

**DAIKIN**



DAIKIN ROOM AIR CONDITIONER

# INSTALLATION MANUAL

R410A Split Series

**INVERTER**

Installation manual  
Installationsanleitung  
Manuel d'installation  
Installatiehandleiding  
Manual de instalación  
Manuale di installazione  
Εγχειρίδιο εγκατάστασης  
Manual de instalação  
Руководство по монтажу  
Montaj kılavuzları

## MODELS

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FTXG25JV1BW    FTXG25JV1BS  
FTXG35JV1BW    FTXG35JV1BS  
CTXG50JV1BW    CTXG50JV1BS

English

Deutsch

Français

Nederlands

Español

Italiano

Ελληνικά

Portugues

Русский

Türkçe

CE - DECLARATION-OF-COMFORMITY  
 CE - KONFORMITÄTSEKHLARUNG  
 CE - DECLARATION-DE-CONFORMITE  
 CE - CONFORMITEITSEVERKLARING

CE - DECLARACION-DE-CONFORMIDAD  
 CE - DICHIARAZIONE-DE-CONFORMITA  
 CE - ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ

CE - DECLARACÃO-DE-CONFORMIDADE  
 CE - ЗАЯВЛЕНИЕ-О-СОБЛЕТСТВИИ  
 CE - OPPERLIDELSESEKHLARUNG  
 CE - FORSKRIFTNOM-OVERENSTEMMELSE

CE - ERKHLERING OM-SAMSVAR  
 CE - ILMOITUS-YHDENMUKAISUUDESTA  
 CE - DEKLARACJA-ZGODNOSCI  
 CE - DECLARAȚIE-DE-CONFORMITATE

CE - IZJAVA-O-USKLABENOSTI  
 CE - MEGFELELŐSÉGINYILATKOZAT  
 CE - DEKLARACJA-ZGODNOSCI  
 CE - DECLARAȚIE-DE-CONFORMITATE

CE - IZJAVA-O-SKLDARACIJA  
 CE - ATILBŠTĪBAS-DEKLARACIJA  
 CE - VYHLÁŠENIE-ZHODY  
 CE - UYUMLULUK-BILDİRİSİ

CE - ATTIKTIKES-DEKLARACIJA  
 CE - ATRIBILŠTĪBAS-DEKLARACIJA  
 CE - VYHLÁŠENIE-ZHODY  
 CE - UYUMLULUK-BILDİRİSİ

**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 d'air conditionné visés par la présente déclaration;
- 04 ☞ verklaart hierbij op eigen exclusieve verantwoordelijkheid dat de airconditioning units waaraan deze verklaring betrekking heeft;
- 05 ☞ declara 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 μοντέλα των κλιματιστικών οροφών στο οποία αναφέρεται η παρούσα δήλωση;
- 08 ☞ declara sua sua exclusiva responsabilidad que os modelos de ar condicionado a que esta declaração se refere;
- 09 ☞ заявляет исключительно под своим ответственостью, что модели кондиционеров воздуха, к которым относится настоящая заявление;

**FTXG25JV1BW, FTXG25JV1BS, FTXG35JV1BW, FTXG35JV1BS, CTKG50JV1BW, CTKG50JV1BS**

- 10 ☞ erklærer under enerensvar, at klimaatlegemodellerne, som denne deklaration vedrører;
- 11 ☞ deklarerer i egen skap av hundreprosentig, at luftkonditioneringsmodellerna som berörs av denna deklaration innebär att;
- 12 ☞ erklærer et fuldstændigt ansvar for at de luftkonditioneringsmodeller som berøres af denne deklaration indebærer at;
- 13 ☞ ilmoittaa yksinomaan omalla vastuullaan, että tämän ilmoituksen tarkoitamat ilmastointilaitteiden mallit;
- 14 ☞ prohlašuje ve své plné odpovědnosti, že modely klimatizace, k nimž se toto prohlášení vztahuje;
- 15 ☞ izjavljuje pod skljuljivo vlastitno odgovornostjo da su modeli klima uređaja na koje se ova izjava odnosi;
- 16 ☞ teľjes felelősséggel tudatában kijelenti, hogy a klímaberendezés modellek, melyekre a nyilatkozat vonatkozik;
- 17 ☞ deklarije na vlesna i vyjucizna odgovorniznost, že modele klimatizatorov, ktorých dobozyci nmejsza deklariacia;
- 18 ☞ deklariir pe proprie răspundere că aparatele de aer condiționat la care se referă prezasă de deklariir.

- 08 esta em conformidade com a(s) seguinte(s) norma(s) ou outro(s) documento(s) normativo(s), desde que estes sejam utilizados de acordo com as normas instruçoes;
- 09 соответствует следующим стандартам или другим нормативным документам, при условии их использования согласно нашим инструкциям;
- 10 overholder følgende standard(er) eller andetsteds retningsgivende dokument(er), forudsat at disse anvendes i henhold til vore instrukser;
- 11 respektive utrustning är utförd i överensstämmelse med och följer följande standard(er) eller andra normgivande dokument, under förutsättning att användning sker i överensstämmelse med våra instruktioner;
- 12 respektive ústřer er i overensstemmelse med følgende standard(er) eller andre normgivende dokument(er), under forudsætning af at disse bruges henhold til vore instrukser;
- 13 vastavast seuraavien standardien ja muuten ohjeistien vaatimuksia edellyttäen, että niitä käytetään ohjeidemme mukaisesti;
- 14 za predpokladu, že jsou využivány v souladu s našimi pokyny, odpovídají následujícím normám nebo normativním dokumentům;
- 15 v skladu sa siljedicim standardom(ima) ili drugim normativnim dokumentom(ima), uz uvjet da se oni koriste u skladu s našim uputama;

**EN60335-2-40,**

- 10 under iagttagelse af bestemmelserne i;
- 11 enligt vilkoren i;
- 12 gilt i henhold til bestemmelserne i;
- 13 ordvarensigt de bepalingen van;
- 14 za dodržení ustanovení předpisu;
- 15 prema odredbama;
- 16 követeli a(z);
- 17 zgodnie z postanowieniami Dyrektywy;
- 18 in urma prevederilor;
- 19 on upštejevnju dobó;
- 20 vastavali nõuetele;
- 21 ordvarensigt kravene på;
- 22 lakkamis nõuetele, pakeetiamu;
- 23 levelőgti prásbák, kas nõetlékas;
- 24 održavajuc ustanovienja;
- 25 bunum kosulurienami uygun olarak;

- 01 Note \* as set out in <A> and judged positively by <B> according to the Certificat <C>.
- 02 Hinweis \* wie in der <A> aufgeführt und von <B> positiv beurteilt gemäß Zertifikat <C>.
- 03 Remarque \* tel que défini dans <A> et évalué positivement par <B> conformément au Certificat <C>.
- 04 Bemerk \* zoals vermeld in <A> en positief beoordeeld door <B> overeenkomstig Certificat <C>.
- 05 Nota \* como se establece en <A> y es valorado positivamente por <B> de acuerdo con el Certificat <C>.
- 06 Nota \* kao što je opisano u <A> i procenjeno pozitivno prema Certificatu <C>.
- 07 Σημείωση \* όπως καθορίζεται στο <A> και κρίνεται θετικά από το <B> σύμφωνα με το Ισοδύναμο <C>.
- 08 Nota \* tal como estabelecido em <A> e como o parecer positivo de <B> de acordo com o Certificat <C>.
- 09 Приемање \* как је изложено у <A> и је позитивно оцењено од стране <B> према Certificatu <C>.
- 10 Bemerk \* como se establece en <A> y es valorado positivamente por <B> de acuerdo con el Certificat <C>.



