MITSUBISHI ELECTRIC

Mr. SLIM

CE

Air-Conditioners
PKA-RP·FAL

INSTALLATION MANUAL

FOR INSTALLER

English

For safe and correct use, please read this installation manual thoroughly before installing the air-conditioner unit.

安装说明书

安装人员适用

中文

在安装空调机之前，请先通读此安装说明书，以便安全正确地使用。

Contents

1. Safety precautions

> ▶ Before installing the unit, make sure you read all the "Safety precautions".
> ▶ Please report to your supply authority or obtain their consent before connecting this equipment to the power supply system.

⚠ **Warning:**
Describes precautions that must be observed to prevent danger of injury or death to the user.

⚠ **Caution:**
Describes precautions that must be observed to prevent damage to the unit.

After installation work has been completed, explain the "Safety Precautions," use, and maintenance of the unit to the customer according to the information in the Operation Manual and perform the test run to ensure normal operation. Both the Installation Manual and Operation Manual must be given to the user for keeping. These manuals must be passed on to subsequent users.

🚫 : Indicates an action that must be avoided.

❗ : Indicates that important instructions must be followed.

⏚ : Indicates a part which must be grounded.

⚠ : Indicates that caution should be taken with rotating parts.

⚡ : Indicates that the main switch must be turned off before servicing.

⚡ : Beware of electric shock.

🔥 : Beware of hot surface.

ELV : At servicing, please shut down the power supply for both the Indoor and Outdoor Unit.

⚠ **Warning:**
Carefully read the labels affixed to the main unit.

⚠ **Warning:**
- **Ask a dealer or an authorized technician to install the unit.**
- **For installation work, follow the instructions in the Installation Manual and use tools and pipe components specifically made for use with refrigerant specified in the outdoor unit installation manual.**
- **The unit must be installed according to the instructions in order to minimize the risk of damage from earthquakes, typhoons, or strong winds. An incorrectly installed unit may fall down and cause damage or injuries.**
- **The unit must be securely installed on a structure that can sustain its weight.**
- **If the air conditioner is installed in a small room, measures must be taken to prevent the refrigerant concentration in the room from exceeding the safety limit in the event of refrigerant leakage. Should the refrigerant leak and cause the concentration limit to be exceeded, hazards due to lack of oxygen in the room may result.**

- **Ventilate the room if refrigerant leaks during operation. If refrigerant comes into contact with a flame, poisonous gases will be released.**
- **All electric work must be performed by a qualified technician according to local regulations and the instructions given in this manual.**
- **Use only specified cables for wiring.**
- **The terminal block cover panel of the unit must be firmly attached.**
- **Use only accessories authorized by Mitsubishi Electric and ask a dealer or an authorized technician to install them.**
- **The user should never attempt to repair the unit or transfer it to another location.**
- **After installation has been completed, check for refrigerant leaks. If refrigerant leaks into the room and comes into contact with the flame of a heater or portable cooking range, poisonous gases will be released.**

1.1. Before installation (Environment)
⚠ **Caution:**
- **Do not use the unit in an unusual environment. If the air conditioner is installed in areas exposed to steam, volatile oil (including machine oil), or sulfuric gas, areas exposed to high salt content such as the seaside, the performance can be significantly reduced and the internal parts can be damaged.**
- **Do not install the unit where combustible gases may leak, be produced, flow, or accumulate. If combustible gas accumulates around the unit, fire or explosion may result.**
- **Do not keep food, plants, caged pets, artwork, or precision instruments in the direct airflow of the indoor unit or too close to the unit, as these items can be damaged by temperature changes or dripping water.**

- **When the room humidity exceeds 80% or when the drainpipe is clogged, water may drip from the indoor unit. Do not install the indoor unit where such dripping can cause damage.**
- **When installing the unit in a hospital or communications office, be prepared for noise and electronic interference. Inverters, home appliances, high-frequency medical equipment, and radio communications equipment can cause the air conditioner to malfunction or breakdown. The air conditioner may also affect medical equipment, disturbing medical care, and communications equipment, harming the screen display quality.**

1.2. Before installation or relocation
⚠ **Caution:**
- **Be extremely careful when transporting the units. Two or more persons are needed to handle the unit, as it weighs 20 kg or more. Do not grasp the packaging bands. Wear protective gloves as you can injure your hands on the fins or other parts.**
- **Be sure to safely dispose of the packaging materials. Packaging materials, such as nails and other metal or wooden parts may cause stabs or other injuries.**

- **Thermal insulation of the refrigerant pipe is necessary to prevent condensation. If the refrigerant pipe is not properly insulated, condensation will be formed.**
- **Place thermal insulation on the pipes to prevent condensation. If the drainpipe is installed incorrectly, water leakage and damage to the ceiling, floor, furniture, or other possessions may result.**
- **Do not clean the air conditioner unit with water. Electric shock may result.**
- **Tighten all flare nuts to specification using a torque wrench. If tightened too much, the flare nut can break after an extended period.**

1.3. Before electric work
⚠ **Caution:**
- **Be sure to install circuit breakers. If not installed, electric shock may result.**
- **For the power lines, use standard cables of sufficient capacity. Otherwise, a short circuit, overheating, or fire may result.**
- **When installing the power lines, do not apply tension to the cables.**

- **Be sure to ground the unit. If the unit is not properly grounded, electric shock may result.**
- **Use circuit breakers (ground fault interrupter, isolating switch (+B fuse), and molded case circuit breaker) with the specified capacity. If the circuit breaker capacity is larger than the specified capacity, breakdown or fire may result.**

