

Air-Conditioners INDOOR UNIT

CE

PEFY-P-VMS-E

INSTALLATION MANUAL For safe and correct use, please read this installation manual thoroughly before installing the air-conditioner unit.	GB
INSTALLATIONSHANDBUCH Zum sicheren und ordnungsgemäßen Gebrauch der Klimageräte das Installationshandbuch gründlich durchlesen.	D
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.	F
MANUAL DE INSTALACIÓN Para un uso seguro y correcto, lea detalladamente este manual de instalación antes de montar la unidad de aire acondicionado.	<u> </u>
MANUALE DI INSTALLAZIONE Per un uso sicuro e corretto, leggere attentamente questo manuale di installazione prima di installare il condizionatore d'aria.	NL
INSTALLATIEHANDLEIDING Voor een veilig en juist gebruik moet u deze installatiehandleiding grondig doorlezen voordat u de airconditioner installeert.	ES
MANUAL DE INSTALAÇÃO Para segurança e utilização correctas, leia atentamente este manual de instalação antes de instalar a unidade de ar condicionado.	PR
ΕΓΧΕΙΡΙΔΙΟ ΟΔΗΓΙΩΝ ΕΓΚΑΤΑΣΤΑΣΗΣ Για ασφάλεια και σωστή χρήση, παρακαλείστε διαβάσετε προσεχτικά αυτό το εγχειρίδιο εγκατάστασης πριν αρχίσετε την εγκατάσταση της μονάδας κλιματισμού.	GR
INSTALLATIONSMANUAL Læs af sikkerhedshensyn denne manual samt manualen til installation af udendørsenheden grundigt, før du installerer klimaanlægget.	DA
INSTALLATIONSHANDBOK Läs den här installationshandboken noga innan luftkonditioneringsenheten installeras, för säker och korrekt användning.	SW
MONTAJ ELKİTABI Emniyetli ve doğru biçimde nasıl kullanılacağını öğrenmek için lütfen kilma cihazını monte etmeden önce bu elkitabını dikkatle okuyunuz.	TR
РУКОВОДСТВО ПО УСТАНОВКЕ Для осторожного и правильного использования прибора необходимо тщательно ознакомиться с данным руководством по установке до выполнения установки кондиционера.	RU
安装手册 为了安全和正确地使用本空调器,请在安装前仔细阅读本安装手册。	CN
PŘÍRUČKA K INSTALACI V zájmu bezpečného a správného používání si před instalací klimatizační jednotky důkladně pročtěte tuto příručku k instalaci.	CZ
NÁVOD NA INŠTALÁCIU Pre bezpečné a správne použitie si pred inštalovaním klimatizačnej jednotky, prosím, starostlivo prečítajte tento návod na inštaláciu.	SV
PRIROČNIK ZA NAMESTITEV Za varno in pravilno uporabo pred namestitvijo klimatske naprave skrbno preberite priročnik za namestitev.	SL
TELEPÍTÉSI KÉZIKÖNYV A biztonságos és helyes használathoz, kérjük, olvassa el alaposan ezt a telepítési kézikönyvet, mielőtt telepítené a légkondicionáló egysénet	HG
MANUAL CU INSTRUCȚIUNI DE INSTALARE Pentru o utilizare corectă și sigură, vă rugăm să citiți cu atenție acest manual înainte de a instala unitatea de aer conditionat.	РО
РЪКОВОДСТВО ЗА МОНТАЖ За безопасна и правилна употреба, моля, прочетете внимателно това ръководство преди монтажа на климатизатора.	BG
MANUAL CU INSTRUCȚIUNI DE FUNCȚIONARE Pentru o utilizare corectă și sigură, vă rugăm să citiți cu atenție acest manual înainte de a pune în funcțiune unitatea de aer condiționat.	RO
PRIRUČNIK ZA UGRADNJU	HR

Radi sigurne i ispravne uporabe, temeljito pročitajte ovaj priručnik prije ugradnje klimatizacijskog uređaja.

1. Safety Precautions

IMPORTANT: FOR YOUR SAFETY READ AND OBSERVE THE FOLLOWING PRECAUTIONS CAREFUL-LY & READ ALL LABELS ON THE UNIT. SAVE THIS MANUAL FOR FUTURE REFERENCE.

Symbol Explanations

🕂 WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

This symbol indicates that that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

[1] Read before installation and performing electrical work

🕂 WARNING

Ask your dealer or a qualified technician to install the unit.
 Improper installation by the user may result in water leakage, electric shock, or fire.

- •Properly install the unit on a surface that can withstand its weight. Unit installed on an unstable surface may fall and cause injury.
- •Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable and external force. Improperly connected cables may produce heat and start a fire.
- •Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over. Improper installation may cause the unit to topple over and cause injury or damage to the unit.
- •Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric. Ask a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- •Do not make any modifications or alterations to the unit. Consult your dealer for repair. Improper repair may result in water leakage, electric shock, or fire
- •Do not touch the heat exchanger fins with bare hands. The fins are sharp and pose a risk of cuts.
- +Always wear protective equipment when handling this product (e.g., gloves, full arm protection such as a boiler suit, goggles).
- In the event of a refrigerant leak, thoroughly ventilate the room.
 If gaseous refrigerant leaks out and comes in contact with an open flame, toxic gases will be generated.
- •Properly install the unit according to the instructions in the Installation Manual. Improper installation may result in water leakage, electric shock, or fire.
- +Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.
- Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.
- •Keep electrical parts away from water. Wet electrical parts pose a risk of electric shock, smoke, or fire.
- •Securely attach the control box cover.
- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.
- •Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.
- •When installing the unit in a small space, take appropriate precautions to prevent leaked refrigerant from reaching the limiting concentration. Leaked refrigerant gas will displace oxygen and cause oxygen starvation if it exceeds the limiting concentration. Consult your dealer before installing the unit.
- •Consult your dealer or a qualified technician when moving or reinstalling the unit. Improper installation may result in water leakage, electric shock, or fire.
- After completing the service work, check for a refrigerant leak.
 If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.
- •Do not try to defeat the safety features of the unit. Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices or the use of accessories other than the ones that are recommended by MITSUBISHI may result in smoke, fire, or explosion.
- · Consult your dealer for proper disposal method.

•Do not use a leak detection additive.

[2] Precautions for handling units for use with R410A

Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

- •Use refrigerant piping materials made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and moisture. Contaminants in the refrigerant piping may cause the refrigerator oil to deteriorate.
- Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. (Keep elbows and other joints wrapped in plastic.)

Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

- Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges.
 Infiltration of a large amount of mineral oil may cause the refrigerator oil to deteriorate.
- •Charge the system with refrigerant in the liquid phase.

If gaseous refrigerant is drawn out of the cylinder first, the composition of the remaining refrigerant in the cylinder will change and become unsuitable for use.

•Only use R410A or R407C.

The use of other types of refrigerant that contain chloride may cause the refrigerator oil to deteriorate.

•Use a vacuum pump with a check valve.

If a vacuum pump that is not equipped with a check valve is used, the vacuum pump oil may flow into the refrigerant cycle and cause the refrigerator oil to deteriorate.

•Prepare tools for exclusive use with R 410A. Do not use the following tools if they have been used with the conventional refrigerant: gauge manifold, charging hose, gas leak detector, check valve, refrigerant charge base, vacuum gauge, and refrigerant recovery equipment. If the refrigerant or the refrigerator oil that may be left on these tools are mixed in with R410A, it may cause the refrigerator oil in the new system to deteriorate.

Infiltration of water may cause the refrigerator oil to deteriorate. Leak detectors for conventional refrigerants will not detect an R410A leak because R410A is free of chlorine.

•Do not use a charging cylinder.

If a charging cylinder is used, the composition of the refrigerant in the cylinder will change and become unsuitable for use.

•Exercise special care when handling tools for use with R410A.

Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate.

[3] Read before installing the unit

•To avoid the risk of fire, never install the air conditioner where there is a risk of leakage of flammable gas.

•The models of air conditioning units described in this manual are not intended for use with food, pets, plants, precision instruments, or art work.

•Do not use the unit in an environment with a high concentration of oil, steam, sulfuric gas etc. They can significantly reduce the performance of the unit or damage its parts.

•Take appropriate measures against noise interference when installing the air conditioners in hospitals or communication facilities.

Inverter equipment, power generators, radio communication equipment, and high-frequency medical equipment may interfere with the normal operation of the air conditioner or vice versa.

•Install the unit in a location which will not render the unit vulnerable to water leakage. When the indoor humidity exceeds 80% or if the drainpipe becomes clogged, condensation may drip from the indoor unit. Provide an adequate collective drainage system as necessary.

•The models of indoor units described in this manual should only be installed on a ceiling at least 2.5 m from the floor.

[4] Read before performing electrical work

•Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire.

•To avoid the risk of wire breakage and fire, install the power cable in such a way that tension load is not applied.

•To avoid the risk of electric shock, install all required breakers.

GB

•To avoid the risk of current leakage, heat build-up, and fire, use properly rated power cables for the capacity of the line.

- •To avoid the risk of unit failure and fire, use properly rated breakers and fuses.
- •To avoid the risk of electric shock, do not wash the air conditioning units with water.
- •To prevent the unit from toppling over and cause personal injury or unit damage, periodically check the installation base for damage.
- Install drainpipes according the instructions in this manual to ensure proper drainage. Wrap thermal insulation around the pipes to prevent moisture condensation.

Improper pipe installation or inadequate insulation may result in water leakage.

Exercise caution when transporting units.

Products weighing more than 20 kg should be carried by at least two people. Do not suspend the unit by the PP bands that are used on some packages. To avoid the risk of cuts, keep your hands away from the heat exchanger fins. When using a crane or other hoisting equipment to lift the unit, suspend the unit from four corners.

•Properly dispose of packing materials.

Pallets and the nails on the pallets can pose the risk of cuts, stabs, and abrasions. Plastic gabs can pose suffocation and choking hazards; do not let children play with them. Tear the plastic bags before disposing of them.

[5] Read before starting the test run

•Keep the power on for at least 12 hours before starting a test run.

•To avoid the risk of electric shock, do not touch the switches with wet hands.

•Do not touch the refrigerant pipes with bare hands during and immediately after operation.

•During or immediately after operation, certain parts of the unit such as pipes and compressor may be either very cold or hot, depending on the state of the refrigerant in the unit at the time. To reduce the risk of frostbites and burns, do not touch these parts with bare hands.

•Do not operate the unit without panels and safety guards properly installed. The unit houses high-temperature, high-voltage, or rotating parts that can pose a risk of injury if the unit is operated without the panel and fan guard.

•Do not turn off the power immediately after stopping the operation. Keep the unit on for at least five minutes before turning off the power to prevent water leakage and malfunctions.

2. Indoor Unit Accessories

The unit is provided with the following accessories:

Part No.	Accessories	Qty
1	Insulated pipe (small)	1
2	Tie band	3
3	Drain hose	1
4	Washer	8
5	Short pipe (ø12.7-ø15.88): Model P50 only.	1
6	Short pipe (ø6.35-ø9.52): Model P50 only.	1
7	Installation manual	1
8	Operation manual	1

3. Selecting an Installation Site

•To avoid the risk of injury, unit must be installed on a sturdy, level surface that can support its weight.

•Determine the carry-in route in advance.

•Select a location where the unit would not be adversely affected by intruding air.

•Select a location that allows an unobstructed flow of supply and return air.

•Select a location from which pipes can easily be lead to the outside.

•Select a location that allows the supply air to be distributed evenly in the room.

•Do not install the unit in a location where the unit would be subject to steam or splashing oil.

•Do not install the unit in a location where there is a risk of flammable gas leakage.

+Do not install the unit in a location where high-frequency equipment is used (e.g., high-frequency welder).

•Install the unit in such a way that the supply air from the indoor unit will not trigger a fire detector during heating operation.

•Certain chemical substances that may be used in hospitals and chemical plants can damage the plastic parts of the unit. Check with a proper agency to determine if an installation of the unit is feasible.

•Cover the entire surface of the unit with an insulating material with a thickness of 10 to 20 mm to prevent condensation from forming inside the unit if the temperature and humidity of the air above the ceiling tends to become high (dew point above 26 °C.

[1] Ceiling strength

•To avoid the risk of injury, hang the unit from a structure strong enough to support its weight.

[2] Orientation of the unit and securing enough service space

•Determine the best orientation of the unit by taking into consideration such factors as room configuration.

Α

В

С

D

Е

F

G

1

2

3

4

•Wires are connected to the bottom of the control box, and pipes are connected to the side of the unit. Provide enough space to allow for access to these wires and pipes for maintenance and service.



Access door Control box Air inlet Air outlet Ceiling surface Service space (viewed from the side) Service space (viewed from the direction of arrow) 600 mm min. 100 mm min. 20 mm min.

Fig.1

					(mm)
Model	а	b	С	d	е
PEFY-P20,25,32,40VMS-E	900	952	998	860	1000
PEFY-P50VMS-E					
PEFY-P63VMS-E	1100	1152	1198	1060	1200

[3] Indoor/outdoor unit compatibility

Refer to the outdoor unit installation manual for the compatibility between indoor and outdoor units.

GB

4. Fixing the Hanging Bolts

[1] Fixing the hanging bolts



Fig.2

(Fix the hanging bolts on a structure strong enough to support the unit's weight.)

-1- Ceiling structure

•The ceiling structure varies from one building to another. Consult the proper professional for details. •Provide anti-earthquake reinforcement for the hanging bolts as necessary. (*Use M10 bolts.)

Table 1	Center of c	aravity and	Product	Weiaht
i abio i		gravity and	1100000	11 Orgine

Model	W	L	Х	Y	Z	Product Weight (kg)
PEFY-P20VMS-E	625	952	270	420	105	23
PEFY-P25VMS-E	625	952	270	420	105	23
PEFY-P32VMS-E	625	952	270	420	105	23
PEFY-P40VMS-E	625	952	280	422	104	24
PEFY-P50VMS-E	625	952	280	422	104	24
PEFY-P63VMS-E	625	1152	285	511	104	28

А

Center of gravity

Installing the Unit 5.

[1] Hanging the unit

•Do not remove the packing materials from the unit before the unit has arrived at the installation site.

+Use a lifting machine to install the unit.



- Nuts (not supplied)
- D Washers (not supplied)
- M10 hanging bolt (not supplied) Е

Fig.4

GB

[2] Confirming proper installation

+Use the gage that is supplied with the panel to make sure that the units and hanging bolts are properly positioned to prevent dew condensation.

+Use a level to make sure that the bottom surface of the unit (A) is level. Make sure the nuts on the hanging bolts are securely tightened.

•To ensure proper drainage, be sure to install the unit in a horizontal position, using a level.



Indoor unit's bottom surface A

Fig.5



6. Refrigerant Pipe and Drain Pipe Specifications

Insulate refrigerant pipes and drain pipes to prevent dew condensation.

Insulate both the liquid and gas refrigerant pipes with insulating materials with adequate thickness (See the table below.) and heat resistance rating of at least 100 °C.

Insulate all indoor pipes with form polyethylene insulation with a minimum density of 0.03 and a thickness as specified in the table below.

1. Select the proper thickness of insulating material according to the pipe size.

Pipe size	Thickness of insulating material
6.4 mm to 25.4 mm	10 mm min.
28.6 mm to 38.1 mm	15 mm min.

2. If the unit is installed on the top floor of the building and in a high-temperature/high-humidity environment, pipe size and insulation material thickness must be increased.

3. Follow your client's specifications if specified.

[1] Refrigerant pipe and drain pipe specifications

Model		R410A		R407C or R22	
20,2		20, 25, 32, 40, 50	63	20, 25, 32, 40	50, 63 ^{*1}
Refrigerant pipe	Liquid pipe	ø 6.35	ø 9.52	ø 6.35	ø 9.52
(Brazed connection)	Gas pipe	ø 12.7	ø 15.88	ø 12.7	ø 15.88
Drain pipe		O.D. ø 32		O.D. ø 32	

*1. When the P50 models are used with R22 or R407C, use the supplied short pipes.

[2] Refrigerant pipes and drain pipes



- A Refrigerant pipe (liquid pipe): HP
- B Refrigerant pipe (gas pipe): LP
- C Drain pipe (O.D. ø32)
- D Drain pipe (O.D. ø32, spontaneous draining)



GB

7. Connecting Refrigerant Pipes and Drain Pipes

[1] Refrigerant piping work

Piping work must be performed according to the instructions in the installation manuals for the outdoor unit and BC controller.

•The R2 series is designed for use with the systems in which indoor units are connected to the outdoor units via BC controllers. •For information on maximum refrigerant pipe length and allowable height difference between units, refer to the manual that came with the outdoor unit.

Braze pipe connections.

-1- Follow the steps below to install refrigerant pipes.

1. Cut the end of the pipe on the indoor unit, release the gas, and then remove the brazed cap.

A B



A

A

F

Cut the pipe end off.

Remove the brazed cap.

Fig.7

2. Peel off the thermal insulation material on the refrigerant pipe at the site, braze the pipe connections, and replace the insulation in its original position. Wrap the connection with insulation tape.

Note:

To prevent pipe shrinkage and burning of insulation tubes due to heat, cover the pipes with wet cloths before brazing the pipes. Keep the flame away from the unit.



Cover with wet cloths.

Fig.8

Note:

Please note that insulating copper pipes may promote condensation instead of preventing it.



- Thermal insulation material
- B Peel off the insulation.
- C Wrap with damp cloth.

D Put the insulation back on.

- E To be gap-free
 - Wrap the connection with insulating tape.

Fig.9

-2- Notes on refrigerant pipes

•Use non-oxidizing material for brazing. •Keep foreign objects and moisture from entering the pipe.

•Apply refrigerator oil to the flare-seating surface, and tighten the nuts using two spanners.

Install metal pipe supports so that the weight of the pipes is evenly distributed and that the pipe ends do not bear the full weight of the pipe. They should be installed 50 cm away from the connection to the indoor unit.

🕂 WARNING

•Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may result in malfunctions or serious damage to the unit.



+Use refrigerant pipes made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such con-

taminants as sulfur, oxides, dust, dirt, shaving particles, oil, and water.

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

•Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

•Use a small amount of Suniso 4GS or 3GS to flare and flange connections. (Applicable to the models for use with R22)

•Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. (Applicable to the models for use with R410A or R407C) R410A and R407C are highly hygroscopic and could introduce moisture into the system and cause the refrigerator oil to deteriorate, if not handled with care.

[2] Drain piping work

•Install the drain pipe so that it will have a downward pitch toward the outdoor unit (1/100 min.) Do not make a trap.

•The total horizontal length of pipe must be shorter than 20 m. (Vertical length is excluded.) Install metal pipe supports as necessary to keep the pipes from bowing. Do not install an air-vent pipe, as drain water may come out of it.

+Use a hard vinyl chloride pipe (VP-25) as the drain pipe. (OD \emptyset 32 mm)

•Make sure that the section where the pipes meet is at least 10 cm lower than the drain port on the unit.

•Do not make an odor trap at the end of the drain pipe.

•Do not put the end of the drain pipe in the sewer where ion gases are generated.



Fig.10

-) Correct piping
- × Wrong piping
- A Insulation (9 mm min.)
 - Downward slope (1/100 min.)
- C Pipe support
- K Air bleeder

в

- L Upward slope
- M Odor trap

Integrated piping

- D PCV Tube O.D. ø32
- E Minimum height difference: 10 cm
- F Indoor unit
- G Use a larger than usual diameter pipe for integrated piping system.
- H Downward slope (1/100 min.)
- I PVC Tube for integrated piping O.D. Ø38 (with min. 9 mm PVC insulation)
- J 550 mm max.
- N Drain hose (accessory)
- O Horizontal or slight upward slope
- 1. Attach the drain hose (accessory) to the drain port on the unit (Insertion length: 25 mm) with adhesive and secure the connection with a small band that is supplied.

(Do not bend the drain hose more than 45 degrees to prevent the hose from breaking or clogging.)

- 2. Attach the drain pipe (PCV pipe, not supplied) to the drain hose with adhesive and secure the connection with the band (supplied).
- 3. Insulate the pipes and sockets including elbows.
- 4. Check for proper drainage. (Refer to Fig.12.)

5. Insulate the drain port with the insulation tube (supplied) and secure the connection with a band (supplied).



GB

- A Indoor unit
- B Insulation pipe (accessory)
- C Tie band (accessory)
- D Visible part of pipe
- E Insertion length
- F Drain hose (accessory)
- G Drain pipe (PVC TUBE, O.D. ø32, not supplied)
- H Insulating material (not supplied)
- Tie band (accessory)
- J 180 ± 5 mm max.

T

K To be gap free. The joint section where the insulation material meet must be at the top.

[3] Confirming proper drainage of drain water

Make sure that the drainage system functions properly and that there are no leaks from the pipe connections. •Even though condensation water is discharged only during cooling operation, check for proper drainage of condensation water even when the unit is installed off -season.

•If the units are installed in a new building during construction, check the items above before ceiling work is completed.

- 1. Remove the filling port cover on the indoor unit pipes.
- 2. Pour water into the drain pump through the water supply port with a pump. Make sure the tip of the pump stays in the drain pan so that the water will only go into the drain pan.
- 3. Perform a test run in the cooling mode, or turn on the SWE switch on the controller circuit board. (This forces the drain pump and the fan to go into operation regardless of the setting on the remote controller.) Confirm proper drain discharge through the discharge hose (transparent).

4. After checking for proper drainage, stop the test run and turn off the main power. If the SWE was turned on during the test run, turn it off. Place the filling port cover in its original position.

- A Insert the distal end of the tube (2- 4 cm).
- B Remove the filler plate.
- C Approx. 2000 cc
 - Water

D

Е

F

- Filling port
- Screws



WT04882X01



Fig.13 Indoor board

GB

8. Duct Work

•Install a canvas duct between the duct and the unit.

•Use non-combustible duct materials.

+Provide appropriate thermal insulation to prevent condensation from forming on the outlet ducts and duct flanges.

*Keep the inlet grill at least 850 mm away from the fan. If it is not possible, install a safety guard on the fan.



9. Electrical Work

-1- Precautions for electrical work

🕂 WARNING

•Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.

+Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.

- 1. Install an earth leakage breaker on the power supply.
- 2. Do not let the control cables (remote controller and transmission cables) come in contact with the power cable.
- 3. Make sure all connections are securely made.
- 4. Run the cables through conduit tubes to protect the cables above the ceiling (power, remote controller, or transmission cables) from mice, if possible.
- 5. Never connect the power supply cable to any of the leads from the transmission cables.
- 6. Securely connect the indoor units, outdoor units, and remote controller with cables.
- 7. Ground the outdoor unit (Class-D grounding).
- 8. Use remote controller cables that meet the specifications in the table in "Table 2".

•Be sure to ground the outdoor unit. Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire. Improper grounding can result in a risk of electric shock.

-2- Transmission cable specifications

1. Transmission cable

(1) Cable type

Select appropriate cables according to the criteria in the Table 2 below.

(2) Cable diameter 1.25 mm² min.

-

Table 2 Transmission cable

	Transmission cable	ME Remote controller cable	MA Remote controller cable
Cable type	2-core shielded cable CVVS, CPEVS or MVVS	2-core sheathed cable (unshielded) CVV	
Cable diameter	1.25 mm ² min.	0.3 - 1.25 mm ²	0.3 - 1.25 mm ²
(Simple remote controller)		(0.75 - 1.25 mm ²)	(0.75 - 1.25 mm ²)
Note	Max length: 200 m Maximum length of transmission lines for cen- tralized control and indoor/outdoor transmis- sion lines (Maximumlength via indoor units): 500 m MAX Maximum wiring length between the trans- mission booster (on the transmission lines for centralized control) and each outdoor unit or the system controller is 200 m.	When wiring length exceeds 10 m, use cables that meet the same specifications as the transmission cables.	Max length: 200 m

CVVS, MVVS: PVC insulated PVC jacketed shielded control cable CPEVS: PE insulated PVC jacketed shielded communication cable CVV: PVC insulated PVC shielded control cable

[1] Power supply wiring

Power supply cords of all appliances must be rated at least 245 IEC 57 or 227 IEC 57 or heavier.
A switch with a minimum contact opening of 3 mm at every pole is required.

-1- Power cable size

more than 1.5 mm²

A Switch 16 A B Overcurrent protection 16 A C Indoor unit

Fig.15

- Total operating current not to exceed 16 A
- E Pull box

D

-2- Compatible no fuse breaker (NF) and earth leakage breaker (NV)

Use the following models of NF or NV when an NF or NV is used in place of a combination of a Class B fuse and a switch.

1. In the case of Class B fuse rated 15 A or 20 A,

•NF model name (MITSUBISHI): NF30-CS (15 A) (20 A) •NV model name (MITSUBISHI): NV30-CA (15 A) (20 A)

Use an earth leakage breaker with a sensitivity of 30 mA at 0.1 s or less.

Only use breakers and fuses with adequate breaking capacity. Do not substitute a piece of wire for a fuse or use a fuse that exceeds the specified rating.

[2] Connecting the remote controller and indoor/outdoor units

Connect TB5 on the indoor unit and TB3 on the outdoor unit with a non-polarized 2-core cable. The "S" terminal on the TB5 on the indoor unit is for shielded cable connection. For cable specifications, refer to the Installation Manual for the outdoor unit.
 Install the remote controller according to the instructions in the manual that came with the remote controller.

- •Connect terminals #1 and #2 of TB15 on the indoor unit to the corresponding terminals of TB15 on the MA remote controller with nonpolarized 2-core cables.
- •Connect terminals M1 and M2 of TB5 on the indoor unit to the respective terminals of the M-NET remote controller with non-polarized 2core cables.

+Use a 0.75 mm² cable when the length of remote controller cable is less than 10 m. Use a 1.25 mm² cable when it exceeds 10 m.

