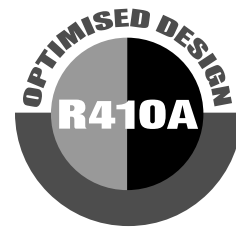


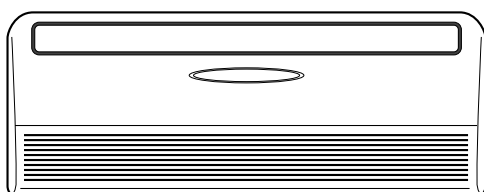
DAIKIN



INSTALLATION MANUAL

R410A Split Series

INVERTER



Models

| | |
|-------------------|-------------------|
| FLXS25BVMB | FLKS25BVMB |
| FLXS35BVMB | FLKS35BVMB |
| FLXS50BVMB | FLKS50BVMB |
| FLXS60BVMB | FLKS60BVMB |
| FLX25BVMB | FLK25BVMB |
| FLX35BVMB | FLK35BVMB |

Installation manual
R410A Split series

English

Installationsanleitung
Split-Baureihe R410A

Deutsch

Manuel d'installation
Série split R410A

Français

Montagehandleiding
R410A Split-systeem

Nederlands

Manual de instalación
Serie Split R410A

Español

Manuale d'installazione
Serie Multiambienti R410A

Italiano

Εγχειρίδιο εγκατάστασης
διαιρούμενης σειράς R410A

Ελληνικά

Manual de Instalação
Série split R410A

Portugues

Руководство по монтажу
Серия R410A с раздельной установкой

Русский

CE - DECLARATION-OF-COMFORMITY
CE - KONFORMITÄTSEKHLÄRUNG
CE - DECLARATION-DE-CONFORMITE
CE - KONFORMITEITSVERKLARING

CE - DECLARACION-DE-CONFORMIDAD
CE - DICHLARAZIONE-DI-CONFORMITA
CE - ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ

CE - DECLARACÃO-DE-CONFORMIDADE
CE - ЗАЯВЛЕНИЕ-О-СООТВЕТСТВИИ
CE - OPGYDELSESERKLÆRING

CE - FÖRSÄKRAN-OM-ÖVERENSSTÄMMELSE
CE - ERKLÆRING OM-SAMSVAR
CE - ILMOITUS-YHDENMUKAISUDESTA
CE - PROHLÁSENÍ-O-SHOĐE

CE - IZJAVA-O-USKLABENOSTI
CE - MEGFELELŐSÉG-NYILATKOZAT
CE - DEKLARACJA-ZGODNOSCI

CE - DECLARATIE-DE-CONFORMITATE
CE - IZJAVA O SKLADNOSTI
CE - VASTAVUŠEKLARACIJSKOON

CE - ДЕКЛАРАЦІЯ-ЗА-СООТВЕТСТВИЕ
CE - АТТИΚΙΤΗΣ-ΔΕΚΛΑΡΑCΙΑ
CE - АТБІЛCТІБАС-ДЕКЛАРАЦІА
CE - VYHLÁSENIE-ZHODY

DAIKIN INDUSTRIES, LTD.

- 01 declares under its sole responsibility that the air conditioning models to which this declaration relates:
- 02 erklärt auf seine alleinige Verantwortung daß die Modelle der Klimaanlage für die diese Erklärung bestimmt ist:
- 03 déclare sous sa seule responsabilité que les appareils de climatisation visés par la présente déclaration:
- 04 verklaart hierbij op eigen verantwoordelijkheid dat de airconditioning units waarop deze verklaring betrekking heeft:
- 05 dichiara bajo su única responsabilidad que los modelos de aire acondicionado a los cuales hace referencia la declaración:
- 06 dichiara sotto sua responsabilità che i condizionatori modello a cui è riferita questa dichiarazione:
- 07 δηλώνει με αποκλειστική της ευθύνη ότι τα προϊόντα των κλιματιστικών συσκευών στα οποία αναφέρεται η παρούσα δήλωση:
- 08 declara sob sua exclusiva responsabilidade que os modelos de ar condicionado a que esta declaração se refere:

FLK25BYMB, FLK35BYMB, FLK50BYMB, FLK60BYMB, FLK25BYMB, FLK35BYMB, FLK50BYMB, FLX50BYMB, FLX60BYMB

- 01 are in conformity with the following standard(s) or other normative document(s), provided that these are used in accordance with our instructions:
- 02 den folgenden Normen/Anweisungen eingesetzt werden:
- 03 sont conformes à la(s) norme(s) ou autre(s) document(s) normatifs, pour autant qu'ils soient utilisés conformément à nos instructions:
- 04 conform de volgende norm(en) of één of meer andere bindende documenten zijn, op voorwaarde dat ze worden gebruikt overeenkomstig onze instructies:
- 05 están en conformidad con la(s) siguiente(s) norma(s) u otro(s) documento(s) normativos, siempre que sean utilizados de acuerdo con nuestras instrucciones:
- 06 sono conformi all(i) seguente(i) standard(i) o altro(i) documento(i) a carattere normativo, a patto che vengano usati in conformità alle nostre istruzioni:
- 07 είναι σύμφωνα με το(α) ακόλουθο(α) πρότυπο(α) ή άλλο(α) έγγραφο(α) κανονισμών, υπό την προϋπόθεση ότι χρησιμοποιούνται σύμφωνα με τις οδηγίες μας:

EN60335-2-40,

- 01 following the provisions of:
- 02 gemäß den Vorschriften der:
- 03 conformément aux stipulations des:
- 04 overeenkomstig de bepalingen van:
- 05 siguiendo las disposiciones de:
- 06 secondo le prescrizioni per:
- 07 με την προϋπόθεση των διατάξεων των:
- 08 de acordo com o previsto em:

- 09a соответствии с положениями:
- 10 under lagtegnelse af bestemmelserne i:
- 11 enligt villkoren i:
- 12 gitt i henhold til bestemmelserne i:
- 13 noudatiiden määräyksiä:
- 14 za dodženi nastaveni predpisu:
- 15 prema odredbama:
- 16 követeli az(ak):

- 17 zgodnie z postanowieniami Dyrektywy:
- 18 in una predefinitio:
- 19 oo uimavarija doobit:
- 20 vastavalt nuleale:
- 21 enmähtavik kirayavne na:
- 22 laikantis nustatitj, pateiktiamų:
- 23 leģrojot prasības, kas noteiktas:
- 24 održavajuću istanovlenu:

- 09 (9a) заявляет, исключительно под свою ответственность, что модели кондиционеров воздуха, к которым относится настоящая декларация:
- 10 (9b) erklærer under eneansvar, at klimaanlegsmodelerne, som denne deklaration inehæver:
- 11 (9c) erklærer i egenansvar av hovedansvar, at luftkonditioneringsmodellerna som berörs av denna deklaration innehåller:
- 12 (9d) erklærer et fulstendig ansvar for at de luftkonditioneringsmodeller som berøres av denne deklarasjon inneholder at:
- 13 (9e) ilmoittaa yksinomaan omalta vastuultaan, että läänin ilmastointilaitteiden mallit:
- 14 (9f) prohlásuje ve své plné odpovědnosti, že modely klimatizace, k nimž se toto prohlášení vztahuje:
- 15 (9g) izjavljuje pod skljipno vsajilom odgovornostjo da su modeli klima uređaja na koje se ova izjava odnosi:
- 16 (9h) teľes felelősséggel tudatában kijelenti, hogy a klímaberendezés modellek, melyekre a nyilatkozat vonatkozik:

- 09 accord am conformitate cu a(s) siguiente(s) norma(s) ou autre(s) document(s) normatifs), deose ce estes sejm utilizados de acoró com as nossas instruções:
- 09 соответствии с последующим стандартом или другим нормативным документом, при условии их использования согласно нашим инструкциям:
- 10 overdror følgende standard(er) eller andre bindende dokument(er), brudst at disse anvendes i henhold til vore instruktioner:
- 11 respektive utrustning är följande överensstämmelse med och följer följande standard(er) eller andra normgivande dokument, under förutsättning att användning sker i överensstämmelse med våra instruktioner:
- 12 respektive utstyr er i overensstemmelse med følgende standard(er) eller andre normgivende dokument(er), under brøussetting av at disse brukes i henhold til våre instruksjoner:
- 13 estasivat seuraavien standardien ja muiden ohjeellisten dokumenttien vaatimuksa edellytellen, että niitä käytetään ohjeidemme mukaisesti:
- 14 za preopokazu, da jsou využívány v souladu s našimi pokyny, odpovídají následujícím normám nebo normativním dokumentům:

- 01 Directives, as amended:
- 02 Direktiven, gemäß Änderung:
- 03 Directives, telles que modifiées:
- 04 Richtlijnen, zoals gewijzigd:
- 05 Directivas, según lo emmendado:
- 06 Directive, come da modifica:
- 07 Ohjeisto, jossa on muutoksia:
- 08 Directivas, conforme alteração em:

Low Voltage 73/23/EEC
Machinery Safety 89/37/EEC
Electromagnetic Compatibility 89/336/EEC *

- 09 Примечание * как указано в Досье технического толкования Daikin.TCF015 и в соответствии с полными решениями KEIMA согласно Свидетельству 74736-KROEINC97-4957.
- 10 Bemærk * som anført den Tekniske Konstruktionsfil Daikin.TCF015 og positiv vurderet af KEIMA i henhold til Certifikat 74736-KROEINC97-4957.
- 11 Information * udstøtningen är utförd i enlighet med den Tekniska Konstruktionsfilen Daikin.TCF015 og gennem positiv bedømmelse av KEIMA i henhold til certifikat 74736-KROEINC97-4957.
- 12 Merk * zoals vermeld in het Technische Constructiedossier Daikin.TCF015 en in orde beoordeeld door KEIMA overeenkomstig Certificaat 74736-KROEINC97-4957.
- 13 Huom * ta como estabelecido no Ficheiro Técnico de Construção Daikin.TCF015 e com o parecer positivo de KEIMA de acordo com o Certificado 74736-KROEINC97-4957.
- 14 Pozremlia * jak bylo uvedeno v souboru technické konstrukce Daikin.TCF015 a pozitivně zjišeno KEIMA v souladu s ovedením 74736-KROEINC97-4957.
- 15 Napomena * kako je izloženo u Dopolni Tehničkoj Konstrukciji Daikin.TCF015 pozitivno ocjenjeno od strane KEIMA prema Certifikatu 74736-KROEINC97-4957.
- 16 Megjegyzés * aljz Daikin.TCF015 műszaki konstrukciós dokumentáció alapján, aljz KEIMA gazdolta a megfelelőséget aljz 74736-KROEINC97-4957 tanúsítvány szerinti.

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- 17 (9L) deklarije na vlaste, izvjeznu odgovornost, ze modele klimatizatorov, ktorých dočyvu ninesza deklaracija:
- 18 (9M) deklarije na vlaste, izvjeznu odgovornost, ze modele klimatizatorov, ktorých dočyvu ninesza deklaracija:
- 19 (9N) z tvo odgovornosti izjavlja, da so modeli klimatiki naprav, na katere se izjava nanaša:
- 20 (9O) klmiaa oma tähtliku vastutuse, et läsovase deklaratsiooni alla kuuluvad klimateadme mudelid:
- 21 (9P) deklariira na oiaq otovõrõust, ce modelidne klimaticheska instalatsion, za komo se tolorosa tam deklarasija:
- 22 (9Q) viska savo atsakomybe skieba, kad oro kondicionavimo priedais modeliai, kuriems yra teikiama ši deklaracija:
- 23 (9R) ar pihni atbildibu apliecinu, ka laik uzskaitilo modeļu gaisa kondicionēji, uz kuriem attiecas šī deklarācija:
- 24 (9S) vyhlásuje na vlastnú zodpovednosť, že tieto klimatizačné modely, na ktoré sa vzťahuje toto vyhlásenie:

- 15 u skladu sa sledujúcim štandardom(ami) ili drugim normativnim dokumentom(ima), uz uvjet da se oni koriste u skladu s našim uputama:
- 16 megfelelőnek az alábbi szabvány(ok)nak vagy egyéb irányadó dokumentum(ok)nak, ha azok aklásra szert hasznájak:
- 17 spretnaig, vinnogi nasledujućim norm. i timych dokumentov normalizacij/pynch, pod varunkiem ze se izvajajo sa zgodna z našymi instruktijami:
- 18 sust in conformitate cu umitorul (umitoratele) standard(e) (sau alte) documente(n) normative, cu condiție ca acestea să fie utilizate în conformitate cu instrucțiunile noastre:
- 19 skladni z nasledujúcimi štandardi in drugim normativi, pod pogojem, da se uporabijo u skladu z našimi navodili:
- 20 on vastavuselt järgmistele standarditele või teiste normaliseeritud dokumentidega, kui need kasutatakse vastavalt meie juhendile:
- 21 съответстват на следните стандарти или други нормативни документи, при условие, че се използват съгласно нашите инструкции:
- 22 atliika zemiau nurodytus standartus ir (arba) kitus norminius dokumentus su sąlyga, kad yra naudojami pagal mūsų nurodymus:
- 23 tad, ja leičoti atliisoti različja nardijujem, atbihi se kojostem standardim un citim normativnim dokumentim:
- 24 su u zbroje s nasledujucimi normami (ili) normativnymi dokumentami, za preopokazu, ze se pouzivaji v soulade s našimi navodami:

- 09 Директиве, ак изменени:
- 10 Direktivet, med senere ændringer:
- 11 Direktiv, med foretagne ændringer:
- 12 Direktivet, zoals gewijzigd:
- 13 Direktiva, según lo emmendado:
- 14 vplátné zmeny:
- 15 Sprijenica, kako je izmijenjeno:
- 16 falyvėlek) is nūdositaisak retukezėseil:

- 17 Uwaga * zgodnie z archiwalna dokumentacją konstrukcyjną Daikin.TCF015, pozytywna opinia KEIMA i Swardectwem 74736-KROEINC97-4957.
- 18 Noit * conform celor stabilite în Dosarul tehnic de construcție Daikin.TCF015 și apreciate pozitiv de KEIMA în conformitate cu Certificatul 74736-KROEINC97-4957.
- 19 Opomba * kol je doobeno v tehnični mapi Daikin.TCF015 in doobeno s strani KEIMA v skladu s certifikatom 74736-KROEINC97-4957.
- 20 Märkus * nagu on määratud tehnilisss dokumentatsioonis Daikin.TCF015 ja teists kiidatud KEIMA järg vastavalt sertifikaadile 74736-KROEINC97-4957.
- 21 Zabeleznka * varto e zalozeo v Arhu za tehnička konstrukcija Daikin.TCF015 u ošenoju pozitivno od KEIMA s uradno Certifikat 74736-KROEINC97-4957.
- 22 Pasaba * kaip nurodyta techninėje konstrukcijos byloje Daikin.TCF015 ir patvirtima KEIMA pagal pažymimą 74736-KROEINC97-4957.
- 23 Pizmes * ka noutils tehnišsja dokumentacijo Daikin.TCF015, atliisoti KEIMA pozitivnjam lēmumam ko apliecinu sertifikats 74736-KROEINC97-4957.
- 24 Poznámka * ako je to stanovené v Súborné technickéj konstrukciji Daikin.TCF015 a kladean posudeno KEIMA podľa Certifikatu 74736-KROEINC97-4957.



Yoshiaki Hirata
Manager Quality Control Department
Shiga, 1st of Aug. 2004

DAIKIN INDUSTRIES, LTD.
Umeda Center Bldg., 4-12, Nakazaki-Nishi 2-chome,
Kita-ku, Osaka, 530-8323 Japan




Safety Precautions

- Read these Safety Precautions carefully to ensure correct installation.
- This manual classifies the precautions into WARNINGS and CAUTIONS.
Be sure to follow all the precautions below: they are all important for ensuring safety.

⚠ WARNINGSFailure to follow any of WARNING is likely to result in such grave consequences as death or serious injury.




⚠ CAUTIONSFailure to follow any of CAUTION may in some cases result in grave consequences.

- The following safety symbols are used throughout this manual:


| | | |
|--|---|--|
|  Be sure to observe this instruction. |  Be sure to establish an earth connection. |  Never attempt. |
|--|---|--|

- After completing installation, test the unit to check for installation errors. Give the user adequate instructions concerning the use and cleaning of the unit according to the Operation Manual.

WARNINGS

- Installation should be left to the dealer or another professional.
Improper installation may cause water leakage, electrical shock, or fire.
- Install the air conditioner according to the instructions given in this manual.
Incomplete installation may cause water leakage, electrical shock, or fire.
- Be sure to use the supplied or specified installation parts.
Use of other parts may cause the unit to come to lose, water leakage, electrical shock, or fire.
- Install the air conditioner on a solid base that can support the unit's weight.
An inadequate base or incomplete installation may cause injury in the event the unit falls off the base.
- Electrical work should be carried out in accordance with the installation manual and the national electrical wiring rules or code of practice. Insufficient capacity or incomplete electrical work may cause electrical shock or fire.
- Be sure to use a dedicated power circuit. Never use a power supply shared by another appliance.
- For wiring, use a cable long enough to cover the entire distance with no connection.
Do not use an extension cord. Do not put other loads on the power supply, use a dedicated power circuit.
(Failure to do so may cause abnormal heat, electric shock or fire.)
- Use the specified types of wires for electrical connections between the indoor and outdoor units.
Firmly clamp the interconnecting wires so their terminals receive no external stresses. Incomplete connections or clamping may cause terminal overheating or fire.
- After connecting interconnecting and supply wiring be sure to shape the cables so that they do not put undue force on the electrical covers or panels.
Install covers over the wires. Incomplete cover installation may cause terminal overheating, electrical shock, or fire.
- If any refrigerant has leaked out during the installation work, ventilate the room.
(The refrigerant produces a toxic gas if exposed to flames.) 
- After all installation is complete, check to make sure that no refrigerant is leaking out.
(The refrigerant produces a toxic gas if exposed to flames.) 
- When installing or relocating the system, be sure to keep the refrigerant circuit free from substances other than the specified refrigerant (R410A), such as air.
(Any presence of air or other foreign substance in the refrigerant circuit causes an abnormal pressure rise or rupture, resulting in injury.)
- During pump-down, stop the compressor before removing the refrigerant piping.
If the compressor is still running and the shut-off valve is open during pump-down, air will be sucked in when the refrigerant piping is removed, causing abnormal pressure in the freezer cycle which will lead to breakage and even injury.
- During installation, attach the refrigerant piping securely before running the compressor.
If the compressor is not attached and the shut-off valve is open during pump-down, air will be sucked in when the compressor is run, causing abnormal pressure in the freezer cycle which will lead to breakage and even injury.
- Be sure to establish an earth. Do not earth the unit to a utility pipe, arrester, or telephone earth.
Incomplete earth may cause electrical shock. A high surge current from lightning or other sources may cause damage to the air conditioner. 
- Be sure to install an earth leakage breaker.
Failure to install an earth leakage breaker may result in electric shocks.

CAUTIONS

- Do not install the air conditioner in a place where there is danger of exposure to inflammable gas leakage.
If the gas leaks and builds up around the unit, it may catch fire. 
- Establish drain piping according to the instructions of this manual.
Inadequate piping may cause flooding.
- Note for installing the outdoor unit. (For heat pump model only.)
In cold area where the outside air temperature keep below or around freezing-point for a few days, the outdoor unit's drain may freeze.
If so, it is recommended to install an electric heater in order to protect drain from freezing.
- Tighten the flare nut according to the specified method such as with a torque wrench.
If the flare nut is tightened too hard, the flare nut may crack after a long time and cause refrigerant leakage.

Accessories

Indoor unit (A) – (Q)

| | | | | | |
|---------------------------------------|---|------------------------------|---|--|---|
| (A) Mounting plate | 1 | (G) AAA dry-cell batteries | 2 | (N) Heat insulation tube (Extension auxiliary pipe) | 1 |
| (B) Photocatalytic deodorizing filter | 1 | (J) Side covers | 2 | (P) Heat insulation tube (Refrigerant pipe) | 1 |
| (C) Air purifying filter | 1 | (K) Operation manual | 1 | (Q) Binding bands | 4 |
| (D) Wireless remote controller | 1 | (L) Installation manual | 1 | | |
| (E) Remote control holder | 1 | (M) Extension auxiliary pipe | 2 | | |

- The extension auxiliary pipe (M) (N) is not included for FLX(S)25, FLX(S)35, FLK(S)25 and FLK(S)35.

Choosing a Site

- Before choosing the installation site, obtain user approval.

1. Indoor unit.

- The indoor unit should be sited in a place where:
 - 1) the restrictions on installation specified in the indoor unit installation drawings are met,
 - 2) both air intake and exhaust have clear paths met,
 - 3) the unit is not in the path of direct sunlight,
 - 4) the unit is away from the source of heat or steam,
 - 5) there is no source of machine oil vapour (this may shorten indoor unit life),
 - 6) cool air is circulated throughout the room,
 - 7) the unit is away from electronic ignition type fluorescent lamps (inverter or rapid start type) as they may shorten the remote control range,
 - 8) the unit is at least 1 metre away from any television or radio set (unit may cause interference with the picture or sound).

