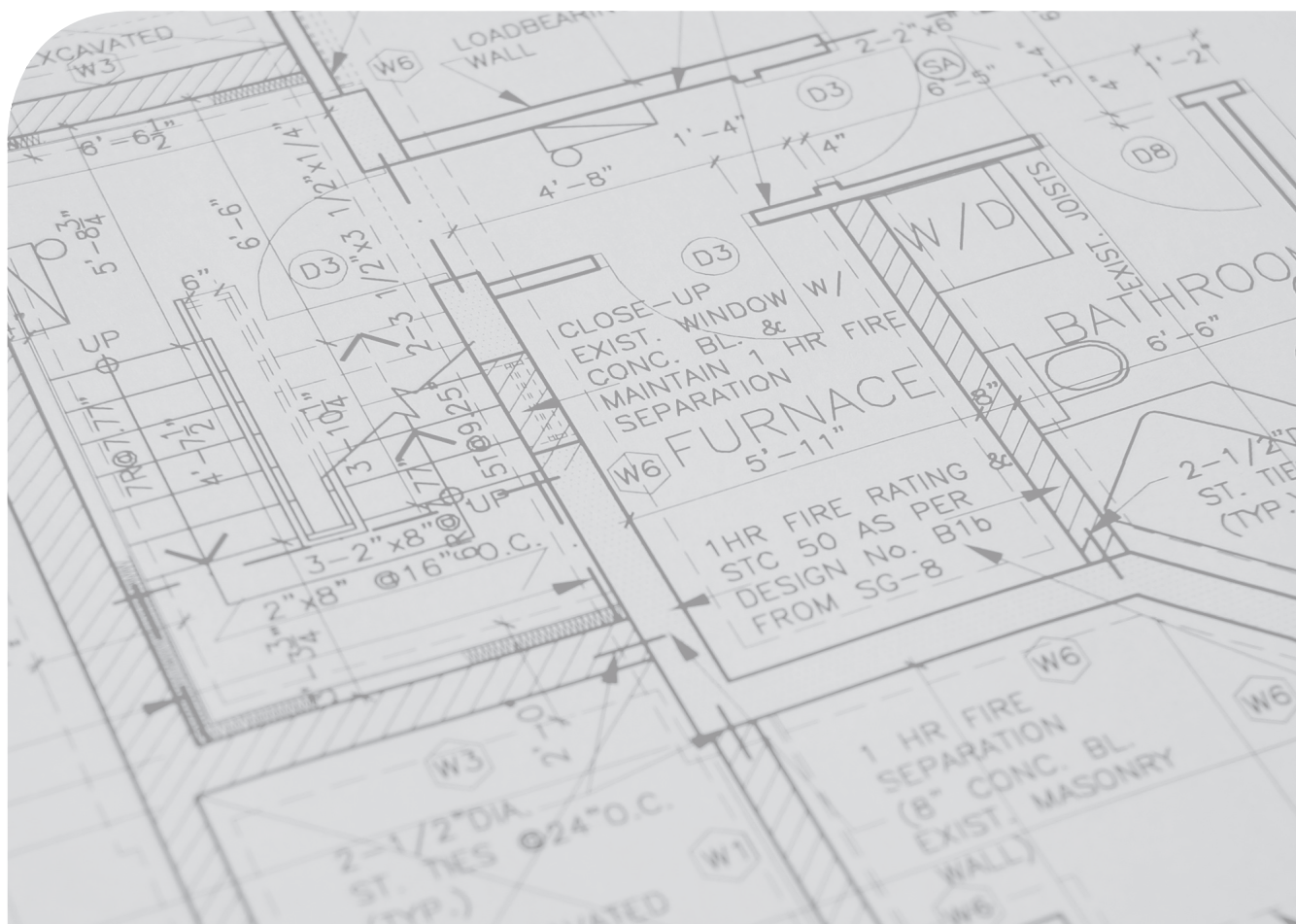


IE

Instruction booklet and warning





We would first of all like to thank you for having chosen one of our products.

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

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

Symbols

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

Safety pictograms



Warning

The operation described may cause physical harm if not carried out in accordance with safety regulations.



Dangerous electrical current

Make personnel aware that the operation described may lead to electrical shocks if not carried out in accordance with safety regulations.



High temperature danger

Of safety regulations, the risk of burns caused by contact with components with high temperatures.



Prohibition

Refers to prohibited actions.



















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1. GENERAL

1.1 General warnings

-  This instruction is an integral part of the booklet of the appliance on which the kit is installed. Please consult this booklet for general warnings and fundamental safety rules.
-  This manual is designed only for the qualified and authorised installation technician, who must be sufficiently trained and in possession of all psycho-physical requirements as per the law.
- All operations must be carried out with care and according to best practices, and in compliance with workplace safety regulations.
-  The appliances must be installed by an authorised installer who, on completion of the work, will release a declaration of conformity to the client in respect of the laws in force and the indications given by the manufacturer in the instructions leaflet supplied together with the appliance.
-  Installation must be carried out by qualified personnel equipped with the necessary PERSONAL PROTECTIVE EQUIPMENT.
-  After unpacking, check that the contents are intact and that all parts are included. If not, contact the agent who sold the appliance to you.
-  It is forbidden to modify the safety or adjustment devices without authorisation from and indications of the manufacturer.
-  It is forbidden to dispose of, or leave in the reach of children, the packaging materials which could become a source of danger.
-  Repairs or maintenance must be performed by the Technical Assistance Service or by qualified personnel in accordance with this manual. Do not modify or tamper with the appliance as this could create dangerous situations and the manufacturer will not be liable for any damage caused.
-  These appliances have been designed both for conditioning and/or heating environments and must be destined for this use only and compatibly with their performance characteristics.
The producer accepts no responsibility, either contractual or extra-contractual, for any damage caused to persons, animals of property as a result of incorrect installation, adjustment or maintenance or improper use.
-  In case of water leaks, turn the master switch of the system to "OFF" and close the water taps.
- As soon as possible, call the Technical service department or else professionally qualified personnel and do not intervene personally on the appliance.
-  The imbedded HYDRO IN do not have a grill or covering plate. Provide safety guards and air inlet/outlet grills to prevent accidental contact with the device.
-  If the appliance is not used for a long period of time, the following operations should be performed:
 - Turn the master switch of the system to "OFF".
 - Close the water taps.
 - If there is the risk of freezing, make sure that anti-freeze has been added to the system otherwise empty the system.
-  If the room temperature is too low or too high it is damaging for the health and is also a useless waste of energy. Avoid prolonged contact with the direct air flow.
-  Do not leave the room closed for long periods. Periodically open the windows to ensure a correct change of air.
-  This instruction leaflet is an integral part of the appliance and consequently must be kept carefully and must ALWAYS accompany the appliance, even when it is passed to a new owner or user or transferred onto another system. If it is lost or damaged, please contact the local Technical service centre.
-  Danger from burns - take care when touching.



1.2 Fundamental safety rules

⚠ Remember that some fundamental safety rules should be followed when using a product that uses electricity and water, such as:

⚠ Do not allow children or unassisted disabled people to use the unit.

⚠ This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.

Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

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

⚠ It is forbidden to modify the safety or regulation devices without the authorisation and directions of the manufacturer.

⚠ Do not stand, sit and/or place objects on the unit.

⚠ The external parts of the appliance can reach temperatures of more than 70°C.

⚠ Do not pull, detach or twist the electrical wires coming out of the unit, even when the unit is disconnected from the power grid.

⚠ It is forbidden to poke objects or anything else through the inlet or outlet grills.

⚠ Do not spray or throw water directly on the unit.

⚠ It is forbidden to dispose of or leave in the reach of children the packaging materials which could become a source of danger.

⚠ It is strictly forbidden to touch any moving parts, interfere with them or introduce pointed objects through the grids.

⚠ Do not touch the unit while barefoot and/or partially wet.

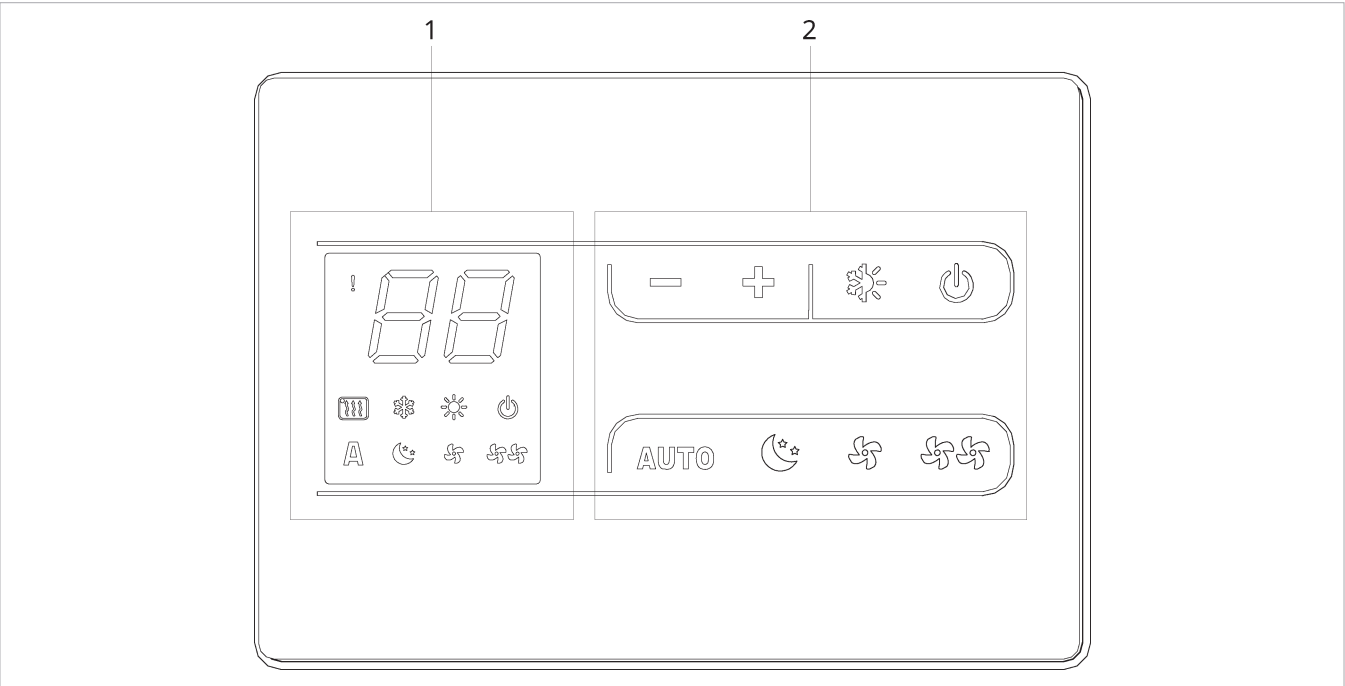
⚠ It is forbidden to carry out any cleaning before having disconnected the appliance from the electricity mains supply by turning the system master switch to "OFF".



2. REMOTE CONTROL 3.030876

2.1 Interface

1.	Display area
2.	Keys area



2.2 Description

The wall-mounted control panel is a thermostat with possibility of control on several device equipped with electronic control for remotization.

⚠ The control can control up to a maximum of 30 units.

⚠ The temperature probe can be remoted in one of the connected device.

⚠ Ensure that:

- the wall supports the weight of the appliance;
- the section of the wall does not contain piping or electrical lines;
- the functionality of load-bearing elements is not compromised.

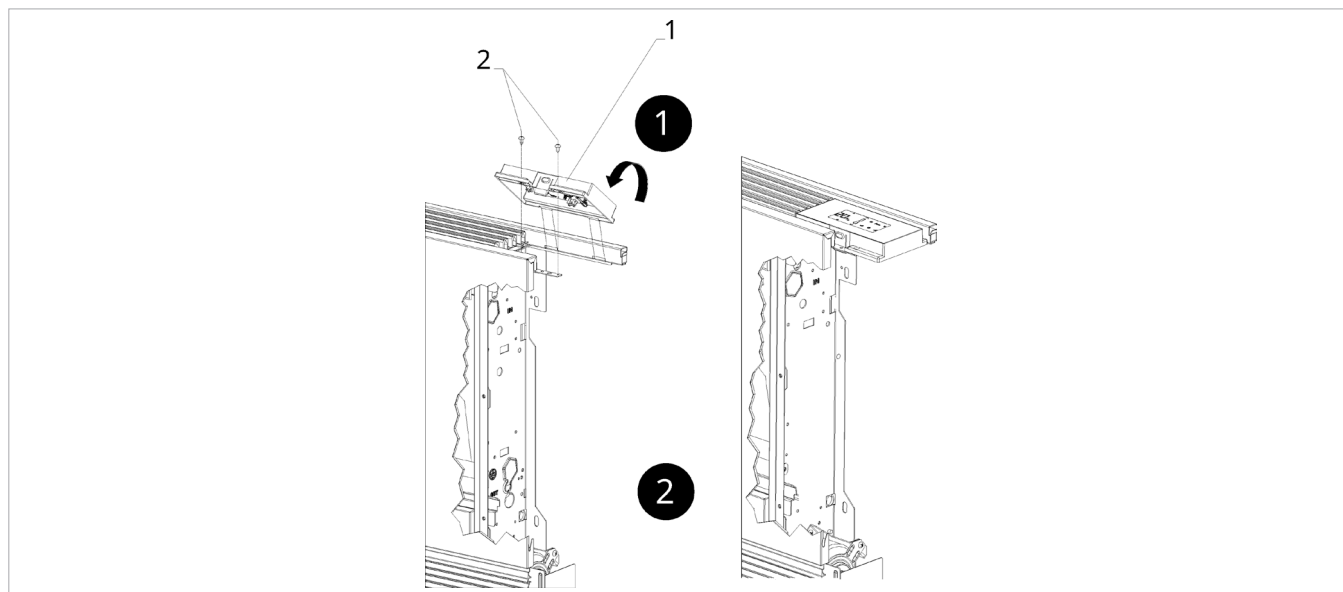


2.3 Assembly

To install the on-board control

- place the on-board control at the top of the unit;
- fix with the screws provided.

- | | |
|----|------------------|
| 1. | On board display |
| 2. | Screws |



2.4 Set-up of auxiliary dip-switch functions B and C

⚠ There are two dip-switches on the control circuit board for configuring the operation of the device as required.

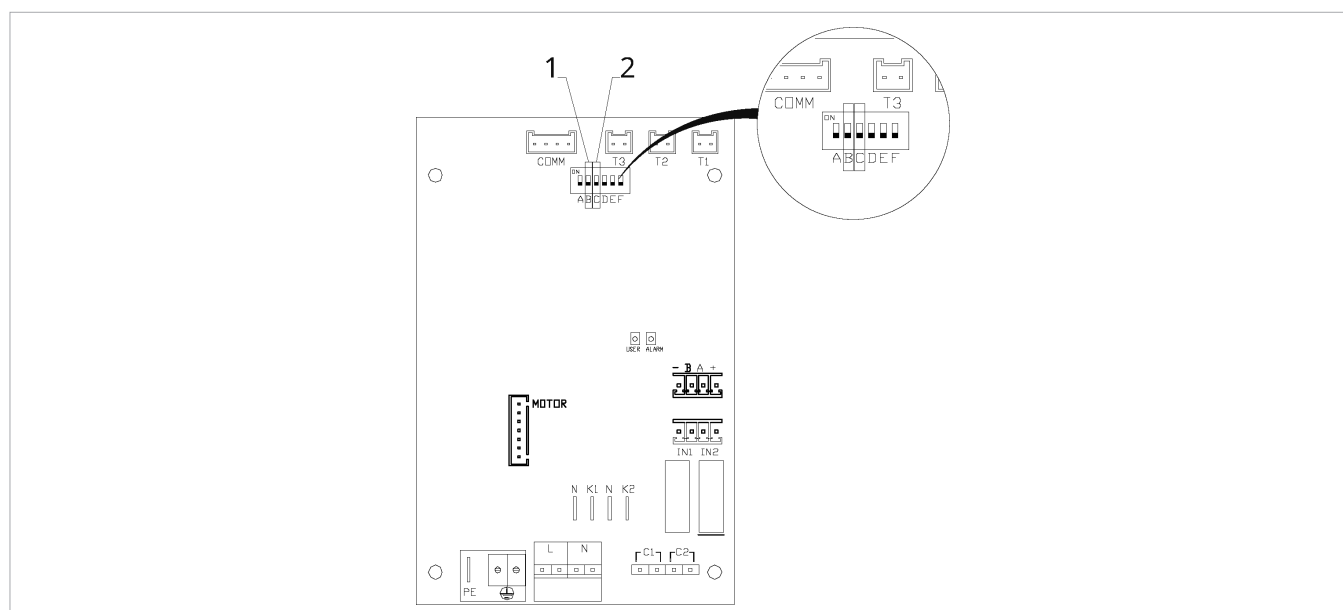
Dip-switch C

- changes the logic of night-time operation in heating mode;
- in the ON position, ventilation is inhibited, allowing the appliance to heat rooms by radiation and natural convection as in traditional radiators;
- in OFF position the fan operates normally.


Dip-switch B

- changes ventilation in cooling mode;
- in the ON position, continuous ventilation at minimum speed is enabled even after the setpoint has been reached to allow more regular operation of the temperature probe and avoid air stratification;
- in OFF position, ventilation takes place cyclically, 4 min ON - 10 min OFF.

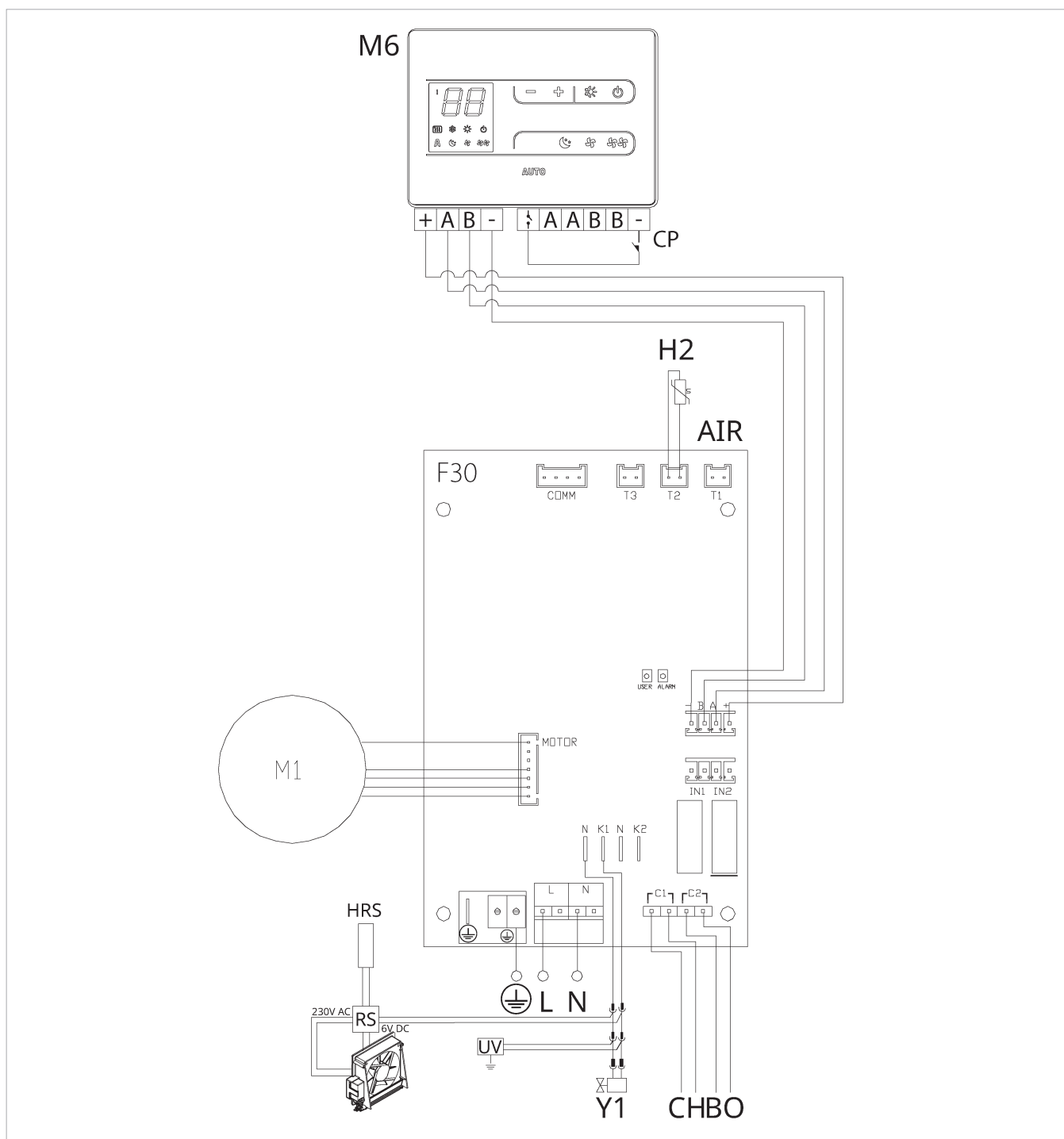
- | | |
|----|--------------|
| 1. | Dip-switch B |
| 2. | Dip-switch C |



2.5 3.030876 connections single connection diagram

M1	DC fan motor
	Earth connection
L-N	Power supply connection 230 V / 50 Hz / 1 A
Y1	Water electrovalve (voltage output 230 V / 50 Hz / 1 A)
CH/C1	Cooling request contact (for example chiller or reversible heat pump). Activated in parallel with the solenoid valve output (Y1) with 1 minute delay when the fancoil is in cooling mode and is on call (potential-free contact max. 1 A)

BO/C2	Heating request contact (for example boiler or heat pump). Activated in parallel with the output of the solenoid valve (Y1) with 1 minute delay when the fancoil is in heating mode and is on call (potential-free contact max. 1 A)
CP	Presence contact (normally open)
-BA+	Serial connection for wall-mounted remote control (respect the AB polarization)
H2/T2	2-pipe water temperature probe
RS	RS version wiring
HRS	Water probe RS version (10 kΩ)
M6	SMART TOUCH Wall Control Panel



⚠ In the case of a single generator for heating and cooling (for example heat pump), simply connect the two contacts C1 and C2 in parallel and lead 2 wires to the generator.

⚠ For models with hydraulic connections on the right hand side, please refer to “Models with right-hand hydraulic connections” to make the connections.

⚠ For radiant panel (RS) versions, please refer to the “Version configurations” section to make the connections.

⚠ Check the correct matching PCB/control with the combinability table.

2.6 Version configurations

RS versions

In RS versions to control the radiant effect of the front panel make the connections.

To make the connections

- connect the appropriate connector to the expansion board and the output of the Y1 solenoid valve.

⚠ Refer to the “Electrical Connections” sections of the specific printed circuit boards for connections.

2.7 Models with right-hand hydraulic connections

The fancoils in the AirLeaf range are designed with:

- hydraulic coil connections on the left side of the unit
- electrical connections on the right side of the unit.

⚠ Should it be necessary to invert the position of the coil's hydraulic connections from the left (default) side to the right side, the hydraulic Hydraulic connection reversal kit must be used to make the electrical connections to the fan motor and the grille safety microswitch.