- A Terminal block for indoor transmission cable
- B Terminal block for outdoor transmission cable
- C Remote controller

Fig.16 MA Remote controller



- A Terminal block for indoor transmission cable
- B Terminal block for outdoor transmission cable
- C Remote controller

Fig.17 M-NET Remote controller

•9 to 13 VDC between 1 and 2 (MA remote controller)
•24 to 30 VCD between M1 and M2 (M-NET remote controller)



Fig.18 MA Remote controller

- A Non-polarized
 - B TB15
 - C Remote Controller
 - D TB5

•Use a 0.75 r

GB



Fig.19 M-NET Remote controller

•The MA and M-NET controllers cannot both be used in the same system.

Install the cables in such a way that the tension load is not applied.

[3] Making electrical connections

1. Unscrew the two screws on the cover to remove it.



A Screws



Fig.20

2. Punch out the knockout holes.

(Use a screw driver or a similar tool.)

- A Terminal block box
- B Knockout hole
- C Punch out the knockout holes.



3. Use a buffer bushing (e.g., PC bushing) for the power supply cable so that external force is not applied to the cable. Connect the transmission cable to the transmission terminal block by putting the cable through the knockout hole on the terminal block box. Use an ordinary bushing for the hole.



(A)

- E Use PG bushing to keep the weight of the cable from being applied to the power supply terminal connector. Use a cable tie to secure the cable.
- F Power supply cable
- G Tensile force

I

- H Use a regular bushing.
 - Transmission cable

Fig.22

4. Connect the power supply, earth, transmission, and remote controller cables. It is not necessary to dismount the terminal block box.



- Power supply terminal block
- Terminal block for indoor transmission cable
- Terminal block for remote controller cable
- To single-phase power supply
- Transmission cable 30VDC
- Terminal block for outdoor transmission cable (TB3)
- P Transmission cable to the remote controller, terminal block for indoor unit, and BC controller

GB

Fig.23



Terminal block

A

B C

D

- Round terminal
- Shielded cable
- The earth wire from two cables are connected together to the S terminal. (Deadend connection)
- E Insulation tape (To keep the earth wire of the shielded cable from coming in contact with the transmission terminal)

Fig.24 Shielded cable connection

5. Upon completion of wiring, check for loose connections, and then place the cover back on the terminal block box cover in the reverse order of removal.

Notes: •Do not pinch cables and wires with the terminal block cover.

[4] External I/O specifications

•Cover the wiring with insulation tubes with extra insulation.

•Use relays and switches that meet the IEC standards or their equivalents.

•Electric resistance between all accessible parts and the control circuit should be at least 2750 V.

[5] Making the external static pressure setting

The external static pressure setting is set to 15 Pa at factory shipment.





Fig.25 Address board

GB

[6] Setting the unit addresses and branch numbers

(Turn off the power before setting the address.)

		SW1	©000000	00000	$\overline{\bigcirc}$
W254613G0 FP-AD-R 3 2 1		·無/輸出·有) 10	8 CN82 1		0
MADE IN J	swa swc ^O sw Apan	¹⁵ ペアN0 分岐ロN0 100	の位 1の位 自己アドレス		

Fig.26 Address board

Three rotary switches are on the address board. The one on the left is for setting the branch address, and the other 1. two are for setting the unit address.

+How to set the unit address

Example: To set the address to "3," set SW12 to "0" and SW11 to "3." •How to set the branch number with SW14 (applicable to R2 series only)

The branch number assigned to each indoor unit is the port number of the BC controller to which the indoor unit is connected. Leave it to "0" on the non-R2 series of units.

2. All rotary switches are set to "0" at factory shipment. These switches are used to set unit addresses and branch numbers.

3. Indoor unit address setting method varies with the system. Refer to the Data Book for how to set the dials.

[7] Using the built-in temperature sensor on the remote controller

To enable the built-in sensor on the remote controller, set SW1-1 on the control board to "ON." Setting the SW1-7 and SW1-8 makes it possible to control fan speed during Thermo-OFF.

1. Safety Precautions

IMPORTANT: FOR YOUR SAFETY READ AND OBSERVE THE FOLLOWING PRECAUTIONS CAREFUL-LY & READ ALL LABELS ON THE UNIT. SAVE THIS MANUAL FOR FUTURE REFERENCE.

Symbol Explanations

🕂 WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

CAUTION

This symbol indicates that that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

[1] Read before installation and performing electrical work

🕂 WARNING

Ask your dealer or a qualified technician to install the unit.
 Improper installation by the user may result in water leakage, electric shock, or fire.

- Properly install the unit on a surface that can withstand its weight. Unit installed on an unstable surface may fall and cause injury.
- •Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable and external force. Improperly connected cables may produce heat and start a fire.
- •Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over. Improper installation may cause the unit to topple over and cause injury or damage to the unit.
- •Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric. Ask a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- •Do not make any modifications or alterations to the unit. Consult your dealer for repair. Improper repair may result in water leakage, electric shock, or fire
- •Do not touch the heat exchange and the fins are sharp and pose



+Always wear protective equipment wnen nanaling this product (e.g., gloves, tuil arm protection such as a boller suit, goggles).

- In the event of a refrigerant leak, thoroughly ventilate the room.
 If gaseous refrigerant leaks out and comes in contact with an open flame, toxic gases will be generated.
- •Properly install the unit according to the instructions in the Installation Manual. Improper installation may result in water leakage, electric shock, or fire.
- •Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.

Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.

- Keep electrical parts away from water.
 Wet electrical parts pose a risk of electric shock, smoke, or fire.
- •Securely attach the control box cover.
- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.
- •Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.
- •When installing the unit in a small space, take appropriate precautions to prevent leaked refrigerant from reaching the limiting concentration. Leaked refrigerant gas will displace oxygen and cause oxygen starvation if it exceeds the limiting concentration. Consult your dealer before installing the unit.
- •Consult your dealer or a qualified technician when moving or reinstalling the unit. Improper installation may result in water leakage, electric shock, or fire.
- •After completing the service work, check for a refrigerant leak. If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.
- •Do not try to defeat the safety features of the unit. Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices or the use of accessories other than the ones that are recommended by MITSUBISHI may result in smoke, fire, or explosion.
- · Consult your dealer for proper disposal method.

П

•Do not use a leak detection additive.

[2] Precautions for handling units for use with R410A

Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

- •Use refrigerant piping materials made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and moisture. Contaminants in the refrigerant piping may cause the refrigerator oil to deteriorate.
- •Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. (Keep elbows and other joints wrapped in plastic.)

Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

- Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. Infiltration of a large amount of mineral oil may cause the refrigerator oil to deteriorate.
- •Charge the system with refrigerant in the liquid phase. If gaseous refrigerant is drawn out of the cylinder first, the composition of the remaining refrigerant in the cylinder will change and become unsuitable for use.
- •Only use R410A or R407C.

The use of other types of refrigerant that contain chloride may cause the refrigerator oil to deteriorate.

- •Use a vacuum pump with a check valve.
- If a vacuum pump that is not equipped with a check valve is used, the vacuum pump oil may flow into the refrigerant cycle and cause the refrigerator oil to deteriorate.
- •Prepare tools for exclusive use with R 410A. Do not use the following tools if they have been used with the conventional refrigerant: gauge manifold, charging hose, gas leak detector, check valve, refrigerant charge base, vacuum gauge, and refrigerant recovery equipment. If the refrigerant or the refrigerator oil that may be left on these tools are mixed in with R410A, it may cause the refrigerator oil in the new system to deteriorate.
- Infiltration of water may cause the refrigerator oil to deteriorate. Leak detectors for conventional refrigerants will not detect an R410A leak because R410A is free of chlorine.
- Do not use a charging cylinc If a charging cylinder is used



itable for use.

•Exercise special care when handling tools for use with R410A. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate.

[3] Read before installing the unit

A CAUTION

•To avoid the risk of fire, never install the air conditioner where there is a risk of leakage of flammable gas.

- •The models of air conditioning units described in this manual are not intended for use with food, pets, plants, precision instruments, or art work.
- •Do not use the unit in an environment with a high concentration of oil, steam, sulfuric gas etc. They can significantly reduce the performance of the unit or damage its parts.
- •Take appropriate measures against noise interference when installing the air conditioners in hospitals or communication facilities.
- •Inverter equipment, power generators, radio communication equipment, and high-frequency medical equipment may interfere with the normal operation of the air conditioner or vice versa.
- Install the unit in a location which will not render the unit vulnerable to water leakage. When the indoor humidity exceeds 80% or if the drainpipe becomes clogged, condensation may drip from the indoor unit. Provide an adequate collective drainage system as necessary.

•The models of indoor units described in this manual should only be installed on a ceiling at least 2.5 m from the floor.

[4] Read before performing electrical work

•Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire.

- •To avoid the risk of wire breakage and fire, install the power cable in such a way that tension load is not applied.
- •To avoid the risk of electric shock, install all required breakers.

•To avoid the risk of current leakage, heat build-up, and fire, use properly rated power cables for the capacity of the line.

ons

•To avoid the risk of unit failure and fire, use properly rated breakers and fuses.

•To avoid the risk of electric shock, do not wash the air conditioning units with water.

•To prevent the unit from toppling over and cause personal injury or unit damage, periodically check the installation base for damage.

 Install drainpipes according the instructions in this manual to ensure proper drainage. Wrap thermal insulation around the pipes to prevent moisture condensation.

Improper pipe installation or inadequate insulation may result in water leakage.

•Exercise caution when transporting units.

Products weighing more than 20 kg should be carried by at least two people. Do not suspend the unit by the PP bands that are used on some packages. To avoid the risk of cuts, keep your hands away from the heat exchanger fins. When using a crane or other hoisting equipment to lift the unit, suspend the unit from four corners.

•Properly dispose of packing materials.

Pallets and the nails on the pallets can pose the risk of cuts, stabs, and abrasions. Plastic gabs can pose suffocation and choking hazards; do not let children play with them. Tear the plastic bags before disposing of them.

[5] Read before starting the test run

•Keep the power on for at least 12 hours before starting a test run.

•To avoid the risk of electric shock, do not touch the switches with wet hands.

•Do not touch the refrigerant pipes with bare hands during and immediately after operation.

•During or immediately after operation, certain parts of the unit such as pipes and compressor may be either very cold or hot, depending on the state of the refrigerant in the unit at the time. To reduce the risk of frostbites and burns, do not touch these parts with bare hands.

•Do not operate the unit without panels and safety guards properly installed.

The unit houses high-temperature, high-voltage, or rotating parts that can pose a risk of injury if the unit is operated without the panel and fan guard.

Do not turn off the power immediately after stopping the operation.
 Keep the unit on for at least

2. Indoor Unit Acces

3. Selecting an Installation Site

[1] Ceiling strength

/ WARNING

•To avoid the risk of injury, hang the unit from a structure strong enough to support its weight.

- [2] Orientation of the unit and securing enough service space
- [3] Indoor/outdoor unit compatibility
- 4. Fixing the Hanging Bolts
- [1] Fixing the hanging bolts
- 5. Installing the Unit
- [1] Hanging the unit
- [2] Confirming proper installation

A CAUTION

• If the unit is installed with the drain port side elevated above the rest, water leakage may result.

- 6. Refrigerant Pipe and Drain Pipe Specifications
- [1] Refrigerant pipe and drain pipe specifications
- [2] Refrigerant pipes and drain pipes

7. Connecting Refrigerant Pipes and Drain Pipes

[1] Refrigerant piping work

🕂 WARNING

Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit.
 Infiltration of any other types of refrigerant or air into the unit may result in malfunctions or serious damage to the unit.



•Use refrigerant pipes made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and water.

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

• Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

+Use a small amount of Suniso 4GS or 3GS to flare and flange connections. (Applicable to the models for use with R22)

 Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. (Applicable to the models for use with R410A or R407C) R410A and R407C are highly hygroscopic and could introduce moisture into the system and cause the refrigerator oil to deteriorate, if not handled with care.

[2] Drain piping work

[3] Confirming proper drainage of drain water

8. Duct Work

*Keep the inlet grill at least 850 mm away from the fan. If it is not possible, install a safety guard on the fan.

9. Electrical Work

🕂 WARNING

Have all electrical work performance a dedicated circuit.

+Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.

Be sure to ground the outdoor unit. Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire. Improper grounding can result in a risk of electric shock.

[1] Power supply wiring

▲ CAUTION

Only use breakers and fuses with adequate breaking capacity. Do not substitute a piece of wire for a fuse or use a fuse that exceeds the specified rating.

[2] Connecting the remote controller and indoor/outdoor units

Install the cables in such a way that the tension load is not applied.

- [3] Making electrical connections
- [4] External I/O specifications

🕂 CAUTION

Cover the wiring with insulation tubes with extra insulation.
Use relays and switches that meet the IEC standards or their equivalents.
Electric resistance between all accessible parts and the control circuit should be at least 2750 V.

- [5] Making the external static pressure setting
- [6] Setting the unit addresses and branch numbers
- [7] Using the built-in temperature sensor on the remote controller

ructions in this manual. Use

1. Safety Precautions

IMPORTANT: FOR YOUR SAFETY READ AND OBSERVE THE FOLLOWING PRECAUTIONS CAREFUL-LY & READ ALL LABELS ON THE UNIT. SAVE THIS MANUAL FOR FUTURE REFERENCE.

Symbol Explanations

🕂 WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

CAUTION

This symbol indicates that that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

[1] Read before installation and performing electrical work

🕂 WARNING

Ask your dealer or a qualified technician to install the unit.
 Improper installation by the user may result in water leakage, electric shock, or fire.

- Properly install the unit on a surface that can withstand its weight. Unit installed on an unstable surface may fall and cause injury.
- •Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable and external force. Improperly connected cables may produce heat and start a fire.
- •Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over. Improper installation may cause the unit to topple over and cause injury or damage to the unit.
- •Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric. Ask a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- •Do not make any modifications or alterations to the unit. Consult your dealer for repair. Improper repair may result in water leakage, electric shock, or fire
- •Do not touch the heat exchanges for with been been de The fins are sharp and pose



- In the event of a refrigerant leak, thoroughly ventilate the room. If gaseous refrigerant leaks out and comes in contact with an open flame, toxic gases will be generated.
- Properly install the unit according to the instructions in the Installation Manual. Improper installation may result in water leakage, electric shock, or fire.
- •Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.
- Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.
- Keep electrical parts away from water.
 Wet electrical parts pose a risk of electric shock, smoke, or fire.
- •Securely attach the control box cover.
- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.
- •Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.
- •When installing the unit in a small space, take appropriate precautions to prevent leaked refrigerant from reaching the limiting concentration. Leaked refrigerant gas will displace oxygen and cause oxygen starvation if it exceeds the limiting concentration. Consult your dealer before installing the unit.
- •Consult your dealer or a qualified technician when moving or reinstalling the unit. Improper installation may result in water leakage, electric shock, or fire.
- •After completing the service work, check for a refrigerant leak. If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.
- •Do not try to defeat the safety features of the unit. Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices or the use of accessories other than the ones that are recommended by MITSUBISHI may result in smoke, fire, or explosion.
- · Consult your dealer for proper disposal method.

Do not use a leak detection additive.

[2] Precautions for handling units for use with R410A CAUTION Do not use the existing refrigerant piping. A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate. •Use refrigerant piping materials made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and moisture. Contaminants in the refrigerant piping may cause the refrigerator oil to deteriorate. •Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. (Keep elbows and other joints wrapped in plastic.) Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction. Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. Infiltration of a large amount of mineral oil may cause the refrigerator oil to deteriorate. •Charge the system with refrigerant in the liquid phase. If gaseous refrigerant is drawn out of the cylinder first, the composition of the remaining refrigerant in the cylinder will change and become unsuitable for use. Only use R410A or R407C. The use of other types of refrigerant that contain chloride may cause the refrigerator oil to deteriorate. •Use a vacuum pump with a check valve. If a vacuum pump that is not equipped with a check valve is used, the vacuum pump oil may flow into the refrigerant cycle and cause the refrigerator oil to deteriorate. •Prepare tools for exclusive use with R 410A. Do not use the following tools if they have been used with the conventional refrigerant: gauge manifold, charging hose, gas leak detector, check valve, refrigerant charge base, vacuum gauge, and refrigerant recovery equipment. If the refrigerant or the refrigerator oil that may be left on these tools are mixed in with R410A, it may cause the refrigerator oil in the new system to deteriorate Infiltration of water may cause the refrigerator oil to deteriorate. Leak detectors for conventional refrigerants will not detect an R410A leak because R410A is free of chlorine. Do not use a charging cylinc If a charging cylinder is used table for use. Exercise special care when handling tools for use with R410A. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate. [3] Read before installing the unit CAUTION

•To avoid the risk of fire, never install the air conditioner where there is a risk of leakage of flammable gas.

- •The models of air conditioning units described in this manual are not intended for use with food, pets, plants, precision instruments, or art work.
- +Do not use the unit in an environment with a high concentration of oil, steam, sulfuric gas etc. They can significantly reduce the performance of the unit or damage its parts.
- •Take appropriate measures against noise interference when installing the air conditioners in hospitals or communication facilities.
- Inverter equipment, power generators, radio communication equipment, and high-frequency medical equipment may interfere with the normal operation of the air conditioner or vice versa.
- •Install the unit in a location which will not render the unit vulnerable to water leakage. When the indoor humidity exceeds 80% or if the drainpipe becomes clogged, condensation may drip from the indoor unit. Provide an adequate collective drainage system as necessary.

•The models of indoor units described in this manual should only be installed on a ceiling at least 2.5 m from the floor.

Read before performing electrical work

CAUTION

Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire.

- •To avoid the risk of wire breakage and fire, install the power cable in such a way that tension load is not applied.
- •To avoid the risk of electric shock, install all required breakers.

•To avoid the risk of current leakage, heat build-up, and fire, use properly rated power cables for the capacity of the line.

ons

•To avoid the risk of unit failure and fire, use properly rated breakers and fuses.

•To avoid the risk of electric shock, do not wash the air conditioning units with water.

•To prevent the unit from toppling over and cause personal injury or unit damage, periodically check the installation base for damage.

 Install drainpipes according the instructions in this manual to ensure proper drainage. Wrap thermal insulation around the pipes to prevent moisture condensation.

Improper pipe installation or inadequate insulation may result in water leakage.

•Exercise caution when transporting units.

Products weighing more than 20 kg should be carried by at least two people. Do not suspend the unit by the PP bands that are used on some packages. To avoid the risk of cuts, keep your hands away from the heat exchanger fins. When using a crane or other hoisting equipment to lift the unit, suspend the unit from four corners.

•Properly dispose of packing materials.

Pallets and the nails on the pallets can pose the risk of cuts, stabs, and abrasions. Plastic gabs can pose suffocation and choking hazards; do not let children play with them. Tear the plastic bags before disposing of them.

[5] Read before starting the test run

*Keep the power on for at least 12 hours before starting a test run.

•To avoid the risk of electric shock, do not touch the switches with wet hands.

•Do not touch the refrigerant pipes with bare hands during and immediately after operation.

•During or immediately after operation, certain parts of the unit such as pipes and compressor may be either very cold or hot, depending on the state of the refrigerant in the unit at the time. To reduce the risk of frostbites and burns, do not touch these parts with bare hands.

•Do not operate the unit without panels and safety guards properly installed.

The unit houses high-temperature, high-voltage, or rotating parts that can pose a risk of injury if the unit is operated without the panel and fan guard.

•Do not turn off the power immediately after stopping the operation. Keep the unit on for at least

2. Indoor Unit Acces

3. Selecting an Installation Site

[1] Ceiling strength

🕂 WARNING

•To avoid the risk of injury, hang the unit from a structure strong enough to support its weight.

- [2] Orientation of the unit and securing enough service space
- [3] Indoor/outdoor unit compatibility
- 4. Fixing the Hanging Bolts
- [1] Fixing the hanging bolts

5. Installing the Unit

- [1] Hanging the unit
- [2] Confirming proper installation

A CAUTION

+If the unit is installed with the drain port side elevated above the rest, water leakage may result.

6. Refrigerant Pipe and Drain Pipe Specifications

[1] Refrigerant pipe and drain pipe specifications

[2] Refrigerant pipes and drain pipes

7. Connecting Refrigerant Pipes and Drain Pipes

[1] Refrigerant piping work

🕂 WARNING

Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit.
 Infiltration of any other types of refrigerant or air into the unit may result in malfunctions or serious damage to the unit.



•Use refrigerant pipes made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and water.

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

•Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

+Use a small amount of Suniso 4GS or 3GS to flare and flange connections. (Applicable to the models for use with R22)

•Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. (Applicable to the models for use with R410A or R407C) R410A and R407C are highly hygroscopic and could introduce moisture into the system and cause the refrigerator oil to deteriorate, if not handled with care.

[2] Drain piping work

[3] Confirming proper drainage of drain water

8. Duct Work

🕂 CAUTION

•Keep the inlet grill at least 850 mm away from the fan. If it is not possible, install a safety guard on the fan.

9. Electrical Work

🕂 WARNING

Have all electrical work performance a dedicated circuit.

+Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.

Be sure to ground the outdoor unit. Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire. Improper grounding can result in a risk of electric shock.

[1] Power supply wiring

▲ CAUTION

Only use breakers and fuses with adequate breaking capacity. Do not substitute a piece of wire for a fuse or use a fuse that exceeds the specified rating.

[2] Connecting the remote controller and indoor/outdoor units

Install the cables in such a way that the tension load is not applied.

- [3] Making electrical connections
- [4] External I/O specifications

🔨 CAUTION

Cover the wiring with insulation tubes with extra insulation.
Use relays and switches that meet the IEC standards or their equivalents.
Electric resistance between all accessible parts and the control circuit should be at least 2750 V.

- [5] Making the external static pressure setting
- [6] Setting the unit addresses and branch numbers
- [7] Using the built-in temperature sensor on the remote controller

ructions in this manual. Use

1. Safety Precautions

IMPORTANT: FOR YOUR SAFETY READ AND OBSERVE THE FOLLOWING PRECAUTIONS CAREFUL-LY & READ ALL LABELS ON THE UNIT. SAVE THIS MANUAL FOR FUTURE REFERENCE.

Symbol Explanations

🕂 WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

This symbol indicates that that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

[1] Read before installation and performing electrical work

🕂 WARNING

Ask your dealer or a qualified technician to install the unit.
 Improper installation by the user may result in water leakage, electric shock, or fire.

- Properly install the unit on a surface that can withstand its weight. Unit installed on an unstable surface may fall and cause injury.
- •Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable and external force. Improperly connected cables may produce heat and start a fire.
- •Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over. Improper installation may cause the unit to topple over and cause injury or damage to the unit.
- •Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric. Ask a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- •Do not make any modifications or alterations to the unit. Consult your dealer for repair. Improper repair may result in water leakage, electric shock, or fire
- •Do not touch the heat exchange and heat exchang
- +Always wear protective equipment when handling this product (e.g., gloves, tuil arm protection such as a boller suit, goggles).
- In the event of a refrigerant leak, thoroughly ventilate the room.
 If gaseous refrigerant leaks out and comes in contact with an open flame, toxic gases will be generated.
- •Properly install the unit according to the instructions in the Installation Manual. Improper installation may result in water leakage, electric shock, or fire.
- •Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.
- Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.
- Keep electrical parts away from water.
 Wet electrical parts pose a risk of electric shock, smoke, or fire.
- •Securely attach the control box cover.
- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.
- •Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.
- •When installing the unit in a small space, take appropriate precautions to prevent leaked refrigerant from reaching the limiting concentration. Leaked refrigerant gas will displace oxygen and cause oxygen starvation if it exceeds the limiting concentration. Consult your dealer before installing the unit.
- •Consult your dealer or a qualified technician when moving or reinstalling the unit. Improper installation may result in water leakage, electric shock, or fire.
- After completing the service work, check for a refrigerant leak.
 If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.
- •Do not try to defeat the safety features of the unit. Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices or the use of accessories other than the ones that are recommended by MITSUBISHI may result in smoke, fire, or explosion.
- · Consult your dealer for proper disposal method.

•Do not use a leak detection additive.

[2] Pi	recautions for handling units for use with R410A	
∕∧ ca	AUTION	
+Do A I era	o not use the existing refrigerant piping. large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing ator oil in the new unit to deteriorate.	piping may cause the refrig-
+Us su Co	se refrigerant piping materials made of phosphorus deoxidized copper. Keep the inner and outer surfaces o ich contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and moisture. ontaminants in the refrigerant piping may cause the refrigerator oil to deteriorate.	f the pipes clean and free of
+Sto	ore the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. (H	Keep elbows and other joints
wr Inf fur	rapped in plastic.) filtration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cau nction.	use the compressor to mal-
∙Ap Inf	oply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. filtration of a large amount of mineral oil may cause the refrigerator oil to deteriorate.	
∙Ch اf و un	narge the system with refrigerant in the liquid phase. gaseous refrigerant is drawn out of the cylinder first, the composition of the remaining refrigerant in the cylin usuitable for use.	der will change and become
•On Th	nly use R410A or R407C. ne use of other types of refrigerant that contain chloride may cause the refrigerator oil to deteriorate.	
•Us If a ref	se a vacuum pump with a check valve. a vacuum pump that is not equipped with a check valve is used, the vacuum pump oil may flow into the refi frigerator oil to deteriorate.	igerant cycle and cause the
•Pre ma If t	repare tools for exclusive use with R 410A. Do not use the following tools if they have been used with the cor anifold, charging hose, gas leak detector, check valve, refrigerant charge base, vacuum gauge, and refrige the refrigerant or the refrigerator oil that may be left on these tools are mixed in with R410A, it may cause t istem to deteriorate.	nventional refrigerant: gauge grant recovery equipment. he refrigerator oil in the new
Inf Le	filtration of water may cause the refrigerator oil to deteriorate. eak detectors for conventional refrigerants will not detect an R410A leak because R410A is free of chlorine	
•Do If a	o not use a charging cylinc a charging cylinder is used	table for use.
◆Ex Inf	vercise special care when handling tools for use with R410A. filtration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate.	
[3] R	ead before installing the unit	

•To avoid the risk of fire, never install the air conditioner where there is a risk of leakage of flammable gas.

