TOSHIBA

INSTALLATION MANUAL
MANUEL D'INSTALLATION
INSTALLATIONS-HANDBUCH
MANUALE D'INSTALLAZIONE
MANUAL DE INSTALACIÓN
MANUAL DE INSTALAÇÃO
INSTALLATIEHANDLEIDING
ΕΓΧΕΙΡΙΔΙΟ ΕΓΚΑΤΑΣΤΑΣΗΣ

AIR CONDITIONER (SPLIT TYPE)
CLIMATISEUR (TYPE SPLIT)
KLIMAGERÄT (SPLIT-TYP)
CONDIZIONATORE D'ARIA (TIPO SPLIT)
AIRE ACONDICIONADO (TIPO SPLIT)
AR CONDICIONADO (TIPO SPLIT)
AIRCONDITIONER (GESPLITST TYPE)
ΚΛΙΜΑΤΙΣΤΙΚΟ (ΤΥΠΟΣ SPLIT)

<Concealed Duct Type>/<Type à conduits dissimulés>
<Lüftungskanalmontage in der Zwischendecke>/<Tipo a condotto nascosto>
<Modelo con conductos ocultos>/<Tipo conduta embutida>
<Type met weggewerkte kanalen>/<Τύπος συγκεκαλυμμένου αγωγού>

Heat Pump Model/Modèle à thermopompe
Geräte mit Heizung/Modello con pompa di riscaldamento
Modelo con bomba de calor/Modelo de bomba térmica
Model met warmtepomp/Μοντέλο με Αντλία Θερμότητας

HFC
R410A

Indoor Unit/Unité intérieure Raumeinheit/Unità interna Unidad interior/Unidade interior Binnenunit/Εσωτερική μονάδα	Outdoor Unit/Unité extérieure Außengerät/Unità esterna Unidad exterior/Unidade exterior Buitenunit/Εξωτερική μονάδα	
RAV-SM562BT-E	**RAV-SM562AT-E**	**SP562AT-E**
RAV-SM802BT-E	**RAV-SM802AT-E**	**SP802AT-E**
RAV-SM1102BT-E	**RAV-SM1102AT-E**	**SP1102AT-E**
RAV-SM1402BT-E	**RAV-SM1402AT-E**	**SP1402AT-E**

Please read this Installation Manual carefully before installing the Air Conditioner.
- This Manual describes the installation method of the indoor unit.
- For installation of the outdoor unit, follow the Installation Manual attached to the outdoor unit.

Veuillez lire attentivement ce Manuel d'installation avant d'installer le climatiseur.
- Ce manuel décrit la procédure d'installation de l'unité intérieure.
- Pour installer l'unité extérieure, reportez-vous au Manuel d'installation fourni avec l'unité extérieure.

Bitte lesen Sie dieses Handbuch sorgfältig, bevor Sie mit der Installation des Klimagerätes beginnen.
- In diesem Handbuch wird die Installation der Raumeinheit beschrieben.
- Um die Außeneinheit zu installieren, folgen Sie den Anweisungen in dem Handbuch, das der Außeneinheit beiliegt.

Prima di installare il condizionatore d'aria, leggere con attenzione questo manuale d'installazione.
- Questo manuale descrive il metodo d'installazione dell'unità interna.
- Per l'installazione dell'unità esterna, fare riferimento al manuale d'installazione fornito insieme all'unità esterna.

Lea atentamente este Manual de instalación antes de proceder a la instalación del aparato de aire acondicionado.
- Este manual describe el método de instalación de la unidad interior.
- Para la instalación de la unidad exterior, consulte el Manual de instalación que acompaña a la unidad exterior.

Leia atentamente o presente Manual de Instalação antes de instalar o Ar Condicionado.
- O presente manual descreve o método de instalar a unidade interior.
- Para a instalação de uma unidade exterior, siga o Manual de Instalação que acompanha a unidade exterior.

Lees deze installatiehandleiding zorgvuldig door voordat u de airconditioner gaat installeren.
- Deze installatiemethode beschrijft de installatiemethode van de binnenunit.
- Zie voor de installatie van de buitenunit, de installatiehandleiding bij de buitenunit.

Παρακαλώ διαβάστε προσεχτικά το Εγχειρίδιο Εγκατάστασης πριν από την εγκατάσταση του Κλιματιστικού.
- Το παρόν Εγχειρίδιο περιγράφει τη μέθοδο εγκατάστασης της εσωτερικής μονάδας.
- Για την εγκατάσταση της εξωτερικής μονάδας, ακολουθήστε το Εγχειρίδιο Εγκατάστασης που συνοδεύει την εξωτερική μονάδα.

ADOPTION OF NEW REFRIGERANT

This Air Conditioner is a new type which adopts a new refrigerant HFC (R410A) instead of the conventional refrigerant R22 in order to prevent destruction of the ozone layer.

UTILISATION DU NOUVEAU REFRIGERANT

Ce climatiseur est d'un type inédit qui utilise le nouveau réfrigérant HFC (R410A) au lieu du réfrigérant traditionnel R22, afin d'éviter la destruction de la couche d'ozone.

EINFÜHRUNG EINES NEUEN KÜHLMITTELS

Dies ist ein neuartiges Klimagerät. Anstatt des herkömmlichen Kühlmittels R22 verwendet es das neue ozonschichtschonende HFC Kühlmittel R410A.

ADOZIONE DI UN NUOVO REFRIGERANTE

Questo condizionatore d'aria è di un tipo nuovo che adotta un nuovo refrigerate HFC (R410A) al posto del refrigerante convenzionale R22, per prevenire la distruzione dello strato di ozono dell'atmosfera terrestre.

ADOPCIÓN DE NUEVO REFRIGERANTE

Este aparato de aire acondicionado es un modelo reciente que incorpora el nuevo refrigerante HFC (R410A) en lugar del refrigerante convencional R22 para así evitar daños en la capa de ozono.

ADOPÇÃO DO NOVO REFRIGERANTE

Este ar condicionado é um modelo novo que adopta um novo refrigerante HFC (R410A) em vez do refrigerante convencional R22 para evitar a destruição da cama de ozono.

TOEPASSING VAN EEN NIEUW KOELMIDDEL

Deze airconditioner is een nieuwe type dat werkt met een nieuw koelmiddel HFC (R410A) in plaats van met het conventionele koelmiddel R22, als bijdrage om de aantasting van de ozonlaag te reduceren.

ΥΙΟΘΕΤΗΣΗ ΝΕΟΥ ΨΥΚΤΙΚΟΥ

Το παρόν Κλιματιστικό είναι νέος τύπος που υιοθετεί νέο ψυκτικό HFC (R410A) στη θέση του συμβατικού ψυκτικού R22 προκειμένου να βοηθήσει στην προστασία του όζοντος.

CONTENTS

ENGLISH

SOMMAIRE

FRANCAIS

INHALT

DEUTSCH

INDICE

ITALIANO

CONTENIDO

ESPAÑOL

ÍNDICE

PORTUGUÊS

INHOUD

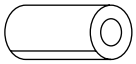
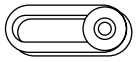
NEDERLANDS

ΠΕΡΙΕΧΟΜΕΝΑ

ΕΛΛΗΝΙΚΑ

Accessory parts and Parts to be procured locally

❒ Accessory parts

Part name		Q'ty	Shape
Pipe insulator		2	
Clamp for air filter fixing	562BT	2	
	802BT 1102BT 1402BT	4	
Washer for unit hung-up		8	

Part name		Q'ty	Shape
Clamp screw	562BT	2	 (with pedestal)
	802BT 1102BT 1402BT	4	
Connecting cable for High static pressure tap			
Installation Manual		1	
Owner's Manual		1	

<Separate sold parts>

Part name	Q'ty	Shape
Standard wired remote controller	1	

❒ Parts to be procured locally

Connecting pipe (Liquid side) (6.4mm (diam.), Nominal (diam.) 1/4" thick 0.8mm) RAV-SM562BT (9.5mm (diam.), Nominal (diam.) 3/8" thick 0.8mm) RAV-SM802BT, RAV-SM1102BT, RAV-SM1402BT
Connecting pipe (Gas side) (12.7mm (diam.), Nominal (diam.) 1/2" thick 0.8mm) RAV-SM562BT (15.9mm (diam.), Nominal (diam.) 5/8" thick 1.0mm) RAV-SM802BT, RAV-SM1102BT, RAV-SM1402BT
Power supply cord 2.5mm² (H07RN-F or 245IEC66) (20m or less), 3.5mm² (AWG-12) (50m or less)

Connecting cable H07RN-F or 245IEC66 (1.5mm² or more)
Thermal insulation for refrigerant pipe (10mm or more, thermal insulating foam polyethylene)
Thermal insulation for drain pipe (10mm or more, foam polyethylene)
Drain pipe (Outer 32mm (diam.)) (VP25)
Tapes
Grounding cable (2.0mm (diam.) or more)

1 PRECAUTIONS FOR SAFETY

- Ensure that all Local, National and International regulations are satisfied.
- Read this “PRECAUTIONS FOR SAFETY” carefully before Installation.
- The precautions described below include the important items regarding safety. Observe them without fail.
- After the installation work, perform a trial operation to check for any problem.
  Follow the Owner’s Manual to explain how to use and maintain the unit to the customer.
- Turn off the main power supply switch (or breaker) before the unit maintenance.
- Ask the customer to keep the Installation Manual together with the Owner’s Manual.

CAUTION **New Refrigerant Air Conditioner Installation**

- **THIS AIR CONDITIONER ADOPTS THE NEW HFC REFRIGERANT (R410A) WHICH DOES NOT DESTROY OZONE LAYER.**

The characteristics of R410A refrigerant are ; easy to absorb water, oxidizing membrane or oil, and its pressure is approx. 1.6 times higher than that of refrigerant R22. Accompanied with the new refrigerant, refrigerating oil has also been changed. Therefore, during installation work, be sure that water, dust, former refrigerant, or refrigerating oil does not enter the refrigerating cycle.

To prevent charging an incorrect refrigerant and refrigerating oil, the sizes of connecting sections of charging port of the main unit and installation tools are charged from those for the conventional refrigerant.

Accordingly the exclusive tools are required for the new refrigerant (R410A).

For connecting pipes, use new and clean piping designed for R410A, and please care so that water or dust does not enter. Moreover, do not use the existing piping because there are problems with pressure-resistance force and impurity in it.

CAUTION **To Disconnect the Appliance from Main Power Supply.**

This appliance must be connected to the main power supply by means of a switch with a contact separation of at least 3 mm.

The installation fuse (25A D type) must be used for the power supply line of this conditioner.

⚠ WARNINGS

- **Ask an authorized dealer or qualified installation professional to install/maintain the air conditioner.**
  Inappropriate installation may result in water leakage, electric shock or fire.
- **Turn off the main power supply switch or breaker before attempting any electrical work.**
  Make sure all power switches are off. Failure to do so may cause electric shock.
- **Connect the connecting cable correctly.**
  If the connecting cable is connected in a wrong way, electric parts may be damaged.
- **When moving the air conditioner for the installation into another place, be very careful not to enter any gaseous matter other than the specified refrigerant into the refrigeration cycle.**
  If air or any other gas is mixed in the refrigerant, the gas pressure in the refrigeration cycle becomes abnormally high and it may resultingly causes pipe burst and injuries on persons.
- **Do not modify this unit by removing any of the safety guards or by by-passing any of the safety interlock switches.**
- **Exposure of unit to water or other moisture before installation may cause a short-circuit of electrical parts.**
  Do not store it in a wet basement or expose to rain or water.

1 PRECAUTIONS FOR SAFETY

- **After unpacking the unit, examine it carefully if there are possible damage.**
- **Do not install in a place that might increase the vibration of the unit.**
- **To avoid personal injury (with sharp edges), be careful when handling parts.**
- **Perform installation work properly according to the Installation Manual.**
  Inappropriate installation may result in water leakage, electric shock or fire.
- **When the air conditioner is installed in a small room, provide appropriate measures to ensure that the concentration of refrigerant leakage occur in the room does not exceed the critical level.**
- **Install the air conditioner securely in a location where the base can sustain the weight adequately.**
- **Perform the specified installation work to guard against an earthquake.**
  If the air conditioner is not installed appropriately, accidents may occur due to the falling unit.
- **If refrigerant gas has leaked during the installation work, ventilate the room immediately.**
  If the leaked refrigerant gas comes in contact with fire, noxious gas may generate.
- **After the installation work, confirm that refrigerant gas does not leak.**
  If refrigerant gas leaks into the room and flows near a fire source, such as a cooking range, noxious gas might generate.
- **Electrical work must be performed by a qualified electrician in accordance with the Installation Manual. Make sure the air conditioner uses an exclusive power supply.**
  An insufficient power supply capacity or inappropriate installation may cause fire.
- **Use the specified cables for wiring connect the terminals securely fix. To prevent external forces applied to the terminals from affecting the terminals.**
- **Conform to the regulations of the local electric company when wiring the power supply.**
  Inappropriate grounding may cause electric shock.
- **Do not install the air conditioner in a location subject to a risk of exposure to a combustible gas.**
  If a combustible gas leaks, and stays around the unit, a fire may occur.

