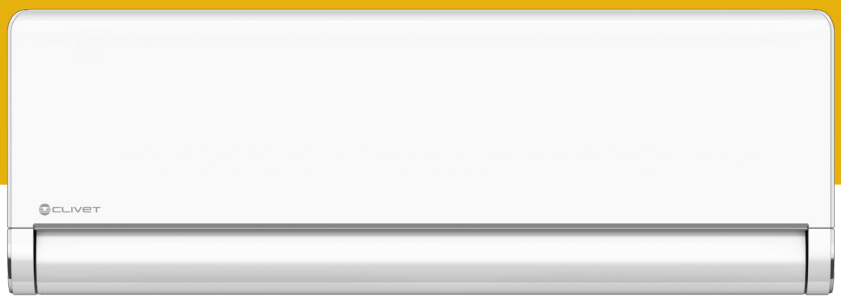
SCHIARA 2

IE2-Y series from 27M to 35M

MANUAL

FOR INSTALLATION, USE AND MAINTENANCE

GB



INTRODUCTION

Dear Customer,
Thank you for choosing a **CLIVET** product.
The **SCHIARA** 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.

RANGE

MONOSplit systems	
SCHIARA	S.IE2+ME2-Y series from 27M to 35M

MULTISplit Systems	
SCHIARA-SM	IE2-Y series from 27M to 35M

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 MONOSplit system components

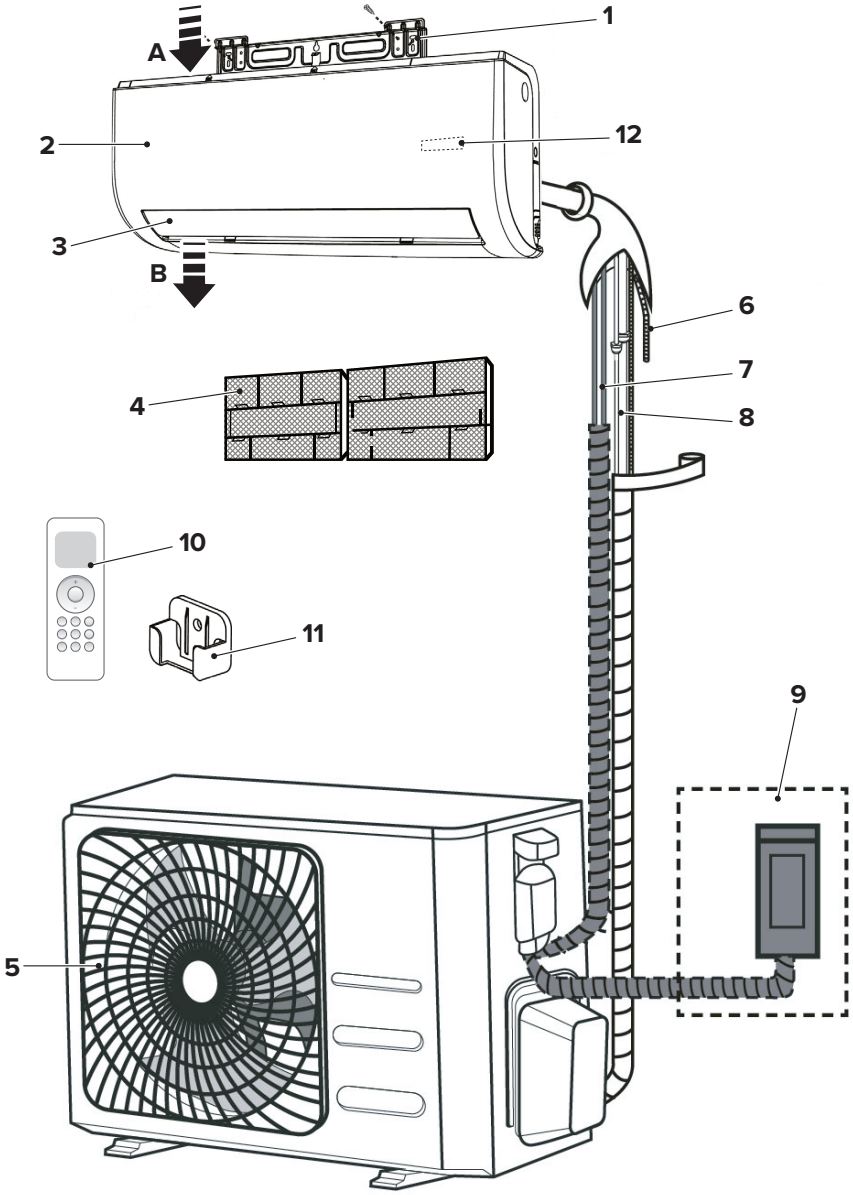


Fig. 1

A Air inlet
B Air outlet
1 Wall mounting plate
2 Indoor unit
3 Ventilation slit
4 Filter
5 Outdoor unit
6 Flexible drainage hose
7 Electrical connection
8 Refrigerant piping
9 Outdoor unit power supply
10 Remote control
11 Remote control support
12 Display LED

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 Description of MULTISplit system components

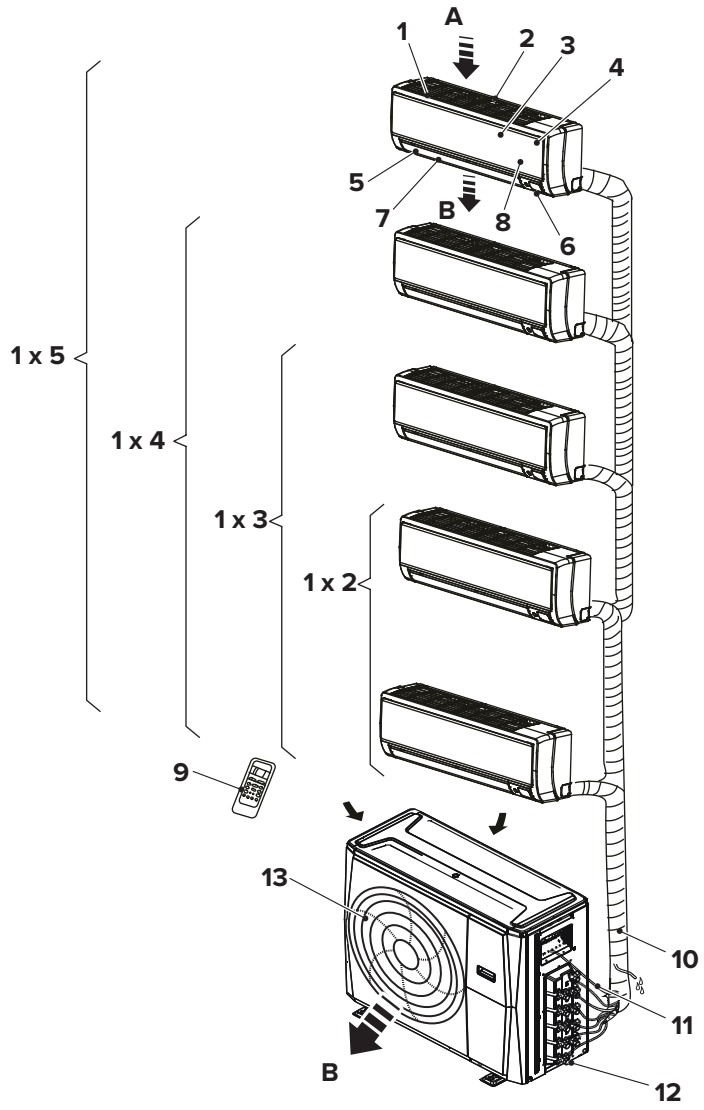


Fig. 2

Indoor unit

1 Panel frame
2 Rear air intake grille
3 External panel
4 Purifier filter and air filter (on the back)
5 Horizontal ventilation flap
6 LCD display window
7 Vertical ventilation flap
8 Manual control button
9 Remote control support

Outdoor unit

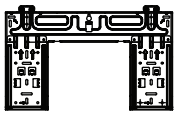
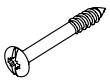
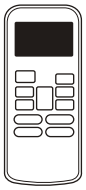
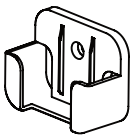
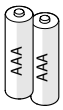
10 Drain pipe, refrigerant connection pipe
11 Connection cable
12 Stop valve
13 Fan cover

A Air inlet
B Air outlet

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.

1.4 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
Mounting plate			1
Gusset			5
Fixing screw for mounting plate ST3.9 X 25			5
Remote control			1
Remote control support			1
Fixing screw for the ST2.9 x 10 remote control holder			2
AAA Alkaline battery. LR03			2
Installation use and maintenance manual			1
Connection pipe unit	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")	

1.5 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.

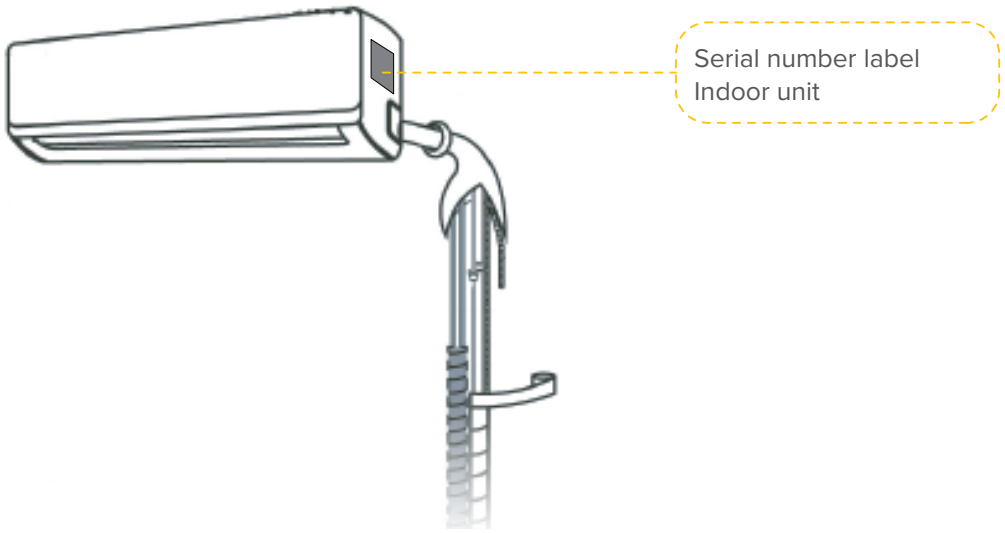


Fig. 3

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 Product receiving

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
disperse in the environment and leave within the reach of children the packaging material 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	
	27M	35M
Width (mm)	920	920
Depth (mm)	321	321
Height (mm)	211	211
Weight (kg)	11,3	11,3

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 security problem has been resolved.
– The power supply should correspond to 90-100% of the nominal 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 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]
< 1.224	-
1.225	1.43
1.4	1.87
1.6	2.44
1.8	3.09
2.0	3.81
2.2	4.61
2.4	5.49
2.6	6.44
2.8	7.47
3.0	8.58
3.2	9.76
3.4	11.0
3.6	12.4
3.8	13.8
4.0	15.3
4.2	16.8
4.4	18.5
4.6	20.2
4.8	22.0
5.0	23.8
5.2	25.8
5.4	27.8
5.6	29.9
5.8	32.1
6.0	34.3
6.2	36.6
6.4	39.1
6.6	41.5
6.8	44.1
7.0	46,7
7.2	49.4
7.4	52.2
7.6	55.1
7.8	58.0
7.956	61.0

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
- at least one metre away from any other electrical device (e.g. TV, radio, computer)

It is PROHIBITED to install the indoor unit in the following locations:
- 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 a an area that is not exposed to direct sunlight.

NOTE ON THE HOLE IN THE WALL
If there is no fixed refrigerant piping:
When choosing the installation position, it is recommended to provide a sufficiently large space for the wall hole (see paragraph "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:

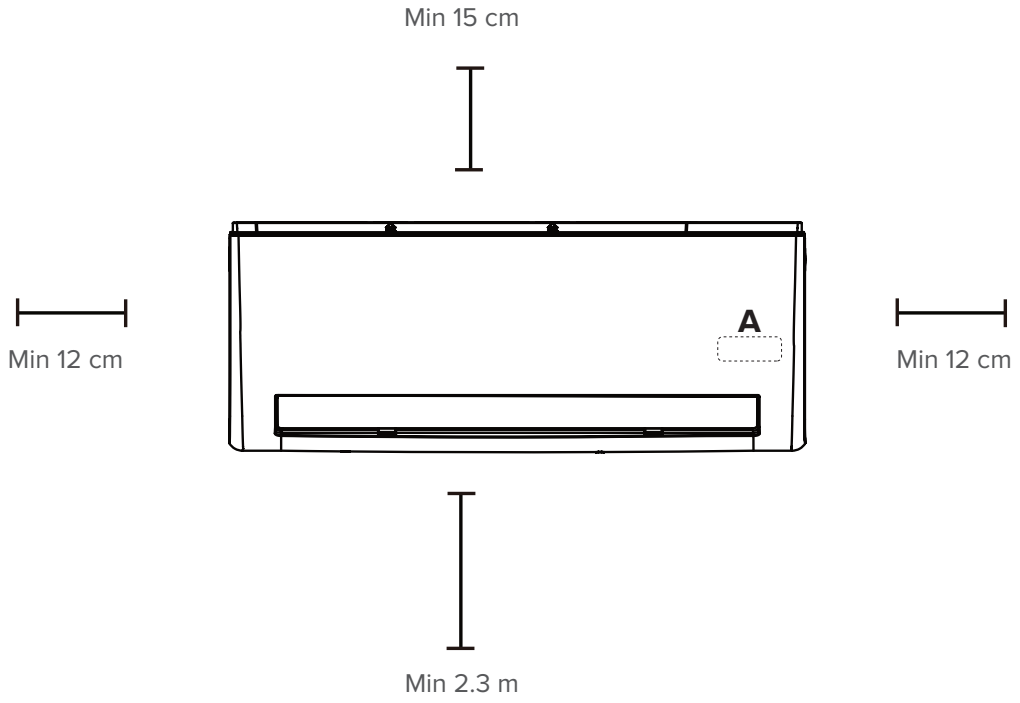


Fig. 4

A *Position of the display SCHIARA and remote control signal receiver.*

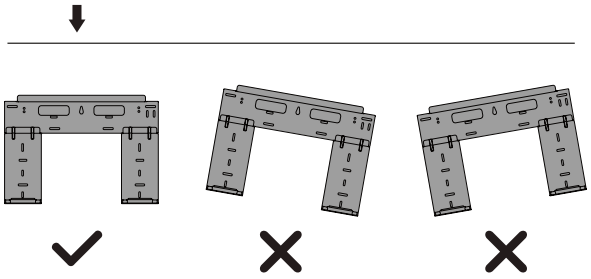
NOTE*: The receiver must be left free of obstacles that could affect reception from the remote control.*

2.4.2 Mounting plate

MOUNTING PLATE DIMENSIONS

The mounting plate is used to fix the indoor unit to the wall.

Correct orientation of the mounting plate



Modello 27M - 35M

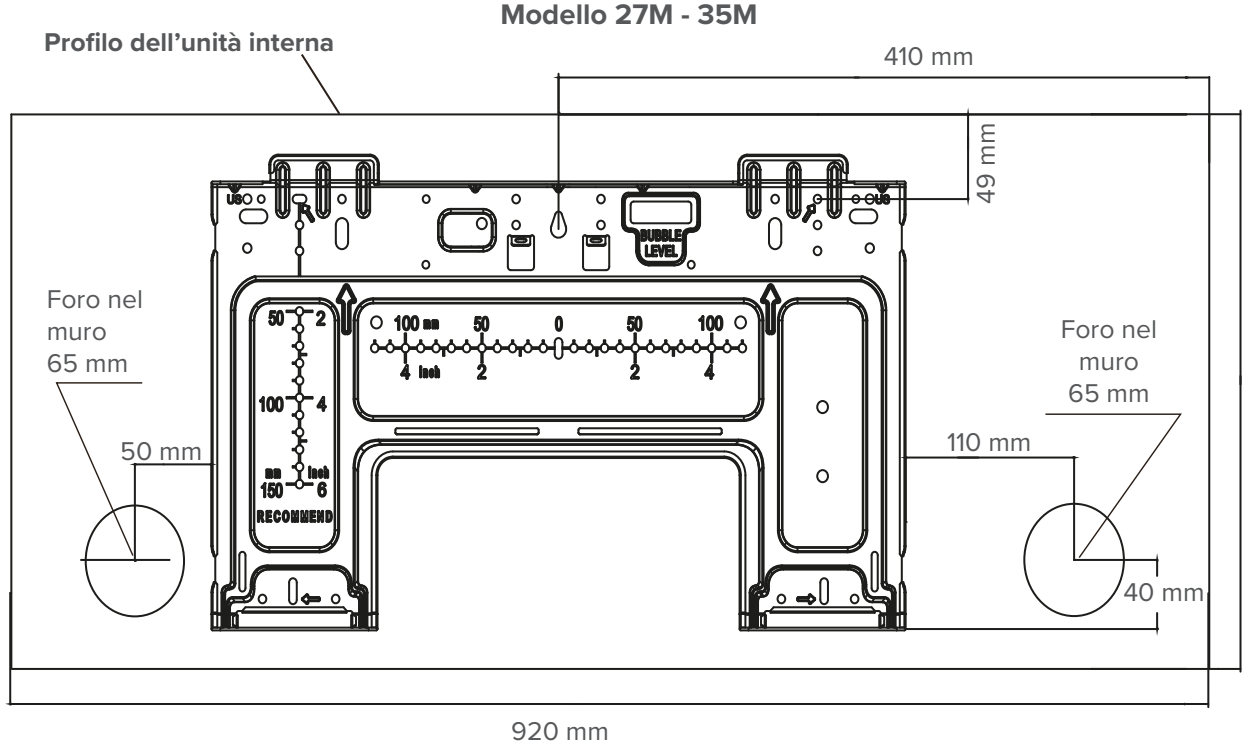


Fig. 5

FIX THE MOUNTING PLATE TO THE WALL

1 Remove the screw that fastens the mounting plate to the back of the indoor unit.

2 Place the mounting plate on the wall in a position that meets the requirements listed in paragraph "2.4.1 Installation room" (for detailed information on the dimensions of the mounting plate see "Mounting plate dimensions".)