- •The models of air conditioning units described in this manual are not intended for use with food, pets, plants, precision instruments, or art work.
- •Do not use the unit in an environment with a high concentration of oil, steam, sulfuric gas etc. They can significantly reduce the performance of the unit or damage its parts.
- •Take appropriate measures against noise interference when installing the air conditioners in hospitals or communication facilities.
- •Inverter equipment, power generators, radio communication equipment, and high-frequency medical equipment may interfere with the normal operation of the air conditioner or vice versa.
- Install the unit in a location which will not render the unit vulnerable to water leakage. When the indoor humidity exceeds 80% or if the drainpipe becomes clogged, condensation may drip from the indoor unit. Provide an adequate collective drainage system as necessary.

•The models of indoor units described in this manual should only be installed on a ceiling at least 2.5 m from the floor.

[4] Read before performing electrical work

•Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire.

- •To avoid the risk of wire breakage and fire, install the power cable in such a way that tension load is not applied.
- •To avoid the risk of electric shock, install all required breakers.

•To avoid the risk of current leakage, heat build-up, and fire, use properly rated power cables for the capacity of the line.

I

•To avoid the risk of unit failure and fire, use properly rated breakers and fuses.

•To avoid the risk of electric shock, do not wash the air conditioning units with water.

•To prevent the unit from toppling over and cause personal injury or unit damage, periodically check the installation base for damage.

 Install drainpipes according the instructions in this manual to ensure proper drainage. Wrap thermal insulation around the pipes to prevent moisture condensation.

Improper pipe installation or inadequate insulation may result in water leakage.

•Exercise caution when transporting units.

Products weighing more than 20 kg should be carried by at least two people. Do not suspend the unit by the PP bands that are used on some packages. To avoid the risk of cuts, keep your hands away from the heat exchanger fins. When using a crane or other hoisting equipment to lift the unit, suspend the unit from four corners.

• Properly dispose of packing materials.

Pallets and the nails on the pallets can pose the risk of cuts, stabs, and abrasions. Plastic gabs can pose suffocation and choking hazards; do not let children play with them. Tear the plastic bags before disposing of them.

[5] Read before starting the test run

CAUTION

*Keep the power on for at least 12 hours before starting a test run.

•To avoid the risk of electric shock, do not touch the switches with wet hands.

•Do not touch the refrigerant pipes with bare hands during and immediately after operation.

•During or immediately after operation, certain parts of the unit such as pipes and compressor may be either very cold or hot, depending on the state of the refrigerant in the unit at the time. To reduce the risk of frostbites and burns, do not touch these parts with bare hands.

•Do not operate the unit without panels and safety guards properly installed.

The unit houses high-temperature, high-voltage, or rotating parts that can pose a risk of injury if the unit is operated without the panel and fan guard.



2. Indoor Unit Acces

3. Selecting an Installation Site

[1] Ceiling strength

•To avoid the risk of injury, hang the unit from a structure strong enough to support its weight.

- [2] Orientation of the unit and securing enough service space
- [3] Indoor/outdoor unit compatibility
- 4. Fixing the Hanging Bolts
- [1] Fixing the hanging bolts

5. Installing the Unit

- [1] Hanging the unit
- [2] Confirming proper installation

A CAUTION

+If the unit is installed with the drain port side elevated above the rest, water leakage may result.

6. Refrigerant Pipe and Drain Pipe Specifications

[1] Refrigerant pipe and drain pipe specifications

[2] Refrigerant pipes and drain pipes

7. Connecting Refrigerant Pipes and Drain Pipes

[1] Refrigerant piping work

•Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may result in malfunctions or serious damage to the unit.



I

•Use refrigerant pipes made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and water.

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

•Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

+Use a small amount of Suniso 4GS or 3GS to flare and flange connections. (Applicable to the models for use with R22)

•Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. (Applicable to the models for use with R410A or R407C) R410A and R407C are highly hygroscopic and could introduce moisture into the system and cause the refrigerator oil to deteriorate, if not handled with care.

[2] Drain piping work

[3] Confirming proper drainage of drain water

8. Duct Work

•Keep the inlet grill at least 850 mm away from the fan. If it is not possible, install a safety guard on the fan.

9. Electrical Work

🕂 WARNING

Have all electrical work performance a dedicated circuit.

Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.

•Be sure to ground the outdoor unit. Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire. Improper grounding can result in a risk of electric shock.

[1] Power supply wiring

▲ CAUTION

Only use breakers and fuses with adequate breaking capacity. Do not substitute a piece of wire for a fuse or use a fuse that exceeds the specified rating.

[2] Connecting the remote controller and indoor/outdoor units

Install the cables in such a way that the tension load is not applied.

- [3] Making electrical connections
- [4] External I/O specifications

🕂 CAUTION

Cover the wiring with insulation tubes with extra insulation.
Use relays and switches that meet the IEC standards or their equivalents.
Electric resistance between all accessible parts and the control circuit should be at least 2750 V.

- [5] Making the external static pressure setting
- [6] Setting the unit addresses and branch numbers
- [7] Using the built-in temperature sensor on the remote controller

ructions in this manual. Use

1. Safety Precautions

IMPORTANT: FOR YOUR SAFETY READ AND OBSERVE THE FOLLOWING PRECAUTIONS CAREFUL-LY & READ ALL LABELS ON THE UNIT. SAVE THIS MANUAL FOR FUTURE REFERENCE.

Symbol Explanations

🕂 WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

This symbol indicates that that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

[1] Read before installation and performing electrical work

🕂 WARNING

Ask your dealer or a qualified technician to install the unit.
 Improper installation by the user may result in water leakage, electric shock, or fire.

- Properly install the unit on a surface that can withstand its weight. Unit installed on an unstable surface may fall and cause injury.
- •Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable and external force. Improperly connected cables may produce heat and start a fire.
- •Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over. Improper installation may cause the unit to topple over and cause injury or damage to the unit.
- •Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric. Ask a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- •Do not make any modifications or alterations to the unit. Consult your dealer for repair. Improper repair may result in water leakage, electric shock, or fire

•Do not touch the heat exchange The fins are sharp and pose



+Always wear protective equipment wnen nanaling this product (e.g., gloves, tuil arm protection such as a boller suit, goggles).

- In the event of a refrigerant leak, thoroughly ventilate the room. If gaseous refrigerant leaks out and comes in contact with an open flame, toxic gases will be generated.
- •Properly install the unit according to the instructions in the Installation Manual. Improper installation may result in water leakage, electric shock, or fire.
- •Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.
- Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.
- Keep electrical parts away from water.
 Wet electrical parts pose a risk of electric shock, smoke, or fire.
- •Securely attach the control box cover.
- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.
- •Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.
- •When installing the unit in a small space, take appropriate precautions to prevent leaked refrigerant from reaching the limiting concentration. Leaked refrigerant gas will displace oxygen and cause oxygen starvation if it exceeds the limiting concentration. Consult your dealer before installing the unit.
- •Consult your dealer or a qualified technician when moving or reinstalling the unit. Improper installation may result in water leakage, electric shock, or fire.
- •After completing the service work, check for a refrigerant leak. If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.
- •Do not try to defeat the safety features of the unit. Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices or the use of accessories other than the ones that are recommended by MITSUBISHI may result in smoke, fire, or explosion.
- · Consult your dealer for proper disposal method.

•Do not use a leak detection additive.

[2] Precautions for handling units for use with R410A

Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

- •Use refrigerant piping materials made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and moisture. Contaminants in the refrigerant piping may cause the refrigerator oil to deteriorate.
- •Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. (Keep elbows and other joints wrapped in plastic.)

Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

- Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. Infiltration of a large amount of mineral oil may cause the refrigerator oil to deteriorate.
- •Charge the system with refrigerant in the liquid phase. If gaseous refrigerant is drawn out of the cylinder first, the composition of the remaining refrigerant in the cylinder will change and become unsuitable for use.
- •Only use R410A or R407C.

The use of other types of refrigerant that contain chloride may cause the refrigerator oil to deteriorate.

- •Use a vacuum pump with a check valve.
- If a vacuum pump that is not equipped with a check valve is used, the vacuum pump oil may flow into the refrigerant cycle and cause the refrigerator oil to deteriorate.
- •Prepare tools for exclusive use with R 410A. Do not use the following tools if they have been used with the conventional refrigerant: gauge manifold, charging hose, gas leak detector, check valve, refrigerant charge base, vacuum gauge, and refrigerant recovery equipment. If the refrigerant or the refrigerator oil that may be left on these tools are mixed in with R410A, it may cause the refrigerator oil in the new system to deteriorate.
- Infiltration of water may cause the refrigerator oil to deteriorate. Leak detectors for conventional refrigerants will not detect an R410A leak because R410A is free of chlorine.
- Do not use a charging cylind If a charging cylinder is used



itable for use.

Exercise special care when handling tools for use with R410A.
 Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate.

[3] Read before installing the unit

A CAUTION

•To avoid the risk of fire, never install the air conditioner where there is a risk of leakage of flammable gas.

- •The models of air conditioning units described in this manual are not intended for use with food, pets, plants, precision instruments, or art work.
- •Do not use the unit in an environment with a high concentration of oil, steam, sulfuric gas etc. They can significantly reduce the performance of the unit or damage its parts.
- •Take appropriate measures against noise interference when installing the air conditioners in hospitals or communication facilities.
- •Inverter equipment, power generators, radio communication equipment, and high-frequency medical equipment may interfere with the normal operation of the air conditioner or vice versa.
- Install the unit in a location which will not render the unit vulnerable to water leakage. When the indoor humidity exceeds 80% or if the drainpipe becomes clogged, condensation may drip from the indoor unit. Provide an adequate collective drainage system as necessary.

•The models of indoor units described in this manual should only be installed on a ceiling at least 2.5 m from the floor.

[4] Read before performing electrical work

A CAUTION

•Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire.

- •To avoid the risk of wire breakage and fire, install the power cable in such a way that tension load is not applied.
- •To avoid the risk of electric shock, install all required breakers.

•To avoid the risk of current leakage, heat build-up, and fire, use properly rated power cables for the capacity of the line.

ons

NI

•To avoid the risk of unit failure and fire, use properly rated breakers and fuses.

•To avoid the risk of electric shock, do not wash the air conditioning units with water.

•To prevent the unit from toppling over and cause personal injury or unit damage, periodically check the installation base for damage.

•Install drainpipes according the instructions in this manual to ensure proper drainage. Wrap thermal insulation around the pipes to prevent moisture condensation.

Improper pipe installation or inadequate insulation may result in water leakage.

•Exercise caution when transporting units.

Products weighing more than 20 kg should be carried by at least two people. Do not suspend the unit by the PP bands that are used on some packages. To avoid the risk of cuts, keep your hands away from the heat exchanger fins. When using a crane or other hoisting equipment to lift the unit, suspend the unit from four corners.

• Properly dispose of packing materials.

Pallets and the nails on the pallets can pose the risk of cuts, stabs, and abrasions. Plastic gabs can pose suffocation and choking hazards; do not let children play with them. Tear the plastic bags before disposing of them.

[5] Read before starting the test run

*Keep the power on for at least 12 hours before starting a test run.

•To avoid the risk of electric shock, do not touch the switches with wet hands.

•Do not touch the refrigerant pipes with bare hands during and immediately after operation.

•During or immediately after operation, certain parts of the unit such as pipes and compressor may be either very cold or hot, depending on the state of the refrigerant in the unit at the time. To reduce the risk of frostbites and burns, do not touch these parts with bare hands.

*Do not operate the unit without panels and safety guards properly installed.

The unit houses high-temperature, high-voltage, or rotating parts that can pose a risk of injury if the unit is operated without the panel and fan guard.

•Do not turn off the power immediately after stopping the operation. Keep the unit on for at least

2. Indoor Unit Acces

3. Selecting an Installation Site

[1] Ceiling strength

/ WARNING

•To avoid the risk of injury, hang the unit from a structure strong enough to support its weight.

- [2] Orientation of the unit and securing enough service space
- [3] Indoor/outdoor unit compatibility
- 4. Fixing the Hanging Bolts
- [1] Fixing the hanging bolts
- 5. Installing the Unit
- [1] Hanging the unit
- [2] Confirming proper installation

A CAUTION

+If the unit is installed with the drain port side elevated above the rest, water leakage may result.

- 6. Refrigerant Pipe and Drain Pipe Specifications
- [1] Refrigerant pipe and drain pipe specifications
- [2] Refrigerant pipes and drain pipes

7. Connecting Refrigerant Pipes and Drain Pipes

[1] Refrigerant piping work

🔨 WARNING

Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit.
 Infiltration of any other types of refrigerant or air into the unit may result in malfunctions or serious damage to the unit.



NL

•Use refrigerant pipes made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and water.

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

•Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

+Use a small amount of Suniso 4GS or 3GS to flare and flange connections. (Applicable to the models for use with R22)

•Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. (Applicable to the models for use with R410A or R407C) R410A and R407C are highly hygroscopic and could introduce moisture into the system and cause the refrigerator oil to deteriorate, if not handled with care.

[2] Drain piping work

[3] Confirming proper drainage of drain water

8. Duct Work

*Keep the inlet grill at least 850 mm away from the fan. If it is not possible, install a safety guard on the fan.

9. Electrical Work

Have all electrical work performance a dedicated circuit.

NL

ructions in this manual. Use

+Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.

Be sure to ground the outdoor unit. Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire. Improper grounding can result in a risk of electric shock.

[1] Power supply wiring

▲ CAUTION

Only use breakers and fuses with adequate breaking capacity. Do not substitute a piece of wire for a fuse or use a fuse that exceeds the specified rating.

[2] Connecting the remote controller and indoor/outdoor units

Install the cables in such a way that the tension load is not applied.

- [3] Making electrical connections
- [4] External I/O specifications

🕂 CAUTION

Cover the wiring with insulation tubes with extra insulation.
Use relays and switches that meet the IEC standards or their equivalents.
Electric resistance between all accessible parts and the control circuit should be at least 2750 V.

- [5] Making the external static pressure setting
- [6] Setting the unit addresses and branch numbers
- [7] Using the built-in temperature sensor on the remote controller
IMPORTANT: FOR YOUR SAFETY READ AND OBSERVE THE FOLLOWING PRECAUTIONS CAREFUL-LY & READ ALL LABELS ON THE UNIT. SAVE THIS MANUAL FOR FUTURE REFERENCE.

Symbol Explanations

🕂 WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

This symbol indicates that that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

[1] Read before installation and performing electrical work

🕂 WARNING

Ask your dealer or a qualified technician to install the unit.
 Improper installation by the user may result in water leakage, electric shock, or fire.

- Properly install the unit on a surface that can withstand its weight. Unit installed on an unstable surface may fall and cause injury.
- •Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable and external force. Improperly connected cables may produce heat and start a fire.
- •Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over. Improper installation may cause the unit to topple over and cause injury or damage to the unit.
- •Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric. Ask a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- •Do not make any modifications or alterations to the unit. Consult your dealer for repair. Improper repair may result in water leakage, electric shock, or fire

•Do not touch the heat exchange The fins are sharp and pose



+Always wear protective equipment wnen nanoling this product (e.g., gloves, tuil arm protection such as a boller suit, goggles).

- In the event of a refrigerant leak, thoroughly ventilate the room. If gaseous refrigerant leaks out and comes in contact with an open flame, toxic gases will be generated.
- •Properly install the unit according to the instructions in the Installation Manual. Improper installation may result in water leakage, electric shock, or fire.
- •Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.

Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.

- Keep electrical parts away from water.
 Wet electrical parts pose a risk of electric shock, smoke, or fire.
- •Securely attach the control box cover.
- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.
- •Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.
- •When installing the unit in a small space, take appropriate precautions to prevent leaked refrigerant from reaching the limiting concentration. Leaked refrigerant gas will displace oxygen and cause oxygen starvation if it exceeds the limiting concentration. Consult your dealer before installing the unit.
- •Consult your dealer or a qualified technician when moving or reinstalling the unit. Improper installation may result in water leakage, electric shock, or fire.
- •After completing the service work, check for a refrigerant leak. If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.
- •Do not try to defeat the safety features of the unit. Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices or the use of accessories other than the ones that are recommended by MITSUBISHI may result in smoke, fire, or explosion.
- · Consult your dealer for proper disposal method.

[2] Precautions for handling units for use with R410A

Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

- •Use refrigerant piping materials made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and moisture. Contaminants in the refrigerant piping may cause the refrigerator oil to deteriorate.
- Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. (Keep elbows and other joints wrapped in plastic.)

Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

- Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. Infiltration of a large amount of mineral oil may cause the refrigerator oil to deteriorate.
- •Charge the system with refrigerant in the liquid phase. If gaseous refrigerant is drawn out of the cylinder first, the composition of the remaining refrigerant in the cylinder will change and become unsuitable for use.
- •Only use R410A or R407C.

The use of other types of refrigerant that contain chloride may cause the refrigerator oil to deteriorate.

- •Use a vacuum pump with a check valve.
- If a vacuum pump that is not equipped with a check valve is used, the vacuum pump oil may flow into the refrigerant cycle and cause the refrigerator oil to deteriorate.
- •Prepare tools for exclusive use with R 410A. Do not use the following tools if they have been used with the conventional refrigerant: gauge manifold, charging hose, gas leak detector, check valve, refrigerant charge base, vacuum gauge, and refrigerant recovery equipment. If the refrigerant or the refrigerator oil that may be left on these tools are mixed in with R410A, it may cause the refrigerator oil in the new system to deteriorate.
- Infiltration of water may cause the refrigerator oil to deteriorate. Leak detectors for conventional refrigerants will not detect an R410A leak because R410A is free of chlorine.
- Do not use a charging cylinc If a charging cylinder is used



itable for use.

Exercise special care when handling tools for use with R410A.
 Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate.

[3] Read before installing the unit

A CAUTION

•To avoid the risk of fire, never install the air conditioner where there is a risk of leakage of flammable gas.

- •The models of air conditioning units described in this manual are not intended for use with food, pets, plants, precision instruments, or art work.
- •Do not use the unit in an environment with a high concentration of oil, steam, sulfuric gas etc. They can significantly reduce the performance of the unit or damage its parts.
- •Take appropriate measures against noise interference when installing the air conditioners in hospitals or communication facilities.
- •Inverter equipment, power generators, radio communication equipment, and high-frequency medical equipment may interfere with the normal operation of the air conditioner or vice versa.
- Install the unit in a location which will not render the unit vulnerable to water leakage. When the indoor humidity exceeds 80% or if the drainpipe becomes clogged, condensation may drip from the indoor unit. Provide an adequate collective drainage system as necessary.

•The models of indoor units described in this manual should only be installed on a ceiling at least 2.5 m from the floor.

[4] Read before performing electrical work

A CAUTION

•Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire.

- •To avoid the risk of wire breakage and fire, install the power cable in such a way that tension load is not applied.
- •To avoid the risk of electric shock, install all required breakers.

•To avoid the risk of current leakage, heat build-up, and fire, use properly rated power cables for the capacity of the line.

•To avoid the risk of unit failure and fire, use properly rated breakers and fuses.

•To avoid the risk of electric shock, do not wash the air conditioning units with water.

•To prevent the unit from toppling over and cause personal injury or unit damage, periodically check the installation base for damage.

 Install drainpipes according the instructions in this manual to ensure proper drainage. Wrap thermal insulation around the pipes to prevent moisture condensation.

Improper pipe installation or inadequate insulation may result in water leakage.

•Exercise caution when transporting units.

Products weighing more than 20 kg should be carried by at least two people. Do not suspend the unit by the PP bands that are used on some packages. To avoid the risk of cuts, keep your hands away from the heat exchanger fins. When using a crane or other hoisting equipment to lift the unit, suspend the unit from four corners.

• Properly dispose of packing materials.

Pallets and the nails on the pallets can pose the risk of cuts, stabs, and abrasions. Plastic gabs can pose suffocation and choking hazards; do not let children play with them. Tear the plastic bags before disposing of them.

[5] Read before starting the test run

*Keep the power on for at least 12 hours before starting a test run.

•To avoid the risk of electric shock, do not touch the switches with wet hands.

•Do not touch the refrigerant pipes with bare hands during and immediately after operation.

•During or immediately after operation, certain parts of the unit such as pipes and compressor may be either very cold or hot, depending on the state of the refrigerant in the unit at the time. To reduce the risk of frostbites and burns, do not touch these parts with bare hands.

•Do not operate the unit without panels and safety guards properly installed.

The unit houses high-temperature, high-voltage, or rotating parts that can pose a risk of injury if the unit is operated without the panel and fan guard.

•Do not turn off the power immediately after stopping the operation Keep the unit on for at least

2. Indoor Unit Acces

3. Selecting an Installation Site

[1] Ceiling strength

/ WARNING

•To avoid the risk of injury, hang the unit from a structure strong enough to support its weight.

- [2] Orientation of the unit and securing enough service space
- [3] Indoor/outdoor unit compatibility
- 4. Fixing the Hanging Bolts
- [1] Fixing the hanging bolts
- 5. Installing the Unit
- [1] Hanging the unit
- [2] Confirming proper installation

A CAUTION

• If the unit is installed with the drain port side elevated above the rest, water leakage may result.

- 6. Refrigerant Pipe and Drain Pipe Specifications
- [1] Refrigerant pipe and drain pipe specifications
- [2] Refrigerant pipes and drain pipes



ons



[1] Refrigerant piping work

🔨 WARNING

Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit.
 Infiltration of any other types of refrigerant or air into the unit may result in malfunctions or serious damage to the unit.

•Use refrigerant pipes made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and water.

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

• Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

+Use a small amount of Suniso 4GS or 3GS to flare and flange connections. (Applicable to the models for use with R22)

•Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. (Applicable to the models for use with R410A or R407C) R410A and R407C are highly hygroscopic and could introduce moisture into the system and cause the refrigerator oil to deteriorate, if not handled with care.

[2] Drain piping work

[3] Confirming proper drainage of drain water

8. Duct Work

*Keep the inlet grill at least 850 mm away from the fan. If it is not possible, install a safety guard on the fan.

9. Electrical Work

Have all electrical work performance
 a dedicated circuit.

•Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.

Be sure to ground the outdoor unit. Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire. Improper grounding can result in a risk of electric shock.

[1] Power supply wiring

▲ CAUTION

Only use breakers and fuses with adequate breaking capacity. Do not substitute a piece of wire for a fuse or use a fuse that exceeds the specified rating.

[2] Connecting the remote controller and indoor/outdoor units

Install the cables in such a way that the tension load is not applied.

- [3] Making electrical connections
- [4] External I/O specifications

🕂 CAUTION

Cover the wiring with insulation tubes with extra insulation.
Use relays and switches that meet the IEC standards or their equivalents.
Electric resistance between all accessible parts and the control circuit should be at least 2750 V.

- [5] Making the external static pressure setting
- [6] Setting the unit addresses and branch numbers
- [7] Using the built-in temperature sensor on the remote controller

ructions in this manual. Use



IMPORTANT: FOR YOUR SAFETY READ AND OBSERVE THE FOLLOWING PRECAUTIONS CAREFUL-LY & READ ALL LABELS ON THE UNIT. SAVE THIS MANUAL FOR FUTURE REFERENCE.

Symbol Explanations

🕂 WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

This symbol indicates that that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

[1] Read before installation and performing electrical work

🕂 WARNING

Ask your dealer or a qualified technician to install the unit.
 Improper installation by the user may result in water leakage, electric shock, or fire.

- Properly install the unit on a surface that can withstand its weight. Unit installed on an unstable surface may fall and cause injury.
- •Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable and external force. Improperly connected cables may produce heat and start a fire.
- •Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over. Improper installation may cause the unit to topple over and cause injury or damage to the unit.
- •Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric. Ask a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- •Do not make any modifications or alterations to the unit. Consult your dealer for repair. Improper repair may result in water leakage, electric shock, or fire

•Do not touch the heat exchange The fins are sharp and pose



+Always wear protective equipment wnen nanoling this product (e.g., gloves, tuil arm protection such as a boller suit, goggles).

- In the event of a refrigerant leak, thoroughly ventilate the room.
 If gaseous refrigerant leaks out and comes in contact with an open flame, toxic gases will be generated.
- •Properly install the unit according to the instructions in the Installation Manual. Improper installation may result in water leakage, electric shock, or fire.
- •Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.

Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.

- Keep electrical parts away from water.
 Wet electrical parts pose a risk of electric shock, smoke, or fire.
- •Securely attach the control box cover.
- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.
- •Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.
- •When installing the unit in a small space, take appropriate precautions to prevent leaked refrigerant from reaching the limiting concentration. Leaked refrigerant gas will displace oxygen and cause oxygen starvation if it exceeds the limiting concentration. Consult your dealer before installing the unit.
- •Consult your dealer or a qualified technician when moving or reinstalling the unit. Improper installation may result in water leakage, electric shock, or fire.
- After completing the service work, check for a refrigerant leak.
 If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.
- •Do not try to defeat the safety features of the unit. Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices or the use of accessories other than the ones that are recommended by MITSUBISHI may result in smoke, fire, or explosion.
- · Consult your dealer for proper disposal method.

[2] Precautions for handling units for use with R410A

Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

- •Use refrigerant piping materials made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and moisture. Contaminants in the refrigerant piping may cause the refrigerator oil to deteriorate.
- Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. (Keep elbows and other joints wrapped in plastic.)

Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

- Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. Infiltration of a large amount of mineral oil may cause the refrigerator oil to deteriorate.
- •Charge the system with refrigerant in the liquid phase. If gaseous refrigerant is drawn out of the cylinder first, the composition of the remaining refrigerant in the cylinder will change and become unsuitable for use.
- •Only use R410A or R407C.

The use of other types of refrigerant that contain chloride may cause the refrigerator oil to deteriorate.

- •Use a vacuum pump with a check valve.
- If a vacuum pump that is not equipped with a check valve is used, the vacuum pump oil may flow into the refrigerant cycle and cause the refrigerator oil to deteriorate.
- •Prepare tools for exclusive use with R 410A. Do not use the following tools if they have been used with the conventional refrigerant: gauge manifold, charging hose, gas leak detector, check valve, refrigerant charge base, vacuum gauge, and refrigerant recovery equipment. If the refrigerant or the refrigerator oil that may be left on these tools are mixed in with R410A, it may cause the refrigerator oil in the new system to deteriorate.
- Infiltration of water may cause the refrigerator oil to deteriorate. Leak detectors for conventional refrigerants will not detect an R410A leak because R410A is free of chlorine.

