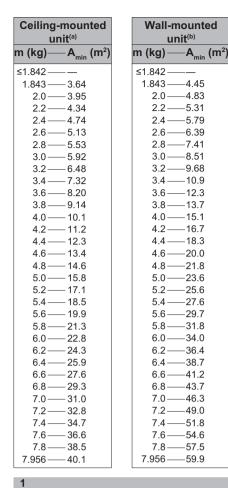
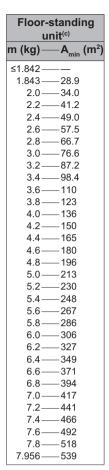


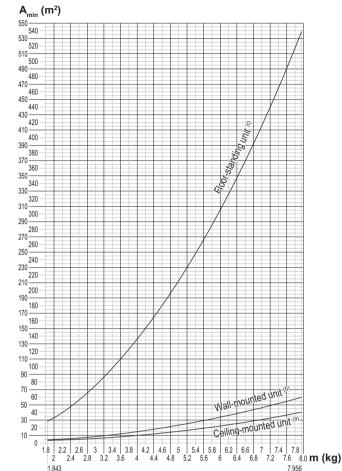
# **INSTALLATION MANUAL**

**Split System air conditioners** 

FUA71AVEB9 FUA100AVEB9 FUA125AVEB9







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

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

CE - DECLARAÇÃO-DE-CONFORMIDADE СЕ - ЗАЯВЛЕНИЕ-О-СООТВЕТСТВИИ CE - OVERENSSTEMMELSESERKLÆRING CE - FÖRSÄKRAN-OM-ÖVERENSTÄMMELSE

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

CE - IZJAVA-O-USKLAĐENOSTI CE - MEGFELELŐSÉGI-NYILATKOZAT CE - DEKLARACJA-ZGODNOŚCI CE - DECLARATIE-DE-CONFORMITATE CE - IZJAVA O SKLADNOSTI CE - VASTAVUSDEKLARATSIOON СЕ - ДЕКЛАРАЦИЯ-ЗА-СЪОТВЕТСТВИЕ

CE - ATITIKTIES-DEKLARACIJA CE - ATBILSTĪBAS-DEKLARĀCIJA CE - VYHLÁSENIE-ZHODY CE - UYGUNLUK-BEYANI

#### Daikin Europe N.V.

01 a declares under its sole responsibility that the air conditioning models to which this declaration relates:

02 d erklärt auf seine alleinige Verantwortung daß die Modelle der Klimageräte für die diese Erklärung bestimmt ist:

03 f déclare sous sa seule responsabilité que les appareils d'air conditionné visés par la présente déclaration:

04 1 verklaart hierbij op eigen exclusieve verantwoordelijkheid dat de airconditioning units waarop deze verklaring betrekking heeft:

05 e declara baja su única responsabilidad que los modelos de aire acondicionado a los cuales hace referencia la declaración:

06 i dichiara sotto sua responsabilità che i condizionatori modello a cui è riferita questa dichiarazione:

07 g δηλώνει με αποκλειστική της ευθύνη ότι τα μοντέλα των κλιματιστικών συσκευών στα οποία αναφέρεται η παρούσα δήλωση:

08 p declara sob sua exclusiva responsabilidade que os modelos de ar condicionado a que esta declaração se refere:

09 и заявляет, исключительно под свою ответственность, что модели кондиционеров воздуха, к которым относится настоящее заявление:

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

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

13 j ilmoittaa yksinomaan omalla vastuullaan, että tämän ilmoituksen tarkoittamat ilmastointilaitteiden mallit:

14 c prohlašuje ve své plné odpovědnosti, že modely klimatizace, k nimž se toto prohlášení vztahuje:

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

16 h teljes felelőssége tudatában kijelenti, hogy a klímaberendezés modellek, melyekre e nyilatkozat vonatkozik:

17 m deklaruje na własną i wyłączną odpowiedzialność, że modele klimatyzatorów, których dotyczy niniejsza deklaracja:

18 r declară pe proprie răspundere că aparatele de aer condiționat la care se referă această declarație:

19 o z vso odgovornostjo izjavlja, da so modeli klimatskih naprav, na katere se izjava nanaša:

 $20 ext{ x}$  kinnitab oma täielikul vastutusel, et käesoleva deklaratsiooni alla kuuluvad kliimaseadmete mudelid:

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

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

23 v ar pilnu atbildību apliecina, ka tālāk uzskaitīto modeļu gaisa kondicionētāji, uz kuriem attiecas šī deklarācija:

24 k vyhlasuje na vlastnú zodpovednosť, že tieto klimatizačné modely, na ktoré sa vzťahuje toto vyhlásenie:

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

#### FUA71AVEB9, FUA100AVEB9, FUA125AVEB9,

01 are in conformity with the following standard(s) or other normative document(s), provided that these are used in accordance with our 08 estão em conformidade com a(s) seguinte(s) norma(s) ou outro(s) documento(s) normativo(s), desde que estes sejam utilizados de

02 der/den folgenden Norm(en) oder einem anderen Normdokument oder -dokumenten entspricht/entsprechen, unter der Voraussetzung. daß sie gemäß unseren Anweisungen eingesetzt werden:

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:

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

05 están en conformidad con la(s) siguiente(s) norma(s) u otro(s) documento(s) normativo(s), siempre que sean utilizados de acuerdo con nuestras instrucciones

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 nostre istruzioni

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

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 andet/andre 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 förutsättning att användning sker i överensstämmelse med våra instruktioner:

12 respektive utstyr er i overensstemmelse med følgende standard(er) eller andre normgivende dokument(er), under forutssetning av at disse brukes i henhold til våre instrukser:

13 vastaavat seuraavien standardien ja muiden ohjeellisten dokumenttien vaatimuksia edellyttäen, että niitä käytetään ohjeidemme

14 za předpokladu, že jsou využívány v souladu s našimi pokyny, odpovídají následujícím normám nebo normativním dokumentům: 15 u skladu sa slijedećim standardom(ima) ili drugim normativnim dokumentom(ima), uz uvjet da se oni koriste u skladu s našim uputama: 16 megfelelnek az alábbi szabvány(ok)nak vagy egyéb irányadó dokumentum(ok)nak, ha azokat előírás szerint használják:

17 spełniają wymogi następujących norm i innych dokumentów normalizacyjnych, pod warunkiem że używane są zgodnie z naszymi 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

19 skladni z naslednjimi standardi in drugimi normativi, pod pogojem, da se uporabljajo v skladu z našimi navodili:

20 on vastavuses järgmis(t)e standardi(te)ga või teiste normatiivsete dokumentidega, kui neid kasutatakse vastavalt meie juhenditele:

21 съответстват на следните стандарти или други нормативни документи, при условие, че се използват съгласно нашите

22 atitinka žemiau nurodytus standartus ir (arba) kitus norminius dokumentus su salvga, kad vra naudojami pagal mūsu nurodymus:

23 tad. ja lietoti atbilstoši ražotāja norādījumiem, atbilst sekojošiem standartiem un citiem normatīviem dokumentiem

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:

#### FN60335-2-40 01 following the provisions of:

02 gemäß den Vorschriften der: 03 conformément aux stipulations des:

04 overeenkomstig de bepalingen van: 05 siguiendo las disposiciones de:

06 secondo le prescrizioni per: 07 με τήρηση των διατάξεων των:

08 de acordo com o previsto em: 09 в соответствии с положениями

02 Hinweis 1

03 Remarque \*

05 Nota

13 noudattaen määrävksiä 14 za dodržení ustanovení předpisu:

10 under iagttagelse af bestemmelserne i:

15 prema odredbama 16 követi a(z):

17 zgodnie z postanowieniami Dyrektyw: 18 în urma prevederilor:

06 Nota \*

07 Σημείωση

10 Remærk \*

20 vastavalt nõuetele: 11 enligt villkoren i: 12 gitt i henhold til bestemmelsene i:

24 održiavajúc ustanovenia:

19 ob upoštevanju določb:

21 спелвайки клаузите на 22 laikantis nuostatų, pateikiamų: 23 ievērojot prasības, kas noteiktas:

25 bunun koşullarına uygun olarak:

delineato nel <A> e giudicato positivamente

το <B> σύμφωνα με το Πιστοποιητικό <C>.

с попожительным решением <В> согласно

som anført i <A> og positivt vurderet af <B>

όπως καθορίζεται στο <Α> και κρίνεται θετικά από

tal como estabelecido em <A> e com o parecer

positivo de <B> de acordo com o Certificado <C>

da <B> secondo il Certificato <C>

\* как указано в <A> и в соответствии

Свидетельству <С>.

i henhold til Certifikat <C>

Machinery 2006/42/EC \*\* Electromagnetic Compatibility 2014/30/EU \* Low Voltage 2014/35/EU

17 Uwaga 1

18 Notă 1

19 Opomba 1

20 Märkus \*

02 Direktiven, gemäß Änderung. 03 Directives, telles que modifiées. 04 Richtlijnen, zoals geamendeerd. 05 Directivas, según lo enmendado.

01 Directives, as amended

06 Direttive come da modifica

07 Οδηγιών, όπως έχουν τροποποιηθεί 08 Directivas, conforme alteração em.

09 Директив со всеми поправками.

21 Забележка \*

22 Pastaba \*

10 Direktiver, med senere ændringer. 11 Direktiv, med företagna ändringar. 12 Direktiver, med foretatte endringer. 13 Direktiivejä, sellaisina kuin ne ovat muutettuina.

14 v platném znění 15 Smjernice, kako je izmijenjeno. 16 irányelv(ek) és módosításaik rendelkezéseit.

17 z późniejszymi poprawkami.

18 Directivelor, cu amendamentele respective

както е изложено в <А> и оценено положително от <В> съгласно Сертификата <С>. kaip nustatyta <A> ir kaip teigiamai nuspręsta <B>

pagal Sertifikata <C>. kā norādīts <A> un atbilstoši <B> pozitīvajam 23 Piezīmes \* vērtējumam saskanā ar sertifikātu <C>.

ako bolo uvedené v <A> a pozitívne zistené <B> 24 Poznámka \* v súlade s osvedčením <C>. 25 Not \* <A>'da belirtildiği gibi ve <C> Sertifikasına göre

<B> tarafından olumlu olarak değerlendirildiği gibi.

19 Direktive z vsemi spremembami. 20 Direktiivid koos muudatustega. 21 Директиви, с техните изменения.

22 Direktyvose su papildymais. 23 Direktīvās un to papildinājumos.

DAIKIN.TCF.033A14/02-2019

**DEKRA (NB0344)** 

24 Smernice, v platnom znení. 25 Değiştirilmiş halleriyle Yönetmelikler.

positivamente por <B> de acuerdo con el 01 \*\* Daikin Europe N.V. is authorised to compile the Technical Construction File.

as set out in <A> and judged positively by <B>

wie in <A> aufgeführt und von <B> positiv beurteilt

tel que défini dans <A> et évalué positivement par

zoals vermeld in <A> en positief beoordeeld door

<B> conformément au Certificat <C>.

<B> overeenkomstig Certificaat <C>

como se establece en <A> y es valorado

according to the Certificate <C>

gemäß Zertifikat <C>.

Cartificado (C)

02 \*\* Daikin Europe N.V. hat die Berechtigung die Technische Konstruktionsakte zusammenzustellen.

03 \*\* Daikin Europe N.V. est autorisé à compiler le Dossier de Construction Technique. 04 \*\* Daikin Europe N.V. is bevoegd om het Technisch Constructiedossier samen te stellen.

05\*\* Daikin Europe N.V. está autorizado a compilar el Archivo de Construcción Técnica. 06 \*\* Daikin Europe N.V. è autorizzata a redigere il File Tecnico di Costruzione.

