外機組的截止閥管接頭。
- 使用扭矩扳手或扳鉗，用與室內機組同樣的扭矩擰緊。

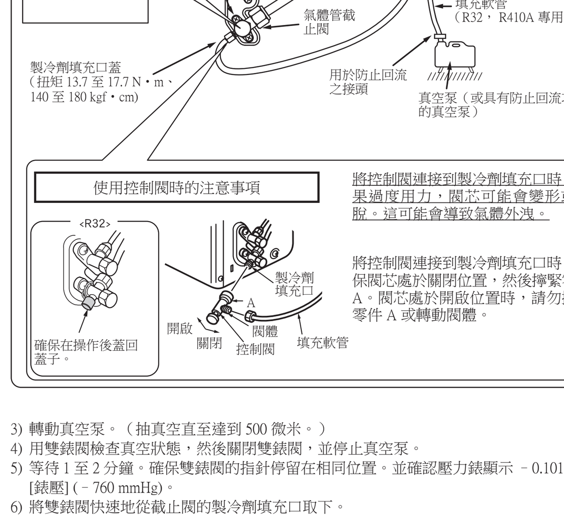
⚠ 警告

安裝機組時，先牢固安裝製冷劑管，再啟動壓縮機。

3-4. 隔熱與纏繞膠帶
1) 使用配管罩包裹管道接頭。
2) 室外機組側的各配管及閥均須做隔熱處理。
3) 從室外機組入口開始使用配管膠帶 (G) 進行包紮。
   - 使用黏性膠帶固定配管膠帶 (G) 末端。
   - 如果配管必須穿過天花板、衣櫃或高溫高濕的地方，應加裝包裹市面的隔熱材料，以防冷凝。

4. 抽真空、洩漏試驗與試運轉

4-1. 抽真空與洩漏試驗
1) 取下室外機組氣體管截止閥的製冷劑填充口蓋。（出廠時，截止閥已完全蓋緊。）
2) 將雙錶閥和真空泵連接到室外機組氣體管截止閥的製冷劑填充口上。



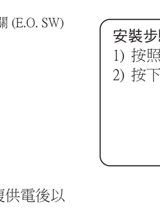
3) 轉動真空泵。（抽真空直至達到 500 微米。）
4) 用雙錶閥檢查真空狀態，然後關閉雙錶閥，並停止真空泵。
5) 等待 1 至 2 分鐘。確保雙錶閥的指針停留在相同位置。並確認壓力錶顯示 －0.101 MPa [錶壓]（－760 mmHg）。
6) 將雙錶閥快速地從截止閥的製冷劑填充口取下。

⚠⚠ 警告

為了避免火災風險，確保在打開截止閥之前沒有任何易燃危險或點火風險。

7) 連接製冷劑管及抽真空後，使用六角扳手全開氣體管和液體管兩邊所有截止閥的閥門桿。如果閥門桿碰到止動器，就停止轉動。若不全開截止閥就運轉，會降低運轉效能，並導致故障。
8) 請參閱 1-3，並在必要時填充定量製冷劑。液態製冷劑必須緩緩加入。否則系統內的製冷劑成份可能會改變，從而影響冷暖氣機的效能。
9) 擰緊製冷劑填充口蓋，回復原始狀態。
10) 洩漏試驗。

4-2. 試運轉
1) 將電源插頭插入電源插座和/或開啟斷路器。
2) 按下應急運轉開關 (E.O. SW)。試運轉會進行 30 分鐘。如果操作指示的左燈號每 0.5 秒閃爍一次，請檢查室內/室外機組接線 (A) 是否連接錯誤。試運轉之後，應急模式（溫度固定為 24ºC）會啟動。
3) 要停止運轉，按下應急運轉開關 (E.O. SW) 數次，直至全部 LED 燈熄滅為止。有關詳細資訊，請參閱操作手冊。
4) 確認遙控器（紅外線）信號接收。
   - 按下遙控器 (3) 的開/關按鈕，請確認室內機組是否發出電子聲響。再次按下開/關按鈕，可關閉冷暖氣機。
   - 壓縮機停止後，重新啟動防護裝置就會發生作用，使壓縮機在 3 分鐘內無法運作，以保護冷暖氣機。



4-3. 自動重新啟動功能
本產品配備有自動重新啟動功能。操作期間停止供電（如停電）時，該功能將在恢復供電後以之前設定自動開始運行。（有關詳細資訊，請參閱操作手冊。）

注意:
- 在試運轉或遙控器信號接收檢查期間，應在關閉電源前以應急運轉開關 (E.O. SW) 或遙控器關閉機組。否則會在恢復供電時使機組自動開始運轉。

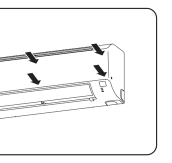
向使用者說明
- 安裝機組後，確保向使用者說明自動重新啟動功能。
- 如果自動重新啟動功能是不必要的，則可將其停用。就停用該功能洽詢服務代表。有關詳細資訊，請參閱服務手冊。

