SPLIT-TYPE AIR CONDITIONERS

MSZ-GA50 VA MSZ-GA60 VA Series **MSZ-GA71 VA** [FLARE CONNECTION TYPE]



outdoor unit, refer to the MSZ type

manual for indoor unit set up.

1. THE FOLLOWING SHOULD ALWAYS BE **OBSERVED FOR SAFETY**

- other electrical appliances are connected to it. Be sure to read "THE FOLLOWING SHOULD ALWAYS BE OBSERVED FOR."
- Be sure to observe the cautions specified here as they include important items related to safety.
- The indications and meanings are as follows.
- ♠ WARNING

Could lead to death, serious injury, etc.

⚠ CAUTION Could lead to serious injury in particular environments when operated incorrectly.

 After reading this manual, be sure to keep it together with the OPERATING INSTRUCTIONS in a handy place on the customer's site

⚠ WARNING ■ Do not install the unit by yourself (customer)

- ncomplete installation could cause injury due to fire, electric shock, the unit falling or leakage of water. Consult the dealer from whom you purchased the unit or special installer
- Install the unit securely in a place which can bear the weight of the unit. When installed in an insufficient strong place, the unit could fall causing injury
- Use the specified wires to connect the indoor and outdoor units securely and attach the wires firmly to the terminal block connecting sections so the stress of the wires is not applied to the sections ncomplete connecting and fixing could cause fire.
- Do not use intermediate connection of the power cord or the extension cord and do not connect many devices to one AC outlet. It could cause a fire or an electric shock due to defective contact, defective
- insulation, exceeding the permissible current, etc. ■ Check that the refrigerant gas do not leak after installation has com-

If refrigerant gas leaks indoors, and comes into contact with the fire of a fan

- heater, space heater, stove, etc., harmful substances will be generated. Perform the installation securely referring to the installation manual. Incomplete installation could cause a personal injury due to fire, electric shock, the unit falling or leakage of water.
- Perform electrical work according to the installation manual and be sure to use an exclusive circuit If the capacity of the power circuit is insufficient or there is incomplete electrical work, it could result in a fire or an electric shock.
- Attach the electrical cover to the indoor unit and the service panel to the outdoor unit securely. If the electrical cover in the indoor unit and/or the service panel in the outdoor unit are not attached securely, it could result in a fire or an electric shock due
- Be sure to use the part provided or specified parts for the installation
- The use of defective parts could cause an injury or leakage of water due to a fire, an electric shock, the unit falling, etc.
- Be sure to cut off the main power in case of setting up the indoor electronic control P.C. board or wiring works. It could cause an electric shock
- The appliance shall be installed in accordance with national wiring
- When installing or relocating the unit, make sure that no substance other than the specified refrigerant (R410A) enters the refrigerant circuit Any presence of foreign substance such as air can cause abnormal pressure

- Please provide an exclusive circuit for the air conditioner and make sure that no If gas leak and accumulate in the area surrounding the unit, it could cause an SAFETY" before installing the air conditioner
 - Install an earth leakage breaker depending on the installation place (Where it is humid).
 - If an earth leakage breaker is not installed, it could cause an electric shock. ■ Perform the drainage/piping work securely according to the installation
 - If there is a defect in the drainage/piping work, water could drop from the unit and household goods could be wet and damaged. Fasten a flare nut with a torque wrench as specified in this manual.
 - When fastened too tight, a flare nut may broken after a long period and cause a leakage of refrigerant.

2. SELECTING THE INSTALLATION LOCATION

· Where airflow is not blocked

- Where cool air spreads over the entire room.
- Maximum refrigerant piping length between indoor unit and outdoor unit is 30 m and the difference of height of both units is 15 m.
- Where it is not exposed to direct sunshine.
- Where easily drained.
- At a distance 1 m or more away from your TV and radio. Operation of the air
- the infrared remote control can operate the air conditioner normally) Where the air filter can be removed and replaced easily.

Where it is not exposed to strong wind.

- Where airflow is good and dustless.
- Where rigid wall or support is available to prevent the increase of operation sound
- Where there is no risk of combustible gas leakage
- Where it is at least 3 m away from the antenna of TV set or radio. Operation of the air conditioner interferes with radio or TV reception in areas where reception is
- weak. An amplifier may be required for the affected device. Install the unit horizontally.

