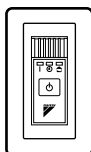
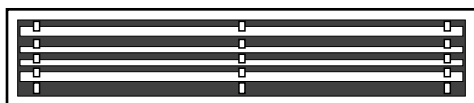




INSTALLATION MANUAL

R410A Split Series



Models

FDXS25CVMB FDKS25CVMB
FDXS35CVMB FDKS35CVMB
CDXS50CVMB CDKS50CVMB
CDXS60CVMB CDKS60CVMB

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-CONFORMITY	CE - DECLARACIÓN-DE-CONFORMIDAD	CE - FÖRSKRÄNKN-ÖVERENSTÄMMELSE	CE - IZJAVA-O-USKLABENOSTI	CE - DECLARATION-DE-CONFORMITATE	CE - ДЕКЛАРАЦИЯ-ЗА-СЪОТВЕТСТВИЕ
CE - KONFORMITÄTSEKLERUNG	CE - DICHIARAZIONE-DI-CONFORMITA	CE - ERKLÆRING OM-SAMSVAR	CE - MEGFELLEŐSÉGI-NYILATKOZAT	CE - IZJAVA O SKLADNOSTI	CE - АТІКІТІЄС-ДЕКЛАРАЦІЯ
CE - DECLARATION-DE-CONFORMITE	CE - ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ	CE - ILMOITUS-YHDENMUKAISUUSDESTA	CE - DEKLARACJA-ZGODNOSCI	CE - VASTAVUSDEKLARATSIIOON	CE - АТБІЛІСТІБАС-ДЕКЛАРАЦІЯ
CE - CONFORMITEITSVERKLARING		CE - PROHLASENÍ-O-ZHODĚ			CE - ВИПАСЕНІЄ-ЗХОДЬ

DAIKIN INDUSTRIES, LTD.

- 01 00 declares under its sole responsibility that the air conditioning models to which this declaration relates:
- 02 01 erklärt auf seine alleinige Verantwortung daß die Modelle der Klimaanlage für die diese Erklärung bestimmt ist:
- 03 01 déclare sous sa seule responsabilité que les appareils d'air conditionné visés par la présente déclaration:
- 04 00 verklaart hierbij op eigen exclusieve verantwoordelijkheid dat de airconditioning units waarop deze verklaring betrekking heeft:
- 05 01 declara bajo su única responsabilidad que los modelos de aire acondicionado a los cuales hace referencia a declaración:
- 06 01 dichiara sotto sua responsabilità che i condizionatori modello a cui è riferita questa dichiarazione:
- 07 00 δηλώνει με αποκλειστική της ευθύνη ότι τα προϊόντα των κλιματιστικών ορυκτωών στα οποία αναφέρεται η παρούσα δήλωση:
- 08 01 déclare sous sa seule responsabilité que os modelos de ar condicionado a que esta declaração se refere:

FDXS25CVMB, FDXS35CVMB, FDKS25CVMB, FDKS35CVMB, CDXS50CVMB, CDXS60CVMB, CDKS50CVMB, CDKS60CVMB

- 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 werden folgenden Normen) oder einen anderen Normdokument oder -dokumenten entsprechendensprechen, unter der Voraussetzung, daß sie gemäß unseren Anweisungen eingesetzt werden:
- 03 sont conformes à aux normes) ou autre(s) document(s) normatif(s), pour autant qu'ils soient utilisés conformément à nos instructions:
- 04 conform de volgende normen) 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) normativo(s), siempre que sean utilizados de acuerdo con nuestras instrucciones:
- 06 sono conformi all(oi) seguente(s) standard(s) o altroi) documentoi) 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 je tílporoj tvoj būdovcov tvoj:
- 08 de acordo com o previsto em:

- 17 zgodnie z postanowieniami Dyrekty:
- 18 in urma prevederilor:
- 19 ob upostavljeni doboli:
- 20 vastarvat nūetele:
- 21 сnедаваки κλαуρη на:
- 22 laikantis nūstatymū pabeliamų:
- 23 leverojit prasības, kas noteiktas:
- 24 održavajuc ustanovena:

- 01 Note * as set out in the Technical Construction File **Daikin.TCF015** and judged positively by **KEIMA** according to the Certificate **74736-KROEINC97-487**.
- 02 Hinweis * wie in der Technischen Konstruktionsakte **Daikin.TCF.015** aufgeführt und von **KEIMA** positiv ausgezeichnet gemäß Zertifikat **74736-KROEINC97-487**.
- 03 Remarque * tel que stipulé dans le Fichier de Construction Technique **Daikin.TCF015** et jugé positivement par **KEIMA** conformément au Certificat **74736-KROEINC97-487**.
- 04 Bemerk * zoals vermeld in het Technisch Constructiebesluit **Daikin.TCF015** en in orde beoornd door **KEIMA** overeenkomstig Certificaat **74736-KROEINC97-487**.
- 05 Nota * tal como se expone en el Archivo de Construcción Técnica **Daikin.TCF.015** y juzgado positivamente por **KEIMA** según el Certificado **74736-KROEINC97-487**.
- 06 Nota * delineato nel File Tecnico di Costruzione **Daikin.TCF015** e giudicato positivamente da **KEIMA** secondo il Certificato **74736-KROEINC97-487**.
- 07 Σημείωση * όπως προϋποβόρζον στο Αρχείο Τεχνικής Κονστρούκσις **Daikin.TCF015** και κρίνεται θετικά από το **KEIMA** σύμφωνα με το Πρωτόκολλο **74736-KROEINC97-487**.
- 08 Nota * tal como estabelecido no Ficheiro Técnico de Construção **Daikin.TCF015**, com o parecer positivo de **KEIMA** de acordo com o Certificado **74736-KROEINC97-487**.

