TECHNICAL INSTALLATION MANUAL





GCH air condensing unit

PRODUCT REGISTRATION

Register your products now to validate your installation and benefit from improved support if needed.

EN-NT-SPC-EVPL2-VTX-0426

Specifications may change without prior notice to reflect product improvements.

Warning

Read the manual carrefully before using the device and
keep it for futur reference.



This symbol indicates that the installation manual should be read carrefully.



This symbol indicates that a technician must handle this equipment in referring to the installation manual.



This symbol indicates that information are available, such as the manual operating instructions or installation manual.

- Improper installation or use can result in personal injury, property damage, and voiding of the manufacturer's warranty. Failure to comply with safety instructions and local standards during the installation releases the manufacturer from all liability.

- Make sure to install the device in a place protected from the elements and frost-free.

- The equipment should be installed in a room without a permanent source of fire, such as open flame, a combustion device, an electric heater, etc..

- The possible stagnation of refrigerant gas leaks in unventilated rooms can create a risk of fire or explosion if the refrigerant comes into contact with an ignition source.

- Be aware that some refrigerant gases can be odorless.

- Any intervention on a refrigeration circuit must be carried out by a professionnal authorized by an accredited body certifing the competence to handle refrigerant fluids.

- The appliance must be free of obstructionsat all times to ensure proper operation and reduce safety risks.

- Do not puncture any component of the refrigerant circuit.
- Use care when handling the equipment to avoid malfunction.

- The device must be installed in accordance with local wiring regulations.

- Make sure that the characteristics of the device are compatible with those of electrical installation.

- Make sure the AC outlet is grounded.

- Do not use the device if it is damaged.

- Do not connect the power supply until the entire installation is complete.

- Always switch off the appliance and unplug it from the mains for cleaning and maintenance.

- Do not put your hands or objects in the air inlets and outlets.

- Do not try to repair the device yourself.

- Any use and / or modification not approved by the manufacturer may be dangerous for your safety and your health.

- This appliance must not be used by children.

- The user should understand and be aware of the potential dangers associated with the use of the device.

- Use only the means and / or tools recommended by the manufacturer for defrosting or cleaning.

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Presentation

Thank you for choosing a Friax cellar system to control the aging of your wines. Take the time to read this user manual. It will allow you to understand and master the operations to install and adjust your device.

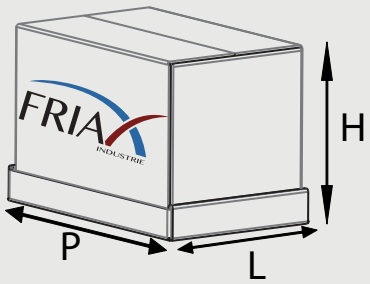
Receipt of the package

We invite you to examine the package upon receipt for possible damage to the cardboard or missing items. Please note your comments regarding the condition of the package on the carrier's delivery note: they will be used in the event of damage noted upon unpacking.

Your package contains:

- One indoor unit, one remote controller, and its condensate drain connection hose located inside the evaporator.
- An additional bag of drain connection accessories is supplied with models 170–230.

The manual corresponding to the condensing unit is located inside its packaging.



Dimensions excluding pallet : L x W x H
30-48 : 700mm x 400mm x 460mm
82-122 : 800mm x 400mm x 520mm
170-230 : 1050mm x 500mm x 730mm

Evaporator EVPL2



Remote control box
+ probe



Technical data

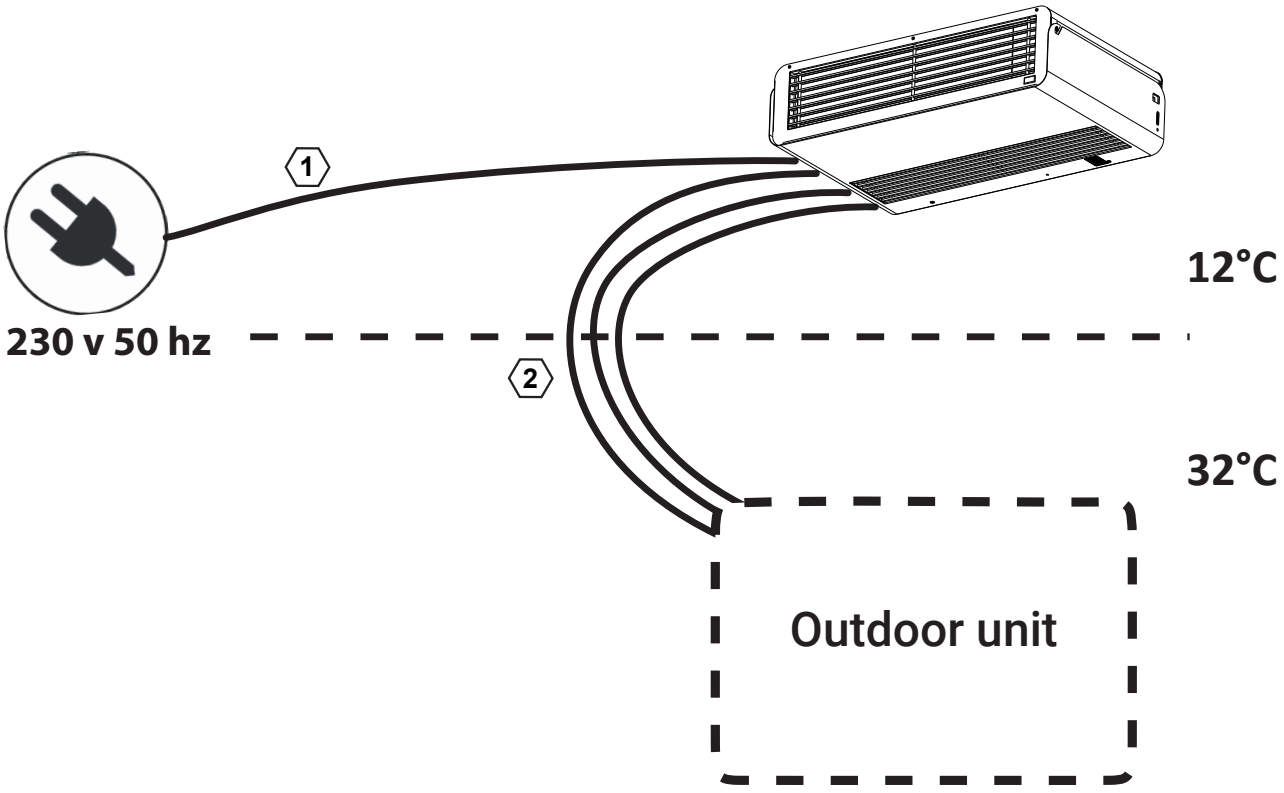
+32°C EXT		SPC	30	48	82	122	170	230
Fluid			R513A	R513A	R513A	R513A	R513A	R513A
Cooling capacity		W	780	1130	1470	2370	2750	3440
Heating capacity		W	800	800	1000	1000	2000	2000
Absorbed power in cold	GCH	W	470	636	824	1122	1300	1423
	GCG		480	669	858	1206	1441	1681
	GCW		416	582	770	1052	1241	1381
Absorbed power in hot		W	873	873	1030	1034	1034	2045
Max Cold/Hot intensity	GCH	Amax	5.42/3.69	5.92/4.09	9.32/5.06	10.82/5.06	12.78/9.75	13.12/9.75
	GCG		5.32/3.69	5.82/4.09	9.22/5.06	10.72/5.06	14.58/9.75	15.08/9.75
	GCW		3.93/3.69	4.43/4.09	7.83/5.06	9.33/5.06	11.29/9.75	11.79/9.75
C.O.P Air conditioner	GCH	W/W	1.66	1.78	1.78	2.11	2.12	2.42
	GCG		1.63	1.69	1.71	1.97	1.91	2.05
	GCW		1.88	1.94	1.91	2.25	2.22	2.49