1.4. Before starting the test run
⚠ **Caution:**
- **Turn on the main power switch more than 12 hours before starting operation. Starting operation just after turning on the power switch can severely damage the internal parts.**
- **Before starting operation, check that all panels, guards and other protective parts are correctly installed. Rotating, hot, or high voltage parts can cause injuries.**

- **Do not operate the air conditioner without the air filter set in place. If the air filter is not installed, dust may accumulate and breakdown may result.**
- **Do not touch any switch with wet hands. Electric shock may result.**
- **Do not touch the refrigerant pipes with bare hands during operation.**
- **After stopping operation, be sure to wait at least five minutes before turning off the main power switch. Otherwise, water leakage or breakdown may result.**
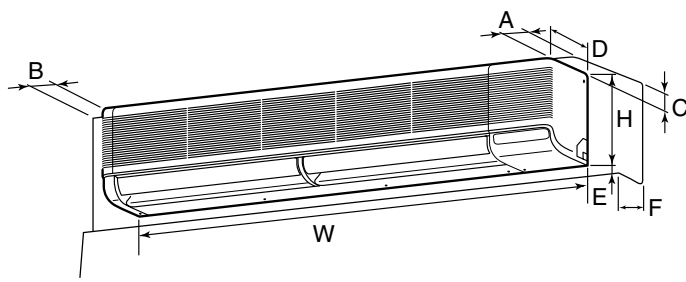
2. Installation location

Fig. 2-1

2.1. Outline dimensions (Indoor unit) (Fig. 2-1)

Select a proper position allowing the following clearances for installation and maintenance.

(mm)

Models	W	D	H	A	B	C	E	F
RP2.5, 3	1400	235	340	Min. 150	Min. 50	Min. 30	Min. 250	Min. 150
RP4	1680	235	340	Min. 150	Min. 50	Min. 30	Min. 250	Min. 150

⚠ **Warning:**
Mount the indoor unit on a ceiling strong enough to withstand the weight of the unit.

2.2. Outline dimensions (Outdoor unit)

Refer to the outdoor unit installation manual.
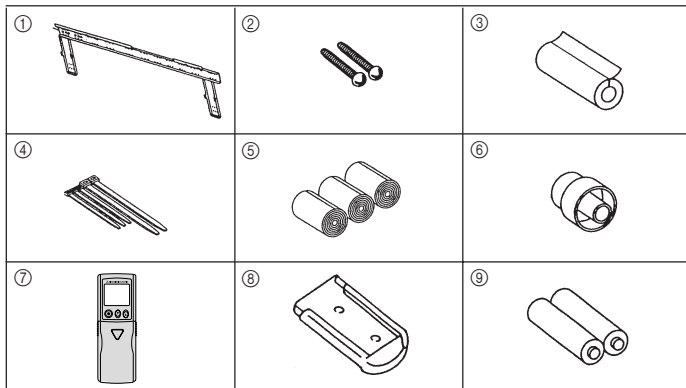
## 3. Installing the indoor unit

Fig. 3-1

3.1. Check the indoor unit accessories (Fig. 3-1)

The indoor unit should be supplied with the following accessories.

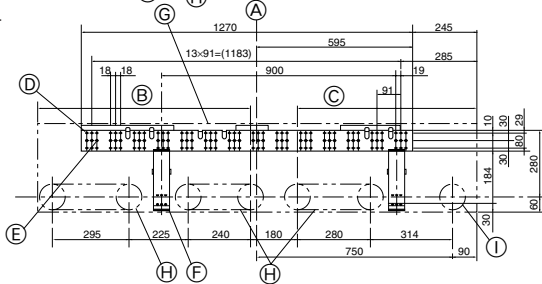| PARTNUMBER	ACCESSORY	QUANTITY	LOCATION OF SETTING
①	Wall-fixing bracket	1	Fix at the back of the unit
②	Tapping screw 4 × 35	12	Set inside the unit
③	Insulation material	2	
④	Band	4 (large) + 3 (small)	
⑤	Felt tape	3	
⑥	Drain socket	1	
⑦	Wireless remote controller	1	
⑧	Remote controller holder	1	
⑨	Alkali batteries	2	

1 RP2.5, RP3 (mm)
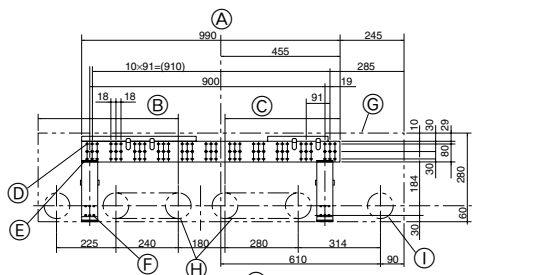
2 RP4

Fig. 3-2

3.2. Installing the wall mounting fixture (Fig. 3-2)

1) Setting the wall mounting fixture and piping positions
▶ **Using the wall mounting fixture, determine the unit's installation position and the locations of the piping holes to be drilled.**

⚠ **Warning:**
Before drilling a hole in the wall, you must consult the building contractor.

Ⓐ Indoor unit center line
Ⓑ Left drain range
Ⓒ Right drain range
Ⓓ Hole for tapping screw
Ⓔ Bolt hole
Ⓕ Hole for tapping screw
Ⓖ Contour of the unit
Ⓗ Knockout hole for left rear piping
Ⓘ Rear piping access hole (90-100 mm dia.)

2) Drilling the piping hole (Fig. 3-3)
▶ **Use a core drill to make a hole of 90-100 mm diameter in the wall in the piping direction, at the position shown in the diagram to the left.**
▶ **The hole should incline so that the outside opening is lower than the inside opening.**
▶ **Insert a sleeve (with a 90 mm diameter and purchased locally) through the hole.**

Note:
The purpose of the hole's inclination is to promote drain flow.

