

Middle Static Pressure Duct Type

Thank you very much for purchasing our air conditioner,

Before using your air conditioner, please read this manual carefully and keep it for future reference.

5.2.2 New concrete bricks 3. Air inlet and air outlet duct should be apart far enough to avoid air passage short-circuit Recommended duct connection (Blade shape insertion) (Slide insertion) 5.2.3 For Original concrete bricks Use embedding screw bold, crock and stick harness. (Refer to Fig.5-4) Steel bar ☐ Embedding screw bolt (Pipe hanging and embedding screw bolt) 5. Please refer to the following static pressure to install 5.2.4 Steel roof beam structure

2 Overhanging the indoor unit (1) Overhang the indoor unit onto the hanging screw bolts with (2) Position the indoor unit in a flat level by using the level indicator, unless it may cause leakage. Shockproof cushion Washer

Install and use directly the supporting angle steel. (Refer to Fig.5-5) $\,$

Change the fan motor static pressure corresponding to external duct static pressure. 1. Do not put the connecting duct weight on the indoor unit. 2. When connecting duct, use inflammable canvas tie-in to prevent Hanging screw bolt 5.3 Duct and accessories installation 1. Install the filter(optional) according to air inlet size.

3. Insulation foam should be wrapped outside the duct to avoid condensate and internal duct underlayer shall be added to reduce the noise for special requirement. 2. Install the canvas tie-in between the body and duct. 6. OUTDOOR UNIT INSTALLATION 6.2 Figure of body size **6.1 Installation Place** 1. Split type outdoor unit ■ The outdoor unit should be installed in the location that meets the following requiements: There is enough room for installation and maintenance.

• The air outlet and the air inlet are not impeded, and can not be reached by strong wind. It must be a dry and well ventilating place. • The support is flat and horizontal and can stand the weight of the outdoor unit. And will no additional noise or Your neighborhood will not feel uncomfortable with the noise or expelled air. It is easy to install the connecting pipes or cables. Determine the air outlet direction where the discharged air is not blocked. There is no danger of fire due to leakage of inflammable The piping length between the outdoor unit and the indoor unit may not exceed the allowable piping length. • In the case that the installation place is exposed to strong wind such as a seaside, make sure the fan operating properly by putting the unit lengthwise along the wall or using a dust shield. (Refer to Fig. 6-1) • If possible, do not install the unit where it is exposed to direct sunlight. If necessary, install a blind that does not interfere with the • During the heating mode, the water drained off the outdoor unit ,The condensate should be well drained away by the drain hole to an appropriate place, so as not to interfere other people. • Select the position where it will not be subject to snow drifts, accumulation of leaves or other seasonal debris. If unavoidable, please cover it with a shelter. Locate the outdoor unit as close to the indoor unit as If possible, please remove the obstacles nearby to prevent the performance from being impeded by too little of air The minimum distance between the outdoor unit and obstacles described in the installation chart does not mean that the same is applicable to the situation of an airtight room. Leave open two of the three directions (M,N,P) (Refer to Fig.6-5)

They may be slightly different from the air conditioner you purchased. The actual uint shall prevail. 1) The branching pipe must be installed horizontally, error angle 8.4 Vacuum with vacuum pump of it should not large than 10°. Otherwise, malfunction will be 1) Use the vacuum pump which vacuum level lower than -0.1MPa and the air discharge capacity above 40L/min. -shaped branching pipe 2) The outdoor unit is not necessary to vacuum, don't open the outdoor unit gas and liquid pipe shut-off valves. 3) Make sure the vacuum pump could result as -0.1MPa or below after 2 hrs or above operation. If the pump operated 3 A direction view hrs or above could not achieve to -0.1MPa or below, please check whether water mix or gas leak inside of the pipe. Connect with vacuum pump Horizontal surface Perform the pump (last for 2 hrs or above) . Close-off the valve of vacuum meter. When get the vacuum level 2. Cut off the connection -0.1MPa, the pump should . REFRIGERANT PIPE CONNECTION keep running for 20-60 mins between pressure meter and vacuum pump. 3. Close the vacuum 9.1 Expel The Air Shut down the 1 Flaring vaccun pump Cut a pipe with a pipe cutter. (Refer to Fig.9-1) Place the vaccum state unused (1 hrs or above) CAUTION Insert a flare nut into a pipe and flare the pipe. ■ Don't mix up the different refrigerants or abuse the tools and measurements which directly contact with refrigerants. · Put the connecting pipes at the proper position, Don't adopt refrigerant gas for air vacuuming. wrench the nuts with hands then fasten it with two wrenches simultaneously. (Refer to Fig.9-2) ■ If vacuum level could not get to -0.1MPa, please check whether resulted by leakage and confirm the leakage site. If no leakage, please operate the vacuum pump again 1 or 2 hrs. 8.5 Refrigerant amount to be added Calculate the added refrigerant according to the diameter and the length of the liquid side pipe of the outdoor/indoor unit CAUTION connection. The refrigerant is R410A. Too large torque will harm the bellmouthing and too small will

installation manual

cause leakage. Please determine the torque according to

8.3/0.327in 8.7/0.343in

12.0/0.472in 12.4/0.488in

15.4/0.606in 15.80.622in

16 kgf.cm)

····/

NOTE

Pipe size on Refrigerant to

liquid side be Added per met

Ф6.35/0.25in 0.015kg/0.033lb

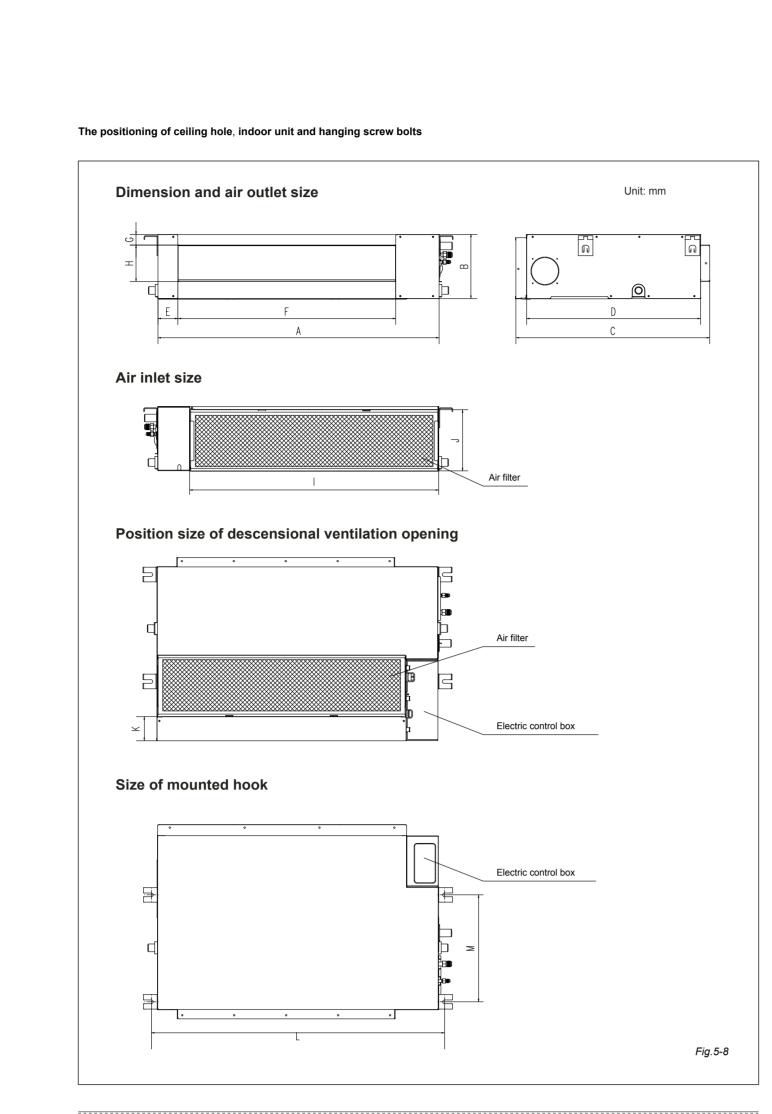
Ф9.52/0.375in 0.030kg/0.066lb

All the figures in this manual are for explanation purpose only.