2.8 Connections

Preliminary warnings

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

The terminals accept:

- rigid or flexible wires with a 0.2 to 1 mm² cross-section;
- rigid or flexible wires with 0,5 mm² cross-section if two wires are connected to the same terminal block;
- rigid or flexible wires with 0,75 mm² cross-section if the wires have wire end ferrules with a plastic collar.

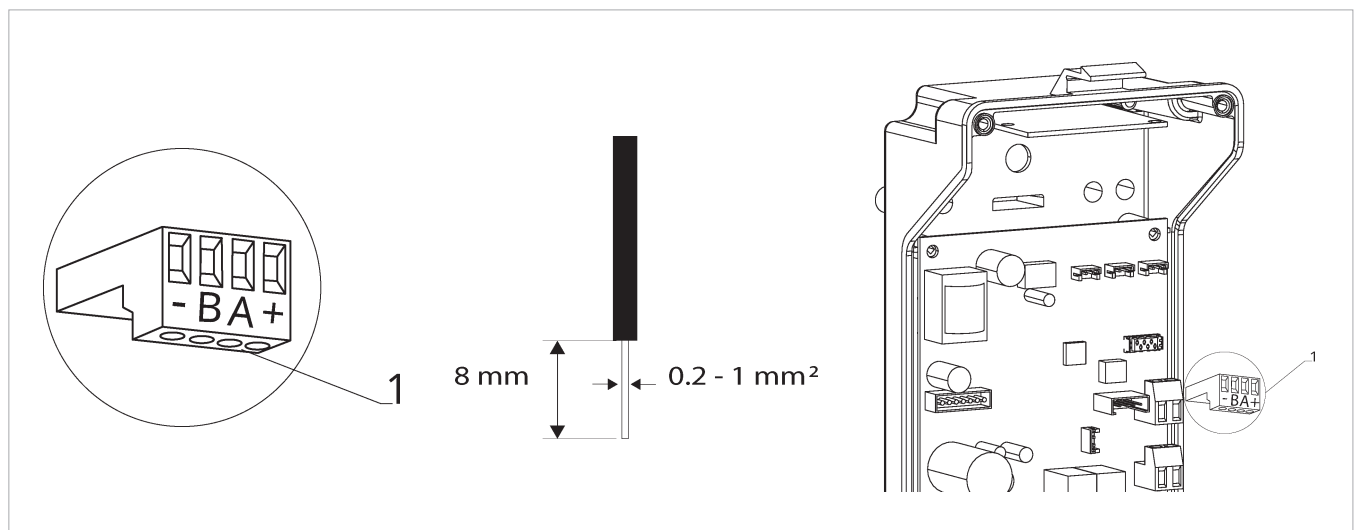
To connect the cables:

- strip 8 mm of the wire;
- if the wire is rigid, you can insert it easily whereas;
- if it is flexible, use appropriate crimp terminals;
- push the wire in completely;
- check the right fixing by pulling it gently.

To connect the wall control panel to the board:

- connect the power supply cables to the + - terminals;
- connect the ModBus serial connection cables to terminals A and B.

1. Terminal blocks




2.9 Presence contact CP

Through this device it is possible to connect an external control signal that inhibits the operation of the control signal, for example:

- opening window contact
- remote on/off
- infrared presence sensor
- activation badge
- remote change of season

Function

- The contact is normally open (NO).
- when closing the CP contact, connected to a potential-free contact, the device switches to stand-by mode
- CP appears on the display.
- At the touch of a button on the display the symbol  flashes.

 It is forbidden connect in parallel the CP input to one of another electronic board. Use separate contacts.

The CP presence contact can be configured for heating and cooling operation via the "Select Digital Input" settings menu item (digital input).


2.10 RS485 Serial Connection


The wall-mounted remote control can be connected through a RS485 serial line to one or more device, for a maximum of 30.

The devices must be equipped with an electronic board suitable for remote control.

For the connection:

- follow the indication on the connection diagram
- connect respecting the indication "A" and "B"

 Use a two core cable shielded cable suitable for the RS485 serial connection with a minimum section of 0,35 mm².

 Keep the two core cable separate from power supply cable by a minimum of 50 mm.

 Create a wire path in order to minimize the length of the lead wire.

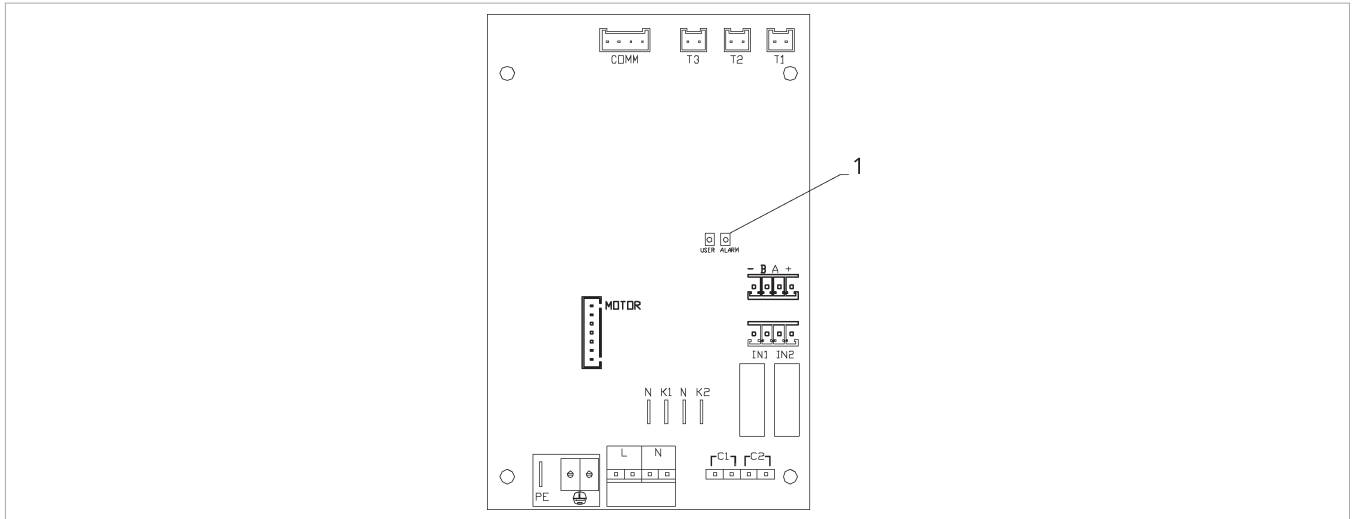
 Complete the line with the 120 Ω resistor.

 It is forbidden make star connections.



2.11 Continuous modulation circuit board for connecting remote thermostat

- The circuit board for remote control is for all functions of the fan coil system from the wall-mounted remote control 3.030877/3.030878.
- A remote control can be connected to a maximum of 30 fan coils that will be controlled in broadcast mode (simultaneous commands to all fan coils).
- It can be installed on all versions, the board has a green LED that indicates the operational state and any anomalies.
- The main operational parameters, the set point and the room temperature are transmitted from the wall-mounted remote control 3.030877/3.030878 to all terminals connected to the network, allowing unified operation.
- Refer to the instructions for this control for use of the fan coils.
- The 10 kΩ water temperature probe positioned in the device battery regulations the minimum level when heating (30°C) and the maximum level when cooling (20°C).



2.12 LED Indications (ref. 1) (3.030876)

The PCB has a status LED.

LED signals

- LED off
Device switched off or without power supply.
- LED on
Normal operating of the device
- LED 1 flash / pause
Water request detected by temperature probe H2/T2 not fulfilled (above 20 °C in cooling and below 30 °C in heating). It causes the fan to stop until the temperature reaches a value suitable to satisfy the request. ()*
- LED 2 flashes / pause
Motor alarm (for example jamming due to foreign bodies or fault in the rotation sensor).
- LED 3 flashes / pause
H2/T2 water temperature probe disconnected or faulty. Check that the probe installed is 10 kΩ.
- LED 4 flashes / pause
Water request detected by temperature probe H3/T3 not fulfilled (above 20 °C in cooling). It causes the fan to stop until the temperature reaches a value suitable to satisfy the request.
- LED 5 flashes / pause
T3/H4 probe for cooling water temperature faulty or disconnected.
- LED 6 flashes / pause
Communication error caused by lack of continuous information exchange on the serial line. If the exchange of information lasts for more than 5 minutes, the error is displayed.

(*) In case of a operation without water probe H2/T2, the fan stop thresholds will be ignored.

Error messages

⚠ The symbol ⚠ is displayed to indicate alarms on the wall control panel.

Displayed alarms

- E1 Room temperature probe disconnected or faulty
None of the modes can be activated.
- E2 Fault or connection of a remote double room sensor on one of the fan coil units
None of the modes can be activated.
- E3 Humidity probe disconnected or faulty
None of the modes can be activated.
- E4 Air quality probe disconnected or faulty
None of the modes can be activated.



3. REMOTE CONTROL 3.030877/3.030878

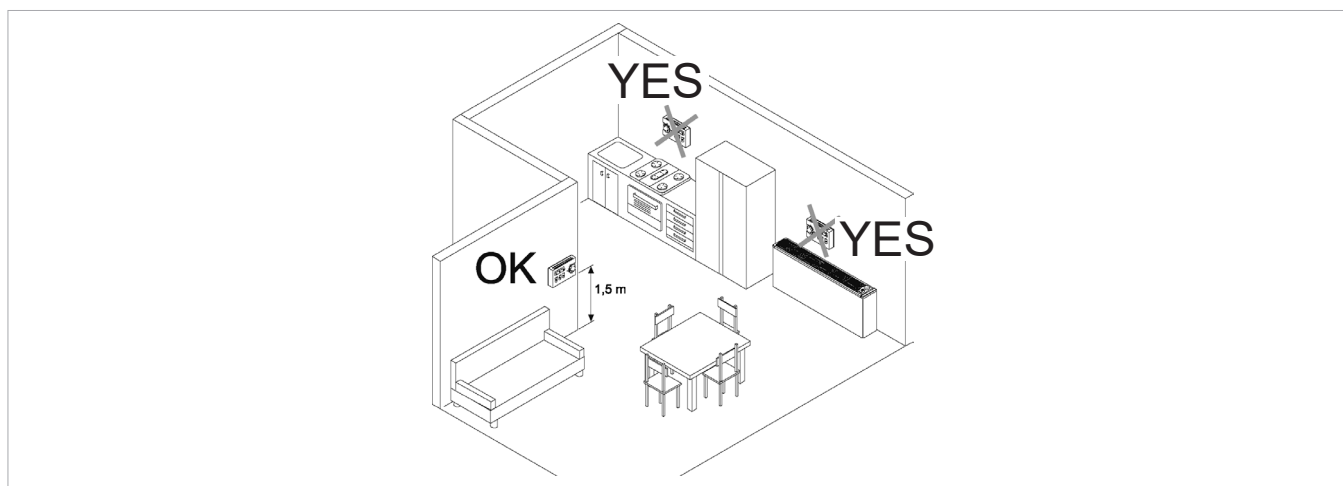
3.1 3.030877/3.030878 wall-mounted remote control panel assembly

The wall control must be installed:

- on internal walls
- at a height of about 1,5 m from the floor
- Should the control be located in an area utilised by persons with reduced physical capabilities, please refer to local regulations.

- away from doors or windows
- away from heat sources (heaters, convectors, stoves, direct sunlight)

⚠ The wall-mounted remote control is provided inside the package already assembled.



Before wall installation:

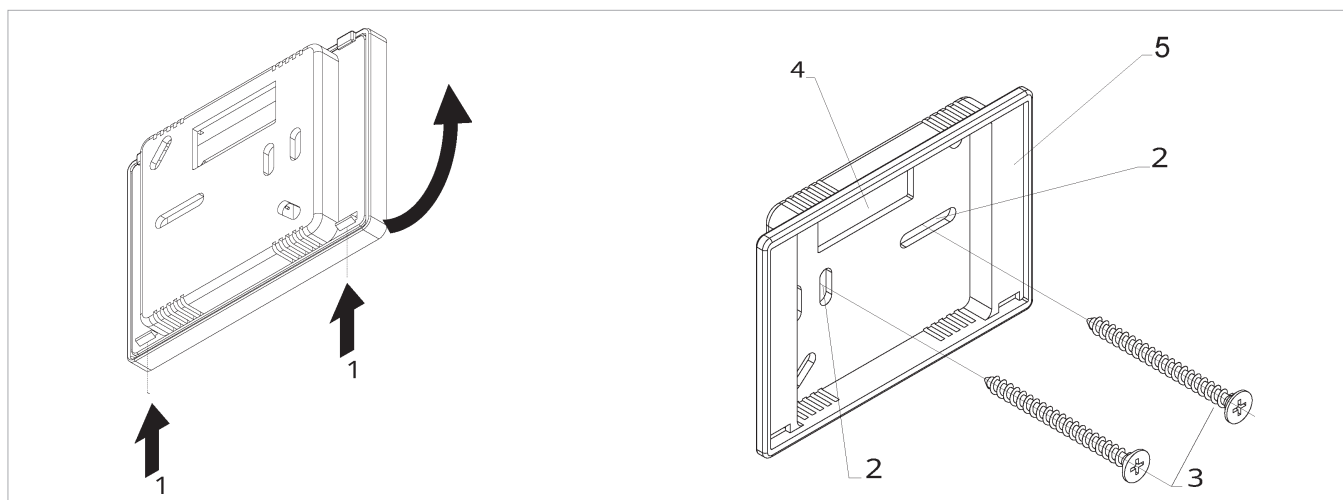
- Unhook the protruding notches on the back side of the control.
- separate the base from the control
- use the base of the control to trace the fixing point on the wall.

For the remote control wall mounting:

- drill holes in the wall
- pull the electric wires through the hole provided
- fix the base of the control to the wall using suitable screw and plugs
- connect the electrical wiring
- close the control

⚠ Pay attention not to crush the conductors when you close the control.

1.	Notches
2.	Holes for the wall mounting
3.	Screw
4.	Hole for the passage of the electrical connections
5.	Back plate



3.2 -AB+ and CP spring-loaded terminal connections

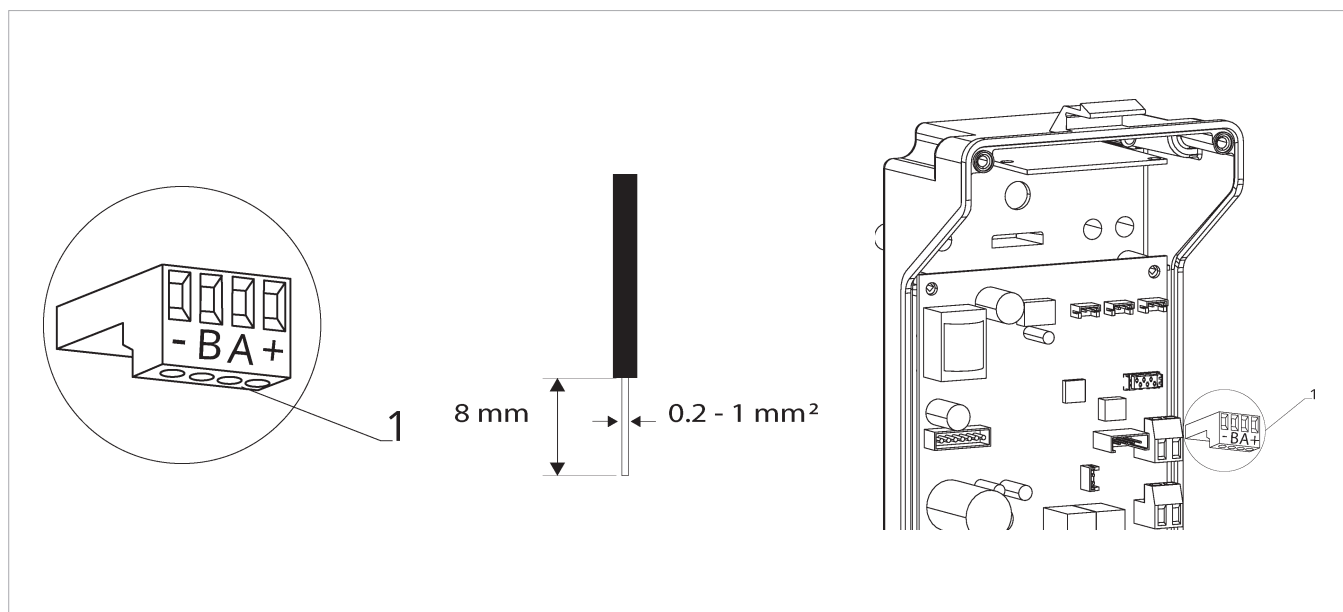
The terminals accept:

- rigid or flexible wires with a 0.2 to 1 mm² cross-section;
- rigid or flexible wires with 0,5 mm² cross-section if two wires are connected to the same terminal block;
- rigid or flexible wires with 0,75 mm² cross-section if the wires have wire end ferrules with a plastic collar.


To connect the cables:

- strip 8 mm of the wire;
- if the wire is rigid, you can insert it easily whereas;
- if it is flexible, use appropriate crimp terminals;
- push the wire in completely;
- check the right fixing by pulling it gently.


1. Terminal blocks



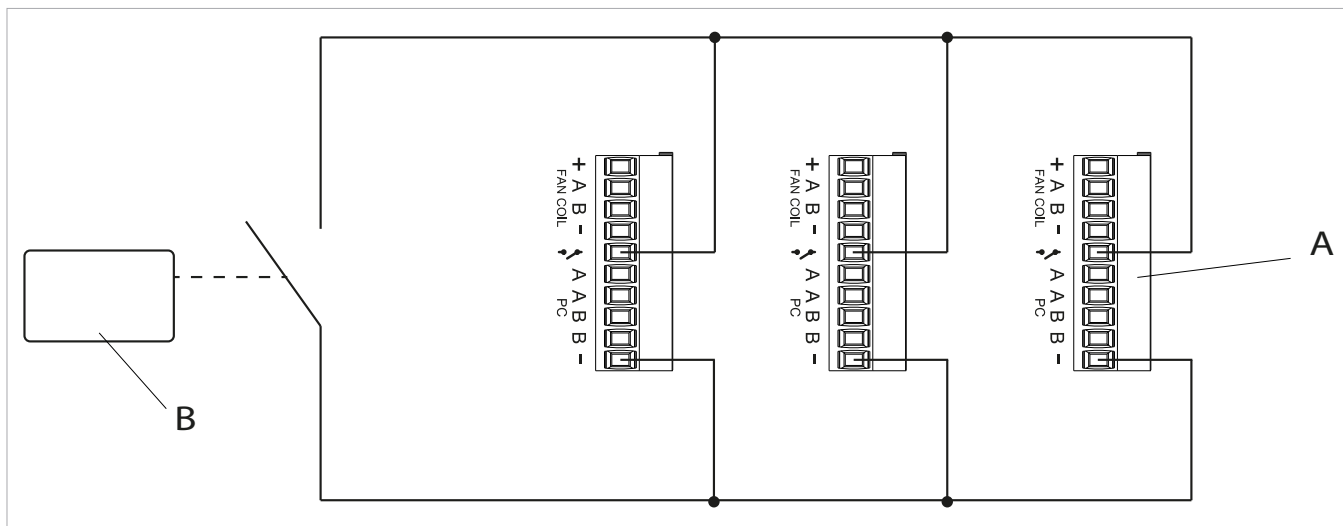
3.3 CP occupancy contact input connection

On closing the contact connected to the CP input (ref. A) the panels are placed into stand-by. If the contact is open the units are active, if the contact is closed they are deactivated when a key is pressed  symbol flashes.

N.B.: the input cannot be connected in parallel to that of other electronic boards (use separate contacts).

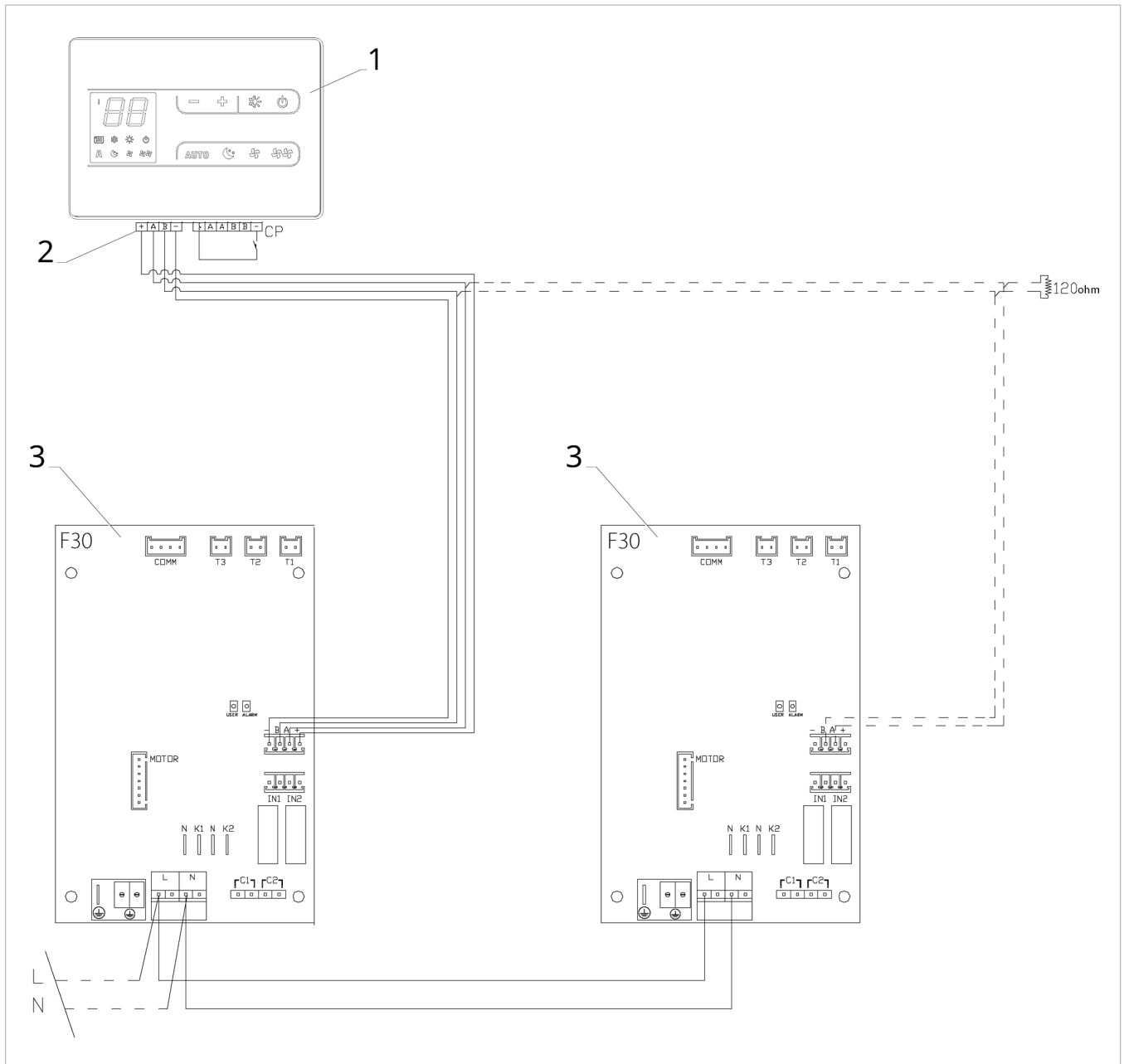
	contact CP
-	contact -

A	remote control terminal block
B	auxiliary relay



3.4 3.030877/3.030878 connections multiple connection diagram

1.	M6 series wall control panel
2.	Terminal block for device connection
3.	PCB



4. UNIVERSAL CARD KIT FOR COMMERCIAL TEMPERATURE CONTROLLER

4.1 Description

On-board electronic printed circuit board for connection to 3-speed wall-mounted electromechanical thermostats. Installed on the unit, it allows the motor to function at fixed