3 Drill the holes for the fixing screws in positions that:

- are strong enough and have sufficient capacity to support the weight of the unit
- match the holes in the mounting plate

4 Fix the mounting plate to the wall using the screws provided.

5 Check that the mounting plate is in line against the wall.

WARNING

If the wall is made of brick, concrete or similar materials, drill holes with a diameter of 5 mm and insert the anchors provided. Then fix the mounting plate to the wall by tightening the screws directly into the anchors.
If the wall is made of other materials, use suitable fasteners and check that they are properly sealed.

2.4.3 Preparation for connection pipes

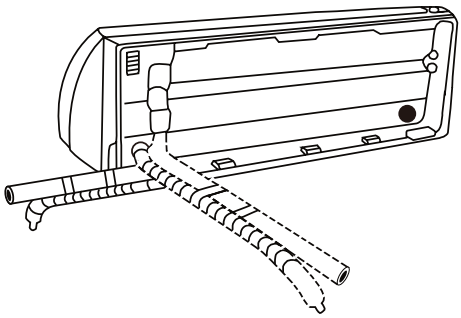
It is necessary to make a hole in the wall where the refrigerant piping, drainage pipe and electrical cables that will connect the indoor unit to the outdoor unit will pass through.

WARNING
The refrigerant piping can come out of the indoor unit at four different angles:
- Left side
- Rear left side
- Right side
- Rear right side

For more details see "Fig. 6"

Reversibility connections

Factory setting



Adaptable configuration on site

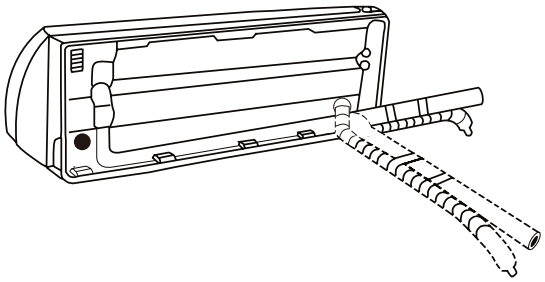


Fig. 6

1 Determine hole position according to the position of the mounting plate. To help you choose the optimal position, refer to point "Mounting plate dimensions". The hole in the wall should have a minimum diameter of 65 mm and a slight downward slope to facilitate drainage (see "Fig. 7").

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 5-7 mm. This will facilitate water drainage.

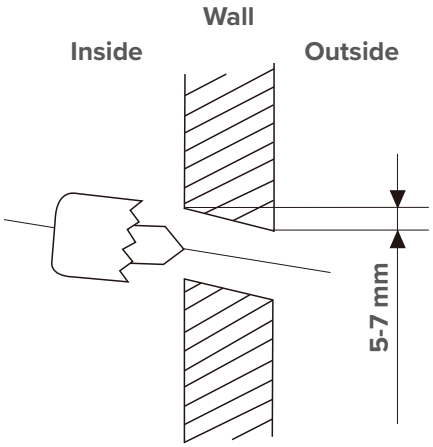


Fig. 7

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, be careful to avoid electrical wires, hydraulic hoses and other delicate components.

2.4.4 Preparation for refrigerant piping

The refrigerant piping is located inside an insulating sleeve fixed on the back of the unit. It is necessary to prepare the pipes before passing them through the hole in the wall. For detailed instructions on countersinking pipes and the required tightening techniques and torques, refer to section "6 Notions on refrigerant piping connection" of the outdoor unit manual.

1 Depending on the position of the wall hole in relation to the mounting plate, choose the side from which the refrigerant piping will exit the unit.

2 If the wall hole is behind the unit, leave the pre-cut panel in place. If the wall hole is on the side of the indoor unit, remove the pre-cut plastic panel from the side of the unit using a jig saw (see "Fig. 8").

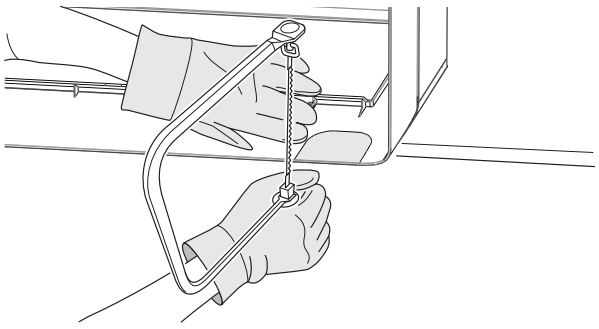


Fig. 8

3 Remove any burrs along the cut section using a half round file.

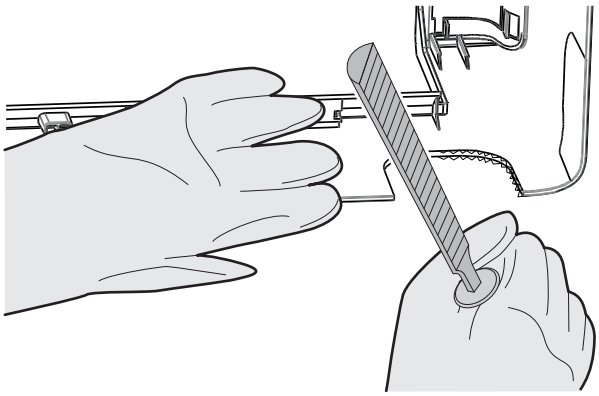


Fig. 9

IT IS PROHIBITED
use pliers to remove the pre-cut panel as this may damage the front grille.

4 Using scissors, cut the insulation sleeve so that about 15 cm of the refrigerant piping is exposed. This operation has a double utility:

- it facilitates connection of refrigerant piping
- it makes it easier to check for gas leaks and to check for indentations

5 If the connection pipes are already embedded in the wall, proceed directly to paragraph "2.4.5 Drainage pipe". If there are no pipes already prepared, connect the refrigerant piping of the indoor unit to the connection pipe between the indoor unit and the outdoor unit. Refer to section "6 Notions on refrigerant piping connection" of the outdoor unit manual for detailed instructions.

6 Depending on the position of the wall hole in relation to the mounting plate, determine the angle required for the pipe.

7 Grab the refrigerant line at the base of the bend.

8 Slowly, applying uniform pressure, bend the pipe towards the hole. Take care to **not to dent or damage the pipe**.

CAUTION
Do not dent or damage the pipe when bending it compared to the unit. Any recesses in the pipe will adversely affect unit performance.

2.4.5 Drainage pipe

In the default configuration, the drainage pipe is connected to the left side of the unit (looking at the back of the unit). However, it can also be connected to the right side.

1. To ensure proper drainage, secure the drainage pipe on the same side as the refrigerant piping.
2. Attach the drainage pipe extension (to be purchased separately) to the end of the pipe.
3. Tightly wrap the connection joint with Teflon tape to ensure a good seal and prevent possible leakage.
4. The part of the drainage pipe that remains inside should be wrapped in a foam sleeve to prevent condensation from forming.
5. Remove the air filter and pour a small amount of water into the drain pan to make sure the water is draining properly from the unit.

WARNING
To prevent unwanted leakage, the unused drain hole must be closed using the rubber cap provided.

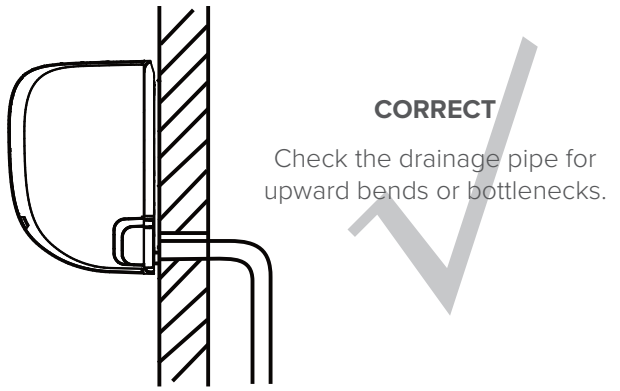


Fig. 10

IT IS PROHIBITED
– bend the drainage pipe upwards;
– create stagnation points;
– submerge the end of the drainage pipe in water or in a water collection container.

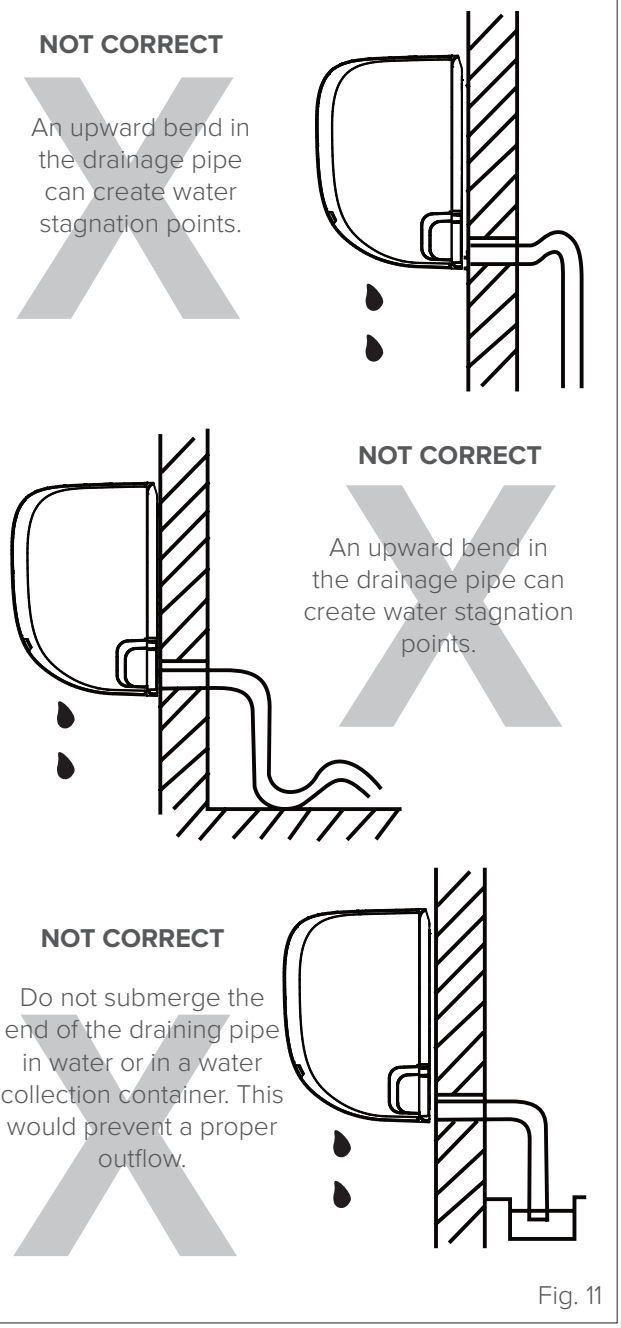


Fig. 11

2.4.6 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
	n° cables/cross section	n° cables/cross section
27M	2 x 1.5mm² + G	2 x 1.5mm²
35M	2 x 1.5mm² + G	2 x 1.5mm²

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.

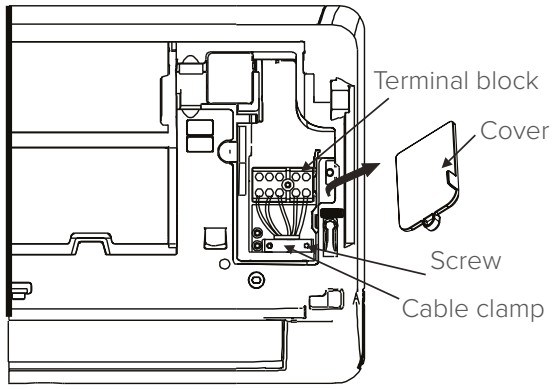
WARNING
WRITE DOWN THE SPECIFICATIONS OF THE FUSES.
The air conditioner board (PCB) is equipped with a fuse for overcurrent protection. Fuse specifications are printed on the circuit board, for example:
Indoor unit: T5A/250VAC
NOTE: The fuse is ceramic.

1 Prepare the cable for connection:
   - Using a wire stripper, strip the rubber sheath at both ends of the cable and expose approximately 40 mm 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 Open the front panel of the indoor unit.

3 Using a screwdriver, open the terminal compartment cover on the right side of the unit. This will give you access to the terminal block.



The wiring diagram is shown inside the terminal compartment cover of the indoor unit.

Fig. 12

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.

4 Unscrew the cable clamp under the terminal block and hold it aside.

5 Looking at the back of the unit, remove the plastic panel located on the left side of the base.

6 Route the electrical cables through this opening, proceeding from the back of the unit to the front.

7 Looking at the front side of the unit, match the colours of the cables to the labels on the terminal block, connect the U-shaped terminals and screw each cable securely to the corresponding terminal.

CAUTION DANGER
DO NOT SWITCH LIVE AND NEUTRAL CABLES. Such a configuration is dangerous and may cause the air conditioner to malfunction.

8 Check that all connections are stable, then close the cable clamp to secure the signal cable to the unit. Screw the cable clamp on firmly.

9 Replace the cover on the front side of the unit and replace the plastic panel on the back.

Connections in MONOSplit configuration

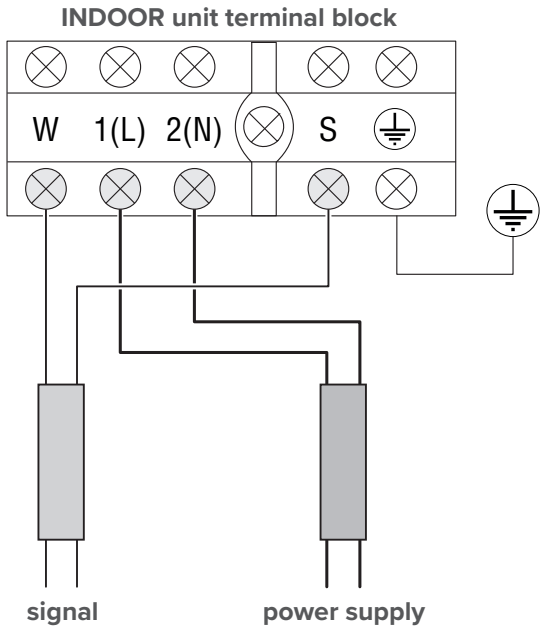


Fig. 13

Connections in MULTISplit configuration

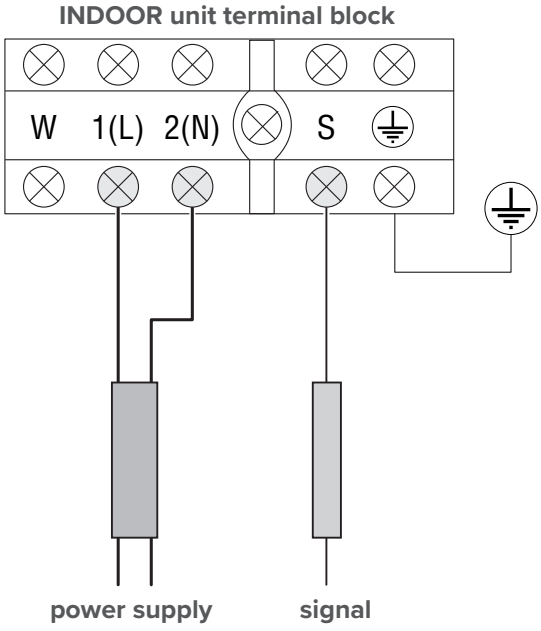


Fig. 14

2.4.7 Wrap the pipes and cables

It is necessary to wrap the coolant pipes, drainage pipe and electrical cables together; this reduces the space occupied, protects them and insulates them before passing them through the hole in the wall.

1 Assemble the drainage pipe, coolant pipes and cables as indicated in "Fig. 15".

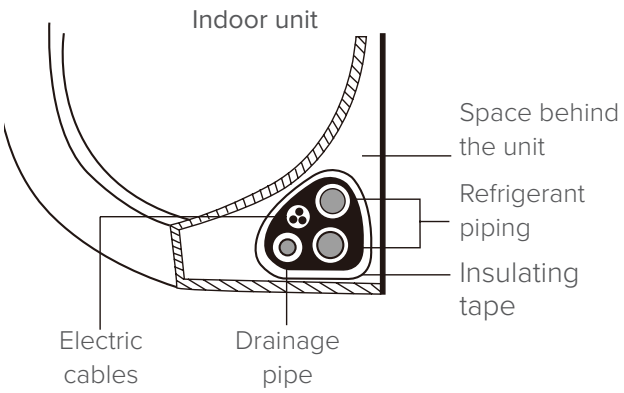


Fig. 15

CAUTION

– Make sure that the drainage pipe is on the lower part of the unit. Placement of the drainage pipe at the top of the unit may cause the drain pan to overflow, which may result in fire or water damage.

