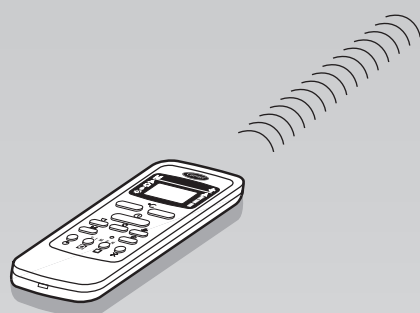
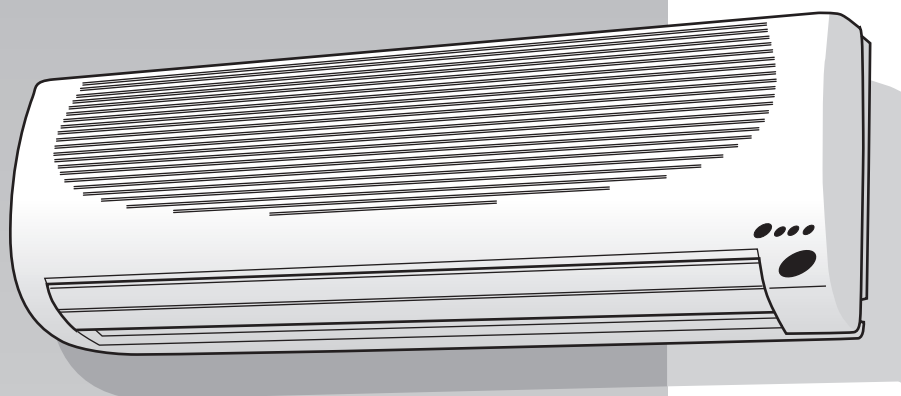




# 42HQM



CE



INSTALLATION MANUAL

# 42HQM

## Split system “Hi-Wall INVERTER” indoor unit

For operation and maintenance instructions of this unit, as well as installation instructions of the outdoor unit, refer to the relevant manuals.

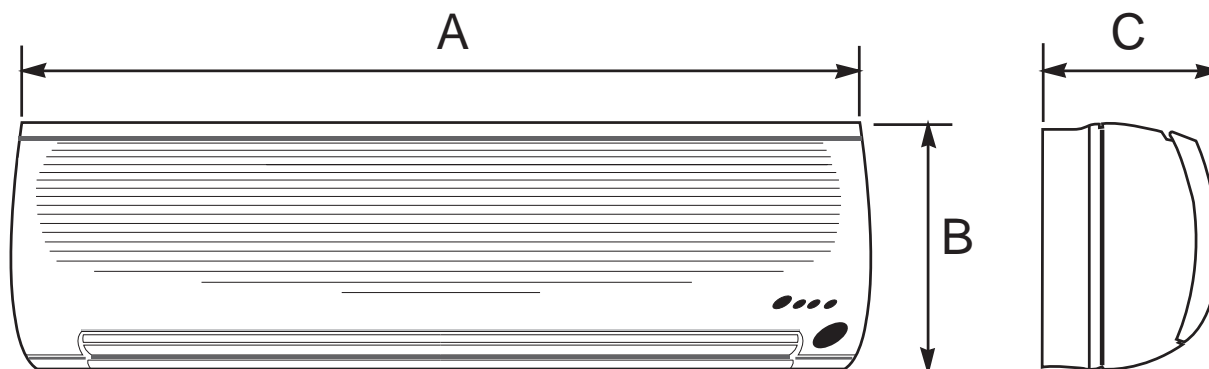
### Contents


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Dimensions and weight.....	2
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Model	Power supply
42HQM009 42HQM012	230V ~ 50Hz

# 42HQM

## Dimensions and weight



Mod.	42HQM 009-012	
<b>A</b> mm	780	
<b>B</b> mm	240	
<b>C</b> mm	170	
 kg	8	

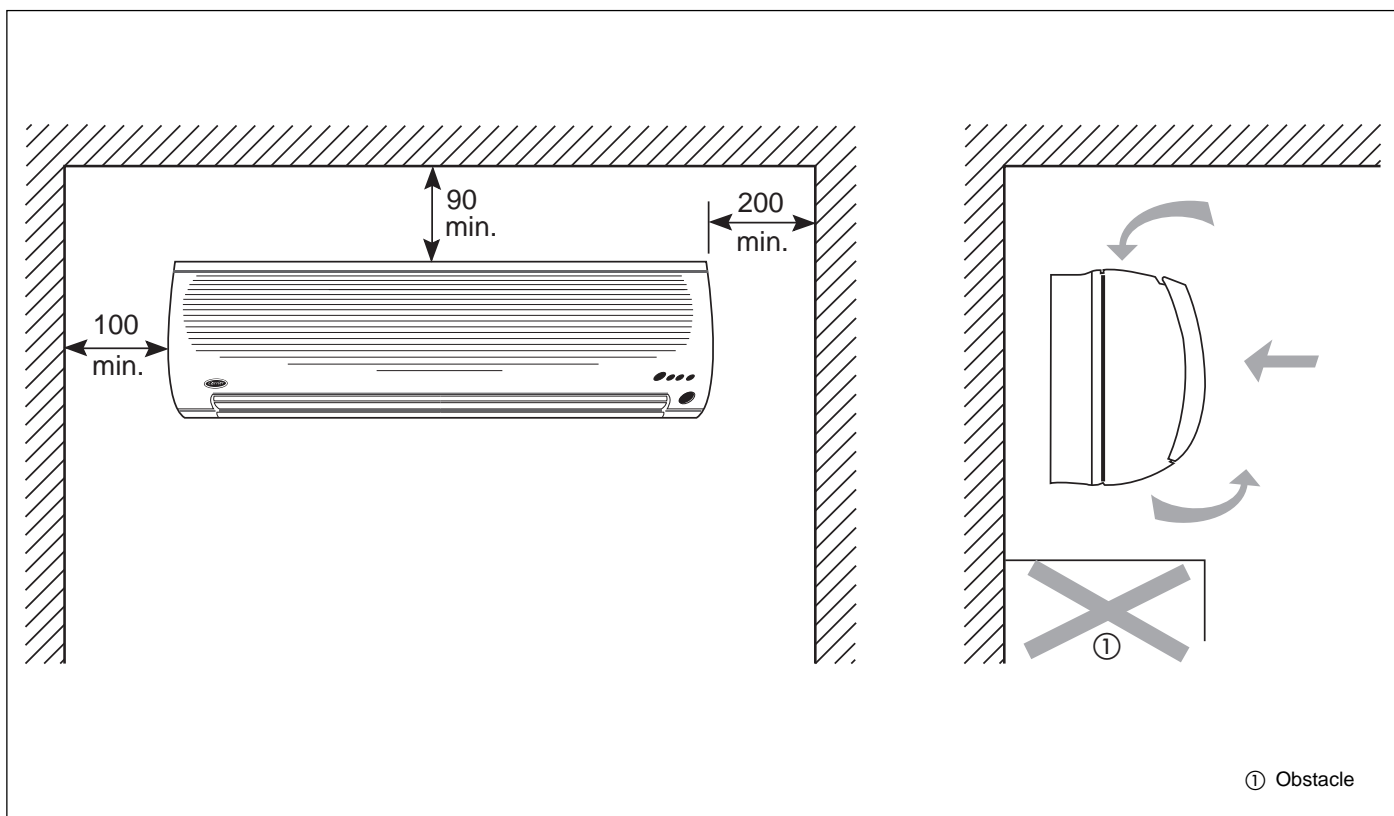
ELECTRIC POWER INPUT		
	Cooling W	Heating W
<b>42HQM 009</b>	25	25
<b>42HQM 012</b>	25	25

**Table I: Nominal data**

- Unit is not suitable for operation in laundry premises.
- Sizing of power supply wires and delay type fuses, refer to the outdoor unit installation instructions.

