DAIKIN

# INSTALLATION MANUAL

VRV System Inverter Air Conditioners

**FXNQ20A2VEB**
**FXNQ25A2VEB**
**FXNQ32A2VEB**
**FXNQ40A2VEB**
**FXNQ50A2VEB**
**FXNQ63A2VEB**

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 - 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 - ДЕКЛАРАЦИЯ-ЗА-СЪОТВЕТСТВИЕ
CE - DECLARAŢIE-DE-CONFORMITATE

CE - IZJAVA O SKLADNOSTI
CE - VASTAVUSDEKLARATSIOON

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

## Daikin Industries Czech Republic s.r.o.

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 felelősségе 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:

**FXNQ20A2VEB, FXNQ25A2VEB, FXNQ32A2VEB, FXNQ40A2VEB, FXNQ50A2VEB, FXNQ63A2VEB,**

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 forutsetning 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 održavajúc ustanovenia:
25 bunun koşullarına uygun olarak:

Machinery 2006/42/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 **Note** * | as set out in <A> and judged positively by <B> according to the **Certificate <C>**. | 06 **Nota** * | delineato nel <A> e giudicato positivamente da <B> secondo il **Certificato <C>**. | 11 **Information** * | enligt <A> och godkänts av <B> enligt **Certifikatet <C>**. | 16 **Megjegyzés** * | a(z) <A> alapján, a(z) <B> igazolta a megfelelést, a(z) <C> **tanúsítvány** szerint. |
| 02 **Hinweis** * | wie in <A> aufgeführt und von <B> positiv beurteilt gemäß **Zertifikat <C>**. | 07 **Σημείωση** * | όπως καθορίζεται στο <A> και κρίνεται θετικά από το <B> σύμφωνα με το **Πιστοποιητικό <C>**. | 12 **Merk** * | som det fremkommer i <A> og gjennom positiv bedømmelse av <B> ifølge **Sertifikat <C>**. | 17 **Uwaga** * | zgodnie z dokumentacją <A>, pozytywną opinią <B> i **Świadectwem <C>**. |
| 03 **Remarque** * | tel que défini dans <A> et évalué positivement par <B> conformément au **Certificat <C>**. | 08 **Nota** * | tal como estabelecido em <A> e com o parecer positivo de <B> de acordo com o **Certificado <C>**. | 13 **Huom** * | jotka on esitetty asiakirjassa <A> ja jotka <B> on hyväksynyt **Sertifikaatin <C>** mukaisesti. | 18 **Notă** * | aşa cum este stabilit în <A> şi apreciat pozitiv de <B> în conformitate cu **Certificatul <C>**. |
| 04 **Bemerk** * | zoals vermeld in <A> en positief beoordeeld door <B> overeenkomstig **Certificaat <C>**. | 09 **Примечание** * | как указано в <A> и в соответствии с положительным решением <B> согласно **Свидетельству <C>**. | 14 **Poznámka** * | jak bylo uvedeno v <A> a pozitivně zjištěno <B> v souladu s **osvědčením <C>**. | 19 **Opomba** * | kot je določeno v <A> in odobreno s strani <B> v skladu s **certifikatom <C>**. |
| 05 **Nota** * | como se establece en <A> y es valorado positivamente por <B> de acuerdo con el **Certificado <C>**. | 10 **Bemærk** * | som anført i <A> og positivt vurderet af <B> i henhold til **Certifikat <C>**. | 15 **Napomena** * | kako je izloženo u <A> i pozitivno ocijenjeno od strane <B> prema **Certifikatu <C>**. | 20 **Märkus** * | nagu on näidatud dokumendis <A> ja heaks kiidetud <B> järgi vastavalt **sertifikaadile <C>**. | 25 **Not** * | <A>'da belirtildiği gibi ve <C> **Sertifikasına** göre <B> tarafından olumlu olarak değerlendirildiği gibi. |

| | |
|---|---|
| <A> | DAIKIN.TCF.024G5/02-2015 |
| <B> | TUV (NB1856) |
| <C> | 0510260101 |

01 ** DICz*** is authorised to compile the Technical Construction File.
02 ** DICz*** hat die Berechtigung die Technische Konstruktionsakte zusammenzustellen.
03 ** DICz*** est autorisé à compiler le Dossier de Construction Technique.
04 ** DICz*** is bevoegd om het Technisch Constructiedossier samen te stellen.
05 ** DICz*** está autorizado a compilar el Archivo de Construcción Técnica.
06 ** DICz*** è autorizzata a redigere il File Tecnico di Costruzione.
07 ** Η DICz*** είναι εξουσιοδοτημένη να συντάξει τον Τεχνικό φάκελο κατασκευής.
08 ** A DICz*** está autorizada a compilar a documentação técnica de fabrico.
09 ** Компания DICz*** уполномочена составить Комплект технической документации.
10 ** DICz*** er autoriseret til at udarbejde de tekniske konstruktionsdata.
11 ** DICz*** är bemyndigade att sammanställa den tekniska konstruktionsfilen.
12 ** DICz*** har tillatelse til å kompilere den Tekniske konstruksjonsfilen.
13 ** DICz*** on valtuutettu laatimaan Teknisen asiakirjan.
14 ** Společnost DICz*** má oprávnění ke kompilaci souboru technické konstrukce.
15 ** DICz*** je ovlašten za izradu Datoteke o tehničkoj konstrukciji.
16 ** A DICz*** jogosult a műszaki konstrukciós dokumentáció összeállítására.
17 ** DICz*** ma upoważnienie do zbierania i opracowywania dokumentacji konstrukcyjnej.
18 ** DICz*** este autorizat să compileze Dosarul tehnic de construcţie.
19 ** DICz*** je pooblaščen za sestavo datoteke s tehnično mapo.
20 ** DICz*** on volitatud koostama tehnilist dokumentatsiooni.
21 ** DICz*** е оторизирана да състави Акта за техническа конструкция.
22 ** DICz*** yra įgaliota sudaryti šį techninės konstrukcijos failą.
23 ** DICz*** ir autorizēts sastādīt tehnisko dokumentāciju.
24 ** Spoločnosť DICz*** je oprávnená vytvoriť súbor technickej konštrukcie.
25 ** DICz*** Teknik Yapı Dosyasını derlemeye yetkilidir.

***DICz = Daikin Industries Czech Republic s.r.o.

3P323721-8J

DAIKIN

Tetsuya Baba
Managing Director
Pilsen, 1st of April 2015

**DAIKIN INDUSTRIES CZECH REPUBLIC s.r.o.**
U Nové Hospody 1/1155, 301 00 Plzeň Skvrňany,
Czech Republic

## CONTENTS



The original instructions are written in English. All 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.
After completing installation, conduct a trial operation to check for faults and explain to the customer how to operate the air conditioner and take care of it with the aid of the operation manual.
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”.**
Meaning of WARNING and CAUTION notices

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

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

**⚠ 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.
- Consult your local dealer regarding what to do in case of refrigerant leakage. When the air conditioner is to be 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 depletion.
- Be sure to use only the specified accessories and spare 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.
  A foundation of insufficient strength may result in the equipment falling and causing injury.
- Carry out the specified installation work after taking into account strong winds, typhoons or earthquakes.
  Failure to do so during installation work may result in the unit falling and causing accidents.
- Make sure that a separate power supply circuit is provided for this unit and that all electrical work is carried out by qualified personnel according to local laws and regulations and this installation manual.
  An insufficient power supply capacity or improper electrical construction may lead to electric shocks or fire.
- Make sure that all wiring is secured, the specified wires are used, and that there is no strain on the terminal connections or wires.
  Improper connections or securing of wires may result in abnormal heat build-up or fire.
- When wiring the power supply and connecting the remote controller wiring and transmission wiring, position the wires so that the control box lid can be securely fastened.
  Improper positioning of the control box lid may result in electric shocks, fire or the terminals overheating.
- 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.
- Be sure to switch off the unit before touching any electrical parts.
- Do not touch the switch with wet fingers.
  Touching the switch with wet fingers can cause electric shock.
- 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.

**⚠ CAUTION**

- While following the instructions in this installation manual, install drain piping to ensure proper drainage and insulate piping to prevent condensation.
  Improper drain piping may result in indoor water leakage and property damage.
- 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.)
- Remote controller (wireless kit) transmitting distance can be shorter than expected in rooms with electronic fluorescent lamps (inverter or rapid start types).
  Install the indoor unit as far away from fluorescent lamps as possible.
- Sound pressure level is less than 70 dB (A).
- Only handle the indoor unit with gloves.