- 09 00 заявляет, исключительно под свою ответственность, что модели кондиционеров воздуха, к которым относится настоящее заявление:
- 10 00 erklærer under eneansvar, at klimaanlegsmødelerne, som denne deklaration vedrører:
- 11 01 deklarerar i egnarskap av huvudsansvarig, att luftkonditioneringsmodellerna som berörs av denna deklaration innehåller att:
- 12 01 erklærer at fuldstørdig ansvar for al de luftkonditioneringsmodeller som berøres af denne deklaration indeholder at:
- 13 00 imolidaa yleistomaan omalla vastuullaan, että tämän ilmoituksen tarkoitettamat ilmastointilaitteiden mallit:
- 14 02 prohlásuje ve své plné odpovědnosti, že modely klimatizace, k nimž se toto prohlášení vztahuje:
- 15 00 izjavljajo pod izključno lastitno odgovornostjo da su modeli klima uređaja na koje se ova izjava odnosi:
- 16 01 teljes felelősséggel tudatában kijelenti, hogy a klímaberendezés modellek, melyekre a nyilatkozat vonatkozik:

- 08 estão em conformidade com a(s) seguinte(s) norma(s) ou outro(s) documento(s) normativo(s), desde que estas sejam utilizadas de acordo com as nossas instruções:
- 09 соответствуют следующим стандартам или другим нормативным документам, при условии их использования согласно нашим инструкциям:
- 10 overholder følgende standard(er) eller andelandre retningsgivende dokument(er), brudsat at disse anvendes i henhold til vore instruktioner:
- 11 respektive utrustning är utöord i överensstämmelse med och följer följande standard(er) eller andra normgivande dokument, under förutsättning at användning sker i överensstämmelse med våra instruktioner:
- 12 respektive utstyr er i overensstemmelse med følgende standard(er) eller andre normgivende dokument(er), under forudsætning af at disse bruges i henhold til våre instrukser:
- 13 vastavaat seuraavien standardien ja muiden ohjeellisten dokumenttien vaatimuksia edellyttäen, että niitä käytetään ohjeidenmukaisesti:
- 14 za předpokladu, že jsou využívány v souladu s našimi pokyny, odpovídaj následujícím normám nebo normativním dokumentům:

- 01 Directiva, as amended.
- 02 Direktiven, gemäß Änderung.
- 03 Directives, telles que modifiées.
- 04 Richtlijnen, zoals geamendard.
- 05 Directivas, según lo emendado.
- 06 Direktive, come da modifica.
- 07 Ohjuvu, omuk työvotromonopei.
- 08 Directivas, conforme alteração em.

- 09 Примечание * как указано в Досье технического конструирования **Daikin.TCF015** и в соответствии с положительным решением **KEIMA** согласно Сертификату **74736-KROEINC97-487**.
- 10 Bemærk * som anført i den Tekniske Konstruktionsfil **Daikin.TCF015** og positivt vurderet af **KEIMA** i henhold til Certificat **74736-KROEINC97-487**.
- 11 Information * utrustningen är utöord i enlighet med den Tekniska Konstruktionsfilen **Daikin.TCF015** som positivt intygas av **KEIMA** vilket också framgår av Certificat **74736-KROEINC97-487**.
- 12 Merk * som del framkommer i den Tekniske Konstruktionsfilen **Daikin.TCF015** og gennem positiv bedømmelse af **KEIMA** følge Certifikat **74736-KROEINC97-487**.
- 13 Huom * jolla on esitetty tekniesssä Asiakirjassa **Daikin.TCF.015** ja jolla **KEIMA** on hyväksynyt Sertifikaatin **74736-KROEINC97-487** mukaisesti.
- 14 Poznamka * jak bylo uweladono w zbioru technické konstrukce **Daikin.TCF015**a pozitivně zjišeno **KEIMA** i souladu s osvědčením **74736-KROEINC97-487**.
- 15 Napomena * kako je izdano u Datidici o tehničkoj konstrukciji **Daikin.TCF015** i pozitivno ocijenjeno od strane **KEIMA** prema Certifikatu **74736-KROEINC97-487**.
- 16 Megjegyzás * a(z) **Daikin.TCF015** műszaki konstrukciós dokumentáció alapján, a(z) **KEIMA** igazolta a megjelölt a(z) **74736-KROEINC97-487** tanúsítvány szerint.

- 17 01 deklarije na vlastnu i vjegljučnu odgovornostiznao, že modele klimatizatorov, kojých dotýczy nínějsza deklaracija:
- 18 00 deklārē par proprie īpašnere cē aparate de aer conditionat la care se referă această declarație:
- 19 00 z svo odgovornosti izjavlja, da so modeli klimatskih naprav, na katere se glava nanaša:
- 20 00 kinnab oma täieliku vastutuse, et kaesoleva deklaratsiooni alla kuuluvad klimaseadmete mudelid:
- 21 00 deklariirja na oson otvorochnost, že modelnye klimatnaya instalatsii, za kotoie se otkasno etaz deklaratsiue:
- 22 01 visluka savo asakomybe svedba, kad oio kondicioniruvno preiatsui modelai, kuriems yra taikoma ši deklaracija:
- 23 01 ar pilni atbildību apliecinu, ka tālāk uzskaitīto modeļu gaisa kondicionēšaj, uz kuriem attiecas šī deklarācija:
- 24 00 vyhlazuje na vlastnu zodpovednost, že tieto klimatizačné modely, na ktoré sa vzťahuje toto vyhlásenie:

- 15 u skladu sa sljedećim standardima) ili drugim normativnim dokumentima), uz uvjet, da se oni koriste u skladu s našim uputama:
- 16 megjelölnek az alábbi szabvány(ok)nak vagy egyéb irányadó dokumentum(ok)nak, ha azokat előírás szerinti használatj:
- 17 spełniają wymogi następujących norm i innych dokumentów normalizacyjnych, pod warunkiem że używane są zgodnie z naszymi instrukcjami:
- 18 sunt în conformitate cu următorii (urmărele) standard(e) sau al(e) documente (normative), cu condiția ca acestea să fie utilizate în conformitate cu instrucțiunile noastre:
- 19 skaidri i nāsedjojo standardi ir drugi normatīvi, pod joprojām, da se uporablja v skladu z našimi navodili:
- 20 on vastavuses järgmis(ite standardile)ga või teiste normatiivsete dokumentidega, kui need kasutatakse vastavalt meie juhendilele:
- 21 съответстват на следните стандарти или други нормативни документи, при условие, че се използват съгласно нашите инструкции:
- 22 atitinka žemiau nurodytus standartus ir (arba) kitus norminius dokumentus su sąlyga, kad yra naudojami pagal mūsų nurodymus:
- 23 tad, ja leisti atbilstoši raščaja norūdiuimen, abisit sekojosiem standartiem un citiem normatīviem dokumentiem:
- 24 sú v zhode s nasledovnými) normami) alebo inými) normatívnymi) dokumentami), za predpokladu, že sa používajú v sľade s našimi návodmi:

- 09 Директивте со всички поправкими.
- 10 Direktivet, med senere ændringer.
- 11 Direktivet, med foretagne ændringer.
- 12 Direktivet, med foretatte endringer.
- 13 Direktivet, således som er emendado.
- 14 v platném znění.
- 15 Sinterica, kako je izmijenjeno.
- 16 irányelv(ek) és módosítás(ak) rendelkezését.

- 17 Uwaga * zgodnie z archiwalną dokumentacją konstrukcyjną **Daikin.TCF015**, pozytywną opinią **KEIMA** i Swiadectwem **74736-KROEINC97-487**.
- 18 Nota * conform celor stabilite în Dosarul tehnic de construcție **Daikin.TCF.015** și apreciate pozitiv de **KEIMA** în conformitate cu Certificatul **74736-KROEINC97-487**.
- 19 Opomba * kaj je dobljeno v tehnični mapi **Daikin.TCF015** in odobreno s strani **KEIMA** v skladu s certifikatom **74736-KROEINC97-487**.
- 20 Märkus * nagu on näidatud tehnilises dokumentatsioonis **Daikin.TCF015** ja heaks kiidnud **KEIMA** järgi vastavalt sertifikaadile **74736-KROEINC97-487**.
- 21 Забелешка * както е записано в Акта за техническа конструкция **Daikin.TCF015** и одобрено потвърдено от **KEIMA** съгласно Сертификат **74736-KROEINC97-487**.
- 22 Pastaba * kaip nurodyta Techninėje konstrukcijos bylose **Daikin.TCF.015** ir patvirtinta **KEIMA** pagal pažymimąją **74736-KROEINC97-487**.
- 23 Pzímies * ka noteikts tehniskajā dokumentācijā **Daikin.TCF015**, atbilstoši **KEIMA** pozitīvajam lēmumam ko apliecina sertifikats **74736-KROEINC97-487**.
- 24 Poznamka * ako je lo stanoveno u Škrobu tehničkoj konstrukcije **Daikin.TCF015** a dodatno posuđeno **KEIMA** podľa Certifikatu **74736-KROEINC97-487**.



Takashi Matsuzaki
Manager Quality Control Department
Shiga, 1st of Nov. 2004

Takashi Matsuzaki

2SB63219-34F

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 WARNING and CAUTION.
Be sure to follow all the precautions below: they are all important for ensuring safety.

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

 **CAUTION**.....Failure 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.















WARNING

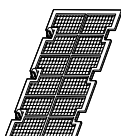
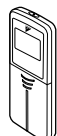






- Installation should be left to the dealer or another professional.
Improper installation may cause water leakage, electrical shock, or fire.
- Install the air conditioner according to the instructions given in this manual.
Incomplete installation may cause water leakage, electrical shock, or fire.
- 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 weight of the unit.
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 length 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.
- 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.)
- 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.) 
- 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.
- When carrying out piping connection, take care not to let air substances other than the specified refrigerant go into refrigeration cycle.
Otherwise, it will cause lower capacity, abnormal high pressure in the refrigeration cycle, explosion and 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.
- An earth leakage circuit breaker may be required depending on site condition to prevent electrical shock.
Failure to do so may cause electrical shock.

CAUTION

- 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

Clamp metal	Insulation for fitting	Sealing pad			Drain hose	Washer for hanging bracket	Sealing material	Clamp	Washer fixing plate	Screws for duct flanges
1	1 each	Large and small 1 each	3	1	1	8	2	6	4	1 set
	 for gas pipe  for liquid pipe	 Large  Small	 2 large  1 small	 Hanger (right) insulation Stored in outlet vent						 24 pcs.

Air filter	Wireless remote controller	Remote controller holder	AAA dry-cell batteries	Receiver				[Other]
1	1	1	2	1 set	1	1	2	
				 Faceplate; faceplate frame	 Decorative cover	 Insulated mounting frame	 Screws M4 x 25	<ul style="list-style-type: none"> • Operation manual • Installation manual

CHOOSING A SITE

- Before choosing the installation site, obtain user approval.

Indoor unit

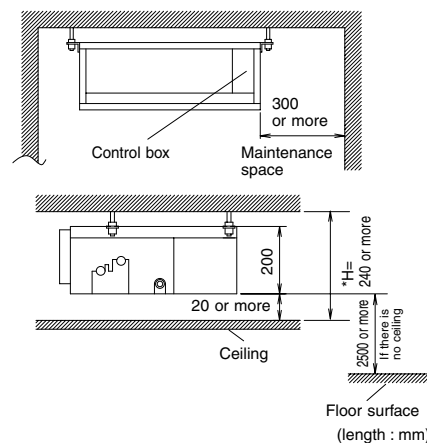
⚠ Caution

- When moving the unit during or after unpacking, make sure to lift it by holding its lifting lugs. Do not exert any pressure on other parts, especially the refrigerant piping, drain piping and flange parts.
Wear protective gears (gloves and so on) when installing the unit.
- If you think the humidity inside the ceiling might exceed 30°C and RH80%, reinforce the insulation on the unit body.
Use glass wool or polyethylene foam as insulation so that it is no thicker than 10mm and fits inside the ceiling opening.