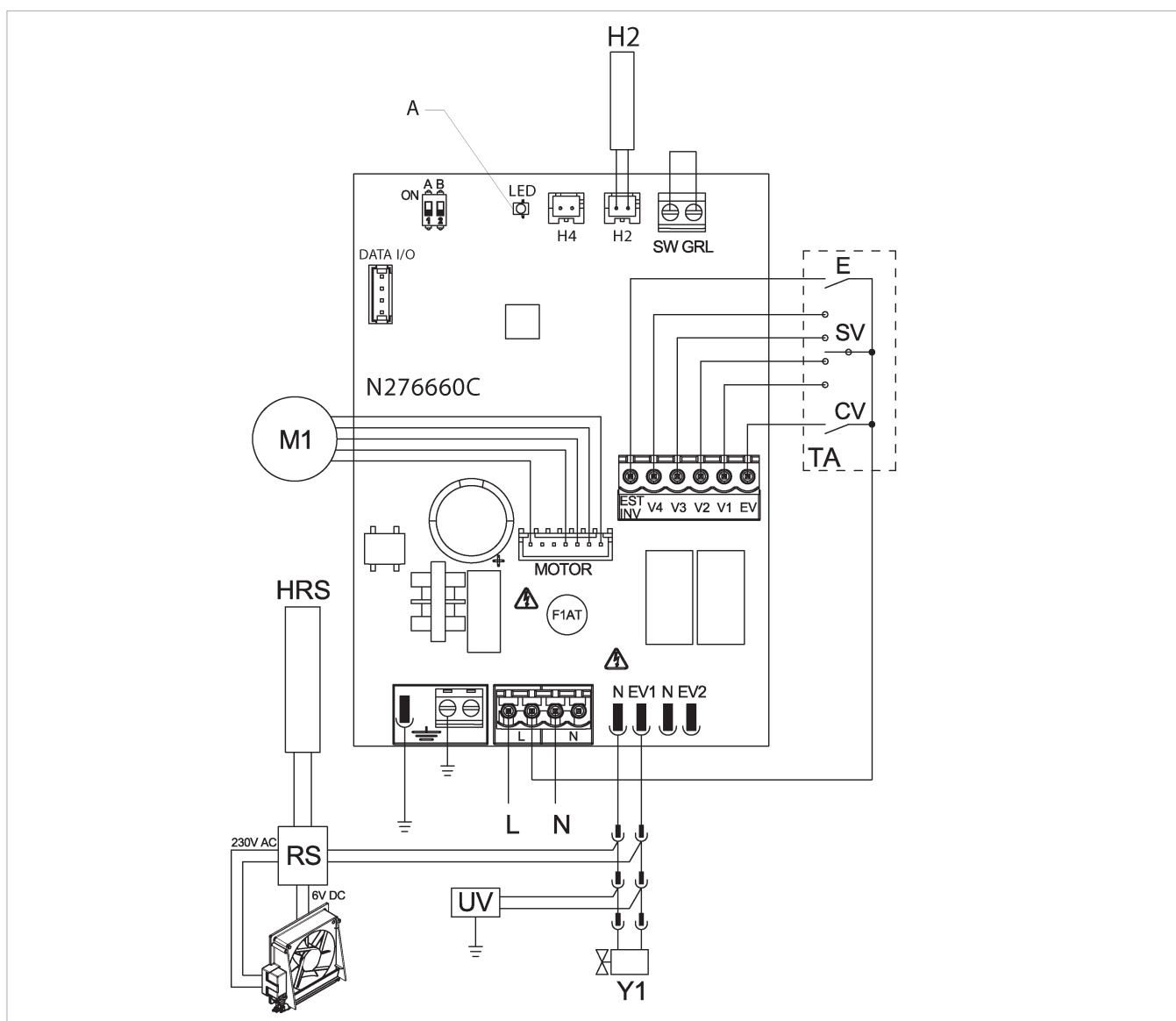
speeds.

It has a 230 V output for controlling a solenoid valve.

4.2 Connection diagram with 3-speed thermostat

L-N	230 V/50 Hz electrical power supply connection
EV	Solenoid valve permission input
V1	Maximum fan speed
V2	Medium fan speed
V3	Minimum fan speed
V4	Supersilent speed
E	Input selection heating/cooling
Y1	Water solenoid valve (230 V / 50 Hz / 1 A power output)
UV	UV lamp accessory connection

HRS	Water temperature probe 10 kΩ for RS models
RS	Wiring for RS model
M1	DC fan motor
TA	3 speed room thermostat (to buy, install and connect by the installer)
CV	Thermostat consent
SV	Speed selector
H2	Hot water temperature probe 10 kΩ
A	Led



4.3 Connections with 3-speed thermostats

The CV input is the board ON/OFF which when open puts the board in stand-by. It must be bridged to the L terminal on the 230V power supply to activate solenoid valve Y1. The 4 speed inputs V1, V2, V3 and V4, when bridged to the L terminal on the 230V power supply, activate the fan if the S1 input to which the grill safety microswitch is connected is closed. The sequence is: maximum speed (1400 rpm on terminal V1), medium speed (1100 rpm on terminal V2), minimum speed (680 rpm on terminal V3) and supersilent speed (400 rpm on terminal V4). Connect the three thermostat speeds to 3 out of the 4 available inputs as per the characteristics and use of the

room: connect, for example, medium speed V2, minimum V3 and supersilent V4 for residential applications, when greater silence is required, whereas V1, V2 and V3 can be connected for commercial applications where the thermal yield is more important.

If multiple inputs are simultaneously closed, the motor will run at a number of revs equal to that of the connection with the highest speed.

Multiple cards can be connected in parallel to a single thermostat, also using different speeds.

4.4 LED signals

The LED (ref. A) is off if the CV input is not closed (stand-by condition).

It turns on when the CV contact is closed and indicates normal operation.

- Flashes frequently if the grille microswitch S1 is activated due to the filter cleaning operation
- 1 flash + pause indicates a fan stoppage alarm due to unsuitable water (with H2 water probe connected).
- 2 flashes + pause due to a motor alarm (e.g. blockage caused by foreign objects, faulty rotation sensor).

- 3 flashes + pause indicates a disconnected or faulty water probe alarm.



4.5 Water probe management with 3-speed thermostat

If the board is used with electromechanical thermostats, or with other commercial controllers with water probe, the on-board probe H2 should not be connected and the fan is controlled by the remote control.

If on the other hand the controller is not set up for managing the water probe, this function can be performed by the board, by connecting the 10 k Ω probe on the battery to the H2 connector on the board (ref. B).

In this case the board carries out the minimum temperature function for heating operations and maximum temperature function for cooling. Therefore, if the water temperature is not suitable for active operation (above 20°C when cooling, under 30°C when heating) the fan is stopped and the anomaly is signalled by a single flash + pause of the LED (ref. A).

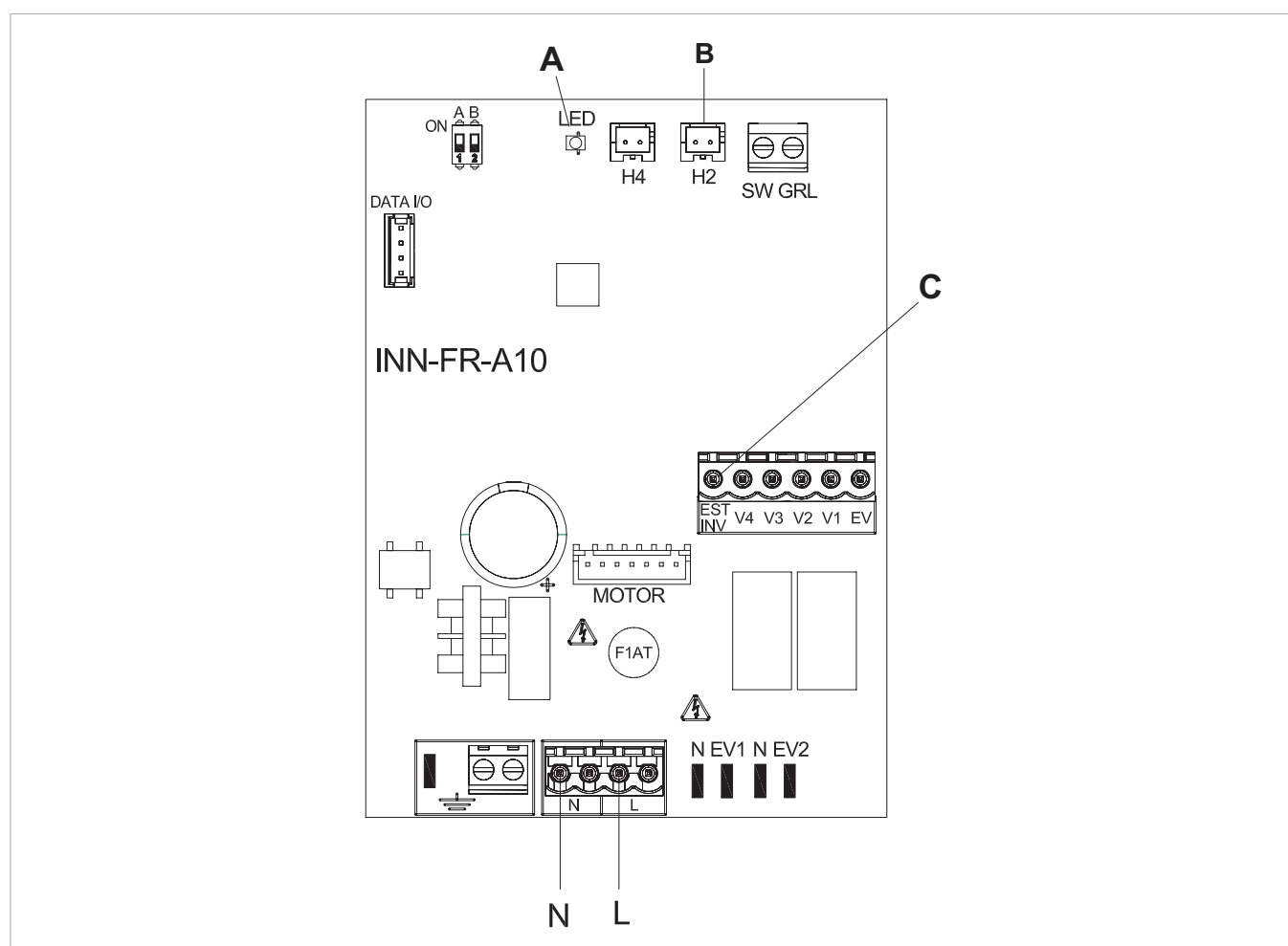
The discrimination between heating/cooling is actuated via the Summer-Winter (ref. C) input of the board: leaving it open the board activates heating, closed activates cooling.

If after having connected the probe it is disconnected or measures incorrect values (e.g. installation of 2 k Ω probe in the place of the 10 k Ω probe) the anomaly is signalled by 3 flashes + pause of the LED (ref. A) and operation is stopped.

To confirm operation without a probe, turn the power to the board off and then on again.

This condition is saved by the board for future start-ups.

In any case, as and when the probe is connected, the unit returns to normal operation with temperature thresholds.



5. 0-10 V DEMAND BOARD KIT

5.1 Description

On-board electronic printed circuit board for control from systems with 0-10 V DC analogue output.

Mounted on the unit, it allows the motor to be managed with modulating speed.

Motor regulation can be made through a 0-10 V analogue input with an input impedance of 25 k Ω .

⚠ Consider the impedance value, especially when controlling several units in parallel.

It has a 230 V output for controlling a solenoid valve.

5.2 Connections with 0-10V thermostats

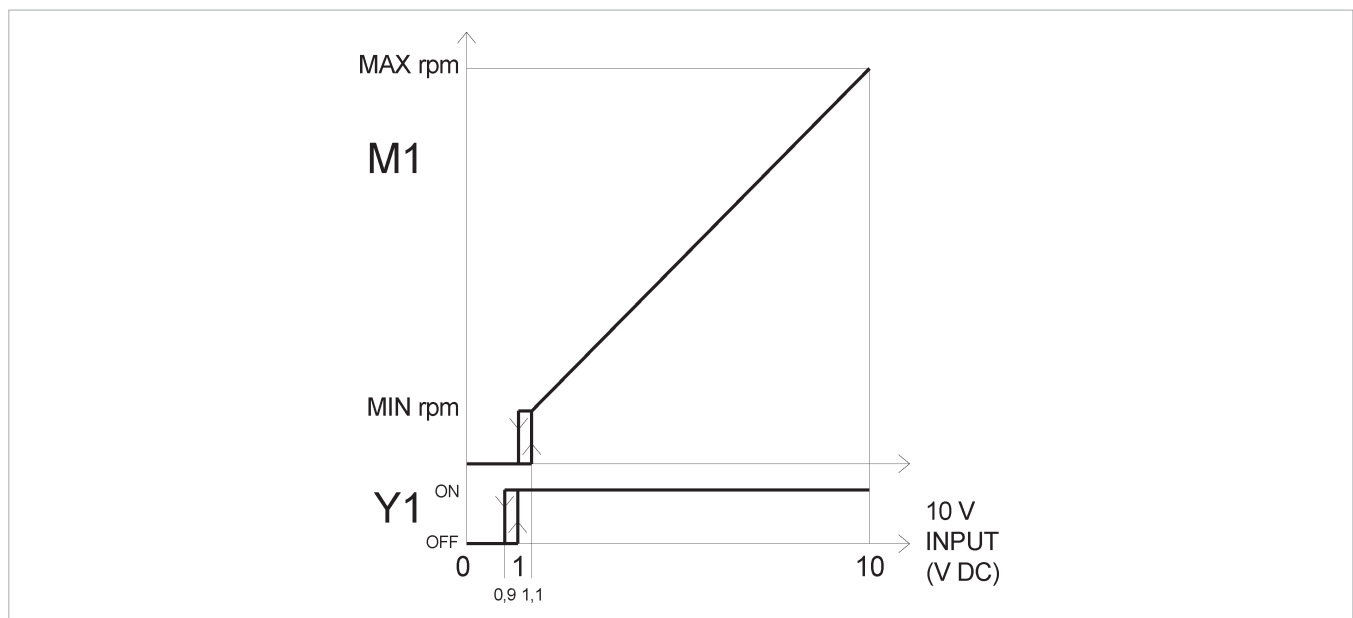
The 10 V input

- activates solenoid valve Y1
- regulates the fan speed

Linear speed regulation is possible, from a minimum value (400 rpm) to a maximum value (1500 rpm) for voltage values ≥ 1.1 V to 10 V DC.

⚠ The motor is switched off for values below 1 V.

⚠ The Y1 solenoid valve is switched on for voltage values greater than 1 V. The Y1 solenoid valve is switched off at values below 0.9 V.



5.3 LED signals


The PCB has a status LED.

LED signals

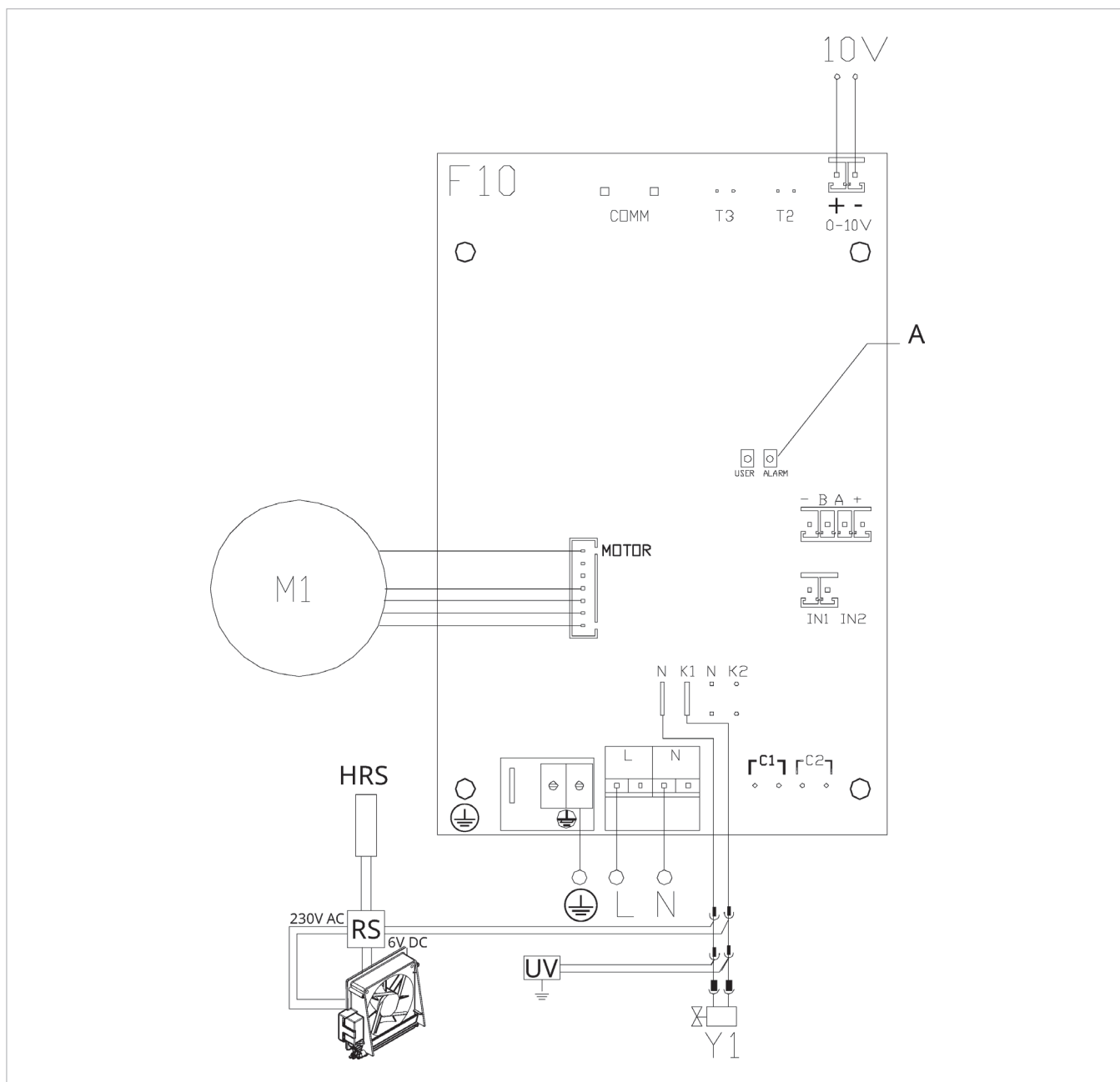
- LED off
Input signal below 0.9 V. Device switched off or without power supply.
- LED on
Input signal more than 1 V. Normal operation of the device.

- LED frequent flashing
Activation of grille safety microswitch S1, due to the filter cleaning operation.
- LED 2 flashes / pause
Motor alarm (for example jamming due to foreign bodies or fault in the rotation sensor).

5.4 Connection diagram with 0-10V DC thermostats / signals

M1	DC fan motor
	Earth connection
L-N	Power supply connection 230 V / 50 Hz / 1 A
Y1	Water electrovalve (voltage output 230 V / 50 Hz / 1 A)

10V	Input 0-10 V
F10	Electronic board on the machine
A	Led



⚠ For models with hydraulic connections on the right hand side, please refer to "Models with right-hand hydraulic connections" to make the connections.

⚠ For radiant panel (RS) versions, please refer to the "Version configurations" section to make the connections.



6. DECORATIVE PANEL KIT WITH RECESSED INSTALLATION WITH FREE FLOW 3.029882÷85

6.1 Assembly

N.B.: this kit can be installed in VERTICAL POSITION WITH HORIZONTAL FREE FLOW and in HORIZONTAL POSITION WITH VERTICAL FREE FLOW. For installation in HORIZONTAL POSITION WITH DUCTED FLOW, one of the DECORATIVE PANEL KITS FOR CEILING RECESSED INSTALLATION WITH DUCTED FLOW 3.029886÷90 is required.

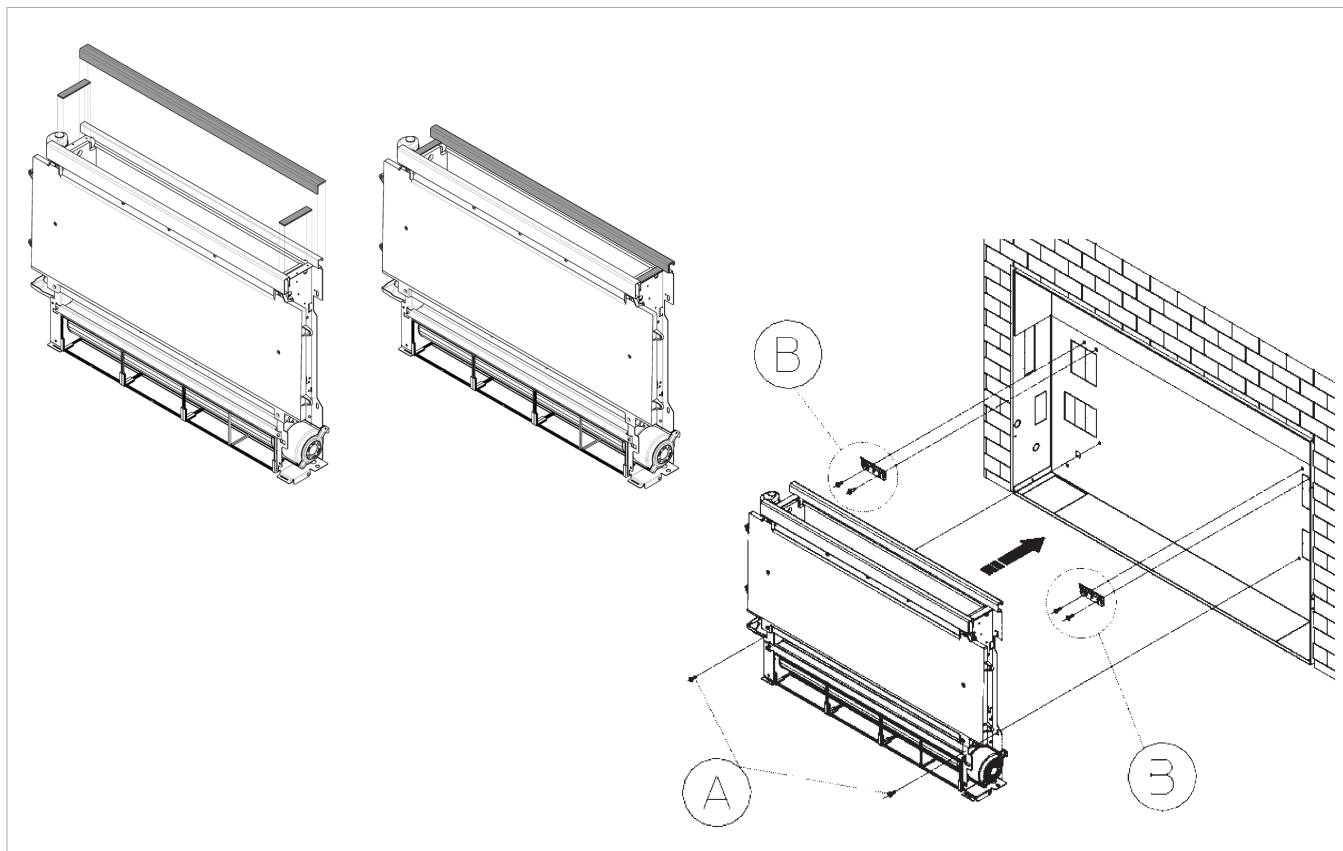
N.B.: before installing the appliance, check that the hydraulic and electrical connections have been made inside the metal structure.

