# INSTALLATION MANUAL

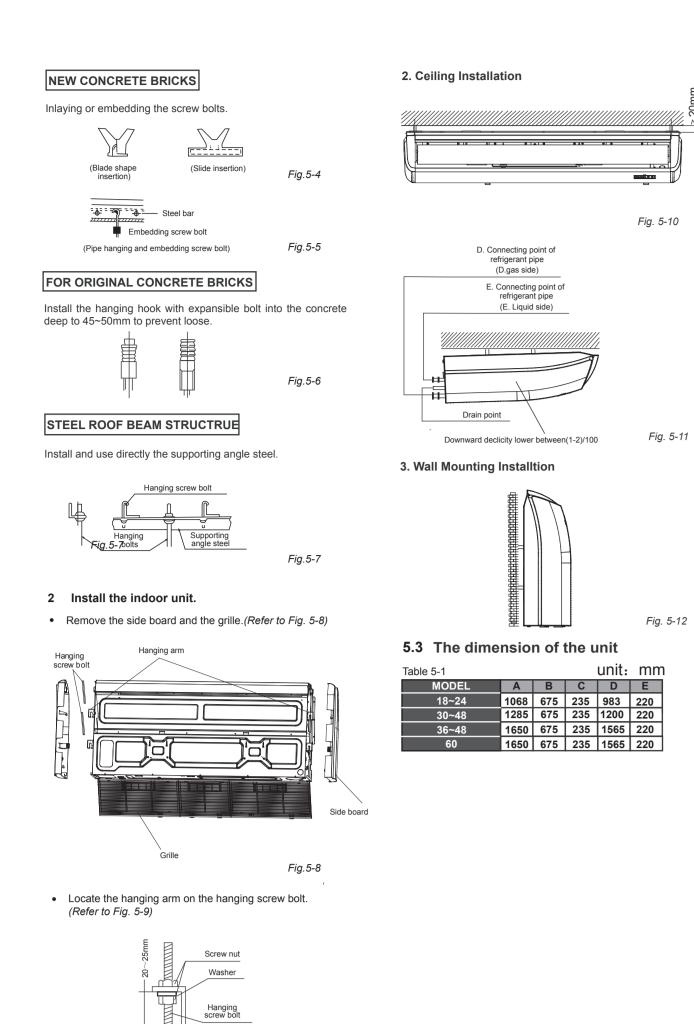
## Ceiling And Floor Type

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.

19999 76 # 1

Fig. 5-11

Fig. 5-12



Hanging screw bolt

Fig.5-9

Hanging arm

Fig.10-5

installation manual installation manual 6

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6. OUTDOOR UNIT INSTALLATION

The outdoor unit should be installed in the location that

 $\mathbf{\Sigma}$  The air inlet and outlet must not be obstructed or

 $\mathbf{\Sigma}$  Ensure the location of the unit will not be subject to

snowdrifts, accumulation of leaves or other seasonal

debris. If possible, p rovide an awning for the unit.

Ensure the awning does not obstruct airflo w.

 $\square$  The installation a rea must be dry and well ventilated.

Fig. 6.1

>60cm / 23.6"

Fig. 6.3

Fix with bol

Fix the outdoor unit with anchor bolts (M10)

/////

 $\square$  There must be enough room to install the connecting

pipes and cables and to access them for maintenance.

 $\mathbf{\Sigma}$  Place the outdoor unit as close to the indoor unit as

 $\square$  Ensure that the re is enough room for installation and

Outdoor Unit Installation Instructions

Step 1: Select installation location.

meets the following requirements:

exposed to st rong wind.

possible.

maintenance.

Strong wind

Step 2: Install outdoor unit.

				6
đ	The area must be f ree of combustible gases and chemicals.	d	q	
Ń	The pipe length between the outdoor and indoor may not exceed the maximum allowable pipe le		ig. 6.4	
đ	If possible, <u>DO NOT</u> install the unit whe re it i exposed to di rect sunlight.	S		<u>e</u>
Ø	If possible, make su re the unit is located far aw from your neighbors' p roperty so that the noise the unit will not disturb them.			W
Ø	If the location is exposed to st rong winds (for example: near a seaside), the unit must be place against the wall to shelter it f rom the wind. If necessar y, use an awning. (See Fig. 6.1 & 6.2)			
đ	Install the indoor and outdoor units, cables and a at least 1 meter f rom televisions or radios to p static or image distortion. Depending on the rad waves, a 1 meter distance may not be enough to eliminate all interfe rence.	revent		
		]	Fig. 6.5	
	Strong wind		g. 6.6	
	Fig. 6.2		1	
	11g. 0.2	Tabl	e 6.1: Length	n Specification
			C	Unit (unit:
			Outdoor Unit W x H	t Dimensions I x D
		760:	x590x285 (29.	9x23.2x11.2)
		810:	x558x310 (31.	.9x22x12.2)
		845:	x700x320 (33.	.27x27.5x12.6)
	<b>CAUTION</b>	900:	x860x315 (35.	.4x33.85x12.4)
	•	9452	x810x395 (37.	.2x31.9x15.55)
	• Be sure to remove any obstacles that may block air circulation.	990	x965x345 (38	.98x38x13.58)
	<ul> <li>Make su re you refer to Length</li> </ul>	938:	x1369x392 (36	6.93x53.9x15.4
	Specifications to ensu re the re is		x1170x350 (35	
	enough room for installation and			.5x21.8x13.1)
	maintenance.			.27x27.6x14.3)
				.24x31.9x16.53
				.24x31.9x16.14
		052	a 1222 a A 1 A (2"	7 5x52 5x16 14

