



# AARIA ONE INVERTER

EN INSTALLATION AND TECHNICAL SERVICE INSTRUCTIONS

**RIELLO**

Dear Technician,

We would like to congratulate you on having recommended a **RIELLO** unit: a modern product that is capable of ensuring maximum comfort at length, with a high degree of reliability, efficiency, quality and safety.

While your technical skills and knowledge will certainly be more than sufficient, this booklet contains all the information that we have deemed necessary for the device's correct and easy installation.

Thank you again, and keep up the good work.

RIELLO

## COMPLIANCE

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**RIELLO AARIA ONE INVERTER** heat pumps are compliant with the following European Directives:

- Low Voltage Directive 2014/35/EU
- Electromagnetic Compatibility Directive 2014/30/EU
- RoHS Directive 2011/65/EU
- Directive 2010/30/EU Indication of the energy consumption on the labels of products related to energy consumption
- WEEE Directive 2012/19/EU
- ErP Directive 2009/125/EC and Regulation 2012/206/EC



## RANGE

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Model	Code
AARIA ONE INVERTER 25	20131342

## ACCESSORIES

For the complete list of accessories and the information relating to their usage combinations, please refer to the catalogue.

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The following symbols are used in this publication:

 **WARNING** = actions requiring special care and appropriate training.

 **DO NOT** = actions that **MUST ON NO ACCOUNT** be carried out.

This booklet cod. Doc-0083695 rev. 3 (05/2021) consists of 29 pages.

## 1 GENERAL INFORMATION

### 1.1 General Notices

- ⚠** When you get the product, check immediately that the contents are all present and undamaged. Contact the dealer **RIELLO** if you notice any problems.
- ⚠** The product's installation must be carried out by an authorised company that will issue a declaration of the installation's conformity to the product's owner once the work has been completed, indicating that the work has been carried out in accordance with the standards of good practice, current National and Local regulations, and the indications provided by **RIELLO** in the instruction booklet accompanying the device.
- ⚠** The product must be used for its intended purpose, as stated by **RIELLO** for which it has been expressly manufactured. **RIELLO** shall bear no responsibility, whether of a contractual or non-contractual nature, for any damage caused to people, animals, or property due to incorrect installation, adjustments, or maintenance, or improper use.
- ⚠** Suitable clothing, instrumentation, and accident-prevention devices must be utilized during the installation and/or maintenance operations. **RIELLO** shall bear no responsibility for any failure to comply with current safety and accident-prevention regulations.
- ⚠** During installation and/or service operations, keep the area around the unit tidy and clean.
- ⚠** Comply with the legislation in force on the country of deployment with regard to the use and disposal of packaging, of cleaning and maintenance products and for the management of the unit's decommissioning.
- ⚠** Any repair and maintenance interventions must be carried out by **RIELLO** Technical Support Service, in accordance with the provisions contained in this publication. Do not modify or tamper with the unit as dangerous situations may arise and the unit manufacturer will not be liable for any damage caused.
- ⚠** In the event of any functional anomalies or fluid leaks, set the system's main switch to its "off" position. Promptly contact your local **RIELLO** Technical Support Service, and do not perform any interventions upon the device on your own.
- ⚠** The units contain refrigerant gas: operate carefully so as to avoid damaging the gas circuit and the fin bank.
- ⚠** Any gas leaks indoors can generate toxic gases if they come into contact with naked flames or high temperature bodies, in case of leaks, please air the rooms thoroughly.
- ⚠** According to EU Regulation no. 517/2014 regarding certain fluorinated greenhouse gases, the total amount of refrigerant contained within the installed system must be indicated. This information can be found on the unit technical data plate.
- ⚠** This unit contains fluorinated greenhouse gases covered by the Kyoto protocol. Maintenance and disposal activities must be carried out exclusively by skilled personnel.

- ⚠** This booklet is an integral part of the device, and must therefore be carefully preserved, and must ALWAYS accompany it, even in the event that it is sold to another Owner or User, or is transferred to another system. If it is damaged or lost, another copy can be requested to **RIELLO** Technical Support Service in your Area.

### 1.2 Safety precautions

It should be noted that the use of products that utilize electric energy requires certain essential safety regulations to be respected, including the following:

- ⊖** Do not allow children or unassisted disabled people to use the unit.
- ⊖** Do not touch the unit while barefoot and/or partially wet.
- ⊖** Do not spray or throw water directly on the unit.
- ⊖** It is forbidden to place weights on the device.
- ⊖** It is strictly forbidden to touch the coil fins, the moving parts, to place any body parts between them, or to insert pointy objects into the grilles.
- ⊖** It is forbidden to perform any technical interventions or cleaning operations before having disconnected the device from its electrical power supply, by setting the system's main switch to its "OFF" position.
- ⊖** It is forbidden to modify the safety or regulation devices without the authorisation of the manufacturer.
- ⊖** Do not pull, detach or twist the electrical wires coming out of the unit, even when the unit is disconnected from the power grid.
- ⊖** The packing material must not be disposed of in the surrounding environment and must be kept out of children reach, as it can be dangerous. It must be disposed of according to the regulations in force.

### 1.3 Unit description

**RIELLO AARIA ONE INVERTER** is a dual duct climate control system suitable for wall installation on any perimeter wall. The aesthetic impact is reduced significantly both on the outside where only two 162 mm holes will be visible, and inside the house thanks to a depth of only 170 mm, smaller than conventional indoor climate control units.

The rotary-type compressor is controlled via DC-Inverter control with continuous modulation thus ensuring high energy standards. The fan DC motor improves performance and sound comfort. The expansion valve electronically optimises the flow of refrigerant within the circuit.

Control, adjustment and programming are carried out using the on-board control or the infrared remote control, whose operation and use are described in the user manual.

### 1.4 Safety and adjustment devices

The device safety and setting are achieved thanks to:

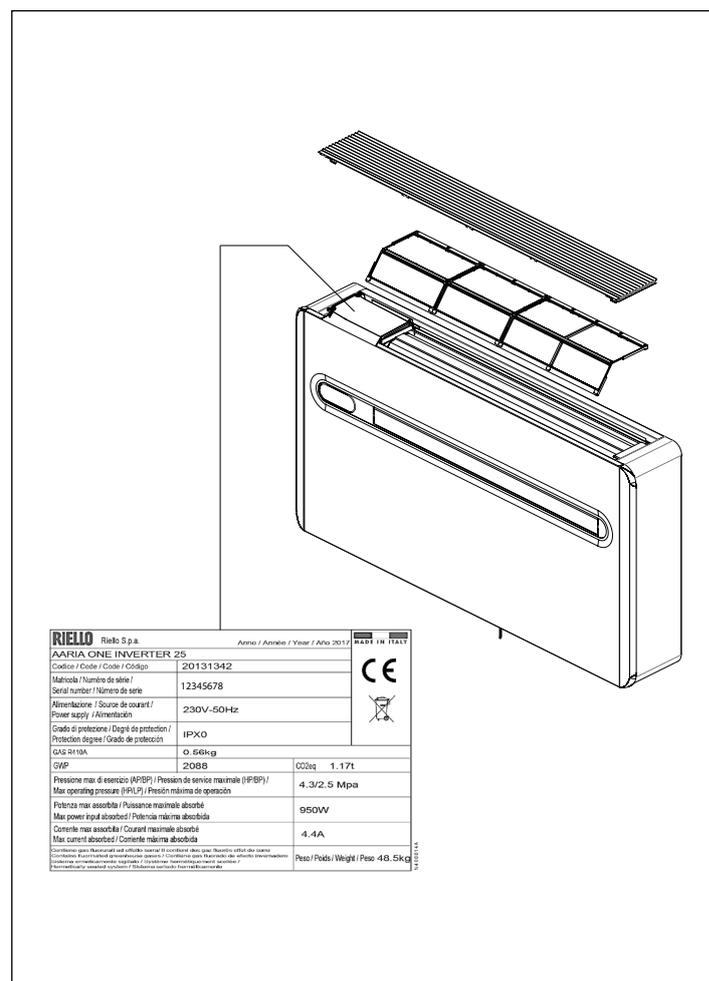
- temperature sensor of the upper heat exchanger, transmits the detected value to the main electronic board which activates:
  - heating mode if the detected temperature is greater than 52°C, turning off the lower fan which then restarts when the temperature is lower than or equal to 47°C
  - heating mode if the detected temperature is greater than 62°C for 10 seconds, turning off the compressor which then restarts when the temperature is lower than or equal to 47°C
  - cooling and dehumidification if the detected temperature is lower than 0°C for 20 seconds, turning off the compressor and the lower fan that restart when the temperature is greater than 7°C
- temperature probe of the lower heat exchanger, transmits the detected value to the main electronic board which activates:
  - cooling mode if the detected temperature is greater than 58°C, increasing the speed of the lower fan until the temperature is lower than 55°C
  - cooling mode if the detected temperature is greater than 62°C, turning off the unit which then restarts after 60 seconds when the temperature is lower than 62°C
  - cooling and dehumidification mode if the detected temperature is lower than 25°C, forcing the lower fan to operate at minimum speed
- temperature sensor of compressor outlet, transmits the value to the electronic board which acts when the temperature is greater than 110°C, turning off the unit
- external air temperature sensor, which transmits the detected value to the electronic board to act on the unit's operation and adapt it to variations in external conditions
- room air temperature sensor, which transmits the detected value to the electronic board to act on the unit's operation and to adjust the room temperature
- safety float in the condensation pan that turns off the unit if the level of condensation is too high

**⚠** Safety device replacement must be carried out by **RIELLO** Technical Support Service, using only original components. Please refer to the spare parts catalogue.

**⊘** IT IS FORBIDDEN to operate the device with faulty safety systems.

### 1.5 Identification

The unit can be identified through the technical data plate:

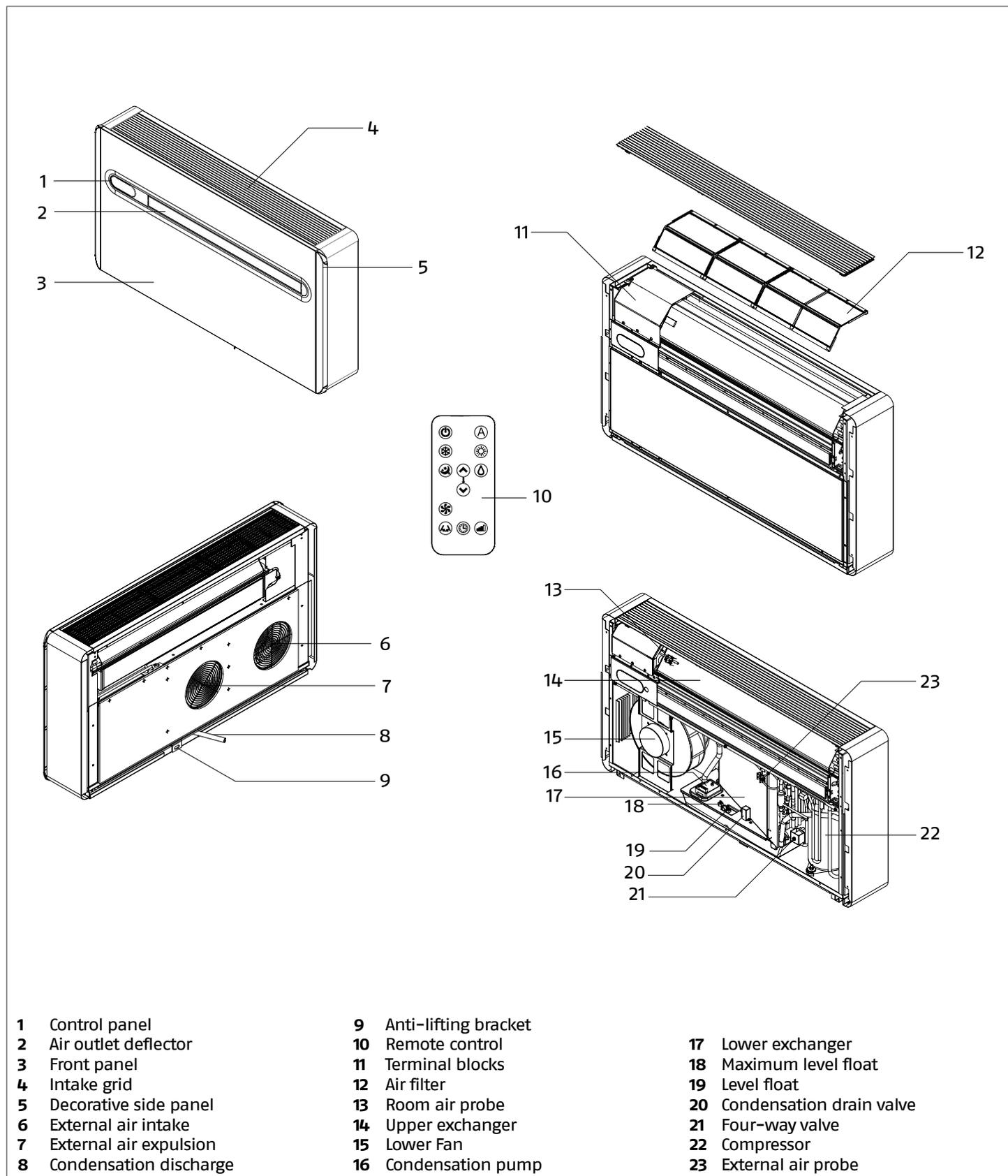


#### Technical data plate

Contains the device's technical and performance data.

**⚠** The tampering, removal, or absence of the identification plates will not allow the product to be properly identified by its serial number.