– When winding the pipes and cables, leave the ends of the pipes free. These should be accessible to check for leaks after installation is complete (see section "3.2 Electrical dispersion and gas leakage control" of the outdoor unit manual).

– When assembling cables, avoid twisting or tangling the signal cable with other types of cable.

2 Using vinyl adhesive tape, fasten the drain pipe to the bottom side of the coolant pipes.

3 Using insulating tape, wrap the electrical cables, coolant pipes and drainage pipe together. Check that all components are joined together as indicated in "Fig. 15"

2.4.8 Mounting the indoor unit

CASE "A": If you have installed a new connection pipe to the outdoor unit, proceed as follows:

1 Check that the ends of the coolant pipes are closed tightly to prevent dust or foreign materials from entering.

2 Slowly pass the unit containing the coolant pipes, drainage pipe and electrical cables through the hole in the wall.

3 Hook the top of the indoor unit to the top hook of the mounting plate.

4 Check that the unit is securely attached to the plate by applying light pressure to the left and right of the unit. The unit must not move or swing.

5 Applying uniform pressure, push on the lower half of the unit. Continue pushing until the unit clicks onto the hooks located along the base of the mounting plate.

6 Once again check that the unit is securely mounted on the plate by applying light pressure to the left and right of the unit.

CASE "B": If the refrigerant piping is already embedded in the wall, proceed as follows:

1 Hook the top of the indoor unit to the top hook of the mounting plate.

2 Use a bracket or wedge to lift the unit so that there is enough space to connect the refrigerant piping, electrical cables and drainage pipe (see "Fig. 16").

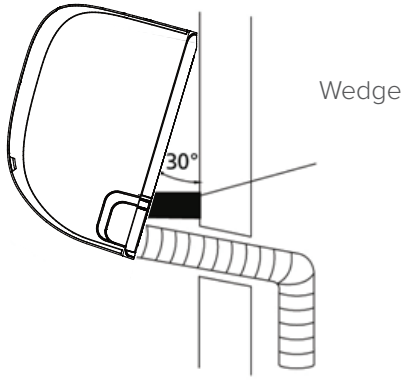


Fig. 16

3 Connect the drainage pipe and refrigerant piping (for instructions, see section "6 Notions on refrigerant piping connection" of the outdoor unit manual).

4 Leave the pipe connection point exposed so that you can check for leaks (see section "3.2 Electrical dispersion and gas leakage control" of the outdoor unit manual).

5 After checking for leaks, wrap the connection point with insulating tape.

6 Remove the bracket or wedge that holds the unit up.

7 Applying uniform pressure, push on the lower half of the unit. Continue pushing until the unit clicks onto the hooks located along the base of the mounting plate.

WARNING
THE UNIT IS ADJUSTABLE.
The mounting plate hooks are smaller than the holes on the back of the unit.
If the space available for connecting the recessed pipes to the indoor unit is not very large, the unit can be moved left or right about 30-50 mm, depending on the model (see "Fig. 17").

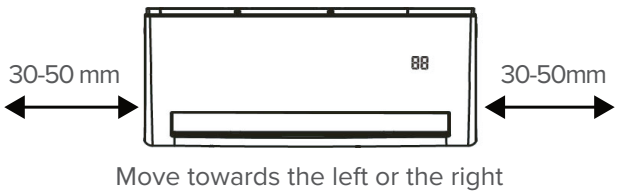


Fig. 17

3 USE

3.1 Description of system components

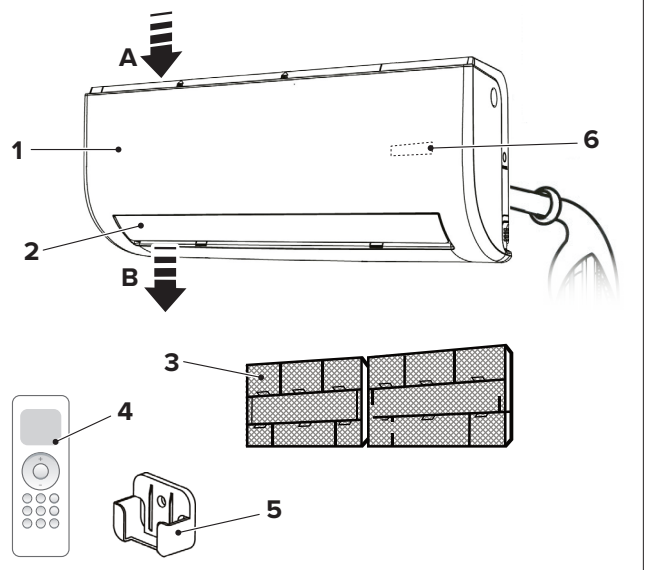


Fig. 18

A Air inlet
B Air outlet

1 Indoor unit

2 Ventilation slit

3 Filter

4 Remote control

5 Remote control support

6 Display LED SCHIARA

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.

3.2 Meaning of the display codes

Icon	Description
	It displays for 3 seconds when: • you set the start-up timer (TIMER ON) • Ioniser filter, TURBO,ECO, BREEZE AWAY,CASCADE or SILENCE functions are activated
	It displays for 3 seconds when: • you set the start-up timer (TIMER OFF) • Ioniser filter, TURBO,ECO, BREEZE AWAY,CASCADE or SILENCE functions are deactivated
	When the defrost function is active
	When the Clean function is active
	When the self-cleaning function of the unit is in progress
	When the frost protection is activated
	When activating the WiFi Control function

NOTE: *In ventilation mode (FAN), the unit shows room temperature. In other modes, the unit shows the set temperature.*

3.3 Remote control

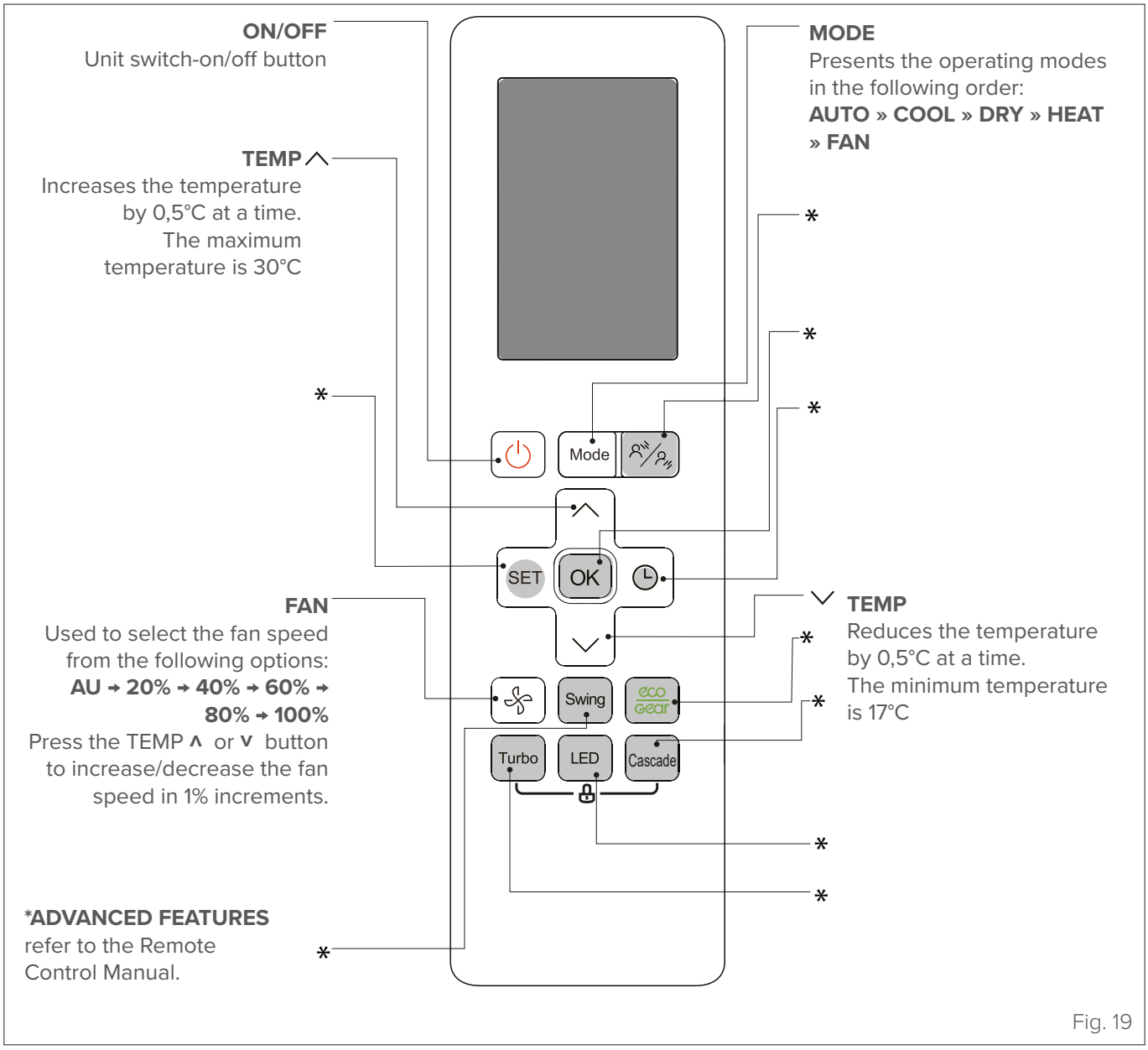


Fig. 19

3.4 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
Ambient temperature	17°C ÷ 32°C	0°C ÷ 30°C	10°C ÷ 32°C
Outdoor temperature	-15°C ÷ 50°C	-20°C ÷ 30°	0°C ÷ 50°C

To further optimise unit performance, take the following steps:

- Keep doors and windows closed.
- Limit power consumption using the start-up (TIMER ON) and shut-off (TIMER OFF) timers.
- Avoid obstructing air inlets or outlets.
- Inspect and clean the filters regularly.

3.4.1 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.

– **Heating in harsh climates**

The sophisticated inverter technology can operate efficiently even in extreme weather conditions. A comfortable indoor climate can be obtained even with an outdoor temperature of -30°C.

– **Cooling in harsh climates**

The external fan speed can be changed according to the temperature of the condenser and the air conditioner can work without any problems even at a temperature of -15°C.

– **Breeze Away**

The optimized air outlet design enlarge the air flow angle , so that you can enjoy an evener comfortable cooling than before.

The enlarged deflector blow the cooling airflow upward avoiding direct air flow blowing on the body.

– **Active Clean function(**

The Active Clean Technology washes away dust when it adheres to the heat exchanger by automatically freezing and then rapidly thawing the frost. A “pi-pi” sound will be heard. The Active clean operation is used to produce more condensed water to improve the cleaning effect, and the cold air will blow out. After cleaning, the internal wind wheel then keeps operating with hot air to blow-dry the evaporator, thus keeping the inside clean.

When this function is turned on, the indoor unit display window appears “CL ” , after 20 to 130 minutes, the unit will turn off automatically and cancel Active Clean function.

For some units, the system will start high temperature cleaning process, and the temperature of air outlet is very high. Please keep away from it. And this would lead to the rising of the room temperature .

– **Cascade function**

With the newly improved volute casing design, the air duct can rotate 180 degree, which brings faster and stronger cooling and heating effect. The hot air can blow vertically, warm your feet and whole room quickly.

– **WiFi Control**

WiFi control allows you to control the air conditioner through your mobile phone and a wireless connection.

– **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**.

SLEEP FUNCTION

The SLEEP function is used to reduce energy consumption while sleeping (when a constant temperature setting is not required for a comfortable climate). This function can only be activated with the remote control.

Press the **SLEEP** button when you are ready to go to bed. In Cooling mode, the unit will increase the set temperature by 1°C after 1 hour and again by 1°C after another hour. In Heating mode, the unit will lower the set temperature by 1°C after 1 hour and again by 1°C after another hour.

The new temperature will be maintained for 5 hours, then the unit will automatically switch off.

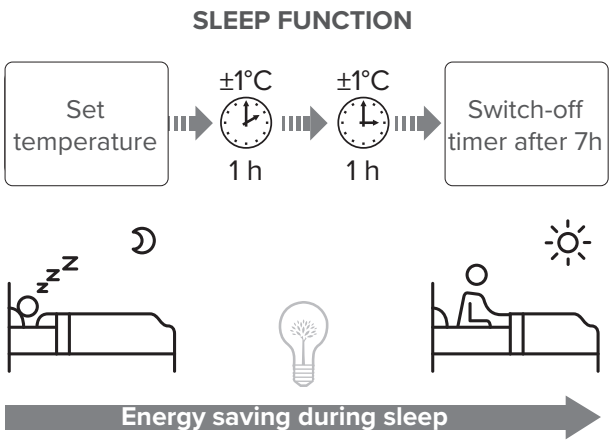


Fig. 20

Note: *The SLEEP function is not available in Ventilation or Dehumidification mode.*

BREEZE AWAY OPERATION

1 Press the Breeze Away button on the remote control to activate the avoiding direct air blowing on the body.

2 Under Breeze Away operation, the system will adjust the louver angles and fan speed automatically. You can also choose the fan speed by remote controller.

3 Under Breeze Away operation, the louver moves as shown below:

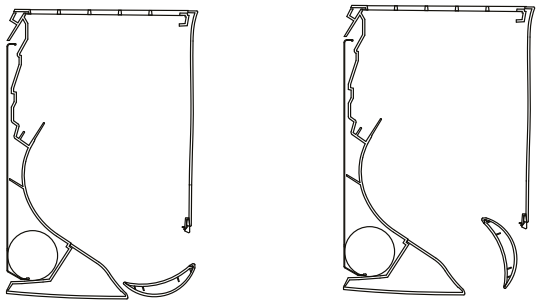


Fig. 21

PRESTARE CAUTELA
For the rooms with large heat load or the outdoor temperature is too high, you'd better not choose breezeless operation, this may result in uncomfortable feeling.

CASCADE OPERATION

1 Press the Cascade button on the remote control to activate Cascade feature.

2 This feature enables the whole room to be cool or warm quickly and evenly. The system will adjust the louver angles and fan speed automatically. You can also choose the fan speed by remote controller.

3 Under Cascade operation, the louver moves as shown below:

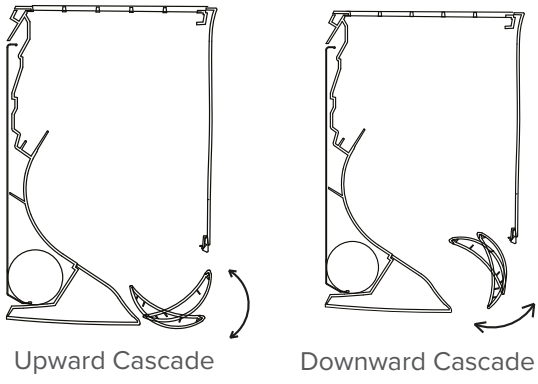


Fig. 22

3.4.2 Airflow angle adjustment

ADJUSTING THE VERTICAL AIR FLOW ANGLE

With the unit turned on, use SWING button to adjust airflow direction.

1 To swing the ventilation slit continuously, press and hold the SWING button for 3 seconds. Press it again to stop the automatic function.

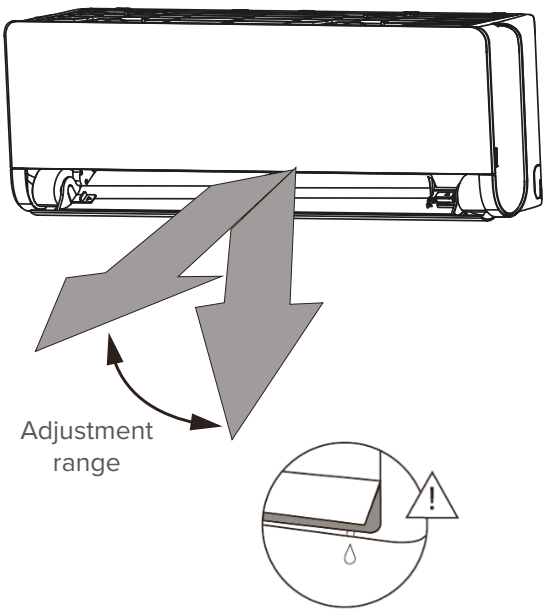


Fig. 23

WARNING
In Cooling or Dehumidifying mode, do not leave the ventilation slit at an angle that is too vertical for a prolonged period. In this position condensation may form on the slit flap, which may then fall on the floor and furniture (see "Fig. 23").
In Cooling or Heating mode, adjustment of the ventilation slot to an angle that is too vertical may reduce the performance of the unit due to restricted airflow.

IT IS PROHIBITED
adjust the air vents with your hands, because doing so could alter the synchronism. In this case, turn off the unit and disconnect it from the power mains for a few seconds, then restart the air conditioner. The air vent will reset.