2 SELECTION OF INSTALLATION PLACE

⚠ WARNING

- **Install the air conditioner at enough strong place to withstand the weight of the unit.**
  If the strength is not enough, the unit may fall down resulting in injury.
- **Install the air conditioner at a height 2.5m or more from the floor.**
  If you insert your hands or others directly into the unit while the air conditioner operates, it is dangerous because you may contact with revolving fan or active electricity.

⚠ CAUTION

- **Do not install the air conditioner in a location subject to a risk of exposure to a combustible gas.**
  If a combustible gas leaks and stays around the unit, a fire may occur.

Upon approval of the customer, install the air conditioner in a place that satisfies the following conditions.

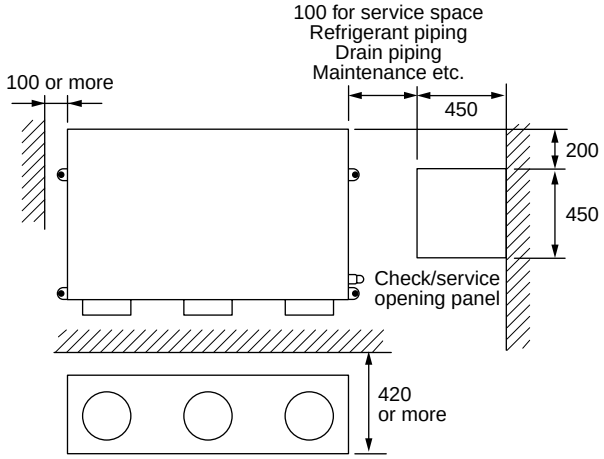
- Place where the unit can be installed horizontally.
- In the process after removing the ceiling panel, it important to reinforce the groundwork (framework) and keep a level correctly of the existing ceiling to prevent vibration of the ceiling panel.
- Place where a sufficient servicing space can be ensured for safety maintenance and check.
- Place where drained water will not cause any problem.

Avoid installing in the following places.

- Place exposed to air with high salt content (seaside area), or place exposed to large quantities of sulfide gas (hot spring). (Should the unit be used in these places, special protective measures are needed.)
- Place exposed to oil, vapor, oil smoke or corrosive gas.
- Place where organic solvent is used nearby.
- Place close to a machine generating high frequency.
- Place where the discharged air blows directly into the window of the neighboring house. (For outdoor unit)
- Place where noise of the outdoor unit is easily transmitted.
  (When installing the air conditioner on the boundary with the neighbor, pay due attention to the level of noise.)
- Place with poor ventilation. (Before air ducting work, check whether value of air volume, static pressure and duct resistance are correct.)

Installation space

Secure the space required to installation and servicing.



Selection of installation place

In case of continued operation of the indoor unit under high-humidity conditions as described below, dew may condense and water may drop.

Especially, high-humidity atmosphere (dew point temperature : 23°C or more) may generate dew inside the ceiling.

1. Unit is installed inside the ceiling with slated roof.
2. Unit is installed at a location using inside of the ceiling as fresh air take-in path.
3. Kitchen

If installing a unit at such place, adhere insulating material (glass wool, etc.) additionally over all the positions of the indoor unit which come to contact with high-humidity atmosphere.

Advice

Set a check service opening panel at right side of the unit (size: 450 x 450mm) for piping, maintenance, and servicing.

3 INSTALLATION OF INDOOR UNIT

⚠ WARNING

Install the air conditioner certainly at a place to sufficiently withstand the weight.
If the strength is insufficient, the unit may fall down resulting in human injury.
Perform a specified installation work to guard against an earthquake.
An incomplete installation can cause accidents by the units falling and dropping.

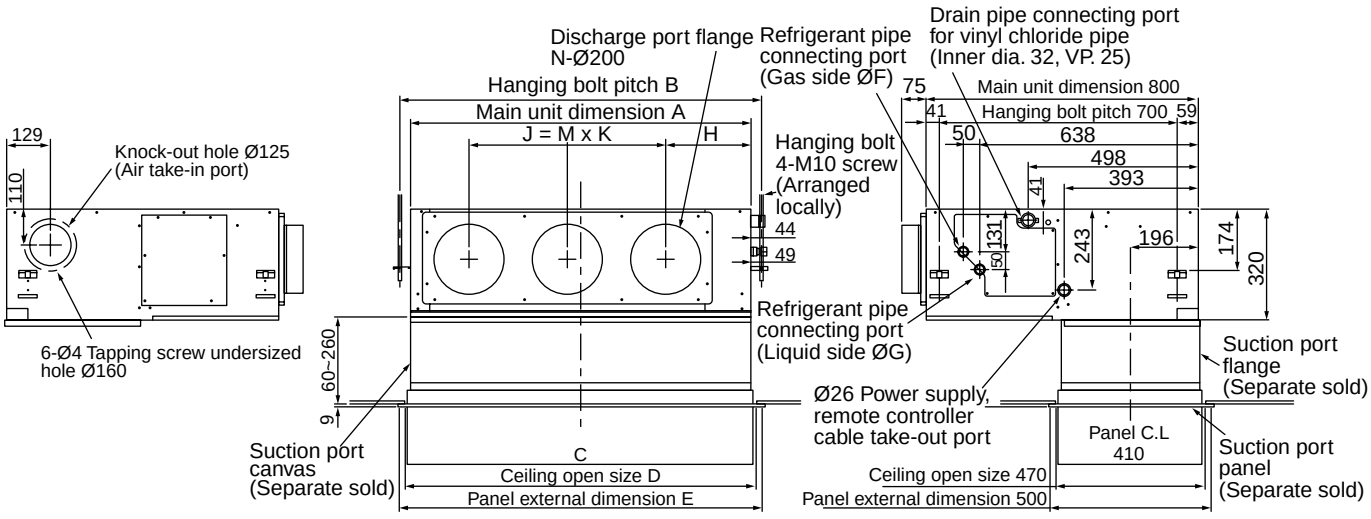
Installation procedure

1. Lay drain pipes, refrigerant pipes, and connecting cables behind wall or ceiling concurrently with supply/drain water work and piping work.
2. Install the mounting frames of supply/return air panels
3. Position the refrigerant and drain pipes
4. Install the indoor unit
   - Preparation for installation
   - Setting/fixing of indoor unit
5. Connect cables and pipes
6. Install supply/return air panels
7. Mount thermal insulation
8. Mount check port

External view

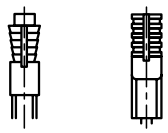
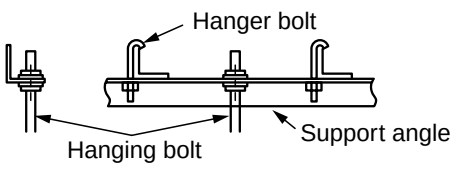
REQUIREMENT

The hanging bolt pitch on horizontal direction (B) is not halved at center with the ceiling opening size.
Therefore, check the relational position in the following figure.



- **Dimension**

	A	B	C	D	E	F	G	H	J	K	M	N
RAV-SM562BT	700	766	690	750	780	12.7	6.4	252	280	280	1	2
RAV-SM802BT	1000	1066	990	1050	1080	15.9	9.5	252	580	290	2	3
RAV-SM1102, 1402BT	1350	1416	1340	1400	1430	15.9	9.5	252	930	310	2	4

In case of concrete slab	In case of steel structure
A hole-in-anchor, a hole-in-plug, or a hole-in-bolt is used. 	Angle is used as it is, or a support angle is newly set. 

3 INSTALLATION OF INDOOR UNIT

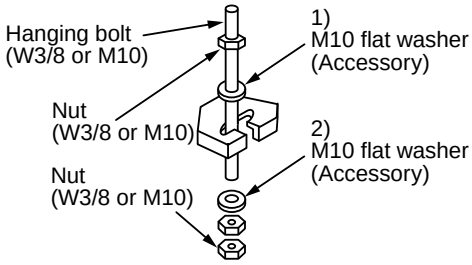
1. Hanging down of indoor unit

Refer to installation figures of hanging material and hanging bolt.

- Adjustment of hanging bolt length and nut position

  Adjust hanging bolt length and nut position as shown in the figure before hanging down the indoor unit.

- Using the level vial, etc., set the horizontal level of the main unit within 5mm.



1) Required those other than M10 flat washer at site.
2) To prevent falling-off of bolt (safety), be sure to set it just under the hanging bracket as shown in the figure.

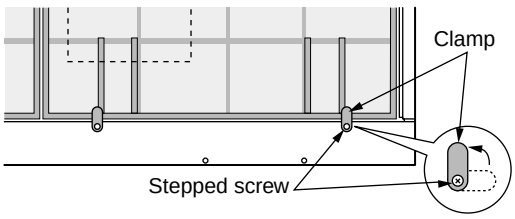
Considering pipe/wire connecting work inside the ceiling after the indoor unit has been hanged, select an installation place and determine piping direction.

- If the ceiling has been already set, prepare refrigerant pipe, drain pipe, connecting wire, switch panel cord, etc. at the place where pipe and wire are connected before hanging the main unit.

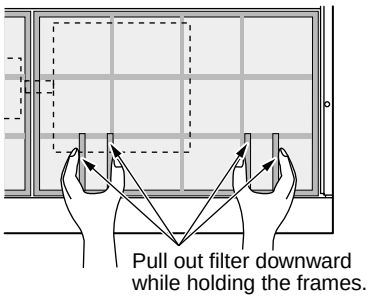
Mounting of clamp (Accessory)

In order to avoid falling of the air filter, be sure to mount the attached clamps with stepped screws.
(562BT : 2, 802BT to 1402BT : 4)

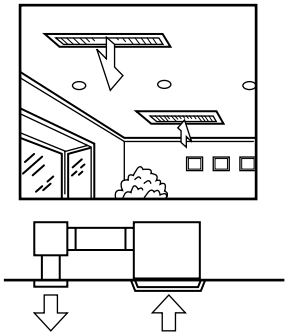
- **Clamp mounting**

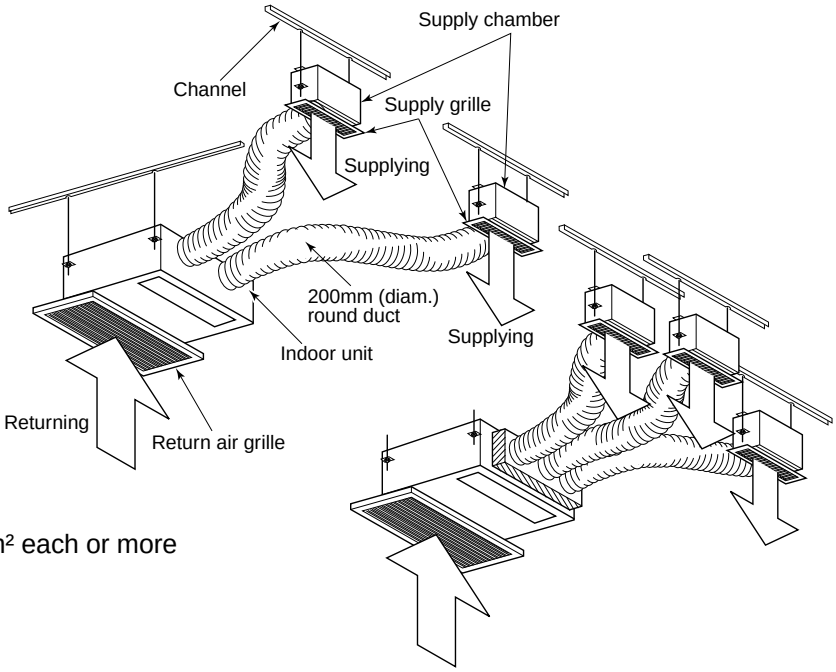


- **Removal of air filter**



Concealed duct type

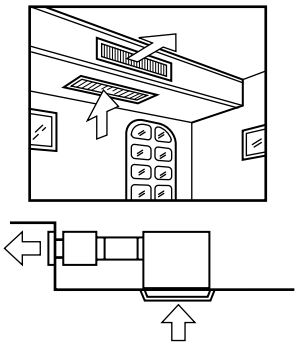


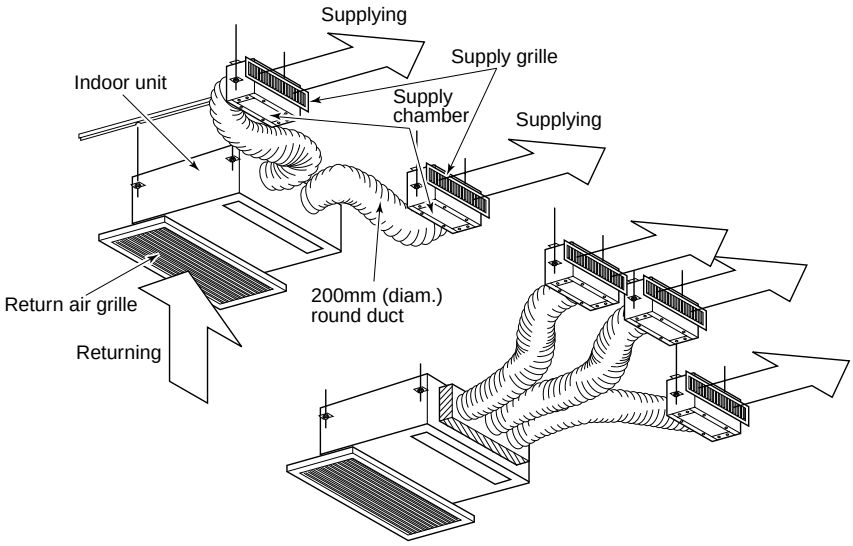


NOTE:

- Recommended supplying grille size 400 cm² each or more

Ledge ceiling concealed duct type





Quality of supplying grilles

SM562BT	2
SM802BT	3
SM1102BT	4
SM1402BT	4

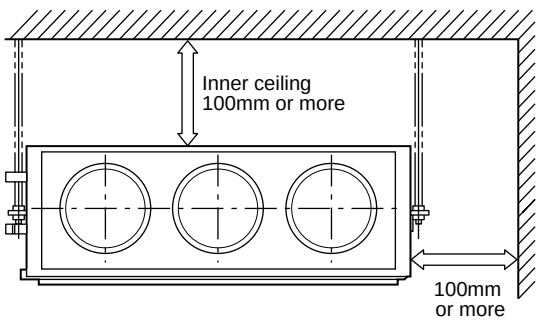
NOTE:

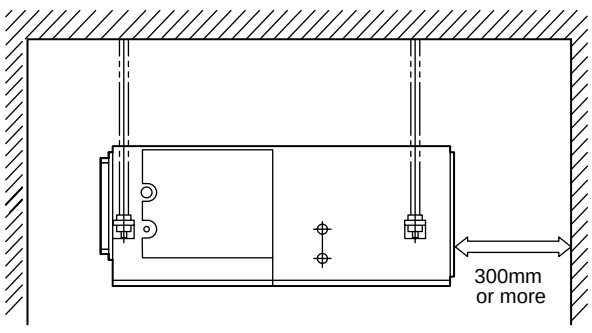
- Opening area of the return grille should be larger than the one for suction port (Air filter) of the indoor unit.

Restriction to installation

1. Installation clearance

- As shown in the figure, keep clearance around the indoor unit.





4 AIR DUCTING WORK

Static pressure characteristics of each model

Fig. 1 RAV-SM562BT (Round duct)

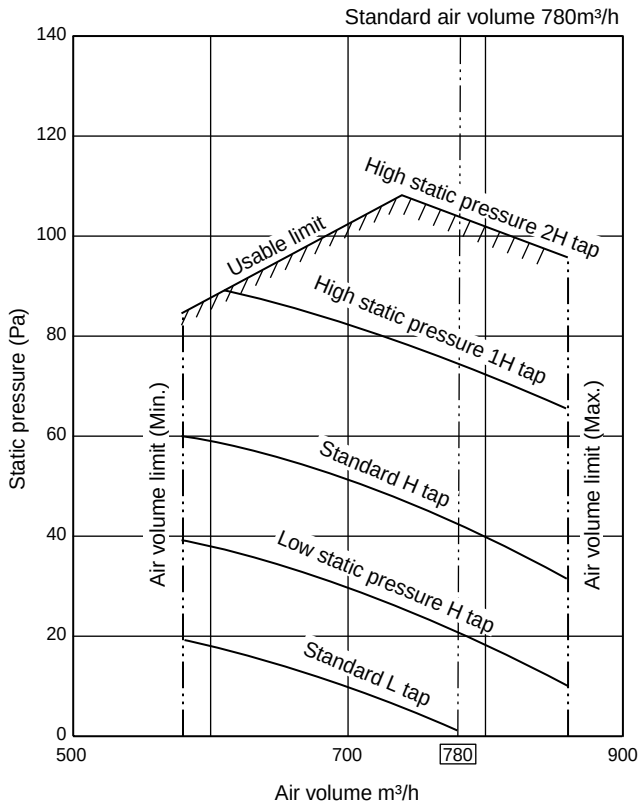


Fig. 2 RAV-SM562BT (Square duct)

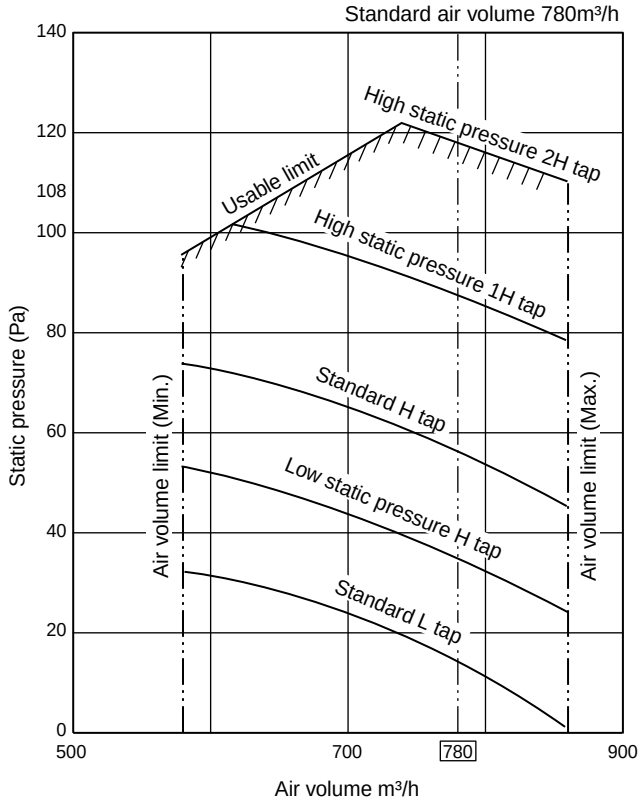


Fig. 3 RAV-SM802BT (Round duct)

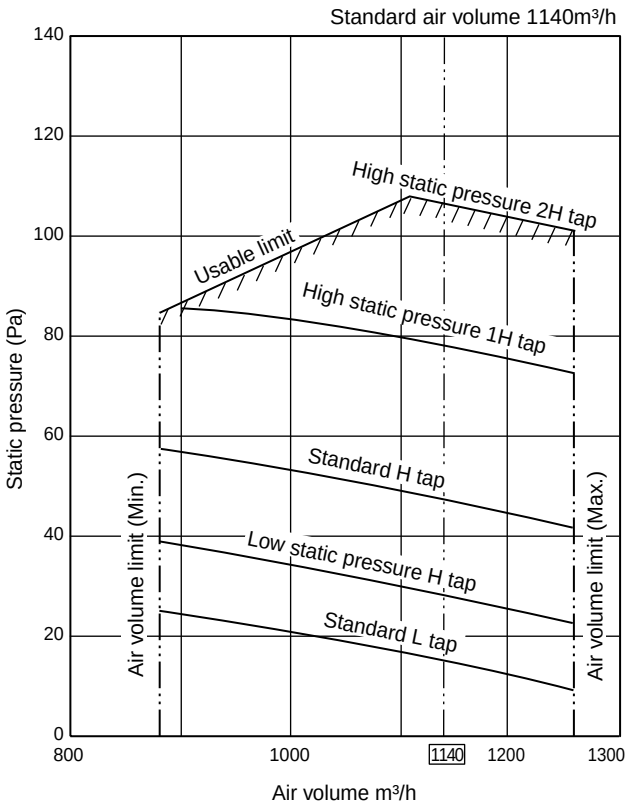


Fig. 4 RAV-SM802BT (Square duct)

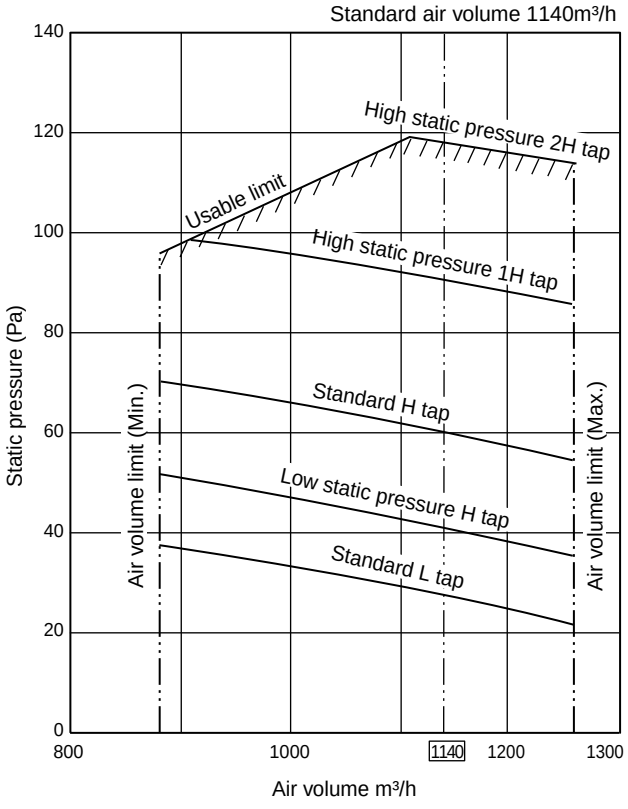


Fig. 5 RAV-SM1102BT (Round duct)

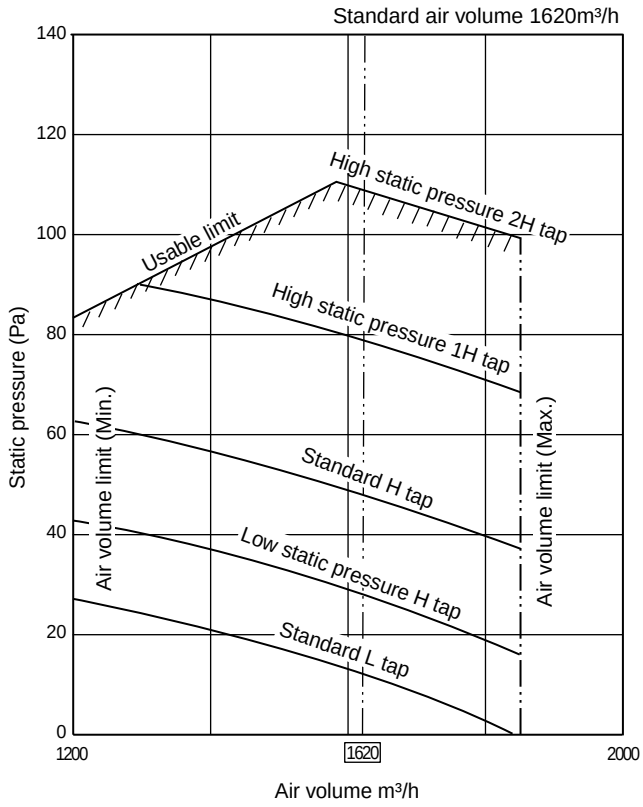


Fig. 6 RAV-SM1102BT (Square duct)

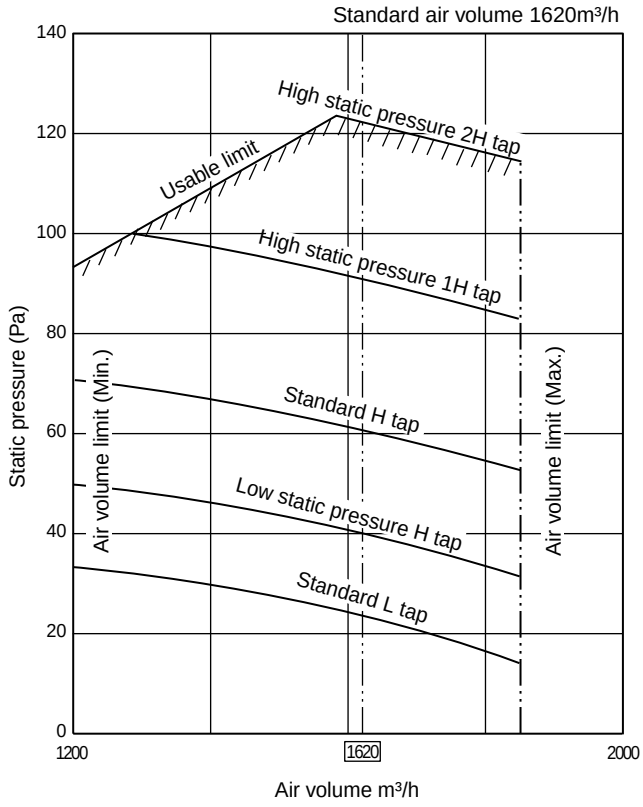


Fig. 7 RAV-SM1402BT (Round duct)

