INSTALLATION MANUAL

SPLIT SYSTEM Air Conditioners

MODELS
(Ceiling suspension type)

FHQ35BVV1B **FHQ35BWV1B**
FHQ50BVV1B **FHQ50BWV1B**
FHQ60BVV1B **FHQ60BWV1B**
FHQ71BVV1B
FHQ100BVV1B
FHQ125BVV1B

READ THESE INSTRUCTIONS CAREFULLY BEFORE INSTALLATION.
KEEP THIS MANUAL IN A HANDY PLACE FOR FUTURE REFERENCE.

LESEN SIE DIESE ANWEISUNGEN VOR DER INSTALLATION SORGFÄLTIG DURCH.
BEWAHREN SIE DIESE ANLEITUNG FÜR SPÄTERE BEZUGNAHME GRIFFBEREIT AUF.

LIRE SOIGNEUSEMENT CES INSTRUCTIONS AVANT L'INSTALLATION.
CONSERVER CE MANUEL A PORTEE DE MAIN POUR REFERENCE ULTERIEURE.

LEA CUIDADOSAMENTE ESTAS INSTRUCCIONES ANTES DE INSTALAR.
GUARDE ESTE MANUAL EN UN LUGAR A MANO PARA LEER EN CASO DE TENER ALGUNA DUDA.

PRIMA DELL'INSTALLAZIONE LEGGERE ATTENTAMENTE QUESTE ISTRUZIONI.
TENERE QUESTO MANUALE A PORTATA DI MANO PER RIFERIMENTI FUTURI.

ΔΙΑΒΑΣΤΕ ΠΡΟΣΕΚΤΙΚΑ ΑΥΤΕΣ ΤΙΣ ΟΔΗΓΙΕΣ ΠΡΙΝ ΑΠΟ ΤΗΝ ΕΓΚΑΤΑΣΤΑΣΗ ΕΧΕΤΕ ΑΥΤΟ ΤΟ ΕΓΧΕΙΡΙΔΙΟ ΕΥΚΑΙΡΟ ΓΙΑ ΝΑ ΤΟ ΣΥΜΒΟΥΛΕΥΕΣΤΕ ΣΤΟ ΜΕΛΛΟΝ.

LEES DEZE INSTRUCTIES ZORGVULDIG DOOR VOOR INSTALLATIE. BEWAAR DEZE HANDLEINDING WAAR U HEM KUNT TERUGVINDEN VOOR LATERE NASLAG.

LEIA COM ATENÇÃO ESTAS INSTRUÇÕES ANTES DE REALIZAR A INSTALAÇÃO.
MANTENHA ESTE MANUAL AO SEU ALCANCE PARA FUTURAS CONSULTAS.

ПЕРЕД НАЧАЛОМ МОНТАЖА ВНИМАТЕЛЬНО ОЗНАКОМЬТЕСЬ С ДАННЫМИ ИНСТРУКЦИЯМИ. СОХРАНИТЕ ДАННОЕ РУКОВОДСТВО В МЕСТЕ, УДОБНОМ ДЛЯ ОБРАЩЕНИЯ В БУДУЩЕМ.

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
CE - ЗАЯВЛЕНИЕ-О-СООТВЕТСТВИИ
CE - OPFYLDELSESERKLÆRING
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 - DECLARAŢIE-DE-CONFORMITATE

CE - IZJAVA O SKLADNOSTI
CE - VASTAVUSDEKLARATSIOON
CE - ДЕКЛАРАЦИЯ-ЗА-СЪОТВЕТСТВИЕ

CE - ATITIKTIES-DEKLARACIJA
CE - ATBILSTĪBAS-DEKLARĀCIJA
CE - VYHLÁSENIE-ZHODY
CE - UYUMLULUK-BİLDİRİSİ

DAIKIN INDUSTRIES, LTD.

01 (GB) 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 (NL) 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 (GR) 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 (RUS) заявляет, исключительно под свою ответственность, что модели кондиционеров воздуха, к которым относится настоящее заявление:
10 (DK) 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 (FIN) ilmoittaa yksinomaan omalla vastuullaan, että tämän ilmoituksen tarkoittamat ilmastointilaitteiden mallit:
14 (CZ) prohlašuje ve své plné odpovědnosti, že modely klimatizace, k nimž se toto prohlášení vztahuje:
15 (HR) 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 (PL) deklaruje na własną i wyłączną odpowiedzialność, że modele klimatyzatorów, których dotyczy niniejsza deklaracja:
18 (RO) declară pe proprie răspundere că aparatele de aer condiţionat la care se referă această declaraţie:
19 (SLO) z vso odgovornostjo izjavlja, da so modeli klimatskih naprav, na katere se izjava nanaša:
20 (EST) kinnitab oma täielikul vastutusel, et käesoleva deklaratsiooni alla kuuluvad kliimaseadmete mudelid:
21 (BG) декларира на своя отговорност, че моделите климатична инсталация, за които се отнася тази декларация:
22 (LT) visiška savo atsakomybe skelbia, kad oro kondicionavimo prietaisų modeliai, kuriems yra taikoma ši deklaracija:
23 (LV) ar pilnu atbildību apliecina, ka tālāk uzskaitīto modeļu gaisa kondicionētāji, uz kuriem attiecas šī deklarācija:
24 (SK) vyhlasuje na vlastnú zodpovednosť, že tieto klimatizačné modely, na ktoré sa vzťahuje toto vyhlásenie:
25 (TR) tamamen kendi sorumluluğunda olmak üzere bu bildirinin ilgili olduğu klima modellerinin aşağıdaki gibi olduğunu beyan eder:

(I) FHY35BJV1, FHY45BJV1, FHY60BJV1, FHY71BJV1, FHY100BJV1, FHY125BJV1, FH35BJV1, FH45BJV1, FH60BJV1

(II) FHYP35BV1, FHYP45BV1, FHYP60BV1, FHYP71BV1, FHYP100BV1, FHYP125BV1, FH35BZV1, FH45BZV1, FH60BZV1

(III) FHQ35BUV1B, FHQ50BUV1B, FHQ60BUV1B, FHQ71BUV1B, FHQ100BUV1B, FHQ125BUV1B
FHQ35BVV1B, FHQ50BVV1B, FHQ60BVV1B, FHQ71BVV1B, FHQ100BVV1B, FHQ125BVV1B
FUQ71BUV1B, FUQ100BUV1B, FUQ125BUV1B, FUQ71BVV1B, FUQ100BVV1B, FUQ125BVV1B
FAQ71BUV1B, FAQ100BUV1B, FAQ71BVV1B, FAQ100BVV1B
FVQ71BV1B, FVQ100BV1B, FVQ125BV1B

01 are in conformity with the following standard(s) or other normative document(s), provided that these are used in accordance with our instructions:
02 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:
08 estão em conformidade com a(s) seguinte(s) norma(s) ou outro(s) documento(s) normativo(s), desde que estes sejam utilizados de acordo com as 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 instrukser:
11 respektive utrustning är utförd i överensstämmelse med och följer följande standard(er) eller andra normgivande dokument, under förutsättning att användning sker i överensstämmelse med våra instruktioner:
12 respektive 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 mukaisesti:
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 instrukcjami:
18 sunt în conformitate cu următorul (următoarele) standard(e) sau alt(e) document(e) normativ(e), cu condiţia ca acestea să fie utilizate în conformitate cu instrucţiunile 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 инструкции:
22 atitinka žemiau nurodytus standartus ir (arba) kitus norminius dokumentus su sąlyga, kad yra naudojami pagal mūsų 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 s našim návodom:
25 ürünün, talimatlarımıza göre kullanılması koşuluyla aşağıdaki standartlar ve norm belirten belgelerle uyumludur:

EN60335-2-40,

01 following the provisions of:
02 gemäß den Vorschriften der:
03 conformément aux stipulations des:
04 overeenkomstig de bepalingen van:
05 siguiendo las disposiciones de:
06 secondo le prescrizioni per:
07 με τήρηση των διατάξεων των:
08 de acordo com o previsto em:
09 в соответствии с положениями:
10 under iagttagelse af bestemmelserne i:
11 enligt villkoren i:
12 gitt i henhold til bestemmelsene i:
13 noudattaen määräyksiä:
14 za dodržení ustanovení předpisu:
15 prema odredbama:
16 követi a(z):
17 zgodnie z postanowieniami Dyrektyw:
18 în urma prevederilor:
19 ob upoštevanju določb:
20 vastavalt nõuetele:
21 следвайки клаузите на:
22 laikantis nuostatų, pateikiamų:
23 ievērojot prasības, kas noteiktas:
24 održiavajúc ustanovenia:
25 bunun koşullarına uygun olarak:

Low Voltage 2006/95/EC
Machinery Safety 98/37/EC
Electromagnetic Compatibility 2004/108/EC *

01 Directives, as amended.
02 Direktiven, gemäß Änderung.
03 Directives, telles que modifiées.
04 Richtlijnen, zoals geamendeerd.
05 Directivas, según lo enmendado.
06 Direttive, come da modifica.
07 Οδηγιών, όπως έχουν τροποποιηθεί.
08 Directivas, conforme alteração em.
09 Директив со всеми поправками.
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.
19 Direktive z vsemi spremembami.
20 Direktiivid koos muudatustega.
21 Директиви, с техните изменения.
22 Direktyvose su papildymais.
23 Direktīvās un to papildinājumos.
24 Smernice, v platnom znení.
25 Değiştirilmiş halleriyle Yönetmelikler.

01 * as set out in <A> and judged positively by <B> according to the **Certificate <C>**.
02 * wie in der <A> aufgeführt und von <B> positiv beurteilt gemäß **Zertifikat <C>**.
03 * tel que défini dans <A> et évalué positivement par <B> conformément au **Certificat <C>**.
04 * zoals vermeld in <A> en positief beoordeeld door <B> overeenkomstig **Certificaat <C>**.
05 * como se establece en <A> y es valorado positivamente por <B> de acuerdo con el **Certificado <C>**.
06 * delineato nel <A> e giudicato positivamente da <B> secondo il **Certificato <C>**.
07 * όπως καθορίζεται στο <A> και κρίνεται θετικά από το <B> σύμφωνα με το **Πιστοποιητικό <C>**.
08 * tal como estabelecido em <A> e com o parecer positivo de <B> de acordo com o **Certificado <C>**.
09 * как указано в <A> и в соответствии с положительным решением <B> согласно **Свидетельству <C>**.
10 * som anført i <A> og positivt vurderet af <B> i henhold til **Certifikat <C>**.
11 * enligt <A> och godkänts av <B> enligt **Certifikatet <C>**.
12 * som det fremkommer i <A> og gjennom positiv bedømmelse av <B> ifølge **Sertifikat <C>**.
13 * jotka on esitetty asiakirjassa <A> ja jotka <B> on hyväksynyt **Sertifikaatin <C>** mukaisesti.
14 * jak bylo uvedeno v <A> a pozitivně zjištěno <B> v souladu s **osvědčením <C>**.
15 * kako je izloženo u <A> i pozitivno ocijenjeno od strane <B> prema **Certifikatu <C>**.
16 * a(z) <A> alapján, a(z) <B> igazolta a megfelelést, a(z) **<C> tanúsítvány** szerint.
17 * zgodnie z dokumentacją <A>, pozytywną opinią <B> i **Świadectwem <C>**.
18 * aşa cum este stabilit în <A> şi apreciat pozitiv de <B> în conformitate cu **Certificatul <C>**.
19 * kot je določeno v <A> in odobreno s strani <B> v skladu s **certifikatom <C>**.
20 * nagu on näidatud dokumendis <A> ja heaks kiidetud <B> järgi vastavalt **sertifikaadile <C>**.
21 * както е изложено в <A> и оценено положително от <B> съгласно **Сертификата <C>**.
22 * kaip nustatyta <A> ir kaip teigiamai nuspręsta <B> pagal **Sertifikatą <C>**.
23 * kā norādīts <A> un atbilstoši <B> pozitīvajam vērtējumam saskaņā ar **sertifikātu <C>**.
24 * ako bolo uvedené v <A> a pozitívne zistené <B> v súlade s **osvedčením <C>**.
25 * <A>'da belirtildiği gibi ve <C> **Sertifikasına** göre <B> tarafından olumlu olarak değerlendirildiği gibi.

	(I)	(II)	(III)
<A>	DAIKIN.TCF.004J1/07-2007	DAIKIN.TCF.016D1/07-2007	DAIKIN.TCF.021E5/11-2007
<B>	KEMA Quality B.V.	KEMA Quality B.V.	KEMA Quality B.V.
<C>	59277-KRQ/ECM95-4233	81728-KRQ/ECM98-4341	2024351-QUA/EMC02-4565

3P104327-1F

DAIKIN

Shinri Sada
Manager Quality Control Department
1st of April 2009

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CONTENTS

The English text is the original instruction. Other languages are translations of the original instructions.

1. SAFETY PRECAUTIONS

Please read these “SAFETY PRECAUTIONS” carefully before installing air conditioning equipment and be sure to install it correctly.

Meaning of WARNING and CAUTION notices.
Both are important notices for safety. Be sure to follow them.

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

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

After completing installation, conduct a test operation to confirm that the equipment operates without any problems. Then, explain to the customer how to operate the equipment and take care of it following the operation manual. Ask the customer to store the installation manual along with the operation manual for future reference.
This air conditioner comes under the term “appliances not accessible to the general public”.