Ⓐ Sleeve
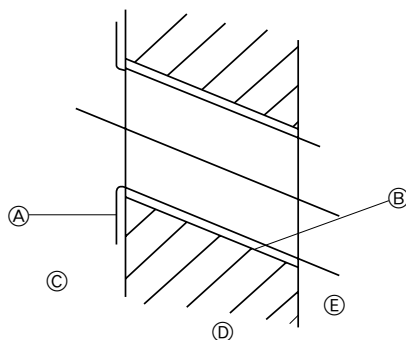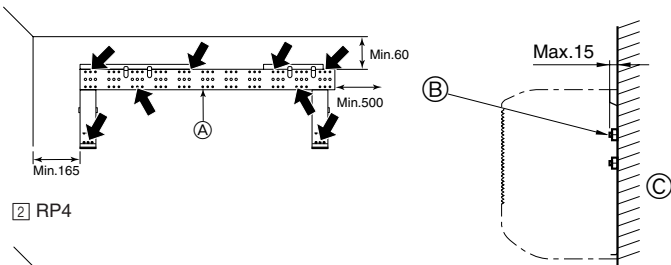Ⓑ Hole
Ⓒ (Indoors)
Ⓓ Wall
Ⓔ (Outdoors)

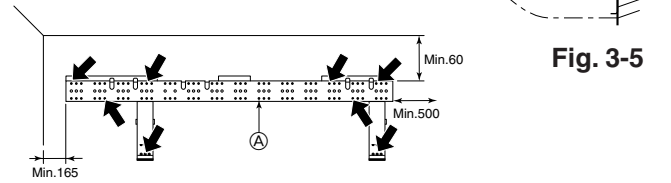**Fig. 3-3**

3. Installing the indoor unit

1 RP2.5, RP3

Min.60
Min.500
Min.165

Max.15

Ⓑ

Ⓒ

Fig. 3-5

2 RP4

Min.60
Min.500
Min.165

Ⓐ

Fig. 3-4

①

Ⓐ

Fig. 3-6

Ⓑ

Ⓒ

Ⓓ

Fig. 3-7

②

Ⓐ

Ⓑ

Ⓒ

③

Ⓓ

Ⓓ

Fig. 3-8

Ⓔ *

Ⓕ

5
4
3
2
1

Fig. 3-9

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Ⓙ

Ⓚ

Ⓖ

Ⓗ

Ⓚ

Ⓘ

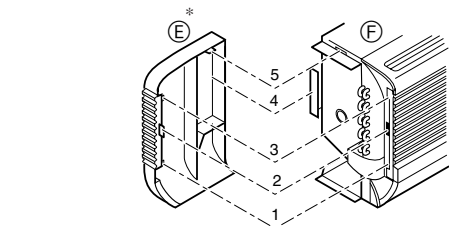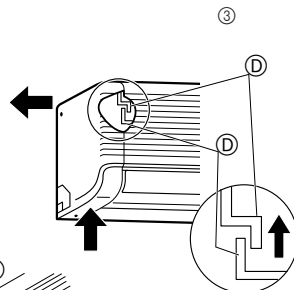**Fig. 3-10**

4
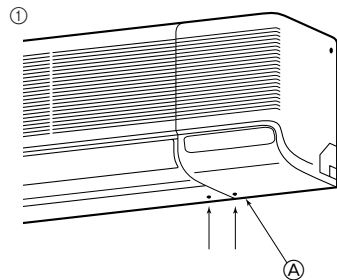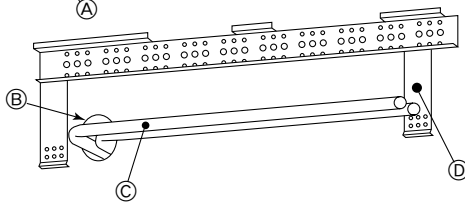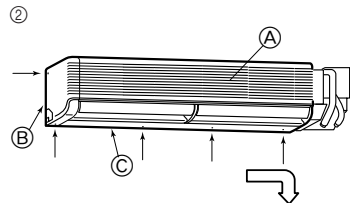
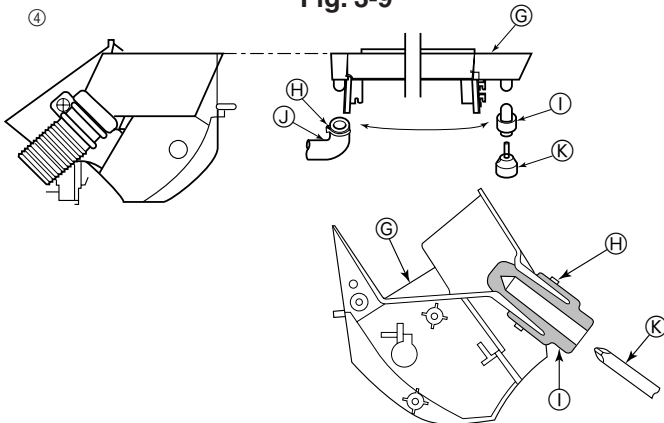**3) Installing the wall mounting fixture**
▸ **Since the indoor unit weighs near 30 kg, selection of the mounting location requires thorough consideration. If the wall does not seem to be strong enough, reinforce it with boards or beams before installation.**
▸ **The mounting fixture must be secured at both ends and at the centre, if possible. Never fix it at a single spot or in any nonsymetrical way. (If possible, secure the fixture at all the positions marked with a bold arrow.) (Fig. 3-4)**
▸ **Secure the wall mounting fixture through its middle row of 12-mm-dia. holes using locally purchased bolts (through bolts, bolt anchor and nut anchor) of M10 or W3/8 threading. The bolt tip must not protrude by more than 15 mm from the wall surface. (Fig. 3-5) Use at least two bolts for a concrete wall, and at least four bolts for a foamed concrete wall.**
Ⓐ Wall-fixing bracket   Ⓑ Mounting bolt   Ⓒ Wall

⚠ **Warning:**
If possible, secure the fixture at all the positions marked with a bold arrow.
⚠ **Caution:**
The unit body must be mounted horizontally.

