Installer manual EN



9 HP DC Inverter MINI

First of all, we would like to thank you for having chosen a device of our production.

We are sure you will be happy with it because it represents the state of the art in the technology of home air conditioning.

By following the suggestions contained in this manual, the product that you have purchased will operate without problems giving you optimum room temperatures with minimum energy costs.

INNOVA S.r.l.

Conformity

This unit complies with the European directives:

- EN 60335-2-40 Household and similar electrical appliances - Safety Part 2-40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers
- Low Voltage Directive 2014/35/EU according following technical norms and their subsequent
- EMC Directive 2014/30/EU, according following technical norms and their subsequent
- RED Directive 2014/53/UE on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment

- RoHS Directive 2011/65/EU
- Directive 2017/1369/EU on energy labelling
- 2009/125/EU Directive and implementing regulation 206/2012/EU and Italian implementing regulation Legislative Decree no. 15 of 16/02/2011
- F-Gas Regulation 2014/517/EU on fluorinated greenhouse gases

And subsequent amendments.

▲ For declarations of conformity, certificates and other certification details please consult the website.

Markings





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GENERAL

1.1 Symbols

The pictograms in the next chapter provide the necessary information for correct, safe use of the machine in a rapid, unmistakable way.

Editorial pictograms

U User

• This indicates pages containing instructions or information for the User.

Installer

• This indicates pages containing instructions or information for the Installer.

Service

• This indicates pages containing instructions or information for the Technical Service Centre.

Safety pictograms

\triangle

Warning

• The operation described above presents a risk of physical injury if not carried out in compliance with safety regulations.

Dangerous electric voltage

 Signals to the personnel that the operation described could cause electrocution if not performed according to the safety rules.

Danger of very hot parts

 The concerned personnel is informed that the operation described above presents a risk of burning due to contact with hot components if not carried out in compliance with safety regulations.

Prohibition

Refers to prohibited actions.

Pictograms related to refrigerant R290

Symbols are used in some parts of the appliance:

Caution flammable material

渔

 R290 refrigerant gas is slightly flammable and odourless. Avoid proximity to sources of ignition in continuous operation (open flames, gas appliances, electric stoves, lighted cigarettes, etc.).

Instructions

• Read the instructions carefully before performing any work on the appliance.



• The Technical Service Centre must read the instructions carefully before performing any work on the appliance.

i Instructions for the user

• Further information can be found in the technical documentation of the appliance.

1.2 About the manual

This manual was written to provide all the explanations for the correct management of the appliance.

Read this manual carefully before using the product and keep the instructions with you so that you will always have them available when needed.

the manual is divided into sections:

General information

It addresses all recipients.

It contains general information and important warnings that should be known before installing and using the appliance.

Installation

It is addressed exclusively to the installer.

It contains specific warnings and all the information necessary for positioning, mounting and connecting the appliance.

Commissioning, maintenance and troubleshooting

It addresses all recipients.

It contains specific warnings useful information for the most common commissioning and routine maintenance.

Technical information

It addresses all recipients.

It contains detailed technical information about the appliance.

1.3 Recipients

U User

Non-expert person capable of operating the product in safe conditions for people, for the product itself and the environment, interpreting an elementary diagnostic of faults and abnormal operating conditions, carrying out simple adjustment, checking and maintenance operations.

Installer

Expert person qualified to position and connect (hydraulically, electrically, etc.) the unit to the plant; this person is responsible for handling and correct installation according to the instructions provided in this manual and the national standards currently in force.

To work on the refrigeration circuit, the installer must comply with the provisions of Regulation 303/2008/EC which defines, in accordance with Directive 842/2006/EC, the requirements

1.4 General warnings

- ▲ This instruction manual forms an integral part of the device and therefore must be carefully preserved and must ALWAYS travel with it, even if you transfer the device to another owner or relocate it to other premises. If the manual gets damaged or lost, download a copy from the website.
- \underline{A} Read this manual carefully before proceeding with any operation and follow the instructions in the individual chapters.
- ▲ All personnel involved must be aware of the operations and dangers that may arise when beginning all unit installation operations.
- ▲ Specific warnings are given in each chapter of the document and must be read before starting operations.
- ▲ Installation performed outside the warnings provided in this manual and use of the appliance outside the prescribed temperature limits will invalidate the warranty.
- ▲ The installation and maintenance of climate control equipment could be dangerous because there is pressurised refrigerant gas and live electrical components inside the appliances. The installation and subsequent maintenance phases must be carried out exclusively by authorised and qualified personnel.
- ▲ Any contractual or extra-contractual liability for damage caused to persons, animals or property, due to installation, adjustment and maintenance errors or improper use is excluded. All uses not expressly indicated in this manual are not permitted.
- ▲ Only qualified installer companies are authorised to install the device. After having completed installation, the installer will issue a declaration of conformity to the plant manager, as required by the applicable standards and the guidelines provided by contractor's instruction manual supplied with the device.
- ▲ First start-up and repair or maintenance operations must be carried out by the Technical Assistance Centre or by qualified personnel following the provisions of this manual.
- ▲ Do not modify or tamper with the appliance as this can lead to dangerous situations.

for companies and personnel with regard to fixed refrigeration, air conditioning and heat pump equipment containing certain fluorinated greenhouse gases (F-gas licence).

S Service

Expert and qualified person authorised directly by the manufacturer to carry out all routine and supplementary maintenance operations, as well as every adjustment, check, repair and replacement of parts necessary during the life of the unit itself.

Service personnel must comply with the provisions of Regulation 303/2008/EC which defines, in accordance with Directive 842/2006/EC, the requirements for companies and personnel with regard to fixed refrigeration, air conditioning and heat pump equipment containing certain fluorinated greenhouse gases (F-gas licence).

- ▲ Use suitable accident-prevention clothing and equipment during installation and/or maintenance operations. The manufacturer is not liable for the non-observance of the current safety and accident prevention regulations.
- ▲ In the event of liquids, oil, turn off the main switch and close the water taps. Immediately call the Technical Assistance Service or other qualified personnel and do not intervene personally on the appliance.
- \blacktriangle In case of replacement of parts, use only original parts.
- Δ The manufacturer is not responsible for damages to persons or property caused by failure to follow the instructions in this manual.
- ▲ The manufacturer reserves the right to make changes to its models at any time to improve its product, without prejudice to the essential characteristics described in this manual. The manufacturer is not obliged to add such modifications to machines previously manufactured, already delivered or under construction.
- \triangle This document is restricted in use to the terms of the law and may not be copied or transferred to third parties without the express authorization of the manufacturer.
- Δ These appliances have been designed for conditioning and/or heating rooms and they must be destined solely for this purpose, in accordance with their performance characteristics.
- ▲ A temperature that is too low or too high is harmful to health and is an unnecessary waste of energy. Avoid direct contact with the air flow over an extended period.
- ▲ Do not leave the room closed for long. Periodically open the windows to ensure proper ventilation.
- ▲ The appliance is declared to have an IPX0 protection rating, therefore, it cannot be installed outdoors or in laundry rooms.

Specific warnings for R290

This document contains only some of the warnings related to the refrigerant R290. For more comprehensive

information, carefully read the safety data sheet available from the dealer.

- ▲ Each chapter contains specific warnings for the operations it describes. These warnings must be read before starting activities.
- ▲ R290 refrigerant gas is flammable and odourless.
- ▲ All precautions concerning the treatment of the refrigerant must be observed following the regulations in force.
- ▲ The unit must be installed in a room without a continuously operating source of ignition (e.g. an open flame, an operating gas appliance or an operating electric heater).

1.5 Basic rules of security

Please keep in mind that the use of products powered by electricity and water call for operators to comply with certain essential safety rules:

- The use of the appliance to children and unassisted disabled persons is prohibited.
- \underline{A} It is forbidden to touch the device with wet or damp body parts.
- ▲ It is forbidden to clean the device before having disconnected it from the mains by setting the main switch of the system to "off".
- It is forbidden to modify the safety or adjustment devices es or adjust without authorization and indications of the manufacturer.
- It is forbidden to pull, unplug or twist the device's electric cables, even if it is disconnected from the mains.

