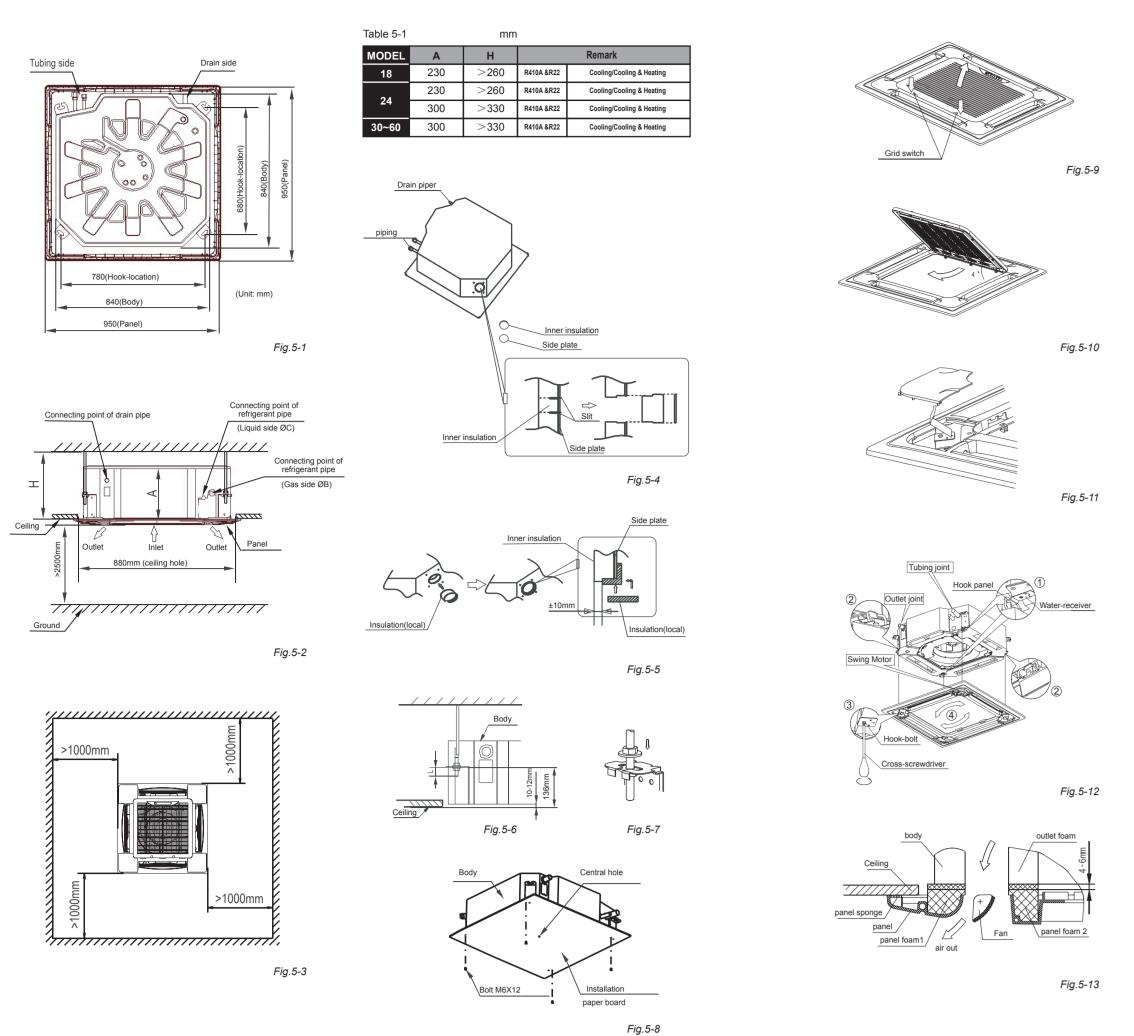
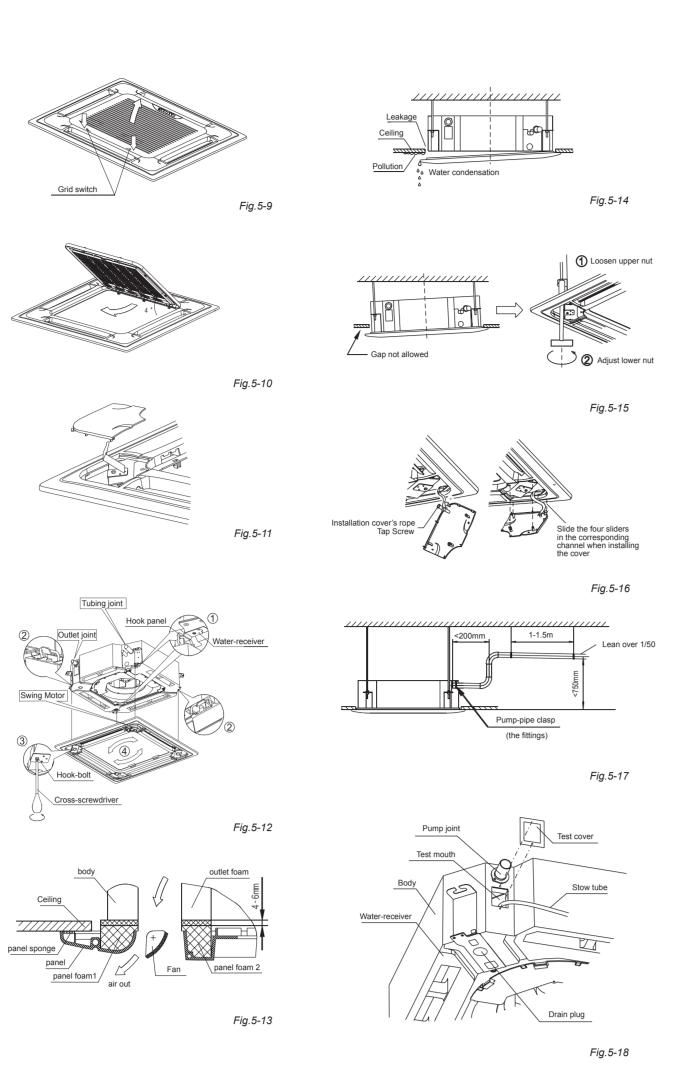
INSTALLATION MANUAL

Four-way Cassette 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.