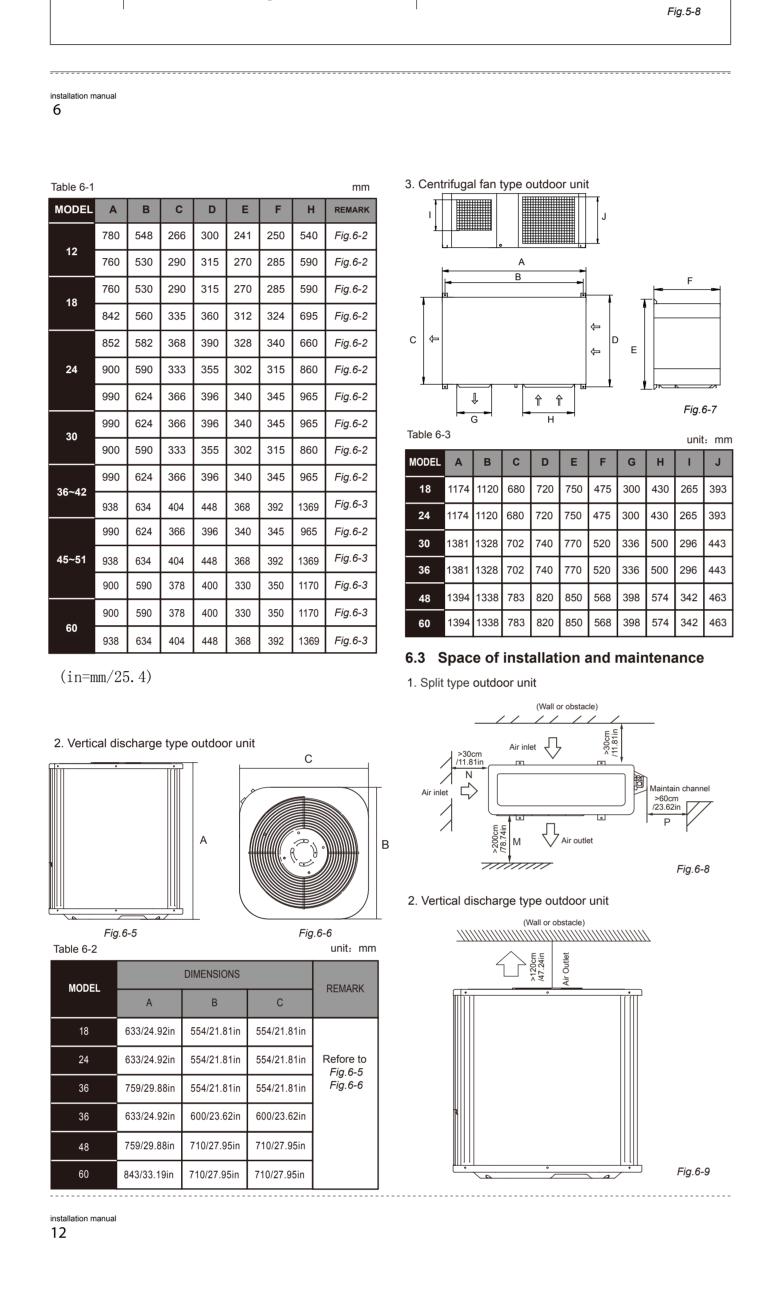
installation manual The Specification of Power(independence power supply) 1Phase | 1Phase | 1Phase | 1Phase PHASE idoor) FREQUENCY AND VOL 208-240V 208-240V 208-240V 208-240V 208-240 V RCUIT BREAKER/FUSE(A 20/16 20/16 20/16 20/16 1Phase 1Phase 1Phase 1Phase PHASE 1Phase utdoor) FREQUENCY AND VOLT 208-240V 208-240V 208-240V 208-240V 208-240 V 40/25 50/30 60/45 60/50 IRCUIT BREAKER/FUSE(A) 30~36 42~60 42~60 1Phase 1Phase 1Phase PHASE door) FREQUENCY AND VOL 208-240V 208-240V 208-240V IRCUIT BREAKER/FUSE(A 20/16 20/16 20/16 PHASE 3Phase 3Phase 3Phase 3Phase utdoor) FREQUENCY AND VOLT 380-420 V 380-420 V 208-240V 208-240V

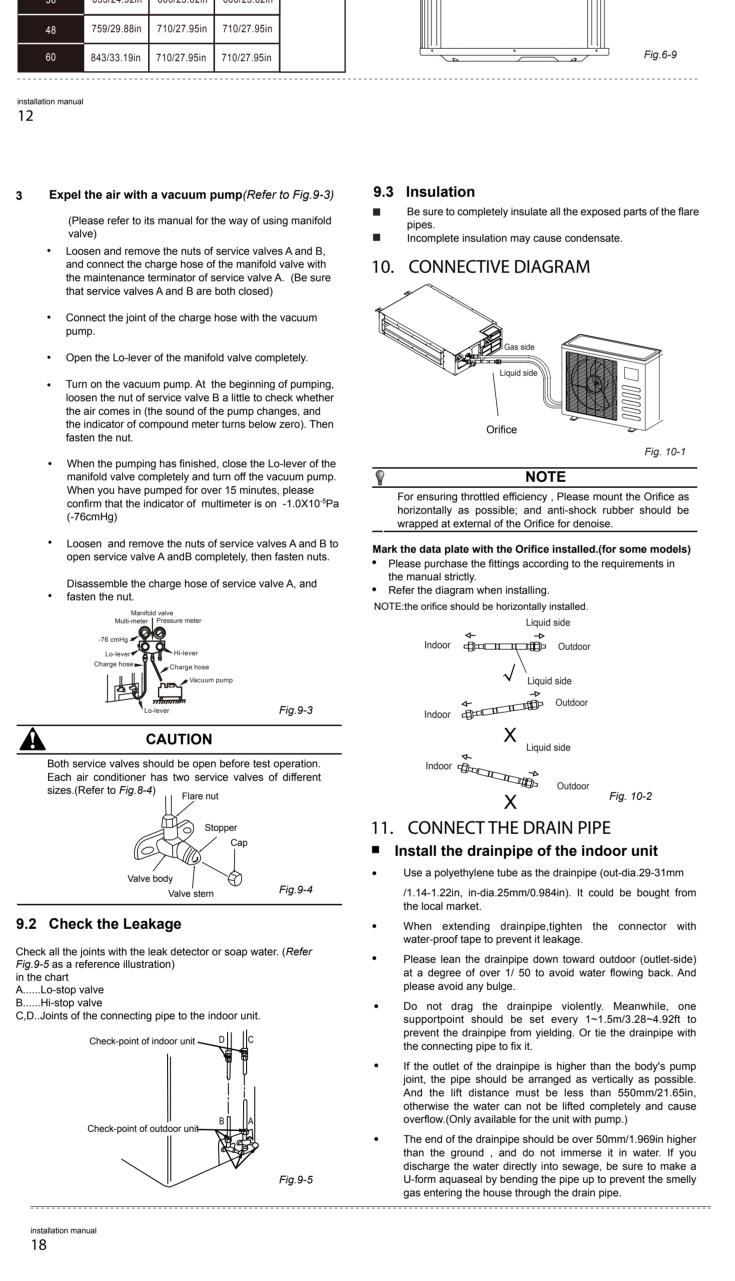
25/20 25/20 40/25 45/35 RCUIT BREAKER/FUSE(A The Specification of Power for the invert type air conditioner(independence power supply) ■ Table 14-7 30~36 42~48 PHASE (indoor) FREQUENCY AND VOL 220-240V 220-240V 220-240V CIRCUIT BREAKER/FUSE(/ 15/10 15/10 15/10 1Phase 1Phase 1Phase 1Phase PHASE 208-240 V 208-240V | 208-240V | 208-240V | 208-240V CIRCUIT BREAKER/FUSE(A 30/20 40/30 40/35 50/40 ■ Table 14-8 42~60 30~36 1Phase PHASE indoor) FREQUENCY AND VOL 220-240V 220-240V 220-240V 220-240V

