

Air-Conditioners

PKA-RP·GAL

INSTALLATION MANUAL

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

FOR INSTALLER

INSTALLATIONSHANDBUCH

Zum sicheren und ordnungsgemäßen Gebrauch der Klimaanlage das Installationshandbuch gründlich durchlesen.

FÜR INSTALLATEURE

MANUEL D'INSTALLATION

Veuillez lire le manuel d'installation en entier avant d'installer ce climatiseur pour éviter tout accident et vous assurer d'une utilisation correcte.

POUR L'INSTALLATEUR

INSTALLATIEHANDLEIDING

Voor een veilig en juist gebruik moet u deze installatiehandleiding grondig doorlezen voordat u de airconditioner installeert.

VOOR DE INSTALLATEUR

MANUAL DE INSTALACIÓN

Para un uso seguro y correcto, lea detalladamente este manual de instalación antes de montar la unidad de aire acondicionado.

PARA EL INSTALADOR

MANUALE DI INSTALLAZIONE

Per un uso sicuro e corretto, leggere attentamente questo manuale di installazione prima di installare il condizionatore d'aria.

PER L'INSTALLATORE

ΕΓΧΕΙΡΙΔΙΟ ΟΔΗΓΙΩΝ ΕΓΚΑΤΑΣΤΑΣΗΣ

Για ασφάλεια και σωστή χρήση, παρακαλείστε διαβάσετε προσεκτικά αυτό το εγχειρίδιο εγκατάστασης πριν αρχίσετε την εγκατάσταση της μονάδας κλιματισμού.

ΓΙΑ ΑΥΤΟΝ ΠΟΥ ΚΑΝΕΙ ΤΗΝ ΕΓΚΑΤΑΣΤΑΣΗ

MANUAL DE INSTALAÇÃO

Para segurança e utilização correctas, leia atentamente este manual de instalação antes de instalar a unidade de ar condicionado.

PARA O INSTALADOR

INSTALLATIONS MANUAL

Læs venligst denne installationsmanual grundigt, før De installerer airconditionanlægget, af hensyn til sikker og korrekt anvendelse.

TIL INSTALLATØREN

INSTALLATIONS MANUAL

Läs denna installationsmanual noga för säkert och korrekt bruk innan luftkonditioneringen installeras.

FÖR INSTALLATÖREN

MONTAJ ELKİTABI

Emniyetli ve doğru biçimde nasıl kullanılacağını öğrenmek için lütfen klima cihazını monte etmeden önce bu elkitabını dikkatle okuyunuz.

MONTÖR İÇİN

РУКОВОДСТВО ПО УСТАНОВКЕ

Для осторожного и правильного использования прибора необходимо тщательно ознакомиться с данным руководством по установке до выполнения установки кондиционера.

ДЛЯ УСТАНОВИТЕЛЯ

安装说明书

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。

安装人员适用

English

Deutsch

Français

Nederlands

Español

Italiano

Ελληνικά

Português

Dansk

Svenska

Türkçe

Русский

中文

Contents

1. Safety precautions	2	5. Drainage piping work	6
2. Installation location	3	6. Electrical work	6
3. Installing the indoor unit	3	7. Test run	8
4. Installing the refrigerant piping	5		

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.

- ⚠ 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.

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.

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.

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.

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.

- ⊘ : 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.

- 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.

- 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.

- 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.

- 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.