07 \*\* Η Daikin Europe Ν.V. είναι εξουσιοδοτημένη να συντάξει τον Τεχνικό φάκελο κατασκευής.

08 \*\* A Daikin Europe N.V. está autorizada a compilar a documentação técnica de fabrico.

15 Napomena 1

12 Merk

13 Huom

09 \*\* Компания Daikin Europe N.V. уполномочена составить Комплект технической документации.

11 Information \* enligt <A> och godkänts av <B> enligt

Certifikatet <C>

som det fremkommer i <A> og gjennom positiv

jotka on esitetty asiakirjassa <A> ja jotka <B> on

jak bylo uvedeno v <A> a pozitivně zjištěno <B>

bedømmelse av <B> ifølge Sertifikat <C>.

hyväksynyt Sertifikaatin <C> mukaisesti.

kako je izloženo u <A> i pozitivno ocijenjeno

od strane <B> prema Certifikatu <C>.

v souladu s osvědčením <C>.

10 \*\* Daikin Europe N.V. er autoriseret til at udarbejde de tekniske konstruktionsdata. 11 \*\* Daikin Europe N.V. är bemyndigade att sammanställa den tekniska konstruktionsfilen.

12 \*\* Daikin Europe N.V. har tillatelse til å kompilere den Tekniske konstruksjonsfilen.

13\*\* Daikin Europe N.V. on valtuutettu laatimaan Teknisen asiakirjan.

16 Megjegyzés \* a(z) <A> alapján, a(z) <B> igazolta a megfelelést,

<B> i Świadectwem <C>.

v skladu s certifikatom <C>

a(z) <C> tanúsítvány szerint.

zgodnie z dokumentacją <A>, pozytywną opinią

aşa cum este stabilit în <A> şi apreciat pozitiv

kot je določeno v <A> in odobreno s strani <B>

de <B> în conformitate cu Certificatul <C>.

nagu on näidatud dokumendis <A> ja heaks

kiidetud <B> järgi vastavalt sertifikaadile <C>.

14 \*\* Společnost Daikin Europe N.V. má oprávnění ke kompilaci souboru technické konstrukce. 15\*\* Daikin Europe N.V. je ovlašten za izradu Datoteke o tehničkoj konstrukciji.

16 \*\* A Daikin Europe N.V. jogosult a műszaki konstrukciós dokumentáció összeállítására.

17 \*\* Daikin Europe N.V. ma upoważnienie do zbierania i opracowywania dokumentacji konstrukcyjnej.

18\*\* Daikin Europe N.V. este autorizat să compileze Dosarul tehnic de construcție.

<C> 2178265.0551-EMC

19 \*\* Daikin Europe N.V. je pooblaščen za sestavo datoteke s tehnično mapo. 20 \*\* Daikin Europe N.V. on volitatud koostama tehnilist dokumentatsiooni.

21 \*\* Daikin Europe N.V. е оторизирана да състави Акта за техническа конструкция.

22 \*\* Daikin Europe N.V. yra įgaliota sudaryti šį techninės konstrukcijos failą.

23 \*\* Daikin Europe N.V. ir autorizēts sastādīt tehnisko dokumentāciju.

24 \*\* Spoločnosť Daikin Europe N.V. je oprávnená vytvoriť súbor technickej konštrukcie.

25 \*\* Daikin Europe N.V. Teknik Yapı Dosyasını derlemeye yetkilidir

DAIKIN

Hiromitsu Iwasaki Director Ostend, 1st of March 2019 DAIKIN EUROPE N.V.

Zandvoordestraat 300, B-8400 Oostende, Belgium

#### UKCA - Safety declaration of conformity

#### Daikin Europe N.V.

declares under its sole responsibility that the products to which this declaration relates:

FUA71AVEB9, FUA100AVEB9, FUA125AVEB9,

are in conformity with the following directive(s) or regulation(s), provided that the products are used in accordance with our instructions:

S.I. 2008/1597: Supply of Machinery (Safety) Regulations 2008\*\*

as amended,

S.I. 2016/1101: Electrical Equipment (Safety) Regulations 2016

S.I. 2016/1091: Electromagnetic Compatibility Regulations 2016\*

following the provisions of: BS EN 60335-2-40,

\* as set out in <A> and judged positively by <B> according to the Certificate <C>.

<A> DAIKIN.TCF.033A14/02-2019

<B>

<C> —

\*\* Daikin Europe N.V. is authorised to compile the Technical Construction File.

Installation manual

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The original instructions are written in English. All other languages are translations of the original instructions.



**DAIKIN** 

Read the precautions in this manual carefully before operating the unit.



This appliance is filled with R32.\*

\*Only applicable if this appliance is connected with the following models of outdoor units: RZAG71, RZAG100, RZAG125, RZAG140, RZASG71, RZASG100, RZASG125, RZASG140,

# 1. SAFETY PRECAUTIONS

Be sure to follow this "SAFETY PRECAUTIONS".

This product comes under the term "appliances not accessible to the general public".

Carefully read these instructions before installation.

Keep this manual in a handy place for future reference.

This manual classifies the precautions into WARNINGS and CAUTIONS. Be sure to follow all the precautions below: They are all important for ensuring safety.

WARNING ....... Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION ......... Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

It may also be used to alert against unsafe practices.

• After the installation is completed, test the air conditioner and check if the air conditioner operates properly. Give the user adequate instructions concerning the use and cleaning of the indoor unit according to the Operation Manual.

Ask the user to keep this manual and the Operation Manual together in a handy place for future reference.

# - ∕N WARNING

- Ask your local dealer or qualified personnel to carry out installation work. Improper installation may result in water leakage, electric shocks or a fire.
- Perform installation work in accordance with this installation manual. Improper installation may result in water leakage, electric shocks or a fire.
- Consult your local dealer regarding what to do in case of refrigerant leakage.
   When the air conditioner is installed in a small room, it is necessary to take proper measures so that the amount of any leaked refrigerant does not exceed the concentration limit in the event of a leakage.
   Otherwise, this may lead to an accident due to oxygen deficiency.
- Be sure to use only the specified parts and accessories for installation work.
   Failure to use the specified parts may result in the air conditioner falling down, water leakage, electric shocks, a fire, etc.
- Install the air conditioner on a foundation that can withstand its mass.
   Insufficient strength may result in the air conditioner falling down and causing injury.
   In addition, it may lead to vibration of indoor units and cause unpleasant chattering noise.
- Carry out the specified installation work in consideration of strong winds, typhoons, or earthquakes. Improper installation may result in an accident such as air conditioner falling.
- Make certain that all electrical work is carried out by qualified personnel according to the applicable legislation (note 1) and this installation manual, using a separate circuit.
   In addition, even if the wiring is short, make sure to use a wiring that has sufficient length and never connect additional wiring to make the length sufficient.

Insufficient capacity of the power supply circuit or improper electrical construction may lead to electric shocks or a fire.

(note 1) applicable legislation means "All international, national and local directives, laws, regulations and/ or codes which are relevant and applicable for a certain product or domain".

· Earth the air conditioner.

Do not connect the earth wiring to gas or water piping, lightning conductor or telephone earth wiring. Incomplete earthing may cause electric shocks or a fire.

• Be sure to install an earth leakage circuit breaker.

Failure to do so may cause electric shocks and a fire.

• Disconnect the power supply before touching the electric components.

If you touch the live part, you may get an electric shocks.

- Make sure that all wiring is secure, using the specified wiring and ensuring that external forces do not act on the terminal connections or wiring.
  - Incomplete connection or fixing may cause an overheat or a fire.
- When wiring between the indoor and outdoor units, and wiring the power supply, form the wiring orderly so that the control box cover can be securely fastened.
- If the control box cover is not in place, overheat of the terminals, electric shocks or a fire may be caused.
- If refrigerant gas leaks during installation work, ventilate the area immediately. Toxic gas may be produced if refrigerant gas comes into contact with a fire.
- After completing the installation work, check to make sure that there is no leakage of refrigerant gas. Toxic gas may be produced if refrigerant gas leaks into the room and comes into contact with a source of a fire, such as a fan heater, stove or cooker.
- Never directly touch any accidentally leaking refrigerant. This could result in severe wounds caused by frostbite.
- Make sure installation, servicing, maintenance and repair comply with instruction from Daikin and with applicable legislation (for example national gas regulation) and are executed only by authorised persons.
- Provide adequate measures to prevent that the unit can be used as a shelter by small animals. Small animals that make contact with electrical parts can cause malfunctions, smoke or fire.
- The appliance shall be stored so as to prevent mechanical damage and in a well-ventilated room without continuously operating ignition sources (example: open flames, an operating gas appliance or an operating electric heater) and have a room size as specified in "SELECTION OF INSTALLATION LOCATION" on page 6 (only for R32 refrigerant).

# - M CAUTION

- Install drain piping according to this installation manual to ensure good drainage, and insulate the piping to prevent condensation.
  - Improper drain piping may cause water leakage, make the furniture get wet.
- Install the air conditioner, power supply wiring, remote controller wiring and transmission wiring at least 1 meter away from televisions or radios to prevent image interference or noise.
  - (Depending on the radio waves, a distance of 1 meter may not be sufficient to eliminate the noise.)
- Install the indoor unit as far as possible from fluorescent lamps.
  - If a wireless remote controller kit is installed, the transmission distance may be shorter in a room where an electronic lighting type (inverter or rapid start type) fluorescent lamp is installed.
- Sound pressure level is less than 70dB(A).
- Do not install the air conditioner in places such as the following:
  - 1. Where there is mist of oil, oil spray or vapour for example a kitchen. Resin parts may deteriorate, and cause them to fall out or water to leak.
  - 2. Where corrosive gas, such as sulfurous acid gas, is produced.

    Corrosion of copper pipings or brazed parts may cause the refrigerant to leak.
  - 3. Where there is machinery which emits electromagnetic waves.

    Electromagnetic waves may disturb the control system, and cause malfunction of the equipment.
  - 4. Where flammable gases may leak, where carbon fibre or ignitable dust is suspended in the air or where volatile flammables, such as thinner or gasoline, are handled.
    - If the gas should leak and remained around the air conditioner, it may cause ignition.
- The air conditioner is not intended for use in a potentially explosive atmosphere.

# 2. BEFORE INSTALLATION

When unpacking the indoor unit or moving the unit after unpacked, hold the hangers (4 places) and do not apply force to other parts (particularly refrigerant piping, drain piping and resin parts). Be sure to check that the refrigerant is used according to outdoor unit specification. (If a wrong refrigerant is charged, the unit will not properly operate.)

- Make sure to check in advance that the refrigerant to be used for installation work is according to outdoor unit specifications.
  - (The air conditioner will not properly operate if a wrong refrigerant is used.)
- For installation of the outdoor unit, refer to the installation manual attached to the outdoor unit.
- Do not throw away the accessories until the installation work is completed.
- After the indoor unit is carried into the room, to avoid the indoor unit from getting damaged, take measures
  to protect the indoor unit with packing materials.
  - (1) Determine the route to carry the unit into the room.
  - (2) Do not unpack the unit until it is carried to the installation location.

    Where unpacking is unavoidable, use a sling of soft material or protective plates together with a rope when lifting, to avoid damage or scratches to the indoor unit.
- Have the customer actually operate the indoor unit while looking at the operation manual.
   Instruct the customer how to operate the unit (particularly cleaning of the air filters, operation procedures, and temperature adjustment).
- For selection of installation location, use the installation pattern paper (used in common with the packing case) as reference.
- Do not use the air conditioner in salty atmosphere such as coastal areas, vehicles, vessels or areas where voltage fluctuation is frequent such as factories.
- Take off static electricity from the body when opening the control box cover panel and when carrying out wiring.
   The electric parts may be damaged.