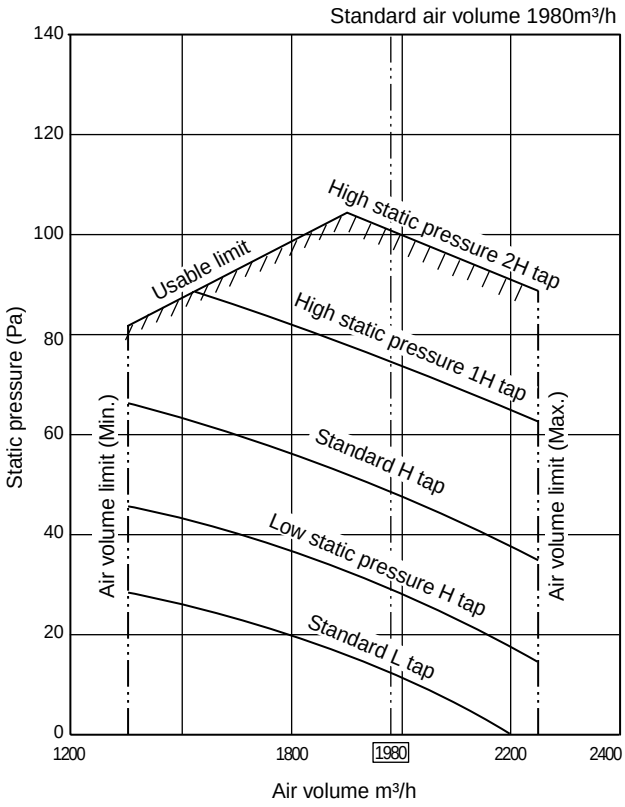
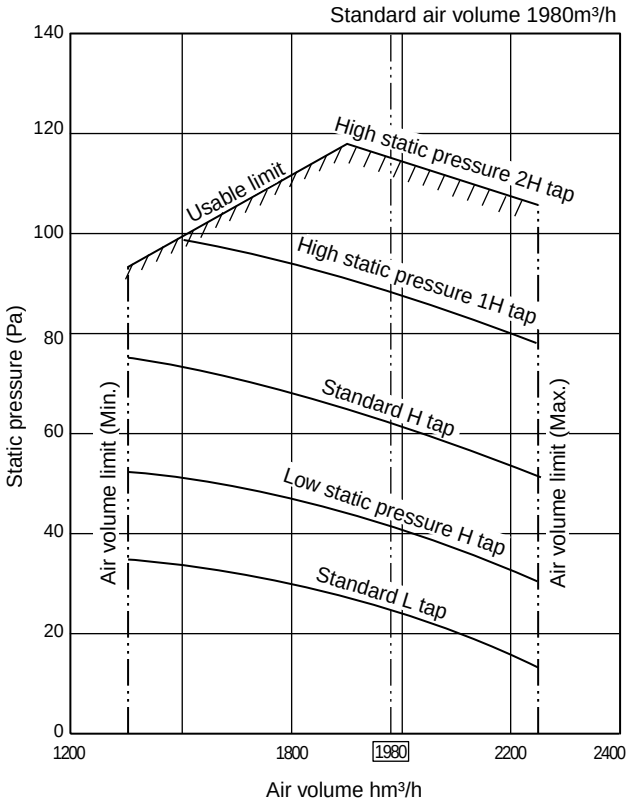


Fig. 8 RAV-SM1402BT (Square duct)



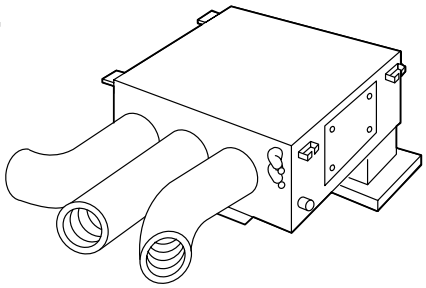
4 AIR DUCTING WORK

Installation reference

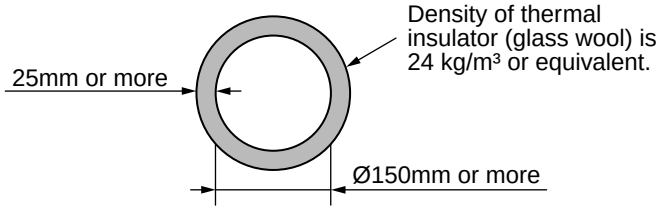
(Example for RAV-SM802BT model)

The air supply ducting work is classified in two ways, one is branched by the round ducts, and the other is branched by the square ducts. (Be sure to divide the air supply duct into three or more branches.)

<Round duct>

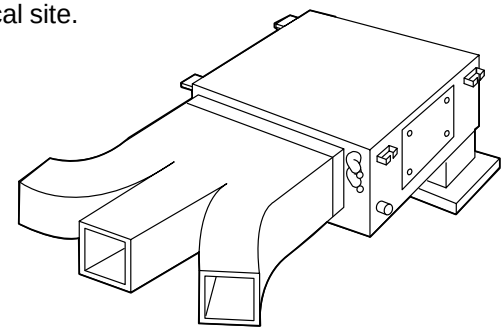


In case of the round duct, use the thermal insulator of thickness 25mm or more and inner diameter 150mm or more to the duct board.
(If the inner diameter is not enough, resistance increase, as the result, air does not flow smoothly and loss of the static pressure increases.) For the thermal insulator, use high-density glass wool of 24kg/m³ or equivalent.

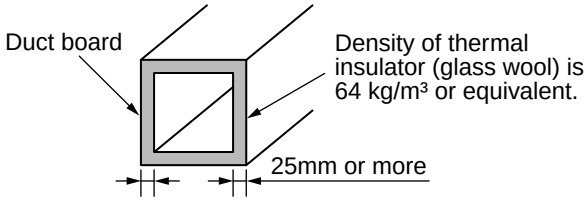


<Square duct> (Reference for square duct)

When using the square duct, change the type of the air supply flange from round type to square flange at the local site.



In case of the square duct, apply the thermal insulator of thickness 25mm or more to the duct board. For the thermal insulator, use high-density glass wool of weight 64kg/m³.



Connecting method of the duct

1. Supply air side

<Round duct>

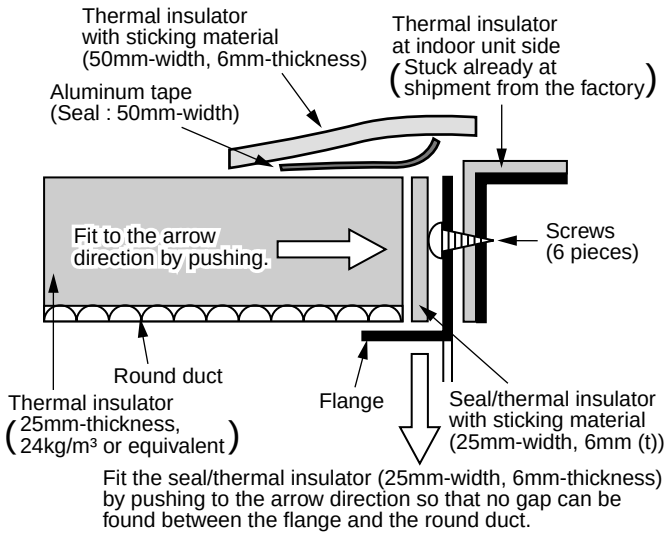


Fig. 2 (a)

<Square duct>

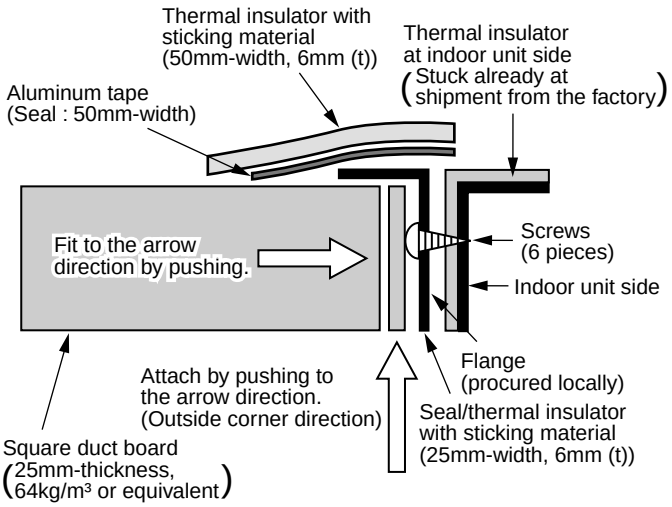


Fig. 2 (b)

CAUTION

Incomplete thermal insulation of the supply air flange and sealing may cause dew drops.

Connecting method of the duct

1. Supply air side

<Round duct>

1. Make the round duct according to inner dimension of the flange

   Use a glass wool board with inside/outside finishing 25mm-thickness and 24kg/m³-density.
2. Connect the flange and each type of duct. (Fig. 1)

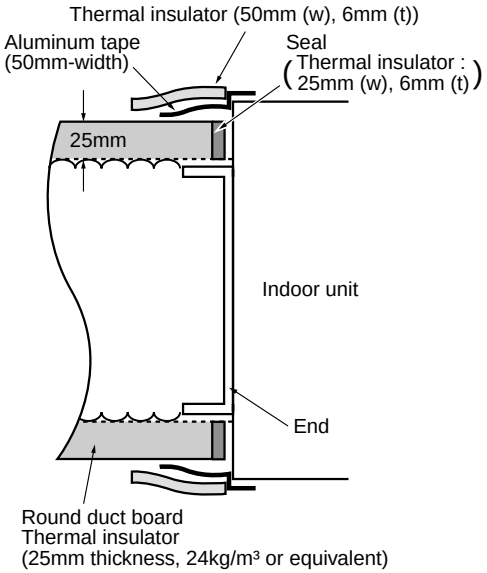


Fig. 1

<Square duct>

1. Using 6 screws, mount the flange to the supply air port of the indoor unit. (Fig. 2)
2. Make the square duct according to inner dimension of the flange [A] x [B].

   Use a glass wool board with inside/outside finishing 25mm-thickness and 24kg/m³-density.
3. Connect the flange and each type of duct. (Fig. 3)

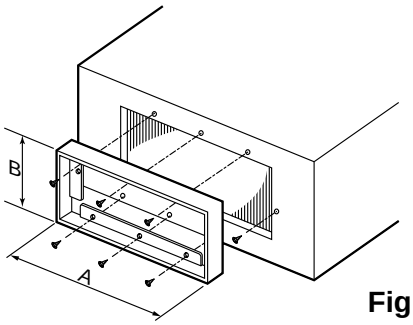


Fig. 2

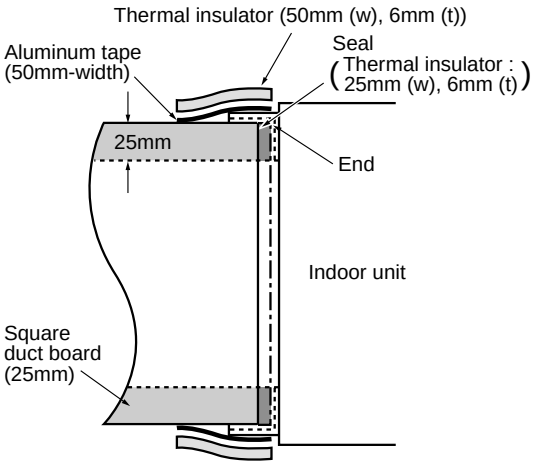


Fig. 3

Points at installation work

■ General cautions

1. Considering installation places of indoor unit supply chamber, structure of the building and determine the duct path.
2. In order to utilize the static pressure characteristics of the air supply in the indoor unit, design the duct branching having the large size of the air supply chamber or setting distance to the first branch as long as possible (Min. : 200mm or longer) so that an even air volume can be obtained.

   Especially, when branching just after air supply of the indoor unit, air concentrates at the center part and is difficult to flow to the ducts at both sides.
3. Connect each connecting section surely, and apply sufficient thermal insulation.

   In this model of which the duct is branched in the ceiling, compared with the model for ordinary houses, the high temperature generates on the periphery in the cooling time (Especially, at attic and etc.), temperature difference increases between the supply air and outside of the duct, and dewing may occur.

   Dewing on the surface of the thermal insulator covering the metal connecting section or leaking portion of the cooled air may cause a trouble such as water drops.
4. Thermal insulation of screwing sections is necessary.

   Prevent dewing by applying thermal insulation to 6 screws those fix the duct flange of the air supply chamber.
   - For duct parts, the flexible branch duct (thermal insulation, 25mm or more thickness) is recommended.
   - Adjust the duct length to 6m or less even for straight pipe, and avoid sharp bending (Air flow resistance is large.) if bending.

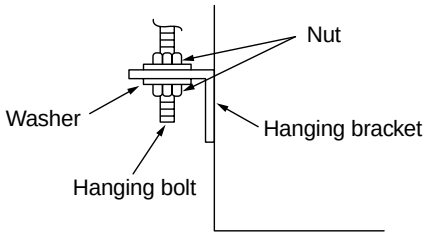
4 AIR DUCTING WORK

Hanging of indoor unit

Lift up the unit with a lifter, etc., and set the hanging metal in the hanging bolt.

- Hook nut of the hanging bolt to the groove of the hanging metal on the main unit.
- Using the level, etc., install the main unit horizontally.

  Failure to do this will cause water leakage



Mounting of filter and canvas for suction port

1. Mount a long-life filter or a high-performance filter according to each Installation Manual.
2. Mount the canvases for suction port to the lower side of the above filter.