CONTENTSPAGEPRECAUTIONS	 Install according to this installation instructions strictly. If installation is defective, it will cause water leakage, electrical shock and fire. 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 deficiency. Use the attached accessories parts and specified parts for installation. otherwise, it will cause the set to fall, water leakage, electrical shock and fire. Install at a strong and firm location which is able to withstand the set's weight. If the strength is not enough or installation is not properly done, the set will drop to cause injury. 	<text><text><text><text><text><text></text></text></text></text></text></text>
TEST OPERATION	The appliance must be installed 2.3m above floor. The appliance shall not be installed in the laundry. Before obtaining access to terminals, all supply circuits must be disconnected.	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
<section-header> 1. PRECAUTIONS 4. Keep this manual where the operator can easily find them. 5. Read this manual attentively before starting up the units. 6. To safety reason the operator must read the following cautions carefully. The safty precautions listed here are divided into two categories. Marning Marning Description of the toperator injury or loss of life. Acutions Acutions</section-header>	<text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text>	 electric shocks. Connect the outdoor unit wires , then connect the indoor unit wires 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 drainage and insulate piping in order to prevent condensation. Improper drain piping may result in water leakage and property damage. 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. Depending on the radio waves, a distance of 1 meter may not be sufficient enough to eliminate the noise. Don't install the air conditioner in the following circumstance: There is petrolatum existing. There is caustic gas (the sulfide, for example) existing in the air (near a hot spring). The Volt vibrates violently (in the factories). In buses or cabinets. In kitchen where it is full of oil gas. There is strong electromagnetic wave existing.
WARNING Be sure only trained and qualified service personnel to install, repair or service the equipment. Improper installation, repair, and maintenance may result in electric shocks, short-circuit, leaks, fire or other damage to the equipment.	Do not modify the length of the power supply cord or use of extension cord, and do not share the single outlet with other electrical appliances. Otherwise, it will cause fire or electrical shock. Carry out the specified installation work after taking into account strong winds, typhoons or earthquakes. Improper installation work may result in the equipment falling and causing accidents.	 There are inflammable materials or gas. There is acid or alkaline liquid evaporating. Other special conditions.
<section-header><section-header><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></section-header></section-header>	<page-header><page-header><text><image/><image/></text></page-header></page-header>	3 Install the panel 3 Install the panel 4 Align the swing motor on the panel to the tubing joints of the body properly. (<i>Refer to Fig.5-12.</i>) 6 Fix hooks of the panel at swing motor and its opposite sides to the hooks of corresponding water receiver. (<i>Refer to Fig.5-12.1</i>) Then hang the other two panel hooks onto corresponding hangers of the body. (<i>Refer to Fig.5-12.2</i>) Image: the cold the wiring of the swing motor into the seal sponge. 4 Adjust the four panel hook screws to keep the panel horizontal, and screw them up to the ceiling evenly. (<i>Refer to Fig.5-12.3</i>) 6 Regulate the panel in the direction of the arrow in <i>Fig.5-12.4</i> slightly to fit the panel's center to the center of the ceiling's opening. Guarantee that hooks of four corners are fixed well.

While following the instructions in this installati manual, install drain piping in order to ensure prop drainage and insulate piping in order to preve condensation. Improper drain piping may result in water leakage a property damage.	nt 2. INSTALLATION INFORMATION
Install the indoor and outdoor units, power supply wiri and connecting wires should be at least 1 meter aw from televisions or radios in order to prevent ima interference or noise. Depending on the radio waves, a distance of 1 meter may be sufficient enough to eliminate the noise.	ay ge The air conditioner must be installed by qualified persons.
The appliance is not intended for use by young childr or infirm persons without supervision.	building, it must be electrically insulated according to the relevant standards to electrical appliances.
 Don't install the air conditioner in the following circumstance: There is petrolatum existing. There is salty air surrounding (near the coast). There is causting and (the culfide for example) existing. 	 When all the installation work is finished, please turn of the power only after a thorough check. Regret for no further announcement if there is any change of this manual caused by product improvement.
 There is caustic gas (the sulfide, for example) existing in the air (near a hot spring). The Volt vibrates violently (in the factories). In buses or cabinets. In kitchen where it is full of oil gas. There is strong electromagnetic wave existing. There are inflammable materials or gas. There is acid or alkaline liquid evaporating. Other special conditions. 	 INSTALLATION ORDER Select the location; Install the indoor unit; Install the outdoor unit; Install the connecting pipe ; Connect the drain pipe; Wiring; Test operation.
installation manual	
 Install the panel Align the swing motor on the panel to the tubing joints of body properly. (<i>Refer to Fig.5-12</i>) Fix hooks of the panel at swing motor and its opposite sid to the hooks of corresponding water receiver. (<i>Refer Fig.5-12.1</i>) Then hang the other two panel hooks o corresponding hangers of the body. (<i>Refer to Fig.5-12.2</i>) 	les to
CAUTION Do not coil the wiring of the swing motor into the s	Grid switch Fig.5-27
 sponge. Adjust the four panel hook screws to keep the panel horizontal, and screw them up to the ceiling evenly. (<i>Refer t Fig.5-12.3</i>) Regulate the panel in the direction of the arrow in <i>Fig.5-12</i>. 	
 slightly to fit the panel's center to the center of the ceiling opening. Guarantee that hooks of four corners are fixed well Keep fastening the screws under the panel hooks, until the thickness of the sponge between the body and the panel outlet has been reduced to about 4~6mm. The edge of the panel should contact with the ceiling well. (<i>Refer to Fig.5-13</i>). Malfunction described in <i>Fig.5-14</i> can be caused by the second second	Fig.5-28 s 2 Install the panel Align the swing motor on the panel to the tubing joints of the
 If the gap between the panel and ceiling still exists after fastening the screws, the height of the indoor unit shoul be modified again. (<i>Refer to Fig.5-15-left</i>) 	
 You can modify the height of the indoor unit through the openings on the panel's four corners, if the lift of the indoor unit and the drainpipe is not influenced (<i>Refer</i> the <i>Fig.5-16-right</i>). 	e The installation server of the swing motor must sink in
 4 Hang the air-in grill to the panel, then connect the leat terminator of the swing motor and that of the control be with corresponding terminators on the body respectively. 5 Relocate the air-in grill in the procedure of reversed order 6 Relocate the installation cover. a Fasten the rope of installation cover on the bolt of the installation cover. (<i>Refer to Fig.5-16-left</i>) b Press the installation cover into the panel slightly. (<i>Refer Fig.5-16-right</i>) 5.4.2 Install The Panel(samII cassette type air conditioner) 	 washer. (<i>Refer to Fig.5-29</i>) Adjust the four panel hook screws to keep the panel horizontal, and screw them up to the ceiling evenly. Regulate the panel in the direction of the arrow in <i>Fig.5-29</i>. (Slightly to fit the panel's center to the center of the ceiling opening. Guarantee that hooks of four corners are fixed well Keep fastening the screws under the panel hooks, until the thickness of the sponge between the body and the panel outlet has been reduced to about 4~6mm. The edge of the panel should contact with the ceiling well. (<i>Refer to Fig.5-30</i>). Malfunction described in <i>Fig.5-31</i> can be caused be inappropriate tightness the screw.
CAUTION	 If the gap between the panel and ceiling still exists after fastening the screws, the height of the indoor unit shou be modified again. (<i>Refer to Fig.5-32-left</i>)
Never put the panel face down on floor or against t wall, or on bulgy objects. Never crash or strike it.	 You can modify the height of the indoor unit through the openings on the panel's four corners, if the lift of the indoor unit and the drainpipe is not influenced (<i>Refer</i> Fig.5-32-right).
1 Remove the air-in grill.	4 Hang the air-in grill to the panel, then connect the leat terminator of the swing motor and that of the control bo with corresponding terminators on the body respectively. ne,
Slide two grill switches toward the middle at the same tin	5 Relocate the air-in grid in the procedure of reversed orde