ADJUSTING THE HORIZONTAL AIR FLOW ANGLE

With the unit turned on, use the SWING button to adjust the direction of airflow.

1 To swing the ventilation slit continuously up and down, press the SWING button. Press it again to stop the automatic function.

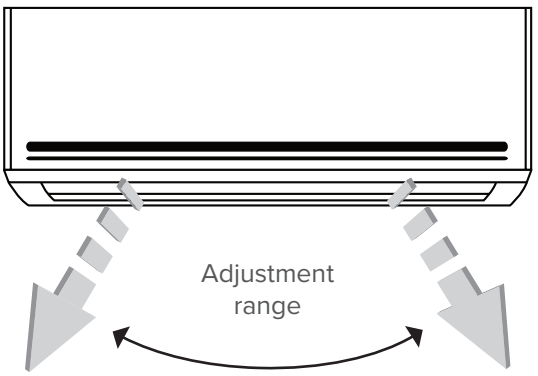


Fig. 24

CAUTION DANGER
Do not approach or insert your fingers into the air intake and outlet section. High-speed rotation of the fan inside the unit may cause injury.

3.5 Manual operation (without remote control)

If the remote control does not work, the unit can be operated manually with the **manual control** button located on the indoor unit. Note that manual operation is only a temporary solution, and it is highly recommended to run the unit with the remote control.

WARNING
Before activating the unit manually, you must turn it off.

To operate the unit manually:

1 Open the front panel of the indoor unit.

2 Locate the manual control button on the right side of the unit.

3 Press the manual control button once to activate forced-automatic mode.

4 Press the manual control button again to activate forced cooling mode.

5 Press the manual control button a third time to turn the unit off.

6 Close the front panel.

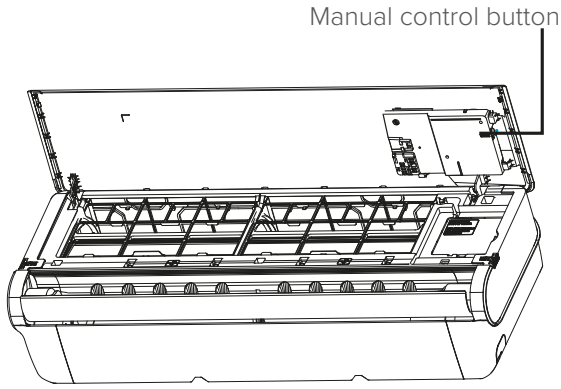


Fig. 25

CAUTION DANGER
The manual override button is only intended for testing and emergency manoeuvres operations. It is recommended to only use it when absolutely necessary and when the remote control has been lost. To restore normal operation, activate the unit using the remote control.

4 MAINTENANCE

It is good practice to periodically clean both the internal and external parts of the appliance. This guarantees its proper functioning 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 turn off the air conditioner and disconnect it from the power supply.

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.

IT IS PROHIBITED
– 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

Obstruction of the air filter can reduce the efficiency of the unit and can be harmful to health. It is recommended to clean the filter every two weeks.

ATTENTION ELECTRIC DANGER
– Before replacing or cleaning the filter, turn the unit off and disconnect it from the power supply.
– Do not wash the inside of the unit with water. Water could damage the insulation and create a risk of electrocution.

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

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

1 The air filter is under the panel.

2 Press the buttons on both sides.

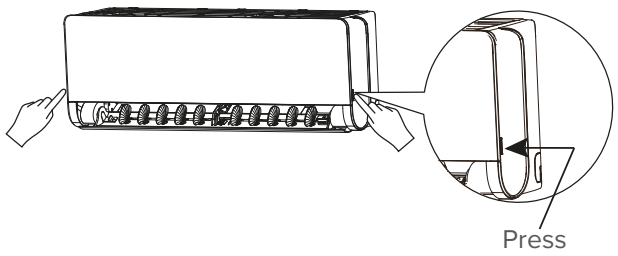


Fig. 26

3 Press the protrusion at the end of the filter to release the latch, lift it and pull it towards you.

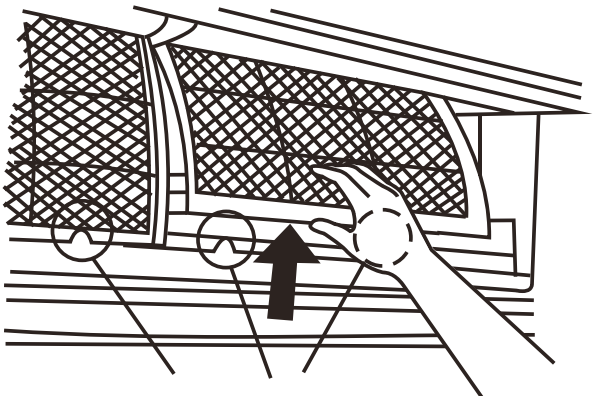


Fig. 27

4 Now pull the filter out.

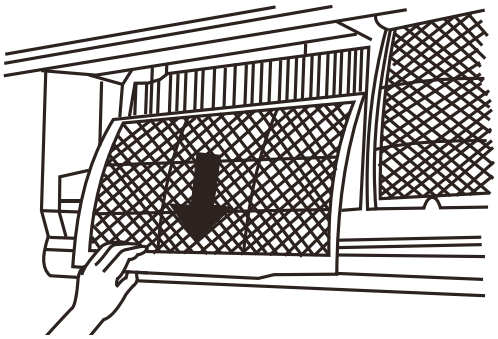


Fig. 28

Wash the filter with warm soapy water. Use a mild detergent.

5 Rinse the filter with clean water and shake it to remove excess water.

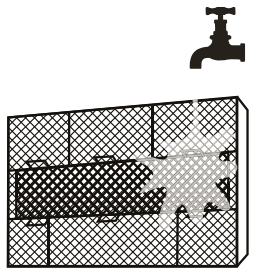


Fig. 29

6 Let it dry in a cool, dry place, avoiding direct sunlight.

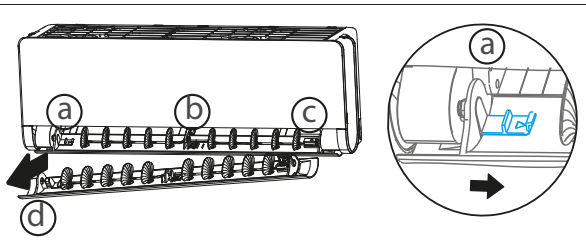
7 Once dry, reinsert the filter into the indoor unit.

4.3 Cleaning Your Louver

Only use a soft, dry cloth to wipe the unit clean.
If the louver is especially dirty, you can remove it and wash it with water.

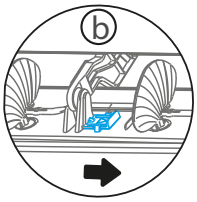
1 Press and hold MODE and SWING buttons on the remote controller together for one second, the deflector will open for a certain angle.

2 Hold the louver and remove it as shown below.

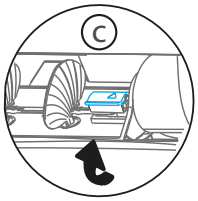


Remove the louver from left side

Release the left side lock block



Release the middle lock block



Remove the right side small cover

Fig. 30

3 Wash it with water and dry it in a cool,dry place.

4 Reinstall the louver, connect the power again, and this will reset the louver.

4.4 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.

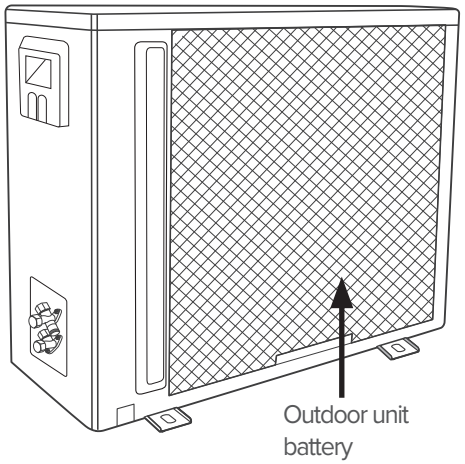
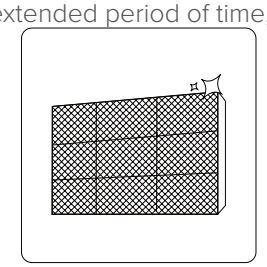


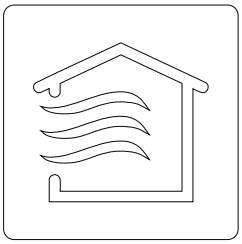
Fig. 31

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:

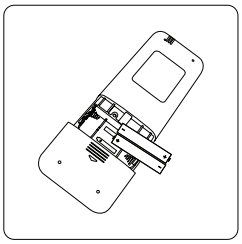


Clean all filters



Activate the Ventilation mode until the unit is completely dry

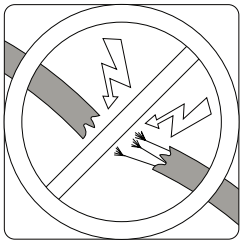
Turn off the unit and disconnect it from the mains power supply



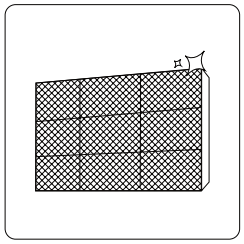
Remove the batteries from the remote control

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:

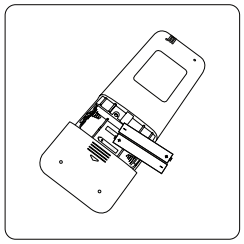


Check that the cables are intact

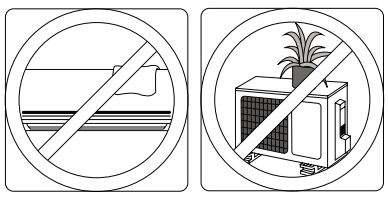


Clean all filters

Check that there are no leaks



Replace batteries



Check that the air inlets and outlets are not obstructed

4.7 Troubleshooting

CAUTION DANGER
If any of the following conditions occur, turn the unit off immediately.
– The power cord 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 turn 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.
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 defrost cycle, it may emit a white haze due to moisture generated by the defrost 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 number.*

4.7.2 Abnormalities 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	Turn off the unit, remove the cause of the obstruction and turn 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 coolant (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 coolant (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 coolant (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. Turn 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, turn the unit off immediately and contact an authorised service centre.*

4.8 Error codes displayed on the indoor unit display

Error code	Cause	Timer light
dF	Defrost	--
CL	Filter cleaning reminder (power on display for 15 seconds)	--
CL	Active clean	--
nF	Filter replacement reminder(power on display for 15 seconds)	--
FP	Heating in room temperature under 8°C	--
FC	Forced cooling	--
AP	AP mode of WIFI connection	--
CP	Remote switched off	--
EH 00 / EH 0A	Indoor unit EEPROM parameter error	OFF
EL 01	Indoor/outdoor unit communication error	OFF
EH 02	Zero-crossing signal detection error	OFF
EH 03	The indoor fan speed is operating outside of the normal range	OFF
EC 51	Outdoor unit EEPROM parameter error	OFF
EC 52	Condenser coil temperature sensor T3 is in open circuit or has short circuited	OFF
EC 53	Outdoor room temperature sensor T4 is in open circuit or has short circuited	OFF
EC 54	Compressor discharge temperature sensor TP is in open circuit or has short circuited	OFF
EC 56	Evaporator coil outlet temperature sensor T2B is in open circuit or has short circuited (for free-match indoor units)	OFF
EH 60	Indoor room temperature sensor T1 is in open circuit or has short circuited	OFF
EH 61	Evaporator coil middle temperature sensor T2 is in open circuit or has short circuited	OFF
EC 07	The outdoor fan speed is operating outside of the normal range	OFF
EH 0b	Indoor PCB/Display board communication error	OFF
EL 0C	Refrigerant leakage detection	OFF
PC 00	IPM malfunction or IGBT over-strong current protection	Flashing
PC 01	Over voltage or over low voltage protection	Flashing
PC 02	Top temperature protection of compressor or High temperature protection of IPM module or High pressure protection	Flashing
PC 04	Inverter compressor drive error	Flashing
PC 08	Current overload protection	Flashing
PC 40	"Communication error between outdoor main chip and compressor driven chip"	Flashing
PC 03	Low pressure protection	Flashing
--	Indoor units mode conflict (match with multi outdoor unit)	ON

***NOTE**: To case of an alarm, the operation light (flashes)*

ERROR CODES DISPLAYED ON THE REMOTE CONTROL.

Use the “Query mode” function on the remote control to display the alarms (see: technical manual special modes).

Error code	Description
EH 00 / EH 0A	Indoor unit EEPROM parameter error
EL 01	Indoor / outdoor unit communication error
EH 02	Zero-crossing signal detection error
EH 30	Over low voltage protection of indoor external fan
EH 31	Over voltage protection of indoor external fan
EH 03	The indoor fan speed is operating outside of the normal range
EC 51	Outdoor unit EEPROM parameter error
EC 52	Condenser coil temperature sensor T3 is in open circuit or has short circuited
EC 53	Outdoor room temperature sensor T4 is in open circuit or has short circuited
EC 54	Compressor discharge temperature sensor TP is in open circuit or has short circuited
EC 56	Evaporator coil outlet temperature sensor T2B is in open circuit or has short circuited
EH 60	Indoor room temperature sensor T1 is in open circuit or has short circuited
EH 61	Evaporator coil temperature sensor T2 is in open circuit or has short circuited
EC 07	The outdoor fan speed is operating outside of the normal range
EH 0b	Indoor PCB/Display board communication error
EL 0C	Refrigerant leak detected
PC 00	IPM malfunction or IGBT over-strong current protection
PC 10	Over low voltage protection
PC 11	Over voltage protection
PC 12	DC voltage protection
PC 02	Compressor top high temperature protection (OLP)
PC 03	Pressure protection
PC 40	Communication error between outdoor main chip and compressor driven chip
PC 41	Current Input detection protection
PC 42	Compressor start error
PC 43	Lack of phase (3 phase) protection
PC 44	No speed protection
PC 45	341PWM error
PC 46	Compressor speed malfunction
PC 49	Compressor over current protection
--	Indoor units mode conflict(match with multi outdoor unit)
PC 0A	Condenser high temperature protection
PC 06	Compressor discharge temperature protection
PC 08	Outdoor current protection
PH 09	Anti-cold air in heating mode

PC 0F	PFC module malfunction
PC 0I	Outdoor ambient tempreture too low
PH 90	Evaporator coil temperature over high protection
PH 91	Evaporator coil temperature over low Protection
LC 05	Frequency limit caused by voltage
LC 03	Frequency limit caused by current
LC 02	Frequency limit caused by TP
LC 01	Frequency limit caused by T3
LH 00	Frequency limit caused by T2
LC 06	Frequency limit caused by PFC
LH 07	Frequency limit caused by remote controller
NA	no malfuction or pretecion

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.

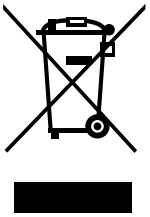
"Professional" electrical and electronic equipment must be disposed of by authorised personnel through established waste disposal authorities around the country.
In this regard, here is the definition of household WEEE and professional WEEE.