Ensure that in the event of a leakage of fluid, the fluid does not leak into the room creating a fire or explosion hazard.

- ▲ Do not place flammable objects (spray cans) within 1 metre of the air outlet.
- ${\rm I}$ Do not puncture or burn the unit.
- ▲ Do not use any means to speed up the defrosting process. Use brushes or tools that do not involve risks of perforating the exchangers or igniting flames to clean the exchangers.
- ▲ The unit uses environmentally friendly R290 refrigerant gas, with a Global Warming Potential (GWP) = 3. Do not release R290 gas into the atmosphere.
- It is forbidden to introduce objects and substances through the air inlet and outlet grilles.
- It is forbidden to open the access doors of the device's internal parts without first having set main switch of the system to" off".
- It is forbidden to dispose of, or leave in the reach of children, the packaging materials which could become a source of danger.
- It is forbidden to climb with your feet on the device and/ or place any kind of object on top of it.

Specific safety rules for R290

- Smoking in the vicinity of the appliance is prohibited.
- Using a mobile phone near the appliance is prohibited.
- Using leak detectors with halogen lamps is prohibited.

1.6 Disposal

The symbol on the product or its packaging indicates that the product must not be treated as normal household waste, but must be taken to the appropriate collection point for the recycling of electrical and electronic equipment. Proper disposal of this product avoids harm to humans and the environment and promotes the reuse of valuable raw materials.

For more detailed information about the recycling of this product, contact your local city office, your household waste disposal service or the shop where you purchased the product.

Illegal disposal of the product by the user involves the application of the administrative sanctions provided for by the regulations in force.

This provision is only valid in the EU Member States.

- ▲ Avoid disassembling the unit yourself.
- ▲ This unit contains fluorinated greenhouse gases covered by the Kyoto Protocol. Maintenance and disposal operations must be carried out by qualified personnel only.
- ▲ Contact an authorised Technical Assistance Centre to disassemble the appliance.

1.7 Identification

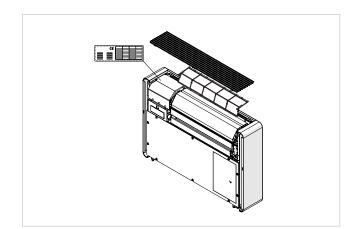
The appliance can be identified by the rating plate:

Technical rating plate

▲ According to EU Regulation No. 517/2014 concerning certain fluorinated greenhouse gases, it is mandatory to indicate the total amount of refrigerant present in the in-

stalled system. This information can be found on the rating plate of the unit.

▲ Tampering with, removal of, or lack of identification plates will not allow for the safe identification of the product by its serial number and therefore invalidates the warranty.



1.8 Destination of use

These appliances have been designed for conditioning and/ or heating rooms and they must be destined solely for this

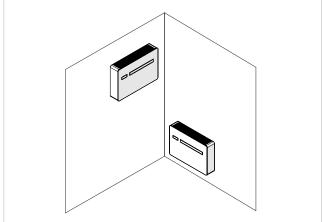
purpose, in accordance with their performance characteristics.

1.9 Description of the appliance

The **...2.0 MINI 9 HP DC Inverter** range of air conditioners without an external unit are designed for indoor installation on a perimeter wall at the top or bottom, in a vertical position.

Inverter technology allows you to optimise the power for maximum comfort. The Dual Power function allows the required temperature to be reached in the shortest possible time (Inverter models only). Control is via a touch panel located on the unit or via a remote control.

The appliance uses the refrigerant R290.



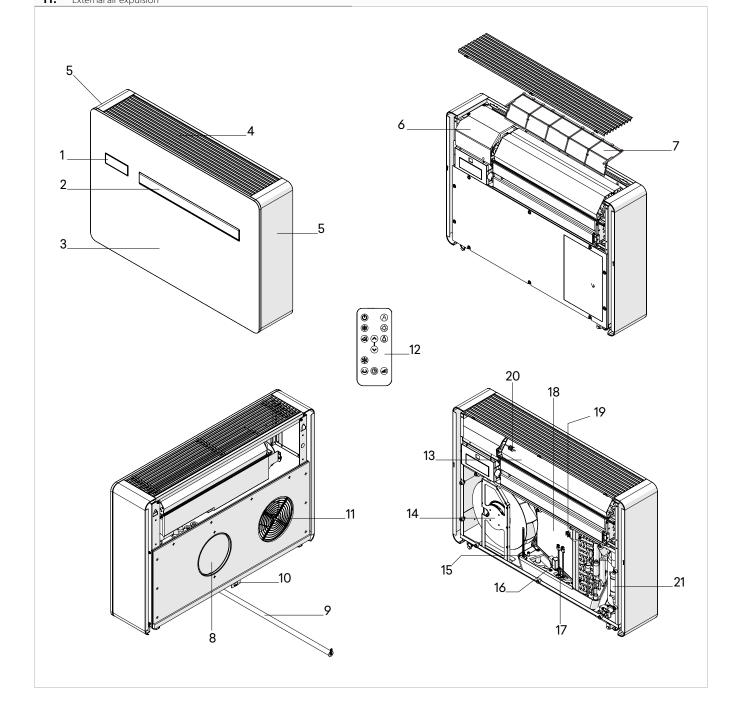


1.10 Components

1.	Control Panel	12.	Remote control
2.	Air outlet deflector	13.	Internal exchanger
3.	Front panel	14.	External fan
4.	Intake grid	15.	Condensation pump
5.	Aesthetic side panel	16.	Condensation drain valve
6.	Electrical compartment cover	17.	Floater
7.	Air filter	18.	External exchanger
8.	External air intake	19.	External air probe
9.	Condensate drain	20.	Room air probe
10	Anti lifting bracket	21	Comproser

- 10.
- Anti-lifting bracket External air expulsion 11.

21. Compressor



1.11 Compatible accessories

 ${\bf \Lambda}$ The accessories table refers to all products in the ...2.0 range. Please check the column Combinable products for correspondence with the purchased size.

	Accessory description	Combinable products	Code
Wall-mounted control panel	c		
Control panels	3		
	Smart touch electronic wall-mounted control panel with thermostat and room probe with integrated Wi-Fi module (supplied with 8 m connection cable). Colour black	All	ECA031II
20) (Smart touch electronic wall-mounted control panel with thermostat and room probe with integrated Wi-Fi module (supplied with 8 m connection cable). Colour white	All	ECB031II
Pre-installation accessories			
Pre-installation kit			
	Kit consisting of: paper template, external grilles, wall fixing bracket, pipes for holes, crews and dowels	All	GB0671II
	Kit consisting of: paper template, external grilles, wall fixing bracket, pipes for holes, crews and dowels, flanges and grilles DN 200 mm	2.0 - 15 HP DC INVERTER	GB1092II
Metal casing			
	Recessed formwork for corner installation with right-hand outlet. Compatible with only DC Inverter versions .	All	L00771II
	Recessed formwork for corner installation with left-hand exit. Compatible with only DC Inverter versions .	All	L00772II
Accessories supplied separat	ely.		
Grilles and accessories			
	Kit n. 2 external grilles with fixed fins 160 mm for outdoor	All	GB0738II
	Rain protection kit. Applicable only on fixed grids. DN 160 mm	All	GB0739II
	Kit n. 1 insect protection for intake hole only. Can only be applied to fixed outside grilles DN 160 mm.	All	GB0755II
	Kit n. 2 external grilles with fixed fins 200 mm for outdoor	2.0 - 15 HP DC INVERTER	GB1091II
Installation kit			
	Kit for installation on glass walls. Consisting of: 1 aesthetic back cover, 2 floor fixing bracket, 1 front plinth cover floor fixing brackets, screws and nuts	All	GB0740II
Kit "Fresh Air"			
	Kit Fresh Air with heat recovery ventilation	All	GR0765II
Cover kit			
	Aesthetic kit lower side cover	2.0 - 8 HP ON-OFF 2.0 - 10 HP DC INVERTER 2.0 - 12 HP DC INVERTER ELECT 2.0 - 12 HP DC INVERTER 2.0 - 15 HP DC INVERTER	GB0737II
		2.0 MINI - 09 HP DC INVERTER	GB1105II
Condensate nebulizer			
3.0			
5.0			

1. Available while stocks last

INSTALLATION

2.1 Preliminary warnings

- ▲ For detailed information on the products, refer to chapter "Technical information" <u>p. 31</u>
- ▲ The installation must be carried out by the installer. There is a risk of water leakage, electric shock or fire if the installation is not performed correctly.
- ▲ During the installation, it is necessary to observe the precautions mentioned in this manual, and on the labels placed inside the equipment, as well as to adopt any precaution suggested by common sense and by the Safety Regulations in force in the place of installation.
- ▲ Be sure to use the supplied or specified installation parts. Use of other parts may cause the unit to come to lose, water leakage, electrical shock, or fire.

