MITSUBISHI ELECTRIC

Split-type Air-Conditioner

PXZ-4F75VG

English is original.

Installation Manual — For INSTALLER

- This manual only describes the installation of outdoor unit.
  When installing the indoor unit, refer to the installation manual of indoor unit.

English

Übersetzung des Originals

Installationsanleitung — Für INSTALLATEUR

- Diese Installationsanleitung gilt nur für die Installation des Außengerätes.
  Zur Installation des Innengeräts siehe die Installationsanleitung für Innengeräte.

Deutsch

Traduction du texte d'origine

Notice d'installation — Destinée à l'INSTALLATEUR

- Cette notice ne décrit que l'installation de l'appareil extérieur.
  Lors de l'installation de l'appareil intérieur, consultez la notice d'installation de cet appareil.

Français

Vertaling van het origineel

Installatiehandleiding — Voor de INSTALLATEUR

- Deze handleiding beschrijft alleen de installatie van de buitenunit.
  Raadpleeg de installatiehandleiding van de binnenunit wanneer u deze installeert.

Nederlands

Traducción del original

Manual de instalación — Para el INSTALADOR

- En este manual sólo se describe la instalación de la unidad exterior.
  Para instalar la unidad interior, consulte el manual de instalación de dicha unidad.

Español

Traduzione dell'originale

Manuale per l'installazione — Per il TECNICO INSTALLATORE

- Questo manuale descrive solo l'installazione dell'unità esterna.
  Per l'installazione dell'unità interna, fare riferimento al relativo manuale di installazione.

Italiano

Μετάφραση του αρχικού

Εγχειρίδιο εγκατάστασης — Για τον ΤΕΧΝΙΚΟ

- Στο παρόν εγχειρίδιο περιγράφεται μόνο η εγκατάσταση της μονάδας εξωτερικού χώρου.
  Για την εγκατάσταση της μονάδας εσωτερικού χώρου, ανατρέξτε στο εγχειρίδιο εγκατάστασης της μονάδας εσωτερικού χώρου.

Ελληνικά

Tradução do original

Manual de Instalação — Para o INSTALADOR

- Este manual descreve apenas a instalação da unidade exterior.
  Quando proceder à instalação da unidade interior, consulte o manual de instalação da unidade interior.

Português

Oversættelse af den originale tekst

Installationshåndbog — Til INSTALLATØREN

- Denne håndbog beskriver kun, hvordan udendørsenheden installeres.
  Vedrørende installation af indendørsenheden henvises til installationshåndbogen for indendørsenheden.

Dansk

Översättning från originalet

Installationsanvisning — För INSTALLATÖREN

- Denna installationsanvisning beskriver endast installation av utomhusenheten.
  Se den separata installationsanvisningen för inomhusenheten.

Svenska

Orijinalin çevirisi

Kurulum Kılavuzu — TESİSATÇI İÇİN

- Bu kılavuzda yalnızca dış ünitenin kurulumu açıklanmaktadır.
  İç ünite kurulum işlemini yaparken iç ünite kurulum kılavuzuna bakın.

Türkçe

Оригиналът е текстът на английски език.

Ръководство за монтаж — За ИНСТАЛАТОРА

- Това ръководство описва само монтажа на външното тяло.
  При монтиране на вътрешното тяло вижте ръководството за монтаж на вътрешното тяло.

Български

Językiem oryginału jest język angielski.

Instrukcja montażu — DLA INSTALATORA

- Niniejsza instrukcja zawiera tylko opis instalacji jednostki zewnętrznej.
  W przypadku instalowania jednostki wewnętrznej należy odnieść się do instrukcji montażu jednostki wewnętrznej.

Polski

Originalspråket er engelsk.

Installasjonshåndbok — For INSTALLATØR

- Denne håndboken beskriver installasjonen av den utvendige enheten.
  Når den innvendige enheten skal installeres, se installasjonshåndboken til den innvendige enheten.

Norsk

Manual Download

http://www.mitsubishielectric.com/ldg/ibim/

EN Go to the above website to download manuals, select model name, then choose language.

DE Besuchen Sie die oben stehende Website, um Anleitungen herunterzuladen, wählen Sie den Modellnamen und dann die Sprache aus.

FR Rendez-vous sur le site Web ci-dessus pour télécharger les manuels, sélectionnez le nom de modèle puis choisissez la langue.

NL Ga naar de bovenstaande website om handleidingen te downloaden, de modelnaam te selecteren en vervolgens de taal te kiezen.

ES Visite el sitio web anterior para descargar manuales, seleccione el nombre del modelo y luego elija el idioma.

IT Andare sul sito web indicato sopra per scaricare i manuali, selezionare il nome del modello e scegliere la lingua.

EL Μεταβείτε στον παραπάνω ιστότοπο για να κατεβάσετε εγχειρίδια. Επιλέξτε το όνομα του μοντέλου και, στη συνέχεια, τη γλώσσα.

PT Aceda ao site Web acima indicado para descarregar manuais, seleccione o nome do modelo e, em seguida, escolha o idioma.

DA Gå til ovenstående websted for at downloade manualer og vælge modelnavn, og vælg derefter sprog.

SV Gå till ovanstående webbplats för att ladda ner anvisningar, välj modellnamn och välj sedan språk.

TR Kılavuzları indirmek için yukarıdaki web sitesine gidin, model adını ve ardından dili seçin.

RU Чтобы загрузить руководства, перейдите на указанный выше веб-сайт; выберите название модели, а затем язык.

UK Щоб завантажити керівництва, перейдіть на зазначений вище веб-сайт; виберіть назву моделі, а потім мову.

BG Посетете горепосочения уебсайт, за да изтеглите ръководства, като изберете име на модел и след това – език.

PL Odwiedź powyższą stronę internetową, aby pobrać instrukcje, wybierz nazwę modelu, a następnie język.

NO Gå til nettstedet over for å laste ned håndbøker og velg modellnavn, og velg deretter språk.

FI Mene yllä mainitulle verkkosivulle ladataksesi oppaat, valitse mallin nimi ja valitse sitten kieli.

CS Příručky naleznete ke stažení na internetové stránce zmíněné výše poté, co zvolíte model a jazyk.

SK Na webovej stránke vyššie si môžete stiahnuť návody. Vyberte názov modelu a zvoľte požadovaný jazyk.

HU A kézikönyvek letöltéséhez látogasson el a fenti weboldalra, válassza ki a modell nevét, majd válasszon nyelvet.

SL Obiščite zgornjo spletno stran za prenos priročnikov; izberite ime modela, nato izberite jezik.

RO Accesaţi site-ul web de mai sus pentru a descărca manualele, selectaţi denumirea modelului, apoi alegeţi limba.

ET Kasutusjuhendite allalaadimiseks minge ülaltoodud veebilehele, valige mudeli nimi ja seejärel keel.

LV Dodieties uz iepriekš norādīto tīmekļa vietni, lai lejupielādētu rokasgrāmatas; tad izvēlieties modeļa nosaukumu un valodu.

LT Norėdami atsisiųsti vadovus, apsilankykite pirmiau nurodytoje žiniatinklio svetainėje, pasirinkite modelio pavadinimą, tada – kalbą.

HR Kako biste preuzeli priručnike, idite na gore navedeno web-mjesto, odaberite naziv modela, a potom odaberite jezik.

SR Idite na gore navedenu veb stranicu da biste preuzeli uputstva, izaberite ime modela, a zatim izaberite jezik.