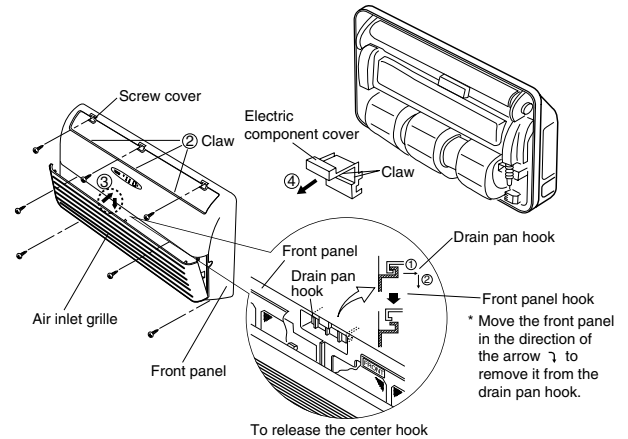
2. Wireless remote controller.

- 1) Turn on all the fluorescent lamps in the room, if any, and find the site where remote control signals are properly received by the indoor unit (within 7 metres).

Before Installing the Indoor Unit

1. Perform the following before installing the indoor unit.

- 1) Open the air inlet grille and the screw cover, and remove the 7 screws.
- 2) Release the claws in the 3 places indicated.
- 3) Release the center hook and remove the front panel.
- 4) Release the claws in the 2 places indicated and remove the electric component cover.



Installation Tips

1. How to the different addresses.

- 1) When two indoor units installed in one room, the two wireless remote controllers can be set for different addresses.

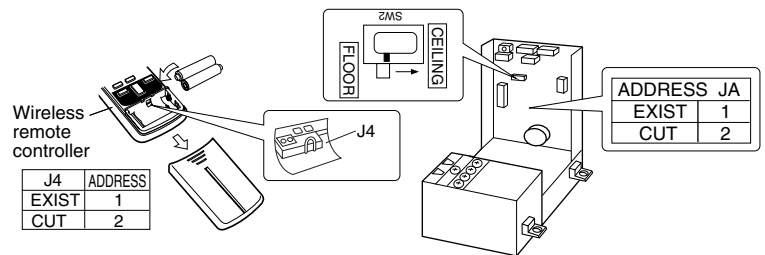
PCB in the indoor addreent

- 2) Remove the electric component cover.
(Refer to the **BEFORE INSTALLING THE INDOOR UNIT.**)

- 3) Cut the jumper JA on PCB.

Wireless remote controller

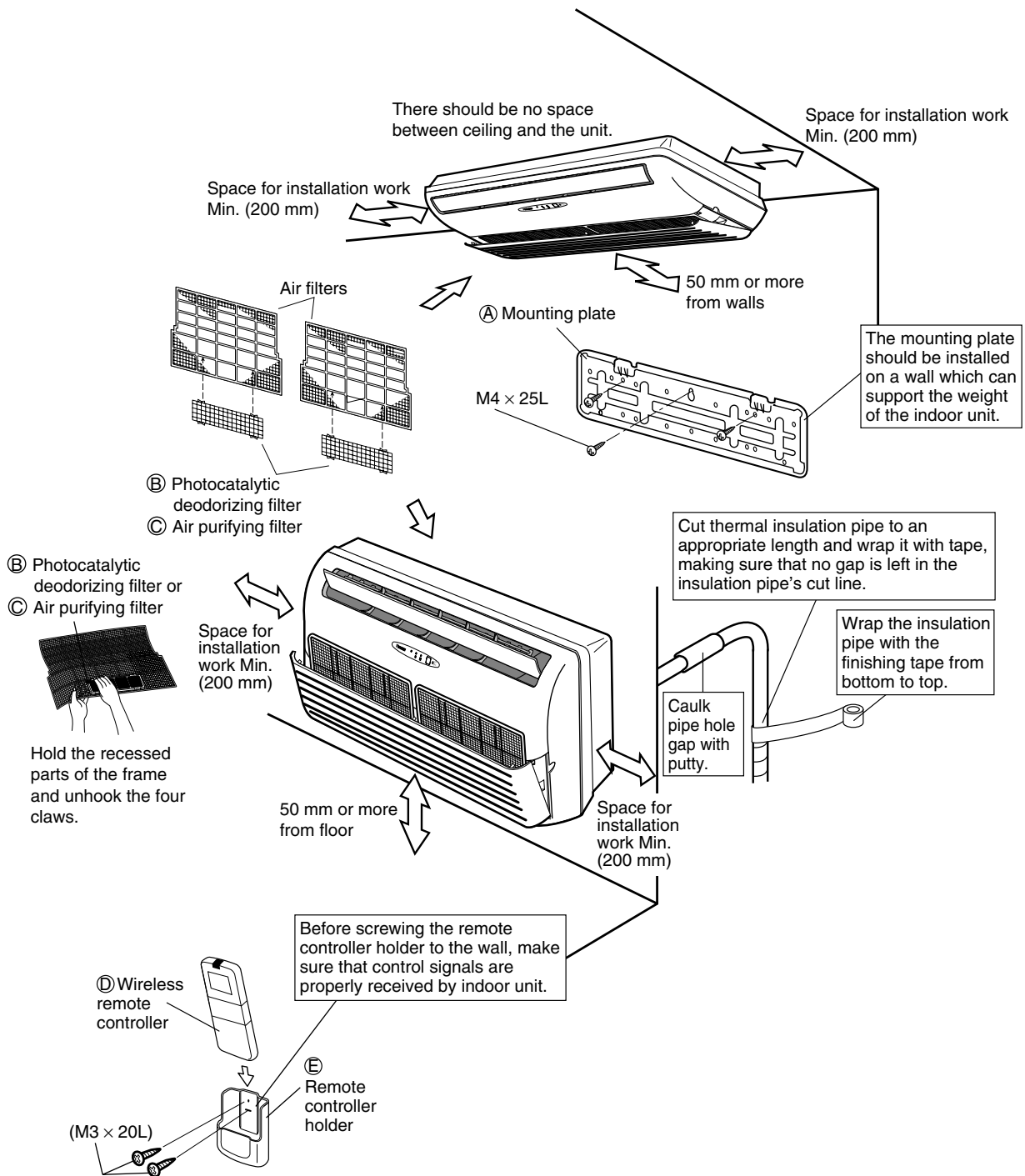
- 4) Cut the jumper J4



2. In case of Ceiling suspended use.

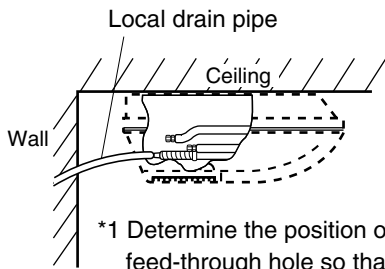
- 1) Slide the switch(SW2)to "CEILING" in case of installing on the ceiling.