▲ Failure to apply the indicated rules may cause malfunctions of the appliances and relieves the manufacturer from any warranty and from any damage caused to persons, animals or property.

Preliminary warnings for R290

- ▲ Safety checks must be carried out to ensure that the risk of combustion is minimised before starting work on systems containing flammable refrigerants.
- ▲ The appliance must be protected against accidental impacts to prevent mechanical damage.
- ▲ Do not puncture or burn.

2.2 Reception

Preliminary warnings

- ▲ Upon receipt of the package check that it is not damaged, otherwise accept the goods with reserve, producing photographic evidence of any damage.
- ▲ The package must be transported in an upright position; otherwise, notify the carrier immediately.
- ▲ In the event of damage, notify the shipper within 3 days of receipt of any damage by registered mail with return receipt, submitting photographic evidence. Similar information should be sent by fax to the manufacturer (jurisdiction will be at the Court Trento for any dispute).
- ▲ No notice of damage will be accepted after 3 days from delivery.
- ▲ Unpack and check the contents against the packing list.

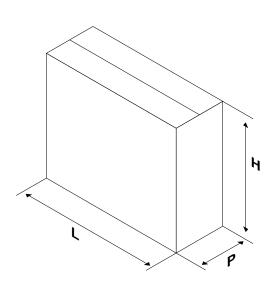
Package description

The packaging is made of suitable material and carried out by experienced personnel.

All units are checked and tested and are delivered complete and in perfect conditions.

The appliance is shipped in standard packaging consisting of a cardboard sleeve and a set of expanded polystyrene protectors.

2.3 Dimensions and weights with packaging



		2.0
Models	m.u.	9 HP-DC Inverter
Dimensions and weight for sho	pping	
Total widh	mm	1100
Total height	mm	660
Total depth	mm	260
Weight	kg	42,0

2.4 Handling with packaging

Preliminary warnings

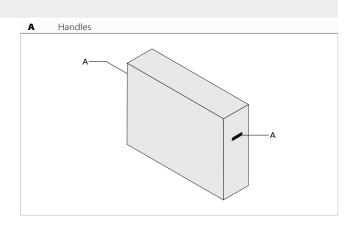
- ▲ The appliance must be handled only by qualified personnel, adequately equipped and with equipment suitable for the weight and dimensions of the appliance.
- ▲ Stay clear of the area below and around it when the load is lifted off the ground.

Movement methods

Boxes can either be carried singularly by hand by two operators or loaded on a forklift truck even stacked.

- Δ Check the indications on the packaging for the number of stackable packages.
- ▲ In manual operation it is compulsory to respect always the maximum weight per person provided for by the national laws and standards.
- ${\bf \Lambda}$ Use the handles provided on the packaging.

- Δ Avoid dangerous situations when using a hoist to lift the appliance.
- Δ During transportation, the appliance must be kept in vertical position.
- ▲ Avoid exposure to sources of ignition (open flames, lighted cigarettes, sources of heat or sparks) when opening the packaging.



2.5 Storage

Preliminary warnings

- ▲ Stored in accordance with the applicable national regulations.
- Δ Store the box in a closed environment protected from atmospheric agents and isolate it from the floor using planks or pallets.
- ${\bf \Lambda}$ Do not turn the packaging upside down.
- $\underline{\Lambda}$ Only place the appliance in a vertical position.

2.6 Unpacking

Preliminary warnings

- ▲ Check that no components were damaged during transport.
- ▲ Dispose of the packaging components following the applicable waste disposal regulations.
- $\mathbf{\Lambda}$ Handle with care.
- $\mathbf{\Lambda}$ The equipment must always be handled vertically.
- ▲ Check if there is refrigerant inside the package using an electronic leak detector suitable for the system refrigerant. If it is present, the refrigeration circuit is likely damaged. In this case, do not install the appliance and call the Technical Assistance Centre.

Remove the package

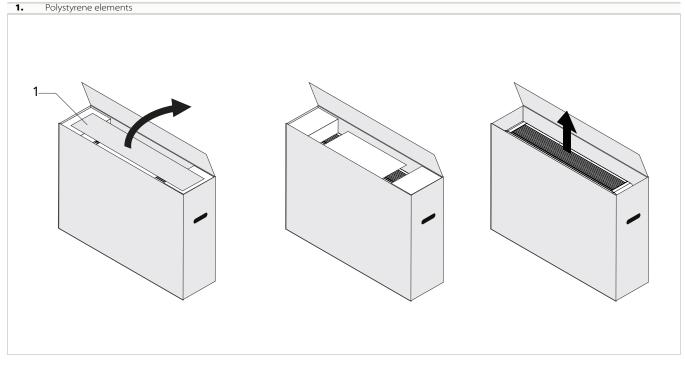
 ${\rm I}$ Store in a clean and dry place.

Specific warnings for R290

- ▲ Store the unit in such a way as to avoid mechanical damage.
- ▲ Check the national/local legistation in force, regarding fire regulations. The refrigerant contributes to the fire load. (149 g R290).
- The packing material (cardboard, staples, plastic bags, etc.) must not be dispersed or abandoned in the surrounding environment and must be kept out of children reach, as it can be dangerous.

Specific warnings for R290

- ▲ Check that there are no sources of ignition in continuous operation (open flames, gas appliances, electric stoves, lighted cigarettes, etc.).
- Using leak detectors with halogen lamps is prohibited.
- Smoking in the vicinity of the appliance is prohibited.
- Using a mobile phone near the appliance is prohibited.



Remove the packing:

- open the cardboard packaging
- remove the polystyrene elements
- remove the accompanying components

- remove the appliance from the box

Accompanying material

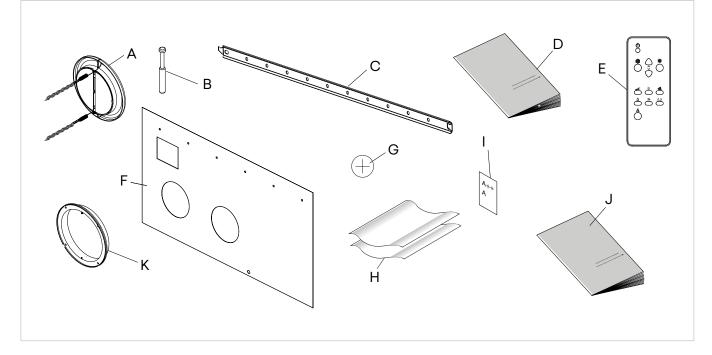
They are included with the appliance, inside the packaging:

A	External fixed grid for air inlet and outlet (2 pcs front view)
В	Screws and dowels kit (6 pcs)
С	Wall mounting bracket
D	Control panel user manual
E	Remote control
F	Paper template for holes

 Δ Check the presence of the individual components.

G	CR2025 3V remote control battery

- H Wall inlet pipes (2 pcs)
- I Energy efficiency labelJ Control panel installation manual
- K Internal flanges
- **n** Internamang



2.7 Handling without packaging

Preliminary warnings

▲ The appliance must be handled only by qualified personnel, adequately equipped and with equipment suitable for the weight and dimensions of the appliance.

Movement methods

▲ The unit can be moved manually for short distances. In this case it is necessary to check carefully that the weight

2.8 Installation site

The location of the appliance must be determined by the plant engineer or a competent person and must take into account both purely technical requirements and any national/ local legislation in force.

