Suomi



# **OUTDOOR UNIT**

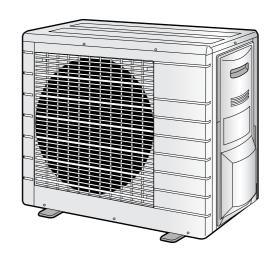


# **INSTALLATION MANUAL**

Installation manual
Installationsmanual
Installationshandbok
Installasjonshåndbok
Asennusohje
Installierungshandbuch
Manuel d'installation
Руководство по монтажу
Instrukcja montażu
Installatiehandleiding



RXL35G2V1B



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 - 3AABJIEHME-O-COOTBETCTBUM CE - OPFYLDELSESERKLÆRING CE - FÖRSÄKRAN-OM-ÖVERENSTÄMMELSE

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

CE - IZJAVA-O-UŞKLAĐENOSTI CE - MEGFELELŐSÉGI-NYILATKOZAT CE - DEKLARACJA-ZGODNOŚCI CE - DECLARAŢIE-DE-CONFORMITATE

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

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

# DAIKIN INDUSTRIES, LTD.

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

04 🖭 verklaart hierbij op eigen exclusieve verantwoordelijkheid dat de airconditioning units waarop deze verklaring betrekking heeft: 03 (F) déclare sous sa seule responsabilité que les appareils d'air conditionné visés par la présente déclar ation:

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

06 ① dichiara sotto sua responsabilità che i condizionatori modello a cui è riferita questa dichiarazione:

07 📾 δηλώνει με αποκλειστική της ευθύνη ότι τα μοντέλα των κλιματιστικών συσκευών στα οποία αναφέρεται η παρούσα δήλωση: 08 🕑 declara sob sua exclusiva responsabilidade que os modelos de ar condicionado a que esta declaração se refere:

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

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

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

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

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

17 🖭 deklaruje na własną i wyłączną odpowiedzialność, że modele klimatyzatorów, których dotyczy niniejsza deklaracja: 16 (E) teljes felelőssége tudatában kijelenti, hogy a klímaberendezés modellek, melyekre e nyilatkozat vonatkozik:

18 (re) declară pe proprie răspundere că aparatele de aer conditionat la care se referă această declarație.

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

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

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

23 🕟 ar pilnu atbildību apliecina, ka tālāk uzskaitīto modeļu gaisa kondicionētāji, uz kuriem attiecas šī deklarācija: 24 ® vyhlasuje na vlastnú zodpovednosť, že tieto klimatizačné modely, na ktoré sa vzťahuje toto vyhlásenie: 25 🔞 tamamen kendi sorumluluğunda olmak üzere bu bildirinin ilgili olduğu klima modellerinin aşağıdaki gibi olduğunu beyan eder:

RXL35G2V1B

08 estão em conformidade com a(s) seguinte(s) norma(s) ou outro(s) documento(s) normativo(s), desde que estes sejam utilizados de 09 соответствуют следующим стандартам или другии нормативным документам, при условии их использования согласно нашим acordo com as nossas instruções: 01 are in conformity with the following standard(s) or other normative document(s), provided that these are used in accordance with our 02 der/den folgenden Norm(en) oder einem anderen Normdokument oder -dokumenten entspricht/entsprechen, unter der Voraussetzung,

инструкциям: 10 overholder falgende standard(er) eller andetlandre retningsgivende dokument(er), forudsat at disse anvendes i henhold til vore instrukser: 03 sont conformes à la laux 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

11 respektive utrustning är utförd i överensstämmelse med och följer följande standard(er) eller andra normgivande dokument, under 12 respektive utstyr er i overensstemmelse med følgende standard(er) eller andre normgivende dokument(er), under forutssetning av at förutsättning att användning sker i överensstämmelse med våra instruktioner:

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:

onze instructies:

daß sie gemäß unseren Anweisungen eingesetzt werden:

13 vastaavat seuraavien standardien ja muiden ohjeellisten dokumenttien vaatimuksia edellyttäen, että niitä käytetään ohjeidemme disse brukes i henhold til våre instrukser: 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 07 είναι σύμφωνα με το(α) ακόλουθο(α) πρότυπο(α) ή άλλο έγγραφο(α) κανονισμών, υπό την προϋπόθεση ότι χρησιμοποιούνται

14 za předpokladu, že jsou využívány v souladu s našími pokyny, odpovídají následujícím nomám nebo nomatívním dokumentům: 15 u skladu sa slijedečím standardom(ima) ili drugim nomatívním dokumentom(ima), uz uvjet da se oni koriste u skladu s naším uputama: mukaisesti:

17 spełniają wymogi następujących norm i innych dokumentów normalizacyjnych, pod warunkiem że używane są zgodnie z naszymi 18 sunt în conformitate cu următorul (următoarele) standard(e) sau alt(e) document(e) normativ(e), cu condiția ca acestea să fie utilizate în 16 megfelelnek az alábbi szabvány(ok)nak vagy egyéb irányadó dokumentum(ok)nak, ha azokat előírás szerint használják: instrukcjami

21 съответстват на следните стандарти или други нормативни документи, при условие, че се използват съгласно нашите 20 on vastavuses järgmis(t)e standardi(te)ga või teiste normatiivsete dokumentidega, kui neid kasutatakse vastavalt meie juhenditele: 19 skladni z naslednjimi standardi in drugimi normativi, pod pogojem, da se uporabljajo v skladu z našimi navodili: conformitate cu instrucțiunile noastre

24 sú v zhode s nasledovnou(ými) normou(ami) alebo iným(i) normatívnym(i) dokumentom(ami), za predpokladu, že sa používajú v súlade 22 atitinka žemiau nurodytus standartus ir (arba) kitus norminius dokumentus su salyga, kad yra naudojami pagal mūsų nurodymus: 23 tad, ja lietoti atbilstoši ražotāja norādījumiem, atbilst sekojošiem standartiem un citiem normatīviem dokumentiem: s našim návodom:

25 ürünün, talimatlarımıza göre kullanılması koşuluyla aşağıdaki standartlar ve norm belirten belgelerle uyumludur.

EN60335-2-40,

αήπφωνα με τις οδηγίες μας:

10 under iagttagelse af bestemmelserne i: 17 zgodnie z postanowieniami Dyrektyw: 14 za dodržení ustanovení předpisu: 13 noudattaen määräyksiä: 18 în urma prevederilor: 15 prema odredbama: 16 követi a(z): 04 overeankomstig de bepalingen van:
05 siguiende las disposiciones de:
05 secondo le prescrizioni petr:
07 pr. riphom trov \textit{\textit{contraction}} petr:
08 de acordo com o previsio en:
09 e cootreptorem c nonoxe 02 gemāß den Vorschriften der: 03 conformément aux stipulations des: 01 following the provisions of:

22 laikantis nuostatų, pateikiamų: 23 ievērojot prasības, kas noteiktas: 24 održiavajúc ustanovenia: 25 bunun koşullarına uygun olarak: 20 vastavalt nõuetele: 21 следвайки клаузите на: 19 ob upoštevanju določb: 11 enligt villkoren i: 12 gitt i henhold til bestemmelsene i:

positivo de <B> de acordo com o Certificado <C> από το <B> σύμφωνα με το Πιστοποιητικό <C>. tal como estabelecido em <A> e com o parecer όπως καθορίζεται στο <Α> και κρίνεται θετικά delineato nel <A> e giudicato positivamente как указано в <А> и в соответствии с da <B> secondo il Certificato <C>. 09 Примечание \* Σημείωση 06 Nota 08 Nota\* zoals vermeld in <A> en positief beoordeeld door <B> overeenkomstig Certificaat <C>. tel que défini dans <A> et évalué positivement par as set out in <A> and judged positively by <B> wie in der <A> aufgeführt und von <B> positiv beurteilt gemäß Zertifikat <C>. <B> conformément au Certificat <C>. according to the Certificate <C>.