Indoor Unit Installation Drawings

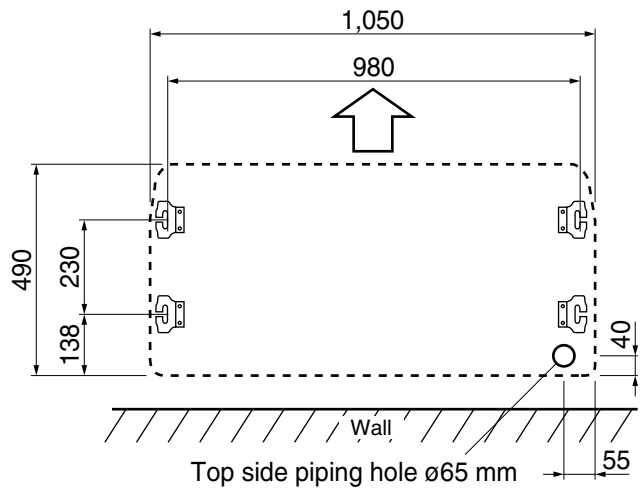
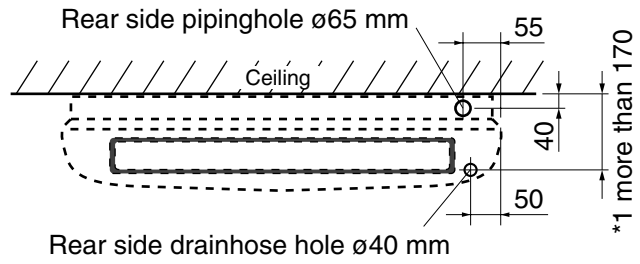
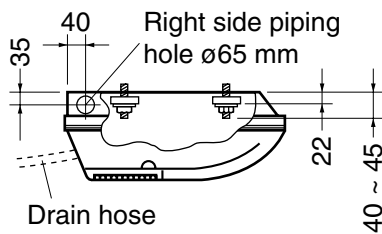


Indoor Unit Installation Drawings

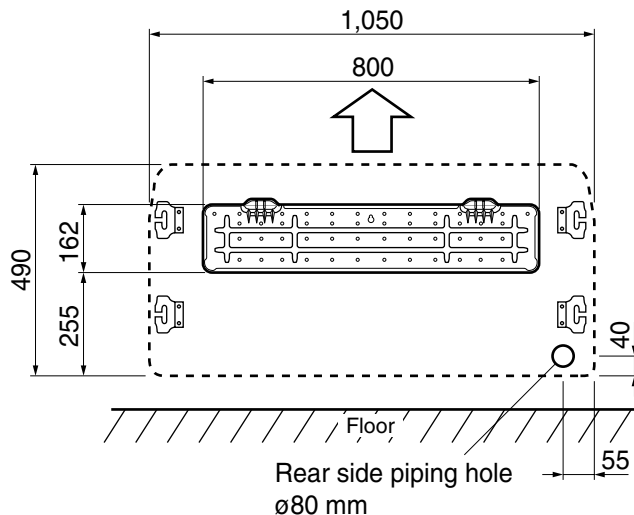
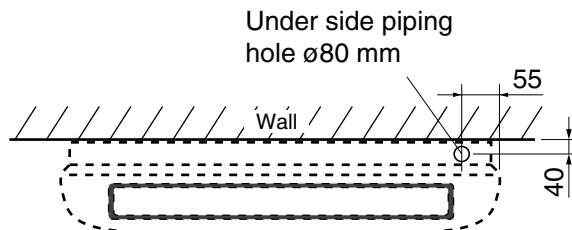
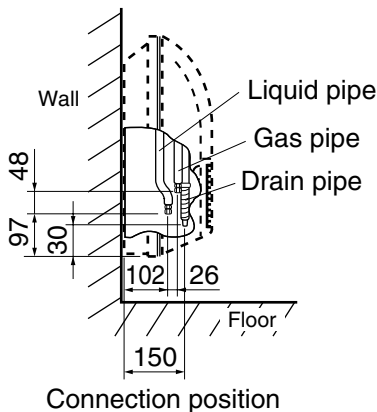
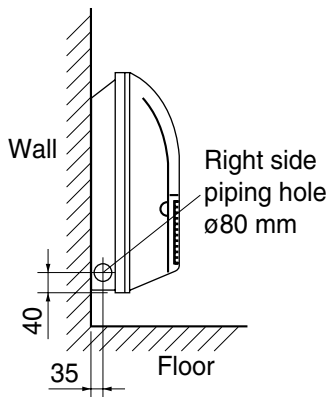
1. Ceiling mounting.



*1 Determine the position of the feed-through hole so that the local piping is placed in a downward sloping direction.



2. Wall mounting.

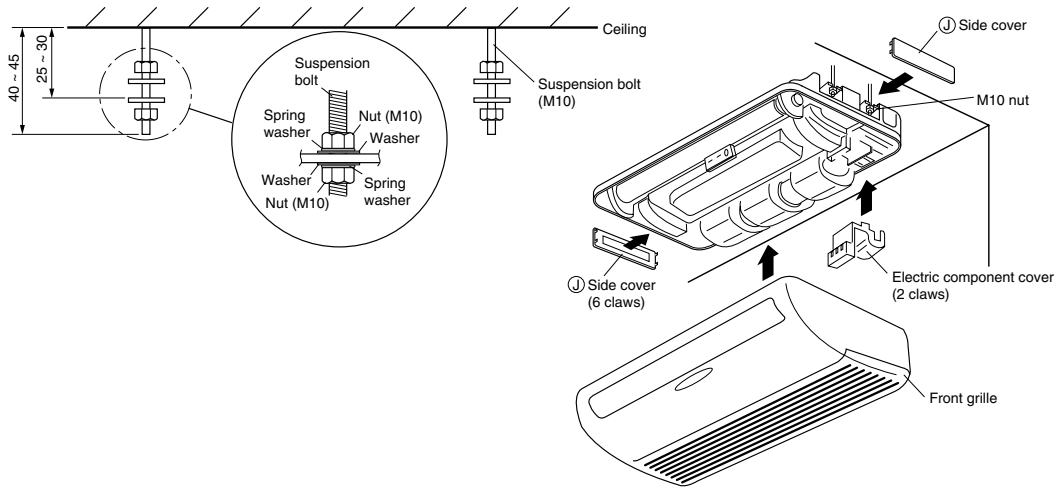


Indoor Unit Installation

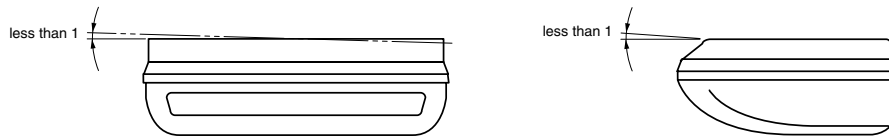
Ceiling Mounting

1. Installing The Suspension Bolt.

- 1) Install the suspension bolt so that it can support the indoor unit; adjust distance to ceiling before installation.
- 2) Mount the indoor unit according to the installation drawings and tighten it securely with M10 nut. (4 places)
- 3) After mounting the indoor unit on the ceiling, install each part as shown in the diagram on the right.