- 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 will deteriorate, parts may fall off and water leakage could result.
  2. Where corrosive gas, such as sulphurous acid gas, is produced.
     Corroding of copper pipes or soldered parts may result in refrigerant leakage.
  3. Near machinery emitting electromagnetic radiation.
     Electromagnetic radiation may disturb the operation of the control system and result in a malfunction of the unit.
  4. Where flammable gas may leak, where there is carbon fibre or ignitable dust suspensions 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.
- Do not touch the heat exchanger fins.
  Improper handling may result in injury.
- Be very careful about product transportation.
  Some products use PP bands for packaging. Do not use any PP bands for a means of transportation. It is dangerous.
- Safely dispose of the packing materials.
  Packing materials, such as nails and other metal or wooden parts, may cause stabs or other injuries.
  Tear apart and throw away plastic packaging bags so that children will not play with them. If children play with a plastic bag which was not torn apart, they face the risk of suffocation.
- Do not turn off the power immediately after stopping operation.
  Always wait at least 5 minutes before turning off the power. Otherwise, water leakage and trouble may occur.
- In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Follow national standards for installation work.

## 2. BEFORE INSTALLATION

**The accessories needed for installation must be retained in your custody until the installation work is completed. Do not discard them!**

1. Decide upon a line of transport.
2. 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 moving the unit at or after opening, hold the unit by the hanger brackets. Do not apply force to the refrigerant piping, drain piping or flange parts.**

**Be sure to check the type of R410A refrigerant to be used before installing the unit.**
**(Using an incorrect refrigerant will prevent normal operation of the unit.)**

For the installation of an outdoor unit, refer to the installation manual attached to the outdoor unit.

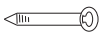
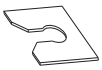
### 2-1 PRECAUTIONS

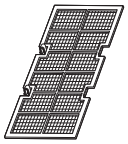
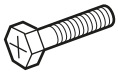
- Be sure to instruct customers how to properly operate the unit (operating different functions, and adjusting the temperature ) by having them carry out operations themselves while looking at the operation manual.
- Do not install in locations where the air contains high levels of salt such as that near the ocean and where voltage fluctuates greatly such as that in factories, or in vehicles or vessels.

### 2-2 ACCESSORIES

Check the following accessories are included with your unit.

| Name | Metal clamp (1) | Drain hose (2) | Insulation for fitting | Sealing pad |
|---|---|---|---|---|
| Quantity | 1 pc. | 1 pc. | 1 each | 1 each |
| Shape |  |  |  for liquid pipe (3)  for gas pipe (4) |  Large (5)  mid. (6) |

| Name | Screws for duct flanges (7) | Washer for hanging bracket (8) | Clamp | Washer fixing plate (11) |
|---|---|---|---|---|
| Quantity | 1 set | 8 pcs. | 1 set | 4 pcs. |
| Shape |  26 pcs. |  |  Large (9) 8 pcs.  small (10) 4 pcs. |  |

| Name | Sealing material (12) | Air filter (13) | Leveling screws (14) | (Other) • Operation manual • Installation manual (this manual) |
|---|---|---|---|---|
| Quantity | 2 pcs. | 1 pc. | 1 set | |
| Shape |  |  |  4x M6 | |

### 2-3 OPTIONAL ACCESSORIES

- This indoor unit requires one of the operation remote controls listed below.

| Remote controller | |
|---|---|
| Wired type | BRC1D52/BRC1D61/BRC1E51/ BRC2C51/BRC1E52/BRC3A61 |
| Wireless type | BRC4C62 |

**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 may drip. | |
| Does drainage flow smoothly? | Condensate 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? | Incomplete grounding may result in electric shocks. | |
| 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. | |

Also review the “SAFETY PRECAUTIONS”.

**b. Items to be checked at time of delivery**

| Items to be checked | Check |
|---|---|
| Did you explain about operations while showing the operation manual to your customer? | |
| Did you hand the operation manual and warranty over to your customer? | |
| Did you explain about the way of maintaining and cleaning local procurements (air filter, grille (both air outlet and suction grille), etc.) to your customer? | |
| Did you hand manuals of local procurements (in case equipped) over to your customer? | |

**c. Points for explanation about operations**

The items with ⚠ WARNING and ⚠ CAUTION marks in the operation manual are the items pertaining to possibilities 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 operation manual.

## 3. SELECTING INSTALLATION SITE

**⚠ CAUTION**

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

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

- Where optimum air distribution can be ensured.
- Where nothing blocks air passage.
- Where condensate can be properly drained.
- Where the wall/floor is strong enough to bear the indoor unit weight.
- Where the floor 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.
- Where piping between indoor and outdoor units is possible within the allowable limit. (Refer to the installation manual for the outdoor unit.)
- The equipment is not intended for use in a potentially explosive atmosphere.

**[ PRECAUTION ]**

- Install the indoor and outdoor units, power supply wiring and connecting wires at least 1 m away from televisions or radios in order to prevent image interference or noise. (Depending on the radio waves, a distance of 1 m may not be sufficient enough to eliminate the noise.)
- If installing the wireless kit in a room with electronic fluorescent lighting (inverter or rapid start type), the remote controller’s transmission distance may be shortened. Indoor units should be installed as far away from fluorescent lighting as possible.

**(2) Use suspension bolts for installation. Check whether the wall/floor is strong enough to support the weight of the unit or not. If there is a risk, reinforce the wall/floor before installing the unit.**

To avoid contact with the fan, the following precaution action must be taken:

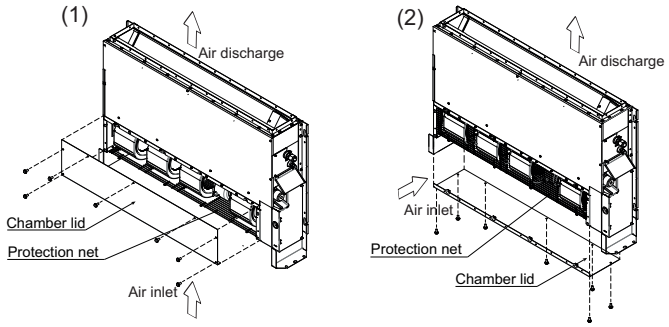
- Install the unit with ducting and grill which can only be removed with the aid of tooling. It shall be installed so that it gives adequate protection against touching the fan. If a maintenance panel exists in the ducting, it shall only be possible to remove the panel by the aid of tooling to avoid contact with the fan. The protection shall be according to relevant European and local legislation. There are no restrictions concerning the installation height.

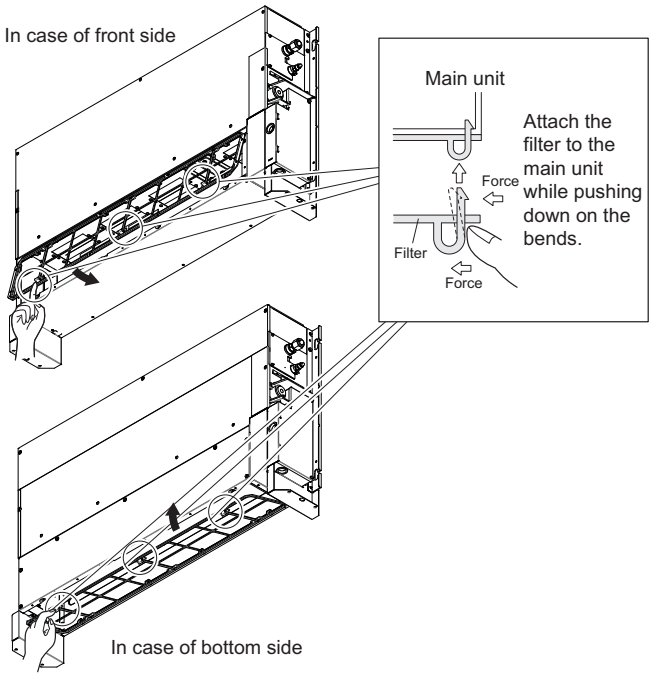
## 4. PREPARATIONS BEFORE INSTALLATION

**(1) Make sure the range of the unit’s external static pressure is not exceeded.**
(See the technical documentation for the range of the external static pressure setting.)

**(2) In case of front suction:**

(1) Remove the protection net.
(2) Remove the chamber lid. (7 locations)
(3) Remove one leg on the opposite side of the el. compo (for instruction, see page 4, “Removing the legs”).
(4) Reattach the removed chamber lid in the orientation shown in picture 2 below. (7 locations)
(5) Attach the protection net to the front side.
(6) Reattach the leg if necessary.
(7) Attach the air filter (accessory) in the manner shown in the diagram.