This appliance is designed for vertical, low-wall or high-wall indoor installation.

- $\underline{\mathbb{A}}$ The appliance must be installed against a wall communicating with the outside.
- Δ The appliance is stated as having an IPXO protection rating, therefore it is not suitable for outdoor installation and in rooms with presence of water (swimming pool rooms, etc.).

▲ The appliance is unbalanced on the right (compressor side)

of the unit does not exceed the regulations in relation to the number of people used.

Preliminary warnings

 ${\bf \Lambda}$ Avoid installing the unit near:

- obstacles or barriers that cause recirculation of the exhaust air
- narrow places where the sound level of the appliance can be enhanced by reverberations or resonances
- environments with the presence of flammable or explosive gases
- very humid environments (laundries, greenhouses, etc.)
- environments with aggressive atmospheres
- solar radiation and proximity to heat sources



- Avoid placing the unit within 1 metre of radio and video equipment.
- $\mathbf{\Lambda}$ Do not install over heat sources.
- Λ Make sure that:

В

- the installation site of the unit must be chosen with the utmost care to guarantee adequate protection from shocks and consequent damage
- the wall is able to support the weight of the appliance
- the wall section does not feature building supporting elements, pipes or power lines
- there are no obstacles to the free circulation of air through the holes (plants, leaves...)
- the appliance must be installed in a position where it can be easily serviced
- the safety distances between the units and other appliances or structures are scrupulously respected so that the air entering and leaving the fans is free to circulate

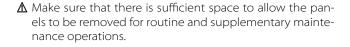
- ▲ If the appliance is installed incompletely or on an inappropriate base, it could cause damage to persons or property if it should detach from its base.
- Δ The unit should not be installed in a position where the air flow is aimed directly at the people nearby.
- $\mathbf{\Lambda}$ Provide the following:
- a nearby drain for the outflow of condensate
- a compliant power supply nearby
- fixing elements suitable for the type of support

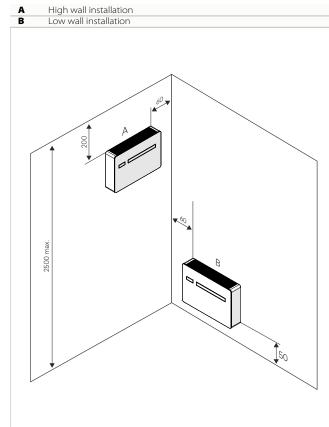
Specific warnings for R290

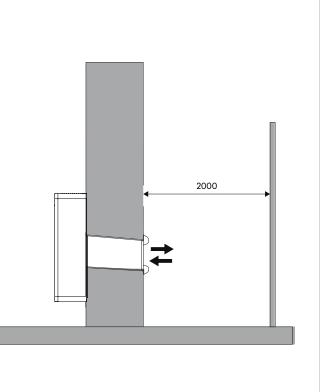
▲ The installation of the unit does not have any special requirements (such as minimum area, room ventilation requirements or sensors) in relation to the use of refrigerants as the quantity used is less than 149 gr.

2.9 Installation minimum distances

The clearance zones for the installation and maintenance of the appliance are shown in the figure. Established spaces are necessary to avoid barriers to airflow and allow for normal cleaning and maintenance.





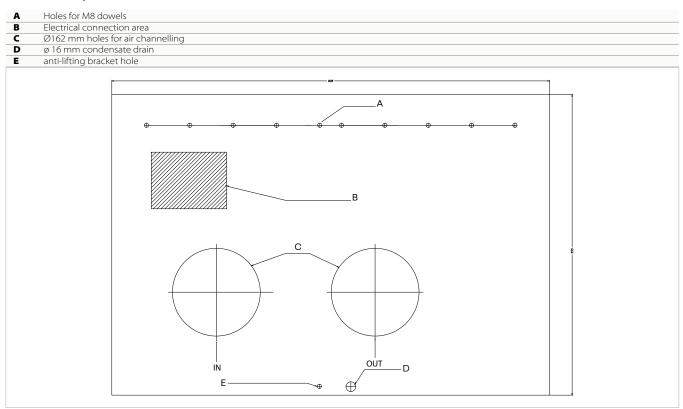


2.10 Positioning

The units can be wall-mounted upwards or downwards.

The units are supplied with a paper template for marking the holes necessary for installation.





Preliminary warnings

- \blacktriangle The wall mounting bracket supplied as an accessory is required to position the unit on the wall.
- $\underline{\Lambda}$ Make sure that:
- the wall supports the weight of the appliance

Installation arrangement

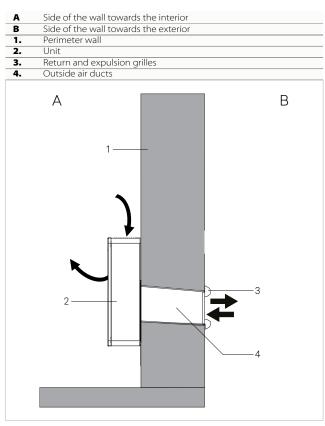
The units can be positioned on the floor or on a high or low wall.

 \blacksquare The ...2.0 range of air conditioners without an external unit are designed for indoor installation on a perimeter wall .

- the section of floor or wall does not concern piping or electrical lines
- the functionality of load-bearing elements is not compromised

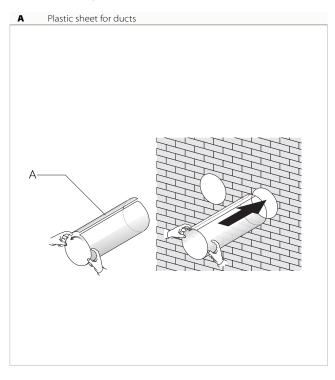


Wall drilling for ducts



- position the paper template
- ▲ Respect the distances indicated in chapter **"Installation** minimum distances" <u>p. 15</u>.
- mark the positions of the holes for the ducts
- use a drill
- drill a pilot hole
- use a core drill
- drill the through hole into the wall
- keep a downward inclination toward the external side
- ${\bf \Lambda}$ The maximum length of the holes is 1 meter.
- Curves are prohibited.
- ▲ To prevent the creation of large quantities of dust and debris in the room it is recommended to couple the core drill to a vacuum system.
- \triangle Proceed with caution in the vicinity of the outer wall in order to avoid the breakage of plaster around the hole.
- $\underline{\mathbb{A}}$ Take precautions so that the drilled material does not fall on persons and objects below.

Positioning the ducts

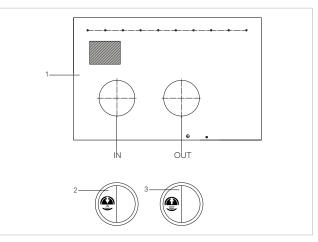


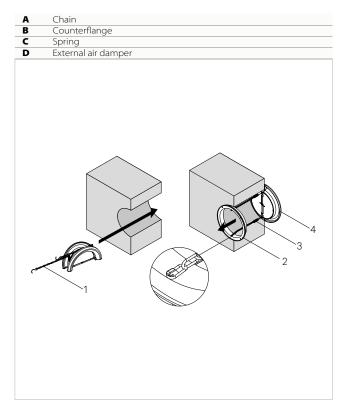
- measure the depth of the holes drilled in the wall
- subtract 5 mm from the measurement
- cut the plastic sheets supplied to size
- roll the plastic sheet
- insert the rolled sheet into the hole
- position so that the edges of the sheet are 2 mm inside both ends of the hole

Positioning outside air dampers

Before proceeding with the installation of the external air dampers, it is necessary to discern the one to be positioned on the air intake from the one intended for the expulsion. The dampers are identified with the labels: **IN:** air intake damper **OUT:** air delivery damper

 ${\rm I}$ Use only the dampers supplied with the unit.