# 2-1 ACCESSORIES

# Check if the following accessories are attached to the indoor unit.

Name	(1) Drain hose	(2) Metal clamp	(3) Washer for hanger	(4) Clamp	(5) Washer clamp
Quantity	1 pc.	1 pc.	8 pcs.	10 pcs.	4 sheets
Shape					
Name	Joint insulat	ing material	Sealing material	(10) Elbow	(11) Installation pat- tern paper
Quantity	2 pcs.	1 pc.	(8): 1 sheet (9): 3 sheets	1 pc.	1 sheet
Shape	(6) For gas piping	(7) For liquid piping	(8) Large (9) Small		Used in common with packing
Name	(12) Blocking mate- rial	(13) L-bent piping	(14) Screw	(15) Non woven fab- ric	(Miscellaneous)
Quantity	1 pc.	1 pc.	5 pcs.	1 sheet	Operation man-
Shape					ual Installation manual Declaration of conformity

# 2-2 OPTIONAL ACCESSORIES

4

- For this indoor unit, the remote controller is separately required.

  (Note that the remote controller is not required for simultaneous operation slave units.)
- There are 2 kinds of remote controller; wired type and wireless type.
   Install the remote controller to the place where the customer has given consent.
   Refer to the catalog for the applicable model.
   (Refer to the installation manual attached to the remote controller for how to install.)

# CARRY OUT THE WORK GIVING CAUTION TO THE FOLLOWING ITEMS AND AFTER THE WORK IS COMPLETED CHECK THESE AGAIN.

# 1. Items to be checked after the installation work is completed

Items to be checked	In case of defective	Check column
Is the air conditioner rigidly fixed?	Drop · vibration · noise	
Is the installation work of the air conditioner complete?	Does not operate · burnout	
Have you carried out a leakage test with the test pressure specified in the outdoor unit installation manual?	Does not cool / Does not heat	
Is the insulation of refrigerant piping and drain piping completely carried out?	Water leakage	
Does the drain flow out smoothly?	Water leakage	
Is the power supply voltage identical to that stated in the manufacturer's label on the air conditioner?	Does not operate · burnout	
Are you sure that there is no wrong wiring nor piping or no loose wiring?	Does not operate · burnout	
Is earthing completed?	Danger in case of leakage	
Are the sizes of electric wiring according to the specification?	Does not operate · burnout	
Is any of air outlets or inlets of the air conditioner blocked with obstacles? (It may lead to capacity drop due to fan speed drop or malfunction of equipment.)	Does not cool / Does not heat	
Have you recorded the refrigerant piping length and the refrigerant charge added?	Refrigerant charge amount is not clear	

Make sure to recheck the items of "SAFETY PRECAUTIONS".

# 2. Items to be checked at delivery

Items to be checked	Check column
Have you carried out field setting? (if necessary)	
Are the control box cover, the air filter and the suction grille attached?	
Does the cool air discharge during the cooling operation and the warm air discharge during heating operation?	
Have you explained how to operate the air conditioner showing the operation manual to the customer?	
Have you explained the description of cooling, heating, program dry and automatic (cooling/heating) given in the operation manual to the customer?	
If you set the fan speed at thermostat OFF, did you explain the set fan speed to the customer?	
Have you handed the operation manual and the installation manual to the customer?	

# Points of the operation explanation

In addition to the general usage, since the items in the operation manual with the  $\triangle$  WARNING and  $\triangle$  CAUTION marks are likely to result in human bodily injuries and property damages, it is necessary not only to explain these items to the customer but also to have the customer read them. It is also necessary to explain the items of "NOT MALFUNCTION OF THE AIR CONDITIONER" to the customer and have the customer read them carefully.

# 3. SELECTION OF INSTALLATION LOCATION

Hold the hangers at 4 places to move the indoor unit when unpacking or after unpacked, and do not apply force to the piping (refrigerant and drain) and resin parts.

- (1) Select the installation location that meets the following conditions and get approval of the customer.
  - Where the cool and warm air spreads evenly in the room.
  - · Where there is no obstacles in the air passage.
  - Where drainage can be ensured.
  - Where the ceiling lower surface is not inclined.
  - Where there is sufficient strength to withstand the mass of the indoor unit (if the strength is insufficient, the indoor unit may vibrate and get in contact with the ceiling and generate unpleasant chattering noise).
  - Where a space sufficient for installation and service can be ensured. (Refer to Fig. 1 and Fig. 2)
  - Where the piping length between the indoor and the outdoor units is ensured within the allowable length. (Refer to the installation manual attached to the outdoor unit.)
  - Where there is no risk of flammable gas leak.

To determine the minimum floor area (only for R32 refrigerant). Use the graph or table to determine the minimum floor area. See figure 1 on the inside of the front cover.

m Total refrigerant charge in the system

A<sub>min</sub> Minimum floor area

- (a) Ceiling-mounted unit (= Ceiling-mounted unit)
- (b) Wall-mounted unit (= Wall-mounted unit)
- (c) Floor-standing unit (= Floor-standing unit)

[Required installation space [mm]]

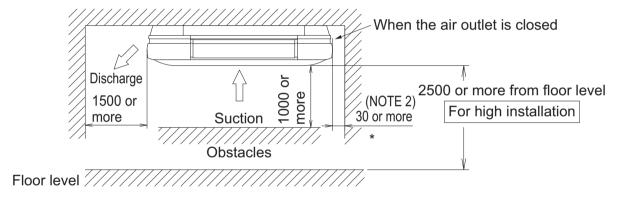


Fig. 1

\*: Sufficient service space is required for removing the corner cover. (NOTE 2)

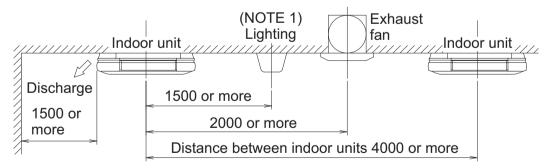


Fig. 2

# - / CAUTION

• Install the indoor and outdoor units, power supply wiring, remote controller wiring and transmission wiring at least 1 meter away from televisions or radios to prevent image interference or noise.

(Depending on the radio waves, a distance of 1 meter may not be sufficient to eliminate the noise.)

Install the indoor unit as far as possible from fluorescent lamps.
 If a wireless remote controller kit is installed, the transmission distance may be shorter in a room where an electronic lighting type (inverter or rapid start type) fluorescent lamp is installed. (NOTE 1)

#### NOTE TO

- 1. Restriction applies to the exposed type lighting but does not apply to the recessed type.
- 2. When the air outlet is closed, the space shown with " \* " must have a distance of 30mm or more.
- 3. For setting the airflow direction of horizontal blade, refer to the operation manual attached to the indoor unit and remote controller.

### (2) Ceiling height

- This indoor unit can be hung from the ceiling of which height is up to 3.5m (models 100·125: up to 4.0m).
- However, if the ceiling height exceeds 2.7m (models 100·125: 3.2m), it is necessary to set on site from the remote controller. Refer to the section "10. FIELD SETTING".

# (3) Air discharge direction

Select the air discharge pattern according to the installation location.

In case of 2-way and 3-way, it is required to set on site from the remote controller.

For details, refer to the section "10. FIELD SETTING".

(Caution) Since there is some restriction on the piping connection side, make sure to select the air discharge pattern from the **Fig. 3**.

The names of air outlet are shown in inscription by the number of "\[ \]" marks on the underside of the air outlet. (Refer to the Fig. 4)

# (4) Use hanging bolts for installation.

Investigate if the installation place can withstand the mass of the indoor unit and, if necessary, hang the unit with bolts after it is reinforced by beams etc.

(Refer to the installation pattern paper (11) for the mounting pitch.)

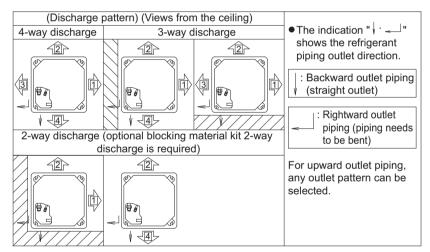


Fig. 3

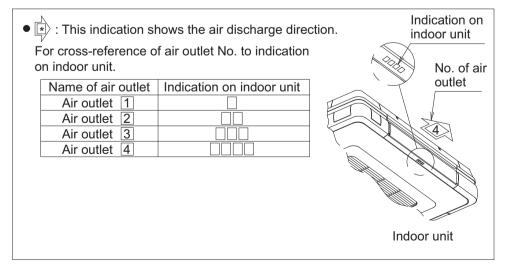


Fig. 4

# 4. PREPARATION BEFORE INSTALLATION

(1) Check the locations of indoor unit hanging bolts, piping outlet holes, drain piping outlet hole and electric wirings inlet hole. (The drawing shows the view from the ceiling.)
(Refer to Fig. 5 and Fig. 6)

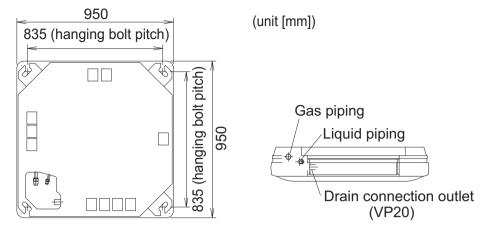


Fig. 5

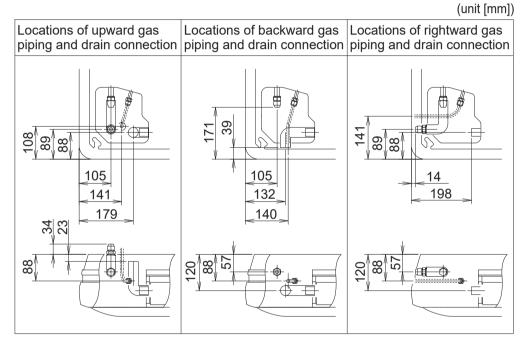


Fig. 6

# (2) Make holes for hanging bolts, piping outlet, drain piping outlet and electric wiring inlet.

- Use the installation pattern paper (11) which shows the above hole locations.
- Determine the locations of hanging bolts, piping outlet, drain piping outlet and electric wiring inlet. And make the hole.

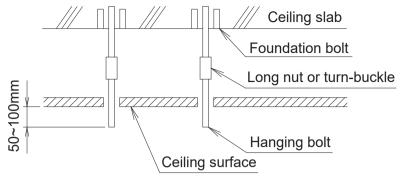


Fig. 7

# NOTE \*

The above shown parts are all field supply. (Refer to Fig. 7)

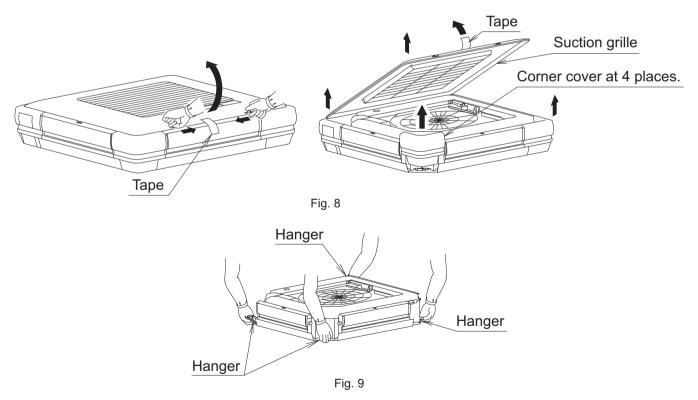
Use M8 or M10 bolts for hanging the indoor unit.
 Use hole-in-anchors for the existing bolts and embedded inserts or foundation bolts for new bolts, and fix the unit firmly to the building so that it may withstand the mass of the unit.
 In addition, adjust the distance from the ceiling in advance.

# (3) Remove the parts of the indoor unit.

# Remove the suction grille. (Refer to Fig. 8)

- Slide the two suction grille fixing knobs toward inner direction (as shown by an arrow) lifting upward. At the same time, have another person lift the tape stuck to the center of air outlet.
- When the suction grille is opened to approximately 45°, the grille can be removed from the unit.