> 03 Remarque \* 02 Hinweis\*

Note \*

04 Bemerk \*

Nota \*

som anført i <A> og positivt vurderet af <B> i положительным решением <В> согласно

10 Bemærk\*

como se establece en <A> y es valorado positivamente por <B> de acuerdo con el

Certificado <C>

Свидетельству <С>.

nenhold til Certifikat <C>

16 Megjegyzés\* 19 Opomba\* 17 Uwaga\* Märkus \* 18 Notă\* jak bylo uvedeno v <A> a pozitívně zjištěno <B> v jotka on esitetty asiakirjassa <A> ja jotka <B> on hyväksynyt Sertifikaatin <C> mukaisesti. kako je izloženo u <A> i pozitivno ocijenjeno od som det fremkommer i <A> og gjennom positiv bedømmelse av <B> ifølge Sertifikat <C>. enligt <A> och godkäntsav <B> enligt Certifikatet <C>. strane <B> prema Certifikatu <C> souladu s osvědčením <C>. Information \* Napomena \* 14 Poznámka \* 13 Huom\* 12 Merk \*

16 irányelv(ek) és módosításaik rendelkezéseit. Direktiivejä, sellaisina kuin ne ovat muutettuina. Direktiv, med företagna ändringar.
 Direktiver, med foretatte endringer. 10 Direktiver, med senere ændringer 15 Smjernice, kako je izmijenjeno. 14 v platném znění. 06 Direttive, come da modifica. 07 Одтучи, отмо έχουν τροποποιηθεί. 08 Directivas, conforme alteração em. 09 Директив со всеми погравками. 02 Direktiven, gemäß Änderung. 03 Directives, telles que modifiées. 04 Richtlijnen, zoals geamendeerd. 05 Directivas, según lo enmendado. 01 Directives, as amended.

Electromagnetic Compatibility 2004/108/EC

Low Voltage 2006/95/EC

18 Directivelor, cu amendamentele respective 17 z późniejszymi poprawkami. както е изложено в <A> и оценено положително от <B> съгласно 21 Забележка \*

kaip nustatyta <A> ir kaip teigiamai nuspręsta <B>

22 Pastaba\*

a(z) <A> alapján, a(z) <B> igazolta a megfelelést, a(z) <C> tanúsítvány szerint.

zgodnie z dokumentacją <A>, pozytywną opinią <B> i Świadectwem <C>.

Сертификата <С>

25 Değiştirilmiş halleriyle Yönetmelikler.

Direktīvās un to papildinājumos.

24 Smernice, v platnom znení.

21 Директиви, с техните изменения.

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

> ako bolo uvedené v <A> a pozítívne zistené <B> v súlade s osvedčením <C> . kā norādīts <A> un atbilstoši <B> pozitīvajam <A>'da belirtildiği gibi ve <C> Sertifikasına vērtējumam saskanā ar sertifikātu <C>. Poznámka \* 23 Piezīmes\* ¥ Not 7 22

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

skladu s certifikatom <C>.

aşa cum este stabilit în <A> şi apreciat pozitiv de <B> în conformitate cu Certificatul <C> .

nagu on näidatud dokumendis <A> ja heaks kiidetud <B> järgi vastavalt sertifikaadile <C>.

ę ŝ göre <B> tarafından olumlu olarak pagal Sertifikata <C>. değerlendirildiği gibi.

<A> DAIKIN.TCF.015 M3/07-2008 KEMA Quality B.V.

74736-KRQ/EMC97-4957

DAIKIN

Manager Quality Control Department 1st. of Sep. 2008 Noboru Murata

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

# **Safety Precautions**

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

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

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

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

Be sure to follow the instructions.

Be sure to establish an earth connection.

Never attempt.

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.