Shinri Sada

Shinri Sada  
 Manager Quality Control Department

3.12.2009

- 19 ☞ z vso odgovornostjo izjavlja, da so modeli klimatskih naprav, na katere se izjava nanaša;
- 20 ☞ khlariit oma llaikliku vastuusele, et llaasoleva deklariatsiooni alla kuuluvad kliimaseadmete mudelid;
- 21 ☞ deklaruje na svoj odgovornost, ce modelne klimatizacijske naprave, za koje se ova izjava odnosi;
- 22 ☞ visikla savo atsakomybe slesbia, kad oro kondicionavimo priekasų modeliai, kuriems yra taikoma ši deklaracija;
- 23 ☞ ar plinu atbildību apliecinu, ka llaik uzskaitito modeļu gaisa kondicionēji, uz kuriem attiecas šī deklarācija;
- 24 ☞ vyhlásuje na vlesnu zodpovednost, že tieto klimatizacné modely, na ktoré sa vzťahuje toto vyhlásenie;
- 25 ☞ iznanevan tenori sorumluluğunada olnak üzere bu bildirimin ilgili dobuğu klima modellerinin eşşiklikli gibi dođuluđunu beyan eder;

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- 16 megjelölnek az alábbi szabvány(ok)nak vagy egyéb irányadó dokumentum(ok)nak, ha azokat előírás szerinti használatját;
- 17 megfelel vmihoi nasledujucijm norm i jinymi dokumentov normalizujucijm, pod varunkem za uzivanie sa' zgodnie z naszymi instrukcjami;
- 18 sunt in conformitate cu urmatorul (urmatoarele) standard(e) sau al(e) documente (documente) normative (e), cu conditie ca acestea sa fie utilizate in conformitate cu instructiunile noastre;
- 19 skldni z nasledujimmi standardi in drugimi normativi, pod pogojem, da se uporabljajo v skladu z našimi navodili;
- 20 on vastavastus jrgimis(t)e standard(ite)ga vti leiste normatiivsete dokumentidega, kui need kasutatakse vastavalt meie juhendile;
- 21 sobereetvust na stngavate standard(ite) ning apriti juhendavate dokument(ite)ga, kui need kasutatakse vastavalt meie juhendile;
- 22 atinka zemaun nuboditus standarts ir (arba) kitus normivus dokumentus su satyga, kad yra naudojiami pagal mūsų nurodymus;
- 23 sad, ja liehtu nuboditus razlazuja normalizujim, atbisi sekojšem standardem un oilem normativim dokumentim;
- 24 su i zhdne s nasledovnuj(m) normoju(ami) alebo jinj(m)j normativnj(m) dokumentom(ami), za predpokladu, že sa používajú v súlade s našim návodom;
- 25 ününün, talimatlarına göre kullanılması kosululuja eşşiklikli standartlar ve norm belirlen belgelenen uyumludur;

- 01 Directives, as amended;
- 02 Direktiv, med senere ændringer;
- 03 Directives, telles que modifiées;
- 04 Richtlijnen, zoals gewijzigd;
- 05 Directivas, según lo emmendado;
- 06 Directive, come da modificata;
- 07 Önyüv, ömcs öyöv tronomonfeli;
- 08 Directivas, conforme alteraçáo em;
- 09 Директивe, cu amendamentele respective;
- 10 Direktiver, med senere ændringer;
- 11 Direktiv, med förändring ändringar;
- 12 Direktiv, med foretatte endringer;
- 13 Direktiv, selasaina kun ne ovat muutettuna;
- 14 v pähten zrtelbi;
- 15 Smeines, kako da izmjenjeno;
- 16 rányeviki és módosításik rendelkezésseli;
- 17 z póznejšimi popravkami;
- 18 Direktive, cu amendamentele respective;
- 19 Direktive, med senere ændringer;
- 20 Direktiv, med förändring ändringar;
- 21 Директив, с текните изменения;
- 22 Direktivose su papiljums;
- 23 Direktivās un to papildjums;
- 24 Smeines, y plānotu zieni;
- 25 Bgšjštlimis halerleye Yoneimleker;

- 21 Zelenka \* jako je izloženo u <A> i oceneno pozitivno od <B> prema Certificatu <C>.
- 22 Pastaba \* kaip nustatyta <A> ir kaip įvertinama pagal <B> pagal Sertifikaatą <C>.
- 23 Piezīmes \* kā norādīts <A> un atbilstīgi <B> pozitīvajam vērtējumam saskaņā ar sertifikātu <C>.
- 24 Poznámka \* ako bolo uvedené v <A> z pozitívne zistené <B> v súlade s overčedním <C>.
- 25 Not \* <A> da beirtiligi gibi ve <C> Sertifikasına göre <B> tarafından olumlu olarak değerlendirildiği gibi;

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# Safety Precautions

- The precautions described herein are classified as WARNING and CAUTION. They both contain important information regarding safety. Be sure to observe all precautions without fail.
- Meaning of WARNING and CAUTION notices





 **WARNING** .... Failure to follow these instructions properly may result in personal injury or loss of life.



 **CAUTION** ..... Failure to observe these instructions properly may result in property damage or personal injury, which may be serious depending on the circumstances.

- The safety marks shown in this manual have the following meanings:

 Be sure to follow the instructions.	 Be sure to establish an earth connection.	 Never attempt.
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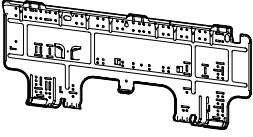
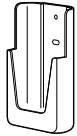
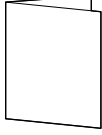
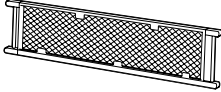



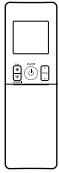

- After completing installation, conduct a trial operation to check for faults and explain to the customer how to operate the air conditioner and take care of it with the aid of the operation manual.

 <b>WARNING</b>	
<ul style="list-style-type: none"> <li>• Ask your dealer or qualified personnel to carry out installation work. Do not attempt to install the air conditioner yourself. Improper installation may result in water leakage, electric shocks or fire.</li> </ul>	
<ul style="list-style-type: none"> <li>• Install the air conditioner in accordance with the instructions in this installation manual. Improper installation may result in water leakage, electric shocks or fire.</li> </ul>	
<ul style="list-style-type: none"> <li>• Be sure to use only the specified accessories and parts for installation work. Failure to use the specified parts may result in the unit falling, water leakage, electric shocks or fire.</li> </ul>	
<ul style="list-style-type: none"> <li>• Install the air conditioner on a foundation strong enough to withstand the weight of the unit. A foundation of insufficient strength may result in the equipment falling and causing injury.</li> </ul>	
<ul style="list-style-type: none"> <li>• Electrical work must be performed in accordance with relevant local and national regulations and with instructions in this installation manual. Be sure to use a dedicated power supply circuit only. Insufficiency of power circuit capacity and improper workmanship may result in electric shocks or fire.</li> </ul>	
<ul style="list-style-type: none"> <li>• Use a cable of suitable length. Do not use tapped wires or an extension lead, as this may cause overheating, electric shocks or fire.</li> </ul>	
<ul style="list-style-type: none"> <li>• Make sure that all wiring is secured, the specified wires are used, and that there is no strain on the terminal connections or wires. Improper connections or securing of wires may result in abnormal heat build-up or fire.</li> </ul>	
<ul style="list-style-type: none"> <li>• When wiring the power supply and connecting the wiring between the indoor and outdoor units, position the wires so that the control box lid can be securely fastened. Improper positioning of the control box lid may result in electric shocks, fire or over heating terminals.</li> </ul>	
<ul style="list-style-type: none"> <li>• If refrigerant gas leaks during installation, ventilate the area immediately. Toxic gas may be produced if the refrigerant comes into contact with fire.</li> </ul>	
<ul style="list-style-type: none"> <li>• After completing installation, check for refrigerant gas leakage. Toxic gas may be produced if the refrigerant gas leaks into the room and comes into contact with a source of fire, such as a fan heater, stove or cooker.</li> </ul>	
<ul style="list-style-type: none"> <li>• When installing or relocating the air conditioner, be sure to bleed the refrigerant circuit to ensure it is free of air, and use only the specified refrigerant (R410A). The presence of air or other foreign matter in the refrigerant circuit causes abnormal pressure rise, which may result in equipment damage and even injury.</li> </ul>	
<ul style="list-style-type: none"> <li>• During installation, attach the refrigerant piping securely before running the compressor. If the compressor is not attached and the stop valve is open when the compressor is run, air will be sucked in, causing abnormal pressure in the refrigeration cycle, which may result in equipment damage and even injury.</li> </ul>	
<ul style="list-style-type: none"> <li>• During pump-down, stop the compressor before removing the refrigerant piping. If the compressor is still running and the stop valve is open during pump-down, air will be sucked in when the refrigerant piping is removed, causing abnormal pressure in the refrigeration cycle, which may result in equipment damage and even injury.</li> </ul>	
<ul style="list-style-type: none"> <li>• Be sure to earth the air conditioner. Do not earth the unit to a utility pipe, lightning conductor or telephone earth lead. Imperfect earthing may result in electric shocks.</li> </ul>	
<ul style="list-style-type: none"> <li>• Be sure to install an earth leakage breaker. Failure to install an earth leakage breaker may result in electric shocks or fire.</li> </ul>	