Appliance assembly

- Apply the 3 insulating materials supplied to the upper part of the appliance;
- Make 4 Ø 8mm holes at the B openings and insert the dowels (2 for each bracket) into the wall ;
- Mount the 2 support brackets supplied with the appliance by using the screws and washers provided with the dowels;
- Check the correct locking by manually moving the brackets to the right and left, up and down;
- Mount the appliance in the metal structure, checking it is correctly hooked on the brackets and is stable.

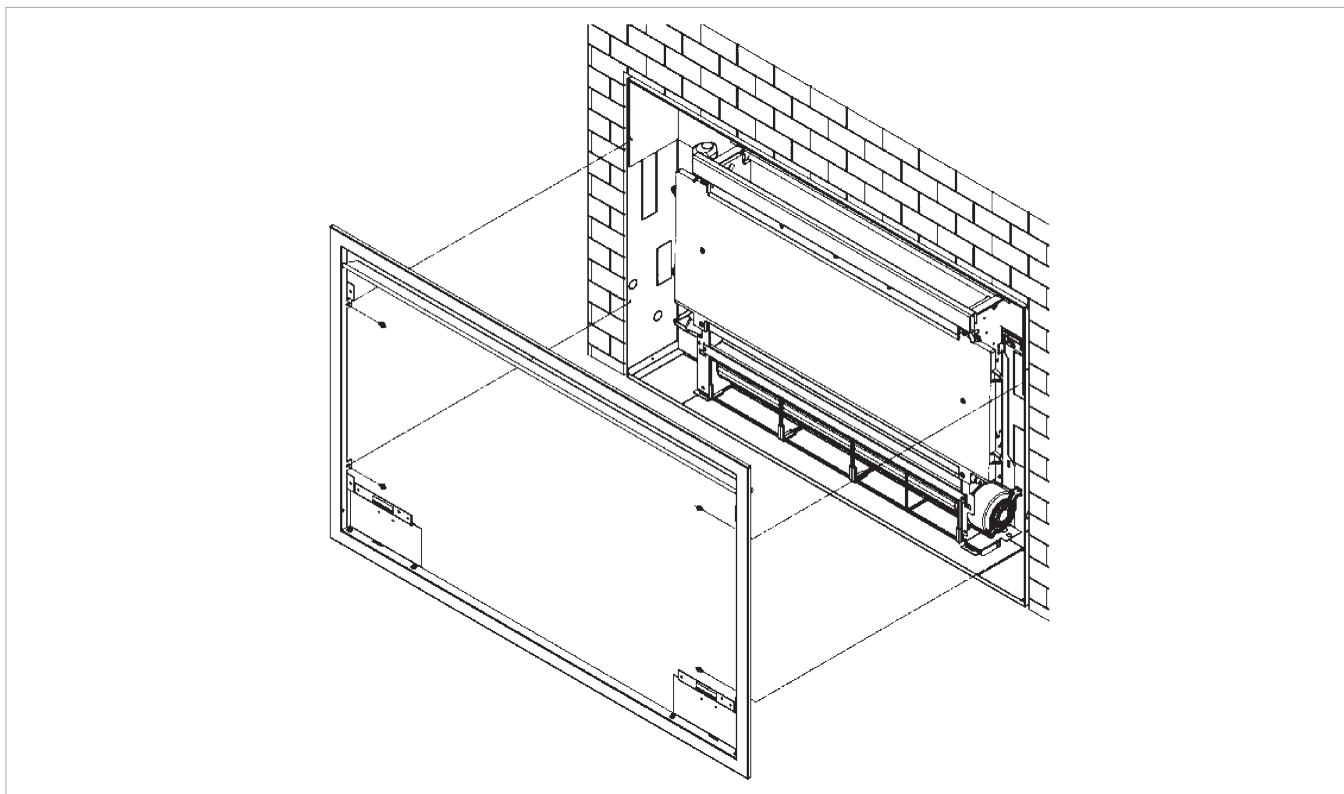
N.B.: for the horizontal ceiling version, lock the appliance through the 2 A holes by using the screws and washers supplied with the dowels.

N.B.: before proceeding with the assembly of the kit it is required to disassemble the GRID, FILTER BLOCK and FRONT PANEL components by unscrewing the 6 fixing screws in the lower part of the FRONT PANEL.



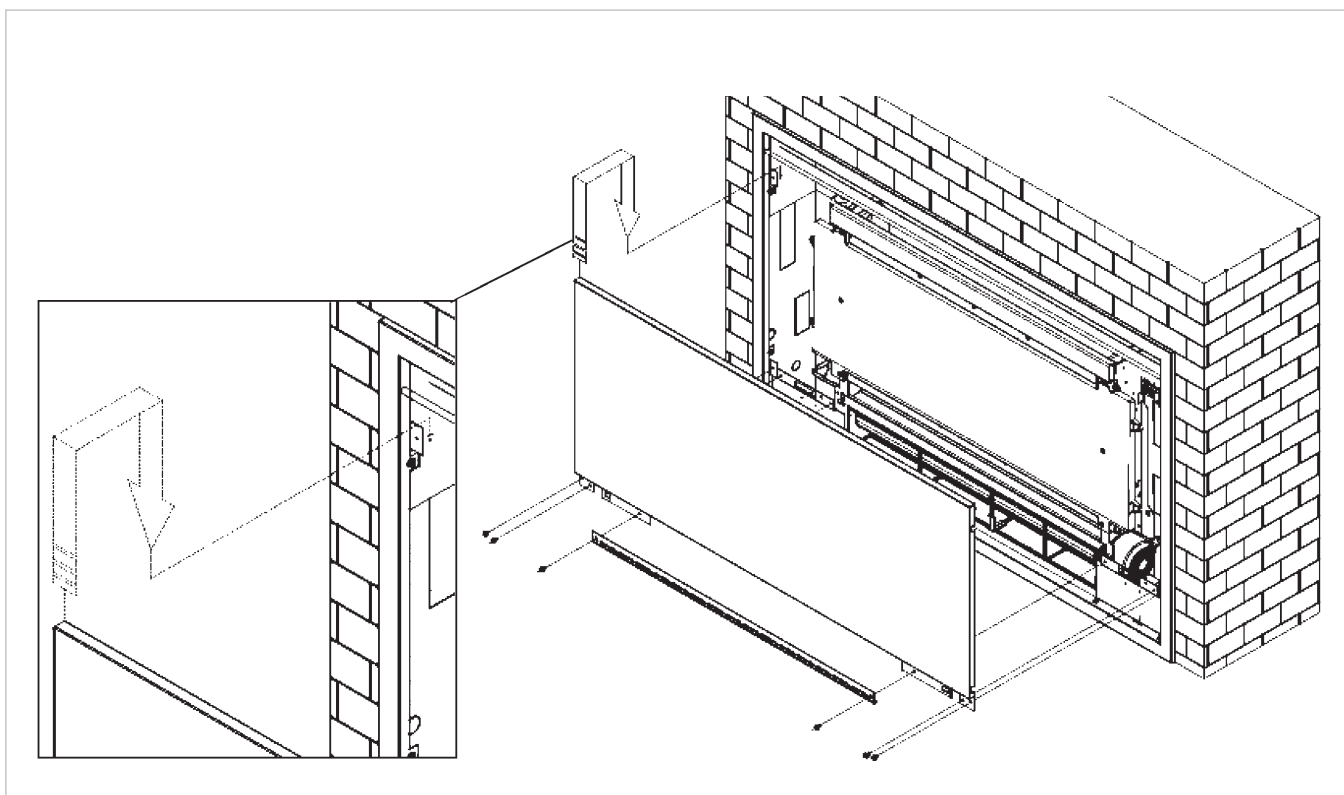
Decorative frame assembly

- Move the decorative frame next to the recessed structure;
- place it so that it adheres to the wall;
- fix it from the sides to the recessed structure by means of the 4 screws supplied.



Decorative front panel and filter block assembly

- Place the front panel next to the recessed structure;
- make sure that the upper part of the front panel hooks onto the flaps on the frame;
- fit the FILTER BLOCK crosspiece and fix the front panel by screwing the 6 screws previously removed from the lower part of the panel again.

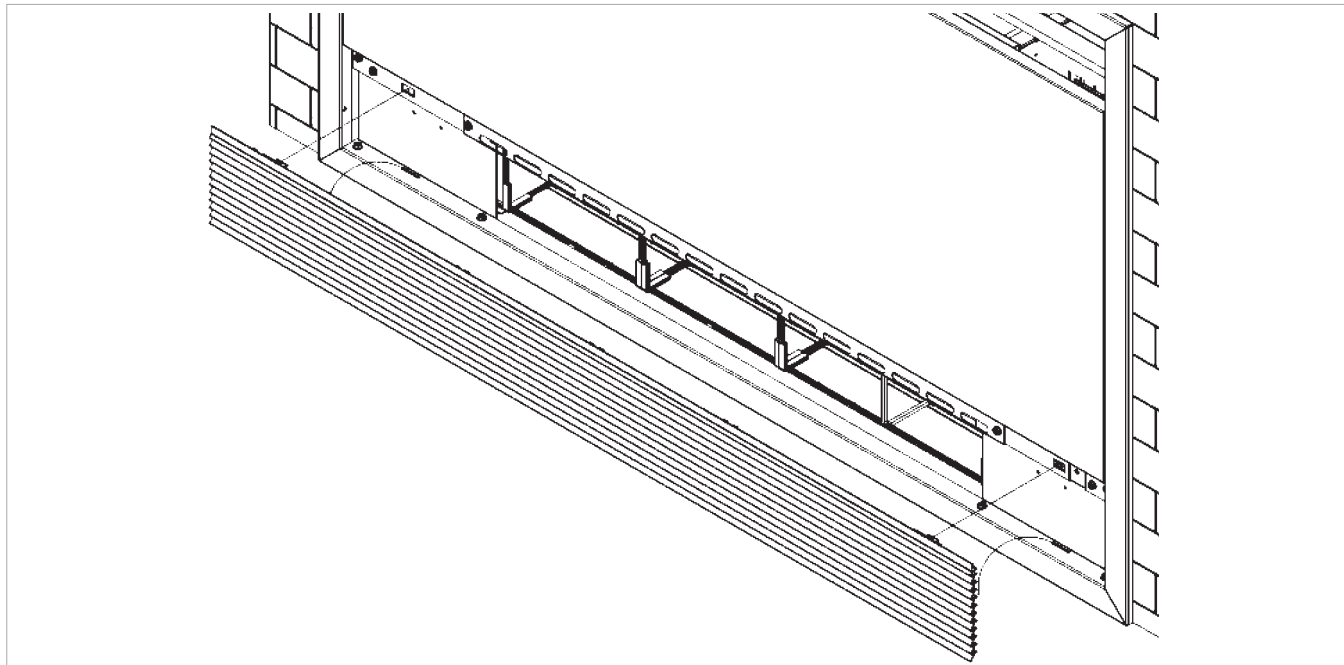


Lower grid assembly

⚠ In case of horizontal ceiling installation, fit the front grid safety supports by following the instructions provided in the specific paragraph of the booklet supplied with the appliance.

- Move the intake grid close to the recessed structure;

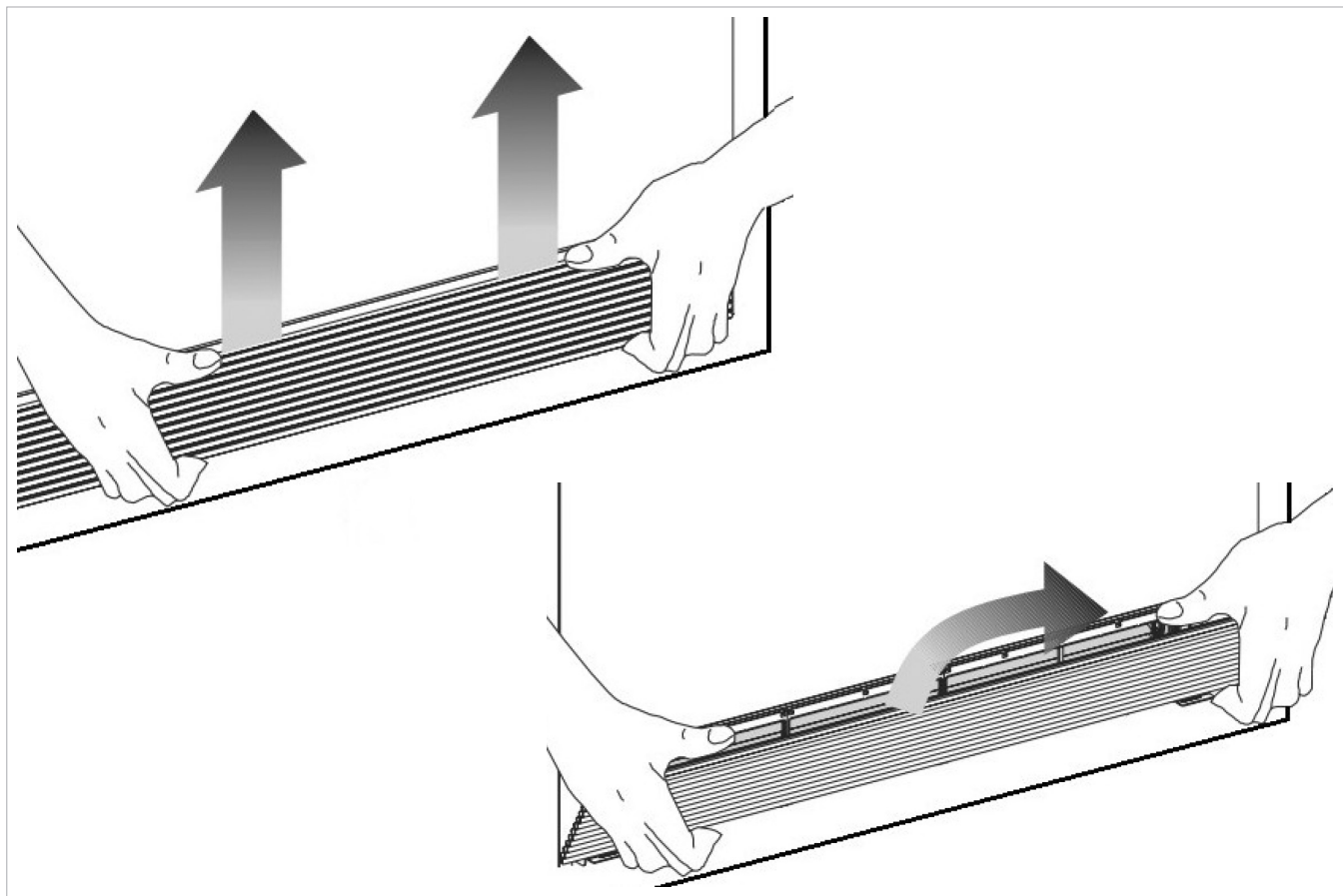
- place the two flaps into the specific slots of the lower part of the frame;
- close the grid by rotating it until the upper teeth lock.



Mesh filter cleaning

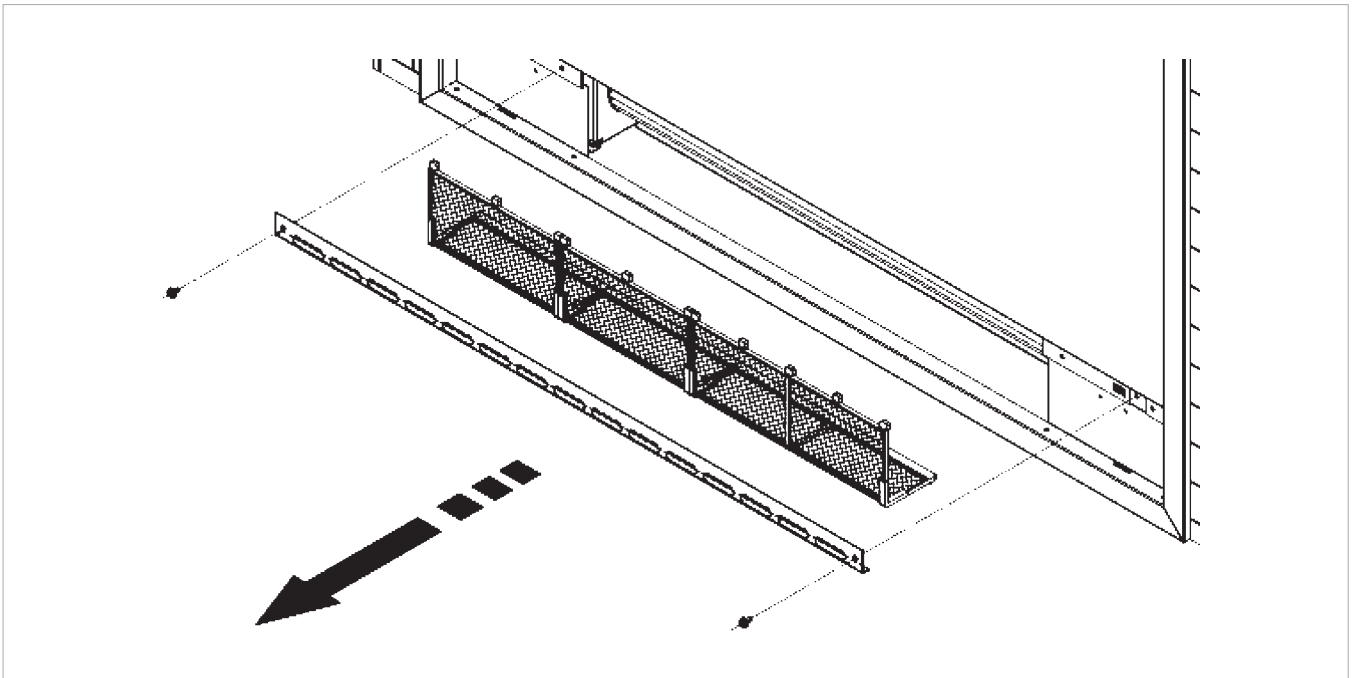
- Remove the front grid by lifting it slightly;

- rotate it until it fully comes out of its seat;



- disassemble the FILTER BLOCK by unscrewing the 2 screws using a suitable tool;
- remove the filters horizontally outwards and proceed

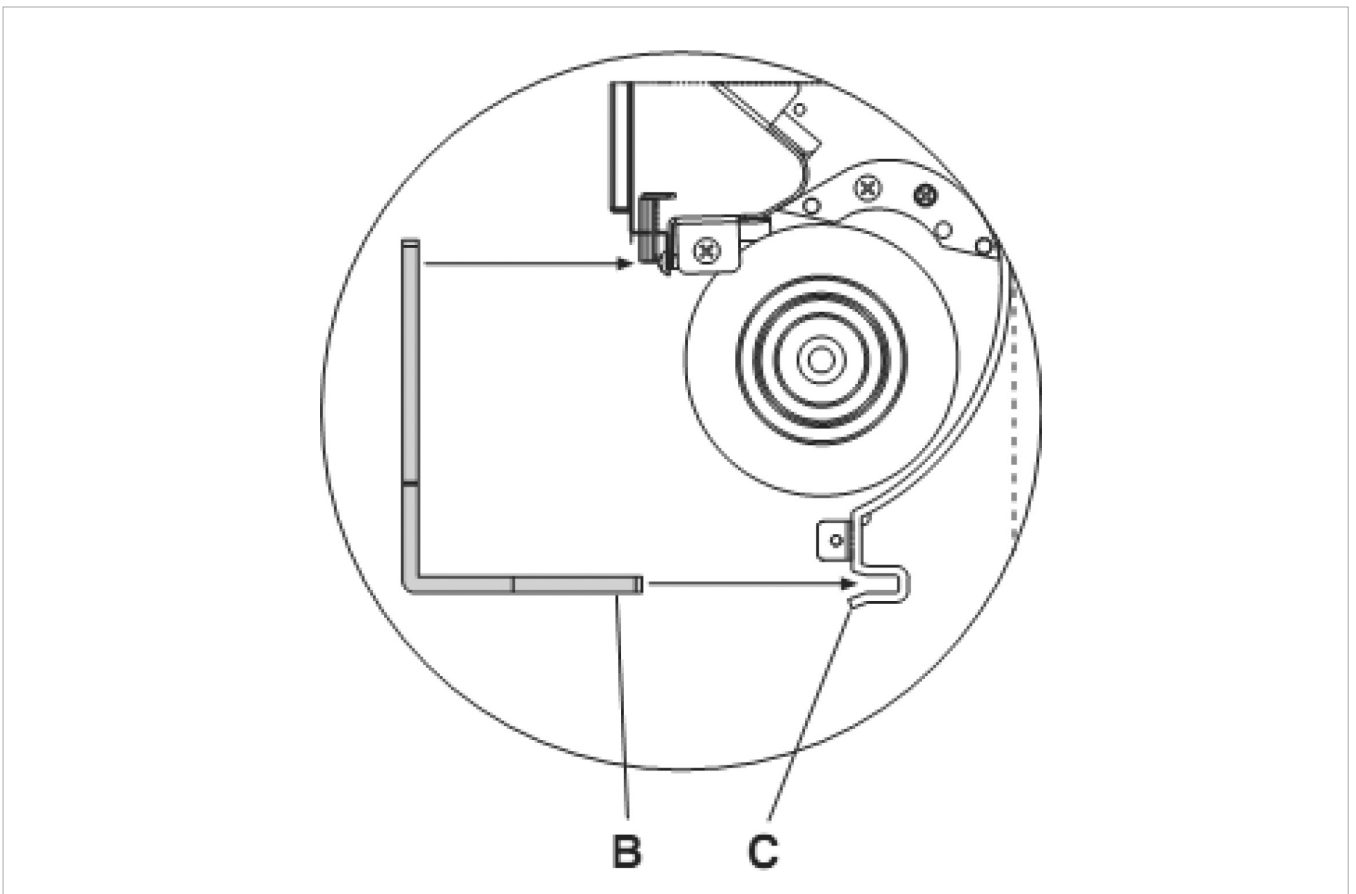
with the cleaning operations as indicated in the maintenance instructions supplied with the appliance;



- reposition the filters paying particular attention to inserting the lower flap (B) in its seat (C).

- Close the grid again by rotating it until the upper teeth lock.

⚠ Mount the FILTER BLOCK crosspiece again by fixing it with the 2 previously unscrewed screws so as to ensure the appliance is secured.