 Do not use a charging cylind If a charging cylinder is used PR

itable for use.

Exercise special care when handling tools for use with R410A.
 Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate.

[3] Read before installing the unit

A CAUTION

•To avoid the risk of fire, never install the air conditioner where there is a risk of leakage of flammable gas.

- •The models of air conditioning units described in this manual are not intended for use with food, pets, plants, precision instruments, or art work.
- •Do not use the unit in an environment with a high concentration of oil, steam, sulfuric gas etc. They can significantly reduce the performance of the unit or damage its parts.
- •Take appropriate measures against noise interference when installing the air conditioners in hospitals or communication facilities.
- •Inverter equipment, power generators, radio communication equipment, and high-frequency medical equipment may interfere with the normal operation of the air conditioner or vice versa.
- Install the unit in a location which will not render the unit vulnerable to water leakage. When the indoor humidity exceeds 80% or if the drainpipe becomes clogged, condensation may drip from the indoor unit. Provide an adequate collective drainage system as necessary.

•The models of indoor units described in this manual should only be installed on a ceiling at least 2.5 m from the floor.

[4] Read before performing electrical work

A CAUTION

•Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire.

- •To avoid the risk of wire breakage and fire, install the power cable in such a way that tension load is not applied.
- •To avoid the risk of electric shock, install all required breakers.

•To avoid the risk of current leakage, heat build-up, and fire, use properly rated power cables for the capacity of the line.

ons

•To avoid the risk of unit failure and fire, use properly rated breakers and fuses.

•To avoid the risk of electric shock, do not wash the air conditioning units with water.

•To prevent the unit from toppling over and cause personal injury or unit damage, periodically check the installation base for damage.

 Install drainpipes according the instructions in this manual to ensure proper drainage. Wrap thermal insulation around the pipes to prevent moisture condensation.

Improper pipe installation or inadequate insulation may result in water leakage.

•Exercise caution when transporting units.

Products weighing more than 20 kg should be carried by at least two people. Do not suspend the unit by the PP bands that are used on some packages. To avoid the risk of cuts, keep your hands away from the heat exchanger fins. When using a crane or other hoisting equipment to lift the unit, suspend the unit from four corners.

•Properly dispose of packing materials.

Pallets and the nails on the pallets can pose the risk of cuts, stabs, and abrasions. Plastic gabs can pose suffocation and choking hazards; do not let children play with them. Tear the plastic bags before disposing of them.

[5] Read before starting the test run

*Keep the power on for at least 12 hours before starting a test run.

•To avoid the risk of electric shock, do not touch the switches with wet hands.

•Do not touch the refrigerant pipes with bare hands during and immediately after operation.

•During or immediately after operation, certain parts of the unit such as pipes and compressor may be either very cold or hot, depending on the state of the refrigerant in the unit at the time. To reduce the risk of frostbites and burns, do not touch these parts with bare hands.

*Do not operate the unit without panels and safety guards properly installed.

The unit houses high-temperature, high-voltage, or rotating parts that can pose a risk of injury if the unit is operated without the panel and fan guard.

•Do not turn off the power immediately after stopping the operation. Keep the unit on for at least

2. Indoor Unit Acces

3. Selecting an Installation Site

[1] Ceiling strength

🕂 WARNING

•To avoid the risk of injury, hang the unit from a structure strong enough to support its weight.

- [2] Orientation of the unit and securing enough service space
- [3] Indoor/outdoor unit compatibility
- 4. Fixing the Hanging Bolts
- [1] Fixing the hanging bolts
- 5. Installing the Unit
- [1] Hanging the unit
- [2] Confirming proper installation
- A CAUTION

• If the unit is installed with the drain port side elevated above the rest, water leakage may result.

- 6. Refrigerant Pipe and Drain Pipe Specifications
- [1] Refrigerant pipe and drain pipe specifications
- [2] Refrigerant pipes and drain pipes

[1] Refrigerant piping work

🔨 WARNING

Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit.
 Infiltration of any other types of refrigerant or air into the unit may result in malfunctions or serious damage to the unit.

PR

•Use refrigerant pipes made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and water.

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

•Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

+Use a small amount of Suniso 4GS or 3GS to flare and flange connections. (Applicable to the models for use with R22)

•Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. (Applicable to the models for use with R410A or R407C) R410A and R407C are highly hygroscopic and could introduce moisture into the system and cause the refrigerator oil to deteriorate, if not handled with care.

[2] Drain piping work

[3] Confirming proper drainage of drain water

8. Duct Work

*Keep the inlet grill at least 850 mm away from the fan. If it is not possible, install a safety guard on the fan.

9. Electrical Work

Have all electrical work performance a dedicated circuit.



Be sure to ground the outdoor unit. Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire. Improper grounding can result in a risk of electric shock.

[1] Power supply wiring

▲ CAUTION

Only use breakers and fuses with adequate breaking capacity. Do not substitute a piece of wire for a fuse or use a fuse that exceeds the specified rating.

[2] Connecting the remote controller and indoor/outdoor units

Install the cables in such a way that the tension load is not applied.

- [3] Making electrical connections
- [4] External I/O specifications

🕂 CAUTION

PR - 4

Cover the wiring with insulation tubes with extra insulation.
Use relays and switches that meet the IEC standards or their equivalents.
Electric resistance between all accessible parts and the control circuit should be at least 2750 V.

- [5] Making the external static pressure setting
- [6] Setting the unit addresses and branch numbers
- [7] Using the built-in temperature sensor on the remote controller

ructions in this manual. Use

IMPORTANT: FOR YOUR SAFETY READ AND OBSERVE THE FOLLOWING PRECAUTIONS CAREFUL-LY & READ ALL LABELS ON THE UNIT. SAVE THIS MANUAL FOR FUTURE REFERENCE.

Symbol Explanations

🕂 WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

This symbol indicates that that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

[1] Read before installation and performing electrical work

🕂 WARNING

Ask your dealer or a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.

- Properly install the unit on a surface that can withstand its weight. Unit installed on an unstable surface may fall and cause injury.
- •Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable and external force. Improperly connected cables may produce heat and start a fire.
- •Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over. Improper installation may cause the unit to topple over and cause injury or damage to the unit.
- •Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric. Ask a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- •Do not make any modifications or alterations to the unit. Consult your dealer for repair. Improper repair may result in water leakage, electric shock, or fire

•Do not touch the heat exchange The fins are sharp and pose



+Always wear protective equipment when handling this product (e.g., gloves, tuil arm protection such as a boller suit, goggles).

- In the event of a refrigerant leak, thoroughly ventilate the room.
 If gaseous refrigerant leaks out and comes in contact with an open flame, toxic gases will be generated.
- Properly install the unit according to the instructions in the Installation Manual. Improper installation may result in water leakage, electric shock, or fire.
- •Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.

Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.

- Keep electrical parts away from water.
 Wet electrical parts pose a risk of electric shock, smoke, or fire.
- •Securely attach the control box cover.
- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.
- •Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.
- •When installing the unit in a small space, take appropriate precautions to prevent leaked refrigerant from reaching the limiting concentration. Leaked refrigerant gas will displace oxygen and cause oxygen starvation if it exceeds the limiting concentration. Consult your dealer before installing the unit.
- •Consult your dealer or a qualified technician when moving or reinstalling the unit. Improper installation may result in water leakage, electric shock, or fire.
- •After completing the service work, check for a refrigerant leak. If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.
- •Do not try to defeat the safety features of the unit. Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices or the use of accessories other than the ones that are recommended by MITSUBISHI may result in smoke, fire, or explosion.
- · Consult your dealer for proper disposal method.

[2] Precautions for handling units for use with R410A

GR

Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

- •Use refrigerant piping materials made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and moisture. Contaminants in the refrigerant piping may cause the refrigerator oil to deteriorate.
- Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. (Keep elbows and other joints wrapped in plastic.)

Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

- Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. Infiltration of a large amount of mineral oil may cause the refrigerator oil to deteriorate.
- •Charge the system with refrigerant in the liquid phase. If gaseous refrigerant is drawn out of the cylinder first, the composition of the remaining refrigerant in the cylinder will change and become unsuitable for use.
- •Only use R410A or R407C.

The use of other types of refrigerant that contain chloride may cause the refrigerator oil to deteriorate.

- •Use a vacuum pump with a check valve.
- If a vacuum pump that is not equipped with a check valve is used, the vacuum pump oil may flow into the refrigerant cycle and cause the refrigerator oil to deteriorate.
- •Prepare tools for exclusive use with R 410A. Do not use the following tools if they have been used with the conventional refrigerant: gauge manifold, charging hose, gas leak detector, check valve, refrigerant charge base, vacuum gauge, and refrigerant recovery equipment. If the refrigerant or the refrigerator oil that may be left on these tools are mixed in with R410A, it may cause the refrigerator oil in the new system to deteriorate.
- Infiltration of water may cause the refrigerator oil to deteriorate. Leak detectors for conventional refrigerants will not detect an R410A leak because R410A is free of chlorine.

 Do not use a charging cylinc If a charging cylinder is used

•Exercise special care when handling tools for use with R410A. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate.

[3] Read before installing the unit

A CAUTION

•To avoid the risk of fire, never install the air conditioner where there is a risk of leakage of flammable gas.

- •The models of air conditioning units described in this manual are not intended for use with food, pets, plants, precision instruments, or art work.
- •Do not use the unit in an environment with a high concentration of oil, steam, sulfuric gas etc. They can significantly reduce the performance of the unit or damage its parts.
- •Take appropriate measures against noise interference when installing the air conditioners in hospitals or communication facilities.
- •Inverter equipment, power generators, radio communication equipment, and high-frequency medical equipment may interfere with the normal operation of the air conditioner or vice versa.
- Install the unit in a location which will not render the unit vulnerable to water leakage. When the indoor humidity exceeds 80% or if the drainpipe becomes clogged, condensation may drip from the indoor unit. Provide an adequate collective drainage system as necessary.

•The models of indoor units described in this manual should only be installed on a ceiling at least 2.5 m from the floor.

[4] Read before performing electrical work

A CAUTION

•Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire.

- •To avoid the risk of wire breakage and fire, install the power cable in such a way that tension load is not applied.
- •To avoid the risk of electric shock, install all required breakers.

•To avoid the risk of current leakage, heat build-up, and fire, use properly rated power cables for the capacity of the line.

itable for use.

•To avoid the risk of unit failure and fire, use properly rated breakers and fuses.

•To avoid the risk of electric shock, do not wash the air conditioning units with water.

•To prevent the unit from toppling over and cause personal injury or unit damage, periodically check the installation base for damage.

+Install drainpipes according the instructions in this manual to ensure proper drainage. Wrap thermal insulation around the pipes to prevent moisture condensation.

Improper pipe installation or inadequate insulation may result in water leakage.

Exercise caution when transporting units.

Products weighing more than 20 kg should be carried by at least two people. Do not suspend the unit by the PP bands that are used on some packages. To avoid the risk of cuts, keep your hands away from the heat exchanger fins. When using a crane or other hoisting equipment to lift the unit, suspend the unit from four corners.

Properly dispose of packing materials.

Pallets and the nails on the pallets can pose the risk of cuts, stabs, and abrasions. Plastic gabs can pose suffocation and choking hazards; do not let children play with them. Tear the plastic bags before disposing of them.

[5] Read before starting the test run

CAUTION

•Keep the power on for at least 12 hours before starting a test run.

•To avoid the risk of electric shock, do not touch the switches with wet hands.

•Do not touch the refrigerant pipes with bare hands during and immediately after operation.

•During or immediately after operation, certain parts of the unit such as pipes and compressor may be either very cold or hot, depending on the state of the refrigerant in the unit at the time. To reduce the risk of frostbites and burns, do not touch these parts with bare hands.

•Do not operate the unit without panels and safety guards properly installed.

The unit houses high-temperature, high-voltage, or rotating parts that can pose a risk of injury if the unit is operated without the panel and fan guard.

Do not turn off the power immediately after stopping the operation Keep the unit on for at least

2. Indoor Unit Acces

3. Selecting an Installation Site

[1] **Ceiling strength**

/!\ WARNING

•To avoid the risk of injury, hang the unit from a structure strong enough to support its weight.

- [2] Orientation of the unit and securing enough service space
- Indoor/outdoor unit compatibility [3]
- 4. Fixing the Hanging Bolts
- [1] Fixing the hanging bolts
- 5. Installing the Unit
- [1] Hanging the unit
- [2] Confirming proper installation
- CAUTION

•If the unit is installed with the drain port side elevated above the rest, water leakage may result.

- 6. **Refrigerant Pipe and Drain Pipe Specifications**
- Refrigerant pipe and drain pipe specifications [1]
- [2] Refrigerant pipes and drain pipes





ons

GR

[1] Refrigerant piping work

🔨 WARNING

Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit.
 Infiltration of any other types of refrigerant or air into the unit may result in malfunctions or serious damage to the unit.

GR

•Use refrigerant pipes made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and water.

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

•Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

+Use a small amount of Suniso 4GS or 3GS to flare and flange connections. (Applicable to the models for use with R22)

•Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. (Applicable to the models for use with R410A or R407C) R410A and R407C are highly hygroscopic and could introduce moisture into the system and cause the refrigerator oil to deteriorate, if not handled with care.

[2] Drain piping work

[3] Confirming proper drainage of drain water

8. Duct Work

*Keep the inlet grill at least 850 mm away from the fan. If it is not possible, install a safety guard on the fan.

9. Electrical Work

Have all electrical work performance a dedicated circuit.

•Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.

Be sure to ground the outdoor unit. Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire. Improper grounding can result in a risk of electric shock.

[1] Power supply wiring

▲ CAUTION

Only use breakers and fuses with adequate breaking capacity. Do not substitute a piece of wire for a fuse or use a fuse that exceeds the specified rating.

[2] Connecting the remote controller and indoor/outdoor units

Install the cables in such a way that the tension load is not applied.

- [3] Making electrical connections
- [4] External I/O specifications

🕂 CAUTION

Cover the wiring with insulation tubes with extra insulation.
Use relays and switches that meet the IEC standards or their equivalents.
Electric resistance between all accessible parts and the control circuit should be at least 2750 V.

- [5] Making the external static pressure setting
- [6] Setting the unit addresses and branch numbers
- [7] Using the built-in temperature sensor on the remote controller



ructions in this manual. Use

IMPORTANT: FOR YOUR SAFETY READ AND OBSERVE THE FOLLOWING PRECAUTIONS CAREFUL-LY & READ ALL LABELS ON THE UNIT. SAVE THIS MANUAL FOR FUTURE REFERENCE.

Symbol Explanations

🕂 WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

This symbol indicates that that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

[1] Read before installation and performing electrical work

🕂 WARNING

Ask your dealer or a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.

- Properly install the unit on a surface that can withstand its weight. Unit installed on an unstable surface may fall and cause injury.
- •Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable and external force. Improperly connected cables may produce heat and start a fire.
- •Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over. Improper installation may cause the unit to topple over and cause injury or damage to the unit.
- •Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric. Ask a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- •Do not make any modifications or alterations to the unit. Consult your dealer for repair. Improper repair may result in water leakage, electric shock, or fire
- •Do not touch the heat exchanges for with been been de The fins are sharp and pose



+Always wear protective equipment when handling this product (e.g., gloves, tuil arm protection such as a boller suit, goggles).

- In the event of a refrigerant leak, thoroughly ventilate the room.
 If gaseous refrigerant leaks out and comes in contact with an open flame, toxic gases will be generated.
- •Properly install the unit according to the instructions in the Installation Manual. Improper installation may result in water leakage, electric shock, or fire.
- •Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.
- Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.
- Keep electrical parts away from water.
 Wet electrical parts pose a risk of electric shock, smoke, or fire.
- •Securely attach the control box cover.
- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.
- •Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.
- •When installing the unit in a small space, take appropriate precautions to prevent leaked refrigerant from reaching the limiting concentration. Leaked refrigerant gas will displace oxygen and cause oxygen starvation if it exceeds the limiting concentration. Consult your dealer before installing the unit.
- •Consult your dealer or a qualified technician when moving or reinstalling the unit. Improper installation may result in water leakage, electric shock, or fire.
- •After completing the service work, check for a refrigerant leak. If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.
- •Do not try to defeat the safety features of the unit. Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices or the use of accessories other than the ones that are recommended by MITSUBISHI may result in smoke, fire, or explosion.
- · Consult your dealer for proper disposal method.

[2] Precautions for handling units for use with R410A

Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

- •Use refrigerant piping materials made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and moisture. Contaminants in the refrigerant piping may cause the refrigerator oil to deteriorate.
- •Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. (Keep elbows and other joints wrapped in plastic.)

Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

- Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. Infiltration of a large amount of mineral oil may cause the refrigerator oil to deteriorate.
- •Charge the system with refrigerant in the liquid phase. If gaseous refrigerant is drawn out of the cylinder first, the composition of the remaining refrigerant in the cylinder will change and become unsuitable for use.
- •Only use R410A or R407C.
- The use of other types of refrigerant that contain chloride may cause the refrigerator oil to deteriorate.
- •Use a vacuum pump with a check valve.
- If a vacuum pump that is not equipped with a check valve is used, the vacuum pump oil may flow into the refrigerant cycle and cause the refrigerator oil to deteriorate.
- •Prepare tools for exclusive use with R 410A. Do not use the following tools if they have been used with the conventional refrigerant: gauge manifold, charging hose, gas leak detector, check valve, refrigerant charge base, vacuum gauge, and refrigerant recovery equipment. If the refrigerant or the refrigerator oil that may be left on these tools are mixed in with R410A, it may cause the refrigerator oil in the new system to deteriorate.
- Infiltration of water may cause the refrigerator oil to deteriorate. Leak detectors for conventional refrigerants will not detect an R410A leak because R410A is free of chlorine.
- Do not use a charging cylind If a charging cylinder is used



itable for use.

Exercise special care when handling tools for use with R410A.
 Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate.

[3] Read before installing the unit

A CAUTION

•To avoid the risk of fire, never install the air conditioner where there is a risk of leakage of flammable gas.

- •The models of air conditioning units described in this manual are not intended for use with food, pets, plants, precision instruments, or art work.
- •Do not use the unit in an environment with a high concentration of oil, steam, sulfuric gas etc. They can significantly reduce the performance of the unit or damage its parts.
- •Take appropriate measures against noise interference when installing the air conditioners in hospitals or communication facilities.
- •Inverter equipment, power generators, radio communication equipment, and high-frequency medical equipment may interfere with the normal operation of the air conditioner or vice versa.
- •Install the unit in a location which will not render the unit vulnerable to water leakage. When the indoor humidity exceeds 80% or if the drainpipe becomes clogged, condensation may drip from the indoor unit. Provide an adequate collective drainage system as necessary.

•The models of indoor units described in this manual should only be installed on a ceiling at least 2.5 m from the floor.

[4] Read before performing electrical work

A CAUTION

•Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire.

- •To avoid the risk of wire breakage and fire, install the power cable in such a way that tension load is not applied.
- •To avoid the risk of electric shock, install all required breakers.

•To avoid the risk of current leakage, heat build-up, and fire, use properly rated power cables for the capacity of the line.

ons

•To avoid the risk of unit failure and fire, use properly rated breakers and fuses.

•To avoid the risk of electric shock, do not wash the air conditioning units with water.

•To prevent the unit from toppling over and cause personal injury or unit damage, periodically check the installation base for damage.

 Install drainpipes according the instructions in this manual to ensure proper drainage. Wrap thermal insulation around the pipes to prevent moisture condensation.

Improper pipe installation or inadequate insulation may result in water leakage.

•Exercise caution when transporting units.

Products weighing more than 20 kg should be carried by at least two people. Do not suspend the unit by the PP bands that are used on some packages. To avoid the risk of cuts, keep your hands away from the heat exchanger fins. When using a crane or other hoisting equipment to lift the unit, suspend the unit from four corners.

•Properly dispose of packing materials.

Pallets and the nails on the pallets can pose the risk of cuts, stabs, and abrasions. Plastic gabs can pose suffocation and choking hazards; do not let children play with them. Tear the plastic bags before disposing of them.

[5] Read before starting the test run

*Keep the power on for at least 12 hours before starting a test run.

•To avoid the risk of electric shock, do not touch the switches with wet hands.

•Do not touch the refrigerant pipes with bare hands during and immediately after operation.

•During or immediately after operation, certain parts of the unit such as pipes and compressor may be either very cold or hot, depending on the state of the refrigerant in the unit at the time. To reduce the risk of frostbites and burns, do not touch these parts with bare hands.

•Do not operate the unit without panels and safety guards properly installed.

The unit houses high-temperature, high-voltage, or rotating parts that can pose a risk of injury if the unit is operated without the panel and fan guard.

•Do not turn off the power immediately after stopping the operation. Keep the unit on for at least

2. Indoor Unit Acces

3. Selecting an Installation Site

[1] Ceiling strength

/ WARNING

•To avoid the risk of injury, hang the unit from a structure strong enough to support its weight.

- [2] Orientation of the unit and securing enough service space
- [3] Indoor/outdoor unit compatibility
- 4. Fixing the Hanging Bolts
- [1] Fixing the hanging bolts
- 5. Installing the Unit
- [1] Hanging the unit
- [2] Confirming proper installation
- A CAUTION

• If the unit is installed with the drain port side elevated above the rest, water leakage may result.

- 6. Refrigerant Pipe and Drain Pipe Specifications
- [1] Refrigerant pipe and drain pipe specifications
- [2] Refrigerant pipes and drain pipes





[1] Refrigerant piping work

🔨 WARNING

Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit.
 Infiltration of any other types of refrigerant or air into the unit may result in malfunctions or serious damage to the unit.



DA

•Use refrigerant pipes made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and water.

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

•Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

+Use a small amount of Suniso 4GS or 3GS to flare and flange connections. (Applicable to the models for use with R22)

•Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. (Applicable to the models for use with R410A or R407C) R410A and R407C are highly hygroscopic and could introduce moisture into the system and cause the refrigerator oil to deteriorate, if not handled with care.

[2] Drain piping work

[3] Confirming proper drainage of drain water

8. Duct Work

*Keep the inlet grill at least 850 mm away from the fan. If it is not possible, install a safety guard on the fan.

9. Electrical Work

Have all electrical work performance a dedicated circuit.



ructions in this manual. Use

+Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.

Be sure to ground the outdoor unit. Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire. Improper grounding can result in a risk of electric shock.

[1] Power supply wiring

▲ CAUTION

Only use breakers and fuses with adequate breaking capacity. Do not substitute a piece of wire for a fuse or use a fuse that exceeds the specified rating.

[2] Connecting the remote controller and indoor/outdoor units

Install the cables in such a way that the tension load is not applied.

- [3] Making electrical connections
- [4] External I/O specifications

🕂 CAUTION

Cover the wiring with insulation tubes with extra insulation.
Use relays and switches that meet the IEC standards or their equivalents.
Electric resistance between all accessible parts and the control circuit should be at least 2750 V.

- [5] Making the external static pressure setting
- [6] Setting the unit addresses and branch numbers
- [7] Using the built-in temperature sensor on the remote controller

IMPORTANT: FOR YOUR SAFETY READ AND OBSERVE THE FOLLOWING PRECAUTIONS CAREFUL-LY & READ ALL LABELS ON THE UNIT. SAVE THIS MANUAL FOR FUTURE REFERENCE.

Symbol Explanations

🕂 WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

This symbol indicates that that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

[1] Read before installation and performing electrical work

🕂 WARNING

51

- Ask your dealer or a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- Properly install the unit on a surface that can withstand its weight. Unit installed on an unstable surface may fall and cause injury.
- •Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable and external force. Improperly connected cables may produce heat and start a fire.
- •Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over. Improper installation may cause the unit to topple over and cause injury or damage to the unit.
- •Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric. Ask a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- •Do not make any modifications or alterations to the unit. Consult your dealer for repair. Improper repair may result in water leakage, electric shock, or fire
- •Do not touch the heat exchanges fire with here he The fins are sharp and pose



+Always wear protective equipment when handling this product (e.g., gloves, tuil arm protection such as a boller suit, goggles).

- In the event of a refrigerant leak, thoroughly ventilate the room.
 If gaseous refrigerant leaks out and comes in contact with an open flame, toxic gases will be generated.
- •Properly install the unit according to the instructions in the Installation Manual. Improper installation may result in water leakage, electric shock, or fire.
- •Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.
- Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.
- Keep electrical parts away from water.
 Wet electrical parts pose a risk of electric shock, smoke, or fire.
- •Securely attach the control box cover.
- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.
- •Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.
- •When installing the unit in a small space, take appropriate precautions to prevent leaked refrigerant from reaching the limiting concentration. Leaked refrigerant gas will displace oxygen and cause oxygen starvation if it exceeds the limiting concentration. Consult your dealer before installing the unit.
- •Consult your dealer or a qualified technician when moving or reinstalling the unit. Improper installation may result in water leakage, electric shock, or fire.
- •After completing the service work, check for a refrigerant leak. If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.
- •Do not try to defeat the safety features of the unit. Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices or the use of accessories other than the ones that are recommended by MITSUBISHI may result in smoke, fire, or explosion.
- · Consult your dealer for proper disposal method.

[2] Precautions for handling units for use with R410A

Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

- •Use refrigerant piping materials made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and moisture. Contaminants in the refrigerant piping may cause the refrigerator oil to deteriorate.
- Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. (Keep elbows and other joints wrapped in plastic.)

Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

- Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. Infiltration of a large amount of mineral oil may cause the refrigerator oil to deteriorate.
- Charge the system with refrigerant in the liquid phase.
 If gaseous refrigerant is drawn out of the cylinder first, the composition of the remaining refrigerant in the cylinder will change and become unsuitable for use.
- •Only use R410A or R407C.

The use of other types of refrigerant that contain chloride may cause the refrigerator oil to deteriorate.