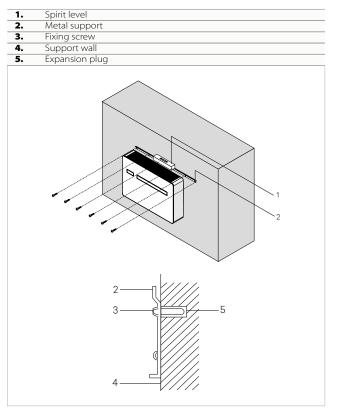




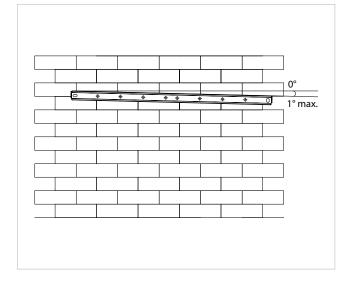
- fold the damper
- insert it in the duct until it comes out on the other side of the wall
- hold the chains with the other hand so that the damper does not fall
- open the damper outside of the hole
- rotate the damper so that the flaps are in vertical position
- insert the counterflange in the hole toward the interior of the room
- rotate it so that the hooks are in vertical position
- pull the chains so that the springs are in tension
- hook the chains to the counterflange
- cut off the excess of chain
- ▲ When painting the dampers, use water-based paints suitable for plastic surfaces to avoid problems with the movement of the flaps.
- ${\bf \Lambda}$ Do not use thick, sticky paints like enamels.

Fixing the bracket

The devices are provided with metallic support for mounting on the wall.



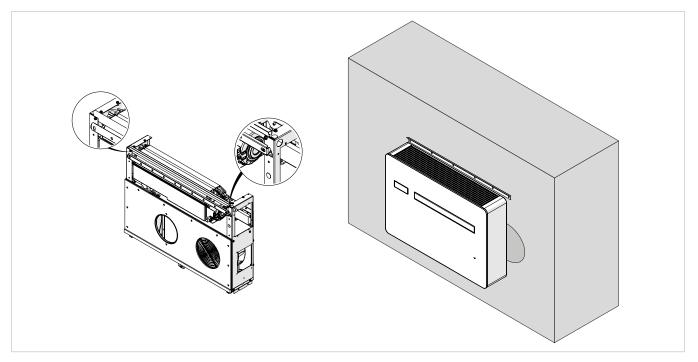
- use the paper template
- mark the positions of the fixing holes
- use a drill
- mark the position of the mounting holes
- fix the metallic support with the screws and the wall plugs
- ▲ Place the metallic support on a level surface that is capable of supporting its weight.



- Δ Check that the installation is horizontal using a water level.
- ▲ A maximum inclination of 1° towards the right side of the appliance is allowed to facilitate the drainage of condensate.



Positioning



- fasten the unit to the upper part of the metallic support
- verify the correct hooking to the interlocking points

2.11 Condensation drain preparation

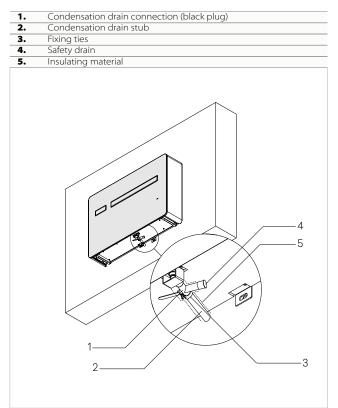
This appliance is complete with a tray for collecting the condensation produced during operation, which must be channelled to a suitable place for drainage.

The size and positioning of the drainage tube are shown below.

Preliminary warnings

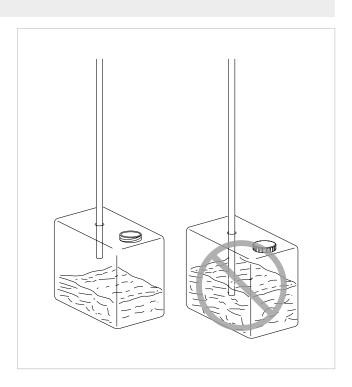
- ▲ If the line flows into a container (e.g. a tank), do not close the container hermetically and avoid immersing the draining pipe into the water.
- ▲ The hole for the condensation pipe must always slope towards the outside.
- Δ The exact position in which to place the pipe mouth is indicated on the template.
- ▲ Check that the expelled water does not cause any damage or problems to people or objects. During winter, this water may create sheets of ice outside.
- $\underline{\mathbb{A}}$ When connecting the condensation drain, be careful not to squeeze the rubber duct.
- Δ It is possible to empty the collection tray using the safety drain at the base of the appliance if necessary.
- ▲ If you do not want to prepare an external drainage pipe in "cold only" mode, it is advisable to close the condensate drain with a plug.

Positioning



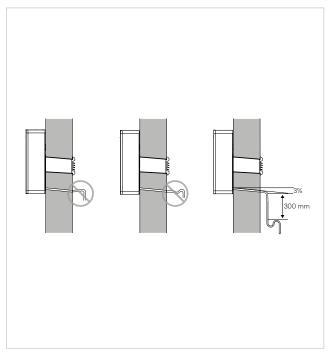
The device is factory supplied with a stub pipe connected to the condensation drain connection. If it is not enough.

- remove the nozzle from the discharge connection
- connect the drainage tube measuring 0.6 meters supplied with the unit or a longer one
- direct it towards a suitable location for drainage
- keep a minimum slope of 3% towards the drain location
- insulate fitting points
- ▲ Use plastic drainage pipes.
- ${f \Lambda}$ Avoid pipes made of metallic material.
- ▲ Make sure all joints are sealed to prevent leakage of water.
- ▲ Condensate drainage pipes must be insulated for both indoor and outdoor sections of the house to avoid condensation on the surface and/or freezing problems.
- ▲ If needed it is possible to empty the condensation collection pan through a safety drain provided on the base of the devi-ce. See Chapter Extraordinary maintenance If using a jug for collecting the condensation:



- \blacktriangle Avoid the hermetic closure of the container.
- ▲ Prevent the end of the drainage tube from falling below the water level.

If draining into the sewage system:



- ▲ The discharge system must feature a suitable syphon in order to prevent air from entering the vacuum system. The syphon also prevents odours and insects from entering the system.
- ▲ The syphon must feature a plug in its lower part or must otherwise allow for a quick disassembly for cleaning purposes.

If using an open drain:



▲ If the condensation is not collected, it will be deposited on the support surface. The water could freeze if the outdo-or temperatures are below zero, thus creating a hazard. In this case, appropriate barriers should be installed in order to prevent people from approaching the area.

Condensate drain pipe insulation

In case of condensate drain pipe use, the pipe must be coated with anti-condensation insulation for the internal part of the building and the wall.

▲ The insulation must be fitted until the condensate drain pi-pe is plugged into the connection provided on the unit.

2.12 Electric connections

Preliminary warnings

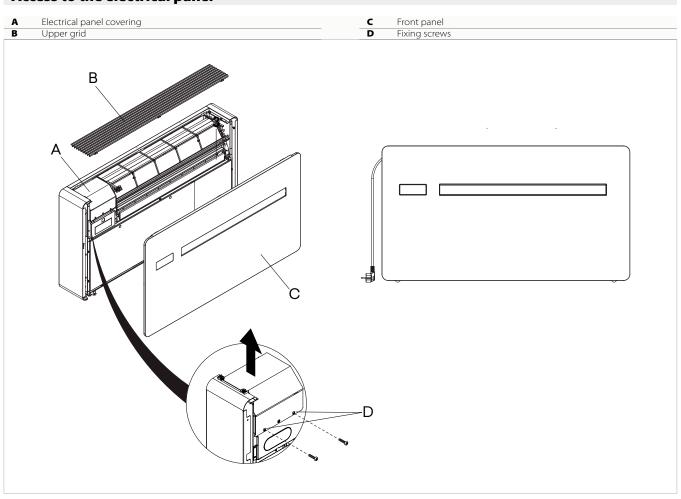
 $\underline{\Lambda}$ Before connecting the conditioner check that:

- the power supply voltage and frequency values comply with the data plate of the appliance.
- the line has a suitable earth connection and that it is sized for the maximum absorption of the conditioner (minimum cable section equal to 1.5 mm2 and 2.5 mm2 for ELEC version).
- the socket used is compatible with the plug provided
- ▲ The appliance must be connected to 230V/50 Hz mains via an omnipolar switch with a contact opening distance of minimum 3 mm, or using a device enabling the complete disconnection of the appliance in overvoltage III category conditions.
- ▲ Please check that the power supply is provided with suitable protections against overloads and/or short-circuits (using a 10 Amp Time delay fuse or other equivalent devices is recommended).
- ▲ To prevent any risk of electrocution, always disconnect the main circuit breaker before making electric connections or performing any maintenance on the units.
- \clubsuit Access to the electrical panel is only necessary when replacing the wired cable or when using the presence contact.