• Incline condition for installation

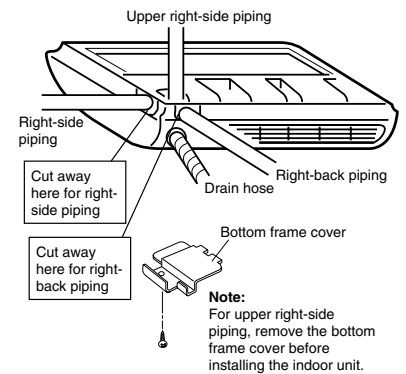


2. Installing Indoor Unit

- 1) Connect the extension auxiliary pipe (M , supplied) to the local piping.(See 1 on the next page)
(Applies to both ceiling mounting and wall mounting units.)
- 2) Prepare the local piping at the connection point for the drain pipe, as shown in the installation drawings.

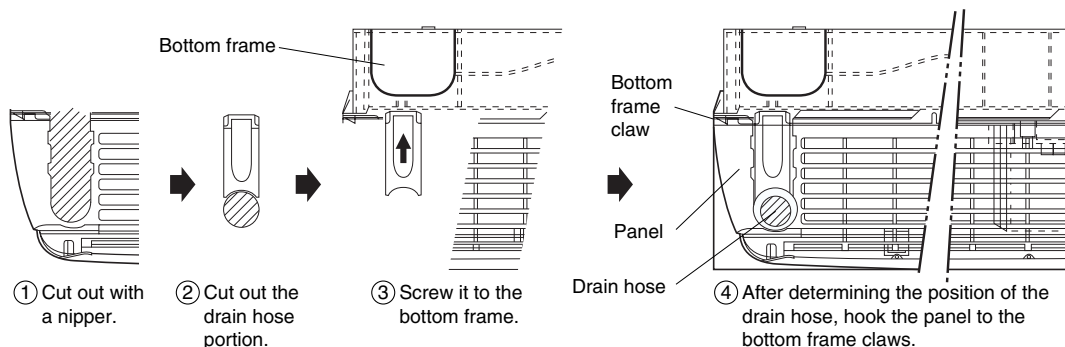
Note: Be sure to place the drain hose as shown in the diagram on the right, in a downward sloping direction.

- 3) Connect the drain hose to the local drain pipe.
Position the interconnecting wire in the same direction as the piping.



• Feed-through portion of drain hose

For determining the position of the drain hose, perform the following procedures.

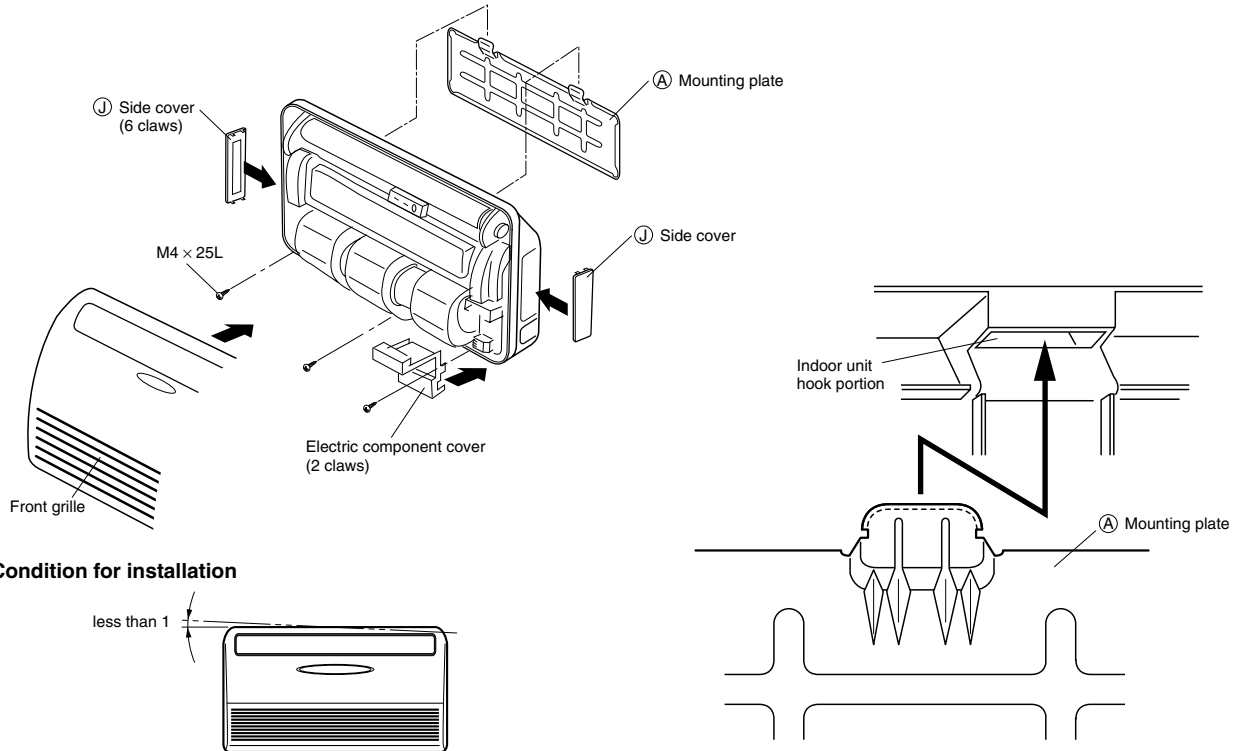


Indoor Unit Installation

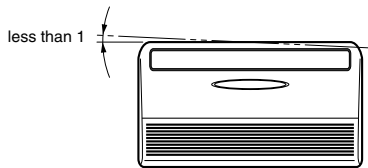
Wall Mounting

3. Installation

- Install the indoor unit on the wall according to the installation drawings.
- 1) Hang the indoor unit on the hooks of A mounting plate. (2 places)
- 2) Fix the three holes in the lower portion of the indoor unit with M4 × 25L screws.

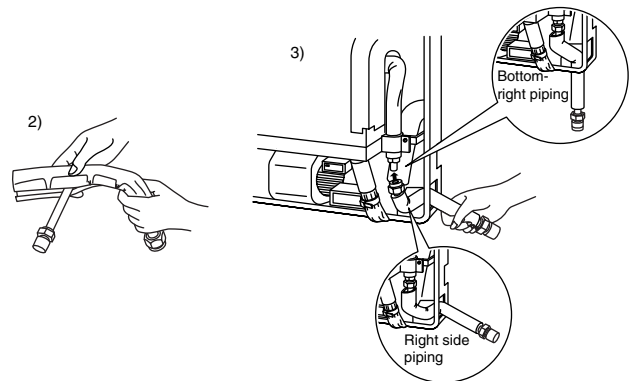


Condition for installation



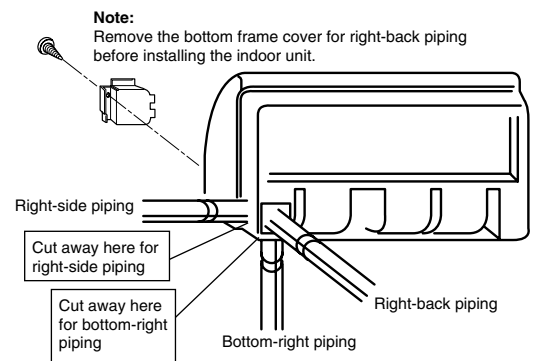
- Work should be performed to match the direction of the piping, as the extension auxiliary pipe (M , supplied) and installation methods vary depending on the direction the piping is brought out.