⚠ WARNING

- Ask your dealer or qualified personnel to carry out installation work.
  Do not attempt to install the air conditioner yourself. Improper installation may result in water leakage, electric shocks or fire.
- Install the air conditioner in accordance with the instructions in this installation manual.
  Improper installation may result in water leakage, electric shocks or fire.
- When installing the unit in a small room, take measures so that the refrigerant may not exceed the limiting concentration in the event of refrigerant leakage.
  Contact your dealer for further information. If the refrigerant leaks and exceeds the limiting concentration, it may lead to oxygen deficiency.

- Be sure to use only the specified accessories and parts for installation work.
  Failure to use the specified parts may result in the unit falling, water leakage, electric shocks or fire.
- Install the air conditioner on a foundation strong enough to withstand the weight of the unit.
  If a foundation does not have sufficient strength, the equipment may fall and cause injury.
- Carry out the required installation work in consideration of strong winds, typhoons or earthquakes.
  If the installation work is not properly carried out, the unit may fall down and cause accidents.
- The electrical work must be carried out by the qualified electrician in accordance with the local laws and regulations and this installation manual. Make sure to provide a dedicated power supply circuit and never connect additional wiring to the existing circuit.
  An insufficient power supply capacity or improper electrical work may lead to electric shocks or fire.
- Be sure to earth the air conditioner.
  Do not earth the unit to a utility pipe, lightning conductor or telephone earth lead.
  Imperfect earthing may result in electric shocks 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.
- Be sure to switch off the unit before touching any electrical parts.
  Touching a live part may result in electric shock.
- For wiring, use the specified wires and connect and fasten them firmly so that no external force from the wires may be applied to the terminal connections.
  If the wires are not firmly connected and fastened, it may cause heating, fire or the like.
- Wiring for power supply and between the indoor and outdoor units must be properly laid and formed, and the control box lid must be firmly fastened so that the wiring may not push up the structural parts such as the lid.
  If the lid is improperly fastened, it may cause electric shock or fire.
- If refrigerant gas leaks during installation, ventilate the area immediately.
  Toxic gas may be produced if the refrigerant comes into contact with fire.
- After completing installation, check for refrigerant gas leakage.
  Toxic gas may be produced if the refrigerant gas leaks into the room and comes into contact with a source of fire, such as a fan heater, stove or cooker.
- Do not directly touch refrigerant that has leaked from refrigerant pipes or other areas, as there is a danger of frostbite.

⚠ CAUTION

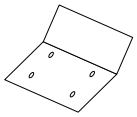
- Carry out drain piping properly following this installation manual and insulate the pipe to prevent condensation.
  Improper drain piping may result in indoor water leakage and property damage.
- Install the indoor and outdoor units, power cord and connecting wires at least 1 meter away from televisions or radios to prevent picture interference and noise.
  (Depending on the incoming signal strength, a distance of 1 meter may not be sufficient to eliminate noise.)
- Install the indoor unit as far as possible from fluorescent lamps.
  If a wireless kit is installed in a room where the electronic lighting type (inverter or rapid start types) fluorescent lamps exist, the transmitting distance of a remote controller may be shorter.
- Do not install the air conditioner in the following locations:
  1. Where there is a high concentration of mineral oil spray or vapour (e.g. a kitchen).
     Plastic parts may deteriorate and cause parts to fall off or water to leak.
  2. Where corrosive gas, such as sulphurous acid gas, is produced.
     Corrosion of copper pipes or brazed parts may occur and cause refrigerant leakage.
  3. Where there is a machine that generates electromagnetic wave and where voltage fluctuation often occurs such as a factory.
     Control system may malfunction and as a result the unit may not properly operate.
  4. Where flammable gas may leak, where carbon fibre or ignitable dust is suspending in the air, or where volatile flammables such as paint thinner or gasoline are handled.
     Operating the unit in such conditions may result in fire.
- The air conditioner is not intended for use in a potentially explosive atmosphere.

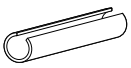
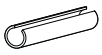
2. BEFORE INSTALLATION

- **When moving the unit while removing it from the carton box, be sure to lift it by holding on to the four lifting lugs without exerting any pressure on other parts, especially swing flap, the refrigerant piping, drain piping, and other resin parts.**
- Be sure to check the type of refrigerant to be used before installing the unit. (Using an incorrect refrigerant will prevent normal operation of the unit.)
- The accessories needed for installation must be retained in your custody until the installation work is completed. Do not discard them!
- Decide upon a line of transport.
- Leave the unit inside its packaging while moving, until reaching the installation site. 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 unit.
- When selecting installation site, refer to the paper pattern.
- For the installation of an outdoor unit, refer to the installation manual attached to the outdoor unit.
- Do not use the unit in locations with high salt content in the air such as beachfront property, locations where the voltage fluctuates such as factories, or in automobiles or marine vessels.

2-1 ACCESSORIES

Check the following accessories are included with your unit.

Name	1) Drain hose	2) Clamp	3) Washer for hanger bracket	4) Clamp	5) Paper pattern for installation
Quantity	1 pc.	1 pc.	8 pcs.	6 pcs.	1 pc.
Shape					

Name	Insulation for fitting	Sealing pad	
Quantity	1 each.	1 each.	(Other) Operation manual Installation manual
Shape	6) For gas pipe  7) For liquid pipe 	8) Large  9) Small 	

2-2 OPTIONAL ACCESSORIES

- The remote controller are required for this indoor unit “Table 1” on page 3.
  (However, the remote controller is not required for the slave unit of a simultaneous operation system.)
- These are two types of remote controllers: wired and wireless. Select a remote controller from “Table 1” on page 3 according to customer request and install in an appropriate place.

Table 1

Remote controller type	Cooling only type	Heat pump type
Wired type	BRC1D528, BRC1C61	
Wireless type	BRC7EA66	BRC7EA63W

NOTE

- If you wish to use a remote controller that is not listed in “Table 1” on page 3, select a suitable remote controller after consulting catalogs and technical materials.

FOR THE FOLLOWING ITEMS, TAKE SPECIAL CARE DURING CONSTRUCTION AND CHECK AFTER INSTALLATION IS FINISHED.

a. Items to be checked after completion of work

Items to be checked	If not properly done, what is likely to occur	Check
Are the indoor and outdoor unit fixed firmly?	The units may drop, vibrate or make noise.	
Is the gas leak test finished?	It may result in insufficient cooling.	
Is the unit fully insulated?	Condensate water may drip.	
Does drainage flow smoothly?	Condensate water may drip.	
Does the power supply voltage correspond to that shown on the name plate?	The unit may malfunction or the components burn out.	
Are wiring and piping correct?	The unit may malfunction or the components burn out.	
Is the unit safely grounded?	Dangerous at electric leakage.	
Is wiring size according to specifications?	The unit may malfunction or the components burn out.	
Is something blocking the air outlet or inlet of either the indoor or outdoor units?	It may result in insufficient cooling.	
Are refrigerant piping length and additional refrigerant charge noted down?	The refrigerant charge in the system is not clear.	

b. Items to be checked at time of delivery

* Also review the “SAFETY PRECAUTIONS”

Items to be checked	Check
Did you explain about operations while showing the instruction manual to your customer?	
Did you hand the instruction manual over to your customer?	

c. Points for explanation about operations

The items with ⚠ WARNING and ⚠ CAUTION marks in the instruction manual are the items pertaining to possibillties for bodily injury and material damage in addition to the general usage of the product. Accordingly, it is necessary that you make a full explanation about the described contents and also ask your customers to read the instruction manual.

2-3 NOTE TO THE INSTALLER

Be sure to instruct customers how to properly operate the unit (especially cleaning filters, operating different functions, and adjusting the temperature) by having them carry out operations themselves while looking at the manual.

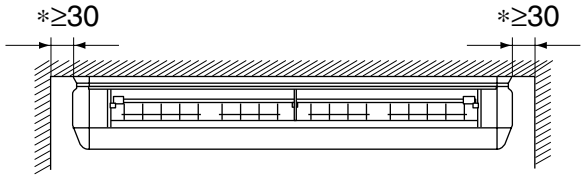
3. SELECTING INSTALLATION SITE

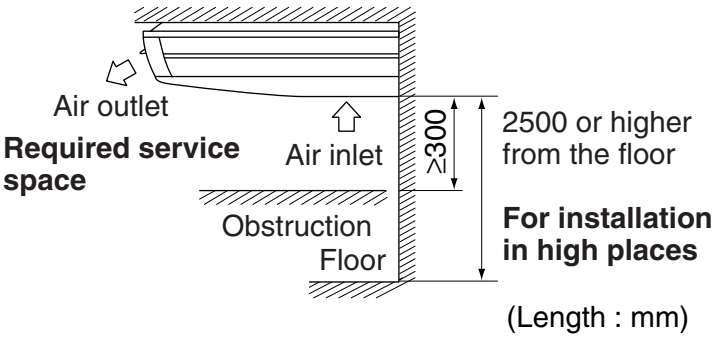
(1) Select an installation site where the following conditions are fulfilled and that meets your customer's approval.

- Where optimum air distribution can be ensured.
- Where nothing blocks air passage.
- Where condensate can be properly drained.
- Where the ceiling is strong enough to bear the indoor unit weight.
- Where the false ceiling is not noticeably on an incline.
- Where there is no risk of flammable gas leakage.
- Where sufficient clearance for maintenance and service can be ensured.

NOTE

- If there is space left over in the * section, opening it up 200 mm will make servicing easier.





(Length : mm)

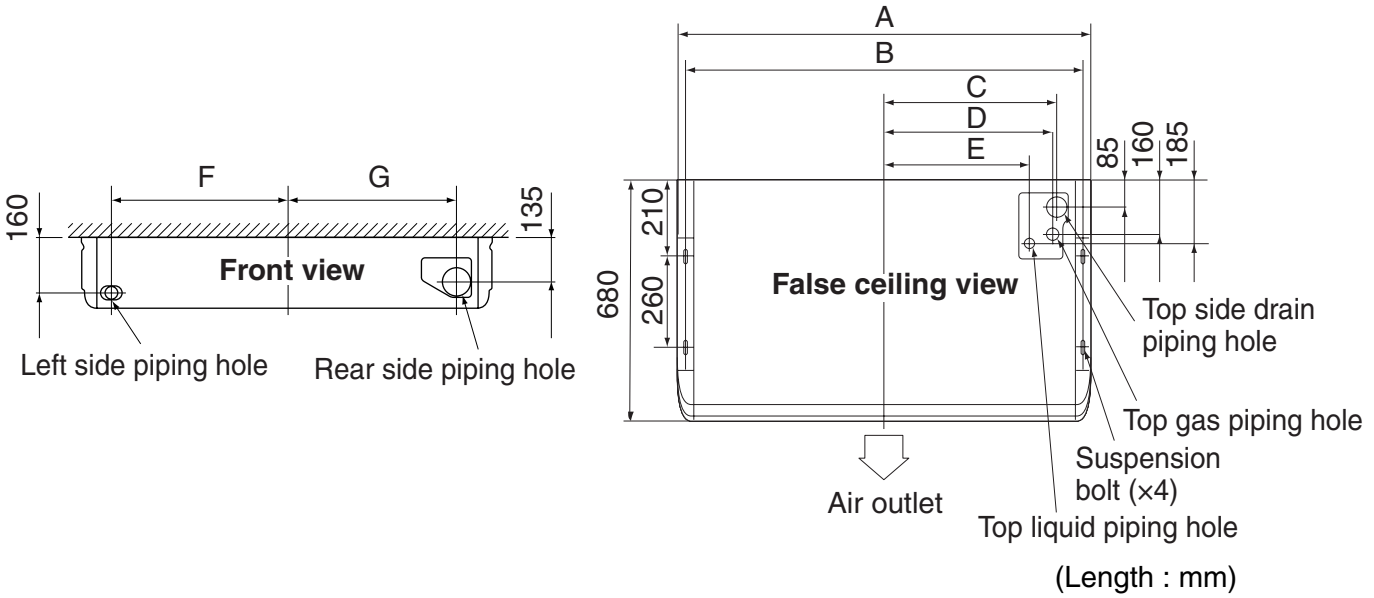
- Where piping between indoor and outdoor units is possible within the allowable limit. (Refer to the installation manual for the outdoor unit.)
- Install the indoor and outdoor units, power cord and connecting wires at least 1 meter away from televisions or radios in order to prevent image interference or noise.
  (Depending on the radio waves, a distance of 1 meter may not be sufficient enough to eliminate the noise.)

(2) Use suspension bolts for installation. Check whether the ceiling is strong enough to support the weight of the unit or not. If there is a risk, reinforce the ceiling before installing the unit.
(Installation pitch is marked on the paper pattern for installation. Refer to it to check for points requiring reinforcing.)

(3) This product may be installed on ceilings up to 3.5 m in height. However, if the ceiling is higher than 2.7 m, the remote control will have to be set locally. (Refer to "10. FIELD SETTINGS" on page 19)

4. PREPARATIONS BEFORE INSTALLATION

(1) Relation of holes for indoor unit, suspension bolt position, piping and wiring.



