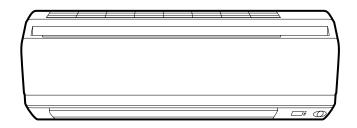


# INSTALLATION MANUAL

# **R410A Split Series**





Models FTXS20G2V1B FTXS25G2V1B FTXS35G2V1B FTXS42G2V1B FTXS50G2V1B 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

Montaj kılavuzları R410A Split serisi

Türkçe

- KONFORMITÄTSERKLÄRUNG - DECLARATION-DE-CONFORMITE - CONFORMITEITSVERKLARING DECLARATION-OF-CONFORMITY គុគុគុគុ

DECLARACION-DE-CONFORMIDAD DICHIARAZIONE-DI-CONFORMITA ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ ម៉ូម៉ូម៉ូ

CE - DECLARAÇÃO-DE-CONFORMIDADE CE - 3AABJIEHИE-O-COOTBETCTBИИ CE - OPFYLDELSESERKLÆRING CE - FÖRSÄKRAN-OM-ÖVERENSTÄMMELSE

CE - ERKLÆRING OM-SAMSVAR CE - ILMOITUS-YHDENMUKAISUUDESTA CE - PROHLÅŠENÍ-O-SHODĚ

CE - IZJAVA-O-UŞKLABENOSTI CE - MEGFELELÖSÉGI-NYILATKOZAT CE - DEKLARACJA-ZGODNOŚCI CE - DECLARAŢIE-DE-CONFORMITATE

CE - IZJAVA O SKLADNOSTI CE - VASTAVUSDEKLARATSIOON CE - ДЕКЛАРАЦИЯ-3A-CЪOTBETCTBИE

CE - ATITIKTIES-DEKLARACIJA CE - ATBILSTIBAS-DEKLARĀCIJA CE - VYHLÁSENIE-ZHODY CE - UYUMLULUK-BILDIRISI

# DAIKIN INDUSTRIES, LTD.

02 💿 erklärt auf seine alleinige Verantwortung daß die Modelle der Klimageräte für die diese Erklärung bestimmt ist: 01 ® declares under its sole responsibility that the air conditioning models to which this declaration relates:

03 🕞 déclare sous sa seule responsabilité que les appareils d'air conditionné visés par la présente déclar ation:

04 (x) verklaart hierbij op eigen exclusieve verantwoordelijkheid dat de airconditioning units waarop deze verklaring betrekking heeft:

65 E. declara baja su única responsabilidad que los modelos de aire acondicionado a los cuales hace referencia la declaración.
66 O 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 συσκευών στα οποία αναφέρεται η παρούσα δήλωση:

09 🝩 заявляет, исключительно под свою ответственность, что модели кондиционеров воздуха, к которым относится настоящее заявление: 08 🕑 declara sob sua exclusiva responsabilidade que os modelos de ar condicionado a que esta declaração se refere:

FTXS20G2V1B, FTXS25G2V1B, FTXS35G2V1B, FTXS42G2V1B, FTXS50G2V1B

10 ® erklærer under eneansvar, at klimaanlægmodellerne, som denne deklaration vedrører:

11 💿 deklarerar i egenskap av huvudansvarig, att luftkonditioneringsmodellerna som berörs av denna deklaration innebär att: 12 (ii) erklærer et fullstendig ansvar for at de luftkondisjoneringsmodeller som berøres av denne deklarasjon innebærer at:

13 🕪 ilmoittaa yksinomaan omalla vastuullaan, että tämän ilmoituksen tarkoittamat ilmastointilaitteiden mallit: 14 @ prohlašuje ve své plné odpovědnosti, že modely klimatizace, k nimž se toto prohlášení vztahuje:

15 (FB) izjavljuje pod isključivo vlastitom odgovornošću da su modeli klima uređaja na koje se ova izjava odnosi:

17 🖭 deklaruje na własną i wyłączną odpowiedzialność, że modele klimatyzatorów, których dotyczy niniejsza deklaracja: 16 (F.) teljes felelőssége tudatában kijelenti, hogy a klímaberendezés modellek, melyekre e nyilatkozat vonatkozik: 18 (ne) declară pe proprie răspundere că aparatele de aer condiționat la care se referă această declarație:

20 📾 kinnitab oma täielikul vastutusel, et käesoleva deklaratsiooni alla kuuluvad kliimaseadmete mudelid: 19 🖘 z vso odgovornostjo izjavlja, da so modeli klimatskih naprav, na katere se izjava nanaša:

21 🙉 декларира на своя отговорност, че моделите климатична инсталация, за които се отнася тази декларация:

22 Œ visiška savo atsakomybe skelbia, kad oro kondicionavimo prietaisų modeliai, kuriems yra taikoma ši deklaracija:

23 🕟 ar pilnu atbildību apliecina, ka tālāk uzskaitīto modeļu gaisa kondicionētāji, uz kuriem attiecas šī deklarācija: 24 🕸 vyhlasuje na vlastnú zodpovednosť, že tieto klimatizačné modely, na ktoré sa vzťahuje toto vyhlásenie:

25 🕦 tamamen kendi sorumluluğunda olmak üzere bu bildirinin ilgili olduğu klima modellerinin aşağıdaki gibi olduğunu beyan eder:

are in conformity with the following standard(s) or other normative document(s), provided that these are used in accordance with our 02 deriden folgenden Norm(en) oder einem anderen Normdokument oder -dokumenten entspricht/entsprechen, unter der Voraussetzung,

03 sont conformes à la/aux norme(s) ou autre(s) document(s) normatif(s), pour autant qu'ils soient utilisés conformément à nos instructions: daß sie gemäß unseren Anweisungen eingesetzt werden:

04 conform de volgende norm(en) of éen of meer andere bindende documenten zijn, op voorwaarde dat ze worden gebruikt overeenkomstig 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 onze instructies:

06 sono conformi al(i) seguente(i) standard(s) o altro(i) documento(i) a carattere normativo, a patto che vengano usati in conformità alle nuestras instrucciones:

07 είναι σύμφωνα με το(α) ακόλουθο(α) πρότυπο(α) ή άλλο έγγραφο(α) κανονισμών, υπό την προϋπόθεση ότι χρησιμοποιούνται αήπφωνα με τις οδηγίες μας: nostre istruzioni:

08 estão em conformidade com a(s) seguinte(s) norma(s) ou outro(s) documento(s) normativo(s), desde que estes sejam utilizados de 09 соответствуют следующим стандартам или другим нормативным документам, при условии их ислољѕования согласно нашим acordo com as nossas instruções:

instrukser:

12 respektive utstyr er i overensstemmelse med følgende standard(er) eller andre normgivende dokument(er), under forutssetning av at förutsättning att användning sker i överensstämmelse med våra instruktioner:

mukaisesti:

15 u skladu sa slijedećim standardom(ima) ili drugim normativnim dokumentom(ima), uz uvjet da se oni koriste u skladu s našim uputama: 14 za předpokladu, že jsou využívány v souladu s našími pokyny, odpovídají následujícím normám nebo normativním dokumentům:

17 spełniają wymogi następujących norm i innych dokumentów normalizacyjnych, pod warunkiem że używane są zgodnie z naszymi 16 megfelelnek az alábbi szabvány(ok)nak vagy egyéb irányadó dokumentum(ok)nak, ha azokat előírás szerint használják. instrukciami:

18 sunt în conformitate cu următorul (următoarele) standard(e) sau alt(e) document(e) normativ(e), cu condiția ca acestea să fie utilizate în conformitate cu instrucțiunile noastre

21 съответстват на следните стандарти или други нормативни документи, при условие, че се използват съгласно нашите 19 skladní z naslednjimi standardí in drugimi normatíki, pod pogojem, da se uporabljajo v skladu z našími navodili: 20 on vastavuses järgmist(je standardite)ga või teiste normatiivsele dokumentidaga, kui neid kasutatakse vastavatt meie juhenditele: 22 atlinka ženiau nurodytus standartus ir (arba) kitus nominius dokumentus su sajyga, kad yra naudojami pagal mūsų nurodymus. 23 tad. ja lietoti atbilstoši ražotāja norādijumiem, atbilst sekojošiem standartiem un citiem normatīvem dokumentiem: инструкции:

24 sú v zhode s nasledovnou(ými) normou(ami) alebo iným(i) normatívnym(i) dokumentom(ami), za predpokladu, že sa používajú v súlade

**25** ürünün, talimatlarımıza göre kullanılması koşuluyla aşağıdaki standartlar ve norm belirten belgelerle uyumludur. s našim návodom:

# EN60335-2-40,

10 under iagttagelse af bestemmelserne i: 12 gitt i henhold til bestemmelsene i: 14 za dodržení ustanovení předpisu: 13 noudattaen määräyksiä: 15 prema odredbama: 11 enligt villkoren i: 16 követi a(z): 01 following the provisions of:

02 gamás den Vorschriften der:

03 conformément aux sigulations des:

04 overenkomistig de bepalingen var.