7. DECORATIVE PANEL KIT WITH CEILING RECESSED INSTALLATION WITH DUCTED FLOW 3.029886÷90

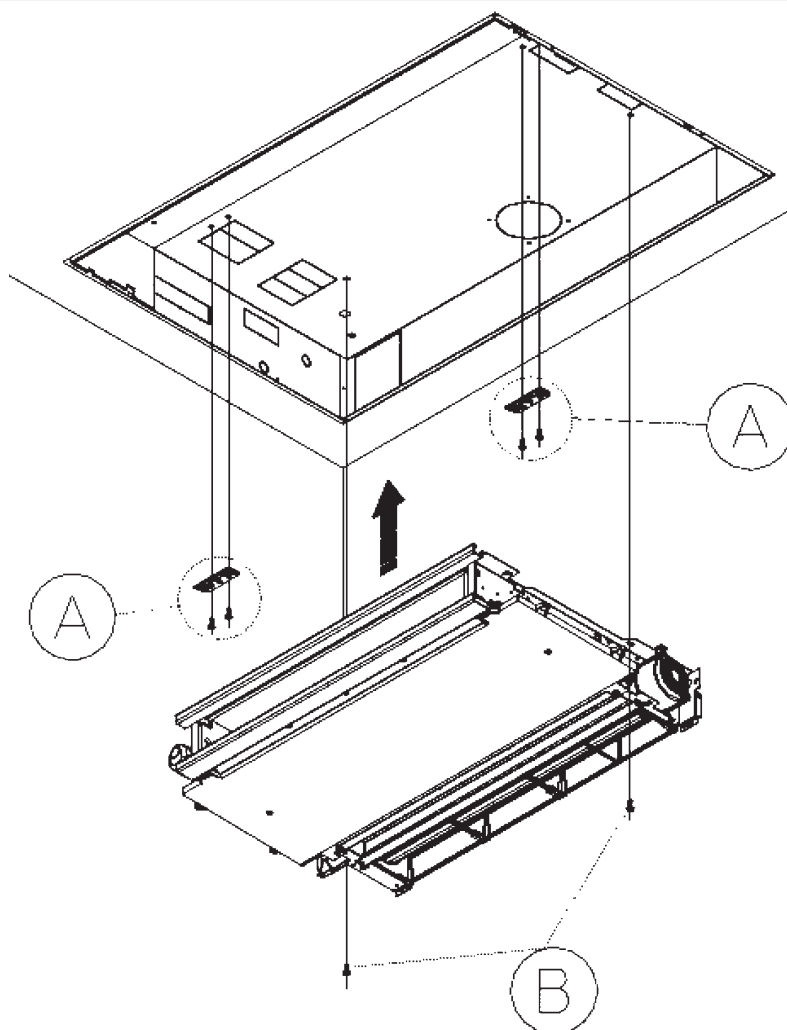
7.1 Assembly

N.B.: the kit can only be installed in HORIZONTAL POSITION WITH DUCTED FLOW. For installation in VERTICAL OR HORIZONTAL POSITION WITH FREE FLOW, one of the DECORATIVE PANEL KITS FOR RECESSED INSTALLATION WITH FREE FLOW 3.029882÷85 is required.

N.B.: before installing the appliance, check that the hydraulic and electrical connections have been made inside the metal structure.

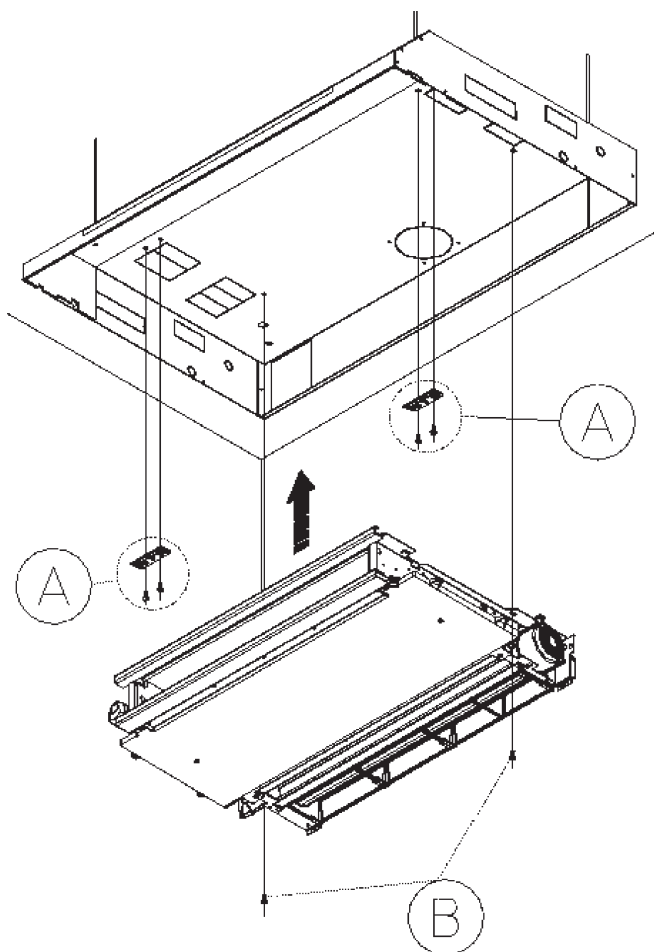
Mounting the appliance into the metal structure directly fixed to the ceiling

- Ø 8mm dowels must be located at the openings A and B, installed when the metal structure is assembled. Mount the 2 fixing brackets supplied with the appliance and lock them via the 4 A holes by using the screws and washers provided with the dowels;
- check the correct locking by manually moving the brackets to the right and left, up and down;
- mount the appliance to the metal structure and hook it to the brackets;
- lock the appliance through the 2 B holes by using the screws and washers supplied with the dowels;
- check appliance stability.



Mounting the appliance into the metal structure fixed with anchors detached from the ceiling

- On the metal structure, M6 CAGE NUTS must be located at the openings A and B, installed when the structure is installed. Mount the 2 fixing brackets supplied with the appliance and lock them via the 4 A holes by using the M6 screws, Grower elastic washers and the washers provided with the RECESSED INSTALLATION KITS 3.029876÷80;
- check the correct locking by manually moving the brackets to the right and left, up and down;
- mount the appliance to the metal structure and hook it to the brackets;
- lock the appliance via the 2 B holes by using the M6 screws, Grower elastic washers and the washers provided with the RECESSED INSTALLATION KITS 3.029876÷80;
- check appliance stability.

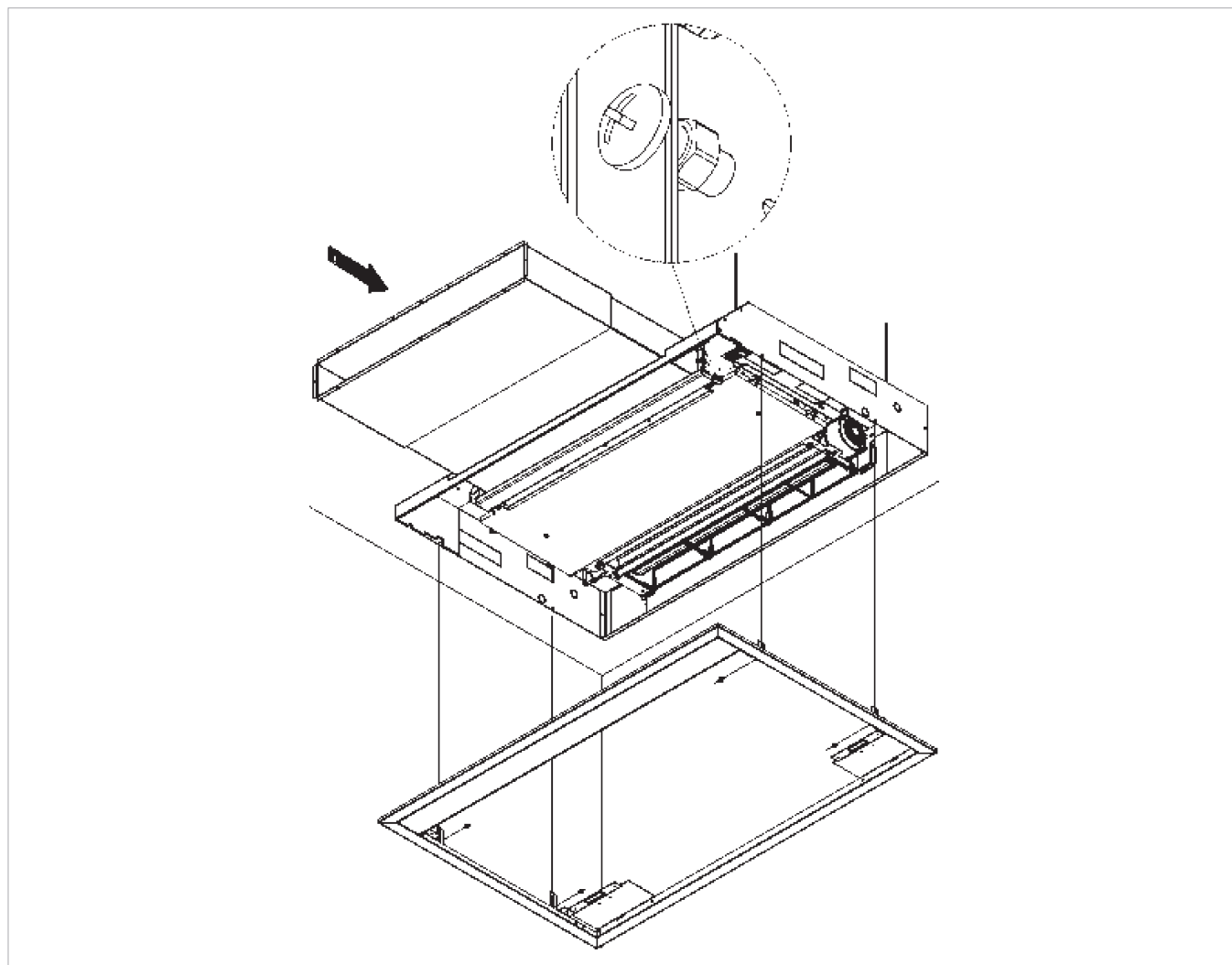


Telescopic air flow duct kit assembly 3.029851÷55

- Insert the telescopic air duct into the opening of the metal structure;
- fasten the duct to the appliance by using the M3 screws and nuts supplied.

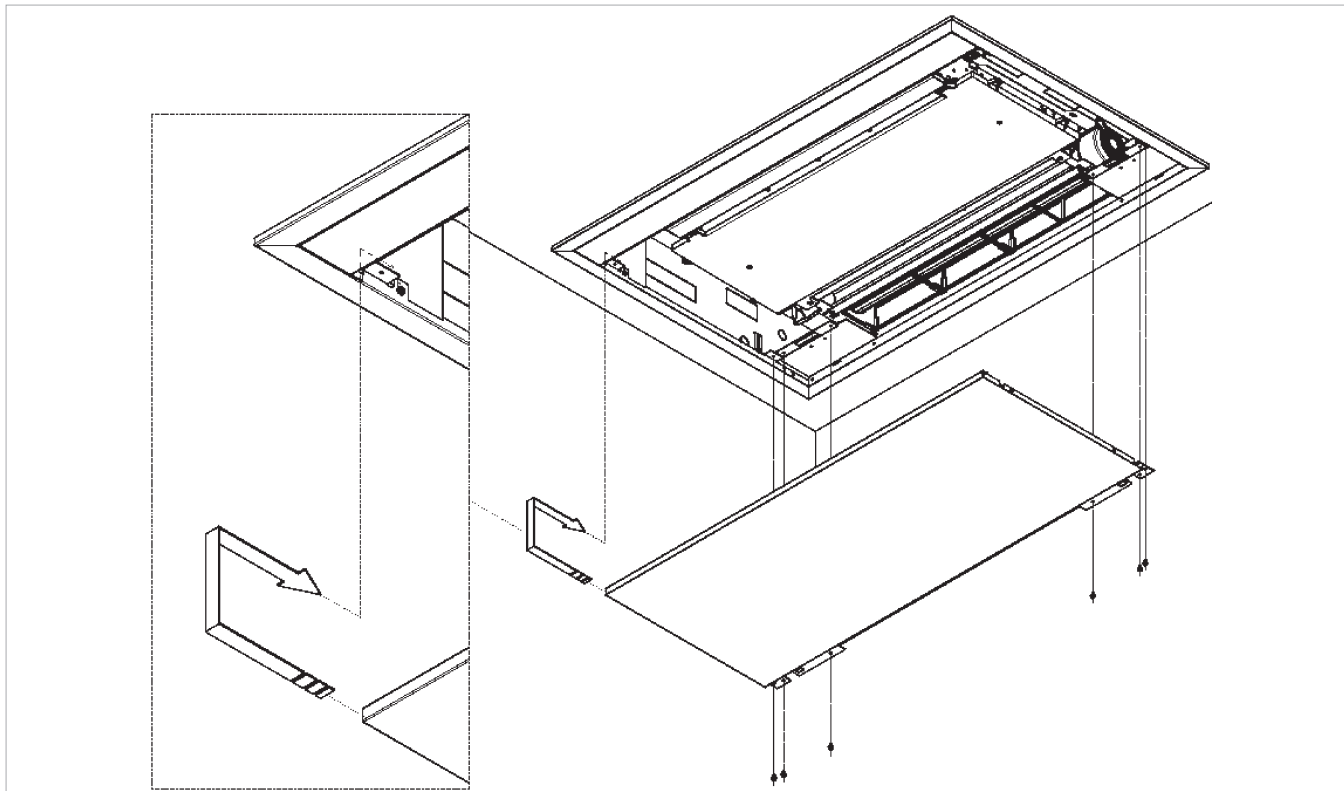
Decorative frame assembly

- Move the decorative frame next to the recessed structure;
- place it so that it adheres to the wall ;
- fix it from the sides to the recessed structure by means of the 4 self-threading screws supplied.



Decorative front panel assembly

- Place the front panel next to the recessed structure ;
- make sure that the upper part of the front panel hooks onto the flaps on the frame;
- screw the lower part of the panel by using the 6 self-threading screws supplied.

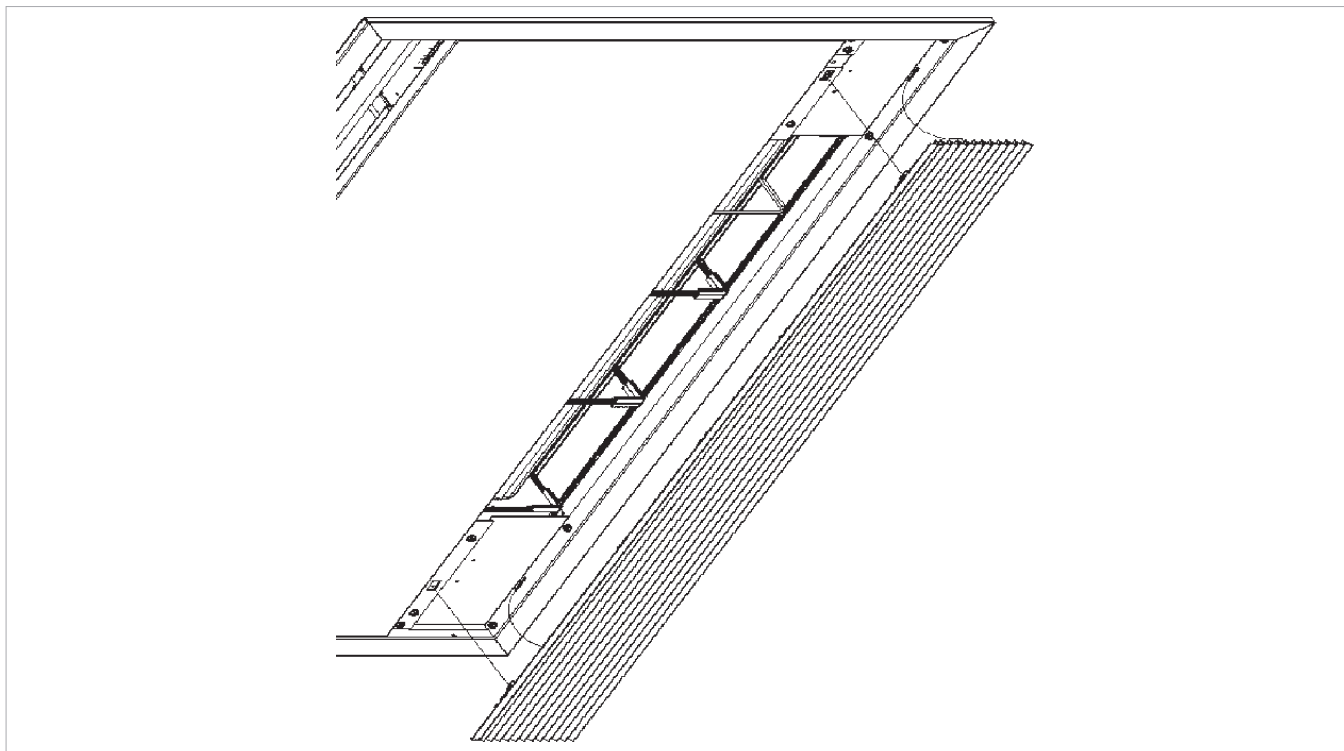


Intake grid assembly

⚠ Mount the front grid safety supports by following the instructions provided in the specific paragraph of the booklet supplied with the appliance.

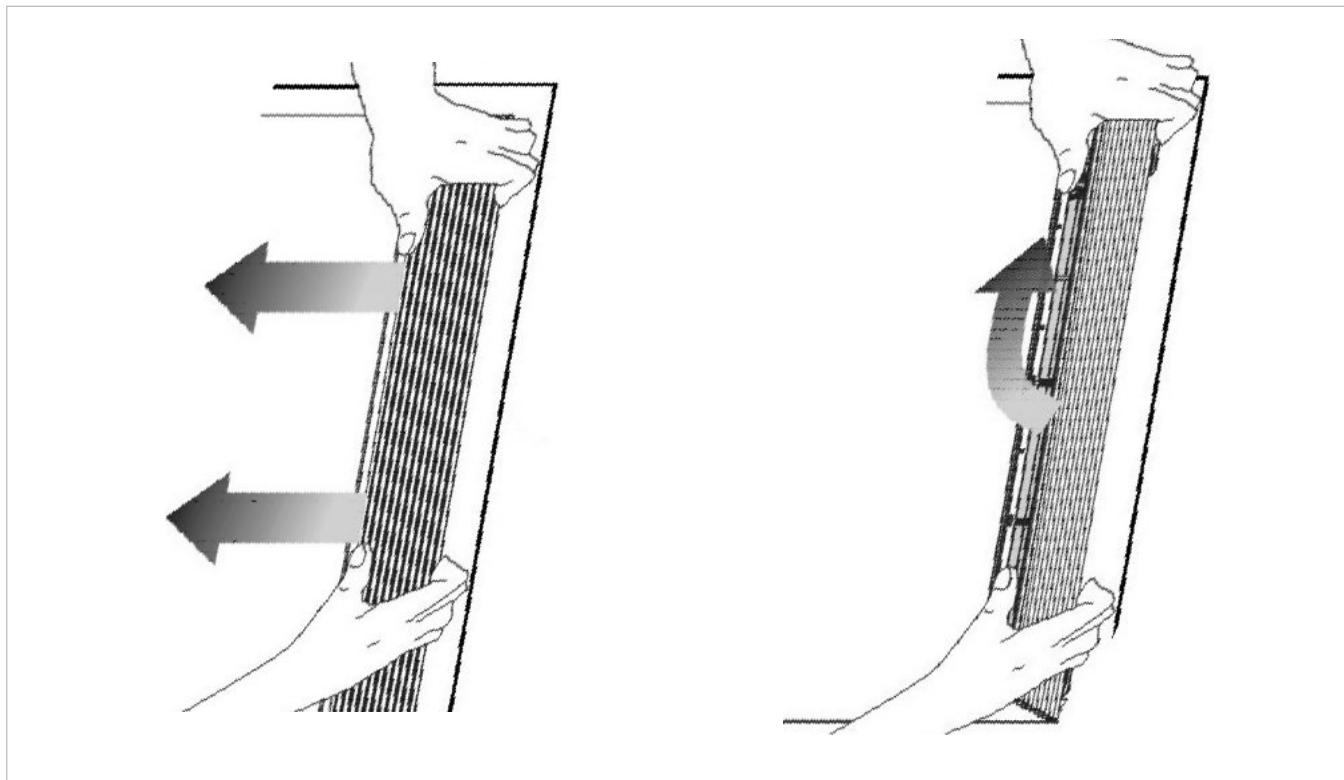
- move the intake grid close to the recessed structure;

- place the two flaps into the specific slots of the lower part of the frame;
- close the grid by rotating it until the upper teeth lock.

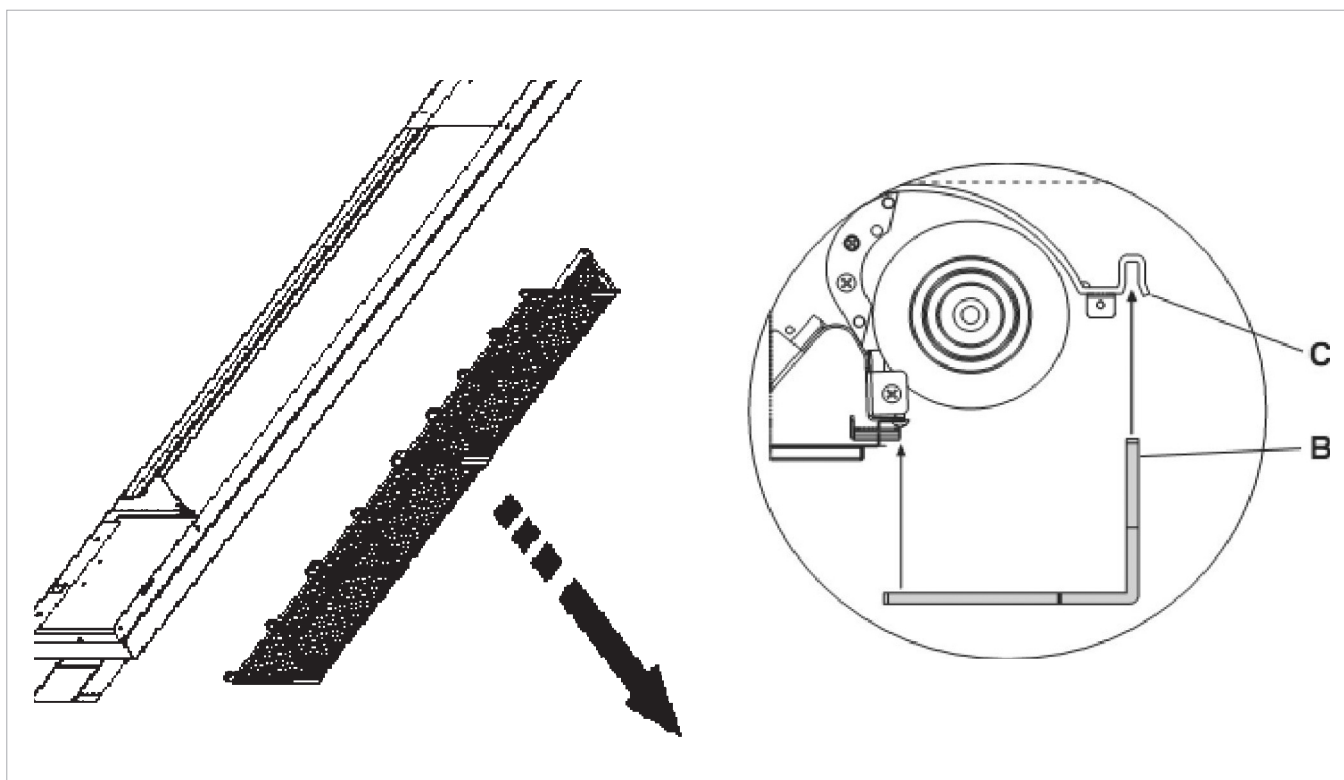


Mesh filter cleaning

- Remove the front grid by lifting it slightly;
- rotate it until it fully comes out of its seat;



- remove the filters vertically downwards and proceed with the cleaning operations as indicated in the maintenance instructions supplied with the appliance;
- reposition the filters paying particular attention to inserting the lower flap (B) in its seat (C);
- close the grid again by rotating it until the upper teeth lock.



