STANDING-SL 2

IS2-XY 140M series

MANUAL

FOR INSTALLATION, USE AND MAINTENANCE

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INTRODUCTION

Dear Customer,
Thank you for choosing a **CLIVET** product.
The **STANDING-SL 2** model which you have chosen is a high performance product of advanced design and technology, high reliability and quality construction.
We suggest that you entrust its management and maintenance to professionally qualified personnel you trust, who, when necessary, only use original spare parts.
This manual contains important information and tips that must be followed for easier installation and the best possible use of the appliance.

SERIES

LIGHT Commercial systems	
Standing-SL 2	S.IS2+MC2-Y 140T series

SYMBOLS USED IN THE MANUAL AND THEIR MEANING

WARNING
To indicate special information.

CAUTION
To indicate particularly important and delicate operations.

CAUTION DANGER
To indicate actions which, if not carried out correctly, may result in general accidents or may cause malfunctions or material damage to the device; therefore, they require special attention and adequate preparation.

ATTENTION ELECTRIC DANGER
To indicate actions which, if not carried out correctly, may result in accidents of electrical origin; therefore, they require special attention and adequate preparation.

IT IS PROHIBITED TO
indicate actions that MUST NOT be performed.

FLAMMABLE MATERIAL
Indicates that the appliance uses a flammable refrigerant.

WARRANTY

The product **CLIVET** is covered by a **conventional warranty**, valid from the date of purchase of the appliance, the conditions of which are specified in the GENERAL CONDITIONS OF SALE available at **www.clivet.com**

WARNING

– The warranty is void if the appliance has been used without following the instructions in this manual.
– The warranty will be forfeited if the customer makes changes and/or attempts to repair the product himself or through third parties not authorised by the manufacturer/authorised dealer.
– The product must be intended for the use intended by **CLIVET** for which it was expressly made. Any contractual and non-contractual liability **CLIVET** for damage caused to persons, animals or property by installation, adjustment, maintenance and misuse errors is excluded.

INDEX

Section dedicated to the USER

1 GENERAL DETAILS

1.1 General warnings and safety rules

WARNING

– This manual is the property of CLIVET and reproduction or transfer to third parties of the contents of this document is prohibited. All rights reserved. It is an integral part of the product; make sure that it is always supplied with the appliance, even in case of sale/transfer to another owner, so that it can be consulted by the user or by personnel authorized to carry out maintenance and repairs.

– Read this manual carefully before using the unit to ensure its safe operation.

– Periodically check the integrity of the power cord, plug and related socket. If the power cable is damaged, it may only be replaced by the manufacturer or the local distributor who sold the appliance or by authorised maintenance and repair personnel.

– The installation must be carried out by an authorized dealer or a qualified technician. Faulty installation may result in water leakage, electric shock or fire.

– Work on the refrigerant circuit must only be carried out by persons with a valid certification, issued by an accredited body, certifying their competence to handle refrigerants safely in compliance with the specifications in force in the sector.

– The installation must be carried out according to the instructions provided. An incorrect installation may cause water leaks, electric shock or fire.

– Install the drain hose according to the instructions in this manual. Incorrect draining can cause water seepage or flooding with possible damage to the home and other property.

– The device must be stored in such a way as to prevent any mechanical damage.

– Consult a qualified technician for unit repair or maintenance.

– Perform the installation using only the supplied accessories and parts specified. The use of non-standard components may cause water leakage, electric shock or fire and cause the unit to malfunction.

– Do not use any means other than those recommended by the manufacturer to accelerate the defrosting process or to clean the unit.

– The appliance must be placed in a room that does not contain any ignition sources operating continuously (e.g. open flames, gas appliances or electric heaters).

– Note that the coolants are odourless.

– Always use the specified cables for all electrical work. Connect the cables securely and secure them in a stable manner to prevent the terminals from being damaged by external forces. Incorrect electrical connection may cause overheating conditions and may result in fire and electrocution.

– The cables must be arranged so that the control board cover can close properly. If the control board cover is not closed properly, corrosion may occur and the connection points on the terminals may become hot, ignite or cause electric shock.

– In some functional environments such as kitchens, server rooms, etc., it is recommended to use specially designed air conditioners.

– The appliance is only suitable for use by children 8 years old and over and persons with reduced physical, sensory or mental capabilities or lack of experience or knowledge when they are properly supervised or have received instructions on the safe use of the appliance and have understood the associated dangers. Prevent children from playing with the appliance. Cleaning and maintenance operations must not be carried out by children without supervision.

– For electrical work, comply with the provisions of the national electrical code, local regulations, current regulations and the requirements contained in the installation manual. It is necessary to use an independent circuit and a single power outlet. Do not connect other appliances to the same electrical outlet. Insufficient electrical capacity or faulty electrical installation may cause risk of electric shock or fire.

CAUTION DANGER

– When connecting refrigerant piping,keep substances or gases other than the specified refrigerant from entering the unit. The presence of other gases or substances can reduce unit performance and cause an abnormal increase in pressure in the refrigeration cycle. This can lead to explosion hazards and resulting injuries.

– Install the unit on a stable stand that can support its weight. If the chosen stand cannot support the weight of the unit, or if the installation is not performed correctly, the unit may fall and cause injury and serious damage.

– Do not pierce or ignite the device.

– The appliance must be placed in a well-ventilated room whose dimensions correspond to those specified for operation.

– The product must be installed with earthing in accordance with the law to avoid the risk of electrocution.

– Do not install the unit in a location that may be exposed to combustible gas leakage. Any accumulation of combustible gas around the unit may cause a fire hazard.

– Do not operate the air conditioner in a very humid room, for example in a bathroom or laundry room. Excessive exposure to water can cause electrical components to short-circuit.

IT IS PROHIBITED TO

– Make changes and/or repair attempts to the product. Any repairs must be carried out by a qualified technician.

– Touch the device with wet, damp and/or barefoot body parts. If you notice current leakage that can be detected on contact with metal parts of the appliance, disconnect the switch, unplug it from the power supply socket and contact an authorised dealer.

– Use of the appliance by children and persons with reduced capacity or lack of experience and specific knowledge unless they are assisted by qualified personnel responsible for their safety.

– Disperse in the environment and leave within the reach of children the packaging material as it may be a potential source of danger. It must therefore be disposed of in accordance with current legislation.

– Change the length of the power cable or use extension cables to power the unit.

– Use the same electrical outlet for other equipment. Incorrect or insufficient power supply may cause fire or electric shock hazard.

NOTES ON FLUORINATED GASES

– This air conditioner contains fluorinated gas. For specific information on gas types and quantities, please refer to the plate found on the unit. It is always necessary to comply with national regulations regarding the use of gases.

– Installation, service, maintenance and repair of the unit must be performed by a qualified technician.

– The uninstallation and recycling of the product must be carried out by qualified technical personnel.

– If a leak detection device is installed in the system, it is necessary to check that there are no leaks at least every 12 months. When checking the unit for leaks, it is recommended to keep a detailed record of all inspections.

– Pay attention to the fact that refrigerant R32 is odourless.

FLAMMABLE MATERIAL

The refrigerant used inside this unit is flammable. A coolant leak that is exposed to an external ignition source can create fire risks

1.2 Description of system components

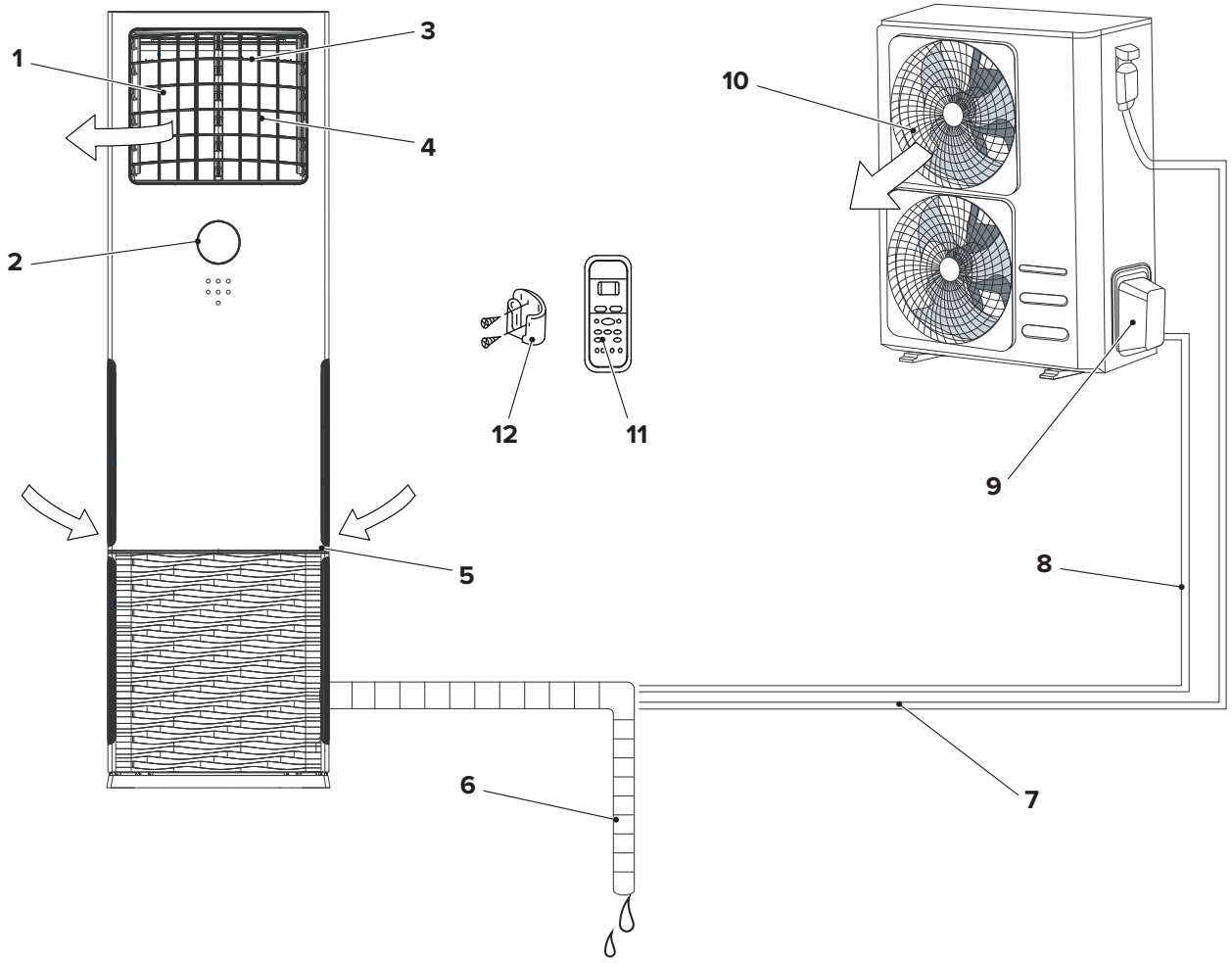


Fig. 1

Indoor unit

1 Air outlet
2 Control panel
3 Horizontal airflow control grille
4 Vertical airflow control grille
5 Air inlet (2 sides)

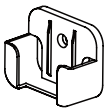
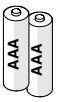
Outdoor unit

6 Flexible drainage hose
7 Electrical connection
8 Refrigerant piping
9 Refrigerant pipe connection
10 Air outlet
11 Remote control
12 Remote control support

WARNING
The images in this manual are provided for illustrative purposes only. The appearance of your device may differ slightly from the illustrations shown here. Refer to the actual characteristics of the unit.