- 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

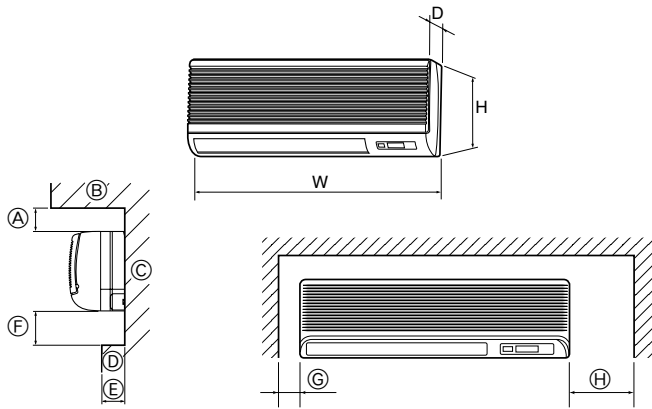


Fig. 2-1

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

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

Models	W	D	H	(A)	(E)	(F)	(G)	(H)
RP1.6_2	990	235	340	Min. 30	Max. 130	Min. 180	Min. 50	Min. 150

- ⓑ Ceiling
- ⓒ Wall
- ⓓ Furnishing, etc

⚠ 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

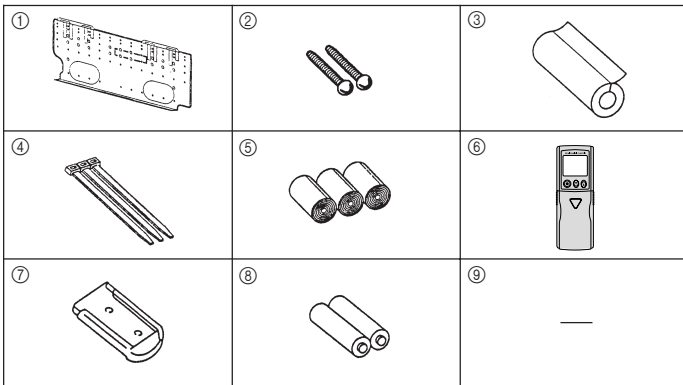


Fig. 3-1

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

The indoor unit should be supplied with the following accessories.

PART NUMBER	ACCESSORY	QUANTITY	LOCATION OF SETTING
①	Mount board	1	Fix at the back of the unit
②	Tapping screw 4 × 35	12	Set inside the unit
③	Pipe cover	1	
④	Band	3	
⑤	Felt tape	3	
⑥	Wireless remote controller	1	
⑦	Remote controller holder	1	
⑧	Alkali batteries (size AAA)	2	
⑨	Mount piece	1	

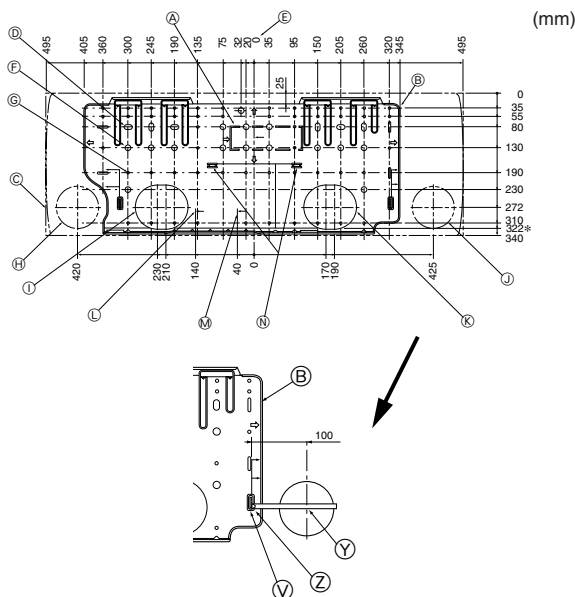


Fig. 3-2

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

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.

- Ⓐ Supporting piece
- Ⓑ Mount board
- Ⓒ Main body
- Ⓓ Slot (6-11 × 20)
- Ⓔ Unit center
- Ⓕ Bolt hole (14-φ14)
- Ⓖ Tapping hole (49-φ5)
- Ⓗ Bottom left pipe slot (φ90)
- Ⓙ Bottom left pipe slot knockout hole
- ⓙ Bottom right pipe slot (φ90)
- Ⓚ Bottom right pipe slot knockout hole
- Ⓛ Liquid pipe flare connection position
- Ⓜ Gas pipe flare connection position
- Ⓝ Level setting standard
- Ⓟ Insert scale.
- Ⓡ Hole centre
- Ⓢ Align the scale with the line.