- transmitted from there.
- Where there is much machine oil.
- Where there is high-frequency or wireless equipment

Place of mounting

- Where children can not touch.

3. INSTALLATION DIAGRAM & ACCESSORIES

FLARED CONNECTIONS

 This unit has flared connections on both indoor and outdoor sides Remove the outdoor units valve cover, then connect the pipe

- Refrigerant pipes are used to connect the indoor and outdoor units.
- Be careful not to crush or bend the pipe in pipe bending.

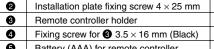
Limits	MSZ-GA50/60/71
Pipe length	30 m max.
Height difference	15 m max.
No. of bends	10 max.

 Refrigerant adjustment ... If pipe length exceeds 7 m, additional refrigerant (The outdoor unit is charged with refrigerant for pipe length up to 7 m.)

	Pipe length	Up to 7 m	No additional charge is required.	
		Exceeding 7 m	Additional charge is required.	
			(Refer to the table below.)	
	D (:	MSZ-GA50	20 g/m × (refrigerant piping length (m) -7)	
	Refrigerant to	MSZ-GA60	20 g/m × (refrigerant piping length (m) -7)	
	be added	MSZ-GA71	55 g/m × (refrigerant piping length (m) -7)	

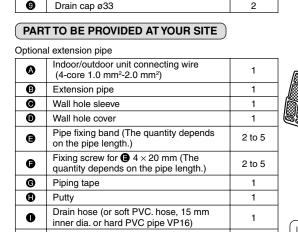
ACCESSORIES

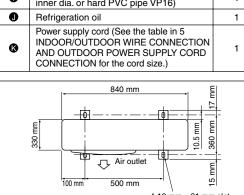
Check the following parts before installation



Battery (AAA) for remote controller Wireless remote controller Felt tape (Used for left or left-rear piping) <Outdoor units

Drain socket





When operating the air conditioner in low outside temperature. be sure to follow the instructions described below. • Never install the outdoor unit in a place where its air inlet/outlet side may be exposed directly to wind.

• To prevent exposure to wind, install the outdoor unit with its

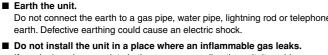
• To prevent exposure to wind, it is recommended to install a

baffle board on the air outlet side of the outdoor unit.

air inlet side facing the wall.



Earth the unit.



⚠ CAUTION

- Rigid wall without vibration

- conditioner interferes with radio or TV reception in areas where reception is weak. An amplifier may be required for the affected device. • In a place as far away as possible from fluorescent and incandescent lights (so
- 2-2 OUTDOOR UNIT
- Where it is not exposed to rain and direct sunshine.
- Where neighbours are not annoyed by operation sound or hot air.
- When installing the unit at a high level, be sure to fix the unit legs
- Please install it in an area not affected by snowfall or blowing snow. In areas with heavy snow, please install a canopy, a pedestal and/or some baffle boards.
- It is advisable to make a piping loop near outdoor unit so as to reduce vibration

⚠ CAUTION

- Avoid the following places for installation where air conditioner trouble is liable to occur. Where flammable gas could leak.
- · Salty places such as the seaside. • Where sulfide gas is generated such as a hot spring.

2-3 WIRELESS REMOTE CONTROLLER MOUNTING

- · Where it is easy to operate and easily visible
- Select a position about 1.2 m above the floor, check that signals from the remote
- controller are surely received by the indoor unit from that position ('beep' or 'beepbeen' receiving tone sounds). After that, attach remote controller holder 3 to a pillar or wall and set the wireless remote controller 6. In rooms where inverter type fluorescent lamps are used, the signal from the

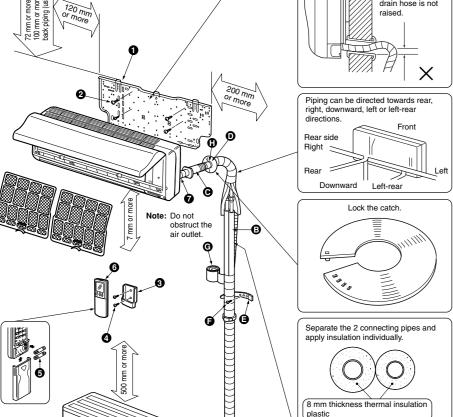


Specific	ations				
Use the	refrigerant pip	es that meet the fo	llowing specifications	S.	
Pipe		Outside diameter	Insulation thickness		
		mm	mm	Insulation material	
or liquid	GA50/GA60	6.35	8	Heat resisting	
	GA71	9.52	8	foam plastic	
	GA50	12.7	8	0.045 specific	