ENGLISH

CONTENTS

Required Tools for Installation

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

1. BEFORE INSTALLATION

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

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

en

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

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

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

- **Do not install the unit by yourself (user).**
  Incomplete installation could cause fire or electric shock, injury due to the unit falling, or leakage of water. Consult the dealer from whom you purchased the unit or a qualified installer.
- **Perform the installation securely referring to the installation manual.**
  Incomplete installation could cause fire, electric shock, injury due to the unit falling, or leakage of water.
- **When installing the unit, use appropriate protective equipment and tools for safety.**
  Failure to do so could cause injury.
- **Install the unit securely in a place which can bear the weight of the unit.**
  If the installation location cannot bear the weight of the unit, the unit could fall causing injury.
- **Electrical work should be performed by a qualified, experienced electrician, according to the installation manual. Be sure to use an exclusive circuit. Do not connect other electrical appliances to the circuit.**
  If the capacity of the power circuit is insufficient or there is incomplete electrical work, it could result in a fire or an electric shock.
- **Do not damage the wires by applying excessive pressure with parts or screws.**
  Damaged wires could cause fire or electric shock.
- **Be sure to cut off the main power in case of setting up the indoor P.C. board or wiring works.**
  Failure to do so could cause electric shock.
- **Use the specified wires to connect the indoor and outdoor units securely and attach the wires firmly to the terminal block connecting sections so the stress of the wires is not applied to the sections. Do not extend the wires, or use intermediate connection.**
  Incomplete connecting and securing could cause fire.
- **Do not install the unit in a place where inflammable gas may leak.**
  If gas leaks and accumulates in the area around the unit, it could cause an explosion.
- **Do not use intermediate connection of the power cord or the extension cord and do not connect many devices to one AC outlet.**
  It could cause a fire or an electric shock due to defective contact, defective insulation, exceeding the permissible current, etc.
- **Be sure to use the parts provided or specified parts for the installation work.**
  The use of defective parts could cause an injury or leakage of water due to a fire, an electric shock, the unit falling, etc.
- **When plugging the power supply plug into the outlet, make sure that there is no dust, clogging, or loose parts in both the outlet and the plug. Make sure that the power supply plug is pushed completely into the outlet.**
  If there is dust, clogging, or loose parts on the power supply plug or the outlet, it could cause electric shock or fire. If loose parts are found on the power supply plug, replace it.
- **Attach the electrical cover to the indoor unit and the service panel to the outdoor unit securely.**
  If the electrical cover of the indoor unit and/or the service panel of the outdoor unit are not attached securely, it could result in a fire or an electric shock due to dust, water, etc.
- **When installing, relocating, or servicing the unit, make sure that no substance other than the specified refrigerant (R32) enters the refrigerant circuit.**
  Any presence of foreign substance such as air can cause abnormal pressure rise and may result in explosion or injury. The use of any refrigerant other than that specified for the system will cause mechanical failure, system malfunction, or unit breakdown. In the worst case, this could lead to a serious impediment to securing product safety.
- **Do not discharge the refrigerant into the atmosphere. If refrigerant leaks during installation, ventilate the room. Check that the refrigerant does not leak after installation has been completed.**
  If refrigerant leaks and comes in contact with fire or heating part of such a fan heater, kerosene heater, or cooking stove, it will create harmful gas. Provide ventilation in accordance with EN378-1.
- **Check that the refrigerant gas does not leak after installation has been completed.**
  If refrigerant gas leaks indoors, and comes into contact with the flame of a fan heater, space heater, stove, etc., harmful substances will be generated.
- **Use appropriate tools and piping materials for installation.**
  The pressure of R32 is 1.6 times more than R22. Not using appropriate tools or materials and incomplete installation could cause the pipes to burst or injury.
- **When the refrigeration circuit has a leak, do not execute pump down with the compressor.**
- **When pumping down the refrigerant, stop the compressor before disconnecting the refrigerant pipes.**
  If the refrigerant pipe are disconnected while the compressor is running and the stop valve is open, air could be drawn in and the pressure in the refrigeration cycle could become abnormally high.
  The compressor may burst and cause injury if any foreign substance, such as air, enters the pipes.
- **When installing the unit, securely connect the refrigerant pipes before starting the compressor.**
  If the compressor is started before the refrigerant pipes are connected and when the stop valve is open, air could be drawn in and the pressure in the refrigeration cycle could become abnormally high. This could cause the pipes to burst or injury.
- **Fasten a flare nut with a torque wrench as specified in this manual.**
  If fastened too tight, a flare nut may break after a long period and cause refrigerant leakage.
- **The unit shall be installed in accordance with national wiring regulations.**
- **Earth the unit correctly.**
  Do not connect the earth to a gas pipe, water pipe, lightning rod or telephone earth. Defective earthing could cause electric shock.
- **Be sure to install an earth leakage breaker.**
  Failure to install an earth leakage breaker may result in electric shock or fire.
- **When using a gas burner or other flame-producing equipment, completely remove all of the refrigerant from the air conditioner and ensure that the area is well-ventilated.**
  If the refrigerant leaks and comes in contact in fire or heating part, it will create harmful gas and there is risk of fire.
- **Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.**
- **The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).**
- **Do not pierce or burn.**
- **Be aware that refrigerants may not contain an odour.**
- **Pipe-work shall be protected from physical damage.**
- **The installation of pipe-work shall be kept to a minimum.**
- **Compliance with national gas regulations shall be observed.**
- **Keep any required ventilation openings clear of obstruction.**
- **Do not use low temperature solder alloy in case of brazing the refrigerant pipes.**
- **Servicing shall be performed only as recommended by the manufacturer.**
- **Do not alter the unit. It may cause fire, electric shock, injury or water leakage.**
- **When opening or closing the valve below freezing temperatures, refrigerant may spurt out from the gap between the valve stem and the valve body, resulting in injuries.**
- **The appliance shall be stored in a well-ventilated area where the room size corresponds to the room area as specified for operation.**
- **If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.**

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

- **Install an earth leakage breaker depending on the installation place.**
  If an earth leakage breaker is not installed, it could cause electric shock.
- **Perform the drainage/piping work securely according to the installation manual.**
  If there is defect in the drainage/piping work, water could drop from the unit, soaking and damaging household goods.
- **Do not touch the air inlet or the aluminum fins of the outdoor unit.**
  This could cause injury.
- **Do not install the outdoor unit where small animals may live.**
  If small animals enter and touch the electric parts inside the unit, it could cause a malfunction, smoke emission, or fire. Also, advise user to keep the area around the unit clean.
- **Do not operate the air conditioner during interior construction and finishing work, or while waxing the floor.**
  Before operating the air conditioner, ventilate the room well after such work is performed. Otherwise, it may cause volatile elements to adhere inside the air conditioner, resulting in water leakage or scattering of dew.
- **When there are the ports which are not used, make sure their nuts are tightened securely.**
- **When charging the refrigerant system with additional refrigerant, be sure to use liquid refrigerant. Charge the liquid refrigerant slowly, otherwise the compressor will be locked.**
  To maintain the high pressure of the gas cylinder, warm the gas cylinder with warm water (under 40°C) during cold season. But never use naked fire or steam.

1-2. SPECIFICATIONS

Model	Power supply *1			Wire specifications *2		Pipe length and height difference *3, *4, *5, *6, *7, *8, *10			Outdoor Noise level *11	
	Rated Voltage	Fre-quency	Breaker capacity	Power supply	Indoor/outdoor connecting wire	Max. pipe length per indoor unit / for multi-system	Max. height difference *9	Max. no. of bends per indoor unit / for multi system	Cooling	Heating
PXZ-4F75VG	230 V	50 Hz	25 A	3-core 2.5 mm²	4-core 1.0/1.5 mm²	30 m / 60 m	20 m	25 / 60	48 dB (A)	54 dB (A)

Model	Maximum amount of refrigerant charge	Factory-charged refrigerant amount
PXZ-4F75VG	2.4 kg	2.4 kg

*1 Connect to the power switch which has a gap of 3 mm or more when open to interrupt the source power phase. (When the power switch is shut off, it must interrupt all phases.)
*2 Use wires in conformity with design 60245 IEC 57. Use the indoor/outdoor connecting wire in conformity with the wire specifications specified in the installation manual of the indoor unit.
*3 Never use pipes with thickness less than specified. The pressure resistance will be insufficient.
*4 Use a copper pipe or a copper-alloy seamless pipe.
*5 Be careful not to crush or bend the pipe during pipe bending.
*6 Refrigerant pipe bending radius must be 100 mm or more.
*7 Insulation material : Heat resisting foam plastic 0.045 specific gravity
*8 Be sure to use the insulation of specified thickness. Excessive thickness may cause incorrect installation of the indoor unit and insufficient thickness may cause dew drippage.
*9 If the outdoor unit is installed higher than the indoor unit, max. height difference is reduced to 10 m.
*10 The piping specification table does not provide a minimum line set length.
However, indoor units with connected piping length less than 3 m could produce intermittent noise during normal system operation in very quiet environments.
Please be aware of this important information when installing and locating the indoor unit within the conditioned space.
*11 When Air to air indoor units (ATA INDOOR UNITS, M series / S series / P series indoor units) operation.

1-3. SELECTING OPTIONAL DIFFERENT-DIAMETER JOINTS

If the diameter of connection pipe does not match the port size of outdoor unit, use optional different-diameter joints according to the following table.

(Unit: mm (inch))

Port size of outdoor unit		Optional different-diameter joints (port size of outdoor unit → diameter of connection pipe)
PXZ-4F75VG	Liquid / Gas	6.35 (1/4) → 9.52 (3/8) : PAC-493PI 9.52 (3/8) → 12.7 (1/2) : MAC-A454JP-E 9.52 (3/8) → 15.88 (5/8) : PAC-SG76RJ-E 12.7 (1/2) → 9.52 (3/8) : MAC-A455JP-E 12.7 (1/2) → 15.88 (5/8) : MAC-A456JP-E
A UNIT	6.35 (1/4) / 12.7 (1/2)	
B - D UNIT	6.35 (1/4) / 9.52 (3/8)	Refer to the installation manual of indoor unit for the diameter of connection pipe of indoor unit.

1-4. SELECTING THE INSTALLATION LOCATION

- Where it is not exposed to strong wind.
- Where airflow is good and dustless.
- Where rain or direct sunshine can be avoided as much as possible.
- Where neighbours are not annoyed by operation sound or hot air.
- Where rigid wall or support is available to prevent the increase of operation sound or vibration.
- Where there is no risk of combustible gas leakage.
- When installing the unit, be sure to secure the unit legs.
- Where it is at least 3 m away from the antenna of TV set or radio. Operation of the air conditioner may interfere with radio or TV reception in areas where reception is weak. An amplifier may be required for the affected device.
- Install the unit horizontally.
- Please install it in an area not affected by snowfall or blowing snow. In areas with heavy snow, please install a canopy, a pedestal and/or some baffle boards.

Note:
It is advisable to make a piping loop near outdoor unit so as to reduce vibration transmitted from there.

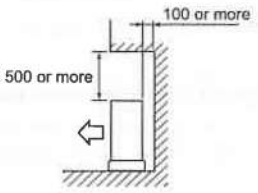
Note:
When operating the air conditioner in low outside temperature, be sure to follow the instructions described below.
- Never install the outdoor unit in a place where its air inlet/outlet side may be exposed directly to wind.
- To prevent exposure to wind, install the outdoor unit with its air inlet side facing the wall.
- To prevent exposure to wind, it is recommended to install a baffle board on the air outlet side of the outdoor unit.