1.6 Layout



## 1.7 Technical specifications

## Performance

Model		25
<b>Cooling performance [A35 / A27] <sup>(1)</sup></b>		
Capacity at maximum air flow	kW	2,04
Absorbed power at maximum air flow	kW	0,63
EER	kW/kW	3,21
Capacity at maximum power	kW	2,60
Power consumption at maximum power	kW	0,81
Average air flow rate capacity	kW	1,75
Power consumption with average air flow rate	kW	0,54
Capacity at minimum air flow	kW	1,53
Absorbed power at minimum air flow	kW	0,47
<b>Heating performance [A7 / A20] <sup>(2)</sup></b>		
Capacity at maximum air flow	kW	2,10
Absorbed power at maximum air flow	kW	0,64
COP	kW/kW	3,30
Capacity at maximum power	kW	2,64
Power consumption at maximum power	kW	0,80
Average air flow rate capacity	kW	1,62
Power consumption with average air flow rate	kW	0,49
Capacity at minimum air flow	kW	1,43
Absorbed power at minimum air flow	kW	0,43
<b>Dehumidification performance</b>		
Dehumidification capacity	l/h	1,00
<b>Upper Fan</b>		
Fan	Type	Tangential
Speed	no.	3
Maximum air flow	m <sup>3</sup> /h	380
Medium air flow	m <sup>3</sup> /h	310
Minimum air flow	m <sup>3</sup> /h	260
Maximum speed	rpm	1500
Medium speed	rpm	1250
Minimum speed	rpm	900
<b>Lower Fan</b>		
Fan	Type	Centrifugal
Speed	no.	3
Maximum air flow	m <sup>3</sup> /h	460
Medium air flow	m <sup>3</sup> /h	380
Minimum air flow	m <sup>3</sup> /h	330
Maximum speed	rpm	2100
Medium speed	rpm	1700
Minimum speed	rpm	1350
<b>Compressor</b>		
Compressor	Type	Rotary
Adjustment	Type	Inverter
Refrigerant	Type	R410A
Refrigerant charge	kg	0,65
Maximum allowable pressure PS	MPa	3,80
<b>Sound level internal side</b>		
Maximum sound pressure <sup>(3)</sup>	dB(A)	40
Medium sound pressure <sup>(3)</sup>	dB(A)	34
Minimum sound pressure <sup>(3)</sup>	dB(A)	31
Maximum sound power	dB(A)	57
Medium sound power	dB(A)	51
Minimum sound power	dB(A)	48
<b>Sound level external side</b>		
Maximum sound pressure <sup>(3)</sup>	dB(A)	52
Medium sound pressure <sup>(3)</sup>	dB(A)	45
Minimum sound pressure <sup>(3)</sup>	dB(A)	40
Maximum sound power	dB(A)	69
Medium sound power	dB(A)	62
Minimum sound power	dB(A)	57

(1) Outdoor air: 35 °C D.B., Indoor air: 27 °C D.B. / 19 ° W.B.

(2) Outdoor air: 7 °C D.B. / 6 °C W.B., Indoor air: 20 °C D.B.

(3) Measured at 2 meters front unit

## Energy data

Model		25
<b>Ecodesign data and Energy Labelling <sup>(1)</sup></b>		
Standby mode (PSB)	W	0,5
Thermostat-off mode (PTO)	W	11,0
GWP		2088
Sound power level	dB(A)	57
<b>Cooling</b>		
Nominal capacity	kW	2,60
Nominal power input	kW	0,81
EER	kW/kW	3,21
Energy class		A+
Hourly energy consumption	kWh/h	0,8
<b>Heating</b>		
Nominal capacity	kW	2,64
Nominal power input	kW	0,80
COP	kW/kW	3,30
Energy class		A
Hourly energy consumption	kWh/h	0,8

(1) According to regulations 206/2012 and 626/2011

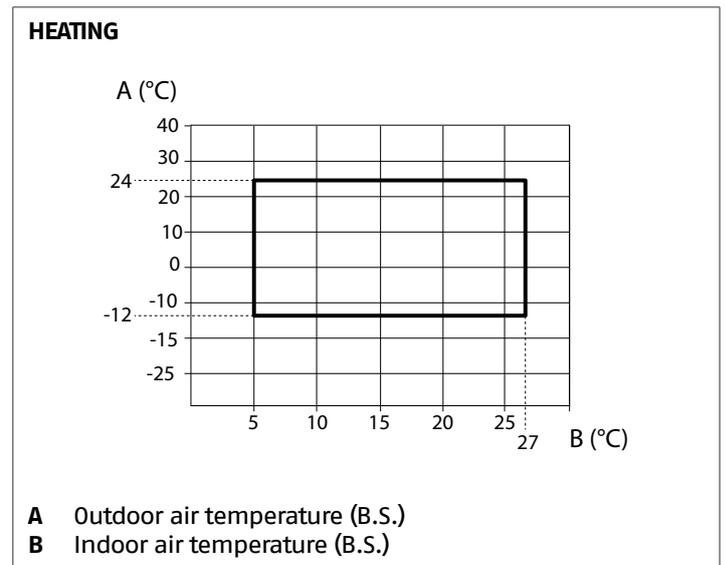
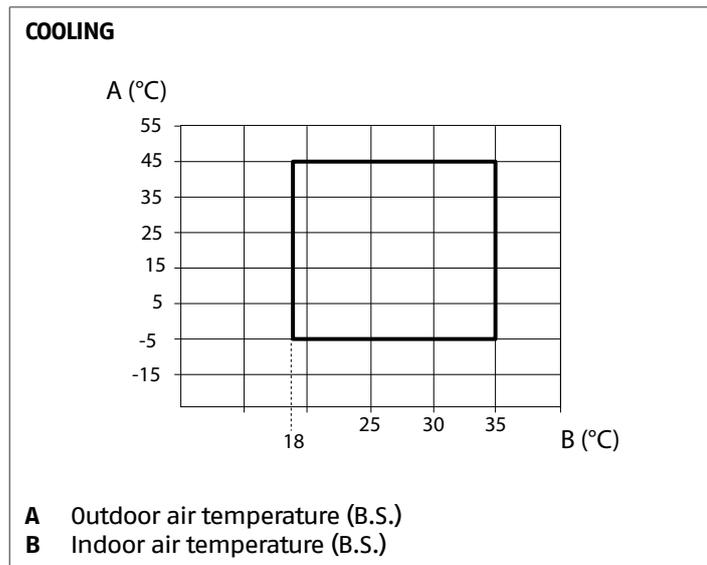
## Electrical characteristics

Model		25
<b>Electrical characteristics</b>		
Power supply	V/Ph/Hz	230/1/50
Protection factor	IP	X0
<b>Cooling performance [A35 / A27] <sup>(1)</sup></b>		
Power consumption at maximum air flow	A	2,90
Current consumption at maximum power	A	4,40
Power consumption at average air flow	A	2,46
Power consumption at minimum air flow	A	2,14
Maximum frequency	Rps	52
Frequency at maximum power	Rps	68
Average frequency	Rps	44
Minimum frequency	Rps	37
<b>Heating performance [A7 / A20] <sup>(2)</sup></b>		
Power consumption at maximum air flow	A	2,89
Current consumption at maximum power	A	4,40
Power consumption at average air flow	A	2,25
Power consumption at minimum air flow	A	1,98
Maximum frequency	Rps	68
Frequency at maximum power	Rps	75
Average frequency	Rps	52
Minimum frequency	Rps	45

(1) Outdoor air: 35 °C D.B., Indoor air: 27 °C D.B. / 19 ° W.B.

(2) Outdoor air: 7 °C D.B. / 6 °C W.B., Indoor air: 20 °C D.B.

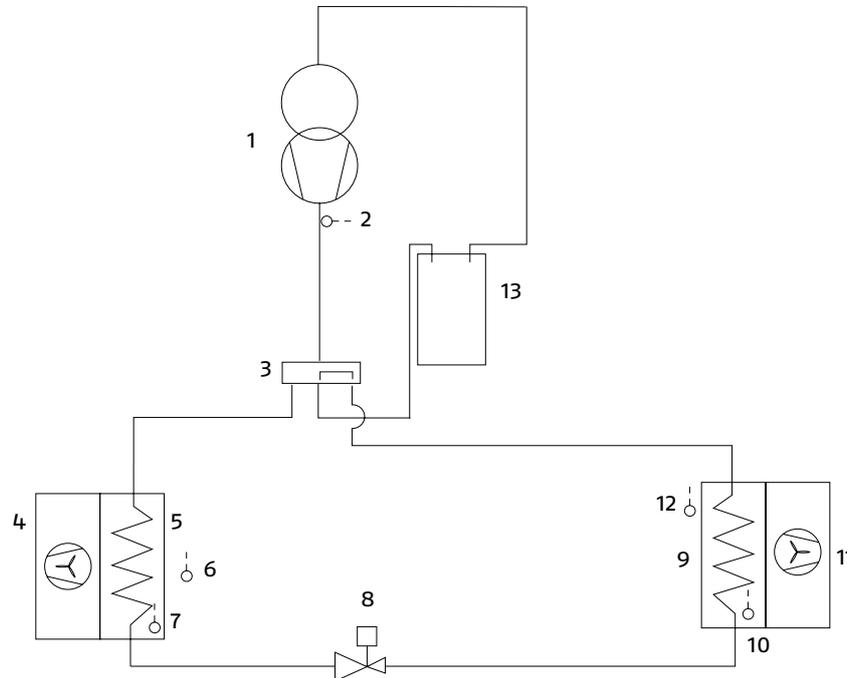
### 1.8 Operating limits



### 1.9 Cooling circuit

The cooling circuit is of the heat pump type with a refrigerant gas reversal cycle. The source fluid utilised is the outdoor air, while the utility-side fluid is the air inside the rooms. During the wintertime, the heat pump extracts the thermal en-

ergy from the outdoor air and delivers it to the room air, thereby heating it. During the summertime the cycle is reversed, and the thermal energy is extracted from the room air, which is cooled, and is delivered to the outdoor air.



- |                                       |                                     |
|---------------------------------------|-------------------------------------|
| <b>1</b> Compressor                   | <b>8</b> Electronic expansion valve |
| <b>2</b> Discharge temperature sensor | <b>9</b> Heat exchanger             |
| <b>3</b> Cycle reversal valve         | <b>10</b> Heat exchanger sensor     |
| <b>4</b> Electric fan                 | <b>11</b> Electric fan              |
| <b>5</b> Heat exchanger               | <b>12</b> Room air probe            |
| <b>6</b> External air probe           | <b>13</b> Intake separator          |
| <b>7</b> Defrost temperature sensor   |                                     |

## 2 INSTALLATION

### 2.1 Receiving the product

**RIELLO AARIA ONE INVERTER** is supplied in a single package, protected by a cardboard packaging, polystyrene elements and a polyethylene film.

The following items can be found inside the packaging:

Document envelope:

- Instruction's book for the installer and for the Technical Service in Italian
- Instruction's book for the installer and for the Technical Service in English
- Instruction's book for the installer and for the Technical Service in French
- Instruction's book for the installer and for the Technical Service in Spanish
- user instruction booklet in Italian
- user instruction booklet in English
- user instruction booklet in French
- user instruction booklet in Spanish
- Warranty/Spare parts labels.
- energy label
- warranty terms for Italy

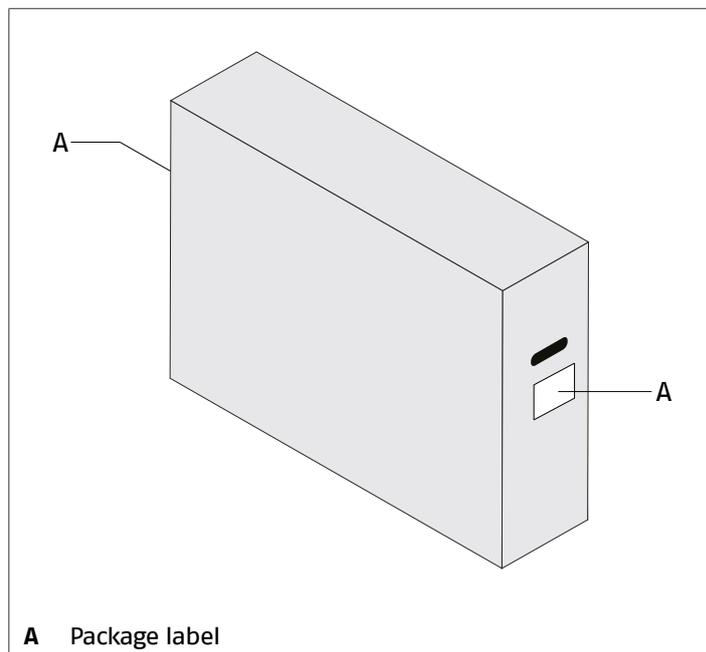
It is also supplied as kit:

- remote control
- CR2025 3V battery
- no. 2 external dampers for air inlet and outlet including springs and chains
- no. 2 plastic sheet for ducts
- no. 2 counterflanges for inner wall
- no. 6 screws and anchor bolts
- paper template
- 0.6 m of condensation drain tube
- lower covering panel
- no. 2 screws for lower cover panel fastening

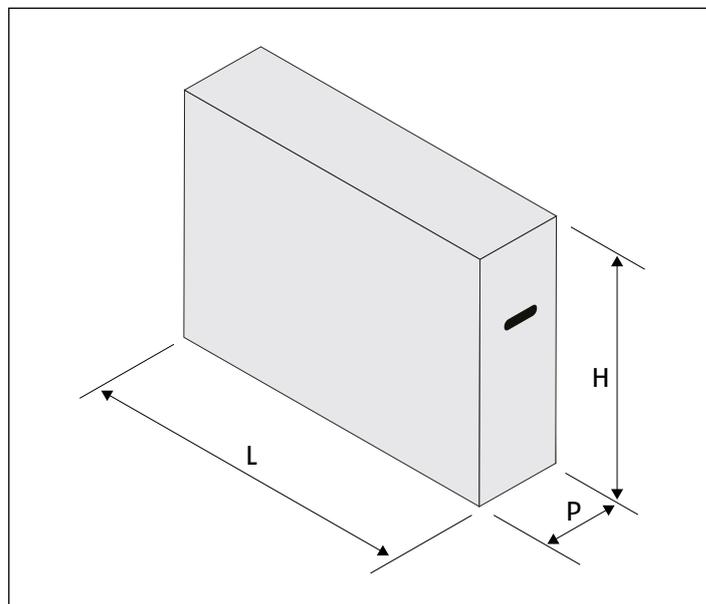
**⚠** The Instruction book comes with the equipment and it should be taken, read and kept carefully.