- •Use a vacuum pump with a check valve.
- If a vacuum pump that is not equipped with a check valve is used, the vacuum pump oil may flow into the refrigerant cycle and cause the refrigerator oil to deteriorate.
- •Prepare tools for exclusive use with R 410A. Do not use the following tools if they have been used with the conventional refrigerant: gauge manifold, charging hose, gas leak detector, check valve, refrigerant charge base, vacuum gauge, and refrigerant recovery equipment. If the refrigerant or the refrigerator oil that may be left on these tools are mixed in with R410A, it may cause the refrigerator oil in the new system to deteriorate.
- Infiltration of water may cause the refrigerator oil to deteriorate. Leak detectors for conventional refrigerants will not detect an R410A leak because R410A is free of chlorine.

 Do not use a charging cylinc If a charging cylinder is used



itable for use.

Exercise special care when handling tools for use with R410A.
 Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate.

[3] Read before installing the unit

A CAUTION

•To avoid the risk of fire, never install the air conditioner where there is a risk of leakage of flammable gas.

- •The models of air conditioning units described in this manual are not intended for use with food, pets, plants, precision instruments, or art work.
- •Do not use the unit in an environment with a high concentration of oil, steam, sulfuric gas etc. They can significantly reduce the performance of the unit or damage its parts.
- •Take appropriate measures against noise interference when installing the air conditioners in hospitals or communication facilities.
- •Inverter equipment, power generators, radio communication equipment, and high-frequency medical equipment may interfere with the normal operation of the air conditioner or vice versa.
- Install the unit in a location which will not render the unit vulnerable to water leakage. When the indoor humidity exceeds 80% or if the drainpipe becomes clogged, condensation may drip from the indoor unit. Provide an adequate collective drainage system as necessary.

•The models of indoor units described in this manual should only be installed on a ceiling at least 2.5 m from the floor.

[4] Read before performing electrical work

A CAUTION

•Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire.

- •To avoid the risk of wire breakage and fire, install the power cable in such a way that tension load is not applied.
- •To avoid the risk of electric shock, install all required breakers.

•To avoid the risk of current leakage, heat build-up, and fire, use properly rated power cables for the capacity of the line.

ons

•To avoid the risk of unit failure and fire, use properly rated breakers and fuses.

•To avoid the risk of electric shock, do not wash the air conditioning units with water.

•To prevent the unit from toppling over and cause personal injury or unit damage, periodically check the installation base for damage.

 Install drainpipes according the instructions in this manual to ensure proper drainage. Wrap thermal insulation around the pipes to prevent moisture condensation.

Improper pipe installation or inadequate insulation may result in water leakage.

•Exercise caution when transporting units.

Products weighing more than 20 kg should be carried by at least two people. Do not suspend the unit by the PP bands that are used on some packages. To avoid the risk of cuts, keep your hands away from the heat exchanger fins. When using a crane or other hoisting equipment to lift the unit, suspend the unit from four corners.

• Properly dispose of packing materials.

Pallets and the nails on the pallets can pose the risk of cuts, stabs, and abrasions. Plastic gabs can pose suffocation and choking hazards; do not let children play with them. Tear the plastic bags before disposing of them.

[5] Read before starting the test run

CAUTION

*Keep the power on for at least 12 hours before starting a test run.

•To avoid the risk of electric shock, do not touch the switches with wet hands.

•Do not touch the refrigerant pipes with bare hands during and immediately after operation.

•During or immediately after operation, certain parts of the unit such as pipes and compressor may be either very cold or hot, depending on the state of the refrigerant in the unit at the time. To reduce the risk of frostbites and burns, do not touch these parts with bare hands.

Do not operate the unit without panels and safety guards properly installed.

The unit houses high-temperature, high-voltage, or rotating parts that can pose a risk of injury if the unit is operated without the panel and fan guard.

•Do not turn off the power immediately after stopping the operation Keep the unit on for at least

2. Indoor Unit Acces

3. Selecting an Installation Site

[1] Ceiling strength

/ WARNING

•To avoid the risk of injury, hang the unit from a structure strong enough to support its weight.

- [2] Orientation of the unit and securing enough service space
- [3] Indoor/outdoor unit compatibility
- 4. Fixing the Hanging Bolts
- [1] Fixing the hanging bolts
- 5. Installing the Unit
- [1] Hanging the unit
- [2] Confirming proper installation
- A CAUTION

+If the unit is installed with the drain port side elevated above the rest, water leakage may result.

- 6. Refrigerant Pipe and Drain Pipe Specifications
- [1] Refrigerant pipe and drain pipe specifications
- [2] Refrigerant pipes and drain pipes







[1] Refrigerant piping work

🔨 WARNING

Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit.
 Infiltration of any other types of refrigerant or air into the unit may result in malfunctions or serious damage to the unit.

•Use refrigerant pipes made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and water.

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

•Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

+Use a small amount of Suniso 4GS or 3GS to flare and flange connections. (Applicable to the models for use with R22)

•Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. (Applicable to the models for use with R410A or R407C) R410A and R407C are highly hygroscopic and could introduce moisture into the system and cause the refrigerator oil to deteriorate, if not handled with care.

[2] Drain piping work

[3] Confirming proper drainage of drain water

8. Duct Work

•Keep the inlet grill at least 850 mm away from the fan. If it is not possible, install a safety guard on the fan.

9. Electrical Work

Have all electrical work performance
 a dedicated circuit.



ructions in this manual. Use

+Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.

Be sure to ground the outdoor unit. Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire. Improper grounding can result in a risk of electric shock.

[1] Power supply wiring

▲ CAUTION

Only use breakers and fuses with adequate breaking capacity. Do not substitute a piece of wire for a fuse or use a fuse that exceeds the specified rating.

[2] Connecting the remote controller and indoor/outdoor units

Install the cables in such a way that the tension load is not applied.

- [3] Making electrical connections
- [4] External I/O specifications

A CAUTION

Cover the wiring with insulation tubes with extra insulation.
Use relays and switches that meet the IEC standards or their equivalents.
Electric resistance between all accessible parts and the control circuit should be at least 2750 V.

- [5] Making the external static pressure setting
- [6] Setting the unit addresses and branch numbers
- [7] Using the built-in temperature sensor on the remote controller

IMPORTANT: FOR YOUR SAFETY READ AND OBSERVE THE FOLLOWING PRECAUTIONS CAREFUL-LY & READ ALL LABELS ON THE UNIT. SAVE THIS MANUAL FOR FUTURE REFERENCE.

Symbol Explanations

🕂 WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

This symbol indicates that that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

[1] Read before installation and performing electrical work

🕂 WARNING

Ask your dealer or a qualified technician to install the unit.
 Improper installation by the user may result in water leakage, electric shock, or fire.

- Properly install the unit on a surface that can withstand its weight. Unit installed on an unstable surface may fall and cause injury.
- •Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable and external force. Improperly connected cables may produce heat and start a fire.
- •Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over. Improper installation may cause the unit to topple over and cause injury or damage to the unit.
- •Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric. Ask a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- •Do not make any modifications or alterations to the unit. Consult your dealer for repair. Improper repair may result in water leakage, electric shock, or fire

•Do not touch the heat exchange The fins are sharp and pose



+Always wear protective equipment when handling this product (e.g., gloves, tuil arm protection such as a boller suit, goggles).

- In the event of a refrigerant leak, thoroughly ventilate the room.
 If gaseous refrigerant leaks out and comes in contact with an open flame, toxic gases will be generated.
- •Properly install the unit according to the instructions in the Installation Manual. Improper installation may result in water leakage, electric shock, or fire.
- •Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.

Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.

- Keep electrical parts away from water.
 Wet electrical parts pose a risk of electric shock, smoke, or fire.
- •Securely attach the control box cover.
- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.
- •Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.
- •When installing the unit in a small space, take appropriate precautions to prevent leaked refrigerant from reaching the limiting concentration. Leaked refrigerant gas will displace oxygen and cause oxygen starvation if it exceeds the limiting concentration. Consult your dealer before installing the unit.
- •Consult your dealer or a qualified technician when moving or reinstalling the unit. Improper installation may result in water leakage, electric shock, or fire.
- •After completing the service work, check for a refrigerant leak. If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.
- •Do not try to defeat the safety features of the unit. Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices or the use of accessories other than the ones that are recommended by MITSUBISHI may result in smoke, fire, or explosion.
- · Consult your dealer for proper disposal method.

[2] Precautions for handling units for use with R410A

Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

- •Use refrigerant piping materials made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and moisture. Contaminants in the refrigerant piping may cause the refrigerator oil to deteriorate.
- Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. (Keep elbows and other joints wrapped in plastic.)

Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

- •Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. Infiltration of a large amount of mineral oil may cause the refrigerator oil to deteriorate.
- Charge the system with refrigerant in the liquid phase.
 If gaseous refrigerant is drawn out of the cylinder first, the composition of the remaining refrigerant in the cylinder will change and become unsuitable for use.
- •Only use R410A or R407C.

The use of other types of refrigerant that contain chloride may cause the refrigerator oil to deteriorate.

- •Use a vacuum pump with a check valve.
- If a vacuum pump that is not equipped with a check valve is used, the vacuum pump oil may flow into the refrigerant cycle and cause the refrigerator oil to deteriorate.
- •Prepare tools for exclusive use with R 410A. Do not use the following tools if they have been used with the conventional refrigerant: gauge manifold, charging hose, gas leak detector, check valve, refrigerant charge base, vacuum gauge, and refrigerant recovery equipment. If the refrigerant or the refrigerator oil that may be left on these tools are mixed in with R410A, it may cause the refrigerator oil in the new system to deteriorate.
- Infiltration of water may cause the refrigerator oil to deteriorate. Leak detectors for conventional refrigerants will not detect an R410A leak because R410A is free of chlorine.
- Do not use a charging cylinc If a charging cylinder is used
- •Exercise special care when handling tools for use with R410A. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate.

[3] Read before installing the unit

A CAUTION

•To avoid the risk of fire, never install the air conditioner where there is a risk of leakage of flammable gas.

- •The models of air conditioning units described in this manual are not intended for use with food, pets, plants, precision instruments, or art work.
- •Do not use the unit in an environment with a high concentration of oil, steam, sulfuric gas etc. They can significantly reduce the performance of the unit or damage its parts.
- •Take appropriate measures against noise interference when installing the air conditioners in hospitals or communication facilities.
- •Inverter equipment, power generators, radio communication equipment, and high-frequency medical equipment may interfere with the normal operation of the air conditioner or vice versa.
- •Install the unit in a location which will not render the unit vulnerable to water leakage. When the indoor humidity exceeds 80% or if the drainpipe becomes clogged, condensation may drip from the indoor unit. Provide an adequate collective drainage system as necessary.

•The models of indoor units described in this manual should only be installed on a ceiling at least 2.5 m from the floor.

[4] Read before performing electrical work

A CAUTION

•Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire.

- •To avoid the risk of wire breakage and fire, install the power cable in such a way that tension load is not applied.
- •To avoid the risk of electric shock, install all required breakers.

•To avoid the risk of current leakage, heat build-up, and fire, use properly rated power cables for the capacity of the line.

table for use.

ons

•To avoid the risk of unit failure and fire, use properly rated breakers and fuses.

•To avoid the risk of electric shock, do not wash the air conditioning units with water.

•To prevent the unit from toppling over and cause personal injury or unit damage, periodically check the installation base for damage.

 Install drainpipes according the instructions in this manual to ensure proper drainage. Wrap thermal insulation around the pipes to prevent moisture condensation.

Improper pipe installation or inadequate insulation may result in water leakage.

•Exercise caution when transporting units.

Products weighing more than 20 kg should be carried by at least two people. Do not suspend the unit by the PP bands that are used on some packages. To avoid the risk of cuts, keep your hands away from the heat exchanger fins. When using a crane or other hoisting equipment to lift the unit, suspend the unit from four corners.

•Properly dispose of packing materials.

Pallets and the nails on the pallets can pose the risk of cuts, stabs, and abrasions. Plastic gabs can pose suffocation and choking hazards; do not let children play with them. Tear the plastic bags before disposing of them.

[5] Read before starting the test run

*Keep the power on for at least 12 hours before starting a test run.

•To avoid the risk of electric shock, do not touch the switches with wet hands.

•Do not touch the refrigerant pipes with bare hands during and immediately after operation.

•During or immediately after operation, certain parts of the unit such as pipes and compressor may be either very cold or hot, depending on the state of the refrigerant in the unit at the time. To reduce the risk of frostbites and burns, do not touch these parts with bare hands.

*Do not operate the unit without panels and safety guards properly installed.

The unit houses high-temperature, high-voltage, or rotating parts that can pose a risk of injury if the unit is operated without the panel and fan guard.

•Do not turn off the power immediately after stopping the operation Keep the unit on for at least

2. Indoor Unit Acces

3. Selecting an Installation Site

[1] Ceiling strength

🕂 WARNING

•To avoid the risk of injury, hang the unit from a structure strong enough to support its weight.

- [2] Orientation of the unit and securing enough service space
- [3] Indoor/outdoor unit compatibility
- 4. Fixing the Hanging Bolts
- [1] Fixing the hanging bolts
- 5. Installing the Unit
- [1] Hanging the unit
- [2] Confirming proper installation
- A CAUTION

+If the unit is installed with the drain port side elevated above the rest, water leakage may result.

- 6. Refrigerant Pipe and Drain Pipe Specifications
- [1] Refrigerant pipe and drain pipe specifications
- [2] Refrigerant pipes and drain pipes

[1] Refrigerant piping work

Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit.
 Infiltration of any other types of refrigerant or air into the unit may result in malfunctions or serious damage to the unit.



•Use refrigerant pipes made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and water.

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

•Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

+Use a small amount of Suniso 4GS or 3GS to flare and flange connections. (Applicable to the models for use with R22)

•Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. (Applicable to the models for use with R410A or R407C) R410A and R407C are highly hygroscopic and could introduce moisture into the system and cause the refrigerator oil to deteriorate, if not handled with care.

[2] Drain piping work

[3] Confirming proper drainage of drain water

8. Duct Work

*Keep the inlet grill at least 850 mm away from the fan. If it is not possible, install a safety guard on the fan.

9. Electrical Work

\Lambda WARNING

Have all electrical work performance a dedicated circuit.

+Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.

Be sure to ground the outdoor unit. Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire. Improper grounding can result in a risk of electric shock.

[1] Power supply wiring

▲ CAUTION

Only use breakers and fuses with adequate breaking capacity. Do not substitute a piece of wire for a fuse or use a fuse that exceeds the specified rating.

[2] Connecting the remote controller and indoor/outdoor units

Install the cables in such a way that the tension load is not applied.

- [3] Making electrical connections
- [4] External I/O specifications

🕂 CAUTION

Cover the wiring with insulation tubes with extra insulation.
Use relays and switches that meet the IEC standards or their equivalents.
Electric resistance between all accessible parts and the control circuit should be at least 2750 V.

- [5] Making the external static pressure setting
- [6] Setting the unit addresses and branch numbers
- [7] Using the built-in temperature sensor on the remote controller

TR

ructions in this manual. Use

IMPORTANT: FOR YOUR SAFETY READ AND OBSERVE THE FOLLOWING PRECAUTIONS CAREFUL-LY & READ ALL LABELS ON THE UNIT. SAVE THIS MANUAL FOR FUTURE REFERENCE.

Symbol Explanations

🕂 WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

This symbol indicates that that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

[1] Read before installation and performing electrical work

🕂 WARNING

Ask your dealer or a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.

- Properly install the unit on a surface that can withstand its weight. Unit installed on an unstable surface may fall and cause injury.
- •Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable and external force. Improperly connected cables may produce heat and start a fire.
- •Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over. Improper installation may cause the unit to topple over and cause injury or damage to the unit.
- •Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric. Ask a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- •Do not make any modifications or alterations to the unit. Consult your dealer for repair. Improper repair may result in water leakage, electric shock, or fire

•Do not touch the heat exchange The fins are sharp and pose



+Always wear protective equipment wnen nangling this product (e.g., gloves, tuil arm protection such as a polier suit, goggles).

- In the event of a refrigerant leak, thoroughly ventilate the room.
 If gaseous refrigerant leaks out and comes in contact with an open flame, toxic gases will be generated.
- •Properly install the unit according to the instructions in the Installation Manual. Improper installation may result in water leakage, electric shock, or fire.
- •Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.

Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.

- Keep electrical parts away from water.
 Wet electrical parts pose a risk of electric shock, smoke, or fire.
- •Securely attach the control box cover.
- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.
- •Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.
- •When installing the unit in a small space, take appropriate precautions to prevent leaked refrigerant from reaching the limiting concentration. Leaked refrigerant gas will displace oxygen and cause oxygen starvation if it exceeds the limiting concentration. Consult your dealer before installing the unit.
- •Consult your dealer or a qualified technician when moving or reinstalling the unit. Improper installation may result in water leakage, electric shock, or fire.
- •After completing the service work, check for a refrigerant leak. If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.
- •Do not try to defeat the safety features of the unit. Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices or the use of accessories other than the ones that are recommended by MITSUBISHI may result in smoke, fire, or explosion.
- · Consult your dealer for proper disposal method.

[2] Precautions for handling units for use with R410A

RU

Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

- •Use refrigerant piping materials made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and moisture. Contaminants in the refrigerant piping may cause the refrigerator oil to deteriorate.
- Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. (Keep elbows and other joints wrapped in plastic.)

Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

- Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. Infiltration of a large amount of mineral oil may cause the refrigerator oil to deteriorate.
- •Charge the system with refrigerant in the liquid phase. If gaseous refrigerant is drawn out of the cylinder first, the composition of the remaining refrigerant in the cylinder will change and become unsuitable for use.
- •Only use R410A or R407C.

The use of other types of refrigerant that contain chloride may cause the refrigerator oil to deteriorate.

- •Use a vacuum pump with a check valve.
- If a vacuum pump that is not equipped with a check valve is used, the vacuum pump oil may flow into the refrigerant cycle and cause the refrigerator oil to deteriorate.
- •Prepare tools for exclusive use with R 410A. Do not use the following tools if they have been used with the conventional refrigerant: gauge manifold, charging hose, gas leak detector, check valve, refrigerant charge base, vacuum gauge, and refrigerant recovery equipment. If the refrigerant or the refrigerator oil that may be left on these tools are mixed in with R410A, it may cause the refrigerator oil in the new system to deteriorate.
- Infiltration of water may cause the refrigerator oil to deteriorate. Leak detectors for conventional refrigerants will not detect an R410A leak because R410A is free of chlorine.

 Do not use a charging cylinc If a charging cylinder is used



itable for use.

Exercise special care when handling tools for use with R410A.
 Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate.

[3] Read before installing the unit

A CAUTION

•To avoid the risk of fire, never install the air conditioner where there is a risk of leakage of flammable gas.

- •The models of air conditioning units described in this manual are not intended for use with food, pets, plants, precision instruments, or art work.
- •Do not use the unit in an environment with a high concentration of oil, steam, sulfuric gas etc. They can significantly reduce the performance of the unit or damage its parts.
- •Take appropriate measures against noise interference when installing the air conditioners in hospitals or communication facilities.
- •Inverter equipment, power generators, radio communication equipment, and high-frequency medical equipment may interfere with the normal operation of the air conditioner or vice versa.
- Install the unit in a location which will not render the unit vulnerable to water leakage. When the indoor humidity exceeds 80% or if the drainpipe becomes clogged, condensation may drip from the indoor unit. Provide an adequate collective drainage system as necessary.

•The models of indoor units described in this manual should only be installed on a ceiling at least 2.5 m from the floor.

[4] Read before performing electrical work

A CAUTION

•Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire.

- •To avoid the risk of wire breakage and fire, install the power cable in such a way that tension load is not applied.
- •To avoid the risk of electric shock, install all required breakers.

•To avoid the risk of current leakage, heat build-up, and fire, use properly rated power cables for the capacity of the line.

•To avoid the risk of unit failure and fire, use properly rated breakers and fuses.

•To avoid the risk of electric shock, do not wash the air conditioning units with water.

•To prevent the unit from toppling over and cause personal injury or unit damage, periodically check the installation base for damage.

 Install drainpipes according the instructions in this manual to ensure proper drainage. Wrap thermal insulation around the pipes to prevent moisture condensation.

Improper pipe installation or inadequate insulation may result in water leakage.

•Exercise caution when transporting units.

Products weighing more than 20 kg should be carried by at least two people. Do not suspend the unit by the PP bands that are used on some packages. To avoid the risk of cuts, keep your hands away from the heat exchanger fins. When using a crane or other hoisting equipment to lift the unit, suspend the unit from four corners.

• Properly dispose of packing materials.

Pallets and the nails on the pallets can pose the risk of cuts, stabs, and abrasions. Plastic gabs can pose suffocation and choking hazards; do not let children play with them. Tear the plastic bags before disposing of them.

[5] Read before starting the test run

*Keep the power on for at least 12 hours before starting a test run.

•To avoid the risk of electric shock, do not touch the switches with wet hands.

•Do not touch the refrigerant pipes with bare hands during and immediately after operation.

•During or immediately after operation, certain parts of the unit such as pipes and compressor may be either very cold or hot, depending on the state of the refrigerant in the unit at the time. To reduce the risk of frostbites and burns, do not touch these parts with bare hands.

•Do not operate the unit without panels and safety guards properly installed.

The unit houses high-temperature, high-voltage, or rotating parts that can pose a risk of injury if the unit is operated without the panel and fan guard.

•Do not turn off the power immediately after stopping the operation. Keep the unit on for at least

2. Indoor Unit Acces

3. Selecting an Installation Site

[1] Ceiling strength

/ WARNING

•To avoid the risk of injury, hang the unit from a structure strong enough to support its weight.

- [2] Orientation of the unit and securing enough service space
- [3] Indoor/outdoor unit compatibility
- 4. Fixing the Hanging Bolts
- [1] Fixing the hanging bolts
- 5. Installing the Unit
- [1] Hanging the unit
- [2] Confirming proper installation
- A CAUTION

• If the unit is installed with the drain port side elevated above the rest, water leakage may result.

- 6. Refrigerant Pipe and Drain Pipe Specifications
- [1] Refrigerant pipe and drain pipe specifications
- [2] Refrigerant pipes and drain pipes



ons



[1] Refrigerant piping work

🔨 WARNING

Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit.
 Infiltration of any other types of refrigerant or air into the unit may result in malfunctions or serious damage to the unit.

RU

•Use refrigerant pipes made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and water.

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

•Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

+Use a small amount of Suniso 4GS or 3GS to flare and flange connections. (Applicable to the models for use with R22)

•Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. (Applicable to the models for use with R410A or R407C) R410A and R407C are highly hygroscopic and could introduce moisture into the system and cause the refrigerator oil to deteriorate, if not handled with care.

[2] Drain piping work

[3] Confirming proper drainage of drain water

8. Duct Work

*Keep the inlet grill at least 850 mm away from the fan. If it is not possible, install a safety guard on the fan.

9. Electrical Work

Have all electrical work performance a dedicated circuit.



ructions in this manual. Use

+Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.

Be sure to ground the outdoor unit. Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire. Improper grounding can result in a risk of electric shock.

[1] Power supply wiring

▲ CAUTION

Only use breakers and fuses with adequate breaking capacity. Do not substitute a piece of wire for a fuse or use a fuse that exceeds the specified rating.

[2] Connecting the remote controller and indoor/outdoor units

Install the cables in such a way that the tension load is not applied.

- [3] Making electrical connections
- [4] External I/O specifications

🕂 CAUTION

Cover the wiring with insulation tubes with extra insulation.
Use relays and switches that meet the IEC standards or their equivalents.
Electric resistance between all accessible parts and the control circuit should be at least 2750 V.

- [5] Making the external static pressure setting
- [6] Setting the unit addresses and branch numbers
- [7] Using the built-in temperature sensor on the remote controller

IMPORTANT: FOR YOUR SAFETY READ AND OBSERVE THE FOLLOWING PRECAUTIONS CAREFUL-LY & READ ALL LABELS ON THE UNIT. SAVE THIS MANUAL FOR FUTURE REFERENCE.

Symbol Explanations

🕂 WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

This symbol indicates that that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

[1] Read before installation and performing electrical work

🕂 WARNING

Ask your dealer or a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.

- Properly install the unit on a surface that can withstand its weight. Unit installed on an unstable surface may fall and cause injury.
- •Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable and external force. Improperly connected cables may produce heat and start a fire.
- •Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over. Improper installation may cause the unit to topple over and cause injury or damage to the unit.
- •Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric. Ask a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- •Do not make any modifications or alterations to the unit. Consult your dealer for repair. Improper repair may result in water leakage, electric shock, or fire

•Do not touch the heat exchange The fins are sharp and pose



+Always wear protective equipment wnen nanaling this product (e.g., gloves, tuil arm protection such as a boller suit, goggles).

- In the event of a refrigerant leak, thoroughly ventilate the room.
 If gaseous refrigerant leaks out and comes in contact with an open flame, toxic gases will be generated.
- •Properly install the unit according to the instructions in the Installation Manual. Improper installation may result in water leakage, electric shock, or fire.
- •Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.
- Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.
- Keep electrical parts away from water.
 Wet electrical parts pose a risk of electric shock, smoke, or fire.
- •Securely attach the control box cover.
- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.
- •Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.
- •When installing the unit in a small space, take appropriate precautions to prevent leaked refrigerant from reaching the limiting concentration. Leaked refrigerant gas will displace oxygen and cause oxygen starvation if it exceeds the limiting concentration. Consult your dealer before installing the unit.
- Consult your dealer or a qualified technician when moving or reinstalling the unit. Improper installation may result in water leakage, electric shock, or fire.
- •After completing the service work, check for a refrigerant leak. If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.
- •Do not try to defeat the safety features of the unit. Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices or the use of accessories other than the ones that are recommended by MITSUBISHI may result in smoke, fire, or explosion.
- · Consult your dealer for proper disposal method.

[2] Precautions for handling units for use with R410A

Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

- •Use refrigerant piping materials made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and moisture. Contaminants in the refrigerant piping may cause the refrigerator oil to deteriorate.
- Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. (Keep elbows and other joints wrapped in plastic.)

Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

- Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. Infiltration of a large amount of mineral oil may cause the refrigerator oil to deteriorate.
- Charge the system with refrigerant in the liquid phase.
 If gaseous refrigerant is drawn out of the cylinder first, the composition of the remaining refrigerant in the cylinder will change and become unsuitable for use.
- •Only use R410A or R407C.