8. WATER CONNECTIONS ROTATION

Hydro IN are ready for the inversion of the water connections on the field.

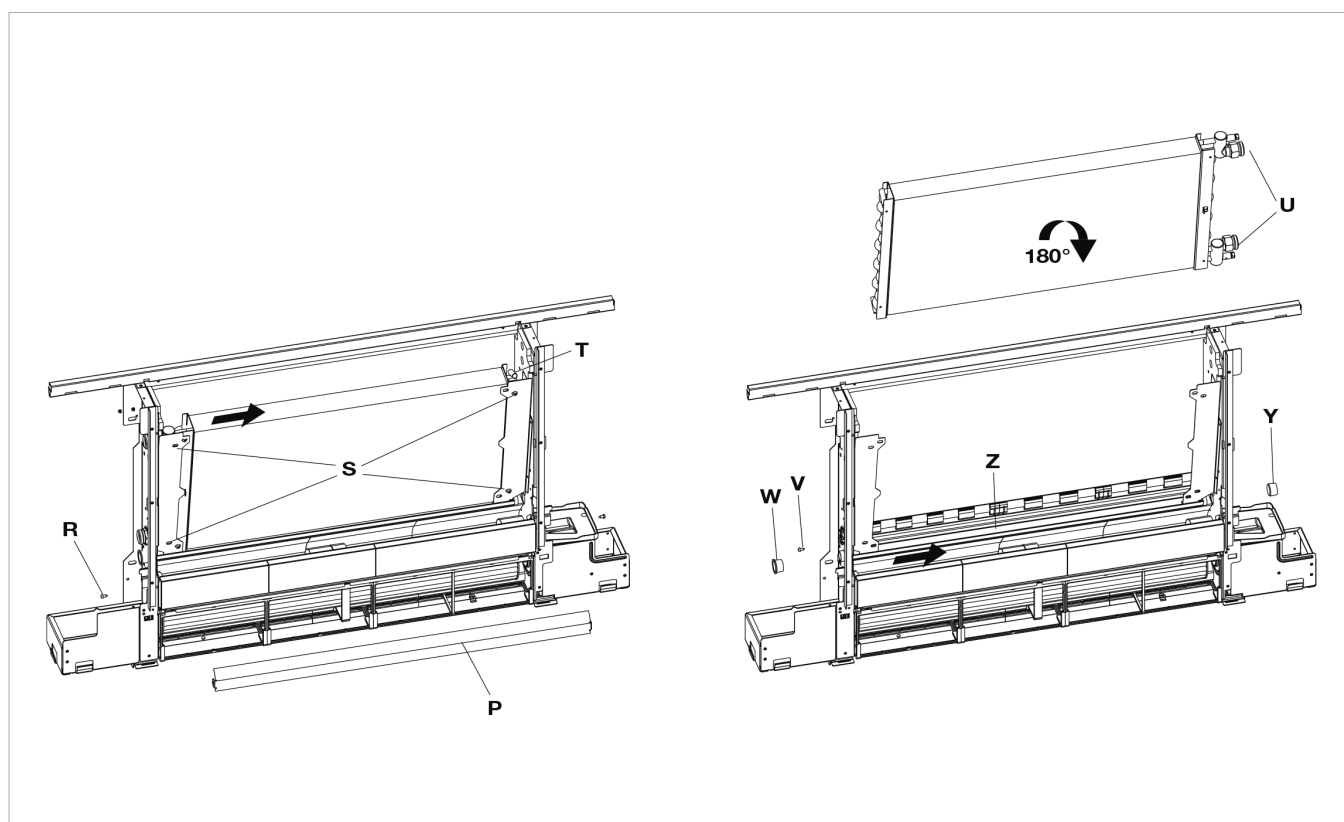
In the event one needs to invert the position of the hydraulic battery connections from the left side to the right side of the device, the electric connections box is also inverted, but since the fan motor and the grid safety microswitch are constrained in the original position, one must use the special kit 3.029834, available as an accessory.

- Access internal parts as described in related chapter.
- Remove the air interceptor (fixed to the shoulders with a screw on each side).
- Loosen the four screws that fix the coil to the front brackets support.
- Remove the water probe from the hole on the coil.
- Open the pre-cut hexagonal holes on the right side insulation.
- Move the coil to the right to remove it from the shoulder's hex attacks, then pull it out.
- Turn of 180° the coil, insert it again in the frame and translate it to the right to introduce the connections in the hexagonal holes of the shoulder. Then fix it with the screws previously removed.
- Close the hexagons holes on the left side with a common insulating adhesive.
- Remove the screw of the central drain pan.
- Translating drain pan to the right side, taking care to remove the cap from the right hole for evacuation and extension drip from the left reversing them to each other.

- Fix the pan on the right shoulder with the screw previously removed.
- Remount the air interceptor.
- Insert the coil water probe into the hole on the water coil.
- Remount the front panel taking care to correctly insert the coil upper insulating so as to avoid air bypass.
- Reassemble the valve access flap on the right part of the unit with the two screws previously removed.
- Make sure you have reassembled all the components and hydraulic and electrical accessories then close also the left and right side panels.

N.B.: the water connections must always be positioned on the opposite side of the control panel.

P	Air interceptor
R	Air interceptor fixing screws
S	Coil fixing screws
T	Water probe coil
U	Coil connections
V	Central drain pan fixing screw
Y	Central drain pan cap
W	Extension drip
Z	Central drain pan



9. 2-WAY/3-WAY VALVE UNIT KIT

N.B.: to avoid penalising the performance of the system the water inlet and outlet must be as indicated in the various figures.

N.B.: for a rapid and correct assembly of the components follow carefully the sequences described in the various sections.

9.1 List of hydraulic accessories

- 2-way valve unit with thermo-electric head kit.
- 3-way deviator valve unit with thermo-electric head deviator valve kit.

9.2 Pipeline diameter

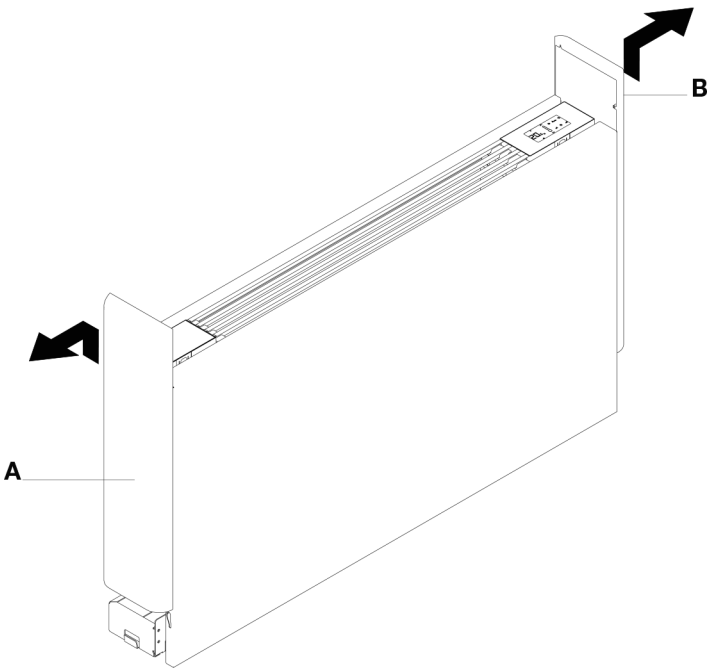
The minimum internal diameter that must be respected for the pipelines of the hydraulic connections varies according to the model:

	U.M.	200	400	600	800	1000
Support covers	mm	12	14	16	18	20

9.3 Access to inner parts

- Lift it up the side panels.
- Move orizzontally to remove.

A	Left panel
B	Right panel



9.4 Mounting the thermostatic head

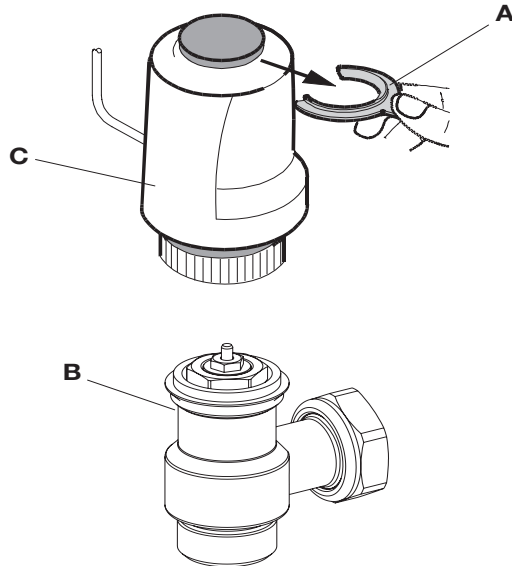
Tighten the plastic disc to the valve body. Attach the head to the valve body.

To facilitate the system mounting, filling and venting operations, even without electric power, the thermostatic head is supplied with a tool that keep it open.

N.B.: remove the tool from the thermostatic head before starting the system.

A	plastic tool
B	valve body

C	thermostatic head
----------	-------------------



9.5 Lockshield adjustment

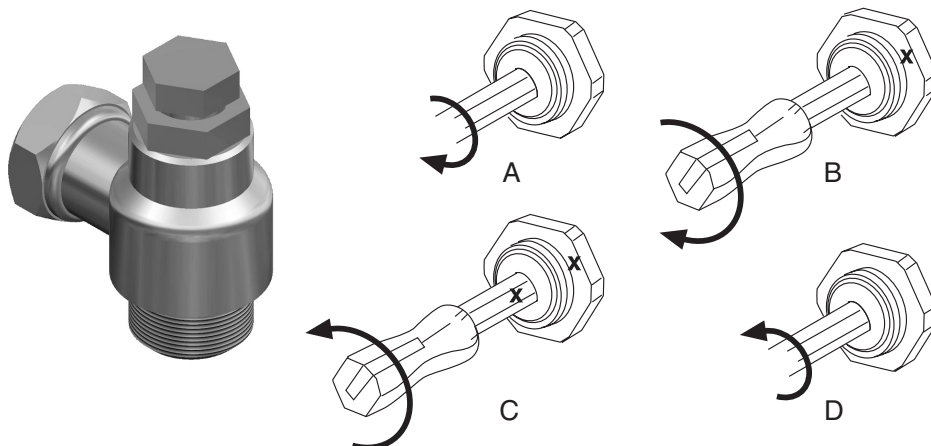
The lockshields supplied with the hydraulic kits provide an adjustment that balances the system load losses. To ensure a correct adjustment and balancing of the circuit, follow the procedure indicated below:

- With a screwdriver, loosen and remove the slotted grub screw inside the hexagonal head.
- Close the adjustment screw using a 5 mm Allen key (A).
- Re-tighten the slotted grub screw then mark the reference point for the adjustment with an "x" (B).

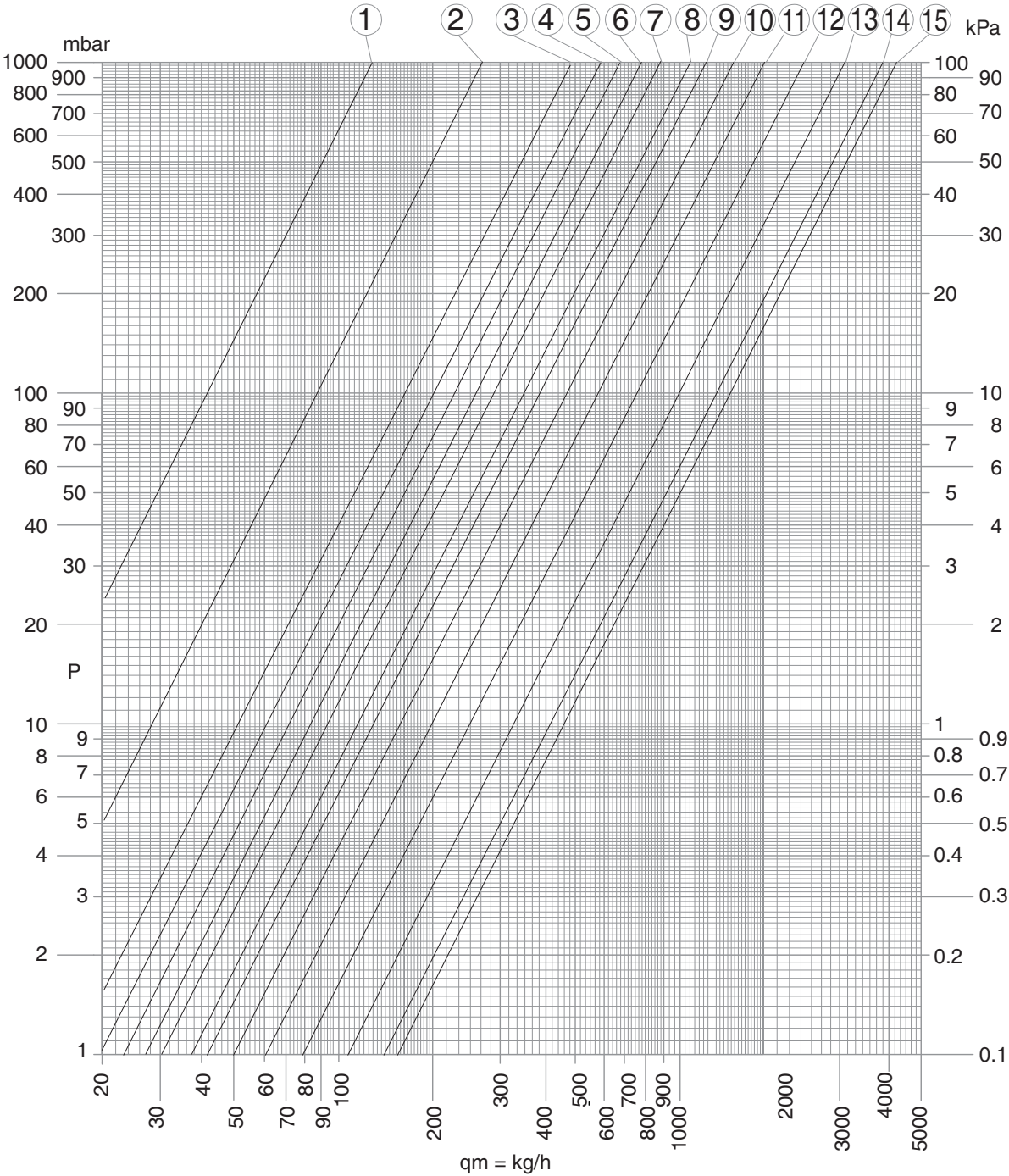
- Align the screwdriver with the "x", then open with a number of turns (C) according to diagram Äp-Q shown on page 32.

N.B.: the number of turns refers to the micrometric screw

Then fully open the screw (D). Now the pre-adjustment has been set and will not change if there are repeated openings or closings with the Allen key.



Load losses based on the adjustment of the lockshield present in all kits.



POS.	1	2	3	4	5	6	7	8	10	11	12	13	14	15
ADJ	1 ^{2/4}	2	2 ^{1/4}	2 ^{1/2}	2 ^{3/4}	3	3 ^{1/4}	3 ^{2/4}	4	4 ^{1/2}	5	6	8	T.A.
Kv	0.13	0.28	0.49	0.62	0.70	0.82	0.95	1.33	1.57	1.95	2.47	3.34	4.18	4.52



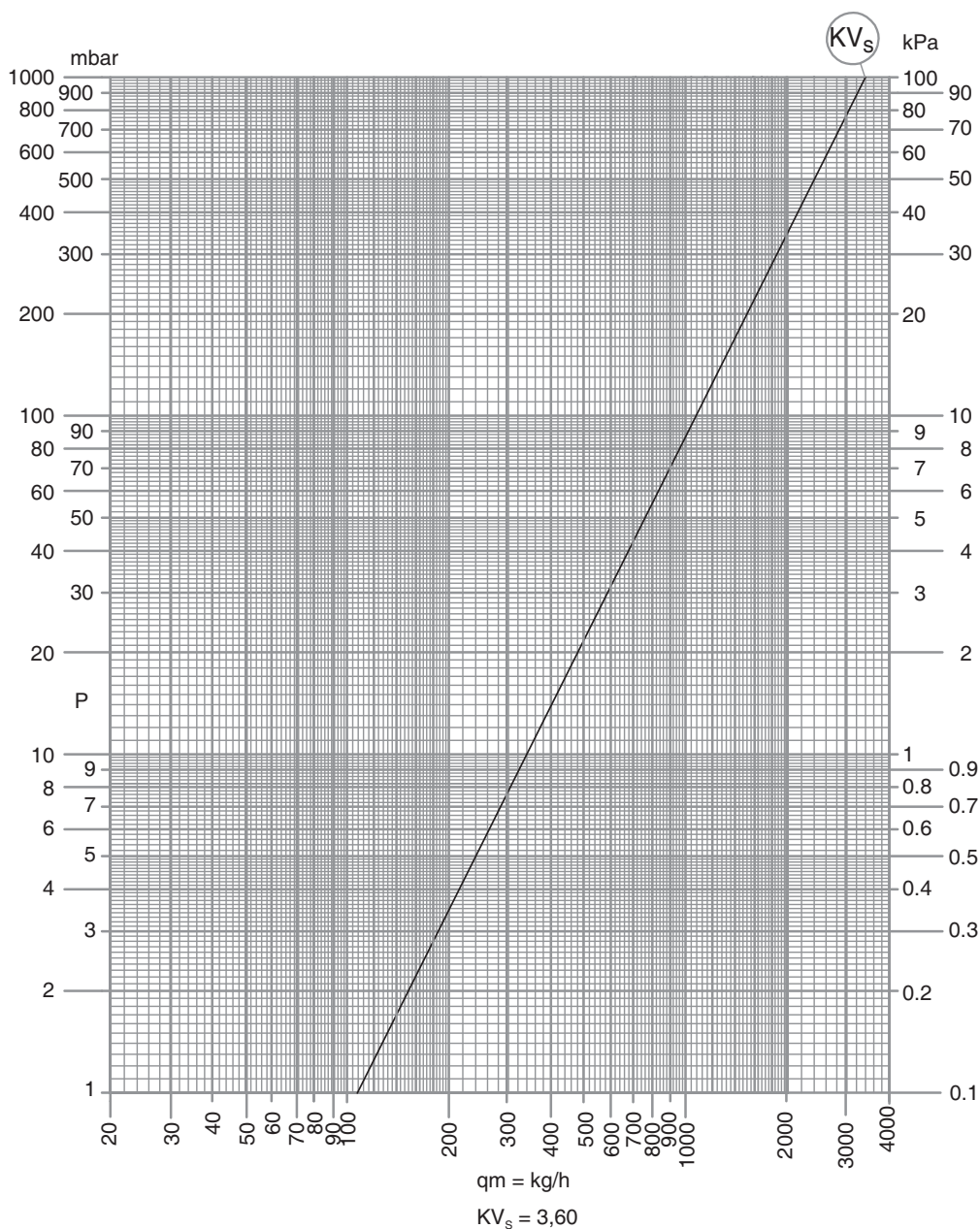
9.6 2-way valve with thermo-electric head kit

Consists of an automatic valve with thermo-electric head and a lockshield, fitted with micrometric adjustment, capable of balancing the system load losses.

The kit contains the insulation to be mounted on the valve and on the lockshield.



load losses in completely open position of 2-way valve present in kits.



9.7 3-way valve with thermo-electric head deviator valve kit

Consists of a 3-way deviator valve with thermo-electric head and a lockshield, fitted with micrometric adjustment, capable of balancing the system load losses).

The kit contains the insulation to be mounted on the valve and on the lockshield.

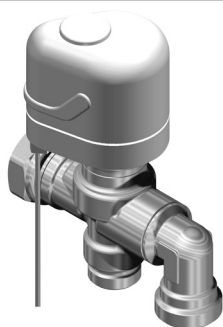


Diagram of load losses of deviator valve, present in kit, in completely open position.