Indoor unit	SPC	30	48	82	122	170	230
Ø Fan		1 x 200	2 x 200	2 x 200	2 x 200	3 x 200	3 x 200
Air flow	m3/h	330	500	660	600	950	950
IMax. evaporator current cool mode	Amax	0.27	0.51	0.51	0.51	0.97	0.97
Max. evaporator current Hot mode	Amax	3.85	4.09	5.06	5.06	9.75	9.75
Gas connections Suction line	Ø	3/8"	3/8"	3/8"	1/2"	5/8"	5/8"
Gas connections Liquid line	Ø	1/4"	1/4"	1/4"	1/4"	3/8"	3/8"
Net weight	Kg	19	21	30	32	40	40
Body color		RAL9005 Black	RAL9005 Black	RAL9005 Black	RAL9005 Black	RAL9005 Black	RAL9005 Black

Electrical connections

Models SPC GCH	30-48-82-122	170 230
Voltage/Frequency	230V / 50Hz	230V / 50Hz
Protection	10A	16A 20A
1 Power supply ==> Evaporator	3g1.5² (2P+T)	3g2.5² (2P+T)
2 Evaporator ==> Outdoor Unit Max length 20 meters	1x (5g1.5²) 1 x (3 x1mm²) 1 x (2 x0.5mm²)	1x (5g2.5²) 1 x (3 x1mm²) 1 x (2 x0.5mm²)

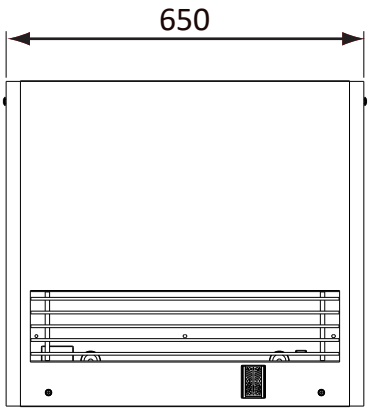
Schematic diagram

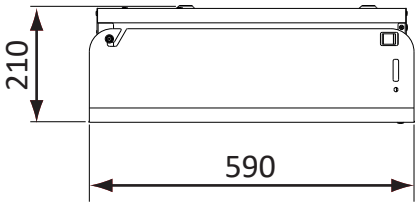


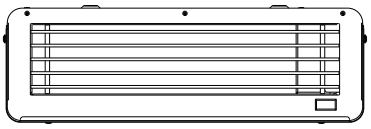
Indoor unit

1. Dimensions

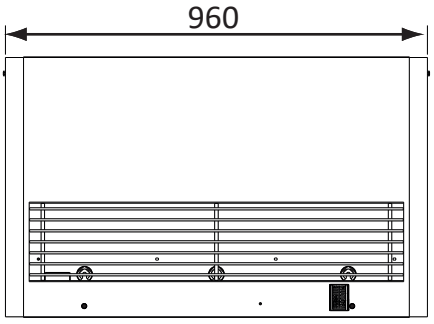
SPC30-48 EVPL2

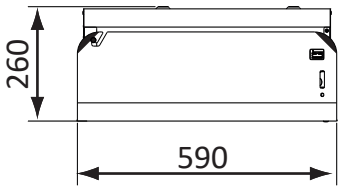


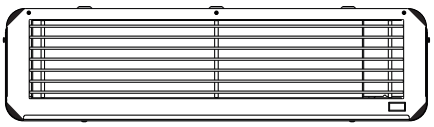




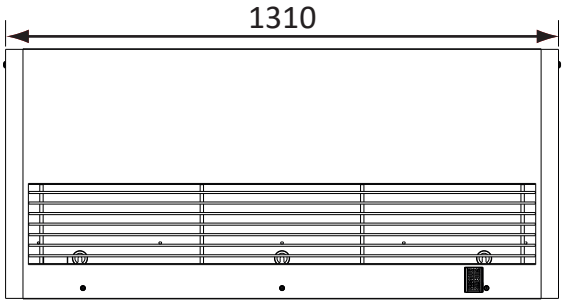
SPC82-122 EVPL2

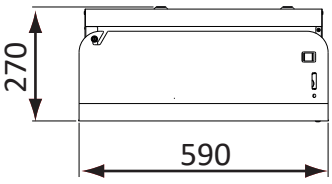


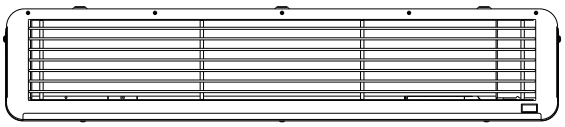




SPC170-230 EVPL2



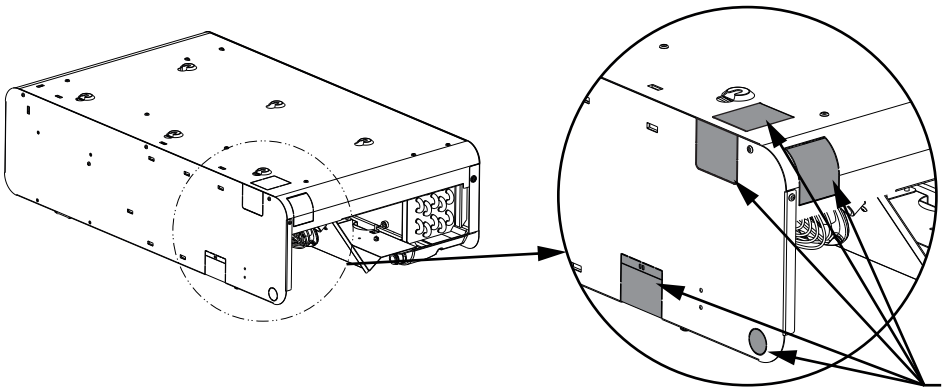




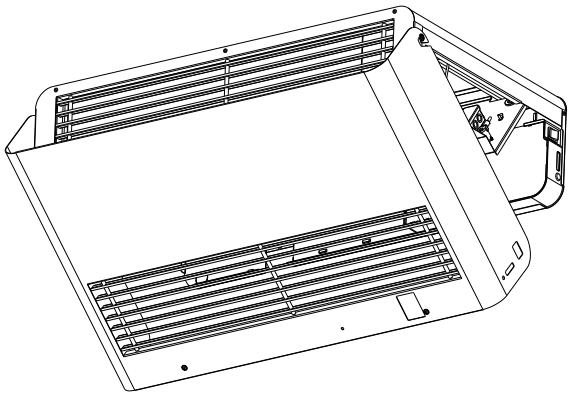
2. Installation location to be respected