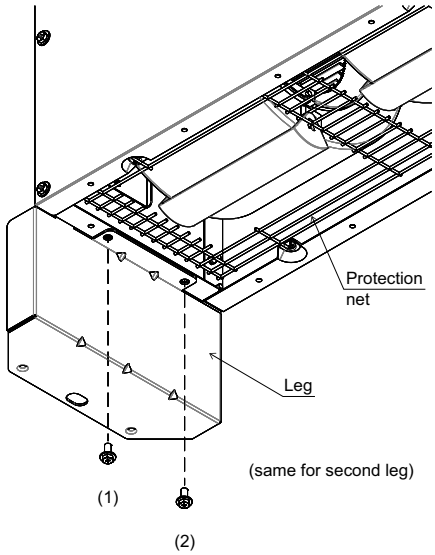


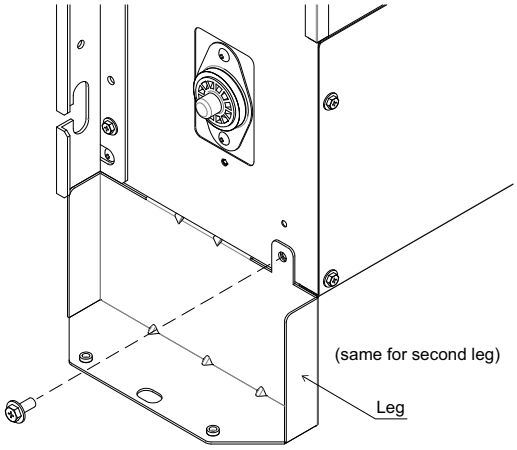



### ■ Removing the legs

If it is necessary to remove the legs, follow these instructions:

- In case of bottom suction
  (1) Remove the air filter
  (2) Unscrew 4 screws which hold both legs on the bottom side of the unit (see the first picture below)
  (3) Unscrew 2 screws on the side of the unit and remove legs (see the second picture below)
  (4) Reattach the air filter
- In case of front suction
  (1) Unscrew 4 screws which hold both legs on the bottom side of the unit (see the first picture below)
  (2) Unscrew 2 screws on the side of the unit and remove legs (see the second picture below)
  (3) Put screws (1) and (2) back in the chamber lid



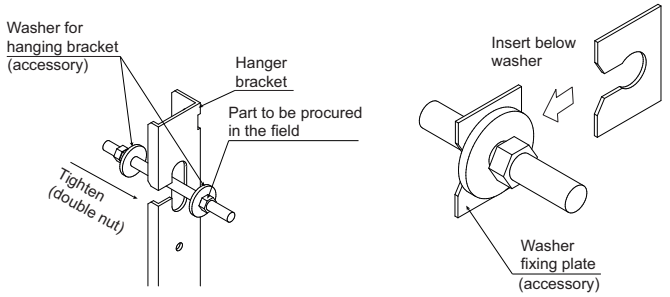

## 5. INDOOR UNIT INSTALLATION

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

**(1) Install the indoor unit temporarily.**

- Attach the hanger bracket to the suspension bolt. Be sure to fix it securely by using a nut and washer from the left and right side of the hanger bracket.
- **(Refer to the picture below)**

[ Securing the hanger bracket ] [ How to secure washers ]




**[ PRECAUTION ]**
Since the unit uses a plastic drain pan, prevent welding spatter and other foreign substances from the air outlet during installation.

**(2) Adjust the unit to fit between the walls.**

**(3) Check the unit is horizontally level.**

**⚠ CAUTION**

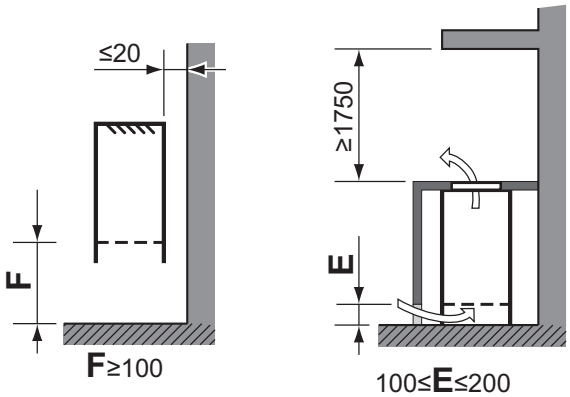
- **Make sure the unit is installed level using a level or a plastic tube filled with water. In using a plastic tube instead of a level, adjust the top surface of the unit to the surface of the water at both ends of the plastic tube and adjust the unit horizontally. (One thing to watch out for in particular is if the unit is installed so that the slope is not in the direction of the drain piping, this might cause leaking.)**

### ■ Mounting the remote controller

Refer to the “installation manual of the remote controller” supplied with remote controller.

### ■ Wall mounted type/floor standing concealed type

Use the installation mount on the rear of the unit for installation.
The unit requires minimum 100mm clearance (**F**) and clearance (**E**) on the bottom side for air intake and maximum 20mm clearance from the wall by using spacers (field supply)




Wall mounted type Floor standing concealed type

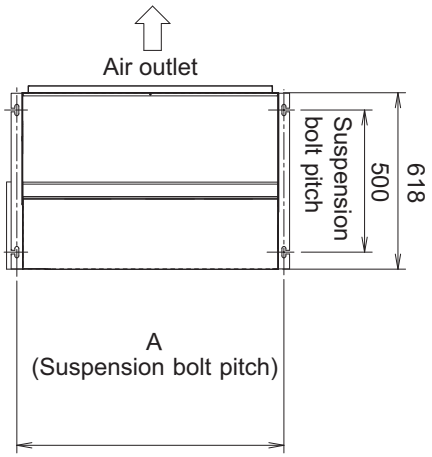
**⚠ CAUTION**

Make sure no short circuit of air is caused when placing the unit directly under a windowsill.

NOTE: The unit must be installed within a fully enclosed casing built by others. The casing shall include as minimum a removable access panel, suction air grille and discharge air grille. These removable items shall prevent any access to the unit by its shape, position and by the use of fixings that require the use of a tool for removal.

**1) Positioning of holes for fastening to the wall**

Unit of measurement = mm

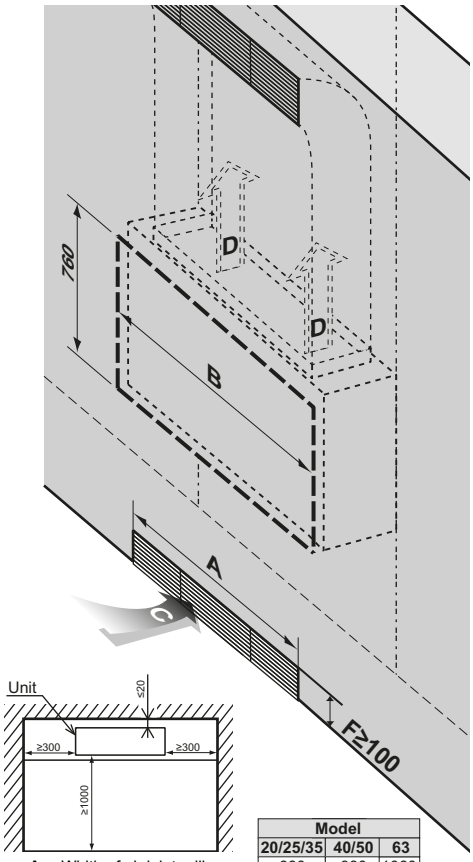



| Model | A |
|---|---|
| 20+25+32 type | 740 |
| 40+50 type | 940 |
| 63 type | 1140 |

**2) Wall mounted installation**

Install the unit according to the figures below.

Unit of measurement = mm



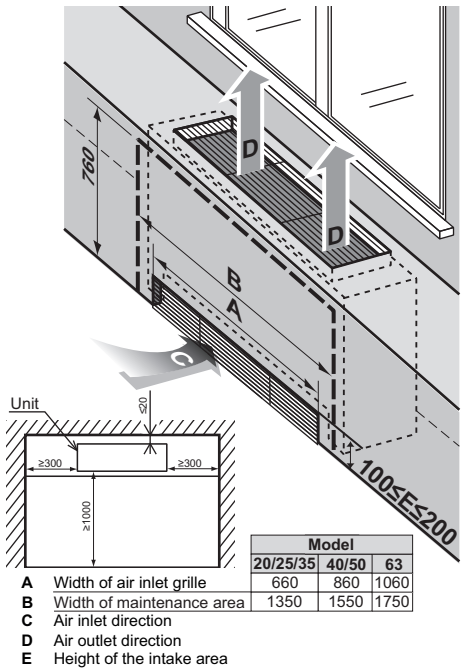

| | | Model | | |
|---|---|---|---|---|
| | | 20/25/35 | 40/50 | 63 |
| A | Width of air inlet grille | 660 | 860 | 1060 |
| B | Width of maintenance area | 1350 | 1550 | 1750 |

C Air inlet direction
D Air outlet direction
F Height of the intake area

**3) Floor standing concealed installation**

Install the unit according to the figures below.