Split Type Outdo					•	Type Outdo	
(Refer to Fig 6.4, 6.5, 6.6, 6	10  and  13	able 6.1)	(	Refer to	Fig 6.7, 6.	8, 6.9 and	Table 6
Fig. 6.4		4			(Wall o	or obstacle)	
			Fi	ig. 6.7			H
Fig. 6.5			F	Fig. 6.8			D
Fig. 6.6		В				or obstacle) "Air inlet	
Table 6.1: Length Specifications of Unit (unit: mm/i		e Outdoor		>30cm / 1 Air in	1.8	×٩	0cm / 11.8*
Outdoor Unit Dimensions	Mounting Di	imensions		Air in	ilet		Air inlet
W x H x D	Distance A	Distance B					
760x590x285 (29.9x23.2x11.2)	530 (20.85)	290 (11.4)					7
810x558x310 (31.9x22x12.2)	549 (21.6)	325 (12.8)			Air in	let >30cm / 11.8"	
845x700x320 (33.27x27.5x12.6)	560 (22)	335 (13.2)					
900x860x315 (35.4x33.85x12.4)	590 (23.2)	333 (13.1)			Fig.	. 6.9	
945x810x395 (37.2x31.9x15.55)	640 (25.2)	405 (15.95)		Table	e 6.2: Length	Specifications	of
990 x965x345 (38.98x38x13.58)	624 (24.58)	366 (14.4)	V			or Unit (unit: m	
938x1369x392 (36.93x53.9x15.43)	634 (24.96)	404 (15.9)	- I			DIMENSIONS	
900x1170x350 (35.4x46x13.8)	590 (23.2)	378 (14.88)		MODEL	W	н	D
800x554x333 (31.5x21.8x13.1)	514 (20.24)	340 (13.39)	=	18	554/21.8	633/25	554/21.8
845x702x363 (33.27x27.6x14.3)	540 (21.26)	350 (13.8)	_	24	554/21.8	633/25	554/21.8
946x810x420 (37.24x31.9x16.53)	673 (26.5)	403 (15.87)		36	554/21.8	759/29.8	554/21.8
946 x810x410 (37.24x31.9x16.14)	673 (26.5)	403 (15.87)	-	36 36	600/23.6 600/23.6	633/25 759/29.8	600/23.6
952x1333x410 (37.5x52.5x16.14)	634 (24.96)	404 (15.9)		36/48/60	710/28	759/29.8	710/28
		404 (1 = 0)					

	installation manual
Unit 0 and Table 6.1)	Vertical Discharge Type Outdoor Unit (Refer to Fig 6.7, 6.8, 6.9 and Table 6.2)
	Fig. 6.7
	Fig. 6.8
lit Type Outdoor h) Mounting Dimensions Distance A Distance B 530 (20.85) 290 (11.4)	(Wall or obstacle) >30cm / 11.8" Air inlet >30cm / 11.8 Air inlet Air inlet
549 (21.6)         325 (12.8)           560 (22)         335 (13.2)	Air inlet >30cm / 11.8"

710/28 759/29.8 710/28

installation manual

60 710/28 843/33 710/28

Connect the connective cables to the terminals as identified

with their respective mached numbers on the terminal block

A protection feature prevents the air conditioner from being

activated for approximately 3 minutes when it is restarted

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installation manual

immediately after shut off.

of indoor and outdoor units.

Re-install the cover or the protection board.

10.2 The Specification of Power

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

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

manufacturer or its service agent or a similarly qualified

An all-pole disconnection switch having a contact

separation of at least 3mm 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

account strong winds, typhoons or earthquakes.

pressure in the refrigeration cycle, explosion and injury.

air substances go into refrigeration cycle.

Otherwise, it will cause fire or electrical shock.

independent circuit and single outlet must be used.

electrical work, it will cause electrical shock fire.

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

The appliance shall not be installed in the laundry.

electrical shock and fire.

deficiency.

for installation.

electrical shock and fire.

withstand the set's weight.

must be disconnected.

accessible.

terminal.

shock.

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.

done, the set will drop to cause injury.

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UNIT

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DRAIN

CONTENTS

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PRECAUTIONS .....

INFORMATION......

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UNIT.....

INDOOR

OUTDOOR

CONNECT

INSTALLATION.....

INSTALLATION ....

1. PRECAUTIONS

cautions carefully.

injury.

the equipment.

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the owner's manual for future reference.

INSTALLATION

A T T A C H E

INSPECTING AND HANDLING THE

THE

keep this manual where the operator can easily find them.

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.