05 siguiendo las disposiciones de:

05 secondo le prescrizioni per:

07 μг тір

23 ievērojot prasības, kas noteiktas: 25 bunun koşullarına uygun olarak: 22 laikantis nuostatų, pateikiamų: 21 следвайки клаузите на: 24 održiavajúc ustanovenia: 19 ob upoštevanju določb: vastavalt nõuetele:

17 zgodnie z postanowieniami Dyrektyw: 18 în urma prevederilor:

tel que sipulé dans le Fichier de Construction Technique **Daikin.TCE015** et jugé positivement par **KEMA** conformément au **Certificat 74736 KROJEM097-4957**. wie in der Technischen Konstruktionsakte Dalikin.TCF.015 aufgeführt und von KEMA positiv ausgezeichnet gemäß Zertifikat 74736-KROJENIC97-4957. as set out in the Technical Construction File Daikin.TCF.015 and judged positively by KEMA according to the Certificate 74736-KRQ/EMC97-4957. 03 Remarque \* 02 Hinweis\* 01 Note \*

tal como se expone en el Archivo de Construcción Técnica Dalkin.TOF.015 y juzgado positivamente por KENA según el Certificado 74736-KROJEN/097-4957. zoals vermeld in het Technisch Constructiedossier Daikin.TCF.015 en in orde bevonden door KEMA overeenkomstig Certificaat 74736-KRQ/EMC97-4957. 04 Bemerk \* 05 Nota\*

Τεχνικής Κατασκευής **Daikin.TCF.015** και κρίνεται θετικά από το **KEMA** σύμφωνα με το delineatio nel File Tecnico di Costruzione **Daikin.TCF.015** e giudicato postitivamente da **KEMA** secondo il Certificato **74736-KROJEM097-4957**. όπως προσδιορίζεται στο Αρχείο \* ητοιείωση 06 Nota\*

Потопопртию 74736-КРО/ЕМС97-4957.

tal como estabelecido no Ficheiro Técnico de Construção Daikin. TCF.015 e com o parecer positivo de KEMA de acordo com o Certificado 74736-KRQ/EMC97-4957. 09 Примечание 08 Nota\*

10 overholder følgende standard(er) eller andetlandre retningsgivende dokument(er), forudsat at disse anvendes i henhold til vore 11 respektive utrustning är utförd i överensstämmelse med och följer följande standard(er) eller andra normgivande dokument, under 13 vastaavat seuraavien standardien ja muiden ohjeellisten dokumenttien vaatimuksia edellyttäen, että niitä käytetään ohjeidemme Low Voltage 2006/95/EC disse brukes i henhold til våre instrukser:

16 irányelv(ek) és módosításaik rendelkezéseit. Direktiivejä, sellaisina kuin ne ovat muutettuina. 10 Direktiver, med senere ændringer. 11 Direktiv, med företagna ändringar. 12 Direktiver, med foretatte endringer. 15 Smjernice, kako je izmijenjeno. 14 v platném znění. 05 Directivas, según lo emmendado.
06 Directivas, según lo emmendado.
07 Obripwió, romes éparur promonom/8si.
08 Directivas, conforme alteração em...
09 Директив со всеми погражками. 03 Directives, telles que modifiées. 04 Richtlijnen, zoals geamendeerd 02 Direktiven, gemäß Änderung. 01 Directives, as amended.

17 z późniejszymi poprawkami.

18 Directivelor, cu amendamentele respective.

25 Değiştirilmiş halleriyle Yönetmelikler.

21 Директиви, с техните изменения.

19 Direktive z vsemi spremembami. 20 Direktiivid koos muudatustega. 22 Direktyvose su papildymais.

Direktīvās un to papildinājumos.