 <b>CAUTION</b>	
<ul style="list-style-type: none"> <li>• Do not install the air conditioner at any place where there is a danger of flammable gas leakage. In the event of a gas leakage, build-up of gas near the air conditioner may cause a fire to break out.</li> </ul>	
<ul style="list-style-type: none"> <li>• While following the instructions in this installation manual, install drain piping to ensure proper drainage and insulate piping to prevent condensation. Improper drain piping may result in indoor water leakage and property damage.</li> </ul>	
<ul style="list-style-type: none"> <li>• Tighten the flare nut according to the specified method such as with a torque wrench. If the flare nut is too tight, it may crack after prolonged use, causing refrigerant leakage.</li> </ul>	

# Accessories

**Indoor unit** (A) – (J),

<p>(A) Mounting plate</p> 	1	<p>(D) Remote controller holder</p> 	1	<p>(G) Operation manual</p>  <p>(H) Installation manual</p>	1
<p>(B) Titanium apatite photocatalytic air-purifying filter</p> 	2	<p>(E) Dry battery AAA. LR03 (alkaline)</p> 	2	<p>(J) Paper pattern (The paper pattern is placed between the last page and the inner side of the back cover. See page 10 for the usage of the paper pattern.)</p>   <p>Left-bottom      Right-bottom</p>	1
<p>(C) Wireless remote controller</p> 	1	<p>(F) Indoor unit fixing screw (M4 × 12L)</p> 	2		

## Service Parts

- Obtain service parts as necessary.
- If a service part is required, obtain and install the part indicated by the part number corresponding to the unit's model name.

(K) Side cover for right-side piping				(L) Side cover for left-side piping			
Model name	Part name	Model name	Part name	Model name	Part name	Model name	Part name
FTXG25JV1BW	5003651	FTXG25JV1BS	5003653	FTXG25JV1BW	5003652	FTXG25JV1BS	5003654
FTXG35JV1BW		FTXG35JV1BS		FTXG35JV1BW		FTXG35JV1BS	
CTXG50JV1BW		CTXG50JV1BS		CTXG50JV1BW		CTXG50JV1BS	

### ⚠ CAUTION

- (K) Side cover for right-side piping is labeled with information concerning applicable safety standards. When replacing the right-side cover with (K) side cover for right-side piping, install the cover securely without removing this labeling.

## Choosing an Installation 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 inlet and air outlet 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 (warm) 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 controller range,
  - 8) the unit is at least 1m away from any television or radio set (unit may cause interference with the picture or sound),
  - 9) install at the recommended height (1.8m),
  - 10) no laundry equipment is located.

### 2. 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 6m).

# Indoor Unit Installation Drawings

**■ How to attach the indoor unit**  
Hook the claws of the bottom frame to the mounting plate. If the claws are difficult to hook, remove the front grille.

The mounting plate should be installed on a wall which can support the weight of the indoor unit.

**■ Opening service lid**  
Service lid is opening/closing type.  
**■ Opening method**  
1) Remove the service lid screws.  
2) Pull out the service lid diagonally down in the direction of the arrow.  
3) Pull down.

**■ How to attach the remote controller holder**  
Before screwing the remote controller holder to the wall, make sure that control signals are properly received by indoor unit.

**INTELLIGENT EYE sensor**  
Make sure that there are no obstacles within 500mm under the signal receiver. Such obstacles, if any, may have an adverse influence on the reception performance of the receiver and the reception distance may be shortened.

Caulk pipe hole gap with putty.  
Cut thermal insulation pipe to an appropriate length and wrap it with tape, making sure that no gap is left in the insulation pipe's cut line.  
Wrap the insulation pipe with the finishing tape from bottom to top.

100mm or more from ceiling  
50mm or more from walls (on both sides)

100mm or more from ceiling  
50mm or more from walls (on both sides)

500mm or more

Fixing screws for remote controller holder (field supply: M3 × 20L)

Filter frame  
Titanium apatite photocatalytic air-purifying filter (2)  
Claw  
Tab  
Air filter

Front grille  
Bottom frame

Front panel  
Screws (M4 × 16L)  
\* When dismantling the front grille, refer to removing and installing front grille on page 4.

INTELLIGENT EYE sensor  
Caulk pipe hole gap with putty.  
Cut thermal insulation pipe to an appropriate length and wrap it with tape, making sure that no gap is left in the insulation pipe's cut line.  
Wrap the insulation pipe with the finishing tape from bottom to top.

Wireless remote controller  
Remote controller holder

Screws (field supply: M4 × 25L)

## INTELLIGENT EYE sensor

### ⚠ CAUTION

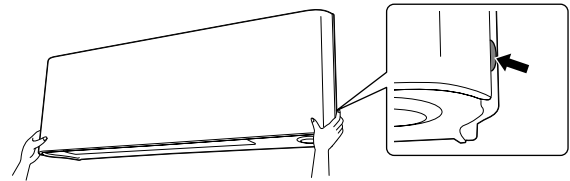
- Do not hit or violently push the INTELLIGENT EYE sensor. This can lead to damage and malfunction.
- Do not place large objects near the sensor. Also keep heating units or humidifiers outside the sensor's detection area.