**⚠** The document envelope must be kept in a safe place. Any duplicate must be requested from Riello S.p.A. which reserves to charge the cost.

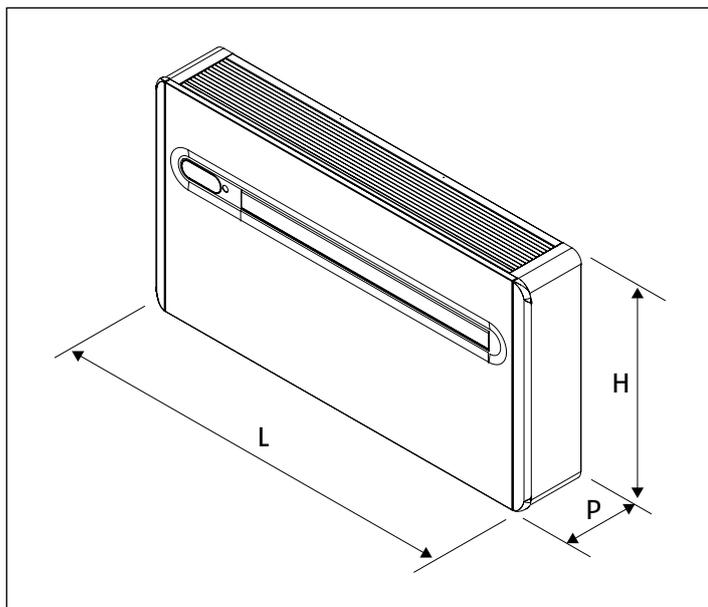
### 2.2 Labels positioning



### 2.3 Dimensions and weight



Model			25
<b>Packaging dimensions</b>			
H	mm		660
L	mm		1110
P	mm		260
Weight	kg		48,5



Model			25
<b>Product dimensions</b>			
H	mm		555
L	mm		1030
P	mm		170
Weight	kg		46,5

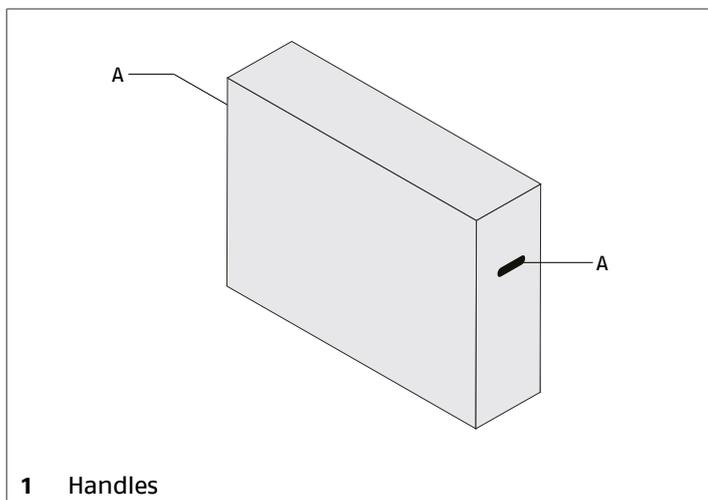
## 2.4 Storage

**⚠** The product must be stored according to the regulations in force.

## 2.5 Handling and removal of the packing

**⚠** Before unpacking, personal protective clothing should be worn and used transport means and tools suitable for the size and weight of the unit.

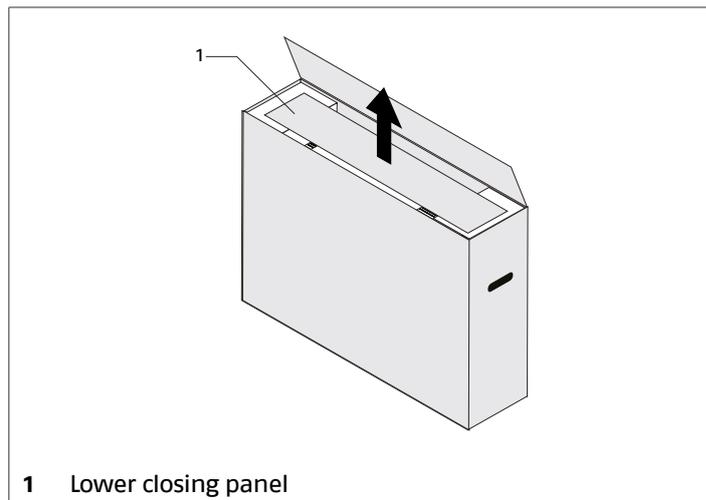
Product handling can also be done manually by grasping the handles provided on the packaging.



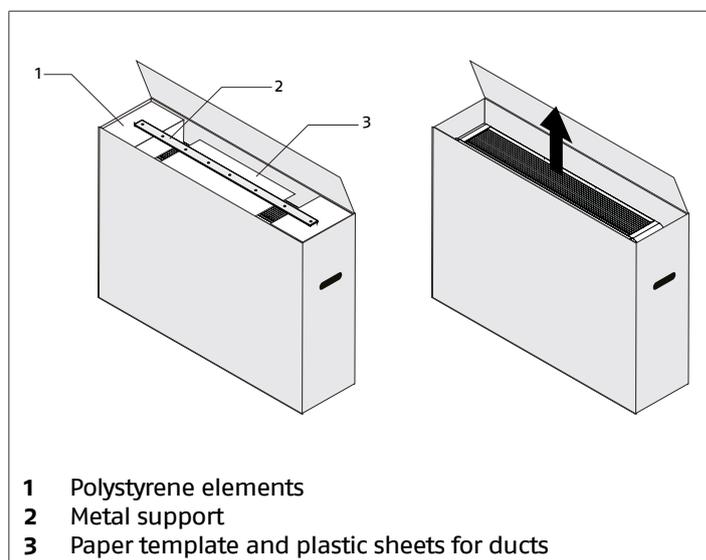
Follow the below instructions for packing removal and product handling:

- transport the equipment in the installation place

- open the cardboard packaging



- remove the lower closing panel



- remove the metal support
- remove the polystyrene elements
- remove the paper template
- remove the plastic sheets for ducts
- remove the document envelope
- remove the envelope with the material supplied with the unit
- remove the polyethylene bag
- take out the device by lifting it up

**⚠** In manual operation it is compulsory to respect always the maximum weight per person provided for by the national laws and standards.

**⚠** Handle with care

**⚠** The equipment must always be handled vertically

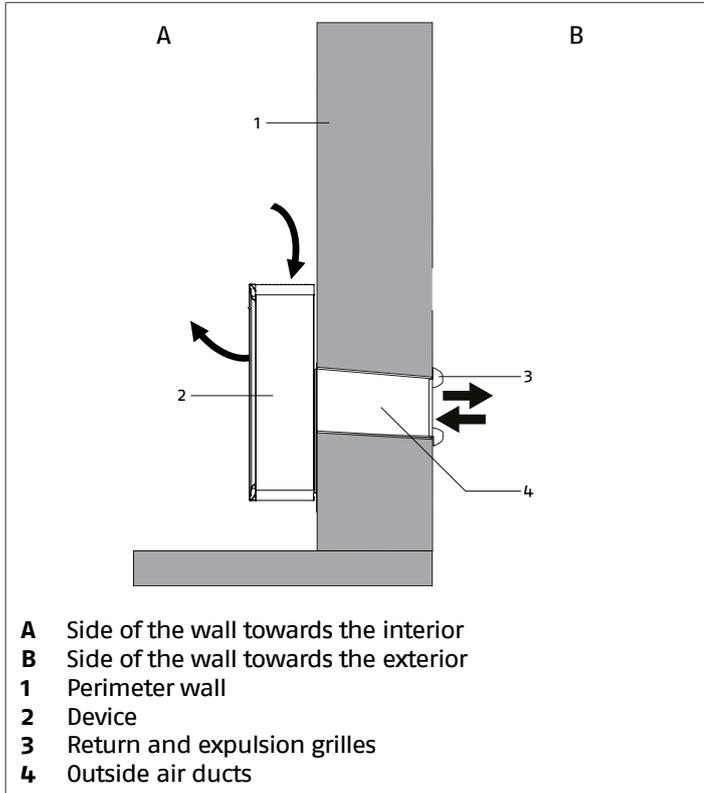
**⚠** The unit's weight is concentrated on the right side (compressor side).

**⚠** The packing material must not be disposed of in the surrounding environment and must be kept out of children reach, as it can be dangerous. It must be disposed of according to the regulations in force.

## 2.6 Place of installation

The location of **RIELLO AARIA ONE INVERTER** devices must be determined by the system's designer or by another competent person, and must take into account the technical requirements, as well as any current local regulations.

**RIELLO AARIA ONE INVERTER** is designed for indoor wall installation:



- install the device adjacent to a perimeter wall communicating with the outside
- install the unit in the room to be air-conditioned
- its position must allow for the circulation of treated air in the whole room
- consider an area where there are no obstacles to the regular air delivery and intake

### Check that:

- the support wall is able to support the device weight
- the wall section does not feature building supporting elements, pipes or power lines
- the supplied wall plugs are suitable for the chosen support wall

### Avoid:

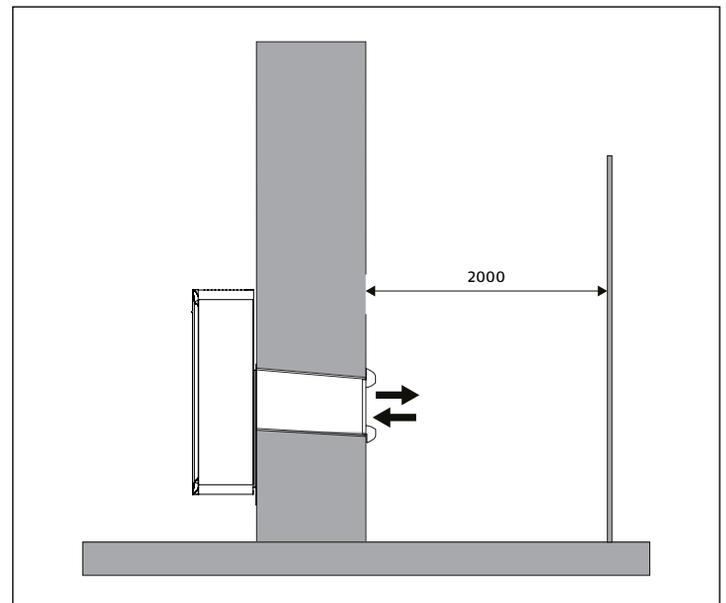
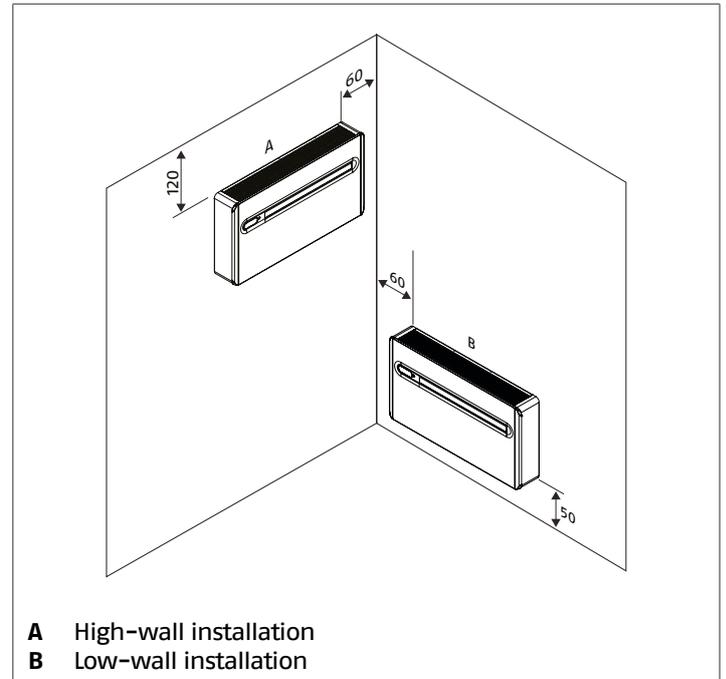
- installing the device in hallways or passageways
- any obstacles or barriers that will cause the expelled air to recirculate
- locations with aggressive or explosive atmospheres or with inflammable fluids
- direct exposure to sunlight and proximity to heat sources
- humid locations or positions where the unit could come into contact with water
- environment containing oil vapours
- locations with high frequency contamination

**⚠** Avoid placing the unit less than 1 metre away from radio and video systems.

## 2.7 Recommended distances

The distances for the device installation and maintenance are shown in the figure. The indicated spaces are necessary in order to prevent the airflow from being blocked, as well as to allow normal cleaning and maintenance operations to be carried out. The device can be installed in high-wall or low-wall mode.

In case of high-wall installation, it is necessary to install the bottom cover panel supplied with the unit. For installation refer to Chapter "Mounting the high-wall unit" p. 20.

