



2.0 RINNOVA CEILING

- Horizontal installation -

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1 GENERALITY

1.1 INTRODUCTION

This manual has been conceived with the aim of making the installation and management of your system as simple as possible. By reading and applying the suggestions in this manual, you will be able to obtain the best performance of the purchased product. We would like to thank you for the choice you made with the purchase of our product.

Read this booklet carefully before carrying out any operation on the unit.

You must not install the unit or carry out any work on it unless you have carefully read and understood this manual in all its parts. In particular, all the precautions listed in the manual must be taken.

The documentation supplied with the unit must be delivered to the plant manager so that he can keep it carefully (at least 10 years) for any future assistance, maintenance and repairs.

The installation of the unit must take into account both the purely technical requirements for proper functioning, and any local legislation in force and specific prescriptions.

Make sure that upon delivery of the unit, there are no obvious signs of damage caused by transportation. In this case indicate it on the delivery note.

This manual reflects the state of the art at the time the machine was marketed and cannot be considered inadequate as it is subsequently updated on the basis of new experiences. The Manufacturer reserves the right to update production and manuals, without the obligation to update the previous ones, except in exceptional cases.

Contact the Manufacturer's Sales Department to receive further information or updates to the technical documentation and for any suggestion for improvement of this manual. All reports received will be rigorously examined.

1.2 BASIC SAFETY RULES



We remind you that the use of products that use electricity and water implies the observance of some fundamental safety rules:

- The use of the appliance by disabled and unassisted persons is prohibited
- It is forbidden to touch the appliance with bare feet and with wet or humid parts of the body
- Any cleaning operation is forbidden before disconnecting the appliance from the power supply by turning the main switch of the system to off
- It is forbidden to modify the safety or adjustment devices without the authorization and indications of the manufacturer of the appliance
- It is forbidden to pull, disconnect or twist the electric cables coming out of the appliance, even if it is disconnected from the mains electricity supply.
- It is forbidden to introduce objects and substances through the air intake and delivery grilles.
- It is forbidden to open the access doors to the internal parts of the appliance without first setting the system main switch to off.
- It is forbidden to disperse and leave the packaging material within reach of children as it can be a potential source of danger.
- Respect the safety distances between the machine and other equipment or structures to ensure sufficient access space to the unit for maintenance and assistance operations as indicated in this booklet.
- The unit must be powered with electrical cables with a section suitable for the power of the unit. The voltage and frequency values must correspond to those indicated for the respective machines; all the machines must be earthed as per the regulations in force in the various countries.
- Do not put R410A into the atmosphere: R410A is a fluorinated greenhouse gas, referred to in the Kyoto protocol, with a global warming potential (GWP) = 1975.

1.3 SYMBOLOGY

The symbols shown in the following booklet allow you to quickly provide information necessary for the correct use of the unit.

Safety symbols

	ATTENTION Only authorized personnel	Warns that the operations indicated are important for the safe operation of the machines
	DANGER Risk of electric shock	Warns you that failure to comply with the prescriptions poses a risk of electric shock.
	DANGER	Warns that failure to comply with the prescriptions entails a risk of harm to exposed persons.
	WARNING	Warns that failure to comply with the prescriptions entails a risk of damage to the unit or to the system.
	DANGER	It warns that there is the presence of moving parts and involves a risk of damage to exposed people

1.4 WARNINGS

	The unit must be installed by qualified and authorized personnel according to the regulations in force in the various countries. If the installation is not carried out it could become a dangerous situation
	Avoid installing the unit in very humid rooms or with large heat sources.
	On the electrical side, to prevent any risk of electrocution, it is essential to disconnect the main switch before making electrical connections and any maintenance operations.
	In the event of water leaks inside the unit, turn the system main switch to "Off", close the water taps and contact the technical service
	It is recommended to use a dedicated power supply circuit; Never use a common power supply with other appliances.
	It is recommended to install an earth leakage breaker; Failure to install this device may cause electric shock.
	For connection, use a cable that is long enough to cover the entire distance, without any connection; do not use extension cords and do not apply other loads to the power supply but use a dedicated power circuit.
	After connecting the electrical cables, make sure that the cables are arranged so as not to exert excessive forces on the covers or electrical panels; any incomplete connection of the covers can cause overheating of the terminals.
	Make sure that the earth connection is made; do not ground the appliance on distribution pipes. Momentary surges of high intensity could damage the unit

	Installations performed outside the warnings in this manual or use outside the operating limits will instantly void the warranty.
	Make sure that the first start-up is carried out by personnel authorized by the company (see first start-up request form)

1.5 COMPLIANCE

The CE marking (present on each machine) certifies compliance with the following Community standards:

- Low Voltage Directive 2014/35 / EC
- Electromagnetic Compatibility Directive 2014/30 / EC

1.6 IDENTIFICATION

- The unit can be identified by means of the plate placed on the lower front panel of the same.
- On the packaging there will be an additional identification plate with the model of the unit and the shipping references.

The plate on the packaging has no validity for the traceability of the product in the years following the sale.

The removal, deterioration and illegibility of the plate placed on the unit involves major problems in identifying the machine, in the availability of spare parts and therefore in any future maintenance.

1.7 CONSTRUCTION FEATURES

The units are designed for the air renewal of the rooms. The ease of installation through two holes diam.160mm and the high fresh air flow, allows the application in situations such as residential buildings, schools, clinics, offices and all contexts where air exchange is necessary; thermodynamic recovery allows integration with respect to environmental climatic conditions, helping the air conditioning system to satisfy internal comfort; Furthermore, the air introduced is always at a temperature close to or better than the ambient one, thus guaranteeing a higher perceived comfort; The unit consists of a monobloc including each component for correct operation: fans, refrigeration circuit with high efficiency compressors,

ALL IN ONE: Complete unit capable of exchanging the air and integrating the cooling thermal demands of the served environments. The unit is complete with every component for its operation and ready for use.

