

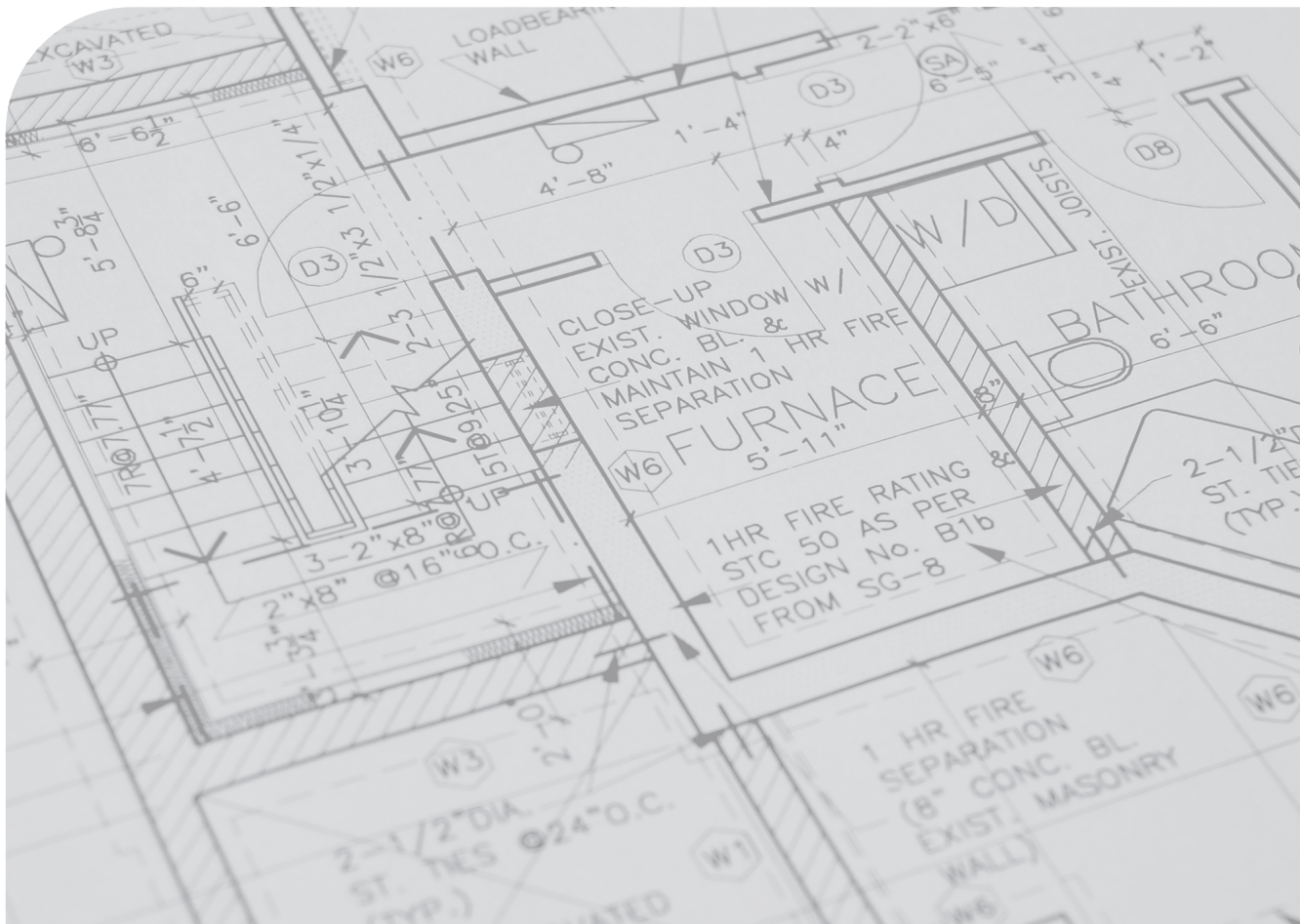
HYDRO VENT 2-3-4-5

Hydronic Fan Coils

IE

**Instruction and warning
book**

1.053067ENG





Dear Customer,

Congratulations for having chosen a top-quality Immergas product, able to assure well-being and safety for a long period of time. As an Immergas customer, you can also count on a qualified After-Sales Service, prepared and updated to guarantee the constant efficiency of your products.

Read the following pages carefully: you will be able to draw useful suggestions regarding the correct use of the device, the respect of which, will confirm your satisfaction for the Immergas product.

For any interventions or routine maintenance contact Immergas Authorised Centres: these have original spare parts and boast of specific preparation directly from the manufacturer.

General warnings

All Immergas products are protected with suitable transport packaging.

The material must be stored in a dry place protected from the weather.

The instruction booklet is an integral and essential part of the product and must be given to the new user in the case of transfer or succession of ownership.

It must be stored with care and consulted carefully, as all of the warnings provide important safety indications for installation, use and maintenance stages.

This instructions manual provides technical information for installing Immergas appliances. As for the other issues related to installation of the appliances (e.g. safety at the workplace, environmental protection, accident prevention), it is necessary to comply with the provisions specified in the regulations in force and with the principles of good practice.

In compliance with legislation in force, the systems must be designed by qualified professionals, within the dimensional limits established by the Law.

Installation and maintenance must be performed in compliance with the regulations in force, according to the manufacturer's instructions and by professionally qualified staff, meaning staff with specific technical skills in the plant sector, as envisioned by the law.

Improper installation or assembly of the Immergas appliance and/or components, accessories, kits and devices can cause unexpected problems for people, animals and objects. Read the instructions provided with the product carefully to ensure proper installation.

Maintenance must be carried out by skilled technical staff. The Immergas Authorised After-sales Service represents a guarantee of qualifications and professionalism.

The device must only be used for that expressly intended. Any other use must be considered improper and therefore dangerous.

If errors occur during installation, operation or maintenance, due to non-compliance with technical laws in force, standards or instructions contained in this booklet (or however supplied by the manufacturer), the manufacturer is excluded from any contractual and extra-contractual liability for any damage and the appliance warranty is invalidated.

The manufacturer declines all liability due to printing or transcription errors, reserving the right to make any modifications to its technical and commercial documents without forewarning.



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1 GENERAL

1.1 ABOUT THIS MANUAL

This manual has been designed to provide all of the explanations necessary to correctly manage the appliance.

△ This instruction book is an integral part of the appliance and must therefore be stored with care and must ALWAYS accompany the appliance even if it is transferred to another owner or user or transferred to another system. If you lose or damage it, you may download a copy from the website.

△ Read this manual carefully before proceeding with any operation and strictly follow the instructions in the individual chapters.

△ Each chapter in the document provides specific warnings which you must read before starting operation.

△ The manufacturer shall not be held liable for personal harm or property damage resulting from failure to follow the regulations in this book.

△ This document is confidential pursuant to law and may not be reproduced or transmitted to third parties without the express consent of the manufacturer.

1.1.1 Editorial pictograms

The pictograms shown in the following chapter quickly and unambiguously provide the information needed for the correct use of the machine under safe conditions.

Safety-related.

△ **High risk warning (bold text):** Indicates that the operation described, if not carried out in compliance with safety regulations, presents the risk of suffering significant physical injury, death, serious damage to the appliance and/or the environment.

△ **Low risk warning (plain text):** Indicates that if the operation is not carried out in compliance with safety standards, it poses the risk of causing slight physical harm, as well as damaging the appliance and/or environment.

⊖ **Prohibition (plain text):** Mark actions that are prohibited.

ⓘ **Important information (bold text):** Indicates important information that must be taken into account during current operations.

In texts.

► Required actions: Responses following an action.

• Lists

In figures.

1 Numbers indicate individual components.

A Capital letters indicate an assembly of components and dimensions

① white numbers in black dots indicate a series of actions to be carried out in sequence.

Ⓐ a black letter in a white dot identifies an image when there are several images in the same figure.

1.1.2 Pictograms on the product

The following symbols are used in some parts of the appliance:

Safety-related.



Read the instruction manual: Read the instructions carefully before carrying out any operation on the appliance.



Instruction manual: Read the information available in the technical documentation of the appliance.



Caution, electricity hazard: Alerts involved personnel regarding the presence of electricity and the risk of electric shock.

1.1.3 Recipients

User.

An person without particular skills capable of operating the product in conditions of safety for people, the product itself and the environment, interpreting a basic fault diagnosis and anomalous operating conditions, carrying out simple adjustment, verification and maintenance operations.

Installer.

Skilled and qualified person capable of positioning and hydraulically, electrically etc. connecting the unit to the system: They are responsible for the handling and correct installation as indicated in this manual and in current national standards.

Service.

Person who is skilled, qualified and authorised by the factory to carry out all routine and extraordinary maintenance operations, as well as any adjustments, checks, repairs and replacements of parts that may required during the unit's lifetime.



1.1.4 Organisation of the manual

The manual is divided into sections, each addressed to one or more recipients.

General.

It is addressed to all recipients.

Contains general information and important warnings that must be known before installing and using the appliance.

Introduction to the product.

It is addressed to all recipients and contains general information to help them to get to know the product.

Installation and Command.

It is addressed exclusively to the installer.

It contains specific warnings and all the information required for positioning, assembly and connection of the appliance and the control panel.

Commissioning, Maintenance and Troubleshooting.

These are addressed exclusively to the Technical Assistance Centre.

They contain specific warnings and useful information for putting into service and routine maintenance.

Technical information.

It is addressed to all recipients.

Contains detailed technical information about the appliance.

1.2 GENERAL WARNINGS

- ⚠ Each chapter in the document provides specific warnings which you must read before starting operation.
- ⚠ All personnel involved must be aware of the operations and hazards that may arise when starting any installation work on the unit.
- ⚠ Installations carried out without abiding by the warnings given in this manual and use of the appliance outside the prescribed temperature limits will void the warranty.
- ⚠ Any contractual or extra-contractual liability for damage caused to persons, animals or things, installation, adjustment and maintenance errors or improper use is void. Any use not expressly indicated in this manual is not permitted.
- ⚠ Installation of the appliances must be carried out by an authorised company who, at the end of the operations, issues a declaration of conformity to the plant manager in compliance with the standards in force and the indications provided by the manufacturer in the instruction book supplied with the appliance.
- ⚠ Initial start-up, repair or maintenance operations must be carried out by the Technical Service Centre or by qualified personnel as reported in this book.
- ⚠ Do not modify or tamper with the appliance as this may cause hazardous situations to arise.
- ⚠ During installation and/or maintenance operations, use suitable, accident-prevention clothing and tools. The manufacturer shall not be held liable for failure to comply with current safety and accident prevention regulations.
- ⚠ In case of liquid or oil spills, isolate the main power supply to the system and close any water taps. Promptly call the authorised Technical Service Centre or professionally qualified personnel and do not personally intervene on the appliance.
- ⚠ With regard to the above, only use Immergas original spare parts when replacing components.
- ⚠ The manufacturer reserves the right to make changes to their models at any time in order to improve their product, without prejudice to the basic features described in this manual. The company is not obliged to add such modifications to machines previously manufactured, already delivered or under construction.
- ⚠ The device can be used by children at least 8 years old as well as by persons with reduced physical, sensory or mental capabilities, or lack of experience or required knowledge, provided that they are under surveillance, or after they have been instructed relating to the safe use and have understood the potential dangers. Children must not play with the appliance. Cleaning and maintenance destined to be performed by the user can not be carried out by unsupervised children.



1.3 BASIC SAFETY RULES

Please note that use of products that use electricity and water requires compliance with some crucial safety rules such as:

- ⊖ Do not touch the appliance with wet or damp parts of the body.
- ⊖ It is forbidden to perform any operations, before having disconnected the appliance from the power supply mains by setting the system main switch to "off".
- ⊖ It is prohibited to modify the safety or adjustment devices without authorisation or instructions from the appliance manufacturer.
- ⊖ Do not pull, detach, twist electrical cables from the appliance, even if the latter is disconnected from the power supply mains.
- ⊖ It is prohibited to introduce objects and substances through the air intake and flow vents.
- ⊖ It is prohibited to open the doors to access the internal parts of the appliance without first having set the main switch of the system to "off".
- ⊖ It is prohibited to release and leave the packaging material within reach of children, as it can be a potential hazard.

1.4 DISPOSAL



The symbol on the product or on its packaging indicates that the product must not be treated as normal household waste, but must be taken to the appropriate collection point for the recycling of used electrical and electronic equipment and batteries.

Correct disposal of this product helps avoid harming people and the environment and promotes the reuse of valuable raw materials.

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

Illegal disposal of the product by the user will result in the application of the administrative fines provided for by current legislation.

This provision is only applies to EU Member States.

⚠ Do not assemble the appliance on your own.

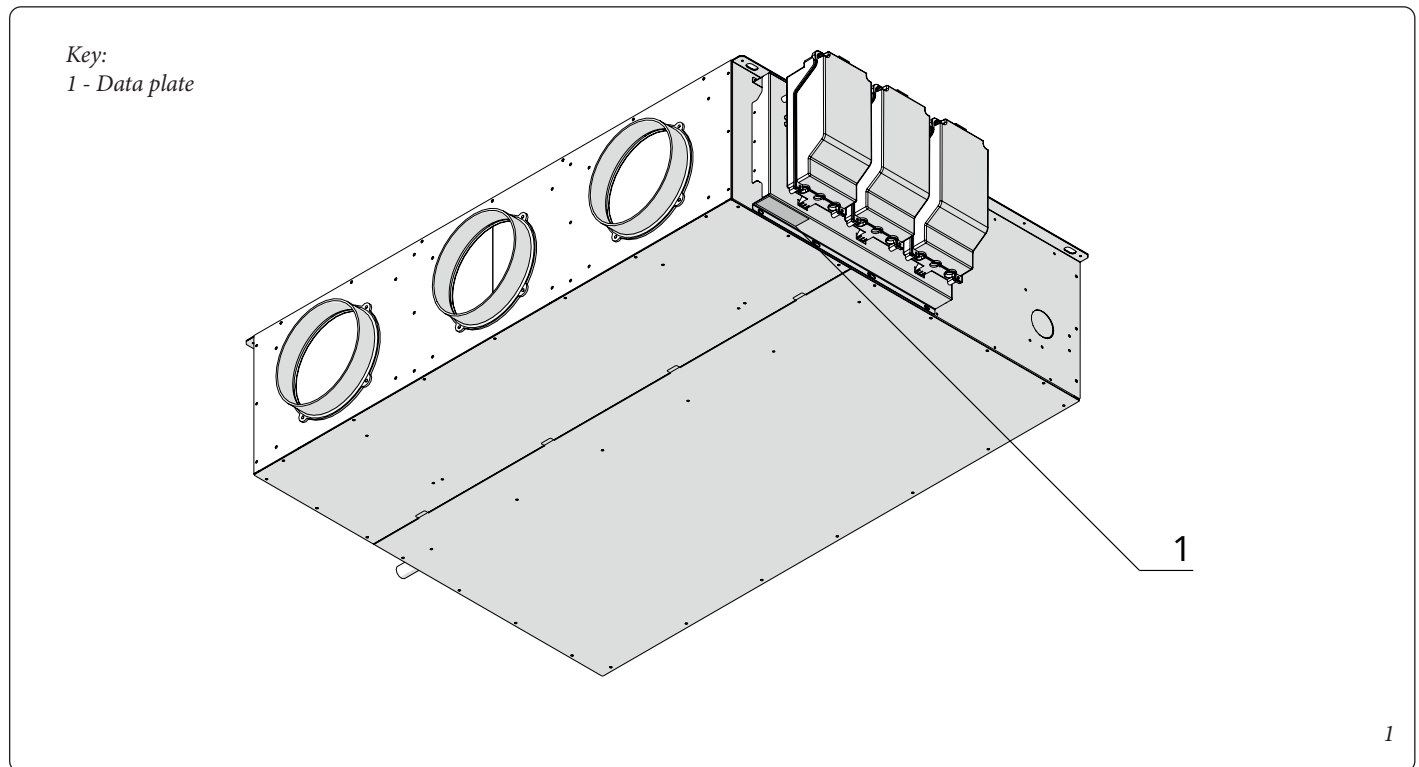
⚠ **To disassemble the appliance, contact an authorised Technical Service Centre only.**



2 INTRODUCTION TO THE PRODUCT

2.1 IDENTIFICATION

The appliance can be identified by the data plate:



Data plate.

It bears the technical and performance data of the appliance.

⚠ If the identification plates are tampered with, removed or missing, product cannot be reliably identified by its serial number and will therefore void the warranty.

2.2 INTENDED USE

Designed for ceiling installation, this compact unit is ideal for air conditioning systems.

2.3 DESCRIPTION OF THE APPLIANCE

Structure: high strength with self-bearing frame in galvanised sheet metal with internal thermal and acoustic insulation.

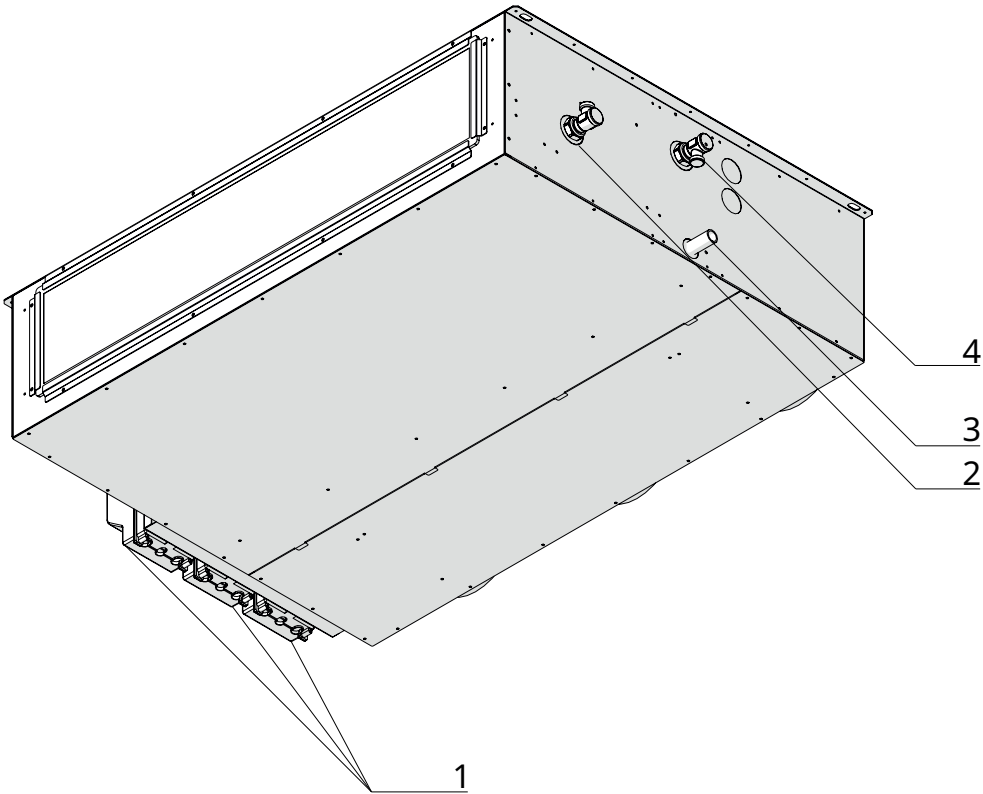
Fans: low energy consumption EC centrifugal fans with forward-curved blades for reduced noise levels.

Filters: surfaces with Coarse filtration class.

Exchange coil: coil optimised for best heat exchange.

Models: 4 sizes with different flow rates are available.