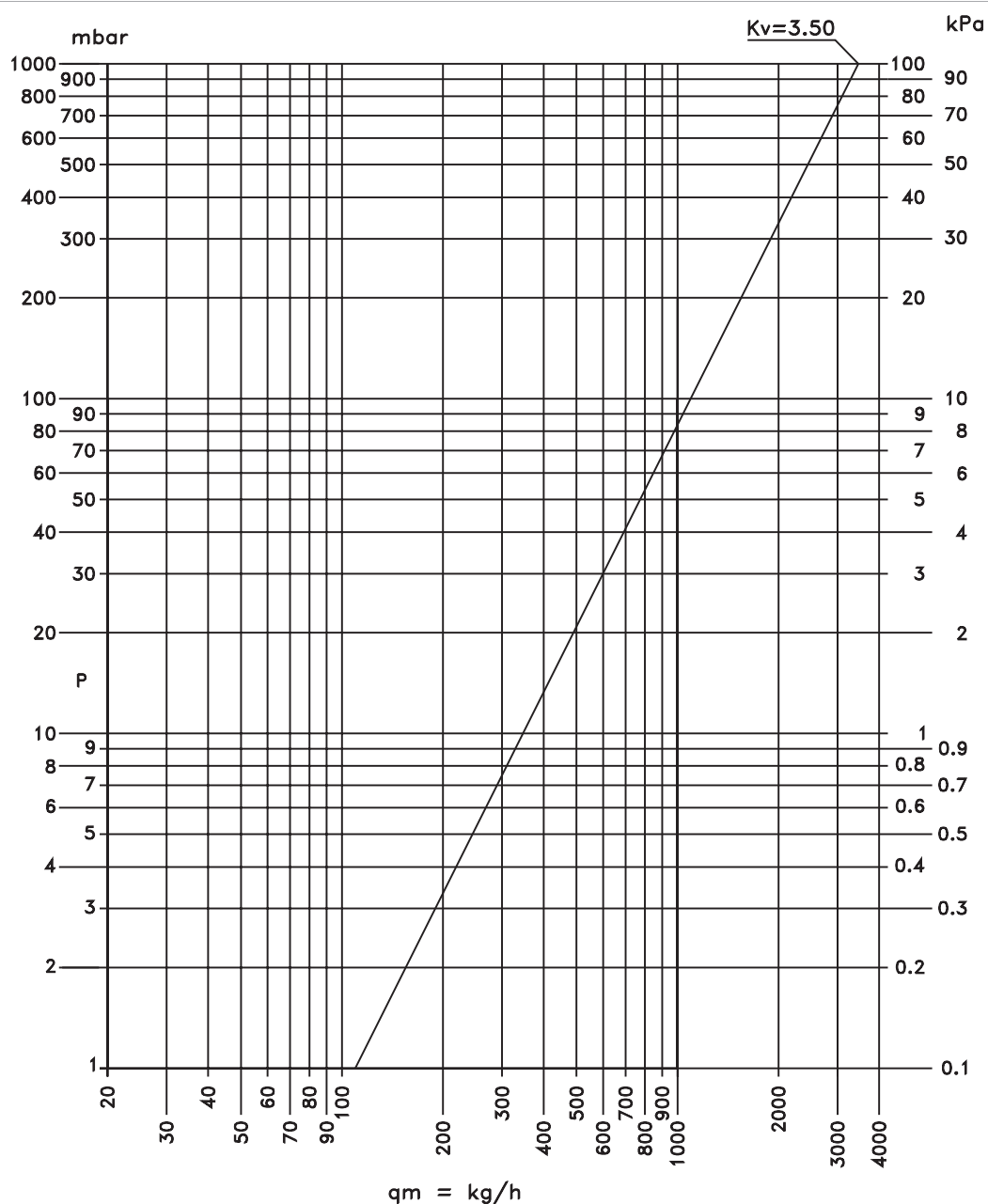
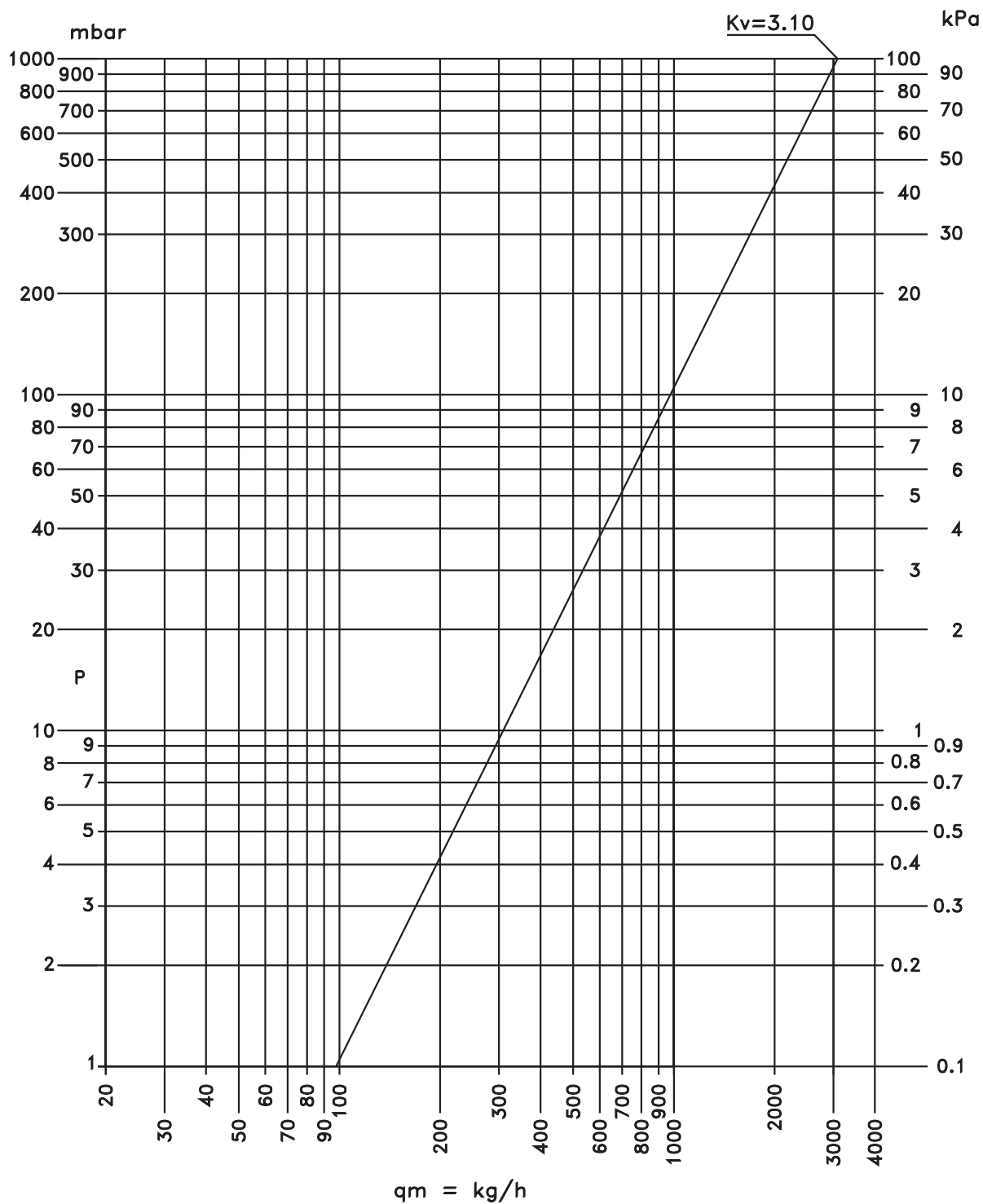


Diagram of load losses of deviator valve, present in kit, in completely closed position.



9.8 Connections

The choice and sizing of the hydraulic lines must be made by an expert who must operate according to the rules of good technique and the laws in force.

To make the connections:

- position the hydraulic lines
- tighten the connections using the "spanner and counter spanner" method
- check for any leaks of liquid
- coat the connections with insulating material

The hydraulic lines and joints must be thermally insulated.

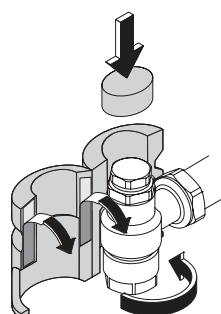
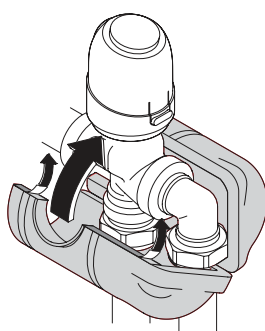
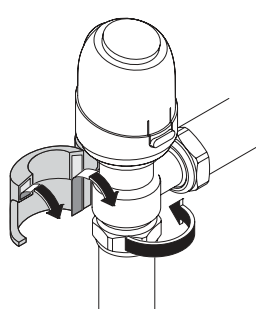
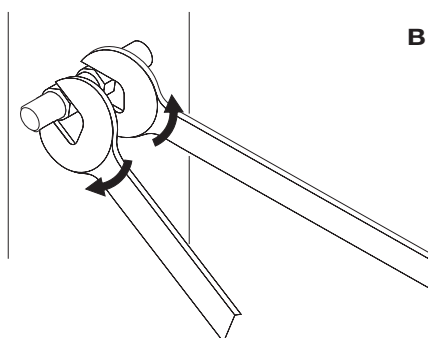
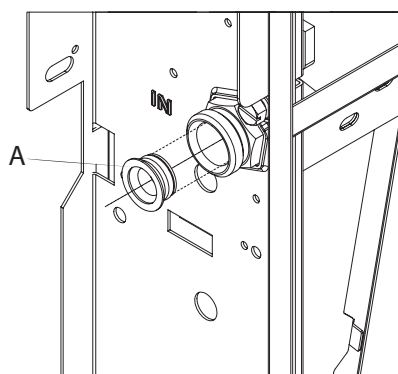
Avoid partially insulating the pipes.

Do not over-tighten to avoid damaging the insulation.

Use hemp and green paste to seal the threaded connections; the use of Teflon is advised when there is anti-freeze in the hydraulic circuit.

A	Eurokonus adapter
B	Spanner and counter spanner

C	Coat the connections with insulating material
----------	---



C

9.9 2-way valve unit kit

Consists of an automatic valve with thermo-electric head and a lockshield, fitted with micrometric adjustment, capable of balancing the system load losses.

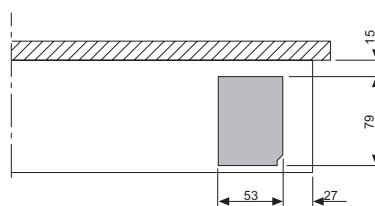
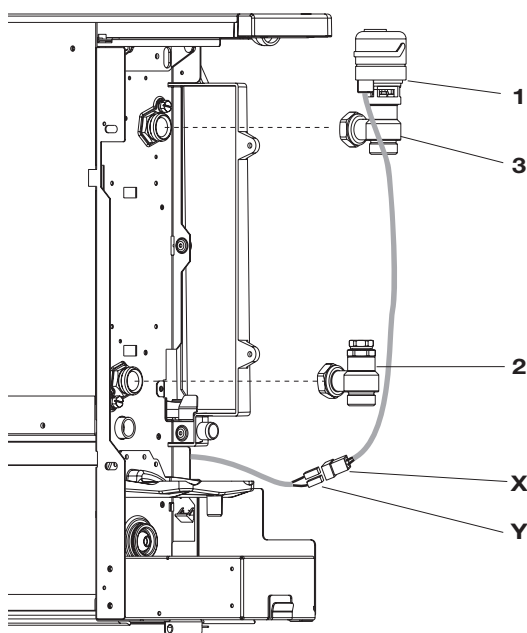
- Remove the side panel as indicated in paragraph Side opening.
- Assemble the components as indicated in figure
- Apply the supplied insulation.

1	thermo-electric head (n.1)
2	lockshield (n.1)
3	2-way valve (n.1)

The kit contains the insulation to be mounted on the valve and on the lockshield.

N.B.: when the hydraulic components have been mounted, connect the thermo-electric head connectors with the wiring connectors on the machine.

X	thermo-electric head connectors
Y	wiring connectors



9.10 3-way valve unit kit

Consists of an automatic 3-way diverter valve with thermo-electric head and a lockshield, fitted with micrometric adjustment, capable of balancing the system load losses. The kit contains the insulation to be mounted on the valve and on the lockshield.

- Remove the side panel as indicated in paragraph 9.3 "Access to inner parts".

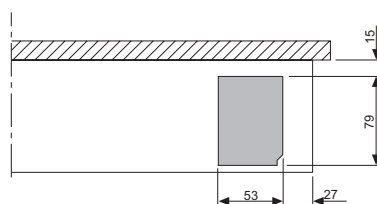
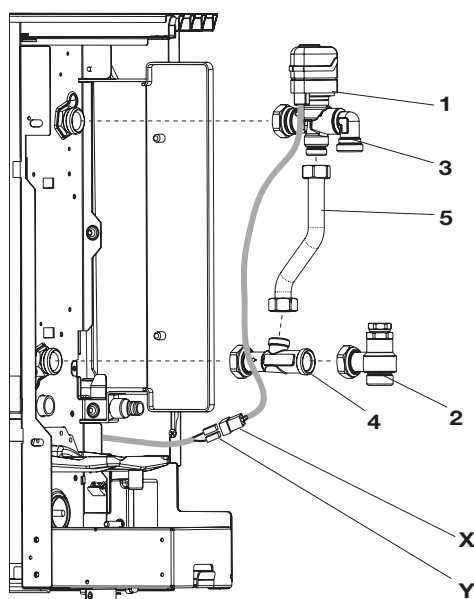
- Assemble the components as indicated in figure
- Apply the supplied insulation.

N.B.: when the hydraulic components have been mounted, connect the thermo-electric head connectors with the wiring connectors on the machine.

Floor mounted version

1	thermo-electric head (n.1)
2	lockshield (n.1)
3	3-way valve (n.1)
4	outlet union (n.1)

5	1/2" flexible tube 230 (n.1)
X	thermo-electric head connectors
Y	wiring connectors



10. COOLER-CONVECTOR, DEUMIDIFICATION

HEATING,

COOLING

AND

10.1 Nominal technical features

TECHNICAL DATA (DC)						
POWER		200	400	600	800	1000
Total output in cooling ^(a)	kW	0,91	2,12	2,81	3,30	3,71
Sensible output in cooling	kW	0,71	1,54	2,11	2,65	2,90
Water flow rate	L/h	157	365	483	568	638
Water head loss	kPa	12,1	8,2	17,1	18,0	21,2
Output in heating with water at 45/40 °C ^(b)	kW	1,02	2,21	3,02	3,81	4,32
Water flow rate (45/40 °C)	L/h	175	380	519	655	743
Water head loss (45/40 °C)	kPa	9,1	9,2	19,1	21,2	23,3
Output in heating without ventilation (45/40 °C)	W	185	236	285	358	436
Output in heating with water at 70/60 °C ^(c)	kW	1,25	2,66	3,60	4,60	5,17
Water flow rate (70/60 °C)	L/h	108	229	310	396	445
Water head loss (70/60 °C)	kPa	7,3	7,2	18,1	17	20,3
Output in heating without ventilation (70 °C)	W	322	379	447	563	690
Maximum water inlet temperature	°C	80	80	80	80	80
Minimum inlet water temperature	°C	4	4	4	4	4
HYDRAULIC FEATURES						
Battery water contents	L	0,47	0,8	1,13	1,46	1,8
Maximum working pressure	bar	10	10	10	10	10
Hydraulic fixtures	Inches	Eurokonus 3/4	Eurokonus 3/4	Eurokonus 3/4	Eurokonus 3/4	Eurokonus 3/4
AERAILIC DATA						
Maximum air flow rate ^(d)	m³/h	146	294	438	567	663
Air flow rate at medium speed (AUTO mode)	m³/h	90	210	318	410	479
Air flow rate at ventilation speed	m³/h	49	118	180	247	262
maximum available static pressure	Pa	10	10	13	13	13
ELECTRICAL DATA						
Power supply	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Maximum power absorbed	W	11	19	20	29	33
Maximum current absorbed	A	0,11	0,16	0,18	0,26	0,28
Electrical power absorbed at minimum speed	W	5	4	6	5	5
SOUND LEVEL						
Sound power at maximum speed	dB(A)	51	53	54	55	57
Sound power at maximum air flow rate ^(g)	dB(A)	41	42	44	46	47
Sound pressure at average air flow rate ^(g)	dB(A)	33	34	34	35	38
Sound pressure at minimum air flow rate ^(g)	dB(A)	24	25	26	26	28
Sound pressure at temperature setpoint ^(g)	dB(A)	19	20	22	23	24
DIMENSIONS AND WEIGHTS						
Total height (without support feet)	mm	576	576	576	576	576
Total depth	mm	126	126	126	126	126
Net weight	kg	9	12	15	18	21

(a) Battery water temperature 7/12°C, room air temperature 27°C d.b. and 19 °C w.b. (EU regulation 2016/2281)

(b) Battery water temperature 45/40°C, room air temperature 20°C (EU regulation 2016/2281)

(c) Battery water temperature 70/60°C, room air temperature 20°C

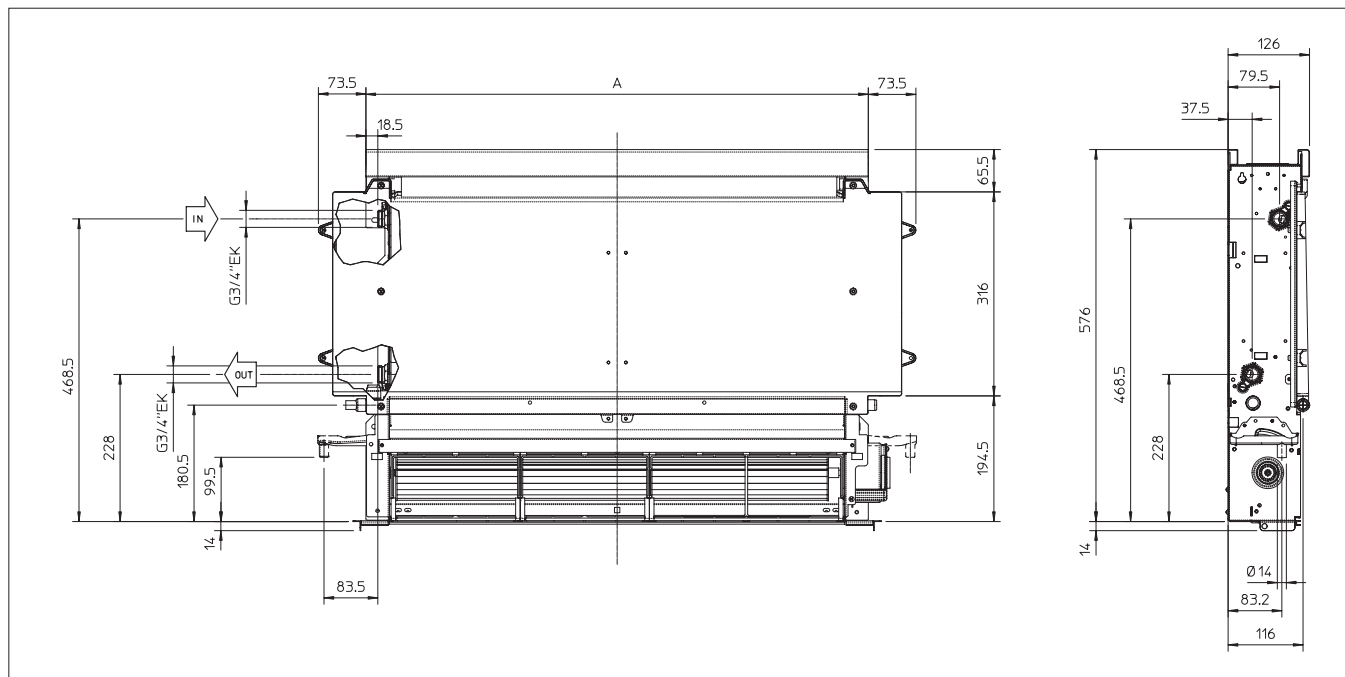
(d) Air flow rate measured with clean filters

(g) Sound pressure measured in a semi-anechoic chamber according to ISO standard 7779 (distance 1 m)

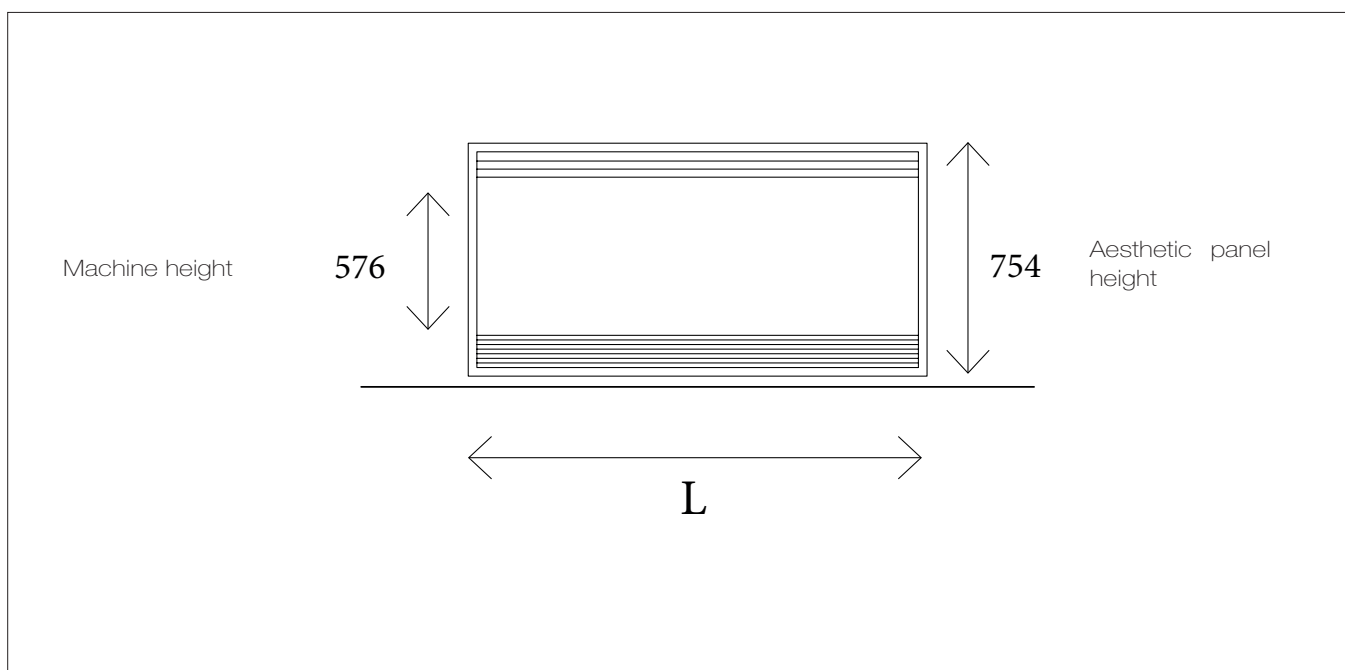


10.2 Dimensions

	U.M.	HYDRO IN 200	HYDRO IN 400	HYDRO IN 600	HYDRO IN 800	HYDRO IN 1000
Dimensions						
A	mm	378	578	778	978	1178



	U.M.	HYDRO IN 200	HYDRO IN 400	HYDRO IN 600	HYDRO IN 800	HYDRO IN 1000
Traditional built-in dimensions						
Machine (L)	mm	525	725	925	1125	1325
Aesthetic panel (L)	mm	772	972	1172	1372	1572



10.3 Installation

Positioning the unit

N.B.: avoid installing the unit in proximity to:

- positions subject to exposure to direct sunlight;
- in proximity to sources of heat;
- in damp areas or places with probable contact with water;
- in places with oil fumes
- places subject to high frequencies.

N.B.: Make sure that:

- the wall on which the unit is to be installed is strong enough to support the weight;

- the part of the wall interested does not have pipes or electric wires passing through;
- the interested wall is perfectly flat;
- there is an area free of obstacles which could interfere with the inlet and outlet air flow;
- the installation wall is preferably an outside perimeter wall to allow the discharge of the condensation outside;
- in case of ceiling installation the airflow is not directed towards persons.

10.4 Installation modes

To ensure that the installation is performed correctly and that the appliance will perform perfectly carefully follow the instructions indicated in this manual. Failure to respect the rules indicated not only can cause malfunctions of the

appliance but will also invalidate the warranty and hence the manufacturer shall not respond for any damage to persons, animals or property.