UV LAMP AND VOC SENSOR: The unit is equipped with a UV lamp (accessory) which allows to carry out a germicidal action on the air introduced from the outside through the effect of the UVC; The lamp is activated automatically according to the ambient air quality,

VENTILATION: Fans with directly coupled brushless motor; The fans work in various modes controlled mainly by the air quality sensor located inside the unit;

ACTIVE THERMODYNAMIC RECOVERY: The unit allows the active recovery of the energy of the expelled air. Thanks to its refrigeration circuit, the thermodynamic recovery allows to supply energy to the environment in greater quantities than that subtracted from ventilation for 90% of the unit's operation;

FILTRATION:

There are 2 ePM1 filters on the extracted and injected air; The filter on the supply air is placed after the coil to completely filter any impurities of the input air. On the outside air there is a Coarse pre-filter that protects the cleanliness of the unit;

STRUCTURE:

Self-supporting frame in sheet metal

Self-supporting sheet metal structure, painted externally (in the visible versions), with thermal and acoustic insulation in polyethylene and Epdm;

REFRIGERANT CIRCUIT:

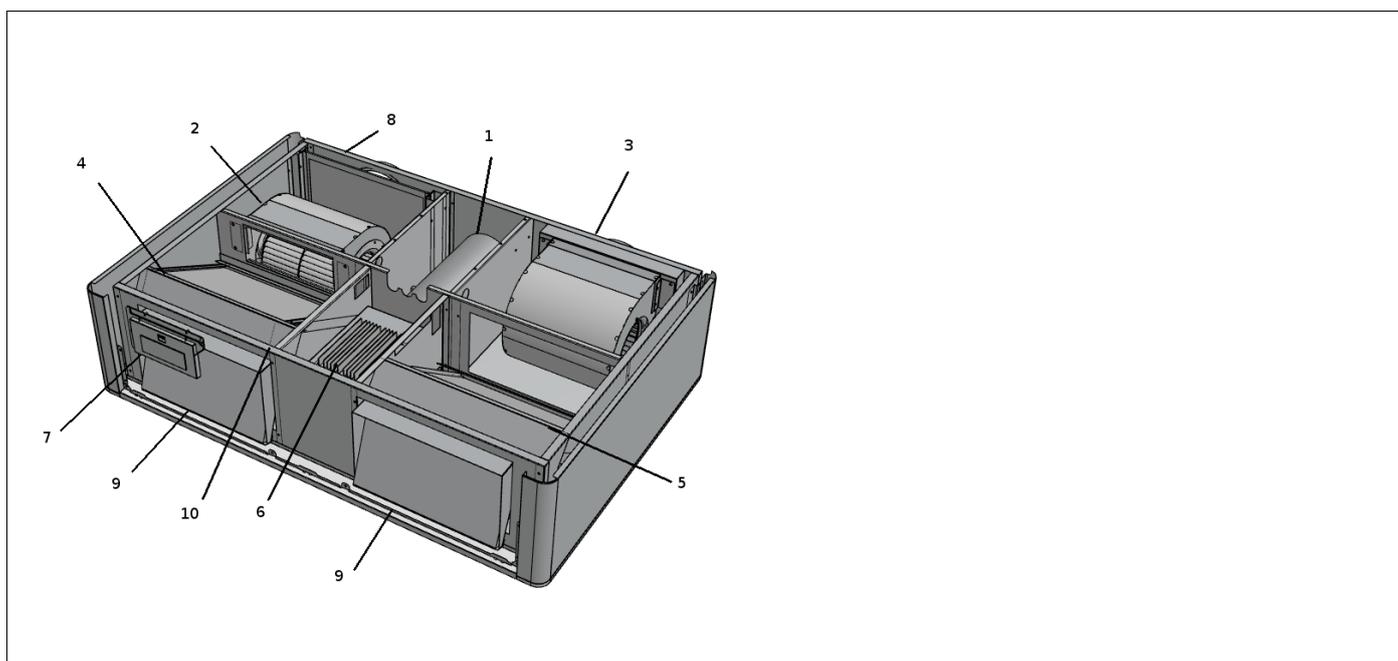
Made of brazed copper complete with: High efficiency BLDC compressor, filter drier, finned coils, electronic expansion valve, reversing valve and safety devices.

ADJUSTMENT:

Electrical panel on board the unit with microprocessor and dedicated regulation. Fan management, visualization and temperature setpoint, timed dirty filter management. Defrost algorithm management optimized for operation with low external temperatures; Panel with graphic interface and WIFI on the machine and remote control included in the visible versions;

Remote panel to be purchased optionally with WIFI or MODBUS RTU for connection up to 10m from the unit for the recessed versions;

1.8 MAIN COMPONENTS OF THE UNIT



1 Compressor	6 Electrical panel
2 Supply fan	7 Display
3 Exhaust fan	8 External air pre-filter
4 Battery input	9 Epm1 Filters
5 Battery eject	10 UV lamp

1.9 PACKAGING AND TRANSPORT

The units are supplied for transport fixed on a wooden pallet and placed in cardboard boxes. To facilitate movement, the units are equipped with a wooden bench and hooks on the base that allow them to be lifted and positioned on the installation site. The unit can be stored in a room protected from atmospheric agents with temperatures not below 0 ° C, up to a maximum of 40 ° C.

1.10 RECEIPT, CONTROL AND HANDLING

The unit is shipped fully pre-charged with refrigerant gas in the circuits and with non-freezing oil in the compressors. Under no circumstances can water be present in the hydraulic circuits, since after testing the unit is carefully emptied. Upon arrival, the customer is required to inspect the unit also in internal areas to verify that it has not been damaged during transport; the unit left the factory in perfect condition. Otherwise, it is necessary to immediately retaliate against the carrier by reporting the extent of the damage in detail on the bill, producing photographic evidence of the apparent damage and notifying any apparent damage to the shipper by means of a registered letter. if he has provided for the shipment himself. It is necessary to be very careful in handling the units during unloading and positioning, in order to avoid damage to the casing and to the more delicate internal components such as compressors, exchangers, etc. In any case, keep the unit in a horizontal position without tilting it. All the information about the necessary precautions to prevent damage to the unit and the indication of the weight of the same, are shown on the packaging. The materials that make up the packaging can be of various kinds such as wood, cardboard or polyethylene (plastic). It is good practice to send them for disposal or recycling through specialized companies to reduce their environmental impact. in order to avoid damage to the casing and to the more delicate internal components such as compressors, exchangers, etc. In any case, keep the unit in a horizontal position without tilting it. All the information about the necessary precautions to prevent damage to the unit and the indication of the weight of the same, are shown on the packaging. The materials that make up the packaging can be of various kinds such as wood, cardboard or polyethylene (plastic). It is good practice to send them for disposal or recycling through specialized companies to reduce their environmental impact. are shown on the packaging. The materials that make up the packaging can be of various kinds such as wood, cardboard or polyethylene (plastic). It is good practice to send them for disposal or recycling through specialized companies to reduce their environmental impact. are shown on the packaging. The materials that make up the packaging can be of various kinds such as wood, cardboard or polyethylene (plastic). It is good practice to send them for disposal or recycling through specialized companies to reduce their environmental impact.