# Preparation before Installation

## 1. Removing and installing front panel

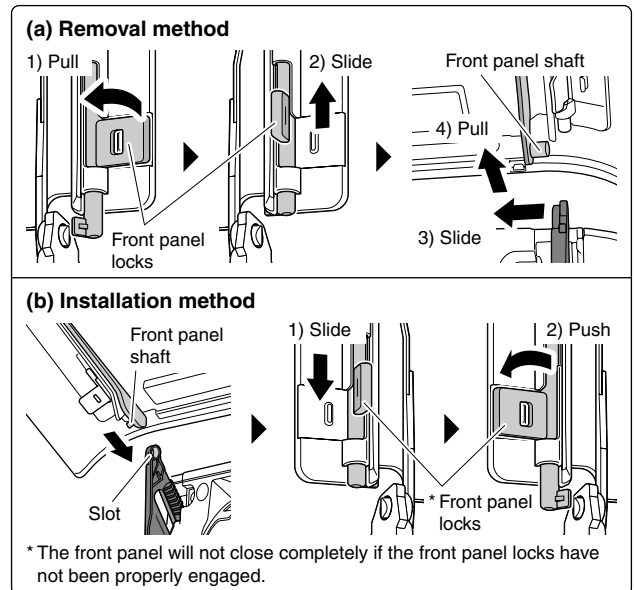
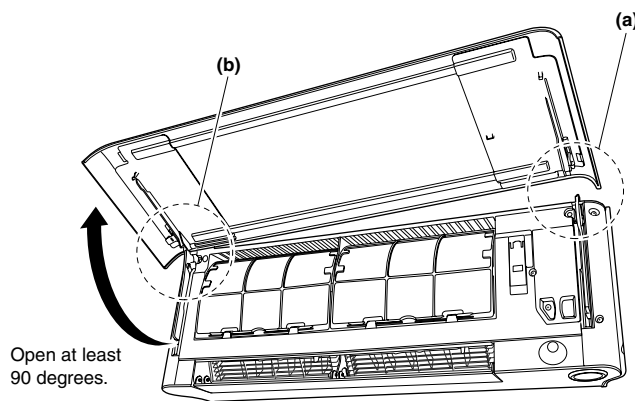
### • Removal method

- 1) Hook fingers on the indentations on the left and right sides of the indoor unit, and open the front panel to a position higher than the horizontal level.
- 2) Raise the front panel lock tabs on the left and right sides, and slide the front panel locks upward.
- 3) Remove the panel shafts on both sides from the shaft holes, and dismount the front panel.



### • Installation method

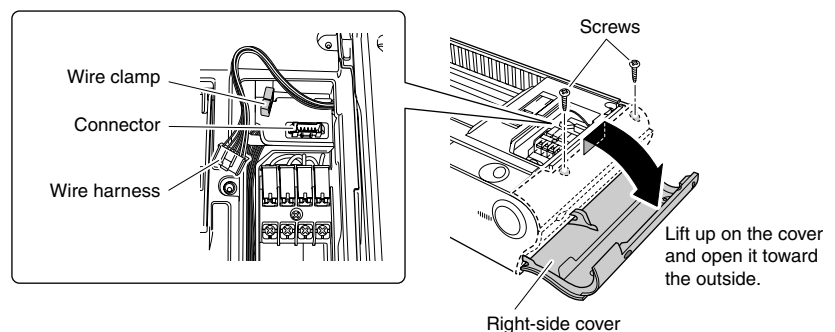
- 1) Insert the panel shafts on both sides of the front panel into the shaft holes.
- 2) Slide the front panel locks downward, and secure the front panel locks with the tabs laid outward.
- 3) Close the front panel after checking that the front panel is securely mounted.



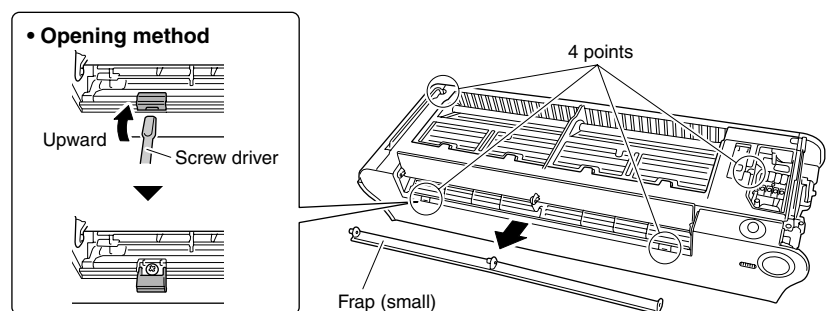
## 2. Removing and installing front grille

### • Removal method

- 1) Remove the front panel and air filters.
- 2) Remove the service lid. (Refer to the opening method on page 3.)
- 3) Disconnect the wire harness from the wire clamp, and remove the wire harness from the connector.
- 4) Remove the right-side cover. (2 screws)

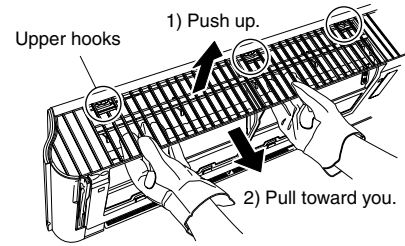


- 5) Rotate the flap (large) and dismount the flap (small).
- 6) Open the 2 screw covers, and remove 4 screws from the front grille.



# Preparation before Installation

- 7) Wear protection gloves and insert both hands under the front grille as shown in the illustration.
- 8) Remove the front grille from the 3 upper hooks by pushing up the top side of the front grille, pull the front grille toward you by holding both ends of the front grille, and dismount the front grille.

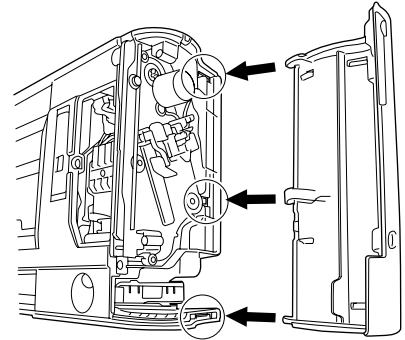


## ⚠ CAUTION

- Be sure to wear protection gloves.

### • Installation method

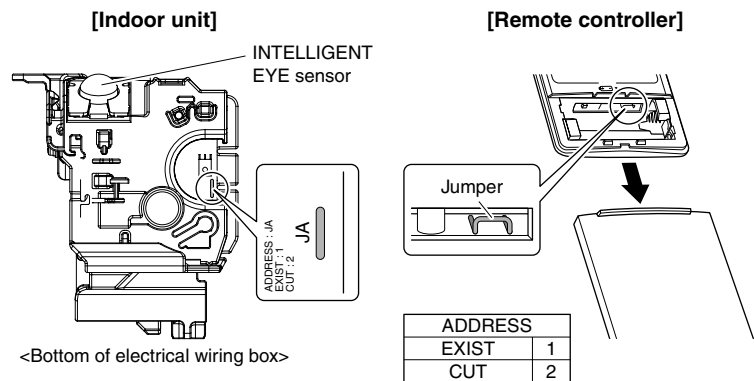
- 1) Install the front grille and firmly engage the upper hooks (3 locations).
- 2) Install 4 screws of the front grille, and close the 2 screw covers.
- 3) Mount the flap (small) and return the flaps to the previous positions.
- 4) Attach the right-side cover. (Refer to figure.)
- 5) Attach the wire harness to the connector and secure the wire harness with the wire clamp.
- 6) Install the air filter and then mount the front panel.



## 3. How to set the different addresses

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

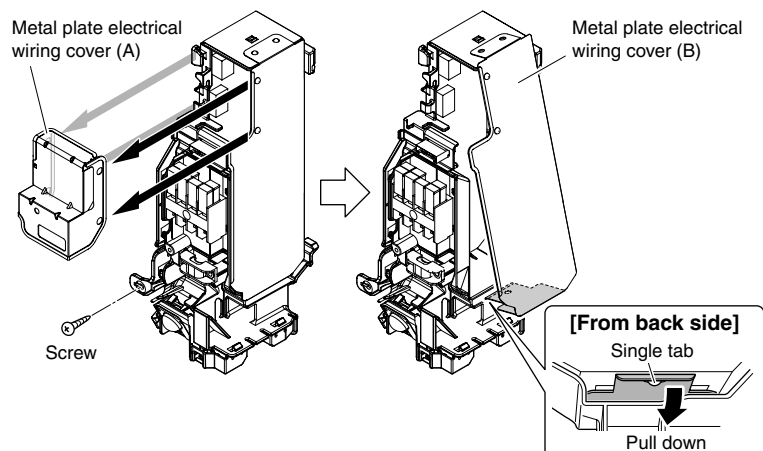
- 1) Remove the front panel and front grille. (4 screws)
- 2) Cut the address jumper (JA) on the printed circuit board.
- 3) Cut the address jumper in the remote controller.