#### Remove the 4 corner covers.



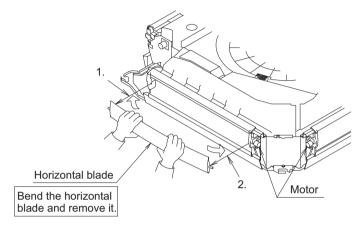
• When carrying the indoor unit, hold it by the hanging metal fittings. (Refer to Fig. 9)

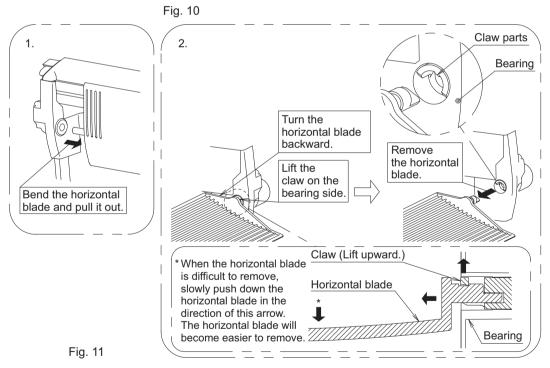
# How to block the air outlet for 2-way or 3-way air discharge

- For 2-way air discharge, in addition to the attached blocking material, the optional blocking material kit for 2-way discharge is required.
  - The attached blocking material and the optional blocking material for 2-way discharge can be used in common for any air outlet.
- For 2-way air discharge, give caution to the inclination of the indoor unit when installing. For details, follow the instruction mentioned in the section "5. INSTALLATION OF THE INDOOR UNIT".

# (1) Remove the horizontal blade of the air outlet to be blocked. (Refer to Fig. 10 and Fig. 11)

- 1. Without applying force to the bearings, lift the horizontal blade with both hands and remove it from the bearing at the side of the motor not mounted.
- 2. After turning the horizontal blade backward, remove the claw of the bearing on the motor side. Then, lift the horizontal blade and remove it.





# (2) Fix the blocking material to the air outlet. (Refer to Fig. 12 and Fig. 13)

- 1. Insert the projected part (2 places) of the blocking material into the clearance between the upper decoration panel and the insulation.
- Insert the bent part (2 places) at both ends of the blocking material into the clearance between the lower decoration panel and the drain pan until you hear a clicking sound.
   When doing this work, lift the end of the lower decoration panel slightly and insert the blocking material.
  - If it is difficult to insert it, first loosen the screws on the both sides of the lower decoration panel and then insert it.
- 3. Insert the bent part (2 places) inside the blocking material into the clearance between the lower decoration panel and the drain pan until you hear a clicking sound, and then fix the blocking material.

4. Check that the sheet metal section of the blocking material is not protruding from the end of the lower decoration panel.



Insert the

bent part.

hear a cliking

(Until you

sound.)

Fix the blocking material and the indoor unit tight so that no clearance remains. If clearance remains, it may cause air leakage and condensation.

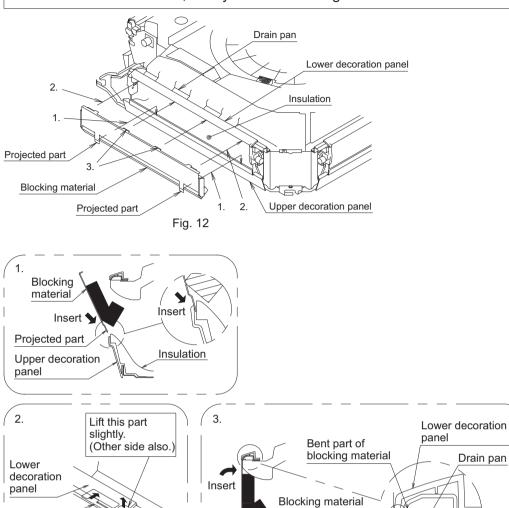


Fig.13

\* If the blocking material is difficult to insert, loosen the left and right screws of the lower decoration panel and insert it. Make sure to tighten the loosened screws again after the blocking material is fixed. (**Refer to Fig. 14**)

Insert so that the

sheet metal section

does not protrude

from the end of the

lower decoration panel.

Clearance between

panel and drain pan

lower decoration

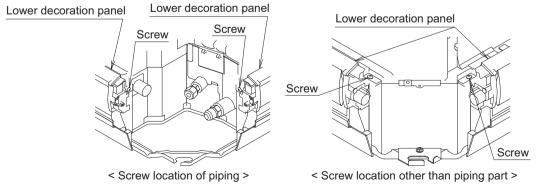


Fig.14

# 5. INSTALLATION OF THE INDOOR UNIT

((It is easy to attach the optional parts before installing the indoor unit. Refer to also the installation manual attached to the optional parts.))

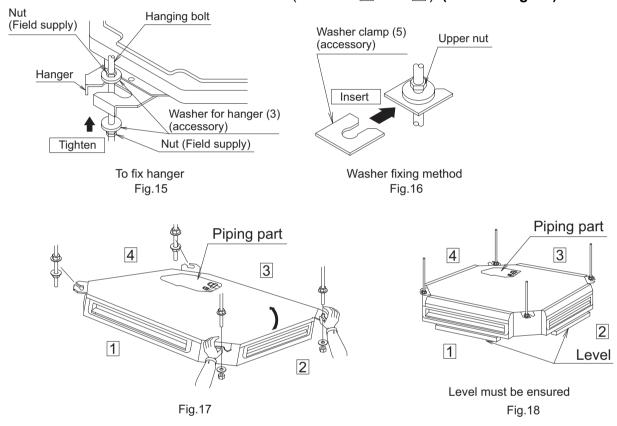
For installation, use the attached installation parts and specified parts.

(1) Attach the upper and lower nuts and the washers for the hanger (3) to the 4 hanging bolts.

### (Refer to Fig. 15)

If the attached washer clamp (5) is used, the washer for the hanger (3) can be prevented from falling off. (Refer to Fig. 16)

- (2) Installation of indoor unit. (Refer to Fig. 17)
  - Insert the hangers on the air outlet 4 side and hang them tentatively.
  - Insert the remaining 2 hanging bolts into the hanger and fix the underside washers for the hanger (3) and the nuts.
- (3) Check the level of the unit from 2 directions (air outlet 1 and 2). (Refer to Fig. 18)



- · Install the indoor unit leveled
  - If the unit is inclined and the drain piping side gets high, it may cause malfunction of a float switch and results in water leakage.
  - However, for 2-way air discharge, install the unit inclined 1° downward to the drain piping.
- Attach nuts on the upper and lower side of hanger
   If there is no upper nut and the lower nut is over-tightened, the hanging plate and the top plate will deform and cause abnormal sound.
- Do not insert materials other than that specified into the clearance between the hanger and the washer for hanger (3).
  - Unless the washers are properly attached, the hanging bolts may come off from the hanger.

# - ∕N WARNING

- The indoor unit must be securely installed on a place that can withstand the mass. If the strength is insufficient, the unit may fall down and cause injuries.
- Only use accessories, optional equipment and spare parts made or approved by DAIKIN.
- Installation shall be done by an installer, the choice of materials and installation shall comply with the applicable legislation.

In Europe, the EN378 is the applicable standard that shall be used.

# Instructions for equipment using R32 refrigerant

- Do NOT pierce or burn.
- Do NOT use means to accelerate the defrosting process or to clean the equipment, other than those recommended by the manufacturer.
- Be aware that R32 refrigerant does NOT contain an odour.

# 6. REFRIGERANT PIPING WORK

- For the outdoor unit refrigerant piping, refer to the installation manual attached to the outdoor unit.
- Carry out insulation of both gas and liquid refrigerant piping securely. If not insulated, it may cause water leakage. For gas piping, use insulation material of which heat resistant temperature is not less than 120°C.
   For use under high humidity, strengthen the insulation material for refrigerant piping. If not strengthened, the surface of insulation material may sweat.
- Before installation work, make sure that the refrigerant is used according outdoor unit specification. (Unless correct refrigerant, the normal operation...)
- Pipework shall be protected from physical damage.
- · Installation of pipework shall be kept to a minimum.

# - **/**∖

# / CAUTION

This air conditioner is a dedicated model for refrigerant R410A or R32. Make sure to meet the requirements shown below and carry out installation work.

- Use dedicated piping cutters and flaring tools according to the refrigerant used.
- When making a flare connection, coat the flared inner surface only with either oil or ester oil.
- Use only the flare nuts attached to the air conditioner. If other flare nuts are used, it may cause refrigerant leakage.
- To prevent contamination or moisture from getting into the piping, take measures such as pinching or taping the piping.

Do not mix substance other than the specified refrigerant such as air into the refrigeration circuit. If the refrigerant leaks during the work, ventilate the room.

Do NOT re-use joints which have been used already.

Joints made in installation between parts of refrigerant system shall be accessible for maintenance purposes.

# Refrigerant piping can be connected from 3 directions.

• In case of upward piping, remove the piping penetration cover, make holes for penetrating piping by cutting the cover with a cutter such as scissors.

After having the piping go through the cover, attach the cover to the indoor unit. (Refer to Fig. 19)

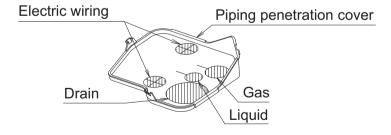


Fig.19

- The refrigerant is pre-charged in the outdoor unit.
- Use the flare nut attached to the air conditioner.

• When making a flare connection, coat the flared inner surface only with either oil or ester oil. (Refer to Fig. 20)

Then, turn the flare nut 3 to 4 times with your hand and screw in the nut.

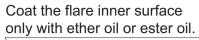




Fig. 20

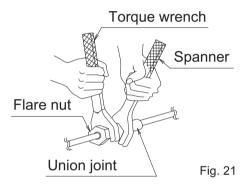


# Do not have oil adhere to the screw fixing part of resin parts.

If oil adheres, it may weaken the strength of screwed part.

• When connecting the piping to the air conditioner, make sure to use a spanner and a torque wrench as shown in **Fig. 21**.

For the dimension of flared part and the tightening torque, refer to the Table 1.



### ⟨⟨Example of unfavorable consequences⟩⟩

When tools other than spanners are used, the thread ridge of a flare nut will be damaged and cause gas leakage due to defective tightening.

Table 1

Piping size (mm)	Tightening torque (N⋅m)	Dimension for processing flare A (mm)	Flare shape
ф 6.4	15.7 ± 1.5	8.9 ± 0.2	±2°
ф 9.5	36.3 ± 3.6	13.0 ± 0.2	. P0.4-0.8
ф 12.7	54.9 ± 5.4	16.4 ± 0.2	90°±2°
ф 15.9	68.6 ± 6.8	19.5 ± 0.2	ō



# / CAUTION

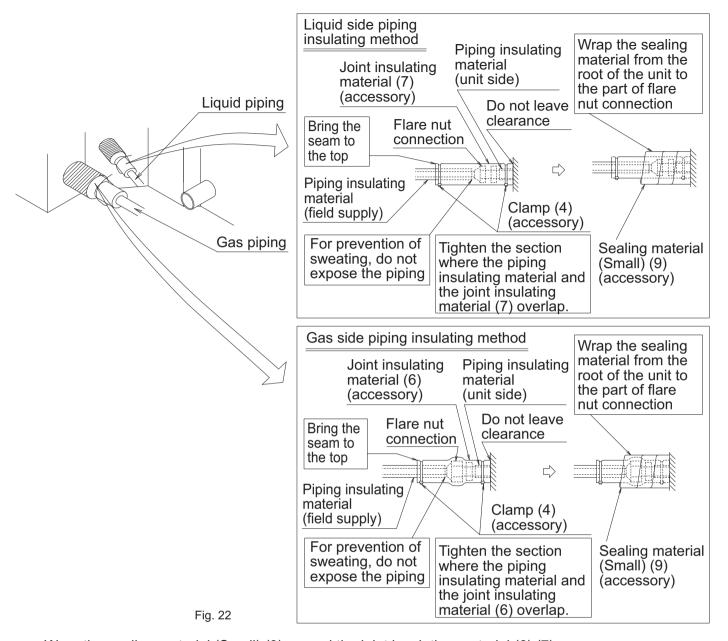
# Do not tighten flare nuts too tight.