wiring regulations. perate your air conditioner in a wet room such	Please check whether the following fitting:	s are of full scope. If there are some spare fil	tings , please restore them carefully	<i>y</i> .
n or laundry room.		NAME	SHAPE	QUANTITY
device which has at least 3mm and have a leakage current that residual current device (RCD)	Installation Fittings	1. Installation paper board (on some models)		1
operating current not exceeding on must be incorporated in the	Tubing & Fittings	2. Soundproof / insulation sheath (on some models)	()	1
ith the wiring rules.		3. Out-let pipe sheath (on some models)		1
	Drainpipe Fittings	4. Out-let pipe clasp (on some models)	Q	1
		5. Drain joint(on some models)		1
		6. Seal ring(on some models)		1
		7. Remote controller		1
	Remote controller & Its Frame	8. Remote controller holder		1
	(The product you have might not be provided the following accessory)	9. Mounting screw(ST2.9×10-C-H)	E DID	2
		10. Alkaline dry batteries (AM4)		2
		11. Owner's manual		1
MATION		12. Installation manual		1
		13. Expansible hook		4
allation manual" at		14. Installation hook		4
		15 .Orifice		1
ed by qualified persons. its tubing, please follow on a metal part of the sulated according to the		16 .Transfer connector(ϕ 12.7- ϕ 15.9) (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
, please turn on re is any change ment.	Installation accessory	17 .Transfer connector(ϕ 6.35- ϕ 9.52) (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
	(The product you have might not be provided the following accessory)	 18. Transfer connector(\$9.52-\$12.7) (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
;; pipe ;				

At delivery, the package should be checked and any damage should be reported immediately to the service agent.	 air conditioner) The existing ceiling (to be horizontal)
Vhen handling the unit, take into account the following:	1 Cut a quadrangular hole of 880x880mm in the ceiling
Fragile, handle the unit with care.	according to the shape of the installation paper board. (Refer to Fig.5-2)
$\boxed{\uparrow\uparrow}$ Keep the unit upright in order to avoid compressor damage.	 The center of the hole should be at the same position of that of the air conditioner body.
2 Choose on before hand the path along which the unit is to be	 Determine the lengths and outlets of the connecting pipe drainpipe and cables.
brought in. Move this unit as originally package as possible.	 To balance the ceiling and to avoid vibration, pleas enforce the ceiling when necessary.
When lifting the unit , always use protectors to prevent belt	2 Select the position of installation hooks according to th hook holes on the installation board.
damage and pay attention to the position of the unit's centre of gravity.	 Drill four holes of Ø12mm, 45~50mm deep at the selecte positions on the ceiling. Then embed the expansibl hooks (fittings).
5. INDOOR UNIT INSTALLATION	 Face the concave side of the installation hooks toward the expansible hooks. Determine the length of the installation hooks from the height of ceiling, then cut off the unnecessary part.
5.1 Installation place	 If the ceiling is extremely high, please determine the length of the installation hook according to facts.
(Refer to Fig.5-1, Fig.5-2, Fig.5-3 and Table 5-1 for specification.)	3 Adjust the hexangular nuts on the four installation hook
The indoor unit should be installed in a location that meets the following requirements:	 evenly, to ensure the balance of the body. If the drainpipe is awry, leakage will be caused by the malfunction of the water-level switch.
There is enough room for installation and maintenance.	 Adjust the position to ensure the gaps between the body
 The ceiling is horizontal, and its structure can endure the weight of the indoor unit. 	and the four sides of ceiling are even. The body's lower part should sink into the ceiling for 10~12 mm (<i>Refer t</i> <i>Fig.5-6</i>).
 The outlet and the inlet are not impeded, and the influence of external air is the least. 	 In general, L is half of the screw length of the installatio hook.(<i>Refer to Fig.5-6</i>)
• The air flow can reach throughout the room.	 Locate the air conditioner firmly by wrenching the nut after having adjusted the body's position well.(Refer t
 The connecting pipe and drainpipe could be extracted out easily. 	Fig.5-7)
• There is no direct radiation from heaters.	New built houses and ceilings
CAUTION	1 In the case of new built house, the hook can be embedde in advance (refer to 2 mentioned above). But it should b
Keep indoor unit, outdoor unit, power supply wiring and transmission wiring at least 1 meter away from televisions	strong enough to bear the indoor unit and will not becom loose because of concrete shrinking.
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.)	2 After installing the body, please fasten the installation pape board onto the air conditioner with bolts(M6X12) t determine in advance the sizes and positions of the hol opening on ceiling.(<i>Refer to Fig.5-8</i>)
5.2 Installation procedures for fresh air	 Please first guarantee the flatness and horizontal c ceiling when installing it.
intake duct connection	• Refer to 1 mentioned above for others.
Preparing the connection hole	3 Refer to 3 above for installation.
 Cut off the knockout hole on the side plate with a nipper. Cut the inner insulation of the hole portion with a cutter. (<i>Refer to Fig.5-4</i>) 	4 Remove the installation paper board.
Placing the insulation	CAUTION
Put the insulation tightly around the hole of the unit as shown. The ends of the side plate and the inner insulation must be completely adhered without leaving any clearance along the circumference of the hole.	After installing the body, the four bolts(M6x12)must b fastened to the air conditioner onto ensure the body i grounded well.
Make sure the inner surface of insulation tightly contacts the inner insulation edge and the side plate. (<i>Refer to Fig.5-5</i>)	
nstallation manual	

Fresh air

NOTE

Two-wav

model 12 to 18 Series A=150mm

Distribution duct

Fresh air intake (Ø75) 🛛 🖵

Distribution duct

Fia.5-35

Fig.5-36

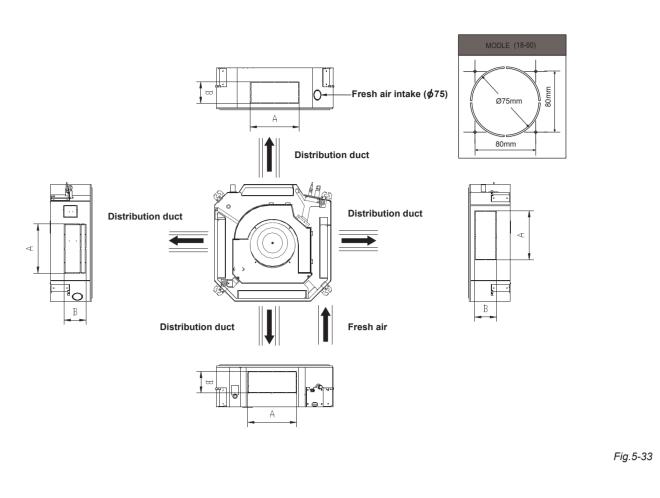
Fig.7-3

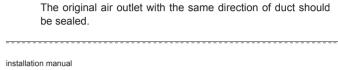
Fig.7-5

Fig.7-6

Hexagon nut Horizontal adjust ment Fig.5-32 Fig 5-30

5.5.1 Install the distribution duct(cassette type air conditioner) Conditioned air can be distributes by means of a distribution duct.





The max. length of duct is 0.75m for one duct.