3.2.2. 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.

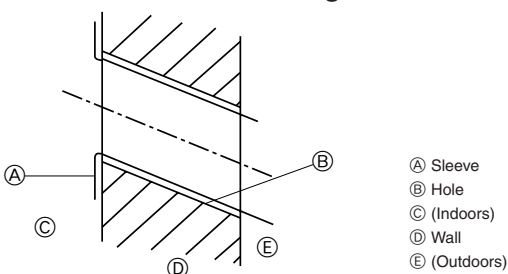


Fig. 3-3

3. Installing the indoor unit

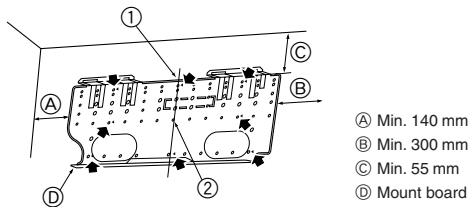


Fig. 3-4

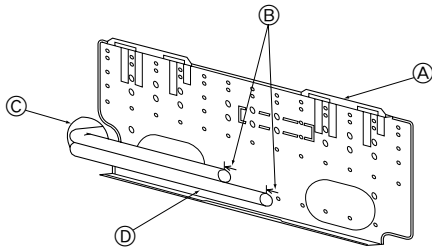


Fig. 3-5

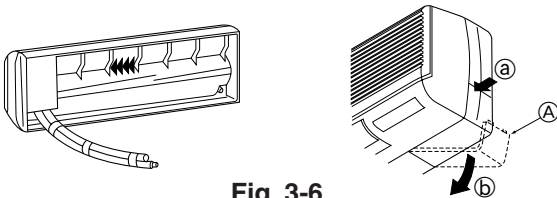


Fig. 3-6

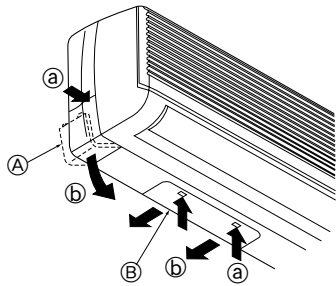


Fig. 3-7

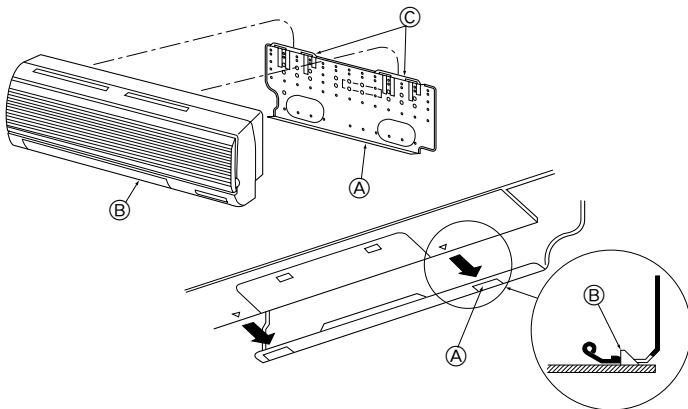


Fig. 3-8

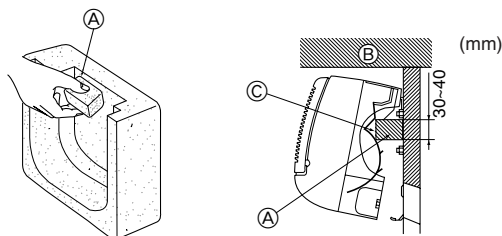


Fig. 3-9

3.2.3. 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 nonsymmetrical way. (If possible, secure the fixture at all the positions marked with a bold arrow.) (Fig. 3-4)

⚠ Warning:

If possible, secure the fixture at all positions indicated with a bold arrow.