Unit of measurement = mm



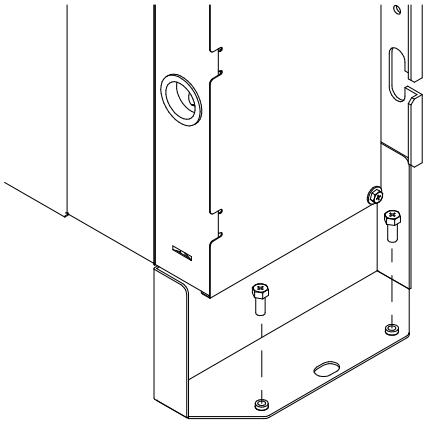

| | | Model | | |
|---|---|---|---|---|
| | | 20/25/35 | 40/50 | 63 |
| A | Width of air inlet grille | 660 | 860 | 1060 |
| B | Width of maintenance area | 1350 | 1550 | 1750 |

C Air inlet direction
D Air outlet direction
E Height of the intake area

### ■ Fixing method of the unit

Make sure that the floor is strong enough to bear the unit.

**1) Level the indoor unit with the leveling screws (accessory part). If the floor is too uneven to level the unit, place the unit on a flat and level base.**



**2) If the unit is in danger of falling over, either fasten to the wall using the holes provided, or fasten to the floor with a field supplied floor fastener.**

## 6. OUTDOOR UNIT INSTALLATION

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

## 7. 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.**

**Use insulation that can withstand temperatures of at least 120°C. Reinforce the insulation on the refrigerant piping according to the installation environment. If the temperature in the wall reaches 30°C or the humidity RH80%, condensation may form on the surface of the insulation.**〉

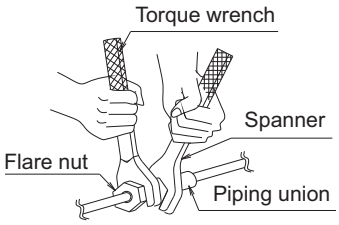
**⚠ CAUTION**

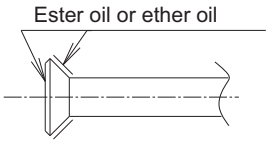
Follow the points at below.

- Use a pipe cutter and flare suitable for the type of refrigerant.
- Apply ester oil or ether oil to the flare section when using a flare connection.
- Only use the flare nuts included with the unit. Using different flare nuts may cause the refrigerant to leak.
- To prevent dust, moisture or other foreign matter from infiltrating the piping, 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.

**(1) Connect the piping.**

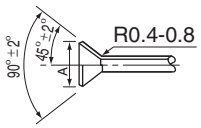
- The outdoor unit is charged with refrigerant.
- Be sure to use both a spanner and torque wrench together, as shown in the drawing, when connecting or disconnecting pipes to/from the unit. **(Refer to the left picture below)**




- Refer to Table 1 for the dimensions of flare nut spaces.
- Apply ester oil or ether oil to flare section (both inside and out) when using flare nut connections and then turn 3 or 4 times by hand. **(Refer to the right picture above)**
- Refer to Table 1 for tightening torque.

Table 1

| Pipe size | Tightening torque | Flare dimension A (mm) | Flare shape |
|---|---|---|---|
| ϕ 6.4 | 15 – 17 N·m | 8.7 – 9.1 |  |
| ϕ 9.5 | 33 – 39 N·m | 12.8 – 13.2 | |
| ϕ 12.7 | 50 – 60 N·m | 16.2 – 16.6 | |
| ϕ 15.9 | 63 – 75 N·m | 19.3 – 19.7 | |



**⚠ CAUTION**

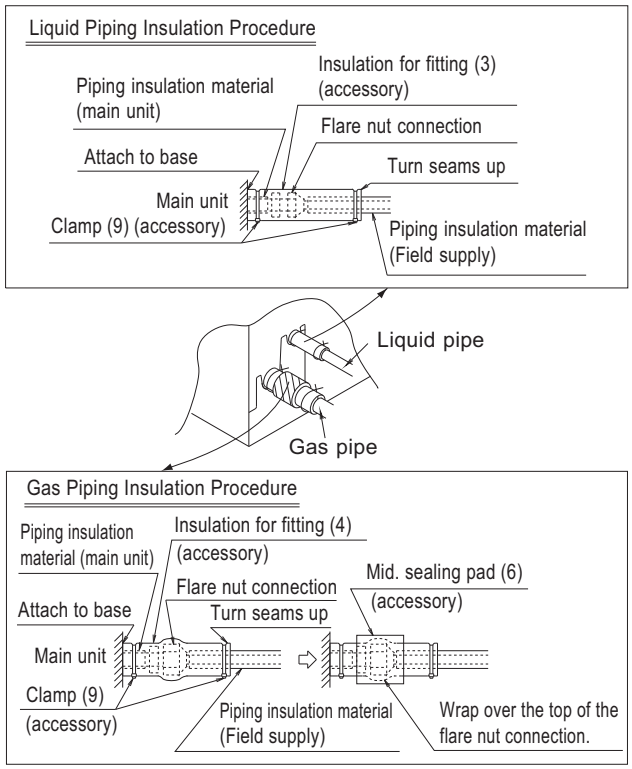
**Overtightening may damage the flare and cause leaks. Be careful for oil not to adhere to any portions other than a flare part. If oil adheres to resin parts etc., there is a possibility of damaging by deterioration.**

- Refer to Table 2 if no torque wrench is available.
  Using a wrench to tighten flare nuts causes the tightening torque to suddenly grow much tighter after a certain point. From there, tighten the nut further by the appropriate angle listed in Table 2.

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

**(3) After checking for gas leaks, be sure to insulate the pipe connections referring to the following picture.**

- Insulate using the insulation for fitting (3) (4) included with the liquid and gas pipes. Besides, make sure the insulation for fitting (3) (4) on the liquid and gas piping has its seams facing up.
  (Tighten both edges with clamp (9).)
- For the gas piping, wrap the mid. sealing pad (6) over the insulation for fitting (4) (flare nut part).



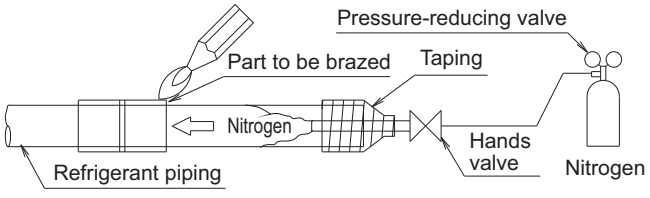

**⚠ CAUTION**

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

- When brazing the refrigerant piping, perform nitrogen replacement first, or perform the brazing (CAUTION 2) while feeding nitrogen into the refrigerant piping (CAUTION 1), and finally connect the indoor unit using the flare connections. **(Refer to the picture below)**

**⚠ CAUTION**

1. When brazing a pipe while feeding nitrogen inside the pipe, make sure to set the nitrogen pressure to 0.02 MPa (0.2 kg/cm$^2$) using the pressure reducing valve. (This pressure is such that breeze is blown to your cheek.)
2. Do not use a flux when brazing the refrigerant pipe joints. Use phosphor copper brazer (BCuP-2: JIS Z 3264/B-Cu93P-710/795: ISO 3677) which does not require flux. (Using a flux containing chlorine may cause the piping to corrode. Using a welding flux containing fluorine may cause the refrigerant lubricant to deteriorate, and affect adversely the refrigerant piping system.)