1.3 Accessories

The air conditioner is equipped with the following accessories. Use all specified installation components and accessories to install it. Incorrect installation may cause water leakage, electric shock and fire, or cause the unit to malfunction.

	Description	Aspect		Quantity
Indoor unit installation	**Installation use and maintenance manual**			1
Remote control	**Remote control**			1
	Remote control support			1
	Fixing screw for the ST2.9 x 10 remote control holder			2
	AAA Alkaline battery. LR03			2
Accessories for installation	**Soundproof sheath**			2
Accessories for refrigerant piping	**Connection pipes**	Liquid side	Ø 6.35 mm (1/4")	Components to be purchased separately. Consult your dealer for pipe sizes.
			Ø 9.52 mm (3/8")	
		Gas side	Ø 9.52 mm (3/8")	
			Ø 12.7 mm (1/2")	
			Ø 15.9 mm (5/8")	

1.4 Identification

The indoor unit and the outdoor unit can be identified by the serial number label that shows the technical and performance data of the unit and what is required by the legislation in force.

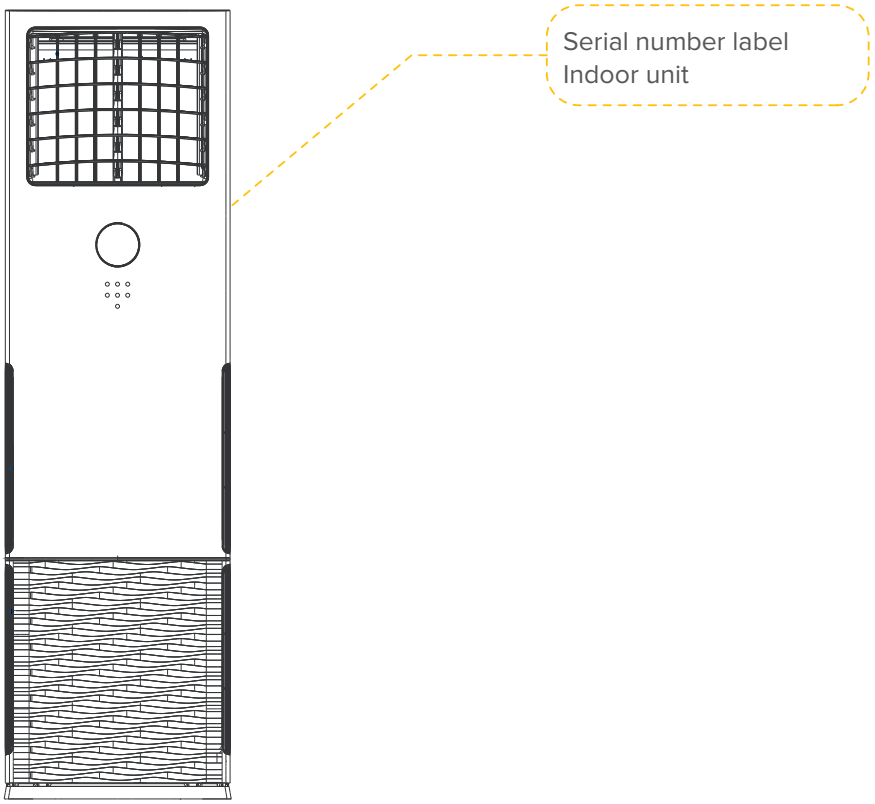


Fig. 2

CAUTION
Tampering, removal, lack of identification labels or anything else that does not allow safe product identification, makes any installation and maintenance operation difficult.

2 INSTALLATION

2.1 Receiving the product

The appliance is supplied packed in several parcels. Handling must be carried out by appropriate means in view of the overall weight of the package.

Upon receiving the appliance, check the perfect integrity of all parts.
In case of damage to the equipment or missing material, please contact your authorised dealer promptly.

WARNING
The manual is an integral part of the product and therefore it is recommended that you read it before installing and commissioning the device and keep it with care for future reference or transfer to another Owner or User.

IT IS PROHIBITED TO
disperse the packaging material in the environment and leave it within the reach of children as it can be a potential source of danger. It must be disposed of in accordance with current legislation.

2.2 Size and weight

	Indoor unit
	140M
Width (mm)	629
Depth (mm)	456
Height (mm)	1935
Weight (kg)	58.4

2.3 Installation - preliminary warnings

WARNING
Before installing the indoor unit, consult the label on the product package to check that the model number matches the model number of the outdoor unit.

ATTENTION ELECTRIC DANGER
- All electrical connections must be done by a licensed electrician according to the provisions of national and local electrical codes.
- All electrical connections must be made according to the wiring diagram on the panels of the indoor and outdoor units.
- If the electrical system has serious safety problems, stop work immediately. Explain the situation to the customer and refuse to install the unit until the safety problem has been resolved.
- The power supply should correspond to 90-100% of the rated voltage. Insufficient power supply may cause malfunction, electric shock or fire.
- If the power cables are permanently installed connected to the electrical system, install overcurrent protection and a main power switch with a capacity of 1.5 times the maximum current of the unit.
- The power supply line must have a special protection upstream against short circuits and earthing leakage that sections the system with respect to other utilities. The technician must choose an approved differential circuit-breaker or main circuit breaker.
- Connect the unit to a single socket of a dedicated branch of the circuit. Do not connect other appliances to the same electrical outlet.
- The air conditioner must be properly grounded.
- All cables and conductors must be connected securely. Loosening a conductor may cause the terminal to overheat, which in turn may result in fire hazards or product malfunction.
- The electrical cables must not touch or rest against the refrigerant pipes, the compressor or any moving parts of the unit.

2.4 Indoor unit installation

2.4.1 Installation room

CAUTION
The appliance must be placed in a well-ventilated room, with a minimum surface area that varies according to the amount of refrigerant present.

To calculate the minimum area of the installation room, proceed as described below:

- determine the total refrigerant charge (see section "3.1.1 Refrigerant charge" of the outdoor unit manual)
- identify the refrigerant charge value in the table below and derive the respective minimum area required for the installation room.

Refrigerant charge [kg]	Minimum surface [m²]
< 1.842	-
1.843	28.9
2.0	34.0
2.2	41.2
2.4	49.0
2.6	57.5
2.8	66.7
3.0	76.6
3.2	87.2
3.4	98.4
3.6	110
3.8	123
4.0	136
4.2	150
4.4	165
4.6	180
4.8	196
5.0	213
5.2	230
5.4	248
5.6	267
5.8	286
6.0	306
6.2	327
6.4	349
6.6	371
6.8	394
7.0	417
7.2	441
7.4	466
7.6	492
7.8	518
7.956	539

The following information can help you choose a suitable location for the indoor unit.
The installation location must have the following characteristics:

- good air circulation.
- ease of drainage.
- the noise emitted by the unit must not disturb other people.
- stability and robustness - no exposure to vibration.
- sufficient capacity to support the weight of the unit. If the structure is too weak, the unit can fall and cause serious or fatal personal injury, material damage and damage to the appliance.
- at least one metre away from any other electrical device (e.g. TV, radio, computer).
- the space must be sufficient for installation and maintenance operations.
- the space must be sufficient for connection of the piping and drainage pipe.
- the air inlet and outlet must not be blocked.
- the airflow must be able to reach the whole room.

It is PROHIBITED to install the indoor unit in the following locations:

- in a bathroom or laundry room, because excess humidity can reduce its service life and corrode the cables;
- near sources of heat, steam or combustible gas;
- near flammable objects, such as curtains or fabrics;
- near obstacles that could obstruct air circulation;
- near the entrance;
- in an area that is not exposed to direct sunlight;
- areas exposed to strong electromagnetic waves;

It is PROHIBITED to install the indoor unit in the following locations:

– oil extraction drilling or fracking areas;
– coastal areas with extremely salty air;
– areas with an atmosphere impregnated with caustic gases, for example near thermal sources;
– areas subject to strong power fluctuations, for example factories;
– enclosed spaces (cabinets, etc.);
– kitchens with natural gas cooker hobs;
– areas used for storing gas or flammable materials.

CAUTION

If there are no refrigerant pipes:
When choosing the installation position, it is recommended to provide a sufficiently large space for the wall hole (see section "2.4.3 Preparation for connection pipes") in which to insert the signal cable and the refrigerant piping between the indoor and outdoor units. The usual position for cables and pipes is on the right side of the indoor unit (looking at the unit).
However, the unit supports installation of cables and piping both on the left and on the right.