## 4. When connecting to an HA system (wired remote controller, central remote controller etc.)

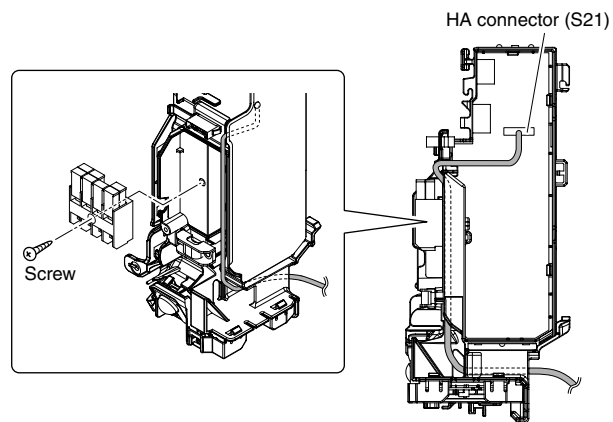
### • Removal methods of metal plate electrical wiring covers

- 1) Remove the front panel and front grille. (4 screws)
- 2) Remove the electrical wiring box. (1 screw)
- 3) Remove the 4 tabs and dismount the metal plate electrical wiring cover (A).
- 4) Pull down the hook on the metal plate electrical wiring cover (B), and remove a single tab.
- 5) Remove the 2 tabs on the top part and dismount the metal plate electrical wiring cover (B).



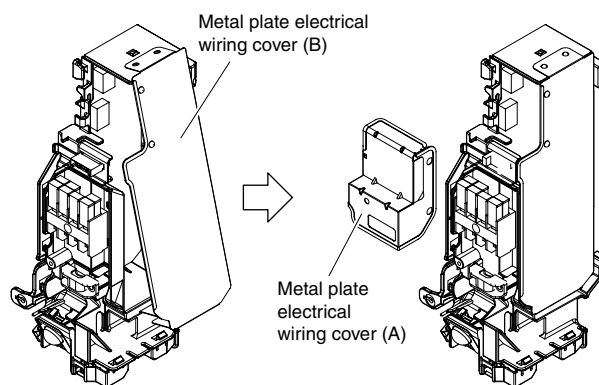
### • Attachment methods of connection cord

- 1) Remove the metal plate electrical wiring cover.  
(Refer to the **Removal methods of metal plate electrical wiring covers**.)
- 2) Attach the connection cord to the S21 connector and pull the harness out through the notched part in the figure.
- 3) Replace the electrical wiring cover as it was, and pull the harness around, as shown in the figure.



### • Attachment methods of metal plate electrical wiring covers

- 1) Hook the top part of the metal plate electrical wiring cover (B) on the 2 tabs.
- 2) Press in the hook on the bottom to catch a single tab, and mount the metal plate electrical wiring cover (B).
- 3) Insert the connector into the hole, and hook and mount the metal plate electrical wiring cover (A) onto the 4 tabs.

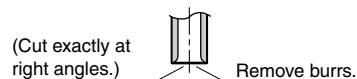


# Refrigerant Piping Work

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

## 1. Flaring the pipe end

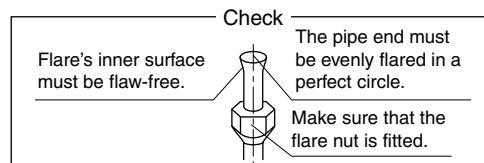
- 1) Cut the pipe end with a pipe cutter.
- 2) Remove burrs with the cut surface facing downward so that the chips do not enter the pipe.
- 3) Put the flare nut on the pipe.
- 4) Flare the pipe.
- 5) Check that the flaring is properly made.



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	0-0.5mm	1.0-1.5mm	1.5-2.0mm



### ⚠ 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.



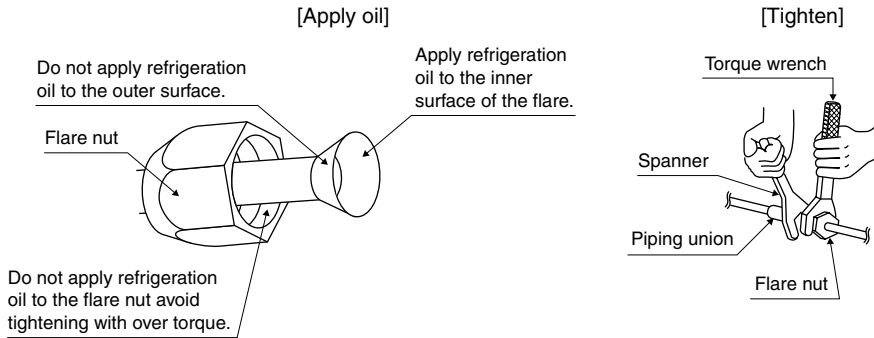
# Refrigerant Piping Work

## 2. Refrigerant piping

### ⚠ CAUTION

- Use the flare nut fixed to the main unit. (To prevent cracking of the flare nut by aged deterioration.)
- To prevent gas leakage, apply refrigeration oil only to the inner surface of the flare. (Use refrigeration oil for R410A.)
- Use torque wrenches when tightening the flare nuts to prevent damage to the flare nuts and gas leakage.

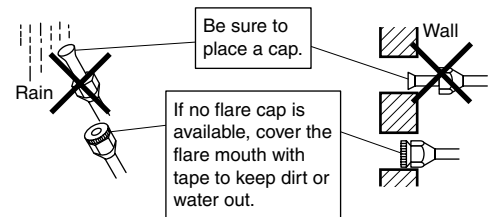
Align the centres of both flares and tighten the flare nuts 3 or 4 turns by hand. Then tighten them fully with the torque wrenches.



Flare nut tightening torque		
Gas side		Liquid side
3/8 inch	1/2 inch	1/4 inch
32.7-39.9N•m (330-407kgf•cm)	49.5-60.3N•m (505-615kgf•cm)	14.2-17.2N•m (144-175kgf•cm)

### 2-1. Caution on piping handling

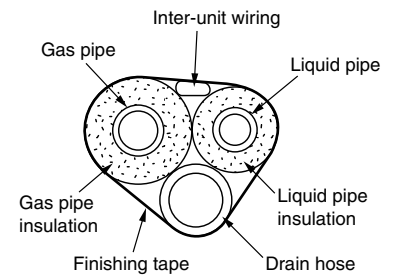
- 1) Protect the open end of the pipe against dust and moisture.
- 2) All pipe bends should be as gentle as possible. Use a pipe bender for bending.