- Use a copper pipe or a copper-alloy seamless pipe with a thickness of 0.8 mm (for ø6.35, 9.52) or 1.0 mm (for ø12.7, ø15.88). Never use any pipe with a thickness less than 0.8 mm (for ø6.35, 9.52) or 1.0 mm (for ø12.7, ø15.88), as the pressure
- resistance is insufficient. Ensure that the 2 refrigerant pipes are insulated to prevent condensation

③ Refrigerant pipe bending radius must be 100 mm or more.

	Be sure to use the insulation of specified thickness. Excessive thickness may cause incorrect installation of the indoor unit and lack of thickness may cause dew drippage.	refriger	ant	
th (m) -7) th (m) -7) th (m) -7)	Decide the installation position using mark on the installation plate indicating the indoor unit size as reference.	The following tools are required for R410A refrigerant. Some R22 tools can be substituted for R410A tools. The diameter of the service port on the stop valve in outdoor unit has been changed to prevent any other refrigerant being charged into the unit. (Cap size has been changed from 7/16 UNF with 20 threads to 1/2 UNF with 20 threads.)		
		R410A tools	Can R22 tools be used?	Description
more for left and left (using spacer)	Be careful the	Gauge manifold	No	R410A has high pressures beyond the measurement range of existing gauges. Port diameters have been changed to prevent any other refrigerant from being charged into the unit.
ising (using or more or more)	drain hose is not raised.	Charge hose	No	Hose material and cap size have been changed to improve the pressure resistance.
back piping or work		Gas leak detector	No	Dedicated for HFC refrigerant.
		Torque wrench	Yes	1/4 and 3/8



2 Burrs removal Completely remove all burrs from the cut cross section of pipe.

When the piping is to be attached to a

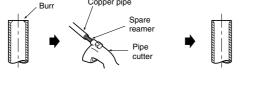
metal netting, use a chemically treated

ooden piece 20 mm or thicker

wrap 7 to 8 turns of insulation vinyl

Units should be installed by licensed contractor according

to local code requirement.



4-3 CONNECTING WIRE SPECIFICATIONS

Use special room air conditioning circuit.

4-1 FIXING OF INSTALLATION PLATE

To prevent the installation plate from vibrating, be sure to fix the holes

plate $\mathbf{0}$ using $11 \times 20 \cdot 11 \times 26$ oval hole (450 mm pitch).

Drill a 75 mm hole so that outside can be lower than inside.

Align the scale with the line.

Repeat the same procedure for the left hole.

Be sure to use wall hole sleeve
to prevent the outdoor connecting wires from

Seal the wall hole

gap with putty **()**.

pipe fixing band (3).

contacting with metal part in the wall and to prevent damage by rat in case the wall

Cut off the

extra length

scale length.

When bolts recessed in the concrete wall are to be utilized, secure the installation

If the recessed bolt is too long, change it for a shorter one available in the market.

as indicated by the arrows 1.

4-2 WALL HOLE DRILLING

Positioning of the holes on the wall

(Wall hole cross section

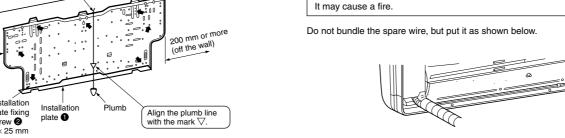
Wall hole sealing and fixing pipe to wall

Indoor unit

Determine the wall hole position

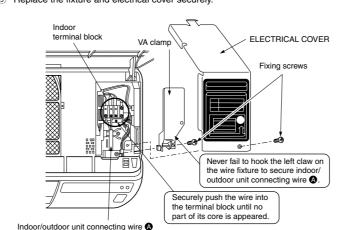
Insert the wall hole sleeve .