Avoid the following places for installation where air conditioner trouble is liable to occur.
- Where flammable gas could leak.
- Where there is much machine oil.
- Where oil is splashed or where the area is filled with oily smoke (such as cooking areas and factories, in which the properties of plastic could be changed and damaged).
- Salty places such as the seaside.
- Where sulfide gas is generated such as a hot spring.
- Where there is high-frequency or wireless equipment.
- Where there is emission of high levels of VOCs, including phthalate compounds, formaldehyde, etc., which may cause chemical cracking.
- The appliance shall be stored so as to prevent mechanical damage from occurring.

FREE SPACE REQUIRED AROUND OUTDOOR UNIT

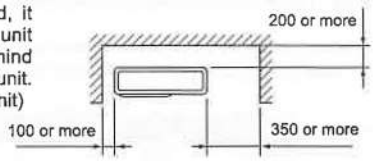
1. Obstacles above

When there is no obstacle in front and on the sides of the unit, it is allowed to install the unit where an obstacle is above the unit only if the space shown in the figure is provided.



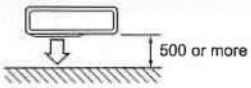
2. Front (blowing) side open

As long as space indicated in the figure is provided, it is allowed to install the unit where obstacles are behind and on the sides of the unit. (No obstacle above the unit)



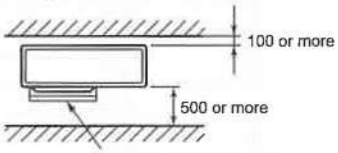
3. Obstacles in front (blowing) only

When there is an obstacle in front of the unit as shown in the figure, open space above, behind, and on the sides of the unit is required.



4. Obstacles in front and behind

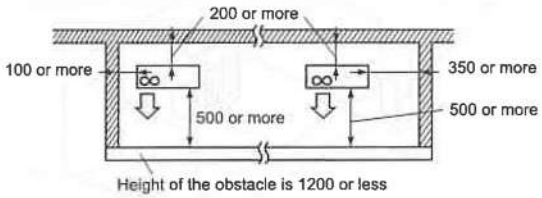
The unit can be used by attaching an optional outdoor blowing guide (MAC-856SG) (but both sides and top are open).



Blowing guide (MAC-856SG)

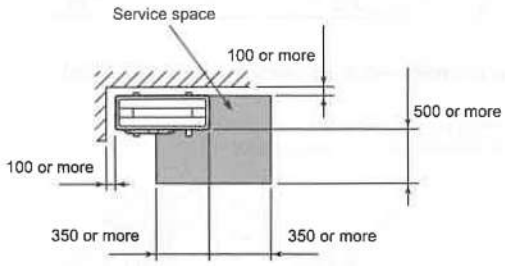
5. Obstacles in front, behind and on side(s)

- When installing the unit in an area that is enclosed with walls such as a verandah, be sure to have enough space as shown below. In this case, the air conditioning capacity and power consumption might deteriorate.
- When there is a lack of airflow or there is a possibility of becoming short cycle, install an outlet guide and make sure there is enough space behind of the unit.
- When installing two or more units, do not install the units in front or behind each other.



6. Service space

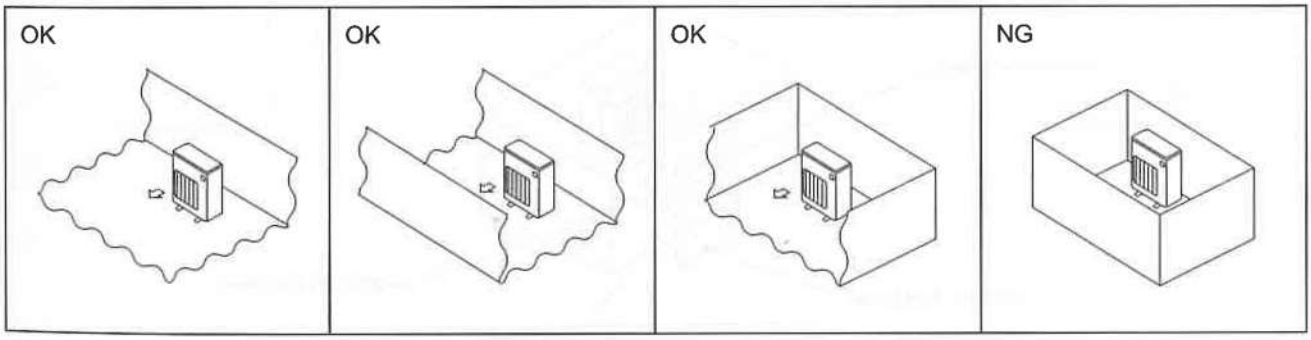
Provide space for service and maintenance as shown in the figure.



(Unit: mm)

- R32 is heavier than air—as well as other refrigerants—so tends to accumulate at the base (in the vicinity of the floor). If R32 accumulates around base, it may reach a flammable concentration in case room is small. To avoid ignition, maintaining a safe work environment is required by ensuring appropriate ventilation. If a refrigerant leak is confirmed in a room or an area where there is insufficient ventilation, refrain from using of flames until the work environment can be improved by ensuring appropriate ventilation.

- Refrigerant pipes connection shall be accessible for maintenance purposes.
- Install outdoor units in a place where at least one of the four sides is open, and in a sufficiently large space without depressions.



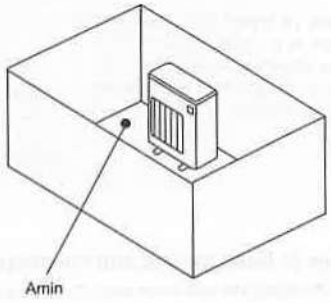
1-4-1. Minimum installation area for Outdoor units

If you unavoidably install a unit in a space where all four sides are blocked or there are depressions, confirm that one of these situations (A, B or C) is satisfied.

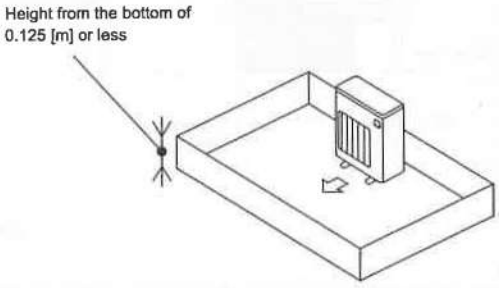
Note: These countermeasures are for keeping safety not for specification guarantee.

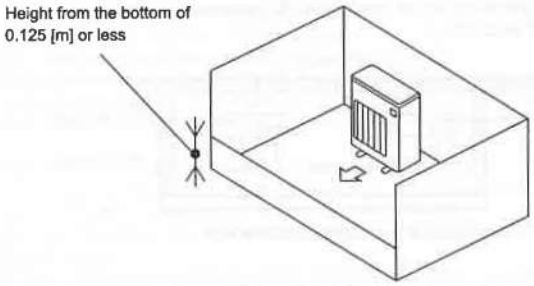
A) Secure sufficient installation space (minimum installation area Amin).
Install in a space with an installation area of Amin or more, corresponding to refrigerant quantity M (factory-charged refrigerant + locally added refrigerant).

M [kg]	Amin [m²]
1.0	12
1.5	17
2.0	23
2.5	28
3.0	34
3.5	39
4.0	45
4.5	50
5.0	56
5.5	62
6.0	67
6.5	73
7.0	78
7.5	84

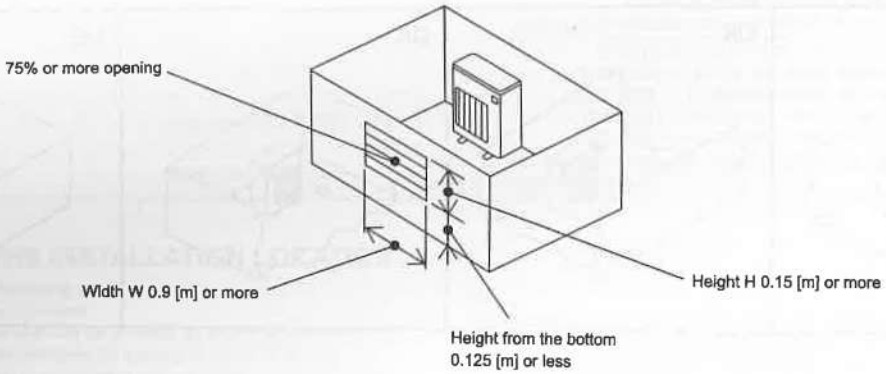


B) Install in a space with a depression height of ≦ 0.125 [m].





C) Create an appropriate ventilation open area.
Make sure that the width of the open area is 0.9 [m] or more and the height of the open area is 0.15 [m] or more.
However, the height from the bottom of the installation space to the bottom edge of the open area should be 0.125 [m] or less.
Open area should be 75% or more opening.



1-4-2. Minimum installation area for Indoor units

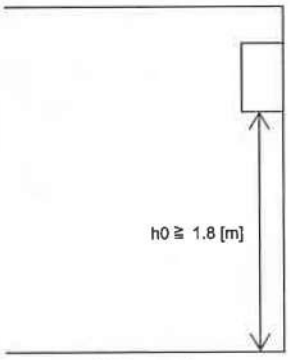
Install in a room with a floor area of Amin or more, corresponding to refrigerant quantity M (factory-charged refrigerant + locally added refrigerant).

Install the indoor unit so that the height from the floor to the bottom of the indoor unit is h0;
for wall mounted: 1.8 m or more;
for ceiling suspended, cassette and ceiling concealed: 2.2 m or more.