### **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.
- 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. A foundation of insufficient strength may result in the equipment falling and causing injury.
- Electrical work must be performed in accordance with relevant local and national regulations and with instructions
  in this installation manual. Be sure to use a dedicated power supply circuit only.
  Insufficiency of power circuit capacity and improper workmanship may result in electric shocks or fire.
- Use a cable of suitable length.
   Do not use tapped wires or an extension lead, as this may cause overheating, 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 wiring between the indoor and outdoor units, position the wires so that the control box lid can be securely fastened.
   Improper positioning of the control box lid may result in electric shocks, fire or over heating terminals.
- If refrigerant gas leaks during installation, ventilate the area immediately.
   Toxic gas may be produced if the refrigerant comes into contact with fire.

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- 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.
- When installing or relocating the air conditioner, be sure to bleed the refrigerant circuit to ensure it is free of air, and
- use only the specified refrigerant (R410A).

  The presence of air or other foreign matter in the refrigerant circuit causes abnormal pressure rise, which may result in equipment damage and even injury.
- During installation, attach the refrigerant piping securely before running the compressor. If the compressor is not attached and the stop valve is open when the compressor is run, air will be sucked in, causing abnormal pressure in the refrigeration cycle, which may result in equipment damage and even injury.
- During pump-down, stop the compressor before removing the refrigerant piping.

  If the compressor is still running and the stop valve is open during pump-down, air will be sucked in when the refrigerant piping is removed, causing abnormal pressure in the refrigeration cycle, which may result in equipment damage and even injury.
- 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.



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

# **CAUTION**

• Do not install the air conditioner at any place where there is a danger of flammable gas leakage. In the event of a gas leakage, build-up of gas near the air conditioner may cause a fire to break out.



- 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.
- Tighten the flare nut according to the specified method such as with a torque wrench. If the flare nut is too tight, it may crack after prolonged use, causing refrigerant leakage.
- Make sure to provide for adequate measures in order to prevent that the outdoor unit be used as a shelter by small animals.
   Small animals making contact with electrical parts can cause malfunctions, smoke or fire. Please instruct the customer to keep the area around the unit clean.

# **Accessories**

Accessories supplied with the outdoor unit:

		(B) Refrigerant charge label	
(A) Installation Manual	1	Contains fluorinated greenhouse gases covered by the Kyoto Protocol  R410A  ① = kg  ② = kg  ① +② = kg	1

# **Precautions for Selecting the Location**

- 1) Choose a place solid enough to bear the weight and vibration of the unit, where the operation noise will not be amplified.
- Choose a location where the hot air discharged from the unit or the operation noise will not cause a nuisance to the neighbors of the user.
- 3) Avoid places near a bedroom and the like, so that the operation noise will cause no trouble.
- 4) There must be sufficient spaces for carrying the unit into and out of the site.
- 5) There must be sufficient space for air passage and no obstructions around the air inlet and the air outlet.
- 6) The site must be free from the possibility of flammable gas leakage in a nearby place.
- 7) Install units, power cords and inter-unit cables at least 3 meter away from television and radio sets. This is to prevent interference to images and sounds. (Noises may be heard even if they are more than 3 meter away depending on radio wave conditions.)
- 8) In coastal areas or other places with salty atmosphere of sulfate gas, corrosion may shorten the life of the air conditioner.
- 9) Since drain flows out of the outdoor unit, do not place under the unit anything which must be kept away from moisture.

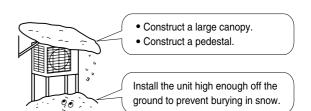
### NOTE

Cannot be installed hanging from ceiling or stacked.



When operating the air conditioner in a low outdoor ambient temperature, be sure to follow the instructions described below.

- 1) To prevent exposure to wind, install the outdoor unit with its suction side facing the wall.
- Never install the outdoor unit at a site where the suction side may be exposed directly to wind.
- 3) To prevent exposure to wind, it is recommended to install a baffle plate on the air discharge side of the outdoor unit.
- 4) In heavy snowfall areas, select an installation site where the snow will not affect the unit.