NOTE

The air volume in duct is around 300-360m3/h for model 18

The air volume in duct is around 400-640m3/h for model 36

The original air outlet with the same direction of duct should

The air volume in one duct is around 200-260m3/h for model

The air volume in one duct is around 300-500m3/h for model

The original air outlet with the same direction of duct should

The air volume in duct is around 180-300m3/h for model 12

The original air outlet with the same direction of duct should

The air volume in one duct is around 100-200m3/h for model

model 18 to 24

model 36 to 60

In case of one duct connection

In case of two duct connection

18 to 24 unit.

36 to 60 unit.

be sealed.

duct.

10

The max. length of duct is 2m.

be sealed In case of two duct connection.

The max. length of duct is 1.5m for one duct.

5.5.1 Install the distribution duct(small

Conditioned air can be distributes by means of a distribution

cassette type air conditioner)

The max. length of duct is 1m.

be sealed In case of two duct connection.

In case of one duct connection

In case of two duct connection

12 to 18 unit.

to 18 unit.

to 24 unit.

to 60 unit.

Series A=350mm; Series B=85mm

Series A=350mm; Series B=155mm

Fig.5-34

installation manual

installation manual

Fig.6-11

installation manual

Fig. 9-3

Liquid side

Liquid side

Liquid side

installation manual

Fig.5-25

Fig.5-26

NOTE

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

They may be slightly different from the air conditioner you

5.4.1 Install The Panel(cassette type air

wall, or on bulgy objects.

Never crash or strike it.

1 Remove the air-in grill.

(Refer to Fig.5-10)

conditioner)

Fig.5-21

Fia.5-2

Fig.5-23

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

CAUTION

Slide two grill switches toward the middle at the same time,

Draw the grill up to an angle of about 45,° and remove it.

Wrench off the bolts, loose the rope of the installation covers,

and then pull them up. (Refer to Fig.5-9)

2 Remove the installation covers at the four corners

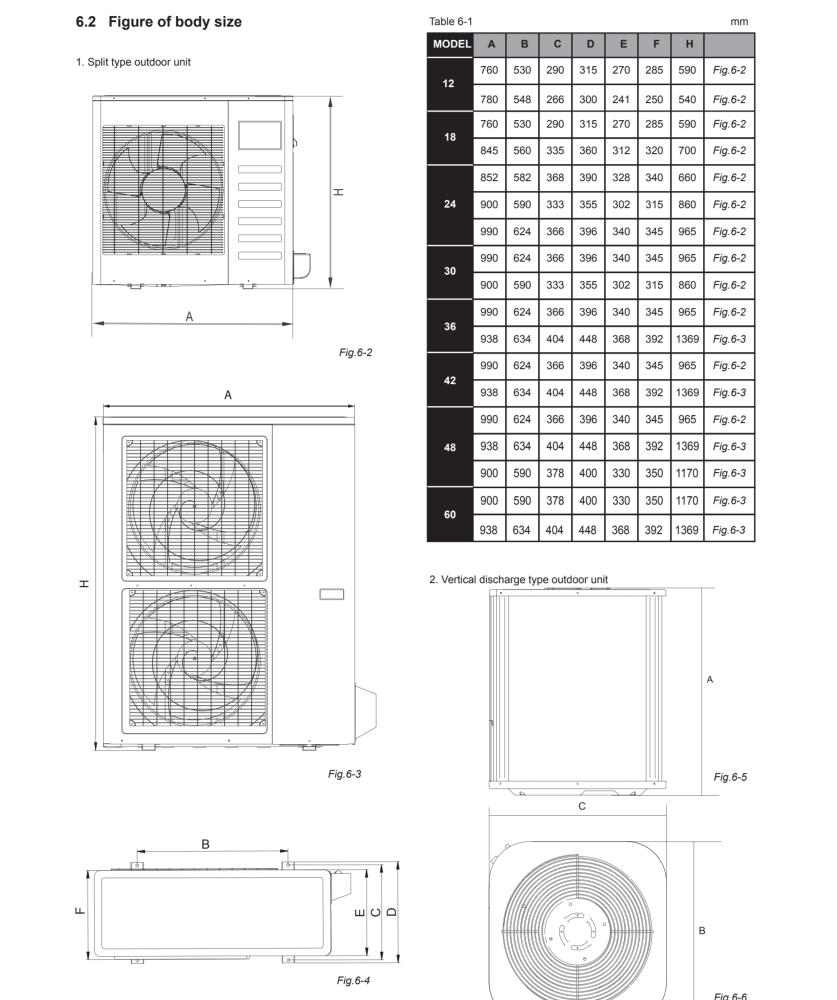
and remove them. (Refer to Fig.5-11)

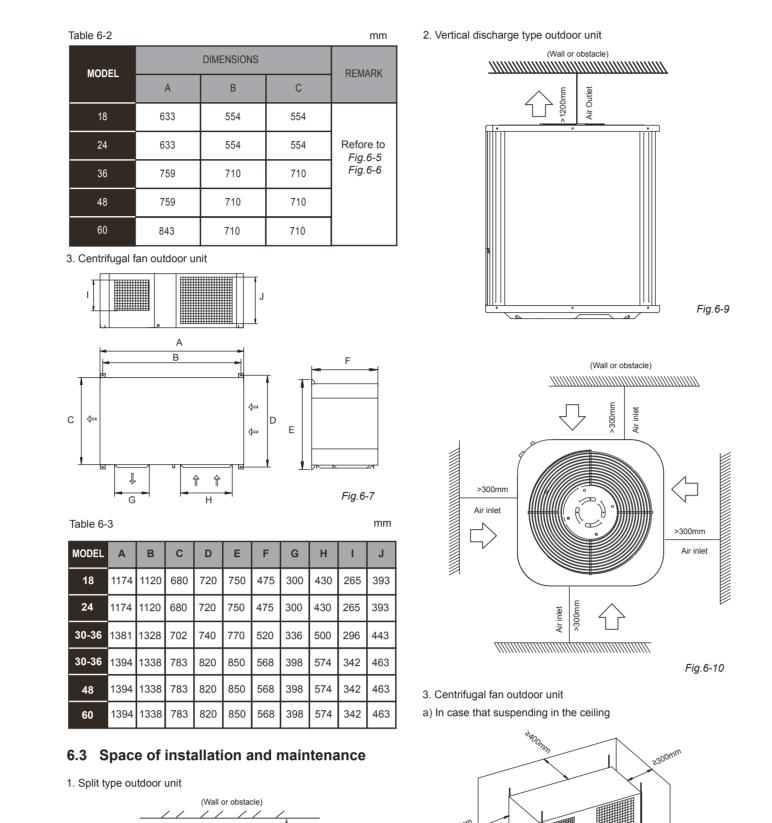
Never put the panel face down on floor or against the

installation manua

6.1 Installation Place 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 vibration. • 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 gas. • 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 air flow. • 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 possible. • If possible, please remove the obstacles nearby to prevent the performance from being impeded by too little of air circulation. • 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.(Refore to Fig.6-4, Fig.6-5)