- Optimum air distribution is ensured.
- The air passage is not blocked.
- Condensate can drain properly.
- The ceiling is strong enough to bear the weight of the indoor unit.
- A false ceiling does not seem to be at an incline.
- Sufficient clearance for maintenance and servicing is ensured.
- Piping between the indoor and outdoor units is within the allowable limits.
(Refer to the installation manual for the outdoor unit.)
- The indoor unit, outdoor unit, power supply wiring and transmission wiring is at least 1 meter away from televisions and radios. This prevents image interference and noise in electrical appliances. (Noise may be generated depending on the conditions under which the electric wave is generated, even if a one-meter allowance is maintained.)

- **Use suspension bolts to install the unit. Check whether or not the ceiling is strong enough to support the weight of the unit. If there is a risk that the ceiling is not strong enough, reinforce the ceiling before installing the unit.**
(Installation pitch is marked on the carton box for installation. Refer to it to check for points requiring reinforcing.) Select the *H dimension such that a downward slope of at least 1/100 is ensured as indicated in “DRAIN PIPING WORK”.

- The installation pitch is listed on the packing material, and should be checked when deciding whether to reinforce the location or not.

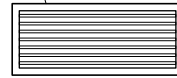


CHOOSING A SITE

■ Select the signal receiver mounting location according to the following conditions:

- Install the signal receiver, which has a built-in temperature sensor, near the intake vent where there is convection of air and it can get an accurate reading of the room's temperature. If the intake vent is in another room or the unit cannot be installed near the intake vent for any other reason, install it 1.5m above the floor on a wall where there is convection.
- In order to get an accurate reading of the room's temperature, install the signal receiver in a location where it is not exposed directly to cold or hot air from the air discharge grille or to direct sunlight.
- Since the receiver has a built-in light receptor to receive signals from the wireless remote controller, do not mount it in a location where the signal may be blocked by a curtain, etc.

Air discharge grille:
Wooden or plastic grille is recommended
because condensation may occur
depending on humidity conditions.



⚠ Caution

If the signal receiver is not installed in a location where there is convection of air, it may be unable to get an accurate reading of the room's temperature.

Wireless remote controller

- Turn on all the fluorescent lamps in the room, if any, and find the site where remote controller signals are properly received by the indoor unit (within 4 metres).

Outdoor unit

- For outdoor unit installation, see the installation manual supplied with the outdoor unit.

PREPARATIONS BEFORE INSTALLATION

■ Relation of the unit to the suspension bolt positions.

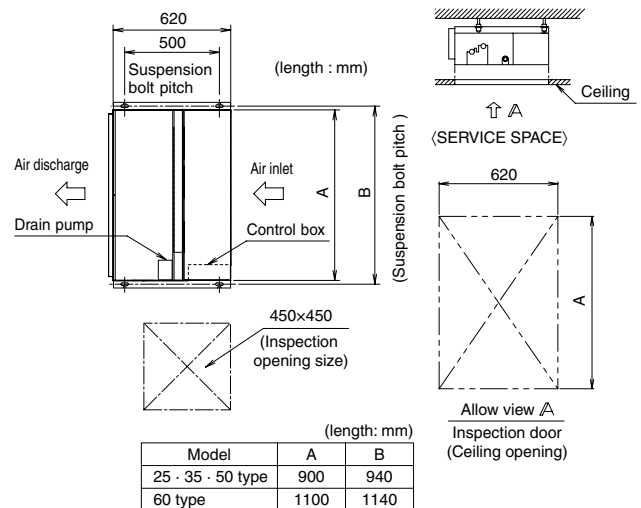
- Install the inspection opening on the control box side where maintenance and inspection of the control box and drain pump are easy. Install the inspection opening also in the lower part of the unit.

■ Make sure the range of the unit's external static pressure is not exceeded.

(See the technical documentation for the range of the external static pressure setting.)

■ Open the installation hole. (Pre-set ceilings)

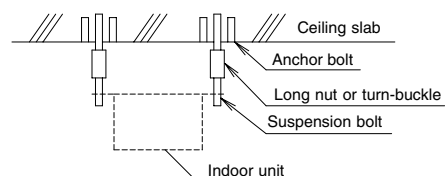
- Once the installation hole is opened in the ceiling where the unit is to be installed, pass refrigerant piping, drain piping, transmission wiring, and remote controller wiring (unnecessary if using a wireless remote controller) to the unit's piping and wiring holes. See "REFRIGERANT PIPING WORK", "DRAIN PIPING WORK", and "WIRING".
- After opening the ceiling hole, make sure ceiling is level if needed. It might be necessary to reinforce the ceiling frame to prevent shaking. Consult an architect or carpenter for details.



■ Install the suspension bolts.

(Use W3/8 to M10 suspension bolts.)

Use a hole-in-anchor, sunken insert, sunken anchor for existing ceilings, and a sunken insert, sunken anchor or other part to be procured in the field to reinforce the ceiling to bearing the weight of the unit. (Refer to Fig.)

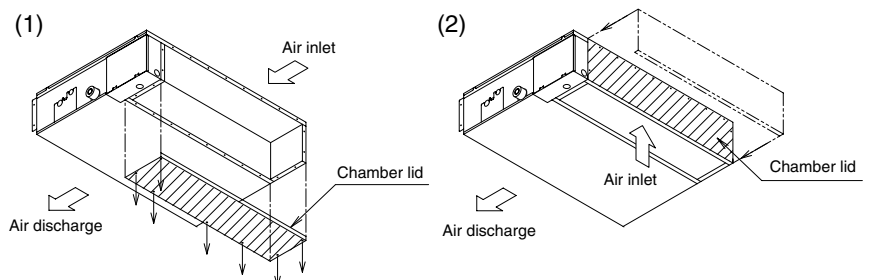


Note: All the above parts are field supplied.

■ Mount chamber lid and air filter (accessory).

For bottom intake, replace the chamber lid in the procedure listed in Fig.