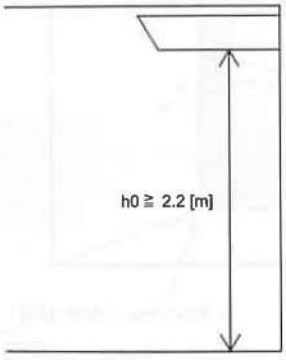
When installing floor standing, refer to indoor unit Installation manual.
There are restrictions in installation height for each model, so read the installation manual for the particular unit.

Case 1: For wall mounted, ceiling suspended, cassette and concealed

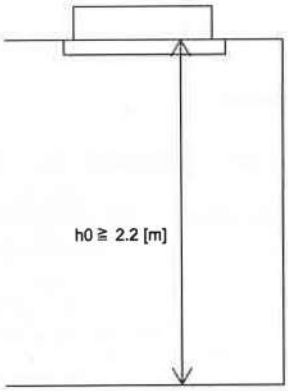
M [kg]	Amin [m²]
1.0	3
1.5	4.5
2.0	6
2.5	7.5
3.0	9
3.5	12
4.0	15.5
4.5	20
5.0	24
5.5	29
6.0	35
6.5	41
7.0	47
7.5	54



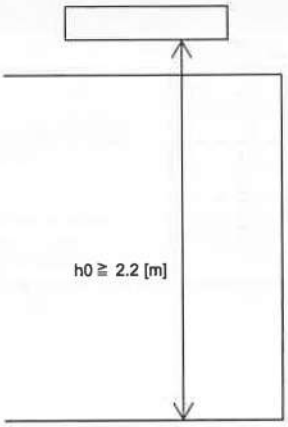
Wall mounted



Ceiling suspended



Cassette



Ceiling concealed

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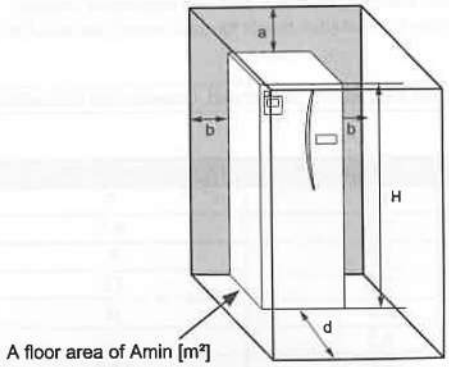
Case 2: For Cylinder unit

When installing the Cylinder unit, meet the minimum floor area requirement according to the installation height (H).
If the minimum floor area requirement for the installation height cannot be met, you may be able to install the Cylinder unit by providing an appropriate ventilation port.
For details, refer to the installation manual for the Cylinder unit.

M [kg]	Amin [m²]		
	H = 1.4 m (170L Type)	H = 1.6 m (200L Type)	H = 2.05 m (200L Type)
< 1.84	Refer to the values described in the installation manual of the Cylinder unit.		
1.84			
1.9			
2			
2.1			
2.2			
2.3			
2.4			

*H = Installation height

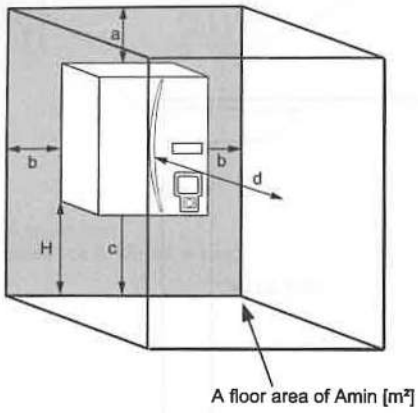


Case 3: For Hydrobox

When installing the Hydrobox, meet the minimum floor area requirement according to the installation height (H).
If the minimum floor area requirement for the installation height cannot be met, you may be able to install the Hydrobox by providing an appropriate ventilation port.
For details, refer to the installation manual for the Hydrobox.

M [kg]	Amin [m²]		
	H = 1.0 m	H = 1.2 m	H = 1.4 m
< 1.84	Refer to the values described in the installation manual of the Hydrobox.		
1.84			
1.9			
2			
2.1			
2.2			
2.3			
2.4			

*H = Height measured from the bottom of the casing to the floor.

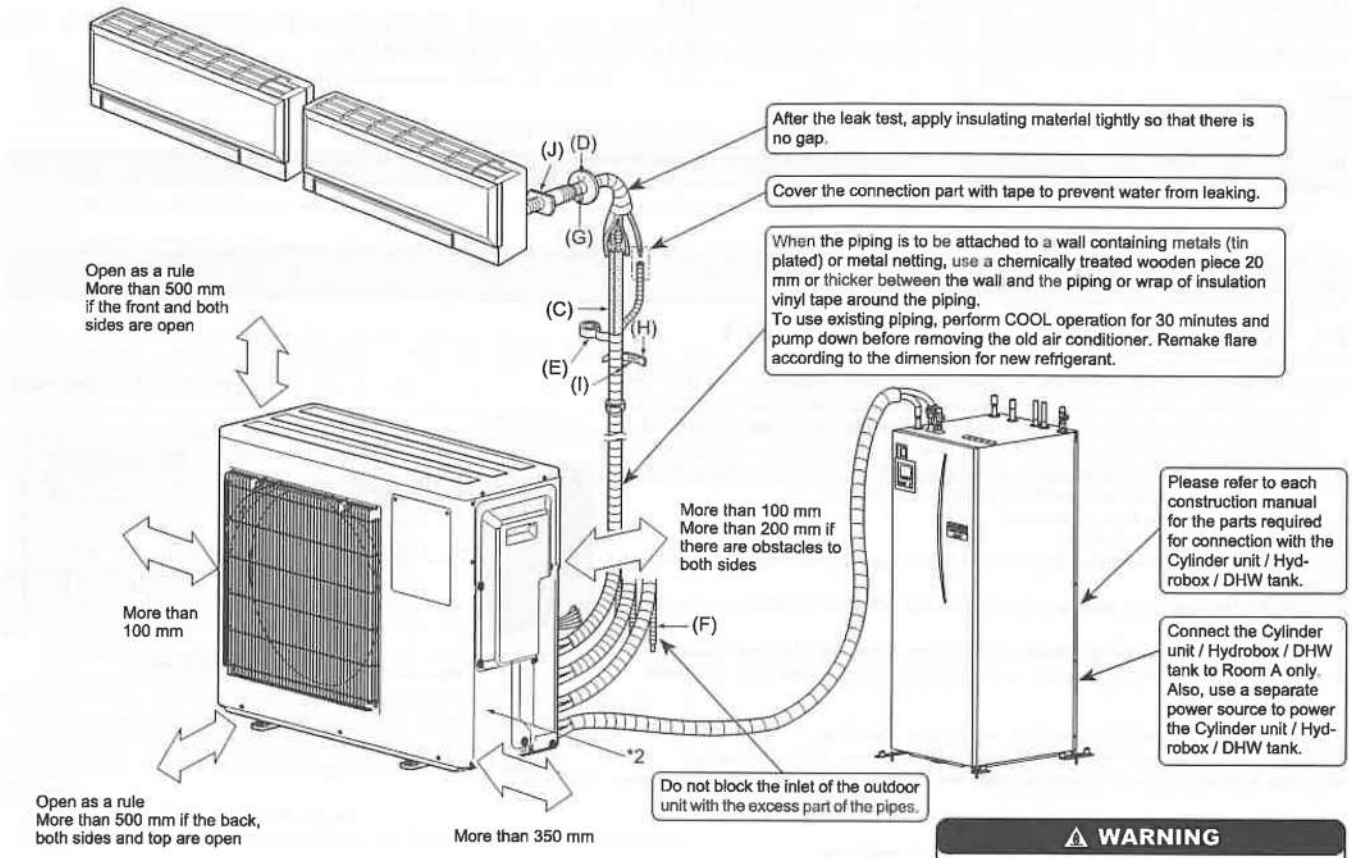


Case 4: For DHW tank*

*DHW tank : A DHW tank specified by MITSUBISHI ELECTRIC

For details on the installation conditions for the DHW tank, refer to the installation manual for the DHW tank.

1-5. INSTALLATION DIAGRAM



*2 The manufacturing year and month is indicated on the spec name plate.

⚠ WARNING

To avoid risk of fire, embed or protect the refrigerant piping.
External damage on the refrigerant piping can be cause of fire.

ACCESSORIES

Check the following parts before installation.

(1)	Drain socket	1
(2)	Drain cap	2

PARTS TO BE PROVIDED AT YOUR SITE

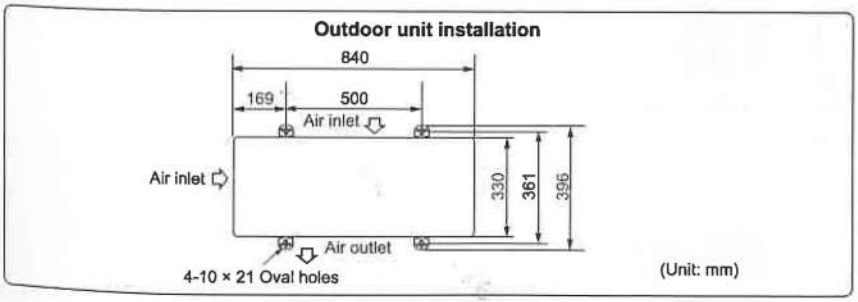
(A)	Power supply cord*1	1
(B)	Indoor/outdoor unit connecting wire*1	1
(C)	Extension pipe	1
(D)	Wall hole cover	1
(E)	Piping tape	1
(F)	Extension drain hose (or soft PVC hose, 15 mm inner diameter or hard PVC pipe VP30)	1
(G)	Putty	1
(H)	Pipe fixing band	2 to 7
(I)	Fixing screw for (H)	2 to 7
(J)	Wall hole sleeve	1
(K)	Soft PVC hose, 15 mm inner diameter or hard PVC pipe VP30 for drain socket (1)	1

Note:

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

The "Q'ty" for (B) to (J) in the left table is quantity to be used per indoor unit.