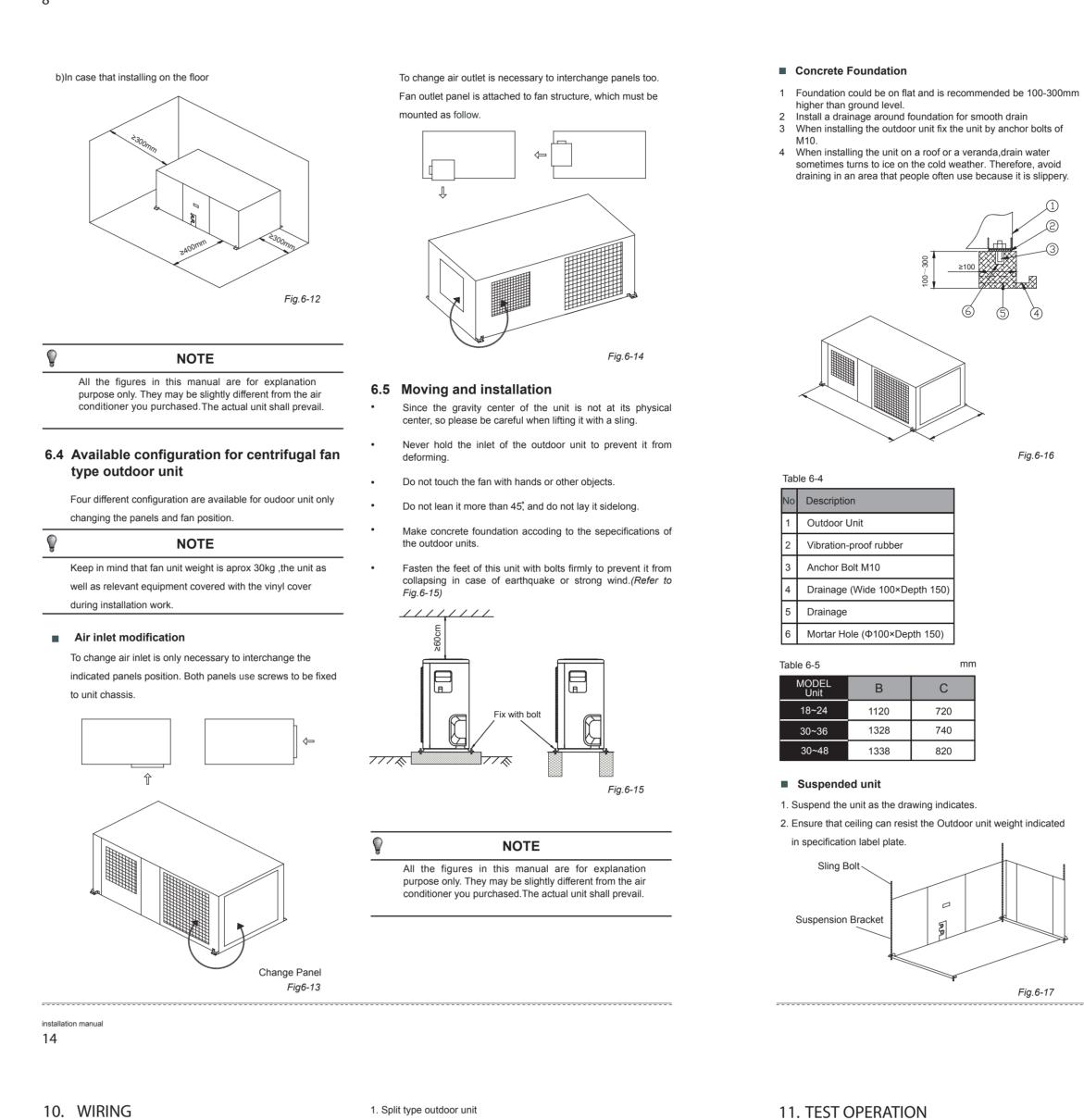
6. OUTDOOR UNIT INSTALLATION





570(Body)

Ceiling 50



higher than ground level. Check whether the height drop between the indoor unit and 2 Install a drainage around foundation for smooth drain outdoor unit, the length of refrigerant pipe, and the number of 3 When installing the outdoor unit fix the unit by anchor bolts of the bends meet the following requirements: (The number of the bends less than 15.) 4 When installing the unit on a roof or a veranda, drain water sometimes turns to ice on the cold weather. Therefore, avoid Table 7-1 draining in an area that people often use because it is slippery. The length of The ma The type of models 50Hz T1 condition/R22 Split type air conditioner OHz Vertical discharge air cond 15 /60Hz T1 condition/R22 Split type 30 ditioner and Vertical discharg 30 ditioner 10 5 R410A inverter Split type air 25 12 conditioner and and Centrifu 25 15 fan outdoor unit 30 20 15 R410A Split type air conditione 25 and and Centrifugal fan outdoo 30 20 Fig.6-16 25 30К 30 15 50Hz/60Hz T3 condition (outdoor unit down) 36К 30 20 lo Description 50 Outdoor Unit 50Hz/60Hz T3 conditio 2 Vibration-proof rubber (outdoor unit up) 42K 3 Anchor Bolt M10 50 4 Drainage (Wide 100×Depth 150) the unit with quick joint 12K-18K 5 5 5 Drainage 6 Mortar Hole (Φ100×Depth 150) CAUTION B C relevant local and national codes. 1120 720 1328 740 system during installation. 30~36 1338 820 liquid piping. Otherwise, the condensate may happen Suspended unit 7.1 The Procedure of Connecting Pipes 1. Suspend the unit as the drawing indicates. 2. Ensure that ceiling can resist the Outdoor unit weight indicated 1 Drill a hole in the wall (suitable just for the size of the wall in specification label plate. its cover. Slina Bolt Suspension Bracket