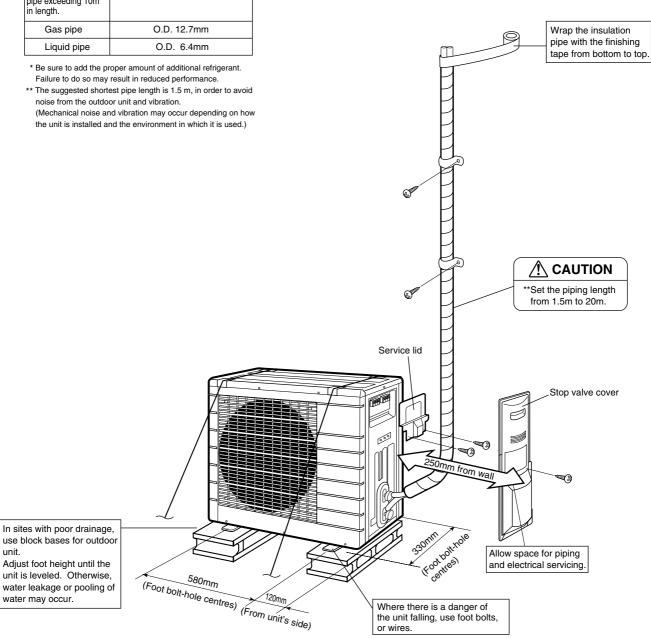


■English 2

# **Outdoor Unit Installation Drawings**

	Max. allowable length	20m
**	Min. allowable length	1.5m
	Max. allowable height	15m
*	Additional refrigerant required for refrigerant pipe exceeding 10m in length.	20g/m
	Gas pipe	O.D. 12.7mm
	Liquid pipe	O.D. 6.4mm

noise from the outdoor unit and vibration. (Mechanical noise and vibration may occur depending on how

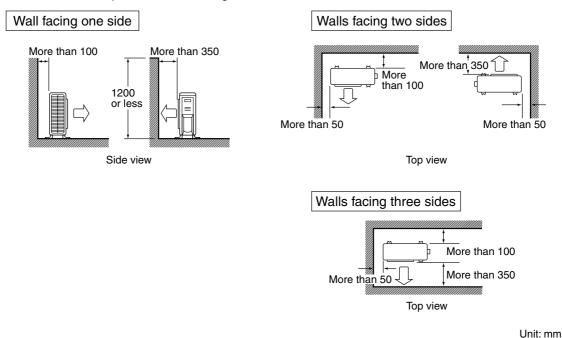


use block bases for outdoor unit.

unit is leveled. Otherwise, water leakage or pooling of water may occur.

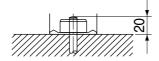
# **Installation Guidelines**

- Where a wall or other obstacle is in the path of outdoor unit's intake or exhaust airflow, follow the installation guidelines below.
- For any of the below installation patterns, the wall height on the exhaust side should be 1200mm or less.



# **Precautions on Installation**

- · Check the strength and level of the installation ground so that the unit will not cause any operating vibration or noise after installed.
- In accordance with the foundation drawing, fix the unit securely by means of the foundation bolts. (Prepare four sets of M8 or M10 foundation bolts, nuts and washers each which are available on the market.)
- It is best to screw in the foundation bolts until their length are 20mm from the foundation surface.



# **Outdoor Unit Installation**

# 1. Installing outdoor unit.

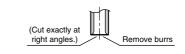
1) When installing the outdoor unit, refer to "Precautions for Selecting the Location" and the "Outdoor Unit Installation Drawings."