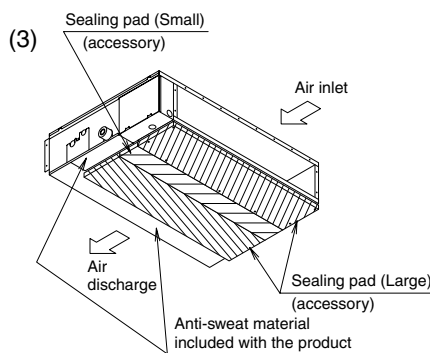
- (1) Remove the chamber lid. (7 locations)
- (2) Reattached the removed chamber lid in the orientation shown in Fig. (7 locations)



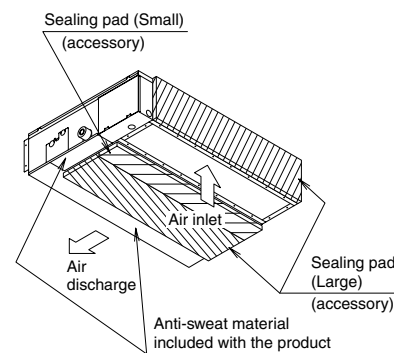
(3) Attach sealing pad as shown in the figure below. (Stored in outlet vent)

(In order to take in the air inside the ceiling, and when not taking in air from outdoor air, it is not necessary to stick.)

- Attach the sealing pad (accessory) to the plate metal sections which are not covered by anti-sweat material.
- Make sure there are no gaps between the different pieces of sealing pad.



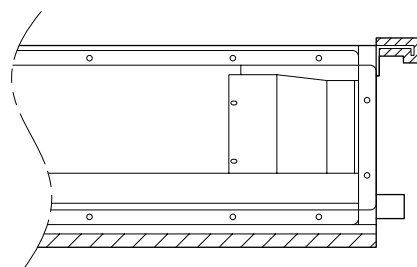
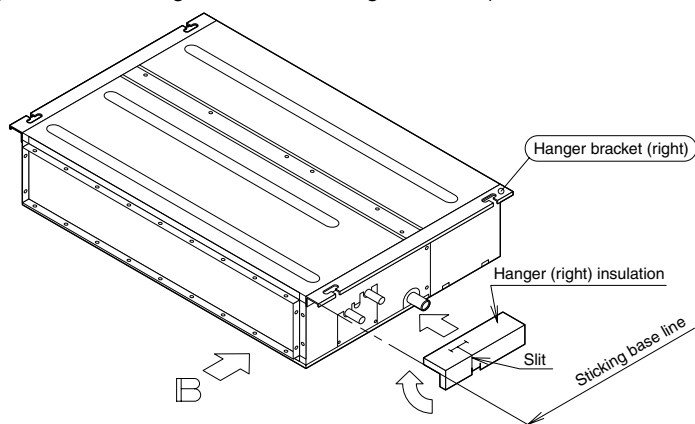
For rear intake type



For bottom intake type

(4) Attach the hanger (right) insulation to the right hanger. (Stored in outlet vent)

(See the below figure for the sticking base line.)

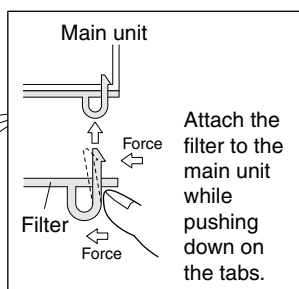
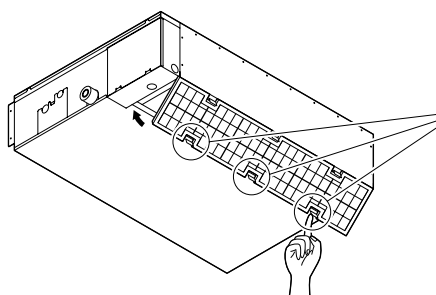


ARROW VIEW

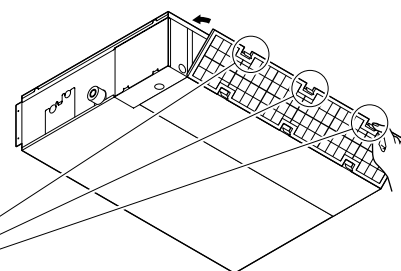
(5) Attach the air filter (accessory) in the manner shown in the diagram.

(5)

In case of bottom side



In case of back side

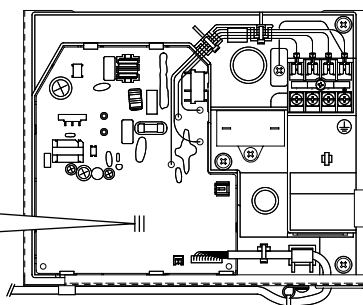


■ When two indoor units are installed in one room, one of the two wireless remote controllers can be easily set for another addresses.

PCB in the indoor unit

- Cut the jumper JA on PCB.

JA	ADDRESS: JA
JB	EXIST 1
JC	CUT 2
ADDRESS	

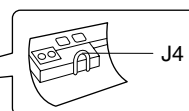


Wireless remote controller

- Cut the jumper J4.

Wireless remote controller

J4	ADDRESS
EXIST	1
CUT	2



INDOOR UNIT INSTALLATION

《 As for the parts to be used for installation work, be sure to use the provided accessories and specified parts designated by our company. 》

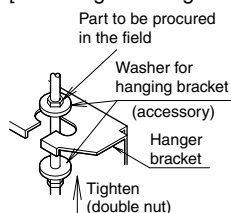
■ Install the indoor unit temporarily.

- Attach the hanger bracket to the suspension bolt. Be sure to fix it securely by using a nut and washer from the upper and lower sides of the hanger bracket. (Refer to Fig.)

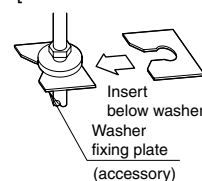
[PRECAUTION]

Since the unit uses a plastic drain pan, prevent welding spatter and other foreign substances from entering the outlet hole during installation.