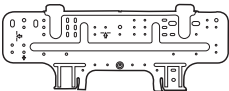


**Table II: Operating limits**

<b>Cooling / Heating</b>	Refer to outdoor unit installation manual.	
<b>Mains power supply</b>	Nominal single-phase voltage Operating voltage limits	230V ~ 50Hz <b>min. 198V – max. 264V</b>



### Table III: Material supplied

The following installation accessories are supplied with unit. Use them as required.

NAME and shape	Q.ty	Use
Wall hanging bracket 	1	For indoor unit installation.
Screws 4xL10 	2	For fixing the unit and hanging bracket
Screws anchors and screws 6xL25 Washers Ø 12 	4 + 4 + 4	For wall hanging bracket installation

The following field-supplied items are required to complete the installation.

Name	Specification
Connection pipe	42HQM 009-012: Ø (3/8") 9,52 mm (Gas) / Ø 6,35 mm (Liquid)
Wall sleeve	
Wall cap	
Finishing tape	PVC film
Fastening tape	
Tube insulation	
Drain hose	I.D. 16-17 mm
Sealer putty	
- Electrical connecting cable between indoor and outdoor unit	1. Cable type: H07RN-F, synthetic rubber insulation with Neoprene coating, according to EN 60335-2-40 and HD277.S1 standards.

# 42HQM

## General information

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### Unit installation

Read this instruction manual thoroughly before starting the installation.

- This unit complies with low-voltage (EEC/73/23) and electromagnetic compatibility (EEC/89/336) directives.
- The installation must be carried out by a qualified installer.
- Follow all current national safety code requirements. In particular ensure that a properly sized and connected ground wire is in place.
- Check that voltage and frequency of the mains power supply are those required for the unit to be installed; the available power must be adequate to operate any other possible appliances connected to the same line. Also ensure that national safety code requirements have been followed for the mains supply circuit.
- Connect the mains supply to the outdoor unit only.
- Connect indoor and outdoor units with field-supplied copper pipes by means of flare connections. Use insulated seamless refrigeration grade pipe only, (Cu DHP type according to ISO 1337), degreased and deoxidized, suitable for operating pressures of at least 4200 kPa and with a burst pressure of 20700 kPa. Under no circumstances must sanitary type copper pipe be used.
- This unit may contain pressurized gas. Leakage can occur when flare connections are opened. No problems are associated with eventual oil leakage.
- Where necessary, use field-supplied 16 -17 mm I.D. PVC pipe of appropriate length and with the correct thermal insulation for the condensate drain extension.
- After installation thoroughly test the system operation and explain all system functions to the owner.
- Leave this manual with the owner for consultation during future periodic maintenance.
- Use this unit only for factory approved applications: **the unit cannot be used in laundry or steam pressing premises.**

#### WARNING:

**Disconnect the mains power supply switch before servicing the system or handling any internal parts of the unit.**

- Do not open the remote control to avoid possible damage. In case of malfunctioning contact a qualified service engineer.
- Control batteries contain polluting elements. When exhausted they must be disposed of according to local requirements.
- This installation manual describes the installation procedures of the indoor unit of a residential split system consisting of two units manufactured by Carrier. Consult factory or a qualified system engineer prior to connecting this unit to any other manufacturer's outdoor unit. Coupling units which have different control systems, may cause irreversible damage and void the warranty protection. The manufacturer declines any liability for system malfunction resulting from unapproved coupling.
- The manufacturer declines any liability for damage resulting from modifications or errors in the electrical or refrigerant connections.

- Failure to observe the installation instructions or use of the unit under conditions other than those indicated in Table II (operating limits), will immediately void the unit warranty.
- Failure to observe electric safety codes may cause a fire hazard in case of short circuits.
- Inspect equipment for damage due to improper transportation or handling; file an immediate claim with the shipping company. Do not install or use damaged units.
- In case of any malfunctioning turn the unit off, disconnect the mains power supply and contact a qualified service engineer.
- Maintenance of the refrigerant circuit must only be carried out by qualified personnel.
- **All of the manufacturing and packaging materials used for your new appliance are compatible with the environment and can be recycled.**
- Dispose of the packaging material in accordance with local requirements.
- This equipment contains refrigerant that must be disposed of in the proper manner. When disposing of the unit after its operational life, remove it carefully. The unit must then be delivered to an appropriate disposal centre or to the original equipment dealer, for proper environmentally friendly disposal.

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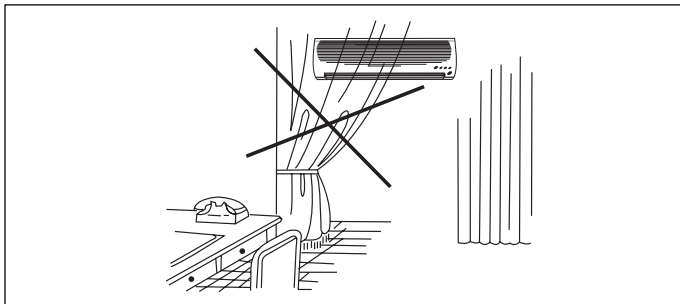
### Choosing the installation site

#### Positions to avoid:

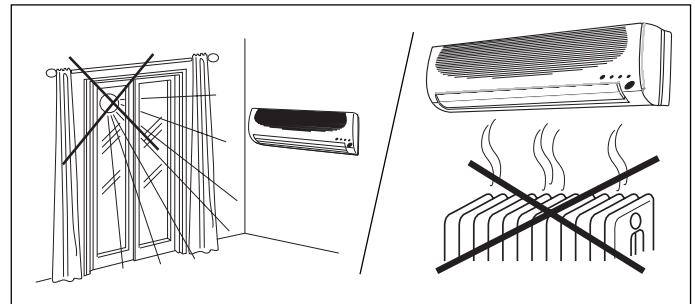
- Exposed to direct sun.
- Too close to heat sources.
- On humid walls or positions with water hazard, e.g. laundry premises.
- Where curtains or furniture may obstruct free air circulation.