Preliminary warnings for R290

- ▲ R290 refrigerant gas is slightly flammable and odourless.
- Δ Do not place flammable objects (spray cans) within 1 metre of the air outlet.
- ▲ All precautions concerning the treatment of the refrigerant must be observed following the regulations in force.
- ▲ Avoid proximity to sources of ignition in continuous operation (open flames, gas appliances, electric stoves, lighted cigarettes, etc.).
- Smoking in the vicinity of the appliance is prohibited.
- Using a mobile phone near the appliance is prohibited.
- carry out safety checks to ensure that the risk of combustion is minimised
- · avoid working in confined spaces
- · delimit the area around the workspace
- ensure safe working conditions around the area by controlling flammable material

Access to the electrical panel



- $\underline{\mathbb{A}}$ Access to the electrical panel is only permitted to qualified personnel.
- ▲ Before doing any work, make sure that the supply power is disconnect.
- To access:
- remove the cosmetic panels (if fitted)

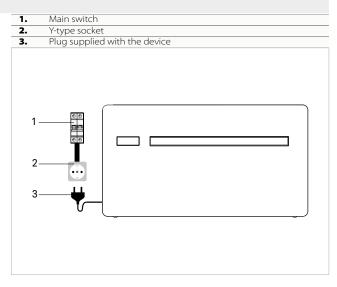
Connection

The appliance leaves the factory fully wired and equip-ped with a cable with Y-type plug for connection to the power supply. To power the unit simply insert the plug into a suitable socket protected by a circuit breaker.

see chapter "Removal of aesthetic panels and grilles" <u>p. 26</u>

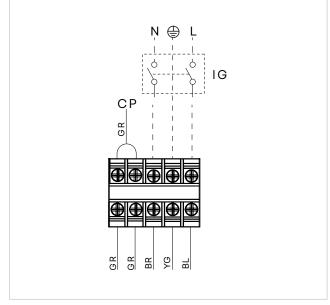
To access the connections:

- unscrew the screws of the electrical panel
- remove the electrical panel cover



If necessary, it is possible to remove the factory cable with plug and connect the power supply directly to the terminal block (recommended connection for installation of the equipment at the top of the wall).

GR	Grey
BR	Brown
YG	Yellow-Green
BL	Blue
СР	Presence contact
Ν	Neutral
L	Phase
IG	System main switch



▲ This operation must be only be carried out by the installation or Technical Assistance Centre.

To carry out direct connections and substitute the power cord using the cable in the wall, proceed as follows:

- access the terminal block
- Disconnect the power cord from the terminal block.
- Connect the wall cable, checking that the power supply line has a suitable earth connection
- The power supply line has a suitable earth connection and that it is sized for the maximum absorption of the condi-

Configuration with the nebulizer 3.0

When installing the nebulizer 3.0 it's very important to follow the indicated procedure to avoid a systematic alarm and the possible failure of the nebulizer.

This procedure, enabled through the display of the air conditioner, modifies the default settings of the drain pan of the appliance by disabling its automatic closure during the summer season.

- Press the cooling mode key ^{*}/_{*} on the display of the appliance The symbol "En" will appear
- press for 15 seconds the key The symbol "ds" will appear Let the display go back to the main screen

2.13 High/low installation configuration

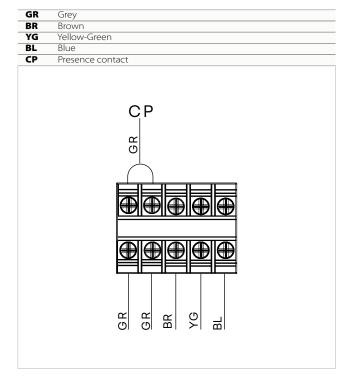
The unit can be installed either at the bottom of the wall (adjacent to the floor) or at the top of the wall (adjacent to the ceiling). tioner (minimum cable section equal to 1.5 mm2 and 2.5 mm2 for ELEC version).

CP occupancy contact input connection

When the CP contact opens (very low voltage, connected to a free non-live contact) the appliance is put is stand-by and CP appears on the display.

Through this contact it is possible to connect an external devi-ce that inhibits operation of the unit such as: window opening contact, remote on/off, infrared presence sensor, activation ba-dge etc.

- \blacktriangle We recommend using a double insulation cable.
- ▲ For the ELEC versions with resistor, disconnecting voltage from the device abruptly is prohibited in order to prevent internal overheating! Use the CP contact that places the device in standby and guarantees correct post-ventilation.



This procedure is used to avoid that during the summer season, with the opening of the drain valve of the drain pan, the condensate itself is poured all in the 3.0 nebulizer installed under the appliance.

The condensate drain will always remain open in both seasons, guaranteeing a regular flow of condensation.

To activate this function:

The unit is supplied for low wall installation with the air outlet from the bottom to the top. For high-wall installation:

- purchase the the lower cover decorative kit code GB0737II.

- ▲ High wall installation is recommended if the unit is to be used for cooling only.
- ▲ If the unit operates in cooling and heating or heating only, low wall installation is recommended.

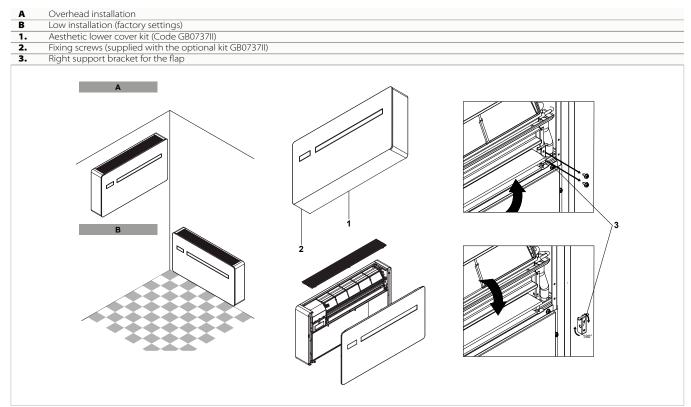
Modification for low-wall to high-wall installation

- Δ If necessary, the air outlet can be changed from top to bottom.
- $\underline{\mathbb{A}}$ This operation must be performed while the appliance is switched off and disconnected.

To make changes:

- if installed, remove aesthetic panels see chapter "Removal of aesthetic panels and grilles" <u>*p. 26*</u>
- Position the lower aesthetic cover kit (code GB0737II).
- fix with the screws provided
- remove the fixing screws of the right support bracket for the flap
- Rotate the bracket 180°
- re-install the stirrup
- reassemble the aesthetic panel
- re-install the grid

see the chapter "Assembly of aesthetic panels and grilles" <u>p. 26</u>



Configuration

After adjusting the air outlet flap position, it is necessary to With the display on: set up the electronic control of the appliance.

- Keep pressed the A button on the display for 10 seconds
- The symbol appears **dn** (low wall) flashing.
- press again the **k** key
- The symbol appears on the display \mathbf{uP} (high wall).
- Do not perform any other operations for 2 seconds *The new setting is memorised.*
- ▲ For the appliance to work properly, each time the configuration of the air outlet flap is modified, the electronic control must be set.

2.14 Setting cooling only or heating only mode

It is possible disable the heating or cooling function by setting the unit to cold only or hot only mode.

- Keep the **A** key pressed for 10 seconds on the display *Appear* **HC** *heating and cooling.*

- Press the **A** key for 1 second *Appear* **CO** *cooling only.*
- Press the A key again
 Appear HO heating only.
 Wait for 3 seconds without touching anything to memorise the setting.

