

# AMD P

SERIES R32

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

**RIELLO AMD P 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
- ErP Directive 2009/125/EC and Regulation 2012/206/EC
- WEEE Directive 2012/19/EU
- F-Gas Regulation 2014/517/EU



## WARRANTY

**RIELLO** product has a **Conventional Warranty** (valid for Italy, Republic of San Marino, Vatican City), starting from the product's date of purchase.

### WARNING

Keep the product purchase documents for tax purposes to be presented to the Authorised Technical Support upon request of a service call under warranty.

Find the nearest Authorised Technical Support by visiting the website

[www.riello.it](http://www.riello.it)

**Support // Authorized Support Centre**

 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.

## RANGE

Model	Code
AMD 25 PA	20151422
AMD 35 PA	20151424
AMD 50 PA	20151425
AMD 70 PA	20151426
AMD 70 PB	20151427

### 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 (RISK OF FIRE):** the unit uses a flammable refrigerant.



For more information, see the installation and technical service instructions.



Before performing maintenance and service tasks, read the installation and technical service instructions.



Before the installation, read the installation and technical service instructions.

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.

## 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 uses R32 refrigerant gas and must be installed in rooms with a minimum floor area A (m<sup>2</sup>), as indicated in the table in the installation **location paragraph**.
-  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.
-  Do not place any inflammable object (spray cans) within a 1 metre radius from the air expulsion.

 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.

 The R32 refrigerant gas is slightly inflammable and odourless. Carefully read the safety data sheet available from the dealer.

 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.
-  It is forbidden to touch the device while barefoot or with wet body parts.
-  Do not spray or throw water directly on the unit.
-  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 adjustment devices without the manufacturer's authorisation.
-  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 AMD P** is a duct installation indoor unit, suitable for small business premises in combination with the outdoor unit. The multiple-speed fan DC motor improves performance and sound comfort. Control, regulation and programming of the unit are carried out by means of the wired control panel, whose functions and use are detailed in the user manual.

### 1.4 Safety and adjustment devices

The device safety and setting are achieved thanks to:

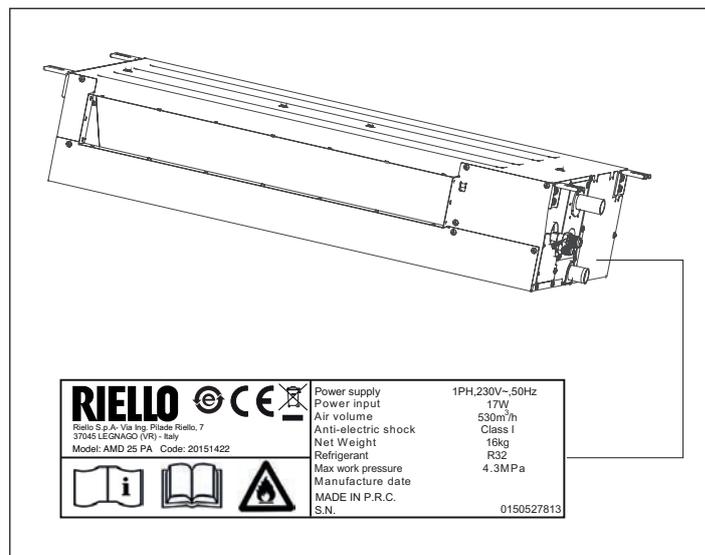
- heat exchanger temperature sensor transmitting the detected value to the control panel, which is triggered in case of abnormal temperature with regard to the operating mode
- room air temperature sensor transmitting the detected value to the control panel in order to control the operation of the outdoor unit and regulate the room temperature

**!** 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:

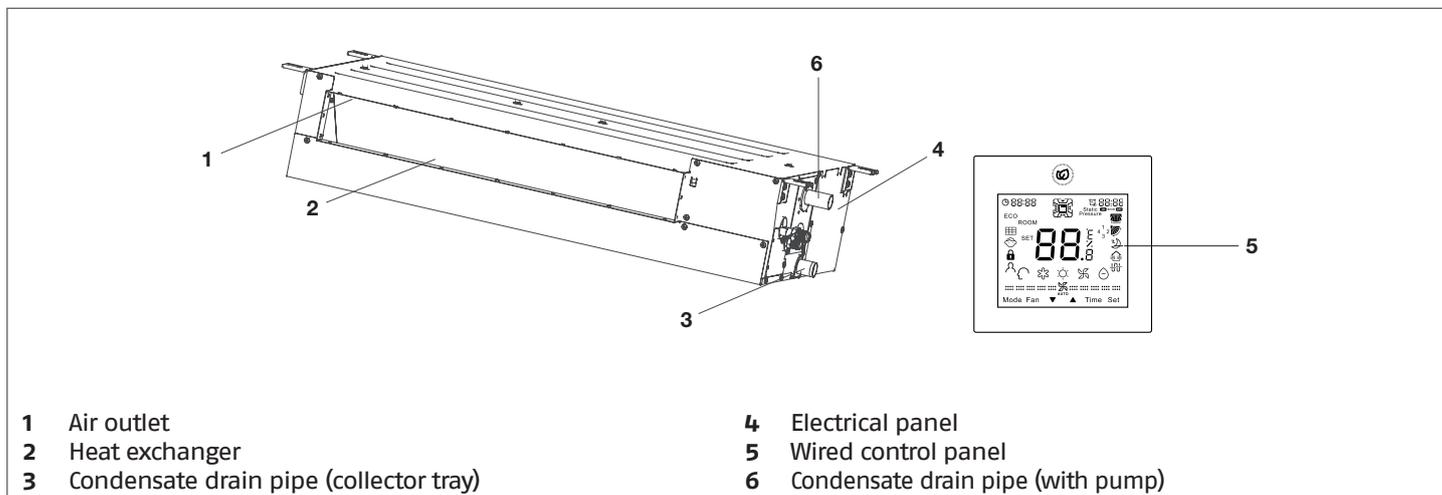


#### Technical data plate

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



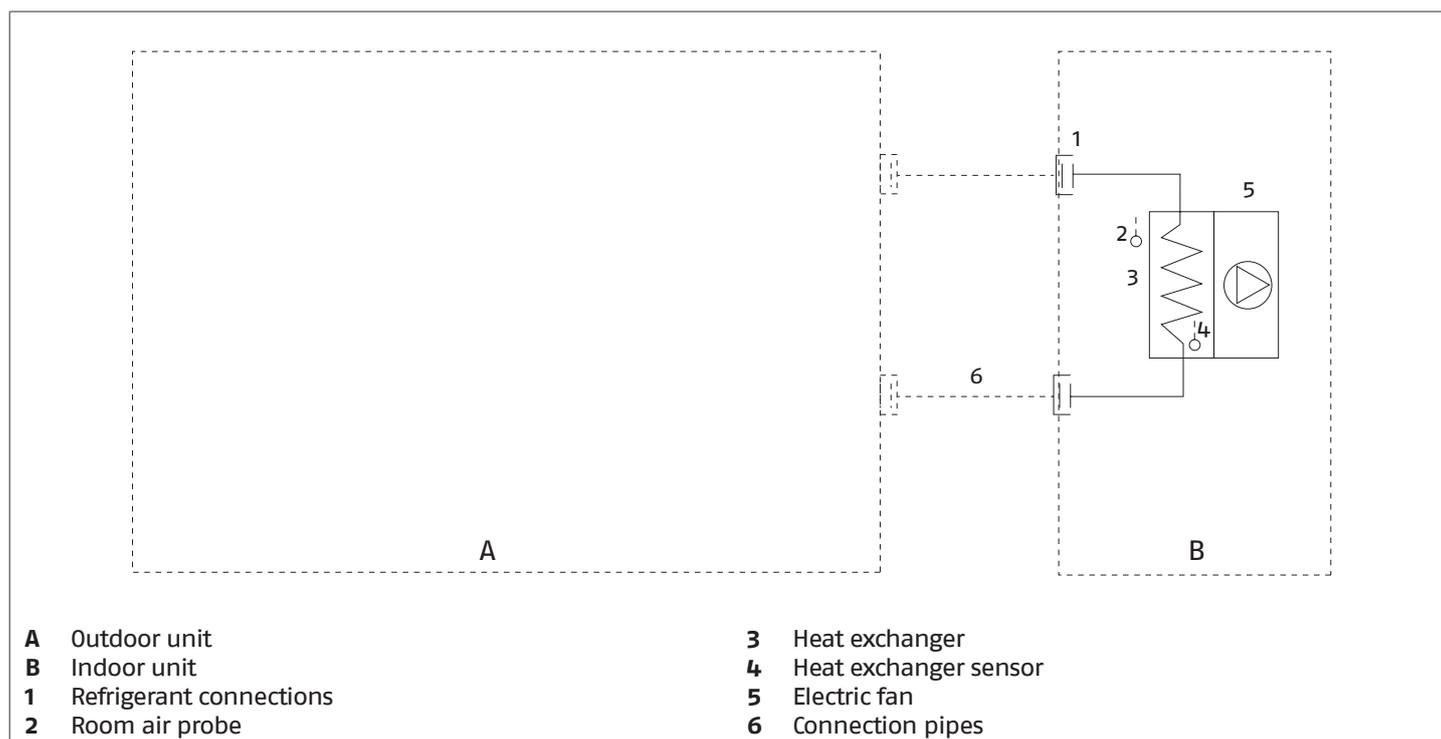
## 1.7 Technical specifications

Model	25 A	35 A	50 A	70 A	70 B	
<b>Fan</b>						
Quantity	2	2	3	3	2	
Nominal power input	17	28	55	65	200	W
Nominal current consumption	0,07	0,12	0,24	0,28	0,87	A
Maximum air flow	530	600	900	1000	1440	m3/h
Medium air flow	460	480	750	850	1260	m3/h
Minimum air flow	390	420	600	750	1100	m3/h
Superminimum air flow	330	350	450	650	900	m3/h
Maximum speed	850	950	900	1250	850	rpm
Medium speed	750	850	800	1100	750	rpm
Minimum speed	650	750	700	1000	650	rpm
Super minimum speed	600	700	600	900	600	rpm
<b>Cooling sound levels</b>						
Superminimum sound pressure <sup>(1)</sup>	23	26	27	30	30	dB(A)
Minimum sound pressure <sup>(1)</sup>	26	29	32	33	37	dB(A)
Medium sound pressure <sup>(1)</sup>	30	32	34	35	43	dB(A)
Maximum sound pressure <sup>(1)</sup>	33	35	36	38	47	dB(A)
Maximum sound power	51	53	54	57	58	dB(A)
<b>Heating sound levels</b>						
Superminimum sound pressure <sup>(1)</sup>	24	27	28	31	31	dB(A)
Minimum sound pressure <sup>(1)</sup>	27	30	33	34	38	dB(A)
Medium sound pressure <sup>(1)</sup>	31	33	35	36	44	dB(A)
Maximum sound pressure <sup>(1)</sup>	34	36	37	39	48	dB(A)
Maximum sound power	52	54	55	58	59	dB(A)

(1) Free field value at 1 meter unit face, in compliance with GB / T7725-2004

 Performance data are indicated in the matching outdoor unit manual.

## 1.8 Cooling circuit



## 2 INSTALLATION

- ⚠** Ensure that the installation and operation sites are properly ventilated in order to disperse any gas leaks that could cause flames during activities with intense heat generation and high temperature.
- ⚠** Avoid proximity to sources of ignition in continuous operation (open flames, gas household appliances, electric stoves, lit cigarettes, etc).
- ⚠** Use equipment suitable for the system refrigerant.
- ⚠** Use an electronic leak finder properly calibrated for the system refrigerant.
- ⊖** It is forbidden to use leak finders with halogen lamps.

### 2.1 Receiving the product

**RIELLO AMD P** 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
- user instruction booklet in Italian
- user instruction booklet in English
- Warranty/Spare parts labels.
- contact sheets

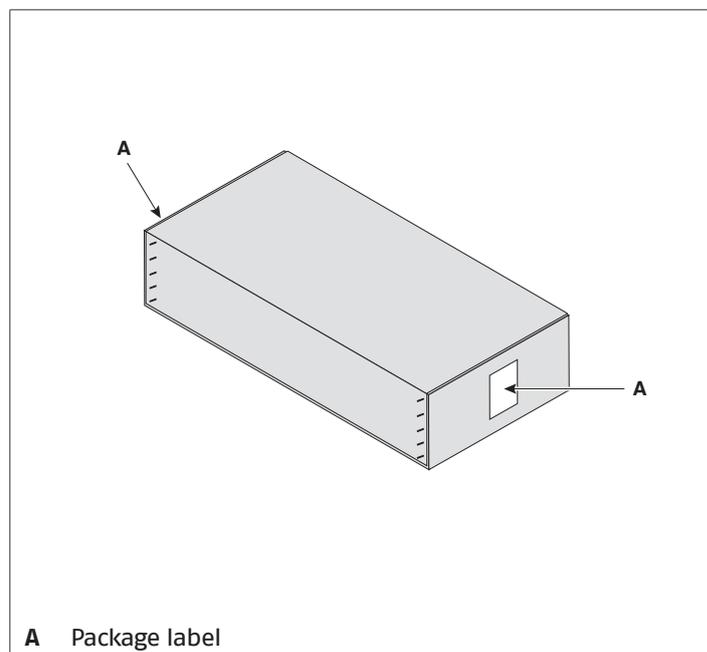
It is also supplied as kit:

- wired control panel
- no. 2 screws for wired control panel support
- connecting wire of control panel
- hose clamp
- flare nut for liquid pipe
- flare nut for gas pipe
- condensate discharge pipe

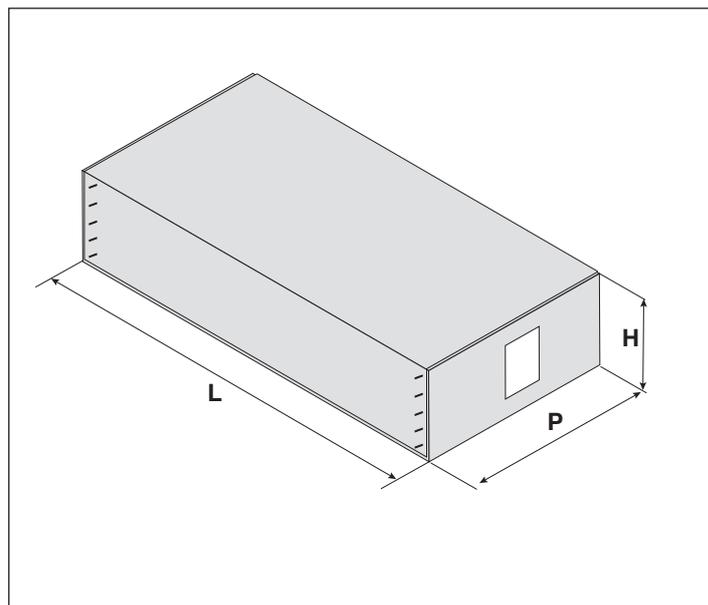
**⚠** The Instruction book comes with the equipment and it should be taken, read and kept carefully.

**⚠** 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.

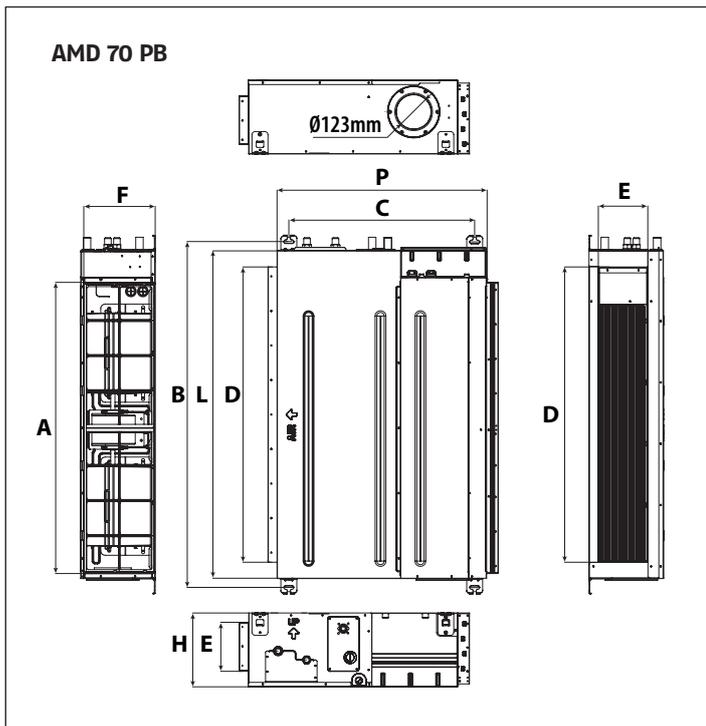
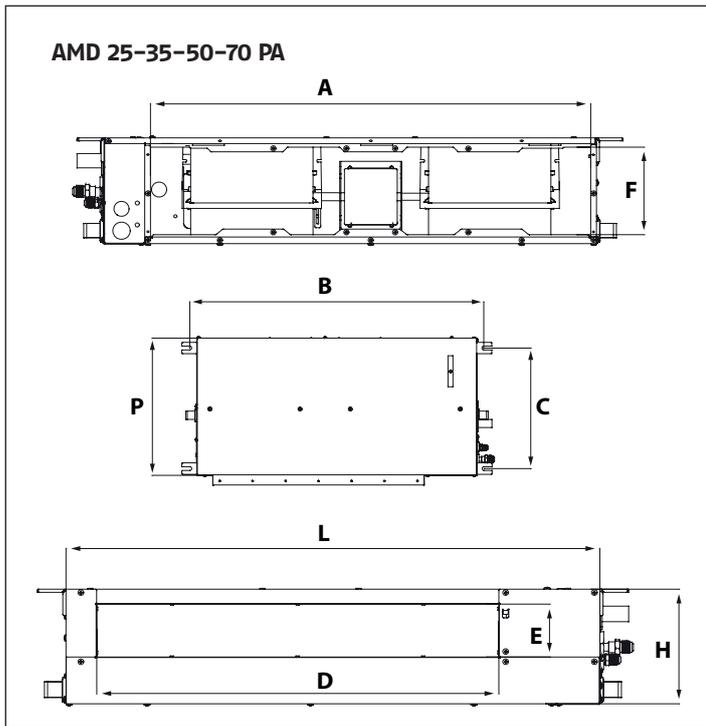
### 2.2 Labels positioning



### 2.3 Dimensions and weight



Model	25 A	35 A	50 A	70 A	70 B	
<b>Packaging dimensions</b>						
H	245	245	245	245	280	mm
L	1030	1030	1350	1350	1332	mm
P	515	515	515	515	835	mm
Weight	20,5	20,5	27,5	27,5	40	kg



Model	25 A	35 A	50 A	70 A	70 B	
<b>Product dimensions</b>						
L	850	850	1170	1170	1100	mm
P	420	420	420	420	700	mm
H	185	185	185	185	248	mm
A	760	760	1080	1080	978	mm
B	892	892	1212	1212	1162	mm
C	370	370	370	370	620	mm
D	640	640	960	960	992	mm
E	90	90	90	90	165	mm
F	152	152	152	152	238	mm
Weight	15,5	15,5	21,5	21,5	36	kg

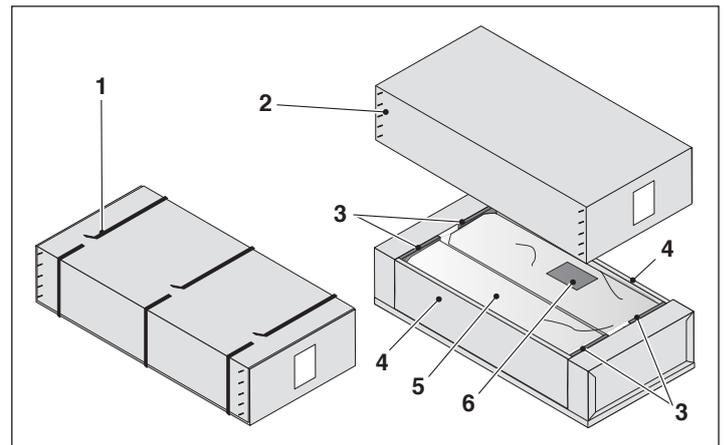
## 2.4 Storage

**⚠** 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.

The product can be handled manually.



Follow the below instructions for packing removal and product handling:

- transport the equipment in the installation place
- cut strapping bands (1)
- lift and remove the cardboard pack (2)
- remove the polystyrene (3) and the cardboard (4) elements
- remove the polyethylene bag (5)
- remove document envelope (6)
- remove accessories and control panel from the fan compartment.

**⚠** 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 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 product uses R32 refrigerant gas and must be installed in rooms with a minimum floor area A (m<sup>2</sup>), as indicated in the following table, depending on the total refrigerant charge of the system (given by the sum of the factory charge of the outdoor unit and, if applicable, the additional charge)

**⚠** The product uses R32 refrigerant gas and must be installed in rooms with a minimum floor area A (m<sup>2</sup>), as indicated in the table in the installation location paragraph.

**!** The amount of refrigerant charged inside the unit refer to the **INSTALLATION AND TECHNICAL SERVICE INSTRUCTIONS** of outdoor unit used.

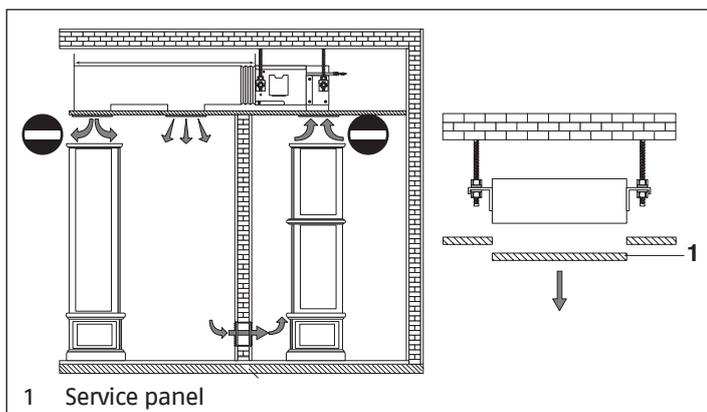
**!** Floor area where the indoor unit will be installed shall be higher than minimum required floor area mentioned in table below

Minimum floor area for indoor unit			
mc (kg)	Amin (m <sup>2</sup> )	mc (kg)	Amin (m <sup>2</sup> )
0,2	No requirements	2,1	2,81
0,6		2,2	3,09
0,8		2,3	3,38
1,0		2,4	3,68
1,1		2,5	3,99
1,224		2,6	4,31
1,225	0,96	2,8	5,00
1,3	1,08	3,0	5,74
1,4	1,25	3,4	7,38
1,5	1,44	3,8	9,22
1,6	1,63	4,2	11,26
1,7	1,84	4,6	13,50
1,8	2,07	5,0	15,96
1,9	2,30	5,4	18,61
2,0	2,55	5,8	21,47
mc	Refrigerant charge of the system (kg)		
Amin	Minimum floor area for indoor unit (m <sup>2</sup> )		

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

**RIELLO AMD P** is designed for indoor installation and positioned horizontally under-ceiling:

- install the indoor unit in the room to be air-conditioned
- air intake and outflow must be channelled so as to allow the processed air to circulate throughout the room
- in order to guarantee the correct operation of the equipment, the units must be installed so that the air outlet and inlet shall remain unobstructed
- if the air outlets and inlets are located in different rooms, some communication conduits with grids should be present
- a detachable section cut into the suspended ceiling is required in order to access the unit



**Check that:**

- the support ceiling can support the weight of the unit
- the ceiling section does not include pipes or electric lines

**Avoid:**

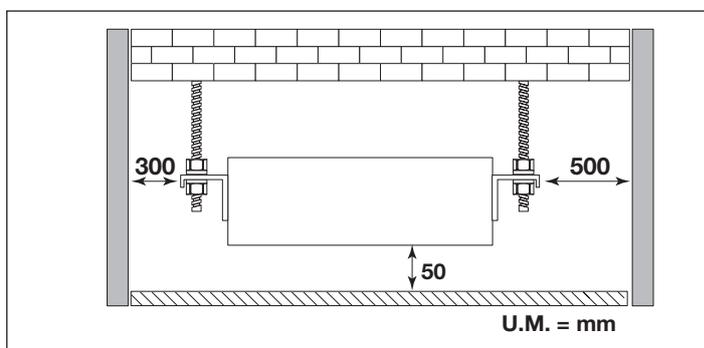
- installing the device in hallways or passageways

- 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
- locations with 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 allow normal cleaning and maintenance operations to be carried out.



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

When **RIELLO AMD P** 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

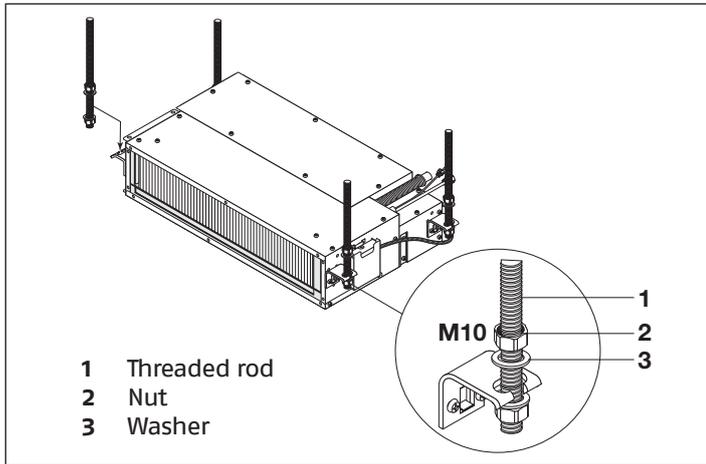
**!** In the event of a replacement, the system must be inspected by the designer or by another competent person, and must be compliant with the technical requirements, as well as the current legislations and regulations.

**!** The manufacturer shall bear no responsibility for any damages caused by incorrect system installation.

**2.9 Positioning**

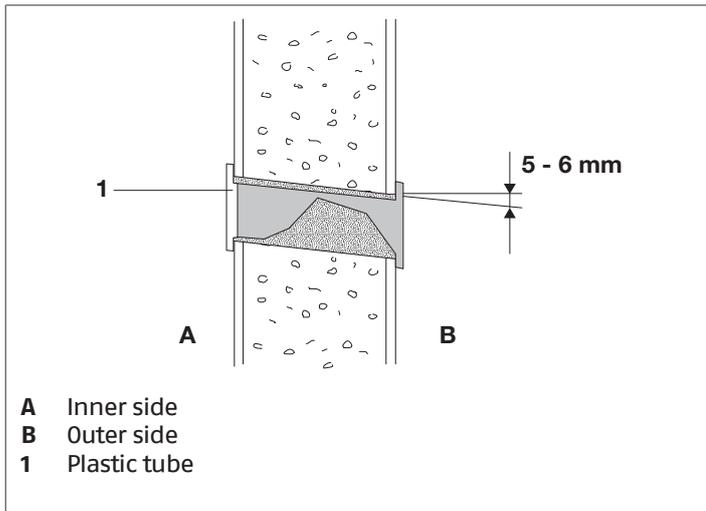
**RIELLO AMD P** devices are supplied with a metallic support to fix them to the ceiling:

- install the support rods and attach them safely to the bearing structures
- install the nuts on the threaded rods
- hook the unit on the threaded rods
- regulate the height of installation of the unit
- regulate the unit's position so as to maintain it in horizontal position
- fasten the nuts



- ⚠ The support rods must be attached to structures able to support the weight of the unit.
- ⚠ If the unit is not perfectly horizontal, water leaks may occur.
- ⚠ Ensure that the ceiling section does not include pipes or electric lines.
- ⚠ Check that the installation is horizontal using a water level.

**Drilling into the wall:**



- drill the through hole into the wall
- keep a downward inclination toward the external side
- insert a plastic tube in the hole in order to protect the connections
- seal with stucco

- ⚠ Ensure that the ceiling section does not include pipes or electric lines.

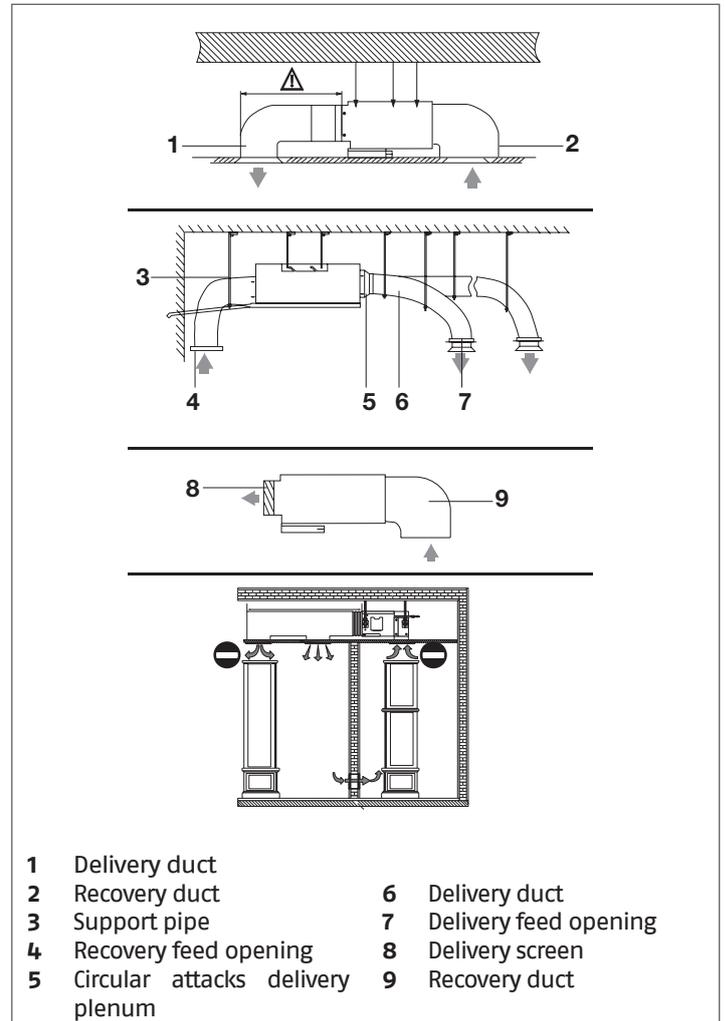
**2.10 Aeraulic links**

**Preliminary instructions**

- ⚠ The dimensions of the channels and the inlet and outlet grids must be determined by a professional, skilled operator.
- ⚠ To avoid the transfer of the machine's vibrations to the environment, it is suggested that an antivibrating joint be positioned between the ventilating outlets and the channels.
- ⚠ Use a channel sheathed with an appropriate thickness of anti-condensation material.
- ⚠ Apply a thermal insulation on the joints.
- ⚠ Practice an opening in the channels, to enable filter removal.
- ⚠ The connection tubes must have the appropriate diameter and must be supported, so as not to rest their weight on the unit.

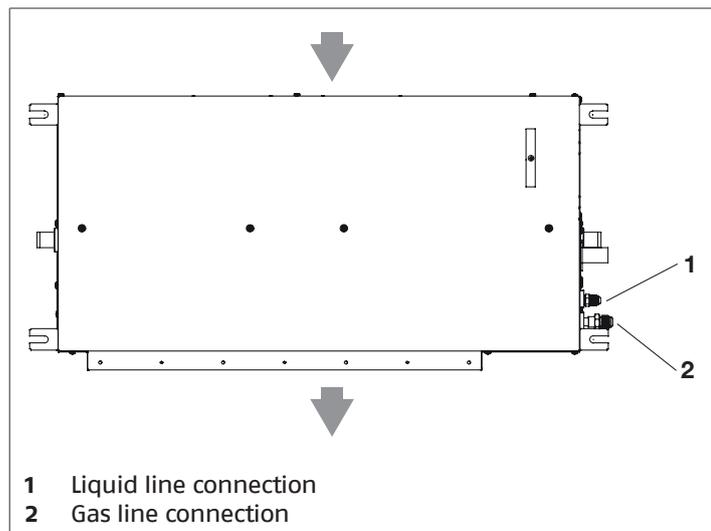
**Connection**

- Position the channels in conjunction with the connectors on the unit.
- Fasten using screws of the appropriate dimensions for the pre-cut holes.
- ⚠ Connect the fan motor according to the length of the delivery duct:
  - <0.5 m use the white connector (default)
  - 0.5 m <length delivery <2m use the red connector

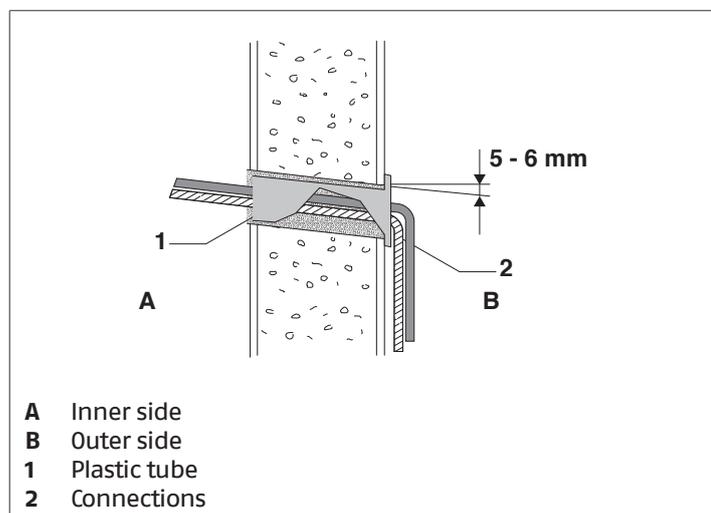


## 2.11 Refrigerating connection

The dimensions and positions of **RIELLO AMD P** cooling connections are shown hereunder.



Model	25 A	35 A	50 A	70 A	70 B
<b>Connections</b>					
Liquid line connection	1/4		3/8		Inch
Gas line connection	3/8	1/2	5/8		Inch
Liquid line connection	6,35		9,52		mm
Gas line connection	9,52	12,7	15,88		mm



- drill the through hole into the wall
- keep a downward inclination toward the external side
- insert a plastic tube in the hole in order to protect the connections
- introduce the supplied hole protection insert on the internal side of the wall
- seal with stucco

**⚠** For indications concerning distances and differences in height of connection pipes, refer to the matching outdoor unit manual.

**⚠** Use clean hoses. Make sure the inside is free of dust, residues, water.

**⚠** Avoid the entry of uncondensable gases (air) in the circuit, otherwise, with the unit in operation, high pressures with the risk of damages might ensue.

**⚠** Use copper pipes for cooling systems.

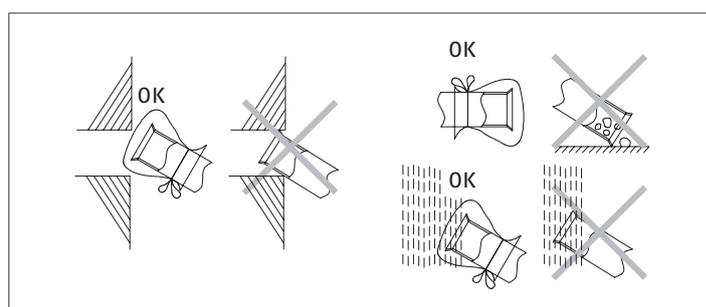
**⊖** It is forbidden to use second-hand cooling lines since their flare connection seal is not guaranteed.

**⊖** It is forbidden to use pre-charged cooling lines.

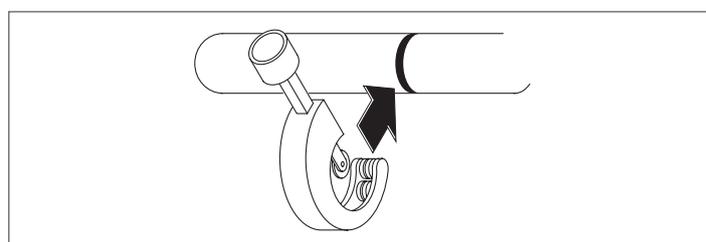
**⊖** It is forbidden to carry out welding operations with refrigerant inside the cooling circuit. If necessary, the refrigerant must be recovered and the circuit must be cleaned with nitrogen without oxygen.

### 2.11.1 Connections

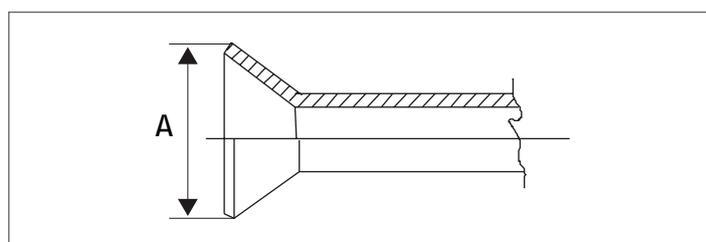
— position the connecting pipes



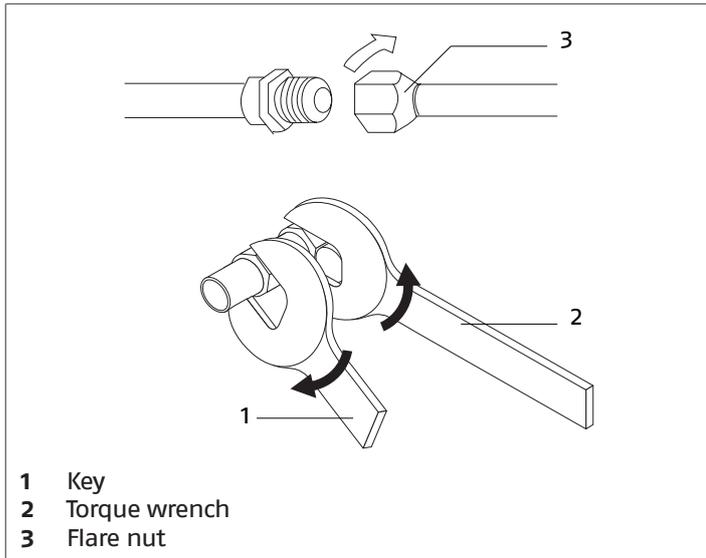
**⚠** Before threading the lines through the hole in the wall, close the lines ends.



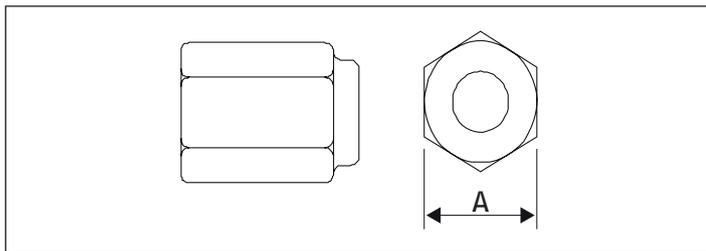
- cut the pipe end square using a pipe cutter
- remove burrs keeping the cut edge facing down
- remove the flare nut on the unit connection
- insert it into the connection pipe
- flare the tube



Pipe $\varnothing$		A
mm	inches	mm
6,35	1/4	9,1
9,52	3/8	13,2
12,70	1/2	16,6
15,88	5/8	19,7



Pipe Ø		Tightening torque
mm	inches	Nm
6,35	1/4	18
9,52	3/8	42
12,70	1/2	55
15,88	5/8	60



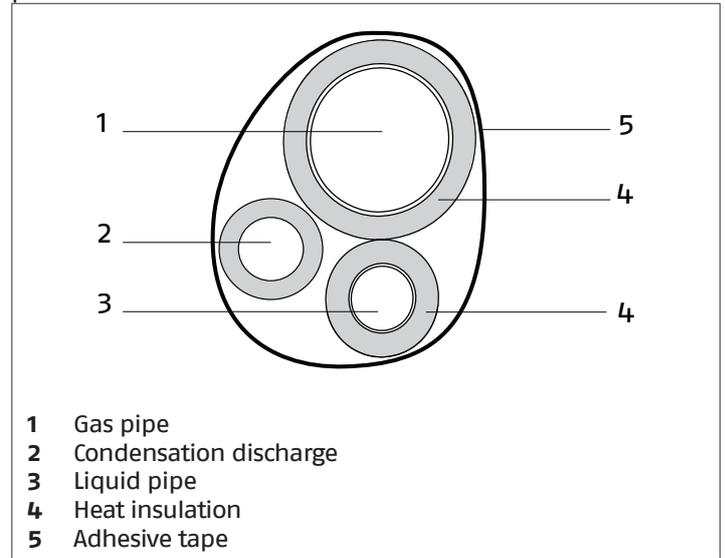
Pipe Ø		A
mm	inches	mm
6,35	1/4	17
9,52	3/8	22
12,70	1/2	26
15,88	5/8	29

- bring line ends with flare connection close to their coupling on the unit
- manually rotate the flare nuts by 3 - 4 turns
- tighten the connections using a spanner and a counter spanner

- ⚠ Use a torque wrench to tighten so as to prevent damage to flare nuts and gas leaks.
- ⚠ Use equipment suitable for the system refrigerant.
- ⚠ Avoid using the refrigerant oil on the external part of the flaring.
- ⚠ Avoid proximity to sources of ignition in continuous operation (open flames, gas household appliances, electric stoves, etc.).
- ⚠ As for circuit leak and pneumatic vacuum tests, refer to the matching outdoor unit instruction booklet for the installer.

### 2.11.2 Pipe insulation

Connection pipes must be thermally insulated to prevent dispersions of heat or formation of condensate.



insulate the liquid and gas pipes separately

- use insulating material that is thicker than 15 mm
- ensure that the insulating material adheres to the pipe without gaps
- fix using adhesive tape

- ⚠ Do not tighten the adhesive tape excessively to prevent damaging the insulation.
- ⚠ Avoid partial insulation of the pipes.
- ⚠ In case of use with outdoor temperature above 30 °C and relative humidity above 80%, increase wall thickness up to 20 mm.

For gas pipes:

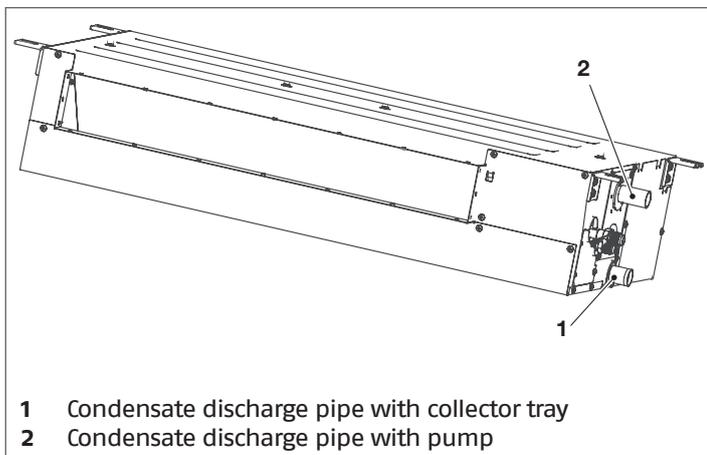
- ensure that the material used resists to temperatures up to 120°C

For liquid pipes:

- ensure that the material used resists to temperatures up to 70°C

## 2.12 Condensate discharge connection

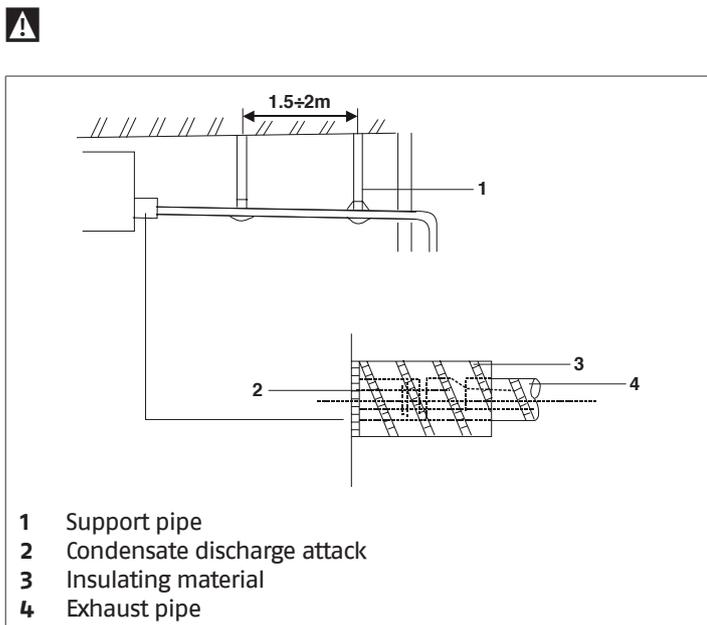
**RIELLO AMD P** is provided with a tray that collects condensate generated during the cooling operation, which must be conveyed into a suitable place for discharge. Sizes and position of the discharge pipe are indicated below.



Model	25 A	35 A	50 A	70 A	70 B	
<b>Condensate discharge</b>						
Material	PVC	PVC	PVC	PVC	PVC	mm
Internal diameter $\phi$		27			21	mm
External diameter $\phi$		31			25	mm

**!** AMD 25 PA and AMD 35 PA units are supplied without condensate drain pump and float switch; the condensate is collected in the basin and evacuated through the pipe 1.

**!** AMD 50 PA, AMD 70 PA and AMD 70 PB units are equipped with condensate discharge pump and float switch; the condensate is evacuated through the pipeline 2. In case of evacuation of the condensate discharge by gravity, use the piping 1 and disconnect the CN4 connector of the condensate drain pump and jumper the CN13 connector; for more information refer to the paragraph "wiring diagram".

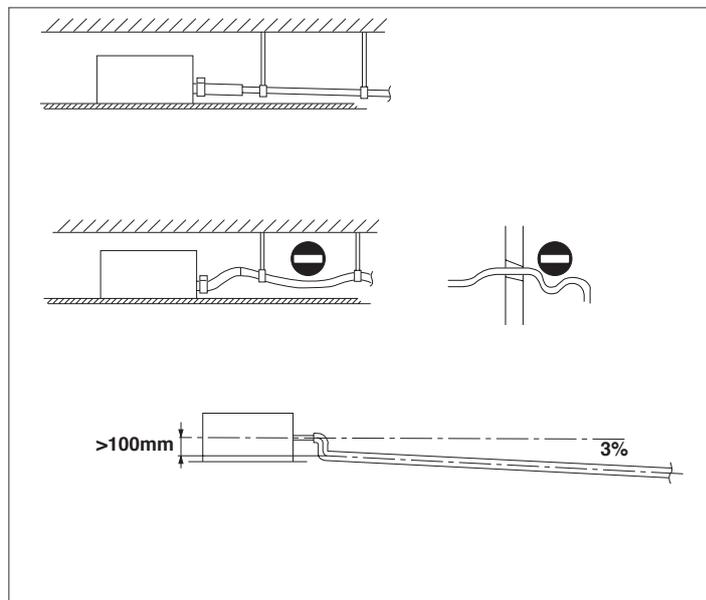


— connect an insulated drainage tube to the condensation collection tray and thread it towards an appropriate discharge exit with a 2-3% slope

- avoid any countersloping stretches
- secure it with a pipe strap
- apply a thermal insulation on the joints
- avoid partial insulation of the pipes

After installation:

- check that the tray discharges the condensation correctly by pouring some water in it



**!** 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.

**!** 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.

**!** The dimensions and shape of the drain trap must guarantee appropriate drainage, taking into account the machine's effective static pressure.

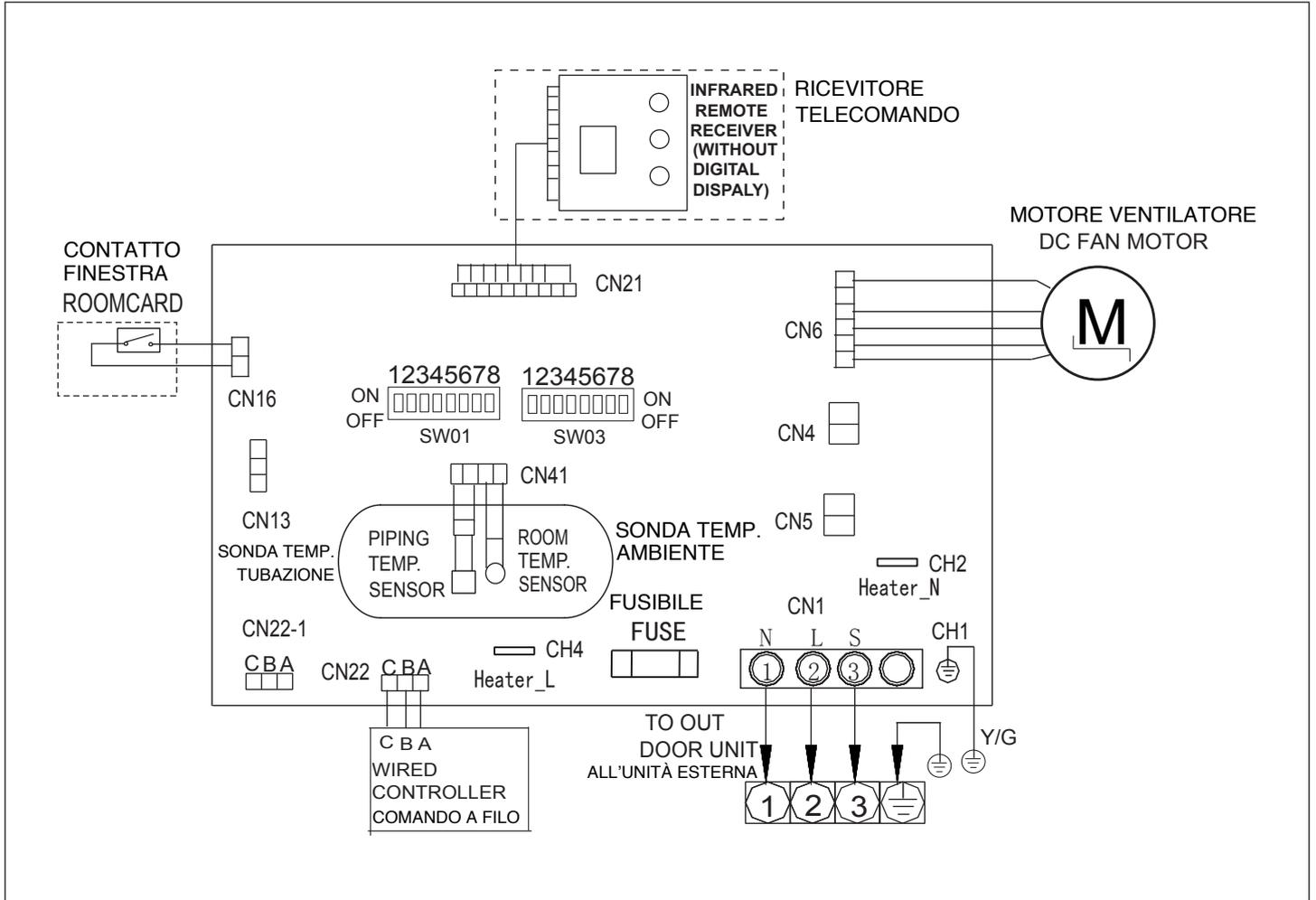
**!** The connection tubes must have the appropriate diameter and must be supported, so as not to rest their weight on the unit.

Drainage check:

- pour water into the condensate tray
- check that it flows out correctly through the drainage pipe

2.13 Wiring diagram

AMD 25-35 PA



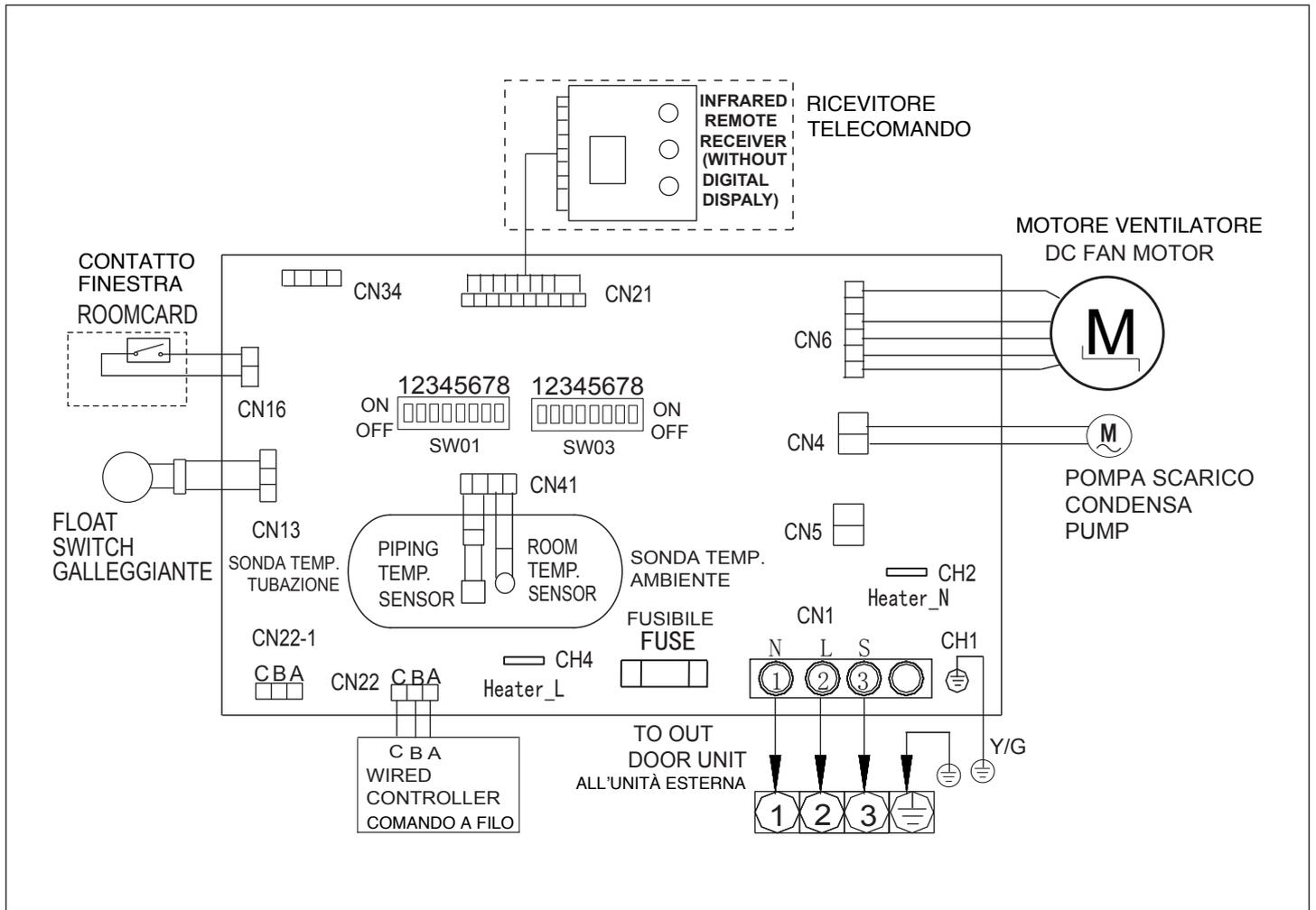
**⚠** Dots part are optional

**⚠** Do not change SW01 and SW03 Dip Switch position without reading the instruction inside the paragraph "Microswitch setting"

**⚠** SW03-5 -> SW03-8 are used to address more indoor units to one wired control panel. For information read the paragraph "Microswitch setting"

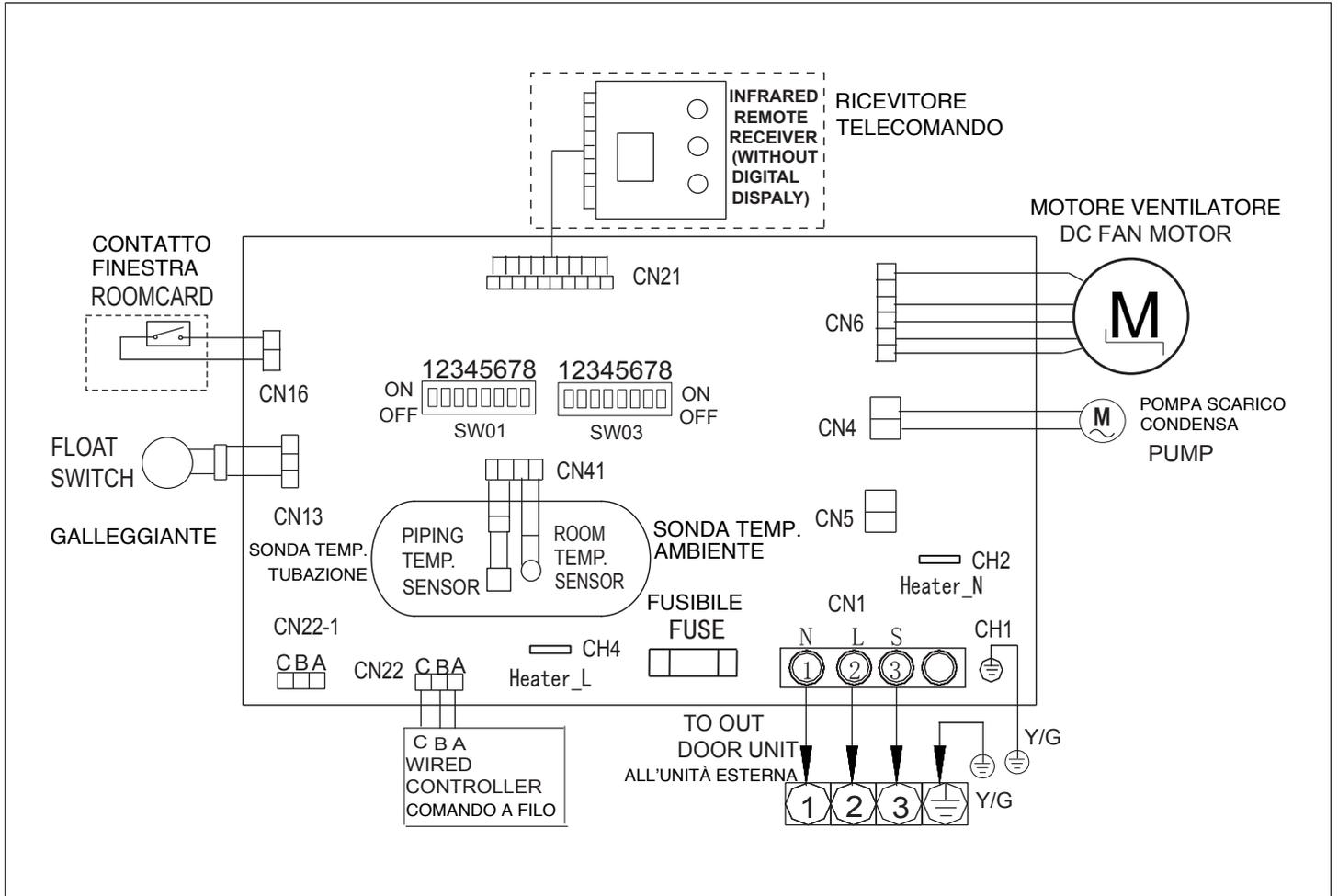
**⚠** CN13 connector it leaves the factory jumpered

AMD 50-70 PA



- ⚠** Dots part are optional
- ⚠** Do not change SW01 and SW03 Dip Switch position without reading the instruction inside the paragraph "Microswitch setting"
- ⚠** SW03-5 -> SW03-8 are used to address more indoor units to one wired control panel. For information read the paragraph "Microswitch setting"
- ⚠** In case of gravity condensation discharge, disconnect the CN4 connector of the condensate drain pump.
- ⚠** CN13 connector, it leaves the factory connected to the float switch; in case of gravity condensation discharge, jumper the connector CN13.