7. INSTALL THE CONNECTING PIPE

2 Bind the connecting pipe and the cables together tightly with **3 Remove the protection cover of stop valve** binding tapes. Pass the bound connecting pipe through the wall conduct from outside. Be careful of the pipe allocation to do on damage to the tubing. Connect the pipes. Refer to "How to Connect the pipes" for details. Gas Valve 4 Expel the air with a vacuum pump. Refer to "How to expel the air with a vacuum pump" for details. 4 Connect the indoor unit at first, then the outdoor unit. 5 open the stop values of the outdoor unit to make the • Bend the tubing in proper way. Do not harm to them. refrigerant pipe connecting the indoor unit with the outdoor Bend the pipe with thumb unit in fluent flow. I'm Thy 6 Check the leakage. Check all the joints with the leak detector or soap water. min-radius 100mm Fig. 7-4 The bending angle should not exceed 90. 7 Cover the joints of the connecting pipe with the soundproof / insulating sheath (fittings), and bind it well with the tapes to Bending position is preferably in the middle of the prevent leakage. bendable pipe. The larger the bending radius the better it CAUTION Do not bend the pipe more than three times. Be sure to with insulating materials cover all the exposed When connecting the flare nut, coat the flare both inside parts of the flare pipe joints and refrigerant pipe on the and outside with either oil or ester oil and initially tighten liquid-side and the gas-side. Ensure that there is no gap by hand 3 or 4 turns before tighting firmly. between them. Incomplete insulation may cause water condensation. How to Connect the pipes ----1 Flaring • Cut a pipe with a pipe cutter. (Refer to Fig. 7-1) • Be sure to use both a spanner and torque wrench $O \times \times \times$ together when connecting or disconnecting pipes to /from the unit. Lean crude Fig.7-1 Insert a flare nut into a pipe and flare the pipe. • Refer to Table 4 for the dimension of flare nut spaces. CAUTION Table 7-2 Too large torque will harm the bellmouthing and too small will cause
 Pipe gauge
 Tightening
 torque
 Flare dimensin A min (mm)
 Flare
 shape
 leakage. Please determine the torque according to Table 7-2. After the connecting work is finished, be sure to check that there is 15~16 N.m 8.3 8.7 no gas leak. 53~163 kgf.cm 25~26N.m 12.0 12.4 Ø9.52 How to expel the air with a vacuum pump 255~265 kgf.cm) 35~36 N.m Stop valve operation introduction 15.4 15.8 ~367 kgf.cm) _ Opening stop valve 45~47 N.m Ø15.9 18.6 19. 1. Remove the cap and turn the valve counter 59~480 kgf.cm) clock-wise with the hexagon wrench. 65~67N.m 22.9 23 (663~684 kgf.cm 2. Turn it until the shaft stops.Do not apply excessive force to the stop valve. Doing so may break the valve body, Remove the Cycle Service Panel and the Cover as the valve is not a backseat type. Always use the Board, unscrewing the screws which secure it to special tool. the structure 3. Make sure to tighten the cap securely. 2. Closing stop valve 1. Remove the cap and turn the valve clockwise with the hexagon wrench. Securely tighten the valve until the shaft contacts the main bodyseal. Make sure to tighten the cap securely. Cycle Service Panel For the tightening torque, refer to the table below. Cover Boar Fig.7-2 _____

_____ installation manual installation manual 12

Table 7-3 Shaft (valve body) (Valve Hexagonal 13.5~16.5 Hexagonal 35~40 _____

CAUTION Always use a charge hose for service port connection. After tightening the cap, check that no refrigerant leaks arepresent.

NOTE

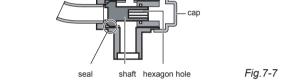
All the figures in this manual are for explanation

purpose only. They may be slightly different from the air

conditioner you purchased. The actual unit shall prevail.

Fig.6-1





 Using the vacuum pump 1 Loosen and remove the maintenance nuts of stop valves A and B, and connect the charge hose of the manifold valve to the service port of stop valve A. (Be sure that stop valves A and B are both closed)

2 Connect the joint of the charge hose with the vacuum pump. 3 Open the Lo-lever of the manifold value completely. 4 Turn on the vacuum pump. At the beginning of pumping, loosen the maintenance nut of stop valve B a little to check

whether the air comes in (the sound of the pump changes, and the indicator of compound meter turns below zero). Then fasten the maintenace nut.

pump.Make pumping for 15 minutes or more and check that the compound meter indicates -76cmHg(-1X10⁵Pa)

stop valve A and B completely, then fasten the cap. Disassemble the charge hose from the service port of stop valve A, and fasten the nut.

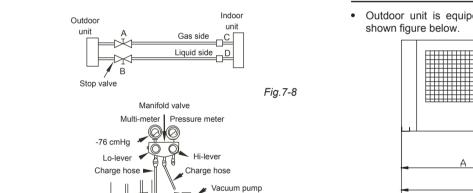
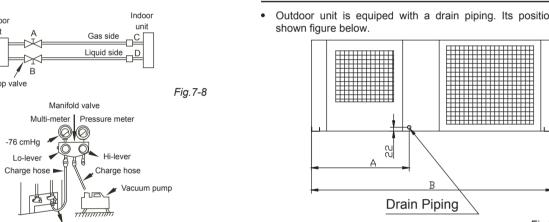


Fig.7-9



Charging with an unsuitable substance may cause explosions and accidents, so always ensure that the appropriate refrigerant is charged. Refrigerant containers shall be opened slowly. Always use protective gloves and protect your eyes when charging refrigerant. The outdoor unit is factory charged with refrigerant. Calculate the added refrigerant according to the diameter and the length of the liquid side pipe of the outdoor unit/indoor unit connection.

Brass tube(mm) orifice in the indoorunit orifice in the outdoorunit orifice in the indoorunit)60kg/m×(L-5) | 0.065kg/m×(L-{

completed

7.2 Additional Refrigerant Charge

test and the vacuum pumping.

the danger of liquid hammer.

CAUTION

Refrigerant cannot be charged until field wiring has been

Refrigerant may only be charged after performing the leak

When charging a system, care shall be taken that its

aximum permissible charge is never exceeded, in view of

orifice in the outdoorunit 0.030kg/m×(L-5) 0.030kg/m×L orifice in the indoorunit 0.110kg/m×(L-5) 0.115kg/m×(L-5) orifice in the outdoorunit 0.060kg/m×(L-5) 0.060kg/m×L orifice in the indoorunit 0.170kg/m×(L-5) 0.190kg/m×(L-5) orifice in the outdoorunit 0.085kg/m×(L-5) 0.095kg/m×L

orifice in the indoorunit 0.250kg/m×(L-5) 0.290kg/m×(L-5 orifice in the outdoorunit 0.125kg/m×(L-5) 0.145kg/m×L 5 When the pumping has finished, close the Lo-lever of the • NOTE: the table above refer to the liquid tube.

height drop.Usually for each 10m need a bend. NOTE 6 Loosen and remove the cap of stop valves A and B to open If a negative result is gotten for R from Table 7-4, no

refrigerant needs to be added nor removed. Additional refrigerant will be twice of R from Table 7-4 if the indoor unit installed throttle assembly. • Outdoor unit is equiped with a drain piping. Its position is

R410A R22 0.030kg/m×(Lg/m×(L-5) 0.015kg/m×L

8. CONNECT THE DRAIN PIPE Install the drainpipe of the indoor unit • You can use a polyethylene tube as the drainpipe (out-dia.37-39mm, in-dia.32mm). It could be bought at local market or from your dealer. • Set the mouth of the drainpipe onto the root of the body's pump-pipe, and clip the drainpipe and the out-let pipe sheath

MODEL

(fittings) together firmly with the out-let pipe clasp (fitting). • The body's pump pipe and the drainpipe (especially the indoor part) should be covered evenly with the out-let pipe sheath (fittings) and be bound tightly with the constrictor to prevent condensation caused by entered air. To prevent water from flowing backwards into the air conditioner while the air conditioner stops, please lean the drainpipe down toward outdoor (outlet-side) at a degree of over 1/ 50. And please avoid any bulge or water deposit. (Refer to Fig.5-17.a in the figure page) • Do not drag the drainpipe violently when connecting to

mm

A B

Prepare a polyviny chloride with 21mm inner diameter

• Fasten the tube to the drain hose with an adhesive and the

field-supplied clamp. The drain piping must be performed with

18~24 595 1200

30~36 624 138

48 646 1385

a DOWN-SLOPE pitch of 1/25 to 1/100

Connect a siphon, as shown in figure below

prevent the body from being pulled. Meanwhile, one supportpoint should be set every 1~1.5m to prevent the drainpipe from yielding (Refer to Fig.5-17a in the figure page). purpose only. They may be slightly different from the air Or you can tie the drainpipe with the connecting pipe to fix conditioner you purchased. The actual unit shall prevail. it.(Refer to Fig.5-17.c in the figure page) In the case of prolonged drainpipe, you had better tighten its

Fig.7-11

indoor part with a protection tube to prevent it from loosing. • If the outlet of the drainpipe is higher than the body's pump joint, the pipe should be arranged as vertically as possible. And the lift distance must be less than 200mm, otherwise the water will overflow when the air conditioner stops. (Refer to Fig.5-18 in the figure page) • The end of the drainpipe should be over 50mm higher than the ground or the bottom of the drainage chute, and do not

The power supply is included in the power supply above mentioned can be applied to the table.