■English 4

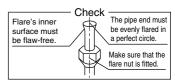
# **Outdoor Unit Installation**

# 2. Flaring the pipe end.

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



Set exactly at the position shown below.				
<b>V</b> A		Flare tool for R410A	Conventional flare tool	
	Clutch-type	Clutch-type (Rigid-type)	Wing-nut type (Imperial-type)	
Die	Α	0-0.5mm	1.0-1.5mm	1.5-2.0mm



# **⚠ WARNING** -

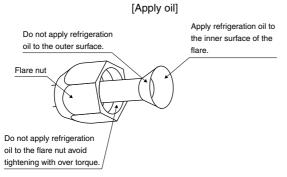
- 1) Do not use mineral oil on flared part.
- 2) Prevent mineral oil from getting into the system as this would reduce the lifetime of the units.
- 3) Never use piping which has been used for previous installations. Only use parts which are delivered with the unit.
- 4) Do never install a drier to this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

# 3. Refrigerant piping.

### **↑** CAUTION

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

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



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

	Torque wren	ch
Spanner		
Piping union	Flare nu	t d

[Tighten]

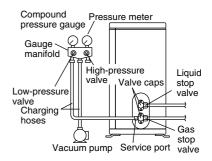
Valve cap tightening torque			
Gas side	Liquid side		
1/2 inch	1/4 inch		
48.1-59.7N • m (490-610kgf • cm)	21.6-27.4N • m (220-280kgf • cm)		
Service port cap	10.8-14.7N • m (110-150kgf • cm)		

# 4. Purging air and checking gas leakage.

• When piping work is completed, it is necessary to purge the air and check for gas leakage.

# **↑** WARNING

- 1) Do not mix any substance other than the specified refrigerant (R410A) into the refrigeration cycle.
- 2) When refrigerant gas leaks occur, ventilate the room as soon and as much as possible.
- 3) R410A, as well as other refrigerants, should always be recovered and never be released directly into the environment.
- 4) Use a vacuum pump for R410A exclusively. Using the same vacuum pump for different refrigerants may damage the vacuum pump or the unit.
- If using additional refrigerant, perform air purging from the refrigerant pipes and indoor unit using a vacuum pump, then charge additional refrigerant.
- Use a hexagonal wrench (4mm) to operate the stop valve rod.
- All refrigerant pipe joints should be tightened with a torque wrench at the specified tightening torque.



1) Connect projection side of charging hose (which comes from gauge manifold) to gas stop valve's service port.



2) Fully open gauge manifold's low-pressure valve (Lo) and completely close its high-pressure valve (Hi). (High-pressure valve subsequently requires no operation.)



3) Do vacuum pumping and make sure that the compound pressure gauge reads -0.1MPa (-76cmHg)\*1.



4) Close gauge manifold's low-pressure valve (Lo) and stop vacuum pump.

(Keep this state for a few minutes to make sure that the compound pressure gauge pointer does not swing back.)\*2.



5) Remove caps from liquid stop valve and gas stop valve.



6) Turn the liquid stop valve's rod 90 degrees counterclockwise with a hexagonal wrench to open valve. Close it after 5 seconds, and check for gas leakage. Using soapy water, check for gas leakage from indoor unit's flare and outdoor unit's flare and valve rods. After the check is complete, wipe all soapy water off.



Disconnect charging hose from gas stop valve's service port, then fully open liquid and gas stop valves.
 (Do not attempt to turn valve rod beyond its stop.)



8) Tighten valve caps and service port caps for the liquid and gas stop valves with a torque wrench at the specified torques.

\*1. Pipe length vs. vacuum pump run time.

Pipe length	Up to 15 metres	More than 15 metres
Run time	Not less than 10 min.	Not less than 15 min.

\*2. If the compound pressure gauge pointer swings back, refrigerant may have water content or a loose pipe joint may exists. Check all pipe joints and retighten nuts as needed, then repeat steps 2) through 4).

# **Outdoor Unit Installation**

# 5. Refilling the refrigerant.

Check the type of refrigerant to be used on the machine nameplate.

### Precautions when adding R410A

### Fill from the liquid pipe in liquid form.

It is a mixed refrigerant, so adding it in gas form may cause the refrigerant composition to change, preventing normal operation.

1) Before filling, check whether the cylinder has a siphon attached or not. (It should have something like "liquid filling siphon attached" displayed on it.)

Filling a cylinder with an attached siphon



Stand the cylinder upright when filling.

There is a siphon pipe inside, so the cylinder need not be upside-down to fill with liquid.