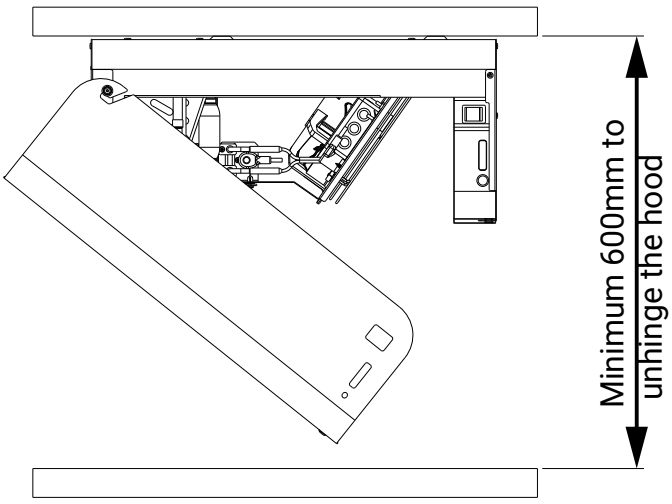
To optimize the operation of the unit and facilitate maintenance, it is essential to take the following points into account:

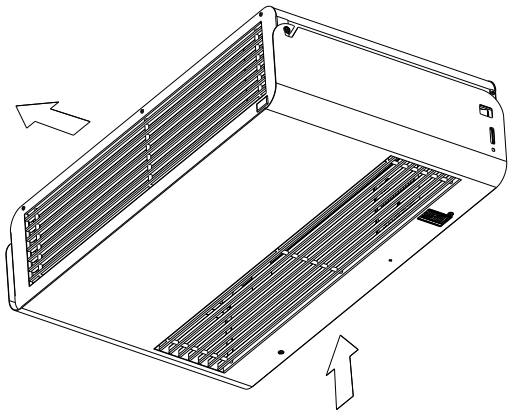
- Define the arrival passage of your connections according to the available passages.
- A ceiling height of 2 m is recommended to ensure proper air distribution.
- The air inlet and outlet must be kept clear to ensure sufficient airflow.
- The side controls (ON/OFF and LED) must remain accessible (minimum 150mm).
- The connections (refrigeration, electrical, hydraulic) must be able to enter the unit without obstruction.
- A clearance of 60 cm below the unit is required to allow the cover to be opened.

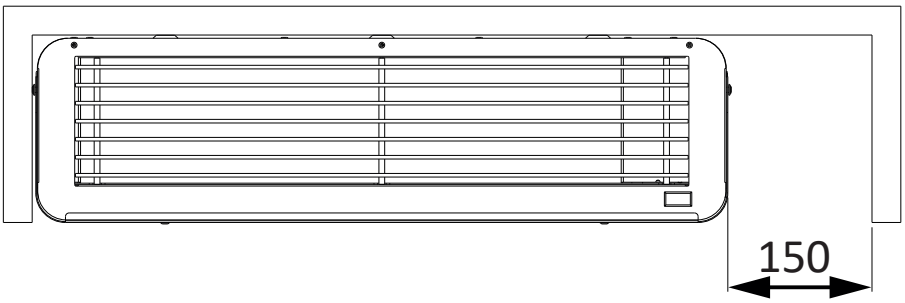


Possible openings for refrigerant and electrical connections









3. Mounting the unit to the ceiling

After selecting a location that meets the technical requirements, you can mount your evaporator to the ceiling:

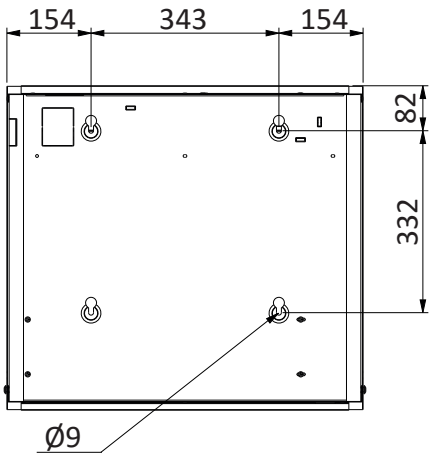
- Check that the support can bear the weight of the unit.
- Install the screws suitable for the ceiling support and the weight of the unit (screws and anchors are not provided).

- Remove the unit's cover, taking care not to scratch it.
- Remove the condensate tray by loosening its fixing screws.

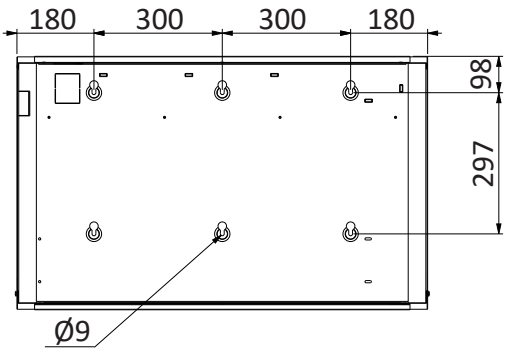
- Hold the unit up to the ceiling with the help of a second person.
- Insert the screws into the "lock" holes.
- Secure the unit in position.

3.1 Install the screws in the ceiling according to the size

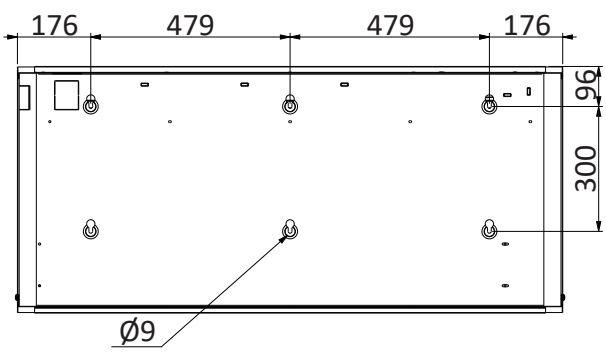
SPC30-48 EVPL2



SPC82-122 EVPL2

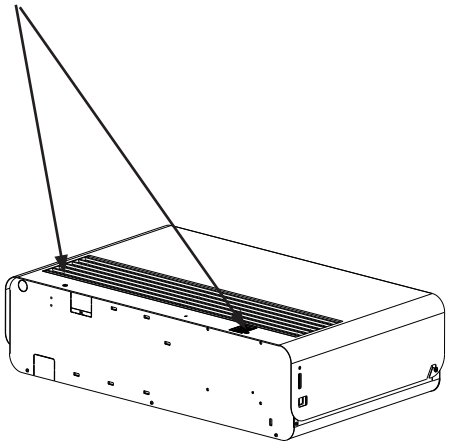


SPC170-230 EVPL2

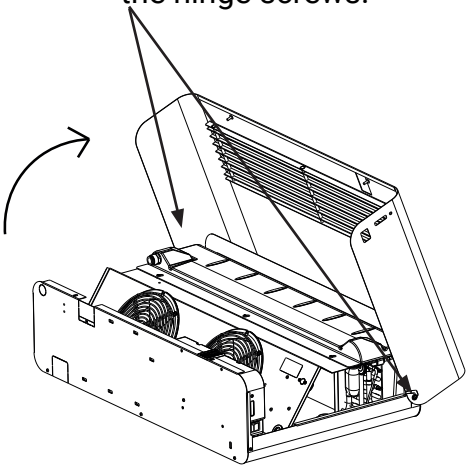


3.2 Remove the cover

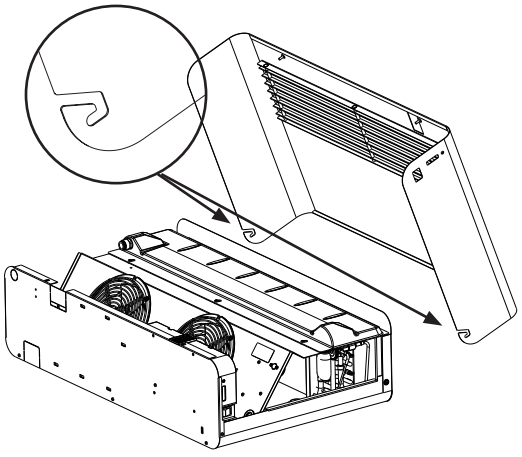
Unscrew the 2 screws holding the cover.