Please refer to the following diagram for wall and ceiling distances:

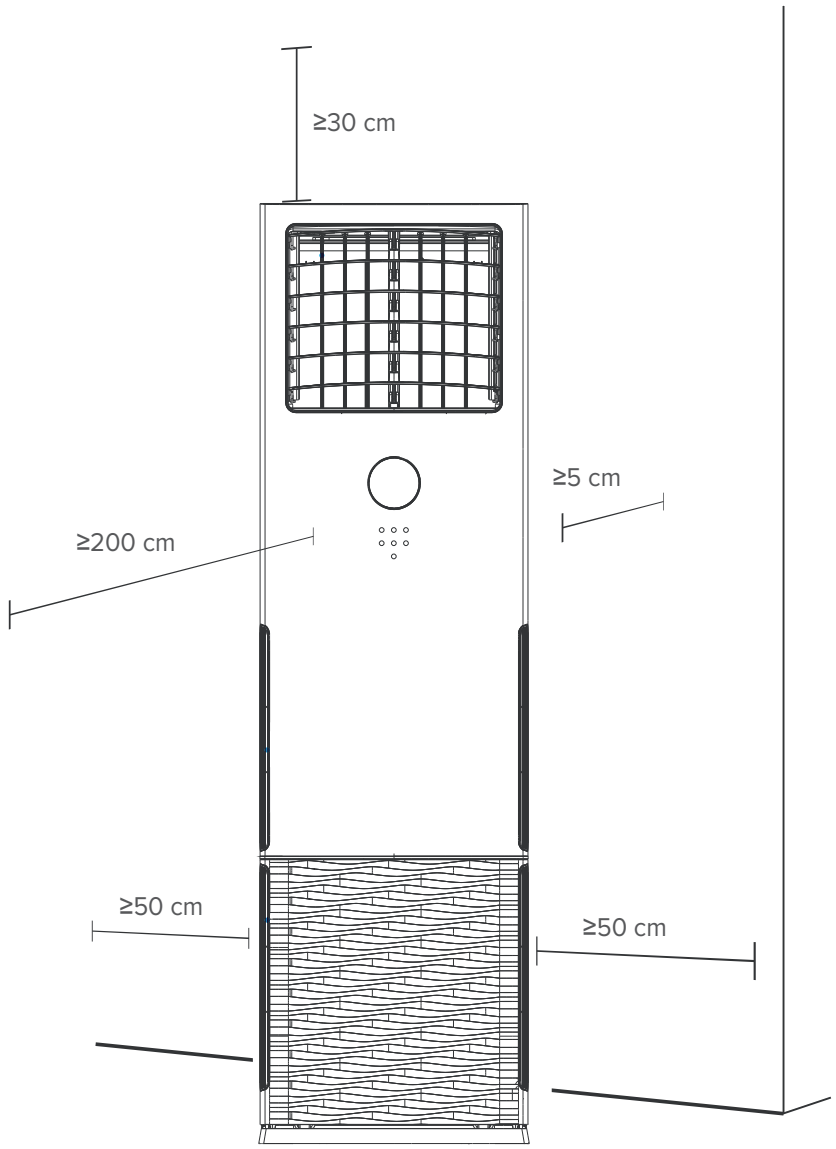


Fig. 3

2.4.2 Mounting the indoor unit

1 Remove the control panel and remove the filter.

– Open the packaging and take out the indoor unit. Remove the protective tape and any components.

– Open the two boxes to store the remote control located on both sides of the indoor unit, then unscrew the screws on the control panel.

– Gently hold the decorative part at the top of the control panel with both hands, then lift it upwards to remove it together with the cable terminal connected to it.

– Unscrew the two screws on the front of the filter.

– Use both hands to hold the two recessed areas on both sides of the filter and move away from the unit. Lift the filter upwards to remove it.

– Remove the air inlet grille before connecting the pipes/wires. Remove the screw cover first, then the screws on the air inlet grille, and then remove the grille.

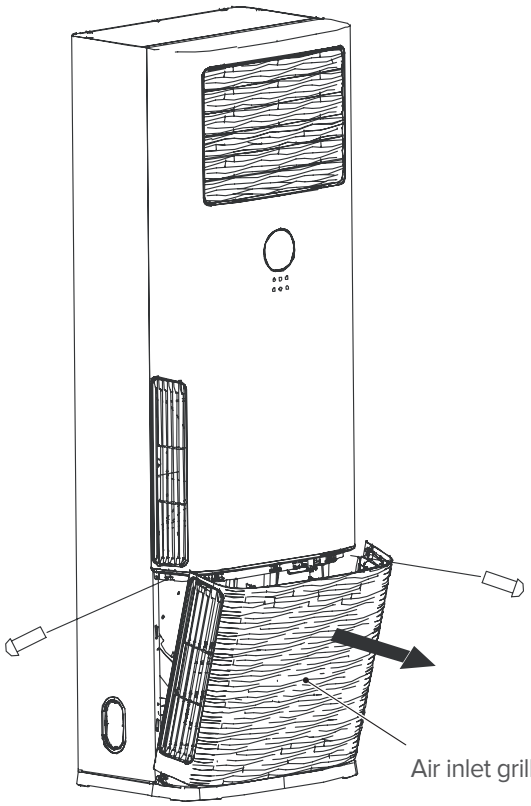


Fig. 4

– Take all of the accessories out of the bottom cavity of the indoor unit.

– Check that all of the accessories match those indicated in section “1.3 Accessories”.

2 Remove the fastening devices from the roller

– Check if the indoor unit’s roller has fastening devices holding it in place and remove the warning sticker.

– Remove the fastening elements from the roller following the instructions on the sticker.

3 Fixing the indoor unit (to prevent it from falling)

– Measure the position of the installation holes.

– Insert M8 bolts into the unit while it is still on the floor (the amount of bolts used depends on the number of holes on the unit’s frame).

– Lift the indoor unit so that the installation holes cover the bolts, then fasten the nuts on the bolts and tighten them.

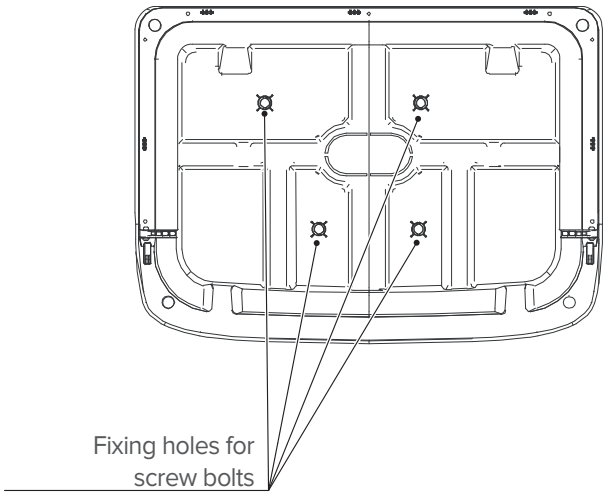


Fig. 5

CAUTION

If additional support is required to prevent the unit from falling, a protection wedge can be installed. The installation procedure for this wedge is as follows:

– Extract the protection wedge and measure its correct size.

– Use self-tapping screws to fasten the protection wedge to the upper cover of the indoor unit.

– Firmly fasten the other end of the wedge to the wall with the self-tapping screws.

4 Installing the rodent proof wire mesh

- Remove the rodent proof wire mesh from the pipe on the unit by gently tapping it
- Use the tip of a knife to make a small hole, following the marking on the rat proof closure plug.
- Fit the rat proof closure plug on the unit and firmly hold it in place.

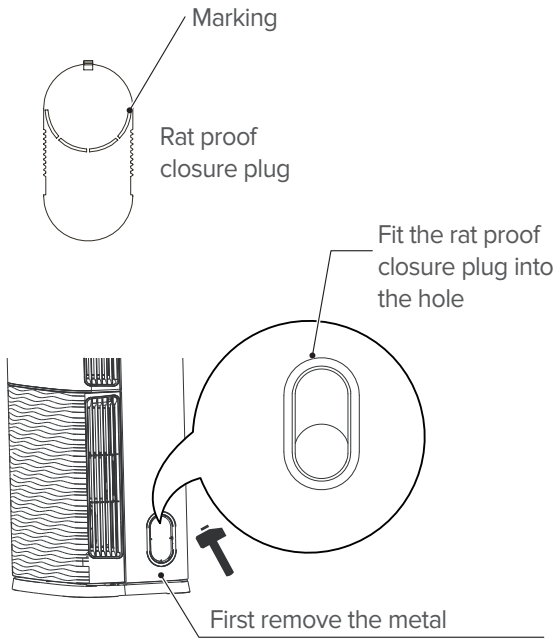


Fig. 6

5 Pipes and tying

- Install the earth connection pipes. Put the drainage pipe, the refrigerant pipe and all electrical cables in position (ensuring that both ends are correctly placed) next to the pipe.
- Using the drainage pipe as a guide, measure and adjust the length of the low voltage wiring, high voltage wiring, any other electrical wiring and the refrigerant pipe. Use the cable ties to initially fasten them in place.
- Arrange the pipe so that the drainage pipe is at the bottom, the connection pipe is in the middle and the electrical wiring is at the top.
- Use vinyl adhesive tape to start tying the pipes together. Start tying the bottom end of the flexible drainage hose with the adhesive tape and make sure that the connectors are fastened properly. Position of the pipe/wire hole on both sides

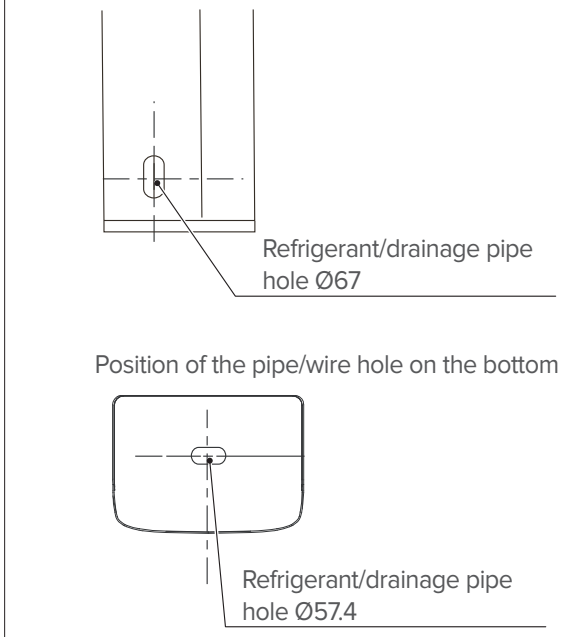


Fig. 7

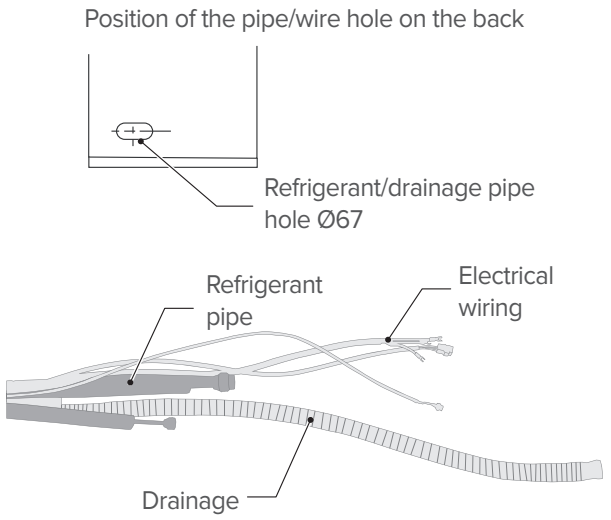


Fig. 8

WARNING
The electrical wiring, the drainage pipe and the refrigerant pipe must come out of the connection in an appropriate place. All connections must be connected to each other, fitted uniformly and aesthetically pleasing.