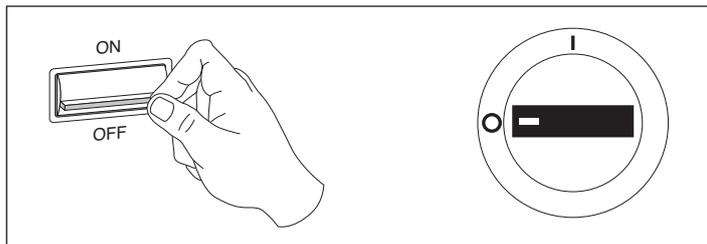
AMD 70 PB



-  Dots part are optional
-  Do not change SW01 and SW03 Dip Switch position without reading the instruction inside the paragraph "Microswitch setting"
-  SW03-5 -> SW03-8 are used to address more indoor units to one wired control panel. For information read the paragraph "Microswitch setting"
-  In case of gravity condensation discharge, disconnect the CN4 connector of the condensate drain pump.
-  CN13 connector, it leaves the factory connected to the float switch; in case of gravity condensation discharge, jumper the connector CN13.

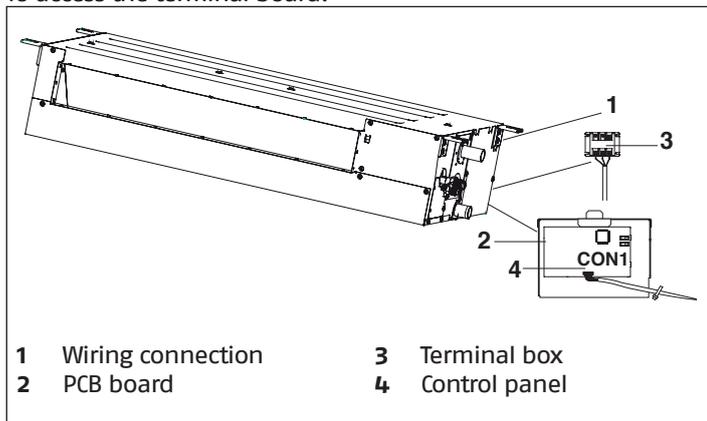
## 2.14 Electrical connection

**AMD P** it leaves the factory completely wired, and only requires a connection to the outdoor unit.



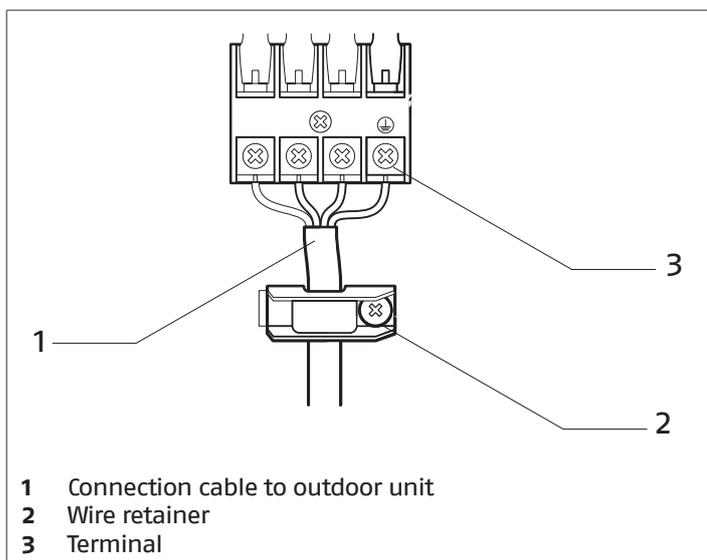
— set the system main switch to "OFF"

To access the terminal board:



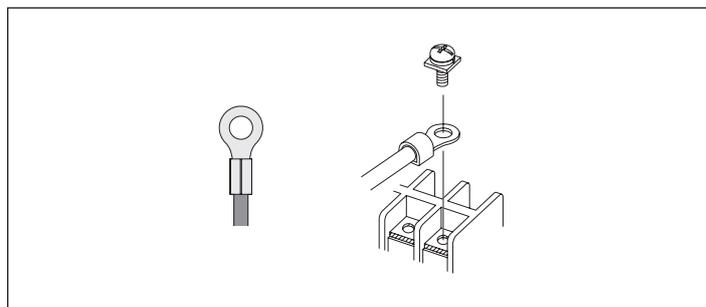
- 1 Wiring connection
- 2 PCB board
- 3 Terminal box
- 4 Control panel

- unscrew the fastening screw
- remove the electric panel access panel
- unscrew the fastening screws
- remove the terminal board cover panel



- 1 Connection cable to outdoor unit
- 2 Wire retainer
- 3 Terminal

- remove the wire retainer
- make the electric connections according to the diagrams on the installation booklet of the matching outdoor unit



**!** It is compulsory to use ring crimp terminals to connect to the terminal board.

For the sizing of the electrical power cables and safety devices, use the following table:

Model	25 A	35 A	50 A	70 A	70 B	
<b>Electrical characteristics</b>						
Power supply	230/1/50					V/Ph/Hz
Power cable	H05RN-F					Tipo
Power cable	3x4.0	3x4.0	3x4.0	3x4.0	3x4.0	n. x mm <sup>2</sup>
Signal cable	4x2.5	4x2.5	4x2.5	4x2.5	4x2.5	n. x mm <sup>2</sup>

**!** 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

**Mandatory items:**

- 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.

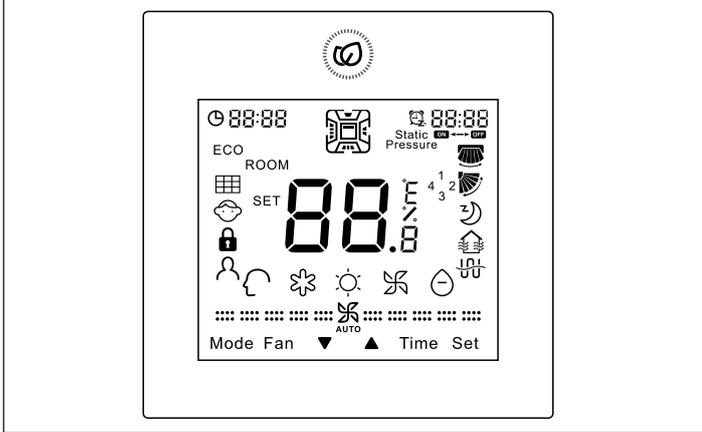
**!** Avoid using mobile phones.

**⊖** 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.

## 2.15 Control panel

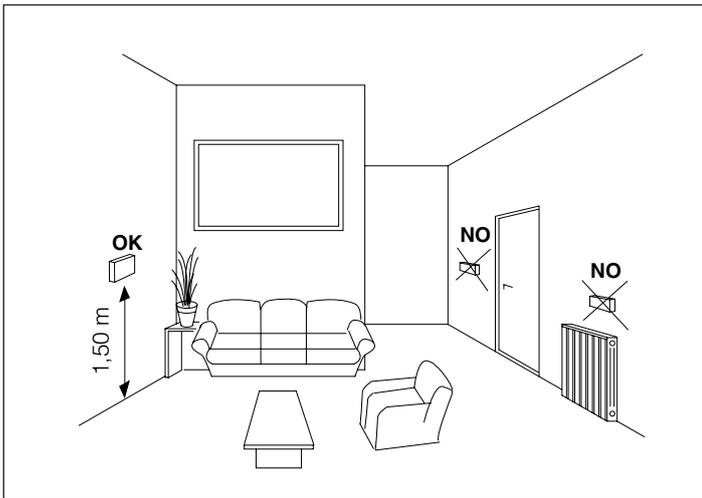
Control, setting and programming operations are carried out with the wired control panel.

The electronics modulates the device operation according to the temperatures detected by the probes inside the indoor and outdoor units.



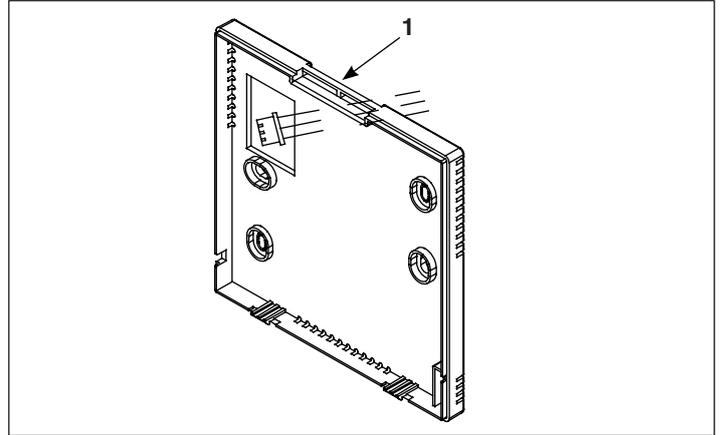
For correct installation, remember that the panel:

- Must be installed on a wall, preferably not a perimeter one, and one without any hot or cold pipes inside.
- It must be mounted at 1.5 m from the floor.
- It must not be placed next to doors or windows, cooking devices, radiators, fan coils or, more generally, it must not be placed in conditions that might alter the measured temperatures.
- The maximum length of the connecting cable must be taken into account.
- Use a shielded cable for the connection.
- The connection cable must not be spliced; if splicing is necessary, it shall be tinned and adequately protected.
- Any trenching of the connection cable must be separated from the live wires.