The use of other types of refrigerant that contain chloride may cause the refrigerator oil to deteriorate.

- •Use a vacuum pump with a check valve.
- If a vacuum pump that is not equipped with a check valve is used, the vacuum pump oil may flow into the refrigerant cycle and cause the refrigerator oil to deteriorate.
- •Prepare tools for exclusive use with R 410A. Do not use the following tools if they have been used with the conventional refrigerant: gauge manifold, charging hose, gas leak detector, check valve, refrigerant charge base, vacuum gauge, and refrigerant recovery equipment. If the refrigerant or the refrigerator oil that may be left on these tools are mixed in with R410A, it may cause the refrigerator oil in the new system to deteriorate.
- Infiltration of water may cause the refrigerator oil to deteriorate. Leak detectors for conventional refrigerants will not detect an R410A leak because R410A is free of chlorine.

 Do not use a charging cylinc If a charging cylinder is used



itable for use.

Exercise special care when handling tools for use with R410A.
 Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate.

[3] Read before installing the unit

A CAUTION

•To avoid the risk of fire, never install the air conditioner where there is a risk of leakage of flammable gas.

- •The models of air conditioning units described in this manual are not intended for use with food, pets, plants, precision instruments, or art work.
- •Do not use the unit in an environment with a high concentration of oil, steam, sulfuric gas etc. They can significantly reduce the performance of the unit or damage its parts.
- •Take appropriate measures against noise interference when installing the air conditioners in hospitals or communication facilities.
- •Inverter equipment, power generators, radio communication equipment, and high-frequency medical equipment may interfere with the normal operation of the air conditioner or vice versa.
- Install the unit in a location which will not render the unit vulnerable to water leakage. When the indoor humidity exceeds 80% or if the drainpipe becomes clogged, condensation may drip from the indoor unit. Provide an adequate collective drainage system as necessary.

•The models of indoor units described in this manual should only be installed on a ceiling at least 2.5 m from the floor.

[4] Read before performing electrical work

A CAUTION

•Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire.

- •To avoid the risk of wire breakage and fire, install the power cable in such a way that tension load is not applied.
- •To avoid the risk of electric shock, install all required breakers.

•To avoid the risk of current leakage, heat build-up, and fire, use properly rated power cables for the capacity of the line.

ons

•To avoid the risk of unit failure and fire, use properly rated breakers and fuses.

•To avoid the risk of electric shock, do not wash the air conditioning units with water.

•To prevent the unit from toppling over and cause personal injury or unit damage, periodically check the installation base for damage.

 Install drainpipes according the instructions in this manual to ensure proper drainage. Wrap thermal insulation around the pipes to prevent moisture condensation.

Improper pipe installation or inadequate insulation may result in water leakage.

•Exercise caution when transporting units.

Products weighing more than 20 kg should be carried by at least two people. Do not suspend the unit by the PP bands that are used on some packages. To avoid the risk of cuts, keep your hands away from the heat exchanger fins. When using a crane or other hoisting equipment to lift the unit, suspend the unit from four corners.

•Properly dispose of packing materials.

Pallets and the nails on the pallets can pose the risk of cuts, stabs, and abrasions. Plastic gabs can pose suffocation and choking hazards; do not let children play with them. Tear the plastic bags before disposing of them.

[5] Read before starting the test run

*Keep the power on for at least 12 hours before starting a test run.

•To avoid the risk of electric shock, do not touch the switches with wet hands.

•Do not touch the refrigerant pipes with bare hands during and immediately after operation.

•During or immediately after operation, certain parts of the unit such as pipes and compressor may be either very cold or hot, depending on the state of the refrigerant in the unit at the time. To reduce the risk of frostbites and burns, do not touch these parts with bare hands.

•Do not operate the unit without panels and safety guards properly installed.

The unit houses high-temperature, high-voltage, or rotating parts that can pose a risk of injury if the unit is operated without the panel and fan guard.

•Do not turn off the power immediately after stopping the operation Keep the unit on for at least

2. Indoor Unit Acces

3. Selecting an Installation Site

[1] Ceiling strength

🕂 WARNING

•To avoid the risk of injury, hang the unit from a structure strong enough to support its weight.

- [2] Orientation of the unit and securing enough service space
- [3] Indoor/outdoor unit compatibility
- 4. Fixing the Hanging Bolts
- [1] Fixing the hanging bolts
- 5. Installing the Unit
- [1] Hanging the unit
- [2] Confirming proper installation
- A CAUTION

+If the unit is installed with the drain port side elevated above the rest, water leakage may result.

- 6. Refrigerant Pipe and Drain Pipe Specifications
- [1] Refrigerant pipe and drain pipe specifications
- [2] Refrigerant pipes and drain pipes





[1] Refrigerant piping work

🔨 WARNING

Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit.
 Infiltration of any other types of refrigerant or air into the unit may result in malfunctions or serious damage to the unit.

•Use refrigerant pipes made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and water.

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

•Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

+Use a small amount of Suniso 4GS or 3GS to flare and flange connections. (Applicable to the models for use with R22)

•Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. (Applicable to the models for use with R410A or R407C) R410A and R407C are highly hygroscopic and could introduce moisture into the system and cause the refrigerator oil to deteriorate, if not handled with care.

[2] Drain piping work

[3] Confirming proper drainage of drain water

8. Duct Work

*Keep the inlet grill at least 850 mm away from the fan. If it is not possible, install a safety guard on the fan.

9. Electrical Work

🕂 WARNING

_				
_	+Have all electrical work perform		tions in this manual. U	se
	a dedicated circuit.			
	 Insufficient power supply capa 		tric shock, or fire.	

Be sure to ground the outdoor unit. Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire. Improper grounding can result in a risk of electric shock.

[1] Power supply wiring

▲ CAUTION

Only use breakers and fuses with adequate breaking capacity. Do not substitute a piece of wire for a fuse or use a fuse that exceeds the specified rating.

[2] Connecting the remote controller and indoor/outdoor units

Install the cables in such a way that the tension load is not applied.

- [3] Making electrical connections
- [4] External I/O specifications

🕂 CAUTION

Cover the wiring with insulation tubes with extra insulation.
Use relays and switches that meet the IEC standards or their equivalents.
Electric resistance between all accessible parts and the control circuit should be at least 2750 V.

- [5] Making the external static pressure setting
- [6] Setting the unit addresses and branch numbers
- [7] Using the built-in temperature sensor on the remote controller

IMPORTANT: FOR YOUR SAFETY READ AND OBSERVE THE FOLLOWING PRECAUTIONS CAREFUL-LY & READ ALL LABELS ON THE UNIT. SAVE THIS MANUAL FOR FUTURE REFERENCE.

Symbol Explanations

🕂 WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

This symbol indicates that that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

[1] Read before installation and performing electrical work

🕂 WARNING

Ask your dealer or a qualified technician to install the unit.
 Improper installation by the user may result in water leakage, electric shock, or fire.

- Properly install the unit on a surface that can withstand its weight. Unit installed on an unstable surface may fall and cause injury.
- •Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable and external force. Improperly connected cables may produce heat and start a fire.
- •Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over. Improper installation may cause the unit to topple over and cause injury or damage to the unit.
- •Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric. Ask a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- •Do not make any modifications or alterations to the unit. Consult your dealer for repair. Improper repair may result in water leakage, electric shock, or fire
- •Do not touch the heat exchanger fins with bare hands. The fins are sharp and pose a
- Always wear protective equipm
- In the event of a refrigerant leak, thoroughly ventilate the room. If gaseous refrigerant leaks out and comes in contact with an open flame, toxic gases will be generated.
- •Properly install the unit according to the instructions in the Installation Manual. Improper installation may result in water leakage, electric shock, or fire.
- •Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.
- Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.
- Keep electrical parts away from water.
 Wet electrical parts pose a risk of electric shock, smoke, or fire.
- •Securely attach the control box cover.
- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.
- •Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.
- •When installing the unit in a small space, take appropriate precautions to prevent leaked refrigerant from reaching the limiting concentration. Leaked refrigerant gas will displace oxygen and cause oxygen starvation if it exceeds the limiting concentration. Consult your dealer before installing the unit.
- Consult your dealer or a qualified technician when moving or reinstalling the unit. Improper installation may result in water leakage, electric shock, or fire.
- •After completing the service work, check for a refrigerant leak. If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.
- •Do not try to defeat the safety features of the unit. Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices or the use of accessories other than the ones that are recommended by MITSUBISHI may result in smoke, fire, or explosion.
- · Consult your dealer for proper disposal method.



suit, goggles).

[2] Precautions for handling units for use with R410A

Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

- •Use refrigerant piping materials made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and moisture. Contaminants in the refrigerant piping may cause the refrigerator oil to deteriorate.
- Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. (Keep elbows and other joints wrapped in plastic.)

Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

- Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. Infiltration of a large amount of mineral oil may cause the refrigerator oil to deteriorate.
- Charge the system with refrigerant in the liquid phase.
 If gaseous refrigerant is drawn out of the cylinder first, the composition of the remaining refrigerant in the cylinder will change and become unsuitable for use.
- •Only use R410A or R407C.
- The use of other types of refrigerant that contain chloride may cause the refrigerator oil to deteriorate.
- •Use a vacuum pump with a check valve.
- If a vacuum pump that is not equipped with a check valve is used, the vacuum pump oil may flow into the refrigerant cycle and cause the refrigerator oil to deteriorate.
- •Prepare tools for exclusive use with R 410A. Do not use the following tools if they have been used with the conventional refrigerant: gauge manifold, charging hose, gas leak detector, check valve, refrigerant charge base, vacuum gauge, and refrigerant recovery equipment. If the refrigerant or the refrigerator oil that may be left on these tools are mixed in with R410A, it may cause the refrigerator oil in the new system to deteriorate.
- Infiltration of water may cause the refrigerator oil to deteriorate. Leak detectors for conventional refrigerants will not detect an R410A leak because R410A is free of chlorine.

•Do not use a charging cylinder If a charging cylinder is used, t



ble for use.

•Exercise special care when handling tools for use with R410A. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate.

[3] Read before installing the unit

A CAUTION

•To avoid the risk of fire, never install the air conditioner where there is a risk of leakage of flammable gas.

- •The models of air conditioning units described in this manual are not intended for use with food, pets, plants, precision instruments, or art work.
- •Do not use the unit in an environment with a high concentration of oil, steam, sulfuric gas etc. They can significantly reduce the performance of the unit or damage its parts.
- •Take appropriate measures against noise interference when installing the air conditioners in hospitals or communication facilities.
- •Inverter equipment, power generators, radio communication equipment, and high-frequency medical equipment may interfere with the normal operation of the air conditioner or vice versa.
- Install the unit in a location which will not render the unit vulnerable to water leakage. When the indoor humidity exceeds 80% or if the drainpipe becomes clogged, condensation may drip from the indoor unit. Provide an adequate collective drainage system as necessary.
- •The models of indoor units described in this manual should only be installed on a ceiling at least 2.5 m from the floor.

[4] Read before performing electrical work

•Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire.

- •To avoid the risk of wire breakage and fire, install the power cable in such a way that tension load is not applied.
- •To avoid the risk of electric shock, install all required breakers.

•To avoid the risk of current leakage, heat build-up, and fire, use properly rated power cables for the capacity of the line.

CZ

•To avoid the risk of unit failure and fire, use properly rated breakers and fuses.

•To avoid the risk of electric shock, do not wash the air conditioning units with water.

•To prevent the unit from toppling over and cause personal injury or unit damage, periodically check the installation base for damage.

 Install drainpipes according the instructions in this manual to ensure proper drainage. Wrap thermal insulation around the pipes to prevent moisture condensation.

Improper pipe installation or inadequate insulation may result in water leakage.

•Exercise caution when transporting units.

Products weighing more than 20 kg should be carried by at least two people. Do not suspend the unit by the PP bands that are used on some packages. To avoid the risk of cuts, keep your hands away from the heat exchanger fins. When using a crane or other hoisting equipment to lift the unit, suspend the unit from four corners.

• Properly dispose of packing materials.

Pallets and the nails on the pallets can pose the risk of cuts, stabs, and abrasions. Plastic gabs can pose suffocation and choking hazards; do not let children play with them. Tear the plastic bags before disposing of them.

[5] Read before starting the test run

*Keep the power on for at least 12 hours before starting a test run.

•To avoid the risk of electric shock, do not touch the switches with wet hands.

•Do not touch the refrigerant pipes with bare hands during and immediately after operation.

•During or immediately after operation, certain parts of the unit such as pipes and compressor may be either very cold or hot, depending on the state of the refrigerant in the unit at the time. To reduce the risk of frostbites and burns, do not touch these parts with bare hands.

•Do not operate the unit without panels and safety guards properly installed. The unit houses high-temperature, high-voltage, or rotating parts that can pose a risk of injury if the unit is operated without the panel and fan guard.

•Do not turn off the power immediately after stopping the operation. Keep the unit on for at least five minutes before turning off the power to prevent water leakage and malfunctions.

2. Indoor Unit Access

3. Selecting an Installation Site

[1] Ceiling strength

/ WARNING

•To avoid the risk of injury, hang the unit from a structure strong enough to support its weight.

- [2] Orientation of the unit and securing enough service space
- [3] Indoor/outdoor unit compatibility
- 4. Fixing the Hanging Bolts
- [1] Fixing the hanging bolts
- 5. Installing the Unit
- [1] Hanging the unit
- [2] Confirming proper installation

A CAUTION

• If the unit is installed with the drain port side elevated above the rest, water leakage may result.

- 6. Refrigerant Pipe and Drain Pipe Specifications
- [1] Refrigerant pipe and drain pipe specifications
- [2] Refrigerant pipes and drain pipes



[1] Refrigerant piping work

🔨 WARNING

Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit.
 Infiltration of any other types of refrigerant or air into the unit may result in malfunctions or serious damage to the unit.

•Use refrigerant pipes made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and water.

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

• Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

+Use a small amount of Suniso 4GS or 3GS to flare and flange connections. (Applicable to the models for use with R22)

•Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. (Applicable to the models for use with R410A or R407C) R410A and R407C are highly hygroscopic and could introduce moisture into the system and cause the refrigerator oil to deteriorate, if not handled with care.

[2] Drain piping work

[3] Confirming proper drainage of drain water

8. Duct Work

•Keep the inlet grill at least 850 mm away from the fan. If it is not possible, install a safety guard on the fan.

9. Electrical Work

🕂 WARNING

 Have all electrical work perform 	$\mathbf{C7}$	tions in this manual. Use
a dedicated circuit.		
 Insufficient power supply capa 		tric shock, or fire.

Be sure to ground the outdoor unit. Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire. Improper grounding can result in a risk of electric shock.

[1] Power supply wiring

▲ CAUTION

Only use breakers and fuses with adequate breaking capacity. Do not substitute a piece of wire for a fuse or use a fuse that exceeds the specified rating.

[2] Connecting the remote controller and indoor/outdoor units

Install the cables in such a way that the tension load is not applied.

- [3] Making electrical connections
- [4] External I/O specifications

🕂 CAUTION

Cover the wiring with insulation tubes with extra insulation.
Use relays and switches that meet the IEC standards or their equivalents.
Electric resistance between all accessible parts and the control circuit should be at least 2750 V.

- [5] Making the external static pressure setting
- [6] Setting the unit addresses and branch numbers
- [7] Using the built-in temperature sensor on the remote controller

WT04882X01
1. Safety Precautions

IMPORTANT: FOR YOUR SAFETY READ AND OBSERVE THE FOLLOWING PRECAUTIONS CAREFUL-LY & READ ALL LABELS ON THE UNIT. SAVE THIS MANUAL FOR FUTURE REFERENCE.

Symbol Explanations

🕂 WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

This symbol indicates that that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

[1] Read before installation and performing electrical work

🕂 WARNING

Ask your dealer or a qualified technician to install the unit.
 Improper installation by the user may result in water leakage, electric shock, or fire.

- Properly install the unit on a surface that can withstand its weight. Unit installed on an unstable surface may fall and cause injury.
- •Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable and external force. Improperly connected cables may produce heat and start a fire.
- •Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over. Improper installation may cause the unit to topple over and cause injury or damage to the unit.
- •Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric. Ask a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- •Do not make any modifications or alterations to the unit. Consult your dealer for repair. Improper repair may result in water leakage, electric shock, or fire
- •Do not touch the heat exchanger fins with bare hands. The fins are sharp and pose a
- Always wear protective equipm
- In the event of a refrigerant leak, thoroughly ventilate the room. If gaseous refrigerant leaks out and comes in contact with an open flame, toxic gases will be generated.
- •Properly install the unit according to the instructions in the Installation Manual. Improper installation may result in water leakage, electric shock, or fire.
- •Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.
- Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.
- Keep electrical parts away from water.
 Wet electrical parts pose a risk of electric shock, smoke, or fire.
- •Securely attach the control box cover.
- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.
- •Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.
- •When installing the unit in a small space, take appropriate precautions to prevent leaked refrigerant from reaching the limiting concentration. Leaked refrigerant gas will displace oxygen and cause oxygen starvation if it exceeds the limiting concentration. Consult your dealer before installing the unit.
- Consult your dealer or a qualified technician when moving or reinstalling the unit. Improper installation may result in water leakage, electric shock, or fire.
- •After completing the service work, check for a refrigerant leak. If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.
- •Do not try to defeat the safety features of the unit. Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices or the use of accessories other than the ones that are recommended by MITSUBISHI may result in smoke, fire, or explosion.
- · Consult your dealer for proper disposal method.



suit, goggles).

[2] Precautions for handling units for use with R410A

Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

- •Use refrigerant piping materials made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and moisture. Contaminants in the refrigerant piping may cause the refrigerator oil to deteriorate.
- Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. (Keep elbows and other joints wrapped in plastic.)

Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

- Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. Infiltration of a large amount of mineral oil may cause the refrigerator oil to deteriorate.
- Charge the system with refrigerant in the liquid phase.
 If gaseous refrigerant is drawn out of the cylinder first, the composition of the remaining refrigerant in the cylinder will change and become unsuitable for use.
- •Only use R410A or R407C.

The use of other types of refrigerant that contain chloride may cause the refrigerator oil to deteriorate.

- •Use a vacuum pump with a check valve.
- If a vacuum pump that is not equipped with a check valve is used, the vacuum pump oil may flow into the refrigerant cycle and cause the refrigerator oil to deteriorate.
- •Prepare tools for exclusive use with R 410A. Do not use the following tools if they have been used with the conventional refrigerant: gauge manifold, charging hose, gas leak detector, check valve, refrigerant charge base, vacuum gauge, and refrigerant recovery equipment. If the refrigerant or the refrigerator oil that may be left on these tools are mixed in with R410A, it may cause the refrigerator oil in the new system to deteriorate.
- Infiltration of water may cause the refrigerator oil to deteriorate. Leak detectors for conventional refrigerants will not detect an R410A leak because R410A is free of chlorine.

 Do not use a charging cylinder If a charging cylinder is used, 1



ble for use.

•Exercise special care when handling tools for use with R410A. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate.

[3] Read before installing the unit

A CAUTION

•To avoid the risk of fire, never install the air conditioner where there is a risk of leakage of flammable gas.

- •The models of air conditioning units described in this manual are not intended for use with food, pets, plants, precision instruments, or art work.
- •Do not use the unit in an environment with a high concentration of oil, steam, sulfuric gas etc. They can significantly reduce the performance of the unit or damage its parts.
- •Take appropriate measures against noise interference when installing the air conditioners in hospitals or communication facilities.
- •Inverter equipment, power generators, radio communication equipment, and high-frequency medical equipment may interfere with the normal operation of the air conditioner or vice versa.
- Install the unit in a location which will not render the unit vulnerable to water leakage. When the indoor humidity exceeds 80% or if the drainpipe becomes clogged, condensation may drip from the indoor unit. Provide an adequate collective drainage system as necessary.

•The models of indoor units described in this manual should only be installed on a ceiling at least 2.5 m from the floor.

[4] Read before performing electrical work

•Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire.

- •To avoid the risk of wire breakage and fire, install the power cable in such a way that tension load is not applied.
- •To avoid the risk of electric shock, install all required breakers.

•To avoid the risk of unit failure and fire, use properly rated breakers and fuses.

•To avoid the risk of electric shock, do not wash the air conditioning units with water.

•To prevent the unit from toppling over and cause personal injury or unit damage, periodically check the installation base for damage.

 Install drainpipes according the instructions in this manual to ensure proper drainage. Wrap thermal insulation around the pipes to prevent moisture condensation.

Improper pipe installation or inadequate insulation may result in water leakage.

•Exercise caution when transporting units.

Products weighing more than 20 kg should be carried by at least two people. Do not suspend the unit by the PP bands that are used on some packages. To avoid the risk of cuts, keep your hands away from the heat exchanger fins. When using a crane or other hoisting equipment to lift the unit, suspend the unit from four corners.

• Properly dispose of packing materials.

Pallets and the nails on the pallets can pose the risk of cuts, stabs, and abrasions. Plastic gabs can pose suffocation and choking hazards; do not let children play with them. Tear the plastic bags before disposing of them.

[5] Read before starting the test run

*Keep the power on for at least 12 hours before starting a test run.

•To avoid the risk of electric shock, do not touch the switches with wet hands.

•Do not touch the refrigerant pipes with bare hands during and immediately after operation.

•During or immediately after operation, certain parts of the unit such as pipes and compressor may be either very cold or hot, depending on the state of the refrigerant in the unit at the time. To reduce the risk of frostbites and burns, do not touch these parts with bare hands.

•Do not operate the unit without panels and safety guards properly installed. The unit houses high-temperature, high-voltage, or rotating parts that can pose a risk of injury if the unit is operated without the panel and fan guard.

•Do not turn off the power immediately after stopping the operation. Keep the unit on for at least five minutes before turning off the power to prevent water leakage and malfunctions.

2. Indoor Unit Access

3. Selecting an Installation Site

[1] Ceiling strength

/ WARNING

•To avoid the risk of injury, hang the unit from a structure strong enough to support its weight.

- [2] Orientation of the unit and securing enough service space
- [3] Indoor/outdoor unit compatibility
- 4. Fixing the Hanging Bolts
- [1] Fixing the hanging bolts
- 5. Installing the Unit
- [1] Hanging the unit
- [2] Confirming proper installation
- A CAUTION

- 6. Refrigerant Pipe and Drain Pipe Specifications
- [1] Refrigerant pipe and drain pipe specifications
- [2] Refrigerant pipes and drain pipes



[1] Refrigerant piping work

Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit.
 Infiltration of any other types of refrigerant or air into the unit may result in malfunctions or serious damage to the unit.

•Use refrigerant pipes made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and water.

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

• Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

+Use a small amount of Suniso 4GS or 3GS to flare and flange connections. (Applicable to the models for use with R22)

•Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. (Applicable to the models for use with R410A or R407C) R410A and R407C are highly hygroscopic and could introduce moisture into the system and cause the refrigerator oil to deteriorate, if not handled with care.

[2] Drain piping work

[3] Confirming proper drainage of drain water

8. Duct Work

•Keep the inlet grill at least 850 mm away from the fan. If it is not possible, install a safety guard on the fan.

9. Electrical Work

<u> </u>	
 Have all electrical work perform 	
a dedicated circuit.	V
 Insufficient power supply capa 	

tions in this manual. Use tric shock, or fire.

Be sure to ground the outdoor unit. Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire. Improper grounding can result in a risk of electric shock.

[1] Power supply wiring

▲ CAUTION

Only use breakers and fuses with adequate breaking capacity. Do not substitute a piece of wire for a fuse or use a fuse that exceeds the specified rating.

[2] Connecting the remote controller and indoor/outdoor units

Install the cables in such a way that the tension load is not applied.

- [3] Making electrical connections
- [4] External I/O specifications

🕂 CAUTION

Cover the wiring with insulation tubes with extra insulation.
Use relays and switches that meet the IEC standards or their equivalents.
Electric resistance between all accessible parts and the control circuit should be at least 2750 V.

- [5] Making the external static pressure setting
- [6] Setting the unit addresses and branch numbers
- [7] Using the built-in temperature sensor on the remote controller

SL

1. Safety Precautions

IMPORTANT: FOR YOUR SAFETY READ AND OBSERVE THE FOLLOWING PRECAUTIONS CAREFUL-LY & READ ALL LABELS ON THE UNIT. SAVE THIS MANUAL FOR FUTURE REFERENCE.

Symbol Explanations

🕂 WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

This symbol indicates that that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

[1] Read before installation and performing electrical work

🕂 WARNING

Ask your dealer or a qualified technician to install the unit.
 Improper installation by the user may result in water leakage, electric shock, or fire.

- Properly install the unit on a surface that can withstand its weight. Unit installed on an unstable surface may fall and cause injury.
- •Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable and external force. Improperly connected cables may produce heat and start a fire.
- •Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over. Improper installation may cause the unit to topple over and cause injury or damage to the unit.
- •Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric. Ask a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- •Do not make any modifications or alterations to the unit. Consult your dealer for repair. Improper repair may result in water leakage, electric shock, or fire
- •Do not touch the heat exchanger fins with bare hands. The fins are sharp and pose a
- Always wear protective equipm
- In the event of a refrigerant leak, thoroughly ventilate the room.
 If gaseous refrigerant leaks out and comes in contact with an open flame, toxic gases will be generated.
- •Properly install the unit according to the instructions in the Installation Manual. Improper installation may result in water leakage, electric shock, or fire.
- •Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.
- Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.
- Keep electrical parts away from water.
 Wet electrical parts pose a risk of electric shock, smoke, or fire.
- •Securely attach the control box cover.
- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.
- •Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.
- •When installing the unit in a small space, take appropriate precautions to prevent leaked refrigerant from reaching the limiting concentration. Leaked refrigerant gas will displace oxygen and cause oxygen starvation if it exceeds the limiting concentration. Consult your dealer before installing the unit.
- Consult your dealer or a qualified technician when moving or reinstalling the unit. Improper installation may result in water leakage, electric shock, or fire.
- •After completing the service work, check for a refrigerant leak. If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.
- •Do not try to defeat the safety features of the unit. Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices or the use of accessories other than the ones that are recommended by MITSUBISHI may result in smoke, fire, or explosion.
- · Consult your dealer for proper disposal method.