### 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 0.052W/mK (0.035 to 0.045kcal/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	Gas pipe thermal insulation		Liquid pipe thermal insulation
25/35 class	50 class	O.D. 6.4mm	25/35 class	50 class	I.D. 8-10mm
O.D. 9.5mm	O.D. 12.7mm		I.D. 12-15mm	I.D. 14-16mm	
Minimum bend radius			Thickness 10mm Min.		
30mm or more	40mm or more	30mm or more			
Thickness 0.8mm (C1220T-O)					

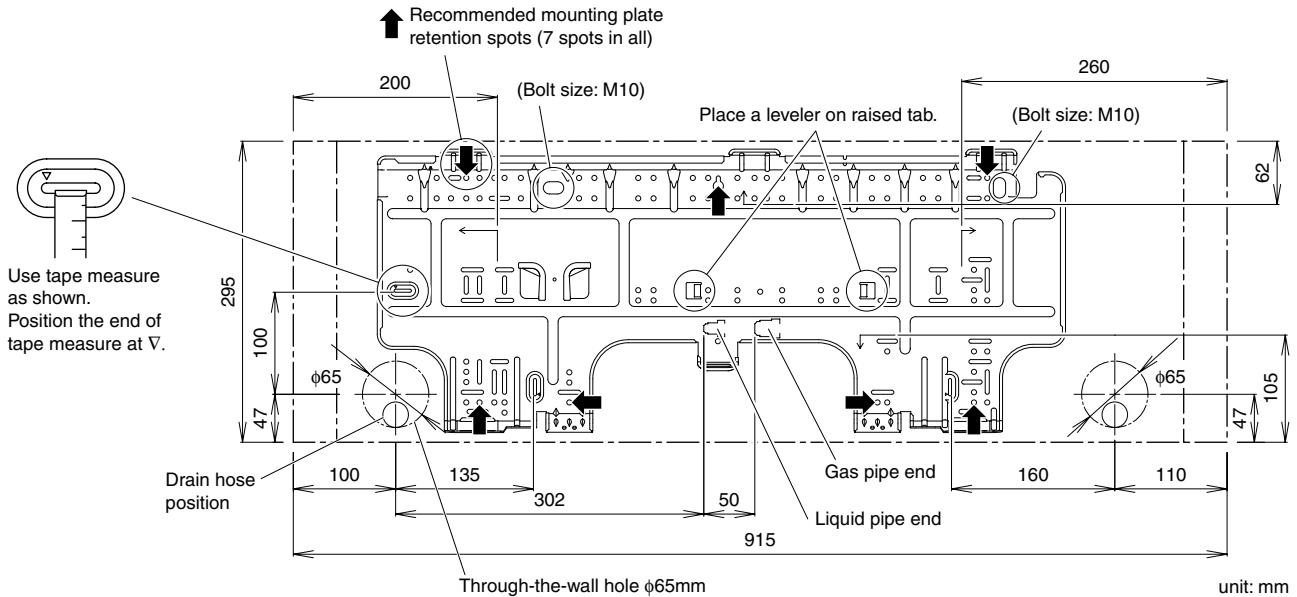
- 3) Use separate thermal insulation pipes for gas and liquid refrigerant pipes.

# Indoor Unit Installation

## 1. Installing the mounting plate

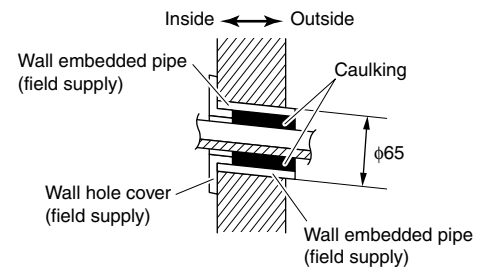
- The mounting plate should be installed on a wall which can support the weight of the indoor unit.
  - Temporarily secure the mounting plate to the wall, make sure that the unit is completely level, and mark the boring points on the wall.
  - Secure the mounting plate to the wall with screws.

### Recommended mounting plate retention spots and dimensions



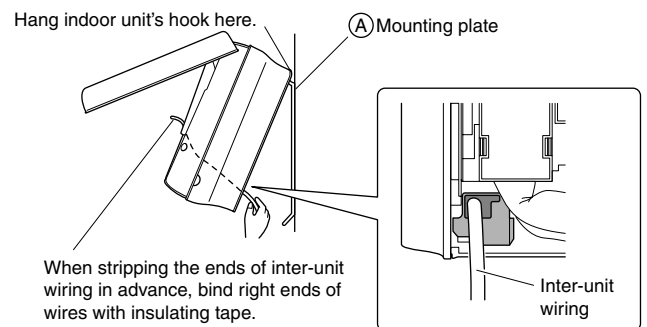
## 2. Boring a wall hole and installing wall embedded pipe

- For walls containing metal frame or metal board, be sure to use a wall embedded pipe and wall cover in the feed-through hole to prevent possible heat, electrical shock, or fire.
- Be sure to caulk the gaps around the pipes with caulking material to prevent water leakage.
  - Bore a feed-through hole of 65mm in the wall so it has a down slope toward the outside.
  - Insert a wall pipe into the hole.
  - Insert a wall cover into wall pipe.
  - After completing refrigerant piping, wiring, and drain piping, caulk pipe hole gap with putty.



## 3. Inter-unit wiring

- Open the front panel, then remove the service lid.
- Pass the inter-unit wiring from the outdoor unit through the feed-through wall hole and then through the back of the indoor unit. Pull them through the front side. Bend the ends of tie wires upward for easier work in advance. (If the inter-unit wiring ends are to be stripped first, bundle wire ends with adhesive tape.)
- Press the bottom frame of the indoor unit with both hands to set it on the mounting plate hooks. Make sure the wires do not catch on the edge of the indoor unit.



# Indoor Unit Installation

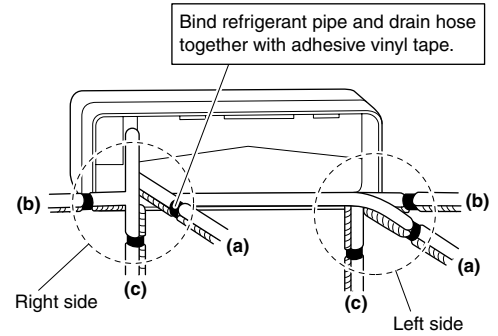
## 4. Laying piping, hoses, and wiring

- The recommended installation method is back piping.
- **When performing side piping (b), refer to 5. Side piping on page 10.**  
In the case of bottom piping (c), refer to 6. Bottom piping on page 10.

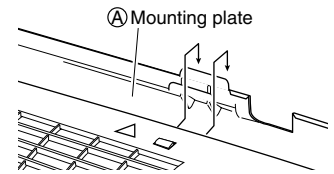
### 4-1. Right-back piping

- 1) Attach the drain hose to the underside of the refrigerant pipes with adhesive vinyl tape.
- 2) Wrap the inter-unit wiring, refrigerant pipes and drain hose together with insulation tape.

(a)	Back piping	Normal installation	Refer to page 9
(b)	Side piping	Service parts use	Refer to page 10
(c)	Bottom piping	Paper pattern use	Refer to page 10



- 3) Pass the inter-unit wiring, drain hose and refrigerant pipes through the wall hole, then set the indoor unit on the mounting plate hooks by using the  $\Delta$  markings at the top of the indoor unit as a guide.



### 4-2. Left-back piping

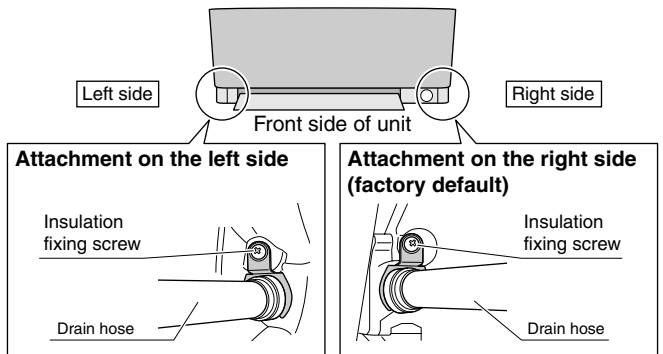
#### How to replace the drain plug and drain hose

##### • Replacing onto the left side

- 1) Remove the insulation fixing screw on the right and remove the drain hose.
- 2) Remove the drain plug on the left side and attach it to the right side.
- 3) Insert the drain hose and tighten with included insulation fixing screw.  
\* (Forgetting to tighten this may cause water leakages.)

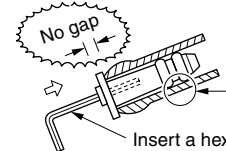
##### Drain hose attachment position

\* The drain hose is on the back of the unit.