3.3. Preparation for piping connection
Remove the vinyl band that holds the drain piping.
• This vinyl band can be used to temporarily attach the pipes to the wall mounting fixture while connecting the left pipe.
1) Rear, right and lower piping (Fig. 3-6)
① Remove the right side panel.

2) Left and left rear piping
① Remove the side panel.

When embedding pipes into the wall (Fig. 3-7)
When the refrigerant pipe, drain pipes, internal/external connection lines, etc., are to be embedded into the wall in advance, the extruding pipes, etc., may have to be bent and have their length modified to the unit.
• Make the pipes to be embedded slightly longer than necessary, and install.
  Ⓐ Right side panel   Ⓒ On-site piping
  Ⓑ Through hole   Ⓓ Wall-fixing bracket ①

② Remove the five screws indicated by the arrows in the diagram. (Fig. 3-8)
③ Remove the left side panel, then the lower panel.
1. While pushing up the front lower portion of the side panel (to disengage the side panel catch from the unit catch), slide the upper portion of the side panel to the left.
• When the indoor unit is already mounted, be sure the unit does not fall from the wall mounting fixture.
• For reassembly, put the catch at the front lower portion of the side panel over the unit body and push it to the right.
  Ⓐ Grille   Ⓓ Catch
  Ⓑ Left side panel   Ⓔ Side panel
  Ⓒ Lower panel   Ⓕ Unit body

∗ Structure of the side panel and the unit body (Fig. 3-9)
1. Panel catch engages the unit body catch.
2. Panel catch is put in the unit body hole.
3. Panel catch engages the unit body catch.
4. Sheet metal of the unit body enters the panel.
5. Panel catch enters the unit body hole.

④ The drain hose can be connected at two different positions. Use the most convenient position and, if necessary, exchange the position of the drain pan, rubber plug and the drain hose. (Fig. 3-10)
  Ⓖ Drain pan
  Ⓗ Band
  Ⓘ Plug
  Ⓙ Drain hose
  Ⓚ Screwdriver
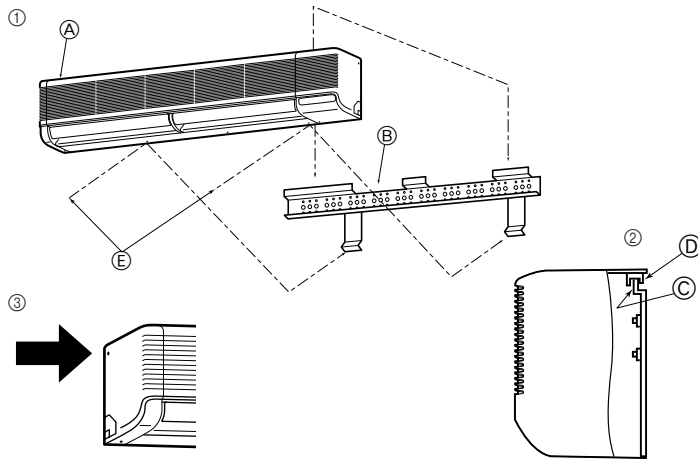
3. Installing the indoor unit

Fig. 3-11

3.4. Mounting the indoor unit (Fig. 3-11)

① Make sure to hang the metal catches of the indoor unit over the hooks of the wall mounting fixture.

② When the piping has been completed, use the securing screws to fix the indoor unit on the wall mounting fixture.

Note:
Check that the catches of the indoor unit securely fit over the hooks of the wall mounting fixture.

③ The screw indicated by the bold arrow is used only during transportation and should be removed. Remove the screw before installation if there is not enough space at the left side to remove it once the unit has been installed.

  Ⓐ Indoor unit
  Ⓑ Wall fixing bracket ①
  Ⓒ Hook
  Ⓓ Metal catch of the indoor unit
  Ⓔ Securing screws

4. Installing the refrigerant piping
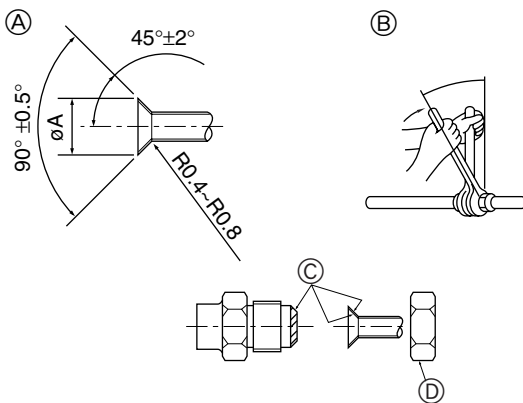

Fig. 4-1

Ⓐ Flare cutting dimensions

Copper pipe O.D. (mm)	Flare dimensions øA dimensions (mm)
ø6.35	8.7 - 9.1
ø9.52	12.8 - 13.2
ø12.7	16.2 - 16.6
ø15.88	19.3 - 19.7

Fig. 4-2

Fig. 4-3

Fig. 4-4

4.1. Connecting pipes (Fig. 4-1)

• When commercially available copper pipes are used, wrap liquid and gas pipes with commercially available insulation materials (heat-resistant to 100 °C or more, thickness of 12 mm or more).