6 Applying mastic sealant and installing the hole cover on the wall

- Tidy up the tied pipes.
- Apply the mastic sealant evenly over the gaps between the pipe and the wall, then firmly press the mastic.
- Extract the wall hole cover to open it. After firmly fixing it to the pipe, push it into the hole in the wall to securely fix it to the wall and complete the installation.

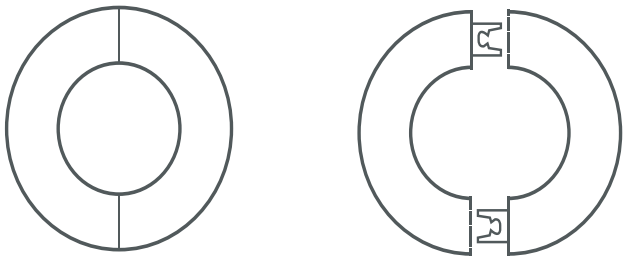


Fig. 9

2.4.3 Preparation for connection pipes

It is necessary to make a hole in the wall where the refrigerant piping, drainage pipe and electrical cables that will connect the indoor unit to the outdoor unit will pass through.

1 Determine hole position in the wall according to the position of the outdoor unit. The hole in the wall should have a minimum diameter of 65 mm and a slight downward slope to facilitate drainage (see "Fig. 10").

2 Drill the hole in the wall using a 65 mm drill bit. The hole should have a slight inclination, so that the outer end is lower than the inner one by about 12 mm. This will facilitate water drainage.

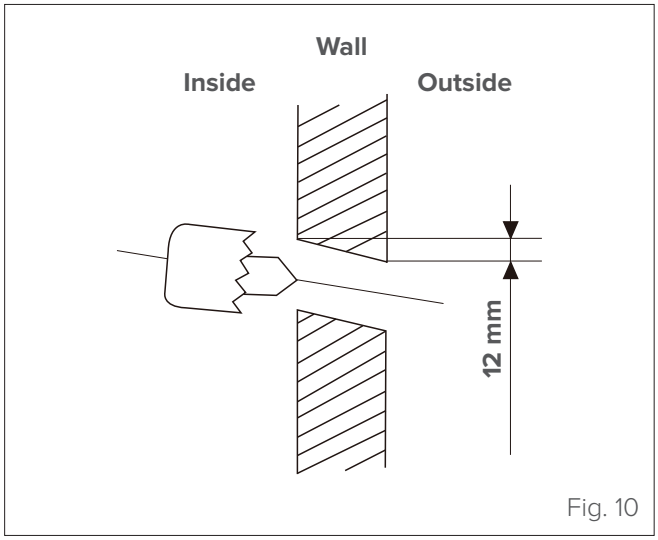


Fig. 10

3 Insert the protective sleeve into the wall, which will protect the edges of the hole and improve the seal after installation.

CAUTION DANGER
When drilling holes, pay attention to avoid electrical wires, hydraulic hoses and other delicate components.

CAUTION
The drain pipe outlet must be at least 5 cm from the floor. If it touches the ground, the unit can block and not work properly. If the water is discharged directly into the sewer system, use a U- or S-shaped drain pipe to block odours which would otherwise flow back inside.

2.4.4 Drainage pipe

The drainage pipe is used to drain the water from the unit. Incorrect installation can cause damage to the unit and other material damage.

CAUTION DANGER

– Insulate all of the pipes to prevent condensate from forming, which could cause water damage.

– If the drainage pipe is bent or not installed properly, the water can escape and cause the float switch to malfunction.

– In HEAT mode, the outdoor unit discharges water. Make sure that the drainage pipe is in a suitable area to avoid water damage and slipping hazards caused by the discharge water freezing.

– **DO NOT** pull the drainage pipe, as this could detach it.

WARNING

A polyethylene pipe (outer diameter = 3.7-3.9cm, inner diameter = 3.2cm) is required for this installation, which you can find in hardware shops or from your local dealer.

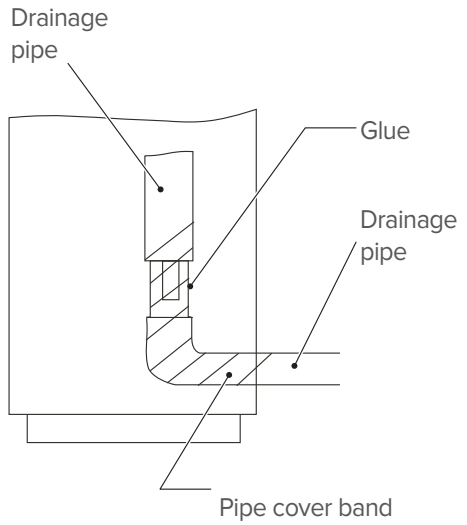


Fig. 11

1 The drainage pipe must be connected downwards on the external side.

2 A rigid PVC pipe widely available on the market (outer diameter 26 mm) can be used for the already fixed flexible drainage hose.

3 Connect the flexible hose to the drainage pipe, then fasten it with tape. If the drainage pipe must be connected inside, cover the pipe with a heat-insulating material (polyethylene with specific 0.03 gravity and thickness of at least 9 mm) and fasten it with adhesive tape to prevent the inlet air from producing condensate.

4 After connecting the drainage pipe, check that the water effectively comes out of the pipe and there are no leaks.

5 The refrigerant pipe and the drainage pipe must be thermally insulated to prevent water drips and condensate.

6 Pass the flexible drainage hose through the hole in the wall. Make sure that the water is drained in a safe place where it cannot cause water damage or slipping hazards.

2.4.5 Electrical connections

Cables with the following characteristics are required for power supply and communication between the indoor and outdoor units:

Indoor unit	Power supplied from outdoor unit	Signal from outdoor unit
	no.of cables/cross section	no.of cables/cross section
140M	2 x 1mm² + G	2 x 0.2mm²

The indicated cross-sections are suitable for a wiring length of up to 5 metres.

ATTENTION ELECTRIC DANGER

Before making electrical connections, turn off the main switch of the system.

WARNING

WRITE DOWN THE SPECIFICATIONS OF THE FUSES.

The air conditioner board (PCB) is equipped with a fuse for overcurrent protection. Fuse specifications are printed on the circuit board, for example:

Indoor unit: T5A/250VAC

NOTE: The fuse is ceramic.

1 Prepare the cable for connection:

– Using a wire stripper, strip the rubber sheath at both ends of the cable and expose approximately 15 cm of the internal conductors.

– Strip the insulation sheath at the ends of the conductors.

– Using a crimping tool, crimp U-type wire terminals to the ends of the conductors.

CAUTION

When crimping, clearly identify live cables ("L") and other cables.

2 Remove the air inlet grille and the electrical panel cover

WARNING
All connections must be made exactly as shown in the wiring diagram on the inside of the terminal block cover of the indoor unit.

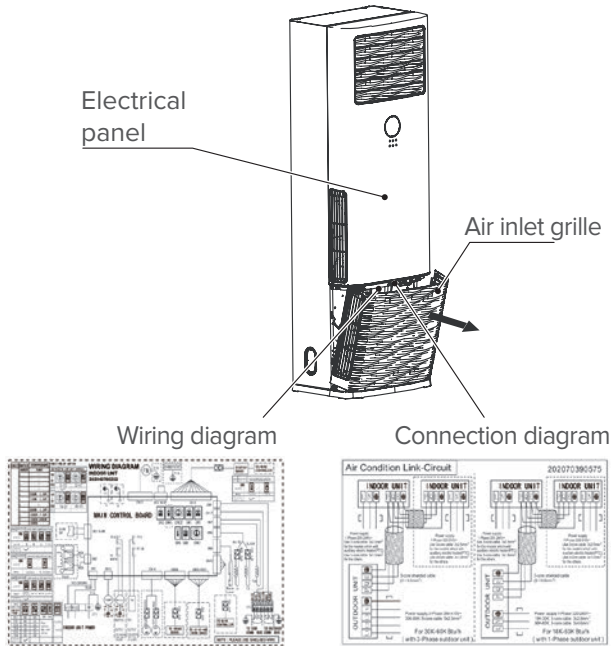


Fig. 12

3 Connect the U-shaped wire terminal to the terminals. Match the colours/labels of the cables to the labels on the terminal block, then screw the U-shaped wire terminal of each cable firmly to the corresponding terminal block. Refer to the serial number and wiring diagram on the cover of the electrical panel.

CAUTION DANGER
– DO NOT SWITCH LIVE AND NEUTRAL CABLES. Such a configuration is dangerous and may cause the air conditioner to malfunction.
– The refrigerant circuit can get very hot. Keep the interconnection cable away from the copper pipe.

4 Secure the cables with the corresponding cable ties. The cable must not be slack and must not pull the U-shaped wire terminal.