Rotate the cover on the hinge screws.

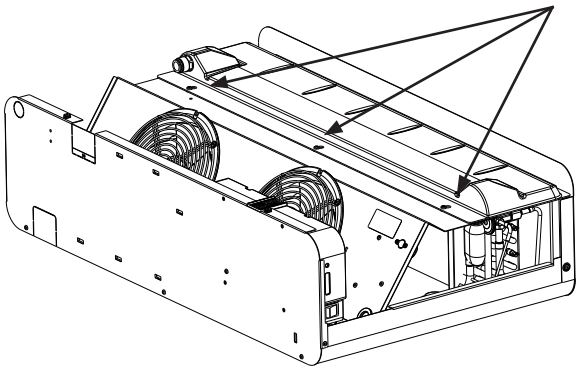


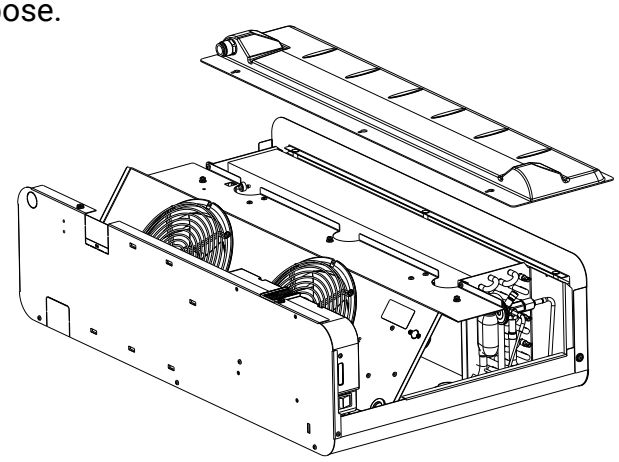
Unhinge the cover by sliding it through the slots.



3.3 Remove the condensate tray

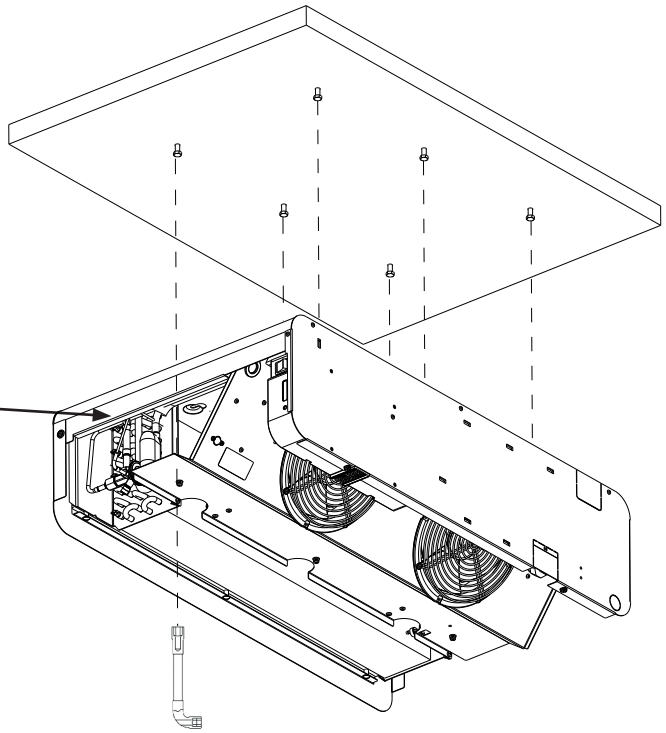
Slightly loosen the 3 retaining screws of the condensate tray without removing them completely, then remove the tray through the keyhole slots provided for this purpose.





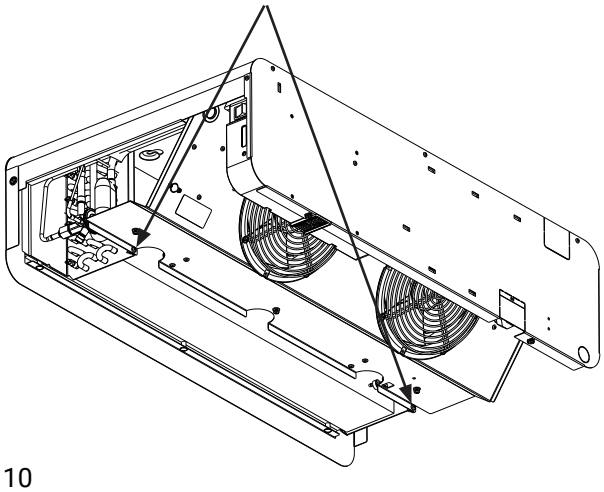
3.4 Position the unit against the ceiling

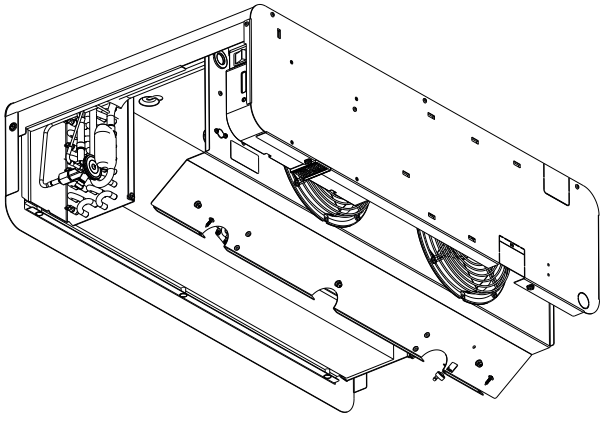
Position the unit against the ceiling and insert the previously installed screws into the keyhole slots.
Use the folds on the edges of the chassis to hold the ceiling unit, then tighten the screws.

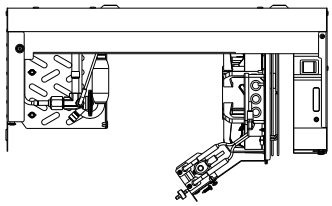


3.5 Rotate the fan support

The fan support can be rotated to facilitate access to the fixing screws, whether during ceiling installation or maintenance operations. Before performing this operation, the condensate tray must be removed as indicated in step REMOVE THE CONDENSATE TRAY.
To do this, loosen the two retaining screws, then rotate the cover on its hinges while holding it firmly until it naturally reaches the vertical position.





