## 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

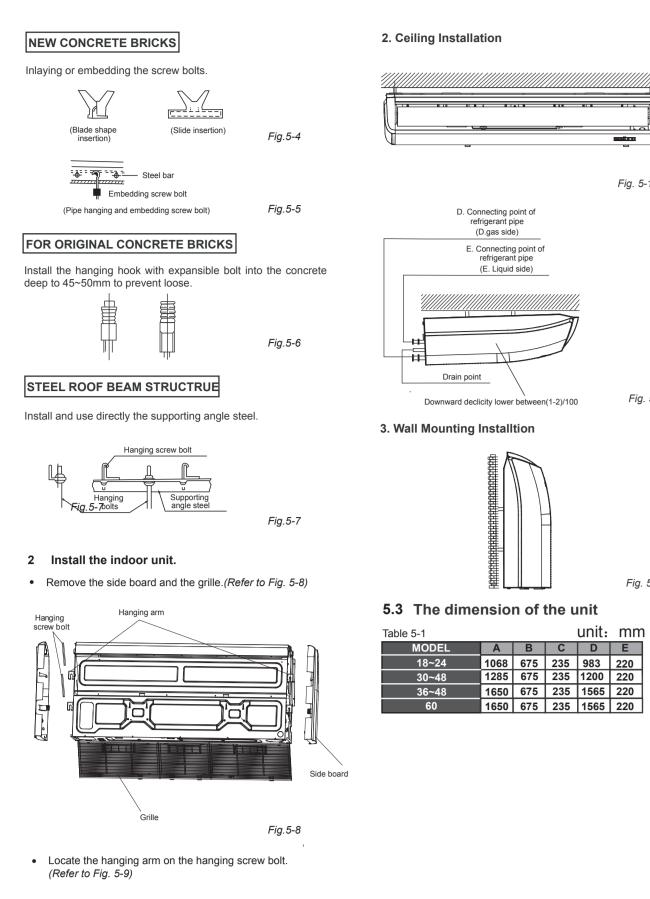
Fig. 5-10

Fig. 5-11

Fig. 5-12

installation manual

unit: mm



# Screw nut Washer

Fig.10-5

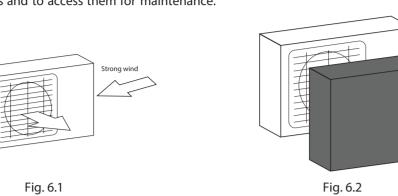
N Washer Hanging screw bolt Hanging arm

Fig.5-9

🗹 The pipe length between the outdoor and indoor unit Step 1: Select installation location. The outdoor unit should be installed in the location that abla 1 If possible, <u>DO NOT</u> install the unit whe re it is meets the following requirements: arnothing Place the outdoor unit as close to the indoor unit as 🗹 If possible, make su re the unit is located far away possible. 🗹 Ensure that the re is enough room for installation and maintenance. arDelta If the location is exposed to st rong winds (for 🗹 The air inlet and outlet must not be obstructed or exposed to strong wind. Description In the second seco 🗹 Install the indoor and outdoor units, cables and wi res 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.  $\mathbf{V}$  The installation a rea must be dry and well ventilated. 🗹 There must be enough room to install the connecting pipes and cables and to access them for maintenance.

6. OUTDOOR UNIT INSTALLATION

Outdoor Unit Installation Instructions



🗹 The a rea must be f ree of combustible gases and

may not exceed the maximum allowable pipe length.

from your neighbors' p roperty so that the noise f rom

example: near a seaside), the unit must be placed

at least 1 meter f rom televisions or radios to p revent

static or image distortion. Depending on the radio

waves, a 1 meter distance may not be enough to

against the wall to shelter it f rom the wind. If

necessary, use an awning. (See Fig. 6.1 & 6.2)

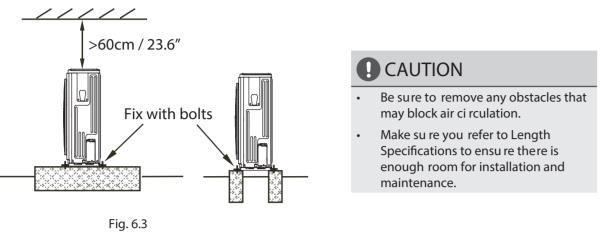
chemicals.

exposed to direct sunlight.

the unit will not disturb them.

eliminate all interfe rence.

Fig. 6.1 Step 2: Install outdoor unit. Fix the outdoor unit with anchor bolts (M10)



Split Type Outdo	oor Unit		Vertical D	ischarge
(Refer to Fig 6.4, 6.5, 6.6, 6.1	10 and Ta	able 6.1)	(Refer to	Fig 6.7, 6.8
Fig. 6.4	H			(Wall or
W		т	Fig. 6.7	
Fig. 6.5			Fig. 6.8	(Wall or
		В		
Fig. 6.6 Table 6.1: Length Specifications of Unit (unit: mm/i Outdoor Unit Dimensions W x H x D 760x590x285 (29.9x23.2x11.2)		e Outdoor mensions Distance B 290 (11.4)	>30cm / 11	<b></b>
810x558x310 (31.9x22x12.2)	549 (21.6)	325 (12.8)	-	Air inlet
845x700x320 (33.27x27.5x12.6)	560 (22)	335 (13.2)		
900x860x315 (35.4x33.85x12.4)	590 (23.2)	333 (13.1)		Fig.
945x810x395 (37.2x31.9x15.55)	640 (25.2)	405 (15.95)	Tabl	e 6.2: Length
990 x965 x345 (38.98 x38 x13.58)	624 (24.58)	366 (14.4)		e 6.2: Lengtr harge Outdo
938x1369x392 (36.93x53.9x15.43)	634 (24.96)	404 (15.9)		
900x1170x350 (35.4x46x13.8)	590 (23.2)	378 (14.88)	MODEL	w
800x554x333 (31.5x21.8x13.1)	514 (20.24)	340 (13.39)	18	554/21.8
845x700x262 (22 07x07 6x14 2)	540 (21 26)	350 (13.8)	24	554/21.8

946x810x420 (37.24x31.9x16.53) 673 (26.5) 403 (15.87)

946 x810 x410 (37.24 x31.9 x16.14) 673 (26.5) 403 (15.87)

952x1333x410 (37.5x52.5x16.14) 634 (24.96) 404 (15.9)

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

Split Type Outd	oor Unit		Vertical D	ischarge	Type Outd	oor Unit
(Refer to Fig 6.4, 6.5, 6.6, 6.	10 and Ta	able 6.1)	(Refer to	Fig 6.7, 6.8	, 6.9 and	Table 6.2)
Fig. 6.4				(Wall or o	obstacle) 	
			Fig. 6.7		·	
Fig. 6.5		Н	Fig. 6.8		W D D D D D D D D D D D D D D D D D D D	D
Fig. 6.6		В		(Wall or )))) >30cm / 11.8"	obstacle) Air inlet	
Table 6.1: Length Specifications o Unit (unit: mm		e Outdoor	>30cm / 11	.8"	>3	30cm / 11.8"
Outdoor Unit Dimensions W x H x D	Mounting D Distance A	imensions Distance B	>30cm / 11			Air inlet
760x590x285 (29.9x23.2x11.2)	530 (20.85)	290 (11.4)				
810x558x310 (31.9x22x12.2)	549 (21.6)	325 (12.8)		Air inlet	>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)			Specifications	
990 x965x345 (38.98x38x13.58)	624 (24.58)	366 (14.4)	Vertical Disc	harge Outdoo	or Unit (unit: m	m/inch)
938x1369x392 (36.93x53.9x15.43)	634 (24.96)	404 (15.9)			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	554/21.8 554/21.8	633/25 759/29.8	554/21.8 554/21.8
	4	400 (15 07)	50	JJ-7/21.0	1 3 3/ 2 3.0	JJ7/21.0

36 554/21.8 759/29.8 554/21.8

 36
 600/23.6
 633/25
 600/23.6

 36
 600/23.6
 759/29.8
 600/23.6

 36/48/60
 710/28
 759/29.8
 710/28

60 710/28 843/33 710/28

	against to keep refrigerant concentration from exceeding allowable safety limits in the event of refrigerant leakage.	The tem
PRECAUTIONS1	Contact the place of purchase for more information.	keep the tube.
INSTALLATION INFORMATION2	Excessive refrigerant in a closed ambient can lead to oxygen	
ATTACHED FITTINGS	deficiency.	After co refrigera
INSPECTING AND HANDLING THE UNIT4	Use the attached accessories parts and specified parts	Toxic gas
INDOOR UNIT INSTALLATION4	for installation.	room and
OUTDOOR UNIT INSTALLATION6	otherwise, it will cause the set to fall, water leakage, electrical shock and fire.	fan heate
CONNECT THE DRAIN PIPE		
INSTALL THE CONNECTING PIPE	Install at a strong and firm location which is able to withstand the set's weight.	Δ
AIR EVACUATION	If the strength is not enough or installation is not properly	
WIRING	done, the set will drop to cause injury.	Ground
TEST OPERATION	The appliance shall not be installed in the laundry.	Do not
IEST OPERATION		lightning
	Before obtaining access to terminals, all supply circuits must be disconnected.	groundin
		Be sure
	The appliance must be positioned so that the plug is	Failure t electric s
. PRECAUTIONS	accessible.	
	The enclosure of the appliance shall be marked by word,	Connect
	or by symbols, with the direction of the fluid flow.	unit wire You are
keep this manual where the operator can easily find them.	For electrical work, follow the local national wiring	power su
	standard, regulation and this installation instructions. An	While f
Read this manual attentively before starting up the units.	independent circuit and single outlet must be used. If electrical circuit capacity is not enough or defect in	manual,
For safety reason the operator must read the following	electrical work, it will cause electrical shock fire.	drainage
cautions carefully.	Use the specified cable and connect tightly and clamp	condens Improper
Installation must be performed in accordance with the requirement of NEC and CEC by authorized personnel only.	Use the specified cable and connect tightly and clamp the cable so that no external force will be acted on the terminal.	property
(Applicable to the North American area only)	If connection or fixing is not perfect, it will cause heat-up or	Install th
	fire at the connection.	and con from tel
	Wiring routing must be properly arranged so that control	interfere
The safty precautions listed here are divided into two categories.	board cover is fixed properly.	Dependir be suffici
WARNING	If control board cover is not fixed perfectly, it will cause heat-up at connection point of terminal, fire or electrical	
	shock.	The app
If you do not follow these instrutions exactly, the unit may	If the supply cord is damaged, it must be replaced by the	or infirm
cause property damage, personal injury or loss of life.	manufacturer or its service agent or a similarly qualified	Don't i
A	person in order to avoid a hazard.	circums
CAUTION	An all-pole disconnection switch having a contact	There
If you do not follow these instrutions exactly, the unit may	separation of at least 3mm in all poles should be	There
cause minor or moderate property damage, personal	connected in fixed wiring.	There
injury.	When carrying out piping connection, take care not to let	in the
	air substances go into refrigeration cycle.	The V
ter completing the installation, make sure that the unit operates operly during the start-up operation. Please instruct the customer	Otherwise, it will cause lower capacity, abnormal high pressure in the refrigeration cycle, explosion and injury.	In bus
how to operate the unit and keep it maintained. Also, inform		In kito
stomers that they should store this installation manual along with	Do not modify the length of the power supply cord or use	There
e owner's manual for future reference.	of extension cord, and do not share the single outlet with other electrical appliances.	
	Otherwise, it will cause fire or electrical shock.	
WARNING	Carry out the specified installation work after taking into	There
	account strong winds, typhoons or earthquakes.	Other
Be sure only trained and qualified service personnel to install, repair or service the equipment.	Improper installation work may result in the equipment falling	
,	and causing accidents.	

installation manual

installation manual

N, P) (See Fig. 6.10)

Drain Joint Installation

the unit.

heating mode.

hazard.

0

Table 10-1

Table 10-2

)WFR

Table 10-3

OWER +

Table 10-4

installation manual **1**4

MODEL

MODEL

MODEL

MODEL

PHASE

CIRCUIT BREAKER/FUSE(A)

FREQUENCY AND VOLT

PHASE

FREQUENCY AND VOLT

RCUIT BREAKER/FUSE(A

CIRCUIT BREAKER/FUSE(A)

PHASE

**CIRCUIT BREAKER/FUSE(A)** 

FREQUENCY AND VOLT

The Specification of Power(outdoor power supply)

Seal

 $\rightarrow$ 

Drain joint

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

electrical shock and fire.

and causing accidents.

PAGE

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CONTENTS

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the equipment.

Improper installation, repair, and maintenance may result in

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

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. emperature of refrigerant circuit will be high, please 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) completing the installation work, check that the having a rated residual operating current not exceeding jerant does not leak. 30mA, and disconnection must be incorporated in the c gas may be produced if the refrigerant leaks into the fixed wiring in accordance with the wiring rules. m and comes into contact with a source of fire, such as a heater, stove or cooker. \_\_\_\_\_ CAUTION nd the air conditioner. ot connect the ground wire to gas or water pipes, ning rod or a telephone ground wire.Inappropriate nding may result in electric shocks. ure to install an earth leakage breaker. re to install an earth leakage breaker may result in c shocks. nect the outdoor unit wires , then connect the indoor are not allowed to connect the air conditioner with the **2. INSTALLATION INFORMATION** r supply until the wiring and piping is done. following the instructions in this installation nual, install drain piping in order to ensure proper To install properly, please read this "installation manual" at nage and insulate piping in order to prevent first. roper drain piping may result in water leakage and The air conditioner must be installed by qualified persons. erty damage. When installing the indoor unit or its tubing, please follow Il the indoor and outdoor units, power supply wiring this manual as strictly as possible. connecting wires should be at least 1 meter away televisions or radios in order to prevent image If the air conditioner is installed on a metal part of the building, it must be electrically insulated according to the rference or noise. relevant standards to electrical appliances. nding on the radio waves, a distance of 1 meter may not ifficient enough to eliminate the noise. When all the installation work is finished, please turn on the power only after a thorough check. ppliance is not intended for use by young children firm persons without supervision. Regret for no further announcement if there is any change of this manual caused by product improvement. install the air conditioner in the following nstance: nere is petrolatum existing. INSTALLATION ORDER There is salty air surrounding (near the coast). Select the location; There is caustic gas (the sulfide, for example) existing in the air (near a hot spring). Install the indoor unit; e Volt vibrates violently (in the factories). Install the outdoor unit; n buses or cabinets. n kitchen where it is full of oil gas. Install the connecting pipe ; here is strong electromagnetic wave existing. Connect the drain pipe; here are inflammable materials or gas. Wiring; here is acid or alkaline liquid evaporating. Test operation. Other special conditions.

NOTE: The minimum distance between the outdoor Notes On Drilling Hole In Wall

You must drill a hole in the wall for the refrigerant piping,

1. Determine the location of the wall hole based on the

2. Using a 65-mm (2.5") co re drill, drill a hole in the

NOTE: When drilling the wall hole, make su re

to avoid wires, plumbing, and other sensitive

protects the edges of the hole and will help seal it

The outlet has PTI screw bread, Please use sealing materials

CAUTION

condense dew, as well as the connections of the indoor unit.

• With the connection part to the indoor unit, please be noted not

When the declivity of the drain pipe downwards is over 1/100,

The total length of the drain pipe when pulled out traversely

1.5m~2m

shall not exceed 20m, when the pipe is over long, a prop stand

Bend 🗙

S shape

to impose pressure on the side of indoor unit pipes.

3. Place the protective wall cuff in the hole. This

when you finish the installation p rocess.

Install the drainpipe of the indoor unit

and pipe sheath(fitting) when connecting PVC pipes.

The drain pipe of indoor unit must be heat insulated, or it will

7. CONNECT THE DRAIN PIPE

and the signal cable that will connect the indoor and

location of the outdoor unit.

components.

sure there is no leakage.

there should not be any winding.

must be installed to prevent winding.

V

Put as deep as possible (about 10cm)

paving the ceiling.

30~36

1Phase 1Phase 1Phase 1Phase 1Phase

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

3Phase 3Phase 3Phase

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

25/20 40/25 45/35

1Phase 1Phase 1Phase 1Phase 1Phase

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

3Phase 3Phase 3Phase

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

20/16 40/30 60/40

42~60

25/20

24 30~36 42~48 60

30~36 42~60

\_\_\_\_\_

40/25 45/35

70/55

70/60

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

24

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

Drainage test

Downward declivity

lower t han 1/100 VP30

Check whether the drainpipe is unhindered.

New built house should have this test done before

Refer to the Fig.7-1 for the installation of the pipes.

Insulating Downward declivity material lower than 1/100

outdoor units.

wall.

2. Insert the drain joint into the hole in the base pan of • Hard PVC binder must be used for pipe connection, and make

unit and walls described in the installation guide does

unobstructed in at least two of the three directions (M,

Fig. 6.10

Before bolting the outdoor unit in place, you must install

1. Fit the rubber seal on the end of the drain joint that

the drain joint at the bottom of the unit. (See Fig. 6.11)

3. Rotate the drain joint 90° until it clicks in place

4. Connect a drain hose extension (not included) to

NOTE: Make su re the water drains to a safe location

Base pan hole of

outdoor unit

(B)

18

3Phase

380-420 V

12~18

30~36

3Phase

380-420 V

25/20

25/20

Seal

(A)

where it will not cause water damage or a slipping

the drain joint to redirect water f rom the unit during

will connect to the outdoor unit.

facing the f ront of the unit.

not apply to airtight rooms. Be su e to keep the unit

The appliance shall be installed in accordance with

If the refrigerant leaks during installation, ventilate the

#### 3. ATTACHED FITTINGS Please check whether the following fittings are of full scope. If there are some spare fittings , please restore them carefully. NAME SHAPE QUANTITY 1. Remote controller (on some models) 2. Remote controller holder (on some models) mote controller & Its Holde 6 MMP 2 . Mounting screw(ST2.9×10-C-H) 2 4. Alkaline dry batteries (AM4) 5. Owner's manual 1 1 \_\_\_\_\_ 6. Installation manual Others 1 7. Remote controller manual

5.	INDOOR UNIT INSTALLATION	
5.1	Installation place	
	(Refer to Fig.5-1, Fig.5-2 and Table 5-1 for specification.)	
	he indoor unit should be installed in a location that meets he following requirements:	
٠	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 Ø1 hanging screw bolts.
	≥35mm	The handling to the ceiling varies from the constructions, consult the construction person for the specific condition.
25mm		Do keep the ceiling flat. Consolidate the roof beam to ave possible vibration.
7		Cut off the roof beam.
		<ul> <li>Strengthen the place that has been cut off, and consolid tethe roof beam.</li> </ul>
7	Fig.5-1	After the selection of installation location, position the refrigera pipes, drain pipes, indoor & outdoor wires to the connecti places before hanging up the machine.
_		The installation of hanging screw bolts.
	CAUTION	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	Put the square timber traversely overthe roof beam, then in the hanging screw bolts.
	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.)	Timber over the beam
		Roof beam Ceiling

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

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

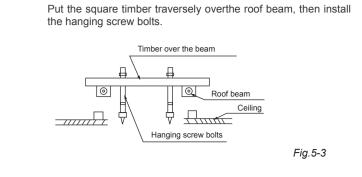
3 Move this unit as originally package as possible.

damage.

brought in.

gravity.

installation manual 4



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

After the selection of installation location, position the refrigerant

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

installation manual

25/82

10/32.8

15/49

20/65.6

Table 8.1: The Maximum Length And Drop

Height Based on Models. (Unit: m/ft.)

Capacity Length of (Btu/h) piping

 50Hz T1
 12K
 15/49
 8/26

 Condition/R22
 30/98.4
 10/32.8

Split Type 30K-42K 50/164 20/65.6

50Hz Vertical 12K 15/49 8/26

 R410A Inverter
 ≥15K - <24 K</th>
 30/98.4
 20/65.6

 Split Type
 ≥24K - <36 K</th>
 50/164
 25/82

 R410A Split Type
 18K-30K
 25/82
 15/49

 36K
 30/98.4
 20/65.6

condition (outdoor unit down) 36K 30/98.4

18K-24K 35/114

30K 30/98.4

50Hz/60Hz T3 30K 30/98.4 20/65.6

Condition (outdoor unit up) 42K 30/98.4 25/82 42K 50/164 30/98.4

Unit with quick igint 12K-18K 5/16.4 5/16.4

Discharge, 60Hz T1 condition/ R22

Split Type, Vertical 30K-60K 30/98.4 20/65.6

Discharge

50Hz/60Hz T3

joint

48K-60K 50/164

<15K 25/82 10/32.8

≥36K - ≤60K 65/213 30/98.4

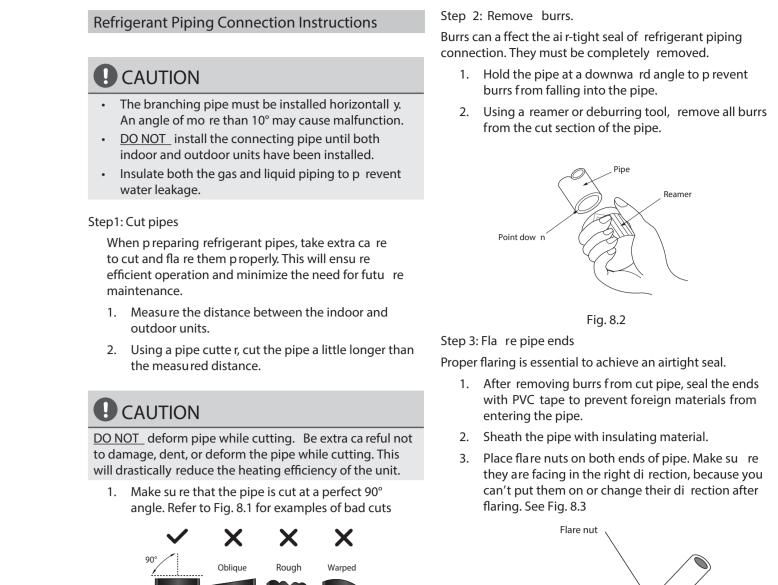
12K 15/49 8/26

48K-60K 50/164 25/82

42K-60K 50/164 25/82

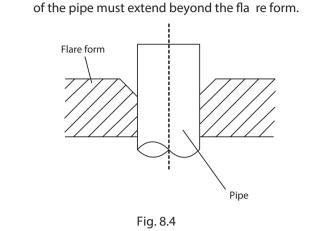
18K-24K 25/82 15/49

48K-60K 50/164 35/114





Copper pipe 🔍 Fig. 8.3 4. Remove PVC tape from ends of pipe when ready to perform flaring work. 5. Clamp fla re form on the end of the pipe. The end



4. INSPECTING AND HANDLING THE UNIT At delivery, the package should be checked and any damage should

5.2 Install the main body

be reported immediately to the the service agent. 111 111 When handling the unit, take into account the following: 1 Fragile, handle the unit with care. Keep the unit upright in order to avoid compressor

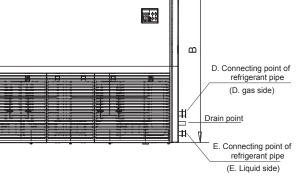


Fig.5-3

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installation manual

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<ol> <li>6. Place flaring tool on</li> <li>7. Turn the handle of the function of the f</li></ol>	ne flaring tool clo			9. AIR EVACUATION	$\leq$
the pipe is fully fla re with the dimensions			• Ensure to wrap insulation a round the piping. Di rect contact with the ba re piping may result in burns or	Safety P recautions	
able 8.2: PIPING EXTENSIO	N BEYOND FLAR	E FORM	<ul><li>frostbite.</li><li>Make su re the pipe is p roperly connected. Over</li></ul>		7
	e dimension (A) nit: mm/Inch) n. Max .	Flare shape	tightening may damage the bell mouth and under tightening may lead to leakage.	<ul> <li>Use a vacuum pump with a gauge reading lower than -0.1MPa and an air discharge capacity above 40L/min.</li> </ul>	Valve bod 9. Watch the Pre
6.4 14.2-17.2 N.m (144-176 kgf.cm) 8.3/	).3 8.3/0.3	90°±4	NOTE ON MINIMUM BEND RADIUS	<ul> <li>The outdoor unit does not need vacuuming. <u>DO</u></li> <li><u>NOT</u> open the outdoor unit 's gas and liquid stop</li> </ul>	that the re is n should read sl
9.5 32.7-39.9 N.m (333-407 kgf.cm) 12.4/	0.48 12.4/0.48		Carefully bend the tubing in the middle according to the	valves.	10. Remove the c
2.7 49.5-60.3 N.m (504-616 kgf.cm) 15.4,	0.6 15.8/0.6	R0.4~0. 8	diagram below. <u>DO NOT</u> bend the tubing more than 90° or more than 3 times.	<ul> <li>Ensure that the Compound Meter reads -0.1MPa or below after 2 hours. If after th ree hours of</li> </ul>	11. Using hexago pressure and l
5.9 61.8-75.4 N.m (630-770 kgf.cm) 18.6/	0.7 19/0.74	Fig. 8.5	Bend the pipe with thumb	operation and the gauge reading is still above -0.1MPa, check if the re is a gas leak or water inside	OPEN VALVE ST
97.2-118.6 N.m 9.1 (990-1210 kgf. 22.9, cm)	0.9 23.3/0.91	19.0.5		the pipe. If the re is no leakage, perform another evacuation for 1 or 2 hours.	When opening w until it hits again
2 (1117-1364 kgf. 27/1	06 27.3/1.07		MISSIM	• <u>DO NOT</u> use refrigerant gas to evacuate the system.	valve to open fu 12. Tighten valve
8. Remove the flaring t			$\land \land \land \land$	Evacuation Instructions	proper tool.
the end of the pipe f p 4: Connect pipes	or cracks and eve	n flaring.	min-radius 10cm (3.9″)	Before using manifold gauge and vacuum pump, read their operation manuals to familiarize yourself with how to use them properly.	Note On Add
<ol> <li>When connecting the of refrigeration oil to</li> <li>Align the center of the connect.</li> </ol>	the fla red ends	of the pipes.	<ul> <li>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 wires. While bundling these items togethe r, do not intertwine or cross the signal cable with any other wiring.</li> <li>7. Thread this pipeline through the wall and connect it to the outdoor unit.</li> </ul>	-76cmHg Low pressure valve Charge hose Vacuum pump Low pressure valve Fig. 9.1	<ul> <li><u>DO NOT</u> exc of refrigerant can damage</li> <li>Charging with explosions of refrigerant is</li> <li>Refrigerant of Always use p</li> <li><u>DO NOT</u> mix</li> </ul>
Indoor unit tubing 6. Tighten the fla re nu 4. Using a spanne r, gri 5. While firmly gripping	o the nut on the u	init tubing.	<ul> <li>8. Insulate all the piping, including the valves of the outdoor unit.</li> <li>9. Open the stop valves of the outdoor unit to start the flow of the refrigerant between the indoor and outdoor unit.</li> <li>CAUTION</li> </ul>	<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. Keep the High Pressure side closed.</li> <li>Turn on the vacuum pump to evacuate the system.</li> </ol>	The outdoor u the added ref length of the connection.(su Table 9-1 Liquid tube(r Ø6.35 orifice in the orifice in the
to tighten the fla re values in table 8.2. DTE: Use both a spanner nnecting or disconnectir	and a to rque w	rench when	Check to make su re there is no refrigerant leak after 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	<ol> <li>Further the vacuum particle of codedate the system.</li> <li>Run the vacuum for at least 15 minutes, or until the Compound Meter reads -76cmHG (-1x105Pa).</li> <li>Close the Low Pressure side of the manifold gauge, and turn off the vacuum pump.</li> </ol>	Ø9.52     orifice in the origin or origin or origin or or origin or
			manual).	<ul> <li>7. Wait for 5 minutes, then check that there has been no change in system pressure.</li> <li>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 there is a change in system p ressure, the re may be a gas leak.</li> </ul>	Ø15.9       orifice in the original distribution of the original distributice in the orification of the orification of the original

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, Flare nut	10. WIRING
	The appliance shall be installed in accordance wiring regulations.
Cap	The air conditioner should use separate powe rated voltage.
valve stem Fig. 9.2	The external power supply to the air condition have ground wiring, which is linked to the gro of the indoor and outdoor unit.
Pressure Gauge for one minute to make su re s no change in p ressure. The P ressure Gauge	The wiring work should be done by qualified pactors according to circuit drawing.
l slightly higher than atmospheric p ressure. e charge hose f rom the service port. gonal w rench, fully open both the high d low p ressure valves.	An all-pole disconnection device which has at sepaaration distance in all pole and a residual device (RCD) with the rating of above 10mA sl incorporated in the fixed wiring according to rule.
STEMS GENT LY	Be sure to locate the power wiring and the sig well to avoid cross-disturbance.
g valve stems, tu rn the hexagonal w rench ainst the stoppe r. <u>DO NOT</u> try to fo rce the	Do not turn on the power until you have check after wiring.
furthe r. ve caps by hand, then tighten it using the	The power cord type designation is H07RN-F.
	NOTE: Remark per EMC Directive 2004/108/EC.
lding Refrigerant	For to prevent flicker impressions during the start of
ION	<ul><li>compressor (technical process), following installation do apply.</li><li>1. The power connection for the air conditioner has the main power distribution. The distribution has to</li></ul>
t charging must be performed after cuuming and the leak test.	impedance, normally the required impedance read fusing point.
xceed the maximum allowable quantity Int or ove rcharge the system. Doing so	2. No other equipment has to be connected with this
e or impact the unit 's function.	<ol> <li>For detailed installation acceptance please refer to supplier, if restrictions do apply for products like w</li> </ol>
with unsuitable substances may cause	machines, air conditioners or electrical ovens.
or accidents. Ensure that the appropriate is used.	<ol><li>For power details of the air conditioner refer to the of the product.</li></ol>
containers must be opened slowly.	5. For any question contact your local dealer.
protective gear when charging the system. nix refrigerants types.	
5 <i>/</i> /	10.1 Connect the cable
or unit is factory charged with refrigerant. Calculate refrigerant according to the diameter and the	Remove the electric cover of the outdoor u If there is no cover on the outdoor unit, dis
the liquid side pipe of the outdoor unit/indoor unit (suitable for throttle outdoor unit)	the bolts from the maintenance board and
	protection board. (See Fig. 10.1, 10.2)
pe(mm) R410A R22	
the indoorunit 0.022kg/m×(L-5) 0.030kg/m×(L-5)	Cover
the outdoorunit 0.011kg/m×(L-5) 0.015kg/m×L	
the indoorunit 0.060kg/m×(L-5) 0.065kg/m×(L-5)	
the outdoorunit         0.030kg/m×(L-5)         0.030kg/m×L           the indoorunit         0.110kg/m×(L-5)         0.115kg/m×(L-5)	Screw
the outdoorunit 0.060kg/m×(L-5) 0.060kg/m×L	
the indoorunit 0.170kg/m×(L-5) 0.190kg/m×(L-5)	Fig. 10.1
the outdoorunit 0.085kg/m×(L-5) 0.095kg/m×L	
the indoorunit 0.250kg/m×(L-5) 0.290kg/m×(L-5)	1 march
the outdoorunit 0.125kg/m×(L-5) 0.145kg/m×L	
e above refer to the liquid tube. bends is up to the length of the max height drop.	Protection Board
10m need a bend. ult is gotten for R from Table 9-1, no refrigerant	
ed nor removed. erant will be twice of R from Table 9-1 if the indoor ottle assembly.	Fig. 10.2
oue assembly.	

. WIRING	Connect the connective cables to the terminals as identified with their respective mached numbers on the terminal block
The appliance shall be installed in accordance with national wiring regulations.	of indoor and outdoor units.
The air conditioner should use separate power supply with rated voltage.	<ul> <li>Re-install the cover or the protection board.</li> <li>10.2 The Specification of Power</li> </ul>
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.	(Refer to Table10-1~Table 10-8) <b>10.3 Wiring figure</b> (Refer to Fig.10-3~Fig.10-6)
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 ncorporated in the fixed wiring according to the national	11. TEST OPERATION
ule. Be sure to locate the power wiring and the signal wring well to avoid cross-disturbance.	1 The test operation must be carried out after the entire installation has been completed.
Do not turn on the power until you have checked carefully after wiring.	<ul> <li>Please confirm the following points before the test operation:</li> <li>The indoor unit and outdoor unit are installed properly.</li> </ul>
The power cord type designation is H07RN-F.	<ul> <li>Tubing and wiring are correctly completed.</li> <li>The refrigerant pipe system is leakage-checked.</li> </ul>
TE: Remark per EMC Directive 2004/108/EC.	The drainage is unimpeded.
to prevent flicker impressions during the start of the	The heating insulation works well.
npressor (technical process), following installation conditions	The ground wiring is connected correctly.
apply. 'he power connection for the air conditioner has to be done at ne main power distribution. The distribution has to be of a low	<ul> <li>The length of the tubing and the added stow capacity of the refrigerant have been recorded.</li> </ul>
npedance, normally the required impedance reaches at a 32 A using point.	The power voltage fits the rated voltage of the air conditioner.
to other equipment has to be connected with this power line.	<ul> <li>There is no obstacle at the outlet and inlet of the outdoor and indoor units.</li> </ul>
For detailed installation acceptance please refer to your power upplier, if restrictions do apply for products like washing	The gas-side and liquid-side stop valves are both opened.
nachines, air conditioners or electrical ovens.	The air conditioner is pre-heated by turning on the power.
For power details of the air conditioner refer to the rating plate of the product.	3 According to the user's requirement, install the remote controller frame where the remote controller's signal can reach the indoor unit smoothly.
or any question contact your local dealer.	4 Test operation
<b>1 Connect the cable</b> emove the electric cover of the outdoor unit. there is no cover on the outdoor unit, disassemble	Set the air conditioner under the mode of "COOLING" with the remote controller, and check the following points. If there is any malfunction, please resolve it according to the chapter "Troubleshooting" in the "Owner's Manual".
ne bolts from the maintenance boa rd and remove the rotection board. (See Fig. 10.1, 10.2)	<ul> <li>1) The indoor unit</li> <li>a. Whether the switch on the remote controller works well.</li> <li>b. Whether the buttons on the remote controller works well.</li> </ul>
Cover	<ul> <li>c. Whether the air flow louver moves normally.</li> <li>d. Whether the room temperature is adjusted well.</li> <li>e. Whether the indicator lights normally.</li> <li>f. Whether the temporary buttons works well.</li> <li>g. Whether the drainage is normal.</li> </ul>
Screw	<ul> <li>h. Whether there is vibration or abnormal noise during operation.</li> <li>I. Whether the air conditioner heats well in the case of the</li> </ul>
Fig. 10.1	HEATING/COOLING type.
	<ul> <li>2) The outdoor unit</li> <li>a. Whether there is vibration or abnormal noise during operation.</li> <li>b. Whether the generated wind, noise, or condensed of by the air conditioner have influenced your neighborhood.</li> <li>c. Whether any of the refrigerant is leaked.</li> </ul>
Protection Board	CAUTION
	A protection feature prevents the air conditioner from being activated for approximately 3 minutes when it is restarted immediately after shut off.

immediately after shut off.

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installation manual

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The Specification of Power(indoor power supply)

PHASE

Fig. 6.11

Fig. 7-1

The Spec	ification of Power(independence power supply)					
I	MODEL	18	24	30~36	42~48	60
POWER	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	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

8. INSTALL THE CONNECTING PIPE

All field piping must be completed by a licensed

technician and must comply with the local and

When the air conditioner is installed in a small

room, measu res must be taken to p revent the

refrigerant leakage. If the refrigerant leaks and

its concentration exceeds its p roper limit, haza rds

When installing the refrigeration system, ensure

that air, dust, moistu re or fo reign substances do

not enter the refrigerant circuit. Contamination

in the system may cause poor operating capacit y,

high pressure in the refrigeration cycle, explosion

refrigerant leakage during the installation. Leaked

Ventilate the area immediately if there is

refrigerant gas is both toxic and flammable.

Ensure there is no refrigerant leakage after

Ensure that the length of the refrigerant pipe, the number

outdoor units meets the requirements shown in Table 8.1:

of bends, and the d rop height between the indoor and

completing the installation work.

Notes On Pipe Length and Elevation

refrigerant concentration in the room from

exceeding the safety limit in the event of

due to lack of oxygen may result.

Safety P recautions

or injury.

national regulations.

WARNING

Table 10-6

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

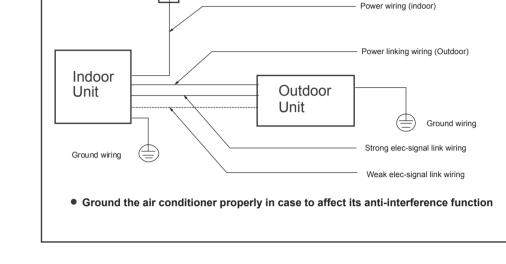
### The Specification of Power for the invert type air conditioner(independence power supply)

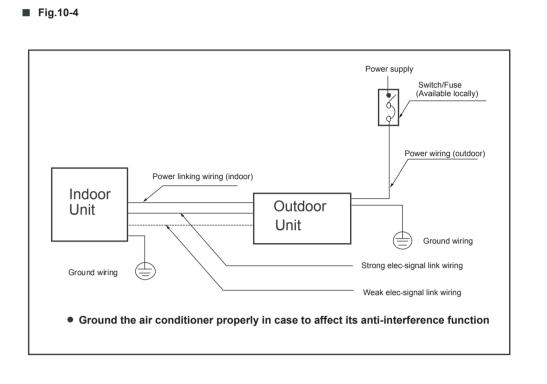
Table 10-7								
MODEL		MODEL		18	24	30~36	42~48	60
POWER	PHASE	1Phase	1Phase	1Phase	1Phase	1Phase		
(indoor)	FREQUENCY AND VOLT	220-240 V	220-240V	220-240V	220-240V	220-240V		
CIRCUIT BREAKER/FUSE(A)		15/10	15/10	15/10	15/10	15/10		
POWER PHASE		1Phase	1Phase	1Phase	1Phase	1Phase		
(outdoor)	FREQUENCY 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		
						•		

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

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. Wiring figure Fig.10-3 Power supply Switch/Fuse (Available locally) Power wiring (indoor) Power linking wiring (Outdoor) Indoor

CAUTION





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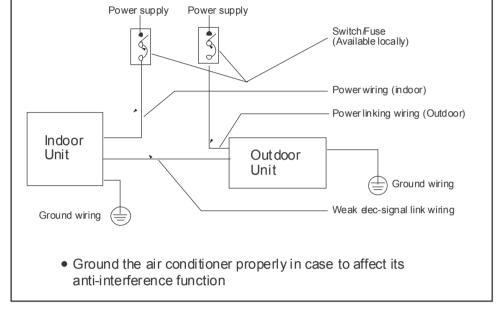
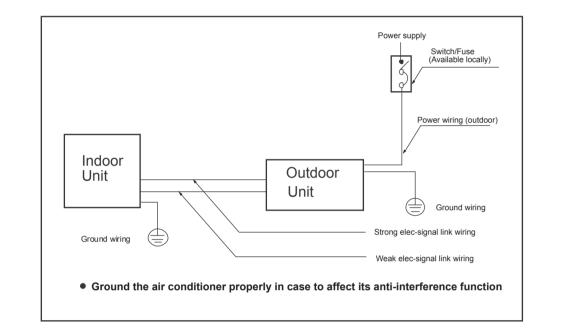


Fig.10-6



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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.

> installation manual installation manual

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