1.11 DISASSEMBLY AND DISPOSAL

Do not disassemble or dispose of the product yourself. Disassembly, demolition, disposal of the product must be carried out by authorized personnel in compliance with local regulations.



2 INSTALLATION

2.1 INSTALLATION CONDITIONS



The unit must be installed according to national and local standards that regulate the use of electrical devices and according to the following indications:

- install the unit inside residential buildings with ambient temperatures between 0 ° C and 45 ° C;
- avoid areas near sources of heat, steam, flammable and / or explosive gases and particularly dusty areas;
- install the unit in a place not subject to frost (the condensation water must be drained not frozen, at a certain inclination, using a siphon);
- do not install the unit in areas with a high relative humidity (such as a bathroom or toilet) to avoid condensation on the external surface;
- choose an installation site where there is sufficient space around the unit for the connections of the air ducts and to be able to carry out maintenance operations;
- the consistency of the ceiling / wall / floor where the unit will be installed must be adequate for the weight of the unit and not cause vibrations.

The environment chosen for the installation must contain:

- connections of the air ducts;
- 230V single-phase electrical connection
- connection for condensate drain

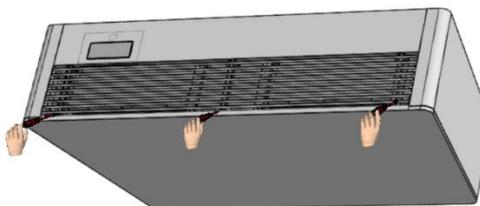
2.2 UNIT POSITIONING



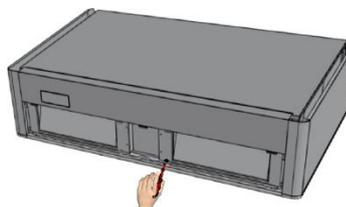
Ceiling mount

To mount the unit on the ceiling, you need:

Remove the front grille by pulling it out by levering it from the bottom upwards and first pulling it out towards the bottom;

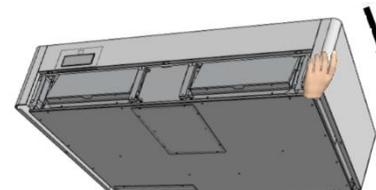


Remove the lower panel using the front screws and extracting it from the rear seats;



Remove the screws of the side panels by removing the 4 screws on the front;

Push the side to make it come out of the rear seats and remove it;

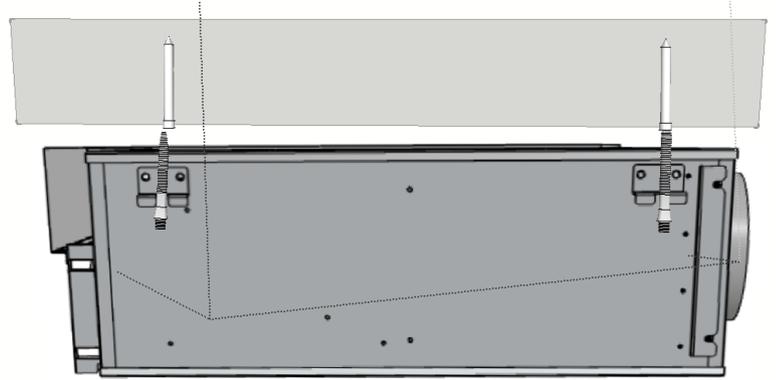


Fix the unit to the ceiling, using the brackets, using suitable anchoring systems (dowels, chains...) and check the leveling with the help of a level.

Keep the unit away from the ceiling at least 10mm;

Do not mount the unit with the sides in direct contact with the walls to avoid possible contact noises, insert rubber or neoprene strips in this case.

Ensure sufficient space for carrying out maintenance activities: the opening of the unit cover (from below) must be guaranteed.



Ceiling mount

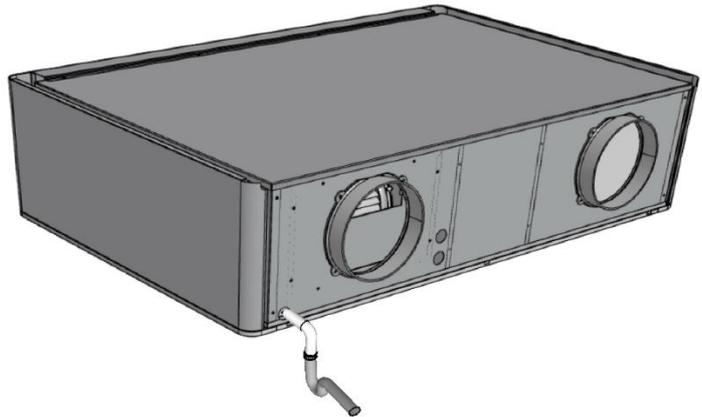
2.3 CONDENSATE DRAIN CONNECTION



Due to the thermodynamic heat recovery system of the dehumidification coils, the humidity contained in the indoor air condenses inside the unit.