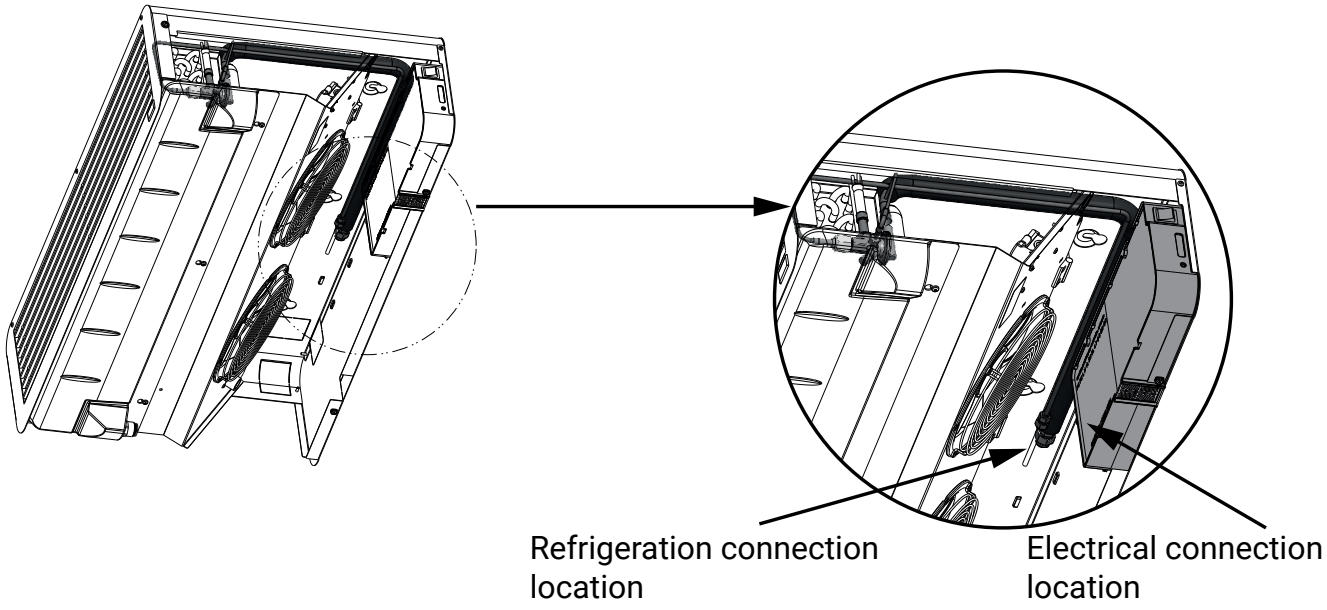


4. Indoor unit connections

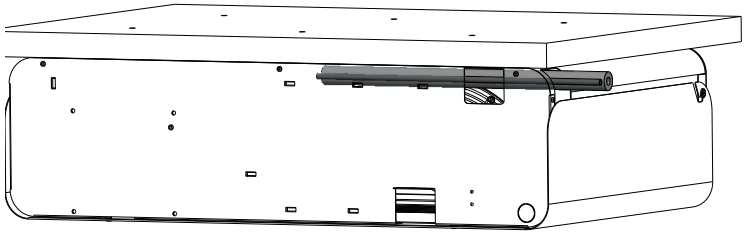
Refrigerant, water, drain and electrical connections are located inside the evaporator. They must be carried out at the designated connection points.

5. Connection of the refrigerant and electrical lines

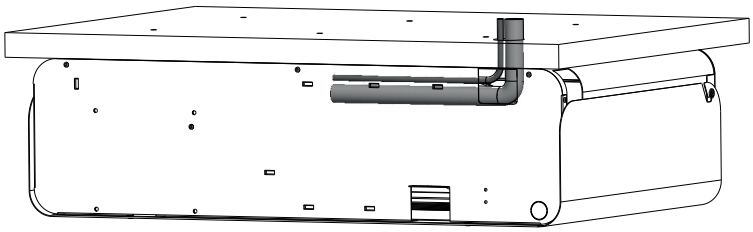
- Connect the liquid line to the smaller section and the suction line to the larger section inside the evaporator.
- Connect the electrical cables in the junction box after removing the access cover provided for this purpose.



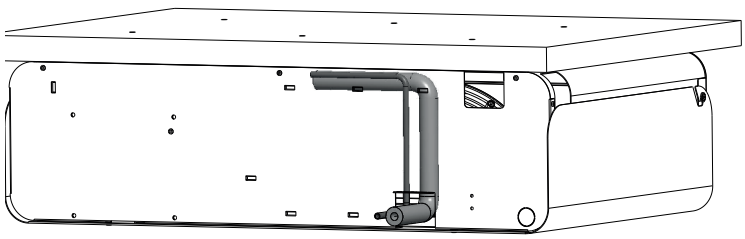
5.1 Refrigeration connection from the side of the evaporator



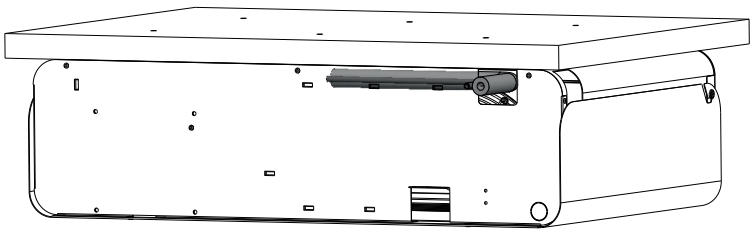
5.3 Refrigeration connection from the top of the evaporator



5.2 Refrigeration connection from the lower rear of the evaporator



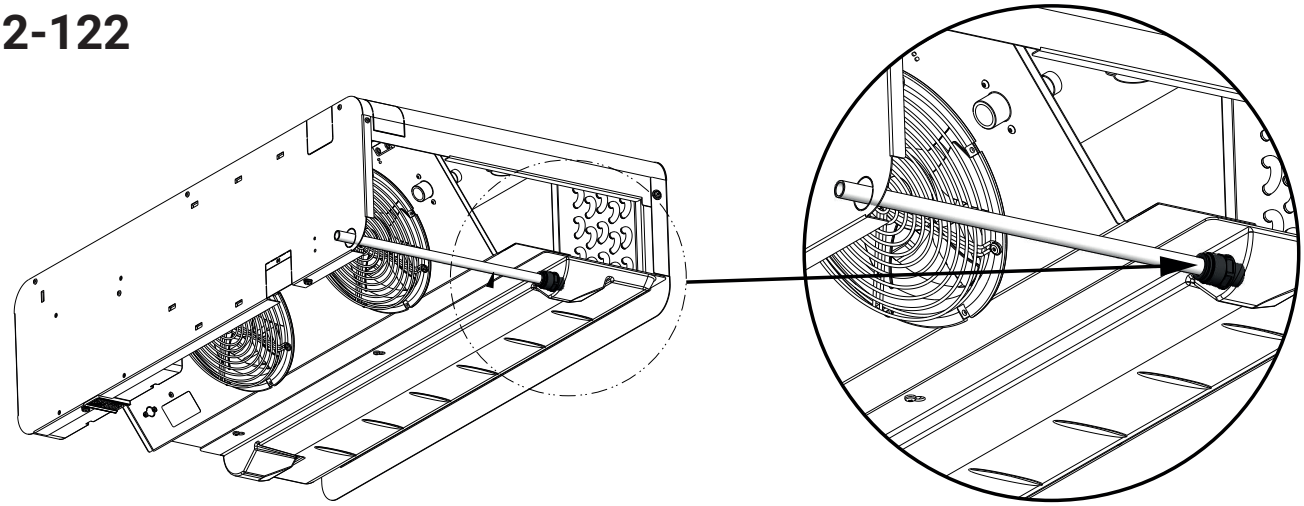
5.4 Refrigeration connection from the upper rear of the evaporator