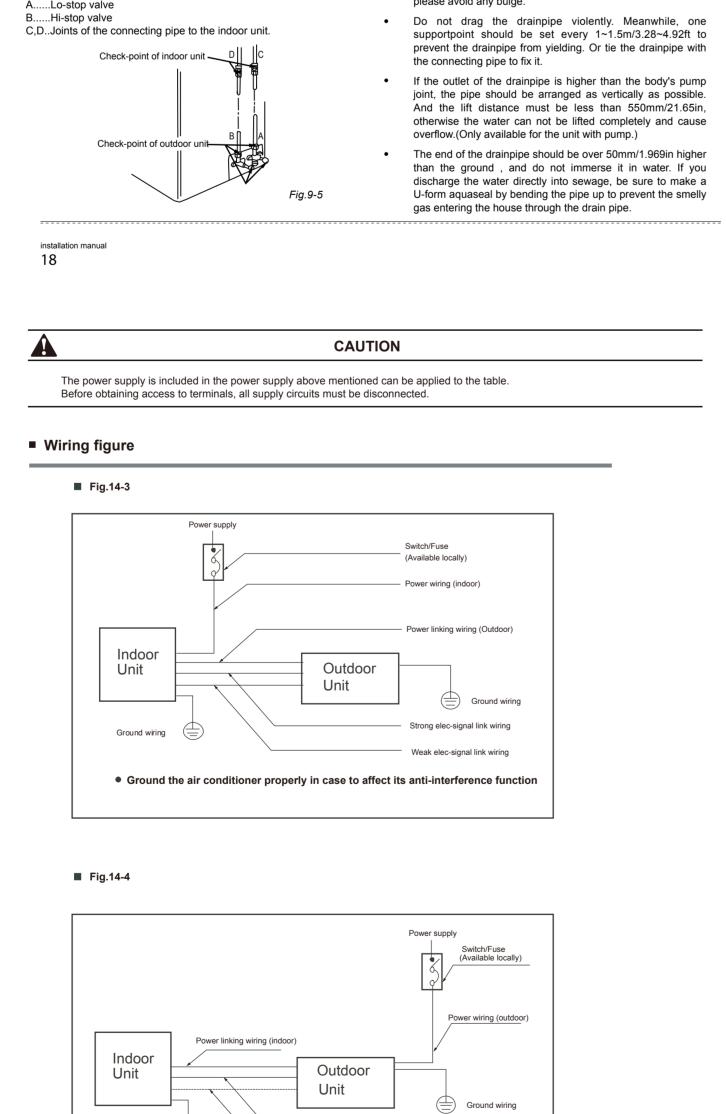
15/10 CIRCUIT BREAKER/FUSE 15/10 3Phase 3Phase 3Phase PHASE utdoor) | FREQUENCY AND VOLT 380-420 V 380-420 V 208-240V 208-240V IRCUIT BREAKER/FUSE(A 30/20 30/25 50/40



If used as MULTI unit, please refer to the Installation & operation manuals packed with outdoor unit.







Strong elec-signal link wiring

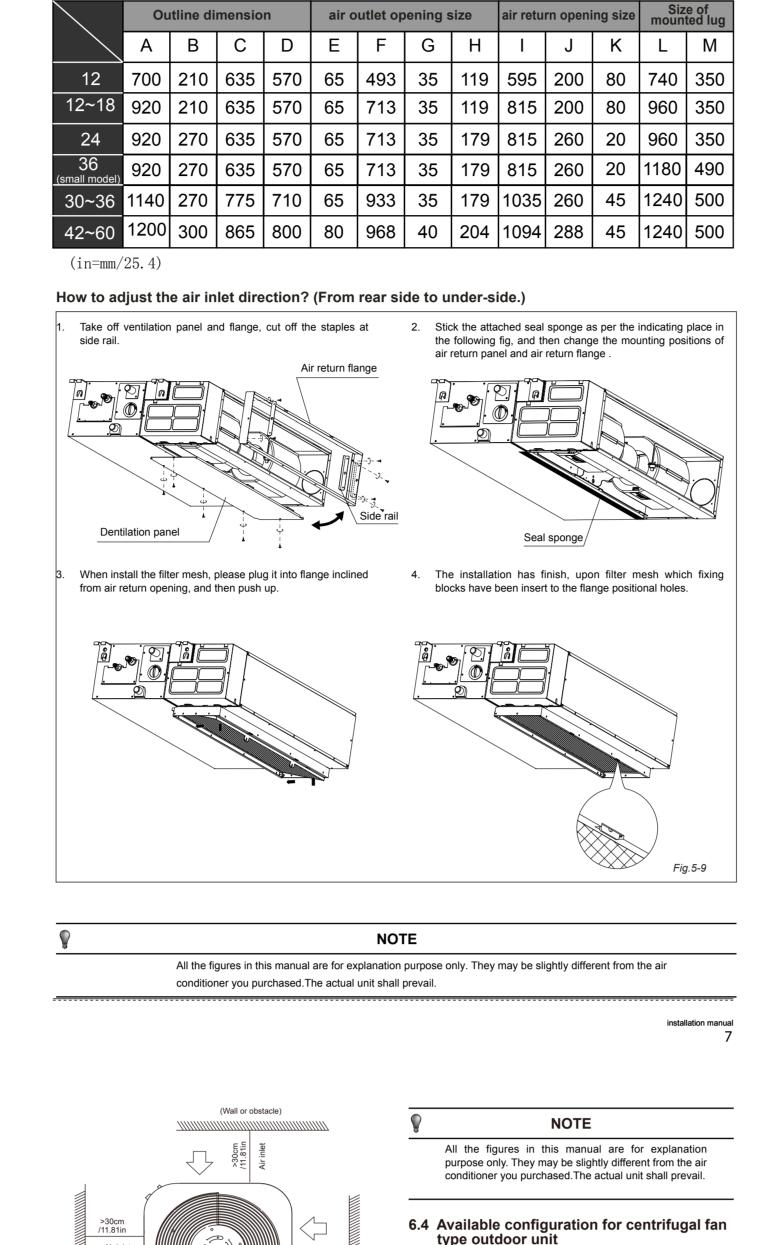
Weak elec-signal link wiring

Ground the air conditioner properly in case to affect its anti-interference function

Ground wiring

installation manual

installation manual



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CONTROL.....

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FRESH AIR DUCT INSTALLATION.....

1. SAFETY PRECAUTIONS

cautions carefully.

injury.

the equipment.

the owner's manual for future reference.

Keep this manual where the operator can easily find them.

Read this manual attentively before starting up the units.

■ For safety reason the operator must read the following

■ Installation must be performed in accordance with the

The safty precautions listed here are divided into two categories.

requirement of NEC and CEC by authorized personnel only.

If you do not follow these instrutions exactly, the unit may

cause minor or moderate property damage, personal

After completing the installation, make sure that the unit operates

properly during the start-up operation. Please instruct the customers

on how to operate the unit and keep it maintained. Also, inform

customers that they should store this installation manual along with

WARNING

install, repair or service the equipment.

Be sure only trained and qualified service personnel to

Improper installation, repair, and maintenance may result in

electric shocks, short-circuit, leaks, fire or other damage to

If you do not follow these instrutions exactly, the unit may

cause property damage, personal injury or loss of life.

OUTDOOR UNIT INSTALLATION...

INSTALL THE CONNECTING PIPE...

REFRIGERANT PIPE CONNECTION .

INSPECTING AND HANDLING THE UNIT.....

Install according to this installation instructions strictly.

If installation is defective, it will cause water leakage,

When installing the unit in a small room, take measures

against to keep refrigerant concentration from exceeding

allowable safety limits in the event of refrigerant leakage.

Contact the place of purchase for more information.

Excessive refrigerant in a closed ambient can lead to oxygen

Use the attached accessories parts and specified parts

otherwise, it will cause the set to fall, water leakage

Install at a strong and firm location which is able to

If the strength is not enough or installation is not properly

The appliance must be installed 2.3m / 7.5ft above floor.

Before obtaining access to terminals, all supply circuits

The appliance must be positioned so that the plug is

The enclosure of the appliance shall be marked by word,

For electrical work, follow the local national wiring

standard, regulation and this installation instructions. An

If electrical circuit capacity is not enough or defect in

Use the specified cable and connect tightly and clamp

the cable so that no external force will be acted on the

If connection or fixing is not perfect, it will cause heat-up or

Wiring routing must be properly arranged so that control

If control board cover is not fixed perfectly, it will cause

heat-up at connection point of terminal, fire or electrical

If the supply cord is damaged, it must be replaced by the

manufacture or its service agent or a similarly qualified

An all-pole disconnection switch having a contact

separation of at least 3mm/0.118in in all poles should be

When carrying out piping connection, take care not to let

Otherwise, it will cause lower capacity, abnormal high

Do not modify the length of the power supply cord or use

of extension cord, and do not share the single outlet with

Carry out the specified installation work after taking into

Improper installation work may result in the equipment falling

pressure in the refrigeration cycle, explosion and injury.

air substances go into refrigeration cycle.