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:

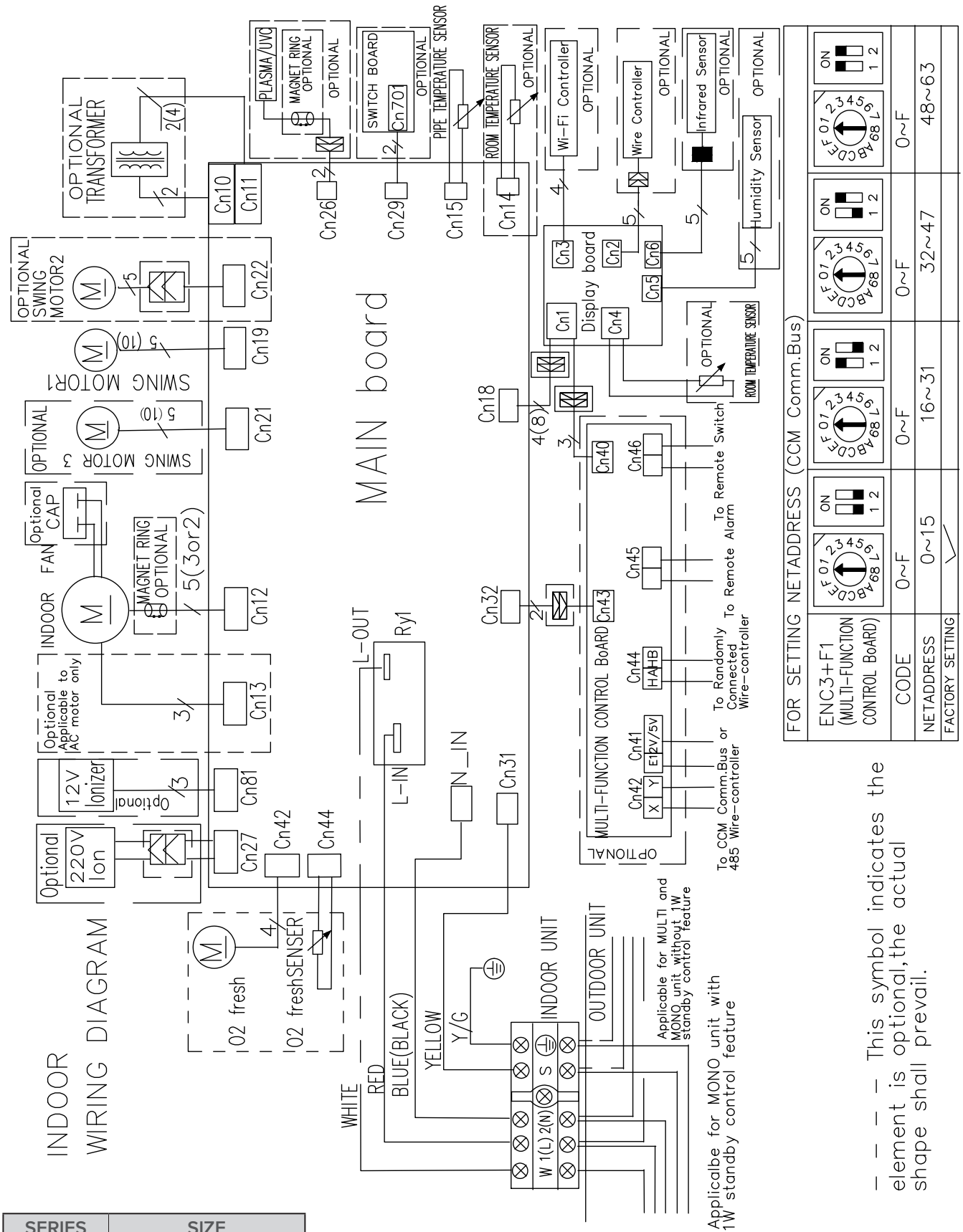
- refrigerant gas, the entire contents of which must be recovered in suitable containers by specialised personnel with the necessary qualifications;
- lubrication oil contained in compressors and in the refrigeration circuit to be collected;
- mixtures with antifreeze in the water circuit, the contents 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



SERIES	SIZE
IE2-Y	27M - 35M

6.2 Conformance Statement

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

IE2-Y 27M
IE2-Y 35M

- **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** **2015/863/UE** **RoHs**

-Unit manufactured and tested according to the followings Standards:	EN 55014-1 :2017 EN 55014-2 :2015 EN IEC 61000-3-2 :2019 EN 61000-3-3 :2013/A1 :2019 EN 55014-1 :2017/A11 :2020
-Unità costruita e collaudata in conformità alle seguenti Normative:	EN 60335-1 :2012/A2 :2019 EN 60335-2-40 :2003/A13 :2012 EN 62233 :2008
-Unité construite et testée en conformité avec les Réglementations suivantes	EN 62321-1 :2013 EN 62321-2 :2014 EN 62321-3-1 :2014
-Unidad construida y probada de acuerdo con las siguientes Normativas	EN 62321-4 :2014 EN 62321-5 :2014 EN 62321-6 :2015
-Gebautes und geprüftes Gerät nach folgenden Normen	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 º 00708410253 registrada en la Cámara de Comercio de Belluno Italia

FELTRE, 20/09/2021

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

FOR 30 YEARS WE HAVE BEEN OFFERING SOLUTIONS FOR SUSTAINABLE COMFORT THE WELL-BEING OF PEOPLE AND THE ENVIRONMENT

www.clivet.com

sales and service

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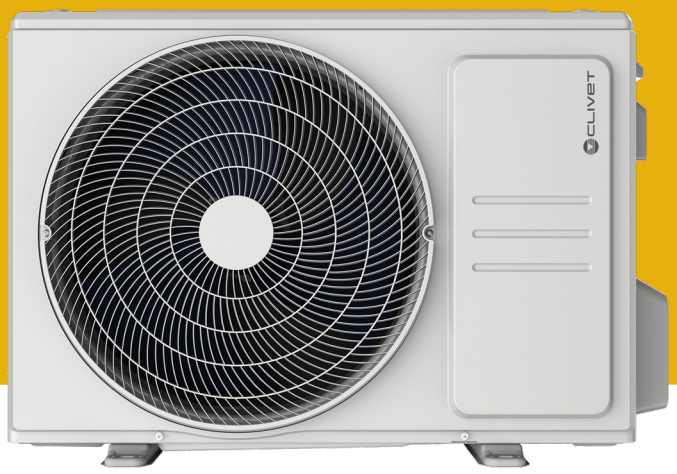
info@clivet.it

MideaGroup
humanizing technology

OUTDOOR UNIT
MONOSplit

SCHIARA 2 ME2-Y series from 27M to 35M

MANUAL
FOR INSTALLATION, USE AND MAINTENANCE



GB

INTRODUCTION

Dear Customer,
Thank you for choosing a **CLIVET** product.
The **SCHIARA 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.

RANGE

MONOSplit systems	
SCHIARA	ME2-Y series from 27M to 35M

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

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

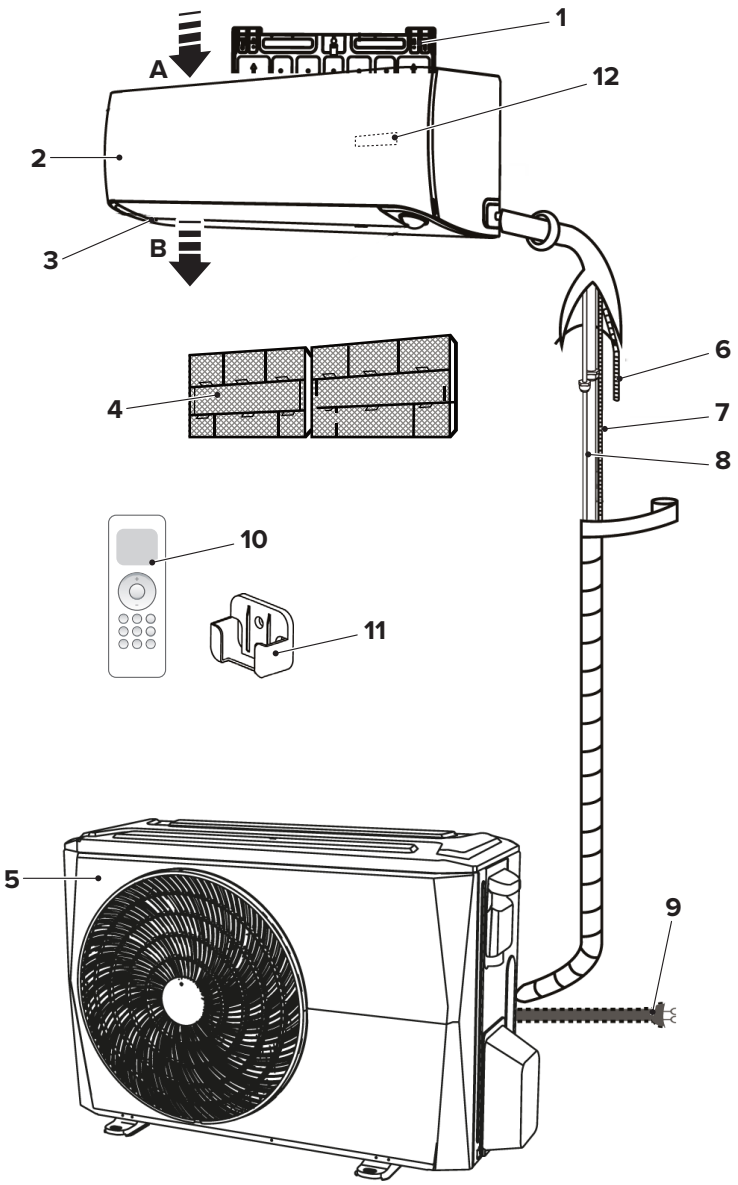


Fig. 1

A Air inlet

B Air outlet

1 Wall mounting plate

2 Indoor unit

3 Ventilation slit

4 Filter

5 Outdoor unit

6 Flexible drainage hose

7 Electrical connection

8 Refrigerant piping

9 Outdoor unit power supply

10 Remote control

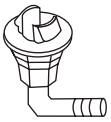
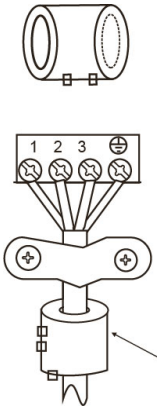
11 Remote control support

12 Display LED SCHIARA 2

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
Gasket			1
Exhaust fitting			1
Installation use and maintenance manual			1
Magnetic ring (If supplied and packed with accessories, refer to the wiring diagram to install it on the connection cable.)	 Pass the strap through the hole in the magnetic ring to secure it to the cable		1
Connection pipe unit	Liquid side	Ø 6.35 mm (1/4")	Components to be purchased separately. Consult your dealer for pipe sizes.
	Gas side	Ø 9.52 mm (3/8")	

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.

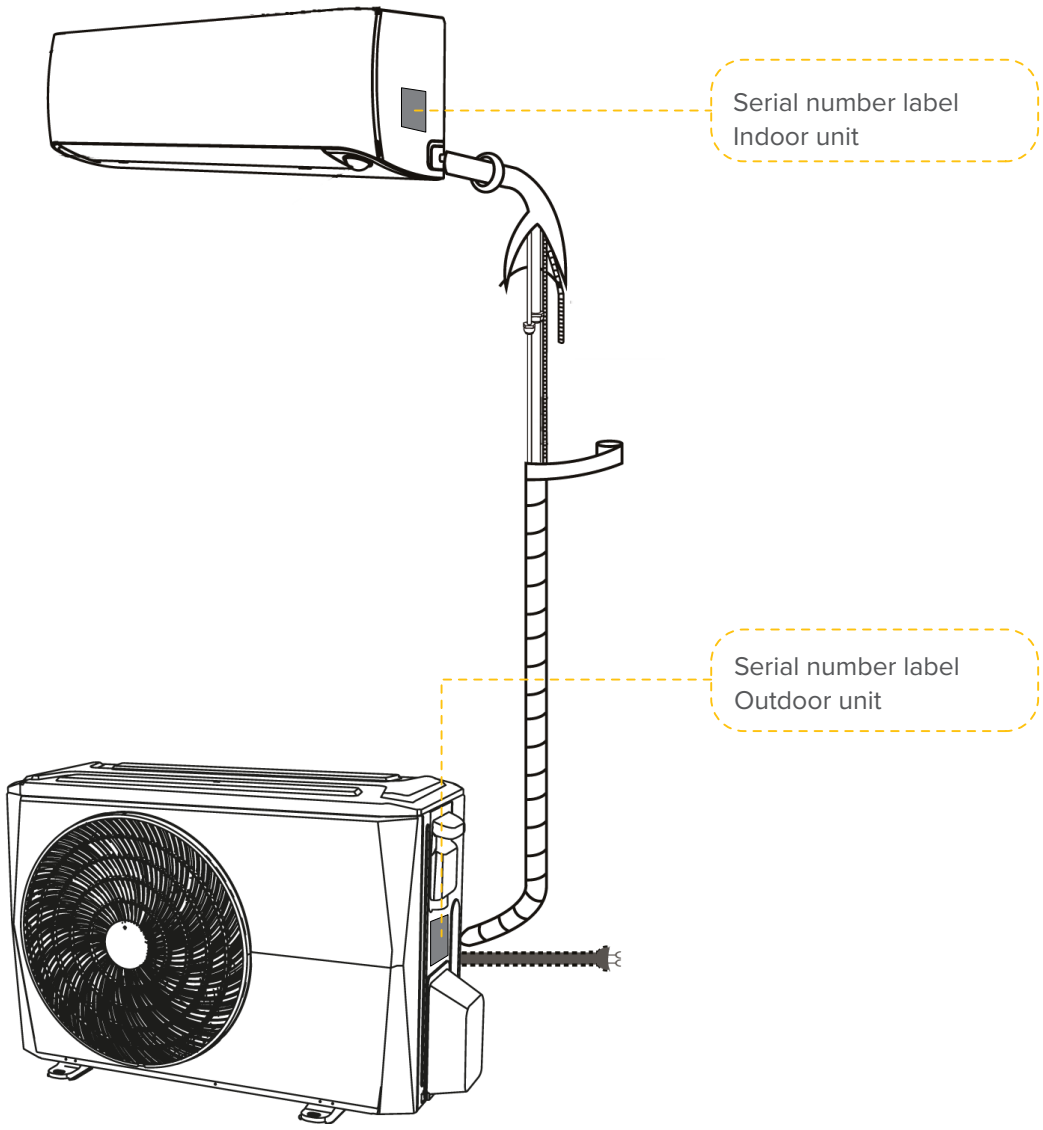


Fig. 2

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 Product receiving

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

2.2 Size and weight

	Outdoor unit	
	27M	35M
Width (mm)	765	765
Depth (mm)	333	333
Height (mm)	555	555
Weight (kg)	26,4	26,4

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 security problem has been resolved.
- The power supply should correspond to 90-100% of the nominal 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 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 Outdoor unit installation

2.4.1 Installation Site

Before installing the outdoor unit, you must choose an appropriate position. The following guidelines may help you choose a suitable position for the unit.

The installation location must have the following characteristics:

- the space available for installation must meet the requirements indicated (see "Fig. 3")
- good air circulation and ventilation
- stability and strength - the load capacity must be sufficient to support the weight of the unit and there must be no vibrations
- the noise emitted by the unit must not disturb other people
- the position must be protected from prolonged exposure to sunlight or rain

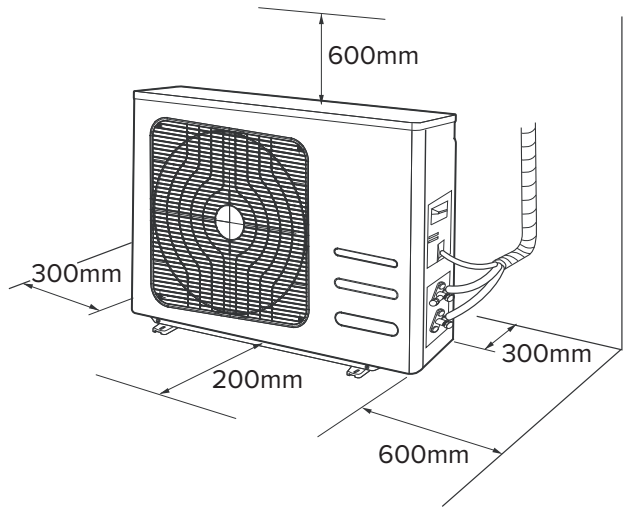


Fig. 3

It is PROHIBITED to install the outdoor unit in the following places:

- near an obstacle blocking the air inlets and outlets;
- near a public road, crowded areas or places where the noise from the unit may cause disturbance to others;
- near animals or plants that may be disturbed by the hot air coming out;
- near combustible gas sources;
- in very dusty places;
- in places excessively exposed to salty air.

SPECIAL CONSIDERATIONS FOR EXTREME WEATHER CONDITIONS

If the unit is exposed to strong wind:
Install the unit so that the air outlet fan is 90° to the direction of the wind. If necessary, place a barrier in front of the unit to protect it from particularly strong winds.

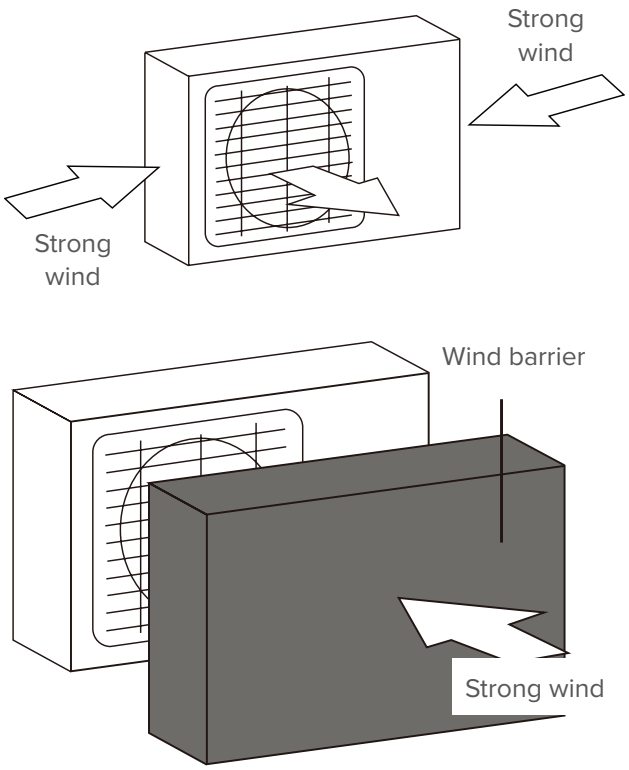


Fig. 4

If the unit is often exposed to heavy rain or snow:
Install a canopy above the unit to protect it from rain or snow. Make sure the airflow around the unit is not obstructed.

If the unit is often exposed to salty air (coastal areas):
Use an outdoor unit specifically designed to resist corrosion.

2.4.2 Installation of the drain connection

Units with heat pump require a drain connection. Before fixing the outdoor unit in place, you must install the drain fitting at the base of the unit.