5 Refit the electrical panel cover and the front panel on the indoor unit.

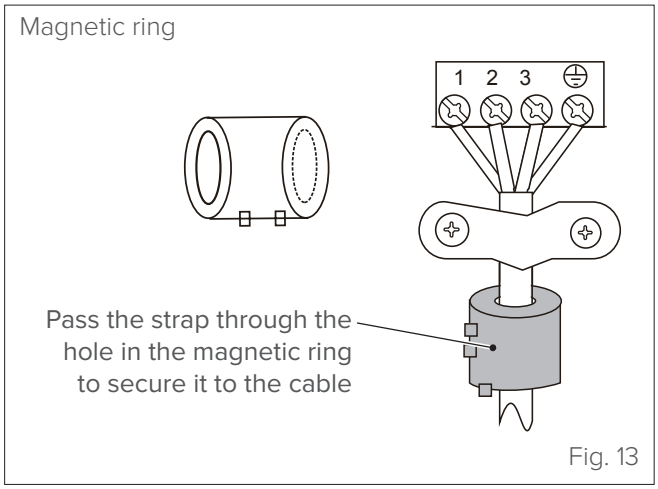


Fig. 13

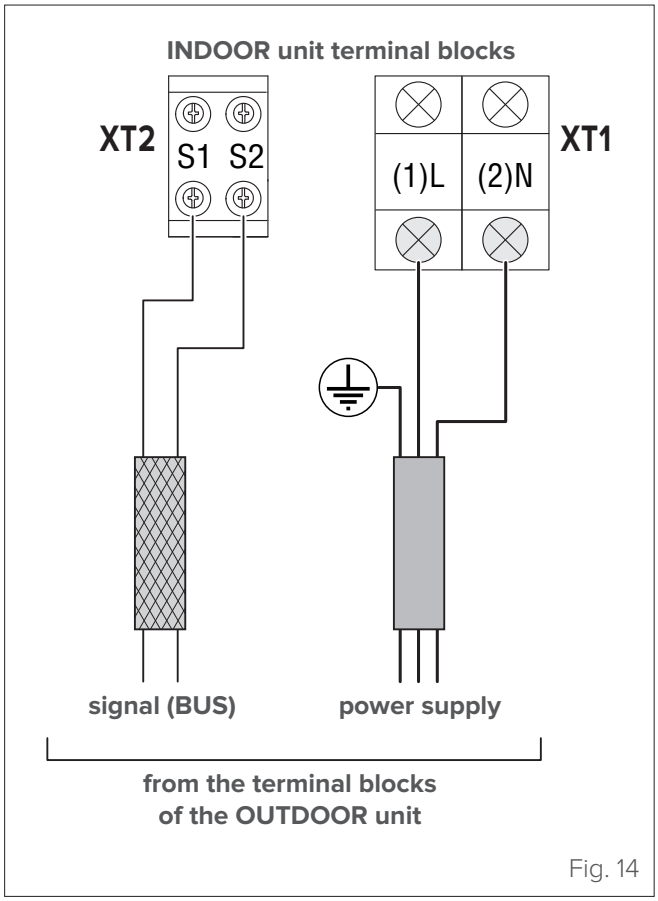


Fig. 14

3 USE

3.1 Description of system components

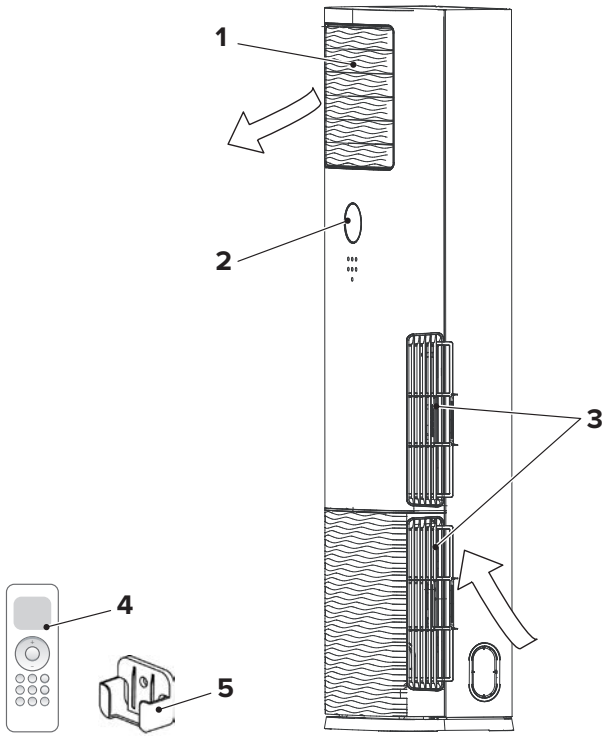


Fig. 15

1 Ventilation slit (air outlet)

2 Control panel

3 Air inlet

4 Remote control

5 Remote control support

WARNING

The images in this manual are provided for illustrative purposes only. The appearance of your device may differ slightly from the illustrations shown here. Refer to the actual characteristics of the unit.

CAUTION DANGER

– If an abnormal condition occurs (e.g. there is a smell of burning), turn the unit off immediately and ask the dealer for assistance to avoid the risk of injury, fire or electrocution.

– DO NOT allow the indoor unit or the remote control to get wet. Humidity can cause an electric shock or a fire risk.

– DO NOT insert fingers, bars or other objects into the air inlet or outlet openings. These operations can be dangerous because the fan can rotate at high speed.

– DO NOT use flammable sprays, such as hairspray or paint, near the unit. These materials can cause fire or combustion.

WARNING

– DO NOT touch the air outlet while the flaps are swinging. Fingers can get trapped or the unit can break down.

– To prevent the appliance from deteriorating, do not use the air conditioner for preservation purposes (food, plants, animals, works of art, etc.).

– DO NOT touch the indoor unit's evaporator coils. The evaporator coils are sharp and can cause personal injury.

– DO NOT place objects that are not resistant to humidity under the indoor unit. A relative humidity of 80% can cause condensate to form.

– DO NOT expose heat generating appliances to cold air and do not place them under the indoor unit. The airflow can cause incomplete combustion, while the heat can cause the unit to deform.

– After long periods of use, check the indoor unit to make sure that it is not damaged. Damage can cause the indoor unit to fall and cause personal injury.

– If the air conditioner is used at the same time as other heating devices, the room must be aired properly to avoid oxygen deficiencies.

– DO NOT use the air conditioner if an insecticidal fumigant is used in the room. The chemicals can be absorbed by the unit and create dangerous situations for people who are hypersensitive to those substances.

3.2 Manual operation (without remote control)

The display panel on the indoor unit can be used to operate the unit if the remote control has been incorrectly positioned or has no batteries.

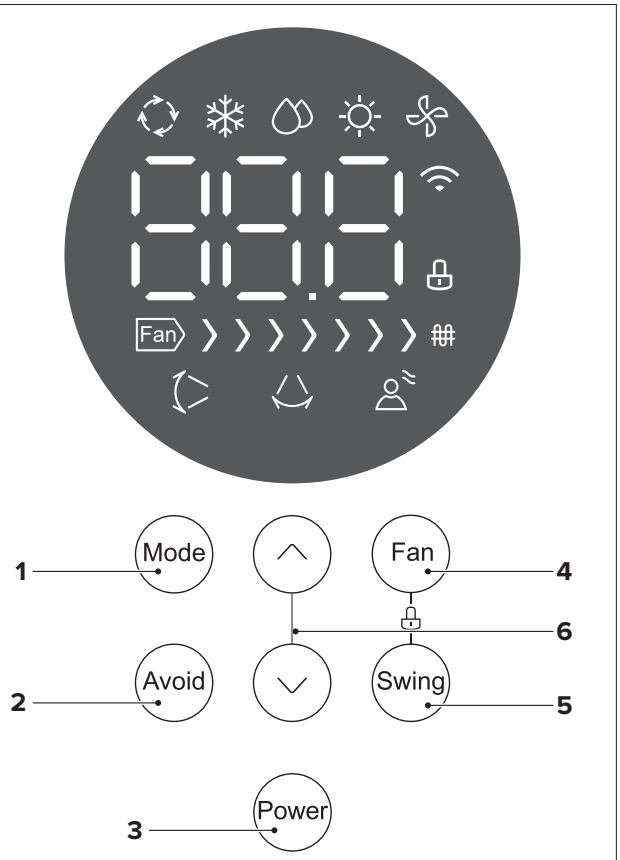


Fig. 16

1 **Mode** button
2 **Avoid** button
3 **Power** button
4 **Fan** button
5 **Swing button**
6 Selection buttons

3.3 Meaning of the displays

Icon	Description	Button
	Displays: • room temperature • set temperature • timer	-
Fan	Fan speed	Fan
	Automatic mode	Mode
	Cooling mode	
	Dehumidification mode	
	Heating mode	
	Ventilation mode	
	Vertical airflow	Swing
	Horizontal airflow	
	Avoid direct airflow	Avoid
	Safety lock	Fan + Swing

3.4 Other functions

– **Automatic restart**
If the power supply to the unit is interrupted, the unit will automatically restart with the last settings when it is restored.

– **Memory of the ventilation slits angle**
When the unit is turned on, the ventilation slits automatically return to the last set angle.

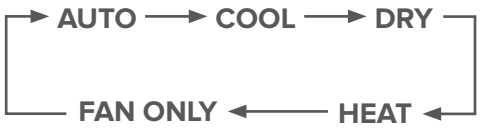
– Detection of refrigerant leaks
The indoor unit automatically displays "EC" when it detects a refrigerant leak.

WARNING
For a detailed explanation of the unit's advanced features (such as TURBO mode and self-cleaning functions), refer to the **Remote Control Manual**.

3.5 Operation buttons

3.5.1 Mode button

Press this button to select the appropriate operation mode. Each time the button is pressed, the operating mode changes and follows the sequence indicated by the arrows:



The mode indicators turn on according to the option selected.

AUTO (Automatic): Automatically chooses the operation mode by detecting the difference between the actual room temperature and the temperature set on the remote control. The fan speed is automatically controlled.

COOL (Cooling): the air is cooled to the set temperature (control range: 17°C~30°C).

DRY (Dehumidification): the air is cooled to the desired temperature with low fan speed so as to dehumidify the room (control range: 17°C~30°C). In Dehumidification mode neither the fan speed nor Sleep mode can be selected.

HEAT (Heating): the air is heated to the set temperature (control range: 17°C~30°C).

FAN ONLY (Ventilation): only the fan is activated, without any air cooling or heating action. However, in this case the temperature is not displayed and its value cannot be controlled.

3.5.2 Avoid button

Press this button to activate the function that prevents the airflow from blowing directly at people: when this function is activated, the flaps move horizontally at an angle of 115° in Cooling or 60° in Heating.

Press either the Power, Swing or Avoid button to stop the function.

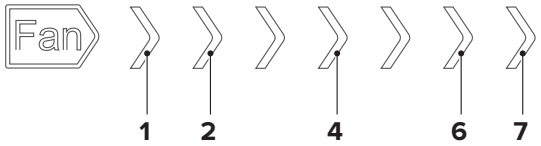
3.5.3 Power button

Power button: operation starts when the Power button is pressed and stops when it is pressed again.

3.5.4 Fan button

Ventilation button: this button is used to select the desired fan speed. Each time the button is pressed, the fan speed changes and follows the sequence indicated by the arrows:

Fan speed display:



LOW speed: zones 1~2 light up.
MED speed: zones 1~4 light up.
HIGH speed: zones 1~6 light up.
AUTO speed: zones 1~7 and “AU” light up.

Note: When the remote control is used to select HIGH fan speed, zones 1~7 light up.

3.5.5 Swing button

This button is used to set the horizontal and vertical airflow.

Each time the Swing button is pressed, the settings change as follows:
Set vertical airflow →
Cancel vertical airflow →
Set horizontal airflow →
Cancel horizontal airflow →
Set simultaneous vertical and horizontal airflow →
Cancel simultaneous vertical and horizontal airflow →
Set horizontal airflow.

CAUTION
Moving the horizontal and vertical airflow direction grilles by hand can damage the air conditioner.

3.5.6 Selection buttons

In Test Running mode, press to control the internal and external display error code.
In the other modes you can select the desired temperature:

^	Increases the temperature by 1°C at a time. The maximum temperature is 30°C
v	Reduces the temperature by 1°C at a time. The minimum temperature is 17°C

3.5.7 Safety lock

The lock function is activated by simultaneously pressing the fan speed and swing buttons for one second.
This function is available when the unit is on or off. When these buttons are pressed once, the locks of the unit and all of its other buttons are disabled (except for the unlock button). Please note that the remote control can still be used when the unit is locked. Press the buttons on the panel and the padlock icon will flash for 5 seconds at 1HZ. Press these buttons again and the unit will unlock.