Otherwise, it will cause fire or electrical shock.

account strong winds, typhoons or earthquakes.

independent circuit and single outlet must be used.

electrical work, it will cause electrical shock or fire.

or by symbols, with the direction of the fluid flow.

The appliance shall not be installed in the laundry.

electrical shock and fire.

must be disconnected.

fire at the connection.

board cover is fixed properly.

person in order to avoid a hazard.

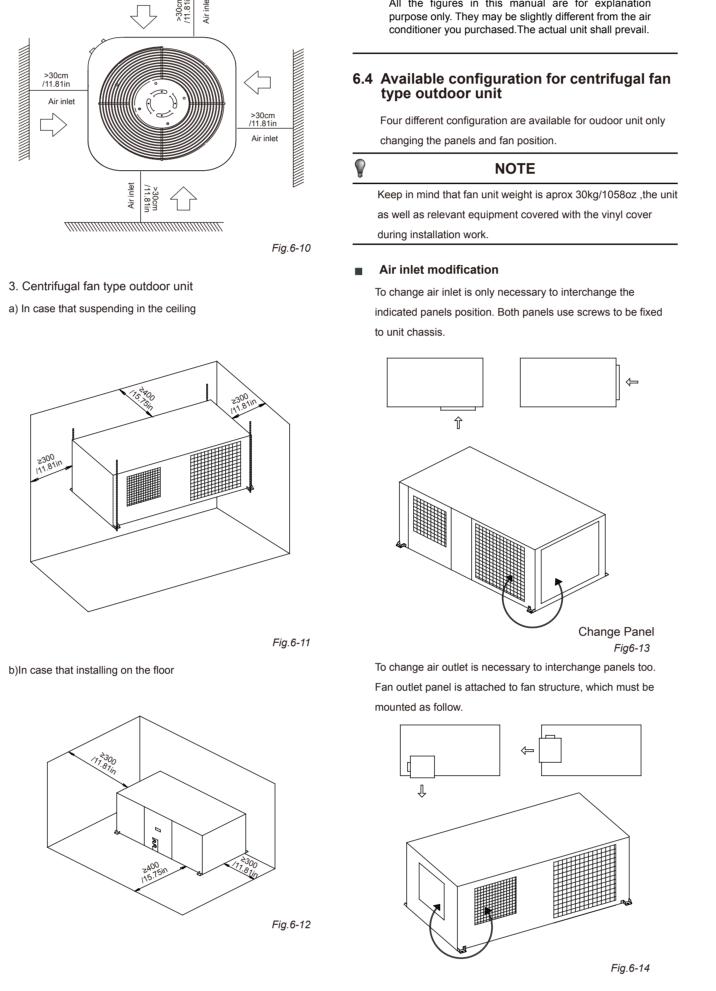
connected in fixed wiring.

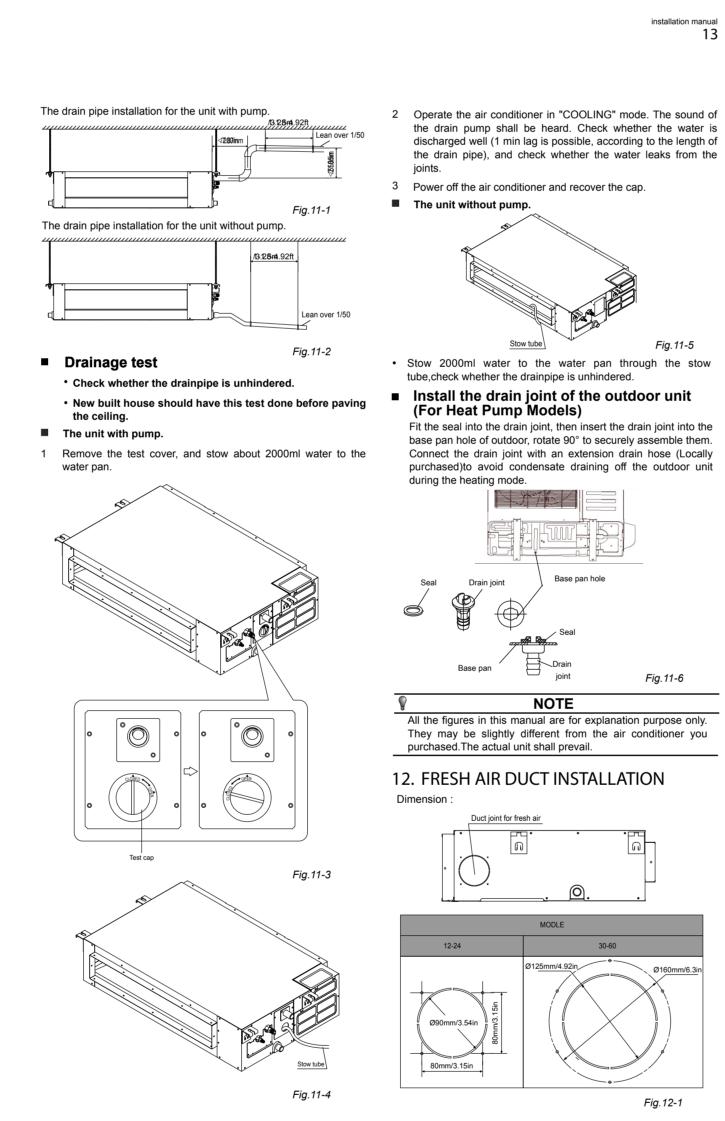
other electrical appliances.

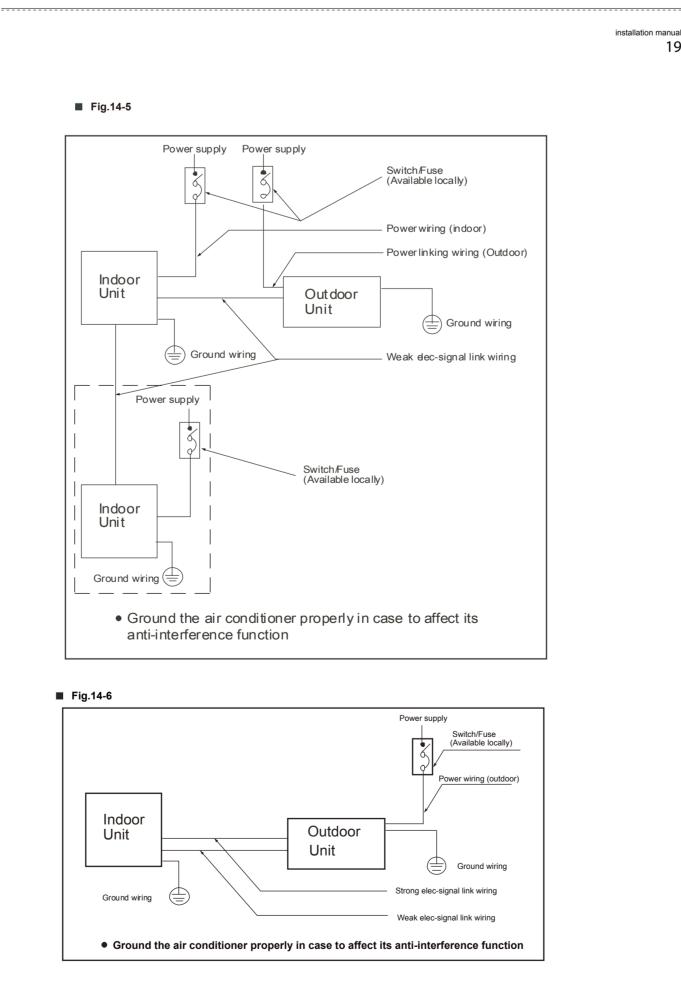
and causing accidents.

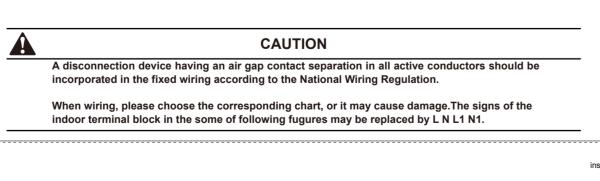
withstand the set's weight.

done, the set will drop to cause injury.