2.4 LIST OF EXTERNAL COMPONENTS

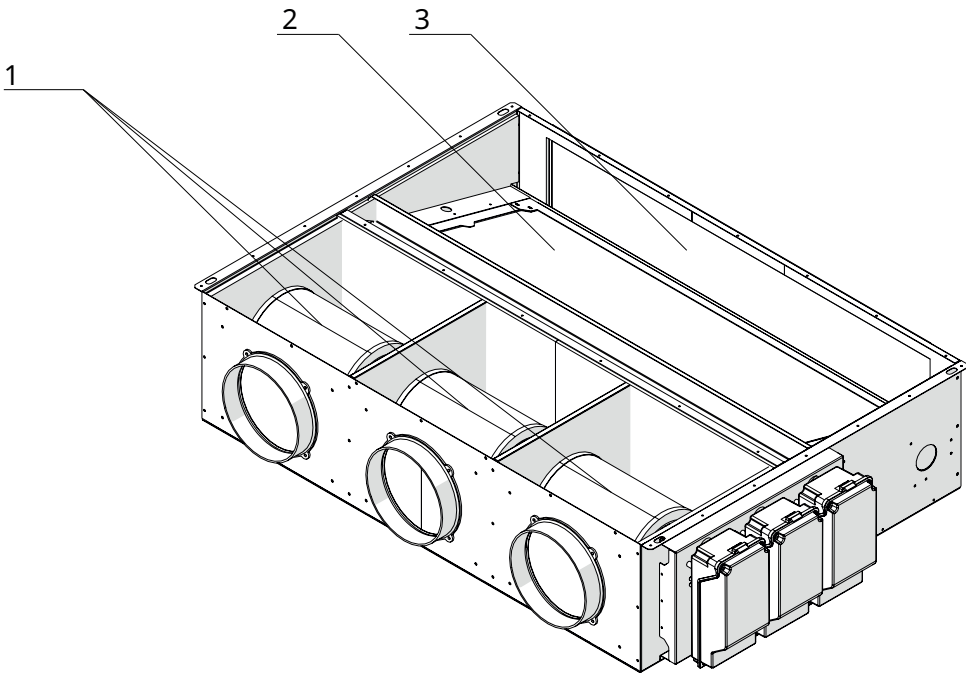


- Key:
- 1 - Electrical panel
 - 2 - Hydraulic connection of water outlet from the unit including air vent
 - 3 - Condensate drain
 - 4 - Hydraulic connection of water inlet to the unit including air vent

2

2.5 LIST OF INTERNAL COMPONENTS

- Key:
- 1 - Fan
 - 2 - Hydronic coil
 - 3 - Filter



3

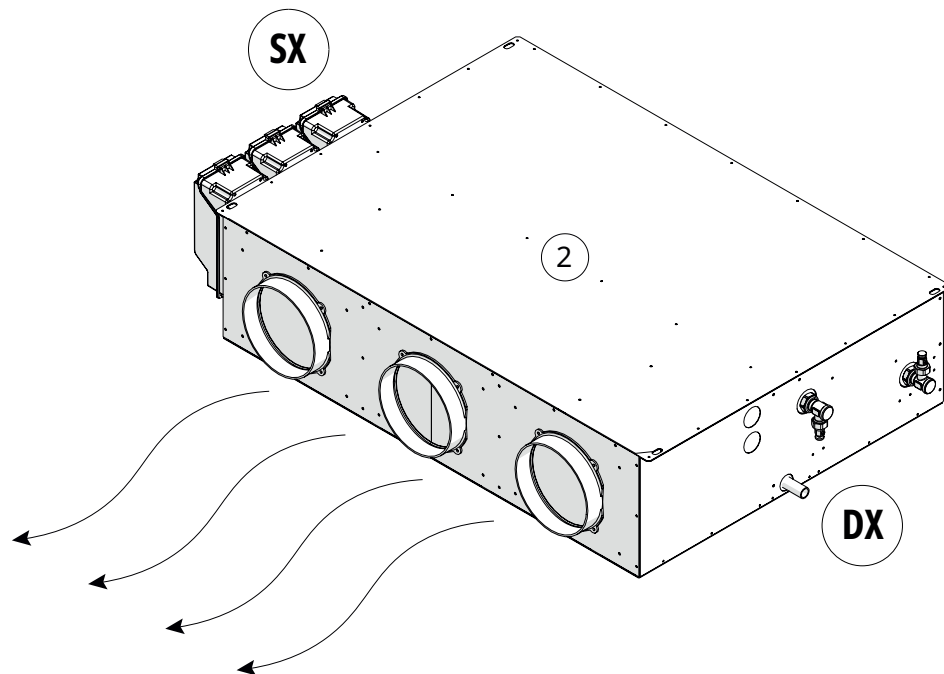
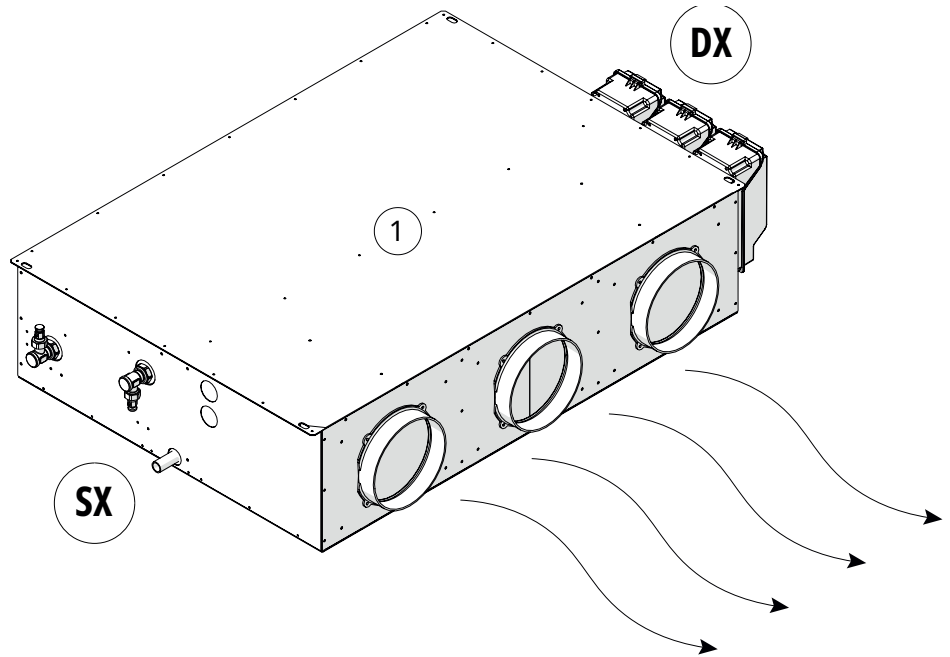


2.6 CONFIGURATIONS

Key:

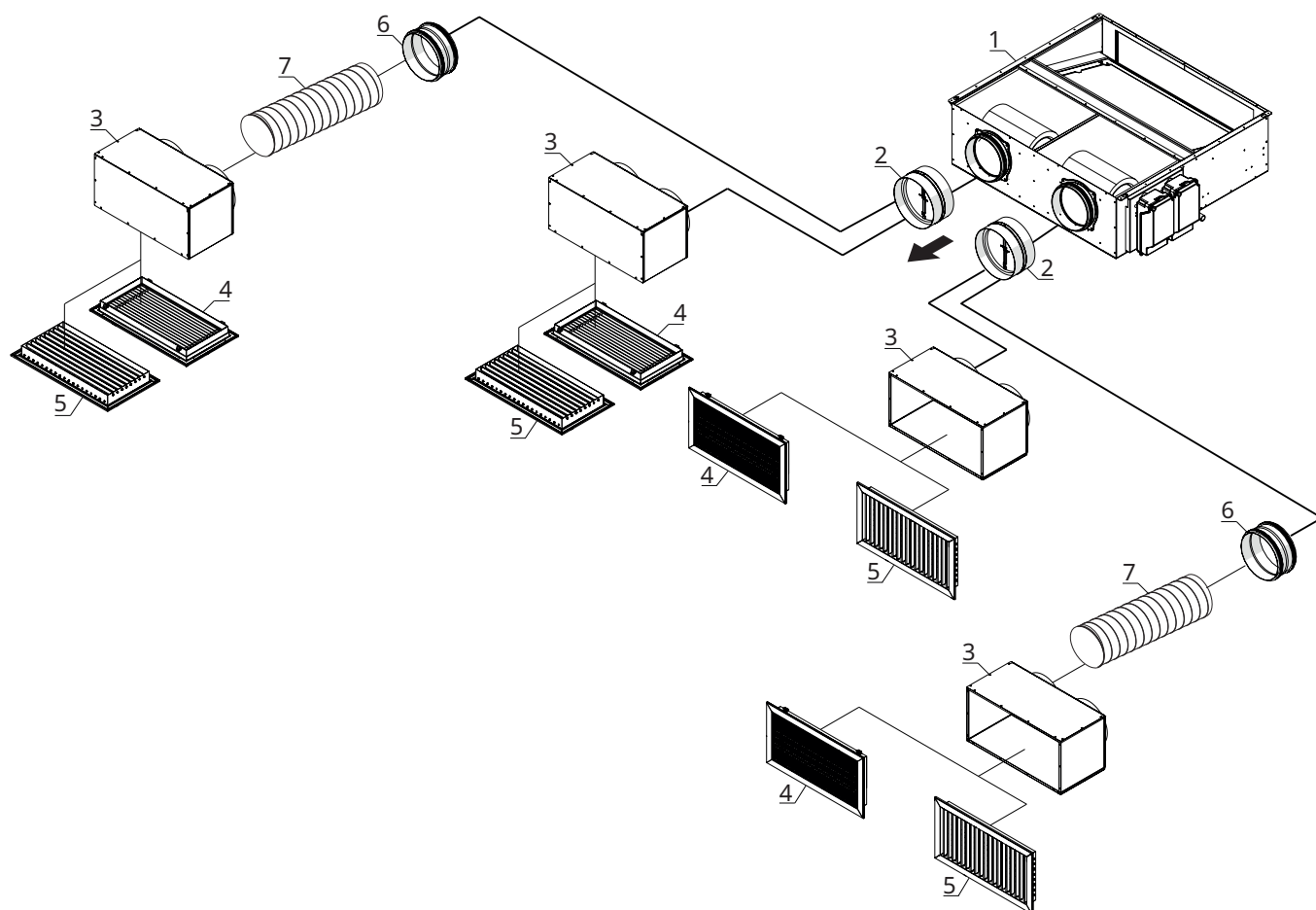
1 - Configuration hydraulic couplings on the SX and electrical panels on the DX

2 - Configuration hydraulic couplings on the DX and electrical panels on the SX



2.7 COMPATIBLE ACCESSORIES

Air Delivery Accessories

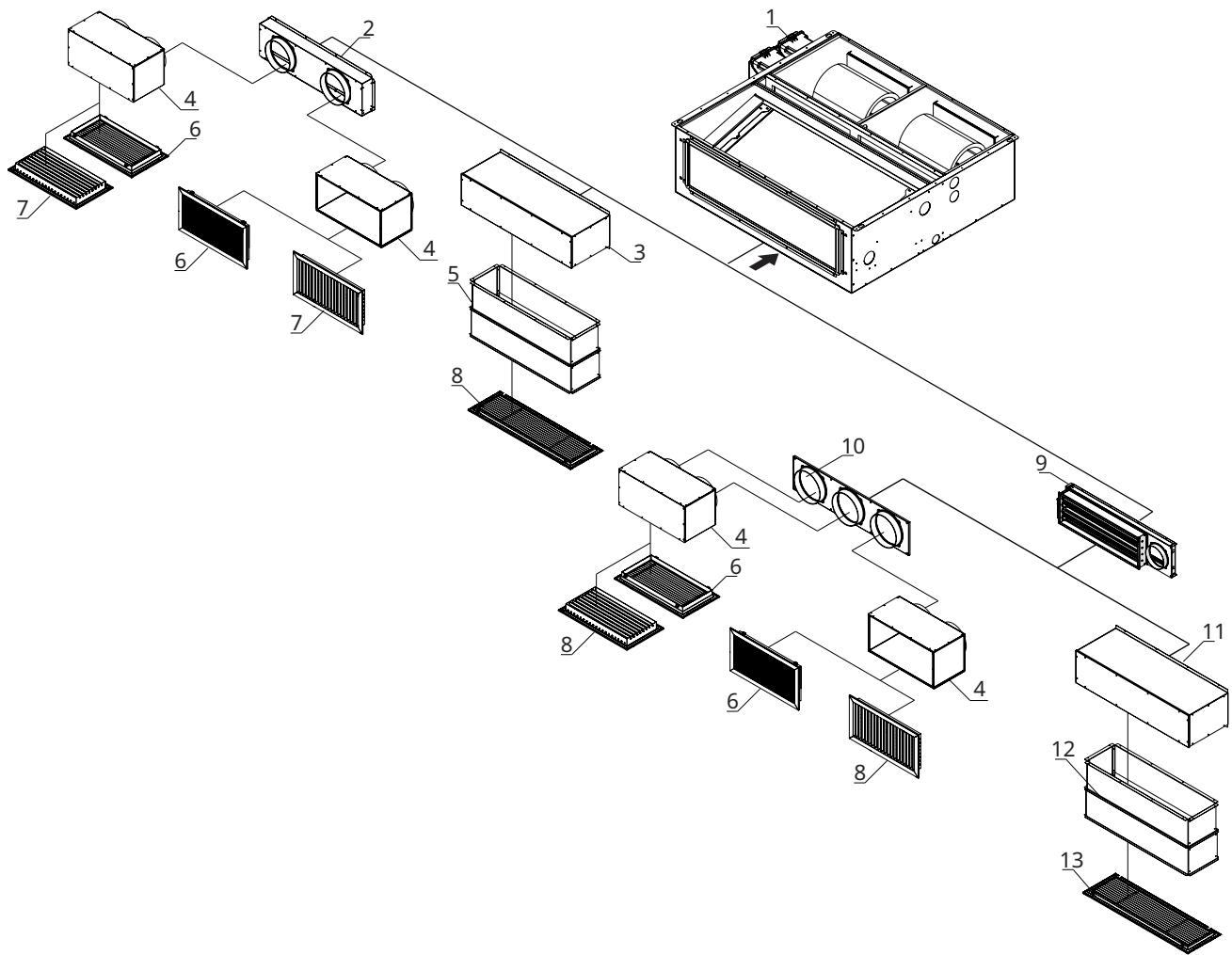


Key:

- 1 - HYDRO VENT
- 2 - Non-Return Damper DN160 for supply outlet
- 3 - Insulated supply/return plenum with 2 DN160 inlets
- 4 - White grille with removable aluminum filter for supply/return plenum with 2 DN160 inlets
- 5 - White grille with adjustable fins for supply/return plenum with 2 DN160 inlets
- 6 - Male/male sleeve
- 7 - Aluphonic insulated hose DN160

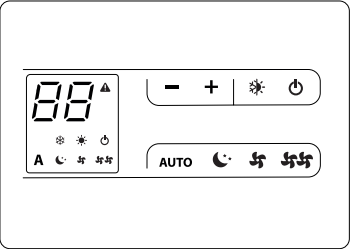
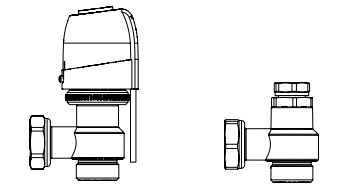
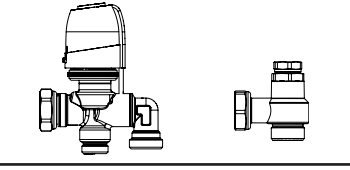
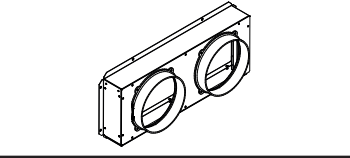
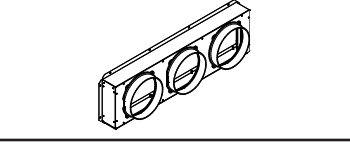
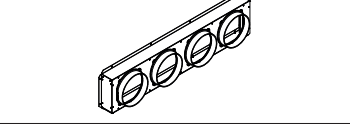
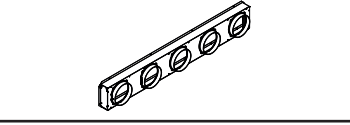
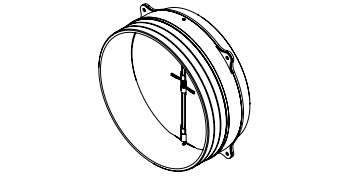
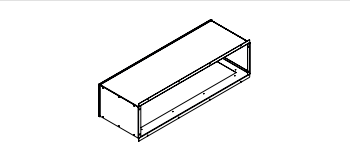


Air Recovery Accessories

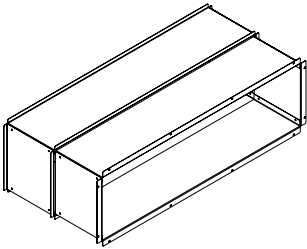
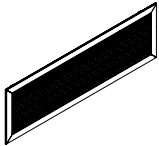
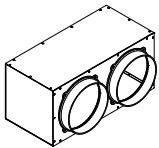
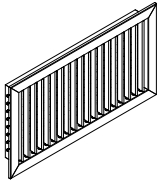
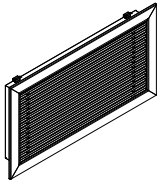
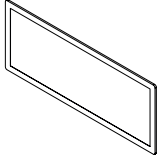


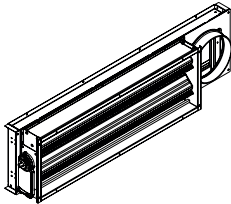
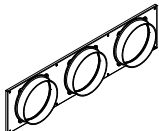
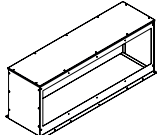
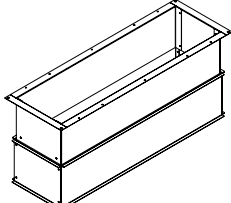
Key:

- 1 - HYDRO VENT
- 2 - Return plate with DN 160 inlets
- 3 - Return 90° plenum
- 4 - Insulated supply/return plenum with 2 DN160 inlets
- 5 - Return telescopic extension
- 6 - White grille with removable aluminum filter for supply/return plenum with 2 DN160 inlets
- 7 - White grille with adjustable fins for supply/return plenum with 2 DN160 inlets
- 8 - Grille for return telescopic extension
- 9 - Return damper with connection for MCV
- 10 - Plate with DN160 inlets for return damper
- 11 - 90° plenum for return damper
- 12 - Telescopic extension for return damper
- 13 - Grille for telescopic extension for return damper

Description	
Control panel	
	Smart touch wall controller with temperature probe and Wi-Fi, black casing
	Smart touch wall controller with temperature probe and Wi-Fi, white casing
	Modulating wall-mounted control panel kit with room probe black
	Modulating wall-mounted control panel kit with room probe white
Water valve	
	2-way valve group kit
	3-way valve group kit
Room air intake plates	
	Return plate with DN 160 inlets for Hydro Vent 2
	Return plate with DN 160 inlets for Hydro Vent 3
	Return plate with DN 160 inlets for Hydro Vent 4
	Return plate with DN 160 inlets for Hydro Vent 5
Non-return flue adjusting device	
	Non-Return Damper DN160 for supply outlet
Room air intake plenum	
	Return 90° plenum Hydro Vent 2
	Return 90° plenum Hydro Vent 3
	Return 90° plenum Hydro Vent 4
	Return 90° plenum Hydro Vent 5



Description	
Telescopic duct for room air intake	
	Return telescopic extension Hydro Vent 2
	Return telescopic extension Hydro Vent 3
	Return telescopic extension Hydro Vent 4
	Return telescopic extension Hydro Vent 5
Telescopic duct grids for room air intake	
	Grille for return telescopic extension Hydro Vent 2
	Grille for return telescopic extension Hydro Vent 3
	Grille for return telescopic extension Hydro Vent 4
	Grille for return telescopic extension Hydro Vent 5
Distribution accessories	
	Insulated supply/return plenum with 2 DN160 inlets
	White grille with adjustable fins for supply/return plenum with 2 DN160 inlets
	White grille with removable aluminum filter for supply/return plenum with 2 DN160 inlets
Replacement filters on the intake	
	Replacement filter Hydro Vent 2
	Replacement filter Hydro Vent 3
	Replacement filter Hydro Vent 4
	Replacement filter Hydro Vent 5

Description	
Accessories for room air intake with connection for CMV	
Intake flue adjusting device with connection for CMV	
	Return damper with connections for MCV Hydro Vent 2
	Return damper with connections for MCV Hydro Vent 3
	Return damper with connections for MCV Hydro Vent 4
	Return damper with connections for MCV Hydro Vent 5
Plate with individual inlets for ducting room air intake	
	Plate with DN160 inlets for return damper Hydro Vent 2
	Plate with DN160 inlets for return damper Hydro Vent 3
	Plate with DN160 inlets for return damper Hydro Vent 4
	Plate with DN160 inlets for return damper Hydro Vent 5
Room air intake plenum	
	90° plenum for return damper Hydro Vent 2
	90° plenum for return damper Hydro Vent 3
	90° plenum for return damper Hydro Vent 4
	90° plenum for return damper Hydro Vent 5
Telescopic duct for room air intake	
	Telescopic extension for return damper Hydro Vent 2
	Telescopic extension for return damper Hydro Vent 3
	Telescopic extension for return damper Hydro Vent 4
	Telescopic extension for return damper Hydro Vent 5
Room air intake telescopic duct grids	
	Grille for telescopic extension for return damper Hydro Vent 2
	Grille for telescopic extension for return damper Hydro Vent 3
	Grille for telescopic extension for return damper Hydro Vent 4
	Grille for telescopic extension for return damper Hydro Vent 5
Other optionals	
	Aluphonic insulated hose DN160
	Clamp for hose DN160 10 pcs



3 INSTALLATION

3.1 PRELIMINARY WARNINGS

⚠ For detailed information on the products, please refer to the “Technical information” chapter.

⚠ Installation must be performed from a qualified installer. If installation is not performed correctly, there may be a risk of water leakage, electric shock or fire.

⚠ During installation, you must observe the precautions mentioned in this manual and on the labels placed inside the appliances. You must also take all precautions following common sense and set forth by the safety regulations in force in the place of installation.

⚠ It is recommended to use only the installation components supplied with the product. Using other components may cause water leakage, electric shock or fire.

⚠ Failure to comply with the aforementioned standards may cause equipment malfunctions and relieves the manufacturer of any form of warranty and liability for any damage caused to people, animals or objects.

3.2 RECEPTION

3.2.1 Preliminary warnings

⚠ When the product arrives, check to make sure it is not damaged; otherwise, collect the goods with reservation, producing photographic evidence of any damage.

⚠ In case of damage, notify the carrier of any damage within 3 days of receipt by registered mail. When submitting photographic documentation, similar information should also be faxed to the manufacturing company.

⚠ No information relating to damage incurred can be taken into consideration from 3 days after delivery.

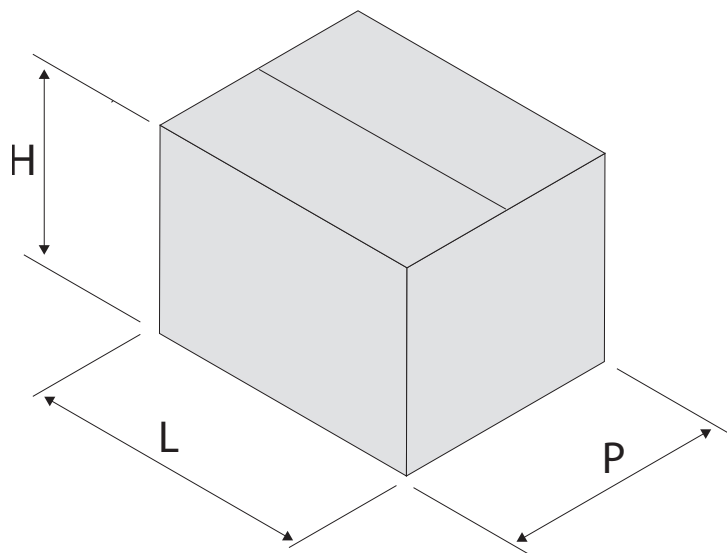
3.2.2 Package description

The packaging is made of suitable materials and carried out by skilled personnel.

The units are all checked and tested and they are delivered complete and in perfect condition.

The appliance is shipped in standard packaging consisting of a cardboard box and several expanded polystyrene protectors, placed on a wooden pallet and secured with straps.

3.3 DIMENSIONS AND WEIGHTS WITH PACKAGING



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Models	u.m.	Hydro Vent 2	Hydro Vent 3	Hydro Vent 4	Hydro Vent 5
Packaging dimensions					
Width	mm	925	1125	1325	1650
Depth	mm	880	880	880	785
Height	mm	275	275	275	275
Weight	kg	31,0	42,0	51,0	61,0



3.4 HANDLING WITH PACKAGING

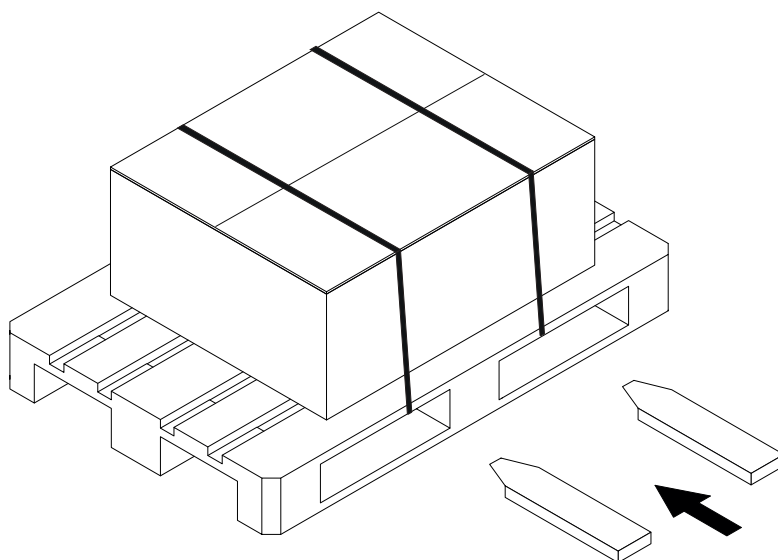
3.4.1 Preliminary warnings

- ⚠ The product must be handled only by qualified personnel, adequately equipped and with equipment suitable for the weight and size of the product.
- ⚠ Before any handling operation, check the lifting capacity of the machinery used, following the instructions on the packaging.
- ⚠ When the load is lifted off the ground, stay clear of the area below and around it.
- ⚠ Check the guidelines on the packaging for the amount of stackable packages.
- ⚠ During manual operations, it is mandatory to always respect the maximum weight per person established by current legislation.

3.4.2 Handling

With pallet:

- Use a forklift.



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Without pallet:

- Use a forklift.
- ⚠ Only in exceptional situations can the unit be moved manually for short distances. In this case, it is necessary to carefully check that the weight of the unit does not exceed the limit set forth by regulations in relation to the number of people employed.

3.5 STORAGE

3.5.1 Preliminary warnings

- ⚠ Storage must be carried out in accordance with current national regulations.
- ⚠ Store in a closed environment protected from atmospheric agents, kept off the ground by beams or pallets with temperatures not lower than 0°C, up to a maximum of 40°C.

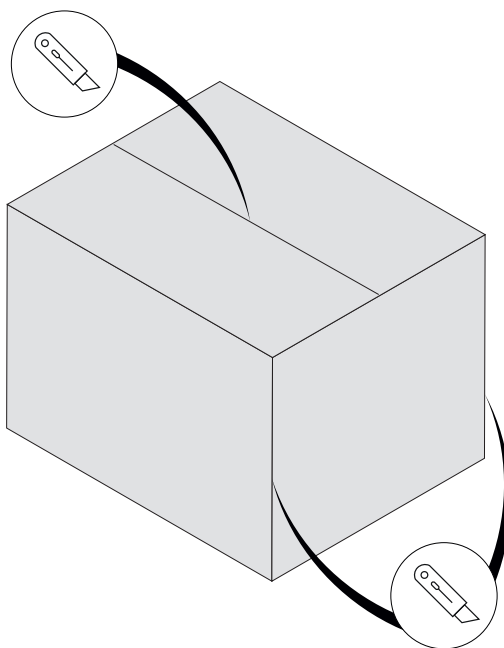
3.6 UNPACKING

3.6.1 Preliminary warnings

- ⚠ Check that the individual components are present.
- ⚠ Check that no components have been damaged during transport.
- ⚠ Dispose of the packaging components in accordance with current waste disposal regulations. Check with your local municipality for disposal requirements.
- ⚠ Handle with care.
- ⊘ It is prohibited to release, abandon, or leave the packaging material (cardboard, staples, plastic bags, etc.) within the reach of children as it may be a potential source of danger.



3.6.2 Removing the packaging



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To remove the packaging:

- ▶ Use a utility knife.
- ▶ Open the cardboard packaging.
- ① **To make it easier to remove the product, also cut the vertical edges.**
- ▶ Remove the supplied components.
- ▶ Remove the polystyrene elements.
- ▶ Remove the appliance from the box.

Accompanying material.

The appliance comes with, inside the box:

- Installer manual
 - Labels / stickers applied on the unit.
- ⚠ Check that the individual components are present.

3.7 HANDLING WITHOUT PACKAGING

3.7.1 Preliminary warnings

- ⚠ The unit must be handled only by qualified personnel, adequately equipped and with equipment suitable for the weight and size of the appliance.
- ⚠ The unit must be handled using non-slip gloves.
- ⚠ The product must be handled only by qualified personnel, adequately equipped and with equipment suitable for the weight and size of the appliance.
- ⚠ Before any handling operation, check the lifting capacity of the machinery used, following the instructions on the packaging.
- ⚠ When the load is lifted off the ground, stay clear of the area below and around it.
- ⚠ Check the guidelines on the packaging for the amount of stackable packages.
- ⚠ During manual operations, it is mandatory to always respect the maximum weight per person established by current legislation.

3.7.2 Handling methods

- ▶ Use a forklift, scaffold tower, or other suitable lifting device.
- ⚠ Only in exceptional situations can the unit be moved manually for short distances. In this case, it is necessary to carefully check that the weight of the unit does not exceed the limit set forth by regulations in relation to the number of people employed.



3.8 PLACE OF INSTALLATION

The location of the appliance must be established by the system designer or by a person competent on the matter and must take into account both purely technical requirements and any applicable national/local legislation.

The appliance is intended to be installed indoors in a horizontal position secured to the ceiling.

⚠ The device is declared with IPX0 protection degree and is therefore not suitable for outdoor installation or in rooms with the presence of water (swimming pools, etc.).

3.8.1 Preliminary warnings

⚠ Do not install the unit near:

- Obstacles or barriers that cause recirculation of exhaust air
- Limited spaces where sound levels from the appliance can be enhanced through reverberations or resonance
- Places with the presence of flammable gases, explosive gases
- Very humid environments (laundries, greenhouses, bathrooms with high humidity, etc.) to avoid the formation of condensate on the external panels of the unit.
- Places with the presence of aggressive, explosive atmospheres or flammable fluids
- Solar radiation and near heat sources.

⚠ **Do not install the unit near the sea. Salty atmospheres cause corrosion and oxidation of internal components, jeopardising the operation of the unit.**

⚠ Do not position the unit within 1 metre of radio and video systems.

⚠ Do not install above heat sources.

⚠ Make sure that:

- The place where the unit is to be installed is chosen with the utmost care to guarantee adequate protection from any impacts and possible ensuing damage.
- The support surface is capable of bearing the weight of the appliance.
- The support surface does not involve load-bearing construction elements, pipes or power lines.
- The functionality of load-bearing elements is not compromised.
- There are no obstacles to the free flow of air through the holes (plants, leaves, etc.).
- The appliance is installed in a position that allows it to be serviced easily.
- The safety distances between the units and other equipment or structures are strictly respected so that the air entering and exiting the fans is free to circulate.

⚠ If the appliance is installed incompletely or on an unsuitable surface, it could cause personal harm or property damage if it were to come loose.

⚠ The appliance must not be installed with the air flow directly hits people.

⚠ Make sure to provide:

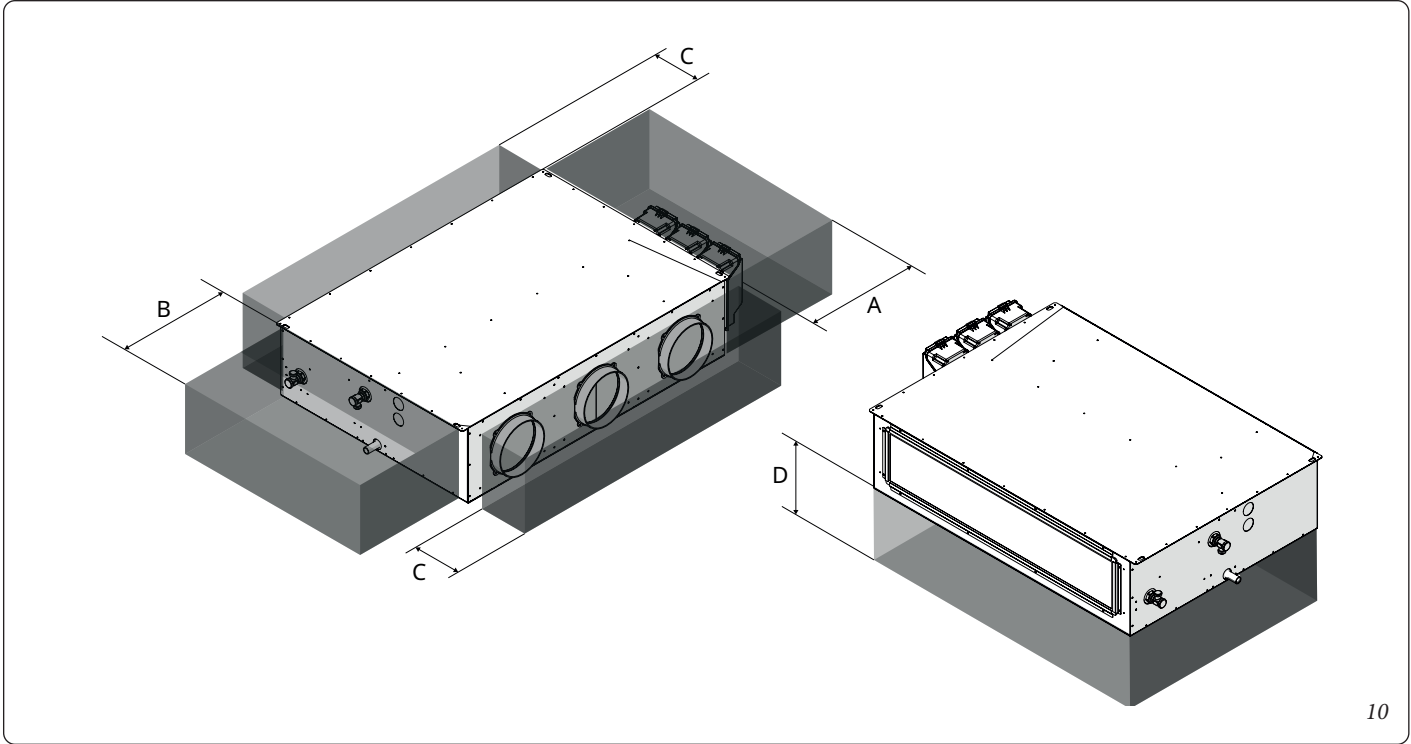
- A condensate drain in the vicinity.
- A compliant power supply in the vicinity.
- Fastening elements suitable for the type of mount.



3.9 MINIMUM INSTALLATION DISTANCES

The safety zones for assembly and maintenance of the appliance are shown in the figure. The established clearances are required to make sure the air flow is not obstructed and to allow for normal cleaning and maintenance operations.

⚠ Make sure there is enough clearance space to allow the panels to be removed for routine and extraordinary maintenance operations.

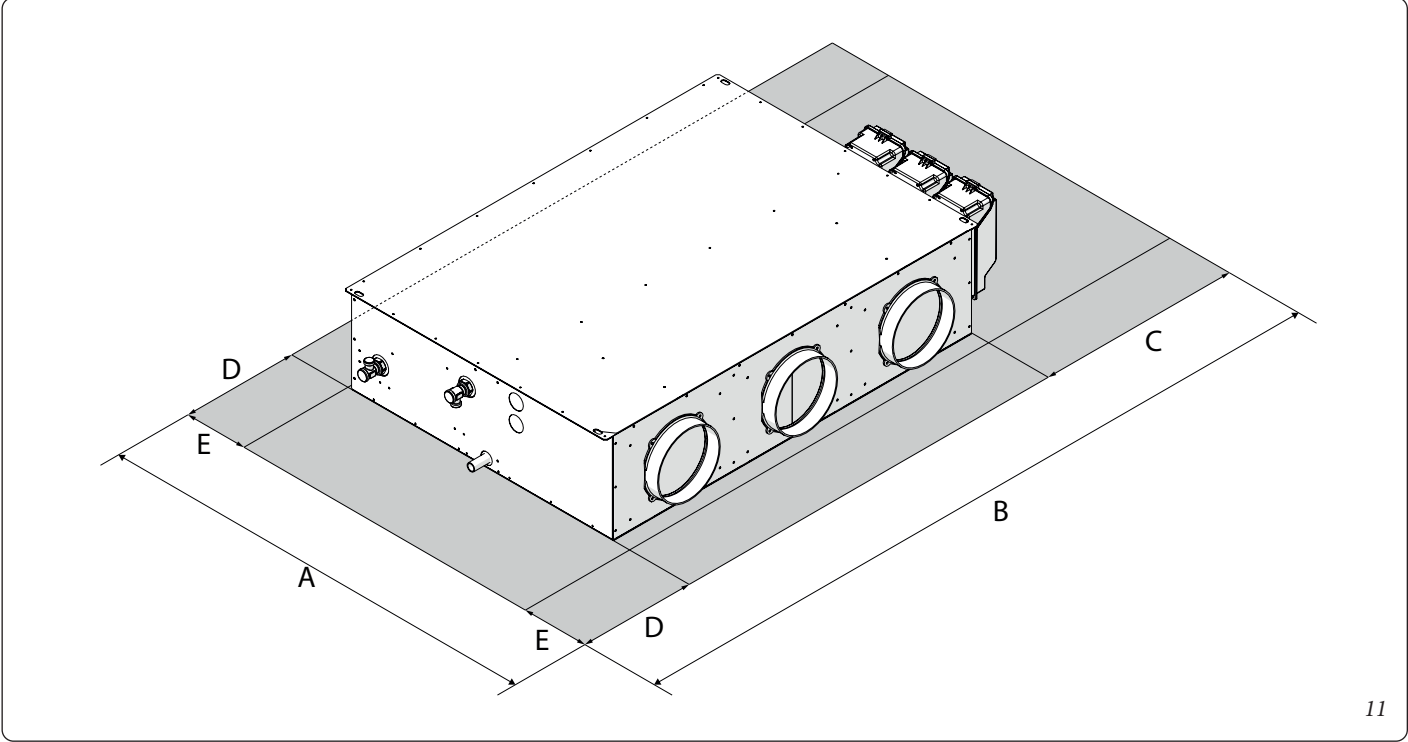


Models	u.m.	Hydro Vent 2	Hydro Vent 3	Hydro Vent 4	Hydro Vent 5
Minimum distances					
A	mm	350	350	350	350
B	mm	350	350	350	350
C	mm	50	50	50	50
D	mm	250	250	250	250



3.9.1 Hatch dimensions

⚠ For horizontal installation in a false ceiling, it is mandatory to make an access hatch for inspection and maintenance of the appliance.



Models	u.m.	Hydro Vent 2	Hydro Vent 3	Hydro Vent 4	Hydro Vent 5
Hatch dimensions					
A	mm	795	795	795	795
B	mm	1490	1690	1890	2140
C	mm	350	350	350	350
D	mm	350	350	350	350
E	mm	50	50	50	50

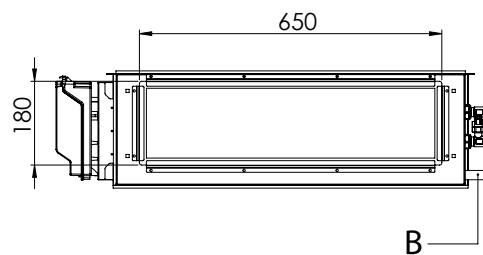
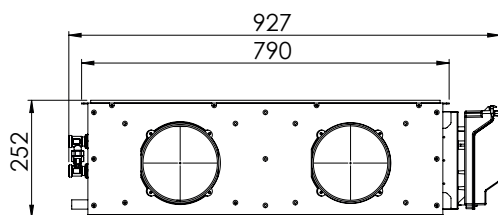
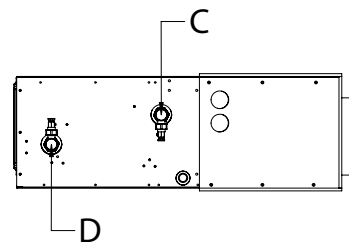
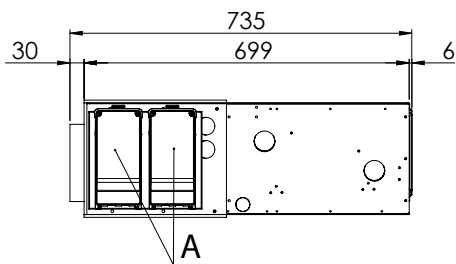
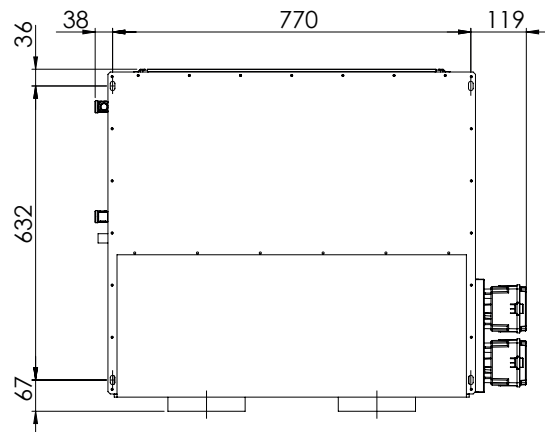
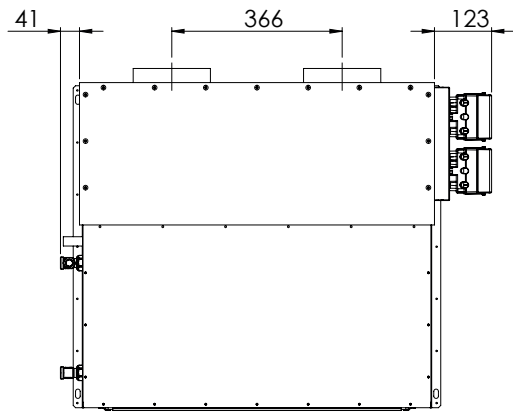
3.10 DIMENSIONS

The drawings below refer to the versions with hydraulic connections on the left.

3.10.1 Hydro Vent 2

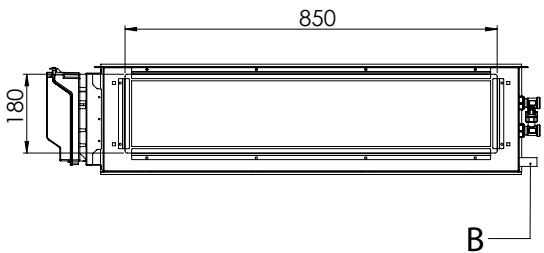
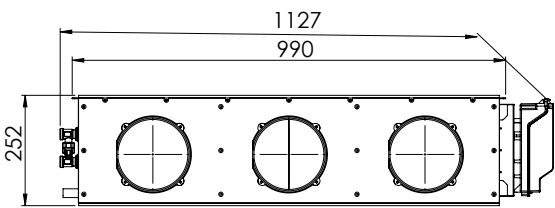
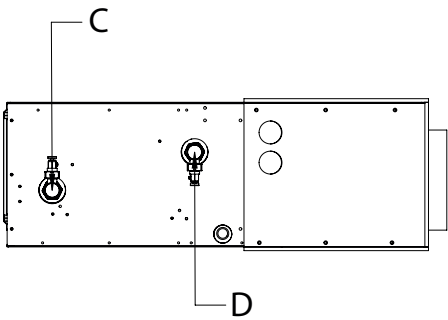
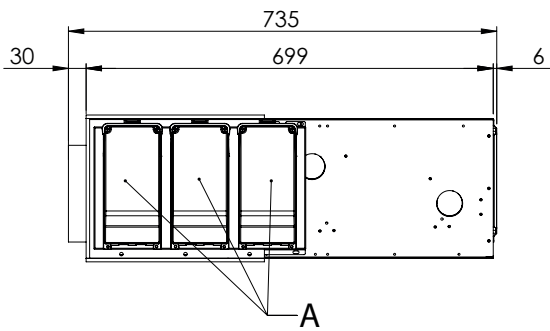
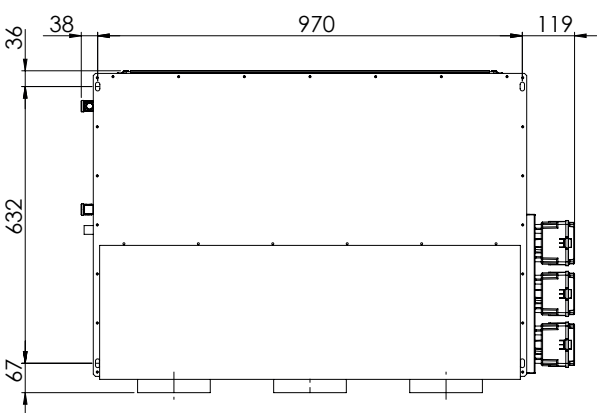
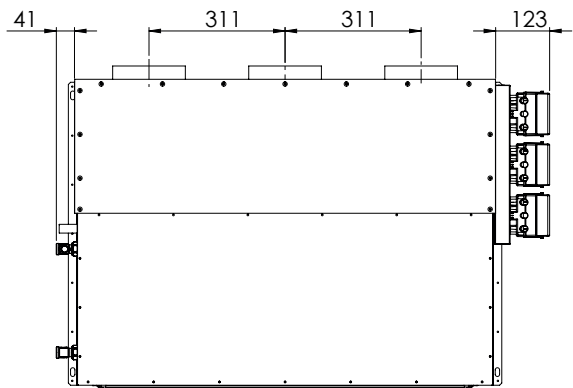
Key:

- A - Electrical panel
- B - Condensate drain
- C - Water inlet
- D - Water outlet



3.10.2 Hydro Vent 3

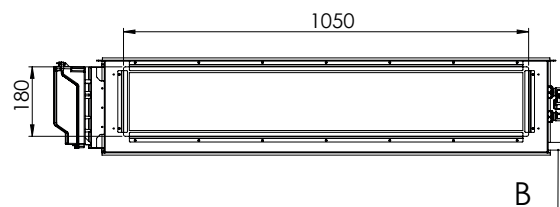
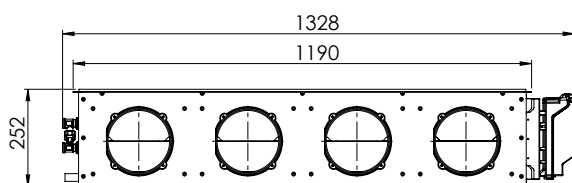
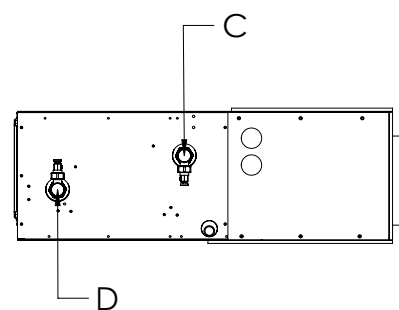
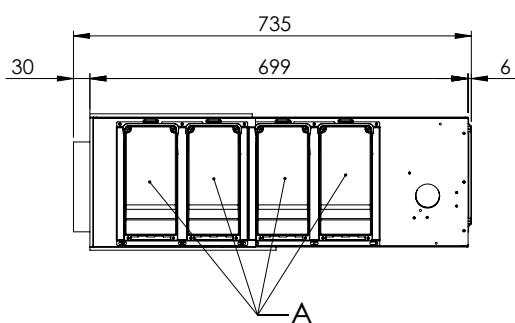
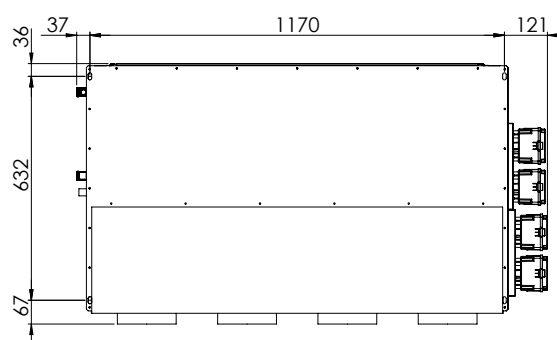
- Key:
A - Electrical panel
B - Condensate drain
C - Water inlet
D - Water outlet



3.10.3 Hydro Vent 4

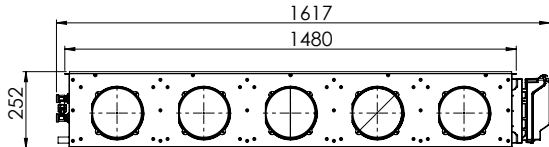
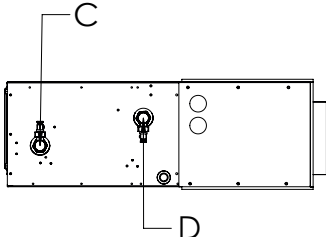
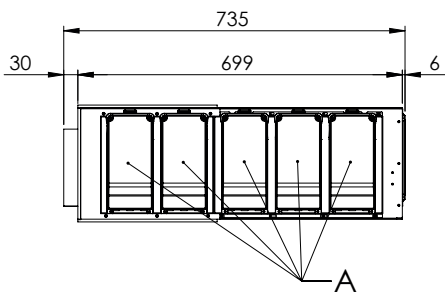
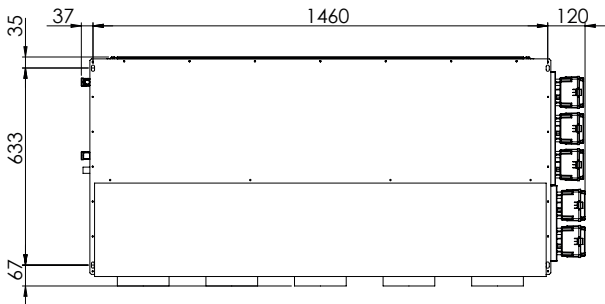
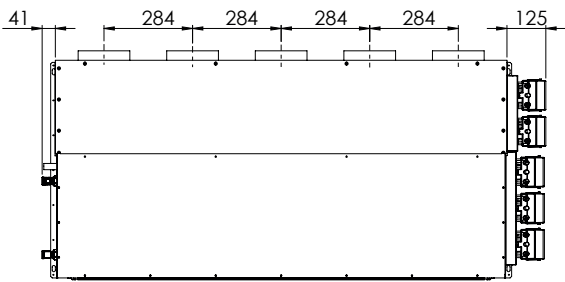
Key:

- A - Electrical panel
- B - Condensate drain
- C - Water inlet
- D - Water outlet



3.10.4 Hydro Vent 5

- Key:
A - Electrical panel
B - Condensate drain
C - Water inlet
D - Water outlet



3.11 POSITIONING

3.11.1 Preliminary warnings

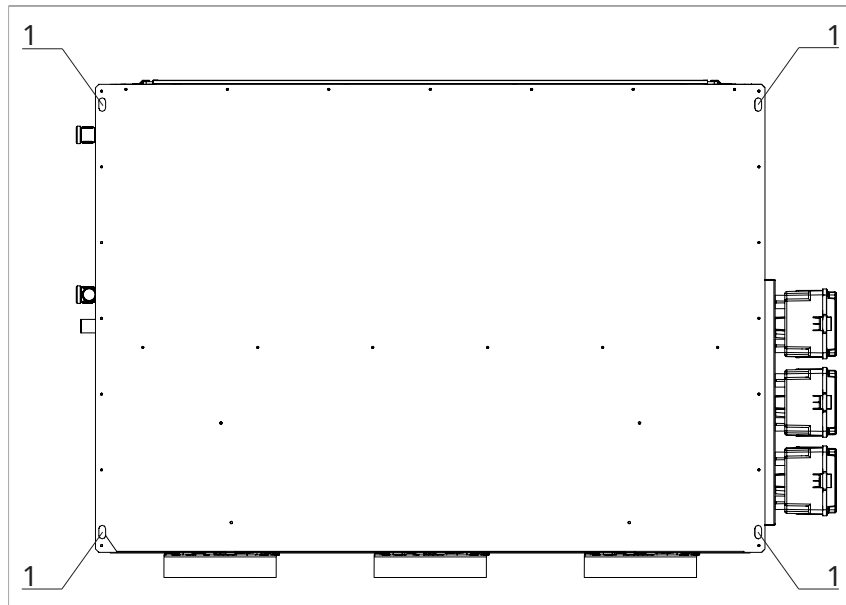
⚠ Check that:

- The surface bears the weight of the appliance.
- There are no pipes or power lines in the surface area.
- The functionality of load-bearing elements is not compromised.

3.11.2 Positioning the unit

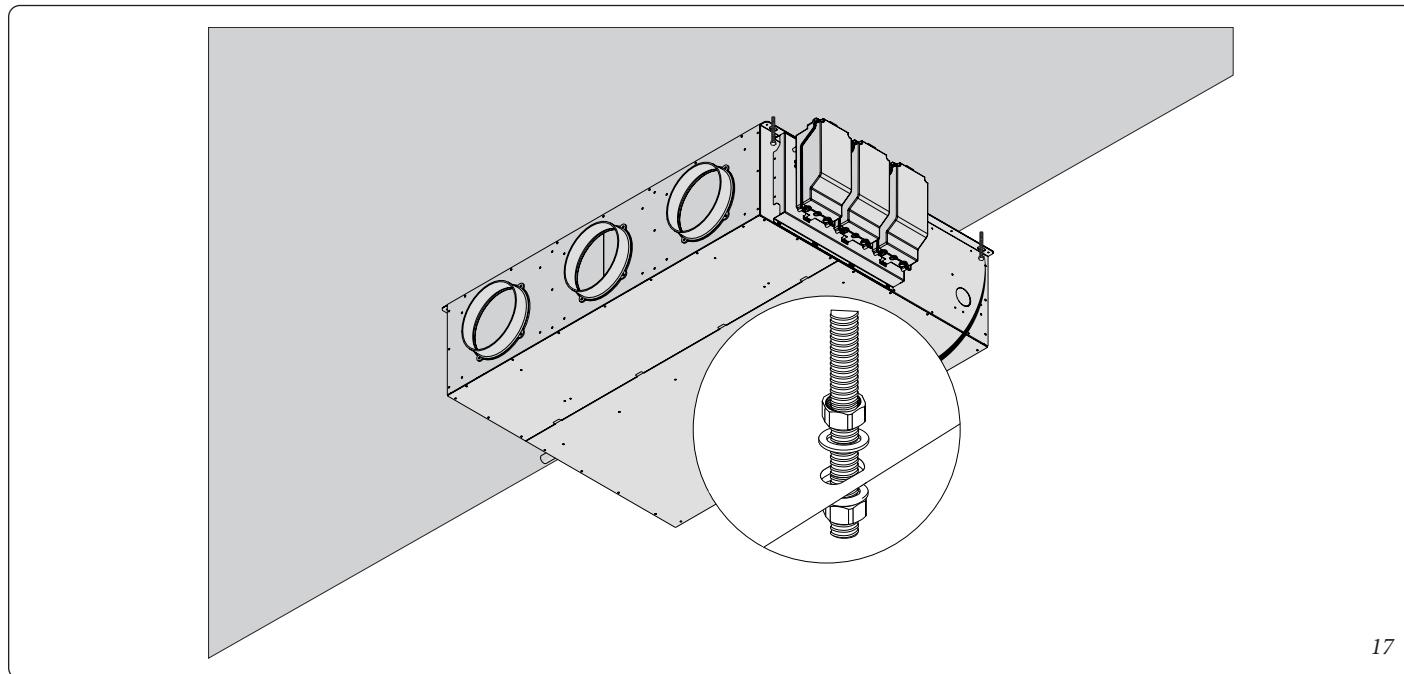
Key:

1 - Mounting holes



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⚠ Use the 4 mounting holes at the top of the unit.



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⚠ Check that the unit faces the right direction.

- ▶ Mark the position of the fixing holes.
- ▶ Use fastening systems suitable for the type of support surface and the weight of the unit.
- ▶ Secure the unit to the fastening system.

Check that:

- It is level.
- The minimum installation clearances are respected.



3.12 HYDRAULIC CONNECTIONS

3.12.1 Chemical-physical properties of the water

The quality of the water used must comply with the properties shown in the following table; otherwise, provide a treatment system.

Water content	Unit of measurement	Concentration
Chlorides (Chloride)	ppm	< 50
Oxygen content	ppm	< 0.1
Ammonia (NH ₃)	ppm	< 0.5
Sulphate (SO ₄)	ppm	< 70
Bicarbonate (HCO ₃)	ppm	70 ÷ 300
Bicarbonate/Sulphate Ratio (HCO ₃ /SO ₄)	-	> 1.0
pH	-	7.5 - 9.0
Total hardness	dH	4.5 - 8.5
Phosphate (PO ₄)	ppm	< 2.0
Free chlorine (Cl ₂)	ppm	< 0.5
Iron (Fe ³⁺)	ppm	< 0.2
Manganese (Mn ²⁺)	ppm	< 0.05
Free carbon dioxide (CO ₂)	ppm	< 5
Electrical conductivity	µS/cm	10 - 500
Nitrate (NO ₃)	ppm	< 100
Aluminium (Al)	ppm	< 0.2
Ratio between [Ca ²⁺ , Mg ²⁺] and [HCO ₃ ⁻]	-	-
Chlorides (Cl)	ppm	< 50
Hydrogen sulphide (H ₂ S)	ppm	< 0.05

⚠ Well water or groundwater not coming from a water supply pipeline must always be carefully analysed and, if necessary, conditioned with appropriate treatment systems.

⚠ If the hardness of the starting water exceeds the value indicated in the table, a water softening system must be used.

⚠ Excessive softening of the water (total hardness < 1.5 mmol/l) could trigger corrosion in contact with metal elements (pipes or boiler parts). Also keep the conductivity value within 600 µS/cm.

⚠ Check the outlet chloride concentration after resin regeneration.

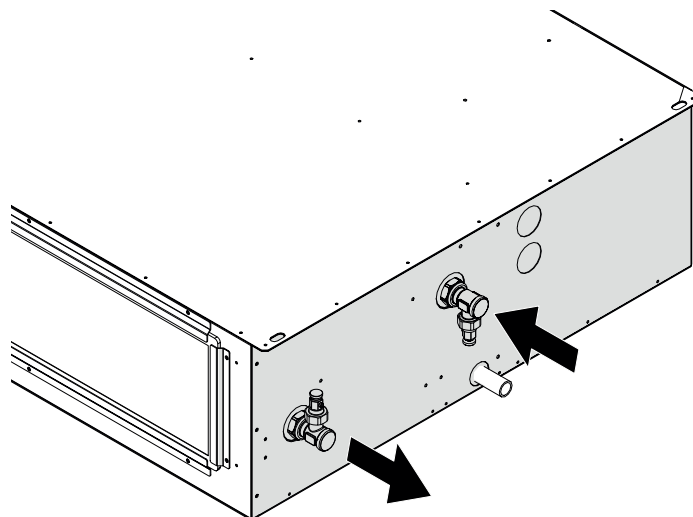
⚠ The unit can be used with water or water-glycol mixtures.

⊖ It is prohibited to introduce acids into the washing circuit.

⊖ It is prohibited to constantly or frequently top up the system, as this could damage the appliance's heat exchanger.



3.12.2 Position and dimensions



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3.12.3 Connection to the system

To make the connections:

- Lay out the hydraulic lines.
 - Use the “key against key” method.
 - Tighten the connections.
 - Check for leaks.
 - Cover the connections with insulating material.
- ⚠ Hydraulic lines and joints must be thermally insulated.
- ⚠ Avoid partial insulation of pipes.
- ⚠ Do not overtighten the connections to avoid damaging the insulation.
- ⚠ Carefully check the tightness of the insulation to avoid the formation and dripping of condensate.

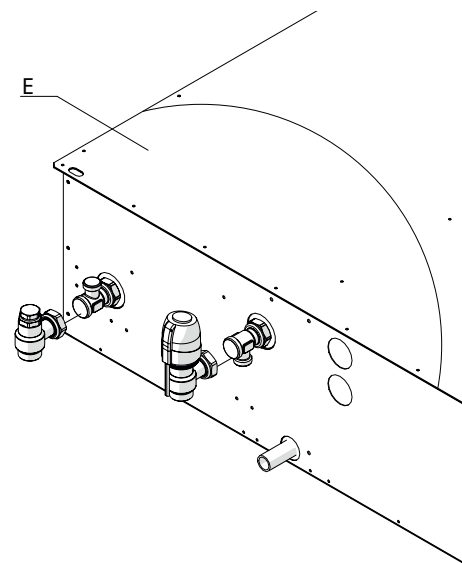
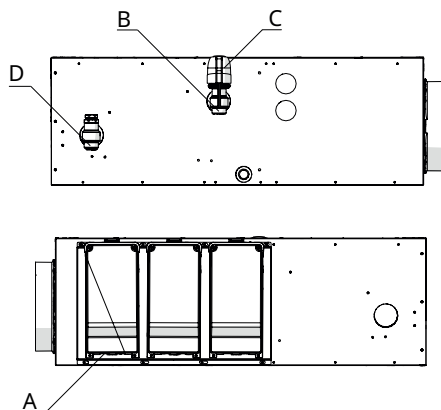
3.12.4 Connection with 2-way valve

If the 2-way valve option has been chosen:

- Electrical connections are required.
- Check that there is enough space to connect to the flow coupling at the bottom (the valve actuator body may protrude at the top from the profile of the unit).

Key:

- A - Electrical cable entry
- B - Fitting for water inlet pipe
- C - Thermoelectric motor
- D - Fitting for water outlet pipe
- E - Machine body



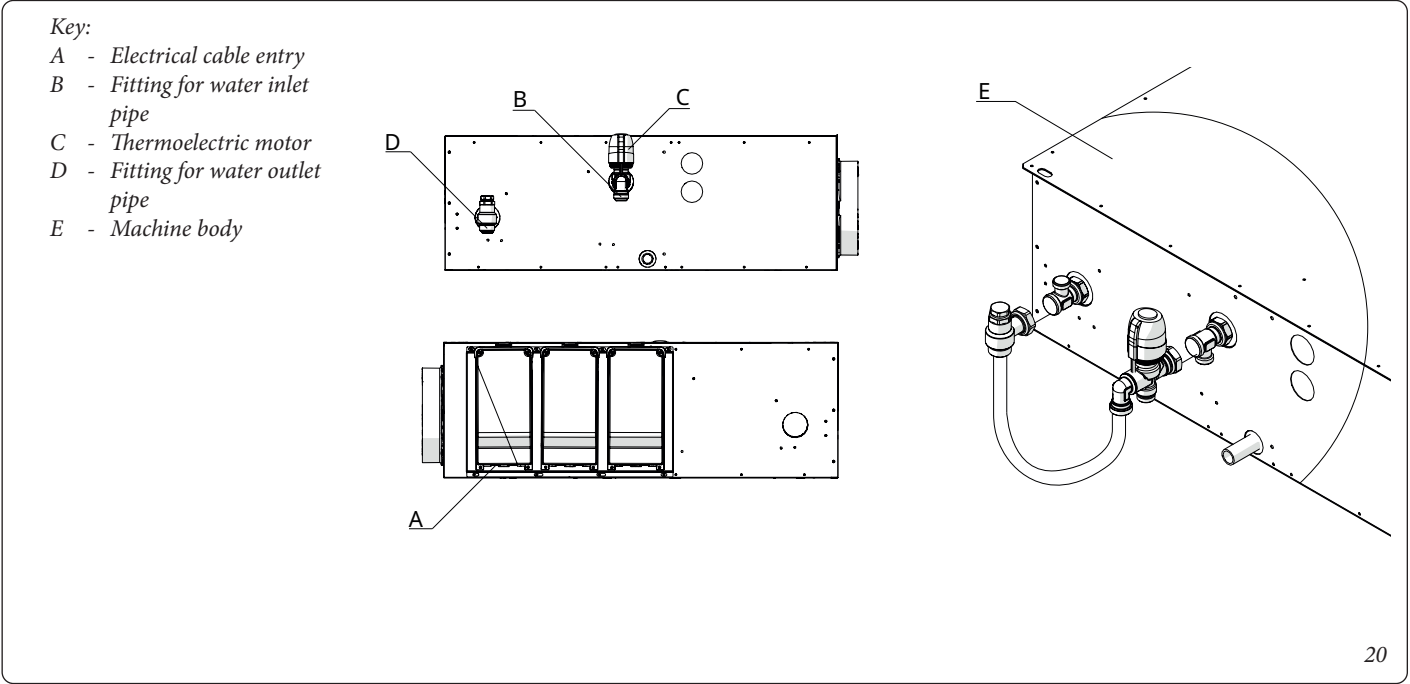
19



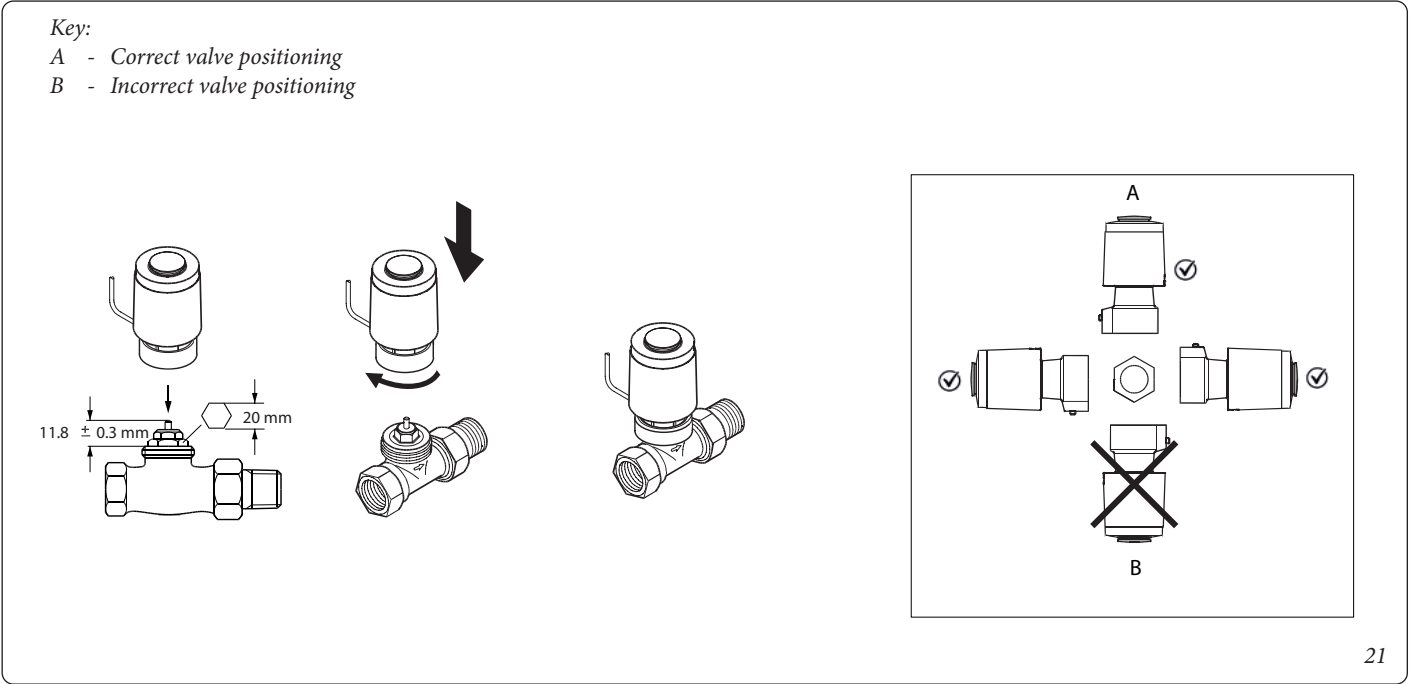
3.12.5 Connection with 3-way valve

If the 3-way valve option has been chosen:

- Electrical connections are required.
- Check that there is enough space to connect to the flow coupling at the bottom (the valve actuator body may protrude at the top from the profile of the unit).



3.12.6 Actuator installation - Positioning specification



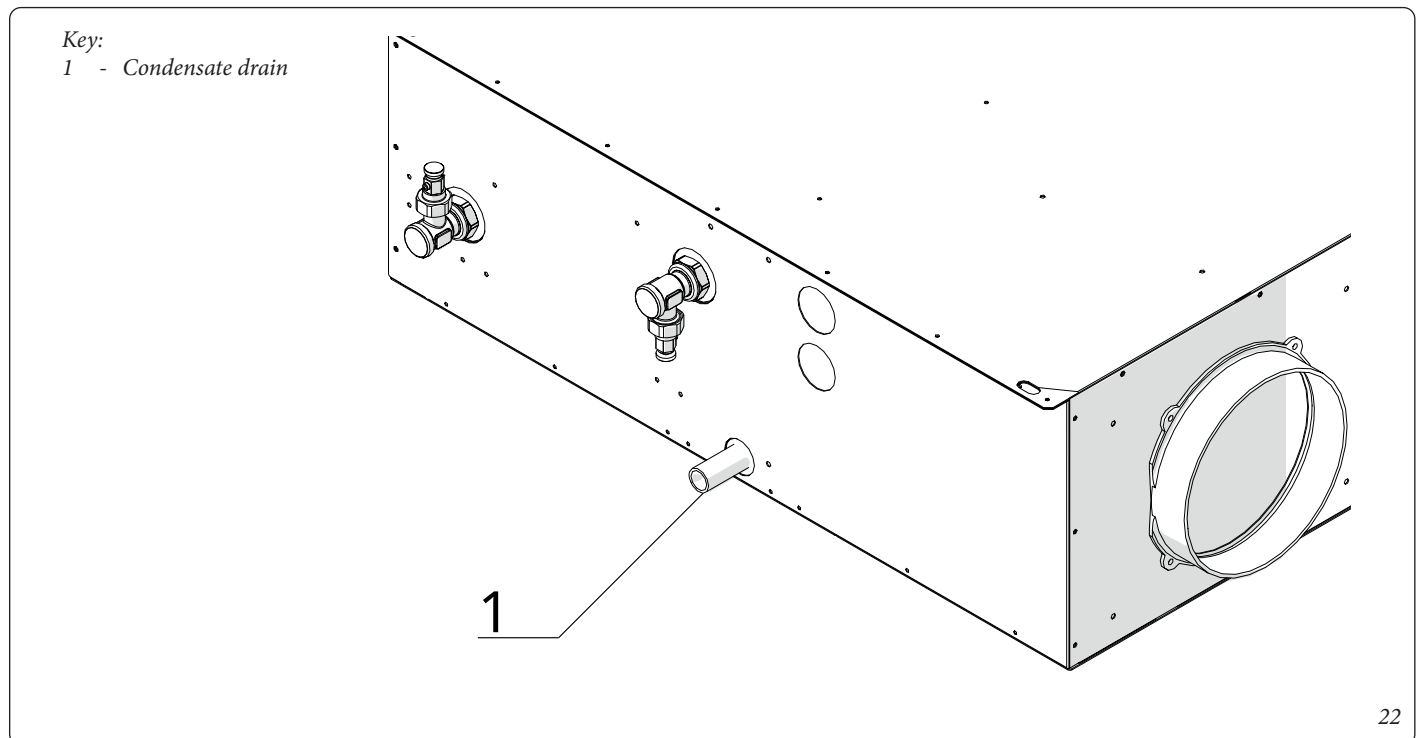
3.13 CONNECTING THE CONDENSATE DRAIN

3.13.1 Preliminary warnings

- ⚠ This appliance is complete with trays for collecting condensate produced during operation. The condensate must be channelled to a suitable place for drainage.
- ⚠ If the drainage line flows into a container (canister or other), the container itself must not be sealed tight and, above all, the drain pipe must not be immersed in water.
- ⚠ The hole for the passage of the condensate pipe must always have an outward slope.
- ⚠ When connecting the condensate drain, be very careful not to crush the rubber hose.

3.13.2 Position of couplings

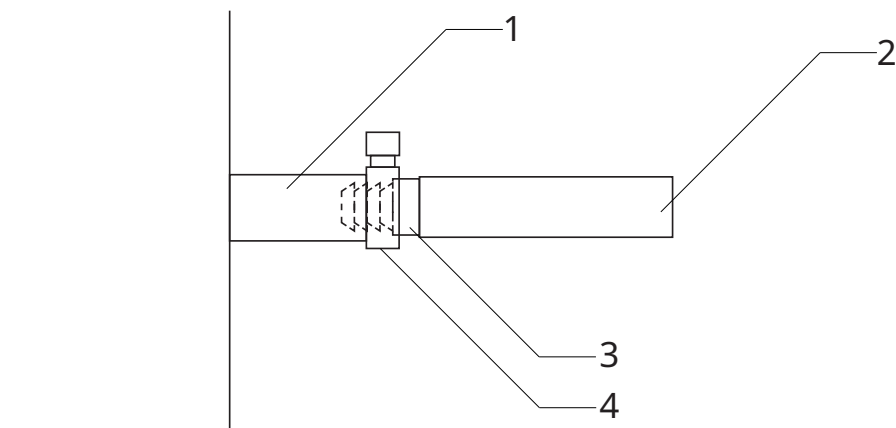
The unit has a condensate drain coupling. The size and location of the condensate drain couplings are shown below.



3.13.3 Connection

Key:

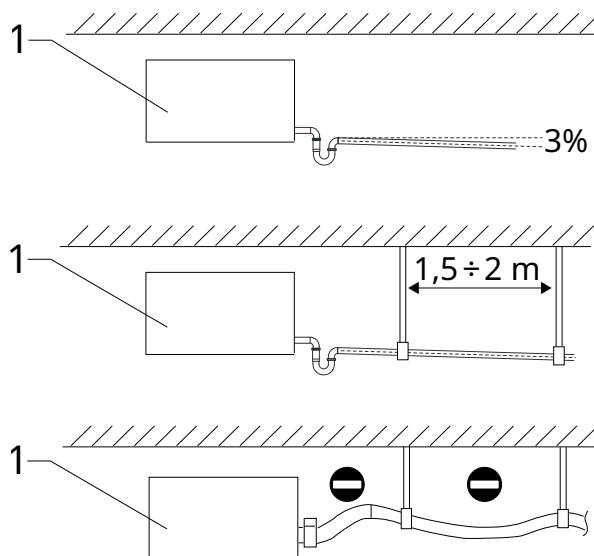
- 1 - Condensate drain coupling
- 2 - Condensate drain pipe
- 3 - Hose union
- 4 - Hose clamp



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Key:

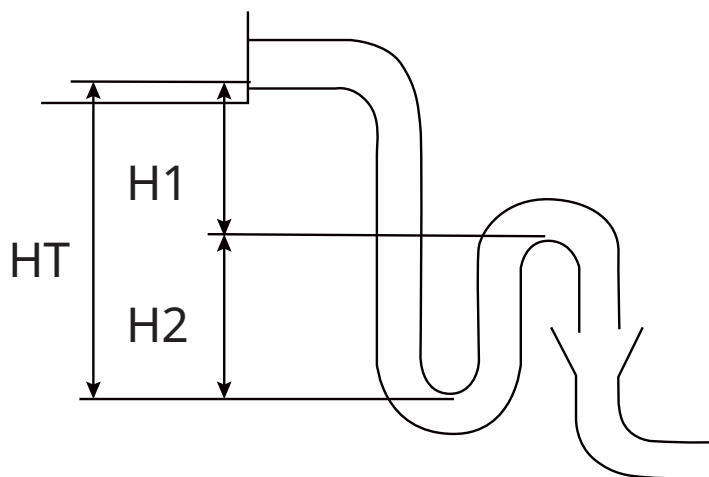
- 1 - Unit



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Key:

- HT - 100 mm
- H1 - 50 mm
- H2 - 50 mm



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To connect the condensate drain:

- Connect the drain pipe to the designated coupling on the unit.
- Make a siphon on the drain pipe near the unit.
- Direct the condensate drain pipe to a place for suitable for drainage.
- Maintain a minimum slope of 3% towards the drainage site.
- Isolate the junction points.



- ⚠ It is mandatory to install an adequate siphon on the condensate drain pipe to prevent the vacuum generated by the fans from blocking the proper outflow of condensate, with the risk of it spilling into the rooms.
- ⚠ The drain system must include an adequate siphon to prevent unwanted air ingress into the system under vacuum. The siphon also prevents odours or insects from infiltrating.
- ⚠ The siphon must have a plug at the bottom or must in any case be able to be quickly disassembled for cleaning.
- ⚠ Use plastic drain pipes.
- ⚠ Do not use metal pipes.
- ⚠ Make sure all joints are sealed to avoid water leaks.
- ⚠ Condensate drain pipes must be insulated for both the internal and external sections of the home to prevent condensate from forming on the surface and/or freezing issues. The insulation must be inserted up to the condensate drain pipe fitting on the designated coupling on the unit.
- ⚠ Use pipes with a minimum inside diameter of 19 mm.

3.14 LOADING THE SYSTEM

To load the system:

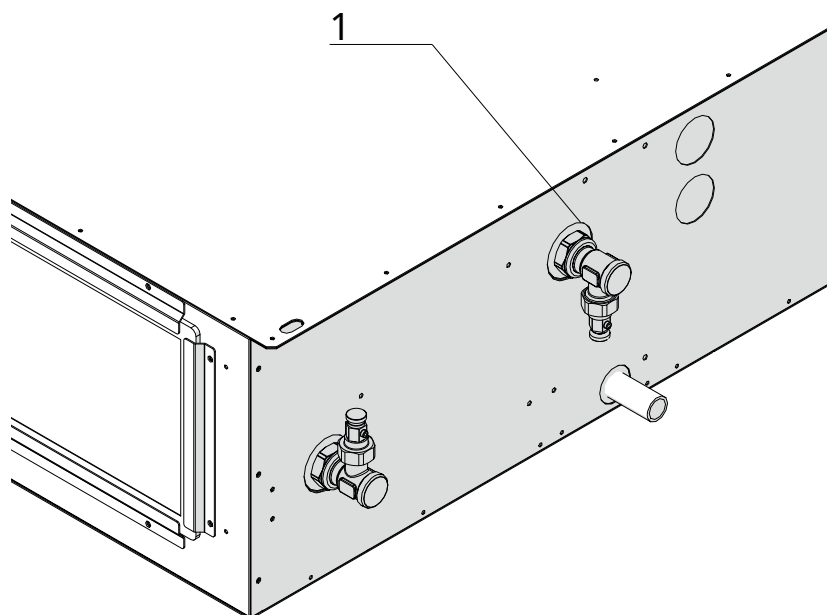
- ▶ Connect the machine to the system.
- ▶ Slowly open the filling tap.
- ▶ Open the vent valves one by one, from the filling tap to the appliance, to relieve air from the system.

Close the vent valve one by one in sequence when water starts to escape:

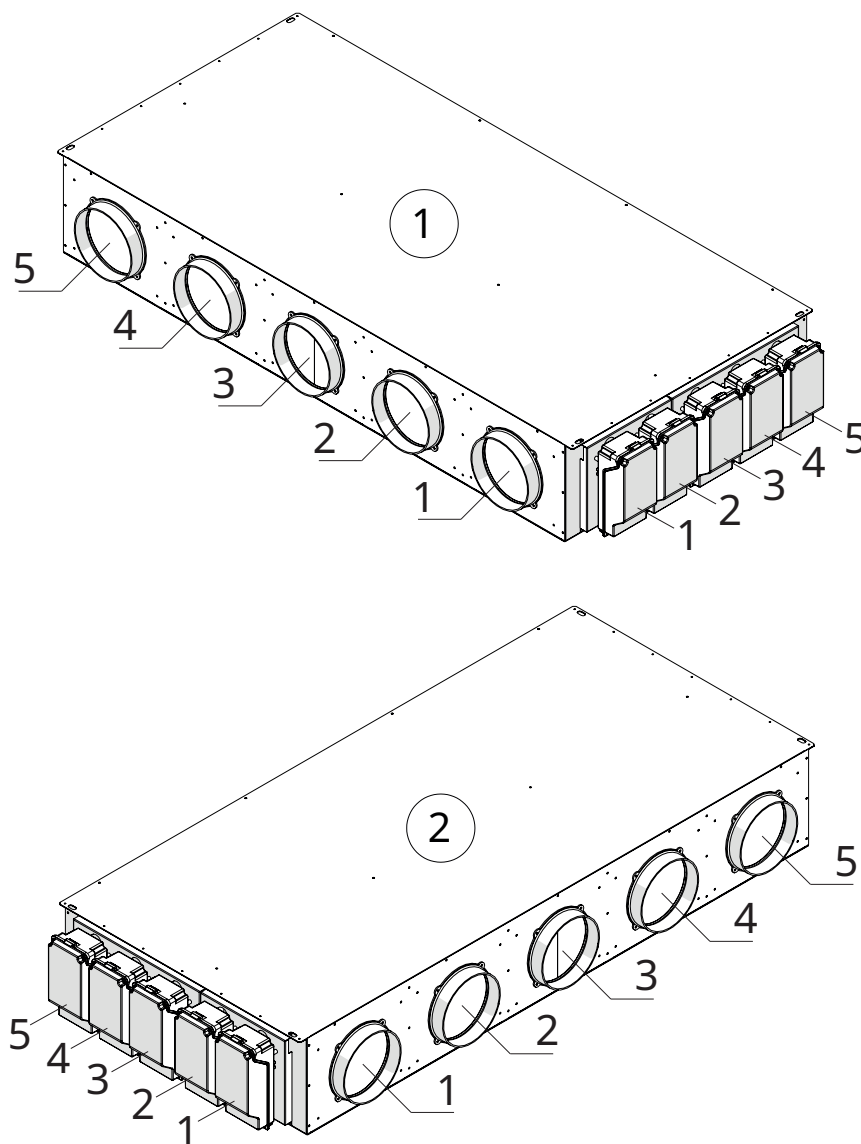
- ▶ Continue filling.
 - ▶ Check that the nominal pressure required for the system has been reached.
 - ▶ Close the filling tap.
 - ▶ Check that the joints are watertight.
- ⚠ It is recommended to repeat the operation after the appliance has been running for a few hours.
- ⚠ Periodically check the system pressure.

Key:

1 - Air vent valve



3.15 CORRESPONDENCE BETWEEN AIR FLOW DUCT AND ELECTRICAL PANEL



Key:

- 1 - Configuration SX: hydraulic couplings on the left and electrical panels on the right.
- 2 - Configuration DX: hydraulic couplings on the right and electrical panels on the left.

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⚠ Electrical panel 1 and flow duct 1 are always positioned near the same corner, regardless of the chosen configuration.

⚠ In the electrical panel corresponding to number 1, there is the connection to the power supply, to the actuator and to the 2-way and 3-way valves. The electrical panels are in parallel, therefore the power supply connection must be made only on number 1.

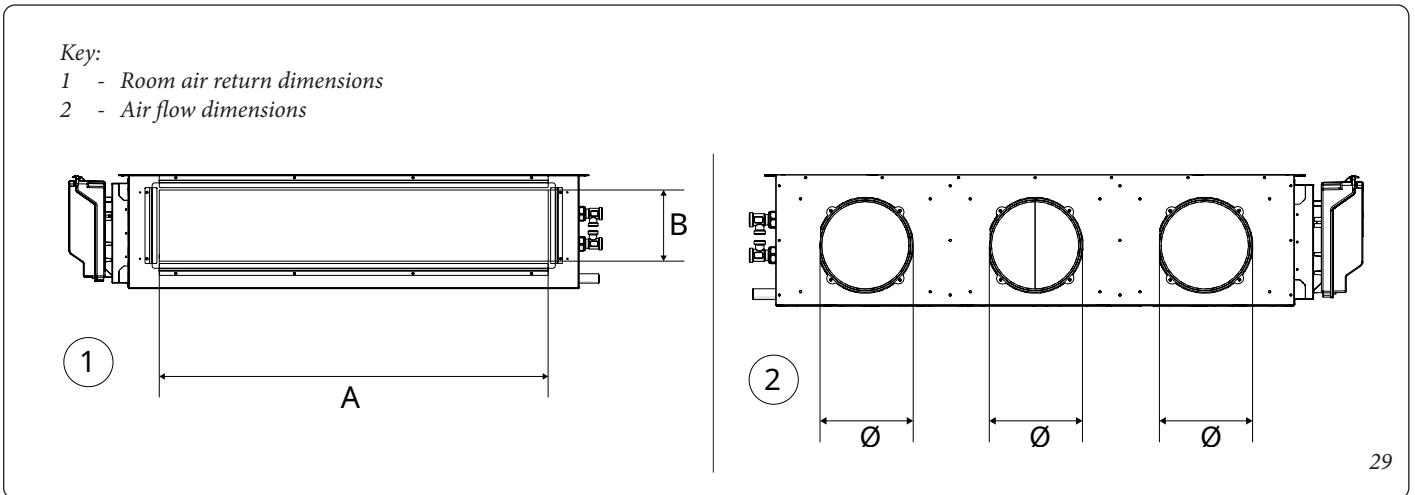
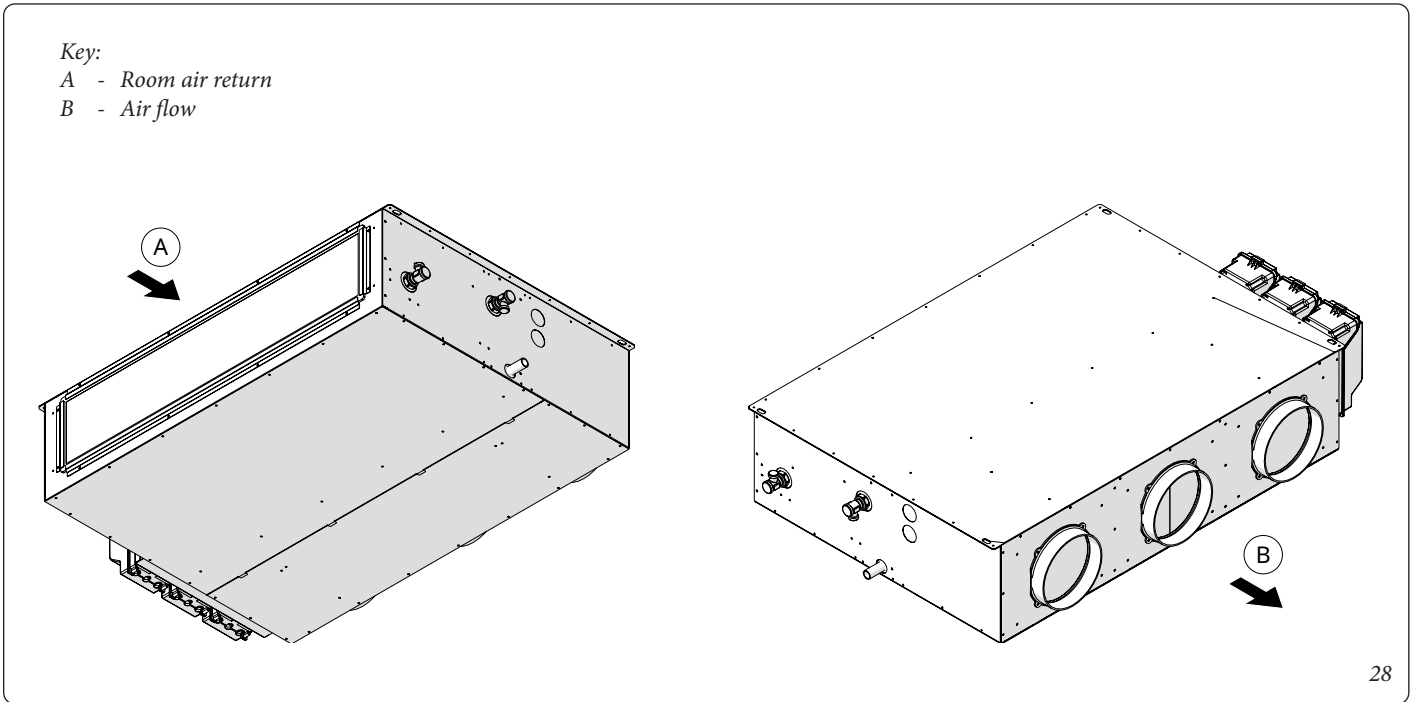


3.16 AIR CONNECTION

3.16.1 Preliminary warnings

- ⚠ The sizing of the ducts and the flow and return grids must be carried out by a professionally qualified person.
- ⚠ To avoid transmitting any vibrations from the machine to the environment, it is recommended to place an anti-vibration joint between the vents and the ducts.
- ⚠ The connecting pipes must have an adequate diameter and be supported so as not to weigh on the appliance.

3.16.2 Connections



Models	u.m.	Hydro Vent 2	Hydro Vent 3	Hydro Vent 4	Hydro Vent 5
Room air return dimensions					
A	mm	620	820	1020	1305
B	mm	150	150	150	150
Air flow dimensions					
Number of connections	-	2	3	4	5
Room air inlet coupling Ø	mm	160	160	160	160



3.17 ELECTRICAL CONNECTIONS

The appliance is delivered from the factory fully wired and only requires connection to the power supply, the control panel and any accessories.

3.17.1 Preliminary warnings

- ⚠ All electrical operations must be carried out by qualified personnel, in possession of the necessary legal requirements, trained and informed on the risks associated with such operations.
- ⚠ All connections must be made in accordance with the regulations in force in the country of installation.
- ⚠ Before carrying out any work, make sure that power is disconnected.
- ⚠ The unit should only be powered up once all hydraulic and electrical work is finished.
- ⚠ References:
 - For electrical connections, refer to the wiring diagrams in this manual, especially the part concerning the power terminal block.
- ⚠ Check that:
 - The features of the power grid are adequate for the absorption of the appliance, also considering any other machinery operating in parallel.
 - The electrical supply voltage and frequency correspond to that specified on the rating plate located on the appliance.
 - The cables are suitable for the type of installation in accordance with the IEC standards in force.
 - The disconnection device must be in an easily accessible place to be operated in case of emergency.
- ⚠ It is mandatory to:
 - Connect the appliance to an effective earthing system.
 - Provide an omnipolar switch with a contact opening distance equal to or greater than 3 mm which allows complete disconnection under overvoltage category III conditions.
 - Install an earth leakage circuit breaker. Failure to install this device may result in electric shock.
- ⚠ Use a dedicated power circuit. Never use a power supply that is also connected to another appliance as this may cause overheating, electric shock or fire.
- ⚠ For the electrical connection, use a cable long enough to cover the entire distance without any other connection. Do not use extension cords. Do not apply any other loads to the power supply.
- ⚠ After connecting the interconnection and power cables, make sure that the cables are routed so as not to exert excessive pressure on the covers or electrical panels. Fit the covers onto the cables. Incomplete connection of the covers may cause overheating of the terminals, electric shock or fire.
- ⚠ Any replacement of the power cable must be carried out exclusively by authorised personnel and in compliance with current national standards.
- ⚠ The manufacturer is not responsible for any damage caused by the lack of earthing or failure to follow the specific diagrams.
- ⚠ The appliance is equipped with an antijamming filter as required by current legislation. Use selective residual current devices to compensate for the micro-earth leakage of this device.
- ⊖ It is prohibited to earth the appliance using the gas and water pipes.

3.17.2 Sizing of the power line

To size the power supply line and the related protective device, see the tables below.

These are not average absorptions or transient peaks, but values to be considered for the correct sizing of the system and for the contractual power demand (excluding loads due to the normal operation of the building).

- ⚠ Maximum power is reached only in exceptional cases, so the indicated tripping current is suggested to ensure a balance between machine absorption and impact on the general system.
- ⚠ The minimum cable cross-section indicated must be checked based on the actual conditions of the system: cable length, power supply features, etc.
- ⚠ For units equipped with electric resistances, it is necessary to add the absorption values of the units to those of the resistances shown in the following tables.

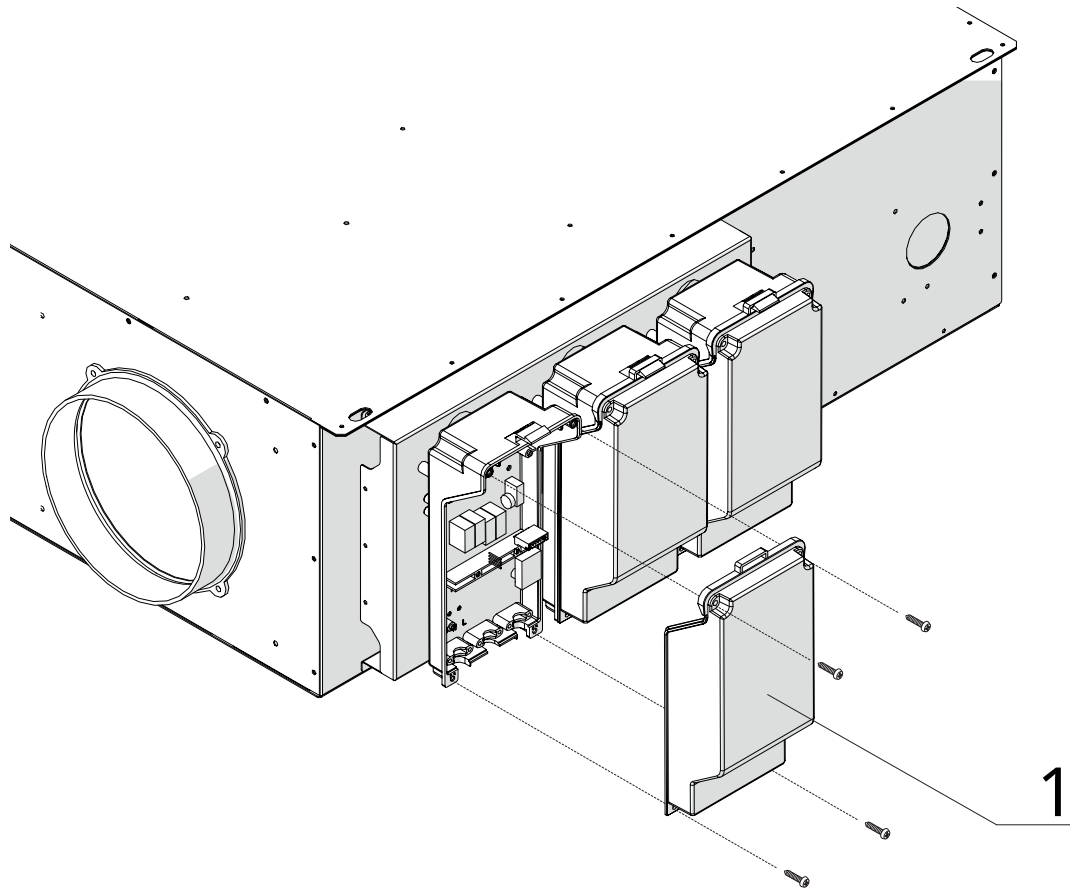


3.17.3 Access to the electrical panel

- ⚠ The electrical panel may only be accessed by specialised personnel.
- ⚠ Before carrying out any work, make sure that power is disconnected.

Key:

1 - Electrical panel cover



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To reach the connections:

- Remove the fixing screws.
- Remove the electrical panel cover.

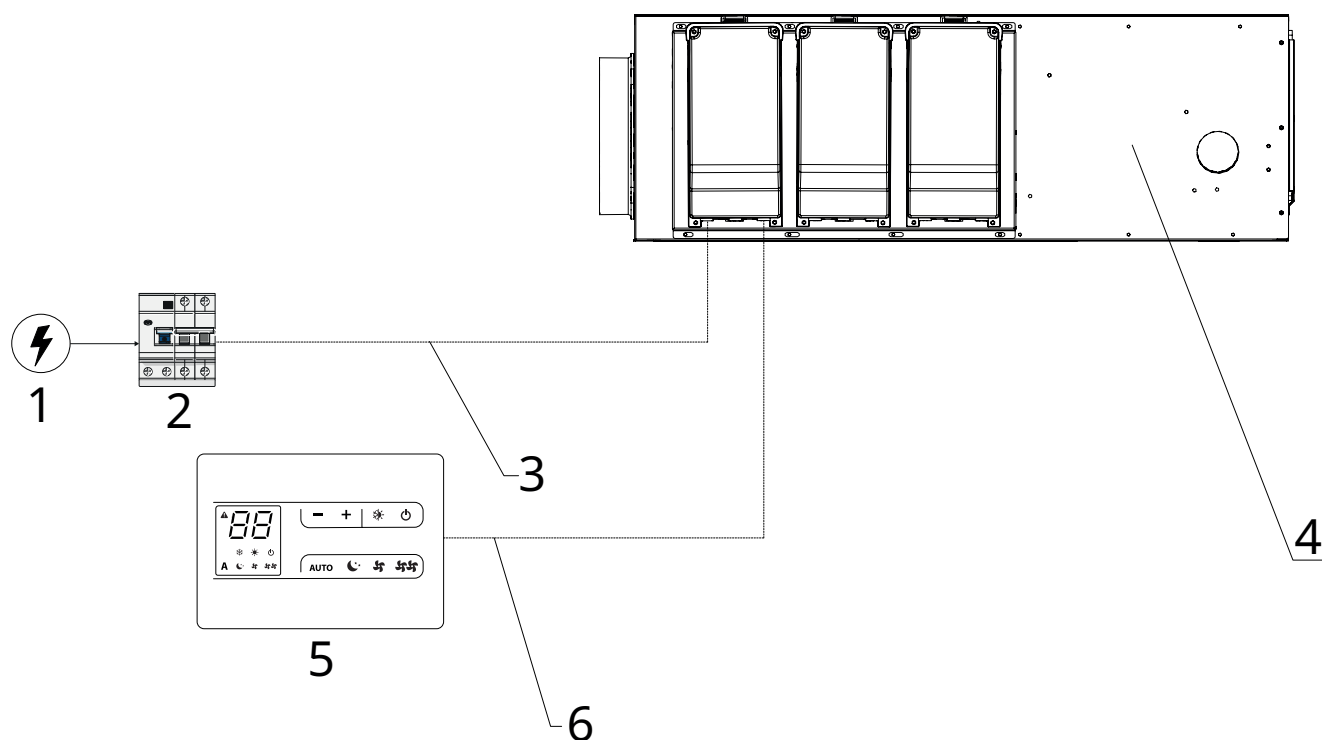
3.17.4 Connection

Before proceeding with the electrical connection of the unit to the power grid, make sure that the disconnecter is open. The power supply of the single-phase unit must be connected to the specific terminals, subject to the action of the disconnecter.

- ⚠ Use properly sized cables to avoid voltage drops or overheating.



3.17.5 Connection diagram



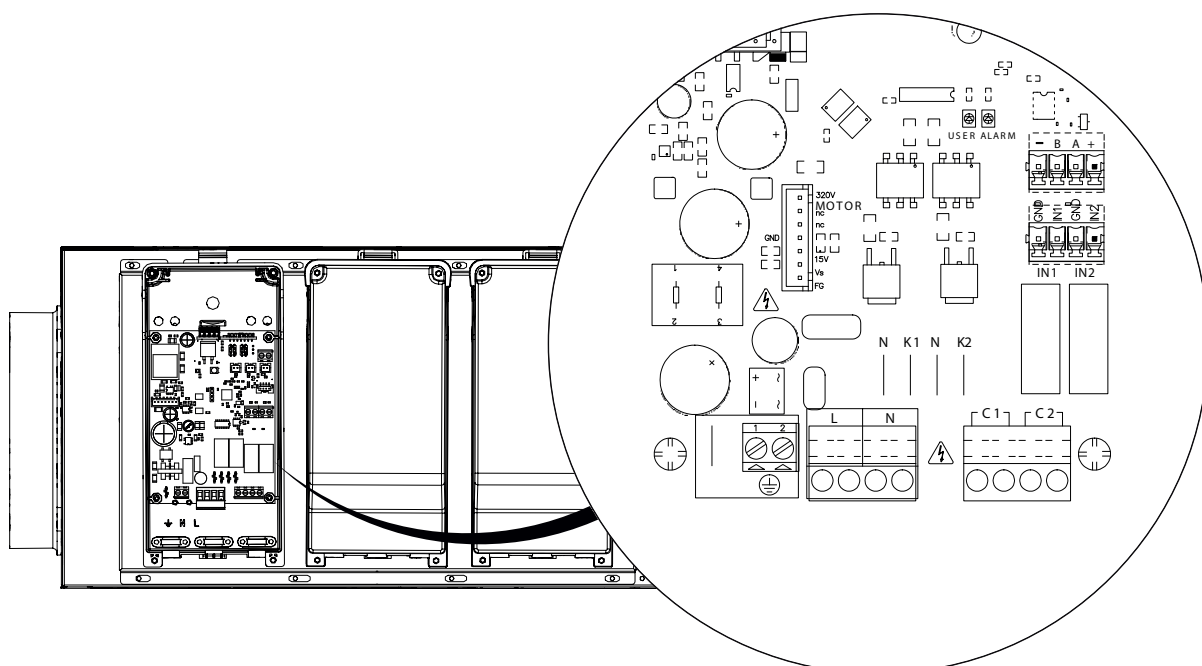
Key:

- 1 - Power supply 230/1/50. Make the power connection **ONLY** on panel 1
- 2 - Disconnect
- 3 - Power cable
- 4 - Unit
- 5 - Control panel
- 6 - Communication cable to control panel

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3.17.6 Electrical panel on board the unit

Connection terminal block. For information on electrical connections, refer to Paragraph 4.6.



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4 CONTROL PANEL

4.1 INSTALLATION

4.1.1 Description

The Smart Touch wall-mounted control panels with thermostat and room temperature and relative humidity probe are electronic thermostats with the possibility of controlling one or more appliances equipped with electronic remote control.

They allow:

- Regulating the room temperature.
- Management of the main functions of the device.

They are equipped with:

- Room temperature probe.
- Internal memory with data saving even in the event of an abnormal shutdown or power failure.

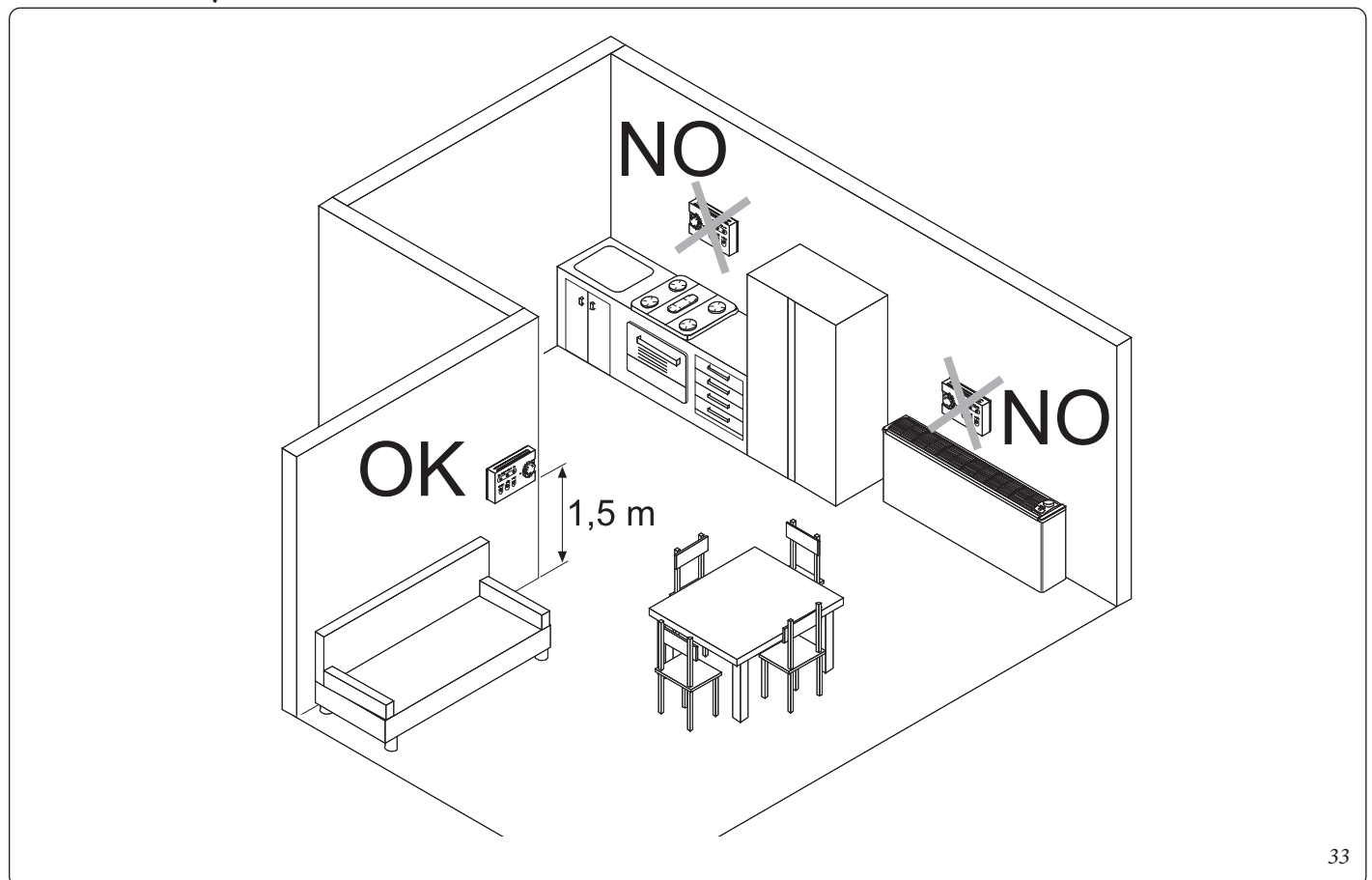
△ The command can control up to 30 devices.

△ The room temperature probe guarantees anti-freeze safety even when the control is in standby.

△ After 20 seconds from the last action, the panel brightness is reduced, and only the room temperature is shown on the display. Pressing any button restores maximum brightness.

△ Any anomalies in the individual connected terminals are not signalled by the wall panel.

4.1.2 Assembly



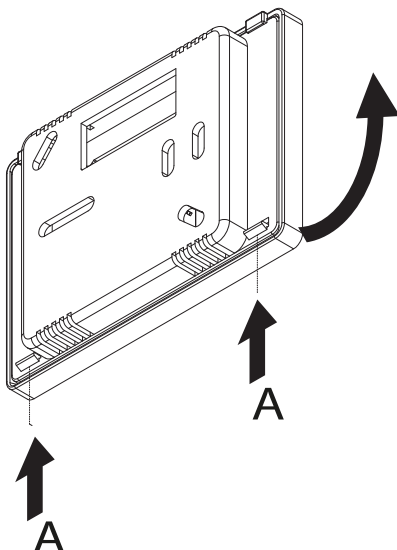
The control panel must be installed:

- On internal walls.
- Approximately 1.5 m above the floor.
- Away from doors and windows.
- Away from heat sources such as radiators, fan coils, stoves, direct sunlight.

⚠ The control panel is shipped already assembled.

Key:

A - Teeth



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Before wall installation:

- Release the fixing teeth at the back the control panel.
- Separate the base from the control panel.
- Use the base as a template to trace the fixing points.

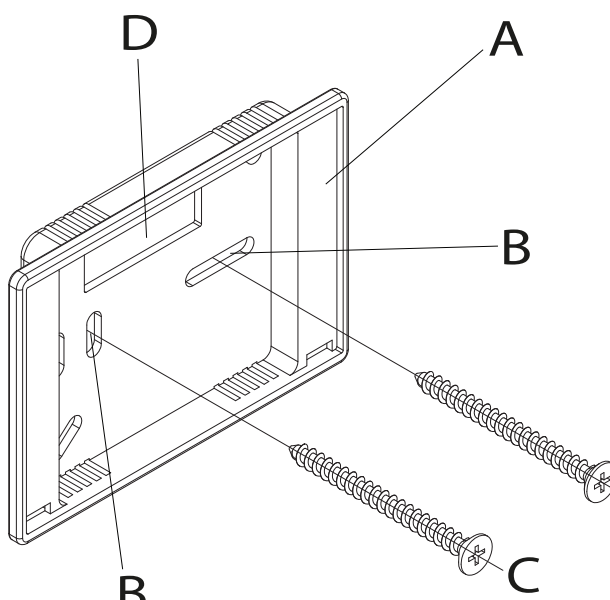
Key:

A - Control base

B - Wall fixing holes

C - Screws

D - Hole for passage of electrical connections



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To fix the control panel to the wall:

- Drill holes in the wall.
- Pass the electrical cables through the drilled hole.
- Secure the control base to the wall using suitable screws and plugs.
- Perform the electrical connections.
- Close the control panel.

⚠ Be careful not to crush the wires when closing the control panel.



4.2 CONNECTIONS

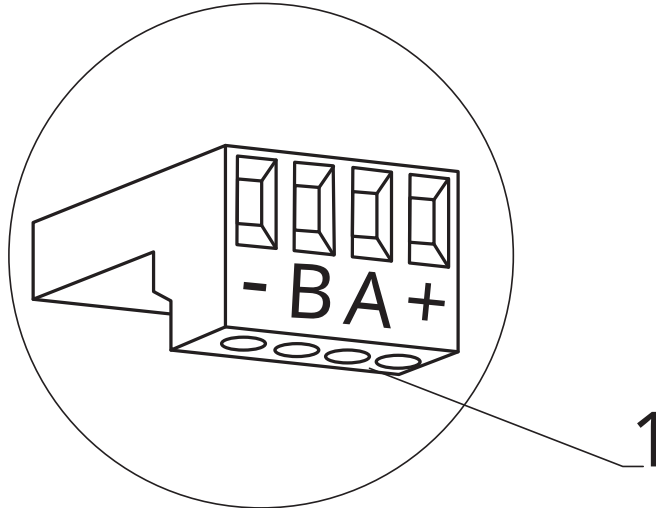
△ The control panel for wall control must be ordered separately.

4.2.1 Preliminary warnings

△ The terminals for connecting the control panel and the CP presence contact are placed in a plastic bag and positioned on the inside of the electrical box cover.

Key:

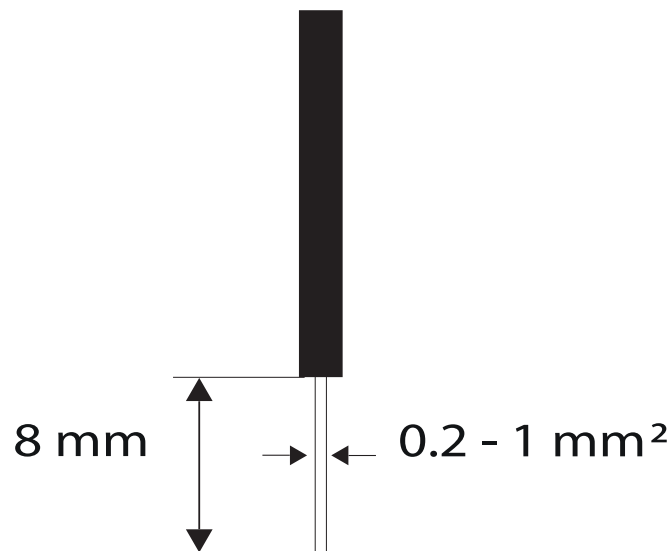
1 - Terminals



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The terminals accept:

- Rigid or flexible cables with a cross-section of 0.2 to 1 mm².
- Rigid or flexible cables with a cross-section of 0.5 mm² if two conductors are connected to the same terminal.
- Rigid or flexible cables with a maximum cross-section of 0.75 mm² if equipped with a cable lug with a plastic collar.



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To connect the cables:

- ▶ Make an 8mm strip.
- ▶ If the cable is rigid, insert it easily.
- ▶ In case of a flexible cable, use needle-nose pliers.
- ▶ Push the cables in all the way.
- ▶ Check that they are securely attached by pulling them lightly.

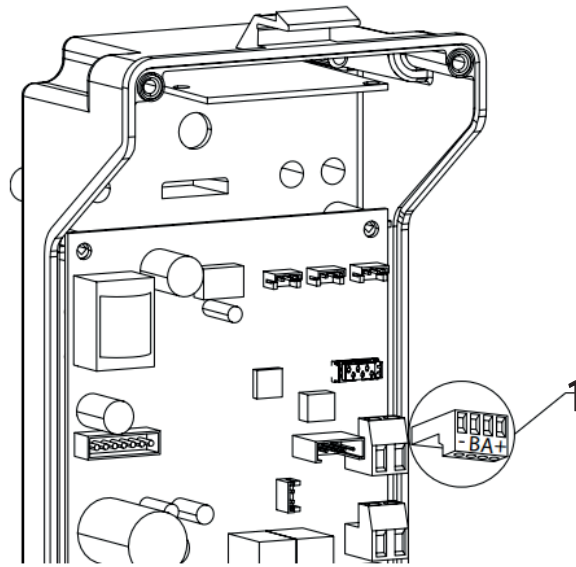


4.2.2 Control panel

Location of terminal blocks:

Key:

1 - Terminals



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To make connections between the wall-mounted control panel and the board:

- ▶ Connect the power cables to the terminals + - .
- ▶ Connect the cables for the ModBus serial connection to terminals A and B.

4.2.3 CP presence contact

Through this contact it is possible to connect an external device that inhibits the operation of the appliance such as:

- Window opening contact.
- On/Off remote.

Operation.

The contact is normally open..

- ▶ When the CP contact, connected to a clean, non-voltage contact, closes, the device goes into standby.
- It is forbidden to connect the CP input in parallel with that of other electronic boards. In this case, use separate contacts.

4.2.4 RS485 serial connection

The wall-mounted remote control can be connected via an RS485 line to one or more devices, up to a maximum of 30. The devices must be equipped with an electronic board suitable for remote control.