2.15 Brightness control

The display brightness sensor can be disabled (leaving the maximum brightness at all times).

- Keep the **C** key pressed for 10 seconds "ds" (disabled) or "En" (enabled) appears.

2.16 Touch screen display key lock

Press and hold the button for 3 seconds
 The key lock function is activated on the display.
 The stand-by symbol flashes every second.

 ${\rm I}$ Any action is prevented by the user.

To deactivate the lock:

- press the key for 3 seconds (\mathbf{L})
 - The lock remains active also for the next operations performed via remote control and in the event of a power failure.

2.17 hotel function

- Keep the 💫 key pressed for 10 seconds

If the "En" function is enabled :

- the dehumidification and Auto functions are disabled
- only ventilation, heating and cooling are left on
- is reduced from 22 to 28 in cooling mode and from 16 to 24 in heating mode.

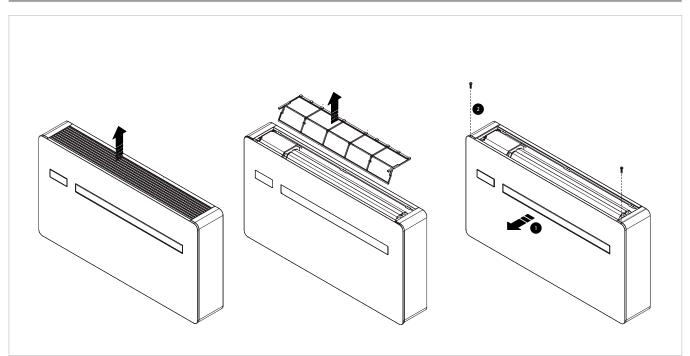
2.18 Operations after installation

Before leaving the site, the packaging should be gathered up and all traces of dirt that have deposited on the unit during assembly should be eliminated with a damp cloth. Once all the checks and controls on the correct operation of the appliance have been completed, the installer must explain the following to the user:

- the basic characteristics of the appliance
- the instructions for use
- the routine maintenance

To adjust the brightness of the display:

2.19 Removal of aesthetic panels and grilles

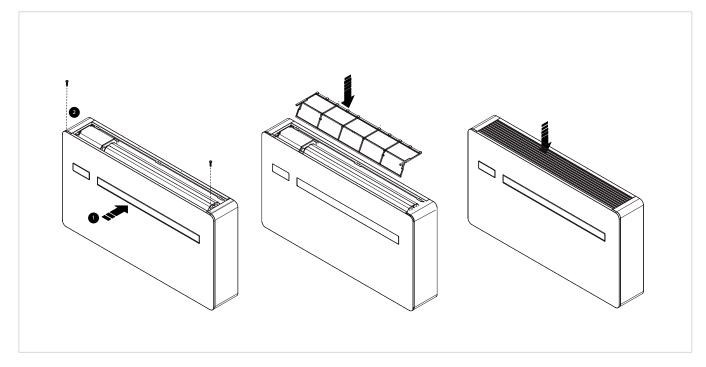


2.20 Assembly of aesthetic panels and grilles

To assemble:

- positioning the aesthetic panel
- insert the two screws

- Screw in the two screws
- insert the filter
- insert the grid





MAINTENANCE

3.1 Preliminary warnings

Before each cleaning and maintenance intervention:

- disconnect the device from the power mains by turning the system master switch to "OFF"
- wait for the components to cool down in order to avoid any burns
- Carrying out any technical or cleaning work before disconnecting the unit from the power supply is forbidden.
- $\underline{\Lambda}$ Make sure that there is no voltage before operating.
- ▲ After completing the maintenance work, must be restored the original condition.

Specific warnings for R290▲ R290 refrigerant gas is flammable and odourless.

- ▲ Check that there are no sources of ignition in continuous operation (open flames, gas appliances, electric stoves, lighted cigarettes, etc.).
- Smoking in the vicinity of the appliance is prohibited.
- Using a mobile phone near the appliance is prohibited.
- Using leak detectors with halogen lamps is prohibited.

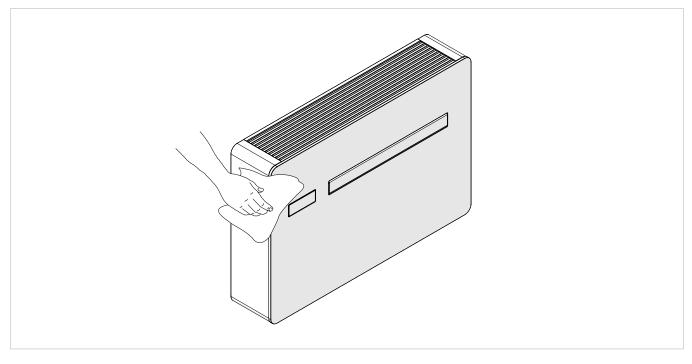
3.2 Routine maintenance

The routine maintenance plan includes the following cleaning operations

External cleaning

Clean the external surfaces with a soft damp cloth.

▲ Do not use abrasive sponges or abrasive or corrosive detergents as you might damage the painted surfaces.



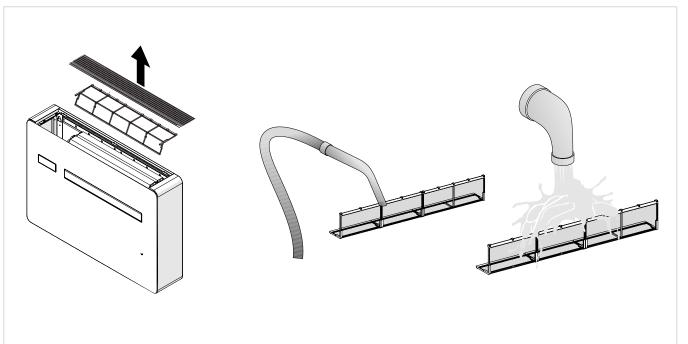
Cleaning the filters

Clean the air filter after a period of continuous use and according to the concentration of impurities in the air, or when you wish to start-up the appliance after a period of inactivity.

- \underline{A} Take care of hot and/or sharp sheet metal surfaces before any operation.
- Δ The filter is located in the top part of the appliance.
- $\underline{\mathbb{A}}$ Wait for the components to cool down in order to avoid any burns.
- \blacktriangle Pay attention to the sharp edges.

- ▲ During cleaning operations, do not use corrosive liquids, abrasive sponges or tools that do not pose a risk of perforating the elements or igniting a flame.
- ▲ For grid disassembly operations see chapter "Removal of aesthetic panels and grilles" *p. 26*.
- ▲ For grid assembly operations see chapter "Assembly of aesthetic panels and grilles" <u>*p. 26*</u>.
- extract the filter by lifting it
- remove the dust from the filter with a vacuum cleaner or by washing it in running water

- allow it dry
- put the filters back on top of the coils, taking care to position them correctly
- ${f \Delta}$ Do not use detergents or solvents
- \blacktriangle After filter cleaning check if the panel is properly mounted.
- The use of the appliance without the mesh filter is prohibited



TROUBLESHOOTING

4.1 Troubleshooting table

In the even of a malfunction, please refer to the following table. If, after performing the suggested checks, the problem

is not solved, please contact the authorised technical assistance.

Anomalies	Possible causes	Remedies	
		Check there is power supply (by turning a light on, for example).	
The appliance doesn't switch on	No power supply	Check that the thermal-magnetic circuit breaker used exclusively to protect the appliance has not been tripp (if it has, reset it). If the problem repeats immediately, please call the Service Centre and avoid trying to mak the appliance work.	
	Remote control batteries have run out	Check that the appliance can be turned on using the touch-screen display and substitute the batteries.	
	The temperature set is too high or too low.	Check and, if necessary, adjust the temperature setting on the remote control	
	The air filter is clogged	Check the air filter and clean it if necessary	
T	Check that there are no other obstacles to the air flow both inside and outside.	Remove anything that might block the air flow.	
The appliance does not cool/heat adequately.	The heating and cooling load has increased (for example, a door or a window has been left open or an appliance has been installed in the room which generates a lot of heat).	Try to reduce the heating and cooling load of the room following instructions below: Cover large windows exposed to sunlight with curtains or with external maskings (blinds, porches, reflecting films, etc.); The air conditioned room must remain closed for as long as possible; Avoid turning on halogen lamps or other high energy consumption appliances such as small ovens, steam irons, hot plates etc.).	