⚠ Caution:

- The unit body must be mounted horizontally.
- Fasten at the holes marked with ▲ as shown by the arrows.

① Fasten a thread to the hole.

② The level can be easily obtained by hanging a weight from the string and aligning the string with the mark.

3.3. When embedding pipes into the wall (Fig. 3-5)

- The pipes are on the bottom left.
- When the cooling 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 suit the unit.
- Use marking on the mount board as a reference when adjusting the length of the embedded cooling pipe.
- During construction, give the length of the extruding pipes etc some leeway.

Ⓐ Mount board

Ⓑ Reference marking for flare connection

Ⓒ Through hole

Ⓓ On-site piping

3.4. Preparing the indoor unit

Rear, right and lower piping (Fig. 3-6)

1. Bind the cooling pipe and drain pipe together.
- Bind the pipes together with vinyl tape at three or more points. This will facilitate passing the pipes through the wall.
2. Remove the corner box and knock out the knockout holes as necessary.
- Remove the corner box by pushing in a downward direction Ⓑ, while at the same time, pressing in the upper side part of the corner box Ⓐ.

Ⓐ Corner box

Ⓑ Under cover

Left and left rear piping (Fig. 3-7)

1. Remove the under cover.
- Remove the under cover by sliding it towards the rear of the unit Ⓑ, while at the same time, pressing the two points marked by arrow heads Ⓐ.
2. Remove the corner box and knock out the knockout holes as necessary.

3.5. Mounting the indoor unit

1. Affix the mounting plate to the wall.
2. Hang the indoor unit on the two hooks positioned on the upper part of the mounting plate.

Rear, right and lower piping (Fig. 3-8)

3. Affix the indoor unit.
4. After connecting the pipes, put the corner box back to where it was (follow the removal steps backwards).

Ⓐ Square hole

Ⓑ Hooks

Left and left rear piping (Fig. 3-9)

3. Cut out a mounting piece from the packaging material.
4. Pull the indoor unit up towards yourself as shown in the figure below and slide the mounting piece in to the mounting plate using the mounting piece setting marks as reference.
5. After connecting the pipes and wiring, put the under cover back to where it was, and remove the mounting piece and affix the indoor unit as shown in the left figure.
6. Put the corner box back to where it was.

Ⓐ Mounting piece

Ⓑ Ceiling

Ⓒ Rib

4. Installing the refrigerant piping

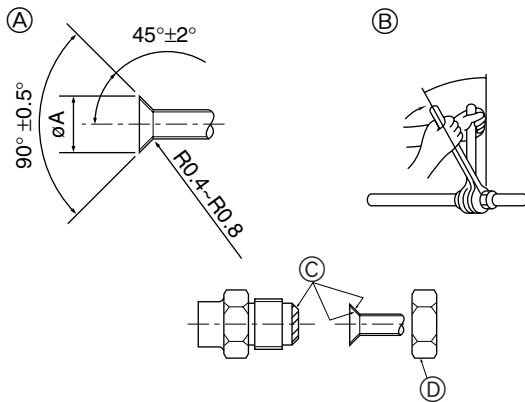


Fig. 4-1

(A) 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
ø19.05	23.6 - 24.0

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.

(B) Flare nut tightening torque

Copper pipe O.D. (mm)	Flare nut O.D. (mm)	Tightening torque (N-m)
ø6.35	17	14 - 18
ø6.35	22	34 - 42
ø9.52	22	34 - 42
ø12.7	26	49 - 61
ø12.7	29	68 - 82
ø15.88	29	68 - 82
ø15.88	36	100 - 120
ø19.05	36	100 - 120

Ⓒ Apply refrigerating machine oil over the entire flare seat surface.

Ⓓ Use the flare nuts as follows.