Indoor/outdoor unit connecting wire Cable 4-core 1.0 mm², in conformity • Find a structural material (such as a stud) in the wall and fix installation plate Specification with Design 245 IEC 57. 100 mm or more for lef and left back piping (using Bind the line to the center hole Never cut the indoor and outdoor unit connecting wire and connect it to other wires



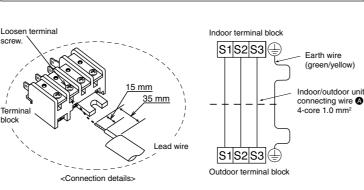
4-4 INDOOR AND OUTDOOR CONNECTING WIRE CON-NECTION

- You can connect indoor/outdoor lead wire without removing the front panel. Open the front panel.
- Remove one screw holding the electrical cover, then remove the cover. Remove the VA clamp and the cord clamp.
- Pass the indoor/outdoor unit connecting wire from the back of the indoor unit and process the end of the wire, then connect it to the terminal block. 5 Replace the fixture and electrical cover securely.



↑ WARNING Use the indoor/outdoor unit connecting wire that meets the Standards to connect the indoor and outdoor units and fix the wire to the terminal block securely so that no external force is conveyed to the connecting section of the terminal block.

Incomplete connection or fixing of the wire could result in a fire. Attach the electrical cover securely. If it is attached incorrectly, it could result in a fire or an electric shock due to dust, water, etc.



· Be careful not to make mis-wiring Firmly tighten the terminal screws to prevent them from loosening. After tightening, pull the wires lightly to confirm that they do not move.

↑ CAUTION

- If the connecting wire is incorrectly connected to the terminal block, the unit does
- not operate normally.

If an earth is incorrect, it may cause an electric shock

4-5 AUTO RESTART FUNCTION • When the units of these models are shipped from the factory, auto restart function is

- set to ON. If you want to know how to release this function, consult the service
- When the indoor unit is controlled with the remote controller, the operation mode, the set temperature, and the fan speed are memorized by the indoor electronic control P.C. board. The auto restart function sets to work the moment the power has restored after power failure, then, the unit will restart automatically. If the unit is operated in "I FEEL CONTROL" mode before power failure, the operation is not memorized. In "I FEEL CONTROL" mode, the operation is decided by the initial room temperature at

① If the main power (230V AC) has been cut, the operation settings remain. 2) When three minutes have passed after power was restored, the unit will restart automatically according to the memory.

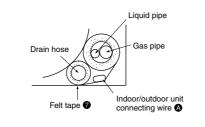
. The operation settings are memorized when 10 seconds have passed after the

remote controller was operated. • If the main power is turned off or a power failure occurs while AUTO START/STOP

- timer is active, the timer setting is cancelled. As these models are equipped with the auto restart function, the air conditioner should start operating at the same time that a power has restored. • If the unit has been off with the remote controller before power failure, the auto restart function does not work as the power button of the remote controller is off.
- To prevent breaker off due to the rush of starting current, systematize other home appliances not to turn on at the same time.

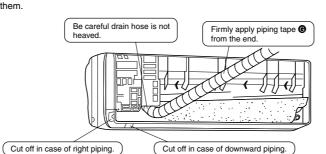
4-6 PIPE FORMING

- Place the drain hose below the refrigerant piping. Make sure that the drain hose is not heaved or snaked. Do not pull the hose to apply the tape.
- When the drain hose passes the room, be sure to wrap insulation material (obtainable at a store) around it
- Wrap the felt tape 7 around the pipe and the drain hose, then put the pipe in the back space of the indoor unit.



FOR REAR, RIGHT OR DOWNWARD PIPING

 Pipe arrangement Put the refrigerant piping and the drain hose together, then apply piping tape 6 to

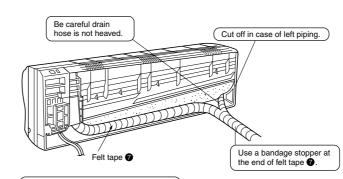


- Insert the piping and the drain hose into the wall hole sleeve (6), and hook the upper part of the indoor unit on the installation plate 1. Check if the indoor unit is hooked securely on the installation plate

 by moving the
- unit to left and right Thrust the lower part of the indoor unit into the installation plate

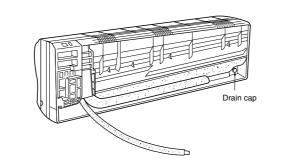
FOR LEFT OR LEFT-REAR PIPING

Put the refrigerant piping and the drain hose together, then apply felt tape **1** to them.

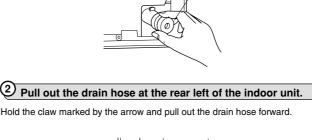


Firmly apply felt tape 🕡 from the end. (Felt tape overlap width should be 1/3

Be sure to reattach the drain hose and the drain cap in case of left or left-rear piping. Otherwise, it could cause drops of water to drip down from the drain hose.