For the correct operation of the heat recovery unit, it is therefore necessary to connect the condensate drain to the hydraulic system (drain); Furthermore, to allow the condensate water to drain correctly and avoid air sucking in, the condensate drains must be equipped with a special siphon to be supplied and laid by the installer;

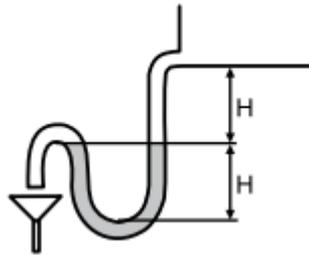
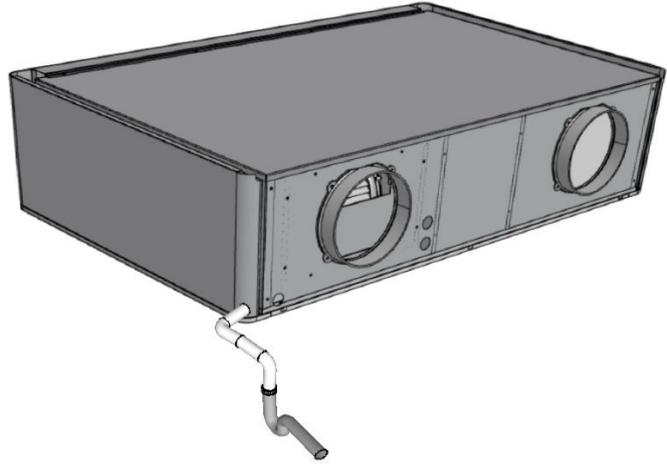
The condensate drain comes out as standard in the rear part of the unit where there should be the hole in the wall as shown alongside;



If it is impossible to bring the condensate drain outside, it is possible to exit on the right side of the unit using the pre-cut hole on the side;

To install the condensate drain, comply with the following rules:

- give a slope of at least 2% to the exhaust pipe;
- provide for the possibility of disconnecting the drain hose for any maintenance (in particular in the case of ceiling installation);
- make sure that the discharge end of the pipe is at least below the water level of the siphon;
- make sure that the siphon is always full of water.
- The H dimension as per the attached image must be at least $H = 50\text{mm}$;



Condensate drain connection

3 AREALIC CONNECTIONS

3.1 AREALIC ORIENTATIONS



The unit is equipped with 2 rear circular connections for connection to the outside air;

For the correct connection of the air ducts, refer to the following diagram and the stickers placed on the unit.

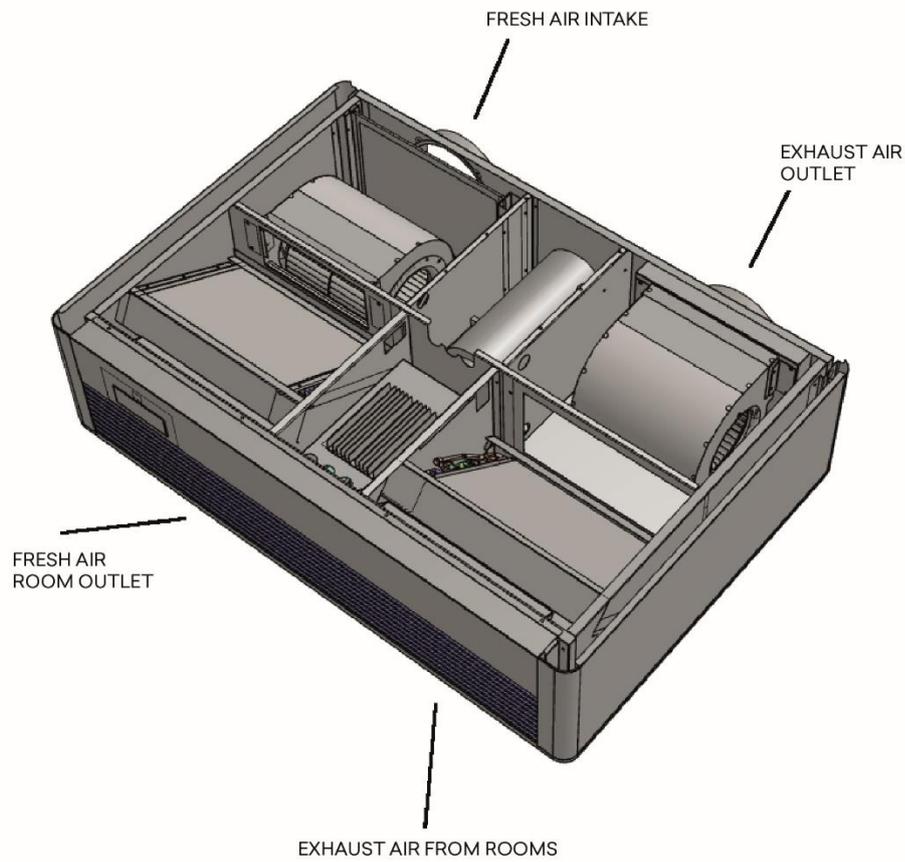
Unit aeraulic connection diameters table

Unit	2.0 RENEW CEILING
Ø External air mm	160mm
Ø Expulsion mm	

We recommend installing at least 500mm of flexible piping to avoid dragging of vibrations and annoying noises due to installation.

Air flow configurations

2.0 RINNOVA CEILING



VIEW FROM TOP

3.2 ASSEMBLY OF EXTERNAL GRIDS

Once the holes have been made, the plastic sheets supplied must be inserted inside them.

Roll up the sheet and insert it into the hole, paying attention to the seam A which must always be positioned upwards.

Cut off any excess part of the tube using a normal cutter.

To position the external grids, proceed as follows:

- attach the chains to the ends of the springs;

- fold the external shutters on themselves;

- insert the arm into the hole until it protrudes

the damper completely to the outside while maintaining the end of the chains with the other hand to avoid accidental falls;

- reopen the shutter outside the hole;

- rotate the shutter so as to bring the flap to

vertical position C checking that the closing functions;

- pull the chains by tensioning the springs;

- cut the chain stitches in

excess.

- fasten the hook of the chain to the wall B.

Use only the grids supplied, or grids that maintain the same characteristics.