If the refrigerant leaks during installation, ventilate the The appliance shall be installed in accordance with area immediately. national wiring regulations. Toxic gas may be produced if the refrigerant comes into the place contacting with fire. Do not operate your air conditioner in a wet room such as a bathroom or laundry room. The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper An all-pole disconnection device which has at least 3mm clearances in all poles , and have a leakage current that may exceed 10mA, the residual current device (RCD) After completing the installation work, check that the having a rated residual operating current not exceeding refrigerant does not leak. 30mA, and disconnection must be incorporated in the Toxic gas may be produced if the refrigerant leaks into the fixed wiring in accordance with the wiring rules. room and comes into contact with a source of fire, such as a fan heater, stove or cooker. CAUTION Ground the air conditioner. Do not connect the ground wire to gas or water pipes,

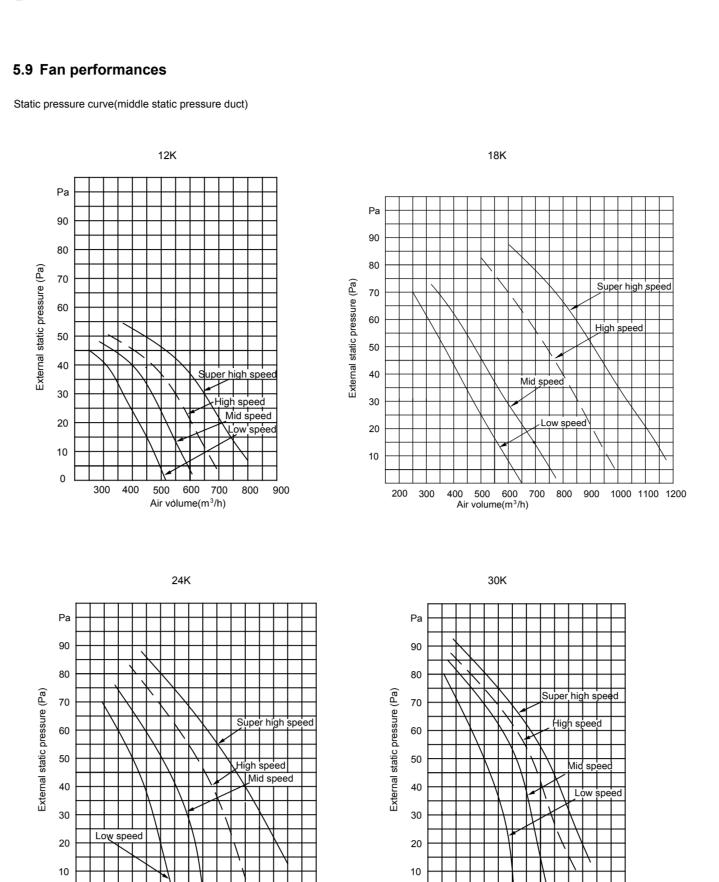
lightning rod or a telephone ground wire.inappropriate

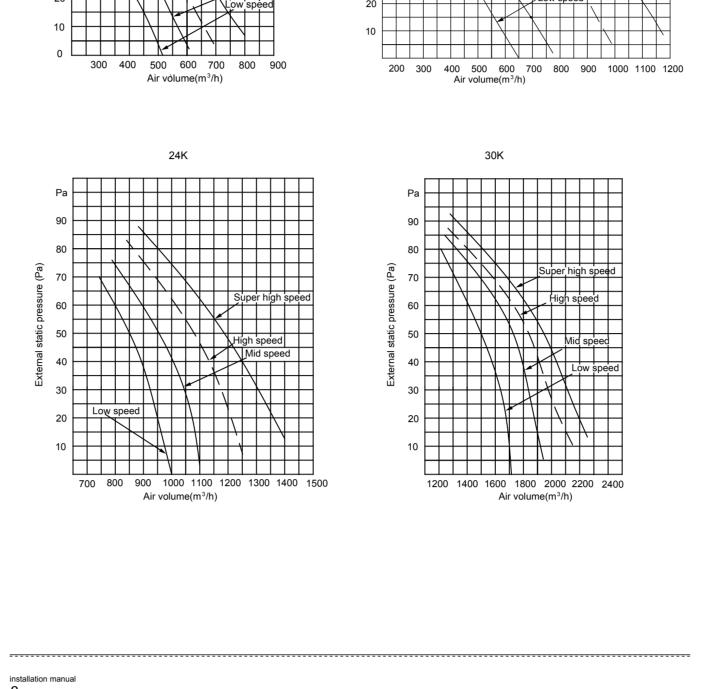
grounding may result in electric shocks.

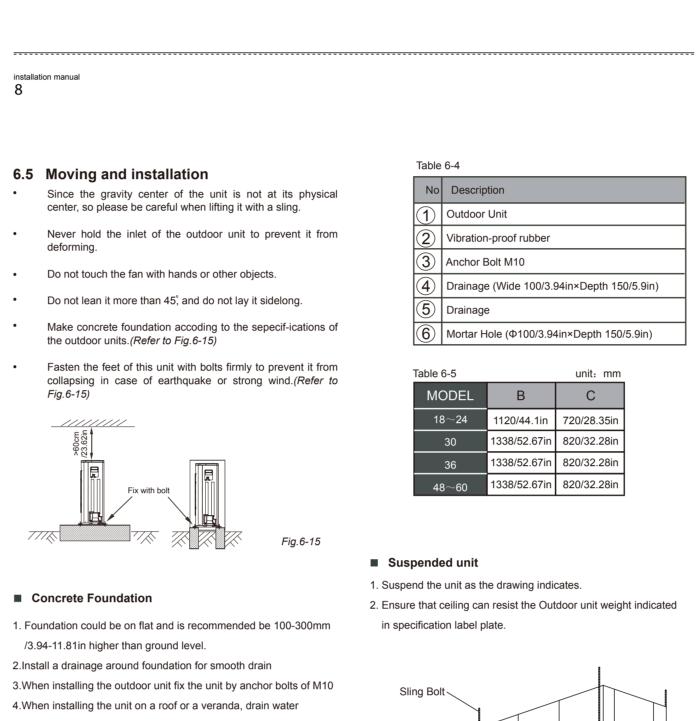
Be sure to install an earth leakage breaker.

Failure to install an earth leakage breaker may result in electric shocks. Connect the outdoor unit wires , then connect the indoor You are not allowed to connect the air conditioner with the power supply until the wiring and piping is done. While following the instructions in this installation manual, install drain piping in order to ensure proper . INSTALLATION INFORMATION drainage and insulate piping in order to prevent Improper drain piping may result in water leakage and property damage. ■ To install properly, please read this "installation manual" at Install the indoor and outdoor units, power supply wiring and connecting wires should be at least 1 meter away from televisions or radios in order to prevent image interference or noise. ■ When installing the indoor unit or its tubing, please follow Depending on the radio waves, a distance of 1 meter may not this manual as strictly as possible. be sufficient enough to eliminate the noise. If the air conditioner is installed on a metal part of the The appliance is not intended for use by young children building, it must be electrically insulated according to the or infirm persons without supervision. relevant standards to electrical appliances. Don't install the air conditioner in the following circumstance: the power only after a thorough check. There is petrolatum existing. Regret for no further announcement if there is any change There is salty air surrounding (near the coast). of this manual caused by product improvement. ■ There is caustic gas (the sulfide, for example) existing ■ The Volt vibrates violently (in the factories). **INSTALLATION ORDER** Select the location; In buses or cabinets.

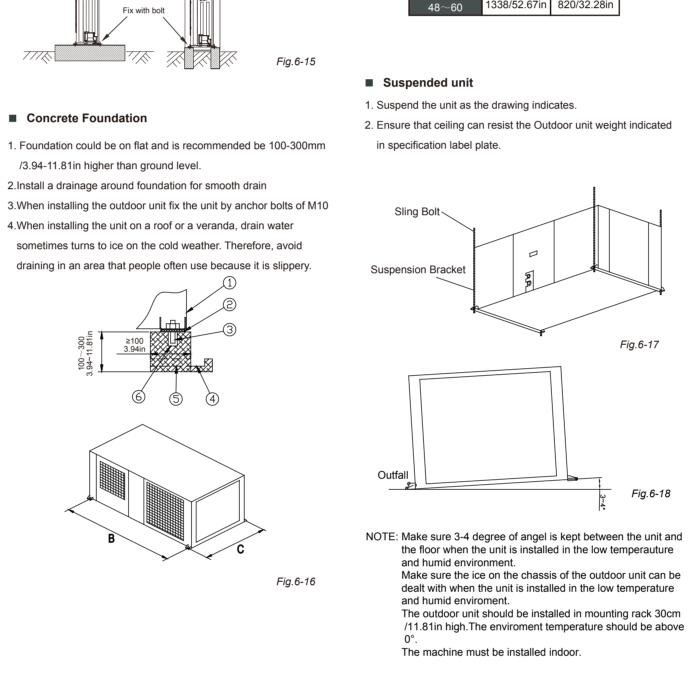
In kitchen where it is full of oil gas. Install the indoor unit; ■ There is strong electromagnetic wave existing Install the outdoor unit; There are inflammable materials or gas. Install the connecting pipe; There is acid or alkaline liquid evaporating. Connect the drain pipe; Other special conditions. Test operation.