1 Pull out the drain cap at the rear right of the indoor unit. Hold the convex section at the end and pull the drain cap.



Dut the drain cap into the section to which the drain hose is to be attached at the rear of the indoor unit. Insert the screwdriver, etc. (not sharp-edged tool) into the hole at the end of the cap and



4 Insert the drain hose into the section to which the drain hose is to be attached at the rear right of the indoor unit.

Insert the drain hose into the wall hole sleeve . and hook the upper part of

Securely attach the spacer

of the rib, taking care its

50 mm gap

If the drain hose provided with the indoor unit is too short, connect it with drain

• If the extension drain hose has to pass through a room, be sure to wrap it with

assembly in the concave par

ection is correct as shown in

(Fig. 3)

15 mm or

the projection of its inserting part at the drain pan

lift the indoor unit as shown in the figure below.

• Connect the refrigerant piping with the extension pipe **3**.

Do not make drain piping as shown in Fig. 2 to 5.

Tip of drain

hose **1** that should be provided at your site.

commercially sold insulation.

Thrust the lower part of the indoor unit into the installation plate 1

• The drain hose should point downward for easy drain flow. (Fig. 1)

Cut part of packing material (spacer assembly) to

INDOOR UNIT INSTALLATION

hook it on the back rib.

4-7 DRAIN PIPING

(Fig. 1)

INDOOR/OUTDOOR UNIT CONNECTING WIRE CON-Insert the drain hose fully into the drain pan. Check if the hose is hooked securely to

20 A

NECTION AND OUTDOOR POWER SUPPLY CORD

5. OUTDOOR UNIT INSTALLATION

on the terminal block.

• Connect the indoor/outdoor unit connecting wire (A) from the indoor unit correctly • For future servicing, give extra length to connecting wire. Rated Voltage Breaker capacity Connect to the supply terminals and leave a contact separation of at least 3 mm at each pole to discon-

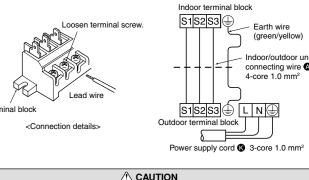
Peel off both ends of connecting wire (extension wire). indoor unit on the installation plate 1. Then, move the unit to the very edge of the When too long, or connected by cutting off the middle, left side for putting the piping easily in the back space of the indoor unit. After that, peel off power supply wire to the size as shown in the cut the part of packing material (spacer assembly) to hook it on the back rib and Be careful not to contact connecting wire with piping.

> (more than 35 mm) For the indoor/outdoor unit connecting wires, be sure to use the ones in compliance with the standards.

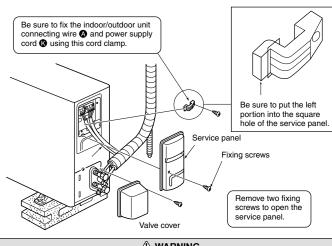
3-core 2.5 mm² or more, in conformity with Design 245 IEC 57. 3-core 4.0 mm² or more, in conformity with 15 m or less Design 245 IEC 57. 3-core 6.0 mm² or more, in conformity with 25 m or less

WARNING

 A means for disconnection of the supply with an isolation switch, or similar device, in all active conductors shall be incorporated in the fixed wiring Never cut the power cord and connect it to other wires.



If the connecting wire is incorrectly connected to the terminal block, the unit



Be sure to attach the service panel of the outdoor unit securely. If it is not attached correctly, it could result in a fire or an electric shock due to dust, water, etc.

6. INDOOR/OUTDOOR UNIT CONNECTION FINISHING AND TEST RUN

TIONER WITH R410A REFRIGERANT

designed for R410A. (Refer to 2. Refrigerant piping.)

INSTALLATION INFORMATION FOR THE AIR CONDI

 This room air conditioner adopts an HFC refrigerant (R410A) which will never destroy the ozone layer Pay particular attention to the following points, though the basic installation procedure is same as that for R22 air conditioners

As R410A has a working pressure approx. 1.6 times as high as that of R22, some

special tools and piping parts / materials are required. (Refer to the table below.)