If a flare nut cracks, the refrigerant may leak.

# Insulation of field piping must be carried out up to the connection inside the casing.

If the piping is exposed to the atmosphere, it may cause sweating, burn due to touching the piping, electric shocks or a fire due to the wiring touching the piping.

• After leak test, insulate both the gas and liquid piping connection with the attached joint insulating material (6) and (7) to prevent the piping from getting exposed. (Refer to Fig. 22)
Then, tighten the both ends of insulating material with the clamp (4).



- Wrap the sealing material (Small) (9) around the joint insulating material (6) (7).
- Make sure to bring the seam of joint insulating material (6) and (7) to the top.
- When carrying out upward and rightward piping, use the attached L-shaped piping, and insulate the 2 places of connection. (Refer to Fig. 23, 24)
   In addition, bend the liquid side field piping using a bender with radius is 40mm or less.
   If the attached L-shaped piping is not used or the piping is bent with a bender with radius more than 40mm, it may interfere with other piping or drain hose.

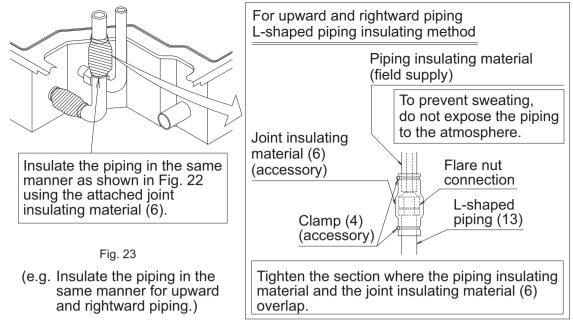


Fig. 24

(To prevent small animals and insects getting into the indoor unit, make sure to tightly fit the piping penetrating cover to the casing and seal the clearance between the piping and the hole with putty and insulating material (field supply).)

### NOTE \*\*

- 1. When carrying out leakage test of refrigerant piping and the indoor unit after the installation of indoor unit is finished, confirm the connecting outdoor unit installation manual for test pressure.

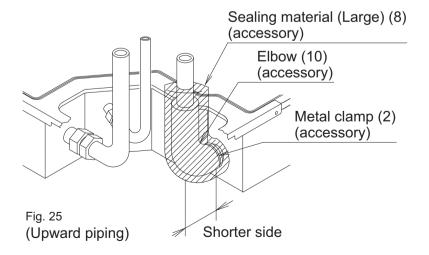
  Refer to also the outdoor unit installation manual or technical document for refrigerant piping.
- In case of refrigerant shortage due to forgetting additional refrigerant charge etc., it will result in malfunction such as does not cool or does not heat.Refer to the outdoor unit installation manual or technical document for refrigerant piping.

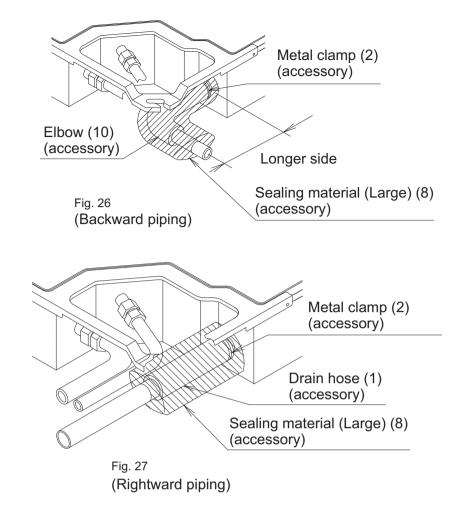
# 7. DRAIN PIPING WORK

#### (1) Carry out drain piping.

Carry out drain piping so that drainage can ensured.

• Drain piping can be connected from 3 directions. (Refer to Fig. 25, 26, and 27)





- Select the piping diameter equal to or larger than (except for riser) that of the connection piping (polyvinyl chloride piping, nominal diameter 20mm, outside diameter 26mm).
- Install piping as short as possible with downward inclination of 1/100 or more and without where air may stagnate. (Refer to Fig. 28)
   (It may cause abnormal sound such as bubbling noise.)

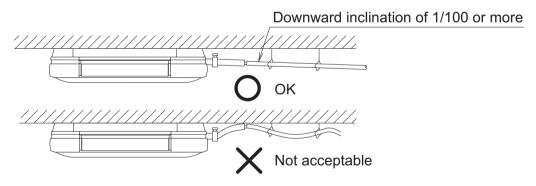
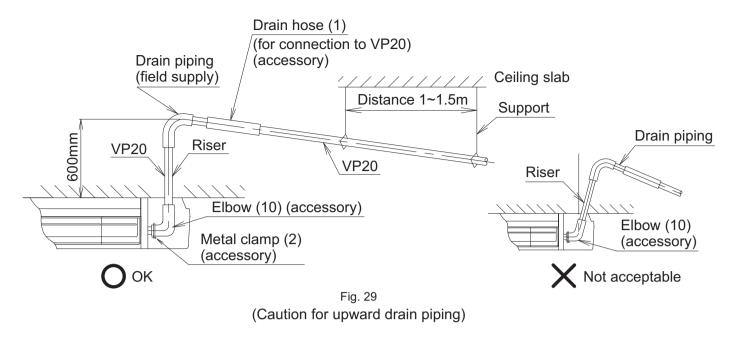


Fig. 28

# If drain stagnates in the drain piping, the piping may be clogged.

• Install supports at a distance of 1 to 1.5m so that the piping may not deflect. (Refer to Fig. 29)



Make sure to use the attached drain hose (1) (for rightward piping), the elbow (10) (for upward and backward piping) and metal clamp (2).

# If an old drain hose or an elbow or a clamp is used, it may cause water leakage.

• Insulate the piping that goes through indoors.

# - M CAUTION

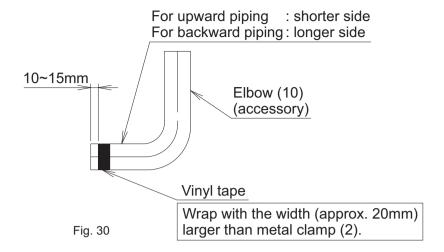
- To avoid the attached drain hose (1) getting excessive force, do not bend nor twist it. (It may cause water leakage.)
- Do not connect the drain piping directly to the sewage that gives off ammonia odor.

  The ammonia in the sewage may go through the drain piping and corrode the heat exchanger of the indoor unit.
- < Caution to be taken when carrying out upward drain piping >
- The maximum height of the drain riser is 600mm.
- Install the drain riser vertically. (Refer to Fig. 29)

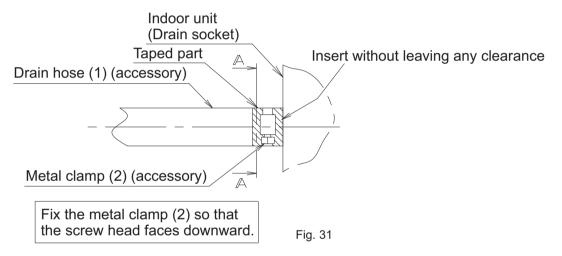
# If the drain riser is installed inclined, the float switch may malfunction and cause water leakage.

• Make sure to use the drain hose (1), the elbow (10) and the sealing material (Large) (8) attached to the indoor unit as accessories.

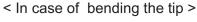
1. To prevent the elbow from getting damaged by the metal clamp (2) for upward and backward piping, wrap the vinyl tape around the elbow 2 to 3 times so that the tape covers more than the width of metal clamp (2) leaving 10 - 15 mm from the tip of the elbow (10) without wrapping as shown in **Fig. 30**.



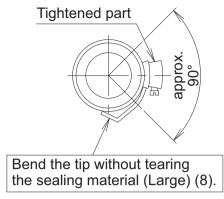
2. Insert the drain hose (1) and the elbow (10) to the root of the drain socket. Tighten the metal clamp (2) within the taped range of hose inserted tip with the torque 1.35±0.15N·m (135±15N·cm). (Refer to Fig. 25, 26, 27, and 31)



- Do not tighten the metal clamp (2) with the torque more than the specified value. The socket, the drain hose (1), the elbow (10) or the metal clamp (2) may be damaged. Fix the metal clamp (2) so that the tightened part may be in the range shown by **Fig. 32**.
  - 3. Wrap the vinyl tape around the end of the metal clamp (2) so that the sealing material (Large) (8) to be used at the next process may not be damaged with the clamp end or bend the tip of the metal clamp (2) inward as shown. (Refer to Fig. 32)



< In case of sticking vinyl tape >



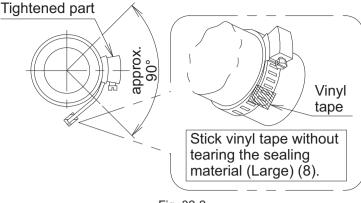
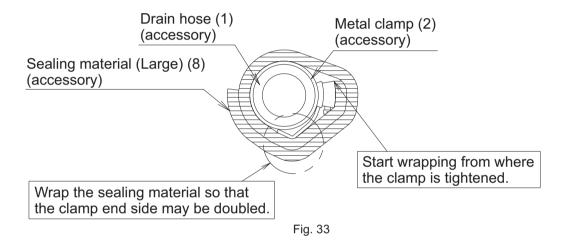


Fig. 32-1 (Section A - A of Fig. 31)

Fig. 32-2 (Section A - A of Fig. 31)

4. Insulate the metal clamp (2), the drain hose (1), the elbow (10) with the attached sealing material (Large) (8). (Refer to Fig. 25, 26, 27, and 33) (The metal clamp (2) may sweat and condensation may drip.)

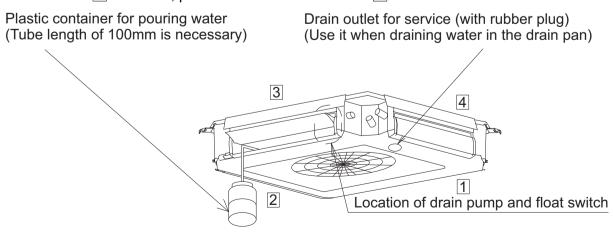


# (2) After piping is finished, check if the drain flows smoothly.

# [When the electric wiring work is finished]

• Gradually pour 1 liter of water from the air outlet 3 into the drain pan (Fig. 34) giving caution to avoid splashing water on the electric components such as drain pump and confirm drainage by operating the indoor unit under cooling mode according to "11. TEST OPERATION".

If the air outlet [3] is closed, pour water from the air outlet [2].

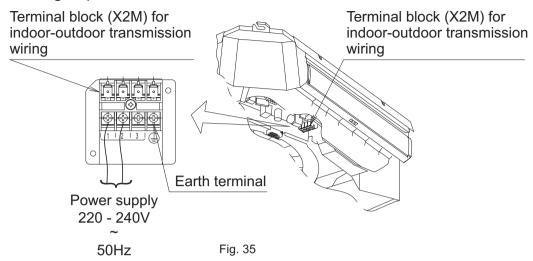


(How to pour water)

Fig. 34

### [When the electric wiring work is not finished]

- The electric wiring works (including earthing) must be carried out by a qualified electrician.
- If a qualified person is not present, after the electric wiring work is finished, check the drainage according to the method specified in [When the electric wiring work is finished].
  - 1. Open the control box cover and connect the single phase power supply to the terminal (1, 2) on the terminal block (X2M) for indoor-outdoor transmission wiring and the earth wiring to the earth terminal. (Refer to Fig. 35)



- 2. Make sure the control box cover is closed before turning on the power supply.
- 3. Gradually pour 1 liter of water from the air outlet 3 into the drain pan (Fig. 34) giving caution to avoid splashing water on the electric components such as drain pump.
  - If the air outlet [3] is closed, pour water from the air outlet [2].
- **4.** When the power supply is turned on, the drain pump will operate. Check drainage. (The drain pump will automatically stop after 10 minutes.)
- 5. Turn off the power supply after checking drainage, and remove the power supply wiring.
- **6.** Attach the control box cover as before.