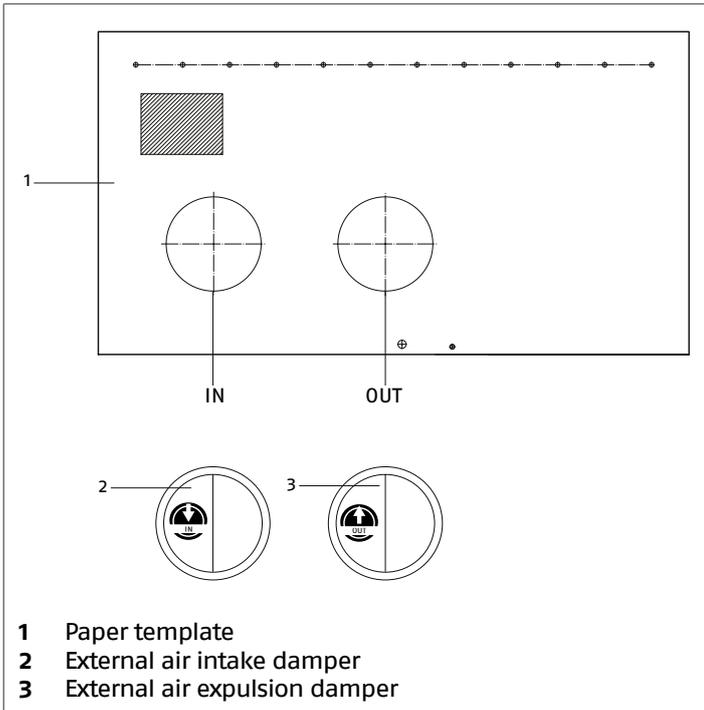


## 2.8 Installation on old systems or systems in need of upgrading

When **RIELLO AARIA ONE INVERTER** is installed on old systems or systems in need of upgrading, it is recommended to ensure that:

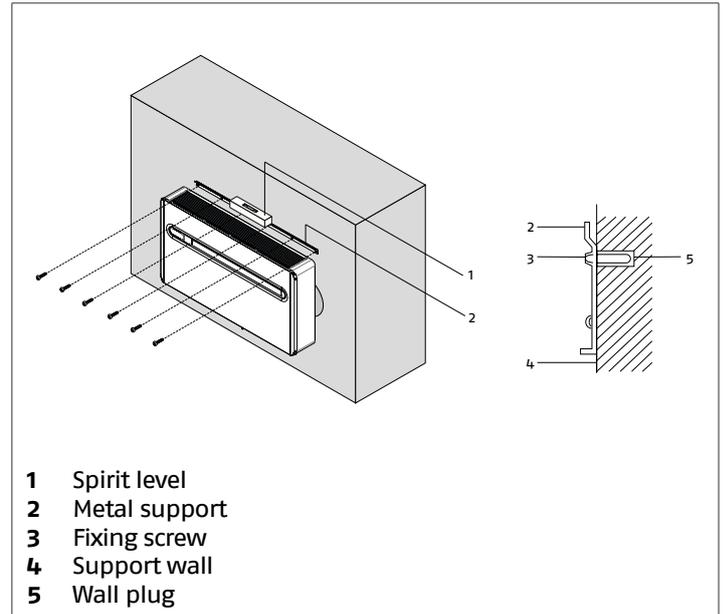
- the electrical system is compliant with the applicable regulations and has been installed by qualified professionals





**Fixing the metallic support to the wall:**

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

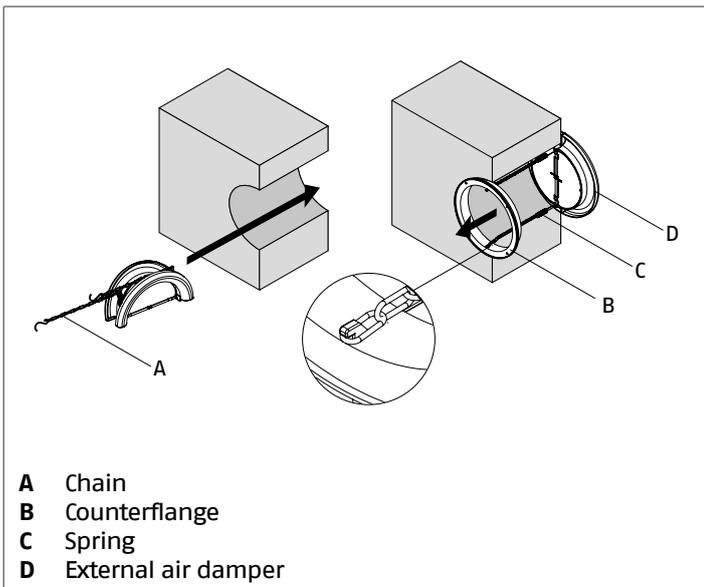


- use the paper template
- mark the position of the mounting holes
- use a drill
- drill holes in the marked positions
- fix the metallic support with the screws and the wall plugs

**⚠** Place the metallic support on a level surface that is capable of supporting its weight

**⚠** Check that the installation is horizontal using a water level.

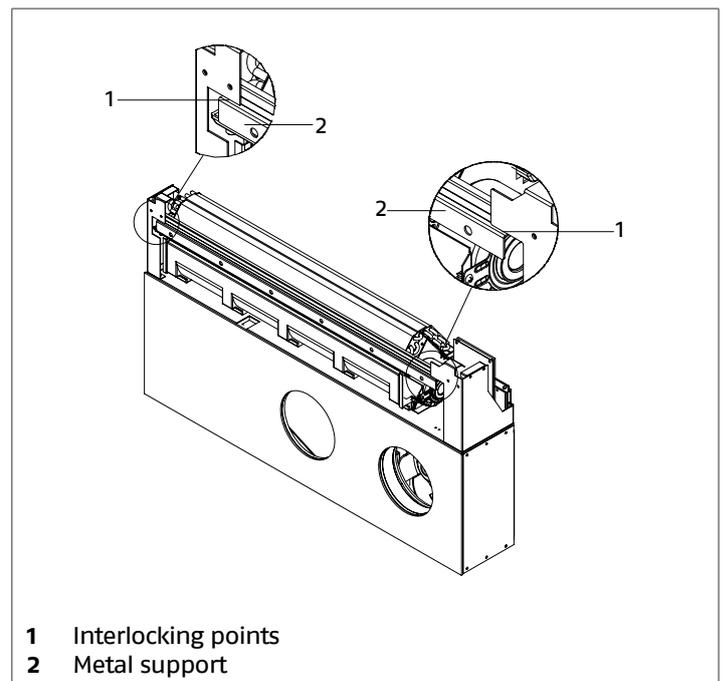
**Assembly:**



- 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.

**⚠** Do not use thick, sticky paints like enamels.



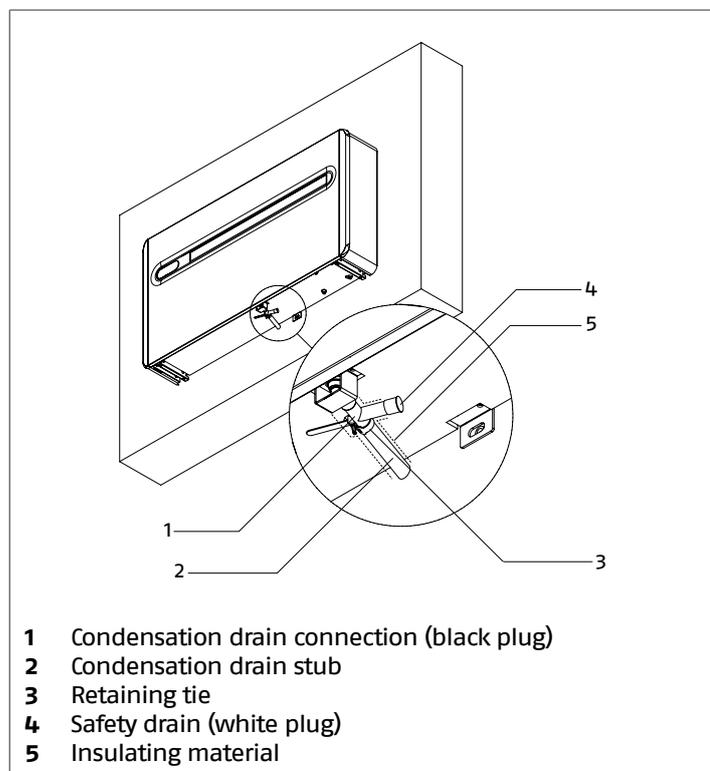
- fasten the unit to the upper part of the metallic support
- verify the correct hooking to the interlocking points

To ease the connections:

- use a spacer to keep the bottom of the unit spaced from the wall

## 2.10 Condensate discharge connection

**RIELLO AARIA ONE INVERTER** comes complete with a pan for collecting the condensation that is produced during operation and that must be conveyed to a suitable location for draining. The size and positioning of the drainage tube are shown below.



Model		25
Refrigeration characteristics		
Drainage pipe inner diameter	mm	10

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

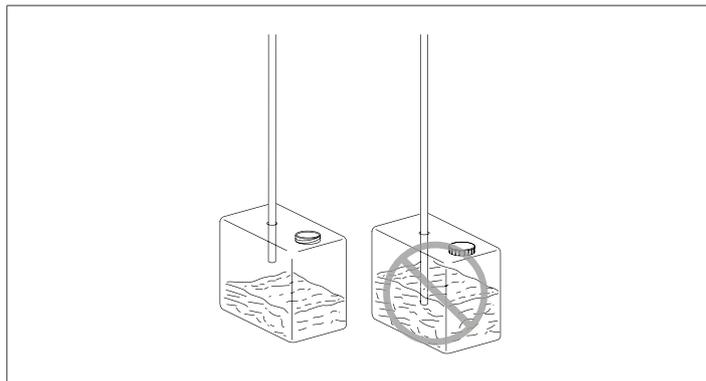
- remove the stub pipe from the drain connection
- connect the drainage tube measuring 0.6 meters supplied with the unit or a longer one
- direct it towards a suitable location for drainage
- keep a minimum slope of 3% towards the drain location
- insulate the joints

**⚠** Ensure that all joints are properly sealed so as to prevent water leaks.

**⚠** The drainage pipe must be insulated for sections running inside houses in order to prevent condensate formation on its surface.

**⚠** If needed it is possible to empty the condensation collection pan through a safety drain provided on the base of the device. See Chapter "Extraordinary maintenance" p. 26.

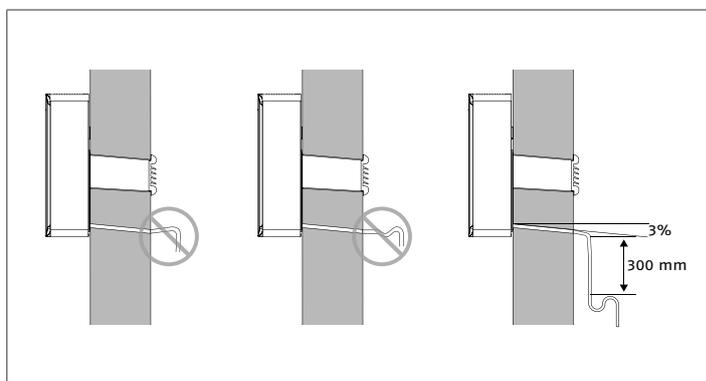
### If using a jug for collecting the condensation:



**⚠** 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.

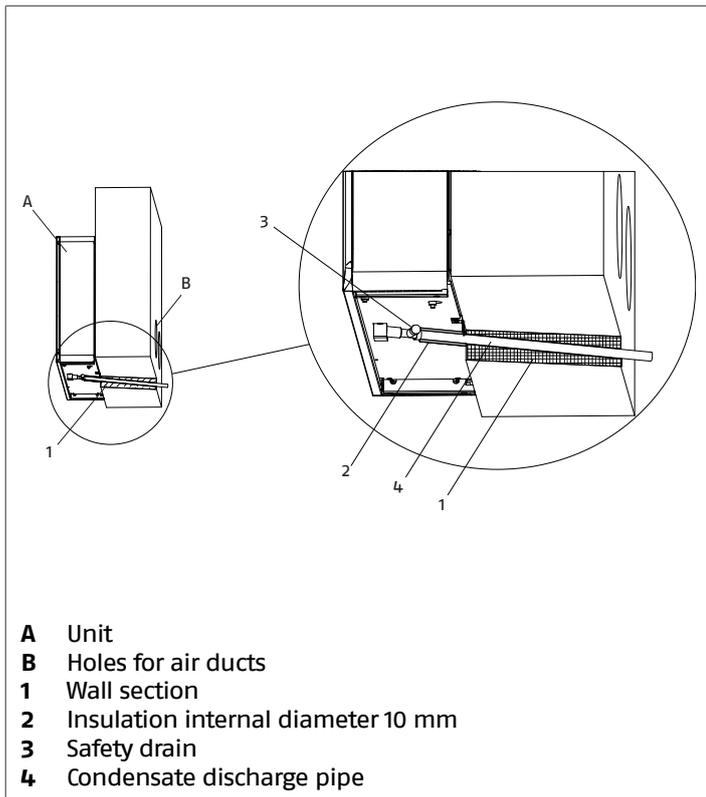
**⚠** The syphon must feature a plug in its lower part or must otherwise allow for a quick disassembly for cleaning purposes.