Outdoor unit installation



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

1-6. DRAIN PIPING FOR OUTDOOR UNIT

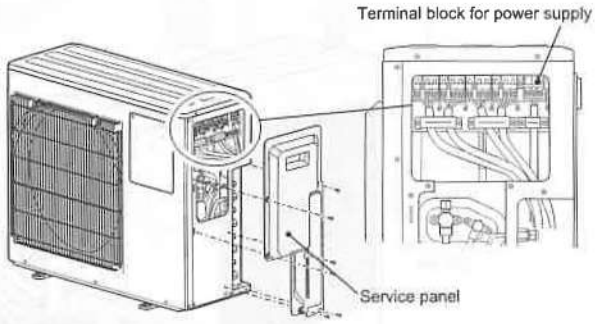
Please perform the drain piping work only when draining from one place.
1) Choose one hole to discharge drain and install the drain socket (1) to the hole.
2) Close the rest of the holes with the drain caps (2).
3) Connect the soft PVC hose (K) of 15 mm in the inside diameter on the market with the drain socket (1) and lead drain.

Note:
Install the unit horizontally.
Do not use the drain socket (1) and the drain caps (2) in the cold regions. Drain may freeze and it makes the fan stop.
The outdoor unit produces condensate during the heating operation. Select the installation place to ensure to prevent the outdoor unit and/or the grounds from being wet by drain water or damaged by frozen drain water.

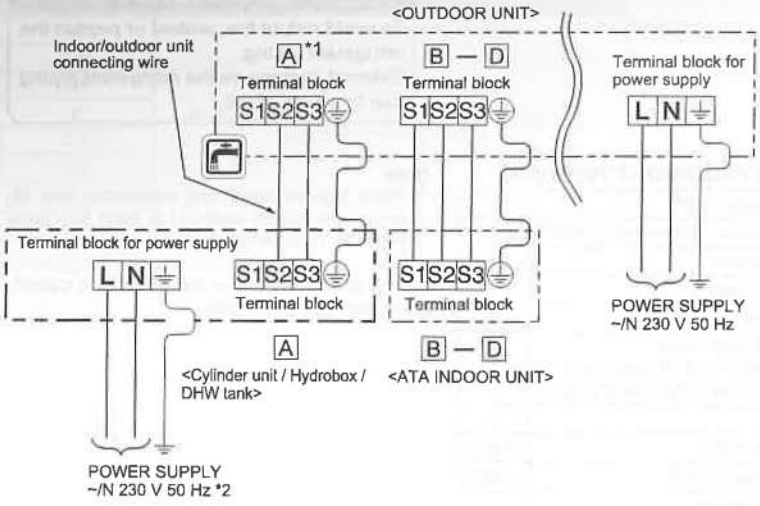
2. OUTDOOR UNIT INSTALLATION

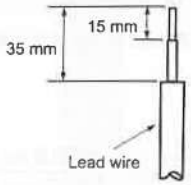
2-1. CONNECTING WIRES FOR OUTDOOR UNIT

1) Remove the service panel.
2) Loosen terminal screw, and connect indoor/outdoor unit connecting wire (B) from the indoor unit correctly on the terminal block. Be careful not to make mis-wiring. Fix the wire to the terminal block securely so that no part of its core is appeared, and no external force is conveyed to the connecting section of the terminal block.
3) Firmly tighten the terminal screws to prevent them from loosening. After tightening, pull the wires lightly to confirm that they do not move.
4) Perform 2) and 3) for each indoor unit.
5) Connect power supply cord (A).
6) Fix indoor/outdoor unit connecting wire (B) and power supply cord (A) with the cable clamps.
7) Close the service panel securely. Make sure that 3-3. PIPE CONNECTION is completed.
   - After making connections between both power supply cord (A) and indoor/outdoor unit connecting wire (B), be sure to fix both cable and wire with cable clamps.



<Case1> Connecting with Cylinder unit / Hydrobox / DHW tank
Connect the Cylinder unit / Hydrobox / DHW tank to Room A only. "*1" below
Also, use a separate power source to power the Cylinder unit / Hydrobox / DHW tank. "*2" below

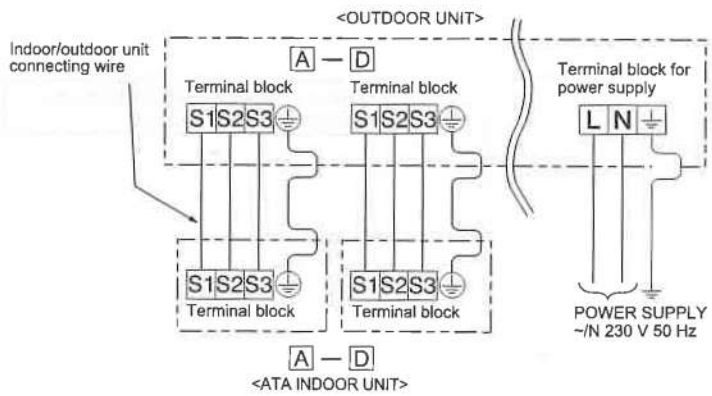




- Be sure to attach each screw to its correspondent terminal when securing the cord and/or the wire to the terminal block.
- Make earth wire a little longer than others. (More than 35 mm)
- For future servicing, give extra length to the connecting wires.

This tap mark indicates the Cylinder unit / Hydrobox / DHW tank connection side for the following parts.
- Terminal block for the connecting cables, S2/S3 (cannot connect to S1)
- Stop valves, gas and liquid for the refrigerant connection

<Case2> Connecting without Cylinder unit / Hydrobox / DHW tank



3. FLARING WORK AND PIPE CONNECTION

3-1. PRECAUTIONS FOR DEVICES THAT USE R32 REFRIGERANT

- Use C1220 copper phosphorus, for copper and copper alloy seamless pipes, to connect the refrigerant pipes. Use refrigerant pipes with the thicknesses specified in the table to the below. Make sure the insides of the pipes are clean and do not contain any harmful contaminants such as sulfuric compounds, oxidants, debris, or dust.
  Always apply no-oxidation brazing when brazing the pipes, otherwise, the compressor will be damaged.

⚠ WARNING

When installing, relocating, or servicing the unit, make sure that no substance other than the specified refrigerant (R32) enters the refrigerant circuit.
Any presence of foreign substance such as air can cause abnormal pressure rise and may result in explosion or injury. The use of any refrigerant other than that specified for the system will cause mechanical failure, system malfunction, or unit breakdown. In the worst case, this could lead to a serious impediment to securing product safety.

Pipe size (mm)	ø6.35	ø9.52	ø12.7	ø15.88	ø19.05	ø22.2	ø25.4	ø28.58
Thickness (mm)	0.8	0.8	0.8	1.0	1.0	1.0	1.0	1.0

- Do not use pipes thinner than those specified above.
- Use 1/2 H or H pipes if the diameter is 19.05 mm or larger.
- Be sure to have appropriate ventilation in order to prevent ignition. Furthermore, be sure to carry out fire prevention measures that there are no dangerous or flammable objects in the surrounding area.

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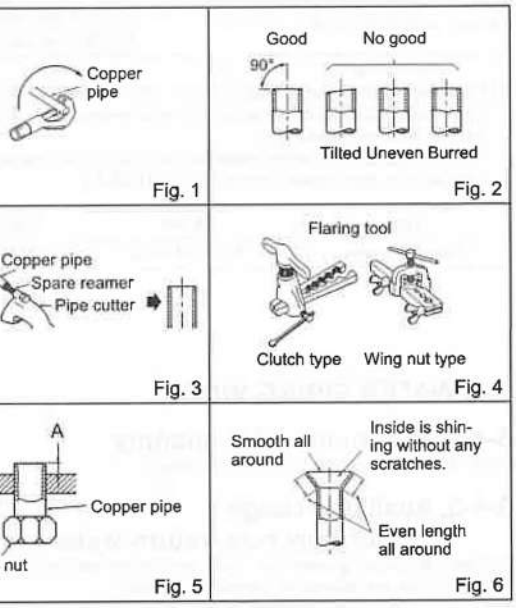
3-2. FLARING WORK

1) Cut the copper pipe correctly with pipe cutter. (Fig. 1, 2)
2) Completely remove all burrs from the cut cross section of pipe. (Fig. 3)
   - Aim the copper pipe downward while removing burrs to prevent burrs from dropping in the pipe.
3) Remove flare nuts attached to indoor and outdoor units, then put them on pipe having completed burr removal. (Not possible to put them on after flaring work.)
4) Flaring work (Fig. 4, 5). Firmly hold copper pipe in the dimension shown in the table. Select A mm from the table according to the tool selected.
5) Check
   - Compare the flared work with Fig. 6.
   - If flare is noted to be defective, cut off the flared section and do flaring work again.

Pipe diameter (mm)	Nut (mm)	A (mm)			Tightening torque	
		Clutch type tool for R32, R410A	Clutch type tool for R22	Wing nut type tool for R22	N•m	kgf•cm
ø6.35 (1/4")	17	0 to 0.5	1.0 to 1.5	1.5 to 2.0	13.7 to 17.7	140 to 180
ø9.52 (3/8")	22				34.4 to 41.2	350 to 420
ø12.7 (1/2")	26			2.0 to 2.5	49.1 to 56.9	500 to 580
ø15.88 (5/8")	29				73.5 to 78.5	750 to 800



3-3. PIPE CONNECTION

- The connected pipe size differs depending the models and the capacities of indoor units.