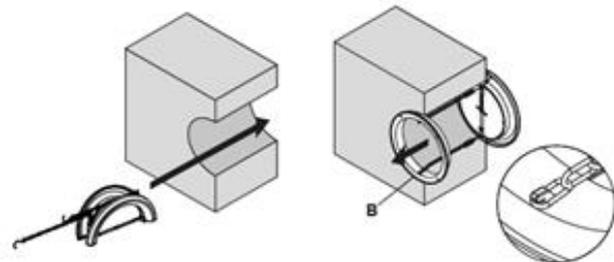
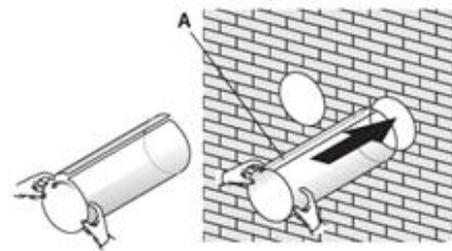
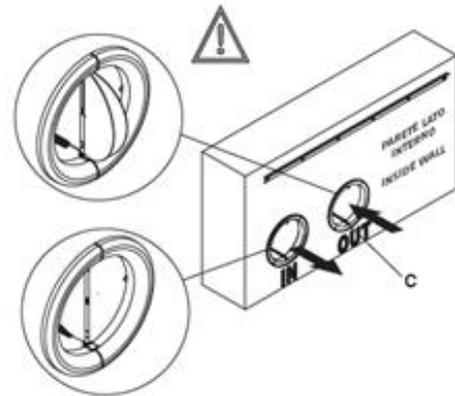
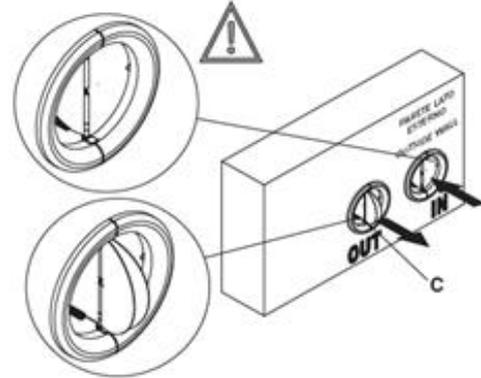
The shutters must be positioned with the blade vertically.

The shutters are different. It is necessary to distinguish the one to be positioned on the return from the one to be positioned on the supply, according to the opening direction of the blades.

Once the installation of the grilles has been completed, check their opening (towards the inside of the duct for the "IN" suction grille and towards the outside of the duct for the "OUT" exhaust grille).

Keep in mind that the grilles open when the outside air flow is activated to allow the cooling or heating function.

For their testing it is therefore essential to operate the air conditioner to cool or heat



Mounting external grids

4 ELECTRICAL CONNECTIONS

4.1 GENERALITY



- Before starting any operation to make the electrical connection make sure that the unit is not electrically powered
- Make the necessary electrical connections by consulting only the wiring diagram attached to this manual.
- Install a suitable breaking and differential protection device for the exclusive service of the unit.
- It is essential that the unit is connected to an earth socket.
- Check that the electrical components chosen for the installation (main switch, circuit breakers, cable section and terminals) are suitable for the electrical power of the installed unit and that they take into account the starting currents of the compressor as well as the maximum load that can be reached. The relative data are indicated on the attached wiring diagram and on the unit identification plate.
- It is forbidden to enter the unit with electric cables unless specified in this booklet.
- Use cables and electrical conductors with adequate sections and in compliance with the regulations in force in the various countries.
- Absolutely avoid running electrical cables in direct contact with pipes or components inside the unit
- After the first moments of operation, check the tightening of the screws of the power supply terminals

Power line sizing table

CUT IT		40
Supply	V / Ph / Hz	230/1/50
Max absorbed current	TO	5.8

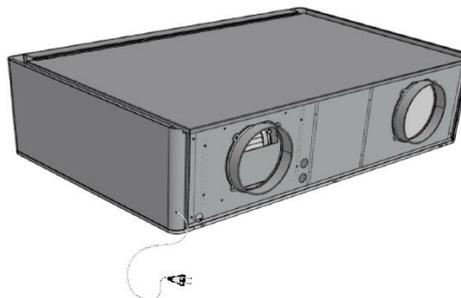
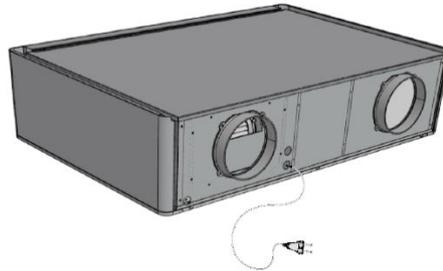
4.2 POSITIONING AND CONNECTION PROCEDURES

The unit is supplied with all the electrical connections predisposed and with a shucko plug for connection to the mains;

The inlet of the electric cables is positioned on the rear part of the unit where two passages dn20mm are arranged;