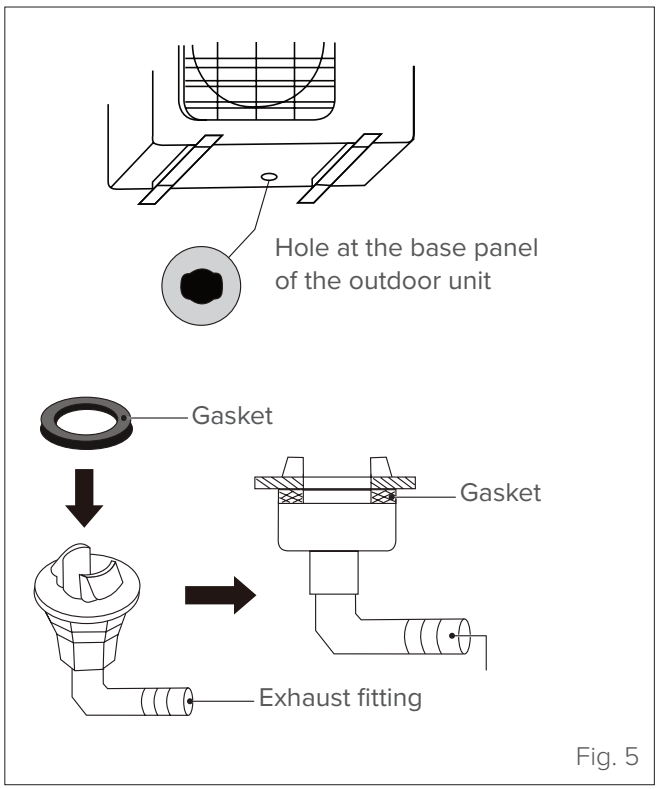


Fig. 5

1 Apply the rubber gasket to the end of the drain fitting to be connected to the outdoor unit.

2 Insert the drain fitting into the hole at the base panel of the unit.

3 From the position observing the front of the unit, turn the drain fitting 90° until it clicks into place.

4 Connect a drainage hose extension (not included) to the drain fitting to divert water from the unit during heating mode operation.

WARNING
In cold climates, check that the drainage pipe is as vertical as possible to ensure proper water flow. If the water flows out too slowly, it can freeze in the pipe and get stuck in the unit.

2.4.3 Mounting the outdoor unit

The outdoor unit can be fixed to the floor or to a wall mounted bracket.

Below are the different sizes of the outdoor units and the distances between their mounting feet.
Prepare the installation base of the unit according to the dimensions below.

	Outdoor unit	
	27M	35M
Width (mm)	765	765
Depth (mm)	333	333
Height (mm)	555	555
Weight (kg)	26,4	26,4
Distance "A" (mm)	452	452
Distance "B" (mm)	286	286

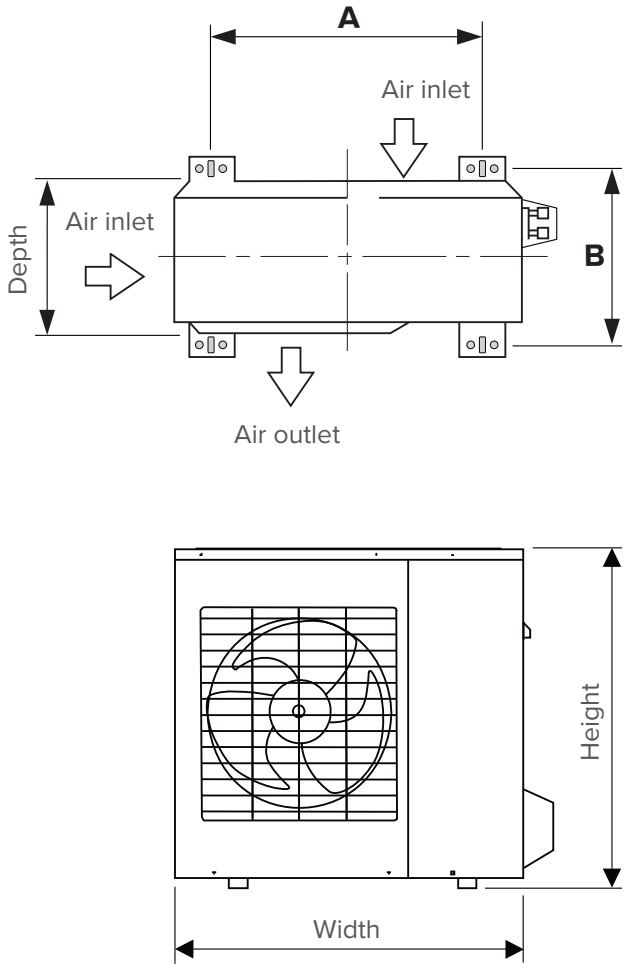


Fig. 6

If the unit is to be installed on the floor or on a concrete mounting platform, proceed as follows:

1 Mark the positions of the four expansion bolts according to the measurements shown in the mounting measurements diagram.

2 Drill the holes for the expansion anchors.

3 Clean the holes from concrete dust.

4 Insert a nut at the end of each expansion block.

5 Hammer the expansion anchors into the holes made.

6 Remove the nuts from the expansion anchors and place the outdoor unit on the anchors.

7 Insert a washer on each expansion plug and re-apply the nuts.

8 Using a spanner, tighten the nuts firmly.

CAUTION
When drilling holes in concrete, it is recommended to always use eye protection.

If the unit is to be installed on a wall-mounted bracket, proceed as follows:

CAUTION DANGER
Before installing a wall unit, make sure the wall is made of solid brick, concrete or materials with similar strength characteristics. **The load capacity of the wall must be sufficient to support at least four times the weight of the unit**.

1 Mark the positions of the holes for the brackets according to the measurements in the mounting dimensions diagram (see "Fig. 6").

2 Drill the holes for the expansion anchors.

3 Clean the holes from dust and concrete residue.

4 Insert a washer and nut at the end of each expansion plug.

5 Screw the expansion bolts into the holes of the mounting brackets, place the brackets in position and hammer the expansion bolts into the wall.

6 Check that the mounting brackets are aligned.

7 Lift the unit carefully and place the mounting feet on the brackets.

8 Screw the unit firmly to the brackets.

TO REDUCE VIBRATION OF WALL MOUNTED UNITS
If possible, install the unit on the wall using rubber seals to reduce vibration and noise.

2.4.4 Electrical connections

Cables with the following characteristics are required to power the outdoor unit:

Outdoor unit	Mains power supply	
	V/Hz/p	n° cables/cross section
27M	230 / 50 / 1	2 x 1.5mm² + G
35M	230 / 50 / 1	2 x 1.5mm² + G

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

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

Outdoor unit	Power supply to indoor unit	Signal to indoor unit
	n° cables/cross section	n° cables/cross section
27M	2 x 1.5mm² + G	2 x 1.5mm²
35M	2 x 1.5mm² + G	2 x 1.5mm²

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

The terminal block of the outdoor unit is protected by a cover on the side of the unit. A complete wiring diagram is printed inside the cover.

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

1 Prepare the cable for connection:

- Using a wire stripper, strip the rubber sheath at both ends of the cable and expose approximately 40 mm 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 Unscrew and remove the terminal block cover.

3 Unscrew the cable clamp under the terminal block and hold it aside.

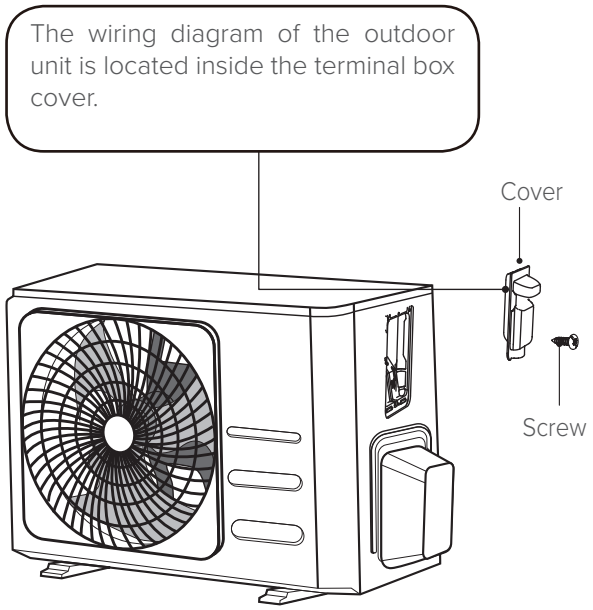


Fig. 7

4 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.

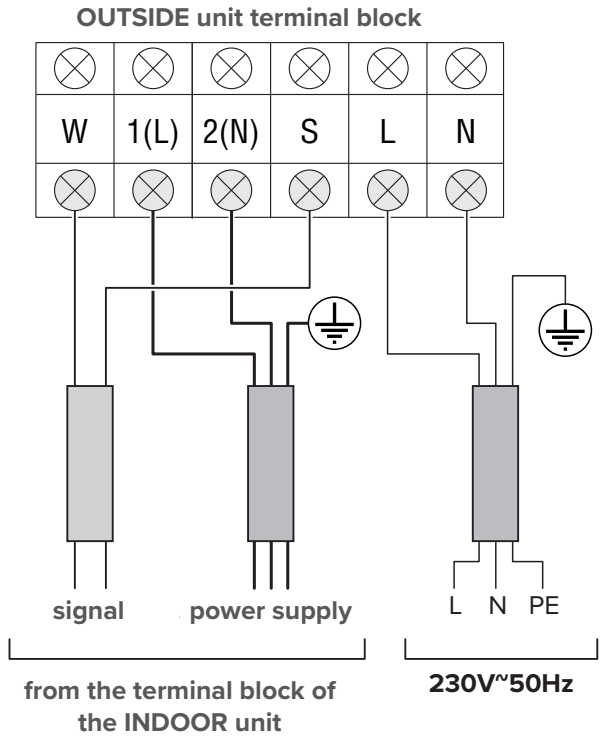


Fig. 8

5 Check that all connections are stable, then wrap the cables to prevent rainwater from entering the terminals.

6 Attach the cable to the unit using the cable clamp. Screw the cable clamp on firmly.

7 Insulate unused cables with PVC insulation tape. Arrange them so that they do not touch electrical or metal parts.

8 Replace the cover on the side of the unit and screw it back on.

3 STARTING UP THE SYSTEM

3.1 Air evacuation

The presence of air and foreign substances in the refrigerant circuit can cause abnormal pressure increases which, in turn, can damage the air conditioner, reduce its efficiency and cause injury. Use a vacuum pump and the manifold pressure gauge assembly to evacuate the refrigerant circuit to expel all moisture and non-condensable gases.
Evacuation should be performed at the initial installation and each time the unit is moved.

WARNING
BEFORE COMPLETING THE EVACUATION

- Check that both high pressure and low pressure pipes between the indoor and outdoor units are connected correctly as described in section "6 Notions on refrigerant piping connection".
- Check that all electrical cables are connected correctly.
- Ensure that installation of the refrigerant pipes complies with applicable legislation. In Europe, the applicable standard is EN378.
- During testing, NEVER bring the product to a pressure that is higher than the maximum allowable pressure (as indicated on the unit's information plate).

Before using the manifold pressure gauge assembly and vacuum pump, read their respective user manuals for the correct procedures.

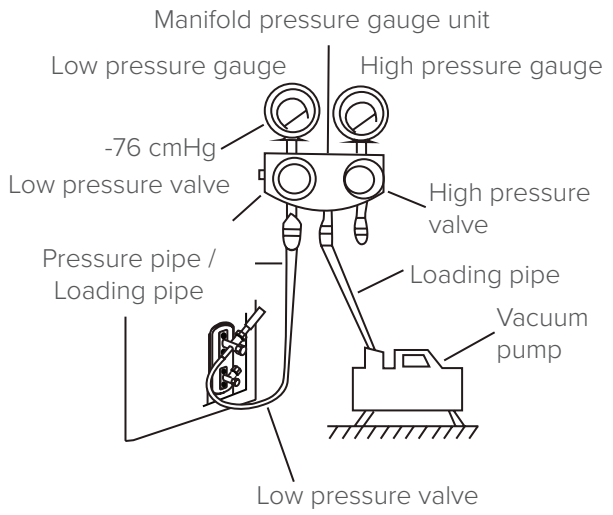


Fig. 9

1 Connect the manifold pressure gauge assembly loading hose to the service port on the low pressure valve of the outdoor unit.

2 Connect another loading pipe between the manifold pressure gauge assembly and the vacuum pump.

3 Open the low pressure side of the manifold gauge assembly. Keep the high pressure side closed.

4 Activate the vacuum pump to evacuate the system.

5 Keep the vacuum pump running for at least 15 minutes, or until the low pressure gauge indicator reads -76 cmHG (10^{-5} Pa).

6 Close the low pressure side of the manifold gauge assembly and switch off the vacuum pump.

7 Wait 5 minutes, then check that there are no changes in system pressure.

8 If a pressure change in the system is observed, refer to paragraph "3.2.2 Checking for gas leaks" for information on how to search for possible leaks. If the system pressure remains unchanged, unscrew the cap from the expansion valve (high pressure valve).

9 Insert a hexagonal key into the expansion valve (high pressure valve) and open the valve by turning the key 1/4 turn counterclockwise. Check that you can hear the noise of exiting gas, then close the valve after 5 seconds.

10 Observe the high pressure gauge for one minute to check that there are no changes in pressure. The value of the high pressure gauge should be slightly higher than atmospheric pressure.

11 Disconnect the loading hose from the service door.

12 Using a hexagonal wrench, fully open both the high pressure and low pressure valve.

13 Close the caps of the three valves by hand (service port, high pressure, low pressure). If necessary, tighten them further using a torque wrench.

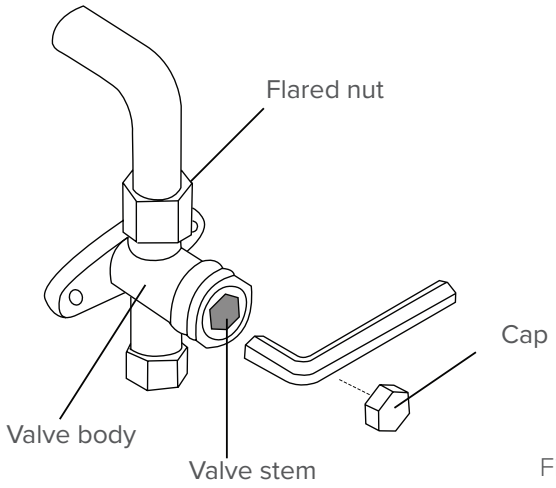


Fig. 10

CAUTION
OPEN THE VALVE STEMS WITHOUT FORCING
To open the valve stems, turn the hexagonal wrench until it is against the stop element. Do not force the valve to open further.

3.1.1 Refrigerant charge

The unit is factory pre-charged with a sufficient quantity of refrigerant for pipe length up to 5 metres.

Unit		27M	35M
Refrigerant pre-charge	kg	0,70	0,70

If the length of the pipes is longer than 5 metres, an additional charge of refrigerant is required.
For **each additional metre**, the following quantity of refrigerant must be added:

Unit		27M	35M
Additional charge	g/m	12	12

The refrigerant must be charged through the low pressure valve of the outdoor unit.

IT IS PROHIBITED TO
mix different types of refrigerant

FULL REFRIGERANT RECHARGE
If a full charge of the refrigerant is required (e.g. after moving / replacing the unit or after a leakage) the total refrigerant charge will be the sum of the factory refrigerant pre-charge + the additional charge in the case of a pipe length of more than 5 meters.

3.2 Electrical dispersion and gas leakage control

3.2.1 Electrical safety controls

After installation, check that all electrical cables are installed according to national and local codes and according to the instructions in the Installation Manual.

BEFORE THE OPERATIONAL TEST
Checking earthing
Measure the earthing resistance with visual detection and a specific tester. The earthing resistance must be less than 0.1Ω.

DURING THE OPERATIONAL TEST
Electrical dispersion control
During the operational test, use an electrode and multimeter to conduct a complete electrical leakage test. If an electrical leakage is detected, turn the unit off immediately and consult a qualified electrician to identify and resolve the cause of the problem.

ATTENTION ELECTRIC DANGER
All electrical connections must be done by a licensed electrician according to the provisions of national and local electrical codes.

3.2.2 Checking for gas leaks

There are two different methods of checking gas leaks.

Method with soap and water
Using a soft brush, apply soapy water or liquid detergent to all pipe joints of the indoor and outdoor units. The bubble formation will indicate a leak.
Leak detector method
If using a leak detector, follow the instructions in the user manual of the device.

AFTER CHECKING FOR GAS LEAKS
After checking that the pipe joints are NOT leaking, re-apply the valve assembly cover to the outdoor unit.

3.3 Function test

3.3.1 Preliminary checks

The function test shall be carried out only after the following procedures have been completed:

- Electrical safety checks - Check that the electrical system is safe and functioning properly
- Check for gas leaks - Check all joints with countersunk nuts and check the system for leaks
- Check that the valves on the gas and liquid side (high and low pressure) are fully open

3.3.2 Operating test instructions

The function test shall be carried out for at least 30 minutes.