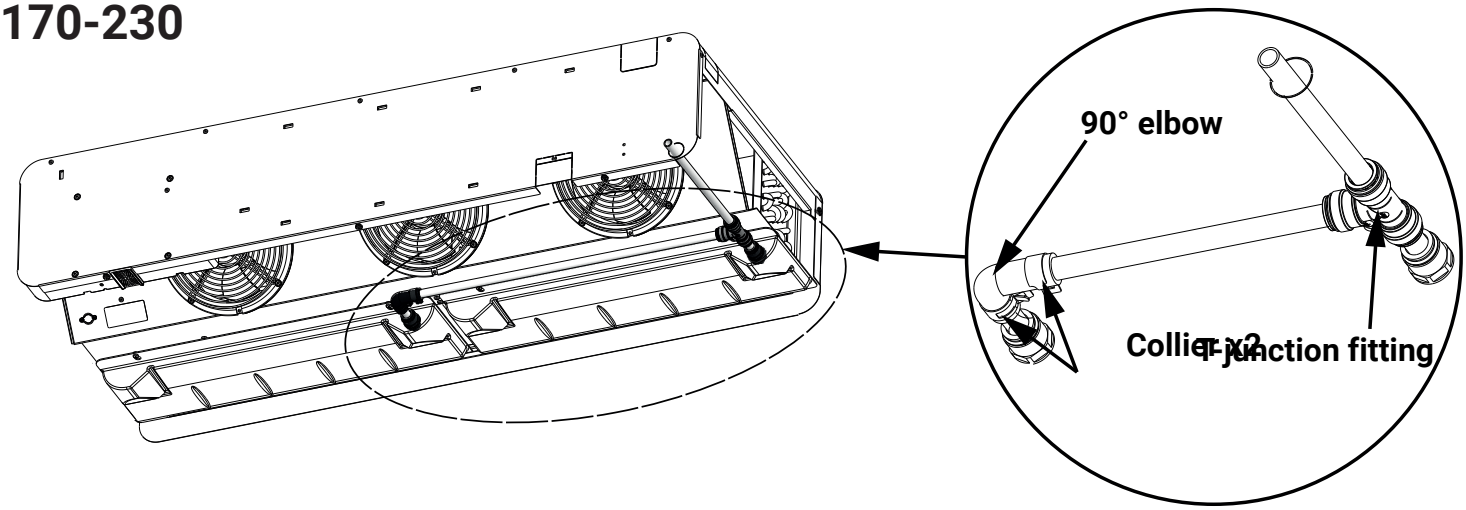
6. Drain connection

- Connect the drain pipe (Ø15) supplied in the accessory bag and fit it onto the tray outlet.
- Ensure that the drain does not discharge into a container or directly onto the floor to avoid any risk of infiltration or water accumulation that could lead to excessive ambient humidity.
- Use an air-tight trap to prevent odour backflow and ensure proper drainage.