- 1) Replace the drain plug and drain hose.
- 2) Attach the drain hose to the underside of the refrigerant pipes with adhesive vinyl tape.
- 3) Be sure to connect the drain hose to the drain port in place of a drain plug.

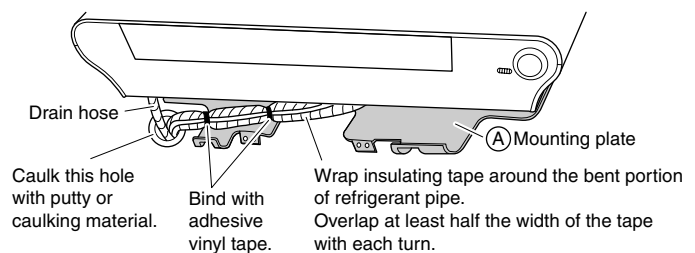
##### How to set drain plug



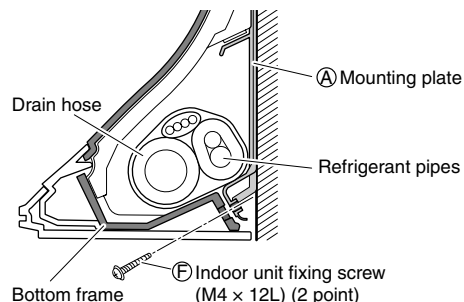
Do not apply lubricating oil (refrigeration oil) when inserting. Application of causes deterioration and drain leakage of the plug.

Insert a hexagonal wrench (4mm).

- 4) Shape the refrigerant pipe along the pipe path marking on the mounting plate.
- 5) Pass drain hose and refrigerant pipes through the wall hole, then set the indoor unit on mounting plate hooks, using the  $\Delta$  markings at the top of indoor unit as a guide.
- 6) Pull in the inter-unit wiring.
- 7) Connect the inter-unit piping.
- 8) Wrap the refrigerant pipes and drain hose together with insulation tape as right figure, in case of setting the drain hose through the back of the indoor unit.

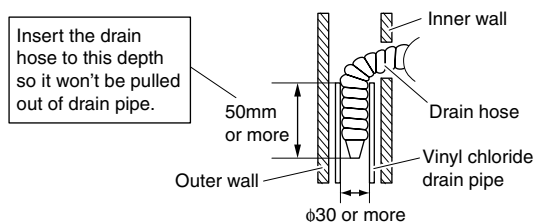


- 9) While exercising care so that the inter-unit wiring do not catch indoor unit, press the bottom edge of indoor unit with both hands until it is firmly caught by the mounting plate hooks. Secure indoor unit to the mounting plate with indoor unit fixing screws (M4 × 12L).



### 4-3. Wall embedded piping

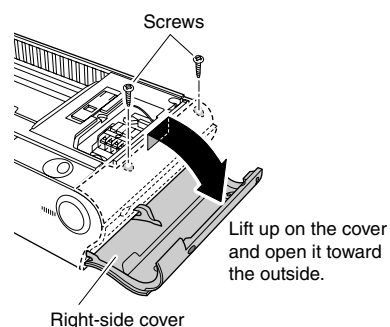
- Follow the instructions given under left-back piping.  
Insert the drain hose to this depth so it won't be pulled out of the drain pipe.



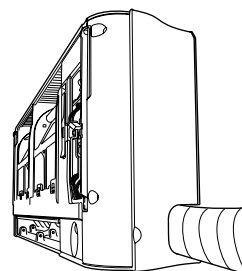
## 5. Side piping

### • Right-side or left-side piping

- 1) Dismount the right- or left-side cover. (2 screws)
- 2) Mount the **K** side cover for right-side piping (service parts) or the **L** side cover for left-side piping (service parts).



- 3) Follow the procedure shown in 4-1. Right-back piping in the case of performing right-side piping and the procedure shown in 4-2. Left-back piping in the case of performing left-side piping. At that time, insert the drain hose and refrigerant pipes into the wall hole after inserting them into the hole on the right- or left-side piping cover.

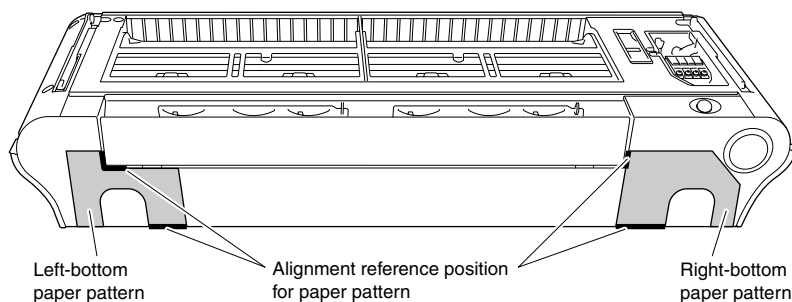


## 6. Bottom piping

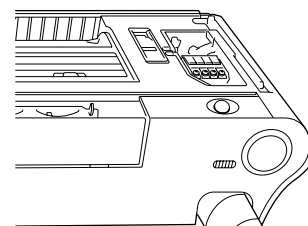
### • Right-bottom or left-bottom piping

- 1) Separate the paper pattern along the cut line and draw a line along the paper pattern after aligning it with the reference position of the bottom frame of the unit. The paper pattern is placed between the last page and the inner side of the back cover.
- 2) Cut out the grille along the lines and open a hole for bottom piping.

#### [How to use the paper pattern]



- 3) Follow the procedure shown in 4-1. Right-back piping in the case of performing right-bottom piping and the procedure shown in 4-2. Left-back piping in the case of performing left-bottom piping. At that time, insert the drain hose and refrigerant pipes into the wall hole after inserting them into the piping hole opened.

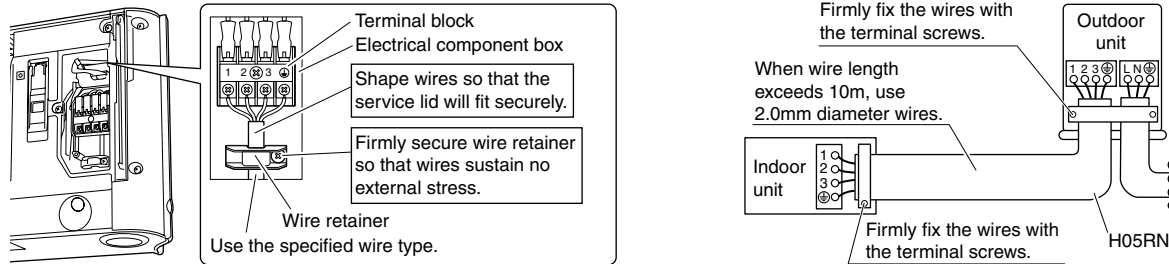


# Indoor Unit Installation

## 7. Wiring

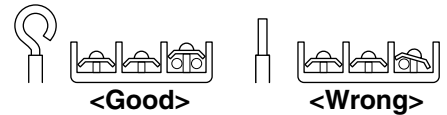
**With a multi indoor unit**, install as described in the installation manual supplied with the multi outdoor unit.

- 1) Strip wire ends (15mm).
- 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 controller cable and attach the S21.
- 6) Shape the wires so that the service lid fits securely, then close service lid.



### CAUTION

- When connecting the connection wires to the terminal board using a single core wire, be sure to perform curling. Problems with the work may cause heat and fires.