Take sufficient care not to allow water and other contaminations to enter the R410A refrigerant during storage and installation, since it is more susceptible to contaminations than R22. For refrigerant piping, use clean, pressure-proof parts / materials specifically

Composition change may occur in R410A since it is a mixed refrigerant. When charging, charge liquid refrigerant to prevent composition change. 6-1 Tools dedicated for the air conditioner with R410A refrigerant

R410A tools Can R22 tools be used? Description R410A has high pressures beyond the measlauge manifold Port diameters have been changed to prevent any other refrigerant from being charged into the Hose material and cap size have been change to improve the pressure resistance. Dedicated for HFC refrigerant Gas leak detector 1/4 and 3/8 /2 and 5/8 Clamp bar hole has been enlarged to reinforce Flare tool the spring strength in the tool. Provided for flaring work (to be used with R22 Flare gauge Provided to prevent the back flow of oil. This Vacuum pump adapter enables you to use existing vacuum

It is difficult to measure R410A with a charging

high pressure and high-speed vaporization.

cylinder because the refrigerant bubbles due to

6-2 FLARING WORK

Electronic scale

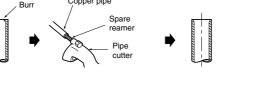
charging

 Main cause of gas leakage is defect in flaring work Carry out correct flaring work in the following procedure

1) Pipe cutting · Cut the copper pipe correctly with pipe cutter Tilted Uneven

No: Not substitutable for R410A Yes: Substitutable for R410A

 Put the end of the copper pipe to downward direction as you remove burrs in order to avoid to let burrs drop in the piping.



ø15.88

Remove flare nuts attached to indoor and outdoor Flare nut

units, then put them on pipe having completed

(not possible to put them on after flaring work)

Flare nut for R410A pipe differs from R22 pipe. Refer to the following table for detail R410A inch ø6.35 1/4 ø9.52 3/8 ø12.7 1/2

4 Flaring work Carry out flaring work using flaring tool as shown below

Clutch type	Wing nut type	Flare nut	Copper pipe
		A (mm)	
Outside diameter	Flare tool for R410A	Convention	al flare tool
	clutch type	Clutch type	Wing nut type
ø6.35 mm	0 to 0.5	1.0 to 1.5	1.5 to 2.0
ø9.52 mm	0 to 0.5	1.0 to 1.5	1.5 to 2.0
ø12.7 mm	0 to 0.5	1.0 to 1.5	2.0 to 2.5
ø15.88 mm	0 to 0.5	1.0 to 1.5	2.0 to 2.5

· Firmly hold copper pipe in a die in the dimension shown in the table above. Compare the flared work with figure below If flare is noted to be defective, cut off the flared section and do flaring work again

Smooth all around Inside is shining without any scratches

Even length

of refrigerant.

Indoor unit connection

6-3 PIPE CONNECTION Fasten a flare nut with a torque wrench as specified in the table below. When fastened too tight, a flare nut may broken after a long period and cause a leakage

Connect both liquid and gas pipings to indoor unit. For connection first align the center, then tighten the first 3 to 4 turns of flare nut. Use tightening torque table below as a guideline for indoor unit side union joint section, and tighten using two wrenches. Excessive tightening damages the flare Pipe diameter
 N·m
 kgf·cm

 ø6.35 mm
 13.7 to 17.7
 140 to 180

ø12.7 mm 49.0 to 56.4 500 to 575 ø15.88 mm 73.5 to 78.4 750 to 800 Outdoor unit connection Connect pipes to stop valve pipe joint of the outdoor unit in the same manner applied for

prevention of condensation.

ø9.52 mm 34.3 to 41.2 350 to 420

applied for indoor unit. Cover piping joints with pipe cover

For outdoor unit side, surely insulate every piping including valves. Using piping tape **(G)**, apply taping starting from the entry of outdoor unit.

Stop the end of piping tape **(a)** with tape (with adhesive agent attached).

When piping have to be arranged through above ceiling, closet or where the

temperature and humidity are high, wind additional commercially sold insulation for

• For tightening, use a torque wrench or spanner and use the same tightening torque

6-4 PURGING PROCEDURES LEAK TEST

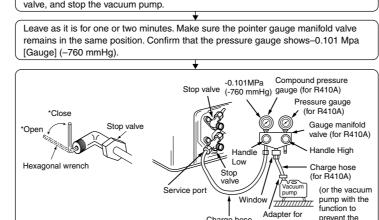
PURGING PROCEDURES Connect the refrigerant pipes (both liquid pipe and the gas pipe) between the indoor and the outdoor unit. Remove the service port cap of the stop valve on the side of the outdoor unit gas

closed with cap on). Connect the gauge manifold valve and the vacuum pump to the service port of the stop valve on the gas pipe side of the outdoor unit.