[Securing the hanger bracket]

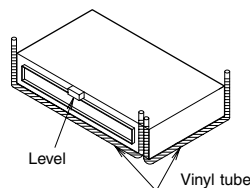


[How to secure washers]



■ Adjust the height of the unit.

■ Check the unit is horizontally level.



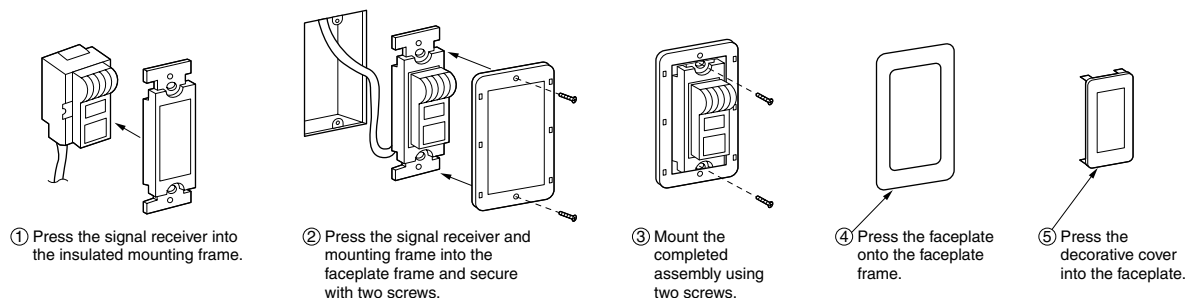
⚠ Caution

Make sure the unit is installed level using a level or a plastic tube filled with water. (One thing to watch out for in particular is if it is installed so that the slope is not in the direction of the drain piping, as this might cause leaking.)

■ Tighten the upper nut.

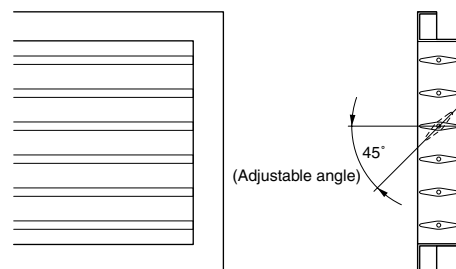
■ Mounting the signal receiver.

Mount the signal receiver as shown below.



Note) Mount the Remote controller cord far enough away from strong electrical wires (such as distribution wires for electrical lights, air conditioners, etc.) and from weak electrical wires (such as wires for telephones, intercoms, etc.).

For heat pump: If your feet feel cold when using the heating function, it is recommended that the air discharge grille shown at below be attached.



OUTDOOR UNIT INSTALLATION

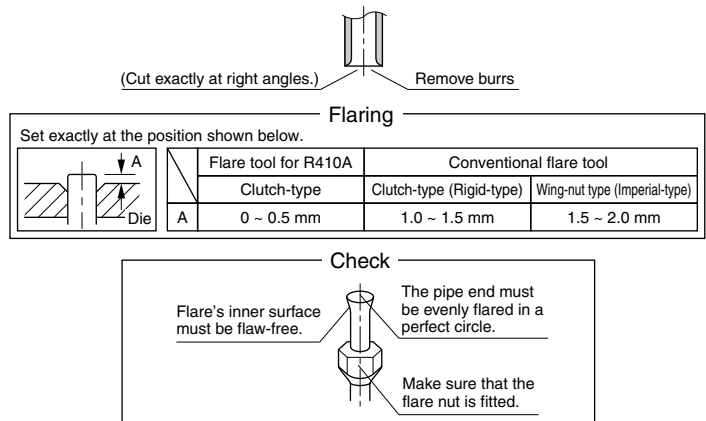
Install as described in the installation manual supplied with the outdoor unit.

REFRIGERANT PIPING WORK

See the installation manual supplied with the 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.



Warning

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

2. REFRIGERANT PIPING

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

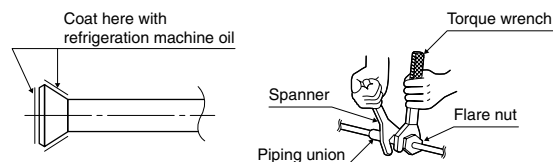
Service port cap tightening torque	10.8~14.7N•m (110~150kgf•cm)
------------------------------------	------------------------------

Caution

Overtightening may damage the flare and cause leaks.

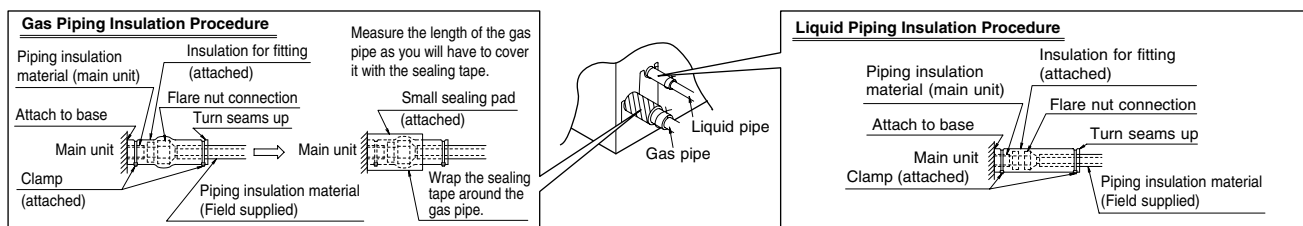
REFRIGERANT PIPING WORK

- 3) After the work is finished, make sure to check that there is no gas leak.



- 4) After checking for gas leaks, be sure to insulate the pipe connections.

- Insulate using the insulation for fitting included with the liquid and gas pipes. Besides, make sure the insulation for fitting on the liquid and gas piping has its seams facing up. (Tighten both edges with clamp.)
- For the gas piping, wrap the medium sealing pad over the insulation for fitting (flare nut part).