24 Smernice, v platnom znení.

kot je določeno v tehnični mapi Daikin.TCF.015 in odobreno s strani KEMA v skladu s certifikatom 74736-KRQ/EMC97-4957, nagu on näidatud tehnilises dokumentatsioonis Daikin.TCF.015 ja heaks kiidetud KEMA järgi vastavalt 19 Opomba \* 20 Märkus\*

както в запожено в Акта за техническа конструкция **Dakin.TGF015** и оценено положително от **KEMA** сългасно Сертификат 74736-KR0EINC97-4957. sertifikaadile 74736-KRO/EMC97-4957. 21 Забележка \*

kā noteikts tehniskajā dokumentācijā **Daikin TCF015**, atbilstoši KEMA poziītvajam lēmumam ko apliecina sertifikās 74736-KRO/EMC97-4957. kajo nurodyta Techninieje konstrukcijos byloje **Daikin.TCF.015** ir patviritnia **KEMA** pagal pażymėjimą 74736-KRO/EMC97-4957. 23 Piezīmes\* Pastaba \* 22

Daikin.TCF.015 Teknik Yapı Dosyasında belirtildiği gibi ve 74736-KRO/EMC97-4957 sertifikasına göre KEMA tarafından olumlu ako je to stanovené v Súbore technickej konštrukcie **Daikin.TCF015** a kladne posúdené **KEMA** podľa Certifikátu 74736-KROJEMC97-4957. 24 Poznámka\* ¥ ¥

olarak değerlendirilmiştir

**œ** как указано в Досье текнического топкования **Dalkin.**ТСБО15 и в соответствии с попожительным решением КЕМА соотвасо Свидетельству 74736-KROEMC974957.

Electromagnetic Compatibility 2004/108/EC Machinery Safety 98/37/EEC

som det fremkommer i den Tekniske Konstruksjonsfilen **Daikin.TCF.015** og gjennom positiv bedømmelse av **KEMA** ifølge Sertifikat 74736-KROJEMC97-4957. kako je izloženo u Datoteci o tehniškoj konstrukciji **Dalikin.TOF.015** i pozitivno ocijenjeno od strane **KEMA** prema Centifikatu 74736-KROJENC97-4957. jak bylo uvedeno v souboru technické konstrukce **Dalkin. TCF.015** a pozitívně zijštěno **KEMA** v souladu s osvědčením 74736-KRO/EMC97-4957. jotka on esitetty Teknisessä Asiakirjassa Daikin.TCF.015 ja jotka KEMA on hyväksynyt Sertifikaatin 74736-KRO/EMC97-4957 mukaisesti 14 Poznámka \* 15 Napomena\*

utrustningen är utförd i enlighet med den Tekniska Konstruktionsfilen Dalkin.TCF.015 som positivt intygas av KEMA vilket också

ramgår av Certifikat 74736-KRQ/EMC97-4957. til Certifikat 74736-KRQ/EMC97-4957.

11 Information \*

13 Huom \* 12 Merk \*

Bemærk \*

우

som anført i den Tekniske Konstruktionsfil Daikin. TCF.015 og positivt vurderet af KEMA i henhold

conform celor stabilile în Dosarul tehnic de construcție **Daikin.T.CF.015** și apreciale pozitiv de KEMA în conformitate cu Certificatul 74736-KRQJEMC97-4957. a(z) Daikin.TCF.015 műszaki konstrukciós dokumentáció alapján, a(z) KEMA igazolta a megfelelést zgodnie z archiwalną dokumentacją konstrukcyjną **Dalkin.TCF.015** pozytywną opinią **KEMA** i świadectwem 74736-KR.0EIMC97-4957. a(z) 74736-KRQ/EMC97-4957 tanúsítvány szerint. 16 Megjegyzés\* 17 Uwaga\* Notă \*

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

Manager Quality Control Department Shiga, 1st of Nov. 2007 Noboru Murata

# **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 result in grave consequences in some cases.

· 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.

If any refrigerant has leaked out during the installation work, ventilate the room.
 (The refrigerant produces a toxic gas if exposed to flames.)



After all installation is complete, check to make sure that no refrigerant is leaking out. (The refrigerant produces a toxic gas if exposed to flames.)