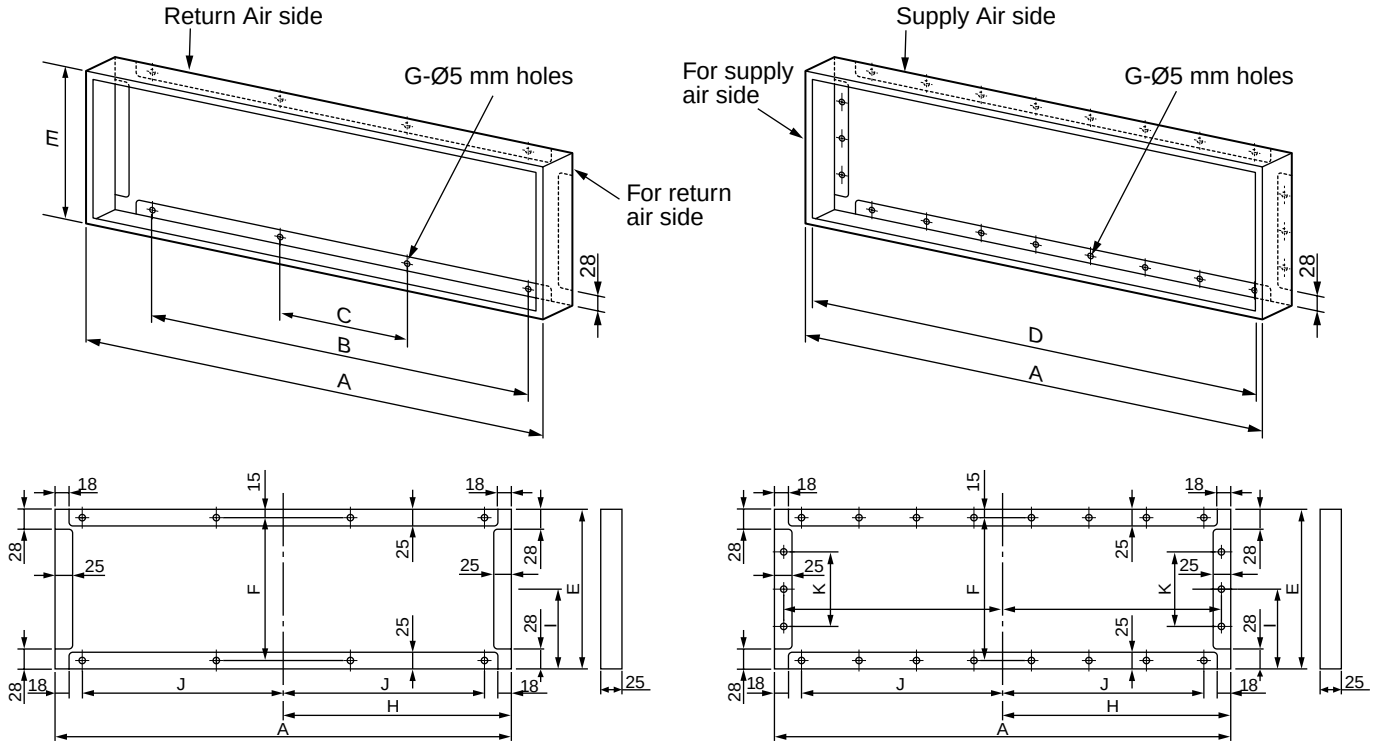
Mounting of remote controller

For the mounting of the wired remote controller, refer to the Installation Manual attached to the remote controller.

- Take out the remote controller cord together with the refrigerant pipe or drain pipe. Be sure to set the remote controller cord so that it passes through the upper side of the refrigerant pipe and drain pipe.

For reference

<Square duct> (Procured locally)

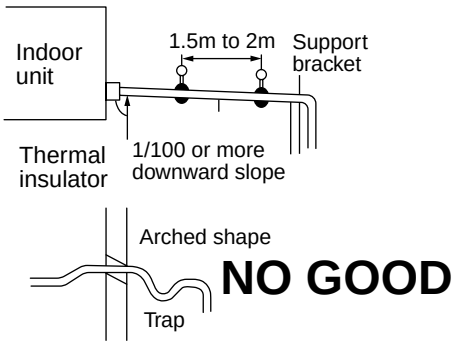


	Model	A	B	C	D	E	F	G	H	I	J	K
Return Air side (Return filter side)	SM562BT	700	—	400	—	420	390	4	350	195	—	—
	SM802BT	1000	700	430	—	420	390	8	500	195	350	—
	SM1102, 1402BT	1350	1050	580	—	420	390	8	675	195	525	—
Supply Air side	SM562BT	550	455 (65 x 7)	65	530	265	245	20	275	132.5	227.5	130
	SM802BT	850	715 (65 x 11)	65	830	265	245	28	425	132.5	307.5	130
	SM1102, 1402BT	1200	1105 (65 x 17)	65	1180	265	245	40	600	132.5	552.5	130

5 DRAIN PIPING WORK

Piping material

- For laying pipes underground, use hard vinyl chloride pipe. VP25 (Inner diamater Ø32mm)



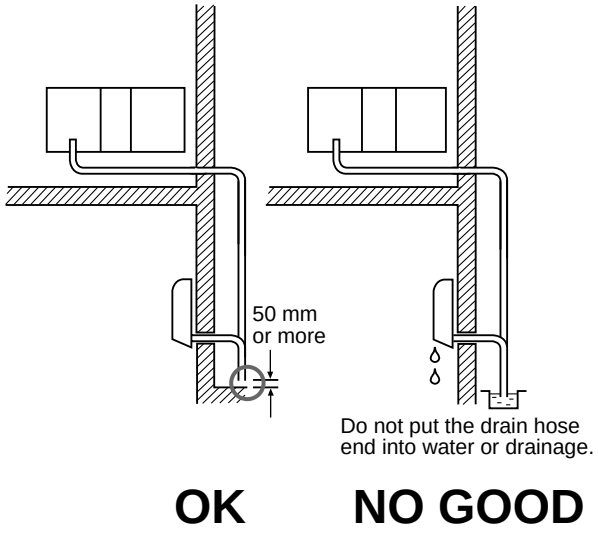
Piping and cautions

- Set drain side of pipe at downward slope. (1/100 or more)
- Be sure to apply thermal insulation (foaming polyethylene, 10mm-thickness or more) for pipes passing through the room.
- Adhere the connecting sections with vinyl chloride agent surely so that no water leakage is caused.
  - Apply adhesive agent without unevenness around the portion approx. 40mm from the end of hard polyvinyl-chloride pipe.
  - Push the vinyl pipe in the drain socket completely up to the end of the socket.
  - Do not apply strength to the connecting part until the adhesive agent has dried and hardened.
- Support the piping with hanging bracket so that the force is not applied to connection sections of pipe and pipe is not waved.

NOTES :

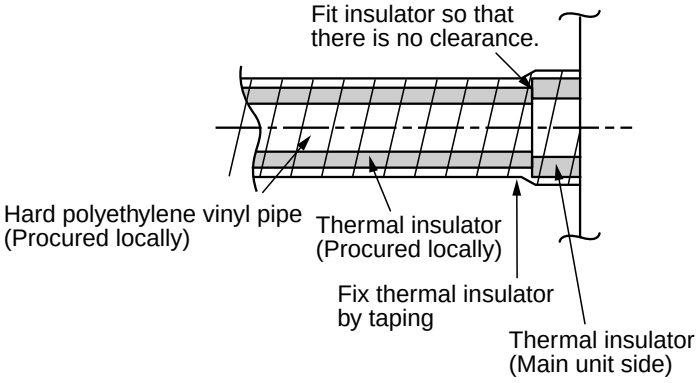
- Do not make slack or trap at halfway across piping.
- Set pipes so that the end of drain pipe is not dipped in water, and also keep space 50mm or more to the ground.
- After piping work, check if water drains smoothly.
- Hole should be made at a slight downward slant to the outdoor side.
- When connecting extension drain hose, insulate the connecting part of extension drain hose with shield pipe.

- As shown in the figure, set the collective piping such as the ceiling duct so that waste water does not back up from the main pipe.



Thermal-insulating process

- After checking water drain, be sure to apply the thermal-insulating for connecting portion of the pipes.
- Apply taping so that there is no clearance on the fitting part of thermal-insulator of the main unit with the insulator procured locally.

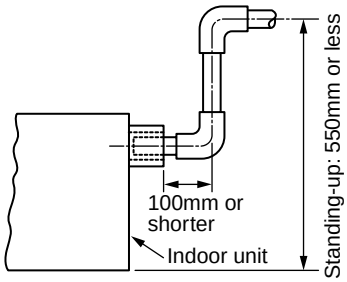


5 DRAIN PIPING WORK

Drain-up

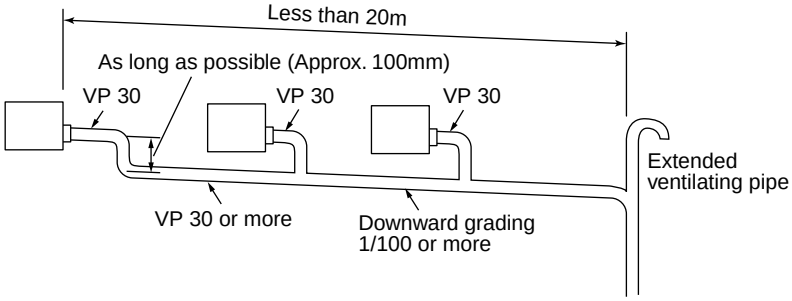
If down-slope cannot be set on a drain pipe, drain-up is possible.

- Set the height of drain pipe 550mm or less from the bottom face of the indoor unit.
- Pull out the drain pipe from connecting port of the drain pipe of the indoor unit by 100mm or shorter, and stand up it vertically.
- After standing up it vertically, arrange immediately so that it is set with down-slope.



Connection of the drain hose

- Insert the drain hose completely into the connecting port of the drain pan.
- Apply thermal insulation surely to the drain hose with socket thermal insulation seal.



Check of water drain

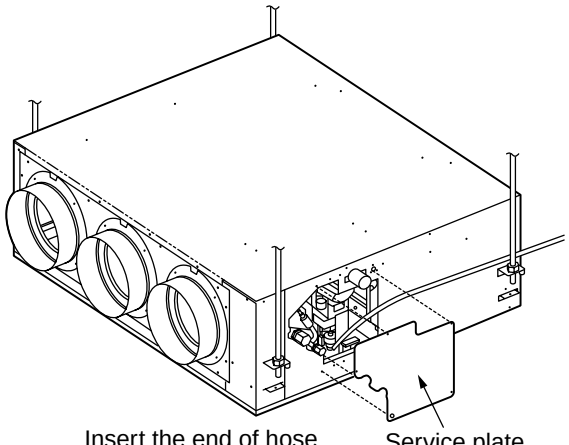
After drain pipe work, check that water is drained and there is no water leak from pipe connection portion. In this time, also check there is no trouble of motor sound of the drain pump. Be sure also to perform this check when installing the unit in heating time.

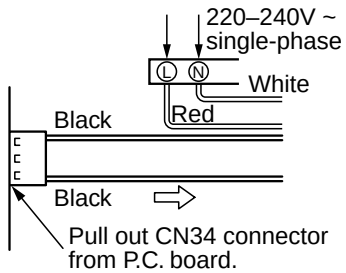
After electric piping work

- Before installing a panel, infuse water as shown in the following figure. By operating the unit in COOL mode, check that water is drained from the drain pipe and then check there is no water leak from the drain pipe.

Before electric piping work

- Pull out the float switch connector (3P: Red) from connector (CN34: Red) on P.C. board of the electric parts box. (In this time, be sure to check the power has been turned off.)
- Connect 220–240V single-phase to Ⓛ and Ⓝ of the power supply terminal block. (Never apply 220–240V to Ⓐ, Ⓑ, $Ⓤ_1$, and $Ⓤ_2$ of the terminal block, otherwise it causes a trouble of P.C. board.)
- Infuse water followed to the figure below. (Water amount: 1500cc to 2000cc)





- The drain pump automatically operates by power-on. Check that water is drained from the drain pipe and then check there is no water leak from the drain pipe.
- After checking water drain and water leak, turn off the power, connect the float switch connector to the original position (CN34) of P.C. board, and then return the electric parts box to the original position.

6 REFRIGERANT PIPING AND EVACUATING

Refrigerant piping

1. If the outdoor units are to be mounted on a wall, make sure that the supporting platform is sufficiently strong. The platform should be designed and manufactured to maintain its strength over a long period of time, and sufficient consideration should be given to ensuring that the outdoor unit will not fall.
2. **Use copper pipe with 0.8 mm or more thickness.**
   (In case pipe size is Ø15.9, with 1.0mm or more.)
3. Flare nut and flare works are also different from those of the conventional refrigerant.
   Take out the flare nut attached to the main unit of the air conditioner, and use it.

CAUTION

IMPORTANT 4 POINTS FOR PIPING WORK

1. Remove dust and moisture from the inside of the connecting pipes.
2. Tight connection (between pipes and unit)
3. Evacuate the air in the connecting pipes using VACUUM PUMP.
4. Check the gas leakage. (connected points)

Permissible piping length and heat

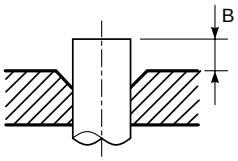
They vary according to the outdoor unit. For details, refer to the Installation Manual attached to the outdoor unit.