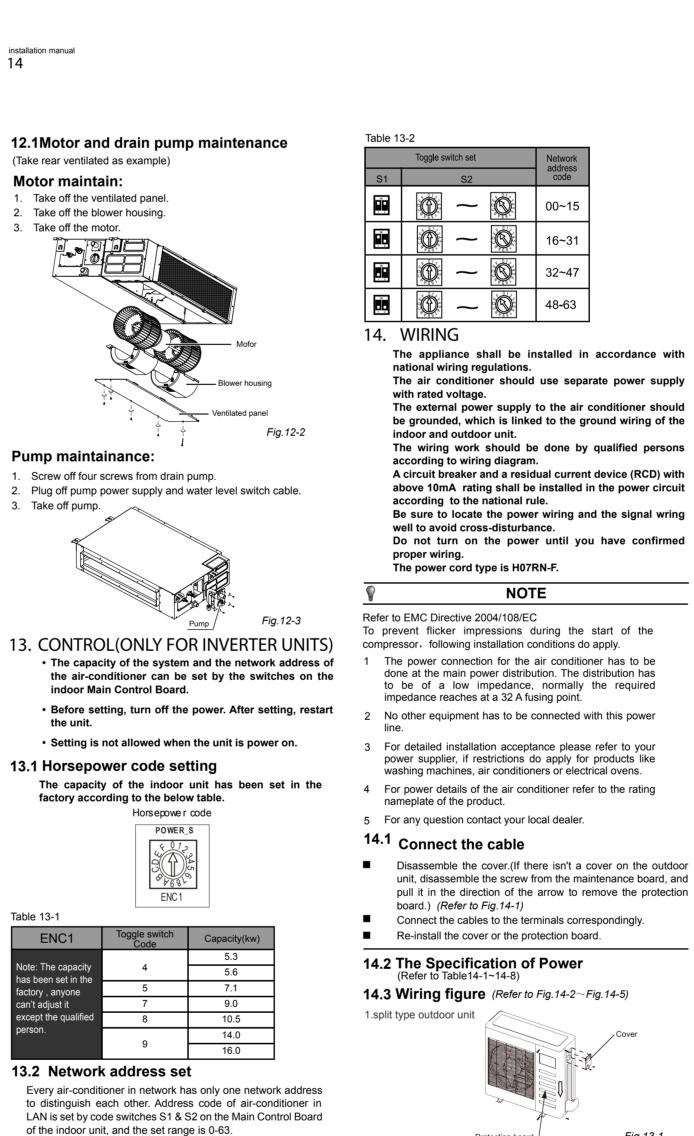


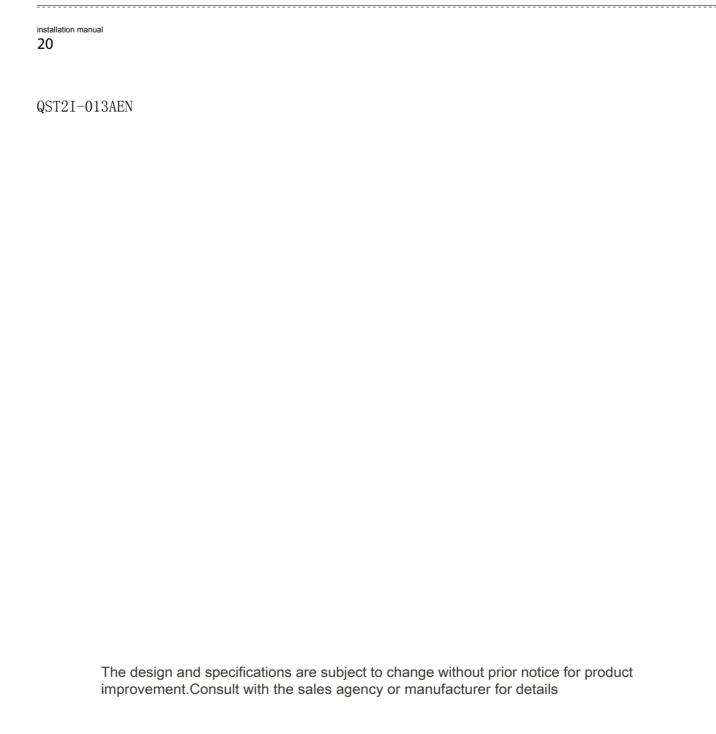




deforming.