30-48-82-122

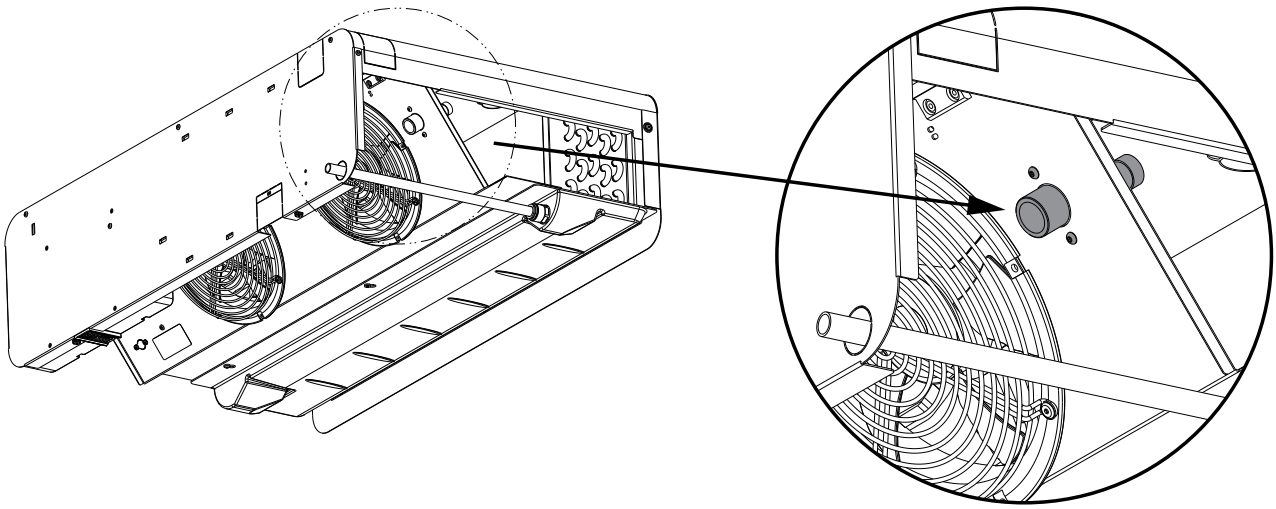


170-230



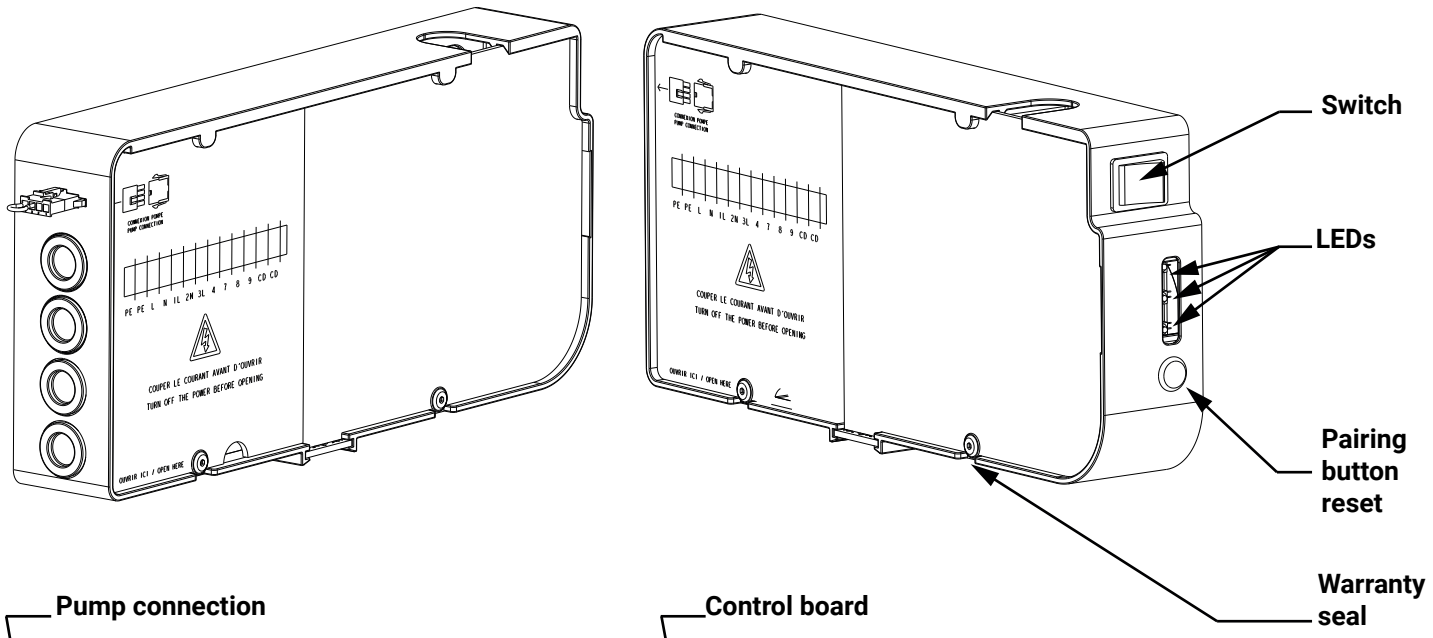
7. Humidifier water connection

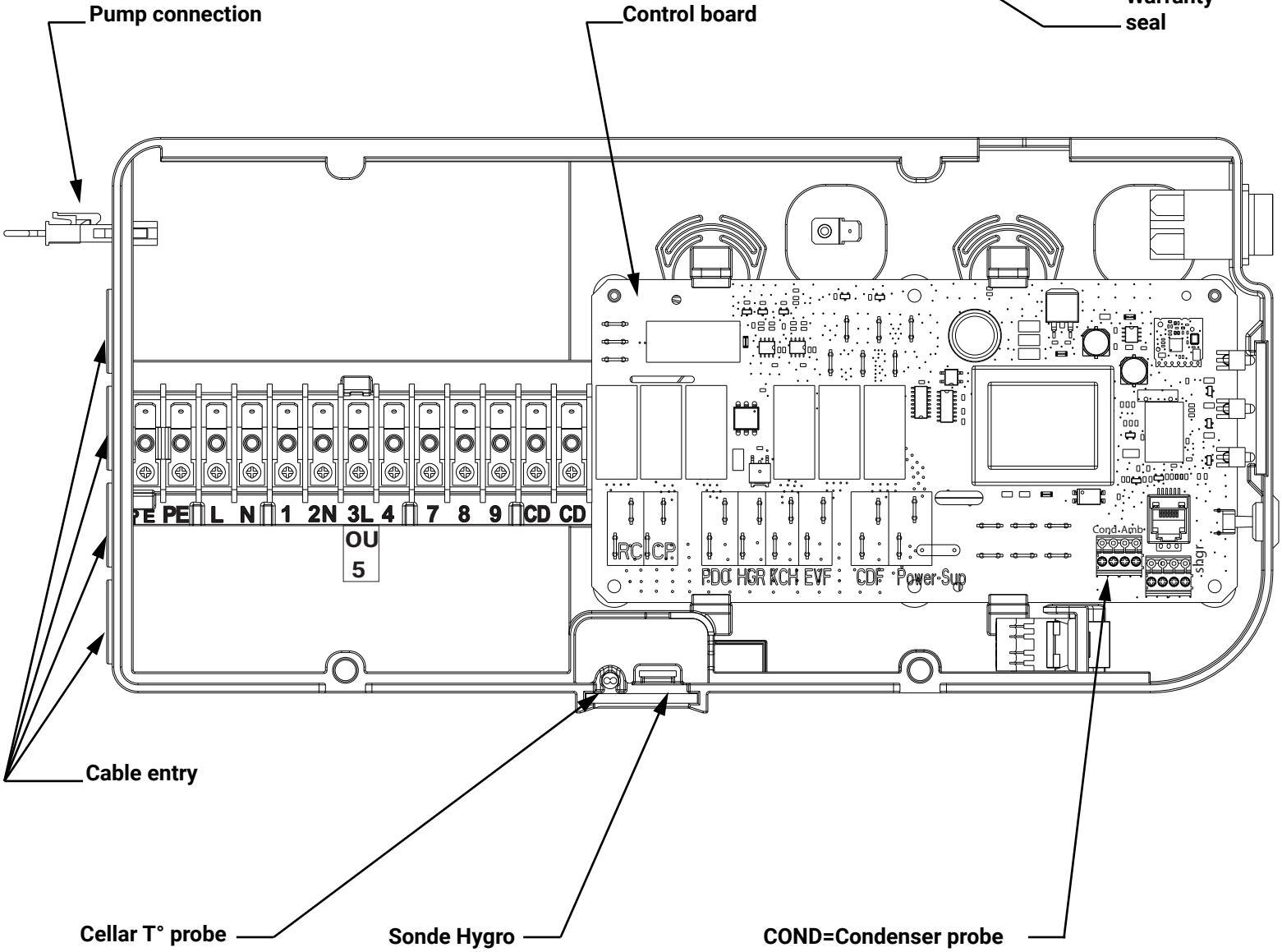
- Connect the water supply to the HGR% humidifier.
- Solenoid valve connection (20/27 mm).



If the water pressure exceeds 2.5 bar, the use of a pressure limiting kit is mandatory (KLPWSECU-XJ sold separately).