(Length : mm)

Model	A	B	C	D	E	F	G
Type 35, 45, 50	960	920	390	375	310	400	375
Type 60, 71	1160	1120	490	475	410	500	475
Type 100	1400	1360	610	595	530	620	595
Type 125	1590	1550	705	690	625	715	690

(2) Make holes for suspension bolts, refrigerant and drain piping, and wiring.

- Refer to the paper pattern for installation.
- Select the location for each of holes and open the holes in the ceiling.

(3) Remove the parts from the indoor unit.

(3-1) Detach the suction grille.

- Slide the locking knobs (×2) on the suction grille inward (direction of arrows) and lift upwards. **(Refer to Fig. 1)**
- With the suction grille open, remove the suction grille forward, holding on to the rear tabs on the suction grille. **(Refer to Fig. 2)**

Fig. 1

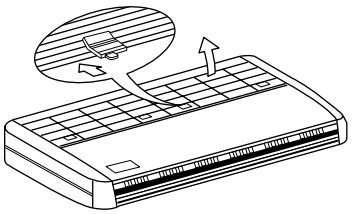
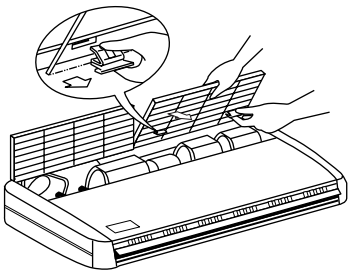


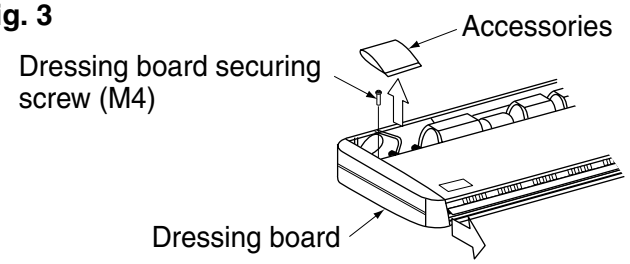
Fig. 2



(3-2) Remove the dressing boards (left and right).

- After removing the securing screws for the dressing boards (one each), pull them forward (in the direction of the arrow) and remove them. **(Refer to Fig. 3)**
- Take out the accessories.

Fig. 3



(3-3) Remove the hanger brackets.

- Loosen the 2 bolts (M8) used to attach the hanger brackets which are on each side (4 places left and right) to within 10 mm. **(Refer to Fig. 4. 5)**
- After removing the securing screws (M5) for the hanger brackets which are on the rear side, pull the hanger brackets back (in the direction of the arrow), and remove them. **(Refer to Fig. 5)**

Fig. 4

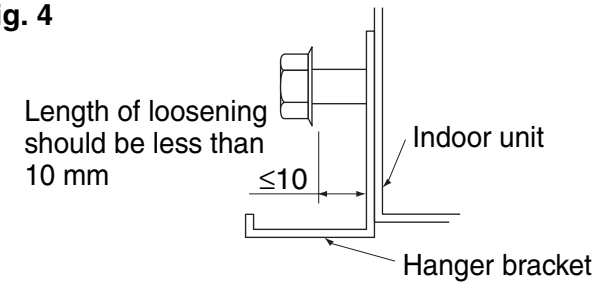
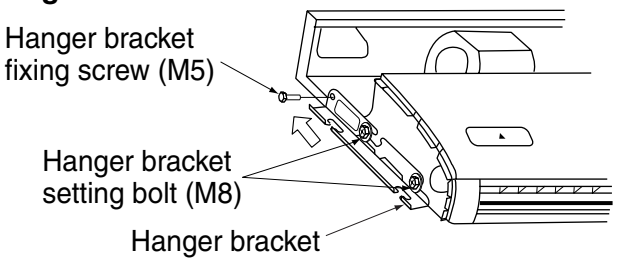


Fig. 5



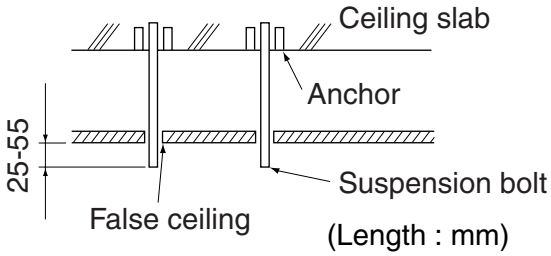
(4) Attach the suspension bolts. (Use suspension bolts which are W3/8 or M8-M10 in size.)

- Adjust the distance of the suspension bolts from the ceiling in advance. **(Refer to Fig. 6)**

NOTE

- Use a hole-in anchor for existing ceilings, and a sunken insert, sunken anchor or other field supplied parts for new ceilings to reinforce the ceiling to bear the weight of the unit. Adjust clearance from the ceiling before proceeding further.

Fig. 6



All the above parts are field supplied.

5. INDOOR UNIT INSTALLATION

It may be easier to attach accessory parts before installing the indoor unit. Therefore, please also read the instruction manuals which are provided with the accessory parts.
As for the parts to be used for installation work, be sure to use the provided accessories and specified parts designated by our company.

(1) Secure the hanger brackets to the suspension bolts. (Refer to Fig. 7)

NOTE
- To ensure they are safely secured, use the included washers, and secure them with double nuts to make sure.

(2) Lift the indoor unit's main body, insert the bolts (M8) for the hanger brackets into the attachment part on the hanger brackets, while sliding the main body from the front. (Refer to Fig. 8)

(3) Fasten the bolts for the hanger brackets (M8) securely in 4 places, left and right. (Refer to Fig. 8)

(4) Replace the screws for the hanger brackets which had been removed (M5) securely in 2 places left and right. This is necessary to prevent any forward and back slide in the main body of the indoor unit. (Refer to Fig. 8)

Fig. 7

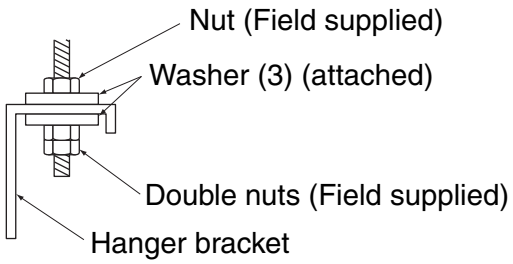
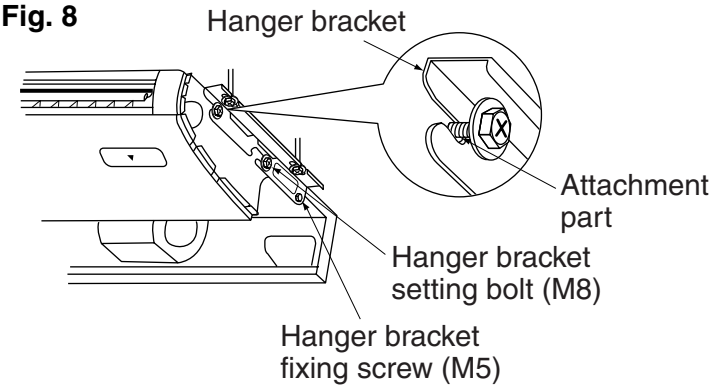
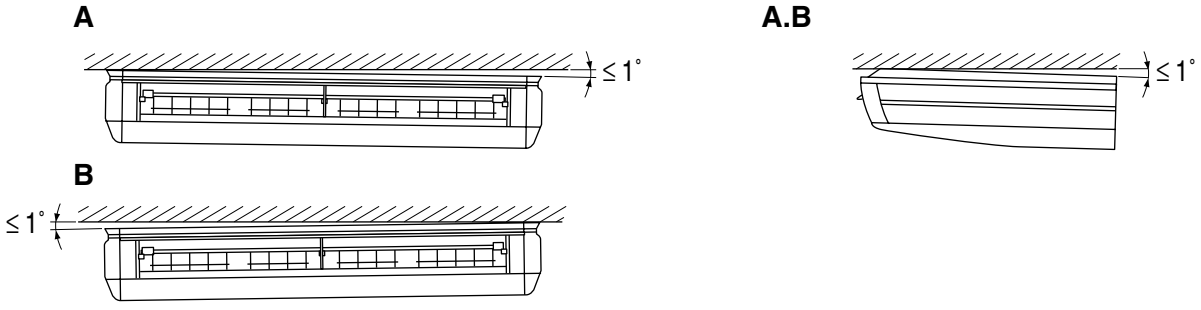


Fig. 8



(5) When hanging the indoor unit main body, be sure to use a level or a plastic tube with water in it to make sure the drain piping is set either level or slightly tilted, in order to ensure proper drainage. (Refer to Fig. 9)

Fig. 9



A.When the drain piping is tilted to the right, or to the right and back.
Place it level, or tilt it slightly to the right or the back. (Within 1°.)

B.When the drain piping is tilted to the left, or to the left and back.
Place it level, or tilt it slightly to the left or the back. (Within 1°.)

⚠ CAUTION
Setting the unit at an angle opposite to the drain piping might cause a water leakage.

6. REFRIGERANT PIPING WORK

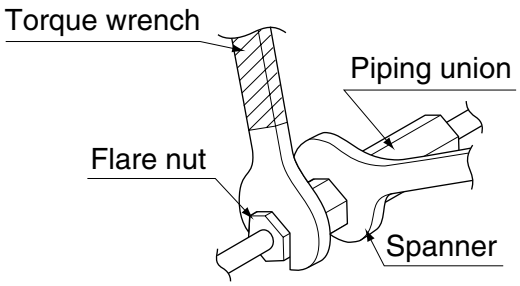
〈For refrigerant piping of outdoor units, see the installation manual attached to the outdoor unit.〉
〈Execute heat insulation work completely on both sides of the gas piping and the liquid piping. Otherwise, a water leakage can result sometimes.〉
(When using a heat pump, the temperature of the gas piping can reach up to approximately 120°C, so use insulation which is sufficiently resistant.)
〈Also, in cases where the temperature and humidity of the refrigerant piping sections might exceed 30°C or RH80 %, reinforce the refrigerant insulation. (20 mm or thicker) Condensation may form on the surface of the insulating material.〉
〈Before refrigerant piping work, check which type of refrigerant is used. Proper operation is not possible if the types of refrigerant are not the same.〉

⚠ CAUTION

- **Use a pipe cutter and flare suitable for the type of refrigerant.**
- **Apply ester oil or ether oil around the flare section before connecting.**
- **To prevent dust, moisuture or other foreign matter from infiltrating the tube, either pinch the end or cover it with tape.**
- **Do not allow anything other than the designated refrigerant to get mixed into the refrigerant circuit, such as air, etc. If any refrigerant gas leaks while working on the unit, ventilate the room thoroughly right away.**

- The outdoor unit is charged with refrigerant.
- Use copper alloy seamless pipes (ISO 1337).
- Be sure to use both a spanner and torque wrench together, as shown in the drawing, when connecting or disconnecting pipes to/from the unit. **(Refer to Fig. 10)**
- Refer to “Table 2” for the dimensions of flare nut spaces.
- When connecting the flare nut, apply ester oil or ether oil to the inside of the flare section, and spin 3-4 times before screwing in. **(Refer to Fig. 11)**

Fig. 10



NOTE

- Use the flare nut included with the unit main body.

⚠ CAUTION

Do not let oil get on the screw holders on the dressing board.
Oil can weaken the screw holders.

Fig. 11

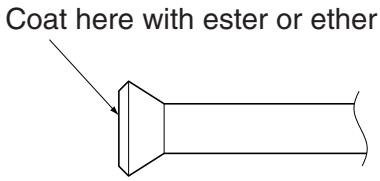
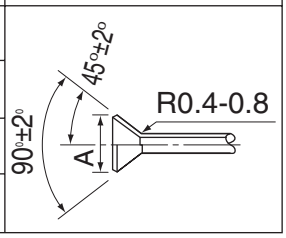


Table 2

Pipe size	Tightening torque	Flare dimensions A (mm) Type of refrigerant: R410A; Applicable model: FHQ	Flare
ϕ6.4(1/4”)	14.2-17.2 N • m	8.7 – 9.1	
ϕ9.5(3/8”)	32.7-39.9 N • m	12.8 – 13.2	
ϕ12.7(1/2”)	49.5-60.3 N • m	16.2 – 16.6	
ϕ15.9(5/8”)	61.8-75.4 N • m	19.3 – 19.7	

- Refer to “Table 2” to determine the proper tightening torque.

⚠ CAUTION

Overtightening may damage the flare and cause a refrigerant leakage.

— Not recommendable but in case of emergency

You must use a torque wrench but if you are obliged to install the unit without a torque wrench, you may follow the installation method mentioned below.

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

When you keep on tightening the flare nut with a spanner, there is a point where the tightening torque suddenly increases. From that position, further tighten the flare nut the angle shown below:

Pipe size	Further tightening angle	Recommended arm length of tool
ϕ6.4 (1/4”)	60 to 90 degrees	Approx. 150mm
ϕ9.5 (3/8”)	60 to 90 degrees	Approx. 200mm
ϕ12.7 (1/2”)	30 to 60 degrees	Approx. 250mm
ϕ15.9 (5/8”)	30 to 60 degrees	Approx. 300mm

— ⚠ CAUTION

CAUTION TO BE TAKEN WHEN BRAZING REFRIGERANT PIPING

“Do not use flux when brazing refrigerant piping. Therefore, use the phosphor copper brazing filler metal (BCuP-2: JIS Z 3264/B-Cu93P-710/795: ISO 3677) which does not require flux.”