Indoor unit		RP1.6, 2	RP2.5, 3	RP4-6
Refrigerant		R407C		
Joint outdoor unit		PU(H)-P1.6/2	PU(H)-P2.5/3	PU(H)-P4/5/6
Gas side	Pipe size (mm)	ø15.88	ø15.88	ø19.05
	Indoor nut	*1	*1	*1
	Outdoor nut	*1	*1	*1
Liquid side	Pipe size (mm)	ø9.52	ø9.52	ø9.52
	Indoor nut	*1	*1	*1
	Outdoor nut	*1	*1	*1

Indoor unit		RP1.6, 2	RP2.5, 3	RP4-6
Refrigerant		R410A		
Joint outdoor unit		PUHZ-RP1.6/2	PUHZ-RP2.5/3	PUHZ-RP4/5/6
Gas side	Pipe size (mm)	ø12.7	ø15.88	ø15.88
	Indoor nut	*2	*1	*2
	Outdoor nut	*1	*1	*1
Liquid side	Pipe size (mm)	ø6.35	ø9.52	ø9.52
	Indoor nut	*2	*1	*1
	Outdoor nut	*1	*1	*1

*1: The flare nut is attached to its pipe.

*2: The flare nut is in the outdoor unit accessory.

Do not use the flare nut attached. If it is used, a gas leakage or even a pipe extraction may occur.

Refer to the outdoor unit installation manual for the specification of connecting pipes.

4.2. Positioning refrigerant and drain piping

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

- The drain pipe can be cut midway to meet the on-site conditions.

- (A) Total length of flexible hose
- (B) Liquid pipe
- (C) Gas pipe
- (D) Drain hose
- (E) Left-side piping
- (F) Right-side piping

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

► Cut the knockout holes using a saw blade or an adequate knife.

Take care not to damage other parts of the unit.

- Remove the corner box and drill a knockout hole. If a hole is made without removing the box, the drain hose could be damaged.

- (A) Left-side piping
- (B) Lower piping
- (C) Right-side piping
- (D) Remote controller cable through hole
- (E) Corner box

4.3. Refrigerant piping (Fig. 4-4)

Indoor unit

- Remove the flare nut and cap of the indoor unit.
- Make a flare for the liquid pipe and gas pipe and apply refrigerating machine oil (available from your local supplier) to the flare sheet surface.
- Quickly connect the on site cooling pipes to the unit.
- Wrap the pipe cover ④ that is attached to the gas pipe and make sure that the connection joint is not visible.
- Wrap the pipe cover of the unit's liquid pipe and make sure that it covers the insulation material of the on site liquid pipe.
- Use the bands that are provided ④ to tighten both ends (15-20mm) of each pipe cover ③.

- (A) Cooling pipe and insulation (available from local supplier)
- (B) Unit's gas pipe
- (C) Unit's liquid pipe
- (D) Pipe cover ③
- (E) Bands ④
- (F) On site gas pipe
- (G) On site liquid pipe