Flaring

Insert a flare nut into the pipe, and flare the pipe.

As the flaring sizes of R410A differ from those of refrigerant R22, the flare tools newly manufactured for R410A are recommended.

However, the conventional tools can be used by adjusting projection margin of the copper pipe.



- **Projection margin in flaring : B (Unit : mm)**

Rigid (Clutch type)

Outer diam. of copper pipe	R410A tool used		Conventional tool used	
	R410A	R22	**R410A**	R22
6.4 to 15.9	0 to 0.5	(Same as left)	1.0 to 1.5	0.5 to 1.0

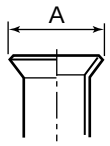
Imperial (Wing nut type)

Outer diam. of copper pipe	**R410A**	R22
6.4 or 9.5	1.5 to 2.0	1.0 to 1.5
12.7 or 15.9	2.0 to 2.5	1.5 to 2.0

- **Flaring dia meter size : A (Unit : mm)**

Outer diam. of copper pipe	$A^{+0}_{-0.4}$	
	R410A	R22
6.4	9.1	9.0
9.5	13.2	13.0
12.7	16.6	16.2
15.9	19.7	19.4

* In the case of flaring for R410A with the conventional flare tool, pull out it approx. 0.5 mm more than that for R22 to adjust to the specified flare size. The copper pipe gauge is useful for adjusting projection margin size.



Tightening connection

CAUTION

- Do not apply excessive torque. Otherwise, the nut may crack depending on the conditions.

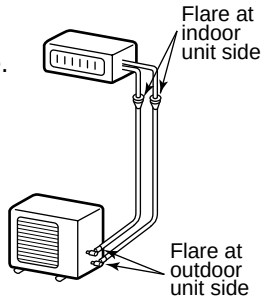
(Unit : N•m)

Outer diam. of copper pipe	Tightening torque
6.4 mm (diam.)	14 to 18 (1.4 to 1.8 kgf•m)
9.5 mm (diam.)	33 to 42 (3.3 to 4.2 kgf•m)
12.7 mm (diam.)	50 to 62 (5.0 to 6.2 kgf•m)
15.9 mm (diam.)	63 to 77 (6.3 to 7.7 kgf•m)

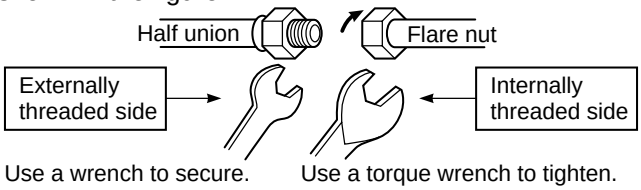
- **Tightening torque of flare pipe connections**

Pressure of R410A becomes higher than that of R22. (Approx. 1.6 times) Therefore, using a torque wrench, tighten firmly the flare pipe connecting sections which connect the indoor and outdoor units up to the specified tightening torque.

Incorrect connections may cause not only a gas leakage, but also a trouble of the refrigeration cycle or compressor damage.



Align the centers of the connecting pipes and tighten the flare nut as far as possible with your fingers. Then tighten the nut with a spanner and torque wrench as shown in the figure.



6 REFRIGERANT PIPING AND EVACUATING

Piping with outdoor unit

- Shape of valve differs according to the outdoor unit.
  For details of installation, refer to the Installation Manual of the outdoor unit.

Air purge

Using a vacuum pump, perform vacuuming from the charge port of valve of the outdoor unit.

For details, follow to the Installation Manual attached to the outdoor unit.

- Never use the refrigerant sealed in the outdoor unit for air purge.

REQUIREMENT

For the tools such as charge hose, etc., use those manufactured exclusively for R410A.

Refrigerant amount to be added

For addition of the refrigerant, add refrigerant “R410A” referring to the attached Installation Manual of outdoor unit.

Be sure to use a scale to charge the refrigerant of specified amount.

REQUIREMENT

- Charging an excessive or too little amount of refrigerant causes a trouble of the compressor. Be sure to charge the refrigerant of specified amount.
- A personnel who charged the refrigerant should write down the pipe length and the added refrigerant amount in the nameplate attached to the service panel of the outdoor unit. It is necessary to troubleshoot the compressor and refrigeration cycle malfunction.

Open the valve fully

Open the valve of the outdoor unit fully. A 4mm-hexagonal wrench is required for opening the valve.

For details, refer to the Installation Manual attached to the outdoor unit.

Gas leak check

Check with a leak detector or soap water whether gas leaks or not, from the pipe connecting section or cap of the valve.

REQUIREMENT

Use a leak detector manufactured exclusively for HFC refrigerant (R410A, R134a, etc.).

Thermal insulation process

Apply thermal insulation for the pipes separately at liquid side and gas side.

For the thermal insulation to the pipes at gas side, be sure to use the material with heat-resisting temperature 120°C or higher.

Using the attached thermal insulation material, apply the thermal insulation to the pipe connecting section of the indoor unit securely without gap.

REQUIREMENT

Apply the thermal insulation to the pipe connecting section of the indoor unit securely up to the root without exposure of the pipe. (The pipe exposed to the outside causes water leak.)

7 ELECTRICAL WORK

NOTE:

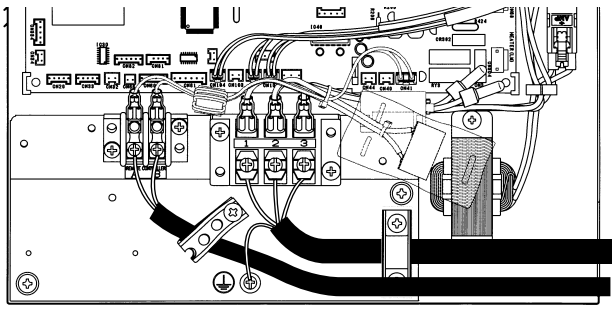
For selection and connection method of the power supply cords, refer to the details in the Installation Manual of the outdoor unit.

CAUTIONS

- Be sure connect earth wire.
  Do not connect the earth wire to gas pipe, pipe of water supply, lightning conductor, and earth wire of telephone.
  An incomplete grounding causes an electric shock.
- If incorrect/incomplete wiring is carried out, it may cause an electrical fire or smoke.
- Prepare the power supply for exclusive use with the air conditioner.
- Be sure to use the cord clamps with attached to the product.
- Using the specified cables, connect the cables surely so that the external force of cable is not transmitted to the terminal connecting portion.
- Do not damage or scratch the conductive core and inner insulator of power and inter-connecting cables when peeling them.
- Be sure to comply with local regulations on running the wire from outdoor unit to indoor unit (wire size of wire and wiring method etc.)
- Use the power cord and Inter-connecting cable of specified thickness, specified type, and protective devices required.
- Never connect 220-240V power to the terminal blocks for communication (Ⓐ, Ⓑ)
  (It causes a trouble.)

How to wire

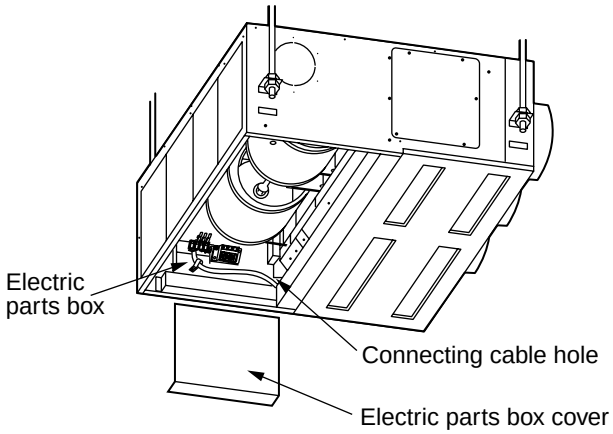
1. Connect the connecting cable to the terminal as identified with their respective numbers on the terminal block of indoor and outdoor unit.
   H07 RN-F or 245 IEC 66 (1.5 mm^2 or more)
2. Mount a leakage breaker.
3. Insulate the unsheathed redundant cords (conductors) with tape.
4. For inter-unit wiring, do not use a wire jointed to another on the way.
5. Fix the cable with cord clamp.



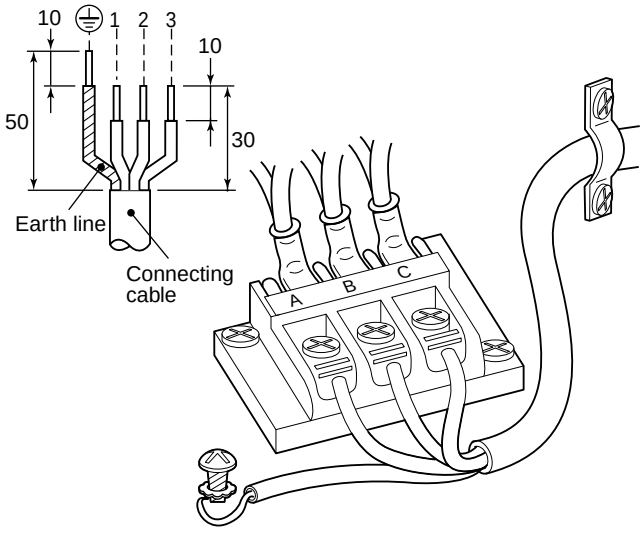
7 ELECTRICAL WORK

Cabling

1. As shown in the figure, remove a screw ① and then remove cover of the electric part.
2. Strip wire ends (10 mm).
3. Match wire colors with terminal numbers on indoor and outdoor units' terminal blocks and firmly screw wires to the corresponding terminals.
4. Connect the ground wires to the corresponding terminals.
5. Fix the cable with cord clamp.
6. Fix cover of the parts box and the terminal block surely with the fixing screws.

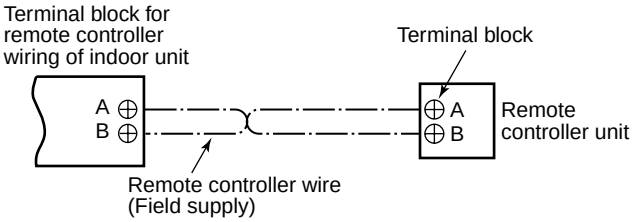


Make a loop for the margin of the cable length so that the electric parts box can be taken out during servicing.



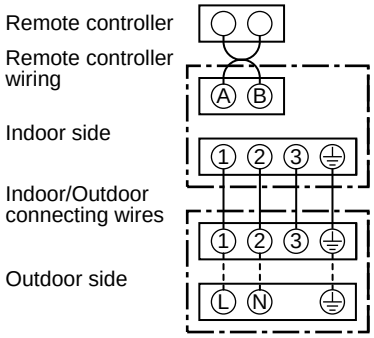
Remote controller cabling

- Strip approx. 9mm the cable to be connected.
- Non polarity, 2 core cable is used for cabling of the remote controller.

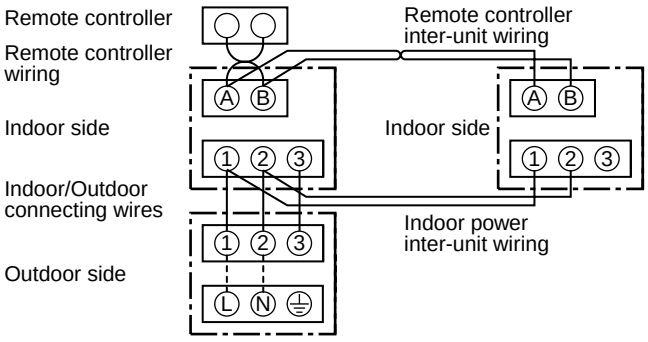


Wiring diagram

<Single system>



<Synchronous twin system>



Cabling diagram

- For details of cabling/installation of the remote controller, refer to the Installation Manual attached to the remote controller.
- When the remote controller is used for the first time, it accepts an operation approx. 5 minutes after the power supply has been turned on. It is not a trouble, but is because the setup of the remote controller is being checked. For the second power-ON time and after, approx. 1 minute is required to start the operation by the remote controller.

8 TEST RUN

Before test run

- Before turning on the power supply, carry out the following procedure.
  1) Using 500V-megger, check 1MΩ or more exists between the terminal block 1 to 3 and the earth.
     If 1MΩ or less is detected, do not run the unit. Do not apply to the remote controller circuit.
  2) Check the valve of the outdoor unit being opened fully.
- To protect the compressor at activation time, leave power-ON for 12 hours or more be for operating.

How to execute a test run

Using the remote controller, operate the unit as usual.
For the procedure of the operation, refer to the attached Owner's Manual.

A forced test run can be executed in the following procedure if the operation stops by thermo.-OFF.

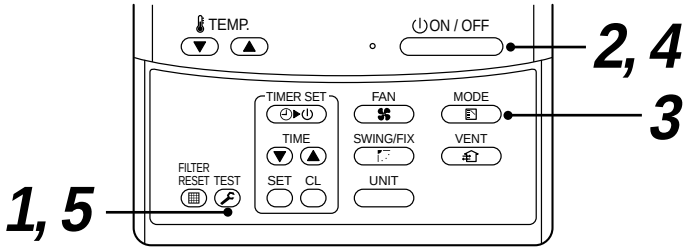
In order to prevent a serial operation, the forced test run is released after 60 minutes have passed and returns to the usual operation.