(Flux has extremely harmful influence on refrigerant piping systems. For instance, if the chlorine based flux is used, it will cause pipe corrosion or, in particular, if the flux contains fluorine, it will damage the refrigerant oil.)

- Before brazing local refrigerant piping, nitrogen gas shall be blown through the piping to expel air from the piping.
  If you brazing is done without nitrogen gas blowing, a large amount of oxide film develops inside the piping, and could cause system malfunction.
- When brazing the refrigerant piping, only begin brazing after having carried out nitrogen substitution or while inserting nitrogen into the refrigerant piping. Once this is done, connect the indoor unit with a flared or a flanged connection.
- Nitrogen should be set to 0.02 MPa with a pressure-reducing valve if brazing while inserting nitrogen into the piping. **(Refer to Fig. 12)**

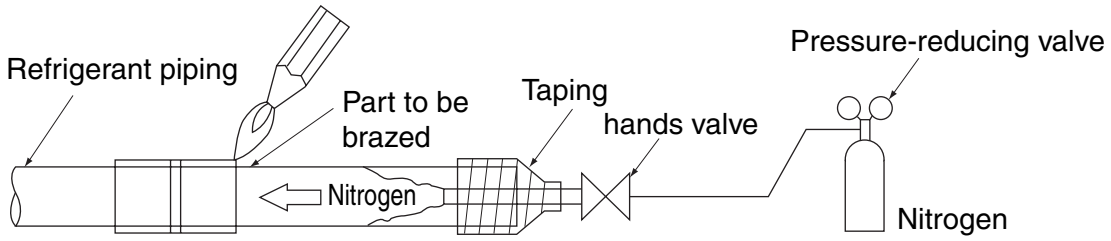


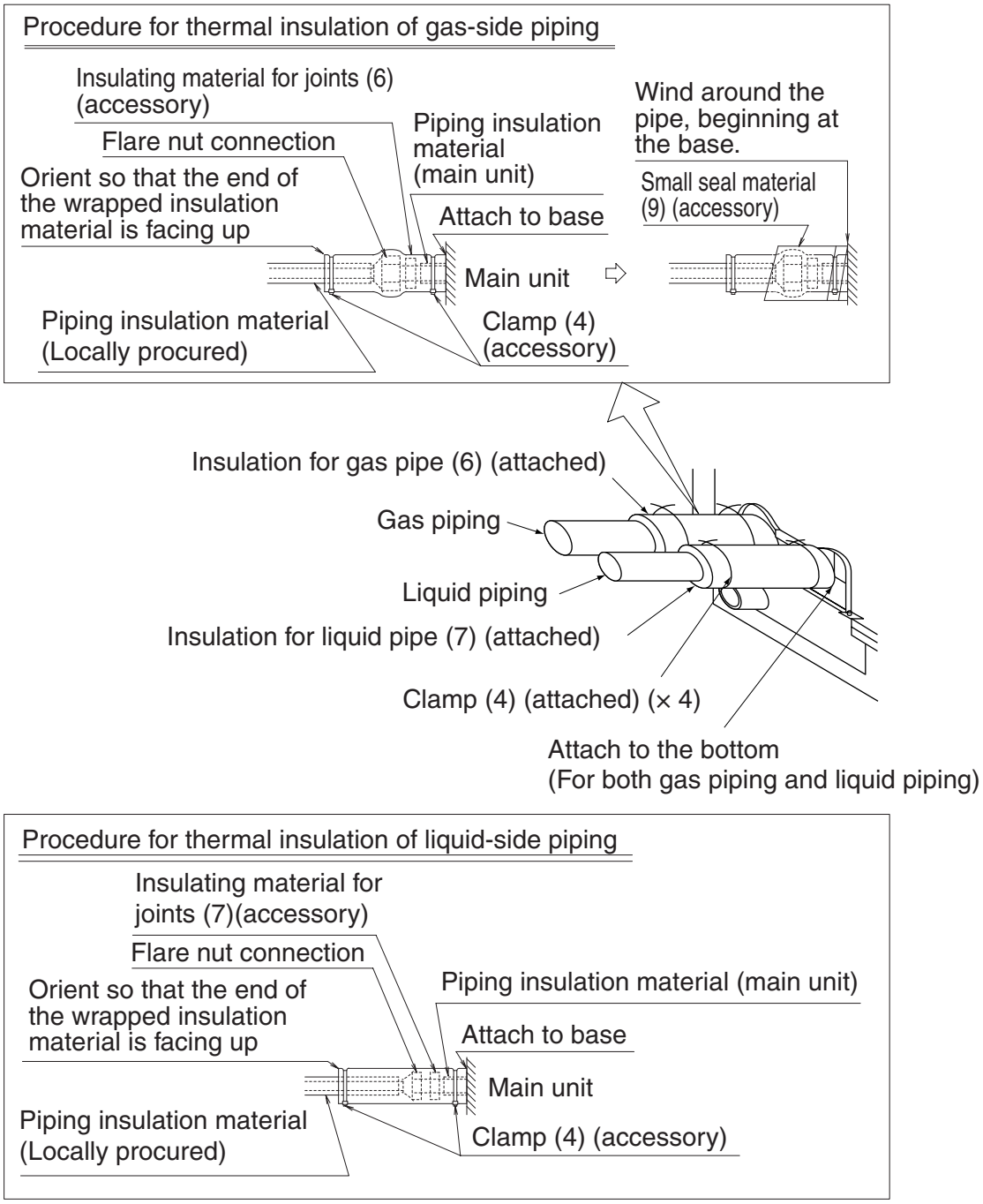
Fig. 12

- Make absolutely sure to execute heat insulation works on the pipe-connecting section after checking gas leakage by thoroughly studying the following figure and using the attached heat insulating materials for fitting (6) and (7). (Fasten both ends with the clamps (4).)
  (Refer to Fig. 13)
- Wrap the sealing pad (9) only around the insulation for the joints on the gas piping side.
  (Refer to Fig. 13)

⚠ CAUTION

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

Fig. 13



(1) For piping facing back.
- Remove the rear penetration lid and set the piping. **(Refer to Fig. 14.16)**

(2) For piping facing up.
- When setting the piping to face up, the L-shaped branch piping kit sold separately is required.
- Removing the top penetration lid and use the L-shaped branch piping kit sold separately to set the piping. **(Refer to Fig. 14.15)**

(3) For piping facing right.
- Cut out a slit hole on the dressing board (right) and set the piping. **(Refer to Fig. 16)**

Fig. 14

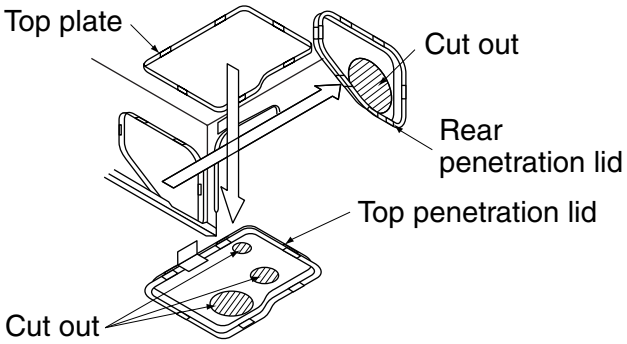


Fig. 15

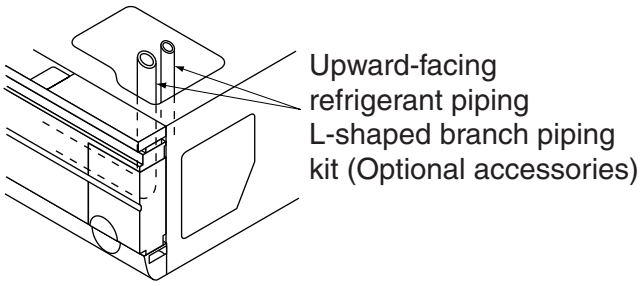


Fig. 16

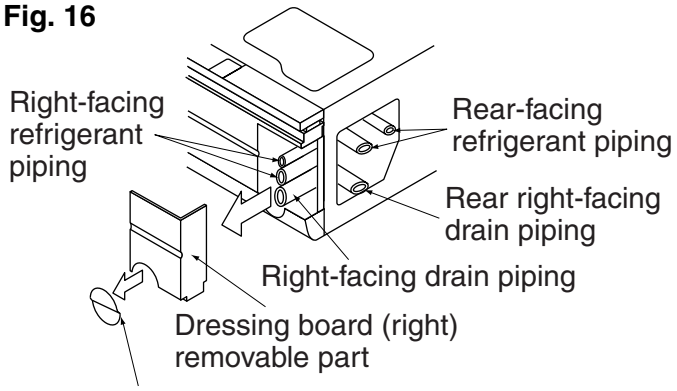
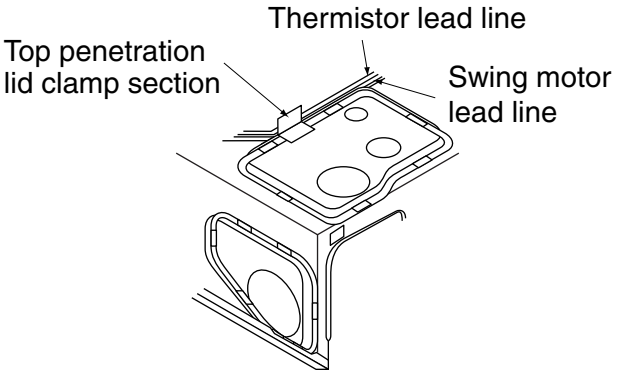


Fig. 17



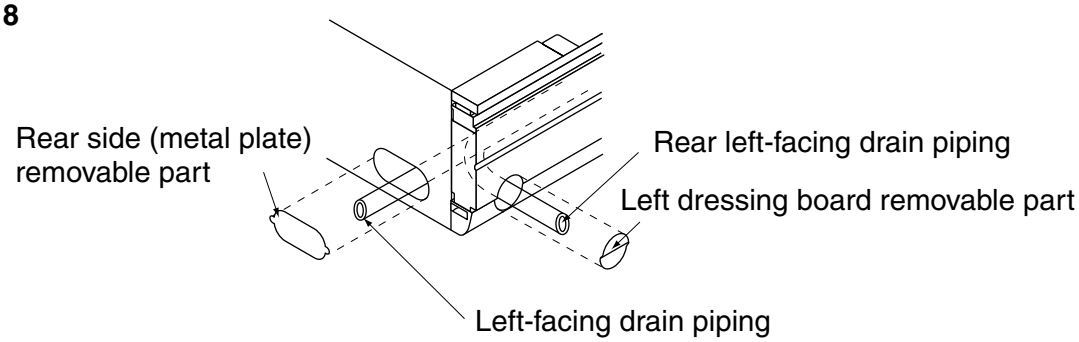
- When piping is complete, cut the removed penetration lid into the shape of the piping using scissors and attach. As when before removing the top penetration lid, secure the lead lines for the swing motor and thermistor by passing them through the clamp section on the top penetration lid. **(Refer to Fig. 14.17)**
- When doing this, block any gaps between the piping penetration lid and the pipes using putty to prevent dust from entering the indoor unit.

7. DRAIN PIPING WORK

(1) Carry out the drain piping.

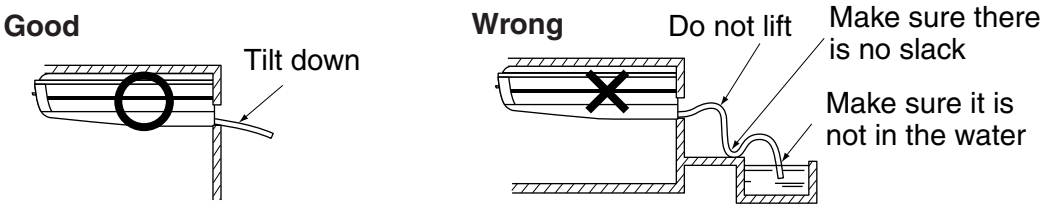
- Make sure piping provides proper drainage.
- You can select whether to bring the drain piping our from the rear right, right, rear left, or left. For rear right-facing and right-facing situations, refer to “6. REFRIGERANT PIPING WORK” on page 9 for rear left-facing and left-facing situations. **(Refer to Fig. 18)**

Fig. 18



- When setting piping facing left, move the rubber stopper and insulation which are attached to the drain pipe connection hole on the left side of the indoor unit to the right-side drain pipe connection hole.
  When doing this, insert the rubber stopper all the way in to prevent a water leakage.
- Make sure the pipe diameter is the same or bigger than the branch piping. (vinyl-chloride piping, nominal diameter 20 mm, external diameter 26 mm)
- Make sure the piping is short, has at least a 1/100 slope, and can prevent air pockets from forming. **(Refer to Fig. 19)**

Fig. 19



⚠ CAUTION

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

- Be sure to use the included drain hose (1) and clamp (2).
  Also, insert the drain hose completely into the drain socket, and securely attach the clamp bracket inside the gray tape area on the inserted tip of the drain hose. **(Refer to Fig. 20)**
  Screw the screws on the clamp bracket until there is 4 mm left. (Pay attention to the direction of the attachment to prevent the clamp bracket from coming into contact with the suction grille.)
  (Refer to Fig. 21)