# 8. ELECTRIC WIRING WORK

#### 8-1 GENERAL INSTRUCTIONS

- Make certain that all electric wiring work is carried out by qualified personnel according to the applicable legislation and this installation manual, using a separate dedicated circuit.
   Insufficient capacity of the power supply circuit or improper electrical construction may lead to electric shocks or a fire.
- Make sure to install an earth leakage breaker.
   Failure to do so may cause electrical shocks and a fire.
- Do not turn on the power supply (branch switch, branch overcurrent breaker) until all the works are finished.
- Multiple number of indoor units are connected to one outdoor unit. Name each indoor unit as A-unit, B-unit ..... and the like. When these indoor units are wired to the outdoor unit and the BS unit, always wiring the indoor unit to the terminal indicated with the same symbol on the terminal block. If the wiring and the piping are connected to the different indoor units and operated, it will result in malfunction.
- Make sure to earth the air conditioner. Earthing resistance should be according to applicable legislation.
- Do not connect the earth wiring to gas or water piping, lightning conductor or telephone earth wiring.
  - Gas piping ...... Ignition or explosion may occur if the gas leaks.
  - Water piping .... Hard vinyl tubes are not effective earths.
  - Lightning conductor or telephone earth wiring ...... Electric potential may rise abnormally if struck by a lightning bolt.
- For electric wiring work, refer to also the "WIRING DIAGRAM" attached to the control box cover.

- Carry out wiring between the outdoor units, indoor units and the remote controllers according to the wiring diagram.
- Carry out installation and wiring of the remote controller according to the "installation manual" attached to the remote controller.
- Do not touch the Printed Circuit Board assembly. It may cause malfunction.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- Use an all-pole disconnection type breaker with at least 3 mm between the contact point gaps that provide full disconnection under overvoltage category III.

#### 8-2 SPECIFICATION FOR FIELD SUPPLIED FUSES AND WIRING

- For the wiring of outdoor units, refer to the installation manual attached to the outdoor units.
- Remote controller and transmission wiring are field supplied. (Refer to Table 2)

#### Table 2

Component	Specification
Transmission wiring	4-core cable 1.5 mm²~2.5 mm² and applicable for 220~240 V H05RN-F (60245 IEC 57) (NOTE 1)
Remote controller wiring	Vinyl cords with 0.75 to 1.25 mm² sheath or cables (2-core wires) Maximum 500 m H03VV-F (60227 IEC 52) (NOTE 2)

<sup>\*</sup>This will be the total extended length in the system when doing group control.

#### NOTE TO

- 1. Shows only in case of protected piping. Use H07RN-F (60245 IEC 66) in case of no protection.
- 2. Vinyl cord with sheath or cable (Insulated thickness: 1mm or more)
- Wiring specifications are shown on the condition that the wiring has a voltage drop of 2%.

# 8-3 WIRING CONNECTION METHOD (Refer to Fig. 36)

· Transmission wiring, earth wiring

Remove the control box cover, match the symbol to that of the transmission wiring terminal block (X2M) and connect the wiring.

Connect the earth wiring also to the transmission wiring terminal block (X2M).

Then, lead the wiring into the indoor unit through the hole bored on the cover for penetrating piping according to the section "6. REFRIGERANT PIPING WORK" and bind the wiring with the clamp (4).

 Remote controller wiring (Note that the remote controller is not required for simultaneous operation slave units.)

Connect the remote controller wiring to [P1 · P2] of the terminal block (X1M) for remote controller. Bind the remote controller wiring with the clamp (4).

• Sticking non woven fabric (15).

To prevent wiring from floating, stick non woven fabric (15).

# - M CAUTION

 Never connect the power supply wiring to the terminal block for remote controller/transmission wiring (X1M).

It may damage the total system.

• Do not connect the remote controller/transmission wiring to the wrong terminal block.

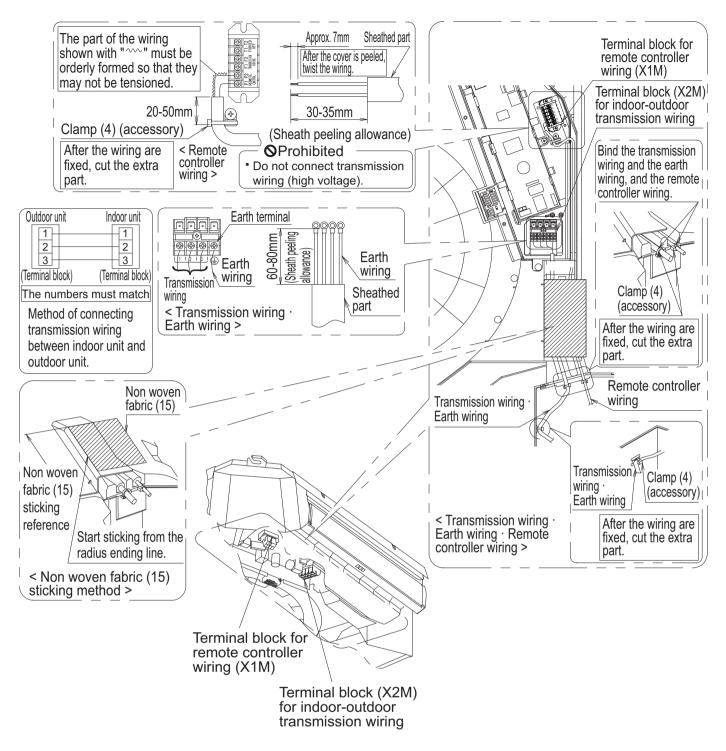


Fig. 36

# - / CAUTION FOR WIRING

• For connection to the terminal block for indoor-outdoor transmission wiring, use ring type crimp style terminals with insulation sleeve or treat the wiring with insulation. (Refer to Fig. 37)



Fig. 37

• If the above is not available, make sure to observe the following items. (Abnormal heating may occur if the wiring are not tightened securely.)

Connection of 2 wirings of same size must be carried out on both sides.

Connection of 2 wirings on one side is prohibited.

Connection of wiring of different sizes is prohibited.







Fig. 38

- Use the required wiring, connect them securely and fix these wiring so that external force may not apply to the terminals.
- Use a proper screw driver for tightening the terminal screws.
   If an improper screw driver is used, it may damage the screw head and a proper tightening cannot be carried out.
- If a terminal is over tightened, it may be damaged. Refer to the table shown below for tightening torque of terminals.

	Tightening torque (N · m)
Terminal block for remote controller wiring	$0.88 \pm 0.08$
Terminal block for transmission wiring	1.47 ± 0.14
Earth terminal	1.47 ± 0.14

· Do not carry out soldering finish when stranded wiring are used.

# - M CAUTION FOR MENDING THE COVER ■

- In case the cover for penetrating piping is cut off and used as wiring penetrating hole, after the wiring connection is finished, mend the cover.
- Cut the sealing material (Small) (9) into two pieces and wrap each wiring with each piece. (Refer to Fig. 39)
- Seal the clearance around the wiring with putty and insulating material (field supply). (If insects and small animals get into the indoor unit, short circuiting may occur inside the control box.)
- If the low voltage wiring (remote controller wiring) and the high voltage wiring (transmission wiring, earth wiring) are brought into the indoor unit from the same place, they may be affected by electric noise (outside noise) and cause malfunction or failure.
- Keep the distance of 50mm or more between the low voltage wiring (remote controller wiring) and the
  high voltage wiring (transmission wiring, earth wiring) at anywhere outside the indoor unit. If both the wirings are laid down together, they may be affected by electric noise (outside noise) and cause malfunction
  or failure.

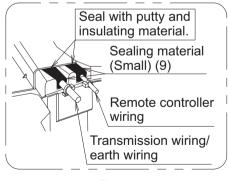


Fig. 39

# - ⚠ WARNING

When wiring, form the wiring orderly so that the control box cover can be securely fastened. If the control box cover is not in place, the wiring may float up or be sandwiched by the box and the cover and cause electric shocks or a fire.

# 8-4 WIRING EXAMPLES

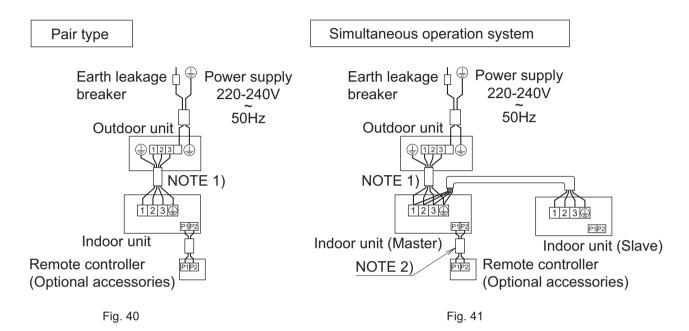
# - M CAUTION

Be sure to install an earth leakage breaker to the outdoor unit.

This is to avoid electric shocks or a fire.

For the wiring of outdoor units, refer to the installation manual attached to the outdoor units. **Confirm the system type.** 

- Pair type: 1 remote controller controls 1 indoor unit (standard system). (Refer to Fig. 40)
- Simultaneous operation system: 1 remote controller controls 2 indoor units (2 indoor units operates equally). (Refer to Fig. 41)



# NOTE \*\*

- 1. Terminal numbers of outdoor and indoor units must be matched.
- 2-1. Connect the remote controller only to the master unit.
- **2-2.** The remote controller needs to be wired only to the master unit; it does not need to be connected to the slave units through transition wiring. (Do not connect transition wiring to the slave units.)
- **2-3.** The indoor temperature sensor is effective only for indoor units to which the remote controller is connected.
- **2-4.** The length of wiring between the indoor unit and the outdoor unit varies depending on the connected model, the number of connected units, and the maximum piping length. For details, refer to the technical documents.

• **Group control:** 1 remote controller controls up to 16 indoor units (All indoor units operate according to the remote controller). **(Refer to Fig. 42)** 

Group control Power supply Power supply Power supply 220-240V 220-240V 220-240V Earth leakage Earth leakage Earth leakage [ 50Hz 50Hz 50Hz breaker breaker breaker Outdoor unit Outdoor unit Outdoor unit 123 NOTE) NOTE) NOTE) Indoor unit Indoor unit Indoor unit Group control remote controller

Fig. 42

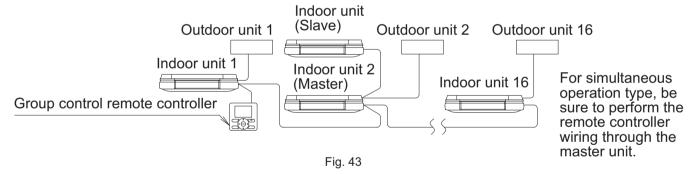
# NOTE \*\*

• Terminal numbers of outdoor and indoor units must be matched.