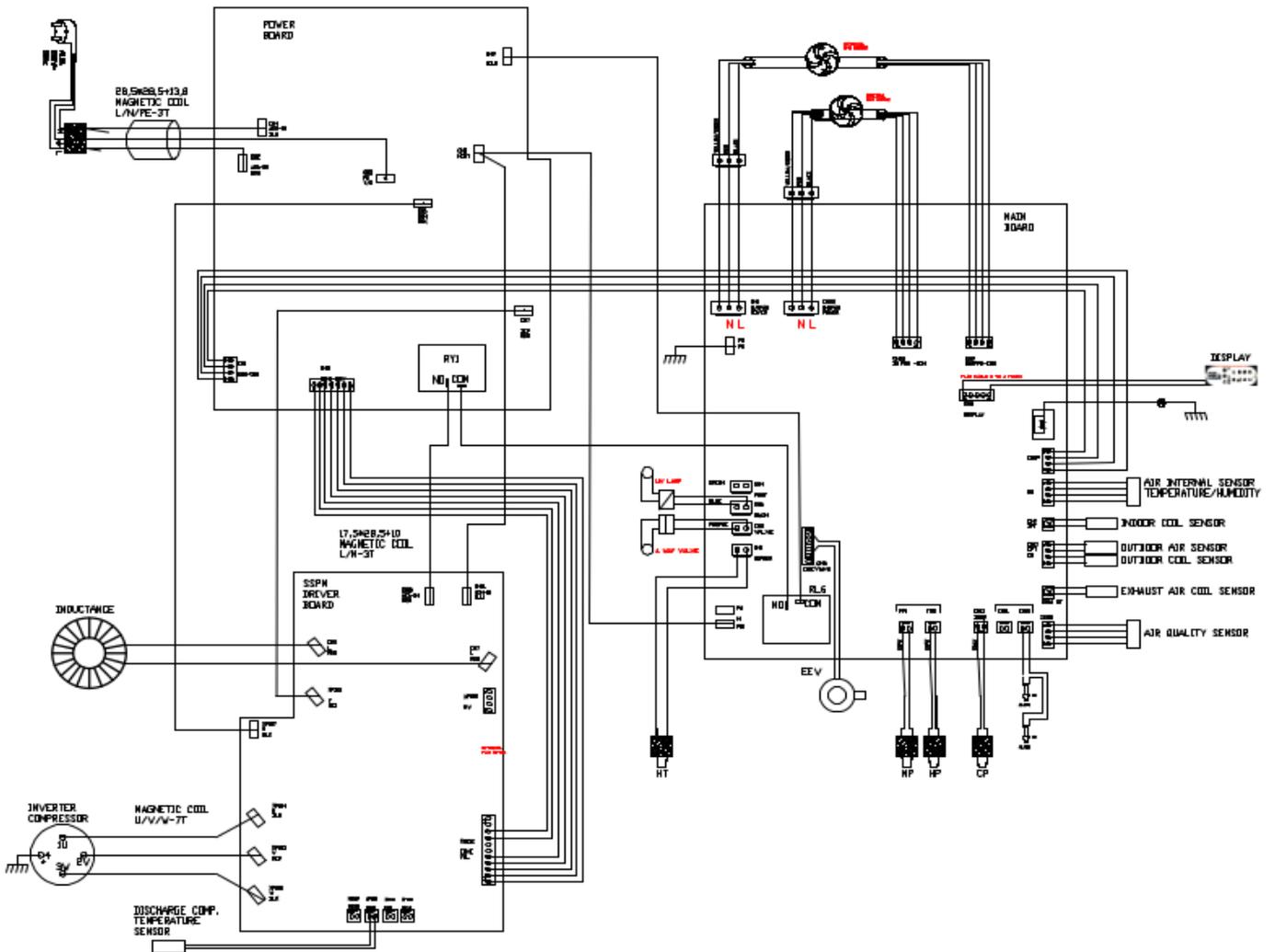
If it is impossible to bring the wiring from the rear of the unit, it is possible to exit on the right side of the unit using the pre-cut hole on the side;

Furthermore, in the lower part, the electrical panel can be reached with a dedicated door



Condensate drain connection

4.4 ELECTRICAL DIAGRAM



4.5 CONNECTIONS

NL-PE - POWER SUPPLY

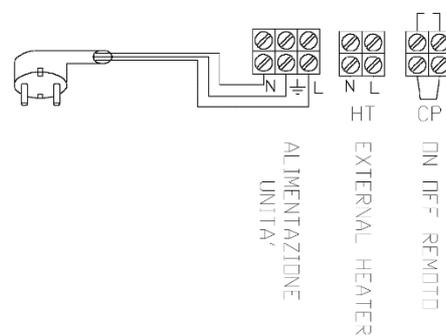
The unit is supplied with an electrical power socket connected to the N, L, PE terminals;

HT- EXTERNAL HEATER

It provides for the connection of the integrative electrical resistance (Accessory) to be inserted on the air delivery duct

CP- REMOTE ON OFF

Provides an external connection to enable the unit as a presence or window contact; Comes with a deck supplied;



Connections

5 COMMISSIONING AND METHOD OF USE

5.1 OPERATION OF THE CONTROL PANEL ON THE MACHINE, WIFI AND REMOTE CONTROL

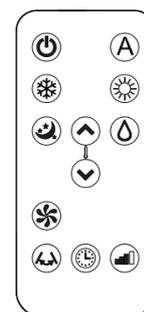
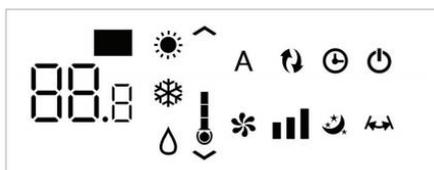
The unit is controlled both through the wifi panel on board the machine and through the supplied infrared remote control;

It is also possible to download the app and control the main functions from IOS systems or ANDROID systems;

The display normally shows the operating status (see paragraph Description of operation) and any alarms (see paragraph Viewing alarms on the display). Furthermore, by pressing the various symbols it is possible to select the various functions.

By pressing the keys it is possible to set the various functions (see paragraph Description of operation) The remote control supplied with the appliance has been designed in such a way as to give it maximum strength and exceptional functionality, however it must be handled with some caution.

Avoid: - leaving it exposed to rain, spilling liquids on its keyboard or dropping it into water - giving it strong shocks or dropping it on hard surfaces - leaving it exposed to sunlight



Wifi machine board panel

Remote controller

- 1 Tasto riferito al telecomando
- 2 Tasto riferito al display touch-screen

TASTO / DISPLAY :

 Setpoint

 Tasto su

 Tasto giù

 Tasto accensione / spegnimento

 Tasto benessere (funzionamento automatico economico)

 Tasto funzionamento in solo raffreddamento

 Tasto funzionamento in sola deumidificazione

 Tasto funzionamento in sola ventilazione

 Tasto funzionamento in solo riscaldamento (1)

 Tasto funzionamento in solo riscaldamento (2)

 Tasto benessere notturno

 Simbolo visualizzazione Lampada UV

 Tasto controllo della velocità del ventilatore

 Tasto impostazione funzione Timer (1)

 Tasto impostazione funzione Timer (2)

 Sensore di luminosità

 Termometro digitale; 1÷7 barrette rosse in inverno, blu in estate

 Non utilizzato

5.2 TURNING THE UNIT ON AND OFF

In order to manage the appliance via the remote control or the touch screen display, the main switch installed on the power supply line must be inserted (and the position of which the technician who installed the appliance can be more precise), or insert the power plug of the appliance into the socket of the system.

Once the described operations have been carried out, it is possible to manage the system by pressing and holding the symbols on the touch screen display (3 seconds) or with the remote control. To transmit commands to the indoor unit, face the front of the remote controller towards the indoor unit display.

The receipt of the command is confirmed by the emission of a note by the buzzer and by the relative visualization on the display. The maximum distance at which commands can be received is approximately 8 meters.

The appliance can be switched off (stand-by) or switched on using the appropriate button. The control system of the appliance is equipped with a memory, so all settings will not be lost either in the event of a shutdown or in the event of a power failure.