Fig. 20

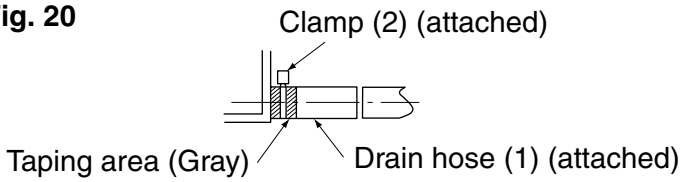


Fig. 22

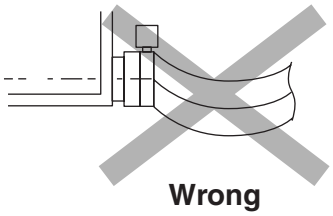
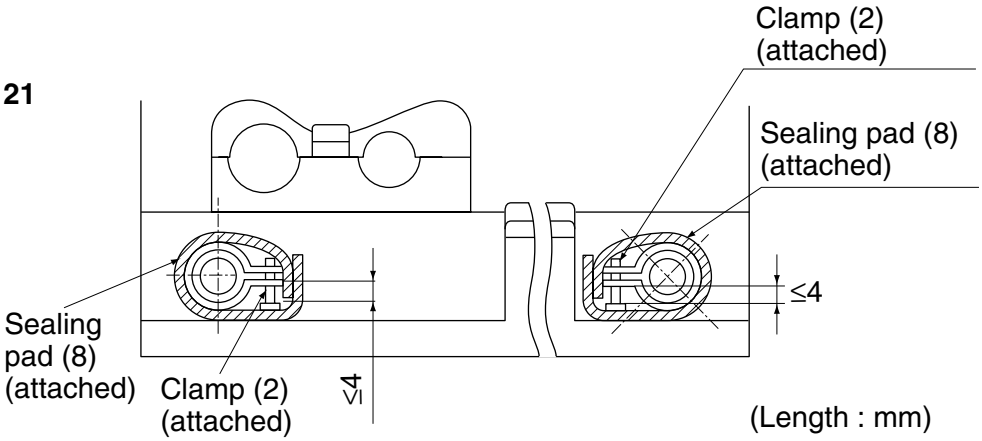


Fig. 21

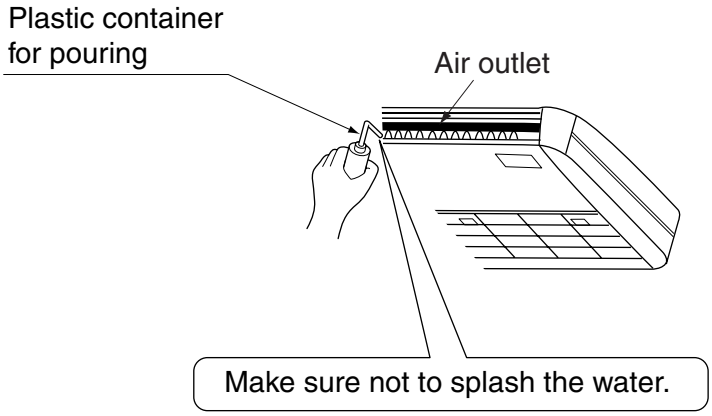


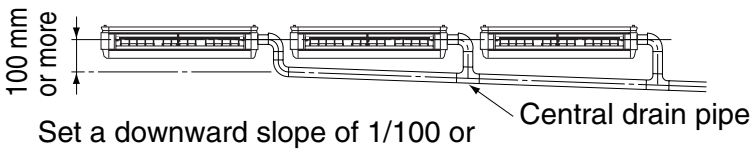
< Facing rear right or right > < Facing rear left or left >

- Insulate the clamp bracket and drain hose from the bottom using the included sealing pad (8). **(Refer to Fig. 21)**
- Be sure to insulate all drain piping running indoors.
- Do not allow any slack to gather in the drain hose inside the indoor unit. **(Refer to Fig. 22)** (Slack in the drain hose can cause the suction grille to break.)

(2) Check to make sure the drain flows smoothly after piping is complete.

- Slowly pour 600 ml of drain-checking water into the drain pan through the air outlet.





Set a downward slope of 1/100 or greater to ensure that air does not accumulate.

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

⚠ CAUTION

Drain piping connections

Do not connect the drain piping directly to sewage pipes that smell of ammonia. The ammonia in the sewage might enter the indoor unit through the drain pipes and corrode the heat exchanger.

8. WIRING EXAMPLE

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

- **Pair or Multi system**: 1 remote controller controls 1 indoor unit. (standard system) **(Refer to Fig. 23)**
- **Simultaneous operation system**: 1 remote controller controls 2 indoor units. (2 indoor units operates equally) **(Refer to Fig. 24)**
- **Group control**: 1 remote controller controls up to 16 indoor units. (All indoor units operate according to the remote controller) **(Refer to Fig. 25)**
- **Two remote controllers control**: 2 remote controllers control 1 indoor unit. **(Refer to Fig. 26)**

Fig. 23

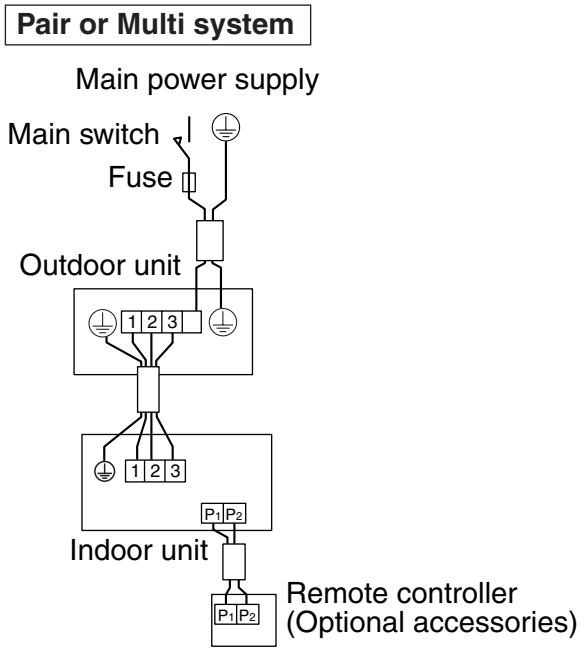


Fig. 24

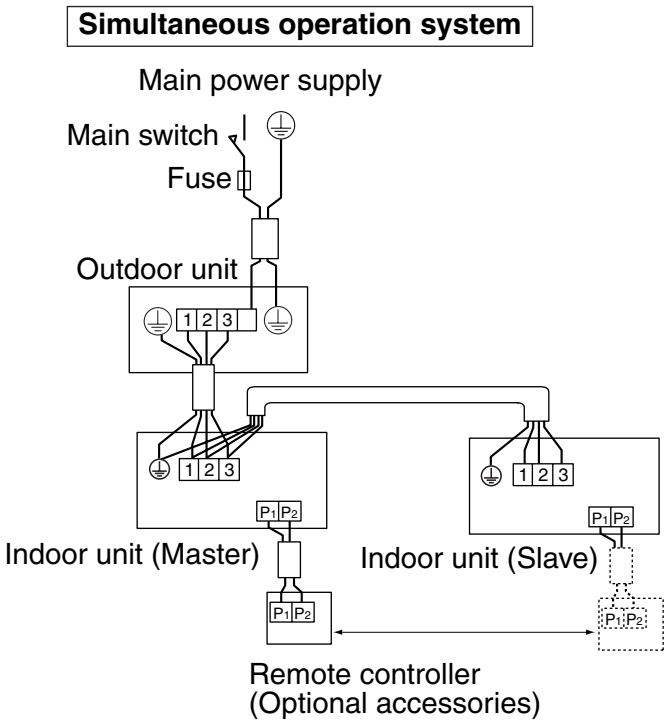


Fig. 25

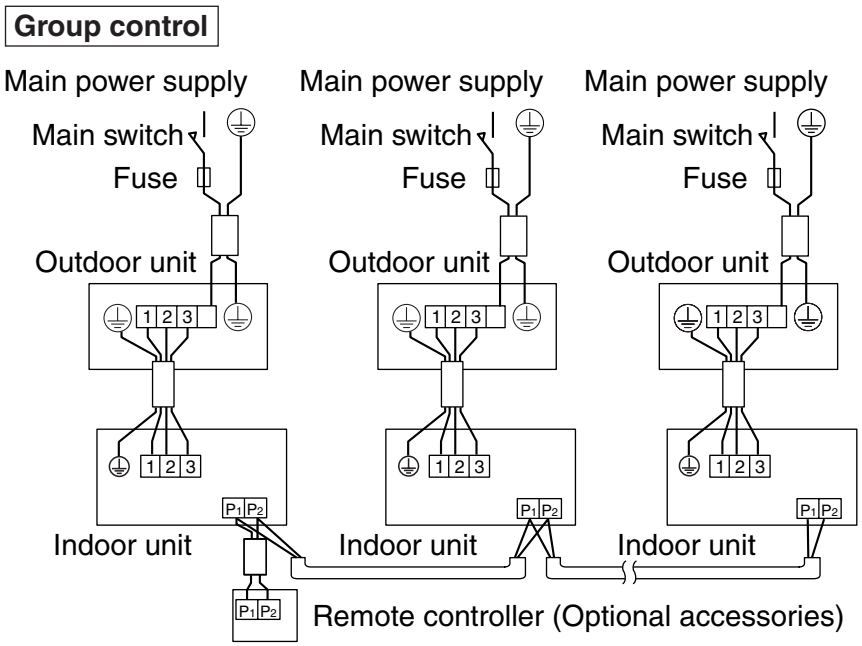
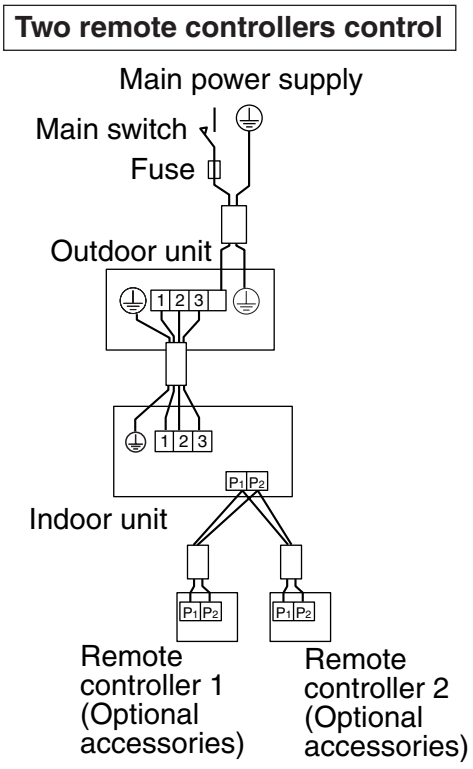


Fig. 26



NOTE

1. All transmission wiring except for the remote controller wires is polarized and must match the terminal symbol.
2. In case of group control, perform the remote controller wiring to the master unit when connecting to the simultaneous operation system. (wiring to the slave unit is unnecessary)
3. For group control remote controller, choose the remote controller that suits the indoor unit which has the most functions (as attached swing flap)
4. When controlling the simultaneous operation system with 2 remote controllers, connect it to the master unit. (wiring to the slave unit is unnecessary)

9. ELECTRIC WIRING WORK

- All field supplied parts and materials and electric works must conform to local codes.
- Use copper wire only.
- For electric wiring work, refer to also “8. WIRING EXAMPLE” on page 15 attached to the unit body.
- For remote controller wiring details, refer to the installation manual attached to the remote controller.
- All wiring must be performed by an authorized electrician.
- A circuit breaker capable of shutting down power supply to the entire system must be installed.
- Refer to the installation manual attached to the outdoor unit for the size of power supply electric wire connected to the outdoor unit, the capacity of the circuit breaker and switch, and wiring instructions.
- Be sure to ground the air conditioner.
- Do not connect the ground wire to gas pipes, water pipes, lightning rods, or telephone ground wires.
  - Gas pipes: might cause explosions or fire if gas leaks.
  - Water pipes: no grounding effect if hard vinyl piping is used.
  - Telephone ground wires or lightning rods: might cause abnormally high electric potential in the ground during lighting storms.

- **Specifications for field wire**

Table 3

	Wire	Size (mm^2)	Length
Wiring between units	H05VV - U4G (NOTE 1, 3)	2.5	–
Remote controller cord	Vinyl cord with sheath or cable (2 wires) (NOTE 2)	0.75 - 1.25	Max. 500 m (NOTE 3)

NOTE

1. Shows only in case of protected pipes. Use H07RN-F in case of no protection. (Sheath thickness: 1mm or more)
2. Use double insulated wire for remote controller (Sheath thickness: 1mm or more) or run wires through a wall or conduit so that the user cannot come in contact with them.
3. This length shall be the total extended length in the system of the group control.

⚠ CAUTION

- Even if the top or rear penetration lid is removed, pull the remote controller cord and the wiring between units inside the unit using conduits for each, so that the wiring does not come into contact with the opening section of the metal casing.
- Pass conduits through the wall and secure along with the refrigerant piping in order to prevent external pressure being applied to the remote controller cord and wiring between units.
- Prevent dust from entering into the unit by filling the gap between the conduits and the penetration lid (top or rear) with corking or putty.
- Arrange the wires and fix a lid firmly so that the lid does not float during wiring work.
- Do not clamp remote controller cord together with wiring between units together. Doing so may cause malfunction.
- Remote controller cord and wiring between units should be located at least 50 mm from other electric wires. Not following this guideline may result in malfunction due to electrical noise.