1. Connect the unit to the power mains.
2. Press the ON/OFF button on the remote control to turn it on.
3. Press the MODE button to scroll through the following functions, one at a time:
   - COOL - Select the lowest possible temperature
   - HEAT - Select the highest possible temperature

4 Leave each function active for 5 minutes and perform the following checks:

List of checks to be performed	YES/NO	
Absence of electrical leakage		
The supply voltage corresponds to the voltage specified on the unit identification label		
The unit is properly earthed and the earthing terminals are tightened		
All electrical terminals are correctly connected and insulated		
Indoor and outdoor units are installed correctly		
Absence of damaged components or crushed pipes inside the indoor and outdoor unit		
All junction points are leak-free	External	Indoor
No refrigerant leaks.		
Water drains correctly from the drainpipe		
All pipes are properly insulated		
The stop valves (for gas and liquid) on the outdoor unit are fully open.		
The unit operates correctly in cooling mode		
The unit works properly in heating mode		
The ventilation slots of the indoor unit rotate correctly		
Indoor unit responds to the remote control		

CHECK THE PIPE JOINTS AGAIN

During operation, the pressure in the refrigerant circuit increases, and this can lead to leaks that were not detected during the initial check. During the function test, carefully check that none of the refrigerant pipe connections have a leak. For instructions, refer to section "3.2.2 Checking for gas leaks".

5 At the end of the operational test, if all the checks listed are positive, proceed as follows:

- Using the remote control, return the unit to normal operating temperature.
- Using insulating tape, wrap the connection points of the refrigerant pipes that are inside and that were left exposed during the installation of the indoor unit.

IF THE ROOM TEMPERATURE IS BELOW 16°C

If the room temperature is below 16°C, you cannot use the remote control to activate the cooling function (COOL). In this case, you can use the MANUAL CONTROL button to test the cooling function.

1 Lift the front panel of the indoor unit until it clicks into place.

2 The MANUAL CONTROL button is located on the right side of the unit. Press it 2 times to select the COOL function.

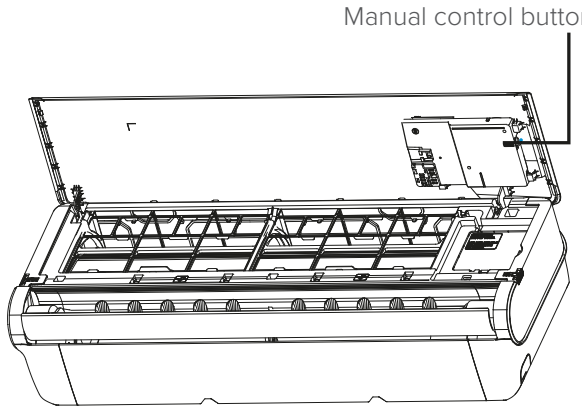


Fig. 13

3 Perform the function test normally.

4 MAINTENANCE

It is good practice to periodically clean both the internal and external parts of the appliance. This guarantees its proper functioning 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.

ATTENTION ELECTRIC DANGER
Before cleaning or maintenance, always turn off the air conditioner and disconnect it from the power supply.

4.1 Troubleshooting

CAUTION DANGER
If any of the following conditions occur, turn the unit off immediately.
– The power cord 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.

4.1.1 Abnormalities 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	Turn off the unit, remove the cause of the obstruction and turn 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 coolant (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

Anomalies	Possible causes	Remedies
The unit starts or stops frequently	The amount of refrigerant in the system is excessive or insufficient	Check for leaks and top up the coolant (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 coolant (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. Turn 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, turn the unit off immediately and contact an authorised service centre.*

4.2 Outdoor unit error messages

Led signaling on the board (only on 35M unit)

Flashing= error displayed on the indoor unit
Slow flashing = stand-by
LED on = unit ON

Error code	Description
EC 51	Outdoor EEPROM malfunction
EL 01	Indoor / outdoor units communication error
PC 40	Communication malfunction between IPM board and outdoor main board
PC 08	Outdoor overcurrent protection
PC 10	Outdoor unit low AC voltage protection
PC 11	Outdoor unit main control board DC bus high voltage protection
PC 12	Outdoor unit main control board DC bus high voltage protection / 341 MCE error
PC 00	IPM module protection
PC 0F	PFC module protection
EC 71	Overcurrent failure of outdoor DC fan motor
EC 72	Lack phase failure of outdoor DC fan motor
EC 07	Outdoor fan speed has been out of control
PC 43	Outdoor compressor lack phase protection
PC 44	Outdoor unit zero speed protection
PC 45	Outdoor unit IR chip drive failure
PC 46	Compressor speed has been out of control
PC 49	Compressor overcurrent failure
PC 30	High pressure protection
PC 31	Low pressure protection
PC 0A	High temperature protection of condenser
PC 06	Temperature protection of compressor discharge
PC 02	Top temperature protection of compressor
EC 52	Condenser coil temperature sensor T3 is in open circuit or has short circuited
EC 53	Outdoor room temperature sensor T4 is in open circuit or has short circuited
EC 54	Compressor discharge temperature sensor TP is in open circuit or has short circuited
EC 50	Open or short circuit of outdoor unit temperature sensor (T3,T4.TP)
PC 0L	Low ambient temperature protection

4.3 Operate safely with R32 refrigerant present

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. Controls in the area

Before starting work on a system containing flammable refrigerants, carry out the appropriate safety checks to ensure that the risk of ignition is minimal. When repairing the refrigeration system, it is recommended that the following precautions be taken before starting the work.

2. Work procedures

The work must be carried out according to a controlled procedure in order to minimise the risk of flammable gases or vapours being present during the work.

3. General work area

Maintenance personnel and other people working in the area should be informed about the nature of the work to be done. It is recommended not to carry out operations in enclosed spaces. The area around the workspace must be made inaccessible. Verify that conditions within the area are safe in terms of control of flammable materials.

4. Checking the presence of refrigerant

The area must be checked using an appropriate refrigerant detector before and during the intervention so that the technician is aware of potentially flammable atmospheres. Check that the leak detection unit is suitable for use with flammable refrigerants (does not generate sparks and is adequately sealed or intrinsically safe).

5. Presence of fire extinguishers

If hot operations are to be carried out on refrigeration equipment or associated components, a suitable fire extinguisher must be kept on hand. Keep a dry-powder or CO^2 extinguisher near the loading area.

6. Absence of ignition sources

When the operations to be carried out on a refrigeration system involve exposing piping containing or having contained a flammable refrigerant, it is forbidden to use any source of ignition that could generate a risk of fire or explosion. All possible sources of ignition, including cigarette smoke, should be kept at a sufficient distance from the installation, repair, disassembly and disposal site, as flammable coolant may escape into the surrounding space during these operations. Before starting the work, the area around the appliance must be inspected to ensure that it does not present ignition or flammability hazards. “NO SMOKING” signs must be affixed.

7. Area ventilation

Before working on the system or performing hot operations, make sure the area is open or adequately ventilated. Ventilation must be constant for the entire duration of the operation. Ventilation must be capable of safely dispersing all refrigerant released and preferably expelling it outside into the atmosphere.

8. Controls on refrigeration equipment

When changing an electrical component, the new one must be suitable for the intended use and meet the correct specifications. The manufacturer's maintenance and service instructions must be followed in all circumstances. When in doubt, consult the manufacturer's technical department. The following checks are recommended for installations using flammable refrigerants:

- the charge volume must be suitable for the cubic capacity of the room in which the components containing the refrigerant are installed;
- ventilation devices and openings must open properly and not be obstructed;
- if an indirect refrigerant circuit is used, the presence of refrigerant in the secondary circuits must be checked; the equipment markings must remain visible and legible;
- markings and indications that become illegible shall be corrected;
- pipes or other components of the refrigerant circuit shall be installed in locations where exposure to potentially corrosive substances is unlikely for components containing the refrigerant, unless they are made of materials inherently resistant to corrosion or adequately protected against the risk of corrosion;

9. Controls on electrical devices

The repair and maintenance procedures for electric components must include initial safety checks and component inspection procedures. If a defect is found that may generate safety risks, the power supply to the circuit must be interrupted until the problem is satisfactorily resolved. If the problem cannot be solved immediately, but it is necessary to keep the system running, an appropriate temporary solution must be adopted. The situation should be communicated to the owner of the equipment so that all persons concerned can be duly informed.

Initial security checks:

- check that the capacitors are discharged: this procedure must be performed safely to avoid the possibility of sparks;
- check that there are no live components or wires exposed while charging, restoring or venting of the system;
- check for interruptions in the earthing.

10. Repair of sealed components

10.1 While repairing sealed components, all electrical utilities must be disconnected from the equipment before removing the sealing covers, etc. If it is absolutely necessary to have electrical power supply during the intervention, a permanent leakage detection method must be set up at the most critical point that can signal any potentially dangerous situations.

10.2 Particular attention must be paid to the following aspects to ensure that, when working on electrical components, the casing is not altered to such an extent that the required level of protection is compromised, including damage to cables, excessive number of connections, use of terminals that do not conform to original specifications, damage to seals, incorrect assembly of glands, etc.

- Check that the device is securely mounted.
- Check that the seals or sealing materials have not deteriorated to such an extent that they no longer guarantee a perfect seal keeping flammable atmospheres from entering. Spare parts must comply with the manufacturer's specifications.

NOTE: The use of silicone sealants may make some types of leak detection equipment less effective. Intrinsically safe components do not need to be isolated before work is carried out.

11. Reparation of intrinsically safe components

Before applying capacitance or permanent inductance loads to the circuit, check that this operation does not result in the permissible voltage and current values for the equipment in use being exceeded. Intrinsically safe components are the only types of components that can be operated under voltage in the presence of a flammable atmosphere. The test device shall have the correct nominal characteristics.
For component replacement use only the parts specified by the manufacturer. Other components may cause ignition of refrigerant released into the atmosphere.

12. Wiring

Check that the wiring is not exposed to wear, corrosion, excessive pressure, vibration, sharp edges or other adverse environmental influences. The control should also take into account the effects of ageing or continuous vibration from compressors, fans or other similar sources.

13. Detection of flammable refrigerants

The use of potential ignition sources for the search or detection of refrigerant leaks is prohibited under any circumstances. The use of halogen torches (or other open flame detection systems) is not permitted.

14. Leak detection methods

The following leak detection methods are considered acceptable for systems containing flammable refrigerants. Electronic leak detectors can be used to detect flammable refrigerants, but their sensitivity may not be adequate or require recalibration. (Detection equipment must be calibrated in a coolant free area.) Check that the detector is not a potential ignition source and is suitable for the refrigerant. Leak detection equipment must be configured at a percentage of the lower flammability limit (LFL) of the refrigerant and be calibrated for the refrigerant used with confirmation of the appropriate gas percentage (max. 25%). Leak detection fluids are suitable for use with most refrigerants but the use of chlorine containing detergents should be avoided, as chlorine can react with the refrigerant and corrode copper piping.
If a leak is suspected, it is recommended to remove or extinguish all open flames. If there is a coolant leak requiring brazing, all coolant must be removed from the system, or isolated (by means of shut-off valves) in a part of the system away from the leak. The system should then be purged with oxygen-free nitrogen (OFN) both before and during brazing.

15. Removal and evacuation

When the cooling circuit needs to be repaired or for other purposes, conventional procedures can be followed. However, it is important to follow recommended practices taking flammability hazards into account. The following procedure is recommended:

- extract the coolant;
- purge the circuit with inert gas;
- evacuate;
- purge again using inert gas;
- open the circuit by cutting or brazing.

The refrigerant charge can be recovered in the appropriate cylinders. The system must be purged with oxygen-free nitrogen to make the unit safe. It may be necessary to repeat this procedure several times. Do not use compressed air or oxygen for this operation.
Purging can be performed by introducing oxygen-free nitrogen into the vacuum circuit in the system and continuing to fill until operating pressure is reached, then venting into the atmosphere and recreating the vacuum. This procedure must be repeated until the refrigerant is completely removed from the system.
When the last OFN charge is introduced, the system must be vented to atmospheric pressure to allow work to be performed. This operation is absolutely essential if brazing operations are to be carried out on the piping.
Check that the output for the vacuum pump is not closed for any ignition source and that good ventilation is available.

16. Charging operations

In addition to conventional charging procedures, it is recommended to follow the ensuing guidelines:

- When using charging equipment, avoid contamination with different refrigerants. Limit the length of the pipes or lines as much as possible to reduce the amount of refrigerant they contain.
- Cylinders must be held vertically.
- Before charging the coolant into the system, make sure that it is properly earthed.
- Label the system after loading (if the label is not already present).
- Use extreme care to avoid overfilling the system.
- Before recharging the system, test the pressure using oxygen-free nitrogen. After charging, but before commissioning, check the system for leaks. Perform an additional leakage check before leaving the site.

17. Disposal

Before performing this procedure, it is essential that the technician is fully familiar with the equipment and all of its components. It is recommended to recover all refrigerants following safe procedures. Before proceeding, take an oil and coolant sample.

Before reusing the recovered refrigerant, it should be analysis if necessary. Before starting the procedure it is essential to check the availability of the power supply.

1. Familiarize yourself with the device and its operation.
2. Electrically isolate the system.
3. Before proceeding, check the following:
   - that mechanical equipment for handling refrigerant cylinders is available if necessary;
   - that the necessary personal protective equipment is available and is used;
   - that the recovery process is carried out under the constant supervision of a competent person;
   - that the recovery equipment and cylinders comply with regulations in force.
4. If possible, transfer the refrigerant to the outdoor unit using a “pump-down” procedure.
5. If it is not possible to create a vacuum, use a manifold that allows the refrigerant to be expelled from various parts of the system.
6. Before proceeding with the recovery, place the cylinder on the scales.
7. Start the recovery device and use it according to the manufacturer's instructions.
8. Do not fill the cylinders excessively. (Do not exceed 80% of the liquid volume).
9. Do not exceed the maximum working pressure of the cylinder, even temporarily.
10. After filling the cylinders correctly and completing the procedure, transfer the cylinders and equipment from the site as soon as possible and close all isolation valves on the equipment.
11. Before loading the recovered refrigerant into another refrigeration system it will be necessary to clean and check it.

18. Labelling

The appliance must be labelled to indicate that it has been decommissioned and emptied of refrigerant. The label must be dated and signed. Make sure that labels indicating flammable refrigerant content are affixed to the appliance.

19. Recovery

- When discharging refrigerant from a system for maintenance or decommissioning reasons, it is recommended to extract the refrigerant safely.
- If the refrigerant is decanted into cylinders, use only cylinders suitable for refrigerant recovery. Verify that the number of cylinders required to hold the entire system charge is available. All cylinders to be used shall be designated for the refrigerant recovered and labelled for that refrigerant (special refrigerant recovery cylinders). Cylinders shall be equipped with a safety valve and well-functioning shut-off valves.
- Empty recovery cylinders must be evacuated and, if possible, cooled before recovery.
- The recovery equipment must be in good working order, accompanied by a set of instructions at hand, and must be suitable for flammable refrigerant recovery. In addition, you will need prepare a set of well functioning calibrated scales.
- The pipes shall be complete with decoupling fittings that are leak-free and in good condition. Before using the recovery equipment, check that it is in good working order, that it has been properly maintained and that the associated electrical components are sealed to prevent risk of ignition in the event of refrigerant leakage. If in doubt, consult the manufacturer.
- The recovered refrigerant must be returned to the supplier in the correct recovery cylinders, accompanied by the relevant waste identification form. Do not mix different types of refrigerant in recovery units, especially in cylinders.
- If compressors or compressor oils need to be decommissioned, evacuate them to an acceptable level to prevent flammable refrigerant from remaining inside the lubricant. The evacuation procedure must be carried out before returning the compressor to the suppliers. To accelerate this process, only use electric heating on the compressor body. When extracting oil from the system, drain it using a safe procedure.

20. Transport, marking and storage of units

1 Transport of equipment containing flammable refrigerants

– Follow applicable regulations related to transporting these materials

2 Markings and signage on equipment

– Observe the regulations in force

3 Disposing of equipment containing flammable refrigerants

– Comply with national regulations

4 Equipment storage

– The equipment must be stored in accordance to the manufacturer's instructions.

5 Storage of packaged equipment (not sold)

– Thepackagingmaterialtobestoredmustbeprotected so that any mechanical damage to the equipment contained in it cannot cause refrigerant leakage. The maximum number of appliances that can be stored in the same location is determined by local regulations.

Construction and specifications are subject to product improvement changes without notice. Please contact the sales agency or manufacturer for further details.

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.

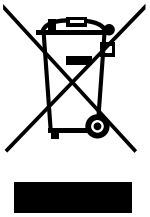
"Professional" electrical and electronic equipment must be disposed of by authorised personnel through established waste disposal authorities around the country.
In this regard, here is the definition of household WEEE and professional WEEE.

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 NOTIONS ON REFRIGERANT PIPING CONNECTION

The length of the refrigerant pipes affects performance and energy efficiency of the unit. The nominal efficiency is tested on units whose pipes are 5 meters long.
For tropical areas, the maximum length of the coolant pipe must not exceed 10 metres. Refer to the following table for specifications on maximum pipe length and height difference

		27M	35M
Max equivalent length	m	25	25
Max. height difference Outdoor unit / Indoor unit	m	±10	±10

6.1 Refrigerant piping connections

6.1.1 Cut the pipes

When preparing the coolant pipes, take great care to cut and flare them correctly. This will ensure efficient operation and reduce the need for further maintenance.
For units with R32 refrigerant, the pipe connection points must be outside the room.