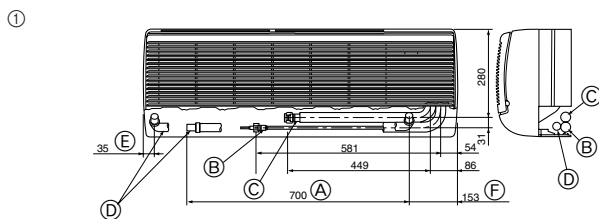


Fig. 4-2

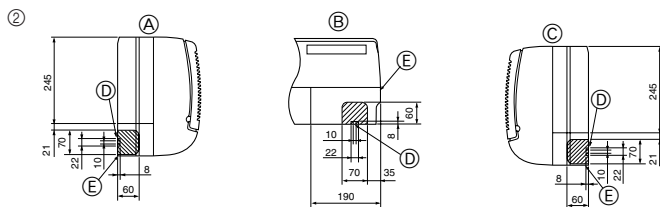


Fig. 4-3

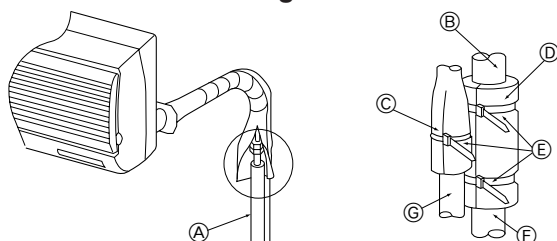


Fig. 4-4

5. Drainage piping work

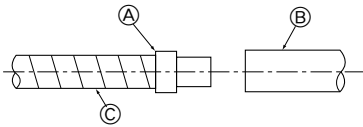


Fig. 5-1

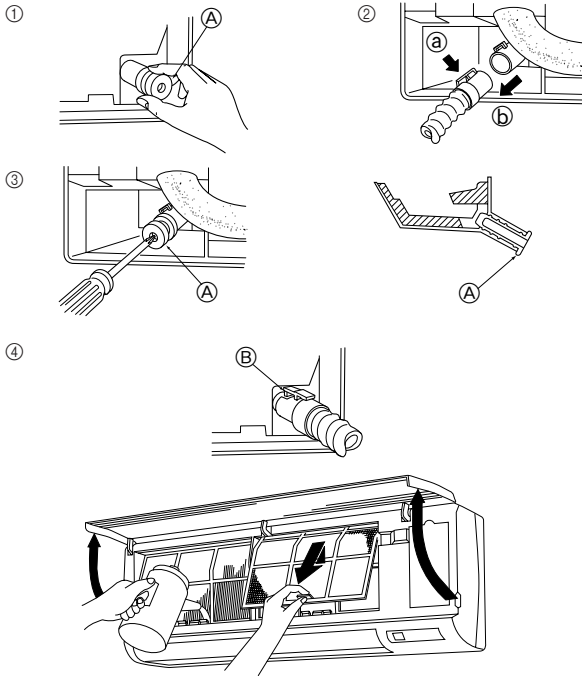


Fig. 5-2

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

- Drain pipes should have an inclination of 1/100 or more.
 - For extension of the drain pipe, use a soft hose (inner dia. 15 mm) available on the market or hard vinyl chloride pipe (VP-20). Make sure that there is no water leakage from the connections.
 - If the drain pipe passes indoors it must be covered with insulating material (foamed polyethylene: specific gravity: 0.03, thickness: 9 mm or more) available on the market.
 - Do not put the drain piping directly in a drainage ditch where sulphuric gas may be generated.
 - When piping has been completed, check that water flows from the end of the drain pipe.
- A Drain connection socket C Indoor unit's drain hose
 B On site drain pipe (VP-20)

⚠ 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.

Preparing left and left rear piping (Fig. 5-2)

1. Remove the drain cap.
 - Remove the drain cap by holding the bit that sticks out at the end of the pipe and pulling.
 - A Drain cap
2. Remove the drain hose.
 - Remove the drain hose by holding on to the base of the hose (a) (shown by arrow) and pulling towards yourself (b).
3. Insert the drain cap.
 - Insert a screwdriver etc into the hole at the end of the pipe and be sure to push to the base of the drain cap.
4. Insert the drain hose.
 - Push the drain hose until it is at the base of the drain box connection outlet.
 - Please make sure the drain hose hook is fastened properly over the extruding drain box connection outlet.
 - B Hooks

Remove the side panel of the indoor unit on the drain side. Pour water in the drain pan and check that it comes out the drain pipe end. After confirmation, reinstall the side panel.