- When installing or relocating the system, be sure to keep the refrigerant circuit free from substances other than the specified refrigerant (R410A), such as air.
   (Any presence of air or other foreign substance in the refrigerant circuit causes an abnormal pressure rise or rupture, resulting in injury.)
- During pump-down, stop the compressor before removing the refrigerant piping.

  If the compressor is still running and the stop 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 stop valve is open during pump-down, air will be sucked in when the compressor is run, causing abnormal pressure in the freezer cycle which will lead to breakage and even injury.
- Be sure to establish an earth. Do not earth the unit to a utility pipe, arrester, or telephone earth. Incomplete earth may cause electrical shock, or fire. A high surge current from lightning or other sources may cause damage to the air conditioner.



Be sure to install an earth leakage breaker.
Failure to install an earth leakage breaker may result in electric shocks, or fire.

### **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.

1

Tighten the flare nut according to the specified method such as with a torque wrench.
 If the flare nut is tightened too hard, the flare nut may crack after a long time and cause refrigerant leakage.

# **Accessories**

#### Indoor unit

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( A )	_	71.	۱
$( \sim )$		(-)	,

Mounting plate	1	E Remote controller holder.	1	(K) Operation manual	1
B Titanium Apatite     Photocatalytic     Air-Purifying Filter	2	AAA dry-cell batteries	2	(L) Installation manual	1
Wireless remote controller	1	(H) Indoor unit fixing screws (M4 × 12L)	2		

# **Choosing an Installation Site**

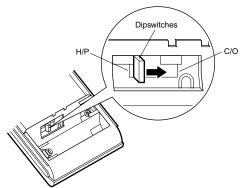
· Before choosing the installation site, obtain user approval.

#### 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 intake and exhaust have clear paths met,
  - 3) the unit is not in the path of direct sunlight,
  - 4) the unit is away from the source of heat or steam,
  - 5) there is no source of machine oil vapour (this may shorten indoor unit life),
  - 6) cool (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 1 metre away from any television or radio set (unit may cause interference with the picture or sound),
  - 9) install at the recommended height (1.8m).

## 2. Wireless remote controller.

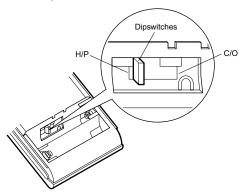
- 1) Turn on all the fluorescent lamps in the room, if any, and find the site where remote controller signals are properly received by the indoor unit (within 7 metres).
- 2) Make the dipswitch settings. Set according to the type of unit purchased by the customer. The default settings are on the heat pump side.
- For cooling only (Outdoor unit model: RKS) Set the dipswitches on the cooling only side.



• For heat pump (Outdoor unit model: RXS)

Check that the dipswitches are on the heat pump side.

If they are set on the cooling only side, move them to the heat pump side.

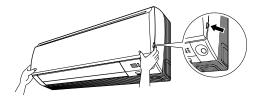


# **Installation Tips**

## 1. Removing and installing front panel.

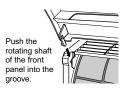
#### Removal method

Hook fingers on the panel protrusions on the left and right of the main body, and open until the panel stops. Slide the front panel sideways to disengage the rotating shaft. Then pull the front panel toward you to remove it



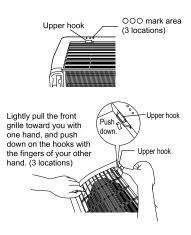
#### Installation method

Align the tabs of the front panel with the grooves, and push all the way in. Then close slowly. Push the center of the lower surface of the panel firmly to engage the tabs.



# 2. Removing and installing front grille.

- Removal method
- 1) Remove front panel to remove the air filter.
- 2) Remove the front grille.
- 3) In front of the OOO mark of the front grille, there are 3 upper hooks. Lightly pull the front grille toward you with one hand, and push down on the hooks with the fingers of your other hand.



## When there is no work space because the unit is close to ceiling

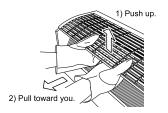
## CAUTION -

Be sure to wear protection gloves.

Place both hands under the center of the front grille, and while pushing up, pull it toward you.