The button in question is used to switch the appliance on and off for short periods.

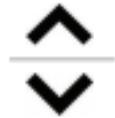
If the appliance is stopped for a long time, it must be deactivated by disconnecting the main switch, or removing the plug from the socket



Unit ON / OFF

5.3 MODIFY TEMPERATURE SET

- The keys for selecting the desired unit temperature are present on the display;
Each time the set temperature is changed, the display will also show the required set point change



Change temperature set

5.4 CHANGE FANS SPEED

-By pressing this button sequentially, it is possible to set the power supplied by the appliance to 5 settings: Minimum, Medium, Maximum, Dual Power and Automatic.

The greater the power set, the greater the performance of the appliance, but the lower its silence.

The Dual Power function (visible through the flashing of the 3 speed bars on the display and the scrolling of the 7 bars, red or blue, of the digital thermometer), available only in heating and cooling, provides an Overboost for 30 minutes.

The controller then inhibits the function and goes into automatic operation.

By setting the Automatic choice (visible through the scrolling of the 3 speed bars on the display) the on-board microprocessor adjusts the power automatically, keeping it as high as the difference between the room temperature and the set temperature is greater. In dehumidification only and night comfort mode, power control is not possible as the appliance can only operate at minimum.



Fan speed management

5.5 AUTOMATIC FUNCTION

By setting this operation, the appliance sets itself up in such a way as to obtain optimal comfort in the air-conditioned room. Depending on the set temperature, the air conditioner automatically selects the operating mode (cooling or heating), and the ventilation speed based on the room temperature and the detected air quality;



AUTO function

5.6 VENTILATION ONLY FUNCTION

-When this function is activated, the compressor is never activated and the appliance has no effect on the temperature or humidity of the air in the room. It is possible to choose the fan speed



Season Change

5.7 NIGHT WELLNESS FUNCTION

With the appliance on and the cooling or heating mode selected, pressing the button allows you to perform multiple functions aimed at maximizing the silence of the appliance, saving electricity and regulating night-time well-being.

In this mode, the fan operation is set to minimum speed.

This feature should be activated immediately before falling asleep

- In cooling, the set temperature set is increased by 1 ° C after one hour and by a further ° C after 2. After the second hour the temperature set setting is not further altered and after another 6 hours the appliance is placed in stand-by.

- In heating, the set temperature is decreased by 1 ° C after one hour and by a further ° C after 2 hours. After the second hour, the temperature setting is not further altered and after another 6 hours the appliance is placed in stand-by.

This function is not available for dehumidification only, ventilation only and economic automatic operation and can be excluded at any time (ideally upon waking up) by pressing the button again.

In case of simultaneous setting of the Timer function, the appliance will switch off after the set time has elapsed.



Night wellness

5.8 DEHUMIDIFICATION FUNCTION

Using this mode, the appliance dehumidifies the room. The activation of this function is therefore particularly useful in mid-seasons, that is to say on those days (such as rainy days) in which the temperature is all in all pleasant, but excessive humidity makes you feel a certain sense of discomfort. In this mode, both the ambient temperature setting and the fan speed setting are ignored, which always corresponds to the minimum. In this mode it is normal for the appliance to operate intermittently



Dehumidification

5.9 CHANGE OF SEASON

<p>-The season change must be done from the keyboard; Press and hold the season change button for at least 3 seconds to change the status of the season; The operation must be carried out to activate the correct logics: Logic symbols: SUN - WINTER SNOWFLAKE - SUMMER</p>	<table border="1"> <tr> <td data-bbox="1230 277 1382 504" style="text-align: center;">  </td> <td data-bbox="1382 277 1540 504" style="text-align: center;">  </td> </tr> <tr> <td colspan="2" data-bbox="1230 504 1540 571" style="text-align: center;"> Season Change </td> </tr> </table>			Season Change	
					
Season Change					

5.10 TIMER FUNCTION

<p>The logic of the device makes it possible for the User to program its activation or deactivation, as desired.</p> <p>While the air conditioner is on, it can be programmed to switch it off by pressing the Timer button, followed by setting the number of hours (from 1 to 24) after which the appliance will be placed in stand-by. • When the air conditioner is off, it is possible to preset its start by pressing the Timer button, followed by setting the number of hours (from 1 to 24) after which the appliance will start</p> <p>Press the button again to confirm.</p>	<table border="1"> <tr> <td data-bbox="1230 665 1540 860" style="text-align: center;">  </td> </tr> <tr> <td data-bbox="1230 860 1540 1055" style="text-align: center;">  </td> </tr> <tr> <td data-bbox="1230 1055 1540 1243" style="text-align: center;">  </td> </tr> </table>			
				
				
				

5.11 AIR QUALITY SENSOR OPERATION DESCRIPTION

<p>-The unit foresees the operation of the fans according to the selected speed and the internal logics linked to the detected air quality value; For each speed, if the air quality is not optimal, the fans increase the flow rates to have greater air exchange and improve the quality of the internal air;</p>	
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5.12 DESCRIPTION OF THE UVC LAMP OPERATION

-The unit provides for the operation of a UVC lamp with germicidal action placed in the section where the new air enters;

The lamp is activated automatically when the ventilation is activated;

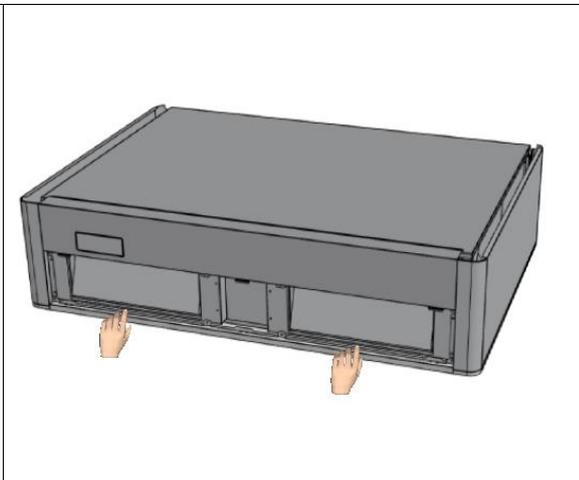


6 MAINTENANCE

To always ensure correct and optimal operation of the unit, all maintenance interventions must be carried out periodically.