• The indoor parts of the drain pipe should be wrapped with polyethylene foam insulation materials (specific gravity of 0.03, thickness of 9 mm or more).

• Apply thin layer of refrigerant oil to pipe and joint seating surface before tightening flare nut.

• Use two wrenches to tighten piping connections.

• Use refrigerant piping insulation provided to insulate indoor unit connections. Insulate carefully.

Ⓑ Flare nut tightening torque

Copper pipe O.D. (mm)	Flare nut O.D. (mm)	Tightening torque (N·m)
ø6.35	17	14 - 18
ø9.52	22	34 - 42
ø12.7	26	49 - 61
ø15.88	29	68 - 82
ø15.88	36	100 - 120

  Ⓒ Apply refrigerating machine oil over the entire flare seat surface.
  Ⓓ Use the flare nuts as follows.

	RP2.5, 3	RP4
Indoor unit (Liquid)	Flare nut attached to indoor liquid valve	Flare nut attached to indoor liquid valve
Indoor unit (Gas)	Flare nut attached to indoor gas valve	* Flare nut in outdoor unit accessories
Outdoor unit (Liquid)	Flare nut attached to outdoor liquid valve	Flare nut attached to outdoor liquid valve
Outdoor unit (Gas)	Flare nut attached to outdoor gas valve	Flare nut attached to outdoor gas valve

* In case that the flare nut attached to indoor gas valve is used, gas leakage or even pipe extraction will occur.

4.2. Positioning refrigerant and drain piping

① Position of refrigerant and drain piping (Fig. 4-2)

② Determine the position of the knockout holes on the unit body (Fig. 4-3)

• Make the knockout holes using a saw blade or an adequate knife.

⚠ **Caution:**
The side panel must be removed before drilling a knockout hole in it.
If a hole is made with the side panel in place, the refrigerant pipe within the unit could be damaged.

③ L-shaped connection pipe (for gas piping) (Fig. 4-4)

  Ⓐ 107 mm (RP2.5, 3), 102 mm (RP4) Ⓗ For lower-side piping
  Ⓑ Drain hose Ⓘ For right-side piping
  Ⓒ Liquid pipe Ⓙ L-shaped connection pipe (option)
  Ⓓ Gas pipe Ⓚ Unit side
  Ⓔ Drain hose in left-side piping Ⓛ On-site piping side
  Ⓕ Knockout holes on the unit body Ⓜ Piping
  Ⓖ For left-side piping

4. Installing the refrigerant piping

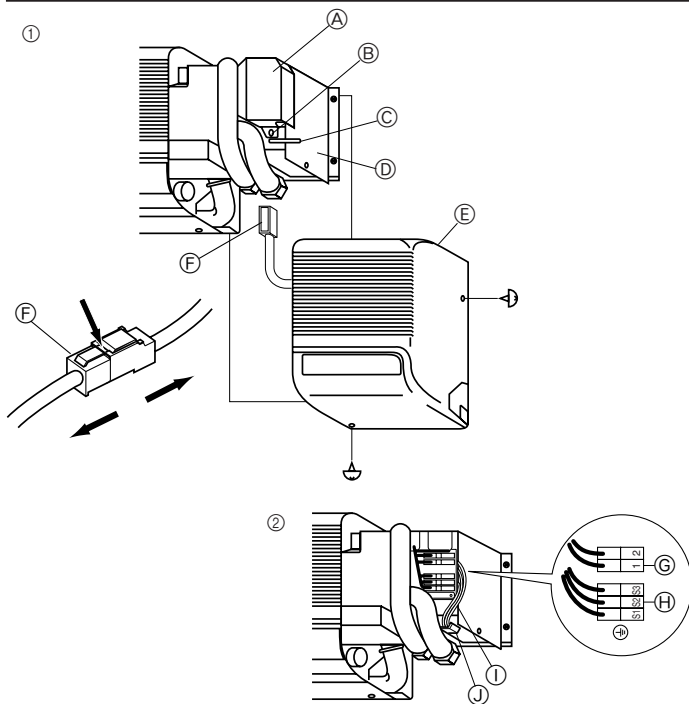**Fig. 4-5**

4.3. Refrigerant piping (Fig. 4-5)
1) Indoor unit
⚠ **Caution:**
Before connecting right, lower, left or left rear piping, connect the supplied L-shaped connection pipe Ⓑ to the on-site piping.

When using commercially available copper pipes:

	Refrigerant and Drainage Piping Sizes		
Item ⟍ Model		RP2.5, 3	RP4
Refrigerant piping	Liquid	ODø9.52 (3/8")	ODø9.52 (3/8")
	Gas	ODø15.88 (5/8")	ODø19.05 (3/4")
Unit drainage piping		PVC pipe IDø20 (13/16")	

5. Drainage piping work (Fig. 5-1)

Fig. 5-1

- Drain pipes should have an inclination of 1/100 or more.
- Use PVC pipe VP-20 for drain piping.
- Drain pipes can be cut with a knife at the connection point according to the on-site conditions.
- When connecting the VP-20, use adhesive to attach the supplied drain socket.
- To prevent dripping condensation, put felt tape ⑤ over the insulation materials on the refrigerant and drain pipes within the unit as shown in the diagram.

⚠ **Caution:**
The drain pipe should be installed according to this Installation Manual to ensure correct drainage. Thermal insulation of the drain pipes is necessary to prevent condensation. If the drain pipes are not properly installed and insulated, condensation may drip on the ceiling, floor or other possessions.