(Optional accessories)

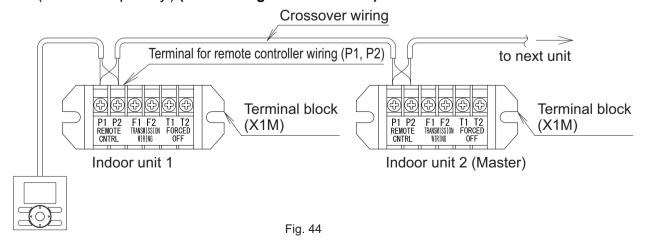
# When implementing group control

- When using as a pair unit or as a master unit for simultaneous multiple unit operation, you may carry out simultaneous start/stop (group) control up to 16 units with the remote controller. (Refer to Fig. 43)
- In this case, all the indoor units in the group will operate in accordance with the group control remote controller.
- · Select a remote controller which matches as many of the functions in the group as possible.



# < Wiring Method >

- (1) Remove the control box cover.
- (2) Connect crossover wiring between the terminals (P1, P2) inside the control box for the remote controller. (There is no polarity.) (Refer to Fig. 42 and Table 2)



• Control with 2 remote controllers: To control 1 indoor unit with 2 remote controllers. (Refer to Fig. 45)

Control with 2 remote controllers

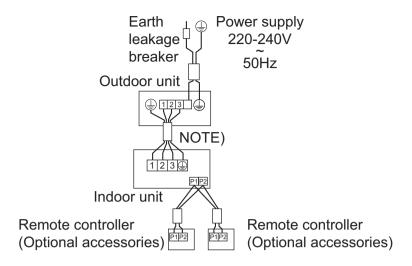


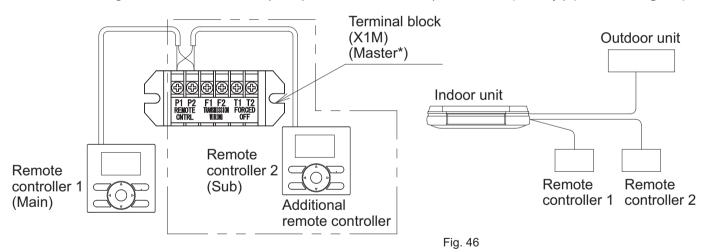
Fig. 45

- For control with 2 remote controllers, set one remote controller as Main and the other remote controller as Sub.
  - < Changeover method from Main to Sub and vice versa >

Refer to the installation manual attached to the remote controller.

# < Wiring Method >

- (1) Remove the control box cover according to the "8-3 WIRING CONNECTION METHOD".
- (2) Carry out additional wiring from the remote controller 2 (Sub) to the terminals (P1·P2) for remote controller wiring on the terminal block (X1M) in the control box. (There is no polarity.) (Refer to Fig. 46)



\* For simultaneous operation system, be sure to connect the remote controller to the master unit.

#### NOTE TO

Terminal numbers of outdoor and indoor units must be matched.

#### 8-5 FOR CENTRALIZED CONTROL

- By connecting the centralized control equipment, the SkyAir series can be centrally controlled as one group.
- The control wiring is field supply. Prepare it by referring to table shown below.
- For information on how to connect the centralized control equipment, refer to the operation manual and technical guide for the centralized control equipment.
- Connect the centralized equipment to the indoor unit connected to the remote controller.
- Only when the centralized equipment is connected to the group that is controlled with two remote controllers, make the "Master" and "Slave" settings for the remote controllers.

Wiring		Size mm²
Control wiring	Sheathed vinyl cord or cable (2 core) (NOTE)	0.75 - 1.25

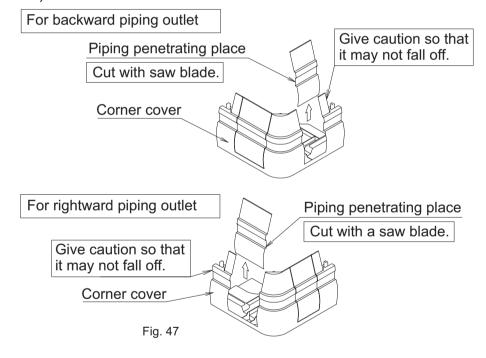
#### NOTE TO

• Vinyl cord with sheath or cable (Insulated thickness: 1 mm or more)

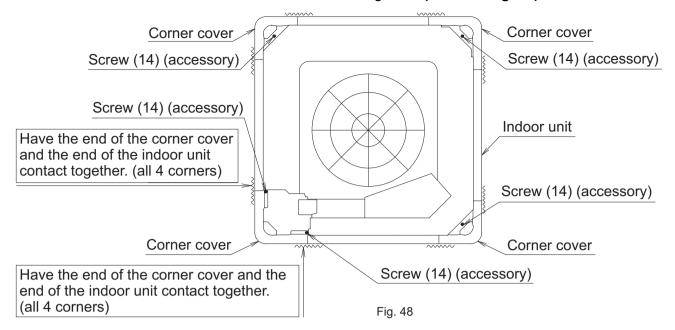
# 9. MOUNTING CORNER COVER · SUCTION GRILLE

((For test operation without the corner cover, first refer to "11. TEST OPERATION")

• For backward and rightward piping outlet, cut the corner cover as shown in **Fig. 47** and remove it. (When cutting, give caution and mount on the indoor unit so that the parts for the corner cover may not fall off.)



Attach the corner cover to the indoor unit.
 Then, fix the corner cover with the attached screws (14) while pressing the corner cover so that the end of the corner cover and the end of the indoor unit contact together. (Refer to Fig. 48)



- After attaching the suction grille in opposite order mentioned in the clause "4. PREPARATION BEFORE INSTALLATION (3)" (Refer to Fig. 49-(1)), hook the strap (a) for preventing the suction grille from falling (Refer to Fig. 49-(2)).
- Hook the strap (b) for preventing the suction grille from falling. (Refer to Fig. 49-(3))

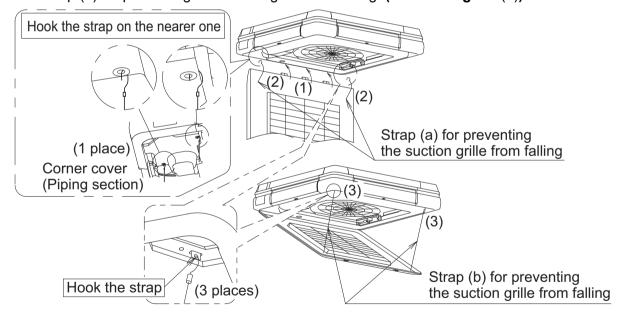


Fig. 49

# 10. FIELD SETTING

# - / CAUTION

Before carrying out field setting, check the items mentioned in the clause 2 "1. Items to be checked after the installation work is completed" on page 5.

- Check if all the installation and piping works for the air conditioners are completed.
- Check if the control box covers of the air conditioner are closed.

# $\langle\langle$ After turn on the power supply, carry out field setting from the remote controller according to the installation state. $\rangle\rangle$

- Carry out setting at 3 places, "Mode No.", "FIRST CODE No." and "SECOND CODE No.".
  - The settings shown by " \_\_\_\_\_ " in the table indicate those when shipped from the factory.
- The method of setting procedure and operation is shown in the installation manual attached to the remote controller.
  - (Note) Though setting of "Mode No." is carried out as a group, if you intend to carry out individual setting by each indoor unit or confirmation after setting, carry out setting with the Mode No. shown in the parenthesis ().
- Do not carry out setting other than those shown in the table.

#### 10-1 SETTING OF CEILING HEIGHT

• Set the SECOND CODE No. according to the ceiling height as shown in the Table 3.

#### Table 3

Sotting	Ceilin	g height (m)	Mode No.	FIRST	SECOND
Setting	FUA71AVEB9	FUA100~125AVEB9	Mode No.	CODE No.	CODE No.
Standard	2.7 or less	3.2 or less			01
High ceiling 1	2.7 - 3.0	3.2 - 3.6	13 (23)	0	02
High ceiling 2	3.0 - 3.5	3.6 - 4.0			03

# **10-2 SETTING FILTER SIGN**

- A message to inform the air filter cleaning time will be indicated on the remote controller.
- Set the SECOND CODE No. shown in the Table 4 according to the amount of dust or pollution in the room.
- Though the indoor unit is equipped with the long life filter, it is necessary to periodically clean the filter to avoid clogging of the filter. Please also explain the set time to the customer.
- The periodical filter cleaning time can be shortened depending on the environment.

#### Table 4

Contamination	Filter hours (long life type)	Mode No.	FIRST CODE No.	SECOND CODE No.
Normal	Approx. 2500 hrs	10 (20)	0	01
More contaminated	Approx. 1250 hrs			02
With indication  No indication*		10 (20)	2	01
			3	02

Use "No indication" setting when cleaning indication is not necessary such as the case of periodical cleaning being carried out.

### 10-3 SETTING AIR DISCHARGE DIRECTION

• When changing air discharge setting (2-way or 3-way discharge), set the SECOND CODE No. as shown in the Table 5.

Table 5

Setting	Mode No.	FIRST CODE No.	SECOND CODE No.
4-way air discharge			01
3-way air discharge	13 (23)	1	02
2-way air discharge			03

#### 10-4 SETTING FAN SPEED DURING THERMOSTAT OFF

- Set the fan speed according to the using environment after consultation with your customer.
- When the fan speed is changed, explain the set fan speed to your customer.

Table 6

Setting		Mode No.	FIRST CODE No.	SECOND CODE No.
Fan stops during thermostat	nermostat Normal 11 (21) 2		01	
OFF (Cooling · heating)	Stop	11 (21)	2	02
Fan speed during cooling	LL (Extra low)	12 (22) 6	6	01
thermostat OFF	Setting		02	
Fan speed during heating	LL (Extra low)	12 (22)	3	01
thermostat OFF	Setting	12 (22)	3	02

# 10-5 SETTING INDOOR UNIT NUMBER OF SIMULTANEOUS OPERATION SYSTEM

- When using in simultaneous operation system mode, change the SECOND CODE No. as shown in Table 7. (SECOND CODE No. is factory set to "01" for pair system.)
- When using in simultaneous operation system mode, refer to "10-6 SIMULTANEOUS OPERATION SYSTEM INDIVIDUAL SETTING" section to set master and slave units separately.

Table 7

Setting	Mode No.	FIRST CODE No.	SECOND CODE No.
Pair system (1 unit)			01
Simultaneous operation system (2-unit)	11 (21)	0	02
Simultaneous operation system (3-unit)			03

# 10-6 SIMULTANEOUS OPERATION SYSTEM INDIVIDUAL SETTING

It is easier if the optional remote controller is used when setting the slave unit.

#### < Procedure >

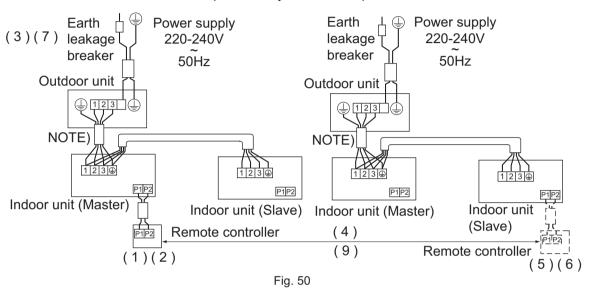
- Perform the following procedure when setting the master and slave unit separately.
- (1) Change the SECOND CODE No. to "02", individual setting, so that the slave unit can be individually set. (SECOND CODE No. is factory set to "01", for unified setting.)

Setting	Mode No.	FIRST CODE No.	SECOND CODE No.
Unified setting	11 (21)	1	01
Individual setting	11 (21)	I	02

- (2) Perform field setting (Refer to 10-5) for the master unit.
- (3) Turn off the main power supply switch after (2) is finished.
- (4) Detach remote controller from the master unit and connect it to the slave unit. \*

- (5) Turn on the main power supply switch again, and as in (1), change the SECOND CODE No. to "02", individual setting.
- (6) Perform field setting (Refer to 10-5) for the slave unit.
- (7) Turn off the main power supply switch after (6) is finished.
- (8) If there is more than one slave unit, repeat steps (4) to (7).
- (9) Detach the remote controller from the slave unit after the setting, and reattach to the master unit. This is the end of the setting procedure.
  - \*You do not need to rewire the remote controller from the master unit if the optional remote controller for slave unit is used. (However, remove the wiring attached to the remote controller terminal block of the master unit.)