3.5.8 Autotest

This function must be activated when installation has been completed, before start-up: run an auto-check test of the main unit functions to check if everything is working properly.

Press the Mode and Swing buttons for one second to start the test.
After 30 minutes press the button again to stop and exit the test.
The combination of buttons is valid in any mode when the unit is on.
The mode button, the fan speed button and the auxiliary function button are not valid, and all of the other buttons are valid (including the key). Press up or down to select the T1, T2, T2, T3 room display (if applicable), outdoor display (outdoor temperature), and the protection code, and show “nA” when there is no fault or protection.

3.6 Remote control

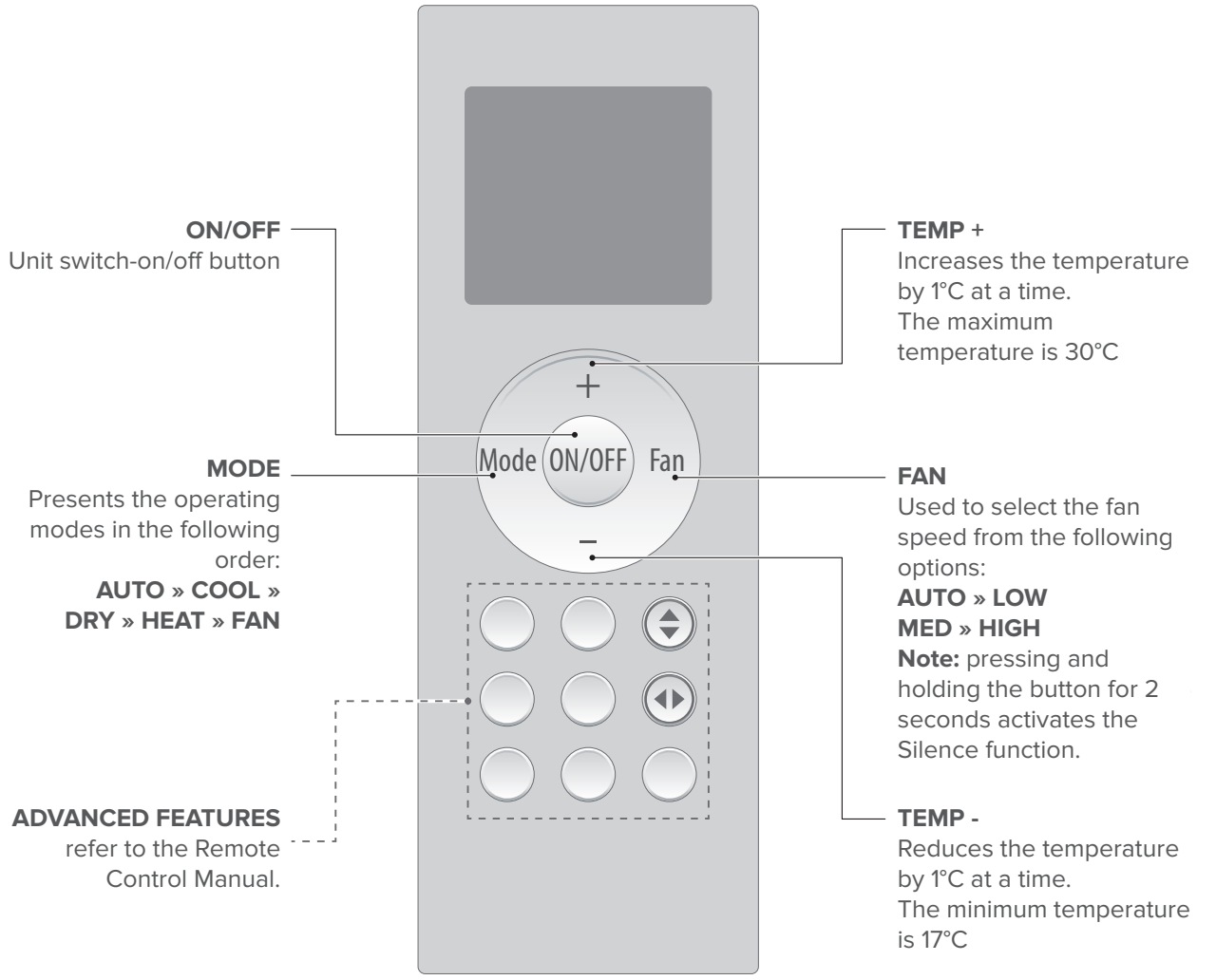


Fig. 17

3.7 Operation

For optimum performance in cooling, heating and dehumidification modes, use the unit within the temperature ranges below. If the air conditioner is used outside of these ranges, some protective functions may trip and cause suboptimal operation.

	Cooling Mode	Heating Mode	Dehumidification Mode
Room temperature	17°C ÷ 32°C	0°C ÷ 30°C	10°C ÷ 32°C
Outdoor temperature	-15°C ÷ 50°C	-15°C ÷ 24°	0°C ÷ 50°C

To further optimise unit performance, take the following steps:

- Keep doors and windows closed.
- Limit power consumption using the ON TIMER and OFF TIMER.
- Avoid obstructing air inlets or outlets.
- Inspect and clean the filters regularly.

4 MAINTENANCE

It is good practice to periodically clean both the internal and external parts of the appliance. This guarantees its proper operation and durability.
Carry out periodic maintenance of the appliance in accordance with the regulations in force.
Maintenance must be carried out by qualified technical personnel.

4.1 Cleaning the indoor unit

ATTENTION ELECTRIC DANGER
– Before cleaning or maintenance, always switch off the air conditioner and disconnect it from the power supply.
– DO NOT replace blown fuses with fuses of different amps because this could damage the circuit or cause a fire hazard.
– Check that all cables are connected correctly. Incorrectly connecting cables can create a fire or electrocution risk.

CAUTION
– Use only a soft, dry cloth to clean the unit. If the unit is particularly dirty, you can use a cloth moistened in warm water.
– Check that the drain pipe is installed according to the instructions. If it is not, water leaks may occur resulting in material damage and fire and electrocution risks.

IT IS PROHIBITED TO
– use chemicals or chemically treated cloths to clean the unit;
– use benzene, thinners, polishing powders or other solvents to clean the unit. These substances can cause cracking or deformation of the plastic surface;
– use water at temperatures above 40°C to clean the front panel. Very hot water can cause the panel to deform or discolour.

4.2 Cleaning the air filter

The filter stops dust and other particles from entering the indoor unit. A build-up of dust can reduce the efficiency of the air conditioner. For optimal efficiency, clean the air filter every two weeks or, if the zone is very dusty, more frequently. If the filter is very clogged and cannot be perfectly cleaned, it is advisable to replace it.

WARNING
It can be dangerous to remove and clean the filter . Disassembly and maintenance operations must be carried out by certified technical personnel.

CAUTION DANGER
When removing the filter, avoid touching the metal parts of the unit. Sharp metal edges can be sharp.

IT IS PROHIBITED TO
dry the filter by exposing it to direct sunlight. The filter may shrink

1 Take hold of the handle of the filters on both sides of the unit. Pull towards yourself and extract the filters. Put the clean filter mesh that was dried in the shade in place.

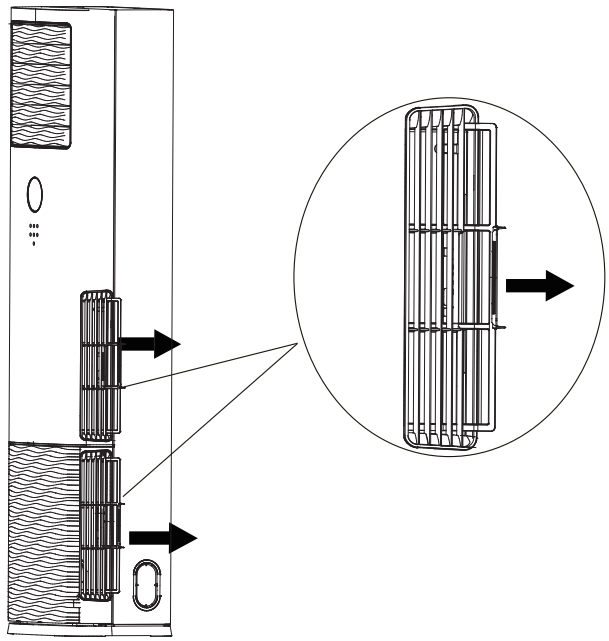


Fig. 18

2 Remove the air filter.

– Lightly press the hooking elements on the right and left of the air filter, then pull upwards.

WARNING
The filter with special function can be washed with water every 6 months. It should be replaced every 3 years.

3 Clean the air filter with a vacuum cleaner or wash it with warm water and a mild detergent.

– If you use a vacuum cleaner, put the inlet side facing the vacuum cleaner.

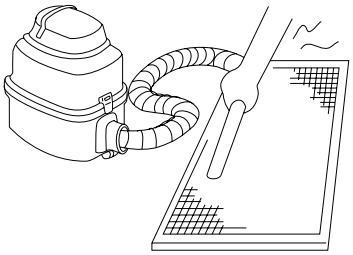


Fig. 19

– If you use water, the inlet side must face downwards, in the opposite direction to the water flow.

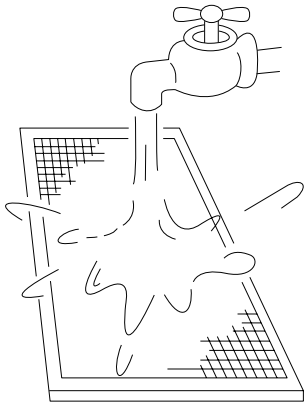


Fig. 20

4 Rinse the filter with clean water and let it dry in a cool, dry place, away from direct sunlight.

5 Once dry, reinsert the filter into the indoor unit.

6 Refit the front grille and reconnect the display cable to the electrical panel on the main body.

4.3 Cleaning the outdoor unit

If the battery in the outdoor unit is clogged, remove the leaves and debris and then remove the dust with a jet of air or water.