### 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 outdoor 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.

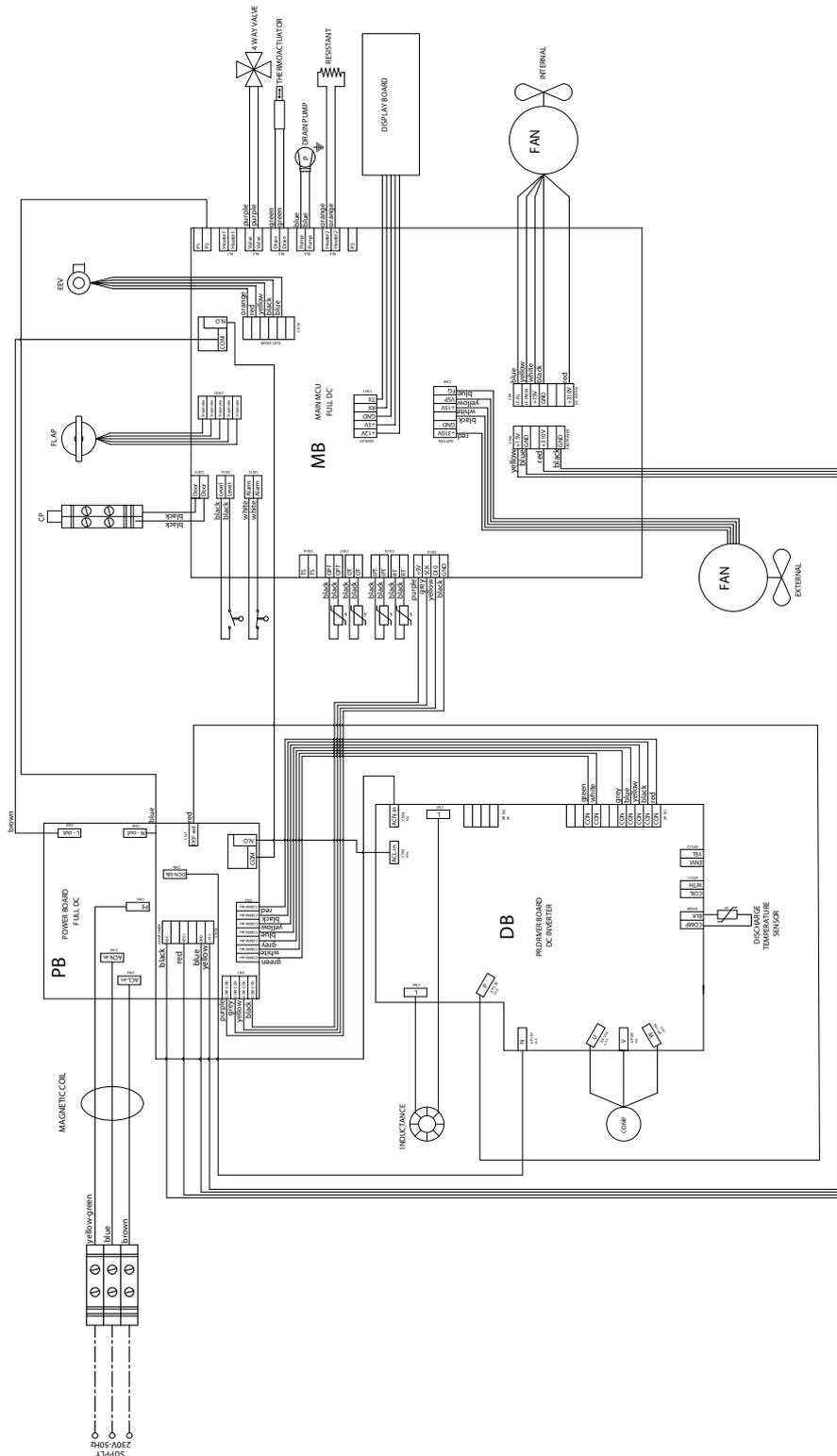
## Condensate drain pipe insulation

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 pipe is plugged into the connection provided on the unit.

2.11 Wiring diagram

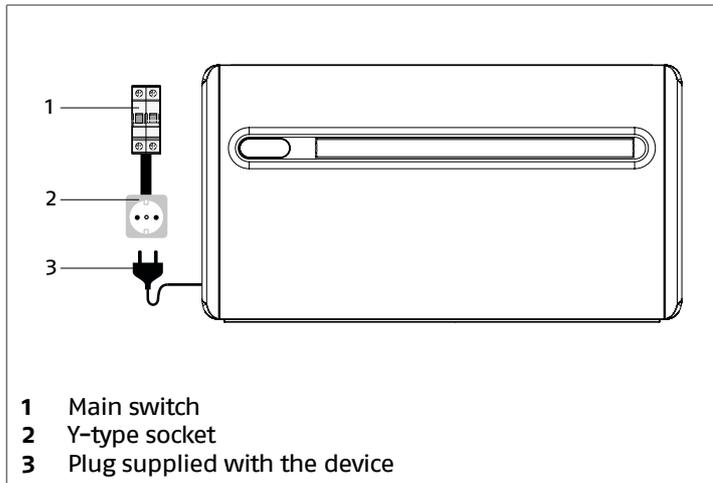


- RL2 Four-way valve
- RL3 Condensation drain valve
- RL4 Condensation pump
- RL4 Heater
- RL4 Air outlet deflector
- CN13 Presence contact

- CN14 Level float (N.A. contact)
- CN15 Maximum level float (N.C. contact)
- CN16 Room temperature probe
- CN17 Outdoor temperature probe (OT)
- CN17 Lower exchanger temperature probe (OPT)

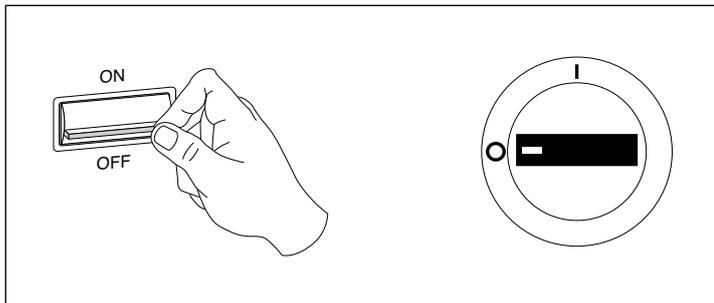
## 2.12 Electrical connection

**AARIA ONE INVERTER** leaves the factory fully wired and equipped 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.



If necessary, it is possible to remove the factory cable with plug and connect the power supply directly to the terminal block.

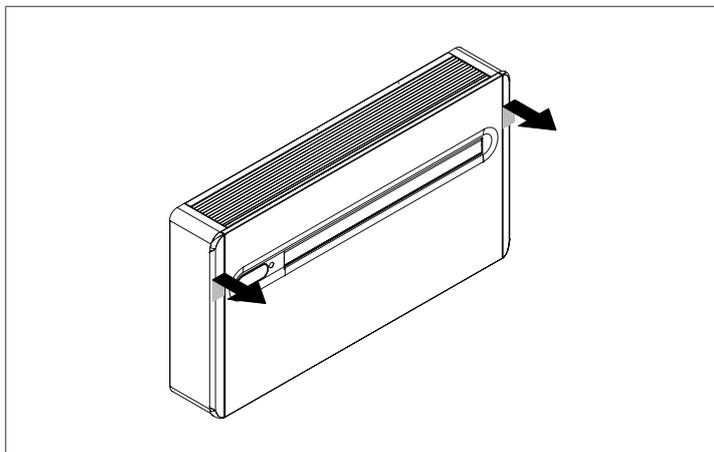
**⚠** This operation must be done only by **RIELLO** Technical Service or qualified personnel.



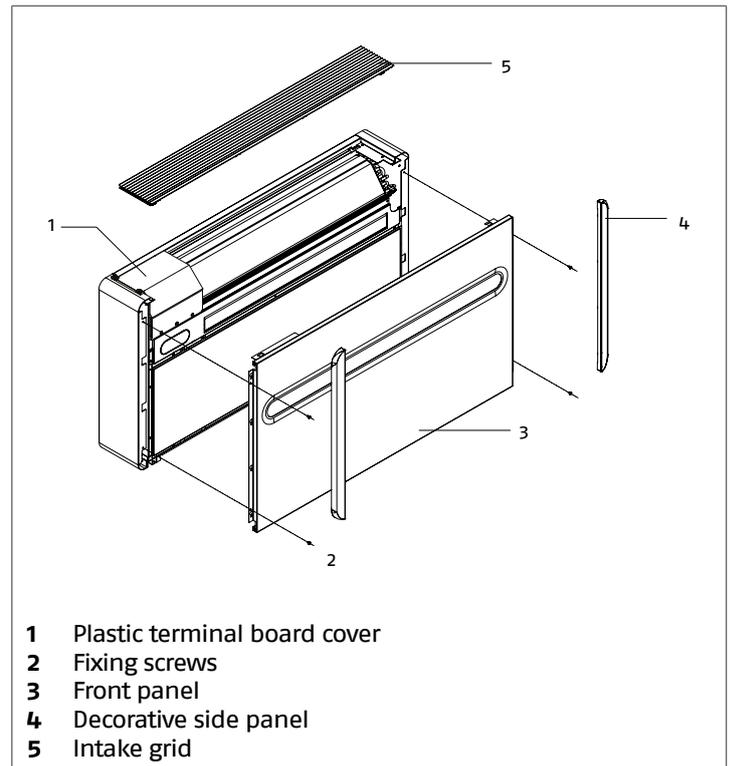
- position the system's main switch in the "OFF" position.

**⚠** Wait 10 minutes before touching the device electric components.

- To access the terminal board:



- lift the decorative side panels
- remove them by pulling horizontally

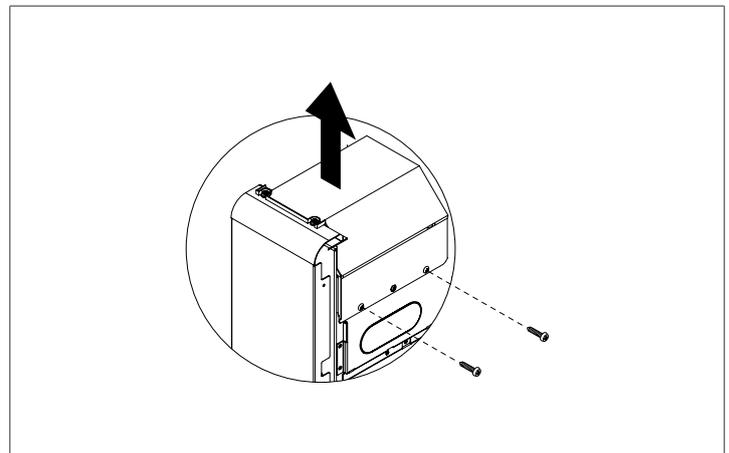


To remove the intake grille:

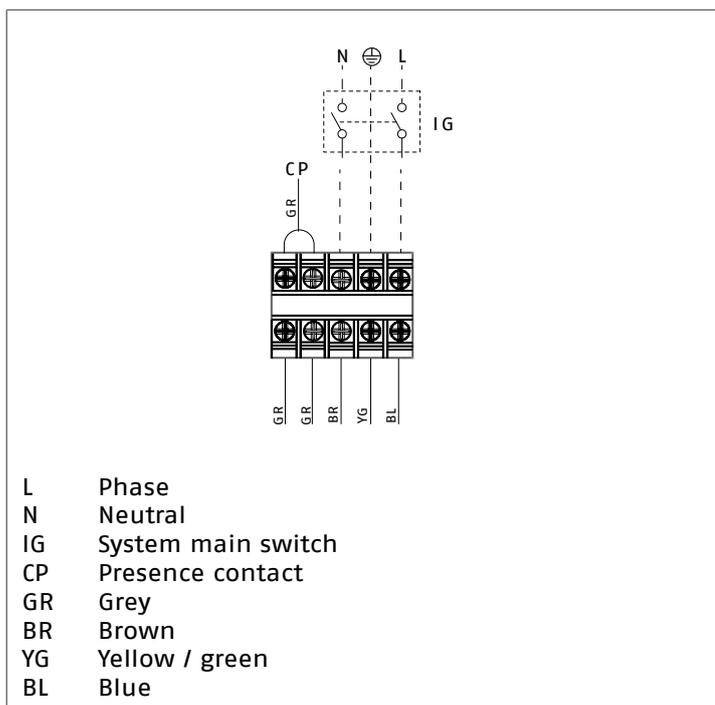
- push it downwards
- slide it forward
- remove it by lifting

After having removed the intake grille:

- unscrew the fastening screws
- remove the front panel



- unscrew the fastening screws
- remove the plastic terminal box
- open the cable guide
- remove the factory wired cable



– connect the new power cord  
 For the sizing of the electrical power cables and safety devices, use the following table:

Model		25
<b>Electrical characteristics</b>		
Power supply	V/Ph/Hz	230/1/50
Power cable	Type	Double insulation
Power cable	n. x mm <sup>2</sup>	3 x 1,5

- ⚠ The cable sections specified in the table are minimum requirements. The correct size must be calculated taking into account the actual length, the type of routing and other conditions set by the existing regulations.
- fasten the wires with the wire retainer
- complete the electric connections and refit all components by performing the described operations in reverse order

**Check that:**

- the characteristics of the power network are suitable for the device usage values
- the power supply voltage corresponds to the nominal value +/- 10%
- all of the power network disconnect devices must be equipped with contact openings (3 mm) in order to allow for complete disconnection, in accordance with the conditions required

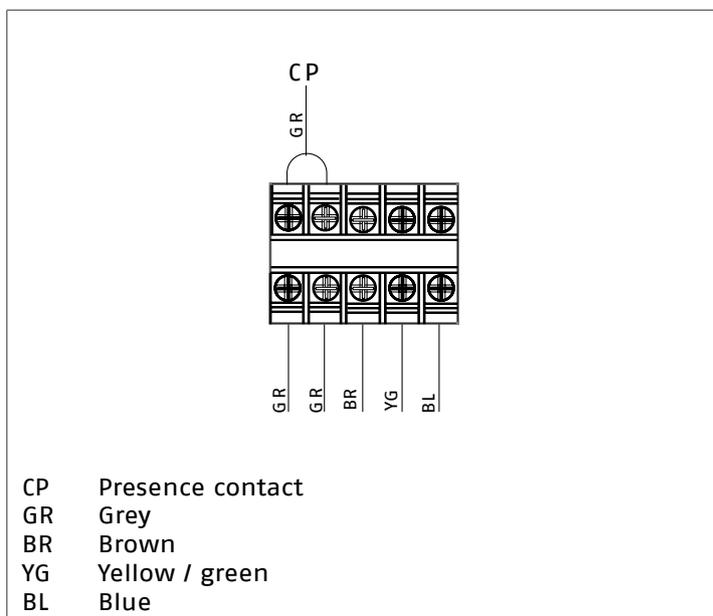
**Mandatory items:**

- have an omnipolar magneto-thermal circuit breaker and a padlockable disconnecting switch compliant with the IEC-EN Standards (contact opening of at least 3 mm), with adequate breaking power and differential protection, installed near the equipment
- connect the device to a properly functioning earthing system
- for any electrical intervention, always refer to the wiring diagrams contained within this booklet
- take anti-static precautions in case of weather conditions where humidity is less than 40%

- ⚠ Electric connections shall be made in compliance with national regulations.
- ⚠ Avoid placing the connection cables less than 1 metre away from radio and video systems.
- ⊖ It is forbidden to earth the device together with pipes, lightning conductors or the earthing system of a telephone line. Using an improper earthing system can cause electric shocks.
- ⊖ It is forbidden to connect other devices in parallel to the unit.