**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 by the angle shown below:

Table 2

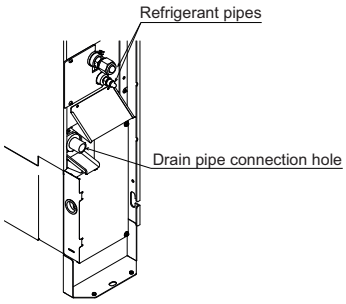
| Pipe size | Further tightening angle | Recommended arm length of tool |
|---|---|---|
| ϕ 6.4 (1/4”) | 60 to 90 degrees | Approx. 150mm |
| ϕ 9.5 (3/8”) | 60 to 90 degrees | Approx. 200mm |
| ϕ 12.7 (1/2”) | 30 to 60 degrees | Approx. 250mm |
| ϕ 15.9 (5/8”) | 30 to 60 degrees | Approx. 300mm |

## 8. DRAIN PIPING WORK

**⚠ CAUTION**

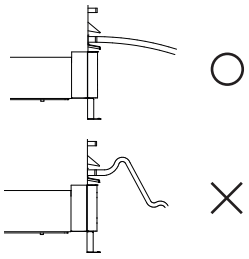
- Make sure all water is out before making the duct connection.

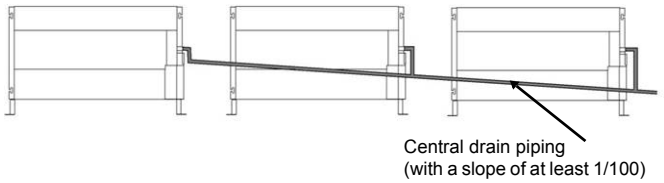
**(1) Install the drain piping.**




Connect the drain pipe after removing the rubber cap and insulation tubing attached to the connection hole.

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



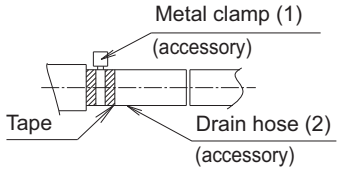


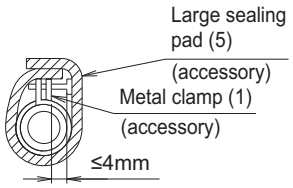

**⚠ CAUTION**

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

- To keep the drain piping from sagging, space hanging bracket every 1 to 1.5 m.
- Use the drain hose (2) and the metal clamp (1). Insert the drain hose (2) fully into the drain socket and firmly tighten the metal clamp (1) with the upper part of the tape on the hose end. Tighten the metal clamp (1) until the screw head is less than 4 mm from the hose. **(Refer to the following pictures)**
- The two areas below should be insulated because condensation may form there causing water to leak.
  - Drain piping passing indoors
  - Drain socket

  Referring the figure below, insulate the metal clamp (1) and drain hose (2) using the included large sealing pad (5). **(Refer to the right picture below)**




〈 **PRECAUTIONS** 〉

Drain piping connections

- Do not connect the drain piping directly to sewage pipes that smell of ammonia. The ammonia in the sewage might enter the indoor unit through the drain piping and corrode the heat exchanger.
- Do not twist or bend the drain hose (2), so that excessive force is not applied to it. (This type of treatment may cause leaking.)
- If you are using central drain piping, follow the procedure outlined in the picture depicting drain piping on this page.
- Select central drain piping of proper size according to the capacity of the connected unit.

**⚠ CAUTION**

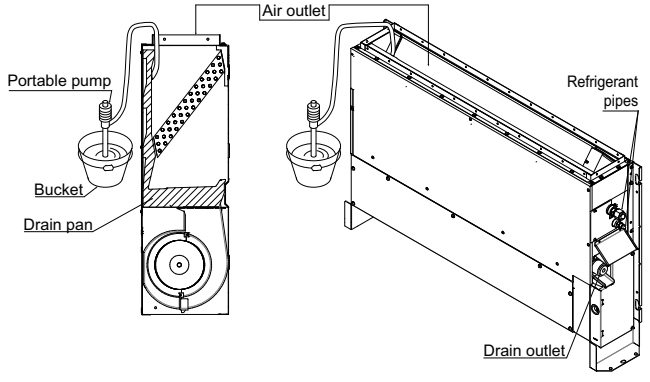
- The electric wiring work shall be performed by qualified electricians.
- If workers not having the electrician qualification have performed the electric wiring work, the steps 3 to 7 shall be performed after the **TEST RUN**.

**(2) After piping work is finished, check drainage flows smoothly. Gradually insert approximately 1L of water into the drain pan to check drainage in the manner described below.**

- Gradually pour approximately 1L of water from the outlet hole into the drain pan to check drainage.
- Check the drainage.

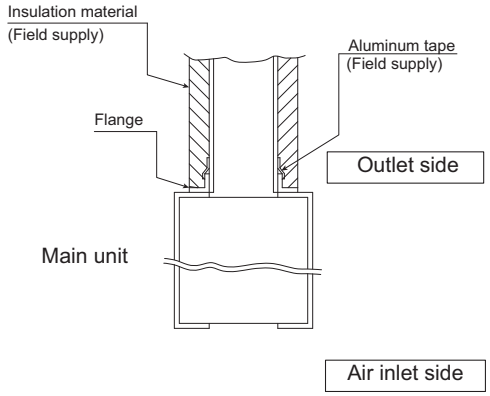
**⚠ CAUTION**

**When filling the drainpan with water, be sure that the water is sliding down the drainpan wall (see picture below). Failure to observe this instruction may result in water leakage.**



# 9. INSTALLING THE DUCT

**Air outlet side**




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

**⚠ CAUTION**

- Be sure to insulate the duct to prevent condensation from forming. (Material: glass wool or polyethylene foam, 25 mm thick)
- Use electric insulation between the duct and the wall when using metal ducts to pass metal laths of the net or fence shape or metal plating into wooden buildings.
- Be sure to explain about the way of maintaining and cleaning local procurements (air filter, grille (both air outlet and suction grille), etc.) to your customer.

# 10. ELECTRIC WIRING WORK

## 10-1 GENERAL INSTRUCTIONS

- Shut off the power before doing any work.
- All field supplied parts and materials, electric works must conform to local codes.
- Use copper wire only.
- See also the “Wiring Diagram plate” attached to the control box lid when laying electrical wiring.
- For details on hooking up the remote controller, refer to the “REMOTE CONTROLLER INSTALLATION MANUAL”.
- All wiring must be performed by an authorized electrician.
- This system consists of multiple indoor units. Mark each indoor unit as unit A, unit B . . . , and be sure the terminal board wiring to the outdoor unit and BS unit are properly matched. If wiring and piping between the outdoor unit and an indoor unit are mismatched, the system may cause a malfunction.
- 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 wiring 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 allow the earth wire to come in contact with gas pipes, water pipes, lightning rods, or telephone earth wires.
  - Gas pipes: gas leaks can cause explosions and fire.
  - Water pipes: they cannot be grounded if hard vinyl pipes are used.
  - Telephone earth wire and lightning rods: the ground potential when struck by lightning gets extremely high.
- To avoid short circuiting the power supply wire, be sure to use insulated terminals.
- Do not turn on the power supply (circuit breaker or earth leakage breaker) until all other work is done.

## 10-2 SPECIFICATIONS FOR FIELD SUPPLIED FUSES AND WIRE

**Power-related**

| Model | Power supply wiring (including earth wire) | | | |
|---|---|---|---|---|
| | Number of units | Field fuses ⊟ | Wire | Size |
| 20 · 25 · 32 type | 1 | 16 A | H05VV-U3G (NOTE 1) | Size must comply with local codes. |
| 40 · 50 type | | | | |
| 63 type | | | | |

| Model | Transmission wiring Remote controller wiring | |
|---|---|---|
| | Wire | Size ($mm^2$) |
| 20 · 25 · 32 type | Sheathed vinyl cord or cable (2 wires) (NOTE 2) | 0.75 - 1.25 |
| 40 · 50 type | | |
| 63 type | | |

**NOTES**

1. Shows only in case of protected pipes. Use H07RN-F in case of no protection.
2. Insulated thickness : 1mm or more.
3. If the wiring is in a place where there are people it can be easily touched by people, install an earth leakage breaker to prevent electric shock.
4. When using an earth leakage breaker, make sure to select one useful also for protection against overcurrent and short-circuit.
   When using an earth leakage breaker only for earth device, make sure to use a wiring interrupter together.

- The length of the transmission wiring and remote controller wiring are as follows.