4.3 INTERFACE

4.3.1 Control panel

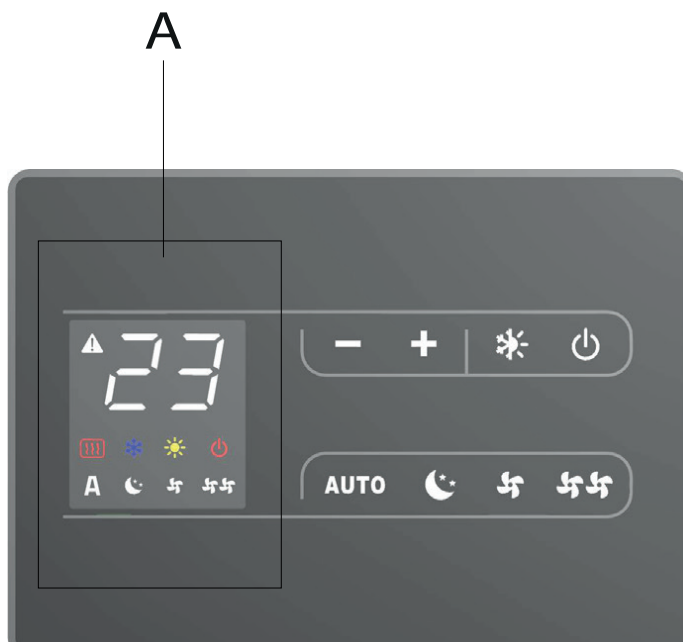
For the connection:

- Follow the instructions on the connection diagram.
- Connect according to the indications “A” and “B”.
- ⚠ Use a shielded two-core cable suitable for RS485 serial connection with a minimum cross-section of 0.35 mm².
- ⚠ Keep the two-core cable, at least 50 mm, separate from the electrical power cables.
- ⚠ Make a route so as to minimize the length of the deviations.
- ⚠ Terminate the line with the 120 Ω resistor.
- Star connections are prohibited.

4.3.2 Display

Key:

A - Display area



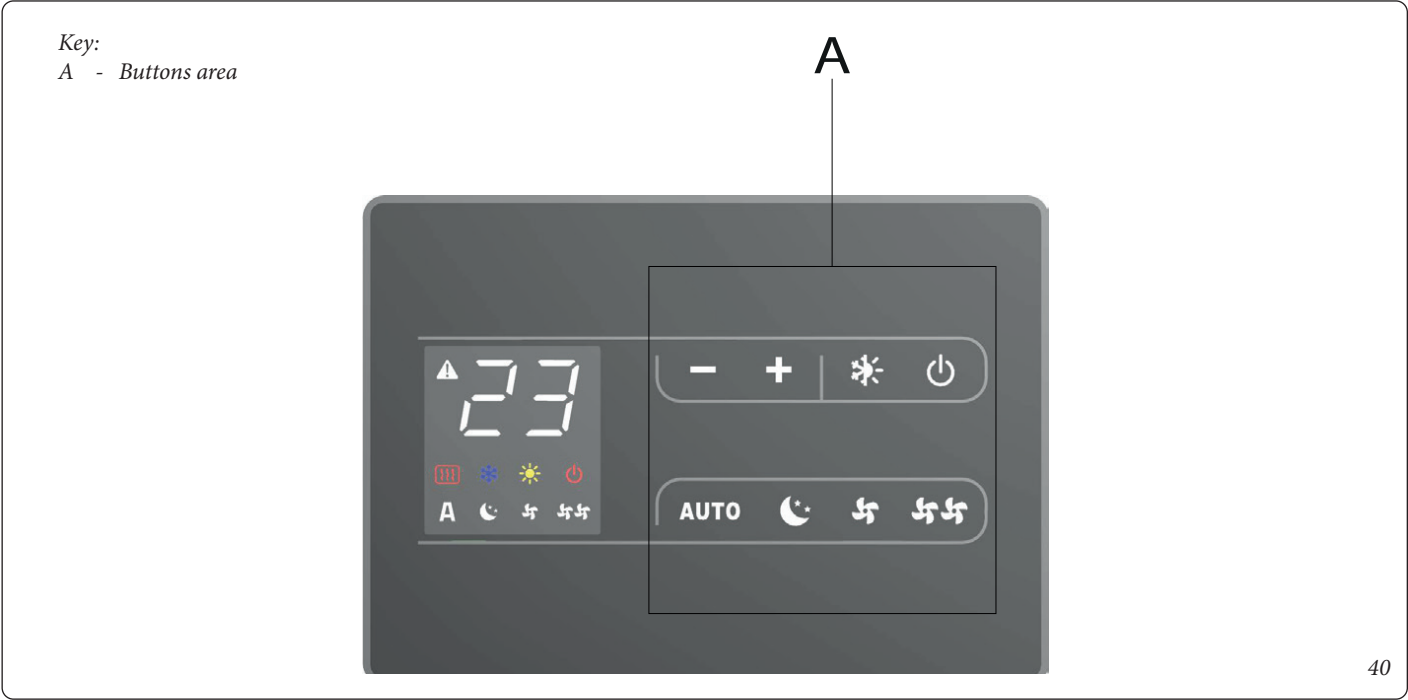
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Statuses and alarms displayed on the display.

A	Automatic function active
	Silent function active
	Maximum active ventilation speed
	Night function active
	Heating function active
	Cooling function active
	Active alarm with fixed icon
	Unit in stand-by or CP contact closed
	Active resistance indication (Not available on this model)



4.3.3 Button functions



Buttons and related functions.

+	Allows you to increase the set temperature
—	Allows you to decrease the set temperature
❄️	Allows you to select the operating mode by choosing between Cooling and Heating
AUTO	Allows you to activate the Automatic function
🌙	Allows you to activate the Night function with limitation of the ventilation speed and automatic variation of the temperature
🌀🌀	Allows you to set the maximum ventilation speed
🔌	Allows you to activate or deactivate the unit
🌀	Allows you to activate the Silent function with limitation of the ventilation speed to a limited maximum value

4.4 MAIN FUNCTIONS

4.4.1 General ignition

Before activation:

△ Make sure the remote control is connected to the mains power supply.

△ In case of a main switch on the power supply line, turn on the system by inserting the switch.

To activate the command

► Hold down the button  : *the symbol  lights up.*

4.4.2 Set the operating mode

To switch the operating mode

► Press and hold the button  for about 2 seconds:

The symbol  on indicates that the Heating function is activated.

The symbol  on indicates that the Cooling function is activated.

△ In Heating mode the symbol is lit with the set-point higher than the room temperature.

△ In Cooling mode the symbol is on with the set-point lower than the room temperature.

△ In case of incorrect set-point, the symbol of the activated function flashes and ventilation stops until the value adequate to satisfy the request is reached.

4.4.3 Put the command on stand-by

To put the command on stand-by.

► Press and hold the button  for about 2 seconds : *the command turns off.*

△ In stand-by mode, the control ensures frost protection. If the ambient temperature is <5°C, the hot water solenoid valve and boiler enable outputs are automatically activated.

4.4.4 Set the room temperature

To set the room temperature

► Press the buttons   to decrease or increase the desired value: *the value shown on the display changes.*

△ The temperature regulation range is from 16°C to 28°C, with a resolution of 0.5°C.

△ Off-scale values of 5°C and 40°C are permitted, except in Automatic mode. Set these values only for short periods.

4.4.5 Automatic Function

To select Automatic function

► Press and hold the button **AUTO** for about 2 seconds: *the symbol  on indicates the Automatic function is activated.*

△ The ventilation speed is automatically adjusted between a minimum and a maximum value based on a PI-type algorithm, according to the actual distance of the room temperature from the set-point.

4.4.6 Silent Function

To select Silent function

► Press and hold the button  for about 2 seconds: *the symbol  on indicates the Silent function is activated.*

△ The ventilation speed is limited to a low maximum value.

4.4.7 Night function

To select Night function

► Press and hold the button  for about 2 seconds: *the symbol  on indicates the Night function is activated.*

△ The ventilation speed is limited to a very low value.

△ The set temperature is automatically changed:

- in Heating function, -1°C after one hour from activation and -1°C after two hours.
- in Cooling function, +1°C after one hour from activation and +1°C after two hours.

4.4.8 Maximum speed functioning

To select maximum speed functioning

► Press and hold the button  for about 2 seconds: *the symbol  on indicates the Maximum speed functioning is activated.*

△ You immediately get the maximum power available for both heating and cooling.

△ Once the desired temperature is reached, select a different operation to obtain greater thermal and acoustic comfort.



4.4.9 Set the buttons lock

To set the buttons lock

- ▶ Press the buttons simultaneously **— +** for about 10 seconds: *the writing **bl** appears on the screen.*
- ⚠ All settings are disabled for the user.
- ⚠ Repeat the sequence to unlock the command again.

4.4.10 Brightness reduction

To reduce the display brightness

- ▶ With the display off, press and hold the button **+** for 5 seconds: *the writing **bl** appears on the screen.*
- ▶ Press the button **—** to activate the brightness reduction.
- ▶ Wait for 20 seconds: *the brightness is reduced.*
- ⚠ After 20 seconds from the last action, the panel brightness is automatically reduced to improve nighttime comfort. Only the set mode and air speed remain visible on the display, obscuring the room temperature display.

4.4.11 Deactivation

To turn off the display

- ▶ Press the button **⏻** for about 2 seconds: *all the light signals go out.*
- ⚠ In stand-by mode the control ensures anti-freeze safety.

4.4.12 Room temperature probe offset adjustment

To adjust the offset of the room temperature probe

- ▶ From the display off, press the button **—** for about 5 seconds: *You access the menu for changing the AIR probe offset displayed on the display.*
- ▶ Press the buttons **— +** to modify: *The value shown on the display changes.*
- ⚠ Since the ambient temperature detection probe is positioned in the lower part of the device, it is possible that in some cases the measurement may differ from the actual temperature.
- ⚠ Use this adjustment with caution.
- ⚠ This adjustment should only be made after actually detecting deviations from the actual ambient temperature with a reliable instrument.
- ⚠ Adjust the value in a range of -9/+12, in increments of 0.1°C.
- ⚠ After a period of 20 seconds from the last action the command switches off and the setting is stored.

4.4.13 On, Off and Reset Wi-Fi Network

To activate the Wi-Fi network

- ▶ From the display on, press the button **📶** for about 10 seconds: *the writing “On” appears on the screen.*
- ▶ Do not touch any other buttons for another 10 seconds: *The Wi-Fi network is active and remains visible and usable with the last name configured.*

To reset and restore the Wi-Fi network to its original configuration

- ▶ From the display on, press the button **📶** for about 10 seconds: *the writing “On” appears on the screen.*
- ▶ Press the button again **📶**: *the writing “rSt” appears on the screen.*
- ▶ Do not touch any other buttons for another 10 seconds, remove and restore voltage to the command: *The Wi-Fi network is reset.*

To turn off the Wi-Fi network

- ▶ From the display on, press the button **📶** for about 10 seconds: *the writing “On” appears on the screen.*
- ▶ Press the button again **📶** until the writing appears “OFF”: *the writing “OFF” appears on the screen.*
- ▶ Do not touch any other buttons for another 10 seconds: *The Wi-Fi network is turned off and will not be displayed on smartphones or tablets.*

4.4.14 App IMMER Vent

To use the IMMER Vent App, download the instruction booklet using the following QR Code



4.5 WARNINGS

4.5.1 Shutdown for long periods

In case of seasonal or long-term shutdowns

- ▶ Turn off the appliance.
- ▶ Set the system's main switch to off.
- ⚠ The antifreeze function is deactivated.

4.5.2 Alarm display on the screen

Alarms displayed on the screen

- ▶  **E1**: Room temperature probe disconnected or faulty. *It is not possible to activate any function of the appliance.*
- ▶  **E2**: Failure or connection of a double remote room probe on board one of the fan coils. *It is not possible to activate any function of the appliance.*
- ▶  **E3**: Humidity probe disconnected or faulty. *It is not possible to activate any function of the appliance.*

Filter alarm.

- ▶ The flashing symbol  appears on the display.
- ▶ The filters have reached their operating time limit.

To remedy

- ▶ Replace the filters.
- ▶ Reset the panel.

To replace the filters

- ▶ See Parag. 6.1.2.

To reset the panel

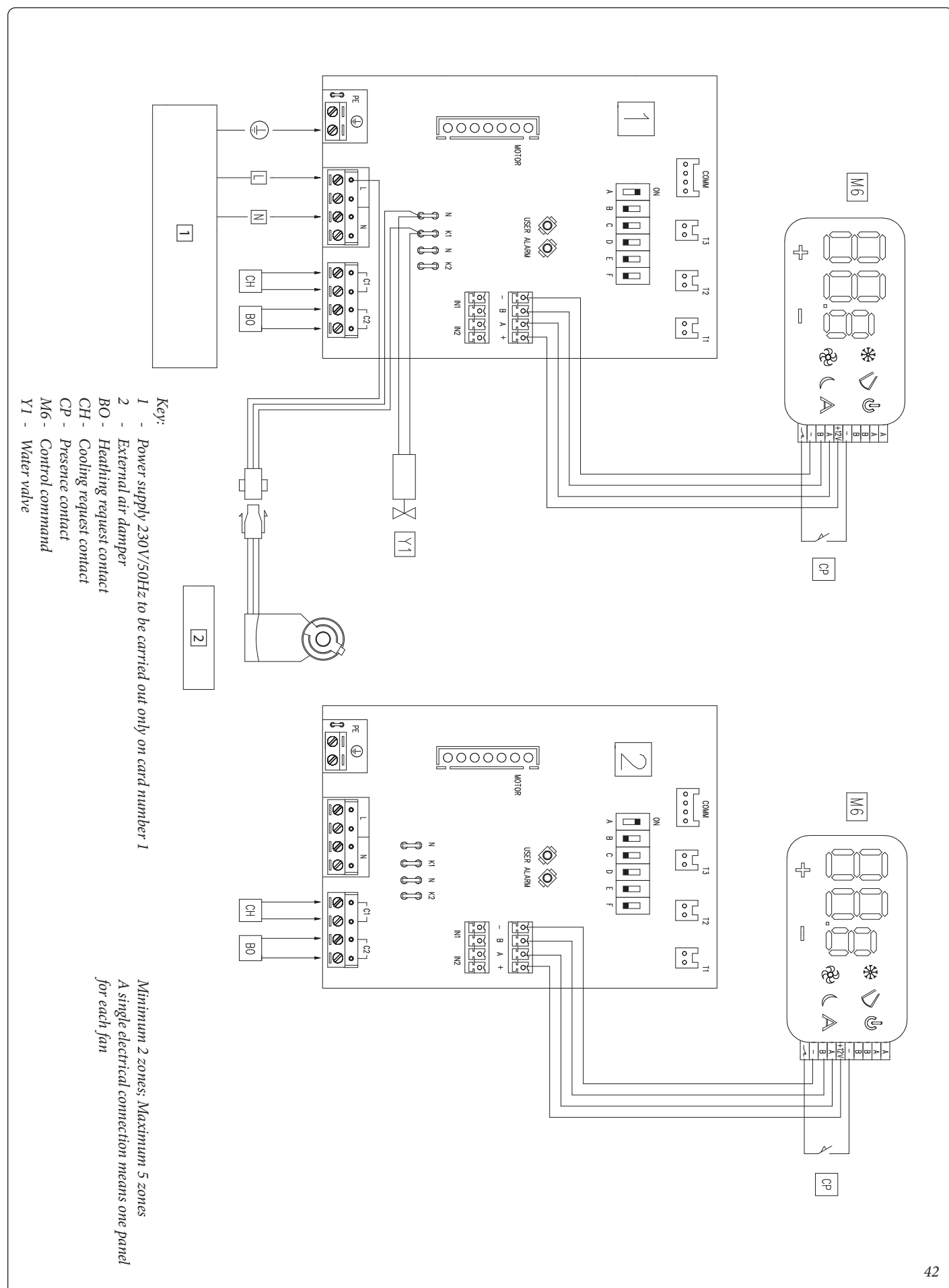
- ▶ Press and hold the button  for 5 seconds.

4.6.1 Hydro Vent internal wiring diagram

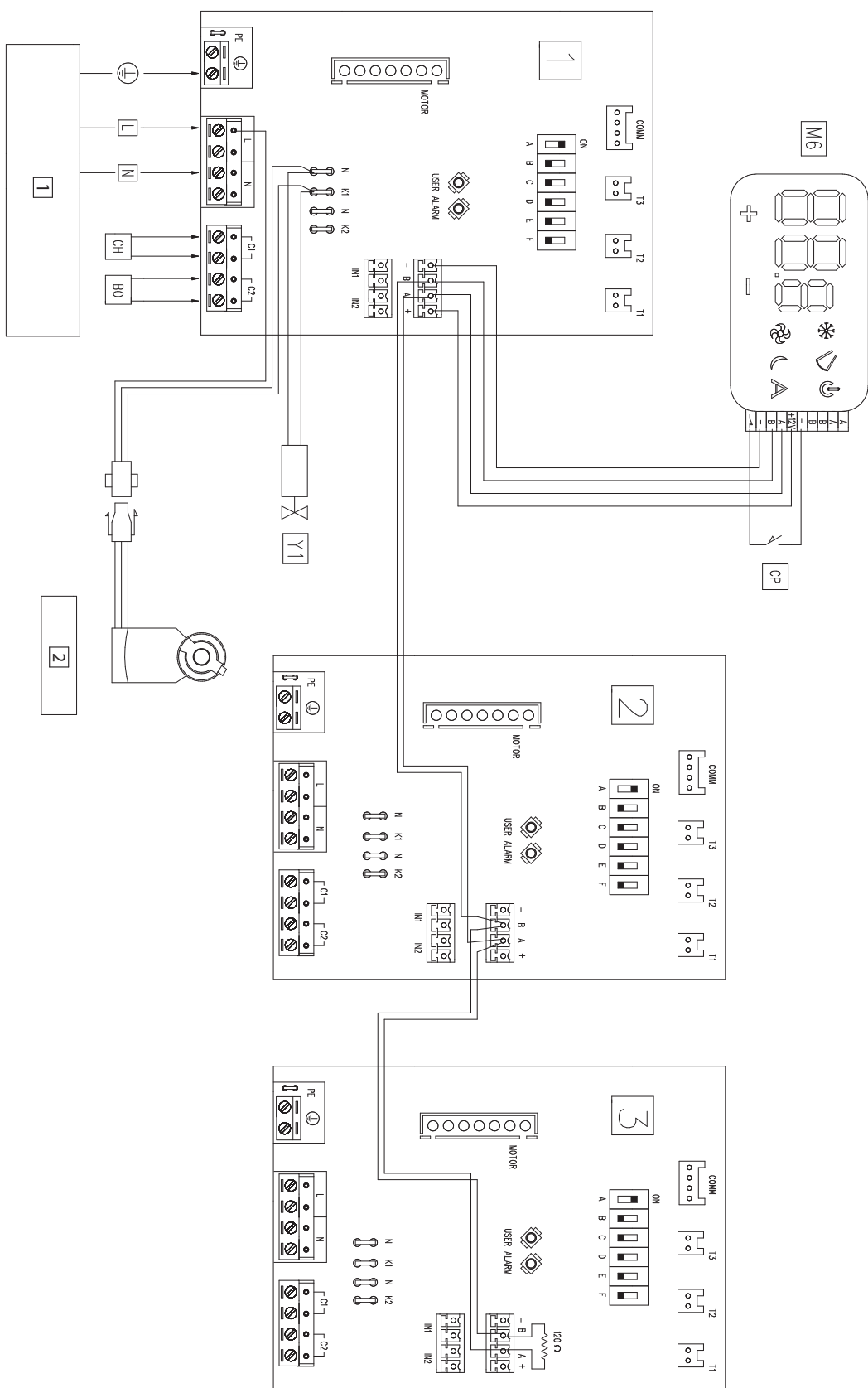
Key:

- 1 - External air flue adjusting device
- 2 - Water valve
- 3 - Up to 5 zones
- H2 - Water probe
- M1 - Fan

4.6.2 Single electrical connection



4.6.3 Electrical connections 1 panel on multiple boards



- Key:
- 1 - Power supply 230V/50Hz to be carried out only on card number 1
 - 2 - External air damper
 - BO - Heating request contact
 - CH - Cooling request contact
 - CP - Presence contact
 - M6 - Control command
 - Y1 - Water valve

Minimum 2 zones. Maximum 5 zones
ATTENTION: on the last board a 120 Ohm resistor must be inserted on terminals "A" and "B" of the connector shown in the diagram



5 COMMISSIONING

5.1 PRELIMINARY WARNINGS

⚠ For detailed information on the accessories, refer to the relative instruction sheets.

See Paragraph 2.7

⚠ The customer must be present when the appliance is tested and informed on the contents of the manual and the procedures. When the appliance has been put into service, the manual and warranty certificate must be delivered to the customer.

⚠ Before starting up, all work (electrical, hydraulic and air conditioning connections) must be finished.

5.2 FIRST START-UP

5.2.1 Preliminary checks

Before proceeding with commissioning, check that:

Functional

- All safety conditions have been met.
- The unit has been properly fastened to the support surface or wall.
- The minimum technical clearances have been observed.

Aeraulic

- The air connections have been made following the instructions in the manual.
- All air connections are correctly secured.
- The ducts are properly supported.
- The ducts have no bottlenecks.
- The ducts are thermally insulated.

Electric

- The cross-section of the power cables is suitable for the absorption of the appliance and the length of the connection made.
- Earthing was done properly.
- The electrical connections have been made correctly.
- All control wires are connected and all electrical connections are secure.