6. Electrical work

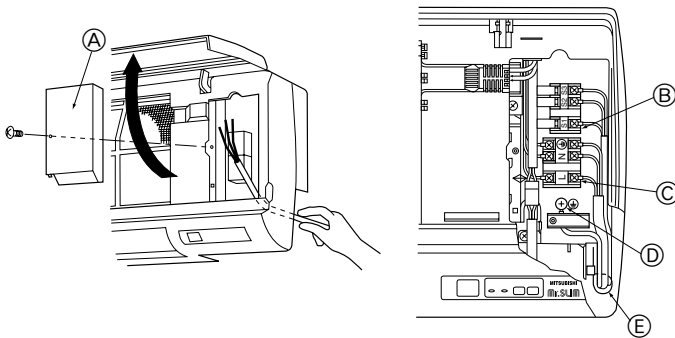


Fig. 6-1

6.1. Indoor unit (Fig. 6-1)

1. Remove the corner box.
2. Install each wire into the unit.
3. Open the front grill, remove 1 tapping screw and remove the terminal block cover.
 - A Terminal block cover
4. Connect each wire properly to the terminal block.
 - In consideration of future servicing, please leave some leeway for the wiring length.
5. Put all the parts back the way they were.
6. Use a clamp from the bottom of the electric parts box to fasten each wire.
 - B Terminal block for Indoor/outdoor connecting
 - C Terminal block for heater (PKH models)
 - D Earth point
 - E Clamp

Indoor unit model		PKA	PKH
Indoor unit power supply (Heater)		—	~N (single), 50Hz, 220-230-240V
Indoor unit input capacity (Heater)		—	—
Main switch (Breaker)		*1	16A
Wiring Wire No. x size (mm)	Indoor unit power supply (Heater)	—	2 × Min. 1.5
	Indoor unit power supply (Heater) earth	—	1 × Min. 1.5
	Indoor unit-Outdoor unit	3 × 2.5 (Polar)	3 × 2.5 (Polar)
	Indoor unit-Outdoor unit earth	1 × Min. 2.5	1 × Min. 2.5
Circuit rating	Remote controller-Indoor unit	*2	—
	Indoor unit (Heater) L-N	*3	AC 220-230-240V
	Indoor unit-Outdoor unit S1-S2	*3	AC 220-230-240V
	Indoor unit-Outdoor unit S2-S3	*3	DC24V
Remote controller-Indoor unit		*3	—

*1. A breaker with at least 3 mm contact separation in each pole shall be provided. Use non-fuse breaker (NF) or earth leakage breaker (NV).

*2. A 10 m wire is attached in the remote controller accessory.

*3. The figures are NOT always against the ground.

S3 terminal has DC 24 V against S2 terminal. However between S3 and S1, these terminals are not electrically insulated by the transformer or other device.

Notes: 1. Wiring size must comply with the applicable local and national code.

2. Power supply cords and Indoor unit/Outdoor unit connecting cords shall not be lighter than polychloroprene sheathed flexible cord. (Design 245 IEC 57)