WARNING

CAUTION

After completing the installation, make sure that the unit operates

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

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

952 x1333 x415 (37.5 x52.5 x16.34) 634 (24.96) 404 (15.9)

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

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

cause minor or moderate property damage, personal

cause property damage, personal injury or loss of life.

(Applicable to the North American area only)

requirement of NEC and CEC by authorized personnel only.

Read this manual attentively before starting up the units.

e)	not apply to airtight rooms. Be su e to keep the unit unobstructed in at least two of the three directions (M, N, P) (See Fig. 6.10)	and th outdo
/ 47"	and the second s	1. 2. 3. 7.
	Fig. 6.10	• II T
	Drain Joint Installation	a
	Before bolting the outdoor unit in place, you must install the drain joint at the bottom of the unit. (See Fig. 6.11)	
D	1. Fit the rubber seal on the end of the drain joint that will connect to the outdoor unit.	• Th co
	2. Insert the drain joint into the hole in the base pan of the unit.	• Ha
	<ol> <li>Rotate the drain joint 90° until it clicks in place facing the f ront of the unit.</li> </ol>	• Wito
	4. Connect a drain hose extension (not included) to the drain joint to redirect water f rom the unit during heating mode.	• Wi the
>30cm / 11.8	NOTE: Make su re the water drains to a safe location whe re it will not cause water damage or a slipping haza rd.	<ul> <li>Th sh mu</li> <li>Re</li> </ul>
Air inlet		
cations of	Base pan hole of outdoor unit	

 $\bigcirc$ 

installation manual

Table 10-1

Table 10-2

OWER

Table 10-3

Table 10-4

installation manual

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MODEL

MODEL

MODEL

MODEL

PHASE

POWER FREQUENCY AND VOLT

CIRCUIT BREAKER/FUSE(A)

PHASE

FREQUENCY AND VOLT

IRCUIT BREAKER/FUSE(A

CIRCUIT BREAKER/FUSE(A)

PHASE

CIRCUIT BREAKER/FUSE(A)

FREQUENCY AND VOLT

The Specification of Power(outdoor power supply)

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Base pan hole of outdoor unit	Bend S shape
- Seal - Seal - Drain joint	Put as deep as possible (about 10cm)
(A) (B) Fig. 6.11	Downward declivity \ lower t han 1/100 VP30
1 ig. 0.11	Drainage test

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 POWER
 FREQUENCY AND VOLT
 208-240 V
 208-240 V

380-420 V

12~18

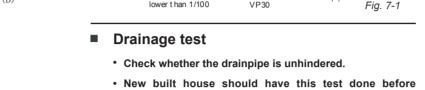
30~36

3Phase

25/20

380-420 V

25/20



paving the ceiling.

30~36

1Phase 1Phase 1Phase 1Phase 1Phase

380-420 V 208-240V 208-240V

25/20 40/25 45/35

1Phase 1Phase 1Phase 1Phase 1Phase

3Phase 3Phase 3Phase

380-420 V 208-240V 208-240V

\_\_\_\_\_

208-240V 208-240V 208-240V 208-240V 208-240V

20/16 40/30 60/40 70/55 70/60

42~60

25/20

24 30~36 42~48 60

30~36 42~60

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40/25 45/35

20/16 40/25 50/30 60/45 60/50

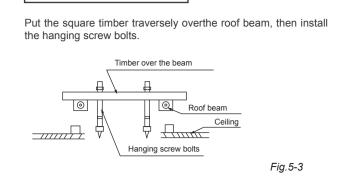
30~36 42~60 30~36 42~60

3Phase 3Phase 3Phase 3Phase

WARNING	Type of model	Capacity (Btu/h)	Length of piping	Maximum drop height
WARININU		12K	15/49	8/26
• All field piping must be completed by a licensed	50Hz T1 Condition/R22	18K-24K	30/98.4	10/32.8
technician and must comply with the local and	Split Type	30K-42K	50/164	20/65.6
national regulations.		48K-60K	50/164	25/82
When the air conditioner is installed in a small	50Hz Vertical	12K	15/49	8/26
room, measu res must be taken to p revent the	Discharge, 60Hz T1 condition/ R22	18K-24K	30/98.4	10/32.8
refrigerant concentration in the room from exceeding the safety limit in the event of	Split Type, Vertical Discharge	30K-60K	30/98.4	20/65.6
refrigerant leakage. If the refrigerant leaks and its concentration exceeds its p roper limit, haza rds		<15 K	25/82	10/32.8
due to lack of oxygen may result.	R410A Inverter	$\geq 15 \text{ K} - \leq 24 \text{ K}$	30/98.4	20/65.6
• When installing the refrigeration system, ensure	Split Type	$\geq 24 \mathrm{K} - \langle 36 \mathrm{K} \rangle$	50/164	25/82
that ai r, dust, moistu re or fo reign substances do		$\geq$ 36 K - $\leq$ 60 K	65/213	30/98.4
not enter the refrigerant ci rcuit. Contamination in the system may cause poor operating capacit y,	R410A Split Type	12K	15/49	8/26
		18K-30K	25/82	15/49
high p ressure in the refrigeration cycle, explosion		36K	30/98.4	20/65.6
or injury.		48K-60K	50/164	25/82
• Ventilate the area immediately if there is		18K-24K	35/114	10/32.8
refrigerant leakage during the installation. Leaked	50Hz/60Hz T3 condition (outdoor unit down)	30K	30/98.4	15/49
refrigerant gas is both toxic and flammable. Ensure the re is no refrigerant leakage after		36K	30/98.4	20/65.6
completing the installation work.		42K-60K	50/164	25/82
comproving the instantion work.		18K-24K	25/82	15/49
lotes On Pipe Length and Elevation	50Hz/60Hz T3	30K	30/98.4	20/65.6
	Condition (outdoor	36K	30/98.4	25/82
sure that the length of the refrigerant pipe, the number	unit up)	42K	50/164	30/98.4
bends, and the d rop height between the indoor and		48K-60K	50/164	35/114
tdoor units meets the requirements shown in Table 8.1:	Unit with quick joint	12K-18K	5/16.4	5/16.4

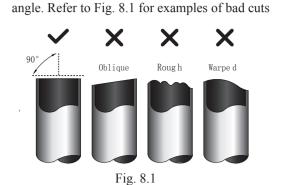
8. INSTALL THE CONNECTING PIPE

Safety P recautions



installation manual 4

> Step 2: Remove burrs. Refrigerant Piping Connection Instructions Burrs can a ffect the ai r-tight seal of refrigerant piping connection. They must be completely removed. **C**AUTION 1. Hold the pipe at a downwa rd angle to p revent burrs from falling into the pipe. • The branching pipe must be installed horizontall y. Using a reamer or deburring tool, remove all burrs An angle of mo re than 10° may cause malfunction. from the cut section of the pipe. • <u>DO NOT</u> install the connecting pipe until both indoor and outdoor units have been installed. • Insulate both the gas and liquid piping to p revent water leakage. Step1: Cut pipes When p reparing refrigerant pipes, take extra ca re to cut and fla re them p roperly. This will ensure efficient operation and minimize the need for futu re maintenance. 1. Measu re the distance between the indoor and Fig. 8.2 outdoor units. Step 3: Fla re pipe ends 2. Using a pipe cutte r, cut the pipe a little longer than Proper flaring is essential to achieve an airtight seal. the measu red distance. 1. After removing burrs f rom cut pipe, seal the ends with PVC tape to prevent foreign materials from **Q** CAUTION entering the pipe. DO NOT deform pipe while cutting. Be extra ca reful not Sheath the pipe with insulating material. to damage, dent, or deform the pipe while cutting. This Place flare nuts on both ends of pipe. Make su re will drastically reduce the heating efficiency of the unit. they a re facing in the right di rection, because you can't put them on or change their di rection after 1. Make su re that the pipe is cut at a perfect 90°



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installation manual

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60/45 60/50

- 9

Copper pipe 🔪

flaring. See Fig. 8.3

Flare n

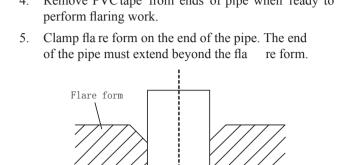


Fig. 8.3 4. Remove PVC tape from ends of pipe when ready to

Fig. 8.4

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.	To install properly, please read this "installation manual" at first.
Improper drain piping may result in water leakage and property damage.	The air conditioner must be installed by qualified persons.
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. The appliance is not intended for use by young children or infirm persons without supervision. Don't install the air conditioner in the following circumstance:	<ul> <li>When installing the indoor unit or its tubing, please follow this manual as strictly as possible.</li> <li>If the air conditioner is installed on a metal part of the building, it must be electrically insulated according to the relevant standards to electrical appliances.</li> <li>When all the installation work is finished, please turn on the power only after a thorough check.</li> <li>Regret for no further announcement if there is any change of this manual caused by product improvement.</li> </ul>
There is petrolatum existing.	
There is salty air surrounding (near the coast).	INSTALLATION ORDER
There is caustic gas (the sulfide, for example) existing in the air (near a hot spring).	<ul> <li>Select the location;</li> </ul>
The Volt vibrates violently (in the factories).	Install the indoor unit;
In buses or cabinets.	<ul> <li>Install the outdoor unit;</li> </ul>
In kitchen where it is full of oil gas.	<ul> <li>Install the connecting pipe ;</li> </ul>
There is strong electromagnetic wave existing.	Connect the drain pipe;
There are inflammable materials or gas.	
There is acid or alkaline liquid evaporating.	<ul> <li>Wiring;</li> </ul>
	Test operation.

The appliance shall be installed in accordance with

Do not operate your air conditioner in a wet room such

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)

having a rated residual operating current not exceeding

30mA, and disconnection must be incorporated in the

fixed wiring in accordance with the wiring rules.

national wiring regulations.

as a bathroom or laundry room.

	NA BAT	CUADE	OLIANTITY
	NAME	SHAPE	QUANTITY
	1. Remote controller (on some models)		1
Remote controller & Its Holder	2. Remote controller holder (on some models)		1
	3. Mounting screw(ST2.9×10-C-H)		2
	4. Alkaline dry batteries (AM4)		2
	5. Owner's manual		1
Others	6. Installation manual		1
	7. Remote controller manual		1

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	elivery, the package should be checked and any damage should eported immediately to the the service agent.	
Whe	n handling the unit, take into account the following:	
1	Fragile, handle the unit with care.	
	$\left[\underline{\uparrow\uparrow}\right]$ Keep the unit upright in order to avoid compressor damage.	D. Connecting point of refrigerant pipe
2	Choose on before hand the path along which the unit is to be brought in.	(D. gas side)
3	Move this unit as originally package as possible.	E. Connecting point of
4	When lifting the unit , always use protectors to prevent belt damage and pay attention to the position of the unit's centre of gravity.	(E. Liquid side)
5.	INDOOR UNIT INSTALLATION	
5.1	Installation place	
	(Refer to Fig.5-1,Fig.5-2 and Table 5-1 for specification.)	
	The indoor unit should be installed in a location that meets the following requirements:	
•	There is enough room for installation and maintenance.	
•	The ceiling is horizontal, and its structure can endure the weight of the indoor unit.	Fig. 5-2
•	The outlet and the inlet are not impeded, and the influence of external air is the least.	
•	The air flow can reach throughout the room.	1 Installing Ø10 hanging screw bolts. (4 bolts)
•	The connecting pipe and drainpipe could be extracted out easily.	Please Refer to Fig.5-3 and Fig.5-4 for the hanging screw bolts distance
•	There is no direct radiation from heaters.	Evaluate the ceiling construction and please install with Ø10 hanging screw bolts.
		<ul> <li>The handling to the ceiling varies from the constructions, consult the construction person for the specific condition.</li> <li>Do keep the ceiling flat. Consolidate the roof beam to avoid possible vibration.</li> <li>Cut off the roof beam.</li> <li>Strengthen the place that has been cut off, and consolidatethe roof beam.</li> </ul>
7	Fig.5-1	After the selection of installation location, position the refrigerant pipes, drain pipes, indoor & outdoor wires to the connection places before hanging up the machine.
	CAUTION	The installation of hanging screw bolts.
_		WOODEN CONSTRUCTION
	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	Put the square timber traversely overthe roof beam, then install the hanging screw bolts.
	generated depending on the conditions under which the electric wave is generated, even if 1 meter is kept.)	Timber over the beam
		Image: Ceiling

4. INSPECTING AND HANDLING THE UNIT<sup>5.2</sup> Install the main body

NOTE: The minimum distance between the outdoor Notes On Drilling Hole In Wall unit and walls described in the installation guide does

If the refrigerant leaks during installation, ventilate the

Toxic gas may be produced if the refrigerant comes into the

The temperature of refrigerant circuit will be high, please

keep the interconnection cable away from the copper

After completing the installation work, check that the

Toxic gas may be produced if the refrigerant leaks into the

room and comes into contact with a source of fire, such as a

Do not connect the ground wire to gas or water pipes,

lightning rod or a telephone ground wire.Inappropriate

Failure to install an earth leakage breaker may result in

Connect the outdoor unit wires , then connect the indoor

CAUTION

area immediately.

tube.

place contacting with fire.

refrigerant does not leak.

fan heater, stove or cooker.

Ground the air conditioner.

electric shocks.

installation manual

unit wires.

grounding may result in electric shocks.

Be sure to install an earth leakage breaker.

not apply to airtight rooms. Be su e to keep the unit You must drill a hole in the wall for the refrigerant piping, d the signal cable that will connect the indoor and tdoor units. . Determine the location of the wall hole based on the

You are not allowed to connect the air conditioner with the 2. INSTALLATION INFORMATION

location of the outdoor unit. Using a 65-mm (2.5") co re drill, drill a hole in the wall. NOTE: When drilling the wall hole, make su re to avoid wi res, plumbing, and other sensitive components. Place the p rotective wall cu ff in the hole. This

protects the edges of the hole and will help seal it when you finish the installation p rocess. CONNECT THE DRAIN PIPE Install the drainpipe of the indoor unit The outlet has PTI screw bread, Please use sealing materials and pipe sheath(fitting) when connecting PVC pipes.

CAUTION The drain pipe of indoor unit must be heat insulated, or it will condense dew, as well as the connections of the indoor unit. Hard PVC binder must be used for pipe connection, and make sure there is no leakage. With the connection part to the indoor unit, please be noted not to impose pressure on the side of indoor unit pipes.

When the declivity of the drain pipe downwards is over 1/100, there should not be any winding. The total length of the drain pipe when pulled out traversely shall not exceed 20m, when the pipe is over long, a prop stand must be installed to prevent winding. Refer to the Fig.7-1 for the installation of the pipes.

1.5m~2m V Insulating Downward declivity material lower than 1/100

> Fig. 7-1

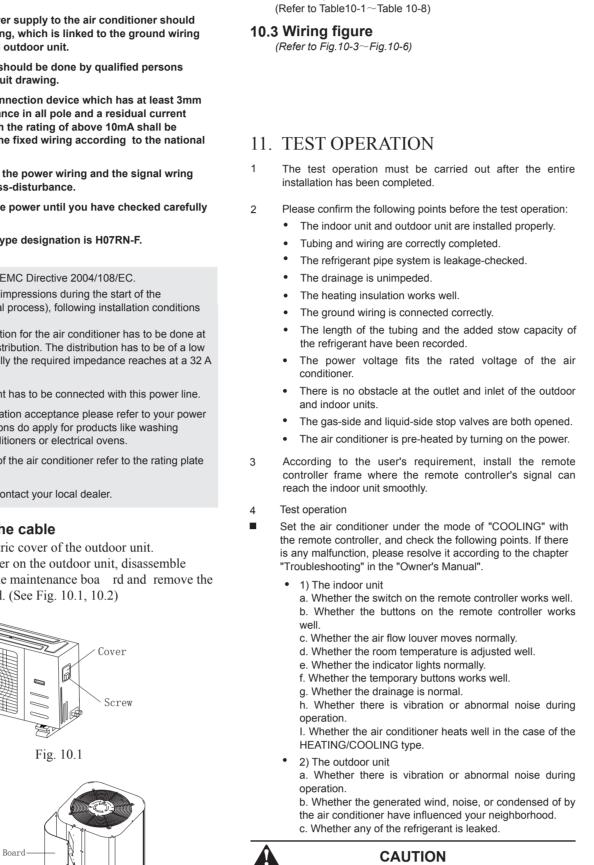
installation manual Table 8.1: The Maximum Length And Drop Height Based on Models. (Unit: m/ft.)

6. 7	Place flaring tool onto the Turn the handle of the flar		<b>C</b> AUTION	9. AIR EVACUATION	Flar
7.		lare the pipe in acco rdance	• Ensure to wrap insulation a round the piping. Di rect	Safety P recautions	
		N BEYOND FLARE FORM	contact with the ba re piping may result in bu rns or frostbite.	<b>CAUTION</b>	
Pipe gauge	Tightening to rque Min.	nension (A) nm/Inch) Max .	• Make su re the pipe is p roperly connected. Over tightening may damage the bell mouth and under tightening may lead to leakage.	• Use a vacuum pump with a gauge reading lower than -0.1MPa and an air discharge capacity above 40L/min.	Valve body Valve st
Ø 6.4	14.2-17.2 N.m (144-176 kgf.cm) 8.3/0.3	8.3/0.3 90°±4	NOTE ON MINIMUM BEND RADIUS	• The outdoor unit does not need vacuuming. <u>DO</u> <u>NOT</u> open the outdoor unit 's gas and liquid stop	<ol> <li>Watch the P ressure Gau that the re is no change is should read slightly high</li> </ol>
Ø 9.5	32.7-39.9 N.m (333-407 kgf.cm) 12.4/0.48 49.5-60.3 N.m	12.4/0.48	Carefully bend the tubing in the middle acco rding to the diagram belo w. <u>DO NOT</u> bend the tubing mo re than	<ul><li>valves.</li><li>Ensure that the Compound Meter reads -0.1MPa</li></ul>	10. Remove the charge hose
Ø 12.7	(504-616 kgf.cm) 15.4/0.6	15.8/0.6	90° or mo re than 3 times.	or below after 2 hours. If after the ree hours of operation and the gauge reading is still above	11. Using hexagonal w renc pressure and low p ressu
Ø 15.9	(630-770 kgf.cm) 18.6/0.7 97.2-118.6 N.m	19/0.74 Fig. 8.5	Bend the pipe with thum b	-0.1MPa, check if the re is a gas leak or water inside	OPEN VALVE STEMS GE
Ø 19.1	(990-1210 kgf. cm) 22.9/0.9	23.3/0.91		the pipe. If the re is no leakage, perform another evacuation for 1 or 2 hours.	When opening valve stems until it hits against the stop
Ø 22	109.5-133.7 N.m (1117-1364 kgf. cm) 27/1.06	27.3/1.07		• <u>DO NOT</u> use refrigerant gas to evacuate the system. Evacuation Instructions	valve to open furthe r. 12. Tighten valve caps by ha
	Remove the flaring tool a the end of the pipe for cra	nd fla re form, then inspect acks and even flaring.		Before using manifold gauge and vacuum pump, read their	proper tool. Note On Adding Refri
Step 4:	Connect pipes t the copper pipes to the in	-	min-radius 10cm (3.9"	operation manuals to familiarize yourself with how to use them p roperly.	<b>!</b> CAUTION
1. 2.	essure pipe, then the high- When connecting the fla of refrigeration oil to the Align the center of the tw connect.	re nuts, apply a thin coat fla red ends of the pipes.	<ul> <li>6. After connecting the copper pipes to the indoor unit, wrap the power cable, signal cable and the piping together with binding tape.</li> <li>NOTE: <u>DO NOT</u> intertwine signal cable with other wi res. While bundling these items togethe r, do not intertwine or cross the signal cable with any other wiring.</li> <li>7. Thread this pipeline th rough the wall and connect it to the outdoor unit.</li> <li>8. Insulate all the piping, including the valves of the</li> </ul>	-76cmHg Low pressure valve Charge hose Low pressure valve Low pressure valve Fig. 9.1	<ul> <li>wiring, vacuuming and</li> <li><u>DO NOT</u> exceed the may of refrigerant or ove relican damage or impact</li> <li>Charging with unsuitable explosions or accidents refrigerant is used.</li> <li>Refrigerant containers Always use protective generative generative for the outdoor unit is factor.</li> </ul>
3. 4.	indoor unit tubing Fig. 8. Tighten the fla re nut as t Using a spanne r, grip the	ightly as possible by hand.	<ol> <li>9. Open the stop valves of the outdoor unit to start the flow of the refrigerant between the indoor and outdoor unit.</li> </ol>	<ol> <li>Connect the charge hose of the manifold gauge to service port on the outdoor unit's low pressure valve.</li> <li>Connect another charge hose from the manifold gauge to the vacuum pump.</li> <li>Open the Low Pressure side of the manifold gauge.</li> </ol>	<ul> <li>The outdoor unit is factory the added refrigerant accelength of the liquid side connection.(suitable for the Table 9-1</li> <li>Liquid tube(mm) orifice in the indoorunit</li> </ul>
5.		e nut, use a to rque w rench	CAUTION Check to make su re the re is no refrigerant leak after	<ul><li>Keep the High Pressure side closed.</li><li>4. Turn on the vacuum pump to evacuate the system.</li><li>5. Run the vacuum for at least 15 minutes, or until the</li></ul>	<ul> <li>Ø6.35</li> <li>orifice in the outdoorunit</li> <li>orifice in the indoorunit</li> <li>Ø9.52</li> <li>orifice in the outdoorunit</li> </ul>
	: Use both a spanner and a eting or disconnecting pipe		completing the installation work. If the re is a refrigerant leak, ventilate the a rea immediately and evacuate the system (refer to the Air Evacuation section of this	<ul><li>Compound Meter reads -76cmHG (-1x105Pa).</li><li>6. Close the Low Pressure side of the manifold gauge, and turn off the vacuum pump.</li></ul>	Ø12.7 Orifice in the indoorunit orifice in the outdoorunit
	A DATE		manual).	<ol> <li>Wait for 5 minutes, then check that there has been no change in system pressure.</li> </ol>	Ø15.9 orifice in the indoorunit orifice in the outdoorunit
				NOTE: If the re is no change in system p ressure, unsc rew the cap f rom the packed valve (high p ressure valve). If the re is a change in system p ressure, the re may be a gas leak.	Ø19         orifice in the indoorunit           orifice in the outdoorunit           NOTE: the table above refer           The number of bends is up to t
	Fig. 8	.7		<ol> <li>Insert hexagonal wrench into the packed valve (high pressure valve) and open the valve by turning the wrench in a 1/4 counterclockwise turn. Listen for gas to exit the system, then close the valve after 5 seconds.</li> </ol>	Usually for each 10m need a b If a negative result is gotten for needs to be added nor remove Additional refrigerant will be tw unit installed throttle assembly

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<ul> <li>9. Watch the P ressure Gathat the re is no change should read slightly high 10. Remove the charge hose</li> </ul>	auge for one minute to make su in p ressure. The Pressure Ga gher than atmospheric p ressu e f rom the service port. ch, fully open both the high	according to circuit drawing.
OPEN VALVE STEMS G	ENTLY	Be sure to locate the power wiring and the signal wring well to avoid cross-disturbance.
until it hits against the sto	s, tu rn the hexagonal w renc ppe r. <u>DO NOT</u> try to fo rce t	DO NOLIUM ON THE DOWER UNIT YOU HAVE CHECKED CARETUNY
valve to open furthe r.	and than tighter it will all	The power cord type designation is H07RN-F.
12. Tighten valve caps by f proper tool.	and, then tighten it using the	
Note On Adding Refi	igerant	NOTE: 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
<ul> <li>wiring, vacuuming ar</li> <li><u>DO NOT</u> exceed the n of refrigerant or ove re can damage or impac</li> <li>Charging with unsuita explosions or accident refrigerant is used.</li> <li>Refrigerant containers Always use protective</li> <li><u>DO NOT</u> mix refrigerant</li> </ul>	naximum allowable quantity charge the system. Doing so t the unit 's function. able substances may cause s. Ensure that the app ropriate must be opened slowly. gear when charging the syste ants types.	10.1 Connect the cable
the added refrigerant a length of the liquid sid connection.(suitable for Table 9-1		e If there is no cover on the outdoor unit, disassemble
Liquid tube(mm)	R410A R22	
Ø6.35 orifice in the indoorunit orifice in the outdoorunit	0.022kg/m×(L-5) 0.030kg/m×(L-5) 0.011kg/m×(L-5) 0.015kg/m×L	Cover
orifice in the indoorunit	<u> </u>	
Ø9.52 orifice in the outdoorunit		Screw
orifice in the indoorunit	0.110kg/m×(L-5) 0.115kg/m×(L-5	
Ø12.7 orifice in the outdoorunit	0.060kg/m×(L-5) 0.060kg/m×L	
Ø15.9 orifice in the indoorunit	0.170kg/m×(L-5) 0.190kg/m×(L-5	) Fig. 10.1
orifice in the outdoorunit	0.085kg/m×(L-5) 0.095kg/m×L	
Ø19 orifice in the indoorunit orifice in the outdoorunit		
Usually for each 10m need a If a negative result is gotten f needs to be added nor remov	the length of the max height drop. bend. or R from Table 9-1, no refrigerant red. wice of R from Table 9-1 if the indoo	Protection Board