6. Electrical work

Fig. 6-1

6.1. Indoor unit (Fig. 6-1)
① Remove the right side panel.
To do this, remove the screws on the lower and right sides.
Remove the securing screw on the terminal board cover to take away the cover.
② Connect the power, control line. (3×2.5 mm² 2 poler).
▶ **This cables shall not lighter than polychloroprene sheathed flexible cord. (design 245 IEC 57)**
▶ **Fix power source wiring to control box using buffer bushing for tensile force. (PG connection or the like.)**
- Since the electric box may need to be pulled out for servicing or other occasions, wires must have enough slack.
- Class 3 grounding work must be conducted (grounding wire size: 2.5 mm² or more). After wiring is completed, reinstall the parts in the reverse order of removal.

⚠ **Warning:**
Wiring should be done so that the power lines are not subject to tension. Otherwise, heat may be generated or fire may occur.

    Ⓐ Terminal board cover
    Ⓑ Screw
    Ⓒ Band
    Ⓓ Printed circuit board cover
    Ⓔ Right side panel
    Ⓕ Coupler connector
    Ⓖ Terminal board for remote controller (option)
    Ⓗ Terminal board for control lines from the outdoor unit
    Ⓘ Power supply wiring & connection wiring
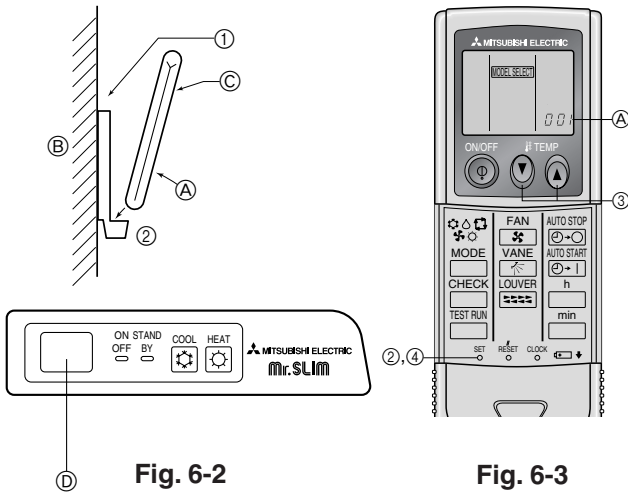   Ⓙ Cord clamp

6. Electrical work
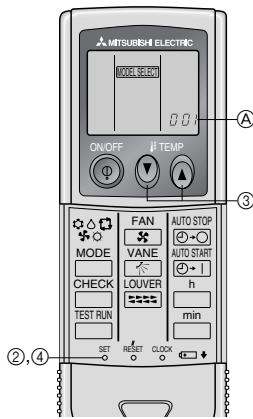

Fig. 6-2   **Fig. 6-3**
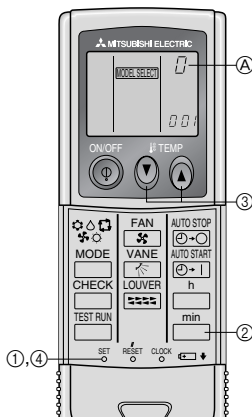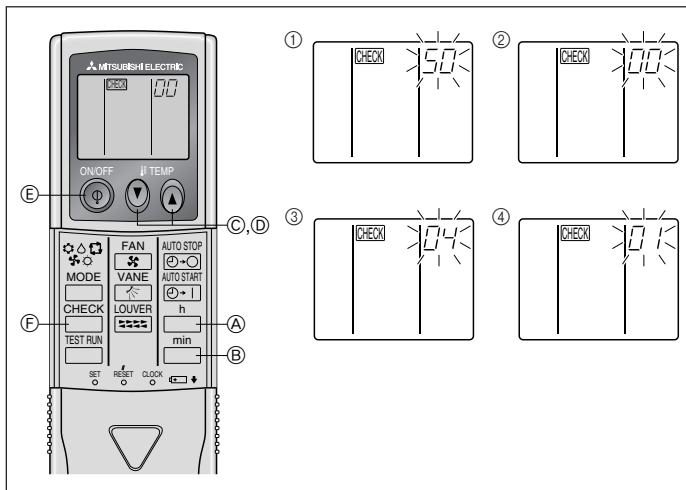

Fig. 6-4

Fig. 6-5

6-2 Installing the wireless remote controller

1) Installation area
• Area in which the remote controller is not exposed to direct sunshine.
• Area in which there is no nearby heating source.
• Area in which the remote controller is not exposed to cold (or hot) winds.
• Area in which the remote controller can be operated easily.
• Area in which the remote controller is beyond the reach of children.

2) Installation method (Fig. 6-2)
① Attach the remote controller holder to the desired location using two tapping screws.
② Place the lower end of the controller into the holder.
　Ⓐ Remote controller
　Ⓑ Wall
　Ⓒ Display panel
　Ⓓ Receiver
• The signal can travel up to approximately 7 meters (in a straight line) within 45 degrees to both right and left of the center line of the receiver.

3) Setting (Fig. 6-3)
① Insert batteries.
② Press the SET button with something sharp at the end.
　MODEL SELECT blinks and Model No. is lighted.
③ Press the temp ▼ ▲ button to set the Model No.
④ Press the SET button with something sharp at the end.
　MODEL SELECT and Model No. are lighted for three seconds, then turned off.