3. Install an earth longer and thicker than other cables.

6. Electrical work

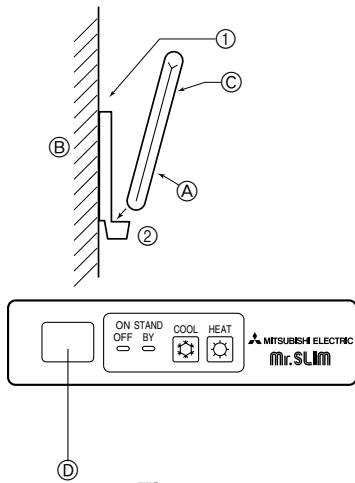


Fig. 6-2

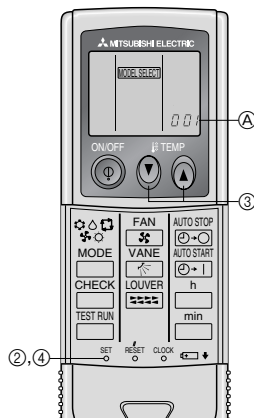


Fig. 6-3

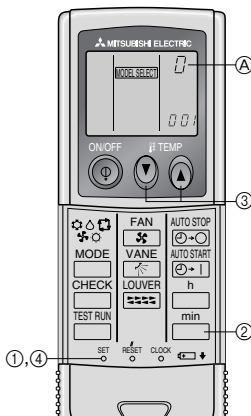


Fig. 6-4

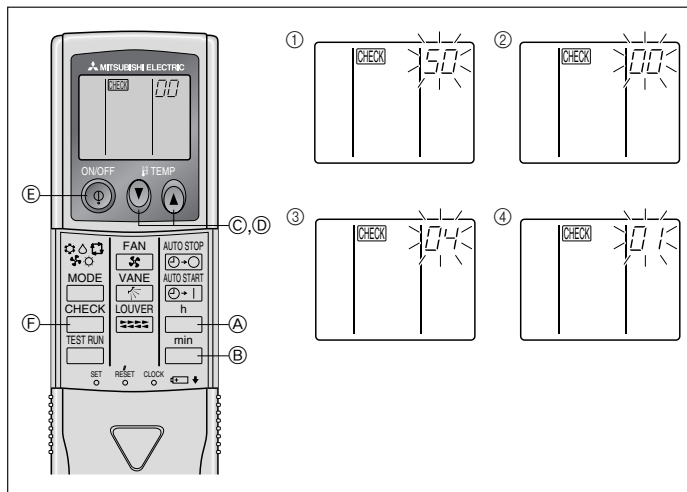


Fig. 6-5

6.2. Installing the wireless remote controller

6.2.1. 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.

6.2.2. 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.

6.2.3. 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 (1.6, 2)	PUH	001
PLA, PCA, PKA (1.6, 2)	PUH, PUHZ	001
	PU	033
PKH (2.5, 3, 4)	PUH	003
	PUH, PUHZ	003
PKA (2.5, 3, 4)	PUH, PUHZ	003
	PU	035

6.2.4. 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.

6.2.5. 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 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 (F) twice continuously.
 - (Start this operation from the status of remote controller display turned off.)
 - CHECK is lighted and "00" blinks.
 - Press the temp (▼) button (C) once to set "50". Direct the wireless remote controller toward the receiver of the indoor unit and press the button (A).
- ② Setting the unit number
 - Press the temp (▼) (▲) button (C) and (D) to set the unit number "00". Direct the wireless remote controller toward the receiver of the indoor unit and press the button (B).
- ③ Selecting a mode
 - Enter 04 to change the power voltage setting using the (▼) (C) and (▲) (D) buttons.
 - Direct the wireless remote controller toward the receiver of the indoor unit and press the button (A).

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 (▼) (C) and (▲) (D) 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 button (A).
- 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 (Ⓢ) button (E).

Note:

Whenever changes are made to the function settings after installation or maintenance, be sure to record the changes with a mark in the "Setting" column of the Function table.

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	100 Hr	07	1	○	
	2500 Hr		2		
	No filter sign indicator		3		
Fan speed	Standard (PLH/PLA)/Silent (PCH/PCA)	08	1		
	High ceiling ① (PLH/PLA)/Standard (PCH/PCA)		2	–	
	High ceiling ② (PLH/PLA)/High ceiling 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 (vaner angle setup ①)		2	–	
	Equipped with vanes (vaner 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 1.0 MΩ.
- ▶ 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 1.0 MΩ. 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.

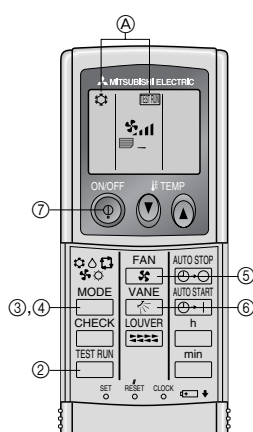


Fig. 7-1

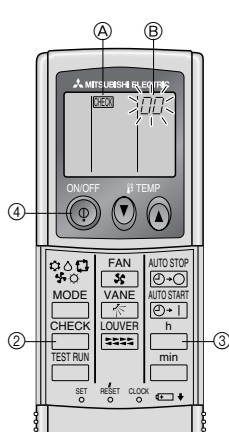


Fig. 7-2

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 appear 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 piping 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.