Before obtaining access to terminals, all supply circuits must be disconnected.

Power supply

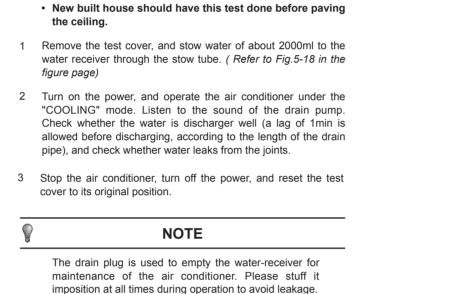


Fig.8-1

imposition at all times during operation to avoid leakage. Install the drain joint of the outdoor unit

Fit the seal into the drain joint, then insert the drain joint into the base pan hole of outdoor, rotate 90° to securely assemble them. Fit the seal into the drain joint, then insert the drain joint into the

Check whether the drainpipe is unhindered.

base pan hole of outdoor, rotate 90° to securely assemble them. Connect the drain joint with an extension drain hose (Locally purchased), in case of the condensate draining off the outdoor unit during the heating mode.

Drainage test

figure page)

The base pan hole Drain joint of outdoor unit B Ó Seal

Drain The base pan joint of outdoor unit NOTE All the figures in this manual are for explanation

immerse it in water. If you discharge the water directly into sewage, be sure to make a U-form aquaseal by bending the pipe up to prevent the smelly gas entering the house through

CAUTION

Outdoor

Outdoor

Unit

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

Unit

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

Switch/Fuse

(Available locally)

Power wiring (indoor)

Power linking wiring (Outdoor)

 $\left(\stackrel{\perp}{=} \right)$ Ground wiring

Strong elec-signal link wiring

Weak elec-signal link wiring

Power supply

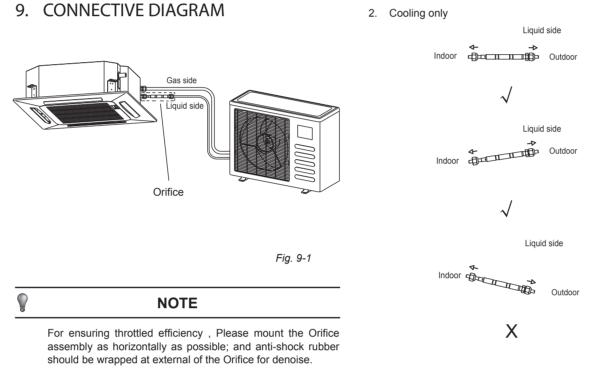
Switch/Fuse (Available locally)

Power wiring (indoor)

 (\pm) Ground wiring

Strong elec-signal link wiring

Weak elec-signal link wiring



Air inlet

>300mm ______

CAUTION Mark the data plate with the Orifice installed(for some Please purchase the fittings according to the requirements in

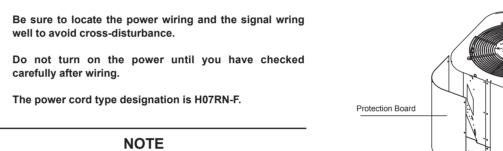
the manual strictly. Refer the diagram when installing. 1. Cooling&heating Liquid side Indoor

Liquid side Indoor Liquid side Indoor Cutdoor

Fig.10-6

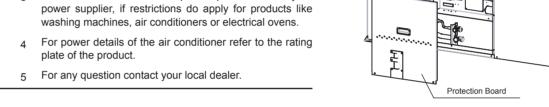
Fig. 9-2

The appliance shall be installed in accordance with national wiring regulations. The air conditioner should use separate power supply with rated voltage. The external power supply to the air conditioner should have ground wiring, which is linked to the ground wiring of the indoor and outdoor unit. The wiring work should be done by qualified persons according to circuit drawing. An all-pole disconnection device which has at least 3mm sepaaration distance in all pole and a residual current device (RCD) with the rating of above 10mA shall be incorporated in the fixed wiring according to the national 2. Vertical discharge type outdoor unit rule.



Remark per EMC Directive 2004/108/EC For to prevent flicker impressions during the start of the compressor (technical process), following installation conditions do apply.

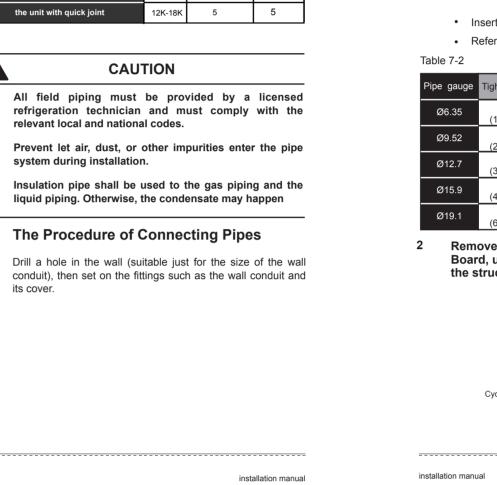
1 The power connection for the air conditioner has to be done at the main power distribution. The distribution has to be of a low impedance, normally the required impedance reaches at a 32 A fusing point. 2 No other equipment has to be connected with this power 3 For detailed installation acceptance please refer to your power supplier, if restrictions do apply for products like washing machines, air conditioners or electrical ovens.



10.1 Connect the cable

the outdoor unit, disassemble the bolts from the maintenance board, and pull it in the direction of the arrow to remove the Connect the connective cables to the terminals as identified with their respective mached numbers on the terminal block

(Refer to Fig.10-1~Fig.10-6)



The Specification of Power(indoor power supply)

Table 10-1

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Table 10-2

I	MODEL	18	24	30~36	42~48	60
	PHASE	1Phase	1Phase	1Phase	1Phase	1Phase
POWER	FREQUENCY AND VOLT	208-240 V	208-240V	208-240V	208-240V	208-240V
CIRCUIT	BREAKER/FUSE(A)	20/16	40/25	50/30	60/45	60/50

MODE 30~36 42~60 30~36 42~60 PHASE 3Phase 3Phase 3Phase 3Phase FREQUENCY AND VOLT 380-420 ∨ 380-420 ∨ 208-240 ∨ 208-240 ∨ CIRCUIT BREAKER/FUSE(A) 25/20 25/20 40/25 45/35

The Specification of Power(outdoor power supply)

Table 10-3

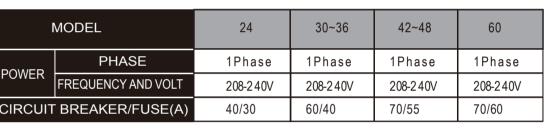
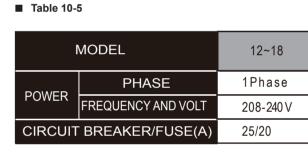


Table 10-4

I	MODEL	30~36	42~60	30~36	42~60
	PHASE	3Phase	3Phase	3Phase	3Phase
POWER	FREQUENCY AND VOLT	380-420 V	380-420 V	208-240V	208-240V
CIRCUIT	BREAKER/FUSE(A)	25/20	25/20	40/25	45/35

The Specification of Power(Applicable to inverter small cassette type air conditioner)



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Fig.7-10

installation manual

the drain pipe.