Indoor unit capacity		15 ~ 25	35 ~ 42	50	60
Indoor unit: M series	Liquid pipe size	ø6.35	ø6.35	ø6.35	ø6.35
	Gas pipe size	ø9.52	ø9.52	ø9.52 *1	ø12.7
Indoor unit: S series	Liquid pipe size	ø6.35	ø6.35	ø6.35	ø6.35
	Gas pipe size	ø9.52	ø9.52	ø12.7	ø15.88
Indoor unit: P series	Liquid pipe size	-	ø6.35	ø6.35	ø9.52
	Gas pipe size	-	ø12.7	ø12.7	ø15.88

*1 Use a joint pipe if the connection of the indoor unit differs.

⚠ WARNING

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

- Use tightening torque table above as a guideline for indoor unit side union joint section, and tighten using two wrenches. Excessive tightening damages the flare section.

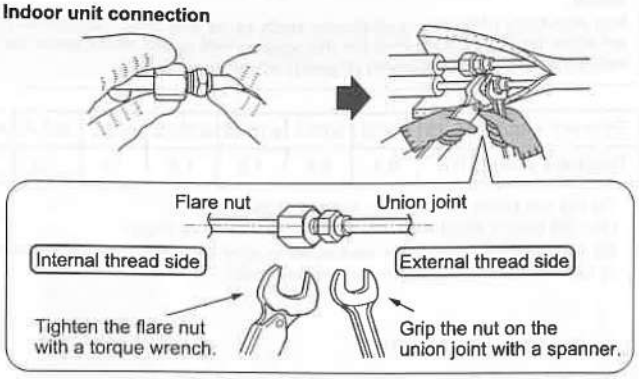
1) Do not apply refrigeration oil on screw threads. Excessive tightening torque will result in damage on the screw.
2) For connection, first align the center, then tighten the first 3 to 4 turns of flare nut by hand.
3) Tighten the flare nut with a torque wrench as specified in the table.
   - Over-tightening may cause damage to the flare nut, resulting in refrigerant leakage.
   - Be sure to wrap insulation around the piping. Direct contact with the bare piping may result in burns or frostbite.

Indoor unit: ecodan Cylinder unit / Hydrobox	Liquid pipe size	ø6.35
	Gas pipe size	ø12.7
Indoor unit: DHW tank	Liquid pipe size	ø6.35
	Gas pipe size	ø9.52

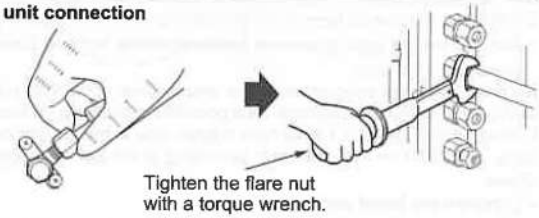
4) If the length of the connection pipe is 10 m or less when connecting to a floor-standing ATA indoor unit, it is recommended to install the optional muffler (sold separately).
   For the installation method, refer to the construction manual for the muffler.
   (Optional muffler model name: MAC-001MF-E)

Type	Model	Optional Muffler
Floor standing	MFZ-KT**VG	MAC-001MF-E

Indoor unit connection



Outdoor unit connection



⚠ CAUTION

When there are the ports which are not used, make sure their nuts are tightened securely.

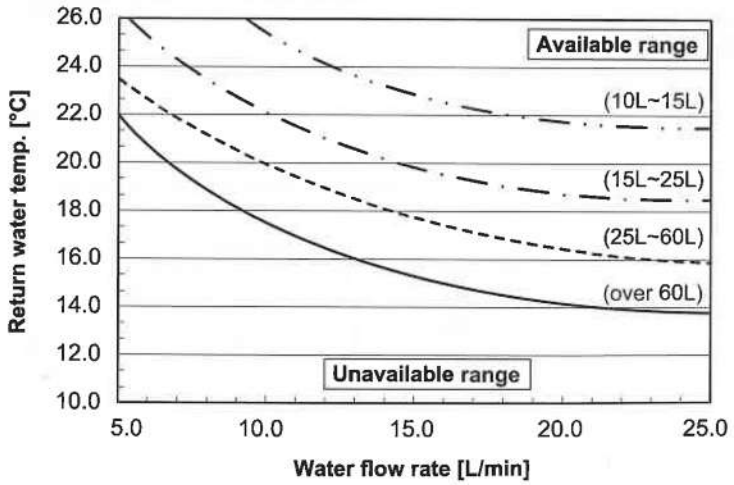
3-4. WATER PIPING WORK

3-4-1. Minimum water quantity

Refer to the indoor unit installation manual.

3-4-2. Available range (Water flow rate, return water temp.)

Ensure the following water flow rate and return temperature range in the water circuit.
These curves are related to the water quantity.



Note:
Be sure to avoid the unavailable range during defrosting.
Otherwise, the outdoor unit is insufficiently defrosted and/or the heat exchanger of the indoor unit may freeze.

3-5. INSULATION AND TAPING

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

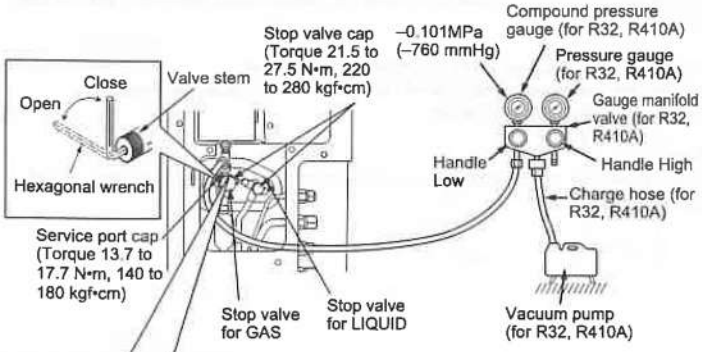
4. PURGING PROCEDURES, LEAK TEST, AND TEST RUN

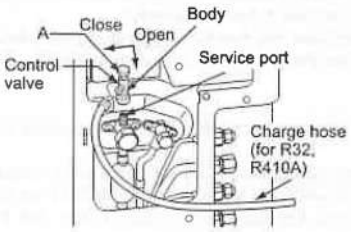
4-1. PURGING PROCEDURES AND LEAK TEST

1) Remove service port cap of stop valve on the side of the outdoor unit gas pipe. (The stop valves are fully closed and covered in caps in their initial state.)
2) Connect gauge manifold valve and vacuum pump to service port of stop valve on the gas pipe side of the outdoor unit.
3) Run the vacuum pump. (Vacuumize for more than 15 minutes.)
4) Check the vacuum with gauge manifold valve, then close gauge manifold valve, and stop the vacuum pump.
5) Leave as it is for one or two minutes. Make sure the pointer of gauge manifold valve remains in the same position. Confirm that pressure gauge shows -0.101 MPa [Gauge] (-760 mmHg).
6) Remove gauge manifold valve quickly from service port of stop valve.
7) After refrigerant pipes are connected and evacuated, fully open the valve stem of all stop valves on both sides of gas pipe and liquid pipe by the hexagonal wrench. If the valve stem hits the stopper, do not turn it any further. Operating without fully opening lowers the performance and this causes trouble.
8) Refer to 1-2., and charge the prescribed amount of refrigerant if needed. Be sure to charge slowly with liquid refrigerant.
9) Tighten cap of service port to obtain the initial status.
10) Leak test

⚠ WARNING

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





Precautions when using the control valve

When attaching the control valve to the service port, valve core may deform or loosen if excess pressure is applied. This may cause gas leak.

When attaching the control valve to the service port, make sure that the valve core is in closed position, and then tighten part A. Do not tighten part A or turn the body when valve core is in open position.

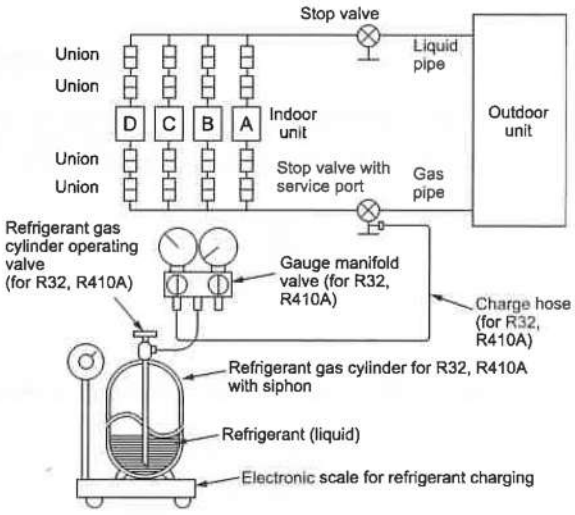
4-2. GAS CHARGE

Perform gas charge to unit.
1) Connect gas cylinder to the service port of stop valve.
2) Perform air purge of the pipe (or hose) coming from refrigerant gas cylinder.
3) Replenish specified amount of the refrigerant, while operating the air conditioner for cooling *1.

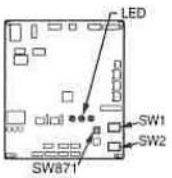
Note:
In case of adding refrigerant, comply with the quantity specified for the refrigerating cycle.

⚠ CAUTION

When charging the refrigerant system with additional refrigerant, be sure to use liquid refrigerant. Charge the liquid refrigerant slowly, otherwise the compressor will be locked.
To maintain the high pressure of the gas cylinder, warm the gas cylinder with warm water (under 40°C) during cold season. But never use naked fire or steam.