#### Installation method

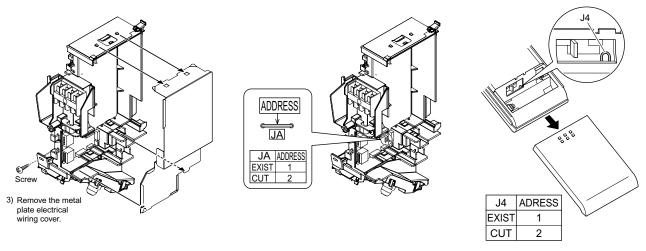
- 1) Install the front grille and firmly engage the upper hooks (3 locations).
- 2) Install 2screws of the front grille.
- 3) Install the air filter and then mount the front panel.



# 3. How to set the different addresses.

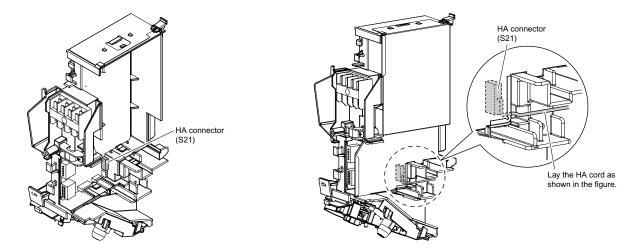
When two indoor units are installed in one room, the two wireless remote controllers can be set for different addresses.

- 1) Remove the front grille. (2 screws)
- 2) Remove the electrical wiring box. (1 screw)
- 3) Remove the metal plate electrical wiring cover. (4 tabs)
- 4) Cut the address jumper (JA) on the printed circuit board.
- 5) Cut the address jumper (J4) in the remote controller.

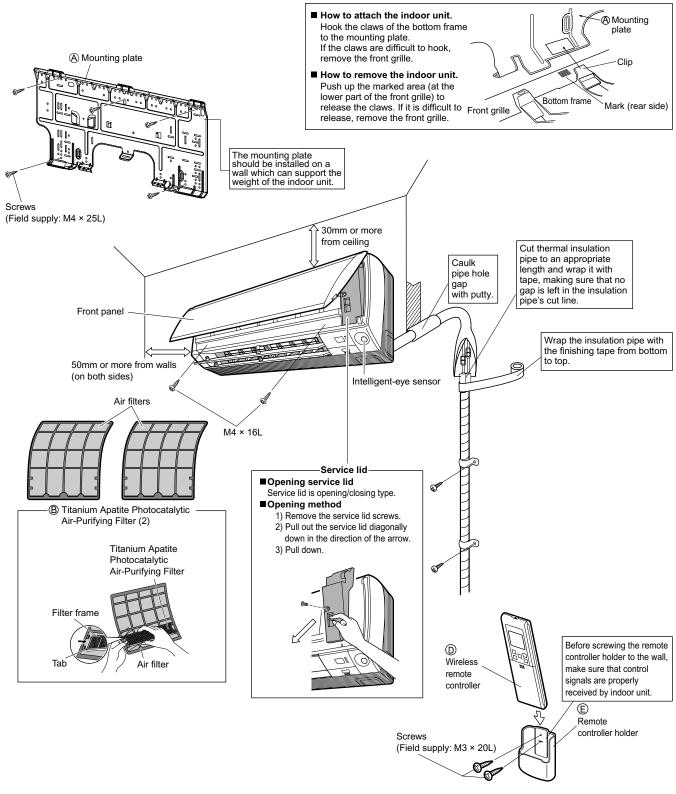


# 4. When connecting to an HA system. (Wired remote controller, central remote controller etc...)

- 1) In the same way as how to set the different addresses, remove the metal plate electrical wiring cover.
- 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.



# **Indoor Unit Installation Drawings**



## Intelligent-eye sensor

# **CAUTION**

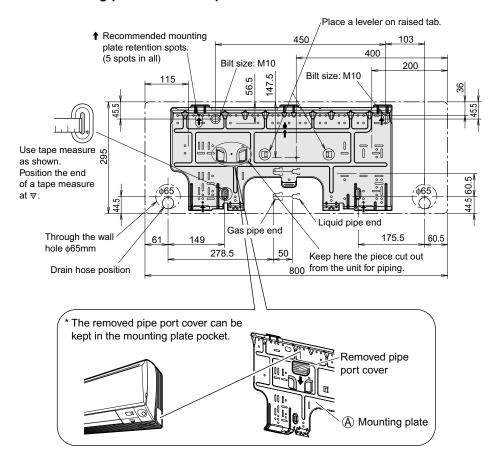
- 1) Do not hit or violently push the Intelligent-eye sensor. This can lead to damage and malfunction.
- 2) Do not place large objects near the sensor. Also keep heating units or humidifiers outside the sensor's detection area.