#### Recommendations:

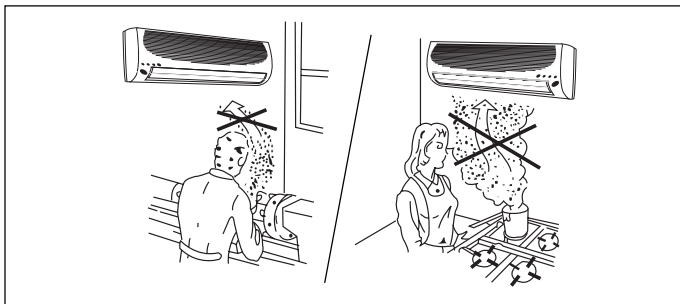
- Choose an area free from obstructions which may cause irregular air distribution and/or return.
- Check that the wall surface is flat enough to allow easy and safe installation. The wall structure should be strong enough to carry the unit weight and avoid deformation, rupture or vibration during operation.
- Consider using an area where installation is easy.
- Choose a position that allows for the clearances required (see drawing).
- Look for a position in the room which assures the best possible air distribution.
- Install unit in a position where condensate can easily be piped to an appropriate drain.



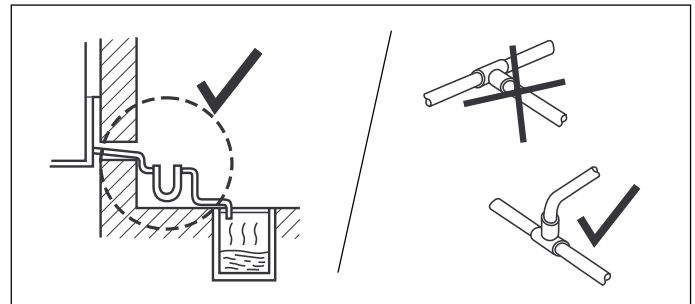
Any obstruction of the unit air outlet or return.



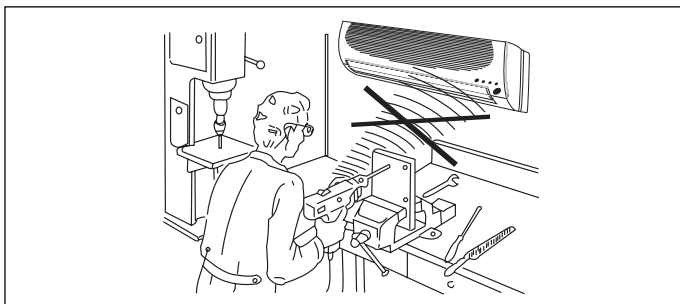
Exposure to direct sunshine, when unit is operating in cooling mode; always use shutters or shades.  
Positions too close to heating sources which may damage the unit.



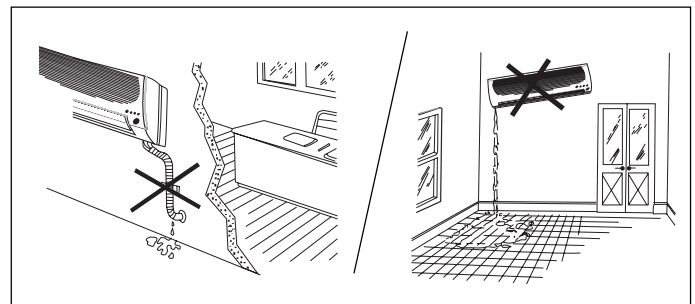
Exposure to oil vapours.



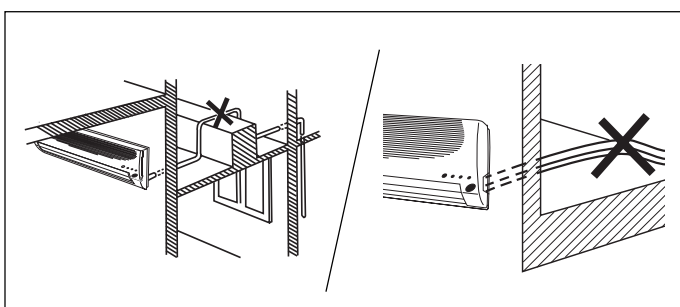
Connecting condensate piping to sewage system drain without appropriate trap. Trap height must be calculated according to the unit discharge head in order to allow sufficient and continuous water evacuation.



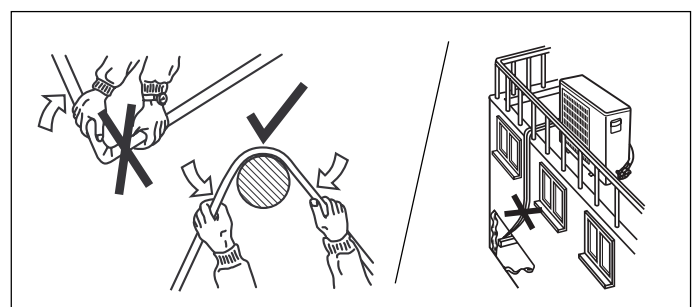
Installation in areas with high-frequency waves.



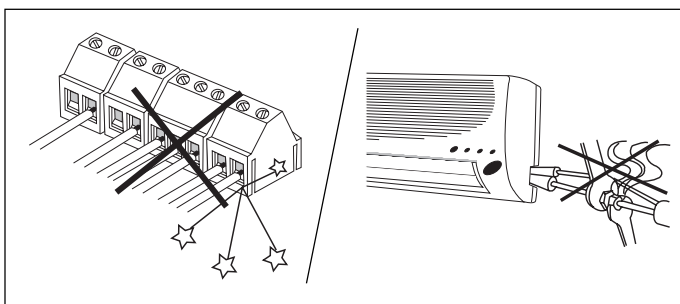
Only partial insulation of the piping.  
Installation not correctly leveled which will cause condensate dripping.



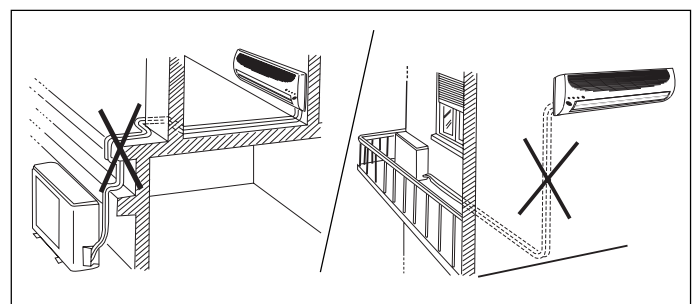
Any rise in the condensate drain piping.  
Horizontal condensate drain piping with less than 2% slope.



Flattening or kinking the refrigerant pipes or condensate pipes.  
Excessive height difference between outdoor and indoor units (see installation manual of outdoor unit).



Slack on electrical connections. Disconnecting refrigerant connections after installation: this will cause refrigerant leaks.

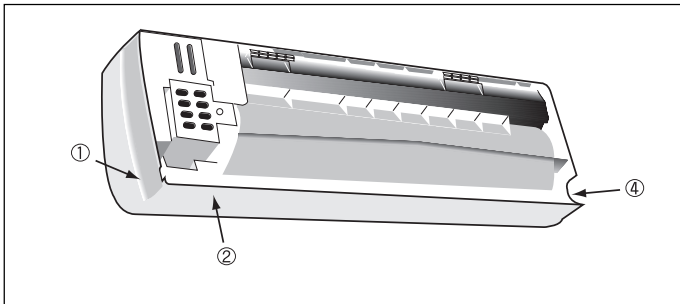
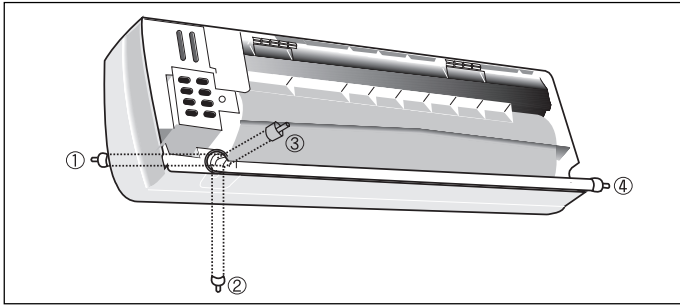


Unnecessary turns and bends in interconnecting tubing. Excessive interconnecting tube length (see installation manual of outdoor unit).