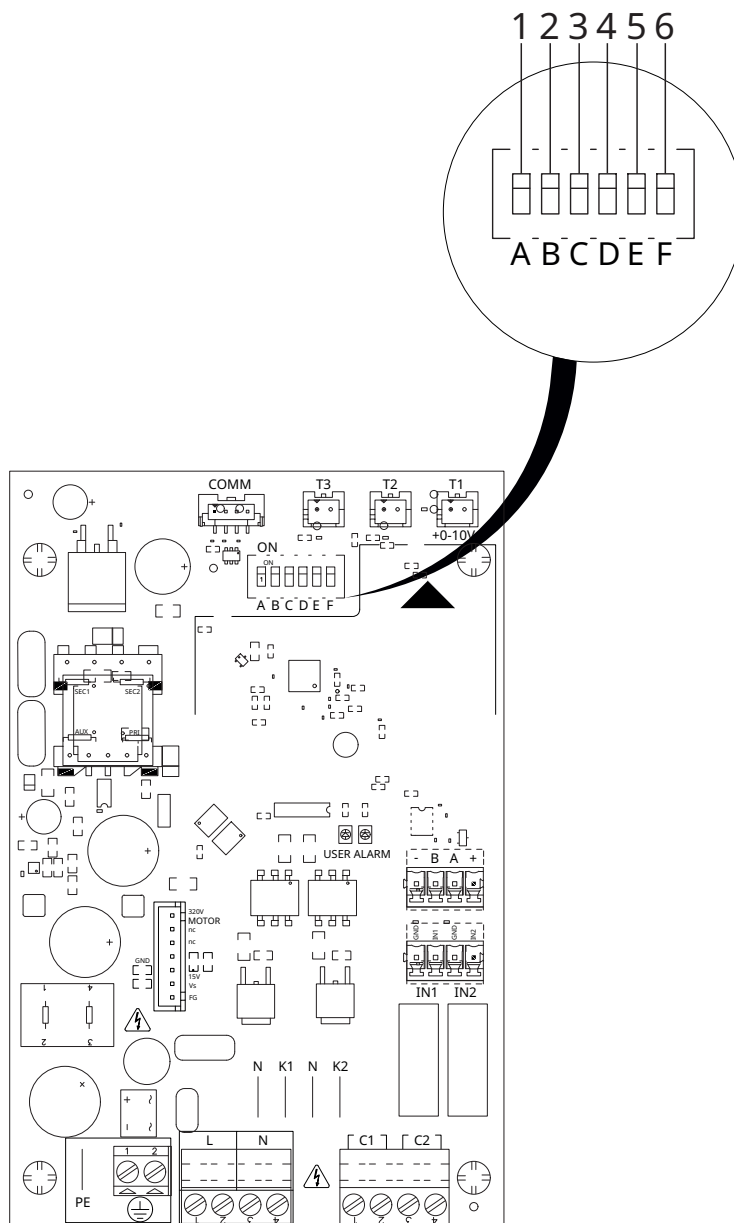
5.2.2 Settings

Micro-switches

There are micro-switches on the P.C.B. for the various operating configurations of the unit.

Key:

- 1 - Micro-switch A
- 2 - Micro-switch B
- 3 - Micro-switch C
- 4 - Micro-switch D
- 5 - Micro-switch E
- 6 - Micro-switch F



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Dip-switch A

- Modifies the performance of the unit.
- At ON, the unit is enabled to operate at nominal flow rates.
- At OFF, the unit's performance is reduced, lowering air flow and noise.

⚠ Dip switch A is set to ON by default.

Dip-switch F

⚠ The unit model is set to OFF by default. If set to ON, the control panel will no longer respond.



5.2.3 Start-up

After performing all the checks, the unit can be put into operation.

To activate the appliance

► Please refer to the user manual.

⚠ If the water temperature prevents the unit from starting up, to temporarily override it, remove the water probe from the P.C.B. This will disable the control, allowing the unit to start up immediately. Reconnect the probe as soon as possible to ensure proper operation of the unit.

5.2.4 Checks with machine on

Once started, perform the following checks:

Functional checks:

- Check the different operating modes.
- Check that the appliance stops and then restarts.
- Switch the appliance off and back on and check that it restarts correctly.
- The appliance operates within the recommended operating conditions (see technical data table).
- Check that the air flow rates are correct.

Hydraulic checks:

- Check that condensate flows out properly.

Electrical checks:

- Check that the absorbed current is lower than the maximum indicated in the technical data table.
- Check that the supply voltage value is within the preset limits and does not drop below the nominal value -10% during operation.

5.3 DELIVERY OF THE SYSTEM

Once all checks and controls on the correct operation of the system are finished, the installer is required to explain to the user:

- The basic functional features of the appliance.
- The instructions for use.
- Routine maintenance.

5.4 LONG-TERM SHUTDOWN

For a prolonged downtime of the appliance, proceed as follows:

- Turn off the appliance.
- Disconnect the power supply.



6 MAINTENANCE

6.1 ROUTINE MAINTENANCE

6.1.1 Yearly operations

The yearly maintenance plan includes the following operations and checks and must be carried out by the Technical Service Centre or by qualified personnel.

Electric circuit

Check:

- The electrical supply voltage.
- The electrical absorption.
- Tightening of connections.
- That the electric cables are not damaged or excessively worn.
- That the gaskets and sealing materials have not deteriorated to the point that they are no longer capable of preventing the development of flammable atmospheres within.
- Correct fixing of the cable glands.
- Safety devices.

Mechanical checks

Check:

- Tightening of the screws, fans and electrical box, external panelling of the unit.
- The conditions of the structure.
- ⚠ Faulty fastenings cause anomalous noises and vibrations.
- ⚠ If there are oxidised parts, treat them with paints suitable for eliminating or reducing oxidation.

Hydraulic checks

Check:

- That condensate flows out properly.
- Cleanliness of the condensate drip trays.
- Cleanliness of the drain pipes.

Aeraulic checks

Check:

- The regular flow of air.
- Cleanliness of any return grids.
- Cleanliness of the ducting.

Cleaning

- Cleaning or replacing the filter.
- Cleaning the heat exchanger.

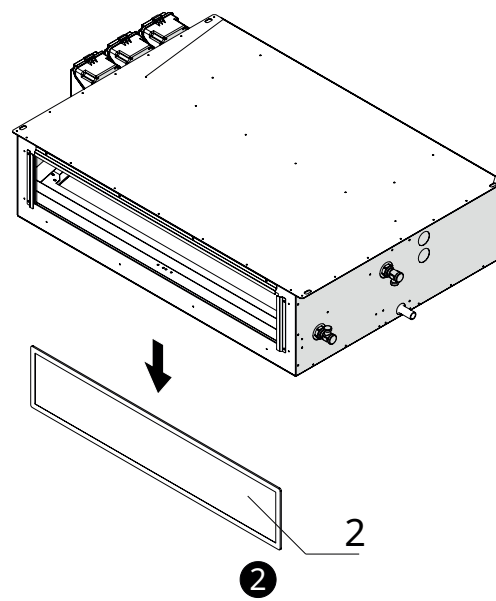
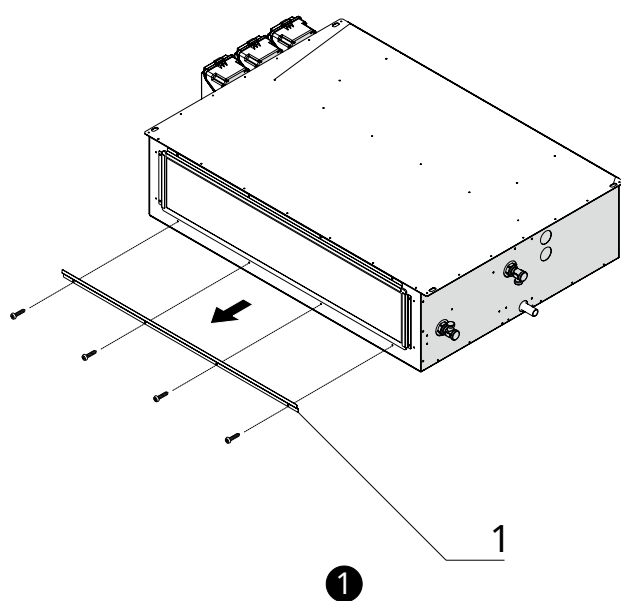


6.1.2 Cleaning or replacing filters

Key:

1 - Lower filter guide

2 - Filter

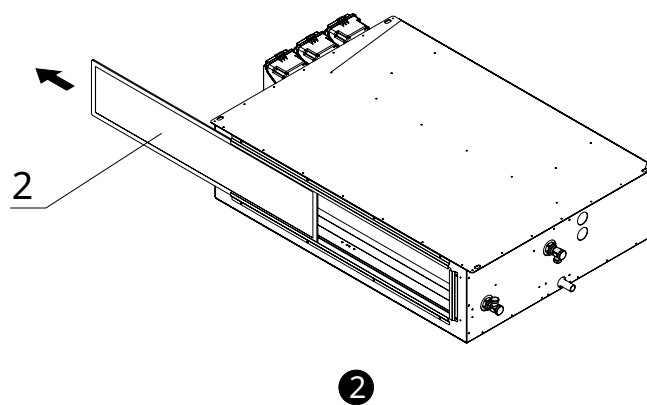
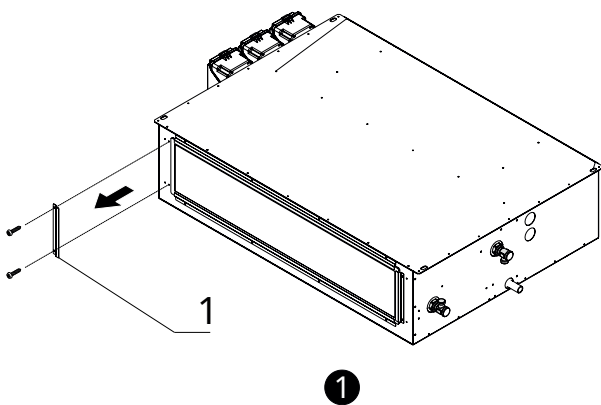


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Key:

1 - Side filter guide

2 - Filter



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To remove:

- ▶ Disconnect power to the unit.
- ▶ Remove the lower filter guide screws.
- ▶ Remove the lower filter guide.
- ▶ Extract the filter.

⚠ Be careful of sharp surfaces.

ⓘ If the filters are in unacceptable conditions, you can clean them using a vacuum cleaner or a low-pressure compressor.

ⓘ The filters must be replaced if they cannot be cleaned.

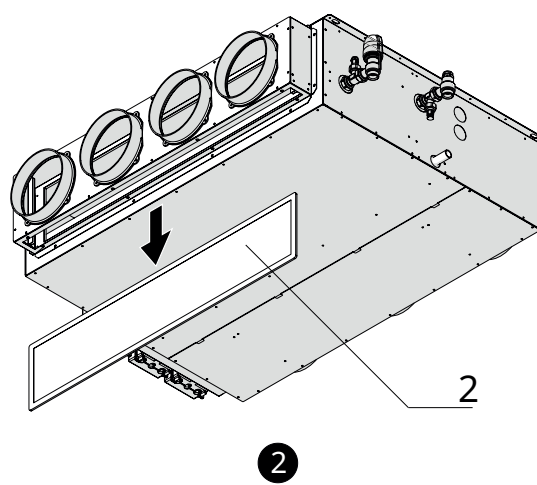
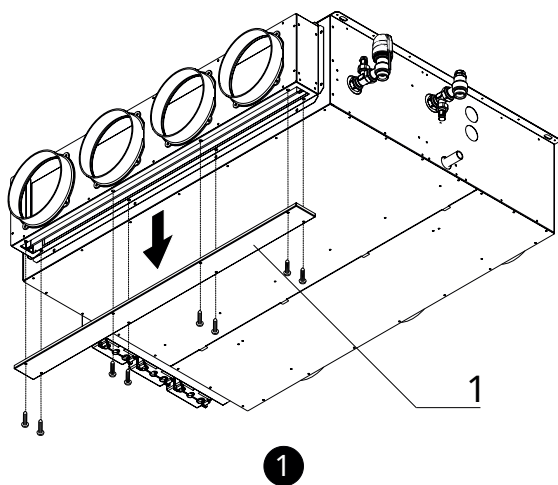
To reposition:

- ▶ Proceed in reverse order.

Key:

1 - Filter cap

2 - Filter



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To remove:

- ▶ Disconnect power to the unit.
- ▶ Remove the screws from the filter cap.
- ▶ Remove the filter cap.
- ▶ Extract the filter.

⚠ Be careful of sharp surfaces.

ⓘ If the filters are in unacceptable conditions, you can clean them using a vacuum cleaner or a low-pressure compressor.

ⓘ The filters must be replaced if they cannot be cleaned.

To reposition:

- ▶ Proceed in reverse order.

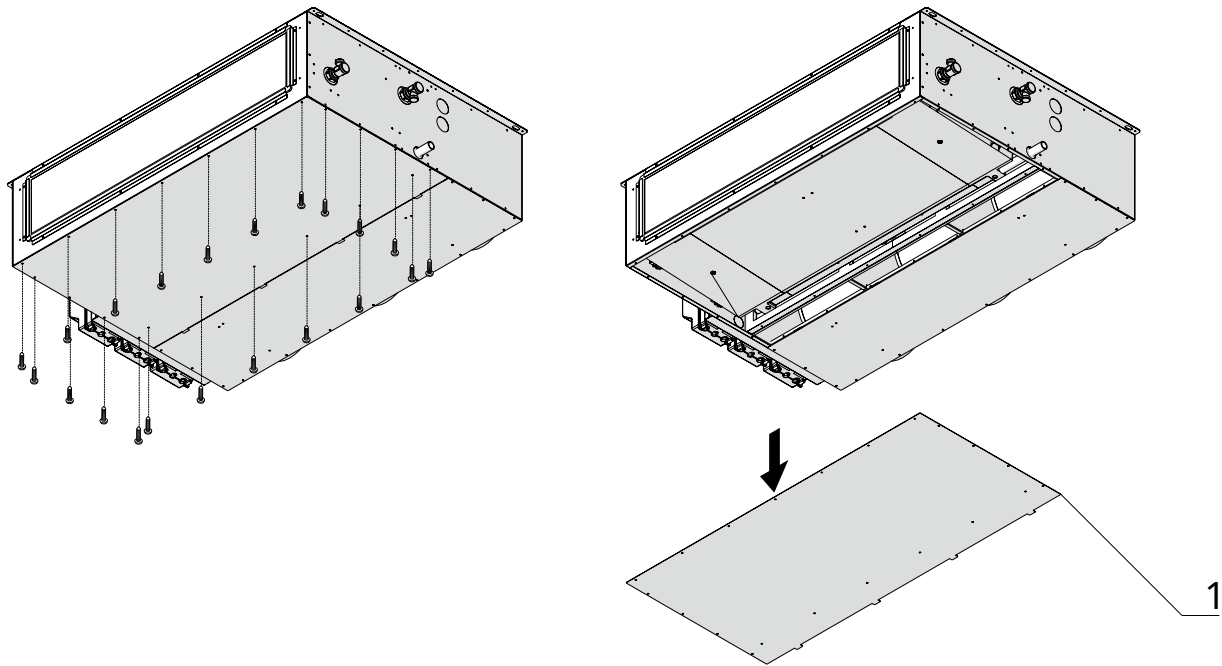


6.1.3 Cleaning the heat exchanger

To clean the heat exchanger:

Key:

1 - Bottom panel

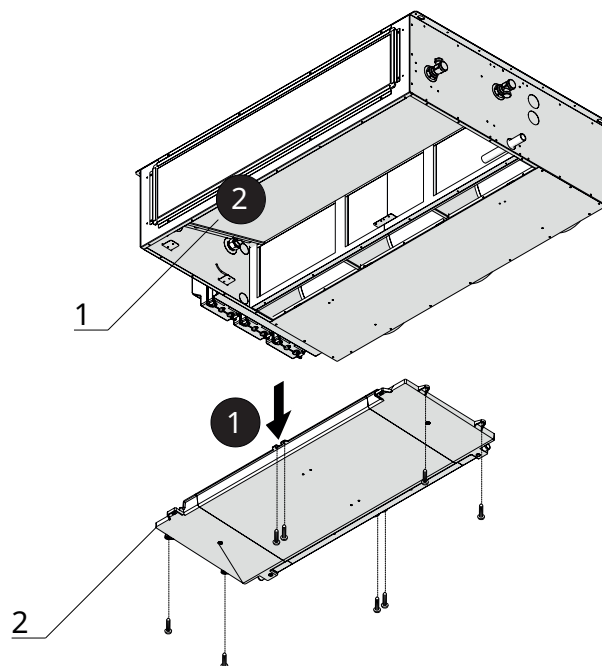


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Key:

1 - Heat exchanger

2 - Condensate drip tray



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To remove:

- ▶ Disconnect power to the unit.
- ▶ Disconnect the condensate drain hose.
- ▶ Access the heat exchanger.
- ▶ Proceed to clean the heat exchanger delicately using a vacuum cleaner or a low-pressure compressor.

To reposition:

- ▶ Proceed in reverse order.
- ⚠ Never touch the heat exchanger fins.



7 TROUBLESHOOTING

7.1 PRELIMINARY WARNINGS

If one of the following faults occurs:

- The fan does not switch on even if there is hot or cold water in the hydraulic circuit.
- The appliance leaks water during central heating mode.
- The appliance leaks water during cooling only.
- The appliance makes too much noise.
- Dew forms on the front panel.

Follow the instructions below:

- ▶ Disconnect power immediately.
- ▶ Close the water valves.
- ▶ Disconnect power to the unit.

⚠ The work must be carried out by a qualified installer or a specialised service centre.

⊖ Do not intervene on your own initiative.

7.2 TROUBLESHOOTING TABLE

DESCRIPTION OF ANOMALY	CAUSE	SOLUTION
The fans are not active	Power is not on	Check the power supply to the fan
	The fan speed control device does not work	Check the fan speed control device
	Incorrect electrical connections	Check the electrical connections
Insufficient air flow or useful pressure	Clogged filters	Clean the filters
	Insufficient rotation speed	Increase rotation speed
	Clogged pipes or heat exchanger	Clean pipes or heat exchanger
Insufficient heat exchanger performance	Clogged heat exchanger fins	Clean the heat exchanger surfaces
Excessive vibrations and noise	Improper installation of the unit	Check the unit's clampings and fixings
	Incorrect installation of pipes	Check pipe clampings and fixings
	Fan impeller imbalance	Check the condition of the fan impellers
Water leaks from the unit	Condensate drain clogged	Clean the condensate drain
	Siphon not installed correctly	Check that the siphon is installed correctly
Problems starting up	Supply voltage too low	Check that the supply voltage is not below 10% of the rated voltage



7.3 ALARMS AND P.C.B. BLINK TABLE

ALARM DESCRIPTION	CAUSE	SOLUTION	P.C.B. BLINKS
Water temperature alarm	Water demand detected by the H2 probe not fulfilled (above 20°C in cooling, below 30°C in heating). It involves stopping the fan until the temperature reaches a value suitable to fulfill the demand	Check the temperature of the water or the positioning of the H2 probe	1 blink - off 3 seconds
Fan alarm	Faulty fan connector or no feedback signal	Check the connection of the fan connector to the P.C.B. Replace the fan control cable	2 blinks - off 3 seconds
Water probe alarm	Probe breakage or failure to read	Check the probe connection or replace it	3 blinks - off 3 seconds
Connection alarm with remote display	Remote display connection error	Check the electrical connections Check that A and B are not swapped Check that the display connection board is inserted correctly on the main board	LED off
Remote display communication alarm	Failed communication between display and P.C.B. for at least 300 seconds	Check that A and B are not swapped Check that the display connection board is inserted correctly on the main board	6 blinks - off 3 seconds
GRID contact open	GRID contact open on the P.C.B.	Check for the presence of the jumper or the connected closed contact	Continuous high frequency flashing



8 TECHNICAL INFORMATION

8.1 TECHNICAL DATA

Models	u.m.	Hydro Vent 2	Hydro Vent 3	Hydro Vent 4	Hydro Vent 5
Fan coil air performance					
Maximum air flow rate	m ³ /h	640	960	1280	1600
Useful head	Pa	100	100	100	100
Single zone fan coil air performance					
Maximum air flow rate	m ³ /h	320	320	320	320
Average air flow rate	m ³ /h	210	210	210	210
Minimum air flow rate	m ³ /h	60	60	60	60
Heating performance (W 45; A 20)(1)					
Total power output	kW	4.14	6.94	8.29	8.94
Water flow rate	L/h	722	1164	1190	1566
Head loss	kPa	39.15	74.65	21.07	41.11
Single zone heating performance (W 45; A 20)(1)					
Total power output	kW	2.39	2.39	2.39	2.39
Cooling performance (W 7; A 27)(2)					
Total power output	kW	3.79	5.54	6.37	7.73
Sensitive power output	kW	3.15	4.91	5.68	6.71
Water flow rate	L/h	644	998	1123	1327
Head loss	kPa	36.36	62.67	18.22	32.52
Single zone cooling performance (W 7; A 27)(2)					
Total power output	kW	1.99	1.99	1.99	1.99
Sensitive power output	kW	1.25	1.25	1.25	1.25
Room air inlet fan					
Type	-	EC Brushless centrifugal fan with forward-curved blades			
Number	No.	2	3	4	5
Heat exchanger (W 7; W 12)(3)					
Coil water content	L	1.13	1.46	1.80	2.14
Maximum water pressure	bar	10	10	10	10
Minimum water pressure	bar	1	1	1	1
Maximum water temperature	°C	80	80	80	80
Minimum water temperature	°C	7	7	7	7
Electrical features					
Electric power supply	V / ph / Hz	230 / 1 / 50			
Total maximum absorbed power	W	140	210	280	350
Total maximum absorbed current	A	0.70	1.40	2.10	2.80
1. Coil water temperature 45/40°C; Room air temperature 20°C (EU regulation 2016/2281) 2. Coil water temperature 7/12°C; Room air temperature 27°C d.b. and 19°C w.b. (EU Regulation 2016/2281) 3. Flow water temperature 7°C; Return water temperature 12°C 4. Data referring to UNI EN 3741 and UNI EN 3744 standards					



Models	u.m.	Hydro Vent 2	Hydro Vent 3	Hydro Vent 4	Hydro Vent 5
Degree of protection	IP	X0			
Room-side noise levels (UNI EN 3741; 3744)(4)					
Sound power transmitted to the structure L _w	dB(A)	60.0	61.0	62.0	64.0
Sound power radiated in the duct L _w	dB(A)	65.0	69.0	69.0	71.0
Average sound pressure at 1 m L _p	dB(A)	46.0	47.0	48.0	51.0
Average sound pressure at 3 m L _p	dB(A)	39.0	40.0	42.0	44.0
Product dimensions					
Width	mm	930	1130	1330	1620
Length	mm	735	735	735	735
Height	mm	240	240	240	240
Weight	kg	28.0	38.0	47.0	56.0
Connections					
Condensate drain coupling	mm	19	19	19	19
Hydraulic couplings	“EK	3/4"	3/4"	3/4"	3/4"
Room air inlet coupling Ø	mm	160	160	160	160
Room air return coupling (B x A)	mm	620 x 150	820 x 150	1020 x 150	1305 x 150
1. Coil water temperature 45/40°C; Room air temperature 20°C (EU regulation 2016/2281) 2. Coil water temperature 7/12°C; Room air temperature 27°C d.b. and 19°C w.b. (EU Regulation 2016/2281) 3. Flow water temperature 7°C; Return water temperature 12°C 4. Data referring to UNI EN 3741 and UNI EN 3744 standards					





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During the useful life of the products, performance is affected by external factors, e.g. the hardness of the DHW, atmospheric agents, deposits in the system and so on.
The declared data refer to new products that are correctly installed and used in observance of the Standards in force.
N.B.: correct periodical maintenance is highly recommended.



The instruction booklet is
made of ecological paper