- 1) Select the extension auxiliary pipe in accordance with the direction of the piping. (This should be done without the included piping for wall-mounted right-back piping and ceiling-mounted upper right-side piping.)
- 2) Attach the heat insulation tube (N) to the extension auxiliary pipe. (Make sure there are no gaps.)
- 3) Attach the extension auxiliary pipe to the product.



4. Installing Indoor Unit

- 1) Connect the extension auxiliary pipe ($\text{\textcircled{M}}$, supplied) to the local piping.
(Applies to both ceiling mounting and wall mounting units.)
- 2) Prepare the local piping at the connection point for the drain pipe, as shown in the installation drawings.
- 3) Connect the drain hose to the local drain pipe.
Position the interconnecting wire in the same direction as the piping.

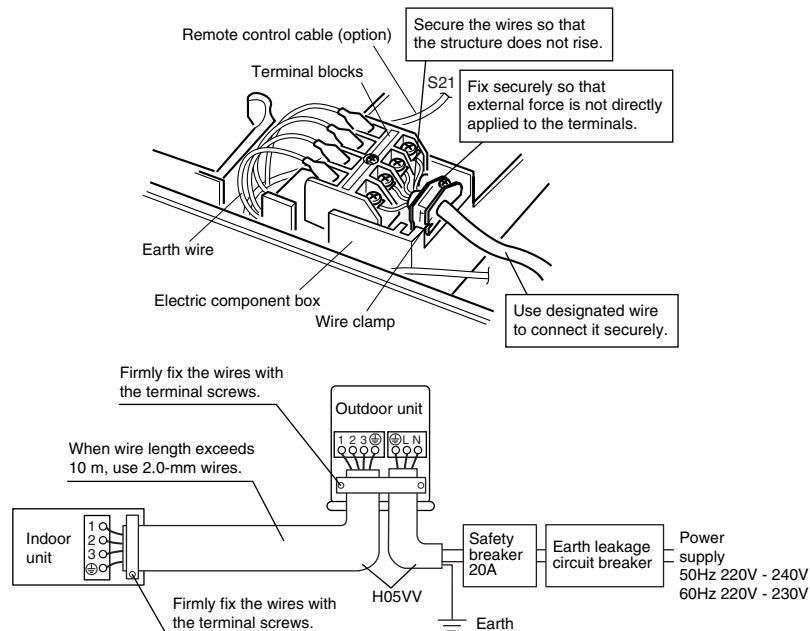


Commonality Between Ceiling Mounting and Wall Mounting

With a Multi indoor unit , install as described in the installation manual supplied with the Multi outdoor unit.

5. Wiring.

- 1) Strip wire ends (15 mm).
- 2) Match wire colours with terminal numbers on indoor and outdoor unit's terminal blocks and firmly screw wires to the corresponding terminals.
- 3) Connect the earth wires to the corresponding terminals.
- 4) Pull wires to make sure that they are securely latched up, then retain wires with wire retainer.
- 5) In case of connecting to an adapter system. Run the remote control cable and attach the S21 connector as the illustration on the right.
- 6) Shape the wires so that the service lid fits securely, then close service lid.



Warning

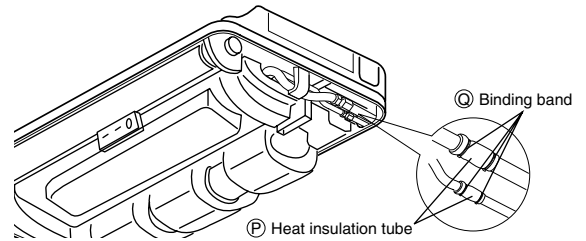
- 1) Do not use tapped wires, stand wires, extensioncords, or starburst connections, as they may cause overheating, electrical shock, or fire.
- 2) Do not use locally purchased electrical parts inside the product. (Do not branch the power for the drain pump, etc., from the terminal block.) Doing so may cause electric shock or fire.

Indoor Unit Installation

6. Insulation of Refrigerant Pipes

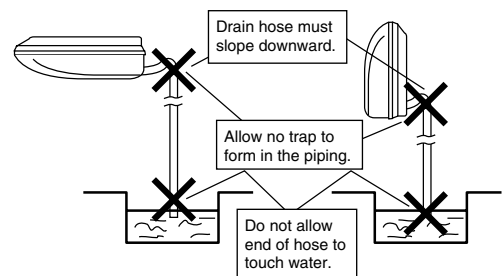
After checking for refrigerant leaks

- Joints in liquid pipe and the gas pipe must be insulated with (P) heat insulation tube attached with (Q) binding bands.
- Cut (P) heat insulation tube to appropriate length.



7. Drain Piping

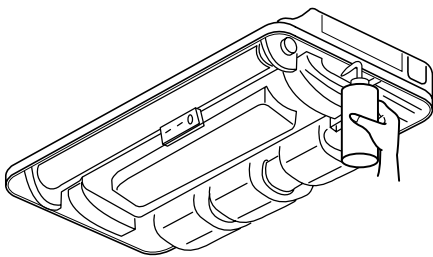
1) Connect the drain hose, as described below.



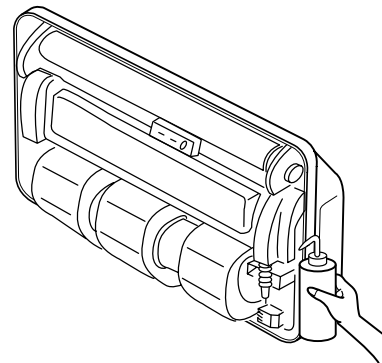
Ceiling mounting

Wall mounting

2) Pour water into the drain pan from the right side to check that water flows smoothly from the drain hose.

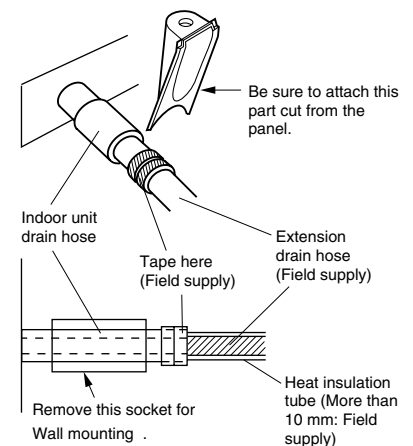


Ceiling mounting



Wall mounting

3) When drain hose requires extension, obtain an extension hose commercially available.
After connecting the local drain hose, tape the slits of the heat insulation tube.

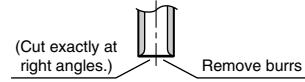


Refrigerant piping work

With a Multi indoor unit, install as described in the installation manual supplied with the Multi outdoor unit.

1. Flaring the pipe end.

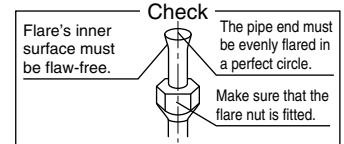
- 1) Cut the pipe end with a pipe cutter.
- 2) Remove burrs with the cut surface facing downward so that the chips do not enter the pipe.
- 3) Put the flare nut on the pipe.
- 4) Flare the pipe.
- 5) Check that the flaring is properly made.