Length of the transmission wiring and remote controller wiring

| | |
|---|---|
| Outdoor unit – Indoor unit | Max. 1000m (Total wiring length: 2000m) |
| Indoor unit – Remote controller | Max. 500m |

## 10-3 ELECTRICAL CHARACTERISTICS

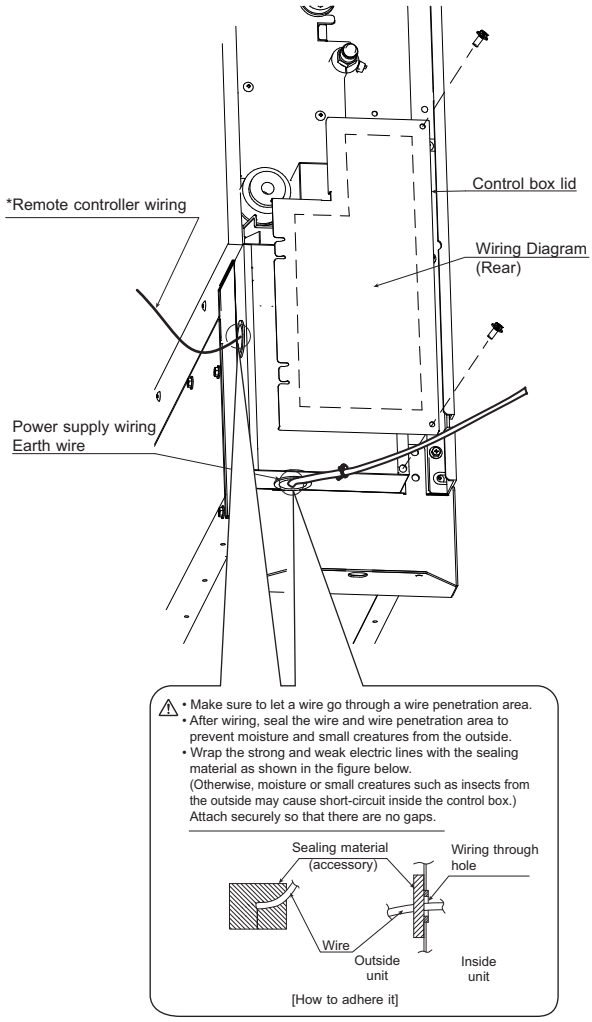
| Units | | | | Power supply | | Fan motor | |
|---|---|---|---|---|---|---|---|
| Model | Hz | Volts | Voltage range | MCA | MFA | KW | FLA |
| 20 · 25 · 32 | 50 | 220-240 | Min. 198 Max. 264 | 0.4 | 16 | 0.068 | 0.3 |
| 40 | | | | 0.5 | | 0.075 | 0.4 |
| 50 | | | | 0.5 | | 0.096 | 0.4 |
| 63 | | | | 0.6 | | 0.107 | 0.5 |
| 20 · 25 · 32 | 60 | 220 | Min. 198 Max. 242 | 0.5 | 16 | 0.068 | 0.4 |
| 40 | | | | 0.6 | | 0.075 | 0.5 |
| 50 | | | | 0.6 | | 0.096 | 0.5 |
| 63 | | | | 0.7 | | 0.107 | 0.6 |

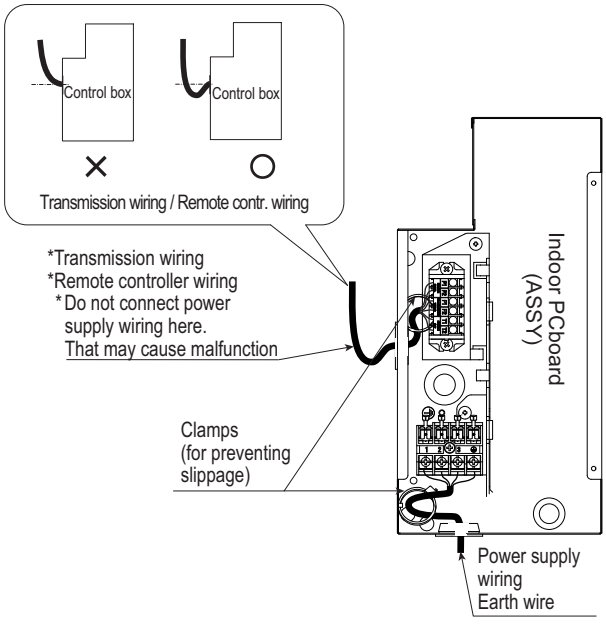
MCA: Minimum Circuit Amps (A) MFA:Max. Fuse Amps (A)
KW: Fan motor output (kW) FLA:Full Load Amps (A)

# 11. WIRING EXAMPLE

## 11-1 HOW TO CONNECT WIRINGS

- Wire only after removing the control box lid as shown in the picture below, referring to view A or B depending on the type of unit.




**⚠ CAUTION**

- Be sure to attach power supply wiring and earth wire to the control box with the clamp.
- When doing the wiring, make sure the wiring is neat and does not cause the control box lid to stick up, then close the cover firmly. When attaching the control box lid, make sure you do not pinch any wires.
- Outside the air conditioners, separate the weak wiring (remote controller and transmission wiring) and strong wiring (earth wire and power supply wiring) at least 50 mm so that they do not pass through the same place together. Proximity may cause electrical interference, malfunctions, and breakage.
- A main switch or other means for disconnection, having a contact separation in all poles, must be incorporated in the fixed wiring in accordance with relevant local and national legislation.
  Note that the operation will restart automatically if the main power supply is turned off and then turned back on again.

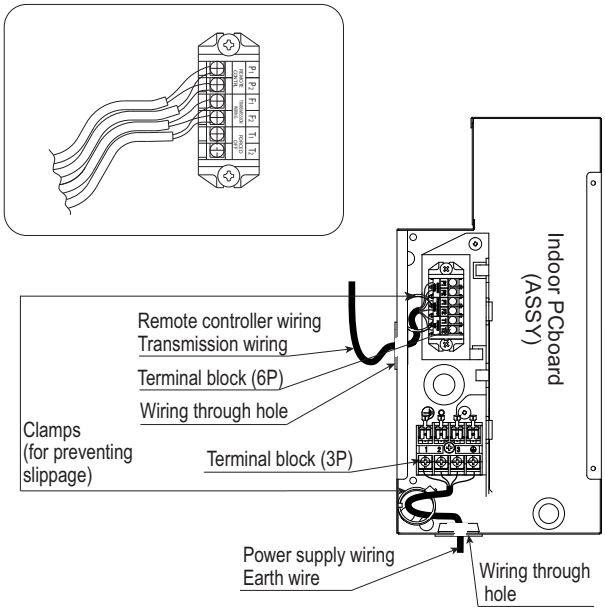
**[ PRECAUTIONS ]**

- Refer to the “REMOTE CONTROLLER INSTALLATION MANUAL” on how to install and lay the wiring for the remote controller.
- See also the “Wiring Diagram plate” attached to the control box lid when laying electrical wiring.
- Connect the remote controller and transmission wiring their respective terminal blocks.

**⚠ CAUTION**

- **Do not, under any circumstances, connect the power supply wiring to the remote controller or transmission wiring terminal block. Doing so can destroy the entire system.**

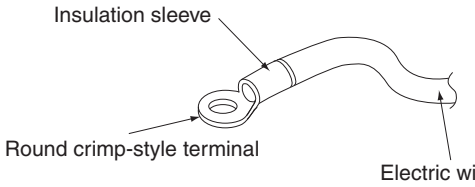
**[ Connecting electrical wiring, remote controller wiring, and transmission wiring ] (Refer to the following picture)**

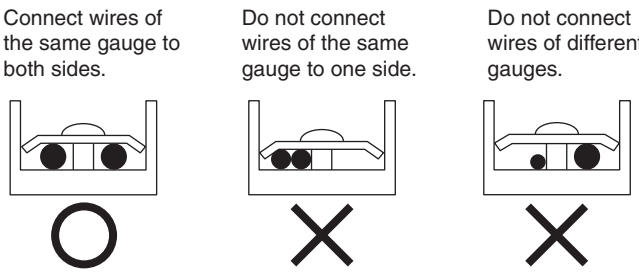



- **Power supply and Earth wiring**
  Remove the control box lid.
  Next, pull the wires into the unit through the wiring through hole and connect to the terminal block (3P).
  Be sure to put the part of the sheathed vinyl into the control box.
- **Remote controller and transmission wiring**
  Pull the wires into the unit through the wiring through hole and connect to the terminal block (6P).
  Be sure to put the part of the sheathed vinyl into the control box.

### 〈 Precautions when laying power supply wiring 〉

- Wiring of different thicknesses cannot be connected to the power supply wiring terminal block. (Slack in the power supply wiring may cause abnormal heat.)
- Use sleeve-insulated round crimp-style terminals for connections to the power supply wiring terminal block. When none are available, connect wires of the same diameter to both sides, as shown in the figure.