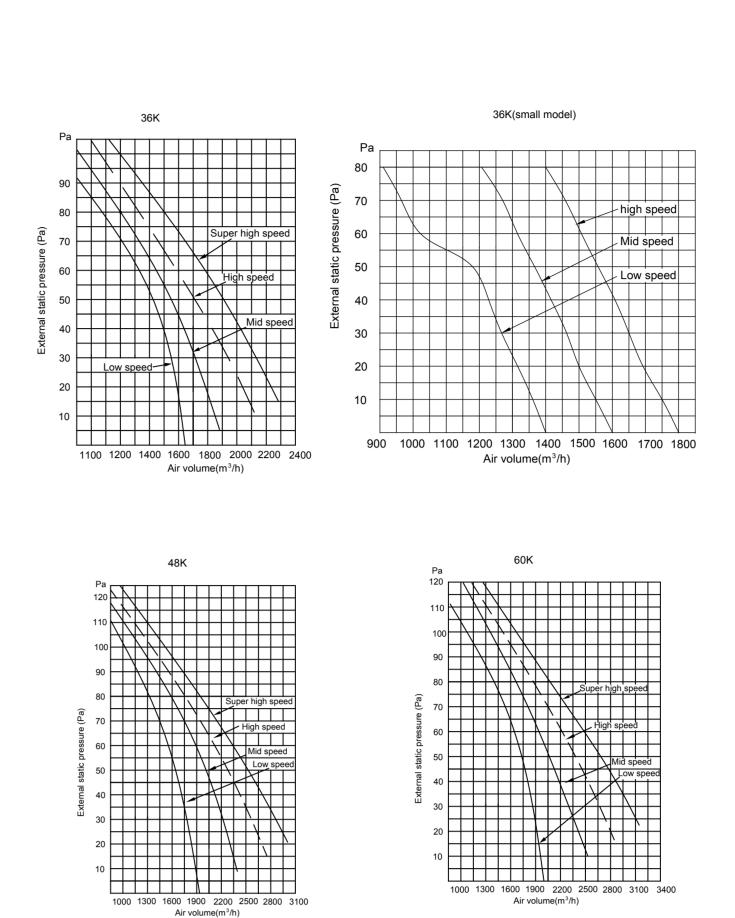


Protection board

202000192509 20130702

3. ATTACHED FITTINGS

1. Soundproof / insulation sheath 2. Binding tape 3. Seal sponge 4. Orifice 5. Drain joint 6. Seal ring		1 1 (on some models)
3.Seal sponge 4.Orifice 5. Drain joint		1 (on some models)
4.Orifice 5. Drain joint		1 (on some models)
5. Drain joint		(on some models)
· · · · · · · · · · · · · · · · · · ·	9	4
6 Seal ring	•	1
o. Ocai iiig		1
7. Remote controller (on some models)		1
8. Frame		1 (on some models)
9.Mounting screw(ST2.9×10-C-H)		2
10.Alkaline dry batteries (AM4)		2
11. Remote controller manual		1
12. Wire controller		1
13. Magnetic ring (twist the electirc wires L and N around the magnetic ring to five circles)		1
14. Owner's manual		1
15. Installation manual		1
(Φ0.5in-Φ0.63in) (Packed with the indoor unit) (NOTE: Pipe size differ from appliance to appliance. To meet different pipe size requirement, sometimes the pipe connections need the transfer connector to install on the outdoor unit .)		1 (on some models)
17 .Transfer connector(Φ6.35-Φ9.52)/ (Φ0.25in-Φ0.375in) (Packed with the indoor unit) (NOTE: Pipe size differ from appliance to appliance. To meet different pipe size requirement, sometimes the pipe connections need the transfer connector to install on the outdoor unit .)		1 (on some models)
18 .Transfer connector(Φ9.52-Φ12.7)/ (Φ0.375in-Φ0.5in) (Packed with the indoor unit,used for multi-type models only) (NOTE: Pipe size differ from appliance to appliance.To meet different pipe size requirement, sometimes the pipe connections need the transfer connector to install on the outdoor unit.)		1 (on some models)
19. Connecting wire for display (2M)		1 (on some models)
	9.Mounting screw(ST2.9×10-C-H) 10.Alkaline dry batteries (AM4) 11. Remote controller manual 12. Wire controller 13. Magnetic ring (twist the electirc wires L and N around the magnetic ring to five circles) 14. Owner's manual 15. Installation manual 16. Transfer connector(Φ12.7-Φ15.9)/ (Φ0.5in-Φ0.63in) (Packed with the indoor unit) (NOTE: Pipe size differ from appliance to appliance. To meet different pipe size requirement, sometimes the pipe connections need the transfer connector to install on the outdoor unit .) 17. Transfer connector(Φ6.35-Φ9.52)/ (Φ0.25in-Φ0.375in) (Packed with the indoor unit) (NOTE: Pipe size differ from appliance to appliance. To meet different pipe size requirement, sometimes the pipe connections need the transfer connector to install on the outdoor unit .) 18. Transfer connector(Φ9.52-Φ12.7)/ (Φ0.375in-Φ0.5in) (Packed with the indoor unit, used for multi-type models only) (NOTE: Pipe size differ from appliance to appliance. To meet different pipe size requirement, sometimes the pipe connections need the transfer connector to install on the outdoor unit.)	8. Frame 9.Mounting screw(ST2.9×10-C-H) 10.Alkaline dry batteries (AM4) 11. Remote controller manual 12. Wire controller 13. Magnetic ring (twist the electirc wires L and N around the magnetic ring to five circles) 14. Owner's manual 15. Installation manual 16. Transfer connector(Ф12.7-Ф15.9)/ (Ф0.5in-Ф0.63in) (Packed with the indoor unit) (NOTE: Pipe size differ from appliance to appliance. To meet different pipe size requirement, sometimes the pipe connections need the transfer connector to install on the outdoor unit .) 17. Transfer connector(Ф6.35-Ф9.52)/ (Ф0.25in-Φ0.375in) (Packed with the indoor unit) (NOTE: Pipe size differ from appliance to appliance. To meet different pipe size requirement, sometimes the pipe connections need the transfer connector to install on the outdoor unit .) 18. Transfer connector(Ф9.52-Ф12.7)/ (Ф0.375in-Ф0.5in) (Packed with the indoor unit, used for multi-type models only) (NOTE: Pipe size differ from appliance to appliance. To meet different pipe size requirement, sometimes the pipe connections need the transfer connector to install on the outdoor unit .)



relevant local and national codes.

Bend the pipe with thumb

system during installation.

connect or disconnect the pipes

Then fasten the nuts at the service valves.

The bending angle should not exceed 90.

Do not bend the pipe more than three times.

To prevent twist of deforming, please bend the pipe at a

NOTE

Bending position is preferably in the middle of the bendable pipe.

Be sure to use the same insulating materials when you buy the brass pipe. (More than 9mm/0.35in thick)

installation manua

insulating pipe.

proper radius.

7. INSTALL THE CONNECTING PIPE

Before installation make sure the height difference, the length

36K 30/98.42ft 20/65.6

42K 50/164.04ft 30/98.42

The outdoor unit is charged with rating refrigerant amount in

the factory. Additional charge refers to the table below:

of refrigerant pipe, and the number of the bends between the

indoor unit and outdoor unit meet the following requirements:

7.1 Preparation and Caution

Split type air conditione

R410A inverter Split type air

R410A Split type air conditione

(outdoor unit down)

(outdoor unit up)

liquid tube(mm)

orifice in the indoor

orifice in the outdoorunit

orifice in the indoorunit

orifice in the outdoorunit

orifice in the indoorunit

orifice in the outdooruni

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orifice in the outdoorunit

2.Centrifugal fan outdoor unit

15. TEST OPERATION

NOTE: the table above refer to the liquid tube.

NOTE: The number of bends is up to the length of the max

All the figures in this manual are for explanation purpose only.

They may be slightly different from the air conditioner you

purchased(depend on model). The actual unit shall prevail.

1 The test operation must be carried out after the entire

Please confirm the following points before the test operation:

The length of the tubing and additional charge amount

The power voltage matches rated voltage of the air

There is no obstacle at the outlet and inlet of the outdoor

The gas-side and liquid-side service valves are both

The air conditioner is pre-heated by turning on the power.

controller, and check the following points. If there is any

malfunction, please resolve it according to the chapter

a. Whether the buttons on the remote controller works

c. Whether the room temperature is adjusted suitable.

e. Whether the temporary switch on the unit works well.

g. Whether there is abnormal vibration or noise during

h. Whether the air conditioner works well in heating

a. Whether there is abnormal vibration and noise during

b. Whether the exhaust air, noise, or condensate influence

c. Whether there is any refrigerant leakage during

CAUTION

3 minutes delay is normal when restarting the unit for

Set the air conditioner in cooling mode with the remote

b. Whether the air flow louver moves normally.

d. Whether the indicator lights normally.

f. Whether the drainage is normal.

mode(heat pump model).

2) The outdoor unit

operation.

compressor protection.

"Troubleshooting" in the "Owner's Manual".

The indoor unit and outdoor unit are installed properly.

Tubing and wiring are correctly completed.

The ground wiring is connected correctly.

The drainage is unimpeded.

have been recorded.

conditioner.

Test operation

1) The indoor unit

and indoor units.

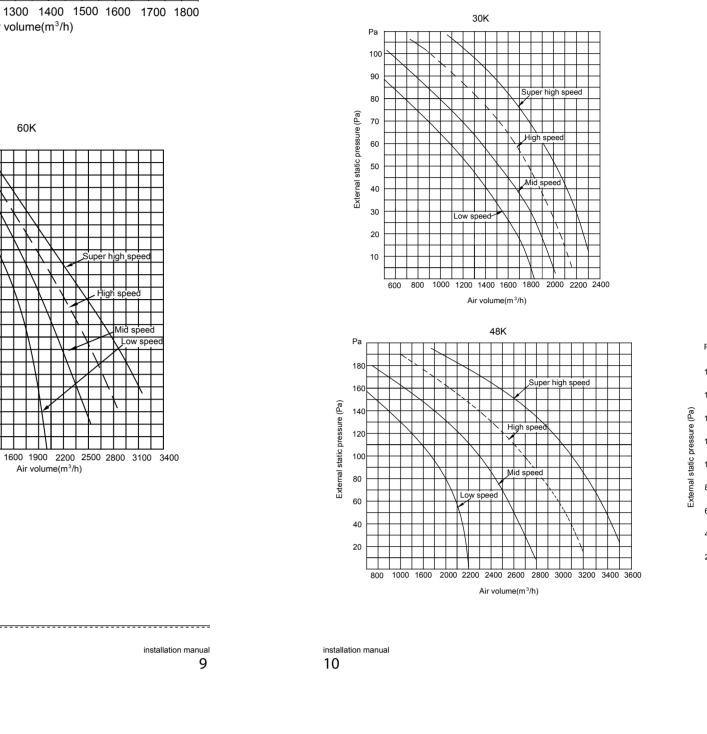
completely open.

The heating insulation works well.

The refrigerant pipe system is leakage-checked.

height drop. Usually for each 10m/32.8ft need a bend.

and Centrifugal fan outdoo



4. INSPECTING AND HANDLING THE UNIT

At delivery, the package should be checked and any damage should

2 Choose on before hand the path along which the unit is to be

4 When lifting the unit, always use protectors to prevent belt

The indoor unit should be installed in a location that meets

• There is enough room for installation and maintenance.

The ceiling is horizontal, and its structure can endure the

The outlet and the inlet are not impeded, and the

The connecting pipe and drainpipe could be extracted out

300mm/11.811in or more

checking orifice

Keep the unit upright in order to avoid compressor

be reported immediately to the service agent.