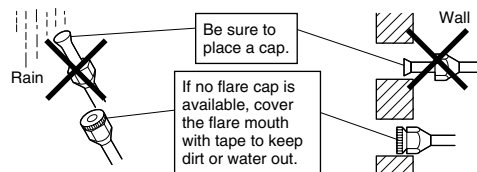


Caution

Be sure to insulate any field piping all the way to the piping connection inside the unit. Any exposed piping may cause condensation or burns if touched.

Cautions on Pipe Handling

- Protect the open end of the pipe against dust and moisture. (Tighten both edges with clamp.)
- 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.)



Selection of Copper and Heat Insulation materials

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

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

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

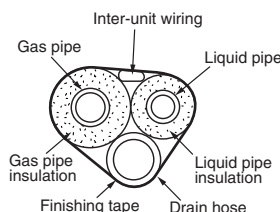
Also, when subject to high humidity, heat insulation of the refrigerant piping (the unit piping and branch piping) must be further reinforced. Reinforce the insulation when installing the unit near bathrooms, kitchens, and other similar locations.

Refer to the following:

- 30°C, more than 75% RH: 20 mm Min. in thickness

If the insulation is not sufficient, condensation may form on the surface of the insulation.

- Use separate thermal insulation pipes for gas and liquid refrigerant pipes.



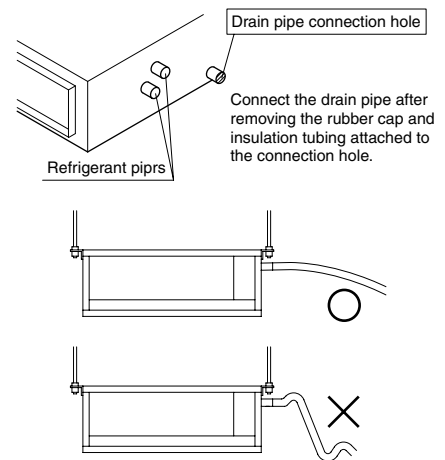
DRAIN PIPING WORK

⚠ Caution

Make sure all water is out before making the duct connection.

■ Install the drain piping.

- Make sure the drain works properly.
- The diameter of the drain pipe should be greater than or equal to the diameter of the connecting pipe (vinyl tube; pipe size: 20 mm; outer dimension: 26 mm). (not including the riser)
- Keep the drain pipe short and sloping downwards at a gradient of at least 1/100 to prevent air pockets from forming.

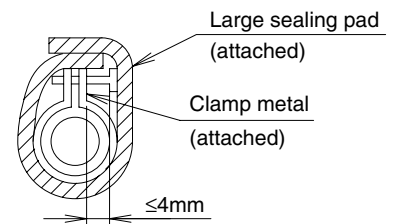
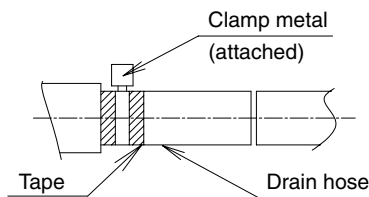


⚠ Caution

Water accumulating in the drain piping can cause the drain to clog.

- To keep the drain tube from sagging, space hanging wires every 1 to 1.5 m.
- Use the drain hose and the metal clamp. Insert the drain hose fully into the drain socket and firmly tighten the metal clamp with the upper part of the tape on the hose end. Tighten the metal clamp until the screw head is less than 4 mm from the hose.
- The two areas below should be insulated because condensation may form there causing water to leak.
 - Drain piping passing indoors
 - Drain sockets

Referring the figure below, insulate the metal clamp and drain hose using the included large sealing pad.



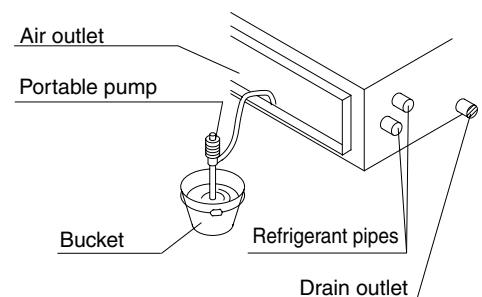
< PRECAUTIONS >

Drain piping connections

- Do not connect the drain piping directly to sewage pipes that smell of ammonia. The ammonia in the sewage might enter the indoor unit through the drain pipes and corrode the heat exchanger.
- Do not twist or bend the drain hose, so that excessive force is not applied to it. (This type of treatment may cause leaking.)

■ After piping work is finished, check drainage flows smoothly.

- Gradually insert approximately 1,000 cc of water into the drain pan to check drainage in the manner described below.
 - Gradually pour approximately 1,000 cc of water from the outlet hole into the drain pan to check drainage.
 - Check the drainage.



INSTALLING THE DUCT

Connect the duct supplied in the field.

Air inlet side

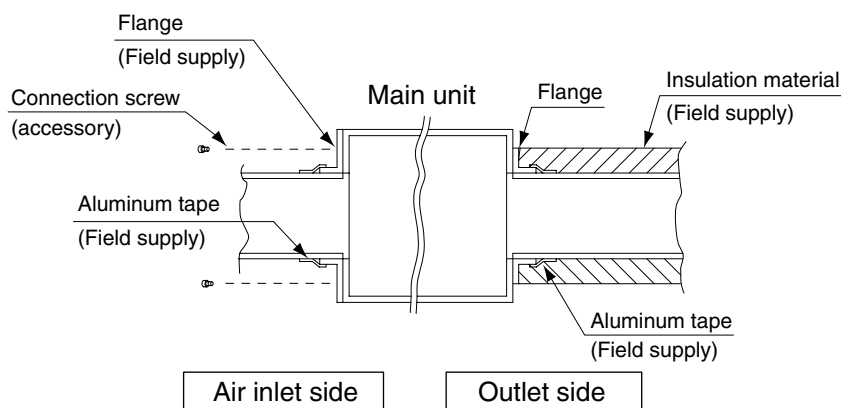
- Attach the duct and intake-side flange (field supply).
- Connect the flange to the main unit with accessory screws (in 20 or 24 positions).
- Wrap the intake-side flange and duct connection area with aluminum tape or something similar to prevent air escaping.