The Specification of Power(indoor power supply)

PHASE

The Specification of Power(independence power supply) ■ Table 10-5							
	MODEL	18	24	30~36	42~48	60	
POWER (indoor)	PHASE	1Phase	1Phase	1Phase	1Phase	1Phase	
	FREQUENCY AND VOLT	208-240 V	208-240V	208-240V	208-240V	208-240V	
CIRCUI	BREAKER/FUSE(A)	20/16	20/16	20/16	20/16	20/16	
POWER (outdoor)	PHASE	1Phase	1Phase	1Phase	1Phase	1Phase	
	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 10-6

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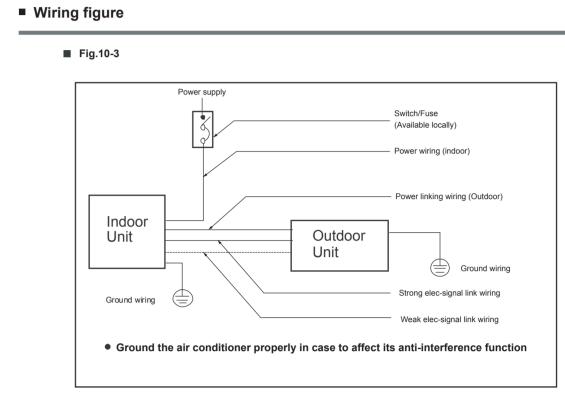
MODEL		30~36	42~60	30~36	42~60	
POWER (indoor)	PHASE	1Phase	1Phase	1Phase	1Phase	
	FREQUENCY AND VOLT	208-240V	208-240V	208-240V	208-240V	
CIRCUIT BREAKER/FUSE(A)		20/16	20/16	20/16	20/16	
POWER (outdoor)	PHASE	3Phase	3Phase	3Phase	3Phase	
	FREQUENCY AND VOLT	380-420 V	380-420 V	208-240V	208-240V	
CIRCUIT BREAKER/FUSE(A)		25/20	25/20	40/25	45/35	

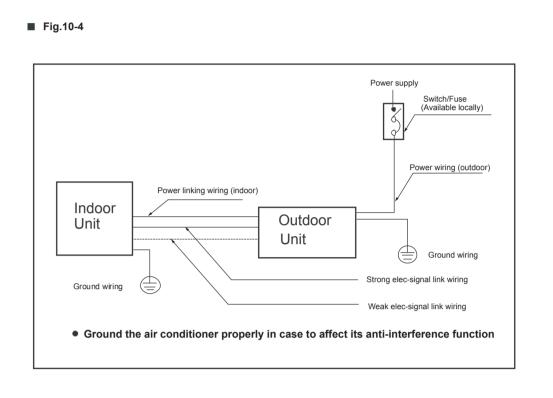
### The Specification of Power for the invert type air conditioner(independence power supply)

MODEL		18	24	30~36	42~48	60
POWER (indoor)	PHASE	1Phase	1Phase	1Phase	1Phase	1Phase
	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 (outdoor)	PHASE	1Phase	1Phase	1Phase	1Phase	1Phase
	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

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

CAUTION 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.





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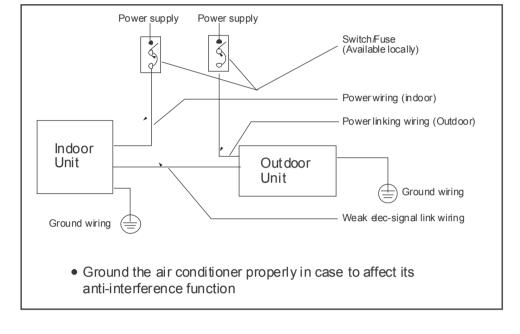
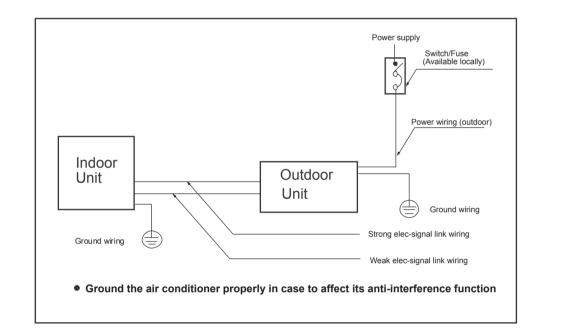


Fig.10-6



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. \_\_\_\_\_

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improvement. Consult with the sales agency or manufacturer for details.

The design and specifications are subject to change without prior notice for product

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