Connection of wiring between units and for the remote control cord (Refer to Fig. 27)

- Wiring between units
  Holding the control box lid, loosen the two securing screws, remove the control box lid, match up the phases on the power source terminal block inside (3P), and make the connections.
  After this is done, use the attached clamp (4) to bind wiring between units to the anchor point.
  (Refer to Fig. 28)
- Remote controller cord: The simultaneous operation multi sub-unit is not required. **(Refer to Fig. 27.29)**
  Connect to the remote control terminal block (2P). (There is no polarity.) After this is done, use the attached clamp (4) to bind remote controller cord to the anchor point. **(Refer to Fig. 28)**

Attaching the suction grille and the dressing boards

- Once wiring is complete, firmly attach the dressing side board by reversing the steps taken to remove the suction grille.

Fig. 27

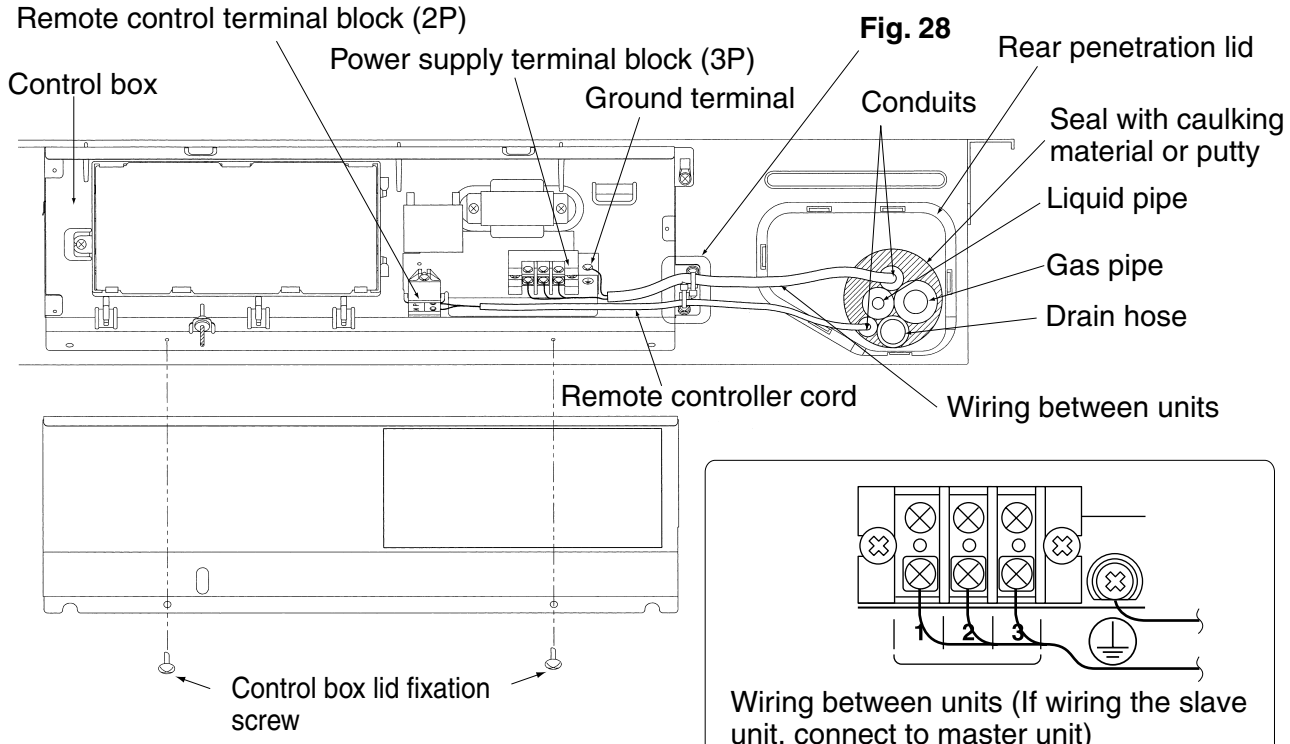
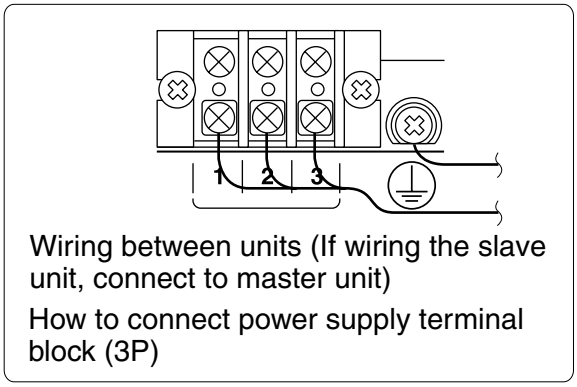


Fig. 28



Wiring between units (If wiring the slave unit, connect to master unit)

How to connect power supply terminal block (3P)

Fig. 28

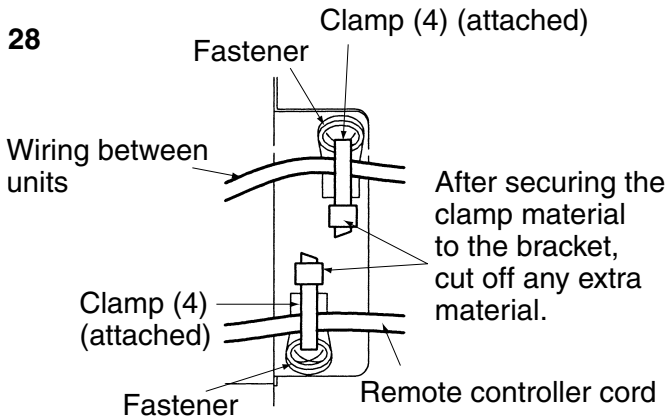
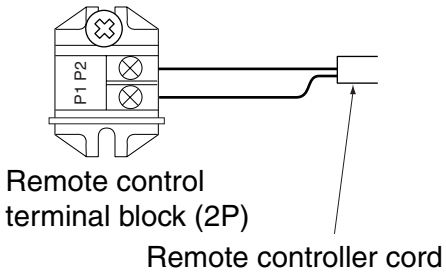


Fig. 29



Observe the notes mentioned below when wiring to the terminals.

Tightening torque for the terminal screws.

- Use the correct screwdriver for tightening the terminal screws. If the blade of screwdriver is too small, the head of the screw might be damaged, and the screw will not be properly tightened.
- If the terminal screws are tightened too hard, screws might be damaged.
- Refer to the table below for the tightening torque of the terminal screws.

Terminal	Size	Tightening torque
Remote controller terminal block (2P)	M3.5	0.79 - 0.97 N•m
Power supply terminal block (3P)	M4	1.18 - 1.44 N•m
Ground terminal	M4	1.18 - 1.44 N•m

Precautions to be taken for power supply wiring

Use a round crimp-style terminal for connection to the power supply terminal block.
In case it cannot be used due to unavoidable reasons, be sure to observe the following instructions.
(Refer to Fig. 30)

- Do not connect wires of different gauge to the same power supply terminal. (Looseness in the connection may cause overheating.) **(Refer to Fig. 31)**
- When connecting wires of the same gauge, connect them according to. **(Refer to Fig. 31)**
- In wiring, make certain that prescribed wires are used, carry out complete connections, and fix the wires so that external forces are not applied to the terminals.

Fig. 30

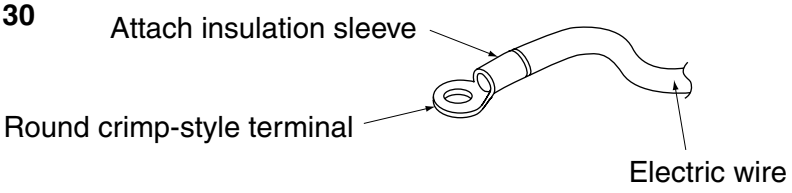
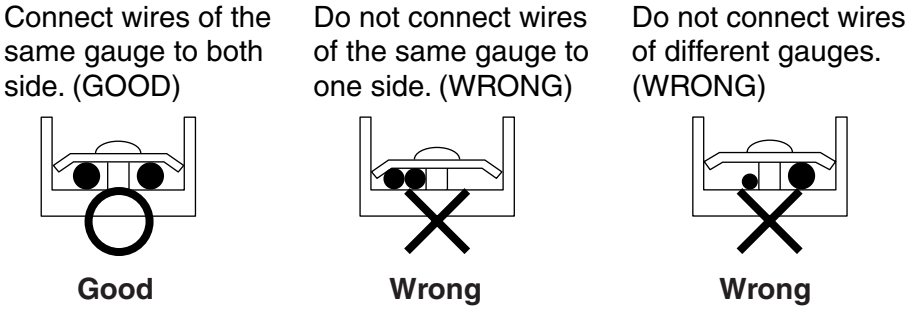


Fig. 31



10. FIELD SETTINGS

(1) Make sure the control box lids are closed on the indoor and outdoor units.
(2) Field settings must be made from the remote controller and in accordance with installation conditions.

- Settings can be made by changing the “Mode No.”, “FIRST CODE NO.” and “SECOND CODE NO.”.
- The “Field Settings” included with the remote control lists the order of the settings and method of operation.

10-1 Setting ceiling height

- Select the SECOND CODE NO. that corresponds to the ceiling height “Table 4”.
  (SECOND CODE NO. is factory set to “01” for a ceiling height of less than 2.7m .)

Table 4

Ceiling height (m)	Mode No.	FIRST CODE NO.	SECOND CODE NO.
Less than 2.7 m	13 (23)	0	01
2.7 to 3.5			02

10-2 Settings for options

- For settings for options, see the installation instructions provided with the option.

10-3 Setting air filter sign

- Remote controllers are equiped with liquid crystal display air filer signs to display the time to clean air filters.
- Change the SECOND CODE NO. according to “Table 5” depending on the amount of dirt or dust in the room.
  (SECOND CODE NO. is factory set to “01” for air filter contamination-light.)

Table 5

Setting	Spacing time of display air filter sign (long life type)	Mode No.	FIRST CODE NO.	SECOND CODE NO.
Air filter contamination-light	Approx. 2500 hrs	10 (20)	0	01
Air filter contamination-heavy	Approx. 1250 hrs			02

10-4 Setting indoor unit number of simultaneous operation system

- When using in simultaneous operation system mode, change the SECOND CODE NO. as shown in “Table 6”.
  (SECOND CODE NO. is factory set to “01” for Pair system (1 unit))

Table 6

Setting	Mode No.	FIRST CODE NO.	SECOND CODE NO.
Pair system (1 unit)	11 (21)	0	01
Simultaneous operation system (2-unit)			02
Simultaneous operation system (3-unit)			03
Double twin multi (4-unit)			04

- When using in simultaneous operation system mode, refer to “10-5 Simultaneous operation system individual setting” on page 20 section to set master and slave units separately.

When using wireless remote controllers

- When using wireless remote controllers, wireless remote controller address setting is necessary. Refer to the installation manual attached to the wireless remote controller for setting instructions.

10-5 Simultaneous operation system individual setting

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

- Perform the following procedure when setting the master and slave unit separately.

Procedure

(1) Change the SECOND CODE NO. to “02” for, individual setting, so that the slave unit can be individually set. (SECOND CODE NO. is factory set to “01”, for unified setting.)

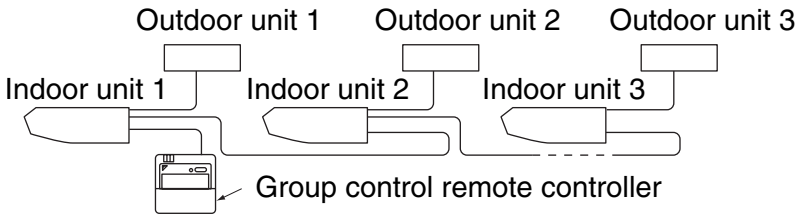
Setting	Mode No.	FIRST CODE NO.	SECOND CODE NO.
Unified setting	11 (21)	1	01
Individual setting			02

(2) Perform field setting (Refer to 10-1 to 10-4) for the master unit.
(3) Turn off the main power supply switch after (2).
(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 10-1 to 10-3) for the slave unit.
(7) Turn off the main power supply switch after (6).
(8) If there is more than one sub-unit, repeat steps (4) – (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 wires attached to the remote controller terminal board of the master unit.)
(Refer to Fig. 24 on page 15)

10-6 When implementing group control

- When using as a pair unit or as a master unit for simultaneous operation multi, you may simultaneous start/stop (group) control up to 16 unit with the remote controller.
- 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 (swing flap, etc.) in the group as possible.



Wiring Method (See “9. ELECTRIC WIRING WORK” on page 16.)

(1) Remove the control box lid.

(2) Cross-wire the remote control terminal block (P_1 P_2) inside the control box. (There is no polarity.)
(Refer to Fig. 25 on page 15 and Table 3 on page 16)

NOTE

- When combining with a simultaneous operation multi-type, be sure only to connect the wiring to the master unit.

10-7 Two remote controllers control (Controlling 1 indoor unit by 2 remote controllers)

• When using 2 remote controllers, one must be set to “MAIN” and the other to “SUB”.