6.1 CLEANING OR REPLACING EPM FILTERS 1

To replace the filters or clean them, proceed as follows:
 disconnect the unit from the power supply;
 remove the front grille
 remove the 2 dirty filters by sliding them downwards;
 insert the new filters carefully;
 close the front grille;
 If the conditions of the filters allow it, they can be cleaned using a vacuum cleaner or a low pressure compressor.

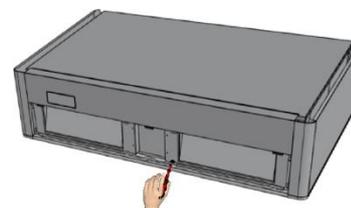


View for filter extraction

6.2 PREFILTER REPLACEMENT

To clean the prefilter on the outside air proceed as follows:
 disconnect the unit from the power supply;
 Remove the front grille
 remove the lower panel using the front screws and extracting it from the rear seats;
 remove the inspection door using the dedicated screws;
 remove the filter;
 If the conditions of the filters allow it, they can be cleaned using a vacuum cleaner or a low pressure compressor.

close the filter cover making sure that all screws are tightened;
 Reposition the lower panel in its seats and insert the screws in the front part;
 Reposition the grill in its seat;



View for filter extraction

6.3 LAMP MAINTENANCE

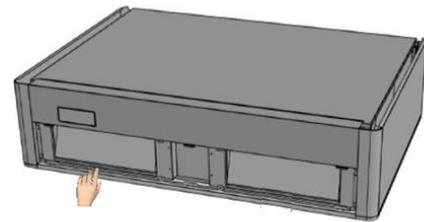
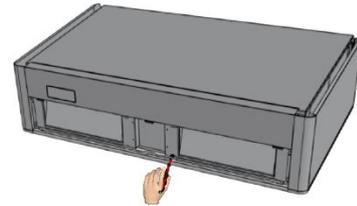
To carry out maintenance on the UVC lamp;

- Remove power to the unit;
- Remove the front grille
- remove the intake air filter to access the UV lamp;
- The UV lamp will be clearly visible behind the filter;
- Remove the lamp from the holder and the connector, taking care to extract it gently
- Replace and reposition the new lamp
- Reinsert the filter in its seat;
- Finally, place the front grille,



Attention

Never perform these operations with the lamp and unit powered;
UVC rays can cause damage to the skin and eyes;



View for lamp maintenance

7 ALARMS

7.1 GENERALITY

In case of problems or breakdowns, take note of any error code appearing on the display of the electronic control unit or of the remote control, take note of the model and serial number of the unit you own (present on the identification plate attached to the side of the unit) and contact the installer.

7.2 PROBLEMS WITHOUT ERROR INDICATION ON THE DISPLAY

Anomalies	Possible causes	Remedies
The appliance does not turn on	There is no power supply	Check if there is voltage in the network (by turning on a light bulb in the house, for example). Check that any exclusive magnetothermic switch protecting the appliance has not tripped (if so, reset it). If the problem occurs again immediately, contact the Assistance Service, avoiding attempting to operate the appliance
The appliance does not cool / heat up sufficiently	The set temperature is too high or too low	Check and if necessary correct the temperature setting
	The air filter is clogged	Check the air filter and clean it if necessary
	Check that there are no obstacles to the airflow inside or outside.	Remove anything that could obstruct the air flows.

Problem	Causes	Remedies
Display off	No power (light switch off)	Check the connection to the mains Check and if necessary replace the fuse on the (black) power connector on the side of the unit.
Little or no air flow The premises remain humid	Clogged filters	Replace the filters
	Clogged exchanger	Clean the exchanger
	Ice cream exchanger	Take the exchanger to a warm place and wait for it to thaw, do not heat with direct heat sources.
	Dirty fan	Clean the fan
	Clogged fan ducts	Clean the ventilation ducts
	Outside temperature below 0 ° C	The unit may be in anti-freeze mode, wait until the outside temperature rises or provide for the installation of an electric pre-heating heater.
High noise	Noise coming from the unit	Check for cracks and / or air leaks from the unit panels Check the siphon connection Check if the motors turn correctly (bearings)
	Noise coming from the ducts	Check for cracks in the intake / inlet / exhaust pipes

Vibrations Elevate	Panels that vibrate	<p>Check the integrity of the aluminum panels and profiles of the unit</p> <p>Check that the unit cover and the panel covering the electronic board are properly closed</p> <p>Check that there are no walls that can transmit vibrations to the wall / floor / false ceilings</p>
	Unbalanced fan blades	<p>Check the integrity of the blades</p> <p>Clean the fans</p> <p>Check that the small metal clips for balancing the blades are still present on the fans</p>
Loss of condensation	Condensate drain clogged	Clean the condensate drain
	Condensate does not flow from the drain duct into the drip tray	<p>Make sure the unit is perfectly flat</p> <p>Check that the condensate drain connections are clogged</p>

7.3 TABLE ALARMS SIGNALLED BY DISPLAY

The table below shows the unit operating anomalies signaled, in the electronic versions, by the display on the machine or by the remote controls. The following table shows the malfunctions of the unit

Alarm	Cause	Operation
E1	RT ambient temperature probe faulty	The Cooling, Dehumidification and Heating functions can be activated regularly. The regulation only monitors the internal coil antifreeze
E2	Internal IPT battery probe faulty	The Cooling, Dehumidification and Heating functions can be activated regularly.
E3	OT outdoor air temperature probe faulty	The Cooling, Dehumidification and Heating functions can be activated regularly.
E4	Faulty OPT external battery probe	The Cooling, Dehumidification and Heating functions can be activated regularly. The control performs defrost cycles at fixed times.
E5	Internal fan motor faulty	It is not possible to activate any operation of the appliance.
E6	Faulty external motor fan	It is not possible to activate any operation of the appliance.
E7	Lack of communication with the display *	It is not possible to activate any operation of the appliance.
E8	Compressor discharge probe failure	It is not possible to activate any operation of the appliance.
CP	CP presence contact open	The device is activated only if the contact is closed. Check the connection of the terminals.

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Technical Assistance Center

The data contained in this manual can be changed by the manufacturer without prior notice.