Run the vacuum pump. (Vacuumize for more than 15 minutes.

pipe. (The stop valve will not work in it initial state fresh out of the factory (totally

Check the vacuum with the gauge manifold valve, then close the gauge manifold



Remove the gauge manifold valve quickly from the service port of the stop valve. After refrigerant pipes are connected and evacuated, fully open all stop valves on both sides of gas pipe and liquid pipe.

Operating without fully opening lowers the performance and this causes trouble.

preventing the back flow

Pipe length exceeding 7 m

of gas. (refer to 3)

Charge the prescribed amount

back flow)

200 to 300

Tighten the cap to the service port to obtain the initial status Retighten the cap Leak test Tightening torque N⋅m kgf⋅cm Cap for service port 13.7 to 17.7 140 to 180

19.6 to 29.4

A thermostat does not work during this time. After 30 minutes the unit will start the

EMERGENCY OPERATION at a fixed temperature setting of 24°C in COOL MODE or

6-5 TEST RUN Before performing the test run, recheck any wrong wiring.

HEAT MODE.

Cap for stop valve

*4 to 5 turns

Pipe length up to 7 m

No gas charge is needed.

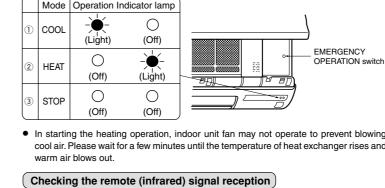
Wrong wiring prevents normal operation or results in blown fuse disabling operation. The test run can be started by pressing EMERGENCY OPERATION switch. When the EMERGENCY OPERATION switch is once pressed, the unit will start the test run

(continuous operation) for 30 minutes

Perform test run in the following procedure.

PROCEDURE Press the EMERGENCY OPERATION switch. Press it once, and after test run for 30 minutes the EMERGENCY COOL MODE starts.

indoor/outdoor unit connecting wire (A) for mis-wiring. Press it once more, and the EMERGENCY HEAT MODE starts. Press it once more, and the operation stops (The operation mode changes in order of 1) ~ 3) every time the EMERGENCY



OPERATION switch is pressed.)

heard from the indoor unit. Press the ON/OFF button again to turn the air conditioner off. If the indoor unit is operated with the remote controller, both the test run and the emergency operation are released by commands from the remote controller

Once the compressor stops, the restart preventive device operates so the compressor

controller in the remote controller holder, how to clean, precautions for operation, etc.

Press the ON/OFF button on the remote controller and check that an electronic sound is

6-6 EXPLANATION TO THE CUSTOMER Using the OPERATING INSTRUCTIONS, explain the following to the customer, how to control temperature, how to remove the air filters, how to remove or put the remote

terminal blocks?

☐ Has air purging been carried out?

☐ Is the drain hose properly installed?

☐ Is the front panel installed securely?

☐ Has the test run been carried out?

□ Are the stop valves open fully?

will not operate for three minutes to protect the air conditioner.

6-7 CHECKING AFTER INSTALLATION After finishing the installation, check the following items and mark the \square next to each item. ☐ Is the specified power supply voltage used? ☐ Is the power line equipped with the circuit breaker?

☐ Have the ends of the indoor/outdoor connecting wire been properly inserted into the

☐ Are the pipes designed for use with R410A or do they have the specified thickness?

Recommend the customer to read the OPERATING INSTRUCTIONS carefully.

 $\hfill\square$ Are the power supply cord and indoor/outdoor connecting wire connected directly to the units (no intermediate connections)? □ Is the earth wire longer than the other wires so that it will not become disconnected when tension is applied? □ Is the earth wire connected properly

☐ Has water been poured through the drain hose to confirm proper drainage? ☐ Are the pipes at the rear of the unit bundled with felt tape (for left and left-rear piping ☐ Can the installation location bear the weight of the unit and not amplify its vibration or

□ Is the area under the unit free of objects that block the air outlet?

SHOULD ALWAYS BE OBSERVED FOR SAFETY" been checked?

 $\hfill\square$ Are the vertical and horizontal vanes closed securely?