**Presence contact**

Through this contact it is possible to connect an external device that inhibits operation of the unit such as: window opening contact, remote on/off, infrared presence sensor, activation badge etc. In case of power failure, the unit will restart with the same settings if during the first 7 seconds after power supply is restored no action is performed.

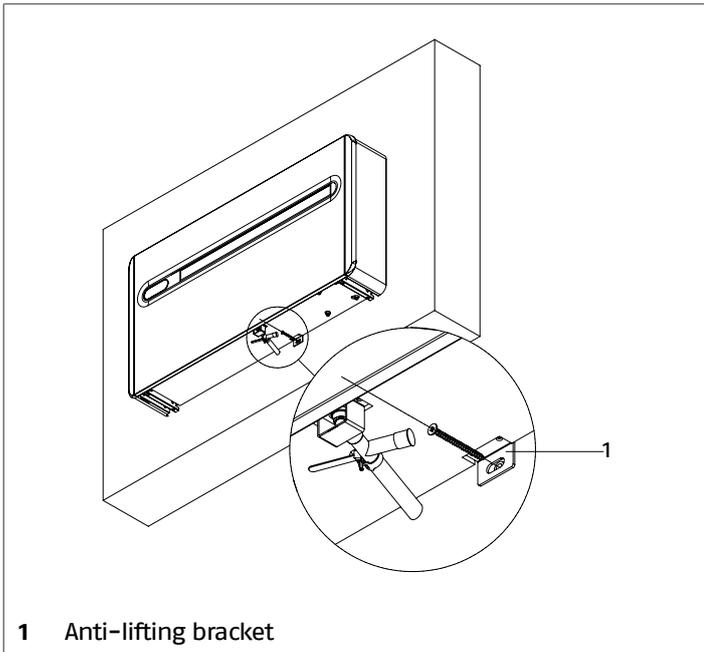


- To connect the contact:
- remove the jumper on the contact
  - connect to a dry contact
- Logic:
    - contact open: OFF, the control panel displays the symbol **CP**
    - contact closed: ON

- ⚠ Use a double insulated cable.
- ⚠ It is prohibited to connect in series the **CP** contact of multiple devices on the same dry contact.

**2.13 Mounting the low-wall unit**

After performing the connections:

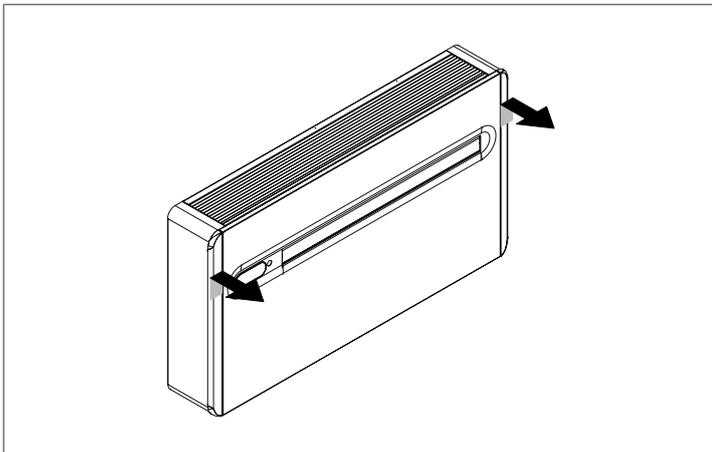


**1** Anti-lifting bracket

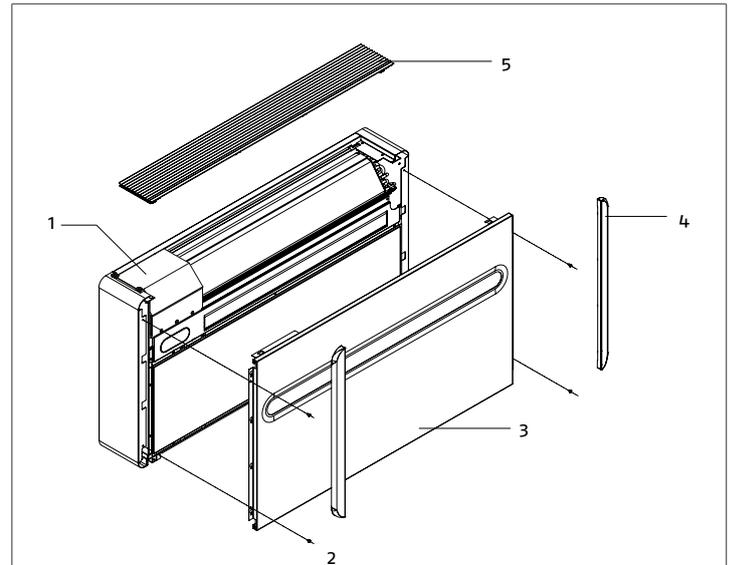
- remove the spacer
- lean the unit against the wall
- verify the absence of cracks between the rear of the unit and the external air ducts
- fasten the anti-lifting bracket to the support wall

**Mounting the high-wall unit**

The device is supplied with a lower closure panel to be installed in the case of high-wall installation.  
To install:



- lift the decorative side panels
- remove them by pulling horizontally



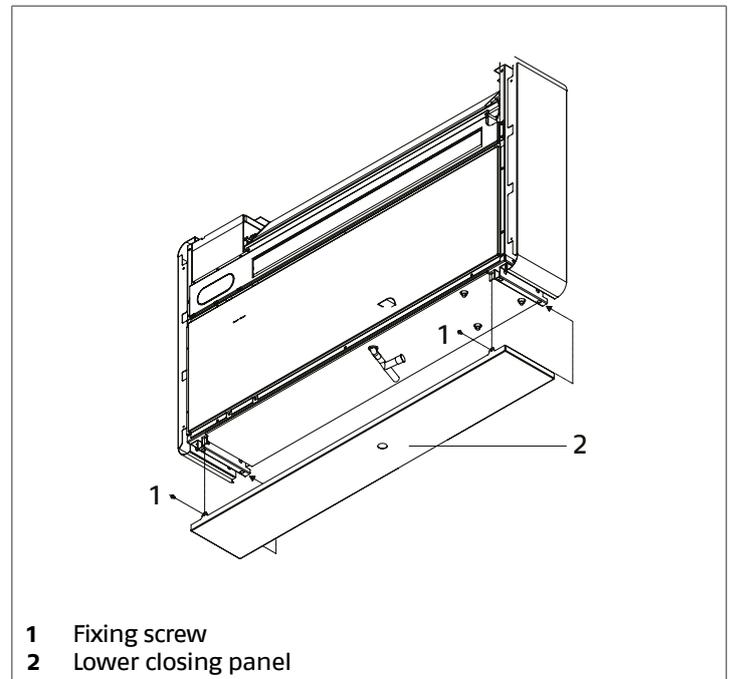
**1** Plastic terminal board cover  
**2** Fixing screws  
**3** Front panel  
**4** Decorative side panel  
**5** Intake grille

To remove the intake grille:

- push it downwards
- slide it forward
- remove it by lifting

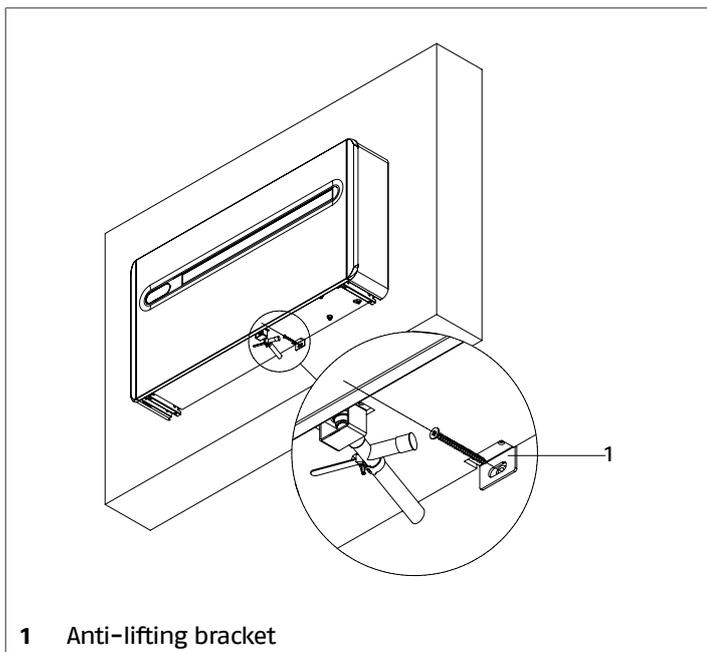
After having removed the intake grille:

- unscrew the fastening screws
- remove the front panel



**1** Fixing screw  
**2** Lower closing panel

- hook the bottom panel without fastening it with screws



1 Anti-lifting bracket

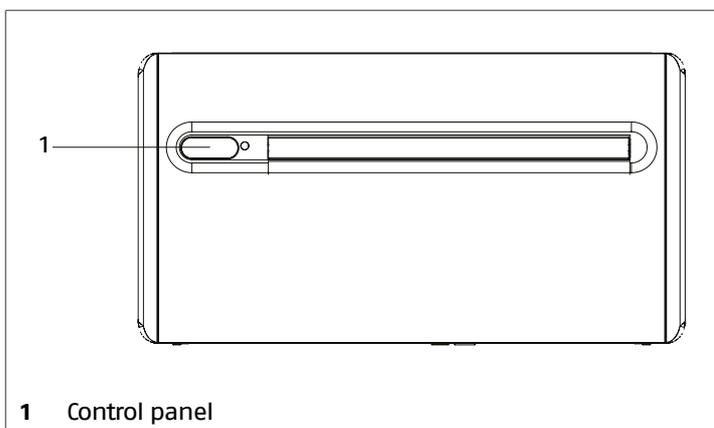
- lean the unit against the wall
- verify the absence of cracks between the rear of the unit and the external air ducts
- fasten the anti-lifting bracket to the support wall
- close the lower panel
- secure with screws
- refit all components by performing the described operations in reverse order

## 2.14 Controls

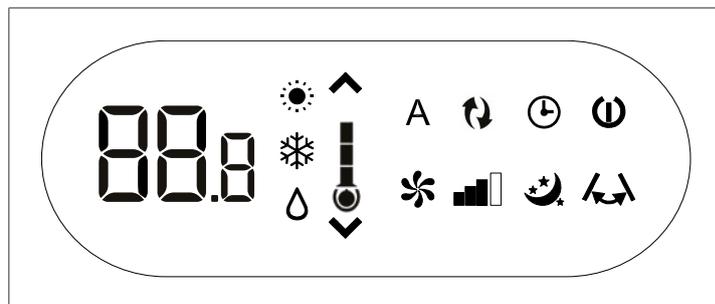
Control, adjustment and programming are carried out using the on-board control panel or the infrared remote control. The electronics modulates the device operation according to the temperatures detected by the probes.

### Control panel on board the unit

The control panel on board the unit is equipped with a touch screen. Pressing the symbols activates their associated functions, and the screen also displays the active mode of operation, the temperature and any alarms.



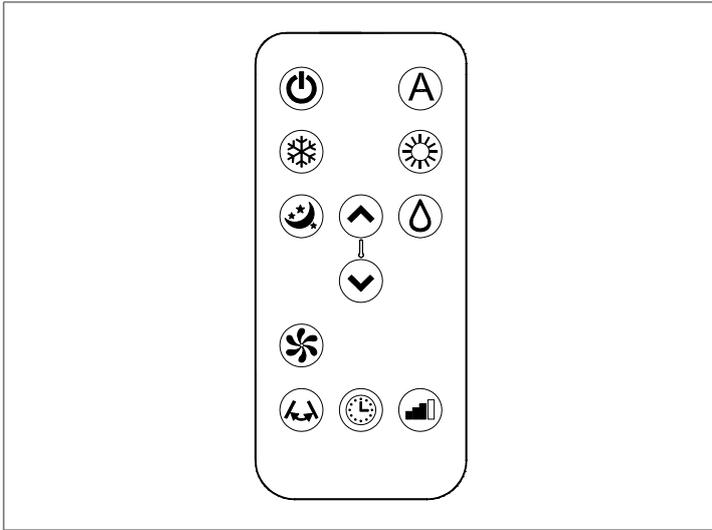
1 Control panel



### Keys and symbols

- |      |  |
|------|--|
| 88.8 | 1. Value of the temperature desired<br>2. Setting value of some functions<br>3. Alarm code                         |
|      | It activates the Heating mode  |
|      | It activates the Cooling mode  |
|      | It activates the Dehumidification mode   |
|      | Indicates the ambient temperature level from 1 to 7:   |
|      | Indicates activation of Maximum power function:  |
|      | Increases the value of the selected parameter  |
|      | Decreases the value of the selected parameter  |
|      | Enables Automatic mode   |
|      | Enables Fan mode   |
|      | Enables Hotel function   |
|      | 1. Select required ventilation speed: minimum, medium, maximum or automatic<br>2. Enables Maximum power function   |
|      | 1. Enables Timer function<br>2. Locks or unlocks key operation   |
|      | It activates the Sleep function  |
|      | It switches the device on and off  |
|      | It activates and deactivates the automatic movement of the horizontal deflector or stops it in a specific position |

Remote control



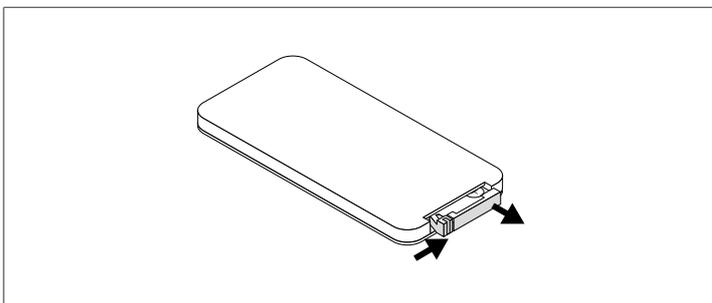
Function keys

-  It switches the device on and off
-  Enables Automatic mode
-  It activates the Cooling mode
-  It activates the Heating mode
-  It activates the Dehumidification mode
-  Increases the value of the selected parameter
-  Decreases the value of the selected parameter
-  It activates the Sleep function
-  Enables Fan mode
-  It activates and deactivates the automatic movement of the horizontal deflector or stops it in a specific position
-  1. Enables Timer function  
2. Locks or unlocks key operation
-  1. Select required ventilation speed: minimum, medium, maximum or automatic  
2. Enables Maximum power function

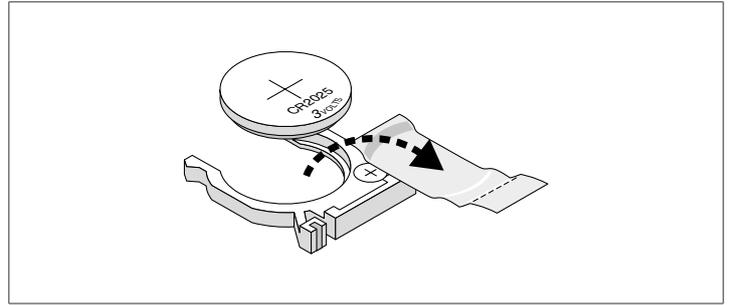
Inserting the battery

The remote control is powered with a dry lithium battery (CR2025 3.0 V) housed on a support inserted into a slot on the underside. For the first installation, a CR2025 3.0 V battery is supplied already housed in the remote control with the contact being protected by a plastic film.

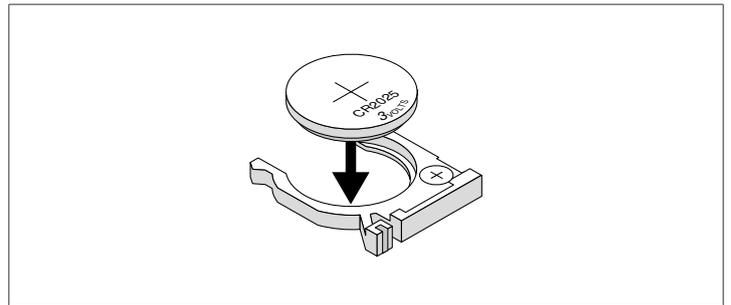
To remove the protective film:



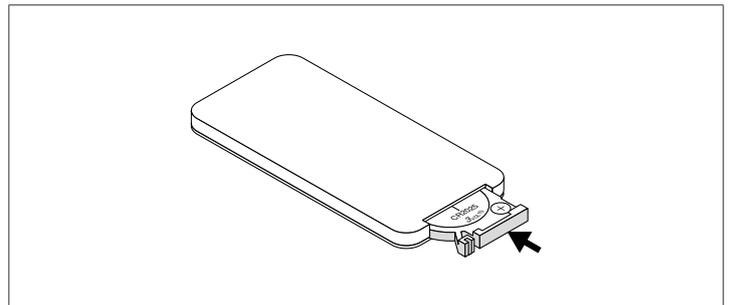
- press the side tab
- extract the battery holder



- remove the protective film



- put the battery back in place



- insert the battery holder into the remote control

Positioning

The underside of the remote control has a magnet so it can be attached to the device or on any metal surface.

### 3 COMMISSIONING AND MAINTENANCE

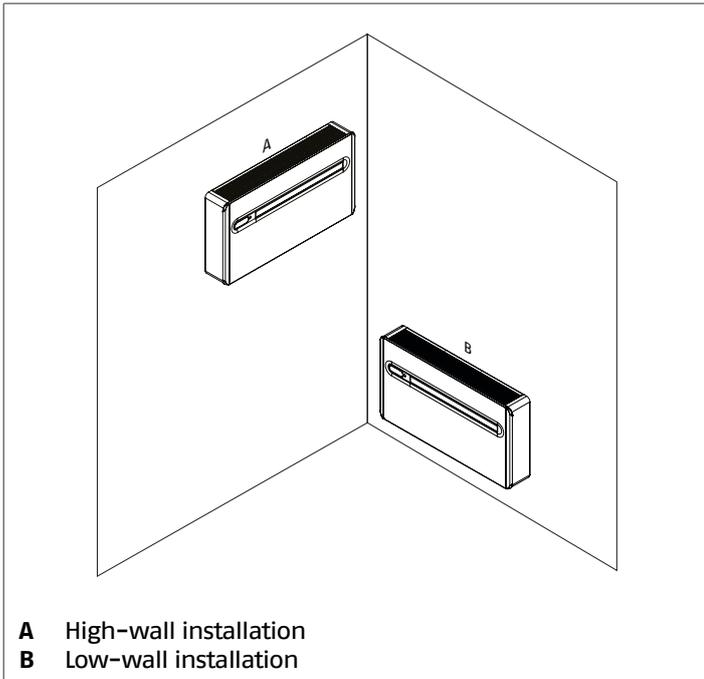
#### 3.1 Preparation for first commissioning

Prior to commissioning, it is necessary to check that:

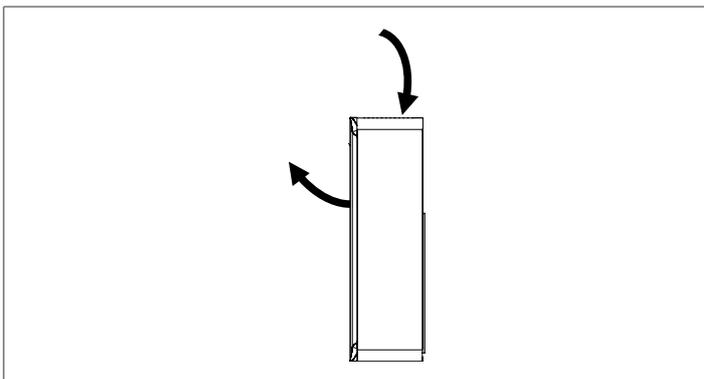
- all the safety conditions have been met
- all distances have been respected
- the electrical connections have been properly completed
- the condensation drain has been installed correctly
- the external air dampers are installed correctly
- the ducts have been made correctly
- power supply values are correct.
- the earthing has been carried out correctly

#### Configuring the installation

The unit can be installed either on the lower part of the wall and on the upper part. To optimise the distribution of the air and the comfort of the environment, the direction of air flow can be modified by changing the direction of the air deflector and adjusting the electronic settings.



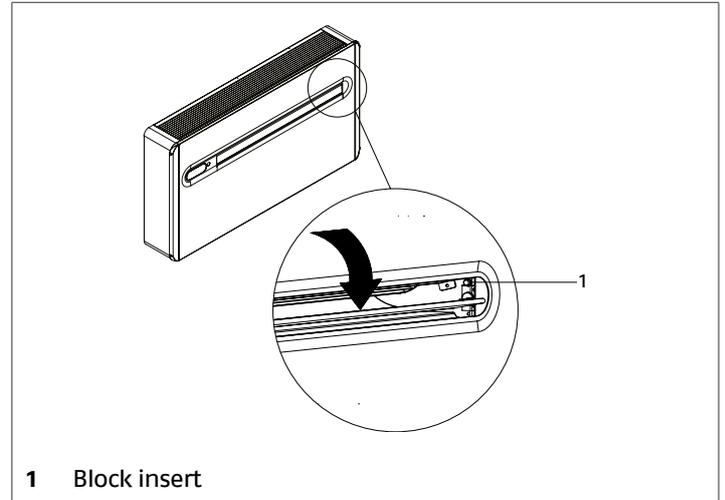
#### Air flow upwards (factory setting)



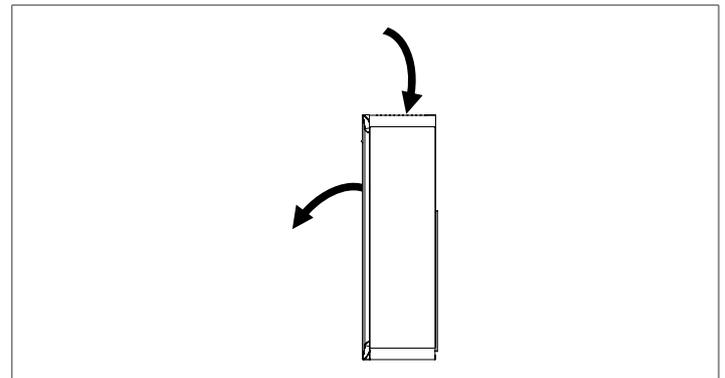
Recommended for:

- low-wall installation
- high-wall installation when used in cooling mode only

Block insert position.



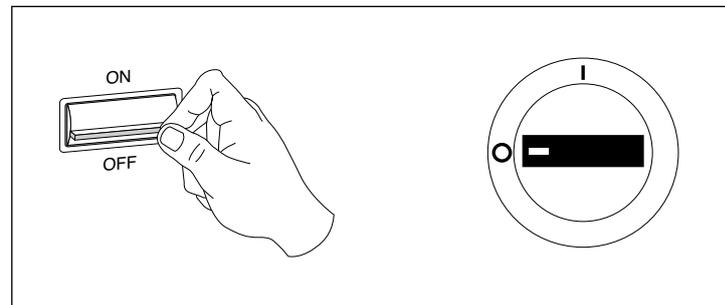
#### Air flow downwards (change of the factory setting)



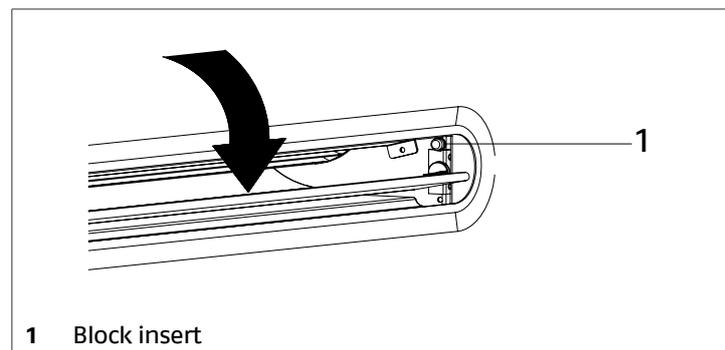
Recommended for:

- high-wall installation

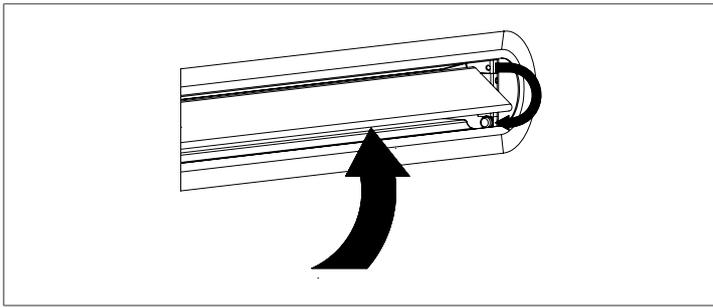
To change the configuration:



- position the system's main switch in the "OFF" position.

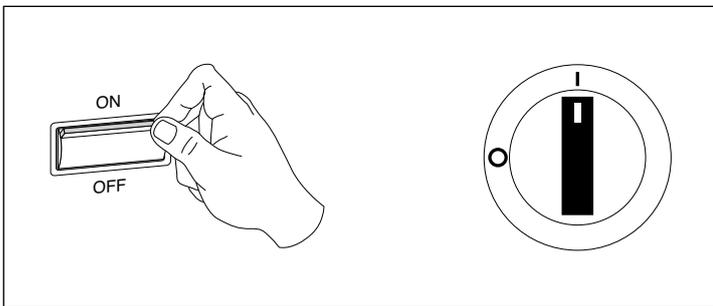


- gently open the air deflector
- remove the block insert



- rotate the deflector in the other direction
- position the block insert in the lower part

After performing the mechanical operations it is necessary to configure the electronic control unit:



- position the system's main switch in the "ON" position.



- use the control panel
- press and hold  for 5 seconds

The symbol **dn** flashes, air flows upwards.



- press 

The symbol **up** appears, air flows downwards.

Not performing other operations for 3 seconds, the setting is saved.

### Setting cooling only or heating only mode

The device is factory set to operate in both cooling and heating

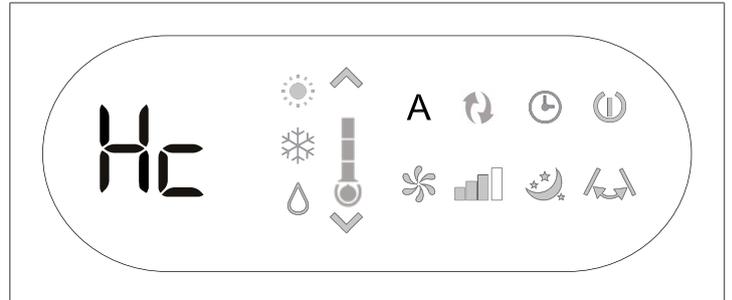
modes. In some applications it may be necessary to change this setting.

Available settings:

- Hc: cooling and heating (factory setting)
- Co: cooling only
- Ho: heating only

To change:

- position the system's main switch in the "ON" position.



- use the control panel
- press and hold **A** for 5 seconds

The symbol **Hc** flashes.

- press and hold **A** for 1 second

The symbol **Co** flashes.

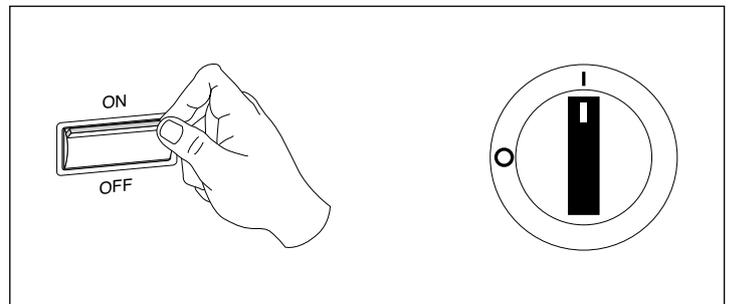
- press and hold **A** for 1 second

The symbol **Ho** flashes.

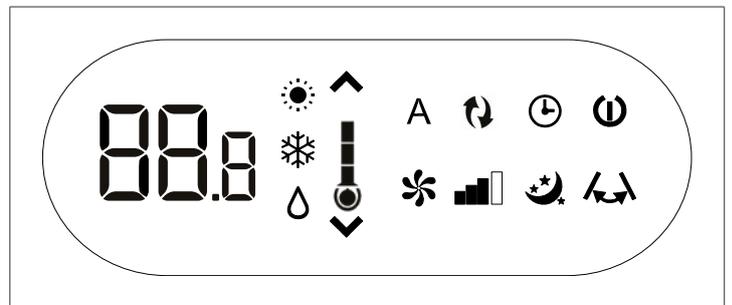
Not performing other operations for 3 seconds, the setting is saved.

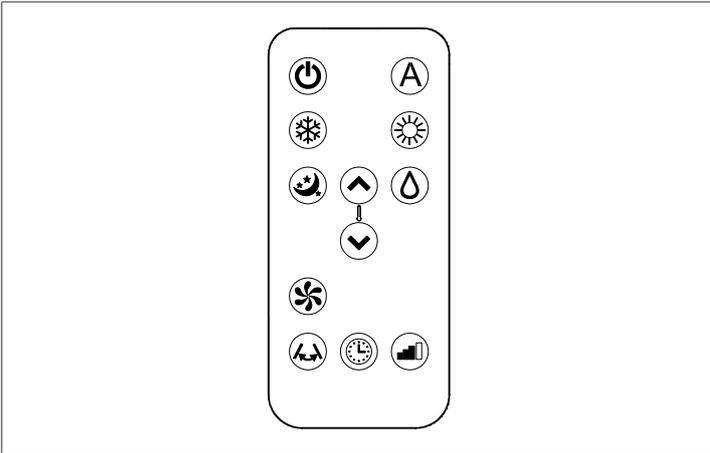
### 3.2 Putting into service

After having completed all the operations required to prepare for first commissioning, do the following to activate the device:



- position the system's main switch in the "ON" position.





- activate the unit with the control panel or the remote control
- check its operation in the different modes

**⚠** The compressor activates 3 minutes after unit activation.

**⚠** Refer to the user booklet as for the use of the control panel and remote control.

**⊘** Do not manually move the deflector.

### Checks during and after the first commissioning

After starting the device, check that:

- the current consumed by the compressor is less than the maximum permitted
- the device is operating under the recommended operating conditions
- the unit is able to stop and start up again

**⚠** Should any of the above-listed controls have problems: turn the device off and call the Technical Service immediately.

**⚠** Do not touch the device pipes to prevent potential burns.

**⚠** Take anti-static precautions in case of weather conditions where humidity is less than 40%.

### 3.3 Temporary shutdown

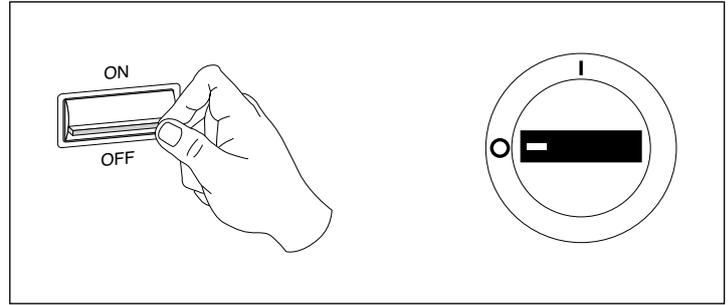
In order to shut down the unit for periods of brief absences:

- deactivate the unit using only the on-board control panel or remote control

### 3.4 Stop for an extended period of time

If the device has not been used for an extended period of time, carry out the following operations:

- start the device in ventilation mode
- select the maximum speed
- let the device run for 6 hours
- deactivate the unit with the control panel or the remote control



- position the system's main switch in the "OFF" position.

### 3.5 Ordinary maintenance

Routine maintenance is fundamental for keeping the equipment efficient, safe and reliable. It can be performed periodically by the Technical Support Service, whose staff is technically qualified and can use genuine spare parts, if necessary.

**⚠** Original conditions must be restored after performing the required maintenance operations.

**⚠** All described operations MUST be carried out under the following conditions:

- cold device
- device NOT supplied with electric power
- suitable personal protection equipment

**⊘** Do not open the access covers and carry out technical or cleaning activities before disconnecting the unit from the power grid by positioning the system's main switch in the "OFF" position

### Monthly operations

The following checks are part of the monthly maintenance plan:

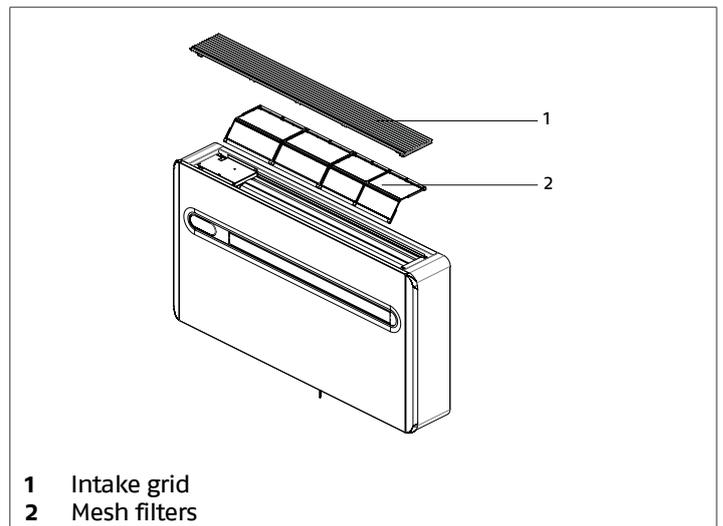
- cleaning the housing and front panel
- mesh filter cleaning

#### Cleaning the housing and front panel

- wet a sponge or soft cloth with water and soap to wash
- once cleaning is over dry surfaces with care

**⚠** Do not use water at a temperature that is higher than 40°C, powder or abrasive detergents, solvents and brushes.

#### Mesh filter cleaning



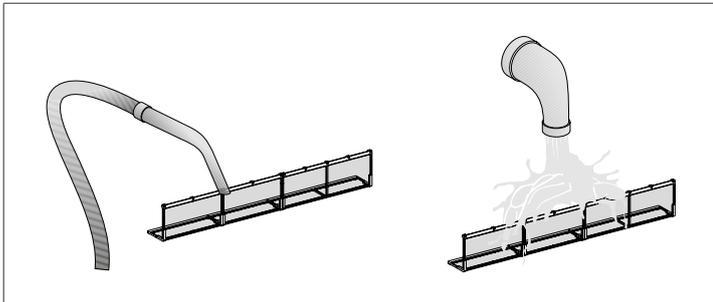
- 1 Intake grid
- 2 Mesh filters

To remove the intake grille:

- push it downwards
- slide it forward
- remove it by lifting

After having removed the intake grille:

- extract the mesh filter



- remove dust with a vacuum cleaner

**⚠** Stubborn dirt can be removed by washing the filter in a luke warm (max. 40°C) solution of water and neutral detergent. After washing, rinse the filters well and leave to dry in the shade.

**⚠** Exposing the filters to the sun or washing them with water at a temperature that is higher than 40 °C can cause the filters to shrink.

**⊖** It is forbidden to use the device without mesh filter.

### Yearly operations

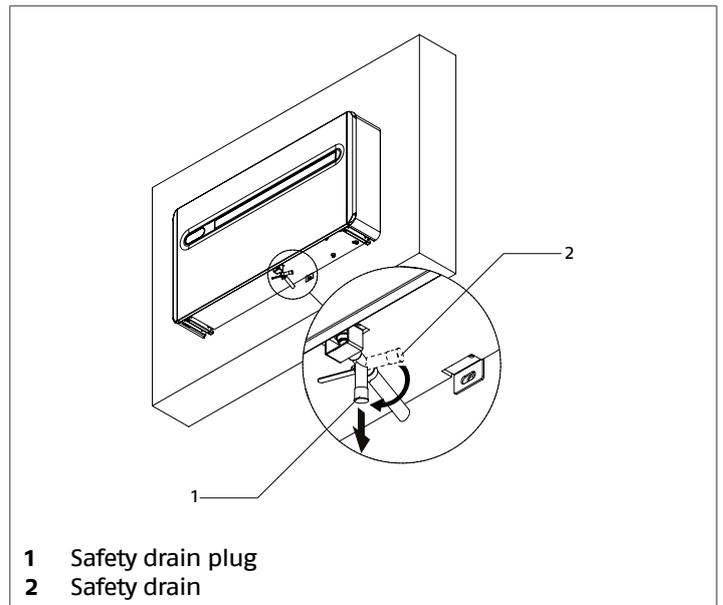
The annual maintenance plan includes the following checks:

- power supply voltage
- electric connection tightening
- hydraulic joint status
- condensate tray cleaning
- electric absorption
- operation of the condensation drain

### 3.6 Extraordinary maintenance

#### Safety drain

If needed it is possible to empty the condensation collection pan through a safety drain provided on the base of the device.



- 1 Safety drain plug
- 2 Safety drain

To drain the pan:

- rotate the drain pipe downwards
- positioning a container to collect the condensation
- remove the plug

If the lower closing panel is present, it must be removed prior to draining.

#### Removal

In case of replacement or extraordinary reparations, you may need to remove the unit.

Proceed as follows to remove the capacitors:

- deactivate the unit with the control panel or the remote control
- position the system's main switch in the "OFF" position.
- disconnect the condensate discharge
- disconnect the electric connections
- remove the screw securing the anti-lifting bracket
- push up and release the unit from its metallic support
- remove the unit

### 3.7 Alarms

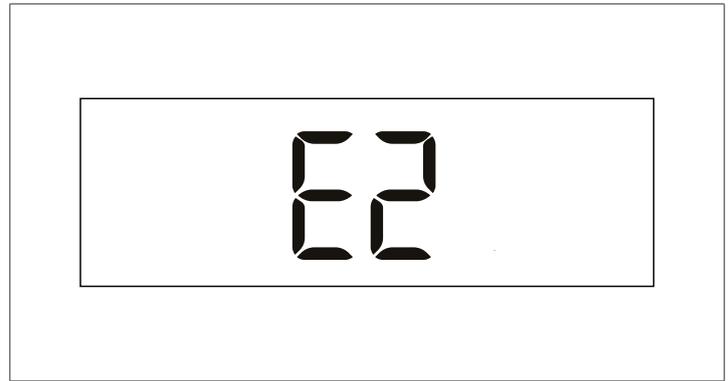
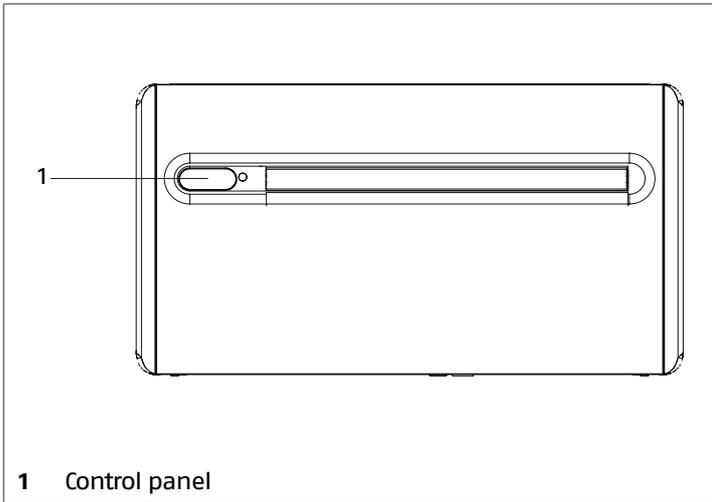
In the presence of operating abnormalities, the unit is secured and blocked.

**⚠** Safety block can occur randomly.

**⚠** Wait for at least 10 minutes before restarting the unit.

**⚠** If the fault occurs again, an accurate check of the device components is required. Contact **RIELLO** Technical Support Service.

Faults are communicated through a code on the unit's control panel.



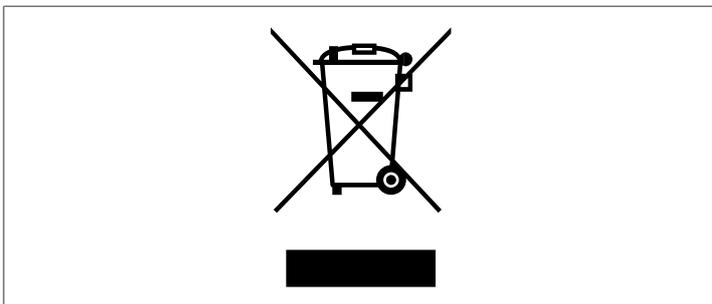
**Fault codes**

Code	Description	Remarks
E1	Room probe fault	Cooling, Dehumidifying and Heating modes remain active The adjustment only monitors the internal battery antifreeze
E2	Upper exchanger probe fault	The unit resets after problem resolution
E3	Outdoor air temperature probe fault	
E4	Lower exchanger probe fault	Cooling, Dehumidifying and Heating modes remain active Defrosting operates at fixed time cycles
E5	Upper fan motor fault	The unit resets after problem resolution
E6	Lower fan motor fault	
E7	Communication error between unit and control panel Communication error between electronic boards	The unit resets upon contact closure
E8	Compressor outlet probe fault	
CP	Presence contact open	The unit resets after problem resolution
OF	Maximum level float triggering	

**⚠** In case of simultaneous failure of two probes, the unit turns off and resets after the resolution of the problem.

**4 DISPOSAL**

Packaging materials shall be disposed of separately so as to recover and recycle them. At the end of its service life, the device shall be disposed of according to the existing legislation.





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As the manufacturer is constantly improving its products, the aesthetic or dimensional features, the technical data, the equipment and accessories indicated could be subject to variations.