Displayed faults

In the event of a malfunction, the display shows an alarm code. The appliance still retains some functions (see the OP-ERATION column).

Alarm	Cause	Function
E1	Faulty room temperature RT sensor	It is possible to normally activate the Cooling, Dehumidification and Heating modes. Regulation only monitors internal battery anti-frost
E2	Faulty internal coil IPT sensor	None of the modes can be activated.
E3	Faulty outside temperature OT sensor	None of the modes can be activated.
E4	Faulty external coil OPT sensor	It is possible to normally activate the Cooling, Dehumidification and Heating modes. The control performs defrosting cycles at fixed times.
E5	Faulty internal fan motor	None of the modes can be activated.
E6	Faulty external fan motor	None of the modes can be activated.
E7	Lack of communication with the display *	None of the modes can be activated.
E8	Compressor discharge probe failure *	None of the modes can be activated.
СР	Open CP contact	The appliance only works if the contact is closed. Check that the clamps are connected.
OF	Maximum level float intervention	During cooling and dehumidification, electronics keeps the water distribution system active with the battery – together with the fan – to disperse excess water in the container. During heating, condensation should drain freely through the specific pipe. In the event of an alarm, check that the condensation pipe is not bent or obstructed, thus preventing the water from flowing out.

* for DC Inverter models: lack of communication between the main, power, driver or display boards

The only way to resolve the problem is to disconnect and reconnect the power to the unit. If the alarm persists, contact your Technical Assistance Centre.

4.3 Diagnosis of possible anomalies

If the conditioner blocks because of an alarm (see following table), please communicate to the assistance centre the code on the display to facilitate interventions.

Acronym to display	Cause
E1	Faulty room temperature RT probe
E2	Faulty evaporative battery IPT probe
E3	Faulty outdoor air temperature OT probe
E4	Faulty conditioner battery OPT probe
E5	Faulty indoor air fan motor
E6	Faulty outdoor air fan
E7	Lack of communication with the display
E8	Compressor discharge probe failure (only for DC Inverter models)

Open CP contact

If the presence contact is not closed, the appliance will not start and the $\ensuremath{\text{CP}}$ alarm appears on the display.

Evacuation of condensate water in the event of an emergency

Should any anomaly occur in the condensation water system, the maximum level float blocks the conditioner and the **OF** code appears on the display.

During cooling and dehumidification, electronics keeps the water distribution system active with the battery - together

Use of the appliance

- ▲ Objects or structural obstacles (furniture, curtains, plants, leaves, blinds, etc.) must not obstruct the normal air flow both from the internal and from the external grids.
- ▲ Do not lean against, or worse sit on, the body of the conditioner, this would damage the appliance.
- $\underline{\mathbb{A}}$ Do not move the horizontal air outlet flap manually. Always use the remote control to perform such operation.
- ▲ In the event of water leaks, turn off the appliance and disconnect the electric power supply. Call the nearest service centre.
- ▲ During heating mode, the conditioner eliminates periodically any ice formed on the external battery. In such situation, the machine keeps on working, but it does not dispense warm air to the room. This phase can last from 3 up to maximum 10 minutes.
- ▲ The appliance must not be installed in rooms where explosive gases develop or where there are humidity and temperature conditions that exceed the maximum levels reported on the installation manual.
- $\underline{\mathbb{A}}$ Clean the air filter regularly as described in the specific paragraph.

Please refer to chapter "CP occupancy contact input connection".

with the fan - to disperse excess water in the container. If the problem persists, please contact the assistance service.

During heating, condensation should drain freely through the specific pipe. In the event of an alarm, check that the condensation pipe is not bent or obstructed, thus preventing the water from flowing out.

TECHNICAL INFORMATION

5.1 Technical data

..2.0 MINI

			2.0		
Models		m.u.	9 HP-DC Inverter		
Cooling performance (AT 35°C;	1	.)			
Maximum cooling capacity Dual Power	(1)	kW	2,35		
Nominal cooling power	(1)	kW	1,73		
Minimum Cooling Capacity	(1)	kW	0,70		
Dehumidification capacity		L/24h	0,7		
total input power		kW	0,57		
Energy efficiency class	(2)		A		
Heating performance (AT 7°C;	AT °C)				
Maximum heat output Dual Power	(3)	kW	2,40		
Nominal heat power	(3)	kW	1,71		
Electric heater additional power		W	-		
Minimum heat output	(3)	kW	0,75		
Total absorbed power	(3)	kW	0,54		
СОР			3,15		
Energy class			A		
Aeraulic data indoor					
Ventilation speed		Nr.	3		
Air flow at the maximum fan speed		m³/h	360		
Air flow at the medium fan speed		m³/h	300		
Air flow at the minimum fan speed		m³/h	240		
Aeraulic data outdoor					
Ventilation speed		Nr.	3		
Air flow at the maximum fan speed		m³/h	430		
Air flow at the medium fan speed		m³/h	360		
Air flow at the minimum fan speed		m³/h	320		
Electrical data					
total input power		kW	0,90		
Maximum absorbed current		A	3,90		
Power Supply		V/F/Hz	230-1-50		
REFRIGERATION CIRCUIT					
Refrigerant			R290		
Refrigerant charge		kg	0,15		
Compressor		5	Rotary – DC Inverter		
 Outdoor air temperature 35 °, relative Energy Efficiency according to Directive 	humidity ve 626/20	50%. Ambient 1	temperature 27 ° C; relative humidity 50%.		

Energy Efficiency according to Directive 626/2011
 Fresh air temperature 7 °C, relative humidity 72%. Room temperature 20°C, relative humidity 28%. Performance according to UNI 13141-7

Reference conditions

		Environment T	External T	
(1)	Cooling mode tests (EN 14511)	DB 27°C - WB 19°C	DB 35°C - WB 24°C	
(2)	Heating mode tests (EN 14511)	DB 20°C - WB 15°C	DB 7°C - WB 6°C	
(3)	Heating mode tests	DB 20°C - WB 15°C	DB -7°C - WB -8°C	
(4)	Internal side sound pressure measured in semi-anechoic chamber at a distance of 2 m.			
(5)	Internal side sound pressure measured in accordance with regulation EN 12012			

Operating limits

	Indoor environment T	External environment T
Maximum operating temperature in cooling mode	DB 35°C - WB 24° C	DB 43°C - WB 32° C
Minimum operating temperature in cooling mode	DB 18°C	DB -5°C
Maximum operating temperatures in heating mode	DB 27°C	DB 24°C - WB 18° C
Minimum operating temperatures in heating mode	DB 5℃	DB 10°C

5.2 Dimensions

		2.0
Models	m.u.	9 HP-DC Inverter
Product dimensions and weight		
Total widh	mm	810
Total height	mm	549
Total depth	mm	165
Empty weight	kg	38,0
Wall hole diameter	mm	162
Wall holes distance	mm	210

5.3 **RED Compliance Statement**

Compliance with 2014/53/EU Radio Equipment Directive (RED).

In accordance with Article 10.8(a) and 10.8(b) of the RED, the following table provides information on the frequency bands

used and the maximum RF transmit power of the product for sale in the EU:

following table provides information on the frequency bands	
Frequency range (MHz)	Max. Transmit Power
2400-2472	<20
Hereby, the company declares that the device is in compli- ance with Directive 2014/53/EU.	This equipment should be installed and operated with a min- imum distance of 20 centimeters between the radiator and
For declarations of conformity, cartificates and other carting	your body.

Safety

This equipment is designed with the utmost care for the safety of those who install and use it.

▲ For declarations of conformity, certificates and other certi-

fication details please consult the website.

However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment.

All guidelines must therefore be allowed at all times to ensure safe use of the equipment.



NOTE



R innova

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