# 42HQM

## Installation

- The piping can be connected in the four ways indicated by ①, ②, ③ and ④.
- When the piping is connected to the points ①, ② or ④, remove the knock-out either at the side or at the bottom of the unit.

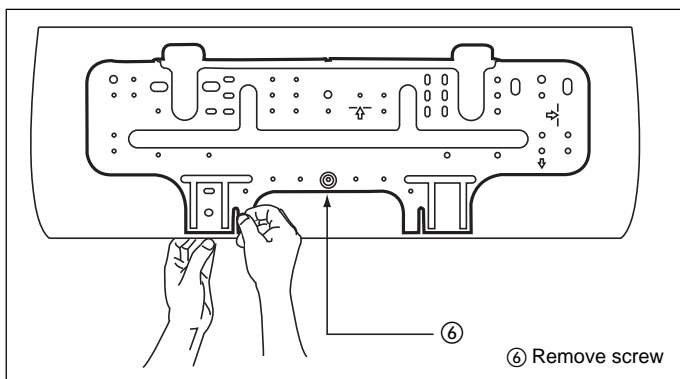
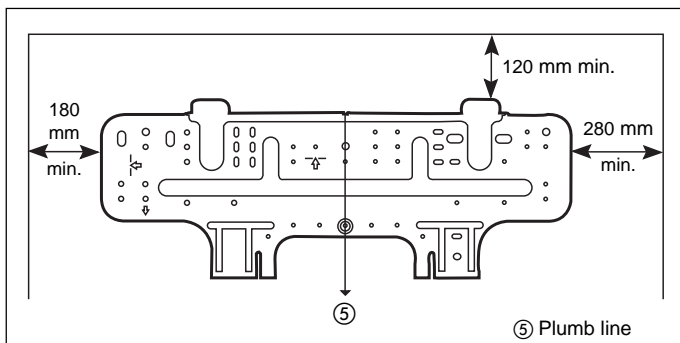


### IMPORTANT NOTE:

This unit has no refrigerant expansion device.

## Installing the wall hanging bracket

- Install the wall hanging bracket so that it is level. Use a plumb line if necessary.
- Be sure to leave the clearance spaces. (Refer to page 3).
- If the wall hanging bracket is not level, water may drip onto the floor.
- Install the wall hanging bracket with a fixing that is strong enough to withstand the weight of the unit.

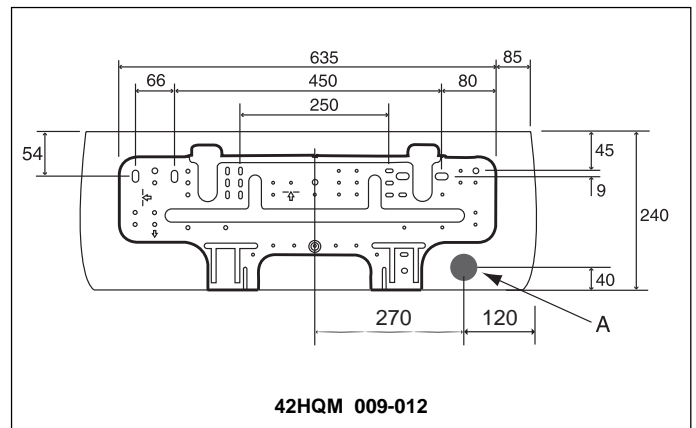


- Before installing the wall hanging bracket, remove it from the unit by pushing at the indicated parts at the bottom of the body.
- Fasten the wall hanging bracket to the wall with 4 or more screw anchors through the holes near the outer edge of the bracket.
- Install the wall hanging bracket so that there is no gap between the bracket and the wall.
- Check that the wall hanging bracket does not move. This can cause noise during operation.
- If the unit is removed from the wall hanging bracket after installing it onto the wall, remove by pushing up the indicated MARKS (▲) at the bottom of the body. (Refer to page 8).

## Marking the wall penetration for the connection piping

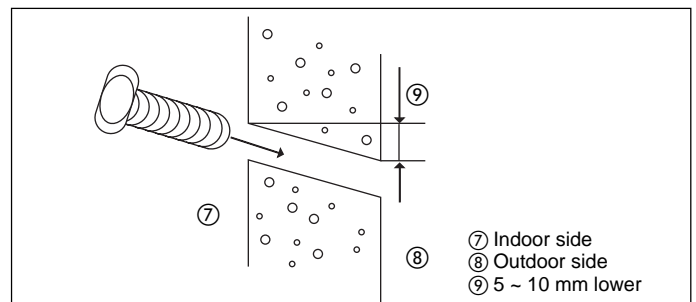
### Rear piping

- It is best for the piping to go through the wall behind the unit, so that the unit hides the pipes.
- For this method of installation, make a 65 mm diameter hole in the wall at point A.



42HQM 009-012

- Drill a 65 mm diameter hole at a slope so that the outside end is lower (5 - 10 mm) than the inside end. This will ensure good drainage.
- Cut the wall sleeve to match the wall thickness and pass the pipe through the hole.

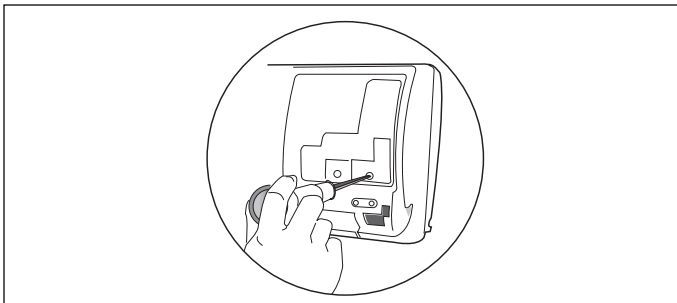
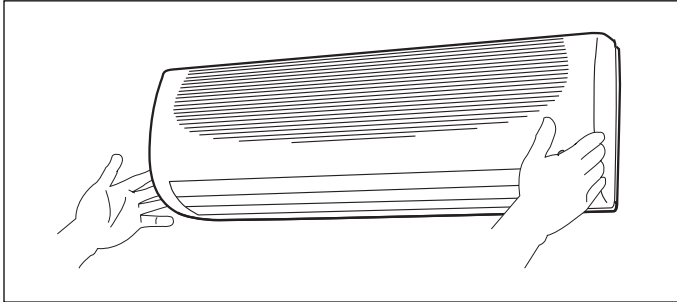