4-4. 向使用者說明
- 請按照操作手冊，向使用者說明使用冷暖氣機的方法（包括如何使用遙控器、如何取出過濾網、如何取出或放置遙控器、如何清潔以及操作注意事項等）。
- 建議使用者仔細閱讀操作手冊。

5. 移機與維修

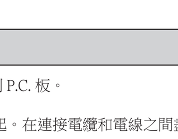
5-1. 拆卸與安裝面板組件

拆卸步驟
1) 取下固定面板組件的 2 顆螺釘。
2) 拆下面板組件。務必先拆下面板底部。



安裝步驟
1) 按照拆下面板組件的相反步驟安裝。
2) 按下箭頭指示的位置，將組件完全安裝到機組上。

5-2. 拆卸室內機組
從安裝板拆下室內機組的底部。
鬆開角位零件時，應鬆開室內機組左右底部的角位零件，然後按照右圖所示，將其向下並向前拉出。

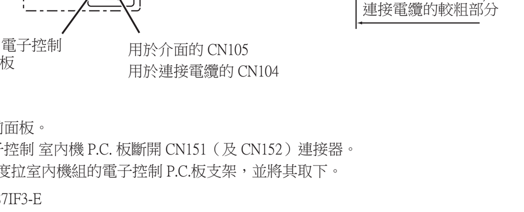


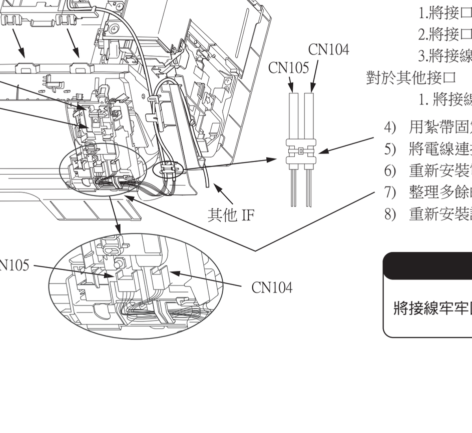
5-3. 回收製冷劑
移機或廢棄冷暖氣機時，請按照以下程序回收系統內的製冷劑，以免製冷劑外洩進入大氣中。
1) 將雙錶閥連接到室外機組氣體管截止閥的製冷劑填充口上。
2) 完全關閉室外機組的液體管截止閥。
3) 幾乎完全關閉室外機組氣體管截止閥，以便在壓力錶顯示 0 MPa [錶壓] (0 kgf/cm²) 時可完全關閉。
4) 啟動應急製冷運轉。
   要啟動製冷模式的 應急運轉 ，請拔除電源插頭和/或關閉斷路器。15 秒鐘後，重新插入電源插頭和/或開啟斷路器，然後按一下應急運轉開關 (E.O. SW)。（應急製冷運轉 可持續進行最多 30 分鐘。）
5) 在壓力錶顯示 0.05 至 0 MPa [錶壓]（約 0.5 至 0 kgf/cm²）時，完全關閉室外機組氣體管截止閥。
6) 停止應急製冷運轉。
   按下應急運轉開關 (E.O. SW) 數次，直至全部 LED 燈熄滅為止。有關詳細資訊，請參閱操作手冊。

⚠ 警告

回收製冷劑時，先停止壓縮機，再拔除製冷劑管。空氣等進入壓縮機，可能導致機體爆裂。

6. 將接口/連接器電纜連接到冷暖氣機
- 使用連接電纜，將接口/連接器電纜連接到冷暖氣機的室內電子控制 P.C. 板。
- 切斷或延長接口電纜/連接器電纜的連接電纜將會導致連接不良
  請勿將連接電纜與電源線、室內/室外連接線及/或接地線捆綁在一起。在連接電纜和電線之間盡可能保持距離。
- 連接電纜的較細部分應存放於客戶無法觸及之處。





1) 取下前面板。
2) 從電子控制 室內機 P.C. 板斷開 CN151（及 CN152）連接器。
3) 以 90 度拉室內機組的電子控制 P.C.板支架，並將其取下。

如為 MAC-587IF3-E
　1.將接口底座安裝到水道凹槽上。
　2.將接口安裝到底座中。
　3.將接線穿過支架，如圖所示。

對於其他接口
　1. 將接線穿過支架，如圖所示。

4) 用紮帶固定所有電線。
5) 將電線連接到室內機組的電子控制 P.C. 板上的 CN105 和/或 CN104。
6) 重新安裝電子控制 P.C. 板支架，並將電線連接到 CN151（及 CN152）連接器。
7) 整理多餘的接線，如圖所示。
8) 重新安裝設備的前面板。

⚠ 警告

將接線牢牢固定到預定位置。安裝出錯可能導致觸電、火災和/或故障。

MITSUBISHI ELECTRIC CORPORATION

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