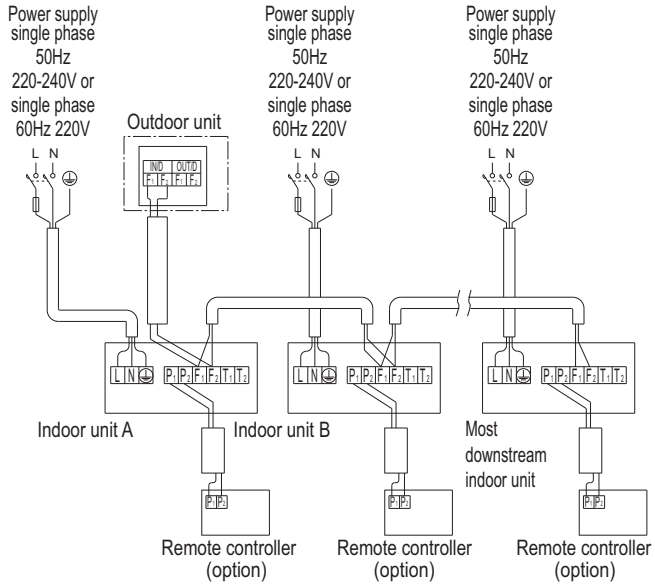

**Follow the instructions below if the wiring gets very hot due to slack in the power supply wiring.**

- For wiring, use the designated power supply wiring and connect firmly, then secure to prevent outside pressure being exerted on the terminal board.
- 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.

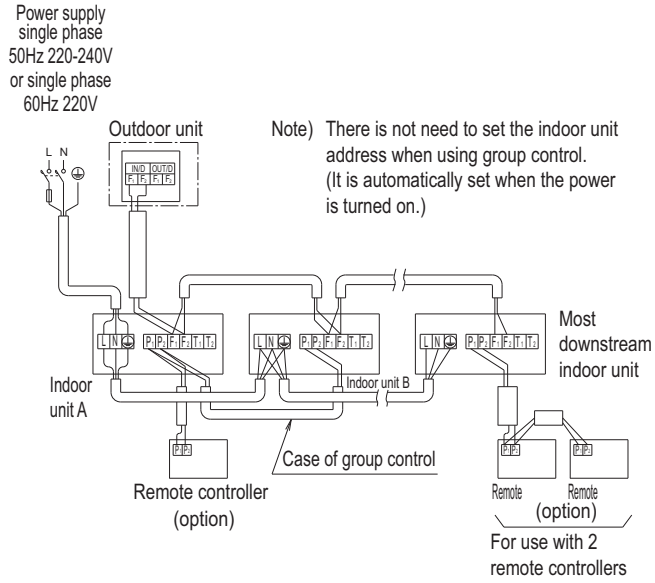
| Terminal block | Tightening torque (N·m) |
|---|---|
| Remote controller / transmission wiring terminal block (6P) | 0.79 – 0.97 |
| Power supply wiring terminal block (3P) | 1.18 – 1.44 |

## [ WIRING EXAMPLE ]

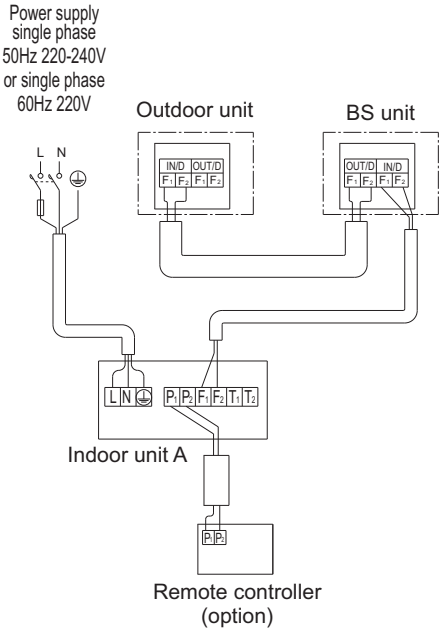
**No. 1 system When using 1 remote controller for 1 indoor unit**




**No. 2 system For group control or use with 2 remote controllers**




**No. 3 system When including BS unit**



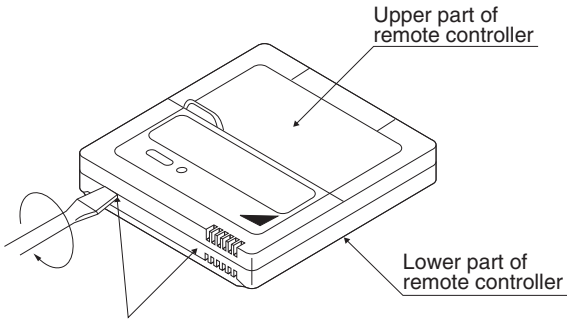

## 11-2 CONTROL BY 2 REMOTE CONTROLLERS (Controlling 1 indoor unit by 2 remote controllers)

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

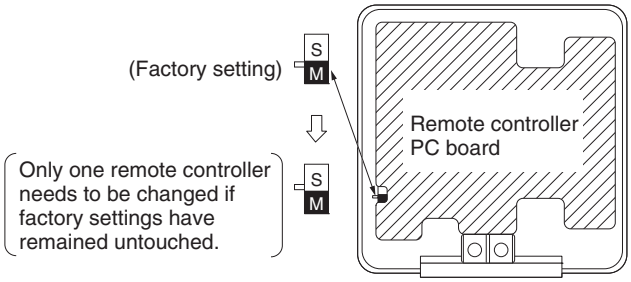
**MAIN/SUB CHANGEOVER**

**(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 (2 locations).**

The remote controller PC board is attached to the upper part of remote controller.



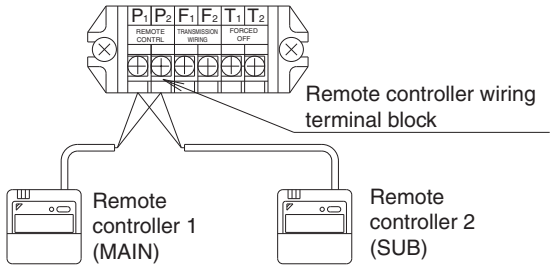

**(2) Turn the MAIN/SUB changeover switch on one of the two remote controller PC boards to "S".**
(Leave the switch of the other remote controller set to "M".)



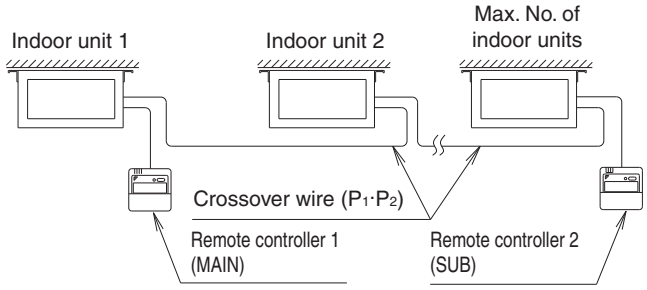

**Wiring Method** (See **"11. ELECTRIC WIRING WORK"**)

**(3) Remove the control box lid.**

**(4) Add remote controller 2 (SUB) to the terminal block for remote controller ($P_1$, $P_2$) in the control box.**
**(There is no polarity.)**

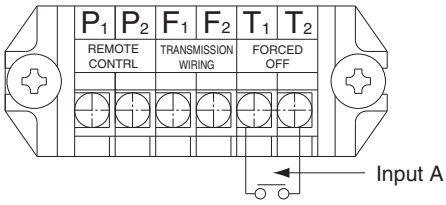



**[ PRECAUTIONS ]**
- Crossover wiring is needed when using group control and 2 remote controllers at the same time.
- Connect the indoor unit at the end of the crossover wire ($P_1$, $P_2$) to remote controller 2 (SUB).




### 11-3 REMOTE CONTROL (FORCED OFF AND ON/OFF OPERATION)

- Connect input lines from the outside to the terminals $T_1$ and $T_2$ on the terminal block (6P) for remote controller to achieve remote control.
- See the **"13. FIELD SETTING AND TEST RUN"** for details on operation.




| | |
|---|---|
| Wire specification | Sheathed vinyl cord or cable (2 wires) |
| Gauge | 0.75 - 1.25 $mm^2$ |
| Length | Max. 100 m |
| External terminal | Contact that can ensure the minimum applicable load of 15 V DC, 1 mA. |

### 11-4 CENTRALIZED CONTROL

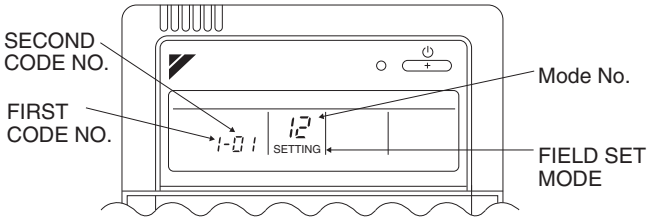
- For centralized control, it is necessary to designate the group No. For details, refer to the manual of each optional controllers for centralized control.