# **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.
  - 1) Temporarily secure the mounting plate to the wall, make sure that the panel is completely level, and mark the boring points on the wall.
  - 2) Secure the mounting plate to the wall with screws.

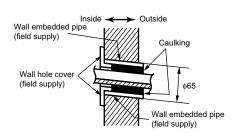
#### **Recommended mounting-plate retention spots and Dimensions**



# **Indoor Unit Installation**

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

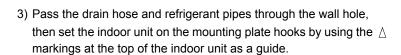
- For walls containing metal frame or metal board, be sure to use a wall embedded pipe and wall cover in the feed-through hole to prevent possible heat, electrical shock, or fire.
- Be sure to caulk the gaps around the pipes with caulking material to prevent water leakage.
  - Bore a feed-through hole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

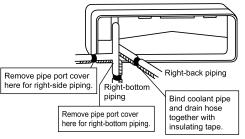


## 3. Installing indoor unit.

#### 3-1. Right-side, right-back, or right-bottom piping.

- Attach the drain hose to the underside of the refrigerant pipes with an adhesive vinyl tape.
- 2) Wrap the refrigerant pipes and drain hose together with an insulation tape.



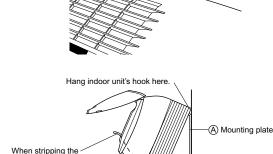


(A) Mounting plate

4) Open the front panel, then open the service lid.

(Refer to Installation tips)

- 5) Pass the interconnecting wires 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 interconnecting wire ends are to be stripped first, bundle wire ends with adhesive tape.)
- 6) 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.



ends of interconnecting wires in advance, bind

right ends of wires with

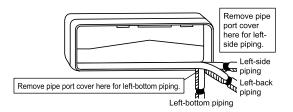
insulating tape.

Interconnecting

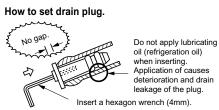
wires

#### 3-2. Left-side, left-back, or left bottom piping.

1) Attach the drain hose to the underside of the refrigerant pipes with adhesive vinyl tape.

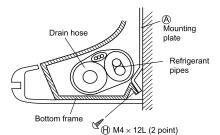


2) Be sure to connect the drain hose to the drain port in place of a drain plug.



- Shape the refrigerant pipe along the pipe path marking on the mounting plate.
- 4) Pass drain hose and refrigerant pipes through the wall hole, then set the indoor unit on mounting plate hooks, using the ∆ markings at the top of indoor unit as a guide.
- 5) Pull in the interconnecting wires.
- 6) Connect the inter-unit piping.
- 7) 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.
- 8) While exercising care so that the interconnecting wires 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 screws (M4 × 12L).

# Caulk this hole with putty or caulking material. Bind with plastic tape. Wrap insulating tape around the bent portion of refrigerant pipe. Overlap at least half the width of the tape with each turn.

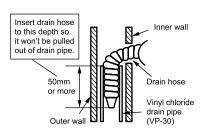


#### 3-3. Wall embedded piping.

Follow the instructions given under

#### Left-side, left-back, or left bottom piping

1) Insert the drain hose to this depth so it won't be pulled out of the drain pipe.



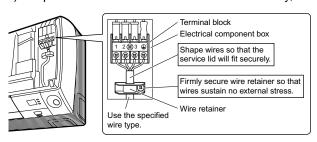
**■**English

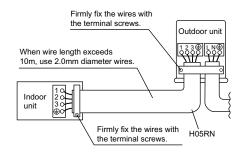
# **Indoor Unit Installation**

# 4. 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.



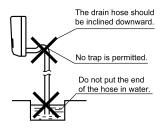


#### **MARNING**

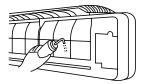
- 1) Do not use tapped wires, strand wires, extensioncords, or starburst connections, as they may cause overheating, electrical shock, or fire.
- 2) Do not use locally purchased electrical parts inside the product. (Do not branch the power for the drain pump, etc., from the terminal block.) Doing so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

## Drain piping.

1) Connect the drain hose, as described right.