### Side or bottom piping

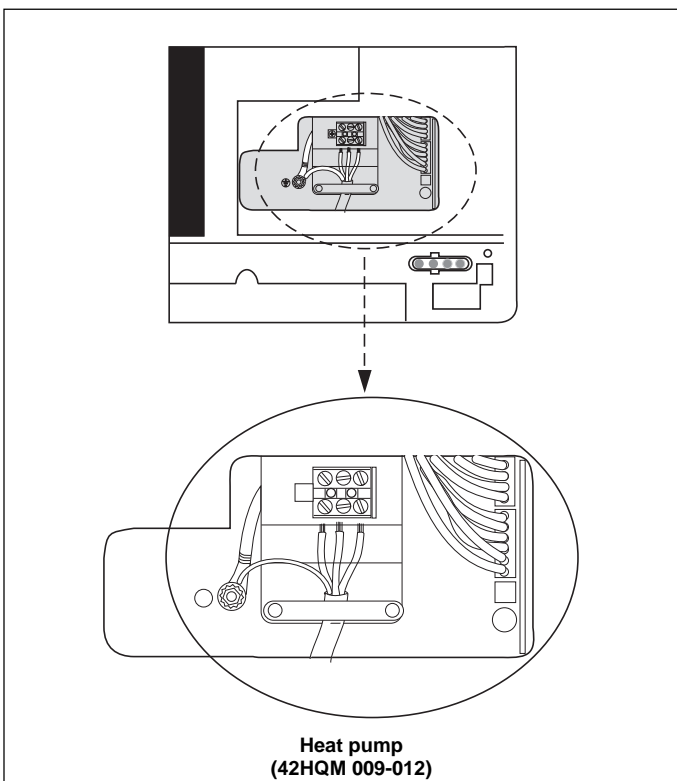
- Remove the knock-out in the unit and pass the pipes through the wall.
- The pipe should slope downward and away from the unit to ensure good drainage.

### Indoor unit wiring

- Lift the front panel up to the top of the unit and the front panel will be separated from the unit.
- Detach the terminal block cover by removing the two screws.
- Connect the electrical connection cord with the screws to the terminal block of the indoor unit.  
Also connect the signal line.  
(Refer to the wiring diagram inside the frame grille and caution label on the frame grille.)



- **The air conditioner always requires grounding.**
- Be sure to comply with local codes when running the wire from the indoor unit to the outdoor unit.
- Every wire must be connected firmly.
- **During installation, proceed first with refrigerant connections between indoor and outdoor units, and only then make the electrical ones; similarly, when disassembling, disconnect the electrical wiring first and then refrigerant connections.**



For detailed wiring connections, refer to page 11.

- Reinstall the terminal block cover with the screws after wiring.

**WARNING:**  
Check that the Emergency button is correctly inserted into its hole in the cover and is not pushed in.

- Fit the front panel to the latch of the frame grille.

### CAUTION:

#### 42HQM 009-012

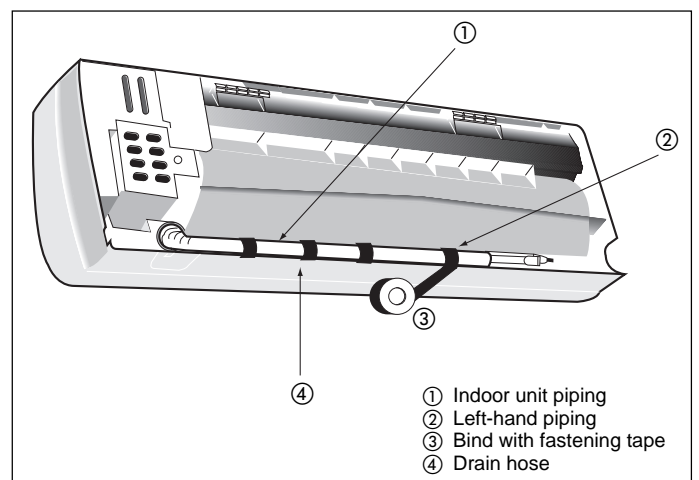
Make certain that the live wire (1), the neutral wire (2) and the signal one (3) are connected to the corresponding terminals 1, 2 and 3 in the outdoor unit.  
Miswiring may cause permanent damage of the system.

### NOTE:

- Incorrect wiring causes malfunction of the unit and electric shock.
- Check local electrical codes and also any specific wiring instructions or limitations.
- For right-hand piping, connect the connection cord and then lead the pipe to the right.
- The ground connection between indoor and outdoor units is made with the ground connection cable.
- Unit must be installed according to applicable national installation standards.
- Power is provided to the unit through the outdoor unit power cord only.
- No power cord or plug are supplied with the indoor unit.

### Routing the drain hose and refrigerant piping

- Tie together the refrigerant pipe, the drain hose, and the electrical connection cord.
- Route the refrigerant piping in the required direction, and bind the drain hose and the electrical connection cord together with fastening tape.  
The drain hose should be at the bottom.

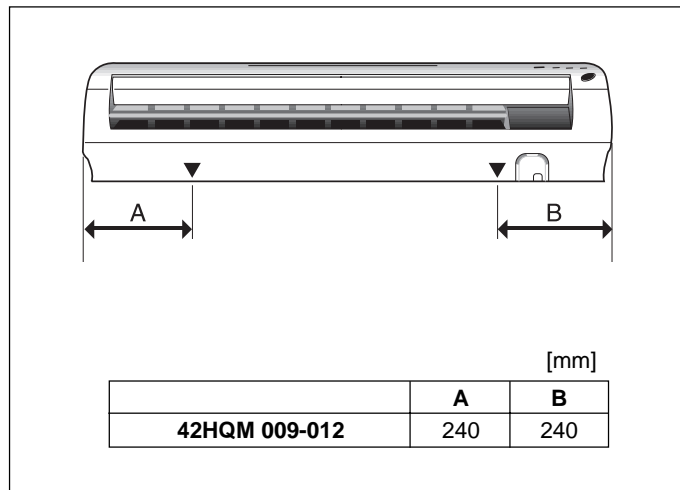
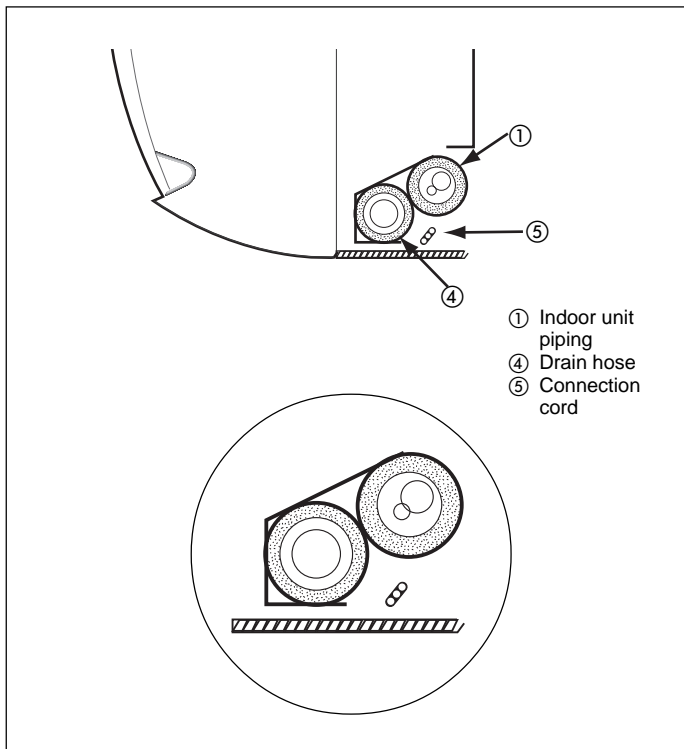


- For left-hand piping, fit the pipes and the wiring into the recess at the back of the unit.