## 12. FIELD SETTING AND TEST RUN

〈**Field settings may have to be performed using the remote controller, depending on the type of installation.**〉

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

**(2) Depending on the type of installation, make the field settings from the remote controller after the power is turned on, following the "Field Settings" manual which came with the remote controller.**
- The settings can select "Mode No.", "FIRST CODE NO." and "SECOND CODE NO.".
- The "Field Settings" included with the remote controller lists the order of the settings and method of operation.




- Lastly, make sure the customer keeps the "Field Settings" manual, along with the operating manual, in a safe place.

### 12-1 SETTING THE STATIC PRESSURE SELECTION

- Select the SECOND CODE NO. for the resistance of the connected duct.
(The SECOND CODE NO. is set to "01" when shipped.)
- See the technical documentation for details.

| External static pressure | Mode No. | FIRST CODE NO. | SECOND CODE NO. |
|---|---|---|---|
| Standard (10Pa) | 13(23) | 5 | 01 |
| High static pressure setting (30Pa) | | | 02 |

### 12-2 REMOTE CONTROL SETTING

- Forced off and ON/OFF operation should be selected by selecting the SECOND CODE NO. as shown in the table below.
(The SECOND CODE NO. is set to "01" when shipped.)

| External ON/OFF input | Mode No. | FIRST CODE NO. | SECOND CODE NO. |
|---|---|---|---|

| | | | |
|---|---|---|---|
| Forced off | 12(22) | 1 | 01 |
| ON/OFF operation | | | 02 |

- Input A of forced off and ON/OFF operation work as shown in the table below.

| Forced off | ON/OFF operation |
|---|---|
| Input A “on” to force a stop (remote controller reception prohibited) | Unit operated by changing input A from “off” to “on” |
| Input A “off” to allow remote controller | Unit stopped by changing input A from “on” to “off” |

## 12-3 SETTING THE FILTER SIGN DISPLAY INTERVAL

- Explain the following to the customer if the filter dirt settings have been changed.
- The filter sign display time is set to 2500 hours (equivalent to 1 year’s use) when shipped.
- The settings can be changed to not display.
- When installing the unit in a place with much dusts, set the filter sign display time to shorter intervals (1,250 hours).
- Explain it to the customer that the filter needs to be cleaned regularly to prevent clogging and also the time that is set.

| Mode No. | FIRST CODE NO. | | SECOND CODE NO. | |
|---|---|---|---|---|
| | | | 01 | 02 |
| 10 (20) | 0 | Filter dirt | low | high |
| | 1 (low/high) | Displayed time (units: hours) | 2500/ 1250 | 10000/ 5000 |
| | 3 | Filter sign display | ON | OFF |

## 12-4 SETTINGS FOR SEPARATELY SOLD ACCESSORIES

- See the instruction manuals included with separately sold accessories for the necessary settings.

〈 **When using a wireless remote controller** 〉

- A wireless remote controller address needs to be set when using a wireless remote controller. See the installation manual included with the wireless remote controller for details on how to make the settings.

**(3) Perform a test run according to the outdoor unit’s installation manual.**

- The operation lamp of the remote controller will flash when a malfunction occurs. Check the malfunction code on the liquid crystal display to identify the point of trouble. An explanation of malfunction codes and the corresponding trouble is provided in “CAUTION FOR SERVICING” of the outdoor unit.
  If the display shows any of the following, there is a possibility that the wiring was done incorrectly or that the power is not on, so check again.

| Remote control display | Content |
|---|---|
| “⚠” display | • There is a short circuit at the FORCED OFF terminals ($T_1$, $T_2$). |
| “U3” display | • The test-run has not been performed. |
| “U4” display<br>“UH” display | • The power on the outdoor unit is off.<br>• The outdoor unit has not been wired for power supply.<br>• Wiring is incorrect for the transmission wiring and / or FORCED OFF wiring.<br>• The transmission wiring is cut. |
| “UF” display | • Reversed transmission wiring |
| No display | • The power on the indoor unit is off.<br>• The indoor unit has not been wired for power supply.<br>• Wiring is incorrect for the remote controller wiring, the transmission wiring and / or the FORCED OFF wiring.<br>• The remote controller wiring is cut. |

**⚠ CAUTION**

- Always stop the test run using the remote controller to stop operation.

# 13. WIRING DIAGRAM

: FIELD WIRING
: CONNECTOR
: WIRE CLAMP
: PROTECTIVE EARTH (SCREW)
L : LIVE
N : NEUTRAL

| | | | |
|---|---|---|---|
| BLK | : BLACK | PRP | : PURPLE |
| BLU | : BLUE | RED | : RED |
| BRN | : BROWN | WHT | : WHITE |
| GRY | : GREY | YLW | : YELLOW |
| ORG | : ORANGE | GRN | : GREEN |
| PNK | : PINK | | |

**INDOOR UNIT**

A1P.....PRINTED CIRCUIT BOARD
C105.....CAPACITOR
F1U.....FUSE(T, 3.15A, 250V)
F2U.....FIELD FUSE
HAP.....LIGHT EMITTING DIODE (SERVICE MONITORING –GREEN)
M1F.....MOTOR (FAN)
PS.....POWER SUPPLY CIRCUIT
Q1DI.....EARTH LEAK DETECTOR
R1T.....THERMISTOR (AIR)
R2T, R3T.....THERMISTOR (COIL)
V1R.....DIODE BRIDGE
X1M.....TERMINAL BLOCK (CONTROL)
X2M.....TERMINAL BLOCK (POWER SUPPLY)
Y1E.....ELECTRONIC EXPANSION VALVE
Z1C.....FERRITE CORE (NOISE FILTER)
Z1F.....NOISE FILTER

**RECEIVER/DISPLAY UNIT**

A2P.....PRINTED CIRCUIT BOARD
A3P.....PRINTED CIRCUIT BOARD
BS1.....PUSH BUTTON (ON/OFF)
H1P.....LIGHT EMITTING DIODE (ON-RED)
H2P.....LIGHT EMITTING DIODE (FILTER DING-RED)
H3P.....LIGHT EMITTING DIODE (TIMER-GREEN)
H4P.....LIGHT EMITTING DIODE (DEFROST-ORANGE)
SS1.....SELECTOR SWITCH (MAIN/SUB)
SS2.....SELECTOR SWITCH (WIRELESS ADDRESS SET)

**ADAPTOR FOR WIRING**

F3U, F4U.....FUSE((B),5A,250V)
KHuR.....MAGNETIC RELAY
KFR.....MAGNETIC RELAY
KCR.....MAGNETIC RELAY

**CONNECTOR FOR OPTIONAL PARTS**

X24A.....CONNECTOR (WIRELESS REMOTE CONTROLLER)
X33A.....CONNECTOR (ADAPTOR FOR WIRING)
X35A.....CONNECTOR (POWER SUPPLY CONNECTOR)
X38A.....CONNECTOR (MULTI TENANT)

**WIRED REMOTE CONTROLLER**

R1T.....THERMISTOR (AIR)
SS1.....SELECTOR SWITCH (MAIN/SUB)

| | | |
|---|---|---|
| WIRED REMOTE CONTROLLER | : | Wired remote controller |
| (OPTIONAL ACCESSORY) | : | (Optional accessory) |
| SWITCH BOX (INDOOR) | : | Switch box (indoor) |
| TRANSMISSION WIRING | : | Transmission wiring |
| CENTRAL REMOTE CONTROLLER | : | Central remote controller |
| INPUT FROM OUTSIDE | : | Input from outside |

**NOTE**

1. USE COPPER CONDUCTORS ONLY.
2. WHEN USING THE CENTRAL REMOTE CONTROLLER, SEE MANUAL FOR CONNECTION TO THE UNIT.
3. WHEN CONNECTING THE INPUT WIRES FROM OUTSIDE, FORCED "OFF" OR "ON/OFF" CONTROL OPERATION CAN BE SELECTED BY THE REMOTE CONTROLLER. SEE INSTALLATION MANUAL FOR MORE DETAILS.
4. REMOTE CONTROLLER MODEL VARIES ACCORDING TO THE COMBINATION SYSTEM, CONFIRM ENGINEERING DATA AND CATALOGS, ETC. BEFORE CONNECTING.

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