⚠ Caution

When attaching a duct to the intake side, be sure also to attach an air filter inside the air passage on the intake side. (Use an air filter whose dust collecting efficiency is at least 50% in a gravimetric technique.)

Outlet side

- Connect the duct according to the inside of the outlet-side flange.
- Wrap the outlet-side flange and the duct connection area with aluminum tape or something similar to prevent air escaping.



⚠ Caution

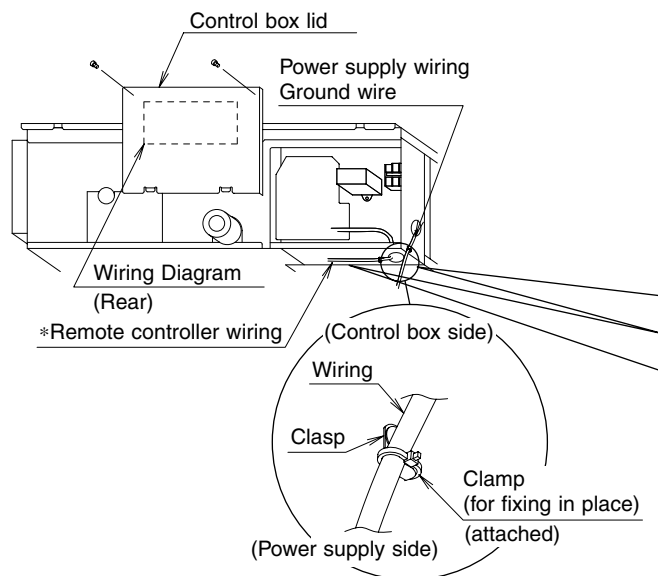
- Be sure to insulate the duct to prevent condensation from forming. (Material: glass wool or polyethylene foam, 25 mm thick)
- Use electric insulation between the duct and the wall when using metal ducts to pass metal laths of the net or fence shape or metal plating into wooden buildings.

WIRING

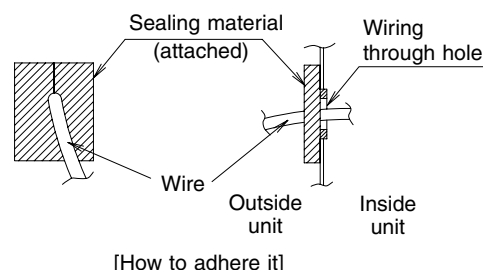
See the installation manual supplied with the outdoor unit.

■ HOW TO CONNECT WIRINGS.

- Wire only after removing the control box lid as shown in the Fig.



- ⚠ Make sure to let a wire go through a wire penetration area.
- After wiring, seal the wire and wire penetration area to prevent moisture and small creatures from the outside.
- Wrap the strong and weak electric lines with the sealing material as shown in the figure below. (Otherwise, moisture or small creatures such as insects from the outside may cause short-circuit inside the control box.) Attach securely so that there are no gaps.



⚠ Caution

- When clamping the wiring, use the included clamping material as shown in the Fig. to prevent outside pressure being exerted on the wiring connections and clamp firmly.
- When doing the wiring, make sure the wiring is neat and does not cause the control box lid to stick up, then close the cover firmly. When attaching the control box lid, make sure you do not pinch any wires.
- Outside the machine, separate the weak wiring (remote controller wiring) and strong wiring (ground wire and power supply wiring) at least 50 mm so that they do not pass through the same place together. Proximity may cause electrical interference, malfunctions, and breakage.

[PRECAUTIONS]

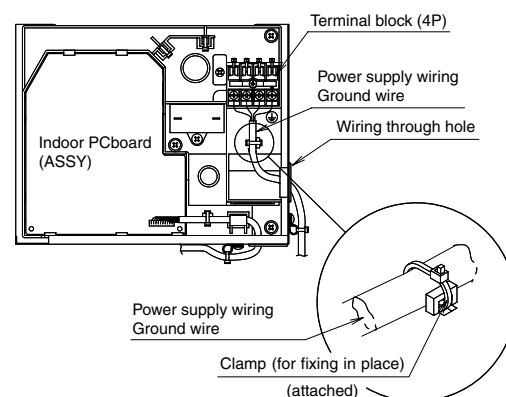
- See also the "Electrical Wiring Diagram Nameplate" when wiring the unit for electrical power.

[Connecting electrical wiring]

• Power supply wiring and Ground wire

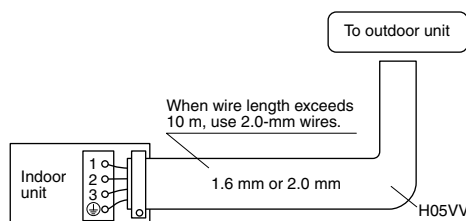
Remove the control box lid.

Next, pull the wires into the unit through the wiring through hole and connect to the power wiring terminal block (4P).



⚠ Warning

Do not use tapped wires, stand wires, extensioncords, or starbust connections, as they may cause overheating, electrical shock, or fire.



TRIAL OPERATION AND TESTING

Trial operation and testing

- (1) Measure the supply voltage and make sure that it falls in the specified range.
- (2) Trial operation should be carried out in either cooling or heating mode.

Trial operation from remote controller
<ol style="list-style-type: none"> (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. ("T") 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.

■ For Heat pump.

- In cooling mode, select the lowest programmable temperature; in heating mode, select the highest programmable temperature.
- Trial operation may be disabled in either mode depending on the room temperature.
- 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).
- For protection, the system disables restart operation for 3 minutes after it is turned off.

■ For Cooling only.

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

- (3) Carry out the test operation in accordance with the Operation Manual to ensure that all functions and parts, 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 turned on again.

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 inlet or discharge has clear path of air. Shut-off valves are opened.	Incomplete cooling/heating function	
Indoor unit properly receives remote controller commands.	Inoperative	

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