[2] Precautions for handling units for use with R410A

Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

- •Use refrigerant piping materials made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and moisture. Contaminants in the refrigerant piping may cause the refrigerator oil to deteriorate.
- Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. (Keep elbows and other joints wrapped in plastic.)

Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

- Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. Infiltration of a large amount of mineral oil may cause the refrigerator oil to deteriorate.
- •Charge the system with refrigerant in the liquid phase. If gaseous refrigerant is drawn out of the cylinder first, the composition of the remaining refrigerant in the cylinder will change and become unsuitable for use.
- •Only use R410A or R407C.

The use of other types of refrigerant that contain chloride may cause the refrigerator oil to deteriorate.

- •Use a vacuum pump with a check valve.
- If a vacuum pump that is not equipped with a check valve is used, the vacuum pump oil may flow into the refrigerant cycle and cause the refrigerator oil to deteriorate.
- •Prepare tools for exclusive use with R 410A. Do not use the following tools if they have been used with the conventional refrigerant: gauge manifold, charging hose, gas leak detector, check valve, refrigerant charge base, vacuum gauge, and refrigerant recovery equipment. If the refrigerant or the refrigerator oil that may be left on these tools are mixed in with R410A, it may cause the refrigerator oil in the new system to deteriorate.
- Infiltration of water may cause the refrigerator oil to deteriorate. Leak detectors for conventional refrigerants will not detect an R410A leak because R410A is free of chlorine.

 Do not use a charging cylinder If a charging cylinder is used, t



ble for use.

•Exercise special care when handling tools for use with R410A. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate.

[3] Read before installing the unit

A CAUTION

•To avoid the risk of fire, never install the air conditioner where there is a risk of leakage of flammable gas.

- •The models of air conditioning units described in this manual are not intended for use with food, pets, plants, precision instruments, or art work.
- •Do not use the unit in an environment with a high concentration of oil, steam, sulfuric gas etc. They can significantly reduce the performance of the unit or damage its parts.
- •Take appropriate measures against noise interference when installing the air conditioners in hospitals or communication facilities.
- •Inverter equipment, power generators, radio communication equipment, and high-frequency medical equipment may interfere with the normal operation of the air conditioner or vice versa.
- Install the unit in a location which will not render the unit vulnerable to water leakage. When the indoor humidity exceeds 80% or if the drainpipe becomes clogged, condensation may drip from the indoor unit. Provide an adequate collective drainage system as necessary.

•The models of indoor units described in this manual should only be installed on a ceiling at least 2.5 m from the floor.

[4] Read before performing electrical work

A CAUTION

•Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire.

- •To avoid the risk of wire breakage and fire, install the power cable in such a way that tension load is not applied.
- •To avoid the risk of electric shock, install all required breakers.

SL

•To avoid the risk of unit failure and fire, use properly rated breakers and fuses.

•To avoid the risk of electric shock, do not wash the air conditioning units with water.

•To prevent the unit from toppling over and cause personal injury or unit damage, periodically check the installation base for damage.

 Install drainpipes according the instructions in this manual to ensure proper drainage. Wrap thermal insulation around the pipes to prevent moisture condensation.

Improper pipe installation or inadequate insulation may result in water leakage.

•Exercise caution when transporting units.

Products weighing more than 20 kg should be carried by at least two people. Do not suspend the unit by the PP bands that are used on some packages. To avoid the risk of cuts, keep your hands away from the heat exchanger fins. When using a crane or other hoisting equipment to lift the unit, suspend the unit from four corners.

•Properly dispose of packing materials.

Pallets and the nails on the pallets can pose the risk of cuts, stabs, and abrasions. Plastic gabs can pose suffocation and choking hazards; do not let children play with them. Tear the plastic bags before disposing of them.

[5] Read before starting the test run

*Keep the power on for at least 12 hours before starting a test run.

•To avoid the risk of electric shock, do not touch the switches with wet hands.

•Do not touch the refrigerant pipes with bare hands during and immediately after operation.

•During or immediately after operation, certain parts of the unit such as pipes and compressor may be either very cold or hot, depending on the state of the refrigerant in the unit at the time. To reduce the risk of frostbites and burns, do not touch these parts with bare hands.

•Do not operate the unit without panels and safety guards properly installed. The unit houses high-temperature, high-voltage, or rotating parts that can pose a risk of injury if the unit is operated without the panel and fan guard.

Do not turn off the power immediately after stopping the operation.
 Keep the unit on for at least five minutes before turning off the power to prevent water leakage and malfunctions.

2. Indoor Unit Access

3. Selecting an Installation Site

[1] Ceiling strength

/ WARNING

•To avoid the risk of injury, hang the unit from a structure strong enough to support its weight.

- [2] Orientation of the unit and securing enough service space
- [3] Indoor/outdoor unit compatibility
- 4. Fixing the Hanging Bolts
- [1] Fixing the hanging bolts
- 5. Installing the Unit
- [1] Hanging the unit
- [2] Confirming proper installation

A CAUTION

- 6. Refrigerant Pipe and Drain Pipe Specifications
- [1] Refrigerant pipe and drain pipe specifications
- [2] Refrigerant pipes and drain pipes

[1] Refrigerant piping work

Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit.
 Infiltration of any other types of refrigerant or air into the unit may result in malfunctions or serious damage to the unit.

•Use refrigerant pipes made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and water.

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

• Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

+Use a small amount of Suniso 4GS or 3GS to flare and flange connections. (Applicable to the models for use with R22)

•Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. (Applicable to the models for use with R410A or R407C) R410A and R407C are highly hygroscopic and could introduce moisture into the system and cause the refrigerator oil to deteriorate, if not handled with care.

[2] Drain piping work

[3] Confirming proper drainage of drain water

8. Duct Work

•Keep the inlet grill at least 850 mm away from the fan. If it is not possible, install a safety guard on the fan.

9. Electrical Work

 Have all electrical work performance 		tions in this manual. Use
a dedicated circuit.		
 Insufficient power supply capa 		tric shock, or fire.

Be sure to ground the outdoor unit. Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire. Improper grounding can result in a risk of electric shock.

[1] Power supply wiring

▲ CAUTION

Only use breakers and fuses with adequate breaking capacity. Do not substitute a piece of wire for a fuse or use a fuse that exceeds the specified rating.

[2] Connecting the remote controller and indoor/outdoor units

Install the cables in such a way that the tension load is not applied.

- [3] Making electrical connections
- [4] External I/O specifications

A CAUTION

Cover the wiring with insulation tubes with extra insulation.
Use relays and switches that meet the IEC standards or their equivalents.
Electric resistance between all accessible parts and the control circuit should be at least 2750 V.

- [5] Making the external static pressure setting
- [6] Setting the unit addresses and branch numbers
- [7] Using the built-in temperature sensor on the remote controller

WT04882X01

HG

1. Safety Precautions

IMPORTANT: FOR YOUR SAFETY READ AND OBSERVE THE FOLLOWING PRECAUTIONS CAREFULLY & READ ALL LABELS ON THE UNIT. SAVE THIS MANUAL FOR FUTURE REFERENCE.

Symbol Explanations

🕂 WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

This symbol indicates that that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

[1] Read before installation and performing electrical work

🕂 WARNING

•Ask your dealer or a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.

- Properly install the unit on a surface that can withstand its weight. Unit installed on an unstable surface may fall and cause injury.
- •Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable and external force. Improperly connected cables may produce heat and start a fire.
- •Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over. Improper installation may cause the unit to topple over and cause injury or damage to the unit.
- •Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric. Ask a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- •Do not make any modifications or alterations to the unit. Consult your dealer for repair. Improper repair may result in water leakage, electric shock, or fire
- •Do not touch the heat exchanger fins with bare hands. The fins are sharp and pose a
- Always wear protective equipm
- In the event of a refrigerant leak, thoroughly ventilate the room. If gaseous refrigerant leaks out and comes in contact with an open flame, toxic gases will be generated.
- •Properly install the unit according to the instructions in the Installation Manual. Improper installation may result in water leakage, electric shock, or fire.
- •Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.
- Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.
- Keep electrical parts away from water.
 Wet electrical parts pose a risk of electric shock, smoke, or fire.
- •Securely attach the control box cover.
- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.
- •Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.
- •When installing the unit in a small space, take appropriate precautions to prevent leaked refrigerant from reaching the limiting concentration. Leaked refrigerant gas will displace oxygen and cause oxygen starvation if it exceeds the limiting concentration. Consult your dealer before installing the unit.
- Consult your dealer or a qualified technician when moving or reinstalling the unit. Improper installation may result in water leakage, electric shock, or fire.
- •After completing the service work, check for a refrigerant leak. If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.
- •Do not try to defeat the safety features of the unit. Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices or the use of accessories other than the ones that are recommended by MITSUBISHI may result in smoke, fire, or explosion.
- · Consult your dealer for proper disposal method.

[2] Precautions for handling units for use with R410A

HG

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

- •Use refrigerant piping materials made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and moisture. Contaminants in the refrigerant piping may cause the refrigerator oil to deteriorate.
- Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. (Keep elbows and other joints wrapped in plastic.)

Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

- •Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. Infiltration of a large amount of mineral oil may cause the refrigerator oil to deteriorate.
- •Charge the system with refrigerant in the liquid phase. If gaseous refrigerant is drawn out of the cylinder first, the composition of the remaining refrigerant in the cylinder will change and become unsuitable for use.
- •Only use R410A or R407C.
- The use of other types of refrigerant that contain chloride may cause the refrigerator oil to deteriorate.
- •Use a vacuum pump with a check valve.
- If a vacuum pump that is not equipped with a check valve is used, the vacuum pump oil may flow into the refrigerant cycle and cause the refrigerator oil to deteriorate.
- •Prepare tools for exclusive use with R 410A. Do not use the following tools if they have been used with the conventional refrigerant: gauge manifold, charging hose, gas leak detector, check valve, refrigerant charge base, vacuum gauge, and refrigerant recovery equipment. If the refrigerant or the refrigerator oil that may be left on these tools are mixed in with R410A, it may cause the refrigerator oil in the new system to deteriorate.
- Infiltration of water may cause the refrigerator oil to deteriorate.

Leak detectors for conventional refrigerants will not detect an R410A leak because R410A is free of chlorine.

 Do not use a charging cylinder If a charging cylinder is used, 1



ble for use.

•Exercise special care when handling tools for use with R410A. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate.

[3] Read before installing the unit

•To avoid the risk of fire, never install the air conditioner where there is a risk of leakage of flammable gas.

- •The models of air conditioning units described in this manual are not intended for use with food, pets, plants, precision instruments, or art work.
- •Do not use the unit in an environment with a high concentration of oil, steam, sulfuric gas etc. They can significantly reduce the performance of the unit or damage its parts.
- •Take appropriate measures against noise interference when installing the air conditioners in hospitals or communication facilities.
- •Inverter equipment, power generators, radio communication equipment, and high-frequency medical equipment may interfere with the normal operation of the air conditioner or vice versa.
- Install the unit in a location which will not render the unit vulnerable to water leakage. When the indoor humidity exceeds 80% or if the drainpipe becomes clogged, condensation may drip from the indoor unit. Provide an adequate collective drainage system as necessary.

•The models of indoor units described in this manual should only be installed on a ceiling at least 2.5 m from the floor.

[4] Read before performing electrical work

A CAUTION

•Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire.

- •To avoid the risk of wire breakage and fire, install the power cable in such a way that tension load is not applied.
- •To avoid the risk of electric shock, install all required breakers.

HG

•To avoid the risk of unit failure and fire, use properly rated breakers and fuses.

•To avoid the risk of electric shock, do not wash the air conditioning units with water.

•To prevent the unit from toppling over and cause personal injury or unit damage, periodically check the installation base for damage.

 Install drainpipes according the instructions in this manual to ensure proper drainage. Wrap thermal insulation around the pipes to prevent moisture condensation.

Improper pipe installation or inadequate insulation may result in water leakage.

•Exercise caution when transporting units.

Products weighing more than 20 kg should be carried by at least two people. Do not suspend the unit by the PP bands that are used on some packages. To avoid the risk of cuts, keep your hands away from the heat exchanger fins. When using a crane or other hoisting equipment to lift the unit, suspend the unit from four corners.

• Properly dispose of packing materials.

Pallets and the nails on the pallets can pose the risk of cuts, stabs, and abrasions. Plastic gabs can pose suffocation and choking hazards; do not let children play with them. Tear the plastic bags before disposing of them.

[5] Read before starting the test run

*Keep the power on for at least 12 hours before starting a test run.

•To avoid the risk of electric shock, do not touch the switches with wet hands.

•Do not touch the refrigerant pipes with bare hands during and immediately after operation.

•During or immediately after operation, certain parts of the unit such as pipes and compressor may be either very cold or hot, depending on the state of the refrigerant in the unit at the time. To reduce the risk of frostbites and burns, do not touch these parts with bare hands.

•Do not operate the unit without panels and safety guards properly installed. The unit houses high-temperature, high-voltage, or rotating parts that can pose a risk of injury if the unit is operated without the panel and fan guard.

•Do not turn off the power immediately after stopping the operation. Keep the unit on for at least five minutes before turning off the power to prevent water leakage and malfunctions.

2. Indoor Unit Access

3. Selecting an Installation Site

[1] Ceiling strength

/ WARNING

•To avoid the risk of injury, hang the unit from a structure strong enough to support its weight.

- [2] Orientation of the unit and securing enough service space
- [3] Indoor/outdoor unit compatibility
- 4. Fixing the Hanging Bolts
- [1] Fixing the hanging bolts
- 5. Installing the Unit
- [1] Hanging the unit
- [2] Confirming proper installation
- A CAUTION

- 6. Refrigerant Pipe and Drain Pipe Specifications
- [1] Refrigerant pipe and drain pipe specifications
- [2] Refrigerant pipes and drain pipes



[1] Refrigerant piping work

🔨 WARNING

Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit.
 Infiltration of any other types of refrigerant or air into the unit may result in malfunctions or serious damage to the unit.

•Use refrigerant pipes made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and water.

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

• Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

+Use a small amount of Suniso 4GS or 3GS to flare and flange connections. (Applicable to the models for use with R22)

•Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. (Applicable to the models for use with R410A or R407C) R410A and R407C are highly hygroscopic and could introduce moisture into the system and cause the refrigerator oil to deteriorate, if not handled with care.

[2] Drain piping work

[3] Confirming proper drainage of drain water

8. Duct Work

•Keep the inlet grill at least 850 mm away from the fan. If it is not possible, install a safety guard on the fan.

9. Electrical Work

 Have all electrical work perform 	tions in this manual. Use
a dedicated circuit.	
 Insufficient power supply capa 	tric shock, or fire.

Be sure to ground the outdoor unit. Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire. Improper grounding can result in a risk of electric shock.

[1] Power supply wiring

▲ CAUTION

Only use breakers and fuses with adequate breaking capacity. Do not substitute a piece of wire for a fuse or use a fuse that exceeds the specified rating.

[2] Connecting the remote controller and indoor/outdoor units

Install the cables in such a way that the tension load is not applied.

- [3] Making electrical connections
- [4] External I/O specifications

🕂 CAUTION

Cover the wiring with insulation tubes with extra insulation.
Use relays and switches that meet the IEC standards or their equivalents.
Electric resistance between all accessible parts and the control circuit should be at least 2750 V.

- [5] Making the external static pressure setting
- [6] Setting the unit addresses and branch numbers
- [7] Using the built-in temperature sensor on the remote controller

1. Safety Precautions

IMPORTANT: FOR YOUR SAFETY READ AND OBSERVE THE FOLLOWING PRECAUTIONS CAREFUL-LY & READ ALL LABELS ON THE UNIT. SAVE THIS MANUAL FOR FUTURE REFERENCE.

Symbol Explanations

🕂 WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

This symbol indicates that that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

[1] Read before installation and performing electrical work

🕂 WARNING

 Ask your dealer or a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.

- Properly install the unit on a surface that can withstand its weight. Unit installed on an unstable surface may fall and cause injury.
- •Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable and external force. Improperly connected cables may produce heat and start a fire.
- •Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over. Improper installation may cause the unit to topple over and cause injury or damage to the unit.
- •Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric. Ask a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- •Do not make any modifications or alterations to the unit. Consult your dealer for repair. Improper repair may result in water leakage, electric shock, or fire
- •Do not touch the heat exchanger fins with bare hands. The fins are sharp and pose a
- Always wear protective equipm
- In the event of a refrigerant leak, thoroughly ventilate the room.
 If gaseous refrigerant leaks out and comes in contact with an open flame, toxic gases will be generated.
- •Properly install the unit according to the instructions in the Installation Manual. Improper installation may result in water leakage, electric shock, or fire.
- •Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.
- Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.
- Keep electrical parts away from water.
 Wet electrical parts pose a risk of electric shock, smoke, or fire.
- •Securely attach the control box cover.
- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.
- •Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.
- •When installing the unit in a small space, take appropriate precautions to prevent leaked refrigerant from reaching the limiting concentration. Leaked refrigerant gas will displace oxygen and cause oxygen starvation if it exceeds the limiting concentration. Consult your dealer before installing the unit.
- Consult your dealer or a qualified technician when moving or reinstalling the unit. Improper installation may result in water leakage, electric shock, or fire.
- •After completing the service work, check for a refrigerant leak. If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.
- •Do not try to defeat the safety features of the unit. Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices or the use of accessories other than the ones that are recommended by MITSUBISHI may result in smoke, fire, or explosion.
- · Consult your dealer for proper disposal method.

[2] Precautions for handling units for use with R410A

Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

- •Use refrigerant piping materials made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and moisture. Contaminants in the refrigerant piping may cause the refrigerator oil to deteriorate.
- Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. (Keep elbows and other joints wrapped in plastic.)

Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

- Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. Infiltration of a large amount of mineral oil may cause the refrigerator oil to deteriorate.
- Charge the system with refrigerant in the liquid phase.
 If gaseous refrigerant is drawn out of the cylinder first, the composition of the remaining refrigerant in the cylinder will change and become unsuitable for use.
- •Only use R410A or R407C.

The use of other types of refrigerant that contain chloride may cause the refrigerator oil to deteriorate.

- •Use a vacuum pump with a check valve.
- If a vacuum pump that is not equipped with a check valve is used, the vacuum pump oil may flow into the refrigerant cycle and cause the refrigerator oil to deteriorate.
- •Prepare tools for exclusive use with R 410A. Do not use the following tools if they have been used with the conventional refrigerant: gauge manifold, charging hose, gas leak detector, check valve, refrigerant charge base, vacuum gauge, and refrigerant recovery equipment. If the refrigerant or the refrigerator oil that may be left on these tools are mixed in with R410A, it may cause the refrigerator oil in the new system to deteriorate.
- Infiltration of water may cause the refrigerator oil to deteriorate. Leak detectors for conventional refrigerants will not detect an R410A leak because R410A is free of chlorine.

 Do not use a charging cylinder If a charging cylinder is used, t



ble for use.

•Exercise special care when handling tools for use with R410A. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate.

[3] Read before installing the unit

A CAUTION

•To avoid the risk of fire, never install the air conditioner where there is a risk of leakage of flammable gas.

- •The models of air conditioning units described in this manual are not intended for use with food, pets, plants, precision instruments, or art work.
- •Do not use the unit in an environment with a high concentration of oil, steam, sulfuric gas etc. They can significantly reduce the performance of the unit or damage its parts.
- •Take appropriate measures against noise interference when installing the air conditioners in hospitals or communication facilities.
- •Inverter equipment, power generators, radio communication equipment, and high-frequency medical equipment may interfere with the normal operation of the air conditioner or vice versa.
- Install the unit in a location which will not render the unit vulnerable to water leakage. When the indoor humidity exceeds 80% or if the drainpipe becomes clogged, condensation may drip from the indoor unit. Provide an adequate collective drainage system as necessary.

•The models of indoor units described in this manual should only be installed on a ceiling at least 2.5 m from the floor.

[4] Read before performing electrical work

A CAUTION

•Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire.

- •To avoid the risk of wire breakage and fire, install the power cable in such a way that tension load is not applied.
- •To avoid the risk of electric shock, install all required breakers.

•To avoid the risk of unit failure and fire, use properly rated breakers and fuses.

•To avoid the risk of electric shock, do not wash the air conditioning units with water.

•To prevent the unit from toppling over and cause personal injury or unit damage, periodically check the installation base for damage.

 Install drainpipes according the instructions in this manual to ensure proper drainage. Wrap thermal insulation around the pipes to prevent moisture condensation.

Improper pipe installation or inadequate insulation may result in water leakage.

•Exercise caution when transporting units.

Products weighing more than 20 kg should be carried by at least two people. Do not suspend the unit by the PP bands that are used on some packages. To avoid the risk of cuts, keep your hands away from the heat exchanger fins. When using a crane or other hoisting equipment to lift the unit, suspend the unit from four corners.

• Properly dispose of packing materials.

Pallets and the nails on the pallets can pose the risk of cuts, stabs, and abrasions. Plastic gabs can pose suffocation and choking hazards; do not let children play with them. Tear the plastic bags before disposing of them.

[5] Read before starting the test run

*Keep the power on for at least 12 hours before starting a test run.

•To avoid the risk of electric shock, do not touch the switches with wet hands.

•Do not touch the refrigerant pipes with bare hands during and immediately after operation.

•During or immediately after operation, certain parts of the unit such as pipes and compressor may be either very cold or hot, depending on the state of the refrigerant in the unit at the time. To reduce the risk of frostbites and burns, do not touch these parts with bare hands.

•Do not operate the unit without panels and safety guards properly installed. The unit houses high-temperature, high-voltage, or rotating parts that can pose a risk of injury if the unit is operated without the panel and fan guard.

•Do not turn off the power immediately after stopping the operation. Keep the unit on for at least five minutes before turning off the power to prevent water leakage and malfunctions.

2. Indoor Unit Access

3. Selecting an Installation Site

[1] Ceiling strength

🕂 WARNING

•To avoid the risk of injury, hang the unit from a structure strong enough to support its weight.

- [2] Orientation of the unit and securing enough service space
- [3] Indoor/outdoor unit compatibility
- 4. Fixing the Hanging Bolts
- [1] Fixing the hanging bolts
- 5. Installing the Unit
- [1] Hanging the unit
- [2] Confirming proper installation

- 6. Refrigerant Pipe and Drain Pipe Specifications
- [1] Refrigerant pipe and drain pipe specifications
- [2] Refrigerant pipes and drain pipes



[1] Refrigerant piping work

🔨 WARNING

Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit.
 Infiltration of any other types of refrigerant or air into the unit may result in malfunctions or serious damage to the unit.



•Use refrigerant pipes made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and water.

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

• Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

+Use a small amount of Suniso 4GS or 3GS to flare and flange connections. (Applicable to the models for use with R22)

•Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. (Applicable to the models for use with R410A or R407C) R410A and R407C are highly hygroscopic and could introduce moisture into the system and cause the refrigerator oil to deteriorate, if not handled with care.

[2] Drain piping work

[3] Confirming proper drainage of drain water

8. Duct Work

•Keep the inlet grill at least 850 mm away from the fan. If it is not possible, install a safety guard on the fan.

9. Electrical Work

 Have all electrical work perform 	DA	tions in this manual. Use
a dedicated circuit.	F ()	
 Insufficient power supply capa 		tric shock, or fire.

Be sure to ground the outdoor unit. Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire. Improper grounding can result in a risk of electric shock.

[1] Power supply wiring

▲ CAUTION

Only use breakers and fuses with adequate breaking capacity. Do not substitute a piece of wire for a fuse or use a fuse that exceeds the specified rating.

[2] Connecting the remote controller and indoor/outdoor units

Install the cables in such a way that the tension load is not applied.

- [3] Making electrical connections
- [4] External I/O specifications

A CAUTION

Cover the wiring with insulation tubes with extra insulation.
Use relays and switches that meet the IEC standards or their equivalents.
Electric resistance between all accessible parts and the control circuit should be at least 2750 V.

- [5] Making the external static pressure setting
- [6] Setting the unit addresses and branch numbers
- [7] Using the built-in temperature sensor on the remote controller

WT04882X01

1. Safety Precautions

IMPORTANT: FOR YOUR SAFETY READ AND OBSERVE THE FOLLOWING PRECAUTIONS CAREFUL-LY & READ ALL LABELS ON THE UNIT. SAVE THIS MANUAL FOR FUTURE REFERENCE.

Symbol Explanations

🕂 WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

This symbol indicates that that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

[1] Read before installation and performing electrical work

🕂 WARNING

•Ask your dealer or a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.

- Properly install the unit on a surface that can withstand its weight. Unit installed on an unstable surface may fall and cause injury.
- •Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable and external force. Improperly connected cables may produce heat and start a fire.
- •Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over. Improper installation may cause the unit to topple over and cause injury or damage to the unit.
- •Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric. Ask a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- •Do not make any modifications or alterations to the unit. Consult your dealer for repair. Improper repair may result in water leakage, electric shock, or fire
- •Do not touch the heat exchanger fins with bare hands. The fins are sharp and pose a
- Always wear protective equipm
- In the event of a refrigerant leak, thoroughly ventilate the room. If gaseous refrigerant leaks out and comes in contact with an open flame, toxic gases will be generated.
- •Properly install the unit according to the instructions in the Installation Manual. Improper installation may result in water leakage, electric shock, or fire.
- •Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.
- Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.
- Keep electrical parts away from water.
 Wet electrical parts pose a risk of electric shock, smoke, or fire.
- •Securely attach the control box cover.
- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.
- •Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.
- •When installing the unit in a small space, take appropriate precautions to prevent leaked refrigerant from reaching the limiting concentration. Leaked refrigerant gas will displace oxygen and cause oxygen starvation if it exceeds the limiting concentration. Consult your dealer before installing the unit.
- Consult your dealer or a qualified technician when moving or reinstalling the unit. Improper installation may result in water leakage, electric shock, or fire.
- •After completing the service work, check for a refrigerant leak. If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.
- •Do not try to defeat the safety features of the unit. Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices or the use of accessories other than the ones that are recommended by MITSUBISHI may result in smoke, fire, or explosion.
- · Consult your dealer for proper disposal method.