MAIN/SUB CHANGEOVER

(1) Insert a ⊖ screwdriver into the recess between the upper and lower part of remote controller and, working from the 2 positions, pry off the upper part. (The remote controller PC board is attached to the upper part of remote controller.) **(Refer to Fig. 32)**

(2) Turn the **main/sub changeover** switch on one of the two remote controller PC boards to “S”. (Leave the switch of the other remote controller set to “M”.) **(Refer to Fig. 33)**

Fig. 32

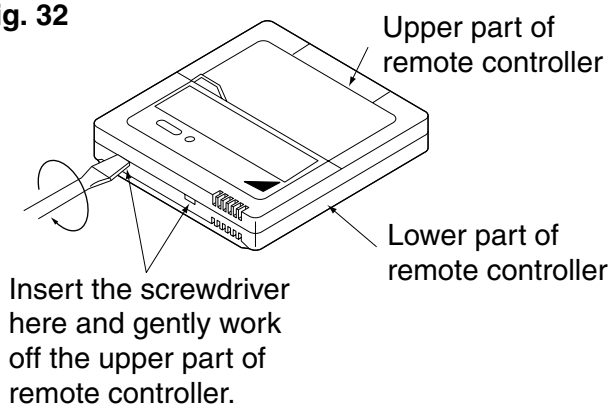
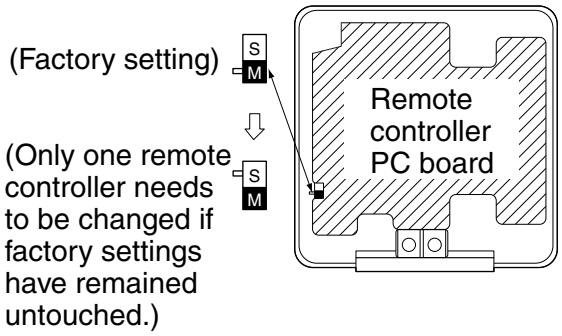


Fig. 33



Wiring Method (See “9.ELECTRIC WIRING WORK” on page16.)

(3) Remove the control box lid

(4) Add remote controller 2 to the remote control terminal block (P_1, P_2) in the control box. (There is no polarity.) (Refer to Fig. 26 on page 15 and Table 3 on page 16)

NOTE

When combining with a simultaneous operation multi-type, be sure only to connect the wiring to the master unit.

11. TEST OPERATION

(1) Make sure the control box lids are closed on the indoor and outdoor units.

(2) Refer to the section of “FOR THE FOLLOWING ITEMS, TAKE SPECIAL CARE DURING CONSTRUCTION AND CHECK AFTER INSTALLATION IS FINISHED.” on page 4.

• After finishing the construction of refrigerant piping, drain piping, and electric wiring, conduct test operation accordingly to protect the unit.

11-1 TEST OPERATION

1. Open the gas side stop valve.
2. Open the liquid side stop valve.
3. Electrify crank case heater for 6 hours. (Not required in case of a unit exclusively designed for cooling only)
4. Set to cooling operation with the remote controller and start operation by pushing ON/OFF button (⏻).
5. Press INSPECTION/TEST OPERATION button 4 times (TEST) (2 times for wireless remote controller) and operate at Test Operation mode for 3 minutes.
6. Push AIR FLOW DIRECTION ADJUST button ( ) to make sure the unit is in operation.
7. Press INSPECTION/TEST OPERATION button (TEST) and operate normally.
8. Confirm function of unit according to the operation manual.

PRECAUTIONS

1. Refer to “11-2 HOW TO DIAGNOSE FOR MALFUNCTION” if the unit does not operate properly.
2. After completing the test run, press the INSPECTION/TEST OPERATION run button once to put the unit in inspection mode, and make sure the malfunction code is “00”. (=normal)
   If the code reads anything other than “00”, refer to “11-2 HOW TO DIAGNOSE FOR MALFUNCTION”.

NOTE

- If a malfunction is preventing operation, refer to the malfunction diagnoses below.

11-2 HOW TO DIAGNOSE FOR MALFUNCTION

With the power on, it is possible to monitor the type of malfunction by looking at the malfunction code displayed in the remote controller.

If nothing is displayed in the remote controller, check the following items before attempting a diagnosis based on the malfunction code, as they might be a cause.

- Disconnected or incorrect wiring (between power supply and the outdoor unit, between the outdoor and indoor units, and between the indoor unit and the remote controller)
- Burnt out indoor or outdoor unit fuse
- “88 ” will be displayed for a few seconds on the remote controller immediately after the power is turned on. This display indicates that the remote controller is being checked to see whether it is ok or not, and does not indicate a malfunction.

Diagnose with the display on the liquid crystal display remote controller.

1. With the wired remote controller. (NOTE 1)
   When the operation stops due to trouble, operation lamp flashed, and “ ” and the malfunction code are indicated on the liquid crystal display. In such a case, diagnose the fault contents by referning to the table on the malfunction code list it case of group control, the unit No. is displayed so that the indoor unit No. with the trouble can be recognized. (NOTE 2)
2. With the wireless remote controller.
   (Refer also to the operation manual attached to the wireless remote controller)
   When the operation stops due to trouble. the display on the indoor unit flashes. In such a case, diagnose the fault contents with the table on the malfunction code list looking for the malfunction code which can be found by following procedures. (NOTE 2)
   (1) Press the INSPECTION /TEST OPERATION button, “ ” is displayed and “ 0 ” flashes.
   (2) Press the PROGRAMMING TIME button and find the unit No. which stopped due to trouble.
   Number of beeps 3 short beeps ..... Perform all the following operations
   1 short beep ..... Perform (3) and (6)
   1 long beep ..... No trouble
   (3) Press the OPERATION MODE SELECTOR button and upper figure of the malfunction code flashes.
   (4) Continue pressing the PROGRAMMING TIME button unit it makes 2 short beeps and find the upper code.
   (5) Press the OPERATION MODE SELECTOR button and lower figure of the malfunction code flashes.
   (6) Continue pressing the PROGRAMMING TIME button unit it makes a long beep and find the lower code.
   - A long beep indicate the malfunction code.

NOTE

1. In case wired remote controller. Press the INSPECTION /TEST OPERATION button on remote controller, “ ” starts flashing.
2. Keep down the ON/OFF button for 5 seconds or longer in the inspection mode and the above trouble history disappears, after the trouble code goes on and off twice, followed by the code “00”(normal).
   The display changes from the inspection mode to the normal mode.

11-3 Malfunciton code list

- For plases where the Malfunction code is left blank, the "" indication is not displayed. Though the system continues operating, be sure to inspect the system and make repairs as necessary.
- Depending on the type of indoor or outdoor unit, the Malfunction code may or may not be displayed.

Code	Malfunction/Remarks
A1	Indoor unit's PC board faulty
A3	Drain water level abnormal
A5	Freeze-up protector or stopped by high pressure control (NOTE 1)
A6	Indoor fan motor overloaded, overcurrent or locked
A7	Swing flap motor locked
	Only the air flow direction can not be controlled.
AF	Humidifier faulty
AH	Air cleaner faulty
	Only the air cleaner does not function.
AJ	Type set improper
	Capacity data is wrongly proset. Or there is nothing programmed in the data hold IC.
C4	Sensor for heat exchanger temperature is fault (NOTE 1)
C5	Indoor heat exchanger/evaporation temperature thermistor faulty (NOTE 1)
C9	Sensor for suction air temperature is fault (NOTE 1)
CC	Humidity sensor abnormal
CJ	Sensor for remote controller is fault
	The remote controller thermistor does not function, but the system thermo run is possible.
E0	Action of safety device (outdoor unit)
E1	Outdoor unit's PC board faulty
E3	High pressure abnormal (outdoor unit) (NOTE 1)
E4	Low pressure abnormal (outdoor unit)
E5	Compressor motor lock malfunction (NOTE 1)
E6	Compressor motor lock by over current (outdoor) (NOTE 1)
E7	Outdoor fan motor lock malfunction Outdoor fan motor instantaneous overcurrent malfunction (NOTE 1)
E8	Input overcurrent (outdoor unit)
E9	Electronic expansion valve faulty (outdoor unit)
EA	Cooling/heating switch malfunction (outdoor) (NOTE 1)
F3	Discharge pipe temperature abnormal (outdoor unit) (NOTE 1)
F6	High pressure control(in cooling) (outdoor unit)
H0	Sensor fault for inverter (outdoor unit) (NOTE 1)
H3	High pressure switch faulty (outdoor unit)
H4	Low pressure switch faulty (outdoor unit)
H6	Faulty position detection sensor (outdoor unit) (NOTE 1)
H7	Outdoor fan motor position signal malfunction
H8	CT abnormality (outdoor unit) (NOTE 1)
H9	Outdoor air thermistor faulty (outdoor unit) (NOTE 1)
J1	Pressure sensor system error (batch) (outdoor unit)
J2	Current sensor system malfunction (outdoor unit) (NOTE 1)
J3	Discharge pipe thermistor faulty (outdoor unit) (NOTE 1)
J5	Suction pipe thermistor faulty (outdoor unit)
J6	Heat exchanger thermistor faulty (outdoor unit) (NOTE 1)
J7	Outdoor heat exchanger/evaporation temperature thermistor faulty (outdoor unit) (NOTE 1)
J8	Liquid piping temperature sensor system error (outdoor unit) (NOTE 1)

J9	Gas piping thermistor malfunction (cooling) (outdoor)	(NOTE 1)
JA	Discharge pipe pressure sensor faulty	
JC	Suction pipe pressure sensor faulty	
L1	Inverter error (outdoor unit)	
L3	Reactor thermistor faulty (outdoor unit)	(NOTE 1)
L4	Overheated heat-radiating fin (outdoor unit)	(NOTE 1)
	Inverter cooling defect.	
L5	Instantaneous overcurrent (outdoor unit)	(NOTE 1)
	Possible earth fault or short circuit in the compressor motor.	
L8	Electric thermal (outdoor unit)	
	Possible electrical overload in the compressor or cut line in the compressor motor.	
L9	Stall prevention (outdoor unit)	
	Compressor possibly locked.	
LC	Transmission malfunction between the outdoor control units' inverters (outdoor unit)	
P1	Open-phase (outdoor unit)	(NOTE 1)
P3	P-board temperature sensor malfunction (outdoor unit)	
P4	Heat-radiating fin temperature sensor malfunction (outdoor unit)	(NOTE 1)
P6	DC output current sensor system malfunction (outdoor unit)	
PJ	Type set improper (outdoor unit)	
	Capacity data is wrongly proset. Or there is nothing programmed in the data hold IC.	
U0	Suction pipe temperature abnormal	(NOTE 1)
U1	Reverse phase	
	Reverse two phase of the L1,L2and L3 leads.	
U2	Power source voltage malfunction (outdoor unit)	(NOTE 1)
	Includes the defect in 52C.	
U4 UF	Transmission error (indoor unit – outdoor unit)	
	Wrong wiring between indoor and outdoor units or malfunction of the PC board mounted on the indoor and the outdoor units.	
U5	Transmission error (indoor unit – remote controller)	
	Transmission is improper between the indoor unit and the remote controller.	
U7	Transmission error of the inverter module	
U8	Malfunction in transmission between main and sub remote controls. (Malfunction in sub remote control.)	
UA	Miss setting for multi system	
	Setting is wrong for selector switch of multi-system. (see switch SS2 on the main unit's PC board)	
UC	Central control address overlapping	
UE	Transmission error (indoor unit - central controller)	
UH	Field setting error	(NOTE 1)
UJ	Accessory equipment transmission error	(NOTE 1)

NOTE

1. Abnormal stop is applied depending on the model or condition.

⚠ CAUTION

- Refer to “b. Items to be checked at time of delivery” on page 4 upon completion of the test run and make sure that all the items are checked.
- If the customer’s interior work has not been finished on completion of the test run, explain the customer not to operate the air conditioner. This is essential until the interior work is finished so as to protect the product.
  Substances generated from paints and adhesives used for the interior work may contaminate the product if the unit is operated.

⚠ To test run Contractors

When delivering the product to the customer after the test run is completed, check that the control box lid, the air filter and the suction grille are mounted. In addition, explain to the customer regarding the state (ON/OFF) of the power supply breaker.