After the slave unit setting, remove the remote controller wiring, and rewire the remote controller to the master unit. (The indoor unit does not operate properly when two or more remote controllers are attached to the unit in the simultaneous operation system mode.)



#### NOTE T

Terminal numbers of outdoor and indoor units must be matched.

# 10-7 SETTING WHEN AN OPTIONAL ACCESSORY IS ATTACHED

• For setting when attaching an optional accessory, refer to the installation manual attached to the optional accessory.

# 10-8 WHEN USING WIRELESS REMOTE CONTROLLER

• When using a wireless remote controller, it is necessary to set the wireless remote controller address. Refer to the installation manual attached to the wireless remote controller.

#### 11. TEST OPERATION

# 11-1 TO PERFORM A TEST RUN

# - M CAUTION

This task is only applicable when using the BRC1E52 or BRC1E53 user interface. When using any other user interface, see the installation manual or service manual of the user interface.

### NOTE TO

• **Backlight.** To perform an ON/OFF action on the user interface, the backlight does not need to be lit. For any other action, it needs to be lit first. The backlight is lit for ±30 seconds when you press a button.

# (1) Perform introductory steps.

# Table 8

#	Action  Open the liquid stop valve (A) and gas stop valve (B) by removing the stem cap and turning counter- clockwise with a hex wrench until it stops.
1	A B O O

- Close the service cover to prevent electric shocks.
   Turn On power for at least 6 hours before starting operation to protect the compressor.
- 4 On the user interface, set the unit to cooling operation mode.

# (2) Start the test run.

# Table 9

#	Action	Result
1	Go to the home menu	Cool Set to 28°C
	Press at least 4 seconds.	
2		The Service Setting menu is displayed.
	Select the Test Operation.	Service Settings 1/3
3		Test Operation
		Test Operation is displayed on the home menu.
	Press.	rest operation to displayed on the herite menta.
4		Cool  Test Operation
	Press within 10 seconds.	
5		Test run starts.

- (3) Check operation for 3 minutes.
- (4) Check operation of the airflow direction.

Table 10

#	Action	Result
1	Press.	Air Volume/direction  Air Volume  Direction  Position 0  Position 0  Air Volume  Position 0  Position 0
2	Select Position 0.	Air Volume/direction  _Air Volume Low  **Return Setting **

#	Action	Result		
3		If the airflow flap of the indoor unit moves, operation is OK. If not, operation is not OK.		
4	Press.	The home menu is displayed.		

# (5) Stop the test run.

#### Table 11

#	Action	Result
	Press at least 4 seconds.	
1		The Service Settings menu is displayed.
	Select Test Operation.	Service Settings 1/3
2		Test Operation Maintenance Contact Field Settlings Demand Min Setpoints Differential Group Address  Chaturn Settling
3	Press.	The unit returns to normal operation, and the home menu is displayed.

# 11-2 ERROR CODES WHEN PERFORMING A TEST RUN

If the installation of the outdoor unit has NOT been done correctly, the following error codes may be displayed on the user interface:

Error code	Possible cause		
Nothing displayed (The currently set temperature is not displayed)	<ul> <li>The wiring is disconnected or there is a wiring error (between power supply and outdoor unit, between outdoor unit and indoor units, between indoor unit and remote controller)</li> <li>The fuse on the outdoor unit PCB has blown out.</li> </ul>		
E3, E4 or L8	<ul><li>The stop valves are closed.</li><li>The air inlet or air outlet is blocked.</li></ul>		
E7	<ul> <li>There is a missing phase in case of three-phase power supply units.</li> <li>Note: Operation will be impossible. Turn OFF the power, recheck the wiring, and switch two of the three electrical wires.</li> </ul>		
L4	The air inlet or air outlet is blocked.		
U0	The sop valves are closed.		
U2	<ul> <li>There is a voltage imbalance.</li> <li>There is a missing phase in case of three-phase power supply units. Note: Operation will be impossible. Turn OFF the power, recheck the wiring, and switch two of the three electrical wires.</li> </ul>		
U4 or UF	The inter-unit branch wiring is not correct.		
UA	The outdoor and indoor unit are incompatible.		

# - / CAUTION

After test operation is completed, check the items mentioned in the clause 2 "2. Items to be checked at delivery" on page 5. If the interior finish work is not completed when the test operation is finished, for protection of the air conditioner, ask the customer not operate the air conditioner until the interior finish work is completed.

If the air conditioner is operated, the inside of the indoor units may be polluted by substances generated from the coating and adhesives used for the interior finish work and cause water splash and leakage.

# - <u>↑</u> To the operator carrying out test operation -

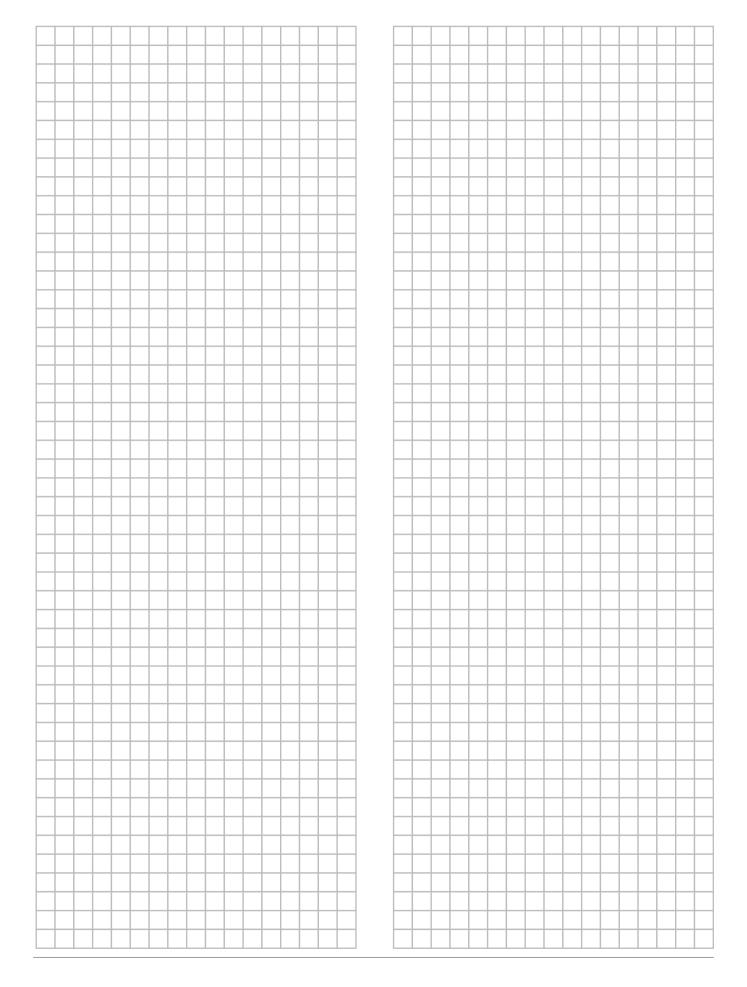
After test operation is completed, before delivering the air conditioner to the customer, confirm that the control box lid is closed.

In addition, explain the power supply status (power supply ON/OFF) to the customer.

# 12. UNIFIED WIRING DIAGRAM

	Unified Wirir	ng Diagram Le	egend	
For applied parts and num	bering, refer to the wiring diagram on the and is represented in the overv			numbers in ascending order for each par code.
	: CIRCUIT BREAKER	<b>(</b>	:	PROTECTIVE EARTH
	: CONNECTION		:	PROTECTIVE EARTH (SCREW)
◎-(   ○ 0,   )-	: CONNECTOR	A	:	RECTIFIER
Ŧ	: EARTH	-	<b>—</b> )— :	RELAY CONNECTOR
	: FIELD WIRING	00	:	SHORT-CIRCUIT CONNECTOR
<del></del>	: FUSE		· :	TERMINAL
INDOOR	: INDOOR UNIT		:	TERMINAL STRIP
OUTDOOR	: OUTDOOR UNIT	0	:	WIRE CLAMP
BLK : BLACK	GRN : GREEN	PNK : PI	INK	WHT : WHITE
BLU : BLUE	GRY : GREY	PRP, PPL: PU	URPLE	YLW : YELLOW
BRN : BROWN	ORG : ORANGE	•	ED	•
A*P	: PRINTED CIRCUIT BOARD	PS	:	SWITCHING POWER SUPPLY
BS*	: PUSHBUTTON ON/OFF, OPERATION SV		* :	THERMISTOR PTC
BZ, H*O	: BUZZER	Q*	:	INSULATED GATE BIPOLAR TRANSISTOR
C*	: CAPACITOR	3		(IGBT)
AC*, CN*, E*, HA*, HE*, HL*, HN*		Q*DI		EARTH LEAK CIRCUIT BREAKER
HR*, MR*_A, MR*_B, S*, U, V,	3020, 3020	Q*L		OVERLOAD PROTECTOR
W, X*A, K*R_*		Q*M	•	THERMO SWITCH
D*, V*D	: DIODE	R*		RESISTOR
DB*	: DIODE : DIODE BRIDGE	R*T	:	THERMISTOR
DS*	: DIODE BRIDGE : DIP SWITCH	RC	:	RECEIVER
		S*C	-	
E*H	: HEATER		:	LIMIT SWITCH
F*U, FU* (FOR CHARACTERISTICS,	: FUSE	S*L	:	FLOAT SWITCH
REFER TO PCB INSIDE YOUR UNIT)		S*NP		PRESSURE SENSOR (HIGH)
FG*	: CONNECTOR (FRAME GROUND)	S*NP		PRESSURE SENSOR (LOW)
H*	: HARNESS		H, HPS* :	PRESSURE SWITCH (HIGH)
H*P, LED*, V*L	: PILOT LAMP, LIGHT EMITTING DIODE	S*PL		PRESSURE SWITCH (LOW)
HAP	: LIGHT EMITTING DIODE (SERVICE MOI		:	THERMOSTAT
HIGH VOLTAGE	: HIGH VOLTAGE	S*RF		HUMIDITY SENSOR
IES	: INTELLIGENT EYE SENSOR		SW* :	OPERATION SWITCH
IPM*	: INTELLIGENT POWER MODULE	SA*,		SURGE ARRESTOR
K*R, KCR, KFR, KHuR, K*M	: MAGNETIC RELAY	·	WLU :	SIGNAL RECEIVER
L	: LIVE	SS*	:	SELECTOR SWITCH
L*	: COIL		ET METAL :	TERMINAL STRIP FIXED PLATE
L*R	: REACTOR	T*R	:	TRANSFORMER
M*	: STEPPER MOTOR	TC, T		TRANSMITTER
M*C	: COMPRESSOR MOTOR	V*, R		VARISTOR
M*F	: FAN MOTOR	V*R	:	DIODE BRIDGE
M*P	: DRAIN PUMP MOTOR	WRC		WIRELESS REMOTE CONTROLLER
M*S	: SWING MOTOR	X*	:	TERMINAL
MR*, MRCW*, MRM*, MRN*	: MAGNETIC RELAY	X*M	:	TERMINAL STRIP (BLOCK)
N	: NEUTRAL	Y*E	:	ELECTRONIC EXPANSION VALVE COIL
n=*, N=*	: NUMBER OF PASSES THROUGH FERR	•	Y*S :	REVERSING SOLENOID VALVE COIL
PAM	: PULSE-AMPLITUDE MODULATION	Z*C	:	FERRITE CORE
PCB*	: PRINTED CIRCUIT BOARD	ZF, Z	ː*F :	NOISE FILTER
PM*	: POWER MODULE			





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