# 42HQM

## Installation



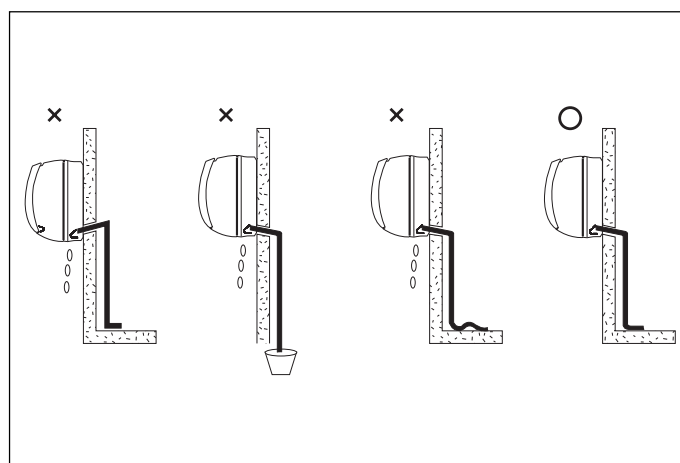
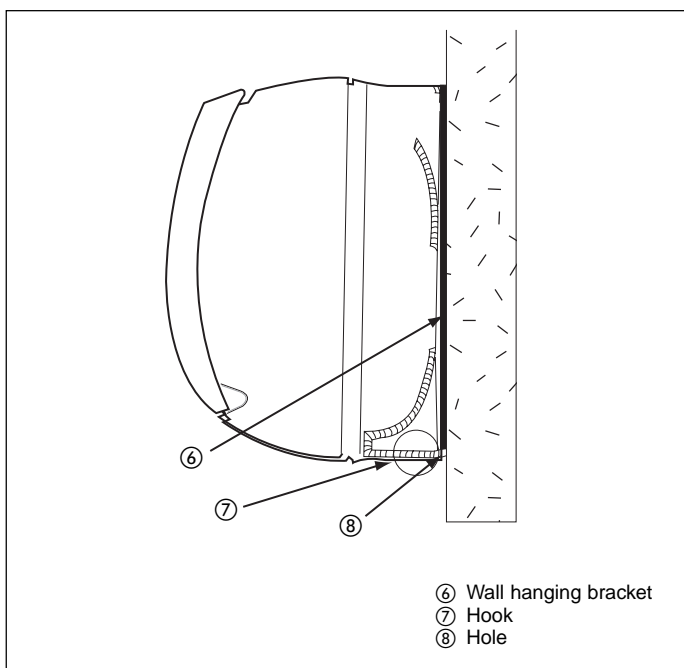
- Next, check the drainage of the unit by pouring some water into the unit drain pan and ensure that the water drains out through the drain hose and that there is no leakage from the other parts.

### NOTE:

- Do not crush or kink the indoor piping. Avoid sharp bends with a bend radius of less than 100 mm.
- Do not bend the same part of the pipe too often.
- Do not remove the flare nut from the indoor unit pipe until the piping is connected.
- The recommended bending of the drain hose is shown.

### Installing the indoor unit body to the wall hanging bracket

- For Left-hand piping, hang the unit onto the top of the wall hanging bracket and incline the unit using a tool such as a screwdriver set between the middle area of the body and bottom right of the wall hanging bracket. Connecting the pipe can be done more easily if the unit is inclined.
- Fix the bottom of unit to the wall hang bracket, by pushing it carefully till the two bracket hooks fit into the marked places at the base of the unit (a click will be heard).

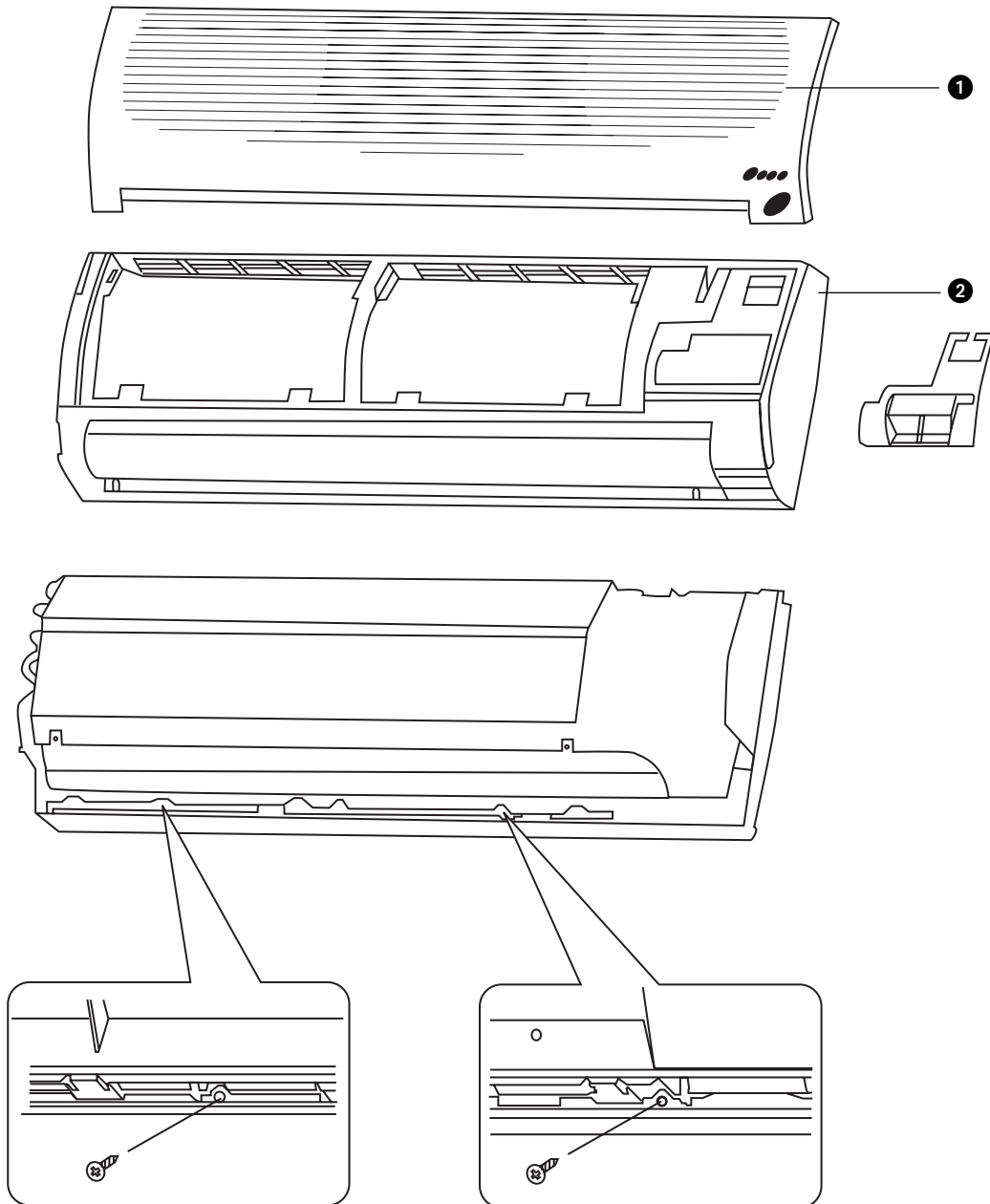


### Usage of Additional Screws

After installation, if there is a significant gap between the unit and wall, it can be adjusted by securing the body to wall hanging bracket using 2 screws. Screw holes can be only seen after removing the frame grille.