CAUTION

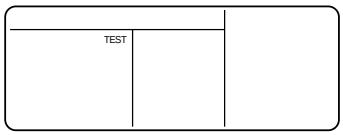
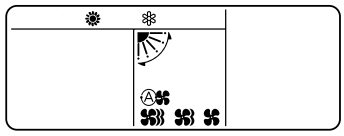
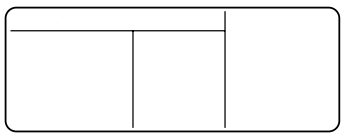
When the remote controller is used for the first time, it accepts an operation approx. 5 minutes after the power supply has been turned on.
It is not a trouble, but is because the setup of the remote controller is being checked.
For the second power-ON time and after, approx. 1 minute is required to start the operation by the remote controller.

NOTE

Do not use the forced test run for cases other than the test run because it applies an excessive load to the devices.



In case of wired remote controller

Procedure	Description	
1	Keep TEST button pushed for 4 seconds or more. [TEST] is displayed on the display part and the selection of mode in the test mode is permitted.	
2	Push ON / OFF button.	
3	Using MODE button, select the operation mode, [COOL] or [HEAT]. • Do not run the air conditioner in a mode other than [COOL] or [HEAT]. • The temperature controlling function does not work during test run. • The detection of error is performed as usual.	
4	After the test run, push ON / OFF button to stop a test run. (Display part is same as procedure ***1***.	
5	Push TEST check button to cancel (release from) the test run mode. ([TEST] disappears on the display and the status returns to a normal.)	

[In case of wireless remote controller]

Follow to the Manual of the parts sold separately.

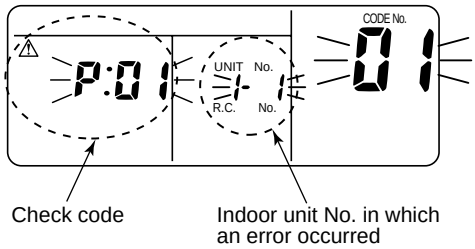
9 TROUBLESHOOTING

Confirmation and check

When a trouble occurred in the air conditioner, the check code and the indoor unit No. appear on the display part of the remote controller.

The check code is only displayed during the operation.

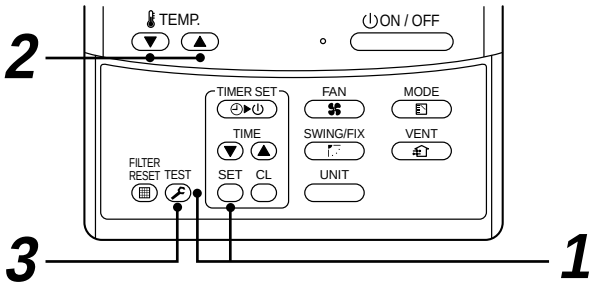
If the display disappears, operate the air conditioner according to the following “Confirmation of error history” for confirmation.

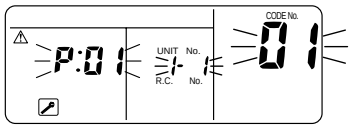


Confirmation of error history

When a trouble occurred on the air conditioner, the trouble history can be confirmed with the following procedure. (The trouble history is stored in memory up to 4 troubles.)

The history can be confirmed from both operating status and stop status.



Procedure	Description	
1	When pushing SET and TEST buttons at the same time for 4 seconds or more, the following display appears. If [Service check] is displayed, the mode enters in the trouble history mode. • [01 : Order of trouble history] is displayed in CODE No. window. • [Check code] is displayed in CHECK window. • [Indoor unit address in which an error occurred] is displayed in UNIT No.	
2	Every pushing of [▼ , ▲] button used to set temperature, the trouble history stored in memory is displayed in order. The numbers in CODE No. indicate CODE No. [01] (latest) → [04] (oldest). **REQUIREMENT** Do not push CL button because all the trouble history of the indoor unit will be deleted.	
3	After confirmation, push TEST button to return to the usual display.	

1. Check the troubles according to the above procedure.
2. Ask an authorized dealer or qualified service (maintenance) professional to repair or maintain the air conditioner.
3. More details of the service code are explained in Service Manual.

10 APPLICABLE CONTROLS

NOTIFICATION

When using the equipment at the first time, it will take a lot of time that the remote controller accepts an operation after power was on. However, it is not a trouble.

- **Automatic address**
  - While automatic addressing, the operation cannot be performed on the remote controller.
  - For automatic addressing, Max. 10 minutes (generally, approx. 5 minutes) are required.
- **When power will be turned on after finish of automatic addressing;**
  - It will require Max. 10 minutes (generally, approx. 3 minutes) that outdoor unit starts operation after power was on.

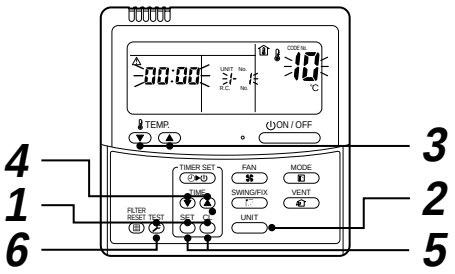
As all the buttons have been set to [Standard] at the shipment, change the setup of the indoor unit if necessary.

To change the setup, use the main remote controller (wired remote controller).

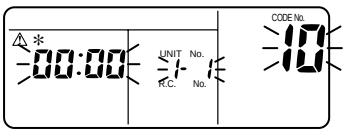
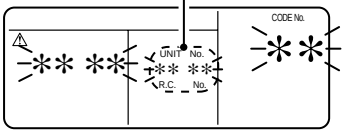
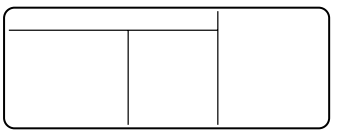
* The setup change for wireless remote controller, sub remote controller, or remote controller-less system (Central control remote controller only is provided.) is impossible. In these cases, prepare and mount a separate main remote controller.

Exchange of applicable control setup

Basic operation procedure for setup exchange



Change the setup while operation of the equipment stops.
(Be sure to stop the operation of a set.)

Procedure	Description
1	When pushing SET, CL, and TEST buttons simultaneously for 4 seconds or more, after a while, the display part flashes as shown in the figure. Check that the displayed item code is [10]. • If the item code indicates other than [10], push TEST button to erase the display, and then retry the operation from the first step. (For some time after TEST button has been pushed, the operation of the remote controller cannot be accepted.) (In a group control, the firstly displayed indoor unit No. becomes the master unit.)  (* The display changes according to the indoor unit model.)
2	Every pushing UNIT button, the indoor unit No. in the group control is displayed successively. Select an indoor unit of which setup to be changed. In this time, the position of the indoor unit of which setup to be changed can be confirmed because the fan and the flap of the selected indoor unit work.
3	Using ▼, ▲ buttons of set temperature, specify the item code [∗∗].
4	Using ▼, ▲ buttons of set timer, select set data [∗∗∗∗]. 
5	Push SET button. In this time, if the display changes from flashing to lighting, the setup completes. • To change the setup of an indoor unit other than the selected one, start operation from Procedure ***2***. • To change the setup of another setup in the selected indoor unit, start operation from Procedure ***3***. Pushing CL button clears the set up contents which have been already set. In this case, retry from Procedure ***2***.
6	When the setup finished, push TEST button. (The setup is determined.) Pushing TEST button deletes the display and returns the status to normal stop status. (For some time after TEST button has been pushed, the operation of the remote controller cannot be accepted.) 

10 APPLICABLE CONTROLS

Setup of external static pressure

Matching with the resistance (External static pressure) of the duct to be connected, be sure to set up the tap exchange according to the basic operation procedure (***1*** → ***2*** → ***3*** → ***4*** → ***5*** → ***6***).

- For the item code in Procedure ***3***, specify [5d].
- For the set data in Procedure ***4***, select the setup data of static pressure outside of the machine to be set up from the table below.

(Exchange by wired remote controller)

Set data	External static pressure	
0000	40Pa	Standard (At shipment)
0001	70Pa *1	High static pressure 1
0003	100Pa *2	High static pressure 2
0006	20Pa	Low static pressure

*1: For SM1402BT, set 65Pa.
*2: For SM1402BT, set 90Pa.

To incorporate a filter sold separately

When mounting a filter sold separately, be sure to set up the tap exchange according to the type of filter.
In this case, also follow to the basic operation procedure (***1*** → ***2*** → ***3*** → ***4*** → ***5*** → ***6***).

- For the item code in Procedure ***3***, specify [5d].
- For the set data in Procedure ***4***, select the setup data of filter to be incorporated from the table below.

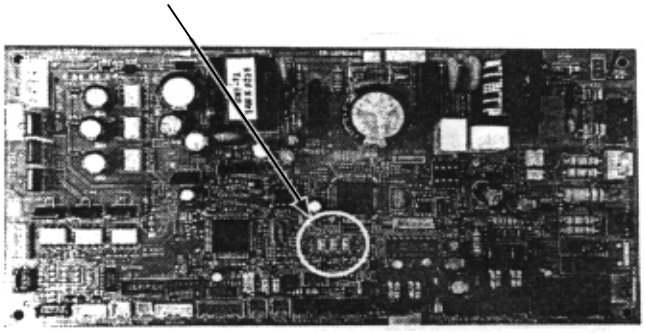
Set data	Filter sold separately
0000	Standard filter (At shipment)
0001	High-performance filter 65, 90

• Select with shifting of the short plug on the indoor unit microcomputer P.C. board.

Short plug position (Short / Open)	External static pressure	Filter sold separately
CN112 CN111 CN110	40Pa Standard (At shipment)	Standard filter (At shipment)
CN112 CN111 CN110	70Pa High static-pressure 1	*1 High-performance filter 65 High-performance filter 90
CN112 CN111 CN110	100Pa High static-pressure 2	Never execute such a change of the short plug as shown at the left; otherwise a malfunction may be caused.
CN112 CN111 CN110	20Pa Low static-pressure	

*1 Resistance of high-performance filter 65 and 90 is equivalent to 30Pa.
Therefore, set the resistance (external static pressure) of a duct to be connected to 40Pa.

• Short plug position (CN112, CN111, CN110 from the left)



Change of lighting time of filter sign

According to the installation condition, the lighting time of the filter sign (Notification of filter cleaning) can be changed.

Follow to the basic operation procedure
(***1*** → ***2*** → ***3*** → ***4*** → ***5*** → ***6***).

- For the item code in Procedure ***3***, specify [01].
- For the set data in Procedure ***4***, select the setup data of lighting time of filter sign to be changed from the table below.

Set data	Filter sign lighting time
0000	None
0001	150H
0002	2500H (At shipment)
0003	5000H
0004	10000H

To secure better effect of heating

When it is difficult to obtain satisfactory heating due to installation place of the indoor unit or structure of the room, the detection temperature of heating can be raised. Also use a circulator, etc. to circulate heat air near the ceiling.

Follow to the basic operation procedure
(***1*** → ***2*** → ***3*** → ***4*** → ***5*** → ***6***).

- For the item code in Procedure ***3***, specify [06].
- For the set data in Procedure ***4***, select the setup data of shift value of detection temperature to be set up from the table below.

Set data	Shift value of detection temp.
0000	No shift
0001	+1°C
0002	+2°C (At shipment)
0003	+3°C
0004	+4°C
0005	+5°C
0006	+6°C

Check and test operation

Be sure to test the pipe connections for gas leak.

- Check the flare nut connections, valve stem cap connections and service port cap connections for gas leak with a leak detector or some soap water.

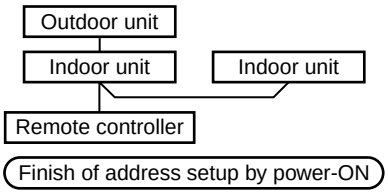
10 APPLICABLE CONTROLS

Group control

Simultaneous twin system

If combining with an outdoor unit, ON/OFF operation of two indoor units is simultaneously available for the twin system.

<Twin system>



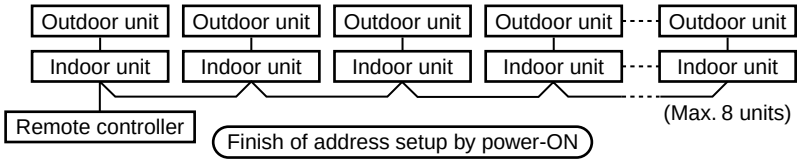
- For wiring procedure and wiring method, follow to the "Electric work" in this manual.
- When the power supply has been turned on, the automatic address setup starts and " " display which indicates that address is being set up flashes on the display part. During setup of automatic address, the remote controller operation is not accepted.

Required time up to the finish of automatic addressing is approx. 5 minutes.

In case of group control for system of multiple units

One remote controller can control maximum 8 indoor units as a group.