□ Has the indoor/outdoor connecting wire been secured firmly?

☐ Has the leak test been carried out for the pipe connections?

6-8 EXPLANATION TO THE CUSTOMER Using the OPERATING INSTRUCTIONS, explain the following to the customer, how to

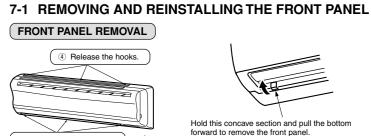
controller in the remote controller holder, how to clean, precautions for operation, etc. Recommend the customer to read the OPERATING INSTRUCTIONS carefully.

☐ Has the drain work been performed properly and are there no bubbling sounds?

☐ Have all of the ⚠ WARNING and ⚠ CAUTION items in "1. THE FOLLOWING

control temperature, how to remove the air filters, how to remove or put the remote

7. FOR MOVEMENT AND MAINTENANCE

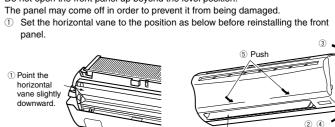


FRONT PANEL REINSTALLATION Do not open the front panel up beyond the level position.

Remove the screw caps.

Fit in the top of the front panel.

Remove three screws. (3) Pull the bottom.



Attach the bottom of the front panel under the horizontal vane.

5 Push the section of the front panel marked by the arrow and fit the panel into the

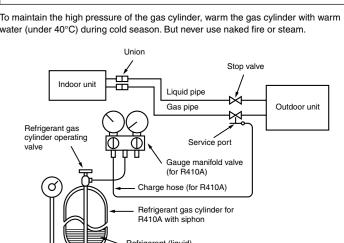
Fit in the bottom of the front panel and tighten it using screws.

7-2 REMOVING THE INDOOR UNIT Remove the bottom of the indoor unit from the installation plate. Remove the front panel. (See FRONT PANEL REMOVAL shown above.) Insert flat screwdrivers into the square holes at the left and right bottom of the indoor unit and push them up; the bottom of the indoor unit goes down and the

Connect gas cylinder to the service port of stop valve (3-way).

If the refrigerant is charged from the gas phase, composition change may

occur in the refrigerant inside the cylinder and the outdoor unit. In this case, ability of the refrigerating cycle decreases or normal operation can be



This product is designed and intended for use in the residential, commercial and light-industrial environment.

The product at hand is based on • Low Voltage Directive 73/23/ EEC

the following EU regulations: • Electromagnetic Compatibility Directive

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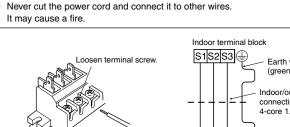
89/336/ EEC

Make earth wire a little longer than the others. Be sure to push the core until it is hidden and pull each cable to make sure that it is not pulled up incomplete insertion may cause a risk of burning the terminal

nect the source power pole. (When the power switch

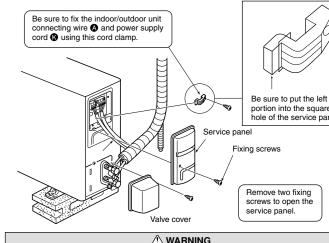
is shut off, it must disconnect all poles.)

Design 245 IEC 57. Indoor and Outdoo Cable 4-core 1.0 mm², in conformity with connecting wire Desian 245 IEC 57.



CAUTION

Use care not to make mis-wiring Firmly tighten the terminal screws to prevent them from loosening. After tightening, pull the wires lightly to confirm that they do not move. does not operate normally.

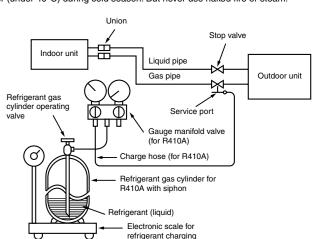


7-3 GAS CHARGE

Execute air purge of the pipe (or hose) coming from refrigerant gas cylinder. Replenish specified amount of the refrigerant, while operating the air conditioner for cooling. In case of adding refrigerant, comply with the quantity specified for the refrigerating

Do not discharge the refrigerant into the atmosphere. Take care not to discharge refrigerant into the atmosphere during installation reinstallation, or repairs to the refrigerant circuit For additional charging, charge the refrigerant from liquid phase of the

impossible. However, charging the liquid refrigerant all at once may cause the compressor to be locked. Thus, charge the refrigerant slowly.



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