# 42HQM

## Installation



- 1 Grill
- 2 Front panel

# 42HQM

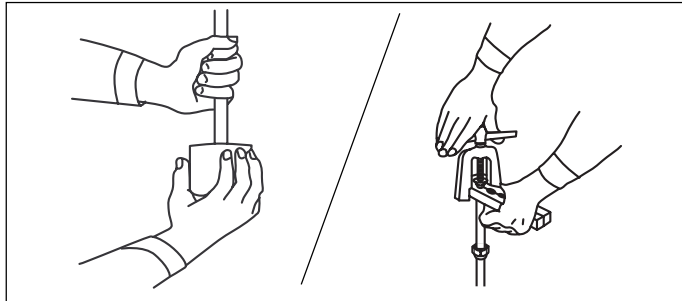
## Refrigerant connections

Refer to the outdoor unit installation manual for tube sizing, and limitations (slope, length, number of bends allowed, refrigerant charge, etc.).

Mod.	Tubing diameter			
	Gas (Suction)		Liquid (Discharge)	
	mm	(inches)	mm	(inches)
42HQM 009-012	9.52	(3/8")	6.35	(1/4")

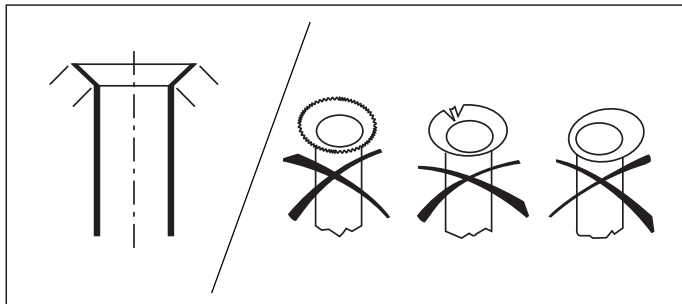
For refrigerant tubes use seamless, insulated refrigeration grade tube, (Cu DHP type according to ISO 1337), degreased and deoxidized, suitable for operating pressures of at least 4200 kPa and with a burst pressure of 20700 kPa. Under no circumstances must sanitary type copper pipe be used.

### Flaring the end of the tubing

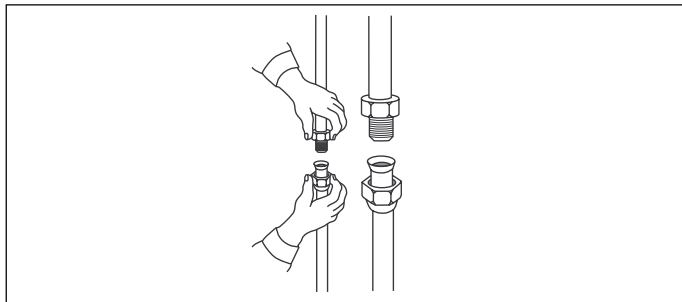


Remove protective caps from the copper tube ends. Position tube end downward, cut the tube to the required length and remove the burrs with a reamer.

Remove flare nuts from the unit connections and place them on the tube end. Flare the tube with the flaring tool.



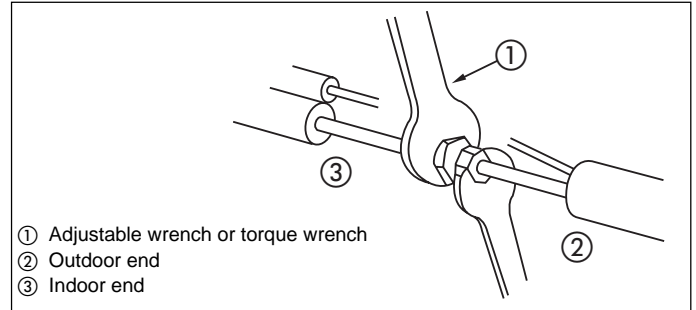
Flare end must not have any burrs or imperfections. The length of the flared walls must be uniform.



Lubricate the tube end and thread of the flare fitting with anti-freeze oil. Finger-tighten the fitting several turns, then tighten it fully with two wrenches by applying the tightening torque indicated in the table.

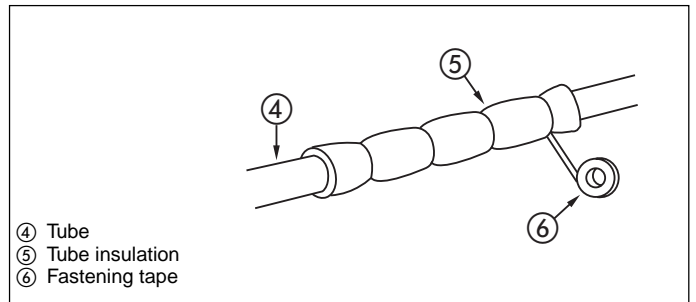
### Connection to the unit

Insufficient tightening torque will cause gas leaks. Overtightening the fittings will damage the tube flaring and cause gas leaks.



- ① Adjustable wrench or torque wrench
- ② Outdoor end
- ③ Indoor end

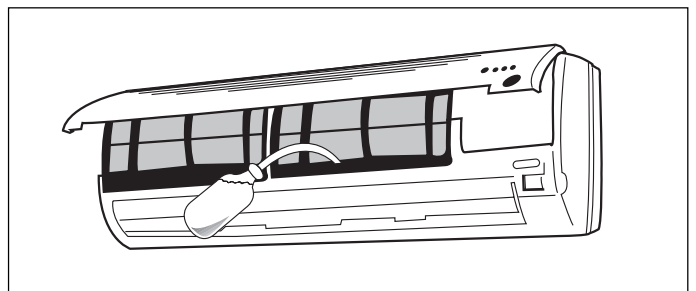
Tubing diameter mm (inches)	Torque Nm
6.35 (1/4")	18
9.52 (3/8")	42