Indoor	Outdoor	Ⓐ Model No.
PLH, PCH, PKH-P·GAH	PUH	001
PLA, PCA, PKA-P·GA	PUH, PUHZ	001
	PU	033
PKH-P·FAH	PUH	003
PKA-P·FA, PKA-RP·FA	PUH, PUHZ	003
	PU	035

4) Assigning a remote controller to each unit (Fig. 6-4)
Each unit can be operated only by the assigned remote controller.
Make sure each pair of an indoor unit PC board and a remote controller is assigned to the same pair No.

5) Wireless remote controller pair number setting operation
① Press the SET button with something sharp at the end.
　Start this operation from the status of remote controller display turned off.
　MODEL SELECT blinks and Model No. is lighted.
② Press the min button twice continuously.
　Pair No. "0" blinks.
③ Press the temp ▼ ▲ button to set the pair number you want to set.
④ Press the SET button with something sharp at the end.
　Set pair number is lighted for three seconds then turned off.

Ⓐ Pair No. of wireless remote controller	Indoor PC board
0	Factory setting
1	Cut J41
2	Cut J42
3~9	Cut J41, J42

6.3. Function Settings (Fig. 6-5)

Changing the power voltage setting
Be sure to change the power voltage setting depending on the voltage used.
① Go to the function select mode
Press the CHECK button Ⓕ twice continuously.
(Start this operation from the status of remote controller display turned off.)
CHECK is lighted and "00" blinks.
Press the temp ▼ button Ⓒ once to set "50". Direct the wireless remote controller toward the receiver of the indoor unit and press the h button Ⓐ.
② Setting the unit number
Press the temp ▼ ▲ button Ⓒ and Ⓓ to set the unit number "00". Direct the wireless remote controller toward the receiver of the indoor unit and press the min button Ⓑ.
③ Selecting a mode
Enter 04 to change the power voltage setting using the ▼ Ⓒ and ▲ Ⓓ buttons. Direct the wireless remote controller toward the receiver of the indoor unit and press the h button Ⓐ.
　　Current setting number:　　1 = 1 beep (one second)
　　　　　　　　　　　　　　　　2 = 2 beeps (one second each)
　　　　　　　　　　　　　　　　3 = 3 beeps (one second each)
④ Selecting the setting number
Use the ▼ Ⓒ and ▲ Ⓓ buttons to change the power voltage setting to 01 (240 V).
Direct the wireless remote controller toward the sensor of the indoor unit and press the h button Ⓐ.
⑤ To select multiple functions continuously
Repeat steps ③ and ④ to change multiple function settings continuously.
⑥ Complete function selection
Direct the wireless remote controller toward the sensor of the indoor unit and press the Φ button Ⓔ.
Note:
Whenever changes are made to the function settings after construction or maintenance, be sure to record the added functions with an "○", in the "Check" column provided on the chart.

7

6. Electrical work

Function table
Select unit number 00

Mode	Settings	Mode no.	Setting no.	Initial setting	setting
Power failure automatic recovery	Not available	01	1	○	
	Available		2		
Indoor temperature detecting	Indoor unit operating average	02	1	○	
	Set by indoor unit's remote controller		2		
	Remote controller's internal sensor		3	–	
LOSSNAY connectivity	Not Supported	03	1	○	
	Supported (indoor unit is not equipped with outdoor-air intake)		2		
	Supported (indoor unit is equipped with outdoor-air intake)		3	–	
Power voltage	240 V	04	1		
	220 V, 230 V		2	○	
Auto mode (only for PUHZ)	Energy saving cycle automatically enabled	05	1	○	
	Energy saving cycle automatically disabled		2		

Select unit numbers 01 to 03 or all units (AL [wired remote controller]/07 [wireless remote controller])

Mode	Settings	Mode no.	Setting no.	Initial setting	setting
Filter sign	100Hr	07	1	○	
	2500Hr		2		
	No filter sign indicator		3		
Fan speed	Standard (PLH/PLA-P·AA(H)/PLA-RP·AA)/Silent (PLH/PLA-P·KA(H), PCH/PCA)	08	1		
	High ceiling ① (PLH/PLA-P·AA(H)/PLA-RP·AA)/Standard (PLH/PLA-P·KA(H), PCH/PCA)		2	–	
	High ceiling ② (PLH/PLA-P·AA(H)/PLA-RP·AA)/High ceiling (PLH/PLA-P·KA(H), PCH/PCA)		3		
No. of air outlets	4 directions	09	1		
	3 directions		2	–	
	2 directions		3		
Installed options (high-performance filter)	Not supported	10	1	–	
	Supported		2		
Up/down vane setting	No vanes	11	1		
	Equipped with vanes (vanes angle setup ①)		2	–	
	Equipped with vanes (vanes angle setup ②)		3		
Energy saving air flow (Heating mode)	Disabled	12	1	–	
	Enabled		2		

7. Test run

7.1. Before test run

▶ After completing installation and the wiring and piping of the indoor and outdoor units, check for refrigerant leakage, looseness in the power supply or control wiring, wrong polarity, and no disconnection of one phase in the supply.

▶ Use a 500-volt megohmmeter to check that the resistance between the power supply terminals and ground is at least 1.0MΩ.

▶ Do not carry out this test on the control wiring (low voltage circuit) terminals.