<In case of group control in single system>



NOTE

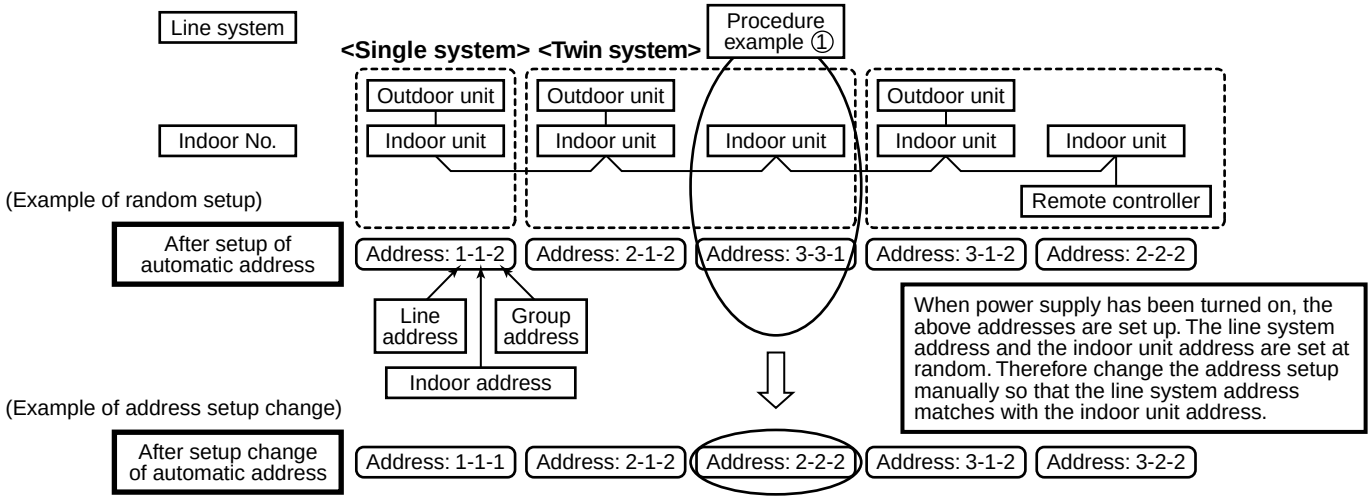
In some cases, it is necessary to change the address manually after setup of the automatic address according to the system configuration of the group control.

- The above-mentioned system configuration is a case when complex systems in which systems of the multiple twin unit is controlled as a group by a remote controller.

- For wiring procedure and wiring method of the individual line (Identical refrigerant line) system, follow to "Electric work".
- Wiring between lines is performed in the following procedure.
  Connect the terminal block (A/B) of the indoor unit connected with a remote controller to the terminal blocks (A/B) of the indoor units of other indoor units by wiring the inter-unit wire of the remote controller.
- When the power supply has been turned on, the automatic address setup starts and " " display which indicates that address is being set up flashes on the display part. During setup of automatic address, the remote controller operation is not accepted.

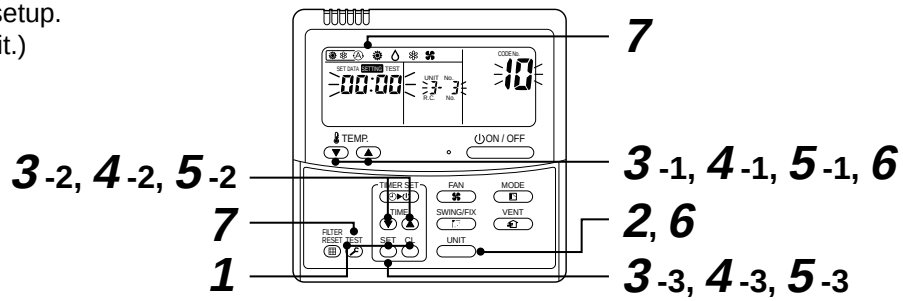
Required time up to the finish of automatic addressing is approx. 5 minutes.

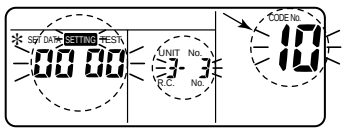
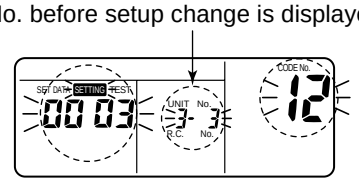
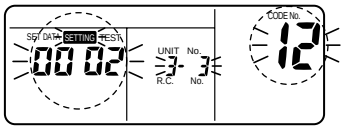
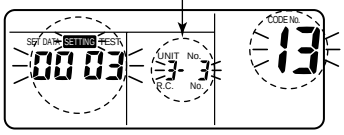
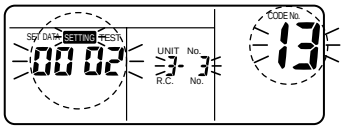
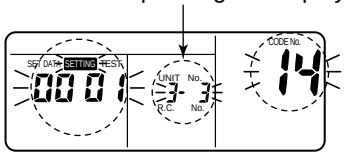
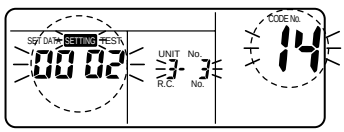
(Example) Group control for complex system



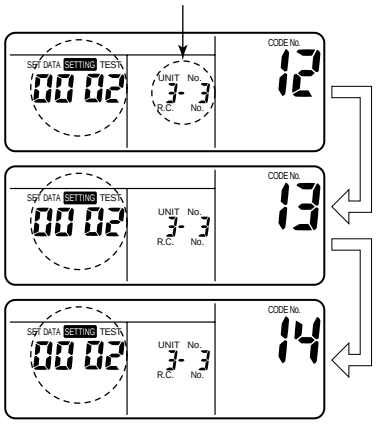
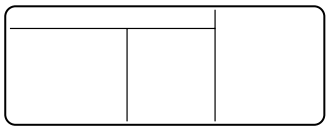
Procedure example ① Manual address setup procedure

While the operation stops, change the setup.
(Be sure to stop the operation of the unit.)



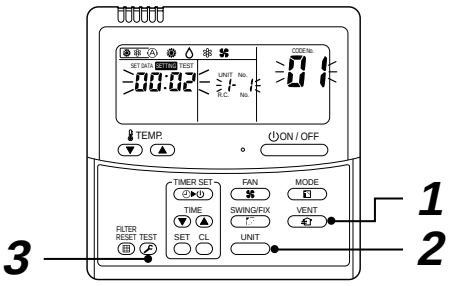
Procedure	Description
1	Push simultaneously SET + CL + TEST buttons for 4 seconds or more. After a while, the display part flashes as shown below. Check the displayed ITEM CODE is [10]. • When the ITEM CODE is other than [10], push TEST button to erase the display and repeat procedure from the first step. (After pushing TEST button, operation of the remote controller is not accepted for approx. 1 minute.) (For a group control, No. of the firstly displayed indoor unit becomes the header unit.)  (✻ Display changes according to the model No. of indoor unit.)
2	Every pushing UNIT button, the indoor unit No. in the group control is displayed in order. Select the indoor unit of which setup is changed. In this time, the position of the indoor unit of which setup is changed can be confirmed because fan and flap of the selected indoor unit operate.
3-1	Using temp. setup ▼ / ▲ buttons, specify ITEM CODE [12]. (ITEM CODE [12]: Line address) Indoor unit No. before setup change is displayed. 
3-2	Using timer time ▼ / ▲ buttons, change the line address from [3] to [2]. 
3-3	Push SET button. In this time, the setup finishes when the display changes from flashing to lighting.
4-1	Using temp. setup ▼ / ▲ buttons, specify ITEM CODE [13]. (ITEM CODE [13]: Indoor address) Indoor unit No. before setup change is displayed. 
4-2	Using timer time ▼ / ▲ buttons, change the indoor address from [3] to [2]. 
4-3	Push SET button. In this time, the setup finishes when the display changes from flashing to lighting.
5-1	Using temp. setup ▼ / ▲ buttons, specify ITEM CODE [14]. (ITEM CODE [14]: Group address) Indoor unit No. before setup change is displayed. 
5-2	Using timer time ▼ / ▲ buttons, change the setup data from [0001] to [0002]. (Setup data [Header unit: 0001] [Follower unit: 0002]) 
5-3	Push SET button. In this time, the setup finishes when the display changes from flashing to lighting.

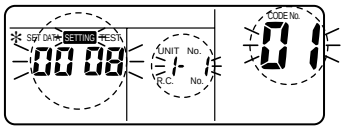
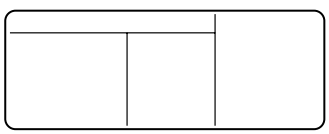
10 APPLICABLE CONTROLS

Procedure	Description
6	If there is other indoor unit to be changed, repeat procedure **2** to **5** to change the setup. When the above setup has finished, push (UNIT) to select the indoor unit No. before change of setup, specify ITEM CODE [12], [13], [14] in order with temp. setup (▼) / (▲) buttons, and then check the changed contents. Address change check Before change: [3-3-1] → After change: [2-2-2] Pushing CL button clears the contents of which setup was changed. (In this case, procedure from **2** is repeated.) Indoor unit No. before setup change is displayed. 
7	After check of the changed contents, push (TEST) button. (Setup is determined.) When pushing (TEST) button, the display disappears and the status becomes the usual stop status. (When pushing (TEST) button the operation from the remote controller is not accepted for approx. 1 minute.) * If the operation from the remote controller is not accepted even 1 minute or more passed after pushing (TEST) button, it is considered that the address setup is incorrect. In this case, the automatic address must be again set up. Therefore repeat procedure of the setup change from the Procedure **1**. 

To recognize the position of the corresponding indoor unit though the indoor unit No. is known

Check the position during operation stop.
(Be sure to stop operation of the set.)



Procedure	Description
1	Push simultaneously (TEST) + (VENT) buttons for 4 seconds or more. After a while, the display part flashes and the display appears as shown below. In this time, the position can be checked because fan and flap of the indoor unit operate. • For the group control, the indoor unit No. is displayed as [ALL] and fans and flaps of all the indoor units in the group control operate. Check the displayed ITEM CODE is [01]. • When the ITEM CODE is other than [01], push (TEST) button to erase the display and repeat procedure from the first step. (After pushing (TEST) button, operation of the remote controller is not accepted for approx. 1 minute.)  (✻ Display changes according to the model No. of indoor unit.)
2	In the group control, every pushing (UNIT) button, the indoor unit No. in the group control is displayed in order. In this time, the position of the indoor unit can be confirmed because only fan and flap of the selected indoor unit operate. (For a group control, No. of the firstly displayed indoor unit becomes the header unit.)
3	After confirmation, push (TEST) button to return the mode to the usual mode. When pushing (TEST) button, the display disappears and the status becomes the usual stop status. (When pushing (TEST) button the operation from the remote controller is not accepted for approx. 1 minute.) 

11 INSTALLATION/SERVICING TOOLS

Tools

Tools	Applicable to R22 model	
Gauge manifold	□	
Charge hose	□	
Electronic balance for refrigerant charging	○	
Torque wrench (nominal diam. 1/4, 3/8, 1/2, 5/8)	□	

Tools	Applicable to R22 model	
Flare tool (clutch type)	○	
Gauge for projection adjustment	—	——
Vacuum pump adapter	○	
Gas leak detector	□	

○ : Newly prepared (They are special requirements for R407C, separate from those for R22.)
□ : Existing tools are available.
For the details of the tools, refer to the Installation manual of the outdoor unit.

12 MAINTENANCE

Cleaning of Return grille

Preparation :

1. Turn off the main power supply switch (or breaker) before the unit maintenance.
2. Dismount the Return grille.

Clean the Return grilles with water:

- Wipe down the Return grille with a sponge or towel moistened with a kitchen detergent. (Do not use any metallic brush for cleaning.)
- **Carefully rinse the Return grille to wash out the detergent.**
- **After rinsing the Return grille with water, dry it in the shade.**

CAUTION

- Do not start the air conditioner while leaving the return grille removed.

Cleaning of Air Filters

- If the air filters are not cleared, it not only impairs the cooling performance of air conditioner but causes a failure in the air conditioner such as water drops.

Preparation :

1. Turn off the main power supply switch (or breaker) before the unit maintenance.
2. Dismount the Return grille.

Use a vacuum cleaner to remove dust from the filters or wash them with water.

- After rinsing the air filters with water, dry them in the shade.
- Set the air filter into the air conditioner.

This product is compliant with Directive 2002/95/EC, and cannot be disposed as unsorted municipal waste.

Ce produit est conforme à la Directive 2002/95/CE et il ne peut pas être jeté avec les ordures ménagères non triées.

Dieses Produkt entspricht der Richtlinie 2002/95/EWG und darf nicht als normaler, unsortierter Hausabfall entsorgt werden.

Questo prodotto è conforme alla direttiva 2002/95/CE, e per disfarsene non deve essere gettato con la spazzatura della casa.

Este producto cumple con la Directiva 2002/95/EC, y no se puede desechar como la basura municipal.

Este produto respeita a Directiva 2002/95/EC e não pode ser deitado fora como lixo municipal.

Dit product is in overeenstemming met richtlijn 2002/95/EC en mag niet als huishoudelijk afval worden afgevoerd.

Το προϊόν αυτό συμμορφώνεται με την Οδηγία 2002/95/ΕΕ και δεν μπορεί να απορριφτεί ως μη ταξινομημένο δημοτικό απόβλητο.