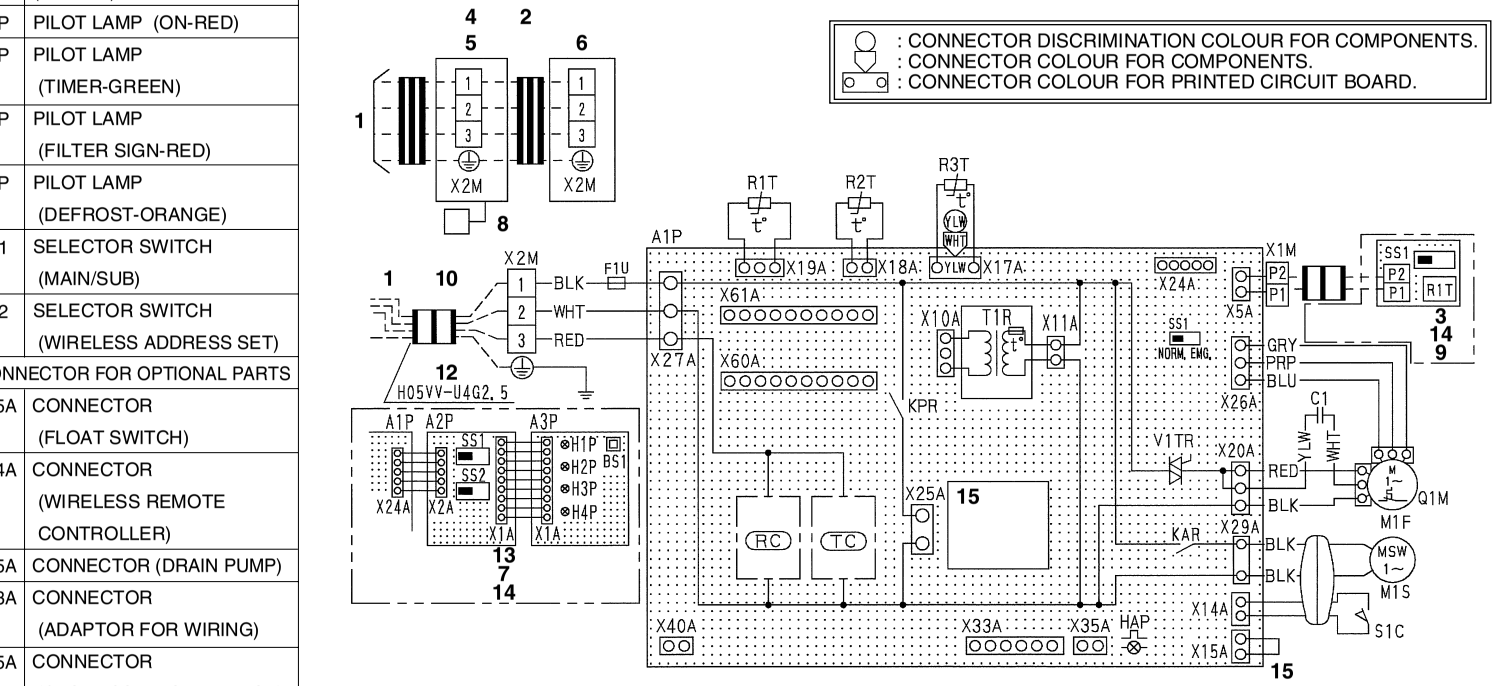
12. WIRING DIAGRAM

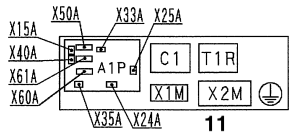
(Refer to Fig. 34.35.)

1	TO OUTDOOR UNIT	2	(NOTE) 6
3	WIRED REMOTE CONTROLLER	4	IN CASE OF SIMULTANEOUS OPERATION SYSTEM
5	INDOOR UNIT (MASTER)	6	INDOOR UNIT (SLAVE)
7	RECEIVER/DISPLAY UNIT	8	REMOTE CONTROLLER
9	(NOTE) 7	10	(NOTE) 4
11	CONTROL BOX	12	(NOTE) 10
13	WIRELESS REMOTE CONTROLLER	14	OPTIONAL ACCESSORY
15	(NOTE) 8		

A1P	PRINTED CIRCUIT BOARD	BS1	PUSH BUTTON SWITCH (ON/OFF)
C1	CAPACITOR (M1F)		
F1U	FUSE (F5A 250V)	H1P	PILOT LAMP (ON-RED)
HAP	FLASHING LAMP (SERVICE MONITOR GREEN)	H2P	PILOT LAMP (TIMER-GREEN)
KAR	MAGNETIC RELAY (M1S)	H3P	PILOT LAMP (FILTER SIGN-RED)
KPR	MAGNETIC RELAY (M1P)		
M1F	MOTOR (INDOOR FAN)	H4P	PILOT LAMP (DEFROST-ORANGE)
M1S	MOTOR (SWING FLAP)		
Q1M	THERMAL PROTECTOR (M1F EMBEDDED)	SS1	SELECTOR SWITCH (MAIN/SUB)
R1T	THERMISTOR (AIR)		
R2T	THERMISTOR (COIL-1)	SS2	SELECTOR SWITCH (WIRELESS ADDRESS SET)
R3T	THERMISTOR (COIL-2)		
S1C	LIMIT SWITCH (SWING FLAP)	CONNECTOR FOR OPTIONAL PARTS	
SS1	SELECTOR SWITCH (EMERGENCY)	X15A	CONNECTOR (FLOAT SWITCH)
T1R	TRANSFORMER (220-240V/22V)		
V1TR	TRIAC (PHASE CONTROL CIRCUIT)	X24A	CONNECTOR (WIRELESS REMOTE CONTROLLER)
X1M	TERMINAL BLOCK		
X2M	TERMINAL BLOCK		
(RC)	SIGNAL RECEIVER CIRCUIT	X25A	CONNECTOR (DRAIN PUMP)
(TC)	SIGNAL TRANSMISSION CIRCUIT	X33A	CONNECTOR (ADAPTOR FOR WIRING)
WIRED REMOTE CONTROLLER			
R1T	THERMISTOR (AIR)	X35A	CONNECTOR (GROUP CONTROL ADAPTOR)
SS1	SELECTOR SWITCH (MAIN/SUB)		
WIRELESS REMOTE CONTROLLER (RECEIVER/DISPLAY UNIT)		X40A	CONNECTOR (ON/OFF INPUT FROM OUTSIDE)
A2P	PRINTED CIRCUIT BOARD	X60A	CONNECTOR (INTERFACE ADAPTOR FOR SKY AIR SERIES)
A3P	PRINTED CIRCUIT BOARD	X61A	

WIRING DIAGRAM





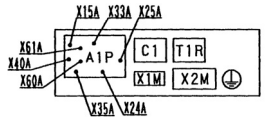
NOTES)

1. : TERMINAL BLOCK : CONNECTOR : SHORT CIRCUIT CONNECTOR
   : CONNECTOR
2. : FIELD WIRING
3. IN CASE OF SIMULTANEOUS OPERATION INDOOR UNIT SYSTEM, SEE THE INDOOR UNIT WIRING ONLY.
4. FOR THE DETAIL, SEE WIRING DIA-GRAM ATTACHED TO OUTDOOR UNIT.
5. IN CASE USING CENTRAL REMOTE CONTROLLER, CONNECT IT TO THE UNIT IN ACCORDANCE WITH THE ATTACHED INSTALLATION MANUAL.
6. IN CASE OF CONNECTION UNITS VARIES ACCORDING TO THE COMBINATION SYSTEM, CONFIRM TECHNICAL GUIDE AND CATALOGS, ETC. BEFORE CONNECTING.
7. IN CASE OF MAIN/SUB CHANGEDVER, SEE THE INSTALLATION MANUAL ATTACHED TO REMOTE CONTROLLER.
8. IN CASE INSTALLING THE DRAIN PUMP(M1P), REMOVE THE JUMPER CONNECTOR OF X15A AND EXECUTE THE ADDITIONAL WIRING FOR FLOAT SWITCH AND DRAIN PUMP.
9. SYMBOLS SHOWS AS FOLLOWS: BLK: BLACK RED: RED BLU: BLUE WHT: WHITE PNK: PINK YLW: YELLOW GRY: GRAY PRP: PURPLE.
10. SHOWS ONLY IN CASE OF PROTECTED PIPES, USE H07RN-F IN CASE OF NO PROTECTION.

Fig.34

WIRING DIAGRAM

A1P	PRINTED CIRCUIT BOARD	BS1	PUSH BUTTON (ON/OFF)
C1	CAPACITOR (M1F)	H1P	LIGHT EMITTING DIODE (ON-RED)
HAP	LIGHT EMITTING DIODE (SERVICE MONITOR GREEN)	H2P	LIGHT EMITTING DIODE (TIMER-GREEN)
KAR	MAGNETIC RELAY (M1S)	H3P	LIGHT EMITTING DIODE (FILTER SIGN-RED)
KPR	MAGNETIC RELAY (M1P)	H4P	LIGHT EMITTING DIODE (DEFROST-ORANGE)
M1F	MOTOR (INDOOR FAN)	SS1	SELECTOR SWITCH (MAIN/SUB)
M1S	MOTOR (SWING FLAP)	SS2	SELECTOR SWITCH (WIRELESS ADDRESS SET)
Q1M	THERMO SWITCH (M1F EMBEDDED)	CONNECTOR FOR OPTIONAL PARTS	
R1T	THERMISTOR (AIR)	X15A	CONNECTOR (FLOAT SWITCH)
R2T	THERMISTOR (COIL)	X25A	CONNECTOR(DRAIN PUMP)
S1Q	LIMIT SWITCH (SWING FLAP)	X33A	CONNECTOR (ADAPTOR FOR WIRING)
T1R	TRANSFORMER (220-240V/22V)	X35A	CONNECTOR (GROUP CONTROL ADAPTOR)
V1TR	PHASE CONTROL CIRCUIT	X40A	CONNECTOR (ON/OFF INPUT FROM OUTSIDE)
X1M	TERMINAL BLOCK	X60A	CONNECTOR (INTERFACE ADAPTOR FOR SKY AIR SERIES)
X2M	TERMINAL BLOCK	X61A	
(RC)	SIGNAL RECEIVER CIRCUIT		
(TC)	SIGNAL TRANSMISSION CIRCUIT		
WIRED REMOTE CONTROLLER			
R1T	THERMISTOR (AIR)		
SS1	SELECTOR SWITCH (MAIN/SUB)		
WIRELESS REMOTE CONTROLLER (RECEIVER/DISPLAY UNIT)			
A2P	PRINTED CIRCUIT BOARD		
A3P	PRINTED CIRCUIT BOARD		



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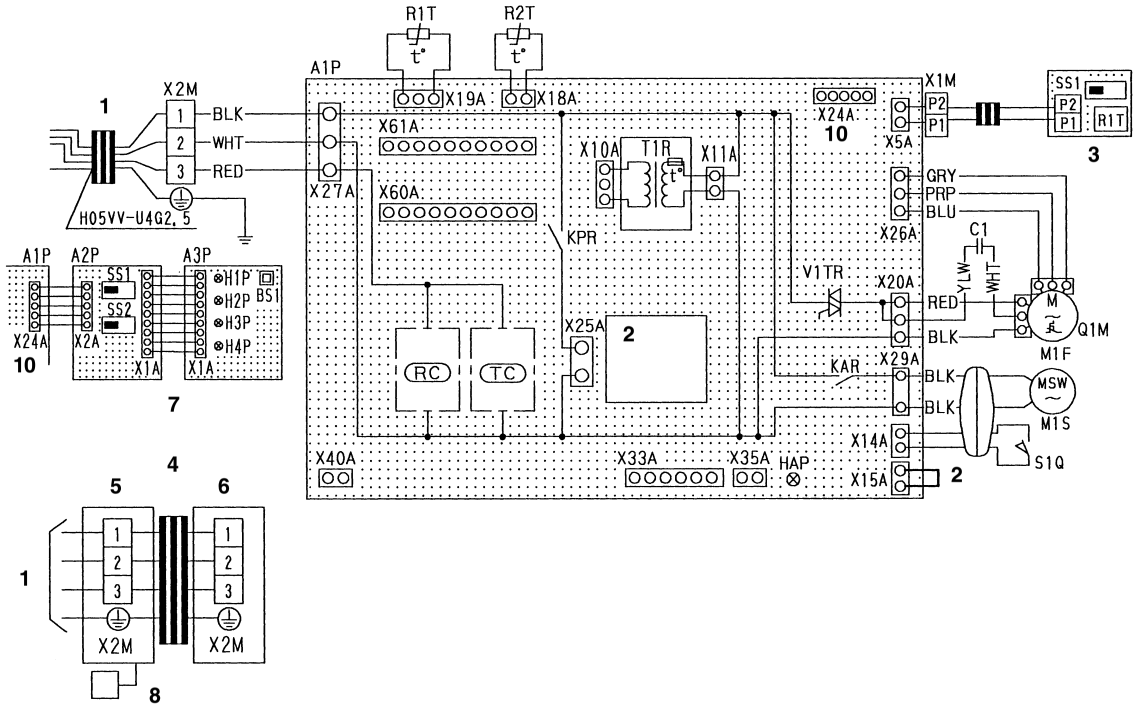

NOTES)
1. □□□ : TERMINAL
   ⊂⊃, ⊂⊃ : CONNECTOR
2. ═══ : FIELD WIRING
3. IN CASE USING CENTRAL REMOTE CONTROLLER, CONNECT IT TO THE UNIT IN ACCORDANCE WITH THE ATTACHED INSTALLATION MANUAL.
4. X24A IS CONNECTED WHEN THE WIRELESS REMOTE CONTROLLER KIT IS BEING USED.
5. REMOTE CONTROLLER MODEL VARIES ACCORDING TO THE COMBINATION SYSTEM, CONFIRM ENGINEERING MATERIALS AND CATALOGS, ETC. BEFORE CONNECTING.
6. IN CASE INSTALLING THE DRAIN PUMP(M1P), REMOVE THE JUMPER CONNECTOR OF X15A AND EXECUTE THE ADDITIONAL WIRING FOR FLOAT SWITCH AND DRAIN PUMP.
7. SYMBOLS SHOW AS FOLLOWS: RED: RED BLK: BLACK WHT: WHITE YLW: YELLOW PRP:PURPLE GRY: GRAY BLU: BLUE

Fig.35