*1. When connecting only the Cylinder unit / Hydrobox / DHW tank, perform cooling according to the following procedure.
1) Turn off the breaker for outdoor unit and Cylinder unit / Hydrobox / DHW tank both.
2) Turn on 2 for SW2.
3) Turn on the breaker for outdoor unit and Cylinder unit / Hydrobox / DHW tank both.
4) After confirming that all the indoor units have stopped for more than 3 minutes, press and hold the SW871 on the control board for 3 seconds.
5) To stop operation after refrigerant filling is complete, press and hold the SW871 on the control board again for 3 seconds.
6) Turn off the breaker for outdoor unit and Cylinder unit / Hydrobox / DHW tank both.
7) Turn off 2 for SW2.



Note:
This function does not operate when the outside temperature is 0°C or below.

Make sure to indicate the followings with ineffaceable ink on the designated label / spec label.

(1) Precharged refrigerant amount – see spec label
(2) On site additionally charged amount
(3) Total refrigerant amount (1)+(2)
(4) (5) (6) CO_2 equivalent

	Ⅰ (kg)	Ⅲ (t)
①	(1)	(4)
②	(2)	(5)
③	(3)	(6)

(4) = (1) × 675/1000
(5) = (2) × 675/1000
(6) = (3) × 675/1000

Contains fluorinated greenhouse gases

① Factory charge (Refer to SPEC LABEL)
② Additional charge
③ Total charge (①+②)
Ⅰ Weight
Ⅲ CO_2 equivalent (Ⅰ×GWP/1000)

R32 (GWP:675)

	Ⅰ (kg)	Ⅲ (t)
①		
②		
③		

*2. This information is based on Regulation (EU) No.517/2014.
*3. According to IPCC 3rd edition, GWP is defined as 550.

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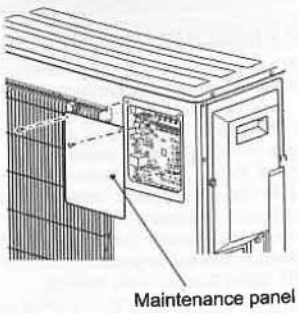
4-3. REMOVING THE MAINTENANCE PANEL

The setting of Dip Switch on the outdoor controller board can be changed without removing the front panel.
Follow the procedures below to remove the maintenance panel and set the Dip Switch.

1) Remove screw(s) which fix the maintenance panel.
2) Remove the maintenance panel, and perform necessary settings.
3) Install the maintenance panel.

Note:
Make sure to fix the maintenance panel securely. Incomplete installation could cause malfunction.

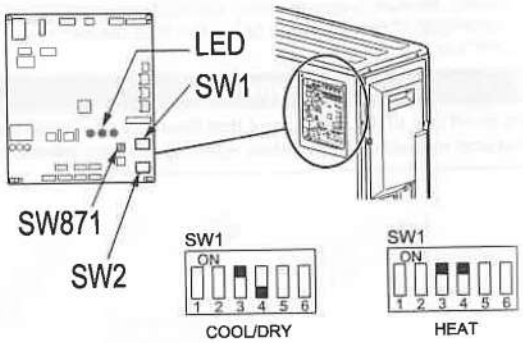


4-4. LOCKING THE OPERATION MODE OF THE AIR CONDITIONER (COOL, DRY, HEAT)

- Description of the function:
  With this function, once the operation mode is locked to either COOL/DRY mode or HEAT mode, the air conditioner operates in that mode only.
- Changing the setting is required to activate this function. Please explain about this function to your customers and ask them whether they want to use it.

[How to lock the operation mode]

1) Be sure to turn off the main power for the air conditioner before making the setting.
2) Set the "3" of SW1 on the outdoor controller board to ON to enable this function.
3) To lock the operation mode in COOL/DRY mode, set the "4" of SW1 on the outdoor controller board to OFF. To lock the operation in HEAT mode, set the same switch to ON.
4) Turn on the main power for the air conditioner.

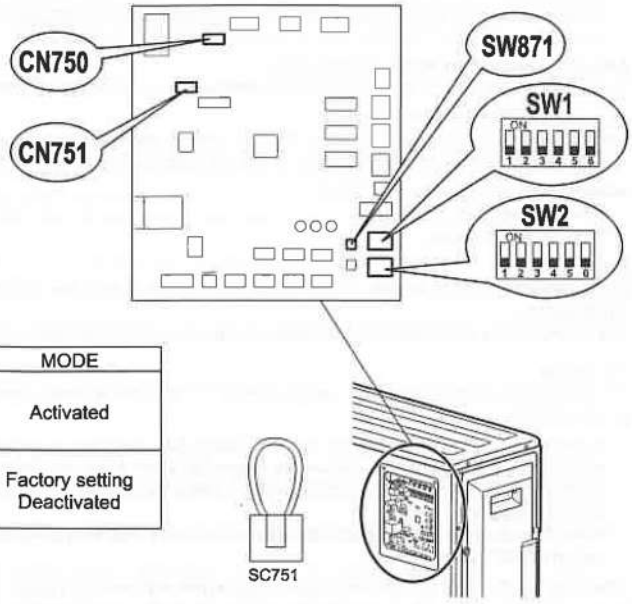


4-5. HOW TO SET LOW STANDBY POWER MODE

Use of the low standby power mode is recommended when none of the indoor units listed in Table 1 or Table 2 is connected to the outdoor unit. The low standby power mode can be set with the dip switch (SW1) and the jumper connector (SC751).

- Before turning on the breaker at first time, settings for dip switch (SW1) and jumper connector (SC751) are necessary on the outdoor control P.C. board.
- It is recommended to activate the low standby power mode when none of the indoor units listed in Table 1 or Table 2 is connected.

Note:
- Units come with low standby power mode deactivated as factory setting.
- When connecting one or more indoor units listed in Table 1 and Table 2, the outdoor unit does not work at "activated low standby power mode".
- In the event that SC751 is missing, outdoor unit will not work.
- Activate the P.C. board setting by turning ON the breaker.



To activate low standby power mode:
Connect SC751 to CN750.
Set the 2 of SW1 to ON.

To deactivate low standby power mode:
Connect SC751 to CN751.
Set the 2 of SW1 to OFF.

SC751	SW1	MODE
CN750		Activated
CN751		Factory setting Deactivated

Table 1: List of the target models

Type	Model name
Wall-Mounted	MSZ-AP**VF
1way-cassette	MLZ-KP**VF
4way-cassette	SLZ-M**FA*
Ceiling-Concealed	PEAD-M**JA(L)*
	SEZ-M**DA(L)*
Ceiling-Suspended	PCA-M**KA*
Floor-Standing	SFZ-M**VA*

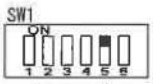
Table 2: List of the target models

Type	Model name
Cylinder unit	E*ST**D-*M2/6/9*D
Hydrobox	E*SD-*M2/6/9*D
DHW tank	A DHW tank specified by MITSUBISHI ELECTRIC

4-6. LOWERING THE OPERATION NOISE OF THE OUTDOOR UNIT

- Description of the function:
  With this function, the operating noise of the outdoor unit can be lowered by reducing the operation load, for example, during nighttime in COOL mode. However, please note that the cooling and heating capacity may lower if this function is activated.
- Changing the setting is required to activate this function. Please explain about this function to your customers and ask them whether they want to use it.

[How to lower the operating noise]
1) Be sure to turn off the main power for the air conditioner before making the setting.
2) Set the "5" of SW1 on the outdoor controller board to ON to enable this function.
3) Turn on the main power for the air conditioner.

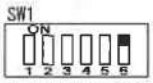


Lower the operating noise

4-7. SETTING WHEN THE PIPING LENGTH IS LONG

For a system that connects all rooms and has a total piping length of 40 m or more, change the setting to improve the circulation of the refrigerant.

[How to perform the setting]
1) Be sure to turn off the main power of the air conditioner before performing the setting.
2) To enable this function, set SW1 "6" on the outdoor controller board to ON.
3) Turn on the main power of the air conditioner.



When the piping length is long

4-8. TEST RUN

- Test runs of the indoor units should be performed individually. See the installation manual coming with the indoor unit, and make sure all the units operate properly.
- If the test run with all the units is performed at once, possible erroneous connections of the refrigerant pipes and the indoor/outdoor unit connecting wires cannot be detected. Thus, be sure to perform the test run one by one.

About the restart protective mechanism
Once the compressor stops, the restart preventive device operates so the compressor will not operate for 3 minutes to protect the air conditioner.

Wiring/piping correction function
This unit has a wiring/piping correction function which corrects wiring and piping combination. When there is possibility of incorrect wiring and piping combination, and confirming the combination is difficult, use this function to detect and correct the combination by following the procedures below.

Make sure that the following is done.
- Power is supplied to the unit.
- Stop valves are open.

Note:
During detection, the operation of the indoor unit is controlled by the outdoor unit. During detection, the indoor unit automatically stops operation. This is not a malfunction.
The wiring/piping correction function does not operate when the indoor unit (Cylinder unit / Hydrobox / DHW tank) is connected.

Procedure
Press the piping/wiring correction switch (SW871) 1 minute or more after turning on the power supply.

- Correction completes in 10 to 15 minutes. When the correction is completed, its result is shown by LED indication. Details are described in the following table.
- To cancel this function during its operation, press the piping/wiring correction switch (SW871) again.
- When the correction completed without error, do not press the piping/wiring correction switch (SW871) again.