BG

[2] Precautions for handling units for use with R410A

BG

Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

- •Use refrigerant piping materials made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and moisture. Contaminants in the refrigerant piping may cause the refrigerator oil to deteriorate.
- Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. (Keep elbows and other joints wrapped in plastic.)

Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

- Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. Infiltration of a large amount of mineral oil may cause the refrigerator oil to deteriorate.
- Charge the system with refrigerant in the liquid phase.
 If gaseous refrigerant is drawn out of the cylinder first, the composition of the remaining refrigerant in the cylinder will change and become unsuitable for use.
- •Only use R410A or R407C.

The use of other types of refrigerant that contain chloride may cause the refrigerator oil to deteriorate.

- •Use a vacuum pump with a check valve.
- If a vacuum pump that is not equipped with a check valve is used, the vacuum pump oil may flow into the refrigerant cycle and cause the refrigerator oil to deteriorate.
- •Prepare tools for exclusive use with R 410A. Do not use the following tools if they have been used with the conventional refrigerant: gauge manifold, charging hose, gas leak detector, check valve, refrigerant charge base, vacuum gauge, and refrigerant recovery equipment. If the refrigerant or the refrigerator oil that may be left on these tools are mixed in with R410A, it may cause the refrigerator oil in the new system to deteriorate.
- Infiltration of water may cause the refrigerator oil to deteriorate. Leak detectors for conventional refrigerants will not detect an R410A leak because R410A is free of chlorine.

 Do not use a charging cylinder If a charging cylinder is used, t



ble for use.

•Exercise special care when handling tools for use with R410A. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate.

[3] Read before installing the unit

A CAUTION

•To avoid the risk of fire, never install the air conditioner where there is a risk of leakage of flammable gas.

- •The models of air conditioning units described in this manual are not intended for use with food, pets, plants, precision instruments, or art work.
- •Do not use the unit in an environment with a high concentration of oil, steam, sulfuric gas etc. They can significantly reduce the performance of the unit or damage its parts.
- •Take appropriate measures against noise interference when installing the air conditioners in hospitals or communication facilities.
- •Inverter equipment, power generators, radio communication equipment, and high-frequency medical equipment may interfere with the normal operation of the air conditioner or vice versa.
- Install the unit in a location which will not render the unit vulnerable to water leakage. When the indoor humidity exceeds 80% or if the drainpipe becomes clogged, condensation may drip from the indoor unit. Provide an adequate collective drainage system as necessary.

•The models of indoor units described in this manual should only be installed on a ceiling at least 2.5 m from the floor.

[4] Read before performing electrical work

A CAUTION

•Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire.

- •To avoid the risk of wire breakage and fire, install the power cable in such a way that tension load is not applied.
- •To avoid the risk of electric shock, install all required breakers.

•To avoid the risk of unit failure and fire, use properly rated breakers and fuses.

•To avoid the risk of electric shock, do not wash the air conditioning units with water.

•To prevent the unit from toppling over and cause personal injury or unit damage, periodically check the installation base for damage.

 Install drainpipes according the instructions in this manual to ensure proper drainage. Wrap thermal insulation around the pipes to prevent moisture condensation.

Improper pipe installation or inadequate insulation may result in water leakage.

•Exercise caution when transporting units.

Products weighing more than 20 kg should be carried by at least two people. Do not suspend the unit by the PP bands that are used on some packages. To avoid the risk of cuts, keep your hands away from the heat exchanger fins. When using a crane or other hoisting equipment to lift the unit, suspend the unit from four corners.

•Properly dispose of packing materials.

Pallets and the nails on the pallets can pose the risk of cuts, stabs, and abrasions. Plastic gabs can pose suffocation and choking hazards; do not let children play with them. Tear the plastic bags before disposing of them.

[5] Read before starting the test run

*Keep the power on for at least 12 hours before starting a test run.

•To avoid the risk of electric shock, do not touch the switches with wet hands.

•Do not touch the refrigerant pipes with bare hands during and immediately after operation.

•During or immediately after operation, certain parts of the unit such as pipes and compressor may be either very cold or hot, depending on the state of the refrigerant in the unit at the time. To reduce the risk of frostbites and burns, do not touch these parts with bare hands.

•Do not operate the unit without panels and safety guards properly installed. The unit houses high-temperature, high-voltage, or rotating parts that can pose a risk of injury if the unit is operated without the panel and fan guard.

Do not turn off the power immediately after stopping the operation.
 Keep the unit on for at least five minutes before turning off the power to prevent water leakage and malfunctions.

2. Indoor Unit Access

3. Selecting an Installation Site

[1] Ceiling strength

/ WARNING

•To avoid the risk of injury, hang the unit from a structure strong enough to support its weight.

- [2] Orientation of the unit and securing enough service space
- [3] Indoor/outdoor unit compatibility
- 4. Fixing the Hanging Bolts
- [1] Fixing the hanging bolts
- 5. Installing the Unit
- [1] Hanging the unit
- [2] Confirming proper installation

- 6. Refrigerant Pipe and Drain Pipe Specifications
- [1] Refrigerant pipe and drain pipe specifications
- [2] Refrigerant pipes and drain pipes



[1] Refrigerant piping work

🔨 WARNING

Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit.
 Infiltration of any other types of refrigerant or air into the unit may result in malfunctions or serious damage to the unit.

BG

•Use refrigerant pipes made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and water.

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

• Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

+Use a small amount of Suniso 4GS or 3GS to flare and flange connections. (Applicable to the models for use with R22)

•Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. (Applicable to the models for use with R410A or R407C) R410A and R407C are highly hygroscopic and could introduce moisture into the system and cause the refrigerator oil to deteriorate, if not handled with care.

[2] Drain piping work

[3] Confirming proper drainage of drain water

8. Duct Work

•Keep the inlet grill at least 850 mm away from the fan. If it is not possible, install a safety guard on the fan.

9. Electrical Work

 Have all electrical work perform 		tions in this manual. Use
a dedicated circuit.		
 Insufficient power supply capa 	•	tric shock, or fire.

Be sure to ground the outdoor unit. Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire. Improper grounding can result in a risk of electric shock.

[1] Power supply wiring

▲ CAUTION

Only use breakers and fuses with adequate breaking capacity. Do not substitute a piece of wire for a fuse or use a fuse that exceeds the specified rating.

[2] Connecting the remote controller and indoor/outdoor units

Install the cables in such a way that the tension load is not applied.

- [3] Making electrical connections
- [4] External I/O specifications

A CAUTION

Cover the wiring with insulation tubes with extra insulation.
Use relays and switches that meet the IEC standards or their equivalents.
Electric resistance between all accessible parts and the control circuit should be at least 2750 V.

- [5] Making the external static pressure setting
- [6] Setting the unit addresses and branch numbers
- [7] Using the built-in temperature sensor on the remote controller

RO

1. Safety Precautions

IMPORTANT: FOR YOUR SAFETY READ AND OBSERVE THE FOLLOWING PRECAUTIONS CAREFULLY & READ ALL LABELS ON THE UNIT. SAVE THIS MANUAL FOR FUTURE REFERENCE.

Symbol Explanations

🕂 WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

This symbol indicates that that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

[1] Read before installation and performing electrical work

🕂 WARNING

 Ask your dealer or a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.

- Properly install the unit on a surface that can withstand its weight. Unit installed on an unstable surface may fall and cause injury.
- •Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable and external force. Improperly connected cables may produce heat and start a fire.
- •Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over. Improper installation may cause the unit to topple over and cause injury or damage to the unit.
- •Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric. Ask a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- •Do not make any modifications or alterations to the unit. Consult your dealer for repair. Improper repair may result in water leakage, electric shock, or fire
- •Do not touch the heat exchanger fins with bare hands. The fins are sharp and pose a
- Always wear protective equipm
- In the event of a refrigerant leak, thoroughly ventilate the room. If gaseous refrigerant leaks out and comes in contact with an open flame, toxic gases will be generated.
- •Properly install the unit according to the instructions in the Installation Manual. Improper installation may result in water leakage, electric shock, or fire.
- •Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.
- Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.
- Keep electrical parts away from water.
 Wet electrical parts pose a risk of electric shock, smoke, or fire.
- •Securely attach the control box cover.
- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.
- •Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.
- •When installing the unit in a small space, take appropriate precautions to prevent leaked refrigerant from reaching the limiting concentration. Leaked refrigerant gas will displace oxygen and cause oxygen starvation if it exceeds the limiting concentration. Consult your dealer before installing the unit.
- Consult your dealer or a qualified technician when moving or reinstalling the unit. Improper installation may result in water leakage, electric shock, or fire.
- •After completing the service work, check for a refrigerant leak. If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.
- •Do not try to defeat the safety features of the unit. Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices or the use of accessories other than the ones that are recommended by MITSUBISHI may result in smoke, fire, or explosion.
- · Consult your dealer for proper disposal method.

[2] Precautions for handling units for use with R410A

Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

- •Use refrigerant piping materials made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and moisture. Contaminants in the refrigerant piping may cause the refrigerator oil to deteriorate.
- •Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. (Keep elbows and other joints wrapped in plastic.)

Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

- Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. Infiltration of a large amount of mineral oil may cause the refrigerator oil to deteriorate.
- Charge the system with refrigerant in the liquid phase.
 If gaseous refrigerant is drawn out of the cylinder first, the composition of the remaining refrigerant in the cylinder will change and become unsuitable for use.
- •Only use R410A or R407C.

The use of other types of refrigerant that contain chloride may cause the refrigerator oil to deteriorate.

- •Use a vacuum pump with a check valve.
- If a vacuum pump that is not equipped with a check valve is used, the vacuum pump oil may flow into the refrigerant cycle and cause the refrigerator oil to deteriorate.

•Prepare tools for exclusive use with R 410A. Do not use the following tools if they have been used with the conventional refrigerant: gauge manifold, charging hose, gas leak detector, check valve, refrigerant charge base, vacuum gauge, and refrigerant recovery equipment. If the refrigerant or the refrigerator oil that may be left on these tools are mixed in with R410A, it may cause the refrigerator oil in the new system to deteriorate.

Infiltration of water may cause the refrigerator oil to deteriorate.

Leak detectors for conventional refrigerants will not detect an R410A leak because R410A is free of chlorine.

 Do not use a charging cylinder If a charging cylinder is used, t



ble for use.

•Exercise special care when handling tools for use with R410A. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate.

[3] Read before installing the unit

A CAUTION

•To avoid the risk of fire, never install the air conditioner where there is a risk of leakage of flammable gas.

- •The models of air conditioning units described in this manual are not intended for use with food, pets, plants, precision instruments, or art work.
- •Do not use the unit in an environment with a high concentration of oil, steam, sulfuric gas etc. They can significantly reduce the performance of the unit or damage its parts.
- •Take appropriate measures against noise interference when installing the air conditioners in hospitals or communication facilities.
- •Inverter equipment, power generators, radio communication equipment, and high-frequency medical equipment may interfere with the normal operation of the air conditioner or vice versa.
- Install the unit in a location which will not render the unit vulnerable to water leakage. When the indoor humidity exceeds 80% or if the drainpipe becomes clogged, condensation may drip from the indoor unit. Provide an adequate collective drainage system as necessary.

•The models of indoor units described in this manual should only be installed on a ceiling at least 2.5 m from the floor.

[4] Read before performing electrical work

A CAUTION

•Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire.

- •To avoid the risk of wire breakage and fire, install the power cable in such a way that tension load is not applied.
- •To avoid the risk of electric shock, install all required breakers.

RO

•To avoid the risk of unit failure and fire, use properly rated breakers and fuses.

•To avoid the risk of electric shock, do not wash the air conditioning units with water.

•To prevent the unit from toppling over and cause personal injury or unit damage, periodically check the installation base for damage.

 Install drainpipes according the instructions in this manual to ensure proper drainage. Wrap thermal insulation around the pipes to prevent moisture condensation.

Improper pipe installation or inadequate insulation may result in water leakage.

•Exercise caution when transporting units.

Products weighing more than 20 kg should be carried by at least two people. Do not suspend the unit by the PP bands that are used on some packages. To avoid the risk of cuts, keep your hands away from the heat exchanger fins. When using a crane or other hoisting equipment to lift the unit, suspend the unit from four corners.

•Properly dispose of packing materials.

Pallets and the nails on the pallets can pose the risk of cuts, stabs, and abrasions. Plastic gabs can pose suffocation and choking hazards; do not let children play with them. Tear the plastic bags before disposing of them.

[5] Read before starting the test run

*Keep the power on for at least 12 hours before starting a test run.

•To avoid the risk of electric shock, do not touch the switches with wet hands.

•Do not touch the refrigerant pipes with bare hands during and immediately after operation.

•During or immediately after operation, certain parts of the unit such as pipes and compressor may be either very cold or hot, depending on the state of the refrigerant in the unit at the time. To reduce the risk of frostbites and burns, do not touch these parts with bare hands.

•Do not operate the unit without panels and safety guards properly installed. The unit houses high-temperature, high-voltage, or rotating parts that can pose a risk of injury if the unit is operated without the panel and fan guard.

•Do not turn off the power immediately after stopping the operation. Keep the unit on for at least five minutes before turning off the power to prevent water leakage and malfunctions.

2. Indoor Unit Access

3. Selecting an Installation Site

[1] Ceiling strength

/ WARNING

•To avoid the risk of injury, hang the unit from a structure strong enough to support its weight.

- [2] Orientation of the unit and securing enough service space
- [3] Indoor/outdoor unit compatibility
- 4. Fixing the Hanging Bolts
- [1] Fixing the hanging bolts
- 5. Installing the Unit
- [1] Hanging the unit
- [2] Confirming proper installation

- 6. Refrigerant Pipe and Drain Pipe Specifications
- [1] Refrigerant pipe and drain pipe specifications
- [2] Refrigerant pipes and drain pipes



[1] Refrigerant piping work

🔨 WARNING

Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit.
 Infiltration of any other types of refrigerant or air into the unit may result in malfunctions or serious damage to the unit.

RC

•Use refrigerant pipes made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and water.

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

• Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

+Use a small amount of Suniso 4GS or 3GS to flare and flange connections. (Applicable to the models for use with R22)

•Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. (Applicable to the models for use with R410A or R407C) R410A and R407C are highly hygroscopic and could introduce moisture into the system and cause the refrigerator oil to deteriorate, if not handled with care.

[2] Drain piping work

[3] Confirming proper drainage of drain water

8. Duct Work

*Keep the inlet grill at least 850 mm away from the fan. If it is not possible, install a safety guard on the fan.

9. Electrical Work

 Have all electrical work perform 		tions in this manual. Use
a dedicated circuit.		
 Insufficient power supply capa 	-	tric shock, or fire.

Be sure to ground the outdoor unit. Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire. Improper grounding can result in a risk of electric shock.

[1] Power supply wiring

▲ CAUTION

Only use breakers and fuses with adequate breaking capacity. Do not substitute a piece of wire for a fuse or use a fuse that exceeds the specified rating.

[2] Connecting the remote controller and indoor/outdoor units

Install the cables in such a way that the tension load is not applied.

- [3] Making electrical connections
- [4] External I/O specifications

🕂 CAUTION

Cover the wiring with insulation tubes with extra insulation.
Use relays and switches that meet the IEC standards or their equivalents.
Electric resistance between all accessible parts and the control circuit should be at least 2750 V.

- [5] Making the external static pressure setting
- [6] Setting the unit addresses and branch numbers
- [7] Using the built-in temperature sensor on the remote controller

1. Safety Precautions

IMPORTANT: FOR YOUR SAFETY READ AND OBSERVE THE FOLLOWING PRECAUTIONS CAREFUL-LY & READ ALL LABELS ON THE UNIT. SAVE THIS MANUAL FOR FUTURE REFERENCE.

Symbol Explanations

🕂 WARNING

This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.

This symbol indicates that that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

[1] Read before installation and performing electrical work

🕂 WARNING

•Ask your dealer or a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.

- Properly install the unit on a surface that can withstand its weight. Unit installed on an unstable surface may fall and cause injury.
- •Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable and external force. Improperly connected cables may produce heat and start a fire.
- •Take appropriate safety measures against wind gusts and earthquakes to prevent the unit from toppling over. Improper installation may cause the unit to topple over and cause injury or damage to the unit.
- •Only use accessories (i.e., air cleaners, humidifiers, electric heaters) recommended by Mitsubishi Electric. Ask a qualified technician to install the unit. Improper installation by the user may result in water leakage, electric shock, or fire.
- •Do not make any modifications or alterations to the unit. Consult your dealer for repair. Improper repair may result in water leakage, electric shock, or fire
- •Do not touch the heat exchanger fins with bare hands. The fins are sharp and pose a
- Always wear protective equipm
- In the event of a refrigerant leak, thoroughly ventilate the room.
 If gaseous refrigerant leaks out and comes in contact with an open flame, toxic gases will be generated.
- •Properly install the unit according to the instructions in the Installation Manual. Improper installation may result in water leakage, electric shock, or fire.
- •Have all electrical work performed by an authorized electrician according to the local regulations and the instructions in this manual. Use a dedicated circuit.
- Insufficient power supply capacity or improper installation of the unit may result in malfunctions of the unit, electric shock, or fire.
- Keep electrical parts away from water.
 Wet electrical parts pose a risk of electric shock, smoke, or fire.
- •Securely attach the control box cover.
- If the cover is not installed properly, dust or water may infiltrate and pose a risk of electric shock, smoke, or fire.
- •Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit. Infiltration of any other types of refrigerant or air into the unit may adversely affect the refrigerant cycle and may cause the pipes to burst or explode.
- •When installing the unit in a small space, take appropriate precautions to prevent leaked refrigerant from reaching the limiting concentration. Leaked refrigerant gas will displace oxygen and cause oxygen starvation if it exceeds the limiting concentration. Consult your dealer before installing the unit.
- Consult your dealer or a qualified technician when moving or reinstalling the unit. Improper installation may result in water leakage, electric shock, or fire.
- •After completing the service work, check for a refrigerant leak. If leaked refrigerant is exposed to a heat source, such as a fan heater, stove, or electric grill, toxic gases will be generated.
- •Do not try to defeat the safety features of the unit. Forced operation of the pressure switch or the temperature switch by defeating the safety features for these devices or the use of accessories other than the ones that are recommended by MITSUBISHI may result in smoke, fire, or explosion.
- · Consult your dealer for proper disposal method.

HR

[2] Precautions for handling units for use with R410A

CAUTION

Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

- •Use refrigerant piping materials made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and moisture. Contaminants in the refrigerant piping may cause the refrigerator oil to deteriorate.
- •Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. (Keep elbows and other joints wrapped in plastic.)

Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

- Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. Infiltration of a large amount of mineral oil may cause the refrigerator oil to deteriorate.
- •Charge the system with refrigerant in the liquid phase. If gaseous refrigerant is drawn out of the cylinder first, the composition of the remaining refrigerant in the cylinder will change and become unsuitable for use.
- Only use R410A or R407C.

The use of other types of refrigerant that contain chloride may cause the refrigerator oil to deteriorate.

- •Use a vacuum pump with a check valve.
- If a vacuum pump that is not equipped with a check valve is used, the vacuum pump oil may flow into the refrigerant cycle and cause the refrigerator oil to deteriorate.
- Prepare tools for exclusive use with R 410A. Do not use the following tools if they have been used with the conventional refrigerant: gauge manifold, charging hose, gas leak detector, check valve, refrigerant charge base, vacuum gauge, and refrigerant recovery equipment. If the refrigerant or the refrigerator oil that may be left on these tools are mixed in with R410A, it may cause the refrigerator oil in the new system to deteriorate
- Infiltration of water may cause the refrigerator oil to deteriorate. Leak detectors for conventional refrigerants will not detect an R410A leak because R410A is free of chlorine.

 Do not use a charging cylinder If a charging cylinder is used, t

ble for use.

•Exercise special care when handling tools for use with R410A. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate.

[3] Read before installing the unit

CAUTION

•To avoid the risk of fire, never install the air conditioner where there is a risk of leakage of flammable gas.

- •The models of air conditioning units described in this manual are not intended for use with food, pets, plants, precision instruments, or art work.
- +Do not use the unit in an environment with a high concentration of oil, steam, sulfuric gas etc. They can significantly reduce the performance of the unit or damage its parts.
- •Take appropriate measures against noise interference when installing the air conditioners in hospitals or communication facilities.
- Inverter equipment, power generators, radio communication equipment, and high-frequency medical equipment may interfere with the normal operation of the air conditioner or vice versa.
- •Install the unit in a location which will not render the unit vulnerable to water leakage. When the indoor humidity exceeds 80% or if the drainpipe becomes clogged, condensation may drip from the indoor unit. Provide an adequate collective drainage system as necessary.

•The models of indoor units described in this manual should only be installed on a ceiling at least 2.5 m from the floor.

Read before performing electrical work

CAUTION

Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire.

- •To avoid the risk of wire breakage and fire, install the power cable in such a way that tension load is not applied.
- •To avoid the risk of electric shock, install all required breakers.

HR

•To avoid the risk of unit failure and fire, use properly rated breakers and fuses.

•To avoid the risk of electric shock, do not wash the air conditioning units with water.

•To prevent the unit from toppling over and cause personal injury or unit damage, periodically check the installation base for damage.

 Install drainpipes according the instructions in this manual to ensure proper drainage. Wrap thermal insulation around the pipes to prevent moisture condensation.

Improper pipe installation or inadequate insulation may result in water leakage.

•Exercise caution when transporting units.

Products weighing more than 20 kg should be carried by at least two people. Do not suspend the unit by the PP bands that are used on some packages. To avoid the risk of cuts, keep your hands away from the heat exchanger fins. When using a crane or other hoisting equipment to lift the unit, suspend the unit from four corners.

• Properly dispose of packing materials.

Pallets and the nails on the pallets can pose the risk of cuts, stabs, and abrasions. Plastic gabs can pose suffocation and choking hazards; do not let children play with them. Tear the plastic bags before disposing of them.

[5] Read before starting the test run

*Keep the power on for at least 12 hours before starting a test run.

•To avoid the risk of electric shock, do not touch the switches with wet hands.

•Do not touch the refrigerant pipes with bare hands during and immediately after operation.

•During or immediately after operation, certain parts of the unit such as pipes and compressor may be either very cold or hot, depending on the state of the refrigerant in the unit at the time. To reduce the risk of frostbites and burns, do not touch these parts with bare hands.

•Do not operate the unit without panels and safety guards properly installed. The unit houses high-temperature, high-voltage, or rotating parts that can pose a risk of injury if the unit is operated without the panel and fan guard.

•Do not turn off the power immediately after stopping the operation. Keep the unit on for at least five minutes before turning off the power to prevent water leakage and malfunctions.

2. Indoor Unit Access

3. Selecting an Installation Site

[1] Ceiling strength

/ WARNING

•To avoid the risk of injury, hang the unit from a structure strong enough to support its weight.

- [2] Orientation of the unit and securing enough service space
- [3] Indoor/outdoor unit compatibility
- 4. Fixing the Hanging Bolts
- [1] Fixing the hanging bolts
- 5. Installing the Unit
- [1] Hanging the unit
- [2] Confirming proper installation

- 6. Refrigerant Pipe and Drain Pipe Specifications
- [1] Refrigerant pipe and drain pipe specifications
- [2] Refrigerant pipes and drain pipes



[1] Refrigerant piping work

🔨 WARNING

Only use the type of refrigerant that is indicated on the unit when installing or relocating the unit.
 Infiltration of any other types of refrigerant or air into the unit may result in malfunctions or serious damage to the unit.

•Use refrigerant pipes made of phosphorus deoxidized copper. Keep the inner and outer surfaces of the pipes clean and free of such contaminants as sulfur, oxides, dust, dirt, shaving particles, oil, and water.

•Do not use the existing refrigerant piping.

A large amount of chlorine that may be contained in the residual refrigerant and refrigerator oil in the existing piping may cause the refrigerator oil in the new unit to deteriorate.

• Store the piping materials indoors, and keep both ends of the pipes sealed until immediately before brazing. Infiltration of dust, dirt, or water into the refrigerant system may cause the refrigerator oil to deteriorate or cause the compressor to malfunction.

+Use a small amount of Suniso 4GS or 3GS to flare and flange connections. (Applicable to the models for use with R22)

•Apply a small amount of ester oil, ether oil, or alkyl benzene to flares and flanges. (Applicable to the models for use with R410A or R407C) R410A and R407C are highly hygroscopic and could introduce moisture into the system and cause the refrigerator oil to deteriorate, if not handled with care.

[2] Drain piping work

[3] Confirming proper drainage of drain water

8. Duct Work

•Keep the inlet grill at least 850 mm away from the fan. If it is not possible, install a safety guard on the fan.

9. Electrical Work

 Have all electrical work performance 	1		tions in this manual. Use
a dedicated circuit.			
 Insufficient power supply capa 			tric shock, or fire.

Be sure to ground the outdoor unit. Never connect the grounding wire to a gas pipe, water pike, lightning rod, or telephone grounding wire. Improper grounding can result in a risk of electric shock.

[1] Power supply wiring

▲ CAUTION

Only use breakers and fuses with adequate breaking capacity. Do not substitute a piece of wire for a fuse or use a fuse that exceeds the specified rating.

[2] Connecting the remote controller and indoor/outdoor units

Install the cables in such a way that the tension load is not applied.

- [3] Making electrical connections
- [4] External I/O specifications

🕂 CAUTION

Cover the wiring with insulation tubes with extra insulation.
Use relays and switches that meet the IEC standards or their equivalents.
Electric resistance between all accessible parts and the control circuit should be at least 2750 V.

- [5] Making the external static pressure setting
- [6] Setting the unit addresses and branch numbers
- [7] Using the built-in temperature sensor on the remote controller

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

This product is in compliance with 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 in the space below before handing it to the user.



HEAD OFFICE: TOKYO BLDG., 2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN