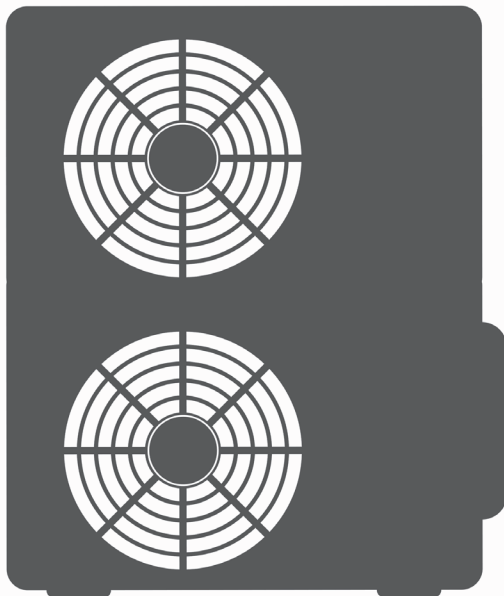




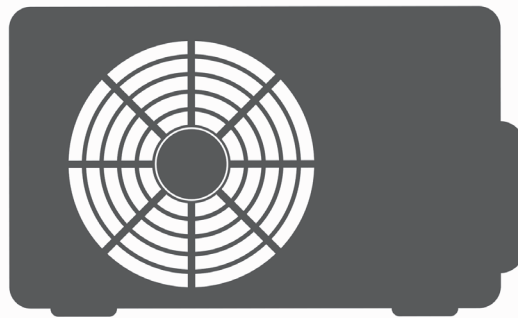
AIR CONDITIONING SYSTEMS CONSOLE TYPE

- **INSTALLATION MANUAL**
- **ΕΓΧΕΙΡΙΔΙΟ ΕΓΚΑΤΑΣΤΑΣΗΣ**
- **MANUAL DE INSTALARE**



MODELS:

V4MLI-12/V4MLO-12
V4MLI-18/V4MLO-18



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

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1. PRECAUTIONS

- Be sure to be in conformity with the local, national and international laws and regulations.
- Read "PRECAUTIONS" carefully before installation.
- The following precautions include important safety items. Observe them and never forget.
- Keep this manual with the owner's manual in a handy place for future reference.
- Installation must be performed in accordance with the requirement of NEC and CEC by authorized personnel only. (Applicable to the North American area only)

The safety precautions listed here are divided into two categories. In either case, important safety information is listed which must be read carefully.



WARNING

Failure to observe a warning may result in death.



CAUTION

Failure to observe a caution may result in injury or damage to the equipment.

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 the owner's manual for future reference.



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.

Install according to this installation instructions strictly. If installation is defective, it will cause water leakage, electrical shock 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 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.

The appliance shall not be installed in the laundry.

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

The appliance must be positioned so that the plug is accessible.

The enclosure of the appliance shall be marked by word, or by symbols, with the direction of the fluid flow.

For electrical work, follow the local national wiring standard, regulation and this installation instructions. An independent circuit and single outlet must be used.

If electrical circuit capacity is not enough or defect in electrical work, it will cause electrical shock fire.

Use the specified cable and connect tightly and clamp the cable so that no external force will be acted on the terminal.

If connection or fixing is not perfect, it will cause heat-up or fire at the connection.

Wiring routing must be properly arranged so that control board cover is fixed properly.

If control board cover is not fixed perfectly, it will cause heat-up at connection point of terminal, fire or electrical shock.

If the supply cord is damaged, it must be replaced by the manufacture or its service agent or similarly qualified person in order to avoid a hazard.

An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.

When carrying out piping connection, take care not to let air substances go into refrigeration cycle.

Otherwise, it will cause lower capacity, abnormal high pressure in the refrigeration cycle, explosion and injury.

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.

If the refrigerant leaks during installation, ventilate the area immediately.

Toxic gas may be produced if the refrigerant comes into the place contacting with fire.

The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.

After completing the installation work, check that the refrigerant does not leak.

Toxic gas may be produced if the refrigerant leaks into the room and comes into contact with a source of fire, such as a fan heater, stove or cooker.



CAUTION

Ground the air conditioner.

Do not connect the ground wire to gas or water pipes, lightning rod or a telephone ground wire. Incomplete grounding may result in electric shocks.

Be sure to install an earth leakage breaker.

Failure to install an earth leakage breaker may result in electric shocks.

Connect the outdoor unit wires , then connect the indoor unit wires.

You are not allow to connect the air conditioner with the power source until wiring and piping the air conditioner 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 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 locations:

- There is petrolatum existing.
- There is salty air surrounding (near the coast).
- 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.

The appliance shall be installed in accordance with national wiring regulations.

Do not operate your air conditioner in a wet room such as a bathroom or laundry room.

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.

2. INSTALLATION INFORMATION

- To install properly, please read this "installation manual" at first.
 - The air conditioner must be installed by qualified persons.
 - When installing the indoor unit or its tubing, please follow this manual as strictly as possible.
 - 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.
 - When all the installation work is finished, please turn on the power only after a thorough check.
 - Regret for no further announcement if there is any change of this manual caused by product improvement.
-

INSTALLATION ORDER

- Select the location;
- Install the indoor unit;
- Install the outdoor unit;
- Install the connecting pipe ;
- Connect the drain pipe;
- Wiring;
- Test operation.

3. ACCESSORIES

Please check whether the following fittings are of full scope. If there are some spare fittings , please restore them carefully.

Table 3-1

	NAME	SHAPE	QUANTITY
Installation fittings	1.Hook		2
	2. Remote controller		1
Remote controller & Its Frame	3. Frame		1
	4. Mounting screw(ST2.9×10-C-H)		2
	5. Alkaline dry batteries (AM4)		2
	6. Owner's manual		1
Others	7. Installation manual		1
	8 .Transfer connector($\phi 9.52$ - $\phi 12.7$) (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)
	9. Magnetic ring (Hitch on the communication cable and wind for two circles.)		1 (on some models)
	10. Red short connected wire (Applied to the W/L pin of outdoor unit terminal block be short-circuited.)		1 (on some models)

Cautions on remote controller installation:

- Never throw or beat the controller.
- Before installation, operate the remote controller to determine its location in a reception range.
- Keep the remote controller at least 1m apart from the nearest TV set or stereo equipment. (it is necessary to prevent image disturbances or noise interferences.)
- Do not install the remote controller in a place exposed to direct sunlight or close to a heating source, such as a stove.
- Note that the positive and negative poles are right positions when loading batteries.
- This manual is subject to changes due to technological improvement without further notices.

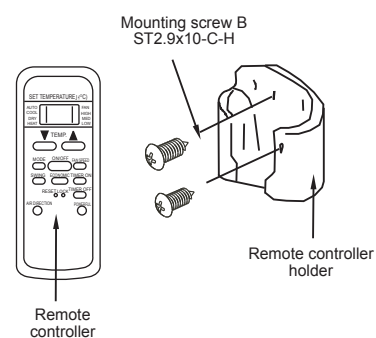


Fig.3-1

4. INSPECTING AND HANDLING THE UNIT

At delivery, the package should be checked and any damage should be reported immediately to the service agent.

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 damage.**
- 2 **Choose on before hand the path along which the unit is to be brought in.**
- 3 **Move this unit as originally package as possible.**
- 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.**

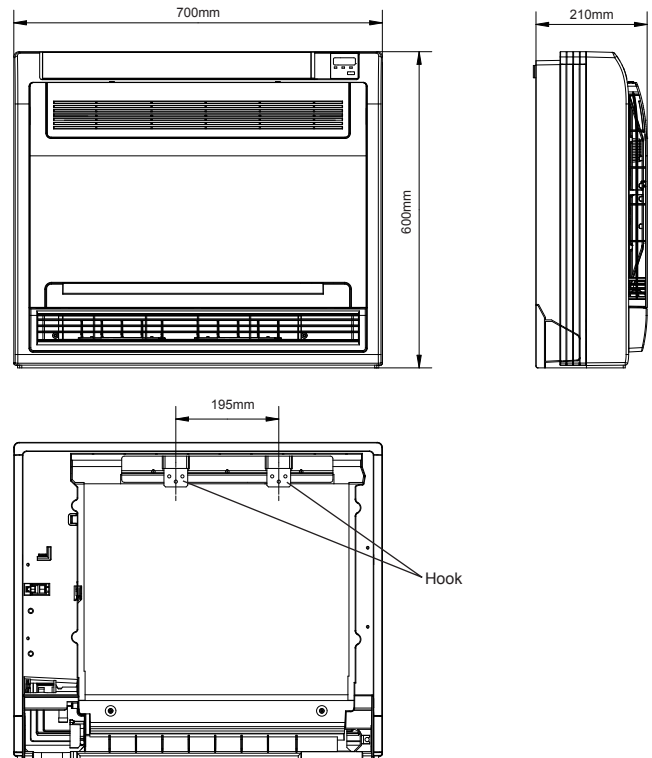


Fig.5-2

5. INDOOR UNIT INSTALLATION

5.1 Installation place

The indoor unit should be installed in a location that meets the following requirements:

- There is enough room for installation and maintenance.
(Refer to Fig.5-1 and 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.
- The connecting pipe and drainpipe could be extracted out easily.
- There is no direct radiation from heaters.



CAUTION

Keep indoor unit, outdoor unit, power supply wiring and transmission wiring at least 1 meter away from televisions and radios. This is to prevent image interference and noise in those electrical appliances. (Noise may be generated depending on the conditions under which the electric wave is generated, even if 1 meter is kept.)

5.2 Install the main body

- Fix the hook with tapping screw onto the wall.(Refer to Fig.5-3)

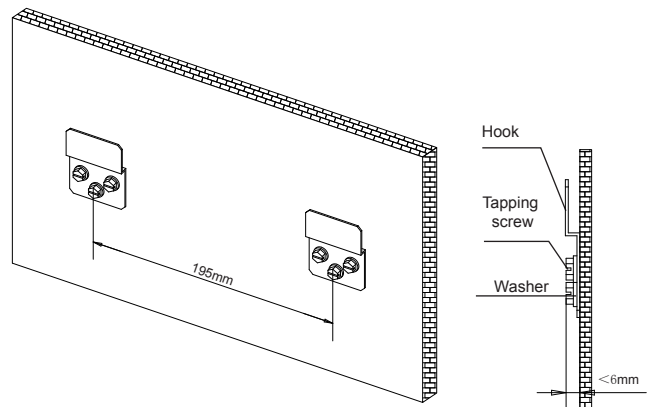


Fig.5-3

- Hang the indoor unit on the hook.
(The bottom of body can touch with floor or suspended, but the body must install vertically.)

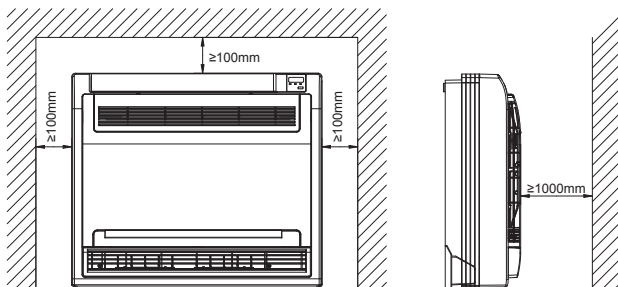


Fig.5-1

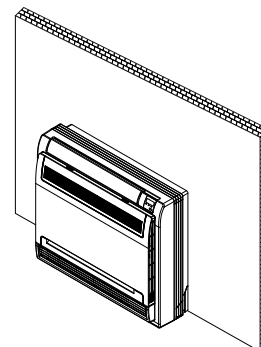


Fig.5-4

6. OUTDOOR UNIT INSTALLATION

6.1 Installation Place

■ The outdoor unit should be installed in the location that meets the following requirements:

- 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. (Refer to Fig. 6-3)

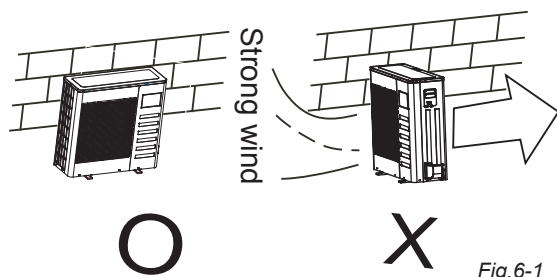


Fig. 6-1

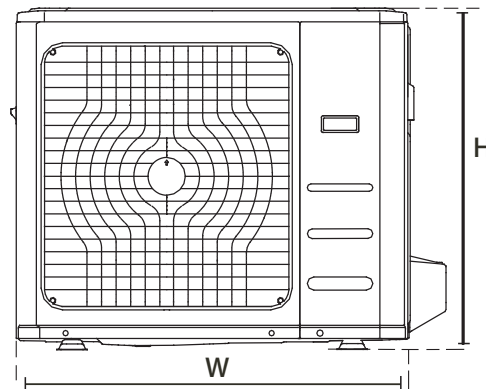


Fig. 6-2

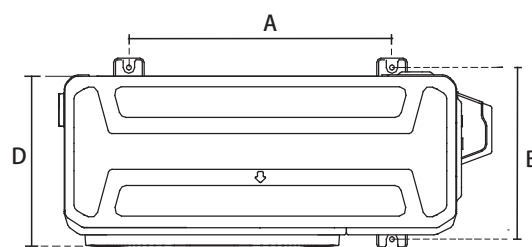


Fig. 6-3

Table 6.1: Length Specifications of Split Type Outdoor Unit (unit: mm/inch)

Outdoor Unit Dimensions W x H x D	Mounting Dimensions	
	Distance A	Distance B
780x540x250 (30.7x21.25x9.85)	549 (21.6)	276 (10.85)
760x590x285 (29.9x23.2x11.2)	530 (20.85)	290 (11.4)
810x558x310 (31.9x22x12.2)	549 (21.6)	325 (12.8)
845x700x320 (33.27x27.5x12.6)	560 (22)	335 (13.2)
770x555x300 (30.3x21.85x11.8)	487 (19.2)	298 (11.73)
800x554x333 (31.5x21.8x13.1)	514 (20.24)	340 (13.39)
845x702x363 (33.27x27.6x14.3)	540 (21.26)	350 (13.8)



NOTE

All the pictures in this manual are for explanation purpose only. They may be slightly different from the air conditioner you purchased (depend on model). The actual shape shall prevail.

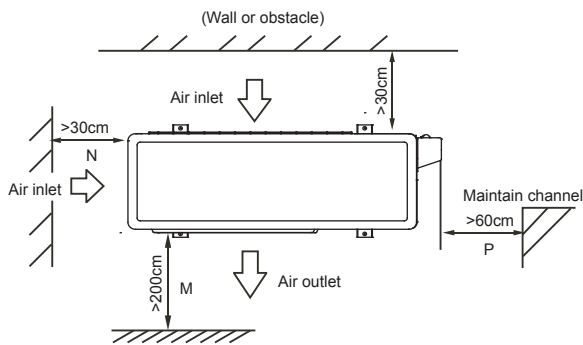


Fig.6-4

**NOTE**

All the pictures in this manual are for explanation purpose only. They may be slightly different from the air conditioner you purchased(depend on model).The actual shape shall prevail.

6.2 Moving and installation

- Since the gravity center of the unit is not at its physical center, so please be careful when lifting it with a sling.
- Never hold the inlet of the outdoor unit to prevent it from deforming.
- Do not touch the fan with hands or other objects.
- Do not lean it more than 45°, and do not lay it sidelong.
- Make concrete foundation according to the specifications of the outdoor units.(Refer to Fig.6-5)
- Fasten the feet of this unit with bolts firmly to prevent it from collapsing in case of earthquake or strong wind.(Refer to Fig.6-5)

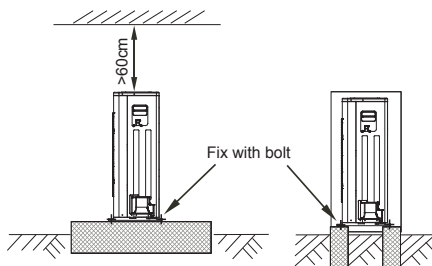


Fig.6-5

**NOTE**

All the pictures in this manual are for explanation purpose only. They may be slightly different from the air conditioner you purchased(depend on model).The actual shape shall prevail.

7. INSTALL THE CONNECTING PIPE

Check whether the height drop between the indoor unit and outdoor unit, the length of refrigerant pipe, and the number of the bends meet the following requirements:

Table 7-1

Capacity(Btu/h)	12000	16000~18000
The max height drop	5m	10m
The length of refrigerant pipe	Less than 10m	Less than 20m
The number of bends	Less than 5	Less than 8

7.1 The Procedure of Connecting Pipes

**CAUTION**

All field piping must be provided by a licensed refrigeration technician and must comply with the relevant local and national codes.

Do not let air, dust, or other impurities fall in the pipe system during the time of installation.

The connecting pipe should not be installed until the indoor and outdoor units have been fixed already.

Keep the connecting pipe dry, and do not let moisture in during installation.

Execute heat insulation work completely on both sides of the gas piping and the liquid piping. Otherwise, this can sometimes result in water leakage.

- 1 Drill a hole in the wall (suitable just for the size of the wall conduit), then set on the fittings such as the wall conduit and its cover.
- 2 Bind the connecting pipe and the cables together tightly with binding tapes.
Pass the bound connecting pipe through the wall conduit from outside. Be careful of the pipe allocation to do on damage to the tubing.
- 3 Connect the pipes. Refer to "How to Connect the pipes" for details.
- 4 Expel the air with a vacuum pump. Refer to "How to expel the air with a vacuum pump" for details.
- 5 open the stop valves of the outdoor unit to make the refrigerant pipe connecting the indoor unit with the outdoor unit in fluent flow.
- 6 Check the leakage. Check all the joints with the leak detector or soap water.
- 7 Cover the joints of the connecting pipe with the soundproof / insulating sheath (fittings), and bind it well with the tapes to prevent leakage.

**CAUTION**

Be sure to with insulating materials cover all the exposed parts of the flare pipe joints and refrigerant pipe on the liquid-side and the gas-side. Ensure that there is no gap between them.

Incomplete insulation may cause water condensation.

■ How to take indoor unit apart to connect the pipes

1 Open the front panel

- Slide the two stoppers on the left and right sides inward until they click. (Refer to Fig.7-1)

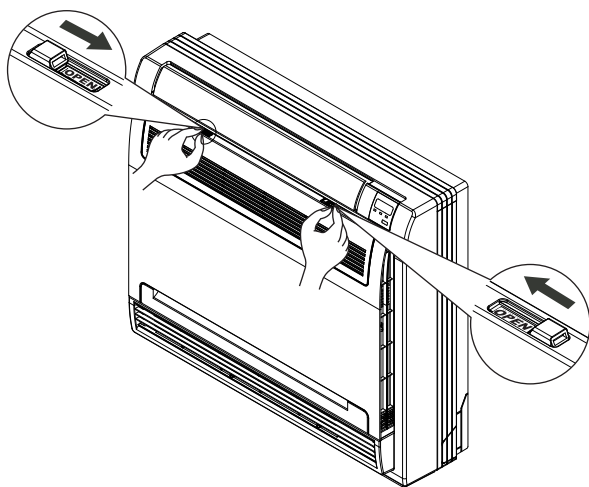


Fig.7-1

2 Remove the front panel .

- Remove the string. (Refer to Fig.7-2)
- Allowing the front panel to fall forward will enable you to remove it.

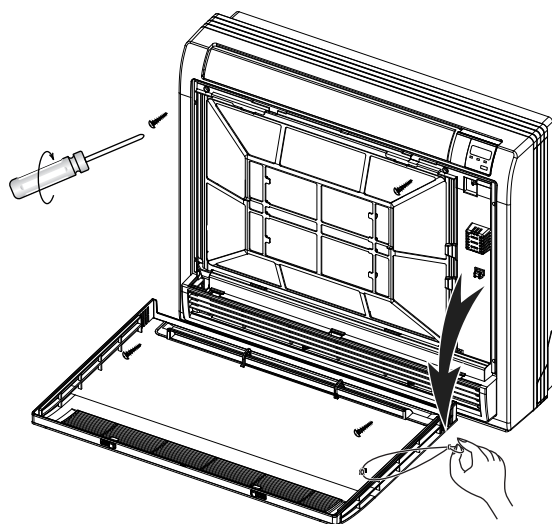


Fig.7-2

3 Remove the face plate .

- Remove the four screws. (Refer to Fig.7-2)
- Opening bottom of face plate for a angle that is 30 degrees, then the top of face plate will be take up. (Refer to Fig.7-3)

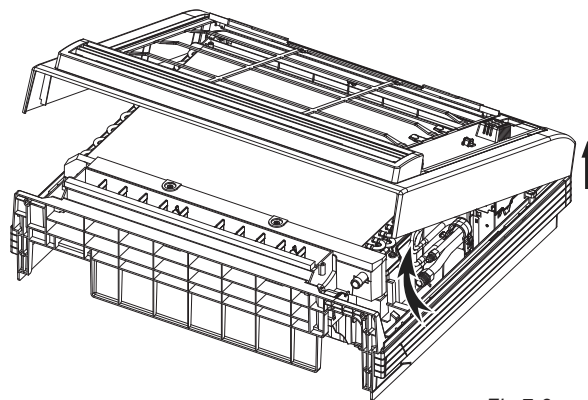


Fig.7-3

■ How to take outdoor unit apart to connect the pipes

Remove the water tray (Refer to Fig.7-4)

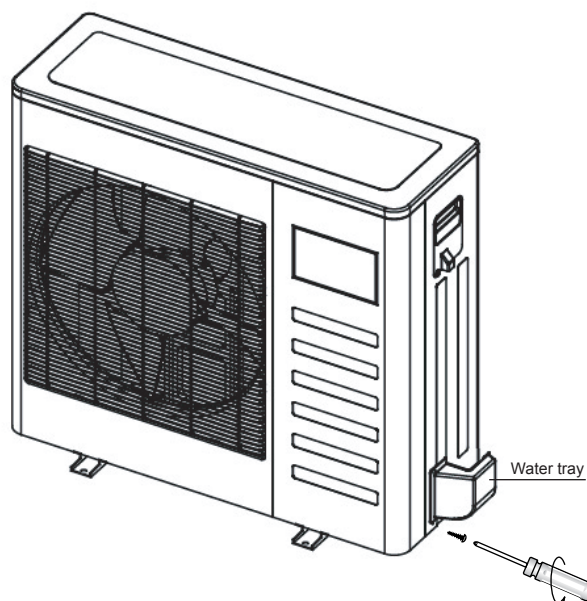


Fig.7-4

■ How to Connect the pipes

1 Flaring

- Cut a pipe with a pipe cutter. (Refer to Fig.7-5)

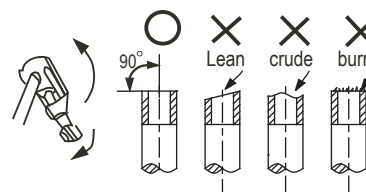


Fig.7-5

- Insert a flare nut into a pipe and flare the pipe.
- Refer to Table 7-2 for the dimension of flare nut spaces.

Table 7-2

Pipe gauge	Tightening torque	Flare dimension A		Flare shape
		min (mm)	max	
Ø6.35	15~16 N.m (153~163 kgf.cm)	8.3	8.7	
Ø9.52	25~26 N.m (255~265 kgf.cm)	12.0	12.4	
Ø12.7	35~36 N.m (357~367 kgf.cm)	15.4	15.8	
Ø15.9	45~47 N.m (459~480 kgf.cm)	18.6	19.0	
Ø19.1	65~67 N.m (663~684 kgf.cm)	22.9	23.3	

2 Connect the indoor unit at first, then the outdoor unit.

- Bend the tubing in proper way. Do not harm to them.

Bend the pipe with thumb



min-radius 100mm

Fig.7-6

- The bending angle should not exceed 90°.
- Bending position is preferably in the middle of the bendable pipe. The larger the bending radius the better it is.
- Do not bend the pipe more than three times.
- When connecting the flare nut, coat the flare both inside and outside with either oil or ester oil and initially tighten by hand 3 or 4 turns before tightening firmly.

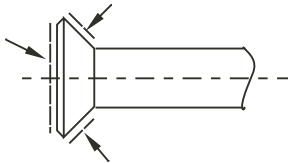


Fig.7-7

- Be sure to use both a spanner and torque wrench together when connecting or disconnecting pipes to /from the unit.

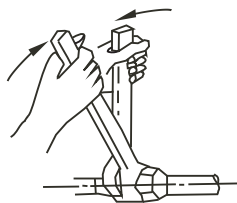


Fig.7-8



CAUTION

Too large torque will harm the bellmouthing and too small will cause leakage. Please determine the torque according to Table 4.

After the connecting work is finished, be sure to check that there is no gas leak.

■ How to expel the air with a vacuum pump

• Stop valve operation introduction

1. Opening stop valve

- Remove the cap and turn the valve counter clock-wise with the hexagon wrench.
- Turn it until the shaft stops. Do not apply excessive force to the stop valve. Doing so may break the valve body, as the valve is not a backseat type. Always use the special tool.
- Make sure to tighten the cap securely.

2. Closing stop valve

- Remove the cap and turn the valve clockwise with the hexagon wrench.
- Securely tighten the valve until the shaft contacts the main body seal.

Make sure to tighten the cap securely.

For the tightening torque, refer to the table below.

Table 7-3

Tightening torque N•M (Turn clockwise to close)				
Stop Valve size	Shaft (valve body)		Cap (Valve lid)	Maintenance nut
Ø6.35	5.4~6.6	Hexagonal wrench 4 mm	13.5~16.5	11.5~13.9
Ø9.52			18~22	
Ø12.7	8.1~9.9	Hexagonal wrench 6 mm	23~27	
Ø15.9	13.5~16.5		36~44	
Ø22.2	27~33	Hexagonal wrench 10 mm		
Ø25.4				



CAUTION

Always use a charge hose for service port connection.

After tightening the cap, check that no refrigerant leaks are present.

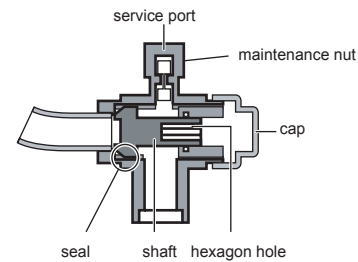


Fig.7-9

• Using the vacuum pump

- 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)
- Connect the joint of the charge hose with the vacuum pump.
- Open the Lo-lever of the manifold valve completely.
- 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 maintenance nut.
- When the pumping has finished, close the Lo-lever of the manifold valve completely and turn off the vacuum pump. Make pumping for 15 minutes or more and check that the compound meter indicates -76cmHg(-1X10⁵Pa)
- Loosen and remove the cap of stop valves A and B to open 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.

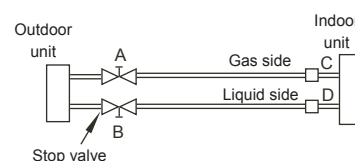


Fig.7-10

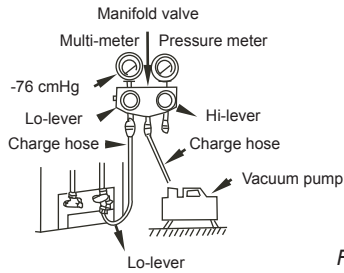


Fig. 7-11

7.2 Additional Refrigerant Charge



CAUTION

Refrigerant cannot be charged until field wiring has been completed.

Refrigerant may only be charged after performing the leak test and the vacuum pumping.

When charging a system, care shall be taken that its maximum permissible charge is never exceeded, in view of the danger of liquid hammer.

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. Some systems require additional charging of refrigerant depending on pipe lengths. The additional refrigerant to be charged can be calculated from the following formula:

The standard pipe length is vary according to the requirements of different area. For example, in North America area, the standard pipe length is 7.5m(25ft). While in the other areas, the standard pipe length is 5m(16ft).

Inverter R410A:

Liquid side: $\phi 6.35(1/4")$ (Total pipe length - standard pipe length) $\times 15g(0.16oz)/m(ft)$

Liquid side: $\phi 9.52(3/8")$ (Total pipe length - standard pipe length) $\times 30g(0.32oz)/m(ft)$



NOTE

If a negative result is gotten for R from the formula at right, no refrigerant needs to be added nor removed.

8. CONNECT THE DRAIN PIPE

■ Install the drainpipe of the indoor unit

The outlet has PTI screw thread, 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 transversely shall not exceed 20m, when the pipe is over long, a prop stand must be installed to prevent winding.

Refer to the figures on the right for the installation of the pipes.

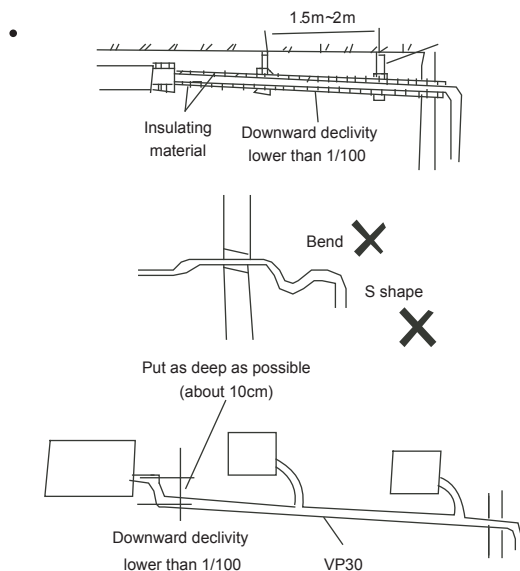


Fig. 8-1

■ Drainage test

- Check whether the drainpipe is unhindered.
- New built house should have this test done before paving the ceiling.

■ 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. 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. (Refer to Fig. 8-2)

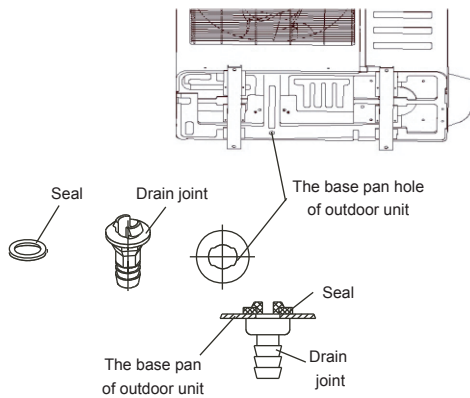


Fig.8-2



NOTE

All the pictures in this manual are for explanation purpose only. They may be slightly different from the air conditioner you purchased(depend on model).The actual shape shall prevail.

9. WIRING



CAUTION

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 separation 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 rule.

Be sure to locate the power wiring and the signal wiring well to avoid cross-disturbance.

Do not turn on the power until you have checked carefully after wiring.



NOTE

Remark per EMC Directive 89/336/EEC
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 line.
- 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.

- 4 For power details of the air conditioner refer to the rating plate of the product.
- 5 For any question contact your local dealer.

9.1 Connect the cable

- The installation bearer of sensing device rotated to another side, and then takes off cover of electrical box. (Take off the electrical box if the capacity is 18000btu/h as well as using network function.)
(Refer to Fig.9-1)

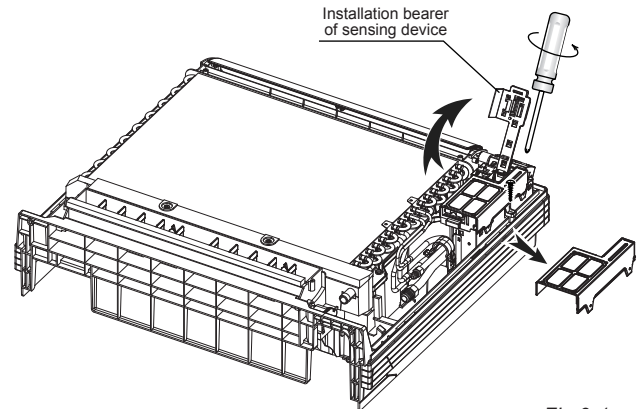


Fig.9-1

- Remove the electric cover of the outdoor unit. If there is no cover on the outdoor unit, disassemble the bolts from the maintenance board and remove the protection board. (See Fig.9-2)

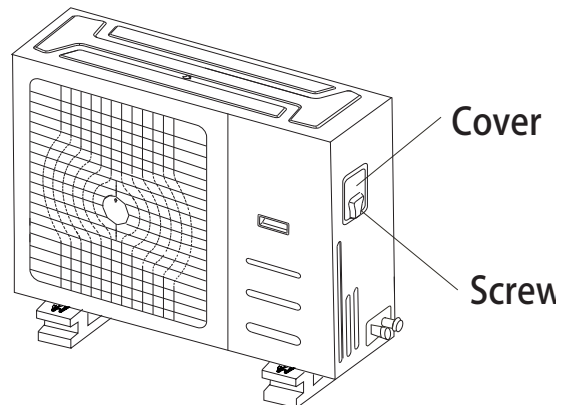


Fig.9-2



NOTE

All the pictures in this manual are for explanation purpose only. They may be slightly different from the air conditioner you purchased(depend on model).The actual shape shall prevail.

- Connect the connective cables to the terminals as identified with their respective matched numbers on the terminal block of indoor and outdoor units.

- Re-install the Indoor unit and outdoor unit

9.2 The Specification of Power

(Refer to Table 9-2)

9.3 Wiring figure

(Refer to Fig9-4~Fig9-7)

9.4 Network address set

(Only unit of 18000Btu/h haso the function that Network address set.)

Every air-conditioner in network has only one network address to distinguish each other. Address code of air-conditioner in LAN is set by code switches S1 & S2 on the Main Control Board of the indoor unit, and the set range is 0-63.

Table 9-1

Toggle switch set			Network address code
S1	S2		
	 ~ 	00~15	
	 ~ 	16~31	
	 ~ 	32~47	
	 ~ 	48-63	

10. TEST OPERATION

- 1 The test operation must be carried out after the entire installation has been completed.
- 2 Please confirm the following points before the test operation:
 - The indoor unit and outdoor unit are installed properly.
 - Tubing and wiring are correctly completed.
 - The refrigerant pipe system is leakage-checked.
 - The drainage is unimpeded.
 - The heating insulation works well.
 - The ground wiring is connected correctly.
 - The length of the tubing and the added stow capacity of the refrigerant have been recorded.
 - The power voltage fits the rated voltage of the air conditioner.
 - There is no obstacle at the outlet and inlet of the outdoor and indoor units.
 - The gas-side and liquid-side stop valves are both opened.
 - The air conditioner is pre-heated by turning on the power.
- 3 According to the user's requirement, install the remote controller frame where the remote controller's signal can reach the indoor unit smoothly.
- 4 Test operation
 - 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".
 - 1) The indoor unit
 - a. Whether the switch on the remote controller works well.
 - b. Whether the buttons on the remote controller works well.
 - c. Whether the air flow louver moves normally.
 - d. Whether the room temperature is adjusted well.
 - e. Whether the indicator lights normally.
 - f. Whether the temporary buttons works well.
 - g. Whether the drainage is normal.
 - h. Whether there is vibration or abnormal noise during operation.
 - i. Whether the air conditioner heats well in the case of the HEATING/COOLING type.
 - 2) The outdoor unit
 - a. Whether there is vibration or abnormal noise during operation.
 - 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.



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

Table 9-2

TYPE		(Cooling & Heating)	(Cooling & Heating)	
POWER	PHASE	1-PHASE	1-PHASE	
	FREQUENCY AND VOLT	208-240V~, 50Hz/60Hz	208-240V~, 50Hz/60Hz	
CIRCUIT BREAKER/FUSE (A)		20/16	20/16	
INDOOR UNIT POWER WIRING (mm ²)		——	3x1.0	
INDOOR/OUTDOOR CONNECTING WIRING (mm ²)	GROUND WIRING	1.5	2.5	
	INDOOR UNIT POWER WIRING	3X1.5	3x2.5	
	STRONG ELECTRIC SIGNAL WIRING	4X1.0	——	
	WEAK ELECTRIC SIGNAL WIRING	——	3X0.5	

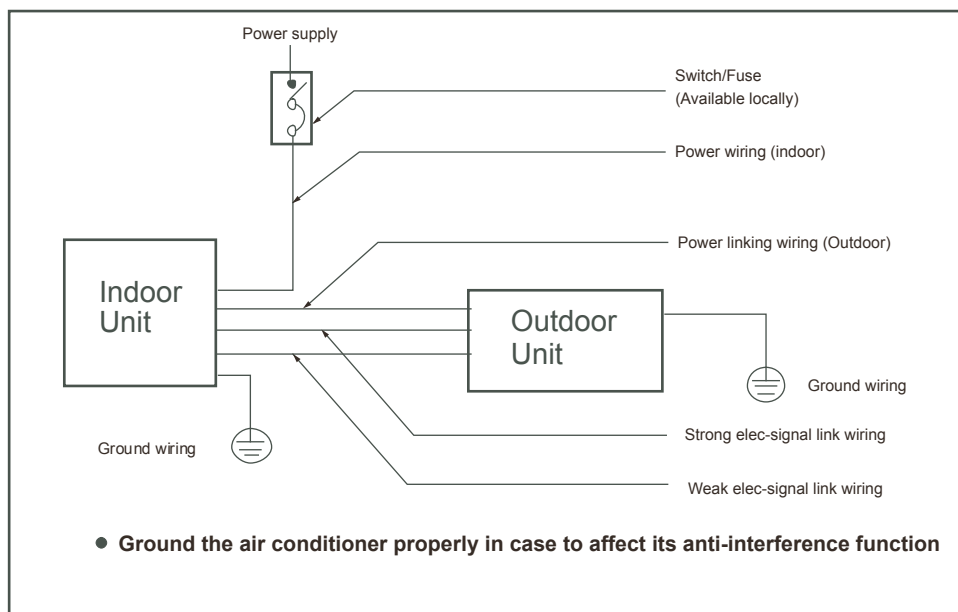


CAUTION

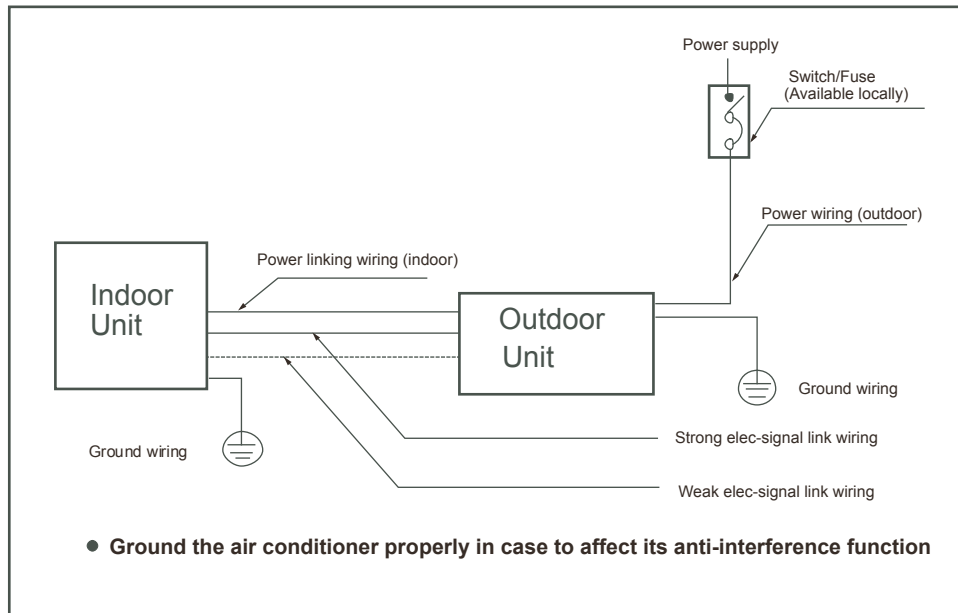
The power supply is included in the power supply above mentioned can be applied to the table.
Before obtaining access to terminals, all supply circuits must be disconnected.

Wiring figure

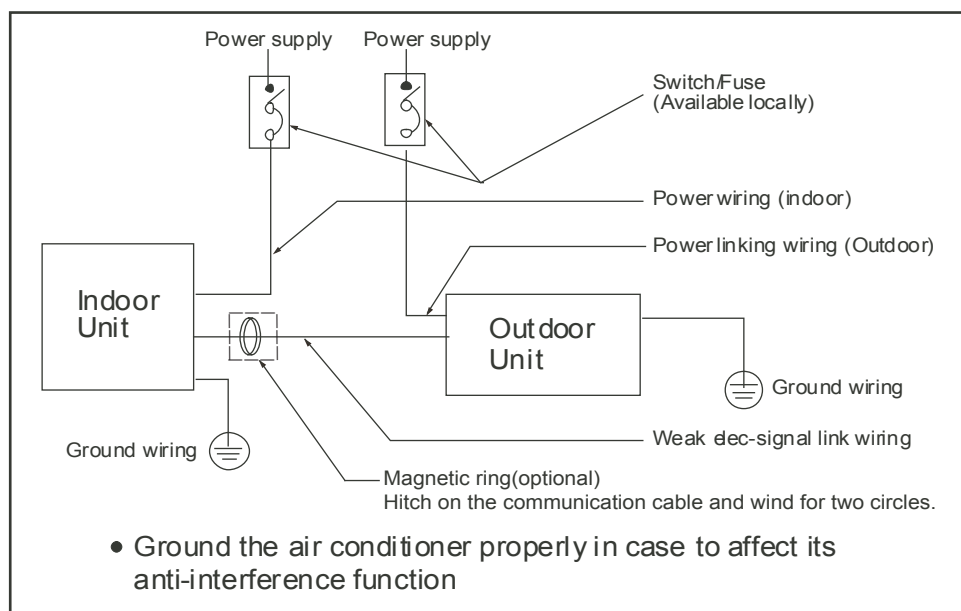
■ Fig.9-4



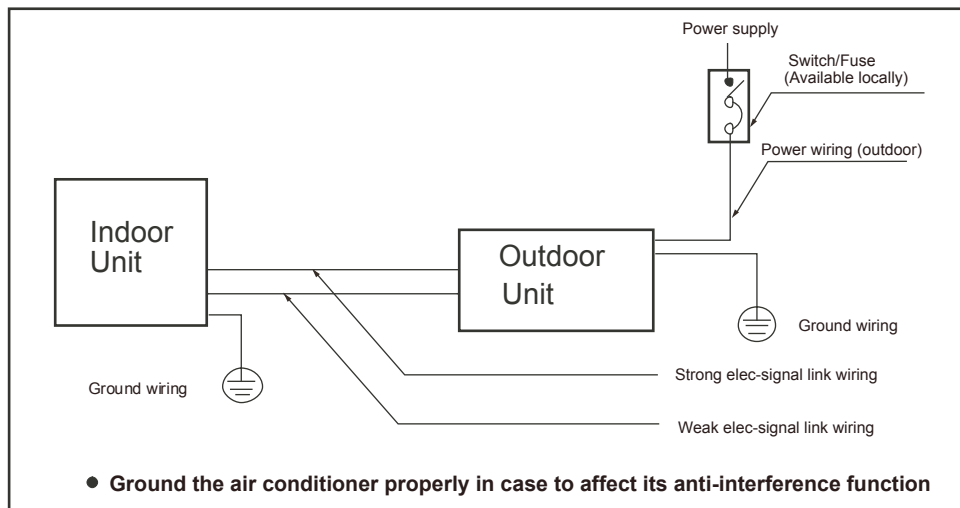
■ Fig.9-5



■ Fig.10-6



■ Fig.9-7



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 figures 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.

Activate your warranty.....

in **5**
simple
steps!



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απλά
βήματα!



Σκανάρετε εδώ
για τα έντυπα
των εγγυήσεων

- 1** Συνδεθείτε στο site της **Inventor** στον ακόλουθο σύνδεσμο
<http://www.inventoraircondition.gr/egiisi-inventor/>
- 2** Επιλέξτε τον τύπο του προϊόντος (κλιματιστικό ή συσκευή) για το οποίο θα ενεργοποιηθεί η εγγύηση
- 3** Επιλέξτε την εγγύηση που αντιστοιχεί στο προϊόν που έχετε στην κατοχή σας
- 4** Συμπληρώστε τα απαιτούμενα στοιχεία (κατόχου, εμπόρου και συσκευής) και πατήστε αποστολή
- 5** Θα λάβετε επιβεβαιωτικό μήνυμα στο e-mail σας για την ενεργοποίηση της εγγύησης

Για την υποβολή
ηλεκτρονικών εγγυήσεων
πληκτρολογήστε
την παρακάτω διεύθυνση

**[http://www.
inventoraircondition.gr/
egiisi-inventor/](http://www.inventoraircondition.gr/egiisi-inventor/)**

- Εάν η μονάδα λειτουργήσει σε σύστημα MULTI, ανατρέξτε στα αντίστοιχα εγχειρίδια εγκατάστασης & λειτουργίας που συνοδεύουν την εξωτερική μονάδα.

ΟΔΗΓΙΕΣ ΑΣΦΑΛΕΙΑΣ.....	1
ΠΛΗΡΟΦΟΡΙΕΣ ΕΓΚΑΤΑΣΤΑΣΗΣ.....	2
ΠΑΡΕΛΚΟΜΕΝΑ.....	3
ΕΛΕΓΧΟΣ ΚΑΙ ΜΕΤΑΦΟΡΑ ΤΗΣ ΜΟΝΑΔΟΣ.....	4
ΕΓΚΑΤΑΣΤΑΣΗ ΕΣΩΤΕΡΙΚΗΣ ΜΟΝΑΔΑΣ.....	4
ΕΓΚΑΤΑΣΤΑΣΗ ΕΞΩΤΕΡΙΚΗΣ ΜΟΝΑΔΑΣ.....	5
ΤΟΠΟΘΕΤΗΣΗ ΨΥΚΤΙΚΩΝ ΣΩΛΗΝΩΣΕΩΝ.....	6
ΣΥΝΔΕΣΗ ΑΓΩΓΟΥ ΑΠΟΣΤΡΑΓΓΙΣΗΣ.....	9
ΣΥΝΔΕΣΜΟΛΟΓΙΑ.....	10
ΔΟΚΙΜΑΣΤΙΚΗ ΛΕΙΤΟΥΡΓΙΑ.....	11

1. ΟΔΗΓΙΕΣ ΑΣΦΑΛΕΙΑΣ

- Βεβαιωθείτε ότι ακολουθείται όλους τους εθνικούς και διεθνείς νόμους και κανονισμούς.
- Πριν την εγκατάσταση διαβάστε προσεκτικά τις οδηγίες ασφαλείας.
- Οι παρακάτω οδηγίες ασφαλείας είναι εξαιρετικά σημαντικές. Μην τις ξεχνάτε.
- Φυλάξτε αυτό το εγχειρίδιο μαζί με το εγχειρίδιο χρήστη για μελλοντική αναφορά.

Οι οδηγίες ασφαλείας που αναφέρονται εδώ είναι χωρισμένες σε 2 κατηγορίες. Και στις δύο περιπτώσεις αναφέρονται σημαντικές οδηγίες ασφαλείας, τις οποίες θα πρέπει να μελετήσετε.



ΠΡΟΕΙΔΟΠΟΙΗΣΗ

Εάν αγνοήσετε αυτές τις οδηγίες μπορεί να προκληθεί τραυματισμός ή θάνατος.



ΠΡΟΣΟΧΗ

Η αγνόηση των συγκεκριμένων οδηγιών μπορεί να προκαλέσει τραυματισμό ή βλάβη στην μονάδα.

Αφού ολοκληρωθεί η εγκατάσταση, βεβαιωθείτε πως η μονάδα κατά την εκκίνηση λειτουργεί σωστά. Καθοδηγήστε τον χρήστη για τη σωστή λειτουργία της μονάδας. Επιπλέον, ενημερώστε τους χρήστες πως το συγκεκριμένο εγχειρίδιο πρέπει να φυλάγεται μαζί με το εγχειρίδιο χρήστη για μελλοντική αναφορά.



ΠΡΟΕΙΔΟΠΟΙΗΣΗ

Βεβαιωθείτε πως η εγκατάσταση ή οποιαδήποτε επισκευή στην κλιματιστική μονάδα έχει γίνει από εξειδικευμένο προσωπικό.

Ακατάλληλη εγκατάσταση, επισκευή ή συντήρηση μπορεί να προκαλέσει ηλεκτροπληξία, βραχυκύκλωμα, διαρροή, πυρκαγιά ή άλλη βλάβη στη μονάδα.

Βεβαιωθείτε πως η εγκατάσταση έχει γίνει σύμφωνα με το συγκεκριμένο εγχειρίδιο.

Εάν η εγκατάσταση είναι ελλιπής, θα προκληθεί διαρροή νερού, ηλεκτροπληξία και πυρκαγιά.

Όταν η κλιματιστική μονάδα εγκαθίσταται σε μικρό χώρο, φροντίστε σε περίπτωση κάποιας διαρροής ψυκτικού υγρού ή συγκέντρωσης ψυκτικού υγρού να μην υπερβούν τα επιτρεπτά όρια ασφαλείας.

Για περισσότερες πληροφορίες επικοινωνήστε με τον προμηθευτή σας. Η υπερβολική συγκέντρωση ψυκτικού υγρού μπορεί να προκαλέσει έλλειψη οξυγόνου.

Χρησιμοποιήστε για την εγκατάσταση τα παρελκόμενα και τα προδιαγραφμένα εξαρτήματα.

Σε αντίθετη περίπτωση μπορεί να προκληθεί πτώση της μονάδας, διαρροή νερού, ηλεκτροπληξία ή πυρκαγιά.

Εγκαταστήστε τη μονάδα σε σταθερή βάση η οποία είναι ικανή να αντέξει το βάρος της.

Εάν η βάση δεν είναι στιβαρή ή η εγκατάσταση δεν έχει γίνει σωστά, μπορεί να προκληθεί πτώση και τραυματισμός.

Η μονάδα δεν πρέπει να εγκαθίσταται σε χώρους με υψηλή υγρασία.

Πριν τη συνδεσμολογία, βεβαιωθείτε πως η μονάδα δεν είναι συνδεδεμένη με την παροχή ρεύματος.

Η συσκευή πρέπει να είναι τοποθετημένη έτσι ώστε το βύσμα παροχής ρεύματος να είναι προσβάσιμο.

Στη συσκευασία της μονάδας πρέπει να είναι σημειωμένη η κατεύθυνση ροής του ψυκτικού υγρού.

Για την ηλεκτρολογική σύνδεση θα πρέπει να ακολουθούνται οι εθνικοί κανονισμοί και οδηγίες. Θα πρέπει να χρησιμοποιηθεί ξεχωριστό κύκλωμα.

Εάν η χωρητικότητα του κυκλώματος δεν είναι επαρκής ή αν η ηλεκτρολογική σύνδεση δεν είναι σωστή, θα προκληθεί ηλεκτροπληξία ή πυρκαγιά.

Χρησιμοποιήστε προδιαγραφμένο καλώδιο και συνδέστε το σφιγκτά στην τερματική επαφή.

Εάν η σύνδεση δεν έχει γίνει σωστά, θα προκληθεί υπερθέρμανση ή πυρκαγιά.

Η οδήγηση των καλωδίων πρέπει να γίνει με τρόπο ώστε το κάλυμμα της πλακέτας να κλείνει σωστά.

Εάν το κάλυμμα δεν κλείνει σωστά, θα προκληθεί υπερθέρμανση, ηλεκτροπληξία ή πυρκαγιά.

Εάν φθαρεί το καλώδιο τροφοδοσίας, πρέπει να αντικατασταθεί από εξειδικευμένο προσωπικό, για την αποφυγή τραυματισμού.

Στο κύκλωμα θα πρέπει να τοποθετηθεί διακόπτης με απόσταση ανάμεσα στους πόλους τουλάχιστον 3mm.

Κατά τη σύνδεση των σωλήνων, βεβαιωθείτε ότι δεν έχει εισέλθει αέρας στο ψυκτικό κύκλωμα.

Μπορεί να προκληθεί πτώση απόδοσης, υψηλή πίεση στο ψυκτικό κύκλωμα, έκρηξη και τραυματισμός.

Μην κάνετε μετατροπές στο καλώδιο τροφοδοσίας και μην χρησιμοποιήτε μπαλαντέζα. Μην χρησιμοποιήτε το ίδιο ηλεκτρικό κύκλωμα και για άλλες συσκευές.

Μπορεί να προκληθεί ηλεκτροπληξία ή πυρκαγιά.

Εγκαταστήστε τη μονάδα αφού έχετε λάβει υπόψη σας καιρικά φαινόμενα, όπως δυνατούς ανέμους, τυφώνες ή σεισμούς.

Ελλιπής εγκατάσταση μπορεί να προκαλέσει πτώση της μονάδας και τραυματισμούς.

Εάν προκληθεί διαρροή ψυκτικού υγρού κατά την εγκατάσταση, αερίστε αμέσως τον χώρο.
Εάν το ψυκτικό υγρό έρθει σε επαφή με φωτιά μπορεί να παραχθεί τοξικό αέριο.

Η θερμοκρασία του ψυκτικού κυκλώματος θα είναι υψηλή.
Βεβαιωθείτε πως το καλώδιο ενδοεπικοινωνίας βρίσκεται σε μακρινή απόσταση από τον χαλκοσωλήνα.

Αφού ολοκληρωθούν οι εργασίες εγκατάστασης, ελέγξτε για τυχόν διαρροή ψυκτικού υγρού.
Εάν υπάρχει διαρροή ψυκτικού υγρού στον χώρο και έρθει σε επαφή με πηγή θερμότητας, όπως αερόθερμο, σόμπα ή κουζίνα, μπορεί να παραχθεί τοξικό αέριο.

Η εγκατάσταση της κλιματιστικής μονάδας πρέπει να γίνεται σύμφωνα με τους εθνικούς κανονισμούς.

Μην λειτουργείτε τη μονάδα σε χώρους με υψηλή υγρασία.

Θα πρέπει να τοποθετηθεί στο κύκλωμα ένας διακόπτης ο οποίος να έχει τουλάχιστον 3mm απόσταση σε κάθε πόλο και η διαρροή του ρεύματος να μην ξεπερνάει τα 10mA.
Θα πρέπει το ρεύμα στην διάταξη RCD να μην ξεπερνάει τα 30mA.



ΠΡΟΣΟΧΗ

Βεβαιωθείτε πως υπάρχει γείωση στη μονάδα.

Μην συνδέετε το καλώδιο γείωσης σε σωλήνες αερίου ή νερού, σε γραμμές ρεύματος ή τηλεφωνικές. Ελλιπής γείωση μπορεί να προκαλέσει ηλεκτροπληξία.

Βεβαιωθείτε πως έχει τοποθετηθεί ρελέ διαφυγής.

Η απουσία του μπορεί να προκαλέσει ηλεκτροπληξία.

Συνδέστε πρώτα τα καλώδια της εξωτερικής μονάδας και κατόπιν της εσωτερικής μονάδας.

Μην συνδέσετε την μονάδα με την παροχή ρεύματος αν δεν έχετε ολοκληρώσει την σύνδεση των σωληνώσεων και των καλωδίων.

Ακολουθώντας τις οδηγίες του παρόντος εγχειριδίου, τοποθετήστε τον αγωγό αποστράγγισης για την διασφάλιση της απορροής συμπυκνωμάτων και βεβαιωθείτε πως οι σωλήνες έχουν μονωθεί. Αν δεν υπάρχει αγωγός αποστράγγισης μπορεί να προκληθεί διαρρο νερού και φθορά περιουσίας.

Εγκαταστήστε την εσωτερική και εξωτερική μονάδα, το καλώδιο τροφοδοσίας και τα καλώδια επικοινωνίας τουλάχιστον σε 1m απόσταση από τηλεοράσεις ή ραδιόφωνα, για την αποφυγή παρεμβολών ή θορύβου.
Ανάλογα με τα ραδιοκύματα, το 1m μπορεί να μην είναι επαρκές για την αποφυγή θορύβου.

Η κλιματιστική μονάδα δεν πρέπει να χρησιμοποιείται από μικρά παιδιά και άτομα με ειδικές ανάγκες χωρίς επίβλεψη.

Μην τοποθετείτε την κλιματιστική μονάδα σε κάποια από τις παρακάτω θέσεις:

- Σε μέρος που μπορεί να υπάρχει κοντά βενζίνη.
- Κοντά σε ακτές.
- Σε περιοχές όπου ο αέρας περιέχει εύφλεκτα αέρια.
- Σε μέρη που υπάρχει απότομη αυξομείωση τάσης (σε εργοστάσια)
- Σε λεωφορία ή καμπίνες
- Σε κουζίνες που ο αέρας του περιέχει πολλά αέρια λαδιού
- Σε μέρος όπου υπάρχουν ισχυρά ηλεκτρομαγνητικά κύματα.
- Σε μέρος όπου υπάρχουν εύφλεκτα υλικά ή αέρια
- Σε μέρη όπου εξατμίζονται όξινα ή αλκαλικά υγρά
- Σε μέρη με άλλες ειδικές συνθήκες.

2. ΠΛΗΡΟΦΟΡΙΕΣ ΕΓΚΑΤΑΣΤΑΣΗΣ

- Για την σωστή εγκατάσταση της κλιματιστικής μονάδας, διαβάστε πρώτα το παρόν εγχειρίδιο εγκατάστασης
- Η κλιματιστική μονάδα πρέπει να εγκαθίσταται από εξειδικευμένο προσωπικό.
- Κατά την εγκατάσταση της εσωτερικής μονάδας ή τις σωληνώσεις της, ακολουθείστε αυστηρά τις οδηγίες του παρόντος εγχειριδίου.
- Εάν η κλιματιστική μονάδα εγκατασταθεί σε μεταλλικό μέρος ενός κτιρίου, θα πρέπει να είναι ηλεκτρικά μονωμένο σύμφωνα με τα ηλεκτρολογικά πρότυπα.
- Όταν ολοκληρωθεί η εγκατάσταση της μονάδας, ενεργοποιήστε τη αφού κάνετε έναν τελικό έλεγχο.
- Δεν θα υπάρξει ενημέρωση για οποιαδήποτε αλλαγή στο παρόν εγχειρίδιο λόγω βελτίωσης της κλιματιστικής μονάδας.

ΣΕΙΡΑ ΕΓΚΑΤΑΣΤΑΣΗΣ

- Επιλογή θέσης εγκατάστασης.
- Εγκατάσταση της εσωτερικής μονάδας.
- Εγκατάσταση της εξωτερικής μονάδας.
- Τοποθέτηση ψυκτικών σωληνώσεων.
- Σύνδεση του αγωγού αποστράγγισης.
- Ηλεκτρολογική σύνδεση.
- Δοκιμαστική λειτουργία.

3. ΠΑΡΕΛΚΟΜΕΝΑ ΕΞΑΡΤΗΜΑΤΑ

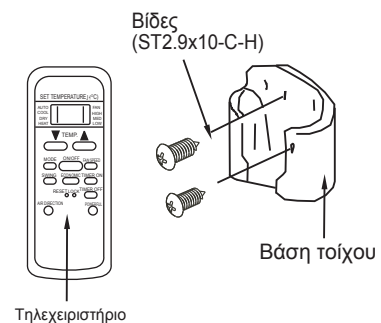
Ελέγξτε πως τα παρακάτω παρελκόμενα εξαρτήματα υπάρχουν. Εάν υπάρχουν και κάποια επιπλέον, φυλάξτε τα προσεκτικά.

Πίνακας 3-1

	Περιγραφή	Σχήμα	Ποσότητα
Εξαρτήματα εγκατάστασης	1. Άγκιστρο		2
Ασύρματο τηλεχειριστήριο & η βάση του	2. Ασύρματο χειριστήριο		1
	3. Βάση τοίχου		1
	4. Βίδες (ST2.9x10-C-H)		2
	5. Αλκαλικές μπαταρίες ξηρού τύπου		2
Άλλα	6. Εγχειρίδιο χρήστη		1
	7. Εγχειρίδιο εγκατάστασης		1
	8 .Αντάπτορας σύνδεσης (Φ9.52 - Φ12.7) (Περιλαμβάνονται στην εσωτερική μονάδα και χρειάζονται μόνο για σύνδεση σε σύστημα multi) (ΣΗΜΕΙΩΣΗ: Οι διαστάσεις σωληνώσεων διαφέρουν ανάλογα την εγκατάσταση. Για προσαρμογή σε διαφορετική διάσταση, μπορεί να απαιτηθεί η εγκατάσταση του αντάπτορα σύνδεσης στην εξωτερική μονάδα.)		1 (σε ορισμένα μοντέλα)
	9. Αντιπαρασητικός μαγνητικός δακτύλιος (Προσαρμογή στο καλώδιο επικοινωνίας, αφού γυρίσει 2 βόλτες.)		1 (σε ορισμένα μοντέλα)
	10. Κόκκινο κοντό καλώδιο σύνδεσης. (Προσαρμόζεται στο W/L στο θερματικό της εξωτερικής μονάδας.)		1 (σε ορισμένα μοντέλα)

Σημειώσεις για την εγκατάσταση του τηλεχειριστηρίου

- Ποτέ μην πετάτε ή χτυπάτε το τηλεχειριστήριο.
- Πρίν την εγκατάσταση του, λειτουργίστε το τηλεχειριστήριο για να καθορίσετε την θέση του βάσει της εμβέλειας μετάδοσης σήματος.
- Κρατήστε το τηλεχειριστήριο τουλάχιστον ένα μέτρο μακριά από τηλεοράσεις ή ηχοσυστήματα. (Είναι απαραίτητο για την αποφυγή παραμόρφωσης εικόνας ή παρεμβολές ήχου)
- Μην το εγκαθιστάτε σε σημείο με απευθείας έκθεση στον ήλιο ή κοντά σε πηγές θερμότητας.
- Παρατηρήστε τον σωστό προσανατολισμό των πόλων των μπαταριών κατά την τοποθέτησή τους στο τηλεχειριστήριο.
- Αυτό το εγχειρίδιο μπορεί να αλλάξει λόγω τεχνολογικής βελτίωσης χωρίς κάποια προηγούμενη ειδοποίηση.



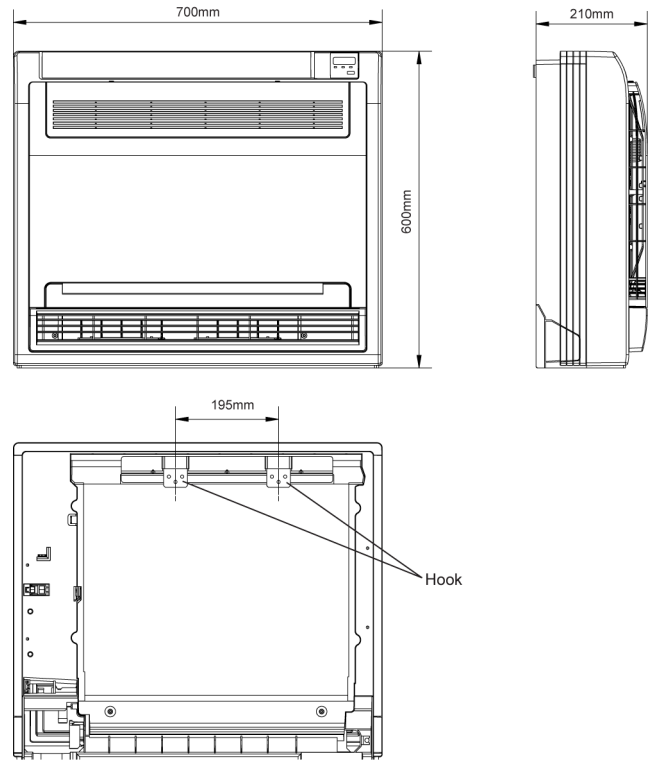
Εικ.3-1

4. ΕΛΕΓΧΟΣ ΚΑΙ ΜΕΤΑΦΟΡΑ ΤΗΣ ΜΟΝΑΔΟΣ

Κατά την παράδοση θα πρέπει να ελέγξετε τη συσκευασία και εάν υπάρχουν φθορές θα πρέπει να αναφερθούν άμεσα στον προμηθευτή.

Κάτα τη μεταφορά της μονάδας, λάβετε υπόψη τα παρακάτω:

- 1  Εύθραστο, μεταφέρετε τη μονάδα με προσοχή.
 Κρατήστε τη μονάδα όρθια, προς αποφυγή καταστροφής του συμπιεστή.
- 2 Επιλέξτε από πριν από ποιά διαδρομή θα μεταφέρετε την μονάδα.
- 3 Μεταφέρετε τη μονάδα με τη συσκευασία της
- 4 Κατά τη μεταφορά της μονάδας λάβετε υπόψη το κέντρο βάρους της και προσέξτε, έτσι ώστε να αποφύγετε φθορές.



Εικ.5-2

5. ΕΓΚΑΤΑΣΤΑΣΗ ΕΣΩΤΕΡΙΚΗΣ ΜΟΝΑΔΟΣ

5.1 Θέση εγκατάστασης

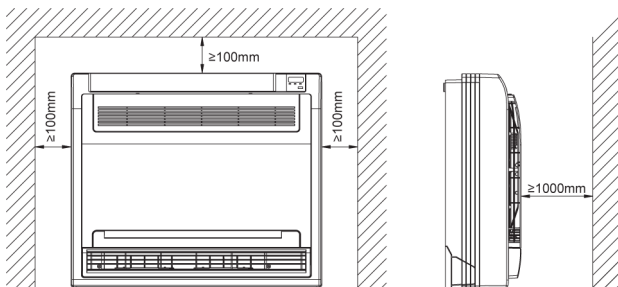
Η θέση εγκατάστασης πρέπει να ακολουθεί τις παρακάτω απαιτήσεις:

- Η οροφή είναι οριζόντια και μπορεί να αντέξει το βάρος της εσωτερικής μονάδας. (Ανατρέξτε στις εικόνες 5-1 και 5-2)
- Δεν παρεμποδίζονται η είσοδος και έξοδος του αέρα, ενώ η επιρροή από τον εξωτερικό αέρα είναι ελάχιστη.
- Η παροχή αέρα μπορεί να καλύψει όλο τον χώρο.
- Να είναι εύκολη η οδήγηση των ψυκτικών σωληνώσεων και του αγωγού αποστράγγισης.
- Δεν υπάρχει απευθείας ακτινοβολία από θερμαντικά σώματα.



ΠΡΟΣΟΧΗ

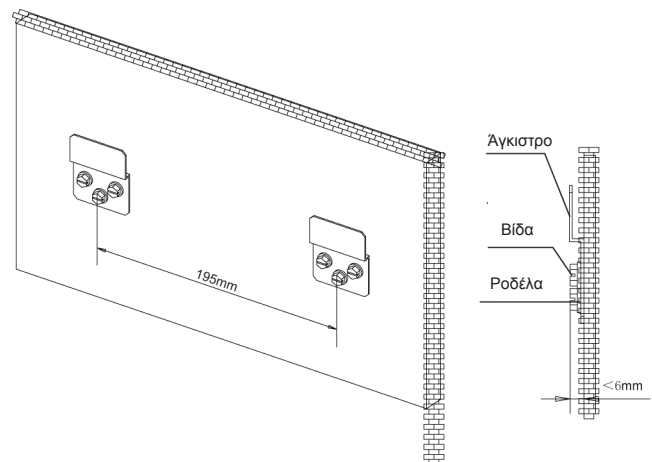
Εγκαταστήστε την εσωτερική και εξωτερική μονάδα, το καλώδιο τροφοδοσίας και τα καλώδια επικοινωνίας τουλάχιστον σε 1m απόσταση από τηλεοράσεις ή ραδιόφωνα, για την αποφυγή παρεμβολών ή θορύβου. (Ανάλογα με τα ραδιοκύματα, το 1m μπορεί να μην είναι επαρκές για την αποφυγή θορύβου.)



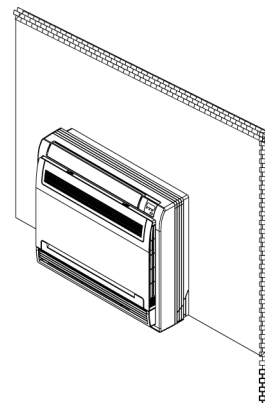
Εικ.5-1

5.2 Εγκατάσταση της εσωτερικής μονάδας

- Στερεώστε το άγκιστρο στον τοίχο με ούπα. (Ανατρέξτε στην εικόνα 5-3)



- Κρεμάστε την εσωτερική μονάδα στο άγκιστρο.
(Το κάτω μέρος της μονάδας μπορεί να ακουμπάει το πάτωμα, ή να είναι αναρτημένο στον τοίχο, αρκεί να βρίσκεται σε κάθετη θέση.)



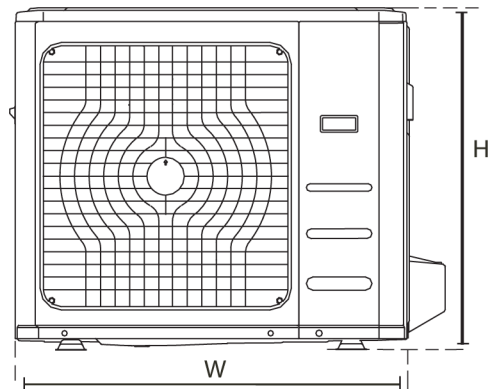
Εικ.5-4

6. ΕΓΚΑΤΑΣΤΑΣΗ ΕΞΩΤΕΡΙΚΗΣ ΜΟΝΑΔΟΣ

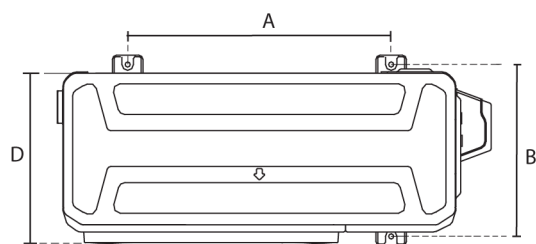
6.1 Θέση Εγκατάστασης

■ Η εξωτερική μονάδα θα πρέπει να εγκατασταθεί σε σημείο όπου τηρούνται τα παρακάτω:

- Υπάρχει επαρκής χώρος για την εγκατάσταση και συντήρηση της μονάδας.
- Δεν παρεμποδίζεται η εισαγωγή και εξαγωγή αέρα και το σημείο δεν είναι εκτεθειμένο σε ισχυρούς ανέμους.
- Το σημείο εγκατάστασης είναι στεγνό και καλά αεριζόμενο.
- Το δάπεδο είναι επίπεδο και οριζόντιο και αντέχει το βάρος της εξωτερικής μονάδας. Επίσης δεν πρέπει να παρουσιάζει οποιοδήποτε κραδασμό ή θόρυβο.
- Δεν ενοχλούνται οι γείτονες από το θόρυβο ή από τον εξερχόμενο αέρα.
- Υπάρχει πρόσβαση για την ψυκτική και ηλεκτρολογική εγκατάσταση.
- Δεν παρεμποδίζεται η εξαγωγή του αέρα.
- Σε περίπτωση διαρροής εύφλεκτου αερίου, δεν υπάρχει κίνδυνος πυρκαγιάς.
- Η απόσταση μεταξύ της εξωτερικής και της εσωτερικής μονάδας δεν υπερβαίνει την επιτρεπόμενη από τον κατασκευαστή.
- Σε περίπτωση που η θέση εγκατάστασης είναι εκτεθειμένη σε ισχυρούς ανέμους, π.χ. παραθαλάσσιες περιοχές, βεβαιωθείτε ότι η θέση της εξωτερικής μονάδας είναι παράλληλη σε τοίχο, ή ότι υπάρχει προστατευτικό (π.χ. στηθαίο) πριν από τη μονάδα. (Ανατρέξτε στην εικόνα 6-1).
- Εφόσον υπάρχει δυνατότητα, μην τοποθετείτε την μονάδα σε θέση όπου υπάρχει απευθείας έκθεση στον ήλιο.
- Εάν χρειάζεται, τοποθετήστε προστατευτικό, το οποίο δε θα παρεμποδίζει την παροχή του αέρα της μονάδας.
- Οδηγήστε την αποστράγγιση των συμπυκνωμάτων της εξωτερικής μονάδας, που πραγματοποιείται κατά τη λειτουργία της θέρμανσης, έτσι ώστε να μην ενοχλεί.
- Επιλέξτε θέση η οποία δεν είναι εκτεθειμένη σε χιονιά, συσσώρευση φύλλων κ.λ.π. Εάν αυτό δεν είναι εφικτό, παρακαλούμε προστατέψτε την μονάδα αναλόγως.
- Εγκαταστήστε την εξωτερική μονάδα στην πλησιέστερη δυνατή απόσταση από την εσωτερική.
- Μετακινήστε τυχόν εμπόδια κοντά στη μονάδα, ώστε να μην παρεμποδίζεται η ανακυκλοφορία του αέρα.
- Η αναφερόμενη ελάχιστη απόσταση άνεσης της εξωτερικής μονάδας δεν ισχύει και στην περίπτωση εγκατάστασης σε κλειστό χώρο. Θα πρέπει να υπάρχει άνοιγμα σε 2 από τις 3 κατευθύνσεις. (Ανατρέξτε στην εικόνα 6-3)



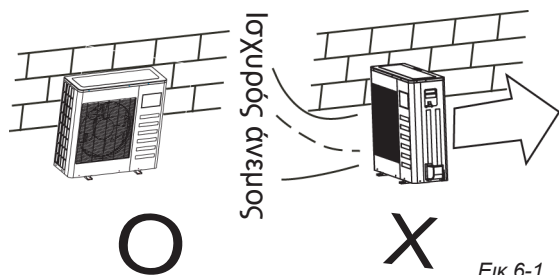
Εικ.6-2



Εικ.6-3

Πίνακας 6.1: Διαστάσεις εξωτερικής μονάδας (mm / in)

Διαστάσεις εξωτερικής μονάδας (Μ x Υ x Π)	Διαστάσεις έδρασης	
	Διάσταση Α	Διάσταση Β
780x540x250 (30.7x21.25x9.85)	549 (21.6)	276 (10.85)
760x590x285 (29.9x23.2x11.2)	530 (20.85)	290 (11.4)
810x558x310 (31.9x22x12.2)	549 (21.6)	325 (12.8)
845x700x320 (33.27x27.5x12.6)	560 (22)	335 (13.2)
770x555x300 (30.3x21.85x11.8)	487 (19.2)	298 (11.73)
800x554x333 (31.5x21.8x13.1)	514 (20.24)	340 (13.39)
845x702x363 (33.27x27.6x14.3)	540 (21.26)	350 (13.8)

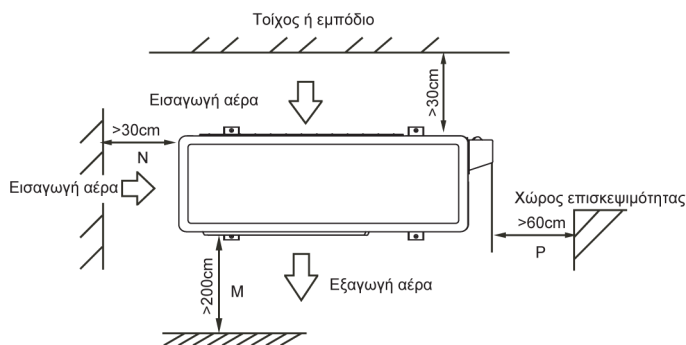


Εικ.6-1



ΣΗΜΕΙΩΣΗ

Οι εικόνες του εγχειριδίου είναι επεξηγηματικές. Πιθανόν να υπάρχουν διαφορές μεταξύ της αγοράς σας και της εικονιζόμενης μονάδας.



Εικ. 6-4

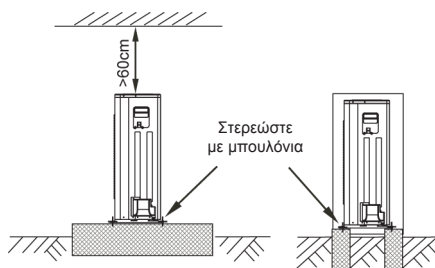


ΣΗΜΕΙΩΣΗ

Οι εικόνες του εγχειριδίου είναι επεξηγηματικές. Πιθανόν να υπάρχουν διαφορές μεταξύ της αγοράς σας και της εικονιζόμενης μονάδας.

6.2 Μεταφορά και εγκατάσταση

- Όταν σηκώνετε την μονάδα με ιμάντα να είστε ιδιαίτερα προσεκτικοί, καθώς το κέντρο βάρους της μονάδας δεν θα είναι το φυσιολογικό του.
- Μην κρατάτε την εξωτερική μονάδα από το εσωτερικό της μέρος για την αποφυγή παραμόρφωσης.
- Μην ακουμπάτε τους ανεμιστήρες με τα χέρια ή άλλα αντικείμενα.
- Αποφύγετε κλίση πάνω από 45° μοίρες και μην ακουμπάτε τη μονάδα λοξά.
- Φτιάξτε βάση από σκυρόδεμα σύμφωνα με τις προδιαγραφές των εξωτερικών μονάδων. (Ανατρέξτε στην Εικ. 6-15)
- Στερεώστε τα πόδια της μονάδας σταθερά για την αποφυγή πτώσης.



Εικ. 6-5



ΣΗΜΕΙΩΣΗ

Οι εικόνες του εγχειριδίου είναι επεξηγηματικές. Πιθανόν να υπάρχουν διαφορές μεταξύ της αγοράς σας και της εικονιζόμενης μονάδας.

7. ΕΓΚΑΤΑΣΤΑΣΗ ΣΩΛΗΝΩΣΕΩΝ ΣΥΝΔΕΣΗΣ

Βεβαιωθείτε ότι η οριζόντια και κάθετη απόσταση μεταξύ εσωτερικής και εξωτερικής μονάδας, το μήκος σωληνώσεων και οι καμπύλες αυτών είναι σύμφωνες με τα παρακάτω:

Πίνακας 7-1

Ισχύς (Btu/h)	12000	16000~18000
Μέγιστη υψομετρική διαφορά	5m	10m
Μέγιστο μήκος σωληνώσεων	Μέγιστο 10m	Μέγιστο 20m
Καμπύλες	Μέχρι 5	Μέχρι 8

7.1 Διαδικασία εγκατάστασης σωληνώσεων



ΠΡΟΣΟΧΗ

Όλες οι σωληνώσεις πρέπει να εγκατασταθούν από αδειούχο ψυκτικό και θα πρέπει η εγκατάσταση να γίνει σύμφωνα με τους εθνικούς κανονισμούς. Μην επιτρέψετε να εισέλθουν στο ψυκτικό κύκλωμα σκόνη, αέρας ή ακαθαρσίες κατά τη διάρκεια της εγκατάστασης. Οι εγκατάσταση σωληνώσεων θα πρέπει να γίνει μετά την ολοκλήρωση της εγκατάστασης της εξωτερικής και της εσωτερικής μονάδας. Κρατήστε το σωλήνα σύνδεσης στεγνό, μην αφήσετε να μπει υγρασία κατά την εγκατάσταση. Θερμομονώστε καλά τις σωληνώσεις υγρού και αερίου, διαφορετικά θα έχετε δημιουργία συμπυκνωμάτων και μειωμένη απόδοση.

- Διανοίξετε μια οπή στον τοίχο (κατάλληλη για το μέγεθος του αγωγού των ηλεκτρικών καλωδίων), έπειτα τοποθετήστε τα εξαρτήματα όπως των αγωγών ηλεκτρικών καλωδίων και το κάλυμμά του.
- Δέστε τις σωληνώσεις και τα καλώδια με ταινίες. Περάστε στον τοίχο από την έξω πλευρά. Προσέξτε ώστε να μην προκληθούν φθορές στους αγωγούς.
- Συνδέστε τις σωληνώσεις. Συμβουλευτείτε τις οδηγίες "Πως να συνδέσω τις σωληνώσεις" για λεπτομέρειες.
- Κάντε κενό στην μονάδα με αντλία κενού. Ανατρέξτε στις οδηγίες "Πως να κάνω κενό με αντλία κενού" για λεπτομέρειες.
- Ανοίξτε τις βάνες της εξωτερικής μονάδας, για να κυκλοφορήσει το ψυκτικό υγρό.
- Ελέγξτε όλες τις ενώσεις για τυχόν διαρροές, είτε με ανιχνευτή διαρροής, είτε με σαπουνό νερό.
- Καλύψτε τις ενώσεις των σωληνώσεων και σφίξτε τις καλά με μονωτική ταινία.



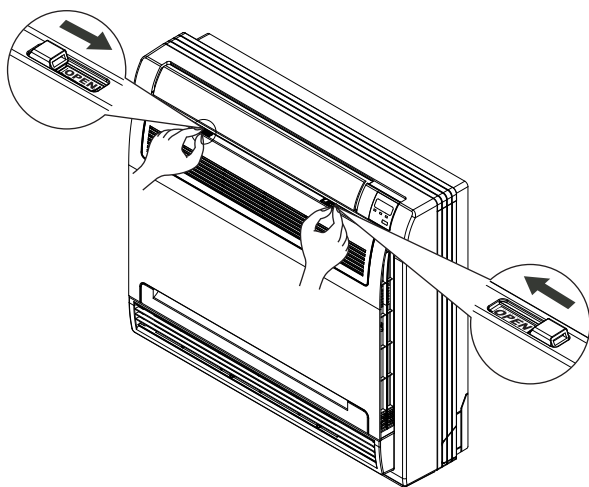
ΠΡΟΣΟΧΗ

Βεβαιωθείτε ότι έχετε καλύψει με μονωτικά υλικά όλες τις εκτεθειμένες ενώσεις των ψυκτικών σωληνώσεων. Δεν πρέπει να υπάρχει κανένα κενό μεταξύ τους,

■ Πως ανοίγετε την εσωτερική μονάδα, για τη σύνδεση των σωληνώσεων.

1 Ανοίξτε το μπροστινό πάνελ

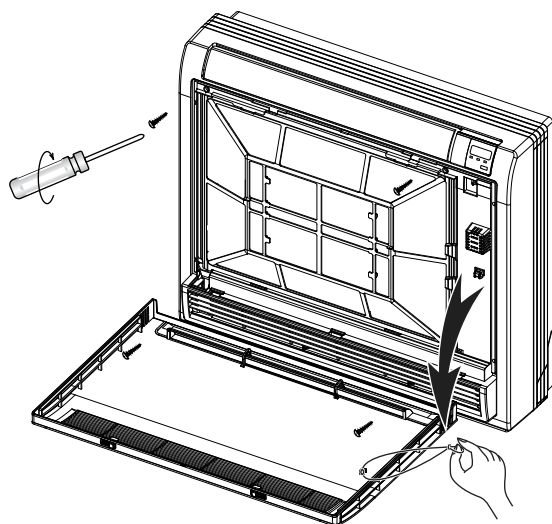
- Σύρετε προς τα μέσα τα δύο κλιπς στην αριστερή και δεξιά πλευρά της μονάδας, έως ότου ακουστεί "κλικ".



Εικ. 7-1

2 Αφαιρέστε το πάνελ της μπροστινής πλευράς

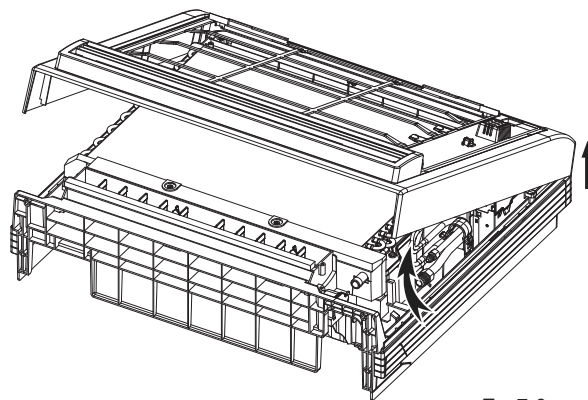
- Βγάλτε από την υποδοχή το σκοινάκι (εικόνα 7-2)
- Αφήστε το πάνελ να κατέβει, ώστε να μπορείτε να το αφαιρέσετε.



Εικ. 7-2

3 Αφαιρέστε την εσωτερική μετώπη.

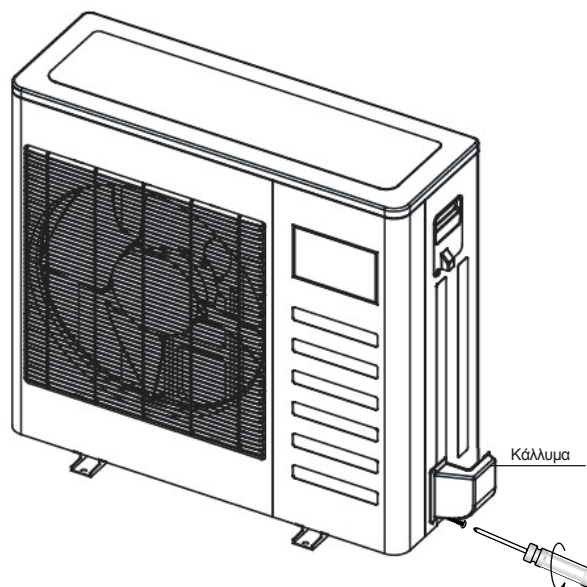
- Αφαιρέστε τις τέσσερις βίδες (ανατρέξτε στην εικόνα 7-2).
- Σηκώστε το κάτω μέρος της μετώπης για γωνιά 30 μοιρών και τραβήξτε την μετώπη (ανατρέξτε στην εικόνα 7-3).



Εικ. 7-3

■ Πως ανοίγετε την εξωτερική μονάδα για τη σύνδεση των σωληνώσεων

Αφαιρέστε το κάλυμα (ανατρέξτε στην εικόνα 7-4)

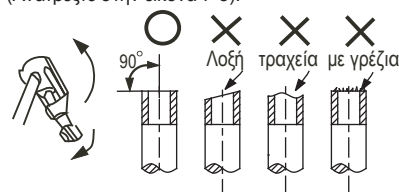


Εικ. 7-4

■ Πως να συνδέσετε τις ψυκτικές σωληνώσεις

1 Εκχείλωση

- Κόψτε τον σωλήνα με ειδικό κοπτικό εργαλείο (Ανατρέξτε στην εικόνα 7-5).



Εικ. 7-5

- Εισάγετε το αντίστοιχο εργαλείο στον σωλήνα και προχωρήστε με την εκχείλωση
- Συμβουλευτείτε τον Πίνακα 7-2 για τις διαστάσεις εκχείλωσης.

Πίνακας 7-2

Διατομή σωλήνα	Ροπή σύσφιξης	Διάσταση εκχείλωσης Α ελαχ.	Διάσταση εκχείλωσης Α μέγ.	Σχήμα εκχείλωσης
Ø6.35	15~16 N.m (153~163 kgf.cm)	8.3	8.7	
Ø9.52	25~26 N.m (255~265 kgf.cm)	12.0	12.4	
Ø12.7	35~36 N.m (357~367 kgf.cm)	15.4	15.8	
Ø15.9	45~47 N.m (459~480 kgf.cm)	18.6	19.0	
Ø19.1	65~67 N.m (663~684 kgf.cm)	22.9	23.3	

2 Συνδέστε πρώτα την εσωτερική μονάδα και εν συνεχεία την εξωτερική.

- Λυγίστε προσεκτικά τις σωληνώσεις, χωρίς να τις φθείρετε.

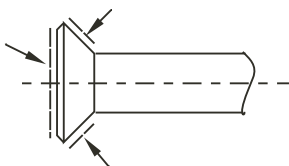
Κάμψτε τη σωληνώση με τον αντίχειρα



ελάχιστη ακτίνα 100mm

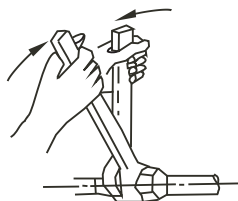
Εικ. 7-6

- Η γωνία κύρτωσης δεν πρέπει να υπερβαίνει τις 90 μοίρες.
- Ιδανικά, η γωνία κύρτωσης θα πρέπει να είναι στο κέντρο των εύκαμπτων σωληνώσεων. Όσο μεγαλύτερη η ακτίνα της κύρτωσης, τόσο καλύτερα.
- Μή λυγίζετε τη σωληνώση πάνω από τρεις φορές.
- Όταν συνδέεται το ρακόρ, αλοιψτε το και στις δύο πλευρές με λίγο ψυκτέλαιο και σφίξτε με το χέρι σας 3 ή 4.



Εικ. 7-7

- Για τη σύνδεση ή αποσύνδεση των σωληνώσεων, χρησιμοποιήστε γαλλικό κλειδί και ροπόκλειδο συγχρόνως.



Εικ. 7-8



ΠΡΟΣΟΧΗ

Υπερβολική ροπή θα προκαλέσει φθορά στη σύνδεση και πολύ μικρή θα προκαλέσει διαρροή. Συμβουλευτείτε τον πίνακα 7-2.

Μετά την ολοκλήρωση της σύνδεσης των σωληνώσεων, βεβαιωθείτε ότι δεν υπάρχει διαρροή ψυκτικού υγρού.

■ Πως να κάνετε κενό μέσω αντλίας κενού

- Πως λειτουργεί η βάνα

1. Ανοίξτε τη βάνα

- Αφαιρέστε το καπάκι και γυρίστε τη βαλβίδα σύμφωνα με τη φορά των δεικτών του ρολογιού, με το αντίστοιχο κλειδί allen.
- Γυρίστε το στυπιοθλίπτη μέχρι τέρμα. Μη βάζετε πολύ δύναμη, διότι μπορεί να σπάσει το σώμα της βάνας. Χρησιμοποιείτε πάντα τα σωστά εργαλεία.
- Σφίξτε το καπάκι με ασφάλεια.

2. Κλείστε τη βάνα

- Αφαιρέστε το καπάκι και γυρίστε τη βαλβίδα σύμφωνα με τη φορά των δεικτών του ρολογιού, με το αντίστοιχο κλειδί allen.
- Σφίξτε με προσοχή τον στυπιοθλίπτη.

Σφίξτε το καπάκι με ασφάλεια. Για τη ροπή δύναμης, συμβουλευτείτε τον παρακάτω πίνακα.

Πίνακας 7-3

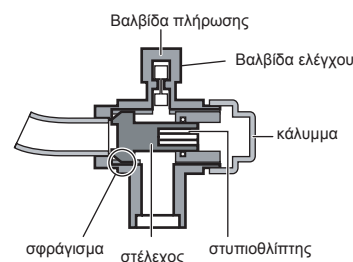
Ροπή σύσφιξης N + M (Στρέψτε δεξιόστροφα)				
Διάσταση βαλβίδας	Στέλεχος (σώμα βαλβίδας)		Καπάκι βαλβίδας	Βαλβίδα ελέγχου
Ø6.35	5.4~6.6	Στυπιοθλίπτης 4mm	13.5~16.5	11.5~13.9
Ø9.52			18~22	
Ø12.7	8.1~9.9	Στυπιοθλίπτης 6mm	23~27	
Ø15.9	13.5~16.5		36~44	
Ø22.2	27~33	Στυπιοθλίπτης 10mm		
Ø25.4				



ΠΡΟΣΟΧΗ

Χρησιμοποιείται πάντα λάστιχο πλήρωσης στην βαλβίδα πλήρωσης.

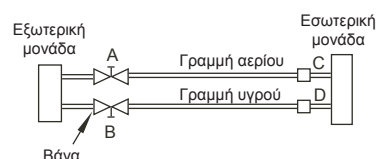
Αφού σφίξετε το καπάκι, ελέγξτε για τυχόν διαρροή ψυκτικού υγρού.



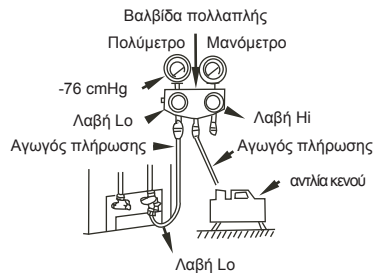
Εικ. 7-9

- Χρήση αντλίας κενού

- Χαλαρώστε και αφαιρέστε τη βαλβίδα ελέγχου από τις βάνες A και B και ενώστε το λάστιχο πλήρωσης στη βαλβίδα πλήρωσης της βάνας A. (Βεβαιωθείτε ότι οι βαλβίδες A και B είναι κλειστές.)
- Ενώστε το λάστιχο πλήρωσης με την αντλία κενού.
- Ανοίξτε τη βαλβίδα χαμηλής από την κάσα μανομέτρων.
- Ανοίξτε την αντλία κενού. Μόλις ξεκινήσει η διαδικασία, ξεβιδώστε ελαφρά τη βαλβίδα ελέγχου της βάνας B, ώστε να βεβαιωθείτε ότι μπαίνει αέρας (ακούγεται ο σχετικός ήχος και η ένδειξη του μανόμετρο είναι χαμηλότερη του μηδέν). Σφίξτε τη βαλβίδα ελέγχου.
- Όταν η διαδικασία κενού έχει ολοκληρωθεί, κλείστε τη βαλβίδα χαμηλής από την κάσα μανομέτρων και κλείστε και την αντλία κενού. Κάντε κενό για 15 λεπτά ή περισσότερο και ελέγξτε ότι το μανόμετρο δείχνει -76cmHg(-1X10⁵ Pa).
- Ξεσφίξτε και αφαιρέστε το καπάκι της βάνας A και B, έτσι ώστε να τις ανοίξετε τελείως και μετά κλείστε και πάλι το καπάκι.
- Αποσυνδέστε το λάστιχο πλήρωσης από την βαλβίδα πλήρωσης της βάνας A και σφίξτε το ρακόρ.



Εικ. 7-10



Εικ. 7-11

7.2 Συμπληρωματική πλήρωση ψυκτικού υγρού



ΠΡΟΣΟΧΗ

Επιπλέον πλήρωση ψυκτικού υγρού μπορεί να γίνει αφού ολοκληρωθούν οι ηλεκτρολογικές εργασίες, ο έλεγχος διαρροών και η διαδικασία κενού.

Κατά την πλήρωση θα πρέπει να προσέξετε ώστε να μην υπερβείτε τα όρια πλήρωσης, διαφορετικά υπάρχει κίνδυνος επιστροφής υγρών στο συμπιεστή.

Βεβαιωθείτε ότι χρησιμοποιείτε πάντα το συμβατό με τη μονάδα σας ψυκτικό υγρό. Πλήρωση με μη συμβατές ουσίες μπορεί να προκαλέσει έκρηξη και ατύχημα.

Τα δοχεία ψυκτικών υγρών θα πρέπει να ανοίγονται αργά.

Κατά την πλήρωση ψυκτικού υγρού να χρησιμοποιείτε πάντα προστατευτικά γάντια και γυαλιά.

Η εξωτερική μονάδα είναι εργοστασιακά πληρωμένη με ψυκτικό υγρό. Ανάλογα το μήκος των εγκατεστημένων σωληνώσεων, πιθανόν να απαιτηθεί επιπλέον πλήρωση ψυκτικού υγρού. Η επιπλέον ποσότητα μπορεί να υπολογιστεί σύμφωνα με τα παρακάτω:

Η εργοστασιακή πλήρωση μπορεί να διαφέρει ανάλογα τις απαιτήσεις της κάθε περιοχής. Για παράδειγμα, στη Νότια Αμερική η εργοστασιακή πλήρωση είναι 7,5m (25ft), ενώ σε άλλες περιοχές είναι 5m (16ft).

Inverter R410A:

Γραμμή υγρού:(Συνολικό μήκος σωληνώσεων - εργοστασιακή πλήρωση)

Γραμμή υγρού:(Συνολικό μήκος σωληνώσεων - εργοστασιακή πλήρωση)



ΣΗΜΕΙΩΣΗ

Εάν το αποτέλεσμα της παραπάνω πράξης είναι αρνητικός αριθμός, δεν απαιτείται επιπλέον πλήρωση ψυκτικού υγρού.

8. ΣΥΝΔΕΣΗ ΤΟΥ ΑΓΩΓΟΥ ΑΠΟΣΤΡΑΓΓΙΣΗΣ

■ Σύνδεση των αγωγών αποστράγγισης

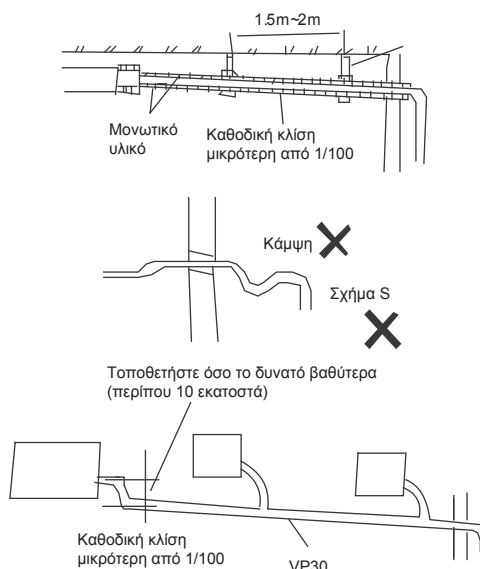
Η εξωτερική πλευρά έχει πλαστική ροδέλα. Κατά τη σύνδεση των σωληνών PVC παρακαλούμε χρησιμοποιήστε μονωτικά υλικά και ανάλογη θήκη προσαρμογής σωληνώσεων.



ΠΡΟΣΟΧΗ

Ο αγωγός αποστράγγισης της εσωτερικής μονάδας θα πρέπει να είναι θερμομονωμένος, ώστε να μην δημιουργούνται συμπυκνώματα. Ομοίως και για τις συνδέσεις της εσωτερικής μονάδας.

- Απαιτείται ισχυρή κόλλα PVC για τη σύνδεση των σωληνώσεων, ώστε να μην υπάρχουν συμπυκνώματα.
- Κατά τη σύνδεση στην εσωτερική μονάδα, παρακαλούμε προσέξτε ώστε να μην ασκήσετε πίεση στις ψυκτικές σωληνώσεις.
- Περιορίστε τις κάμψεις του αγωγού αποστράγγισης.
- Το συνολικό μήκος του αγωγού δε θα πρέπει να υπερβαίνει τα 20m. Εάν απαιτηθεί επιπλέον επιμήκυνση, θα πρέπει να εγκατασταθούν στηρίγματα.
- Παρακαλούμε συμβουλευτείτε τις ακόλουθες εικόνες.



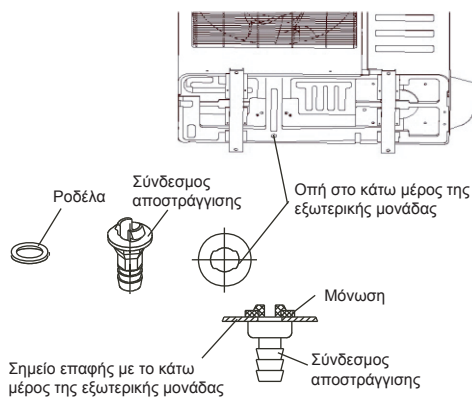
Εικ. 8-1

■ Έλεγχος απορροής συμπυκνωμάτων

- Ελέγξτε αν παρεμποδίζεται ο αγωγός αποστράγγισης.
- Σε νεόκτιστα σπίτια αυτή η δοκιμή θα πρέπει να γίνει πριν κλειστεί η οροφή.

■ Εγκατάσταση του σύνδεσμου αποστράγγισης της εξωτερικής μονάδας

Τοποθετήστε τον στεγανοποιητικό δακτύλιο στον σύνδεσμο αποστράγγισης, τοποθετήστε τον στην οπή της κάτω πλευράς της εξωτερικής μονάδας και στρέψτε τον 90 μοίρες για την συναρμολόγηση. Συνδέστε έναν αγωγό αποστράγγισης (μπορείτε να τον προμηθευτείτε από την τοπική αγορά), για την απορροή συμπυκνωμάτων της εξωτερικής μονάδας κατά τη λειτουργία της θέρμανσης. (Ανατρέξτε στην εικόνα 8-2)

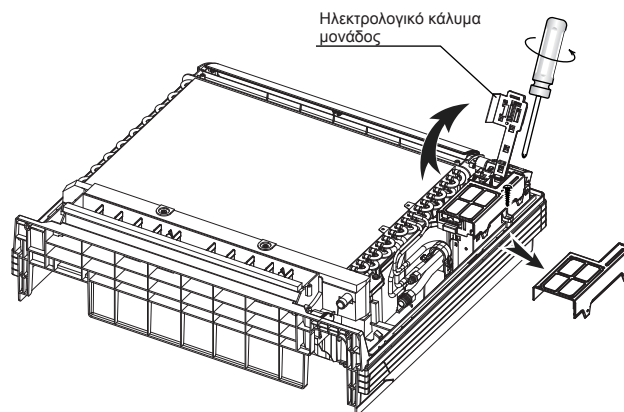


Εικ.8-2

- 4 Για αναλυτικές πληροφορίες ηλεκτρολογικών χαρακτηριστικών, ανατρέξτε στους σχετικούς πίνακες του προϊόντος.
- 5 Για περισσότερες πληροφορίες επικοινωνήστε με τον προμηθευτή σας.

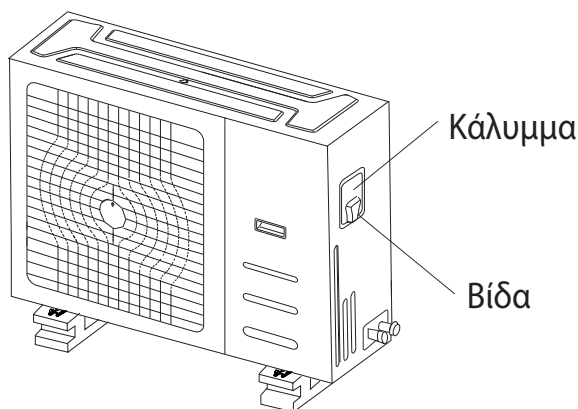
9.1 Ηλεκτρολογική σύνδεση

- Αφαιρέστε το κάλυμα ηλεκτρολογικών συνδέσεων της εσωτερικής μονάδας, σύμφωνα με την παρακάτω εικόνα (και στην περίπτωση συχνότητας σε δίκτυο - αφορά την μονάδα ισχύος 18.000Btu/h).



Εικ.9-1

- Μετακινήστε το κάλυμα ηλεκτρολογικών συνδέσεων της εξωτερικής μονάδας. Εάν δεν υπάρχει κάλυμα, ξεβιδώστε και αφαιρέστε το προστατευτικό. (Εικόνα 9-2)



Εικ.9-2

ΣΗΜΕΙΩΣΗ

Οι εικόνες του εγχειριδίου είναι επεξηγηματικές. Πιθανόν να υπάρχουν διαφορές μεταξύ της αγοράς σας και της εικονιζόμενης μονάδας.

9. ΣΥΝΔΕΣΜΟΛΟΓΙΑ

ΠΡΟΣΟΧΗ

Η κλιματιστική μονάδα θα πρέπει να εγκατασταθεί σύμφωνα με τους εθνικούς κανονισμούς.

Η κλιματιστική μονάδα θα πρέπει να συνδέεται σε ξεχωριστή παροχή ρεύματος

Η παροχή ρεύματος που συνδέεται στην κλιματιστική μονάδα θα πρέπει να έχει γείωση η οποία θα συνδεθεί με την γείωση της εσωτερικής και εξωτερικής μονάδας.

Η συνδεσμολογία θα πρέπει να γίνει από εξειδικευμένο προσωπικό σύμφωνα με το ηλεκτρολογικό διάγραμμα της μονάδας.

Στο κύκλωμα θα πρέπει να τοποθετηθεί ένας διακόπτης στον οποίο θα πρέπει οι πόλοι του να έχουν τουλάχιστον 3mm απόσταση μεταξύ τους και μια διάταξη RCD πάνω από 10mA, σύμφωνα με τους κανονισμούς.

Βεβαιωθείτε πως το καλώδιο τροφοδοσίας και το καλώδιο σήματος δεν διασταυρώνονται.

Ενεργοποιήστε τη μονάδα αφού έχετε ολοκληρώσει την συνδεσμολογία και έχετε κάνει τους απαραίτητους ελέγχους.

ΣΗΜΕΙΩΣΗ

Αναφορά στην οδηγία 89/336/EEC
Προς αποφυγή προβλημάτων κατά την εκκίνηση της μονάδας, παρακαλώ λάβετε υπόψη τα παρακάτω:

- 1 Για την σύνδεση της μονάδας λαμβάνουμε υπόψη τη μέγιστη απορροφούμενη ισχύ, απαιτείται ασφάλεια 32A.
- 2 Δε θα πρέπει να παρεμβάλλεται άλλη συσκευή στην ίδια γραμμή ισχύος με την μονάδα.
- 3 Για αναλυτικές πληροφορίες ηλεκτρολογικής εγκατάστασης, παρακαλούμε επικοινωνήστε με τον ηλεκτρολόγο εγκαταστάτη σας.

- Συνδέστε τα καλώδια στα τερματικά, σύμφωνα με τα σχετικά διαγράμματα και τα αντίστοιχα γράμματα των τερματικών εσωτερικής και εξωτερικής μονάδας.

- Κλείστε την εξωτερική και εσωτερική μονάδα.

9.2 Ηλεκτρικά χαρακτηριστικά

(Ανατρέξτε στον πίνακα 9-2)

9.3 Σχηματικό διάγραμμα συνδεσμολογίας

(Ανατρέξτε στην εικόνα 9-4 και 9-7)

9.4 Ρύθμιση διευθύνσεων δικτύου

(Αφορά μόνο την μονάδα 18.000Btu/h)

Κάθε κλιματιστική μονάδα στο δίκτυο έχει μια μοναδική διεύθυνση. Ο κωδικός διεύθυνσης της κλιματιστικής μονάδας ορίζεται από τους διακόπτες S1 & S2 στην κεντρική πλακέτα της εσωτερικής μονάδας και το εύρος ρύθμισης είναι 0-63.

Πίνακας 9-1

Κωδικός διακόπτη			Κωδικός διεύθυνσης δικτύου
S1	S2		
	 ~ 	00~15	
	 ~ 	16~31	
	 ~ 	32~47	
	 ~ 	48-63	

10. ΔΟΚΙΜΑΣΤΙΚΗ ΛΕΙΤΟΥΡΓΙΑ

- 1 Η δοκιμαστική λειτουργία θα πρέπει να διεξάγεται αφού ολοκληρωθεί η εγκατάσταση.
- 2 Πριν τη δοκιμαστική λειτουργία ελέγξτε τα παρακάτω:
 - Η εσωτερική και εξωτερική μονάδα έχουν εγκατασταθεί σωστά.
 - Έχει ολοκληρωθεί η διαδικασία εγκατάστασης των σωληνώσεων και η συνδεσμολογία.
 - Έχει γίνει έλεγχος για διαρροές.
 - Η απορροή των συμπυκνωμάτων γίνεται ομαλά.
 - Η θερμομόνωση είναι επαρκής.
 - Έχει συνδεθεί σωστά η γείωση.
 - Έχει γίνει καταγραφή του συνολικού μήκους σωληνώσεων και της ποσότητας ψυκτικού υγρού που προστέθηκε.
 - Η τάση του ρεύματος συμφωνεί με την αναγραφόμενη στη μονάδα.
 - Δεν παρεμποδίζονται οι εισοδοί και εξοδοί αέρα της εσωτερικής και εξωτερικής μονάδας.
 - Οι βάνες της γραμμής υγρού και αερίου είναι ανοιχτές.
 - Η μονάδα είναι συνδεδεμένη στην παροχή ρεύματος.
- 3 Εγκαταστήστε τη βάση του χειριστηρίου σύμφωνα με τις απαιτήσεις του χρήστη, λαμβάνοντας υπόψη ότι θα το χειριστήριο θα πρέπει να έχει άνετη οπτική επαφή με τη μονάδα.
- 4 Δοκιμαστική λειτουργία
 - Θέστε την κλιματιστική μονάδα σε λειτουργία ψύξης και ελέγξτε τα παρακάτω. Εάν εμφανιστεί κάποια δυσλειτουργία επιλύστε τη σύμφωνα με το κεφάλαιο "Αντιμετώπιση προβλημάτων" στο εγχειρίδιο χρήσης.
 - 1) Στην εσωτερική μονάδα ελέγξτε εάν:
 - Ο διακόπτης στο ασύρματο τηλεχειριστήριο λειτουργεί σωστά.
 - Τα πλήκτρα στο ασύρματο τηλεχειριστήριο λειτουργούν σωστά.
 - Οι περσίδες κινούνται ομαλά.
 - Η θερμοκρασία έχει ρυθμιστεί σωστά.
 - Οι ενδοκτικές λυχνίες ανάβουν.
 - Τα πλήκτρα προσωρινής λειτουργίας λειτουργούν.
 - Η απορροή συμπυκνωμάτων γίνεται ομαλά.
 - Υπάρχουν επιπλέον κραδασμοί ή περίεργοι θορύβοι κατά τη λειτουργία.
 - Λειτουργεί σωστά και αποδίδει τόσο στη θέρμανση, όσο και στην ψύξη.
 - 2) Στην εξωτερική μονάδα ελέγξτε εάν:
 - Παρατηρούνται επιπλέον κραδασμοί ή περίεργοι θορύβοι κατά τη λειτουργία.
 - Ο θόρυβος, ο αέρας ή τα συμπυκνώματα που παράγονται από την κλιματιστική μονάδα ενοχλούν τους γείτονες.
 - Υπάρχει διαρροή ψυκτικού υγρού.



ΠΡΟΣΟΧΗ

Σε περίπτωση επανεκκίνησης της μονάδας μια προστατευτική διάταξη δεν επιτρέπει στην μονάδα να λειτουργήσει για τα επόμενα 3 λεπτά.

Ηλεκτρικά χαρακτηριστικά

Πίνακας 9-2

ΜΟΝΤΕΛΟ		12000Btu/h (Θέρμανση & Ψύξη)	16000~18000Btu/h (Θέρμανση & Ψύξη)	
ΠΑΡΟΧΗ ΡΕΥΜΑΤΟΣ	ΦΑΣΕΙΣ	1 ΦΑΣΗ	1 ΦΑΣΗ	
	ΣΥΧΝΟΤΗΤΑ ΚΑΙ ΤΑΣΗ	208-240V~, 50Hz/60Hz	208-240V~, 50Hz/60Hz	
ΔΙΑΚΟΠΤΗΣ / ΑΣΦΑΛΕΙΑ (A)		20/16	20/16	
ΠΑΡΟΧΙΚΑ ΚΑΛΩΔΙΑ ΕΣΩΤΕΡΙΚΗΣ ΜΟΝΑΔΟΣ (mm ²)		—	3x1.0	
ΚΑΛΩΔΙΑ ΕΠΙΚΟΙΝΩΝΙΑ ΕΣΩΤΕΡΙΚΗΣ/ΕΞΩΤΕΡΙΚΗΣ ΜΟΝΑΔΟΣ (mm ²)	ΓΕΙΩΣΗ	1.5	2.5	
	ΠΑΡΟΧΙΚΑ ΚΑΛΩΔΙΑ ΕΞΩΤΕΡΙΚΗΣ ΜΟΝΑΔΟΣ	3X1.5	3x2.5	
	ΚΑΛΩΔΙΟ ΕΠΙΚΟΙΝΩΝΙΑΣ	4X1.0	—	
	ΚΑΛΩΔΙΟ ΕΠΙΚΟΙΝΩΝΙΑΣ	—	3X0.5	

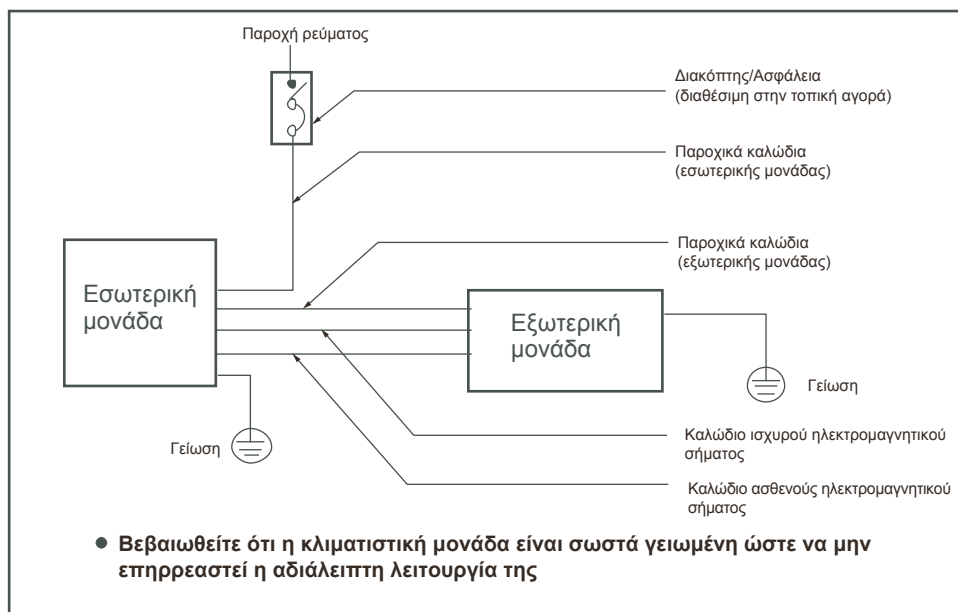


ΠΡΟΣΟΧΗ

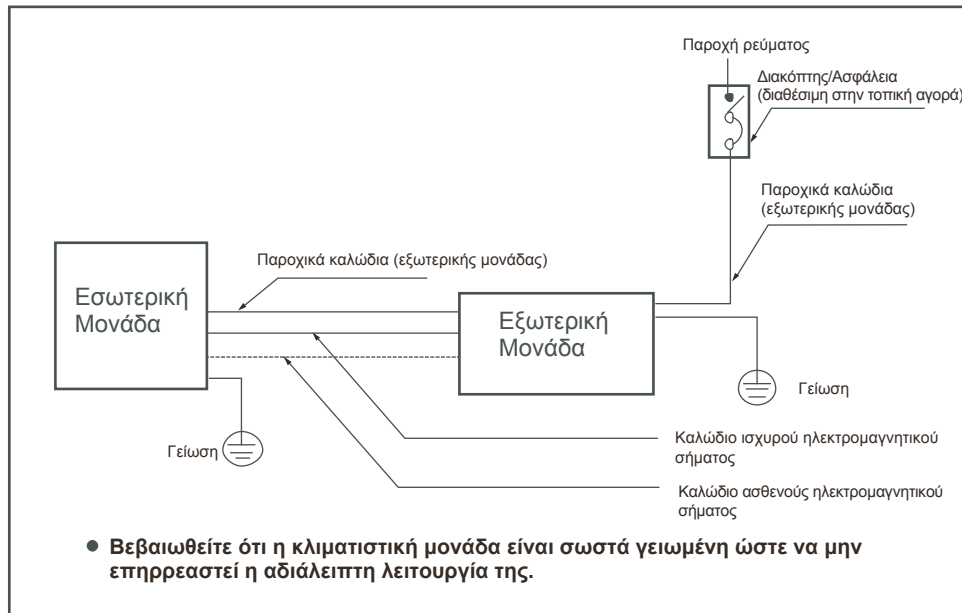
Η παροχή ρεύματος που πρέπει να συνδεθεί είναι αυτή που αναφέρεται παραπάνω. Πριν έρθετε σε επαφή με τις τερματικές επαφές θα πρέπει το κύκλωμα να είναι αποσυνδεδεμένο.

Σχηματικό διάγραμμα συνδεσμολογίας

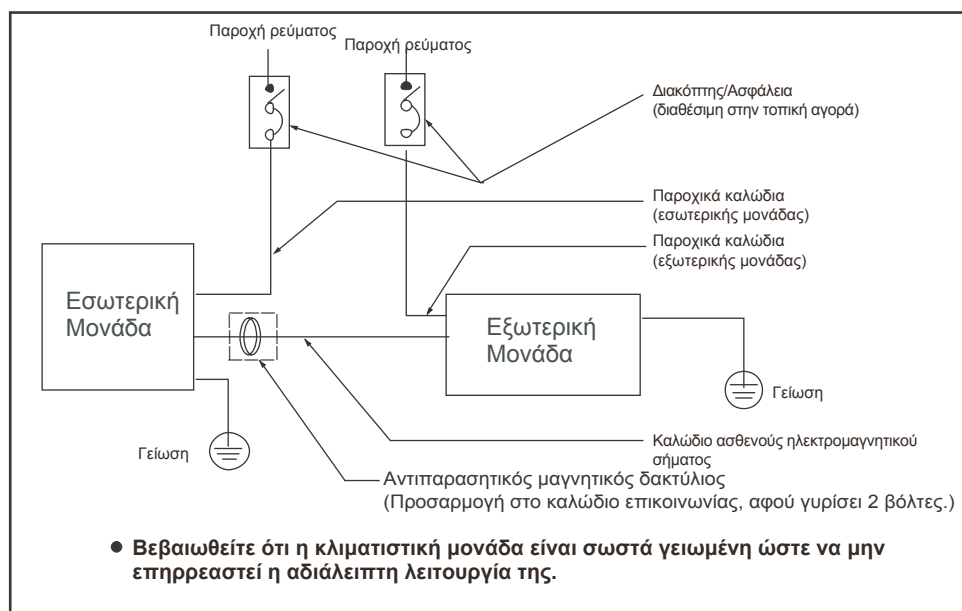
■ Εικ.9-4



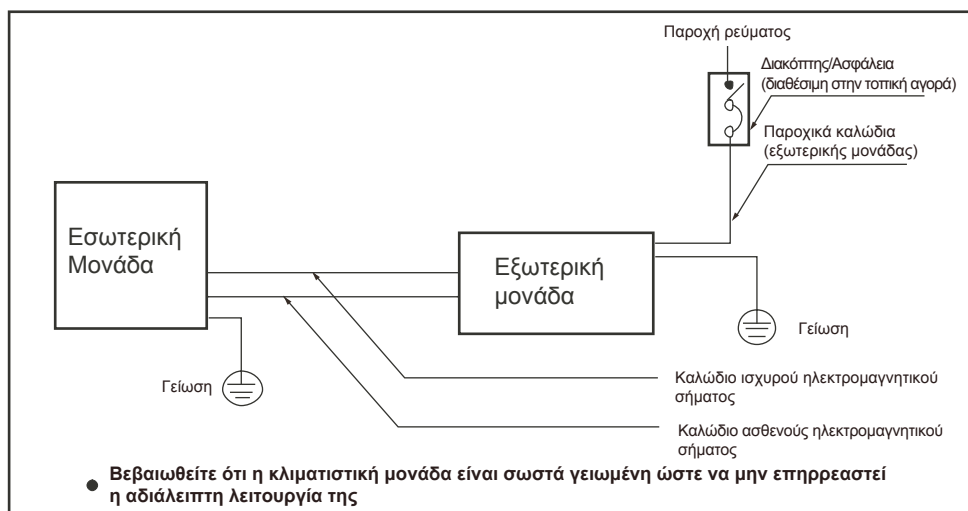
■ Εικ.9-5



■ Εικ.10-6



■ Εικ.9-7



ΠΡΟΣΟΧΗ

Σύμφωνα με τους εθνικούς κανονισμούς θα πρέπει να τοποθετηθεί στο κυκλωμα ένας διακόπτης με κενό ανάμεσα στους πόλους.

Κατά τη συνδεσμολογία επιλέξτε το ανάλογο γράφημα αλλιώς μπορεί να προκληθεί δυσλειτουργία. Κάποιες ενδείξεις στις τερματικές επαφές της εσωτερικής μονάδας μπορεί να αντικατασταθούν από L N L1 N1.

Ο σχεδιασμός και τα χαρακτηριστικά μπορεί να αλλάξουν χωρίς προειδοποίηση για τη βελτίωση του προϊόντος. Για λεπτομέριες απευθυνθείτε στον προμηθευτή σας ή τον κατασκευαστή.

- Dacă se utilizează ca parte a unor unități multiple, vă rugăm consultați manualul de instalare și funcționare ce se poate găsi în pachetul unității exterioare.

PRECAUȚII	1
INFORMAȚII PRIVIND INSTALAREA	3
ACCESORII	5
INSPECTAREA ȘI MANIPULAREA UNITĂȚII	6
INSTALAREA UNITĂȚII INTERIOARE	6
INSTALAREA UNITĂȚII EXTERIOARE	8
INSTALAREA CONDUCTEI DE LEGĂTURĂ	10
LEGAREA CONDUCTEI DE SCURGERE	16
CABLAREA	18
TESTAREA FUNCȚIONĂRII	24

1. PRECAUȚII

- Asigurați conformitatea cu reglementările locale, naționale și internaționale.
- Citiți capitolul „PRECAUȚII” cu atenție înainte de instalare.
- Următoarele măsuri includ elemente importante pentru siguranță. Analizați-le și țineți-le minte.
- Păstrați acest manual împreună cu manualul de utilizare pentru consultări ulterioare.
- Instalarea trebuie realizată în conformitate cu cerințele NEC și CEC și doar de către personal autorizat. (Măsură aplicabilă doar regiunii Americii de Nord).

Măsurile de siguranță enumerate mai jos sunt împărțite în două categorii. În oricare dintre cazuri sunt enumerate informații importante de siguranță ce trebuie citite cu atenție.



AVERTIZARE

Nerespectarea unei avertizări poate duce la deces.



ATENȚIE

Nerespectarea unei atenționări poate duce la vătămare sau la avariarea echipamentului.

După finalizarea instalării, asigurați-vă că aparatul funcționează adecvat în timpul funcționării de pornire. Vă rugăm instruiți clientul cu privire la modul de funcționare al aparatului și păstrați-l întreținut. De asemenea, informați clienții că trebuie să depoziteze acest manual de instalare împreună cu manualul de utilizare pentru consultări ulterioare.



AVERTIZARE

Asigurați-vă că doar personalul calificat din service va instala, repara sau realiza mentenanța echipamentului.

Instalarea neadecvată, reparațiile și întreținerea pot duce la electrocutare, scurtcircuite, scurgeri, incendii sau alte daune asupra echipamentului.

Instalați doar conform instrucțiunilor de instalare.

Dacă instalarea este greșită, acest lucru va duce la scurgeri de apă, electrocutare și incendiu.

La instalarea unității într-o cameră mică, luați măsuri pentru a păstra concentrația agentului frigorific sub limita de siguranță permisă în cazul scurgerilor de agent frigorific.

Contactați locația de vânzare pentru mai multe informații. Agentul frigorific în exces într-un mediu închis poate duce la o lipsă de oxigen.

Utilizați accesoriile atașate, piesele și componentele specifice instalării.
În caz contrar, acest lucru poate duce la căderea setului, scurgeri de apă, electrocutare și incendiu.

Instalați într-o locație solidă și fermă ce poate suporta greutatea setului.
Dacă suprafața nu este destul de solidă sau instalarea nu este realizată adecvat, setul va cădea și va duce la vătămare.

Aparatul nu trebuie instalat în spălătorie.

Înainte de a obține accesul la terminale, toate circuitele de alimentare trebuie deconectate.

Aparatul trebuie poziționat astfel încât priza să fie accesibilă.

Împrejurimile aparatului vor fi marcate prin cuvinte sau simboluri ce arată direcția scurgerii de lichide.

Pentru lucrările de natură electrică, urmați standardul național local de cablare, reglementările și aceste instrucțiuni de instalare. Un circuit independent și o singură priză vor fi folosite.
Dacă circuitul electric are capacitatea mai mică sau există defecte în lucrările electrice, acest lucru va duce la electrocutare sau incendiu.

Utilizați cablul specificat, conectați-l ferm și prindeți cu cleme cablul astfel încât să nu existe forțe externe care să acționeze asupra terminalului. Dacă conexiunea sau fixarea nu sunt perfecte, acest lucru poate duce la încălzirea sau arderea conexiunii.

Tragerea cablurilor trebuie să fie aranjată adecvat astfel încât capacul panoului de control să se fixeze bine.

Dacă capacul panoului de control nu se fixează perfect, acest lucru va duce la încălzirea punctului de legătură al terminalului, incendiu sau electrocutare.

Dacă cablul de alimentare este avariât, acesta trebuie înlocuit de către producător sau agentul său de service sau o persoană calificată pentru a evita un pericol.

Un comutator de deconectare multipolar ce are o separare de contact de cel puțin 3 mm la toți polii trebuie conectat la cablarea fixă.

Atunci când se realizează legarea conductelor, aveți grijă să nu permiteți substanțelor din aer să intre în ciclul agentului frigorific.

În caz contrar acest lucru va duce la o capacitate diminuată, presiune ridicată anormală în ciclul agentului frigorific, explozie și vătămare.

Nu modificați lungimea cablului de alimentare, nu utilizați un prelungitor și nu împărțiți o singură priză cu alte aparate electrice.

În caz contrar acest lucru poate duce la incendiu sau electrocutare.

Desfășurați lucrările de instalare specificate după ce ați luat în considerare vânturile puternice, furtunile și cutremurele.

O instalare neadecvată poate duce la căderea echipamentului și cauzarea de accidente.

Dacă agentul frigorific se scurge în timpul instalării, aerisiți imediat zona.

Gaze toxice pot fi produse dacă agentul frigorific intră în contact cu focul.

Temperatura circuitului agentului frigorific este ridicată, vă rugăm păstrați conexiunile de cabluri departe de conducta de cupru.

După finalizarea lucrărilor de instalare, verificați ca agentul frigorific să nu curgă.

Gaze toxice se pot produce dacă agentul frigorific se scurge în cameră și intră în contact cu o sursă de foc, de genul unui radiator cu ventilator, unei sobe sau unui aragaz.



ATENȚIE

Legați la împământare aparatul de aer condiționat.

Nu legați cablul de împământare la conductele de gaze sau apă, la paratrăsnete sau la un cablu telefonic subteran. Împământarea neadecvată poate duce la electrocutare.

Asigurați-vă că instalați un comutator de scurgeri cu împământare.

Neinstalarea unui comutator de scurgeri cu împământare poate duce la electrocutare.

Conectați cablurile unității exterioare, apoi conectați cablurile unității interioare.

Nu vă este permisă conectarea aparatului de aer condiționat la alimentarea electrică până ce nu sunt realizate lucrările de cablare și legare a conductelor.

În timp ce urmați instrucțiunile din prezentul manual de instalare, instalați conductele de scurgere pentru a asigura o scurgere adecvată și izolați conductele pentru a preveni condensul.

Conducte de scurgere neadecvate pot duce la scurgeri de apă și daune materiale.

Instalați unitățile interioare și exterioare, cablurile de alimentare și conectați firele la cel puțin 1 m distanță de televizoare sau aparate de radio pentru a preveni interferențe ale imaginilor sau bruiaje.

În funcție de undele radio, o distanță de 1 m este posibil să nu fie suficientă pentru a elimina bruiajele.

Aparatul nu este destinat utilizării de către copii mici sau persoane cu dizabilități fără supraveghere.

Nu instalați aparatul de aer condiționat în următoarele cazuri:

- Există în zona petrolatum.
- Există un aer sărat în jur (în apropierea țărmului).
- Există gaze caustice (de exemplu sulfuri) în aer (în apropierea unui izvor cu apă caldă).
- Voltajul vibrează în mod violent (în fabrici).
- În autobuze sau dulapuri.
- În bucătărie unde există gaze petroliere.
- Unde există unde electromagnetice puternice.
- Unde există materiale sau gaze inflamabile.
- Unde există lichide acide sau alcaline care se evaporă.
- În alte condiții speciale.

Aparatul va fi instalat în conformitate cu reglementările naționale de cablare.

Nu puneți în funcțiune aparatul de aer condiționat într-o cameră cu umiditate de genul unei băi sau unei spălătorii.

Un dispozitiv de deconectare multipolar care are cel puțin 3 mm distanță de poli și care are un curent de scurgere ce poate depăși 10mA, dispozitivul de curent rezidual (RCD) ce are un curent rezidual de funcționare ce nu depășește 30mA, precum și o deconectare trebuie încorporate în cablarea fixă în conformitate cu reglementările de cablare.

2. INFORMAȚII PRIVIND INSTALAREA

- Pentru a instala adecvat, vă rugăm citiți mai întâi acest „manual de instalare”.
- Aparatul de aer condiționat trebuie instalat de către persoane calificate.
- La instalarea unității interioare sau a conductelor sale, vă rugăm urmați acest manual cât se poate de îndeaproape.

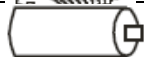
- Dacă aparatul de aer condiționat este instalat pe o parte metalică a unei clădiri, acesta trebuie izolat electric conform standardelor relevante aplicabile aparatelor electrice.
 - La finalizarea tuturor lucrărilor de instalare, vă rugăm porniți aparatul doar după o verificare amănunțită.
 - Ne pare rău pentru că nu vă vom putea anunța de schimbările asupra acestui manual cauzate de îmbunătățiri ale produsului.
-
-

ORDINEA INSTALĂRII

- Instalarea unității interioare;
- Instalarea unității exterioare;
- Instalarea conductei de agent frigorific;
- Legarea conductei de scurgere;
- Lucrări de cablare electrică
- Funcțiile unităților duble
- Testarea funcționării

3. ACCESORII

Vă rugăm verificați dacă următoarele accesorii pot fi toate utilizate. Dacă există accesorii de rezervă, vă rugăm să le depozitați cu atenție.

Accesorii instalare	DENUMIRE	FORMĂ	CANTITATE
	1. Cârlig		2
Telecomandă și cadrul acesteia	2. Telecomandă		1
	3. Suport telecomandă		1
	4. Șurub de montare (ST2,9x10-C-H)		2
	5. Baterii uscate alcaline (Am4)		2
Altele	6. Manual de utilizare		1
	7. Manual de instalare		1
	8. Conector de transfer (Ø9.52-Ø12.7) (În pachetul unității interioare, utilizat doar la modelele cu tipuri multiple) (NOTĂ: Dimensiunea conductei este diferită de la aparat la aparat. Pentru a întruni cerințele diferite privind dimensiunea conductei, uneori conexiunile conductelor trebuie să transfere conectorul pentru a instala unitatea interioară.)		1 (la unele modele)
	9. Inel magnetic (Agățat de cablul de comunicare și având 2 cercuri.)		1 (la unele modele)
	10. Cablu de legătură roșu scurt (Aplicat pinului W/L al unității exterioare din blocul terminal în cazul unui scurtcircuit.)		1 (la unele modele)

Atenție la instalarea telecomenzii:

- Nu aruncați sau loviți telecomanda.
- Înainte de instalare, utilizați telecomanda pentru a determina locația sa într-o categorie de recepție.
- Țineți telecomanda la cel puțin 1m distanță de cel mai apropiat televizor sau echipament stereo. (Este necesar pentru a preveni perturbările imaginii și interferențele de zgomot.)
- Nu instalați telecomanda într-un loc expus la lumina directă a soarelui sau în apropierea unei surse de căldură, cum ar fi o sobă.
- Atenție, polii pozitivi și negativi trebuie să fie în poziția corectă pentru încărcarea bateriilor.
- Acest manual face obiectul modificărilor datorită îmbunătățirii tehnologice fără notificări prealabile.

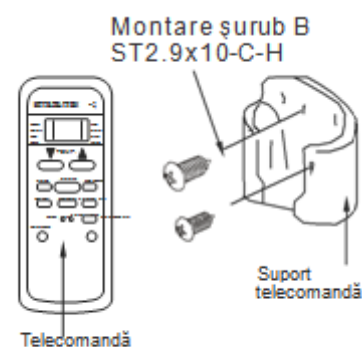


Fig.50-1

4. INSPECTAREA ȘI MANIPULAREA APARATULUI

La livrare, pachetul trebuie verificat și orice daune raportate imediat agentului service.

Când manipulați aparatul, aveți în vedere următoarele:

1.  Fragil, manipulați aparatul cu grijă.
2.  Țineți aparatul în picioare pentru a preveni deteriorarea compresorului.
3. Alegeți înainte ruta urmată de aparat.
4. Deplasați acest aparat în ambalajul original cât de mult posibil.
5. Când ridicați aparatul, folosiți întotdeauna protectori pentru a preveni deteriorarea benzii și atenție la poziția centrului de greutate al aparatului.

5. INSTALAREA UNITĂȚII INTERIOARE

5.1 Locația instalării

Unitatea interioară trebuie instalată într-un loc care întrunește următoarele cerințe:

- Există suficient spațiu pentru instalare și întreținere.
(Consultați Fig. 5-1 și Fig. 5-2)
- Evacuarea și admisia aerului nu sunt obstructionate, iar influența aerului extern este minimă.
- Fluxul de aer poate ajunge în toată camera.
- Conducta de legătură și cea de scurgere pot fi extrase cu ușurință.
- Nu există încălzire directă de la radiatoare.



ATENȚIE

Păstrați unitatea interioară, unitatea exterioară, cablul de alimentare și cablul de transmisie la cel puțin 1 metru de televizoare sau aparate de radio. Acest lucru trebuie să prevină interferențele de imagini și bruiatul acelor aparate electronice. (Bruiajele pot fi generate în funcție de condițiile în care sunt generate undele electrice, chiar dacă se păstrează distanța de 1 metru.)

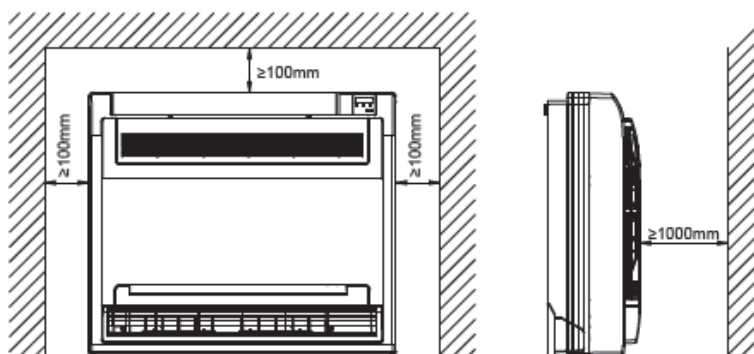
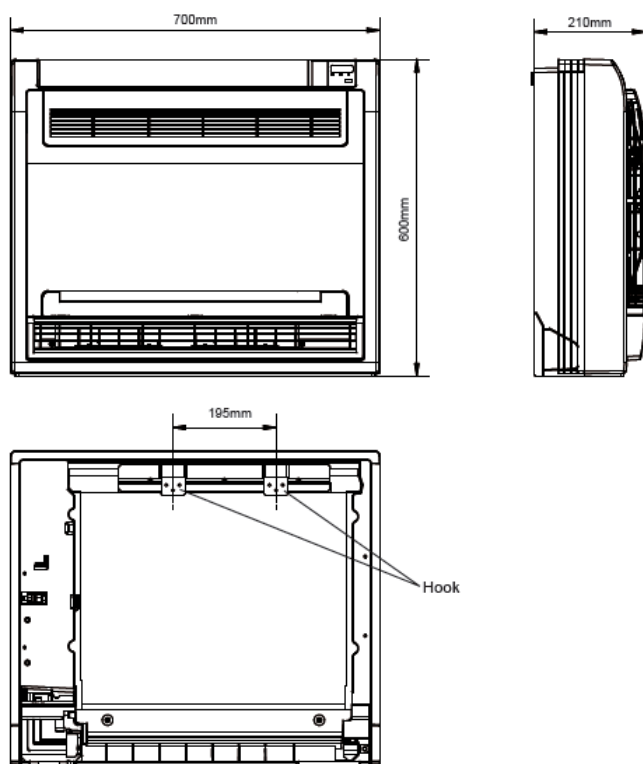


Fig.5-1



Cârlig

Fig.5-2

5.2 Instalarea corpului principal

- Fixați cârligul de perete folosind un șurub cu diblu. (Consultați Fig. 5-3)

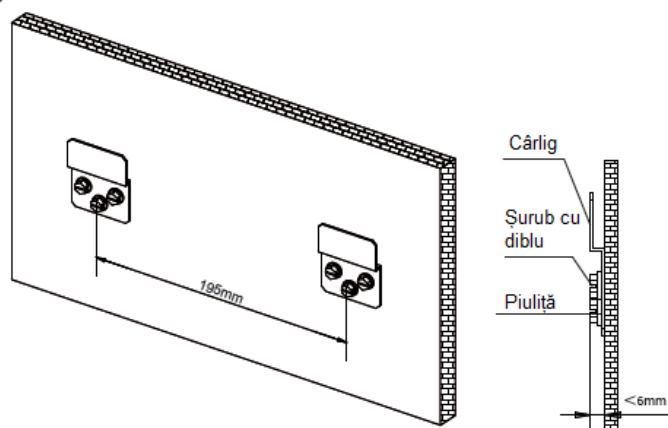


Fig.5-3

- Agățați unitatea interioară de cârlig.
(Capătul de jos al corpului poate atinge podeaua sau poate fi suspendat, însă corpul trebuie instalat vertical.)

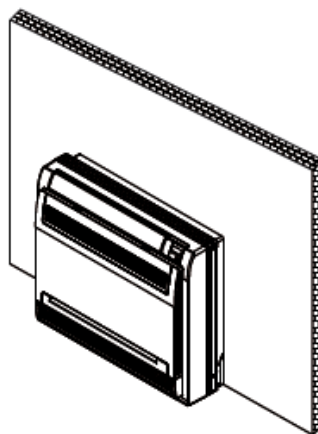


Fig.5-4

6. INSTALAREA UNITĂȚII EXTERIOARE

6.1 Locația instalării

■ **Unitatea exterioară trebuie instalată în locația care întrunește următoarele cerințe:**

- Există suficient spațiu pentru instalare și întreținere.
- Evacuarea de aer și admisia de aer nu sunt obstrucționate și pot să fie ferite de vântul puternic.
- Trebuie să fie un loc uscat și bine aerisit.
- Suportul este drept și orizontal și poate suporta greutatea unității exterioare. Acesta nu va provoca zgomote sau vibrații suplimentare.
- Vecinii dumneavoastră nu vor fi deranjați des comod sau de aerul evacuat.
- Este ușor de instalat conducta de legătură sau cablurile.
- Stabiliți direcția evacuării de aer acolo unde aerul evacuat nu este blocat.
- Nu există pericolul de incendiu datorită scurgerii de gaze inflamabile.
- Lungimea conductei dintre unitatea exterioară și unitatea interioară nu trebuie să depășească lungimea permisă pentru conducte.
- În cazul în care locul de instalare este expus vântului puternic cum este cel de pe malul mării, asigurați-vă că ventilatorul funcționează adecvat prin așezarea unității de-a lungul peretelui sau prin utilizarea unei apărători împotriva prafului. (Consultați Fig. 6-1)
- Dacă este posibil, nu instalați unitatea acolo unde este expusă direct luminii soarelui.
- Dacă este nevoie, instalați o protecție ce nu împiedică fluxul de aer.
- În timpul modului de încălzire, apa se scurge din unitatea exterioară. Apa din condens trebuie să fie bine scursă și departe de aparat prin orificiul de scurgere către un loc adecvat astfel încât să nu deranjeze alți oameni.
- Alegeți poziția unde nu va fi afectată de acumulările de săpăză, acumulările de frunze sau alte resturi sezoniere. Dacă acestea nu pot fi evitate vă rugăm instalați un adăpost.
- Așezați unitatea exterioară aproape de unitatea interioară pe cât posibil.
- Dacă este posibil, fă rugăm îndepărtați obstacolele din apropiere ce previn o performanță optimă din cauza circulației prea puțină a aerului.
- Distanța minimă dintre unitate exterioară și obstacolele descrise în graficul de instalare nu înseamnă că acestea sunt aplicabile și în situația unei încăperi etanș. Lăsați deschisă de două sau trei direcții. (Consultați Fig. 6-3)

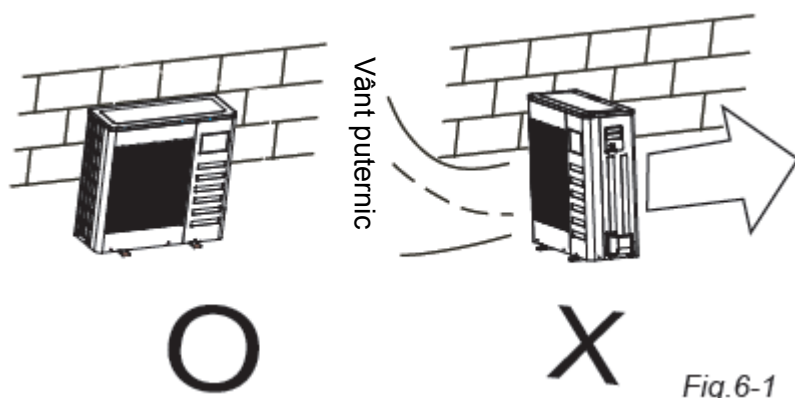


Fig. 6-1



NOTĂ

Toate imaginile din prezentul manual au doar scop explicativ. Acestea pot fi ușor diferite de aparatul de aer condiționat achiziționat de dvs. (în funcție de model). Forma reală va fi cea care va fi luată în considerare.

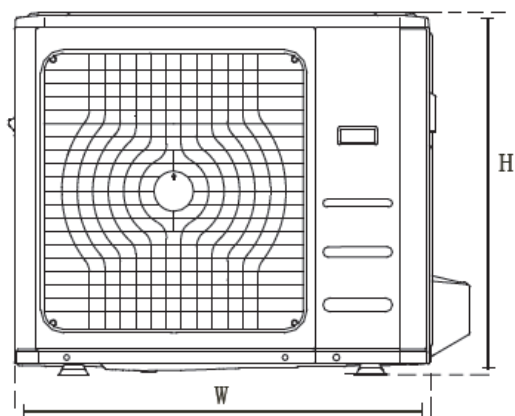


Fig. 6-2

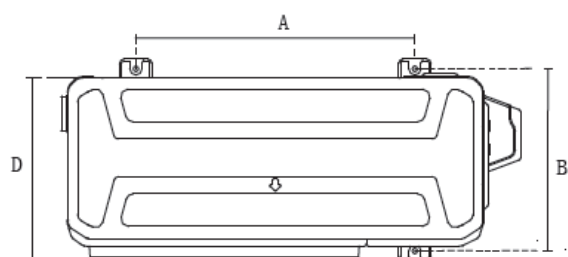


Fig. 6-3

Tabelul 6.1: Specificații privind lungimea pentru unitatea exterioară de tip split (unitate: mm/ inch)

Dimensiuni unitate exterioară L x H x D	Dimensiuni pentru montare	
	Distanța A	Distanța B
780x540x250 (30,7x21,25x9,85)	549 (21,6)	276 (10,85)
760x590x285 (29,9x23,2x11,2)	530 (20,85)	290 (11,4)
810x558x310 (31,9x22x12,2)	549 (21,6)	325 (12,8)
845x700x320 (33,27x27,5x12,6)	560 (22)	335 (13,2)
770x555x300 (30,3x21,85x11,8)	487 (19,2)	298 (11,73)
800x554x333 (31,5x21,8x13,1)	514 (20,24)	340 (13,39)
845x702x363 (33,27x27,6x14,3)	540 (21,26)	350 (13,8)

Glisați evacuarea de aer a unității exterioare

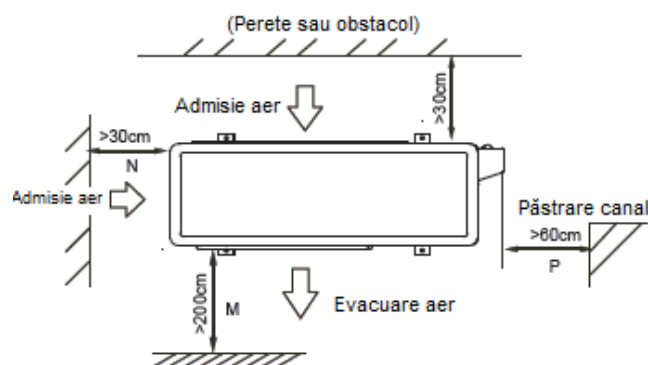


Fig. 6-4



NOTĂ

Toate imaginile din prezentul manual au doar scop explicativ. Acestea pot fi ușor diferite de aparatul de aer condiționat achiziționat de dvs. (în funcție de model). Forma reală va fi cea care va fi luată în considerare.

6.2 Mutare și instalare

- Deoarece centrul gravitațional al unității nu se află în centrul său fizic, aveți grijă la ridicarea cu ajutorul funiilor.
- Nu apucați de admisia unității exterioare pentru a preveni deformarea acesteia.
- Nu atingeți ventilatorul cu mâinile sau alte obiecte.
- Nu o înclinați mai mult de 45°, nu o așezați înclinat.
- Realizați o structură de beton conform cu specificațiile unității exterioare. (Consultați Fig. 6-5)
- Legați picioarele aparatului în mod ferm cu bolțuri pentru a preveni prăbușirea în cazul unui cutremur sau a unui vânt puternic. (Consultați Fig. 6-5)

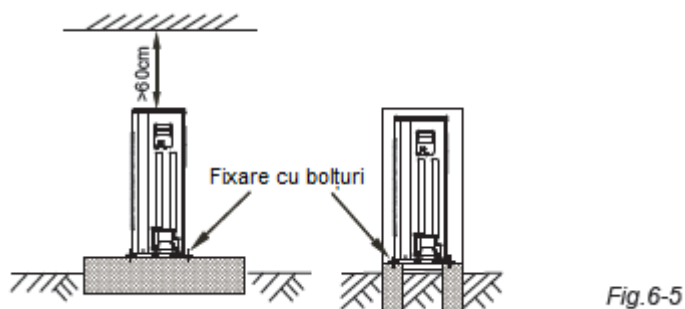


Fig. 6-5



NOTĂ

Toate imaginile din prezentul manual au doar scop explicativ. Acestea pot fi ușor diferite de aparatul de aer condiționat achiziționat de dvs. (în funcție de model). Forma reală va fi cea care va fi luată în considerare.

7. INSTALAREA CONDUCTEI DE AGENT FRIGORIFIC

Verificați dacă înălțimea de cădere dintre unitatea interioară și unitatea exterioară, lungimea conductei de agent frigorific, și numărul de îndoiri sunt conform cu următoarele cerințe:

Tabelul 7-1

Capacitate (Btu/h)	12000	16000 ~ 18000
Înălțimea maximă de cădere	5 m	10 m
Lungimea conductei de agent frigorific	mai puțin de 10 m	mai puțin de 20 m
Numărul de îndoiri	mai puțin de 5	mai puțin de 8

7.1 Procedura de racordare conducte



ATENȚIE

Toate lucrările de conducte trebuie realizate de un tehnician autorizat frigotehnist și trebuie să respecte reglementările locale și naționale relevante.

Nu permiteți pătrunderea aerului, prafului și altor impurități în sistemul conductelor în timpul instalării.

Conducta de racordare nu se va instala până când unitatea interioară și unitatea exterioară nu au fost deja fixate.

Mențineți uscată conducta de racordare, și nu permiteți pătrunderea umezelii în instalație.

Efectuați lucrarea de izolare împotriva căldurii complet pe ambele laturi ale conductei de gaz și conductei lichide. În caz contrar, aceasta poate provoca uneori scurgerea apei.

1. Efectuați o gaură în perete (corespunzătoare pentru dimensiunea conductei de perete), apoi instalați accesoriile cum ar fi conducta de perete și capacul.
2. Legați conducta de perete și cablurile strâns cu colierele de prindere. Treceți conducta de racordare legată prin conducta de perete de la exterior. Atenție la amplasarea conductei pentru a nu afecta tubulatura.
3. Racordați conductele. Consultați "Modul de racordare a conductelor" pentru detalii.
4. Scoateți aerul cu pompa de vid. Consultați "Modul de eliminare aer folosind pompa de vid" pentru detalii.
5. Deschideți vanele de închidere ale aparatului de la exterior pentru un flux fluent al conductei agentului frigorific ce leagă aparatul de la interior cu cel de la exterior.
6. Verificați să nu prezinte scurgeri. Verificați toate racordările cu detectorul de scurgeri sau cu soluție de apă cu săpun.
7. Acoperiți racordurile conductei de racordare cu un înveliș (fitinguri) izolate fonic/izolate, și legați cu benzi pentru a preveni scurgerea.



ATENȚIE

Asigurați-vă ca materialele de izolare acoperă toate părțile expuse ale racordurilor conductei expandate și conductei agentului frigorific în partea lichidă și partea de gaz. Asigurați-vă că nu există niciun spațiu între ele. Izolarea incompletă prezintă risc de condens.

■ Modul de demontare a unității interioare pentru conectarea conductelor

1. Deschideți panoul frontal

- Glisați cele două opritoare pe partea stângă și dreaptă spre interior până se aude un sunet de clic. (Consultați Fig. 7-1)

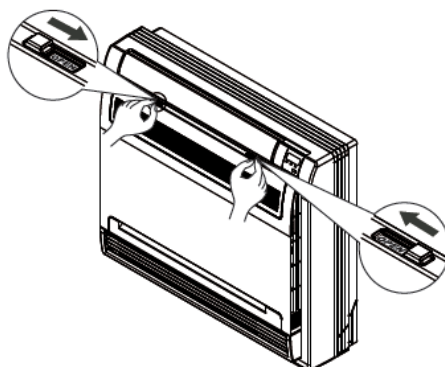


Fig. 7-1

1. Înlăturați panoul frontal

- Îndepărtați sfoara. (Consultați Fig. 7-2)
- Dacă permiteți panoului frontal să cadă spre exterior îl veți putea îndepărta.

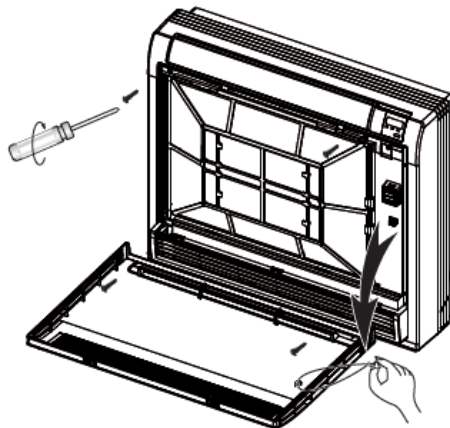


Fig.7-2

1. Înlăturați placa frontală

- Îndepărtați cele patru șuruburi. (Consultați Fig. 7-2)
- Deschiderea părții de jos a plăcii frontale la un unghi de 30 de grade va permite îndepărtarea părții de sus a plăcii frontale. (Consultați Fig. 7-3)

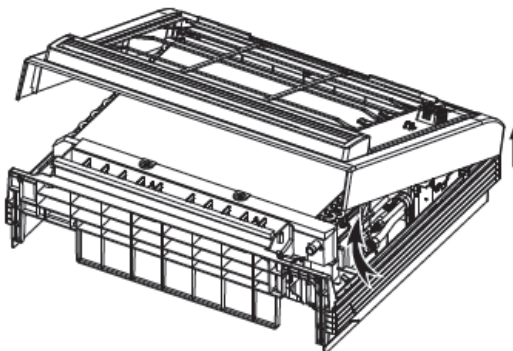


Fig.7-3

■ Modul de demontare al unității exterioare pentru racordarea conductelor

Înlăturați tava de apă (Consultați Fig. 7-4)

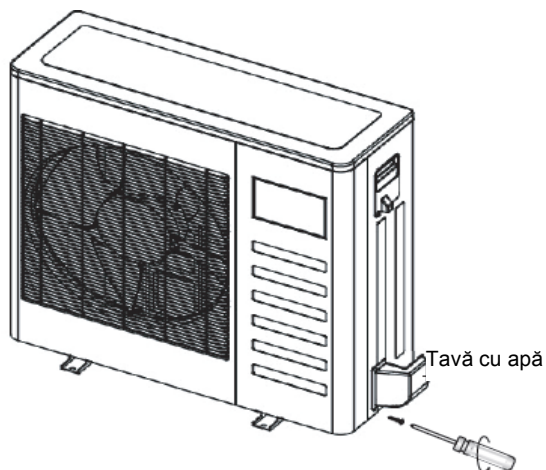


Fig.7-4

■ Modul de racordare a conductelor

1 Expansiunea

- Tăiați o conductă cu un dispozitiv de tăiat țevi. (Consultați Fig. 7-5)

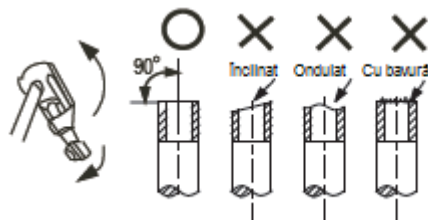


Fig. 7-5

- Inserați o piuliță de expansiune și expandați conducta.
- Consultați tabelul 7-2 pentru dimensiunea spațiilor piuliței de expandare.

Tabelul 7-2

Calibru țeavă	Cuplu de torsiune	Dimensiune expansiune A		Formă expansiune
		Min (mm)	Max	
Ø6.35	15 ~ 16 N. m (153~163 kgf.cm)	8,3	8,7	
Ø9.52	25 ~ 26 N. m (255~265 kgf.cm)	12,0	12,4	
Ø12.7	35 ~ 36 N. m (357~367 kgf.cm)	15,4	15,8	
Ø15.9	45 ~ 47 N. m (459~480 kgf.cm)	18,6	19,0	
Ø19.1	65 ~ 67 N. m (663~684 kgf.cm)	22,9	23,3	

2 Conectați mai întâi unitatea interioară și apoi unitatea exterioară.

- Îndoiiți tubul în mod adecvat
Îndoiiți țeava cu degetul mare



Întindere minimă 100 mm

Fig. 7-6

- Unghiul de îndoire nu trebuie să fie mai mare de 90°.
- Poziția de îndoire este de preferință pe mijlocul conductei de îndoit. Cu cât este mai mare raza de întindere, cu atât este mai bine.
- Nu îndoiți țeava de mai mult de trei ori.
- La legarea piuliței de expansiune, ungeți expansiunea atât la exterior cât și la interior cu ulei sau ulei de ester și strângeți mai întâi cu mâna de 3 sau 4 ori înainte de a strânge ferm.

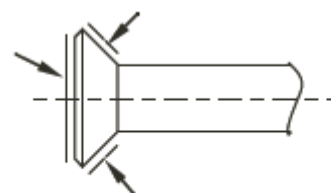


Fig. 7-7

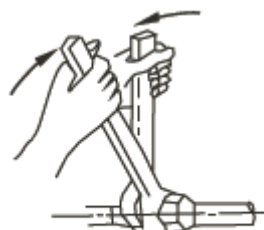


Fig. 7-8

- Asigurați-vă că utilizați atât o cheie fixă, cât și o cheie dinamometrică la conectarea sau deconectarea conductelor la/ de la unitate.



ATENȚIE

O torsiune prea mare va afecta garnitura iar una prea mică va duce la scurgeri. Vă rugăm stabiliți cuplul de torsiune conform cu Tabelul 4.

După finalizarea acțiunii de racordare, asigurați-vă că verificați să nu existe scurgeri de gaze.

■ Modul de purjare aer folosind o pompă de vid

• Introducere funcționare supapă de oprire

1. Deschiderea supapei de oprire

1. Îndepărtați capacul și rotiți supapa în sensul invers acelor de ceasornic cu o cheie hexagonală.
2. Rotiți-o până la oprirea tijei. Nu folosiți forță excesivă pentru supapa de oprire. Acest lucru poate duce la ruperea corpului supapei deoarece nu este de tip cu opritor. Utilizați întotdeauna instrumentul special.
3. Asigurați-vă că strângeți bine capacul.

2. Închiderea supapei de oprire

1. Îndepărtați capacul și rotiți supapa în sensul acelor de ceasornic cu o cheie hexagonală.
 2. Strângeți bine supapa până ce tija intră în contact cu garnitura corpului principal.
 3. Asigurați-vă că strângeți bine capacul.
- Pentru cuplul de torsiune, consultați tabelul de mai jos.

Tabel 7-3

Cuplul de torsiune N+ M (a se roti în sensul acelor de ceasornic pentru închidere)				
Dimensiune supapă oprire	Tijă (corp supapă)		Capac (capac supapă)	Piuliță pt. întreținere
Ø6.35	5.4 ~ 6.6	Cheie hexagonală 4 mm	13.5 ~ 16.5	11.5 ~ 13.9
Ø9.52			18 ~ 22	
Ø12.7	8.1 ~ 9.9	Cheie hexagonală 6 mm	23 ~ 27	
Ø15.9	13.5 ~ 16.5		36 ~ 44	
Ø22.2	27 ~ 33	Cheie hexagonală 10 mm		
Ø25.4				



ATENȚIE

Utilizați întotdeauna un furtun de încărcare pentru conectarea la portul de service.

După strângerea capacului, verificați că nu există scurgeri ale agentului frigorific.

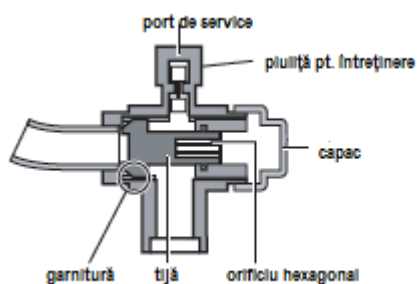


Fig.7-9

- **Utilizarea unei pompe de vid**

1. Slăbiți și îndepărtați piulițele pentru întreținere de la supapele de oprire A și B și conectați furtunul de încărcare al supapei de distribuție la portul de service al supapei de oprire A. (Asigurați-vă că supapele de oprire A și B sunt amândouă închise).
2. Conectați racordul furtunului de încărcare la pompa de vid.
3. Deschideți complet mânerul de presiune scăzută al supapei de distribuție.
4. Porniți pompa de vid. La începutul pompării, slăbiți piulița pentru întreținere de la supapa de oprire B doar puțin pentru a verifica dacă aerul intră (sunetul scos de pompă se schimbă iar indicatorul multimetrului indică o valoare sub zero). Apoi strângeți piulița pentru întreținere.
5. Când pomparea se încheie, închideți mânerul de presiune scăzută al supapei de distribuție complet și opriți pompa de vid. Pomparea se realizează timp de 15 minute sau mai mult pentru a vă asigura că multimetrul indică -76cmHg(-1X10 Pa).
6. Slăbiți și îndepărtați capacul supapelor de oprire A și B pentru a opri complet supapele A și B, apoi strângeți capacul.
7. Demontați furtunul de încărcare de la portul de service al supapei de oprire A și strângeți piulița.

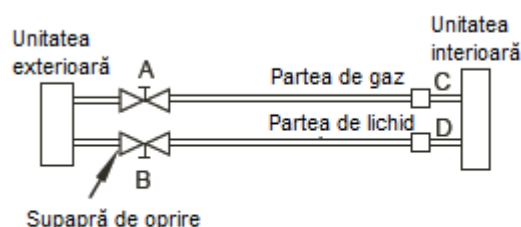


Fig. 7-10

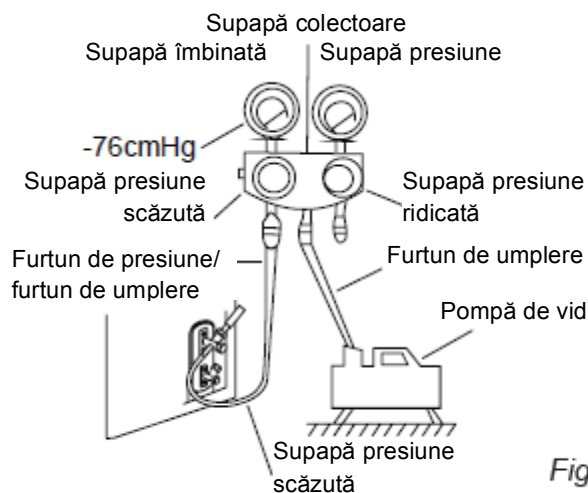


Fig. 7-11

7.2 Încărcarea de agent frigorific suplimentar



ATENȚIE

Agentul frigorific nu poate fi încărcat până ce cablarea nu a fost încheiată.

Agentul frigorific poate fi încărcat doar după efectuarea testului de scurgeri și a pompării în vid.

La încărcarea unui sistem, trebuie să aveți grijă ca nivelul său maxim de încărcare să nu fie depășit, în vederea pericolului forjării lichide.

Încărcarea cu o substanță nepotrivită poate duce la explozii și accidente, așa că asigurați-vă întotdeauna că agentul frigorific adecvat este cel încărcat.

Containerele de agent frigorific vor fi deschise ușor.

Utilizați întotdeauna mănuși de protecție și protejați-vă ochii atunci când încărcați agent frigorific.

Unitatea exterioară este încărcată din fabrică cu agent frigorific. Unele sisteme necesită încărcare suplimentară cu agent frigorific în funcție de lungimea conductelor. Agentul frigorific suplimentar ce poate fi încărcat se poate calcula utilizând următoarea formulă:

Lungimea standard a conductei variază conform cerințelor din diferite regiuni. De exemplu, în America de Nord, lungimea standard a conductei este de 7,5m (25ft). În timp ce în alte regiuni lungimea standard este de 5 m (16ft).

Invertor R410A:

Partea lichidă: $\phi 6.35$ (1/4") (Lungime totală conductă – lungime standard conductă) x15g (0.16oz) /m(ft)

Partea lichidă: $\phi 9.52$ (3/8") (Lungime totală conductă – lungime standard conductă) x30g (0.32oz) /m(ft)



NOTĂ

Toate imaginile din prezentul manual au doar scop explicativ. Acestea pot fi ușor diferite de aparatul de aer condiționat achiziționat de dvs. (în funcție de model). Forma reală va fi cea care va fi luată în considerare.

8. LEGAREA CONDUCTEI DE SCURGERE

■ Instalați conducta de scurgere a unității interioare

Orificiul de evacuare prezintă șurub pânle PTI, Vă rugăm să folosiți materialele de sigilare și de acoperirea s conductei (accesoriu) când racordați conductele PVC.



ATENȚIE

- Conducta de scurgere a unității interioare trebuie izolată împotriva căldurii, sau va produce condens, precum și racordările aparatului de la exterior.
- Legătura puternică PVC trebuie folosită pentru racordarea conductei, și trebuie să vă asigurați că nu există scurgeri. Cu partea de racordare spre unitatea interioară, nu puneți presiune pe conductele unității interioare.
- Când înclinarea conductei de scurgere în jos depășește 1/100, nu trebuie să existe nicio îndoire.

- Lungimea totală a conductei de scurgere când este trasă transversal nu trebuie să depășească 20m, când conducta este prea lungă, se instalează un suport basculant pentru a preveni cotitura.
- Consultați figurile de mai jos pentru instalarea conductelor.

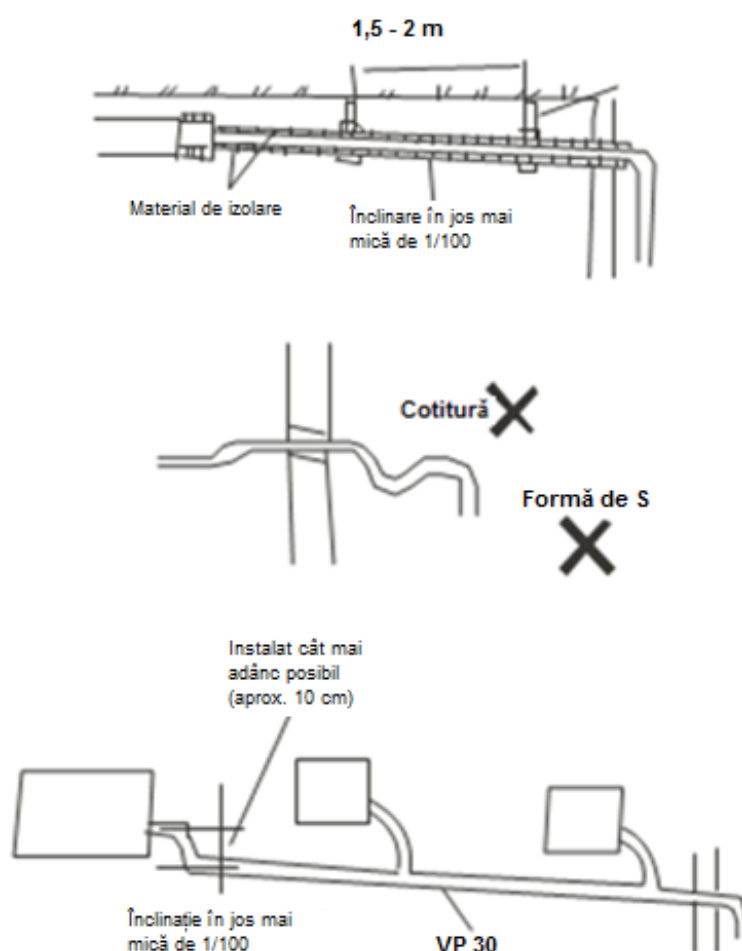


Fig. 8-1

■ Test de scurgere

- Verificați dacă conducta de scurgere este intactă.
- Pentru locuințele nou construite acest test trebuie efectuat înainte de pavarea tavanului.