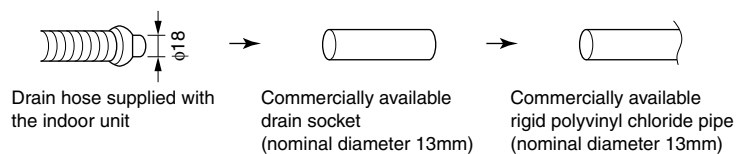
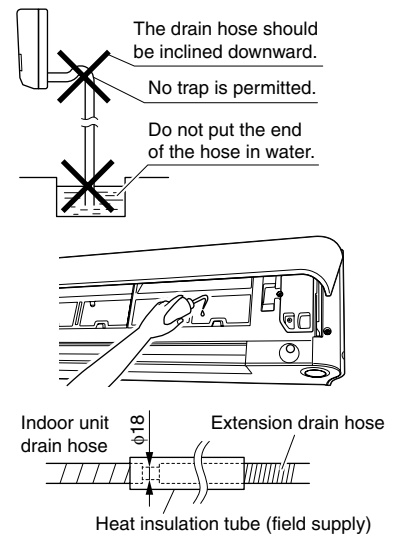


### WARNING

- Do not use tapped wires, strand wires, extension cords, or starburst connections, as they may cause overheating, electrical shock, or fire.
- 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.

## 8. Drain piping

- 1) Connect the drain hose, as described right.
- 2) Remove the air filters and pour some water into the drain pan to check the water flows smoothly.
- 3) When drain hose requires extension, obtain an extension hose commercially available. Be sure to thermally insulate the indoor section of the extension hose.
- 4) When connecting a rigid polyvinyl chloride pipe (nominal diameter 13mm) directly to the drain hose attached to the indoor unit as with embedded piping work, use any commercially available drain socket (nominal diameter 13mm) as a joint.



# 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.

- 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 controller 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.
- 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

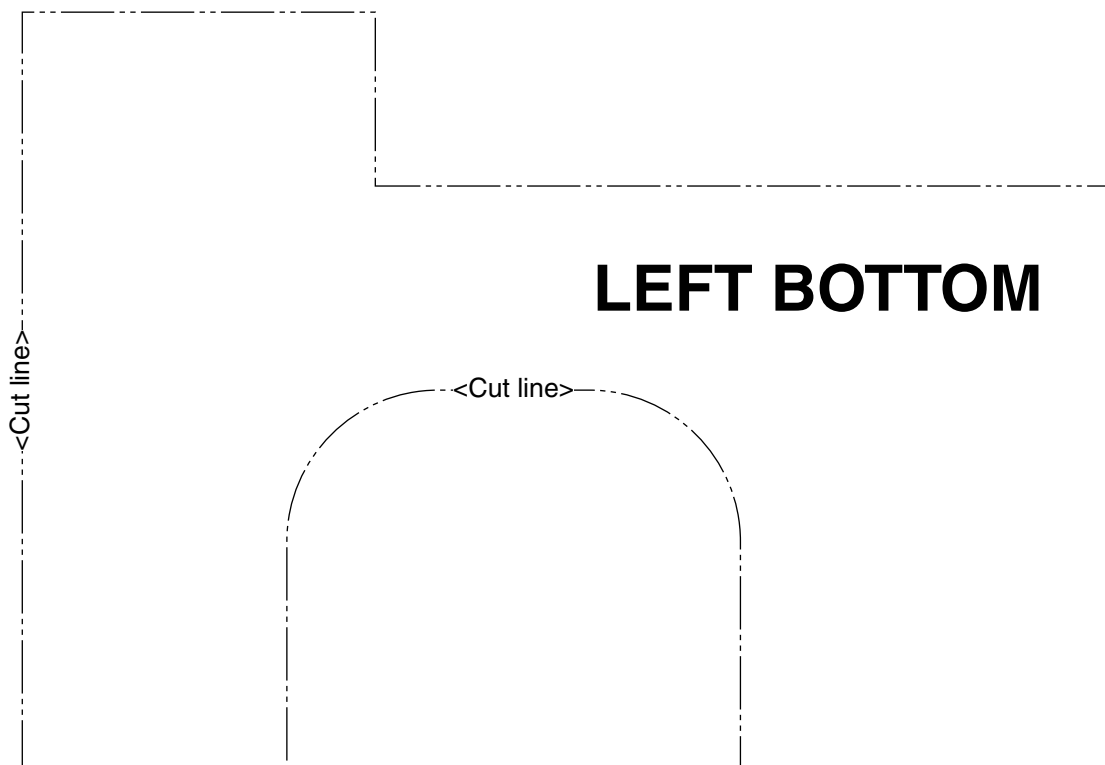
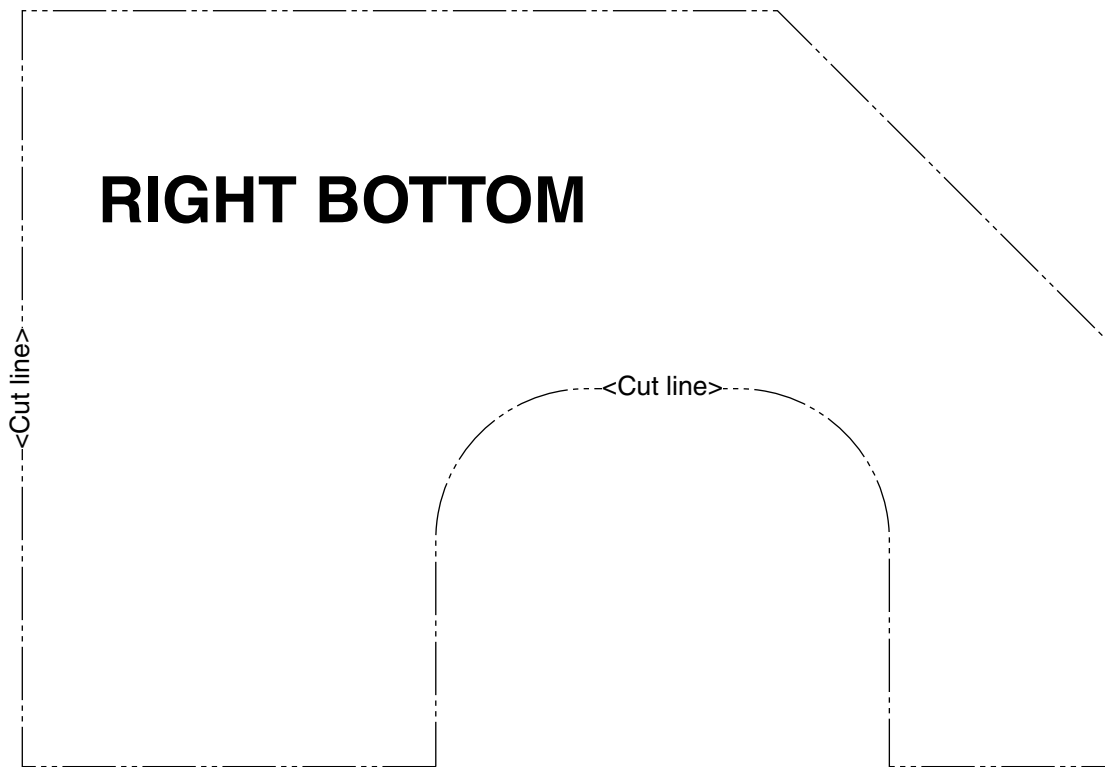
- 1) Press "ON/OFF" button to turn on the system.
- 2) Press "TEMP" button (2 locations) and "MODE" button at the same time.
- 3) Press "TEMP" button and select "7".
- 4) Press "MODE" button.
- 5) Trial operation terminates in approx. 30 minutes and switches into normal mode. To quit a trial operation, 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 inter-unit wiring connections.	Inoperative or burn damage	
Indoor or outdoor unit's air inlet or air outlet has clear path of air. Stop valves are opened.	Incomplete cooling/heating function	
Indoor unit properly receives remote control commands.	Inoperative	



# PAPER PATTERN FOR BOTTOM PIPING





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Two-dimensional bar code is a code for manufacturing.

3P255640-1

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