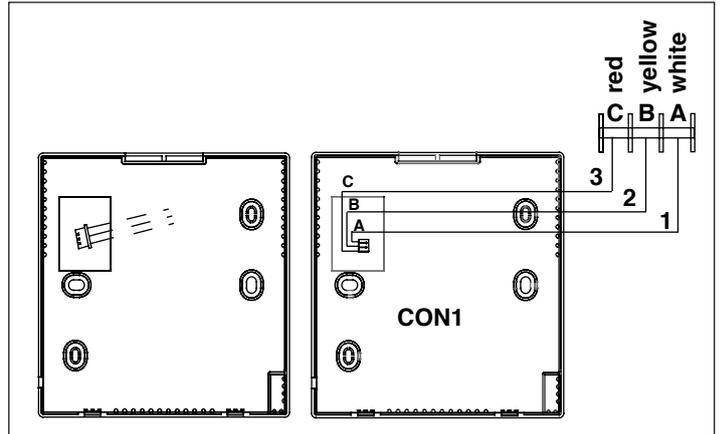
### Placement

- separate the control panel from the base
- press the upper bottom (1) to remove the base from the control panel

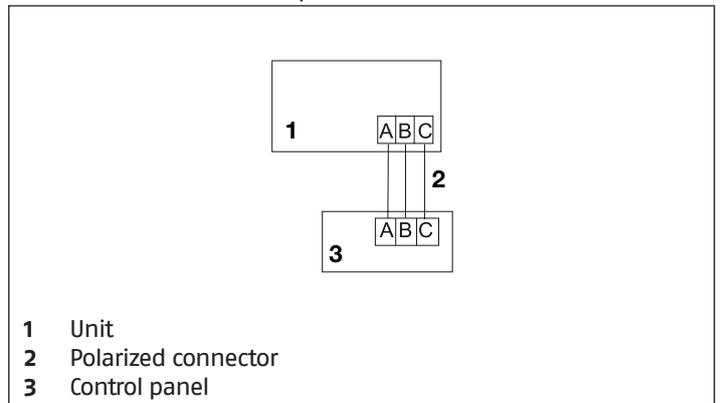


- mark the fastening points using the base as a template.
- drill a hole in the wall
- drill a hole in the wall, through which the connections shall be threaded

### Connection



- thread the connection cable of the control panel through the hole in the base
- anchor the base with appropriate screws and bolts
- connect the cable to the clamps on the control panel, paying attention to polarity
- remount the control panel on the base.



- 1 Unit
- 2 Polarized connector
- 3 Control panel

### 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 electrical power supply's values are correct
- the earthing has been carried out correctly
- all the connections have been properly tightened

##### 3.1.1 Microswitch setting

On the main electronic board there are microswitches to manage some functions.

###### Factory settings

Model	SW01							
	1	2	3	4	5	6	7	8
25 A	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
35 A	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON
50 A	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON
70 A	ON	ON	OFF	OFF	OFF	OFF	OFF	ON
70 B	ON	ON	OFF	OFF	OFF	OFF	OFF	ON

###### SW01-1, SW01-2, SW01-3

Model setting; do not change.

###### SW01-4

It enables and disables the roomcard function:

OFF = disabled (factory setting)

- if contact CN16 is open, the unit switches off, but it can be activated via external control
- if contact CN16 is closed, the unit activates automatically, but can be commanded via external control

ON = activated

- if contact CN16 is open, the unit switches off and cannot be activated via external control
- if contact CN16 is closed, the unit can be activated via external control

**⚠** The CN16 contact is with a jumper by factory (closed).

###### SW01-5

Heat pump operation (OFF) or only cooling operation (ON).

**⚠** Heat pump operation by factory (OFF).

###### SW01-6, SW01-7, SW01-8

Model setting; do not change.

**⚠** Cut off the power supply before adjusting the SW01.

Model	SW03							
	1	2	3	4	5	6	7	8
25 A	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
35 A	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
50 A	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
70 A	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
70 B	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF

###### SW03-1, SW03-2, SW03-3, SW03-4

Reserved. Do not change.

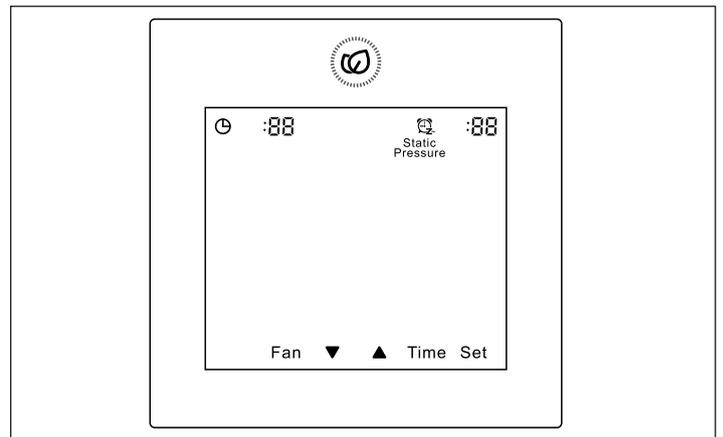
###### SW03-5, SW03-6, SW03-7, SW03-8

Reserved switches for addressing multiple indoor units to a single control panel. For instructions, refer to the user manual of the wired control panel.

**⚠** The indoor unit is factory-set as a master unit (OFF)

#### 3.1.2 Selection of static prevalence available

It can be selected the static pressure values through the control panel.



- switch on the control panel (exit from screen saver mode)
- press and hold the Fan and SET button simultaneously for 5 seconds

- on the display the icon **Static Pressure** will start to flash and the static pressure previously set (or factory) will be displayed
- to change it, press the keys ▲ ▼ to decrease or increase the value
- set the desired value, press the SET button again

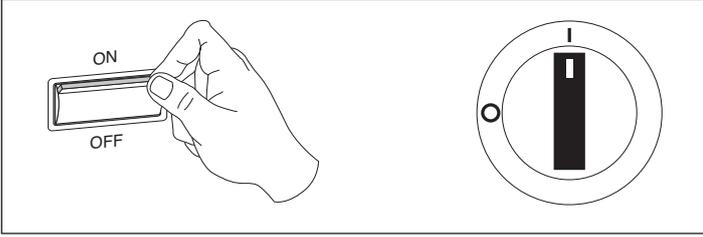
**⚠** The unit number is displayed with **88** in the minute field of the clock, in the upper left corner, and the static pressure value in the minute field of the timer, in the upper right corner. Press the Time button to change the unit number.

**⚠** The unit number is displayed in decimal format between 00 and 15. The static pressure value is displayed in decimal value between 01 and 04.

**⚠** When editing, press the button  to exit the function and switch the unit on / off, without confirming the changes.

### 3.2 Putting into service

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



- set the system main switch to "ON"
- activate the device with 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 wired control panel.

#### 3.2.1 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%.
- ⚠** Avoid using mobile phones.

### 3.3 Temporary shutdown

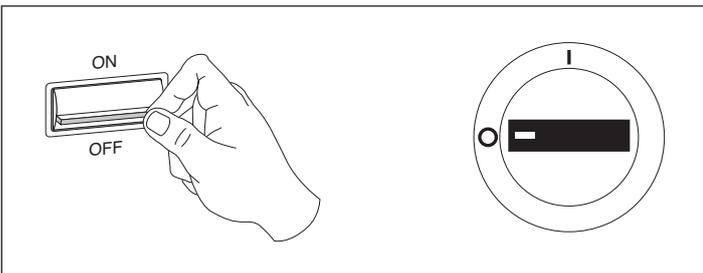
In order to shut down the unit for periods of brief absences:

- only use the remote control to disable the unit

### 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 device with the remote control



- set the system main switch to "OFF"

### 3.5 Ordinary maintenance

Periodical maintenance is fundamental to keep the device efficient, safe and reliable over time, and it can be carried out on a regular basis, depending on the type of intervention required, by our Technical Support Service, which is technically trained and licensed and can also provide original 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

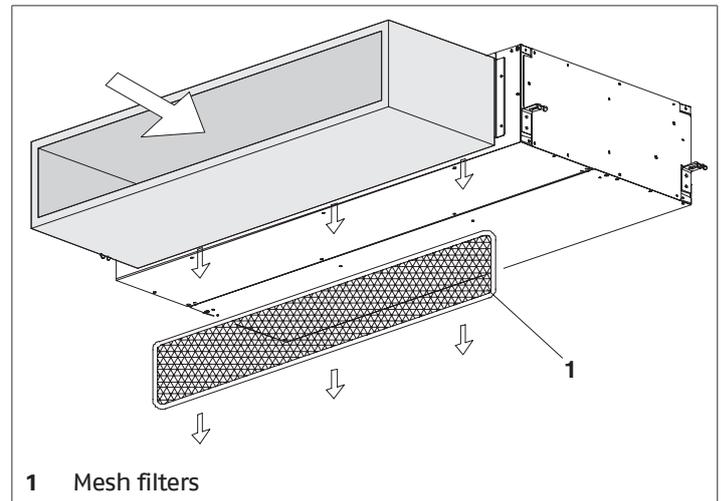
- ⊘** It is forbidden to open the access doors and carry out any technical or cleaning operation before disconnecting the device from the power supply by positioning the system main switch to "OFF".

#### 3.5.1 Annual operations

The following checks are part of the annual maintenance plan:

- mesh filter cleaning
- supply voltage
- fastening of electric connections
- status of the hydraulic joints
- cleaning of the condensation collector tray
- cleaning of the finned coil
- air distribution channels status.

#### Mesh filter cleaning



- extract the mesh filter
- remove dirt using a vacuum cleaner

- ⚠** If there is a considerable amount of dust, wash it with luke-warm water (max 40°C) and a neutral detergent, carefully rinse it off and let it dry in the shadow.
- ⚠** 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.

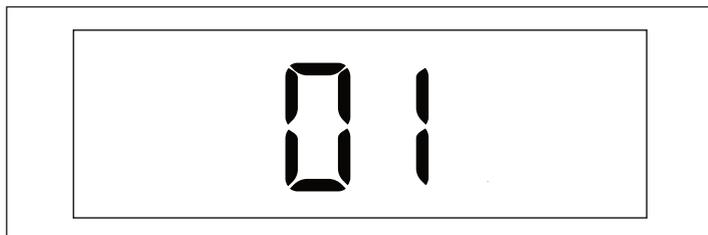
- ⊘** It is forbidden to use the device without mesh filter.

### 3.6 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.

The faults are indicated by a code on the display of the control panel.



#### Indoor unit faults

Code	Description	Remarks
1	Malfunction of indoor unit ambient temperature sensor	The unit resets after problem resolution
2	Malfunction of indoor unit piping temperature sensor	
4	EEPROM wrong of indoor PCB	
7	Abnormal communication between indoor and outdoor units	
/	Abnormal communication between wired controller and indoor	
0C	Malfunction of drain system	
0D	Zero cross signal wrong	
0E	Indoor unit DC fan motor abnormal unit	

### 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.







# RIELLO

RIELLO S.p.A. - 37045 Legnago (VR)  
tel. +39 0442 630111 - fax +39 0442 630371  
[www.riello.it](http://www.riello.it)

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.