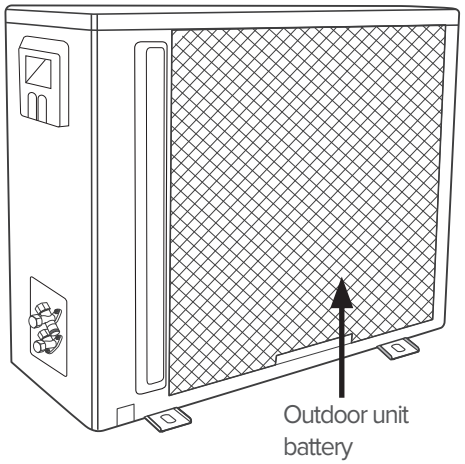


Fig. 21

4.4 Repairing refrigerant leaks

If there is a refrigerant leak, “EC” will appear on the LCD display and the LED will flash.

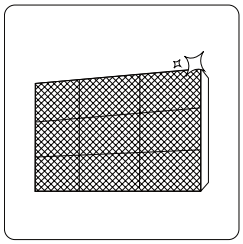
CAUTION DANGER

– If there is a refrigerant leak, switch the air conditioner and any other fuel heating device off, ventilate the room and contact your local dealer. The refrigerant is toxic and flammable. DO NOT use the air conditioner until the leak has been repaired.

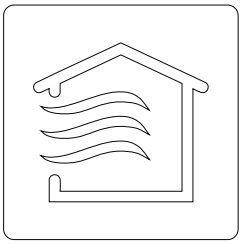
– If the air conditioner is to be installed in a small room, necessary measures must be taken to prevent the concentration of refrigerant in the room from exceeding the safety limit in the event of leaks. An excessive concentration of refrigerant can cause serious harm to health and be a serious risk to safety.

4.5 Extended periods of inactivity

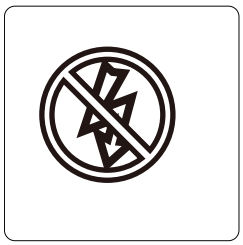
If you do not plan to use the air conditioner for an extended period of time, proceed as follows:



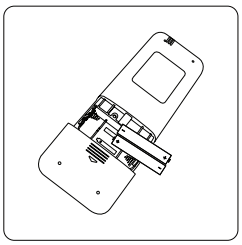
Clean all filters



Activate the Ventilation mode until the unit is completely dry (at least 12 hours)



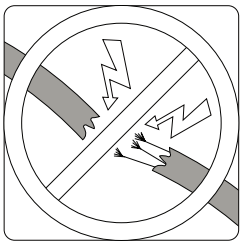
Switch the unit off and disconnect it from the mains power supply



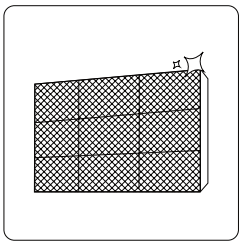
Remove the batteries from the remote control

4.6 Maintenance at the start of the season

After a long period of non-use, or before a period of frequent use, proceed as follows:

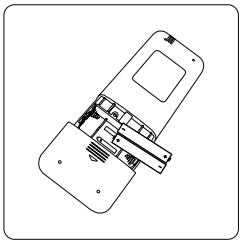


Check that the cables are intact



Clean all filters

Check that there are no leaks



Replace batteries

Remove all obstacles that could block the openings of the indoor and outdoor units.

Clean the air filter and the front grille of the indoor unit. Refit the clean and dry air filter in its original position.

Turn the main power switch on at least 12 hours before switching the unit on.

4.7 Troubleshooting

CAUTION DANGER
If any of the following conditions occur, switch the unit off immediately.
– The power cable is damaged or unusually hot.
– You can smell burning.
– The unit makes loud or abnormal noises.
– A fuse blows or the circuit breaker trips frequently.
– Water or other substance have fallen into the unit, or water or other substance have leaked from the unit.
DON'T TRY TO SOLVE THE PROBLEM YOURSELF. IMMEDIATELY CONTACT AN AUTHORISED SERVICE CENTRE.

4.7.1 Common problems

The problems described below do not represent malfunctions and, in most cases, do not require repair.

Problem	Possible causes
The unit does not switch on when the ON/OFF button is pressed	- The unit has a 3-minute delay protection feature that prevents overloading. The unit cannot be restarted until three minutes have elapsed since shutdown. - If the operation light and the PRE-DEF indicators (Preheating/Defrosting) are on, this means that the outdoor temperature is too low and the anti-cold function has been started to defrost the unit.
The unit switches from Cooling/Heating mode to Ventilation mode	- The unit can change operating mode to prevent frost formation. As the temperature rises, the unit will return to the previously set mode. - The set temperature has been reached and the compressor has switched off. The unit will continue to operate in response to temperature changes.
The indoor unit emits a white haze	- In humid regions, a marked difference in temperature between the air in the room and the air conditioning can cause a white mist to form.
Both the indoor and outdoor units emit a white haze	- When the unit restarts in Heating mode after a defrosting cycle, it may emit a white haze due to moisture generated by the defrosting process.
The indoor unit is noisy	- An air current noise is heard when the ventilation slit returns to its original position. - You will hear a crackling sound after the Heating mode is activated due to the expansion and contraction of the plastic parts of the unit.
Both the indoor and outdoor units are noisy	- Slight hissing during operation: this noise is normal and is due to the circulation of refrigerant gas in the indoor and outdoor units. - Slight hissing when the system starts up, immediately after shutdown or during defrosting: this noise is normal and is caused by stopping or changing the direction of the refrigerant gas. - Cracking: due to normal expansion and contraction of plastic and metal parts caused by temperature changes during operation.
The outdoor unit is noisy	- The unit emits various noises depending on the operating mode in use.
Indoor or outdoor unit emits dust	- During a long period of non-use, dust may accumulate on the unit and be emitted when it is turned on again. This problem can be partly solved by covering the unit during prolonged periods of inactivity.
The unit smells bad	- The unit may absorb ambient odours (furniture, cooking, cigarettes, etc.) and emit them during operation. - Mold has formed on the unit's filters and must be removed.
The fan of the outdoor unit is not working	- During operation, fan speed is controlled to optimise the operation of the air conditioner.
Operation is erratic or unpredictable, or the unit does not respond to commands	Interference from mobile phone repeaters and remote amplifiers may cause the unit to malfunction. In this case, try to solve the problem as follows: - Disconnect the unit from the power mains and then reconnect it. - Press the ON/OFF button on the remote control to restart operation.

***NOTE**: if the problem persists, contact your local dealer or nearest service centre, providing a detailed description of the malfunction and specifying the model code.*

4.7.2 Anomalies and remedies

If problems occur, please check the following before contacting a service centre.

Anomalies	Possible causes	Remedies
Unsatisfactory cooling performance	The set temperature may be higher than the room temperature	Set a lower temperature
	The heat exchanger of the indoor or outdoor unit is dirty	Clean the heat exchanger (Service Centre)
	The air filter is dirty	Remove the filter and clean it following instructions
	The air inlet or outlet of the indoor or outdoor unit is blocked	Switch the unit off, remove the cause of the obstruction and switch the air conditioner on again
	Open doors and windows	Close doors and windows when using the unit
	Sunlight produces excessive heat	Close curtains and windows during the hottest hours or when the sun is brightest
	Too many heat sources in the room (people, computers, electronic devices, etc.)	Reduce heat sources
	Low refrigerant level due to leakage or prolonged use	Check for leaks, reseal the system if necessary and refill the refrigerant (Service Centre)
	The SILENCE function is active	The SILENCE function can reduce product performance by reducing the frequency of operation. Deactivate the SILENCE function.
The unit does not work	Power failure	Wait for power to be restored
	The unit is turned off	Switch on the device
	The fuse is blown	Replace the fuse (Service Centre)
	Remote control batteries are low	Replace batteries
	Protection function with 3-minute delay is active	Wait three minutes before restarting the unit
	The timer is active	Deactivate the timer
The unit starts or stops frequently	The amount of refrigerant in the system is excessive or insufficient	Check for leaks and top up the refrigerant (Service Centre)
	Incompressible gas has entered or moisture has penetrated the system.	Evacuate the system and recharge the refrigerant (Service Centre)
	The compressor is faulty	Replace the compressor (Service Centre)
	The voltage is too high or too low	Install a voltage controller (Service Centre)
Unsatisfactory heating performance	The outside temperature is extremely low	Using an auxiliary heating appliance
	Cold air enters through doors and windows	Close doors and windows when using the unit
	Low refrigerant level due to leakage or prolonged use	Check for leaks, reseal the system if necessary and refill the refrigerant (Service Centre)
The indicator lights continue to flash	The unit may stop or continue to operate properly. If the indicator lights continue to flash or error codes are displayed, wait approximately 10 minutes. The problem may solve itself. If not, disconnect the unit from the power mains and reconnect it. Switch on the unit. If the problem persists, disconnect the unit from the power supply and contact the nearest service centre.	
An error code appears on the display of the indoor unit: • E0, E1, E2... • P1, P2, P3... • F1, F2, F3...		

NOTE: *if, after performing the above checks and diagnostic procedures, the problem persists, switch the unit off immediately and contact an authorised service centre.*

4.8 Indoor unit error codes

Error code	Cause	Timer light	"Operation light (flashes)"
E0	Internal EEPROM malfunction	OFF	Once
E1	Communication malfunction between the indoor unit and the outdoor unit	OFF	Twice
E3	Internal fan speed malfunction	OFF	4 times
E4	Temperature sensor T1 circuit open or in short circuit	OFF	5 times
E5	Temperature sensor T2 circuit open or in short circuit	OFF	6 times
Eb	Communication error between display board and main board	-	-
EC	Detection of refrigerant leaks	OFF	7 times
F0	Overcurrent protection	ON	Once
F1	Temperature sensor T4 circuit open or in short circuit	ON	Twice
F2	Temperature sensor T3 circuit open or in short circuit	ON	3 times
F3	Temperature sensor TP circuit open or in short circuit	ON	4 times
F4	External EEPROM malfunction	ON	5 times
F5	External fan speed malfunction	ON	6 times
P0	IPM module malfunction	FLASHING	Once
P1	DC voltage protection too high/too low	FLASHING	Twice
P2	Maximum compressor temperature protection	FLASHING	3 times
P3*	Low room temperature protection	FLASHING	4 times
P4	Compressor inverter drive protection	FLASHING	5 times
P6	Compressor low pressure protection	FLASHING	7 times
P7	Faulty external IGBT sensor	FLASHING	8 times

P3*

– The indoor unit displays the error code P3, in heating mode, when the outdoor temperature is lower than LowHeatPreTemp°C for 1 hour

– The unit will start working again if the outdoor temperature is higher than LowHeatPreTemp3°C for 10 minutes and the compressor stops for 1 hour or the outdoor temperature is higher than LowHeatPreTempTempTemp20°C for 10 minutes

5 DISPOSAL

The manufacturer is registered on the National EEE Register, in compliance with implementation of Directive 2012/19/EU and pertinent national regulations on electrical and electronic equipment waste.
This Directive requires electrical and electronic equipment to be disposed of properly.
Equipment bearing the crossed-out wheelie bin symbol must be disposed of separately at the end of its lifecycle to prevent damage to human health and to the environment.