Wiring figure

Fig.10-4

Indoor Unit

Ground wiring

Unit

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Indoor

Ground wiring

Power linking wiring (Outdoor

Fig.10-5

installation manual

installation manual

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installation manual installation manual

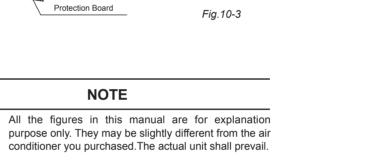
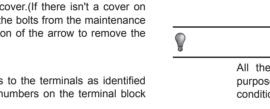


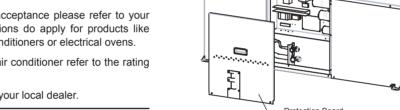
Fig.10-1

Fig.10-2



(Refer to Table10-1 \sim Table 10-9)

3. Centrifugal fan outdoor unit



Dissemble the bolts from the cover.(If there isn't a cover on

protection board.)

of indoor and outdoor units.

10.2 The Specification of Power

10.3 Wiring figure

installation manual

Protection board

Re-install the cover or the protection board.

a. Whether there is vibration or abnormal noise during b. Whether the generated wind, noise, or condensed of by the air conditioner have influenced your neighborhood. c. Whether any of the refrigerant is leaked.

Fig.6-17

1 The test operation must be carried out after the entire

2 Please confirm the following points before the test operation:

Tubing and wiring are correctly completed.

The ground wiring is connected correctly.

the refrigerant have been recorded.

The refrigerant pipe system is leakage-checked.

The indoor unit and outdoor unit are installed properly.

The length of the tubing and the added stow capacity of

• The power voltage fits the rated voltage of the air

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

The gas-side and liquid-side stop valves are both opened.

According to the user's requirement, install the remote

controller frame where the remote controller's signal can

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

any malfunction, please resolve it according to the chapter

a. Whether the switch on the remote controller works well.

b. Whether the buttons on the remote controller works

h. Whether there is vibration or abnormal noise during

I. Whether the air conditioner heats well in the case of the

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

Set the air conditioner under the mode of "COOLING" with the

c. Whether the air flow louver moves normally.

f. Whether the temporary buttons works well.

e. Whether the indicator lights normally.

g. Whether the drainage is normal.

HEATING/COOLING type.

d. Whether the room temperature is adjusted well.

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

installation has been completed.

The drainage is unimpeded.

conditioner.

and indoor units.

3 reach the indoor unit smoothly

• 1) The indoor unit

operation.

2) The outdoor unit

operation

4 Test operation

The heating insulation works well.

CAUTION A protection feature prevents the air conditioner from being activated for approximately 3 minutes when it is restarted immediately after shut off.

The Specification of Power(independence power supply)

Table 10-6

Lo-lever

	MODEL	18	24	30~36	42~48	60
POWER	PHASE	1Phase	1Phase	1Phase	1Phase	1Phase
(indoor)	FREQUENCY AND VOLT	208-240V	208-240V	208-240V	208-240V	208-240V
CIRCUIT	BREAKER/FUSE(A)	20/16	20/16	20/16	20/16	20/16
POWER	PHASE	1Phase	1Phase	1Phase	1Phase	1Phase
(outdoor)	FREQUENCY AND VOLT	208-240 V	208-240V	208-240V	208-240V	208-240V
CIRCUIT	BREAKER/FUSE(A)	20/16	40/25	50/30	60/45	60/50

Table 10-7 MODEL 42~60 30~36 42~60 30~36 PHASE 1Phase 1Phase 1Phase 1Phase ndoor) FREQUENCY AND VOLT 208-240V 208-240V 208-240V 208-240V CIRCUIT BREAKER/FUSE(20/16 20/16 20/16 20/16 WER PHASE 3Phase 3Phase 3Phase 3Phase tdoor) FREQUENCY AND VOLT 380-420 V 380-420 V 208-240V 208-240V CIRCUIT BREAKER/FUSE(A) 25/20 25/20 40/25 45/35

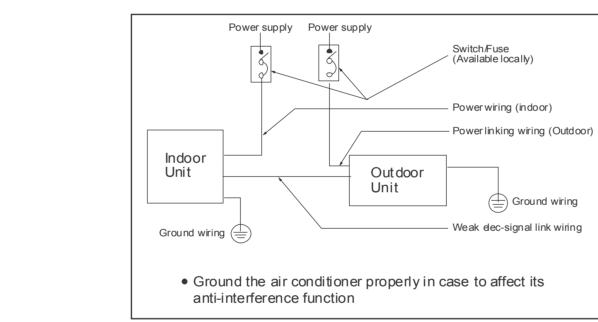
The Specification of Power for the invert type air conditioner(independence power supply)

I	MODEL	18	24	30~36	42~48	60
POWER	PHASE	1Phase	1Phase	1Phase	1Phase	1Phase
(indoor)	FREQUENCY AND VOLT	220-240 V	220-240V	220-240V	220-240V	220-240V
CIRCUIT	BREAKER/FUSE(A)	15/10	15/10	15/10	15/10	15/10
POWER	PHASE	1Phase	1Phase	1Phase	1Phase	1Phase
(outdoor)	FREQUENCY AND VOLT	208-240 V	208-240V	208-240V	208-240V	208-240V
CIRCUIT	BREAKER/FUSE(A)	30/20	30/20	40/30	40/35	50/40

Table 10-9

l	MODEL	30~36	42~60	30~36	42~60
POWER	PHASE	1Phase	1Phase	1Phase	1Phase
(indoor)	FREQUENCY AND VOLT	220-240V	220-240V	220-240V	220-240V
CIRCUIT BREAKER/FUSE(A)		15/10	15/10	15/10	15/10
POWER	PHASE	3Phase	3Phase	3Phase	3Phase
(outdoor)	FREQUENCY AND VOLT	380-420 V	380-420 V	208-240V	208-240V
CIRCUIT BREAKER/FUSE(A)		30/20	30/25	50/40	50/40

installation manual



CAUTION A disconnection device having an air gap contact separation in all active conductors should be incorporated in the fixed wiring according to the National Wiring Regulation. When wiring, please choose the corresponding chart, or it may cause damage. The signs of the indoor terminal block in the some of following fugures may be replaced by L N L1 N1.

The design and specifications are subject to change without prior notice for product improvement.Consult with the sales agency or manufacturer for details.

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