⚠ **Warning:**
• **Do not use the air conditioner if the insulation resistance is less than 1.0MΩ. Insulation resistance**
• **Turn on the power at least 12 hours before starting operation.**
- Starting operation immediately after turning on the main power switch can result in severe damage to internal parts. Keep the power switch turned on during the operational season.
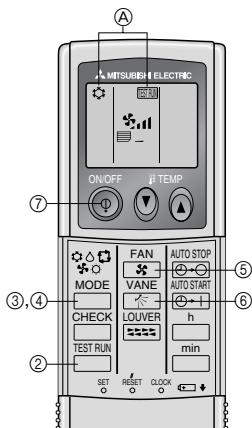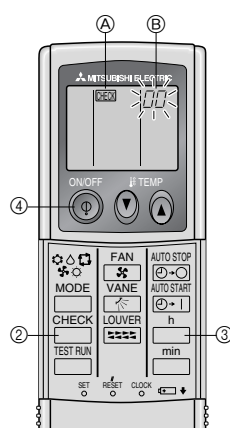

Fig. 7-1

Fig. 7-2

7.2. Test run

7.2.1. Using wireless remote controller (Fig. 7-1)
① Turn on the power to the unit at least 12 hours before the test run.
② Press the [TEST RUN] button twice continuously.
(Start this operation from the status of remote controller display turned off.)
Ⓐ [TEST RUN] and current operation mode are displayed.
③ Press the [MODE] (✿❄☀☼) button to activate COOL✿ mode, then check whether cool air is blown out from the unit.
④ Press the [MODE] (✿❄☀☼) button to activate HEAT☼ mode, then check whether warm air is blown out from the unit.
⑤ Press the [FAN] button and check whether fan speed changes.
⑥ Press the [VANE] button and check whether the auto vane operates properly.
⑦ Press the ON/OFF button to stop the test run.

Note:
• **Point the remote controller towards the indoor unit receiver while following steps ② to ⑦.**
• **It is not possible to run the in FAN, DRY or AUTO mode.**

7.2.2. Using SW4 in outdoor unit
Refer to the outdoor unit installation manual.

7.3. Self-check (Fig. 7-2)
① Turn on the power.
② Press the [CHECK] button twice.
(Start this operation from the status of remote controller display turned off.)
Ⓐ [CHECK] begins to light.
Ⓑ «00» begins to blink.
③ While pointing the remote controller toward the unit's receiver, press the [h] button. The check code will be indicated by the number of times that the buzzer sounds from the receiver section and the number of blinks of the operation lamp.
④ Press the ON/OFF button to stop the self-check.

7. Test run

- For description of each check code, refer to the following table.

① Check code	Symptom	② Buzzer sound	③ OPE LED
P1	Intake sensor error	Single beep × 1	Lit for 1 sec. × 1
P2	Pipe sensor error	Single beep × 2	Lit for 1 sec. × 2
P4	Drain sensor error	Single beep × 4	Lit for 1 sec. × 4
P5	Drain pump error	Single beep × 5	Lit for 1 sec. × 5
P6	Freezing / Overheating safeguard operation	Single beep × 6	Lit for 1 sec. × 6
P8	Pipe temperature error	Single beep × 8	Lit for 1 sec. × 8
P9	TH5 sensor error	Single beep × 2	Lit for 1 sec. × 2
U0–UP	Outdoor unit error	Double beep × 1	Lit for 0.4 sec. + 0.4 sec. × 1
F1–FA	Outdoor unit error	Double beep × 1	Lit for 0.4 sec. + 0.4 sec. × 1
E0–E5	Signal error between remote controller and indoor units	Sounds other than above	Lights other than above
E6–EF	Communication error between indoor and outdoor units	Sounds other than above	Lights other than above
– –	No alarm history	No sound	Not lit
F F F F	No unit	Triple beep	Not lit

- On wireless remote controller
② The continuous buzzer sounds from receiving section of indoor unit.
③ Blink of operation lamp
- On wired remote controller
① Check code displayed in the LCD.

- If the unit cannot be operated properly after the above test run has been performed, refer to the following table to remove the cause.

Symptom			Cause
Wired remote controller	LED 1, 2 (PCB in outdoor unit)		
H0	For about 2 minutes following power-on	After LED 1, 2 are lighted, LED 2 is turned off, then only LED 1 is lighted. (Correct operation)	• For about 2 minutes following power-on, operation of the remote controller is not possible due to system start-up. (Correct operation)
H0 → Error code	After about 2 minutes has expired following power-on	Only LED 1 is lighted. → LED 1, 2 blink.	• Connector for the outdoor unit's protection device is not connected. • Reverse or open phase wiring for the outdoor unit's power terminal block (L1, L2, L3)
Display messages do not apper even when operation switch is turned ON (operation lamp does not light up).		Only LED 1 is lighted. → LED 1 blinks twice, LED 2 blinks once.	• Incorrect wiring between indoor and outdoor units (incorrect polarity of S1, S2, S3) • Remote controller wire short

On the wireless remote controller with condition above, following phenomena takes place.
- No signals from the remote controller are accepted.
- OPE lamp is blinking.
- The buzzer makes a short pipng sound.

Note:
Operation is not possible for about 30 seconds after cancellation of function selection. (Correct operation)

For description of each LED (LED 1, 2, 3) provided on the indoor controller, refer to the following table.

LED 1 (power for microcomputer)	Indicates whether control power is supplied. Make sure that this LED is always lit.
LED 2 (power for remote controller)	Indicates whether power is supplied to the remote controller. This LED lights only in the case of the indoor unit which is connected to the outdoor unit refrigerant address "0".
LED 3 (communication between indoor and outdoor units)	Indicates state of communication between the indoor and outdoor units. Make sure that this LED is always blinking.

This product is designed and intended for use in the residential, commercial and light-industrial environment.

The product at hand is based on the following EU regulations:

- Low Voltage Directive 73/23/ EEC
- Electromagnetic Compatibility Directive 89/336/ EEC

Please be sure to put the contact address/telephone number on this manual before handing it to the customer.

MITSUBISHI ELECTRIC CORPORATION

Printed in Japan