Flaring

Set exactly at the position shown below.

| Flare tool for R410A | Conventional flare tool | | |
|----------------------|-------------------------|--------------------------|-------------------------------|
| | Clutch-type | Clutch-type (Rigid-type) | Wing-nut type (Imperial-type) |
| A | 0 ~ 0.5 mm | 1.0 ~ 1.5 mm | 1.5 ~ 2.0 mm |

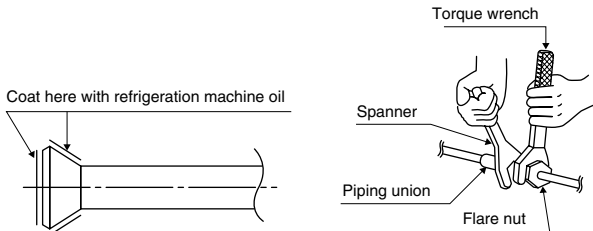


Warning

- 1) Do not use mineral oil on flared part.
- 2) Prevent mineral oil from getting into the system as this would reduce the lifetime of the units.
- 3) Never use piping which has been used for previous installations. Only use parts which are delivered with the unit.
- 4) Do never install a drier to this R410A unit in order to guarantee its lifetime.
- 5) The drying material may dissolve and damage the system.
- 6) Incomplete flaring may cause refrigerant gas leakage.

2. Refrigerant piping.

- 1) Align the centres of both flares and tighten the flare nuts 3 or 4 turns by hand. Then tighten them fully with the torque wrenches.
 - Use torque wrenches when tightening the flare nuts to prevent damage to the flare nuts and escaping gas.



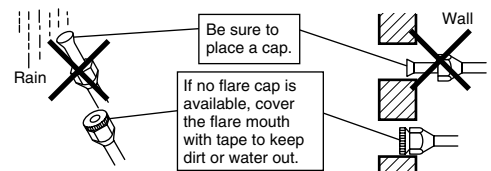
| Flare nut tightening torque | | |
|-------------------------------------|-------------------------------------|-------------------------------------|
| Gas side | | Liquid side |
| 3/8 inch | 1/2 inch | 1/4 inch |
| 32.7-39.9N • m (333-407kgf • cm) | 49.5-60.3N • m (505-615kgf • cm) | 14.2-17.2N • m (144-175kgf • cm) |

| Valve cap tightening torque | | |
|-------------------------------------|-------------------------------------|-------------------------------------|
| Gas side | | Liquid side |
| 3/8 inch | 1/2 inch | 1/4 inch |
| 21.6-27.4N • m (220-280kgf • cm) | 26.5-32.3N • m (270-330kgf • cm) | 21.6-27.4N • m (220-280kgf • cm) |

- 2) To prevent gas leakage, apply refrigeration machine oil on both inner and outer surfaces of the flare. (Use refrigeration oil for R410A)

2-1. Caution on Piping Handling

- 1) Protect the open end of the pipe against dust and moisture.
- 2) All pipe bends should be as gentle as possible. Use a pipe bender for bending.
(Bending radius should be 30 to 40 mm or larger.)



Refrigerant piping work

2-2. Selection of Copper and Heat Insulation materials

- When using commercial copper pipes and fittings, observe the following:

1) Insulation material: Polyethylene foam

Heat transfer rate: 0.041 to 0.052kW/mK (0.035 to 0.045 kcal/mh°C)

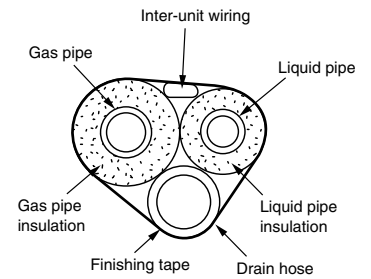
Refrigerant gas pipe's surface temperature reaches 110°C max.

Choose heat insulation materials that will withstand this temperature.

2) Be sure to insulate both the gas and liquid piping and to provide insulation dimensions as below.

| Gas side | | Liquid side |
|-----------------------------|--------------|--------------------------------|
| 25/35 class | 50/60 class | 25/35/50/60 class |
| O.D. 9.5mm | O.D. 12.7mm | O.D. 6.4mm |
| Thickness 0.8mm | | Thickness 0.8mm |
| Gas pipe thermal insulation | | Liquid pipe thermal insulation |
| 25/35 class | 50/60 class | 25/35/50/60 class |
| I.D. 12-15mm | I.D. 14-16mm | I.D. 8-10mm |
| Thickness 10mm Min. | | |

3) Use separate thermal insulation pipes for gas and liquid refrigerant pipes.



Trial Operation and Testing

1. Trial Operation and Testing.

1-1 Measure the supply voltage and make sure that it falls in the specified range.

1-2 Trial operation should be carried out in either cooling or heating mode.

■ For Heat pump

- In cooling mode, select the lowest programmable temperature; in heating mode, select the highest programmable temperature.
 - 1) Trial operation may be disabled in either mode depending on the room temperature.
Use the remote control for trial operation as described below.
 - 2) After trial operation is complete, set the temperature to a normal level (26°C to 28°C in cooling mode, 20°C to 24°C in heating mode).
 - 3) For protection, the system disables restart operation for 3 minutes after it is turned off.

■ For Cooling only

- Select the lowest programmable temperature.
 - 1) Trial operation in cooling mode may be disabled depending on the room temperature.
Use the remote control for trial operation as described below.
 - 2) After trial operation is complete, set the temperature to a normal level (26°C to 28°C).
 - 3) For protection, the unit disables restart operation for 3 minutes after it is turned off.

1-3 Carry out the test operation in accordance with the Operation Manual to ensure that all functions and parts, such as louver movement, are working properly.

- The air conditioner requires a small amount of power in its standby mode. If the system is not to be used for some time after installation, shut off the circuit breaker to eliminate unnecessary power consumption.
- If the circuit breaker trips to shut off the power to the air conditioner, the system will restore the original operation mode when the circuit breaker is opened again.

Trial Operation from Remote Controller

- 1) Press ON/OFF button to turn on the system.
- 2) Simultaneously press center of TEMP button and MODE button.
- 3) Press MODE button twice.
("7" will appear on the display to indicate that Trial Operation mode is selected.)
- 4) Trial run mode terminates in approx. 30 minutes and switches into normal mode. To quit a trial operation, press ON/OFF button.

2. Test Items.

| Test Items | Symptom (diagnostic display on RC) | Check |
|--|---------------------------------------|-------|
| Indoor and outdoor units are installed properly on solid bases. | Fall, vibration, noise | |
| No refrigerant gas leaks. | Incomplete cooling/heating function | |
| Refrigerant gas and liquid pipes and indoor drain hose extension are thermally insulated. | Water leakage | |
| Draining line is properly installed. | Water leakage | |
| System is properly earthed. | Electrical leakage | |
| The specified wires are used for interconnecting wire connections. | Inoperative or burn damage | |
| Indoor or outdoor unit's air intake or exhaust has clear path of air. Shut-off valves are opened. | Incomplete cooling/heating function | |
| Indoor unit properly receives remote control commands. | Inoperative | |

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