Filling other cylinders

Turn the cylinder upside-down when filling.

Be sure to use the R410A tools to ensure pressure and to prevent foreign objects entering.

### Important information regarding the refrigerant used

This product contains fluorinated greenhouse gases covered by the Kyoto Protocol. Do not vent gases into the atmosphere.

Refrigerant type: R410A

GWP<sup>(1)</sup> value: **1975** 

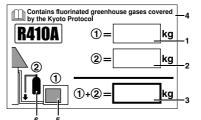
(1) GWP = global warming potential

Please fill in with indelible ink,

- i ① the factory refrigerant charge of the product,
- !■② the additional refrigerant amount charged in the field and
- ①+② the total refrigerant charge

on the refrigerant charge label supplied with the product.

The filled out label must be adhered in the proximity of the product charging port (e.g. onto the inside of the stop valve cover).



- 1 factory refrigerant charge of the product: see unit name plate
- 2 additional refrigerant amount charged in the field
- 3 total refrigerant charge
- Contains fluorinated greenhouse gases covered by the Kyoto Protocol
- 5 outdoor unit
- 6 refrigerant cylinder and manifold for charging

# Refrigerant piping work.

### 6-1 Cautions on pipe handling.

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

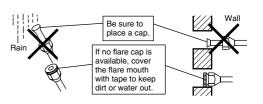
### 6-2 Selection of copper and heat insulation materials.

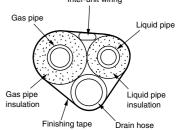
When using commercial copper pipes and fittings, observe the following:

- 1) Insulation material: Polyethylene foam
  Heat transfer rate: 0.041 to 0.052W/mK (0.035 to 0.045kcal/(mh •°C))
  Refrigerant gas pipe's surface temperature reaches 110°C max.
  Choose heat insulation materials that will withstand this temperature.
- Be sure to insulate both the gas and liquid piping and to provide insulation dimensions as below.

Gas side	Liquid side	Gas pipe thermal insulation	Liquid pipe thermal insulation
O.D. 12.7mm	O.D. 6.4mm	I.D. 14-16mm	I.D. 8-10mm
Minimum bend radius			
40mm or more	30mm or more	Thickness 10mm Min.	
Thickness 0.8mm (C1220T-O)			

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

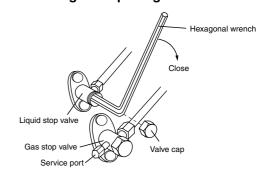




# **Pump Down Operation**

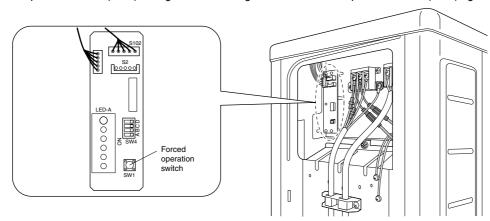
In order to protect the environment, be sure to pump down when relocating or disposing of the unit.

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



### Forced cooling operation

1) Press the Forced Operation switch (SW1) to begin forced cooling. Press the Forced Operation switch (SW1) again to stop forced cooling.



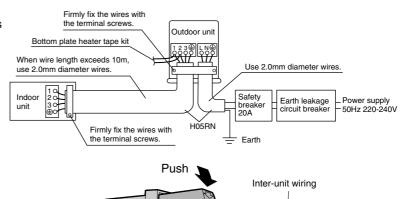
# Wiring

### **↑** WARNING

- 1) Do not use tapped wires, stranded wires, extension cords, or starburst connections, as they may cause overheating, electrical shock, or fire.
- 2) Do not use locally purchased electrical parts inside the product. (Do not branch the power for the drain pump, etc., from the terminal block.) Doing so may cause electric shock or fire.
- 3) Be sure to install an earth leakage breaker. (One that can handle higher harmonics.)
  (This unit uses an inverter, which means that it must be used an earth leakage breaker capable handling harmonics in order to prevent malfunctioning of the earth leakage breaker itself.)
- 4) Use an all-pole disconnection type breaker with at least 3mm between the contact point gaps.
- Do not turn ON the safety breaker until all work is completed.
  - Strip the insulation from the wire (20mm).
     Remove the insulation of the inter-unit wirings for 15mm before connecting the wires to the connectors.
  - Connect the inter-unit wirings between the indoor and outdoor units so that the terminal numbers match.
     Connect the inter-unit wirings to terminal