1 Measure the distance between the indoor and outdoor unit.

2 Using a pipe cutter, cut the pipe to a measurement slightly longer than the measured distance.

3 Check that the pipe is cut at an exact 90° angle. Refer to the examples of incorrect cutting contained in "Fig. 14".

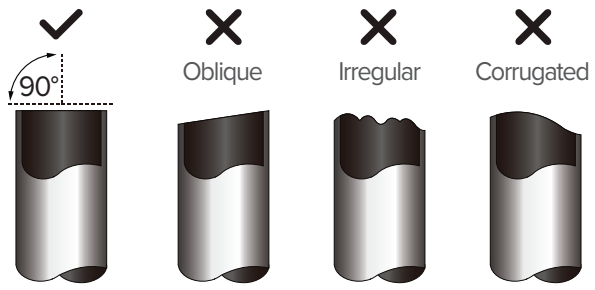


Fig. 14

CAUTION
Do not damage, tighten or deform the pipe during cutting. This would greatly reduce the heating efficiency of the unit.

6.1.2 Eliminate smudges

Deburring can make the refrigerant piping connection seal less effective. For this reason, they must be eliminated completely.

1 Keep the pipe tilted downwards to prevent debris residue from falling into the pipe.

2 Using a reamer or similar tool, remove all burrs from the cut section of the pipe.

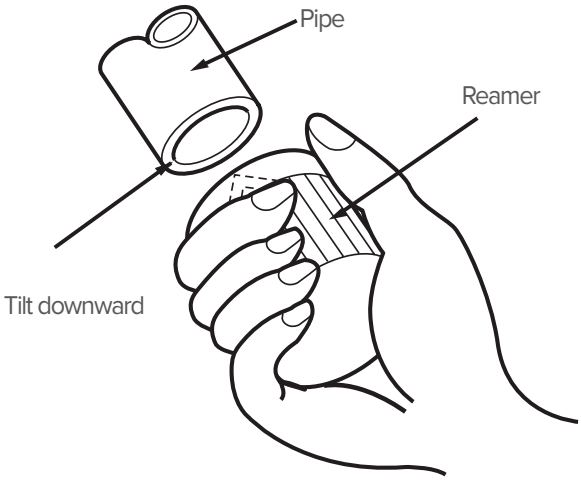


Fig. 15

CAUTION
Do not damage, tighten or deform the pipe during cutting. This would greatly reduce the heating efficiency of the unit.

6.1.3 Countersink the ends of the pipes

Correct flaring is essential to perfectly seal the gasket.

1 After removing burrs from the cut pipe, seal the ends with PVC tape to prevent foreign materials from entering.

2 Wrap the pipe in an insulating material.

3 Place a countersunk nut at each end of the pipe. Make sure that the nuts are facing in the correct direction, because after countersinking it will no longer be possible to apply them or change their direction (see "Fig. 16").

4 When you are ready to complete the flaring, remove the PVC tape from the ends of the pipe.

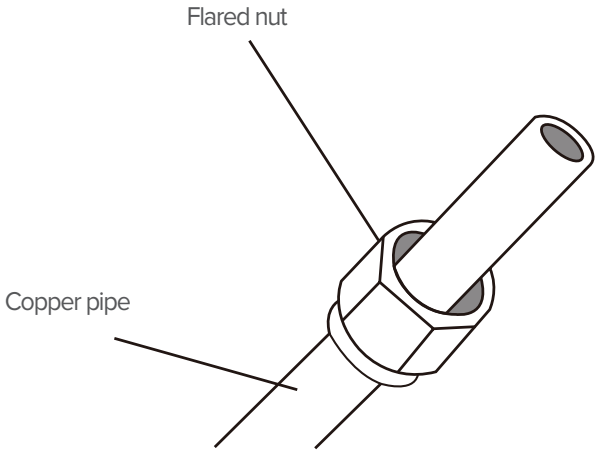


Fig. 16

5 Tighten the end of the pipe into the template of the flaring tool. The end of the pipe must extend beyond the edge of the template, according to the measurements indicated in the table below.

6 Apply the countersink screw to the template.

7 Turn the screw clockwise until the desired countersink is achieved.

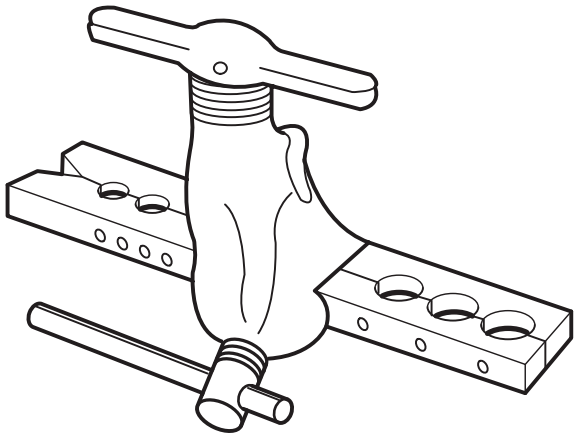


Fig. 17

PIPE PROTRUSION BEYOND THE TEMPLATE

Pipe outer diameter (mm)	A (mm)	
	Min	Max
Ø 6.35 (Ø 1/4")	0.7	1.3
Ø 9.52 (Ø 3/8")	1.0	1.6
Ø 12.7 (Ø 1/2")	1.0	1.8
Ø 15.9 (Ø 5/8")	2.0	2.2

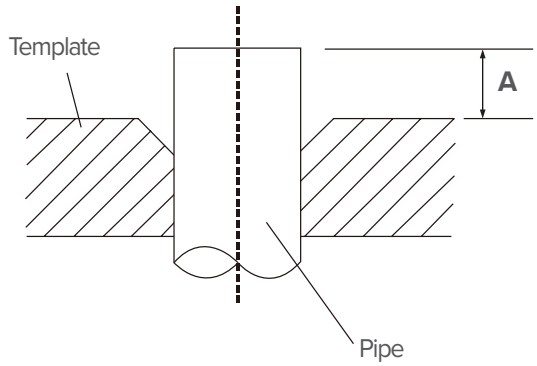


Fig. 18

8 Remove the countersunk screw and template, then check that the end of the pipe is countersunk evenly and not cracked.

6.1.4 Connect the pipes

When connecting the coolant pipes, be careful not to use excessive torque or perform other operations that may damage them. First connect the low pressure pipe and then the high pressure pipe.

WARNING
When bending the connection pipes of the refrigerant piping, observe a minimum radius of 10 cm. See "Fig. 19".

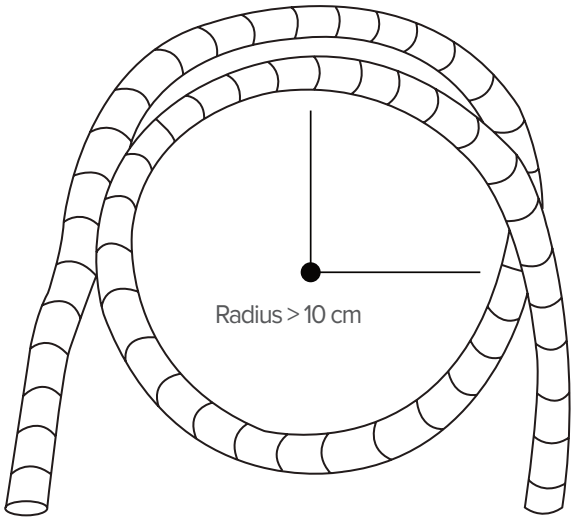


Fig. 19

TORQUES

Outer diameter of the pipe (mm)	Tightening torque (N•m)
Ø 6,35 (Ø 1/4")	14,2 - 17,2
Ø 9,52 (Ø 3/8")	32,7 - 39,9
Ø 12,7 (Ø 1/2")	49,5 - 60,3
Ø 15,9 (Ø 5/8")	61,8 - 75,4

CAUTION
DON'T USE EXCESSIVE TORQUE.
Excessive force can cause the nut to break or damage the refrigerant piping. Do not exceed the torque values shown in the table.

6.2 Connecting the pipes to the indoor unit

1 Align the centre of the two pipes to be connected.

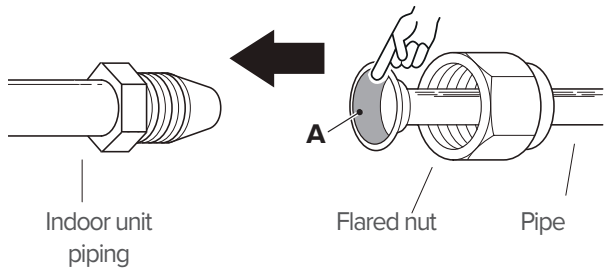


Fig. 20

2 Apply a little lubricating oil only to the inner surface of the countersink (A).

3 Screw the flared nut by hand as far as possible.

4 Then insert a key on the nut.

5 Holding the nut firmly on the unit piping, use a torque wrench to tighten the countersunk nut according to the torque values in table "TORQUES". Slightly loosen the flared nut, then tighten it again.

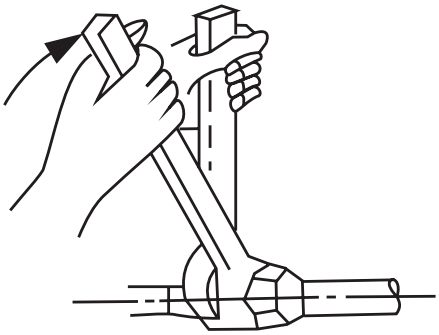


Fig. 21

6.3 Connecting the pipes to the outdoor unit

1 Unscrew the valve unit cover on the side of the outdoor unit.

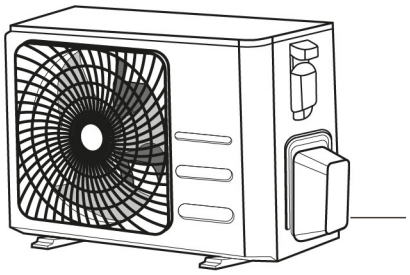


Fig. 22

2 Remove the protective caps from the valve ends.

3 Apply a little lubricating oil only to the inner surface of the countersink (B).

4 Align the end of the countersunk pipe with each valve, then tighten the countersunk nut by hand as far as possible.

5 Use a wrench to hold the valve body in place. Do not apply the key to the nut that closes the service valve (see “Fig. 23”).

USE A WRENCH TO HOLD THE MAIN BODY OF THE VALVE.
The torque applied to tighten the countersunk nut may cause other parts of the valve to detach.

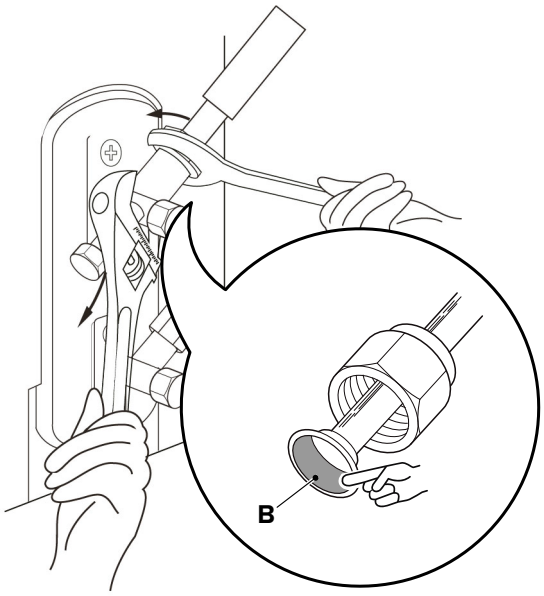


Fig. 23

6 Holding the valve body firmly, use a torque wrench to tighten the countersunk nut to the correct torque values.

7 Slightly loosen the flared nut, then tighten it again.

8 Repeat steps 3 to 7 for the other pipe.

7 TECHNICAL DATA

Technical features (MONOSplit)

Unit		27M	35M
Refrigerant piping			
Liquid line	inch	Ø 1/4”	Ø 1/4”
	mm	Ø 6.35	Ø 6.35
Gas line	inch	Ø 3/8”	Ø 3/8”
	mm	Ø 9.52	Ø 9.52
Max equivalent length	m	25	25
Max. height difference outdoor unit / indoor unit	m	±10	±10
Refrigerant pre-charge	kg/m	0.70 / 5	0.70 / 5
GWP	tco_2	675	675
Tons of equivalent CO_2	t_t	0.47	0.47
Additional refrigerant charge	g/m	12	12

Unit			27M	35M
Electrical connections				
Mains power supply (outdoor unit)		V / Hz / p	230 / 50 / 1	
		n° cables / cross section	2 x 1.5mm² + G	
Outdoor unit --> indoor unit connection	Signal	n° cables / cross section	2 x 1.5mm²	2 x 1.5mm²
	Power supply	n° cables / cross section	2 x 1.5mm² + G	2 x 1.5mm² + G

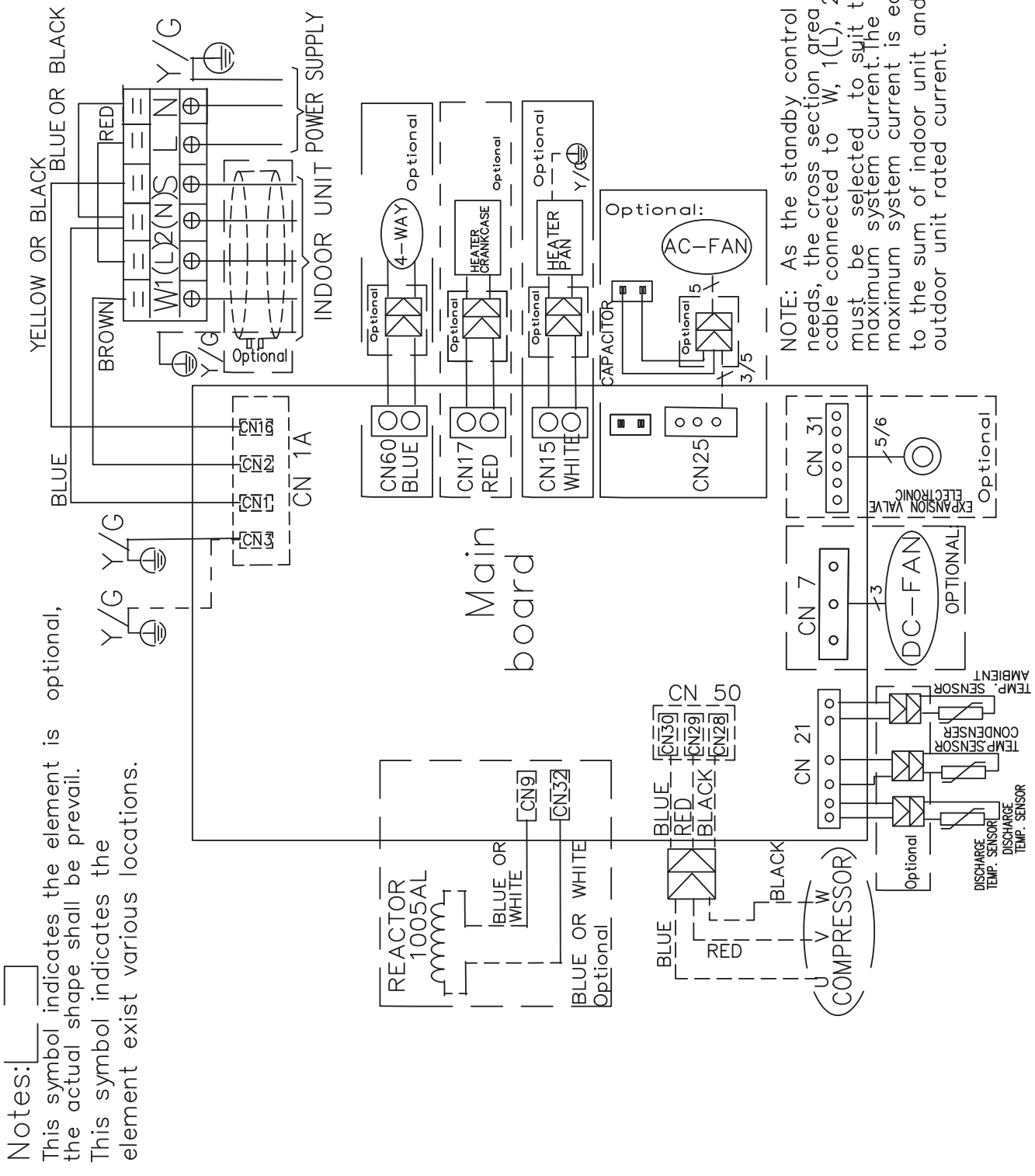
Power consumption (outdoor unit + indoor unit)				27M	35M
Rated power input	Cooling	Nominal (Min~Max)	W	600 (100~1.260)	900 (130~1.650)
	Heating	Nominal (Min~Max)	W	623 (110~1.320)	950 (120~1.500)
Rated current input	Cooling	Nominal (Min~Max)	A	2.6 (0.4~5.5)	3.91 (0.6~7.2)
	Heating	Nominal (Min~Max)	A	2.7 (0.4~5.7)	4.13 (0.5~6.5)

NOTE:

- at max. pipe length, the yield is approximately 90%
- with a height difference >5m it is advisable to insert a siphon.

8 ATTACHMENTS

8.1 Outdoor Unit Wiring Diagrams (27M - 35M)



SERIES	SIZE
ME2-Y	27M - 35M

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