■ Instalare racord scurgere

Fixați sigiliul în racordul de scurgere, apoi introduceți racordul de scurgere în orificiul rezervorului de bază al unității exterioare, rotiți 90° pentru a le asambla în siguranță.

Conectați la racordul de scurgere un furtun de scurgere prelungitor (achiziționat local), în cazul în care apa se scurge din unitatea exterioară în modul de încălzire. (Consultați Fig. 8-2)

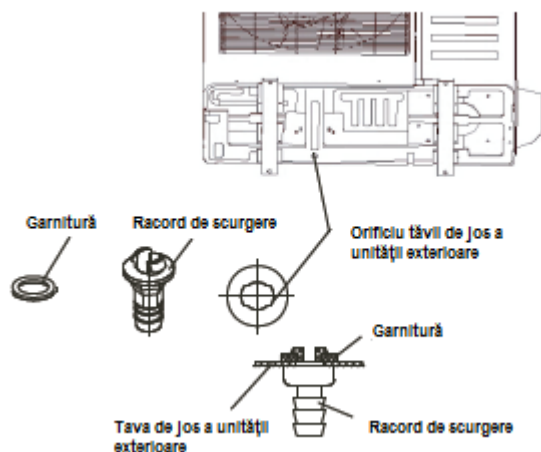


Fig.8-2



NOTĂ

Toate imaginile din prezentul manual au doar scop explicativ. Acestea pot fi ușor diferite de aparatul de aer condiționat achiziționat de dvs. (în funcție de model). Forma reală va fi cea care va fi luată în considerare.

9. CABLAREA



ATENȚIE

Aparatul va fi instalat în conformitate cu standardul național de cablare.

Aparatul de aer condiționat va utiliza o alimentare electrică separată cu voltaj nominal.

Cablul extern de alimentare al aparatului de aer condiționat trebuie să fie împământat, adică legat la împământare atât la unitatea interioară cât și la unitatea exterioară.

Tragerea cablurilor trebuie să fie realizată de către persoane calificate conform digramei de circuit.

Un comutator de deconectare multipolar ce are o separare de contact de cel puțin 3 mm la toți polii și un dispozitiv de curent rezidual (RCD) cu un voltaj de peste 10 mA trebuie încorporate la cablarea fixă conform reglementărilor naționale.

Aveți grijă să amplasați bine cablul de alimentare și cablul de semnal pentru a evita defecțiunile din încrucișarea lor.

Nu porniți alimentarea electrică până ce nu verificați cu atenție cablarea realizată.



NOTĂ

Observație conform Directivei CEM 89/336/EEC
Pentru a evita urmele de aprindere intermitentă în timpul pornirii compresorului (procesului

tehnic) se aplică următoarele condiții:

1. Alimentarea electrică a aparatului de aer condiționat trebuie realizată la distribuția principală a alimentării. Distribuția trebuie să fie de o impedanță scăzută, în mod normal impedanța necesară atingând un punct de aprindere de 32 A.
2. Nu trebuie alimentat niciun alt echipament la această linie electrică.
3. Pentru detalii legate de permisele instalării, vă rugăm contactați furnizorul dvs. de electricitate, dacă se aplică restricții pentru produse de genul mașinilor de spălat, aparatelor de aer condiționat sau cuptoarelor electrice.
4. Pentru detalii legate de electricitatea aparatului de aer condiționat consultați plăcuța de identificare a voltajului de pe produs.
5. Pentru orice întrebări contactați dealerul dvs. local.

9.1 Conectarea cablului

- Purtătorul de instalare al dispozitivului de detectare se rotește într-o altă parte, iar apoi se ia capacul cutiei electrice. (Scoateți cutia electrică în cazul în care capacitatea este 18000 btu/h, precum și cu ajutorul funcției de rețea.)

(Consultați Fig. 9-1)

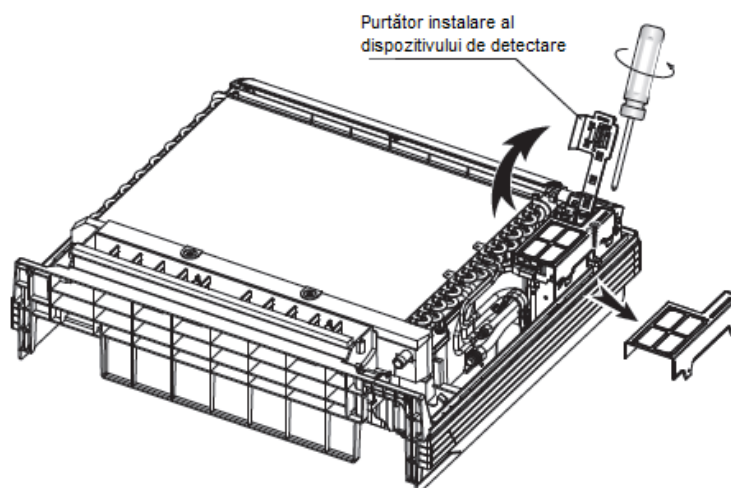


Fig.9-1

- Îndepărtați capacul electric al unității interioare. Dacă nu există capac pe unitatea interioară, demontați șuruburile de pe placa de întreținere și îndepărtați panoul de protecție. (Consultați Fig. 9-2)

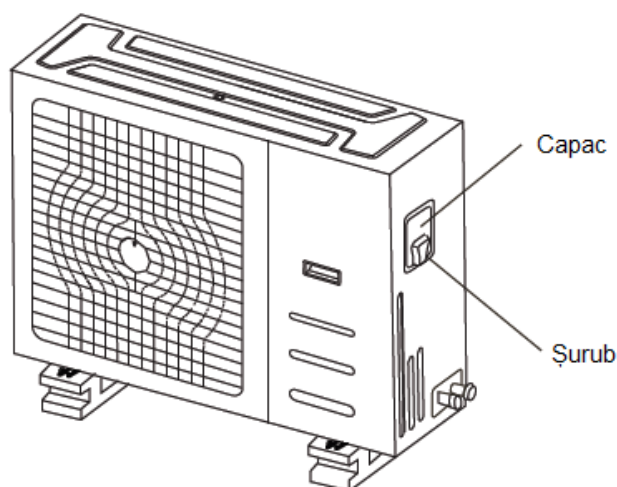


Fig.9-2



NOTĂ

Toate imaginile din prezentul manual au doar scop explicativ. Acestea pot fi ușor diferite de aparatul de aer condiționat achiziționat de dvs. (în funcție de model). Forma reală va fi cea care va fi luată în considerare.

- Conectați cablurile de legătură la terminale, după cum sunt identificate cu numerele lor de potrivire de pe blocul terminal al unității interioare și unității exterioare.
- Reinstalați unitatea interioară și unitatea exterioară.

9.2 Specificații energie electrică

(Consultați Tabelul 9-2)

9.3 Diagrama de legare

(Consultați Fig. 9-4 ~ Fig. 9-7)

9.4 Setarea adresei de rețea

(Doar aparatul de 18000 Btu/h are funcția de setare adresă de rețea.)

Orice aparat de aer condiționat în rețea are o adresă de rețea diferită una de alta. Codul adresei aparatului de aer condiționat în LAN este setat de comutatoare de cod S1 & S2 de pe panoul principal de control al unității interioare și în intervalul setat de 0-63.

Tabelul 9-1

Set basculant de comutare			Cod adresă de rețea
S1	S2		
	 ~ 	00 ~ 15	
	 ~ 	16 ~ 31	
	 ~ 	32 ~ 47	
	 ~ 	48 ~ 63	

10. TESTAREA FUNCȚIONĂRII

1. Operațiunea de testare trebuie desfășurată după finalizarea întregii instalări.
2. Vă rugăm verificați următoarele puncte înainte de testarea funcționării:
 - Unitatea interioară și unitatea exterioară sunt instalate adecvat.
 - Legarea conductelor și a cablurilor este finalizată.
 - Sistemul de conducte de agent frigorific este verificat pentru scurgeri.
 - Scurgerea nu este obstructată.
 - Izolația de căldură funcționează bine.
 - Împământarea este conectată corect.
 - Lungimea conductei și capacitatea suplimentară de umplere a agentului frigorific au fost înregistrate.
 - Voltajul se potrivește voltajului nominal al aparatului de aer condiționat.
 - Nu există obstacole la admisia și evacuarea unității exterioare și unității interioare.
 - Supapele de oprire de pe partea lichidă și partea cu gaz sunt amândouă deschise.
 - Aparatul de aer condiționat este încălzit dinainte prin pornirea alimentării.
3. Conform cerințelor utilizatorului, instalați suportul de telecomandă acolo unde semnalul aparatului de aer condiționat poate să ajungă ușor la unitatea interioară.
4. Testarea funcționării
 - Setati aparatul de aer condiționat pe modulul RĂCIRE (COOL) cu ajutorul telecomenzii și verificați punctele de mai jos. Dacă există defecțiuni, vă rugăm să le soluționați cu ajutorul capitolului „Depanare” din „Manualul de Utilizare”
 - 1) Unitatea interioară
 - a. Dacă comutatorul de pe telecomandă funcționează bine.
 - b. Dacă butoanele de pe telecomandă funcționează bine.
 - c. Dacă flapsul fluxului de aer se mișcă normal.
 - d. Dacă temperatura camerei este potrivită bine.
 - e. Dacă indicatorul se aprinde normal.
 - f. Dacă butoanele temporare funcționează bine.
 - g. Dacă scurgerea curge lin.
 - h. Dacă există vibrații sau zgomote anormale în timpul funcționării.
 - i. Dacă aparatul de aer condiționat se încălzește bine în cazul modelului cu încălzire / răcire.
 - 2) Unitatea exterioară
 - a. Dacă există vibrații sau zgomote anormale în timpul funcționării.
 - b. Dacă aerul evacuat de, zgomotul făcut de sau condensul produs de aparatul de aer condiționat au vreo influență asupra vecinilor dvs.
 - c. Dacă agentul frigorific curge.



ATENȚIE

O funcție de protecție previne activarea aparatului de aer condiționat la aproximativ 3 minute după activare, în momentul repornirii acestuia imediat după oprire.

Specificații energie electrică – Tabelul 9-2

TIP		12000Btu/h (Răcire și încălzire)	16000~18000Btu/h (Răcire și încălzire)	
PUTERE	FAZĂ	1 fază	1 fază	
	FRECVENȚĂ ȘI VOLTAJ	208-240V~, 50Hz/60Hz	208-240V~, 50Hz/60Hz	
ÎNTRERUPĂTOR DE CIRCUIT/SIGURANȚĂ (A)		20/16	20/16	
CABLARE ELECTRICĂ UNITATE INTERIOARĂ (mm ²)		-----	3x10	
CABLARE INTERIOR/ EXTERIOR (mm ²)	ÎMPĂMÂNTARE	1,5	2,5	
	CABLARE ELECTRICĂ UNITATE EXTERIOARĂ	3x1,5	3x2,5	
	SEMNAL ELECTRIC PUTERNIC	4x1,0	-----	
	SEMNAL ELECTRIC SLAB	-----	3x0,5	

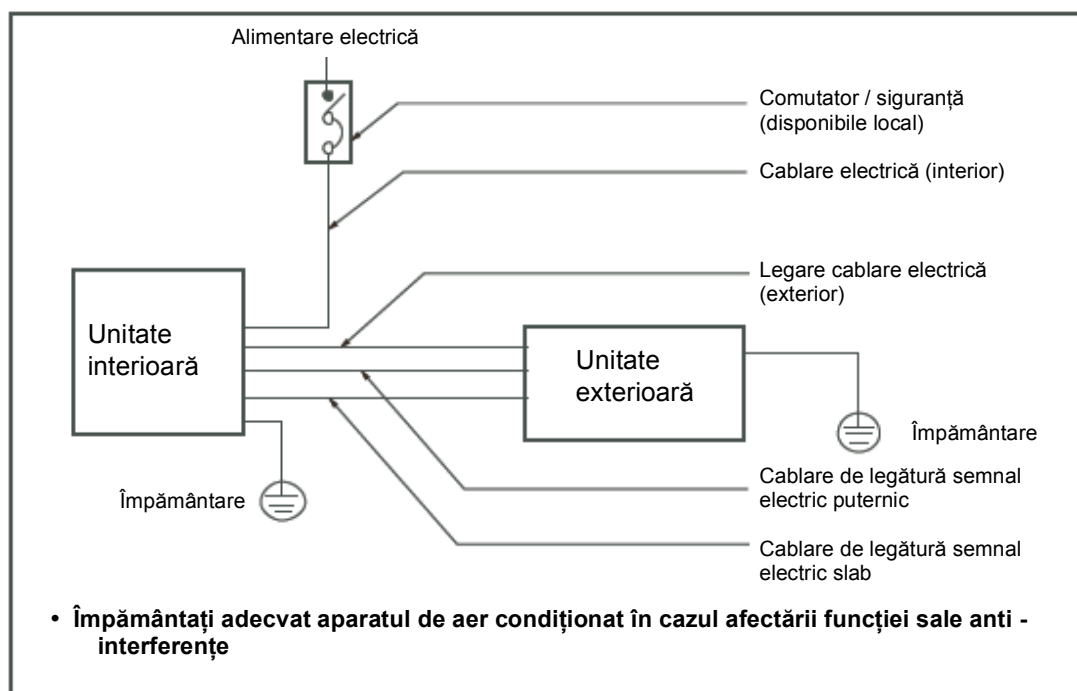


ATENȚIE

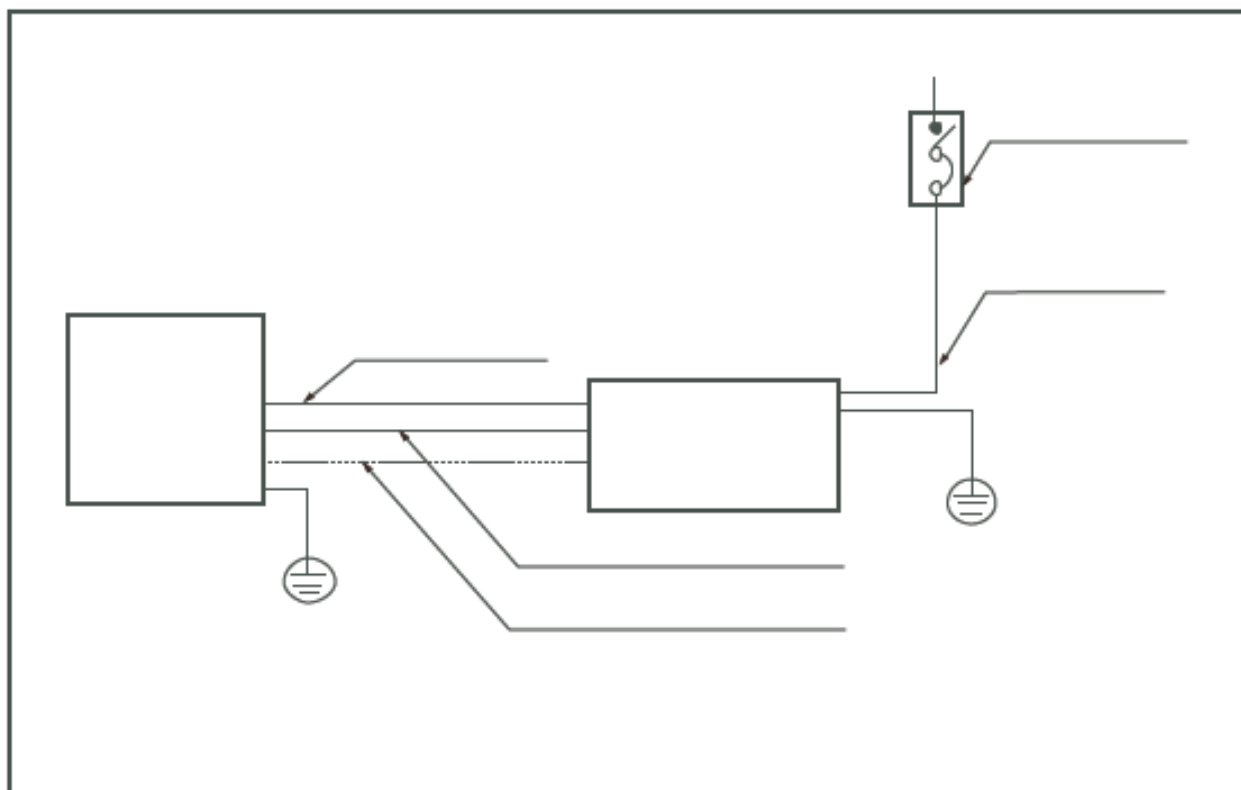
Alimentarea electrică este inclusă în alimentarea electrică menționată mai sus în tabel.
Înainte de obținerea accesului la terminale, toate circuitele de alimentare trebuie deconectate.

Imagine cablare

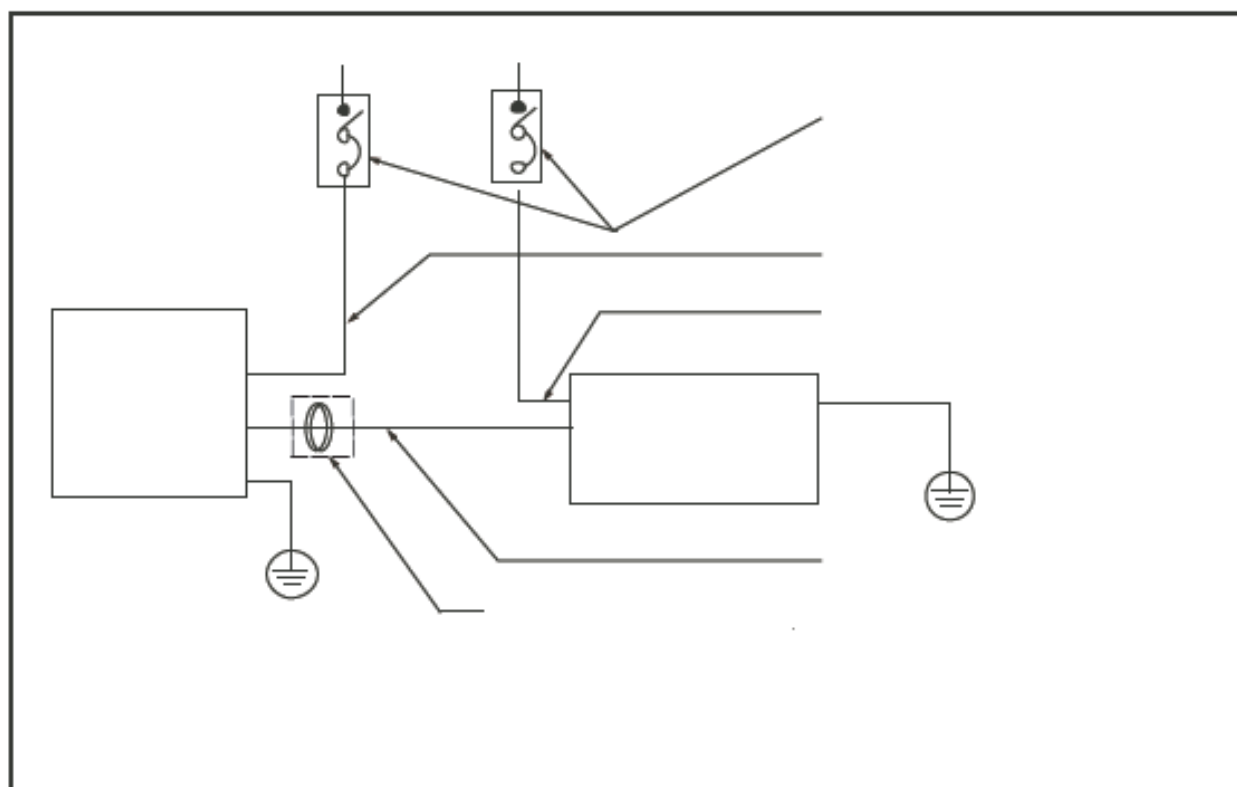
■ Fig.9-4



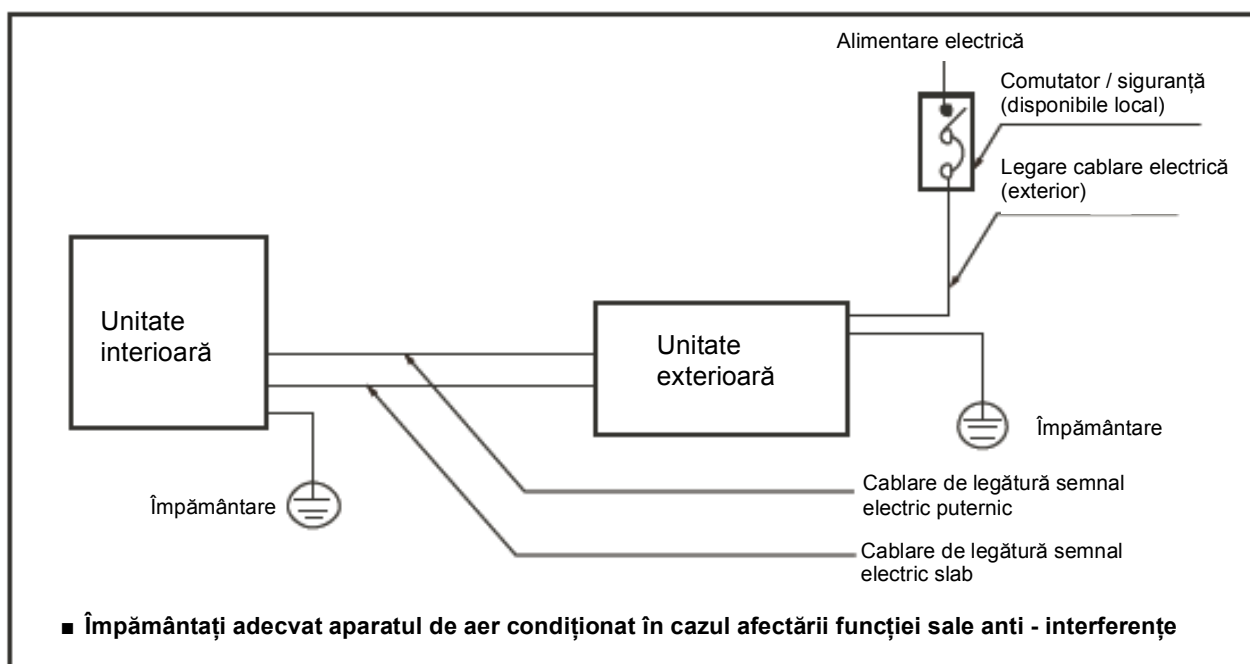
■ Fig.9-5



■ Fig.10-6



■ Fig.9-7



ATENȚIE

Un dispozitiv de deconectare cu o distanță de contact la toți conductorii activi trebuie încorporat în cablarea fixă conform Reglementărilor de Cablare Naționale.

În timpul cablării, vă rugăm alegeți diagrama corespunzătoare. În caz contrar, pot fi provocate defecțiuni. Semnele blocului terminal al unității interioare din câteva dintre imagini pot fi înlocuite de L N L1 N1.

Proiectarea și specificațiile produsului sunt supuse schimbării fără notificare în prealabil pentru îmbunătățirea produsului. Consultați agenții de vânzări sau producătorul pentru detalii.



AIR CONDITIONING SYSTEMS

CONSOLE TYPE



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