Electrical and electronic equipment must be disposed of together with all of its parts.
To dispose of "household" electrical and electronic equipment, the manufacturer recommends contacting an authorised dealer or an authorised ecological site.

"Professional" electrical and electronic equipment must be disposed of by authorised personnel through established waste disposal authorities around the country.
In this regard, here is the definition of household WEEE and professional WEEE.

WEEE from private households: WEEE originating from private households and WEEE which comes from commercial, industrial, institutional and other sources which, because of its nature and quantity, is similar to that from private households. Subject to the nature and quantity, where the waste from EEE was likely to have been used by both a private household and users of other than private households, it will be classed as private household WEEE;

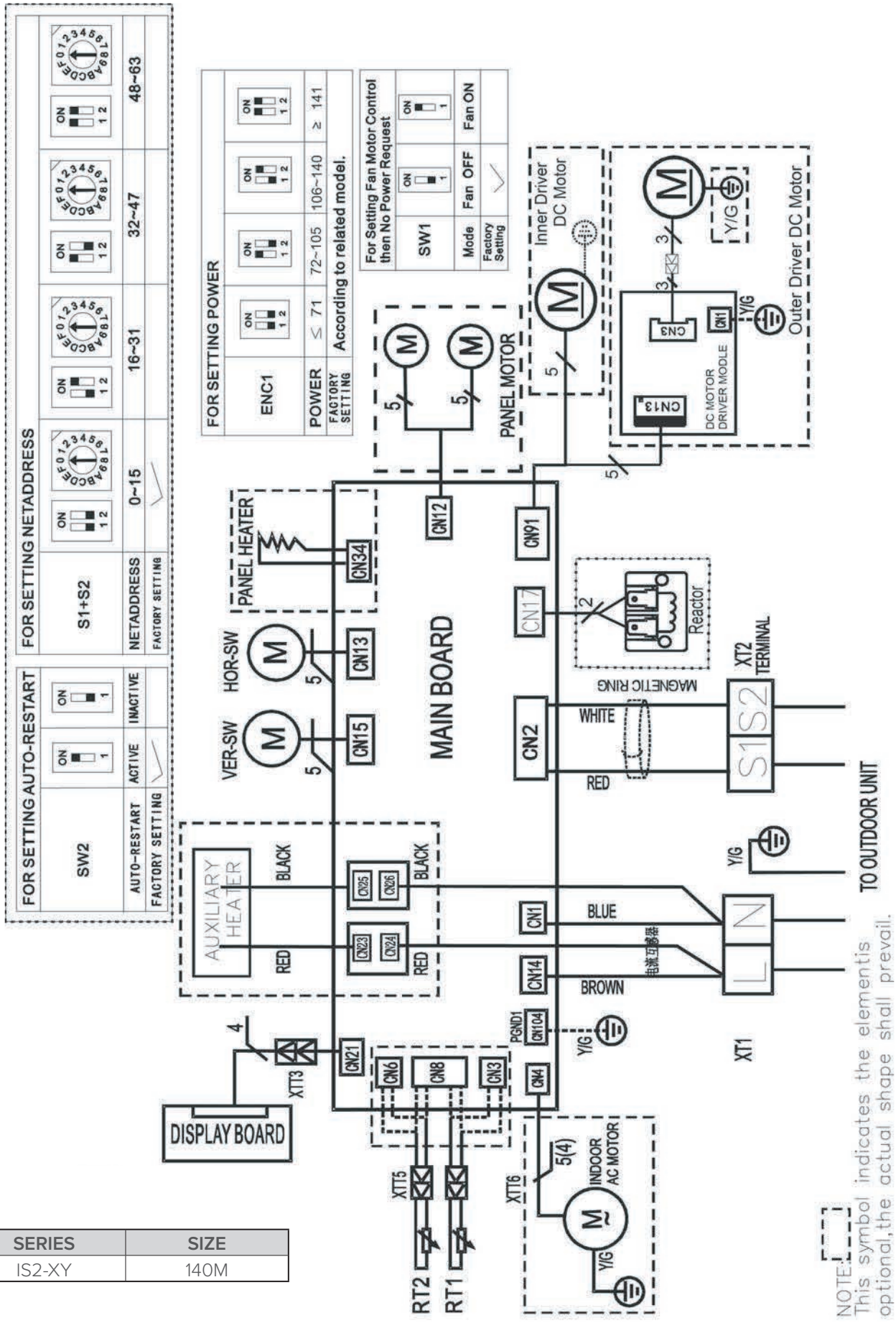
Professional WEEE: all WEEE which comes from something other than private households.
This equipment may contain:

- refrigerant gas, the entire contents of which must be recovered in suitable containers by specialised personnel with the necessary qualifications;
- lubrication oil contained in compressors and in the refrigeration circuit to be collected;
- mixtures with antifreeze in the water circuit, the contents of which are to be collected;
- mechanical and electrical parts to be separated and disposed of as authorised.

When the components to be replaced for maintenance purposes are removed or when the entire unit reaches the end of its life and needs to be removed from the installation, waste should be separated by its nature and disposed of by authorised personnel at existing collection centres.

6 ATTACHMENTS

6.1 Indoor unit wiring diagrams (140M)



SERIES	SIZE
IS2-XY	140M

6.2 Declaration of conformity

DECLARATION OF CONFORMITY EU

DICHIARAZIONE DI CONFORMITÀ UE
KONFORMITÄTSERKLÄRUNG EU
DECLARATION DE CONFORMITE EU
DECLARACIÓN DE CONFORMIDAD EU

WE DECLARE UNDER OUR SOLE RESPONSIBILITY THAT THE MACHINE
DICHIARIAMO SOTTO LA NOSTRA SOLA RESPONSABILITÀ CHE LA MACCHINA
WIR ERKLÄREN EIGENVERANTWORTLICH, DASS DIE MASCHINE
NOUS DÉCLARONS SOUS NOTRE SEULE RESPONSABILITÉ QUE LA MACHINE
EL FABRICANTE DECLARA BAJO SU EXCLUSIVA RESPONSABILIDAD QUE LA MÁQUINA

CATEGORY	DIRECT EXPANSION TERMINALS - Heat pump
CATEGORIA	TERMINALI AD ESPANSIONE DIRETTA - Pompa di calore
KATEGORIE	DIREKTVERDAMPFUNGSGERÄTE - Wärmepumpe
CATEGORIE	TERMINAUX À DÉTENTE DIRECTE - Pompe à chaleur
CATEGORIA	TERMINALES POR EXPANSIÓN DIRECTA - Bomba de calor

TYPE / TIPO / TYP / TYPE / TIPO

IS2-XY 140M

- **COMPLIES WITH THE FOLLOWING EEC DIRECTIVES, INCLUDING THE MOST RECENT AMENDMENTS, AND THE RELEVANT NATIONAL HARMONISATION LEGISLATION CURRENTLY IN FORCE:**
- RISULTA IN CONFORMITÀ CON QUANTO PREVISTO DALLE SEGUENTI DIRETTIVE CEE, COMPRESE LE ULTIME MODIFICHE, E CON LA RELATIVA LEGISLAZIONE NAZIONALE DI RECEPIMENTO:
- DEN IN DEN FOLGENDEN EWG-RICHTLINIEN VORGESEHENEN VORSCHRIFTEN, EINSCHLIEßLICH DER LETZTEN ÄNDERUNGEN, SOWIE DEN ANGEWANDTEN LANDESGESETZEN ENTSPRICHT:
- EST CONFORME AUX DIRECTIVES CEE SUIVANTES, Y COMPRIS LES DERNIÈRES MODIFICATIONS, ET À LA LÉGISLATION NATIONALE D'ACCUEIL CORRESPONDANTE:
- ES CONFORME A LAS SIGUIENTES DIRECTIVAS CEE, INCLUIDAS LAS ÚLTIMAS MODIFICACIONES, Y A LA RELATIVA LEGISLACIÓN NACIONAL DE RECEPCIÓN:

☒	**2014/35/EC**	**low voltage directive** direttiva bassa tensione Bestimmungen der Niederspannungsrichtlinie directive basse tension directiva de baja tensión
☒	**2014/30/UE**	**electromagnetic compatibility** compatibilità elettromagnetica Elektromagnetische Verträglichkeit compatibilité électromagnétique compatibilidad electromagnética
☒	**2009/125/CE**	**Ecodesign** /Progettazione ecocompatibile / Ecodesign / Éco-conception / Ecodiseño
☒	**2011/65/UE**	**RoHs**

-Unit manufactured and tested according to the followings Standards:	EN 60335-2-40 :2003+A11 :2004+A12 :2005+A1 :2006+A2 :2009+A13 :2012 EN 60335-1 :2012+A11 :2014+A13 :2017 EN 62233 :2008
-Unità costruita e collaudata in conformità alle seguenti Normative:	EN 55014-1 :2017 EN 55014-2 :2015
-Unité construite et testée en conformité avec les Réglementations suivantes	EN 61000-3-2 :2014 EN 61000-3-3 :2013
-Unidad construida y probada de acuerdo con las siguientes Normativas	EN 62321-1 :2013 EN 62321-2 :2014 EN 62321-3-1 :2014
-Gebautes und geprüftes Gerät nach folgenden Normen	EN 62321-4 :2014 EN 62321-5 :2014 EN 62321-6 :2015 EN 62321-7-1 :2015 EN 62321 :2009

-Responsible to constitute the technical file is the company n°.00708410253 and registered at the Chamber of Commerce of Belluno Italy
-Responsabile a costituire il fascicolo tecnico è la società n° 00708410253 registrata presso la Camera di Commercio di Belluno Italia
-Verantwortliche für die technischen Unterlagen zusammenstellen n°.00708410253 ist das Unternehmen bei der Handelskammer von Belluno Italien registriert
-Responsable pour compiler le dossier technique est la société n°00708410253 enregistrée à la Chambre de Commerce de Belluno en Italie
-Encargado de elaborar el expediente técnico es la empresa N ° 00708410253 registrada en la Cámara de Comercio de Belluno Italia

FELTRE, 30/09/2019

NAME / NOME / VORNAME / PRÉNOM / NOMBRE: STEFANO
SURNAME / COGNOME / ZUNAME / NOM / APELLIDOS: BELLÒ
COMPANY POSITION / POSIZIONE / BETRIEBSPOSITION / FONCTION / CARGO: LEGALE RAPPRESENTANTE

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