When the result is "Not completed", press the piping/wiring correction switch (SW871) again to cancel this function. Then, confirm the wiring and piping combination in a conventional manner by operating the indoor units one by one.

- The operation is done while the power is supplied. Make sure not to contact parts other than the switch, including the P.C. board. This may cause electric shock or burn by hot parts and live parts around the switch. Contacting the live parts may cause P.C. board damage.
- To prevent electronic control P.C. board damage, make sure to perform static elimination before operating this function.

- This function does not operate when the outside temperature is 0°C or below.

LED indication during detection:

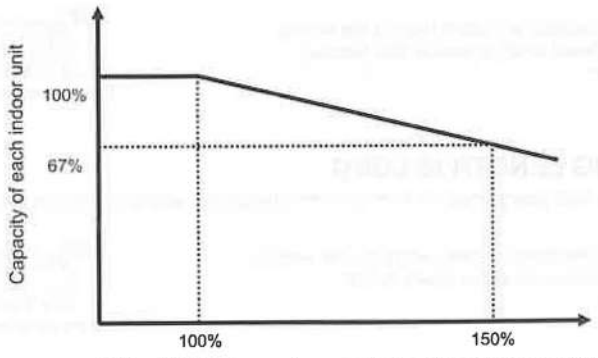
LED1 (Red)	LED2 (Yellow)	LED3 (Green)
Lit	Lit	Once

Result of piping/wiring correction function

LED1 (Red)	LED2 (Yellow)	LED3 (Green)	Result
Lit	Not lit	Lit	Completed (Problem corrected or normal)
Once	Once	Once	Not completed (Detection failed)
Other indications			Refer to "SAFETY PRECAUTIONS WHEN LED BLINKS" located behind the top panel.

4-9. EXPLANATION TO THE USER

- Using the OPERATING INSTRUCTIONS, explain to the user how to use the air conditioner (how to use the remote controller, how to remove the air filters, how to remove or put the remote controller in the remote controller holder, how to clean, precautions for operation, etc.).
- Recommend the user to read the OPERATING INSTRUCTIONS carefully.
- To feel cool / warm wind, use lower fan speed or reduce the number of indoor units in operation.
  When many indoor units are being operated at the same time, capacity of each indoor unit may drop as shown in the graph below.



Ratio of total indoor units capacity to outdoor unit capacity

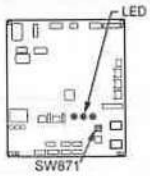
Operation when the total capacity of the operating indoor units is more than the capacity of the outdoor unit.

- When connecting a 60 class or higher Ceiling Concealed P-Series, connection of other ATA indoor units is prohibited.

5. PUMPING DOWN

When relocating or disposing of the air conditioner, pump down the system following the procedure below so that no refrigerant is released into the atmosphere.
When a Cylinder unit or Hydrobox is connected with the outdoor unit, select the asterisks (**) to deactivate the freeze stat function using a remote controller. For the setting method of the freeze stat function, refer to the service manual of the Cylinder unit or the Hydrobox.

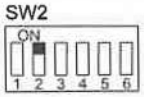
1) Turn off the breaker for outdoor unit and Cylinder unit / Hydrobox / DHW tank both.
2) Connect the gauge manifold valve to the service port of the stop valve on the gas pipe side of the outdoor unit.
3) Fully close the stop valve on the liquid pipe side of the outdoor unit.
4) Turn on 2 for SW2.
5) Turn on the breaker for outdoor unit and Cylinder unit / Hydrobox / DHW tank both.
6) After confirming that all the indoor units have stopped for more than 3 minutes, press and hold the SW871 on the control board for 3 seconds.
   - After pressing the SW871, the compressor starts operating, and the outdoor fan starts running.
   - The connected indoor unit starts cooling. Also, the Cylinder unit / Hydrobox / DHW tank indoor unit starts cold-water operation.
   - The LED on the control board shows pumping down function.
7) When the pressure gauge shows 0.05 to 0 MPa [Gauge] (approx. 0.5 to 0 kgf/cm²), fully close the stop valve on the gas pipe side of the outdoor unit.
8) Press and hold the SW871 on the control board again for 3 seconds.
   - After pressing the SW871, the compressor and the outdoor fan stop.



LED indication during pumping down:

LED1 (Red)	LED2 (Yellow)	LED3 (Green)
Not Lit	Not Lit	3 times

SW2



* The air conditioner automatically stops when the maximum operation time elapses or abnormality occurs. If the air conditioner stops in the middle of the work, perform the above procedure from 1) again.
* If too much refrigerant has been added to the air conditioner system, the pressure may not drop to 0.05 MPa [Gauge] (approx. 0.5 kgf/cm²), or the protection.
If this occurs, use a refrigerant collecting device to collect all of the refrigerant in the system, and then recharge the system with the correct amount of refrigerant after the indoor and outdoor units have been relocated.

9) Turn off the breaker for outdoor unit and Cylinder unit / Hydrobox / DHW tank both. Remove the pressure gauge and the refrigerant piping.
10) Turn off 2 for SW2. Restore other settings that have been changed.

This function does not operate when the outside temperature is 0°C or below.

⚠ WARNING

When the refrigeration circuit has a leak, do not execute pump down with the compressor.
When pumping down the refrigerant, stop the compressor before disconnecting the refrigerant pipes.
If the refrigerant pipe are disconnected while the compressor is running and the stop valve is open, air could be drawn in and the pressure in the refrigeration cycle could become abnormally high.
The compressor may burst and cause injury if any foreign substance, such as air, enters the pipes.

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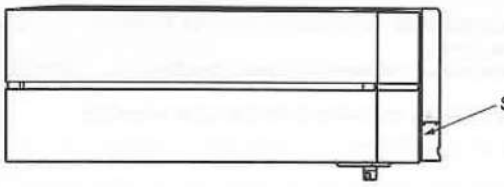
6. PRECAUTIONS WHEN CONNECTING THE CYLINDER UNIT / HYDROBOX / DHW TANK

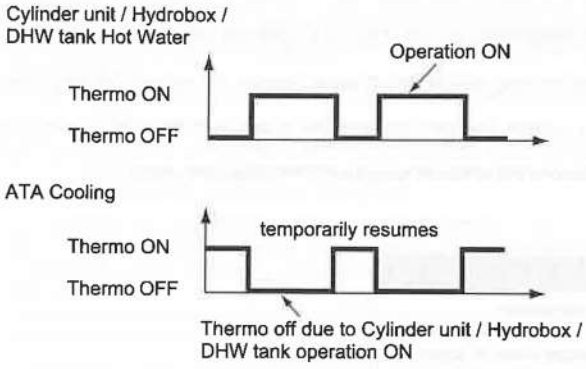
- If the hot water supply operation is performed during the ATA indoor unit air conditioning operation, the LED blinks (enters standby mode) and the air conditioning operation is interrupted.
  However, if the hot water supply time becomes long, the air conditioning operation temporarily resumes.



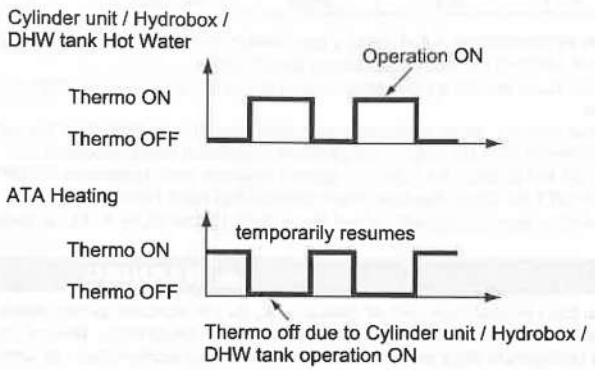
Standby mode

Indication	Operation state
☀ ☼	Standby mode (Only during multi system operation)

Operating state when ATA Cooling and hot water supply operations are requested at the same time



Operating state when ATA Heating and hot water supply operations are requested at the same time



- Since the air conditioning operation stops during hot water supply, set the schedule function for the Cylinder unit / Hydrobox / DHW tank to supply hot water when you are away or at bedtime.
- When water heating and ATA Heating operations are requested at the same time, the water heating operation is prioritized.
- When returning to the ATA indoor unit operation after operating the Cylinder unit / Hydrobox / DHW tank, the operation of the earlier port (A port > B port > C port > D port > E port).
- When an ATA indoor unit is connected other than those units described in the following list, if hot water is supplied after cooling, the unit will switch to electric heater heating when the boiling temperature reaches 40°C.

Type
Wall-Mounted
Floor-Standing
Ceiling-Concealed

- For pump operation for pipe freeze protection, if the Cylinder unit / Hydrobox is connected and the heating operation is performed at an outside temperature of 5°C or below, the outlet temperature will be low.
- The power display value for the Cylinder unit / Hydrobox / DHW tank is the value including the power from the air conditioning operation of the ATA indoor unit.
- Primary current restrictions <in case of ATA+Cylinder unit / Hydrobox / DHW tank Hybrid>
  <in ATA indoor unit operation>
  The lowest among the requested values is prioritised.
  The request from Cylinder unit / Hydrobox / DHW tank is ignored.
  <in Cylinder unit / Hydrobox / DHW tank operation>
  The requested value from Cylinder unit / Hydrobox / DHW tank is respected.
  The request on ATA side is ignored.
- If the breaker of the Cylinder unit / Hydrobox / DHW tank was turned off and then on again, turn off the breaker of the outdoor unit, and then turn it on again. Since the outdoor unit does not read the DipSW settings only when the power is turned on, the changes will not be when the DipSW is changed in the Cylinder unit / Hydrobox / DHW tank.