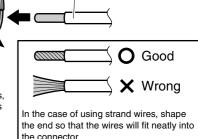
Connect the inter-unit wirings to terminal number 1 connector and terminal number 2 connector as shown in the illustration. After inserting the inter-unit wirings into the connectors, lightly pull the wires and make sure that the wires will not fall off.

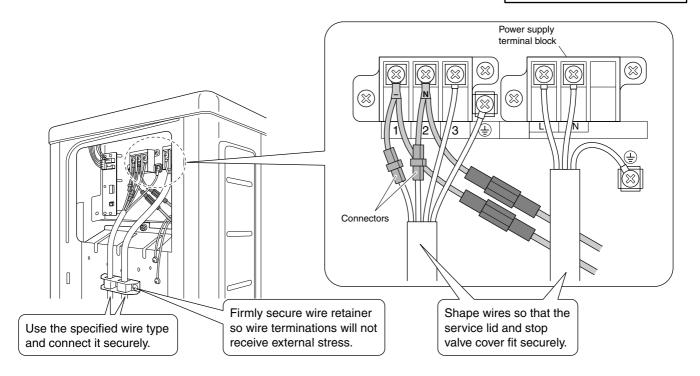
 Tighten the terminal screws securely. We recommend a flathead screwdriver be used to tighten the screws. The screws are packed with the terminal board.



Push the connection port of each connector and push the inter-unit wiring all the way in. After inserting the inter-unit wirings into the connectors, lightly pull the wires and make sure that the wires will not fall off.

Connector





Observe the notes mentioned following when wiring to the power supply terminal board.

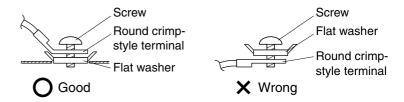
Precautions to be taken for power supply wiring.

Use a round crimp-style terminal for connection to the power supply terminal board. In case it cannot be used due to unavoidable reasons, be sure to observe the following instruction.

Place the round crimp-style terminals on the wires up to the covered part and secure in place.

· Ground terminal installation Use the following method when installing the round crimp-style terminal.

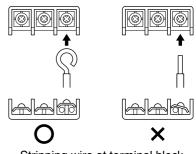




### ♠ CAUTION -

When connecting the inter-unit wirings to the terminal board using a single core wire, be sure to perform curling.

Problems with the work may cause heat and fires.



Stripping wire at terminal block

4) Pull the wire and make sure that it does not disconnect. Then fix the wire in place with a wire stop.

# **Test Run and Final Check**

# 1. Trial operation and testing.

- 1-1 Measure the supply voltage and make sure that it falls in the specified range.
- 1-2 Trial operation should be carried out in either cooling or heating mode.
- In cooling mode, select the lowest programmable temperature; in heating mode, select the highest programmable temperature.
  - 1) Trial operation may be disabled in either mode depending on the room temperature.
  - 2) After trial operation is complete, set the temperature to a normal level (26°C to 28°C in cooling mode, 20°C to 24°C in heating mode).
  - 3) For protection, the system disables restart operation for 3 minutes after it is turned off.
- 1-3 Carry out the test operation in accordance with the operation manual to ensure that all functions and parts, such as louver movement, are working properly.
  - The air conditioner requires a small amount of power in its standby mode. If the system is not to be used for some time after installation, shut off the circuit breaker to eliminate unnecessary power consumption.
  - If the circuit breaker trips to shut off the power to the air conditioner, the system will restore the original operation mode when the circuit breaker is opened again.

### 2. Test items.

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

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