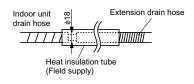


2) Remove the air filters and pour some water into the drain pan to check the water flows smoothly.



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.

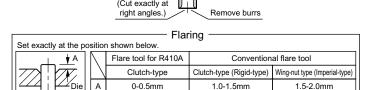


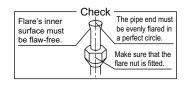
# **Refrigerant Piping Work**

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.





#### **↑** WARNING

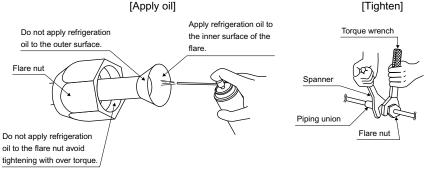
- 1) Do not use mineral oil on flared part.
- 2) Prevent mineral oil from getting into the system as this would reduce the lifetime of the units.
- 3) Never use piping which has been used for previous installations. Only use parts which are delivered with the unit.
- 4) Do never install a drier to this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

## 2. Refrigerant piping.

### CAUTION -

- 1) Use the flare nut fixed to the main unit. (To prevent cracking of the flare nut by aged deterioration.)
- 2) To prevent gas leakage, apply refrigeration oil only to the inner surface of the flare. (Use refrigeration oil for R410A.)
- 3) 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	
20/25/35/42 class	50 class	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)	

■English 10

# **Refrigerant Piping Work**

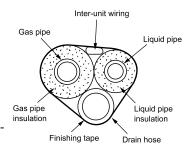
#### 2-1. Caution on piping handling.

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

(Bending radius should be 30 to 40mm or larger.)

#### 2-2. 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 0.052W/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 place a cap.

If no flare cap is

the flare mouth

with tape to keep dirt or water out.

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

Gas	side		Gas pipe thermal insulation		Liquid pipe	
20/25/35/42 class	50 class	Liquid side	20/25/35/42 class	50 class	thermal insulation	
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.				

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

# **Pump Down Operation**

In order to protect the environment, be sure to pump down when relocating or disposing of the unit.

- 1) Remove the valve cap from liquid stop valve and gas stop valve.
- 2) Carry out forced cooling operation.
- 3) After five to ten minutes, close the liquid stop valve with a hexagonal wrench.
- 4) After two to three minutes, close the gas stop valve and stop forced cooling operation.

# Liquid stop valve Close Gas stop valve Valve cap

## How to force cooling operation mode

■ Using the indoor unit operation/stop button

Press the indoor unit operation/stop button for at least five seconds. (Operation will start.)

Forced cooling operation will stop automatically after around 15 minutes.
 To force a test run to stop, press the indoor unit operation/stop button.

#### ■ Using the main unit's remote controller

- Press the "operation/stop" button. (Operation will start.)
- Press the temperature ▲▼ button and the "operation select" button at the same time.
- 3) Press the "operation select" button twice.
- 4) Press the "operation select" button to return the operation mode to cooling.
- Test run mode will stop automatically after around 30 minutes. To force a test run to stop, press the operation/stop button.

## **CAUTION** -

1) After closing the liquid stop valve, close the gas stop valve within three minutes, then stop the forced operation.

# Trial Operation and Testing

# 1. Trial operation and testing.

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

#### ■ For Heat pump

- In cooling mode, select the lowest programmable temperature; in heating mode, select the highest programmable temperature.
  - 1) Trial operation may be disabled in either mode depending on the room temperature. Use the remote 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.

#### ■ For Cooling only

- · Select the lowest programmable temperature.
  - 1) Trial operation in cooling mode may be disabled depending on the room temperature. Use the remote 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).
  - 3) For protection, the unit disables restart operation for 3 minutes after it is turned off.
- 1-3 Carry out the test operation in accordance with the Operation Manual to ensure that all functions and parts, such as louver movement, are working properly.
  - The air conditioner requires a small amount of power in its standby mode. If the system is not to be used for some time after installation, shut off the circuit breaker to eliminate unnecessary power consumption.
  - If the circuit breaker trips to shut off the power to the air conditioner, the system will restore the original operation mode when the circuit breaker is opened again.

#### Trial operation from remote controller

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

## 2. Test items.

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

■English 12

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