1 Fragile, handle the unit with care.

When handling the unit, take into account the following:

3 Move this unit as originally package as possible.

5. INDOOR UNIT INSTALLATION

5.1 Installation place

the following requirements:

Maintenance roomage

200mm/7.874in or more

weight of the indoor unit.

influence of external air is the least.

There is no direct radiation from heaters.

Pa

90

50 High speed

30 Mid.speed
20 Low speed

10

700 800 900 1000 1100 1200 1300 1400 1500

Air volume(m3/h)

70 Super high speed

60

The air flow can reach throughout the room.

CAUTION

Keep indoor unit, outdoor unit, power supply wiring and

transmission wiring at least 1 meter away from televisions

and radios. This is to prevent image interference and

noise in those electrical appliances. (Noise may be

generated depending on the conditions under which the

electric wave is generated, even if 1 meter is kept.)

1 Installing Ø10/Ø0.394in hanging screw bolts. (4 bolts)

Consult the construction personnels for the specific procedures.

Carry out the pipe and line operation in the ceiling after finishing

the installation of the main body. While choosing where to start

the operation, determine the direction of the pipes to be drawn

out. Especially in case there is a ceiling, position the refrigerant

• Strengthen the place that has been cut off, and consolida-

ant pipes, drain pipes, indoor & outdoor wires to the connection

NOTE

Confirm the minimum drain tilt is 1/100 or more

Put the square timber traversely over the roof beam, then install

Pa

Research 60 High speed High speed

40 Mid speed
30 Low speed

20

700 800 900 1000 1100 1200 1300 1400 1500 1600

Air volume(m3/h)

180 Super high speed

140

120 High speed

80 Mid speed

40

20

Indoor unit

600 800 1000 1200 1400 1600 1800 2000 2200 2400

Air volume(m³/h)

10

Super high speed

After the selection of installation location, position the refriger-

pipes, drain pipes,indoor & outdoor lines to the connection

places before hanging up the machine.

places before hanging up the machine.

The installation of hanging screw bolts.

5.2.1 Wooden construction

the hanging screw bolts. (Refer to Fig.5-2)

The installation of hanging screw bolts.

Cut off the roof beam.

tethe roof beam.

Do keep the ceiling flat. Consolidate the roof beam to avoid

■ Please refer to the following figures for positioning 4 screw

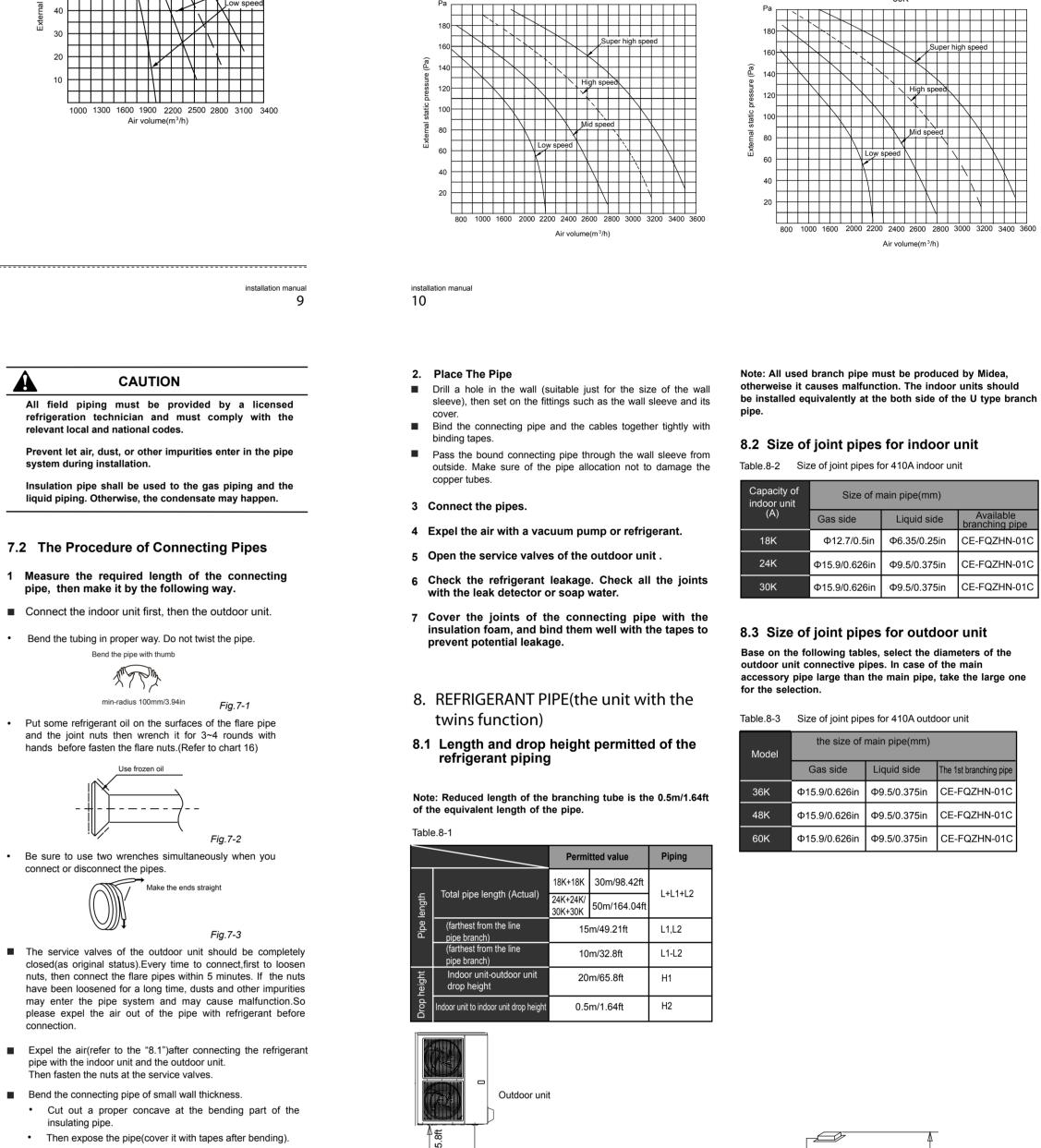
5.2 Install the main body

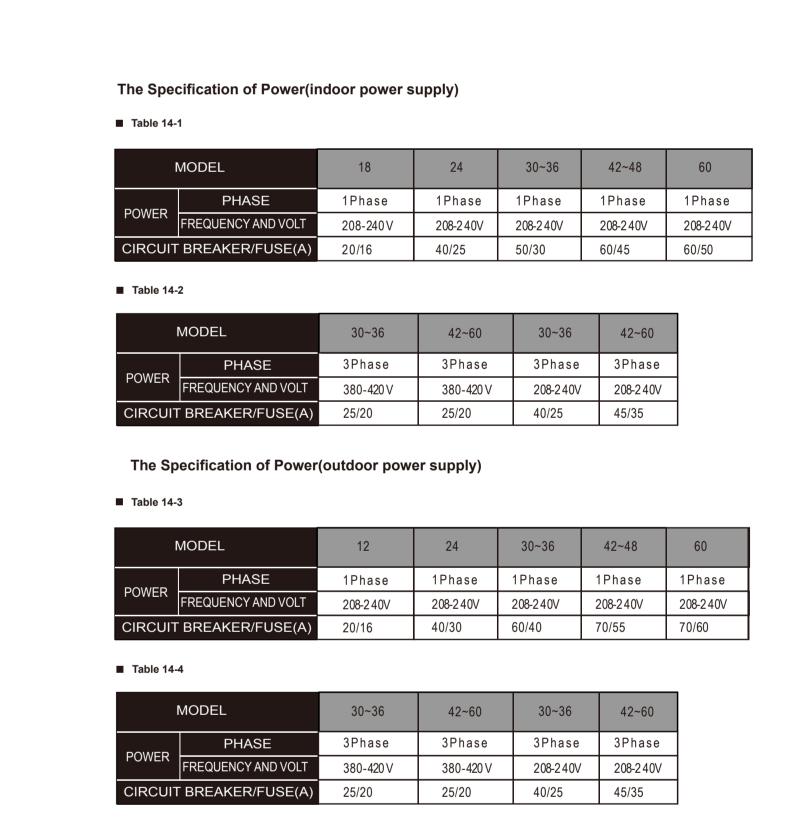
/ Ø0.394in hanging screw bolts.

possible vibration.

damage and pay attention to the position of the unit's centre

Evaluate the ceiling construction and please install with Ø10





installation manual