10.5 Horizontal or ceiling installation

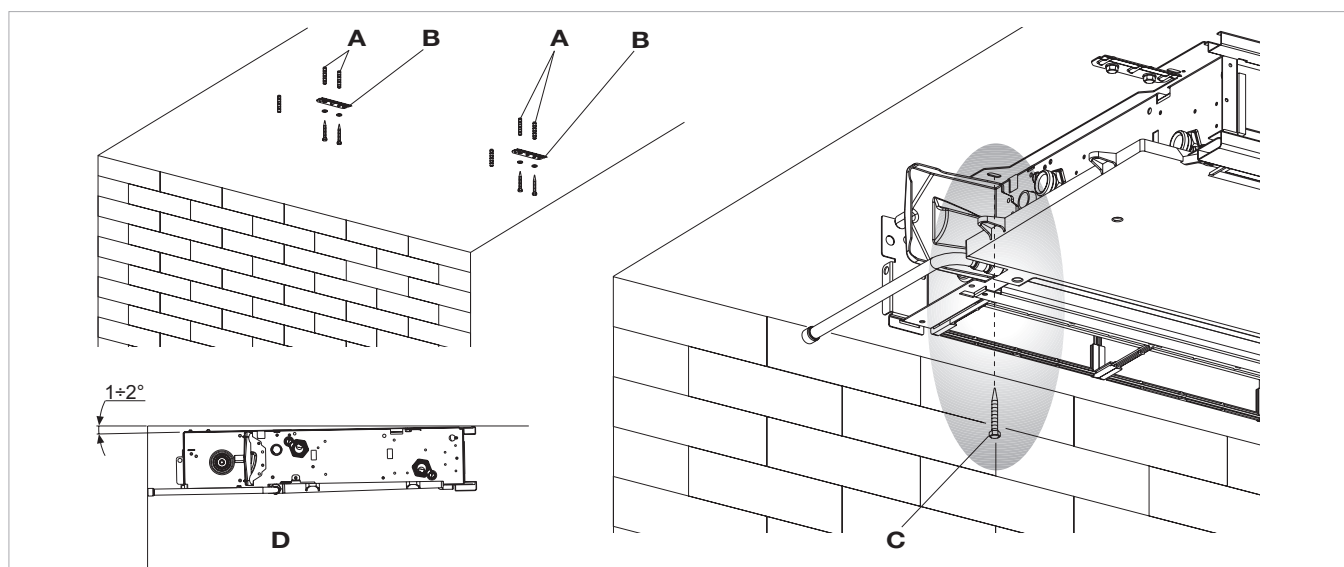
- Using the paper template, trace on the ceiling the position of the two fixing brackets and the two rear screws. Using a suitable drill, make the holes and insert the toggle bolts (2 for each bracket); fix the two brackets. Do not over-tighten the screws.
- Position the machine on the two brackets, keeping it in position and then fix the two screws into the rear toggle bolts, one on each side.

- Make sure that there is sufficient inclination of the unit towards the drainage pipe to facilitate the water drainage.
- Fully tighten all 6 fixing screws.

N.B.: carefully check the inclination of the exhaust pipe. Any counterslope of the discharge line can cause water leakage

A	toggle bolts
B	brackets

C	screws
D	drainage pipe



10.6 Hydraulic connections

	U.M.	200	400	600	800	1000
Pipeline min. rated diameter	mm	14	14	16	18	20

N.B.: the nominal diameter, unless otherwise indicated, always refers to the internal diameter.

To prevent the formation of surface condensation, it is always recommended to install electric valve kits, except in the case where an electrical control (e.g. electrothermal head) is provided upstream of the appliance.

The choice and sizing of the hydraulic lines must be made by an expert who must operate according to the rules of good technique and the laws in force, taking into account that undersized pipes cause a malfunction.

To make the connections:

- position the hydraulic lines

- tighten the connections using the "spanner and counter spanner" method
- check for any leaks of liquid
- coat the connections with insulating material.

N.B.: the hydraulic lines and joints must be thermally insulated.

N.B.: avoid partially insulating the pipes.

N.B.: do not over-tighten to avoid damaging the insulation.

N.B.: use hemp and green paste to seal the threaded connections; the use of Teflon is advised when there is anti-freeze in the hydraulic circuit.

10.7 Condensation discharge

The condensation discharge network must be suitably sized (minimum inside pipe diameter 16 mm) and the pipeline positioned so that it keeps a constant inclination, never less than 1° or 1%.

In the vertical installation, the discharge pipe is connected directly to the discharge tray, positioned at the bottom of the side shoulder underneath the hydraulic fixtures. In a horizontal installation the discharge tube is connected to the one already present on the machine.

- If possible, make the condensation liquid flow directly in a gutter or a "rainwater" discharge.
- When discharging directly into the main drains, it is advisable to make a siphon to prevent bad smells returning up the pipe towards the room. The curve of the siphon must be lower than the condensation collection bowl.
- If the condensation needs to be discharged into a container, it must be open to the atmosphere and

the tube must not be immersed in water to avoid problems of adhesiveness and counter-pressure that would interfere with the normal outflow.

- If there is a height difference that could interfere with the outflow of the condensation, a pump must be mounted:
- in a vertical installation mount the pump under the lateral drainage tray;
- in a horizontal installation the pump position must be decided according to the specific requirements.

Such pumps are commonly found in commerce.

However, on completion of the installation it is advisable to check the correct outflow of the condensation liquid by slowly pouring about ½ l of water into the collection tray in about 5-10 minutes.



Mounting the condensation discharge pipe in the vertical version

Connect to the condensation collection tray discharge union a pipe for the outflow of the liquid blocking it adequately. Check that the drip-collector extension is present and correctly installed.

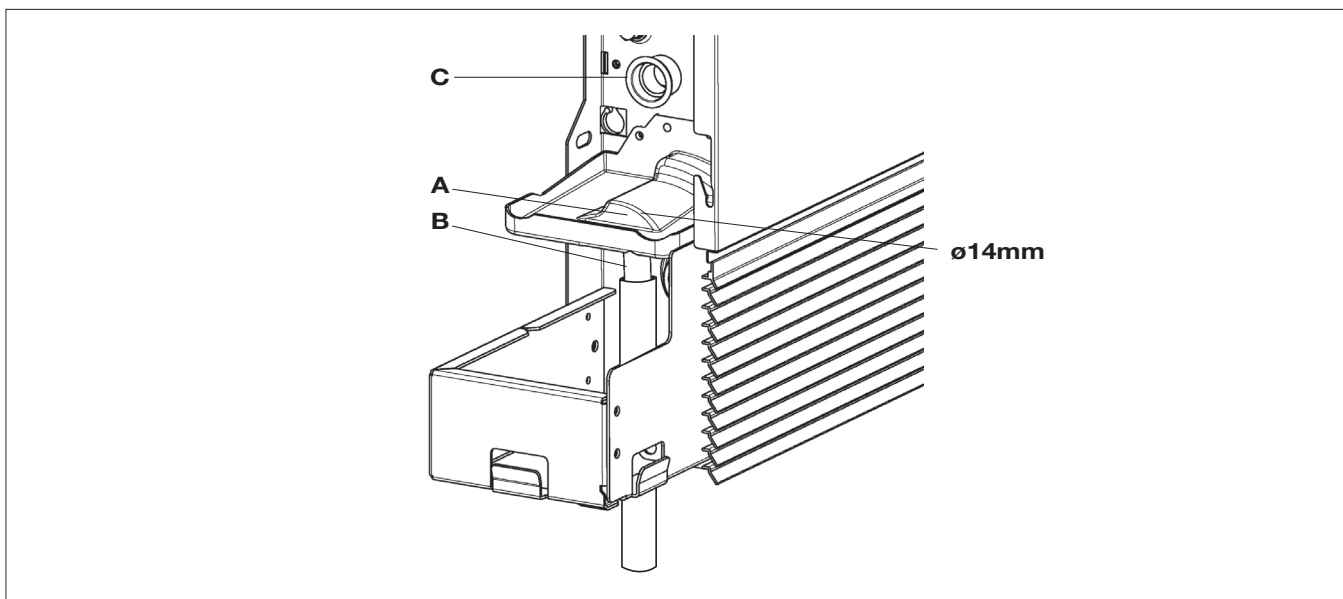
N.B.: make sure that the machine is installed perfectly level or with a slight inclination towards the condensation discharge;

N.B.: insulate carefully the inflow and outflow pipes up to the machine union to prevent any drops of condensation outside the same collection bowl;

N.B.: insulate the bowl condensation discharge pipe along all of its length.

A	Discharge fitting
B	Tube for the outflow of the liquid

C	Extension drip
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Mounting the condensation discharge pipe in the horizontal version

- check that the "L" pipe and the flexible rubber hose are correctly connected to the bowl.
- slide in the side of the machine keeping the pipe in position up against the front grill.
- fully close the side checking that the pipe remains blocked in the special groove on the side.

N.B.: make sure that the machine is installed perfectly

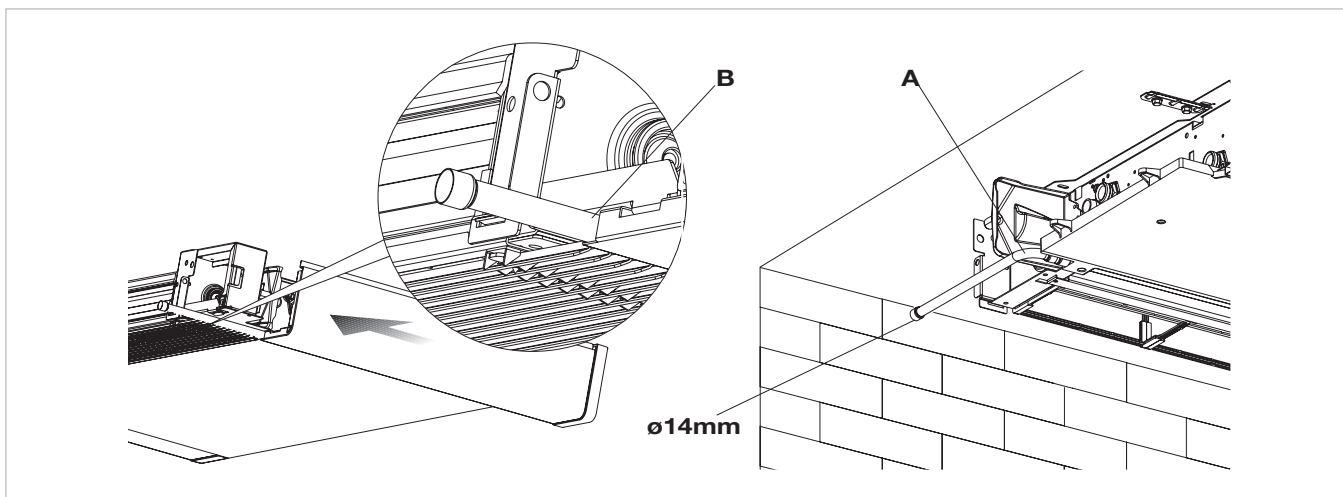
level or with a slight inclination towards the condensation discharge;

N.B.: insulate carefully the inflow and outflow pipes up to the machine union to prevent any drops of condensation outside the same collection bowl;

N.B.: insulate the bowl condensation discharge pipe along all of its length.

A	Pipe connection
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B	Burglary
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10.8 Filling the system

When starting up the system, make sure that the hydraulic unit lockshield is open. If there is no electric power and the

thermo-valve has already been powered use the special cap to press the valve stopper to open it.

10.9 Evacuating air while filling the system

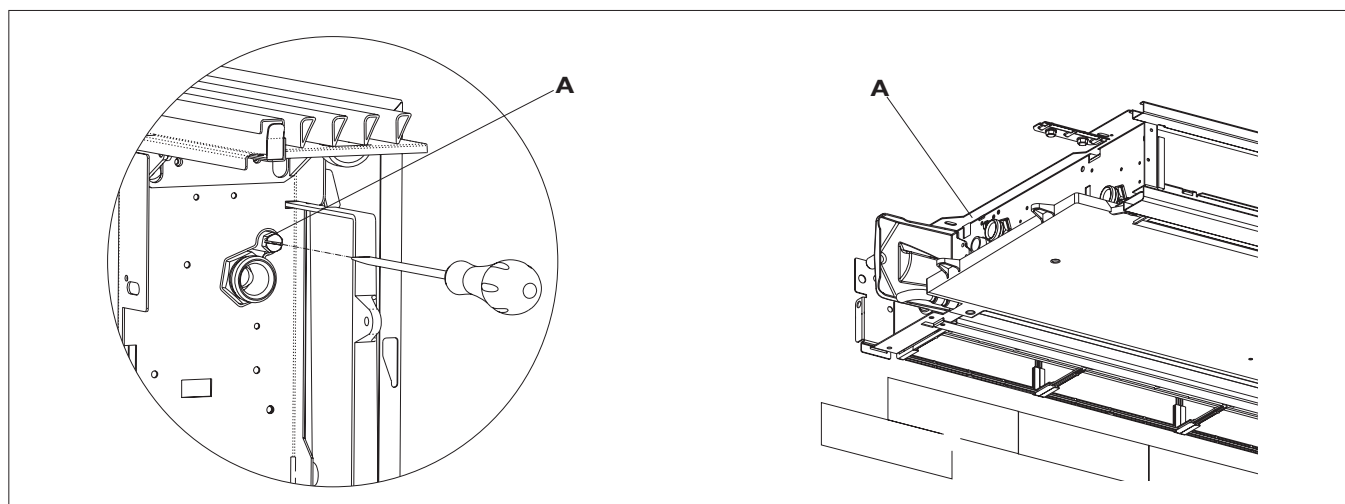
- Open all the system interception devices (manual or automatic);
- Start the filling by slowly opening the system water filling tap;
- For the models installed in a vertical position, take a screwdriver and act on the highest breather of the battery; for appliances installed in a horizontal position, act on the highest positioned breather.

- When water starts coming out of the breather valves of the appliance, close them and continue filling until reaching the nominal value for the system.

N.B.: check the hydraulic seal of the gaskets.

N.B.: it is advisable to repeat these operations after the appliance has been running for a few hours and periodically check the pressure of the system.

A Venting of the battery



10.10 Electrical connections


N.B.: make electrical connections according to the requirements set out in sections General Warnings and Fundamental Safety Rules by reference to the patterns present in the installation and accessories manuals.



N.B.: the unit must be connected to the mains through a multipolar switch with minimum contact opening of at least 3 mm or with a device that allows the complete disconnection from the device under the overvoltage conditions category III.

11. SETTINGS MENU 3.030877/3.030878

11.1 Setup menu


Attraverso il comando è possibile accedere al menu impostazioni. Da display spento:

Key	Operation	Display
	<ul style="list-style-type: none"> - press the key "ON" for 10 sec. - the device turns on and the temperature appears - continue to press until "Ad" appears" 	Ad

Use the icons **- +** to move inside the menu.
 Use the icon  to select menu items and to confirm changes made.
 Pressing  and confirming the change will switch to the next item.

To exit from menu:

- press the icon  for 10 sec.
- or wait 30 sec. for automatic shutdown

 After 30 seconds from the last action, the control goes off and the settings is memorised.

Menu items			
Ad	Address	rb	Modbus reset
uu	Wifi	Fr	Factory reset
Ub	Adjust buzzer volume	ot	Offset probe T
br	Adjust the brightness	oh	Reserved
di	Digital input	Sc	Scale
rZ	Radiant zone	rE	Reserved

Set the modbus address


To set the address:

Display	Operation
Ad	<ul style="list-style-type: none"> - the setting range is from a minimum of 01 to a maximum of 99 - increase or decrease the number with the icons - +



Adjusting buzzer volume


To change the volume:

Display	Operation
	<ul style="list-style-type: none">- the volume setting range is from 00 (min) to 03 (max)- Increase or decrease the volume with the icons - +


 The volume changes after you confirm the modification.

Adjusting the brightness of the display

To adjust the brightness:

Display	Operation
	<ul style="list-style-type: none">- the brightness adjustment range is from 00 to 01- increase and decrease the brightness with the icons - +

 The brightness changes after confirming the modification.

 You can also reduce the brightness of the display through the control's key. From the display off, press the

icon + for 20 sec. The message "01" will appear. Press - to decrease brightness "00". Wait 30 sec. for the correct settings to be verified.



Settings of the digital input

To change the digital input, select "di" menu:


Display	Operation
	<ul style="list-style-type: none">- CP / clean contact (default)- CO / cooling open- CC / cooling close

 By default, digital input is set to CP.

 For return to the default settings, set the digital input to "CP".


 By selecting one of the other inputs (CO,CC) the seasonality is locked. It is not possible to modify it through the key  of the control.

Enable the radiant zone

Display	Operation
	<ul style="list-style-type: none">- select "no" to disable the radiant zone- select "YS" to enable the radiant zone

 This function can only be used for wall controls (3.030877/3.030878) combined with the EF1027 board.

Reset modbus

Display	Operation
	<ul style="list-style-type: none">- select "no" to keep the current settings- select "YS" to reset the settings



Factory reset

To reset the control to factory settings:

Display	Operation
Fr	<ul style="list-style-type: none">- select "YS" to reset the settings- select "no" to keep the current settings

Probe T regulation offset (room temperature probe)

Display	Operation
ot	<ul style="list-style-type: none">- the adjustment range is from -9 to 12

⚠ Use this adjustment carefully.

⚠ Use this adjustment only after having actually detected a discrepancy compared with the actual room temperature using a reliable device.

⚠ Adjust the value in a range of - 9 °C to + 12 °C, at variations of 0,1 °C.

⚠ After 30 seconds from the last action, the control goes off and the settings is memorised.

Scale

To change the temperature unit:

Display	Operation
Sc	<ul style="list-style-type: none">- - select °C o °F



12. MAINTENANCE

Routine maintenance is indispensable to keep the Hydro IN cooler-convactor in perfect working condition, safe and reliable over the years. This can be done every six months

for some interventions and annually for others, by the Technical Service Assistance, technically authorised and prepared, using always original spare parts.

12.1 Cleaning filtering seats

- Suck up the powder with a vacuum cleaner
- Wash the filter with running water without using detergents or solvents, and leave to dry.
- Remount the filter on the cooler-convactor, taking care to insert the lower flap into its seat.

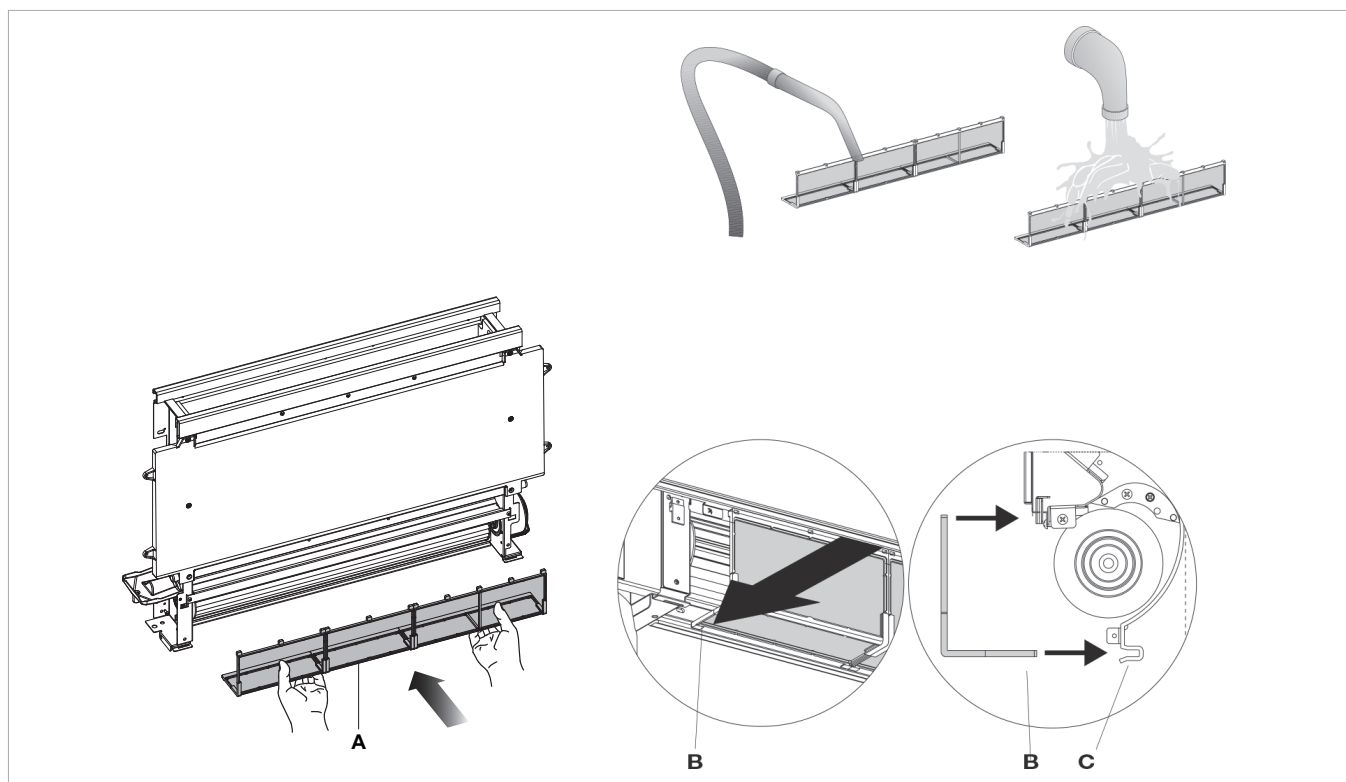
⊘ It is forbidden to use the unit without the net filters.

N.B.: the appliance is fitted with a safety switch that prevents the operation of the cooler with the mobile panel missing or out of position.

N.B.: after finishing the cleaning of the filter, check that the panel is mounted correctly.

A	Filter
B	Lower edge

C	Filter housing
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12.2 Energy saving tips

- Always keep the filters clean;
- when possible, keep the doors and windows closed in the room being conditioned;
- limit where possible the effect of direct sun rays in the rooms being conditioned (use curtains, shutters etc.)



13. TROUBLESHOOTING

N.B.: in case of water leaks or anomalous functioning immediately cut off the power supply and close the water taps.

N.B.: should one of the following anomalies occur, contact an authorised service centre or an authorised qualified person, but do not intervene personally.

- The ventilation does not activate even if there is hot or cold water in the hydraulic circuit.

- The appliance leaks water during the heating function.
- The appliance leaks water only during the cooling function.
- The appliance makes an excessive noise.
- There are formations of dew on the front panel.

13.1 Table of anomalies and remedies

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

EFFECT	CAUSE	REMEDY
A delayed activation of the ventilation respect to the new temperature or function settings.	The circuit valve needs some time to open and as a result the hot or cold water takes time to circulate in the appliance.	Wait for 2 or 3 minutes to open the circuit valve.
The appliance does not activate the ventilation.	No hot or cold water in the system.	Check that the water boiler or cooler are functioning correctly.
The ventilation does not activate even if there is hot or cold water in the hydraulic circuit.	The hydraulic valve remains closed.	Dismount the valve body and check if the water circulation is restored.
	The fan motor is blocked or burnt out.	Check the working efficiency of the valve by powering it separately with 230V. If it activates the problem could be the electronic control.
	The micro-switch that stops the ventilation when the filter grill is opened does not close correctly.	Check the windings of the motor and the free rotation of the fan.
	The electrical connections are not correct.	Check that by closing the grill the micro-switch contact is activated.
The appliance leaks water during the heating function.	Leaks in the hydraulic connections of the system.	Check the electrical connections.
	Leaks in the valve unit.	Check the leak and fully tighten the connections.
There are formations of dew on the front panel.	Thermal insulation unstuck.	Check the state of the gaskets.
There are drops of water on the air outlet grill.	In situations of high humidity (>60%) condensation could form, especially at the minimum ventilation speeds.	Check the correct positioning of the thermo-acoustic insulation paying attention to that in the front above the finned battery.
The appliance leaks water only during the cooling function.	The condensation bowl is blocked.	As soon as the humidity starts falling the phenomenon disappears. In any case the presence of a few drops of water in the appliance does not indicate a malfunction.
	The condensation discharge does not need an inclination for correct drainage.	Slowly pour a bottle of water in the low part of the battery to check the drainage; if necessary, clean the bowl and/or increase the inclination of the drainage pipe.
	The connection pipes and the valve unit are not insulated well.	Check the insulation of the pipes.
The appliance makes a strange noise.	The fan touches the structure.	Check the clogging of filters and clean them if necessary
	The fan is unbalanced.	The unbalancing causes excessive vibrations of the machine; replace the fan.
	Check the clogging of filters and clean them if necessary	Clean the filters



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This instruction booklet is
made of ecological paper.