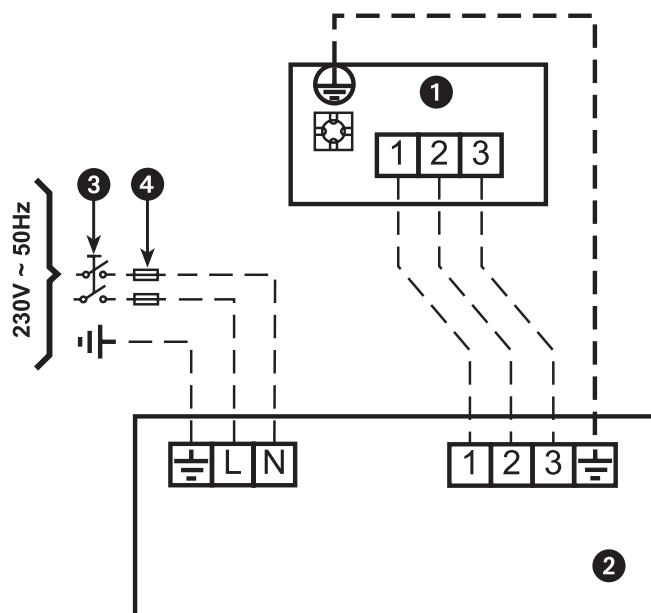
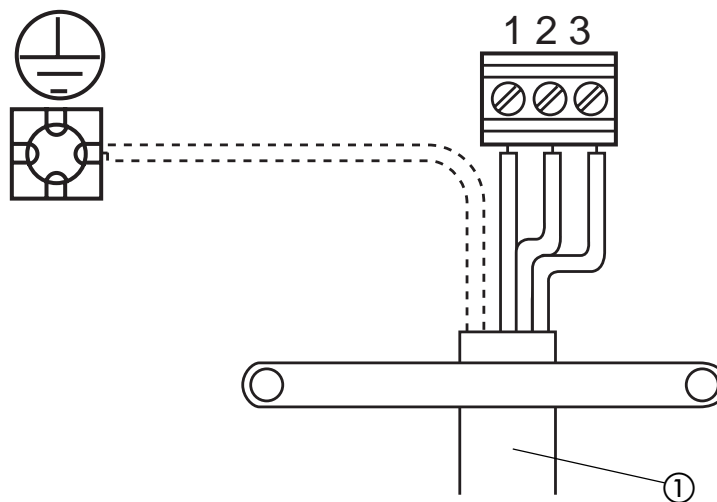
- ④ Tube
- ⑤ Tube insulation
- ⑥ Fastening tape

Once all connections have been completed, check for leaks by applying soapy water to them. Finally wrap connections with anti-condensate insulation and tighten with tape, without exerting great pressure on the insulation. Repair and cover any possible cracks in the insulation. Connection pipes and electric cables between indoor and outdoor units must be fixed to the wall with appropriate conduits.

### Check



Pour water into the condensate drain pan and check that it flows freely to the drain.



Connections wire minimum size between indoor and outdoor units (mm<sup>2</sup>)

Model	1	2	3	⊕
42HQM 009-012	1.0	1.0	1.0	1.0

### Terminal box legend, all models

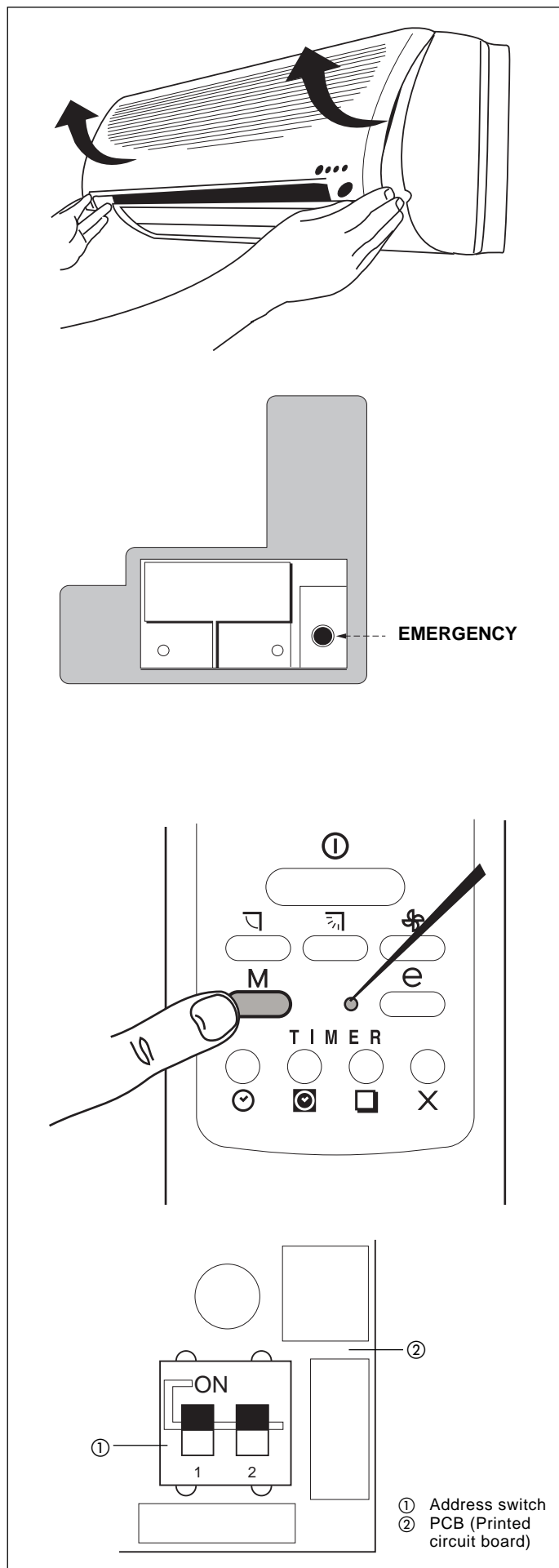
- ⊕ Earth
- 1 Live power supply
- 2 Neutral power supply
- 3 Communication signal

① Connecting wire, indoor-outdoor units (field wiring).  
Mains supply connection can be made to the outdoor unit only.

- ① Indoor unit
- ② Outdoor unit
- ③ Main switch
- ④ Time-delay fuse or circuit breaker  
(see outdoor unit installation manual)

# 42HQM

## Address switch, guide for the owner and accessories



### Address switch



If you are installing two indoor units in the same room, it is necessary for you to assign a different address to the second unit, so each unit can be operated by its own remote control.

One address switch is located on the infrared remote control and the other is on the electronic board.

The two address switches are set to ON when you purchase the unit.

#### To change the address:

##### 1. Remote control

- With a sharp object push the button  as indicated ("00" will appear on the remote control display).
- Push the operating mode **M** button, holding the button  pressed as shown (the indicator of unit A will appear as selected on the remote control display).
- Check that the indoor unit operates with this setting of the remote controller.

##### 2. Indoor unit

- Turn the unit OFF and disconnect the power supply.
- Remove the front grille, terminal block and front cover.
- Locate the two address switch on the electronic board (close to the emergency button).
- Set both switches to OFF.

Replace front cover, terminal block cover and front grille.

Reconnect power supply and verify the operation of the remote control with the new configuration.

### Guide for the owner

When installation and tests are completed explain the Operation and Maintenance Manual to the owner, with particular attention to the main operating modes of the air conditioner, such as:

- Turning the unit on and off.
- Functions of the remote control.
- Removal and cleaning of the air filters.

Leave the two installation manuals for the indoor and outdoor units with the owner for future use during maintenance operations or for any other needs.

**Table IV : Accessories**

Description	Part number	42HQM
		009-012
Active carbon filter and passive electrostatic filter	42HWG9100	●



**Via R. Sanzio, 9 - 20058 Villasanta (MI) Italy - Tel. 039/3636.1**

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The manufacturer reserves the right to change any product specifications without notice.