Electrical connection

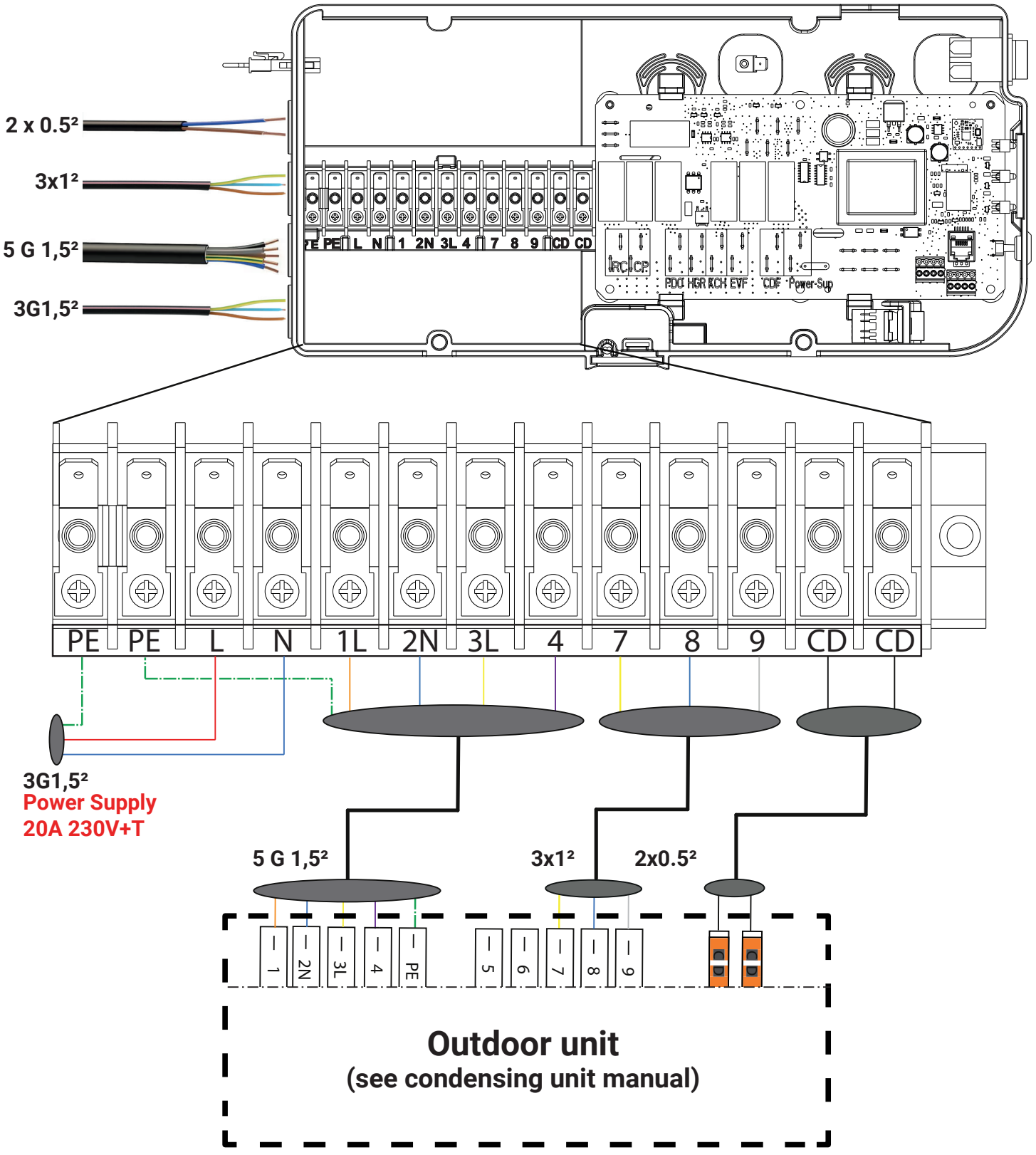




1=Casing resistance	2N= Neutral EXT group	3L= Compressor SPC30-48 82-122
4=Condenser fan	5= Compressor supply SPC170-230	7-8-9= Condenser fan control
N-L= 230V box power supply		

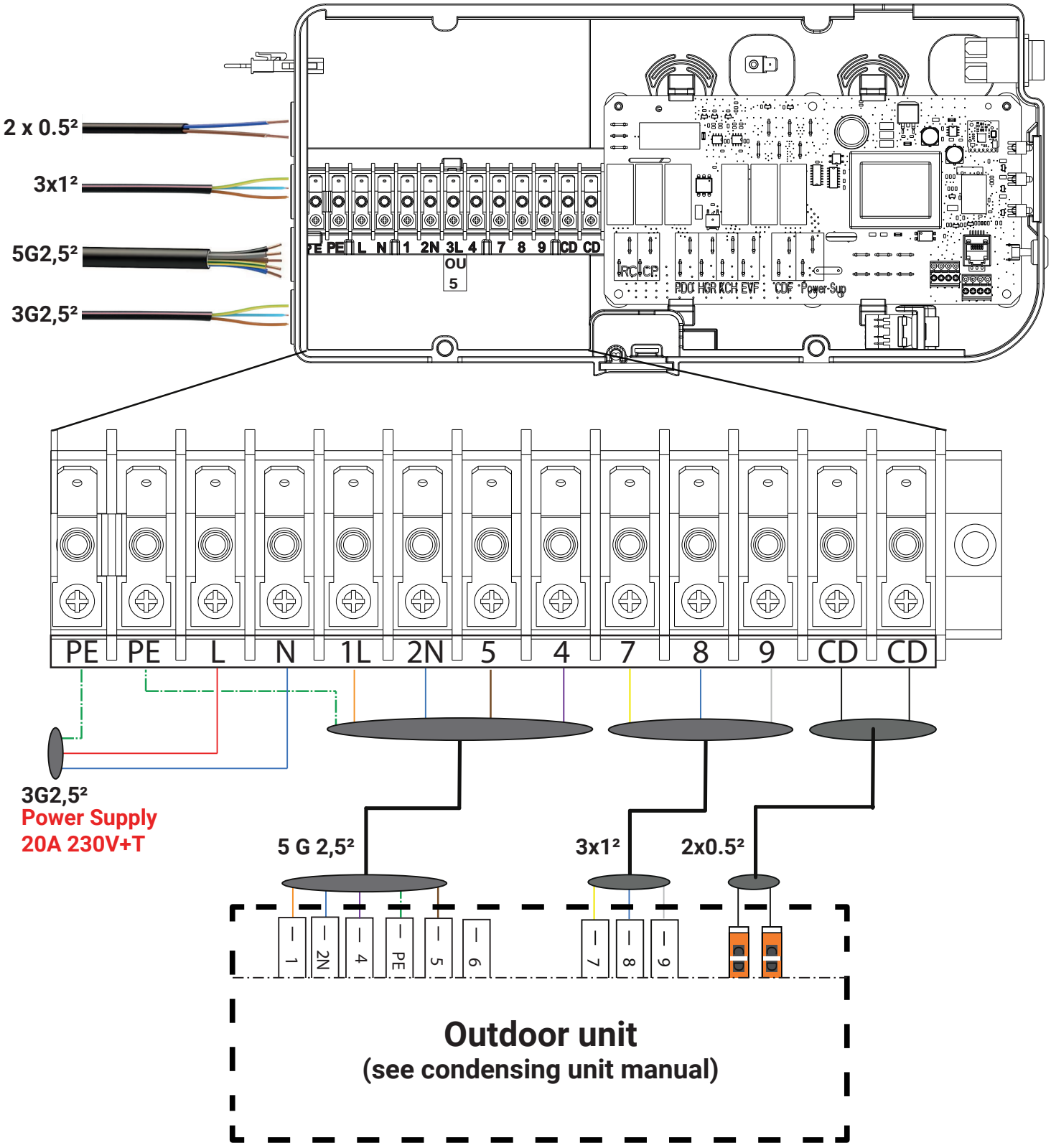
SPC 30-48-82-122-EVPL2 Vintage

Control box

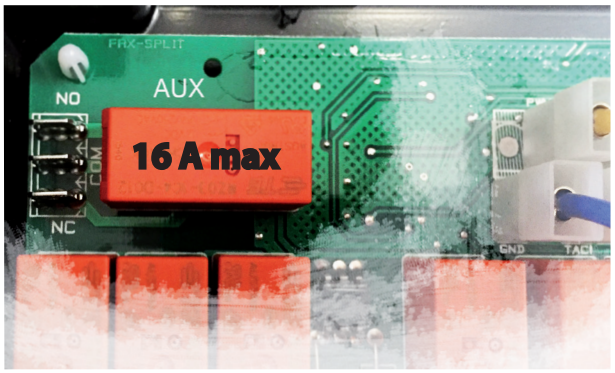


SPC 170-230-EVPL2 Vintage

Control box



Auxiliary contact

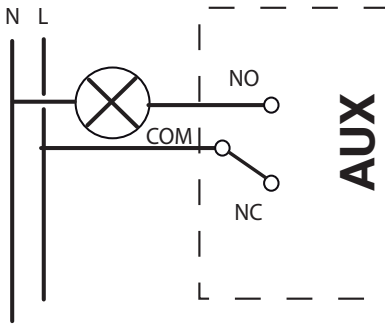


The card is equipped with an auxiliary contact COM-NO-NC
2 functions can be associated with the auxiliary contact:
- ECL lighting function
- Alarm reporting function

The card is basically programmed for lighting function.

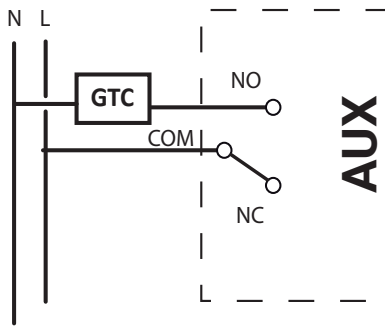
Lighting function:

To turn on the lighting, refer to the RSF2 Commissioning & Use instructions, ==>Summary==>Menu architecture==>Menu 3 FUNC Lig ON/OFF command.



Alarm report function:

To switch the alarm reporting relay, refer to the installer parameter instructions, Modify parameter 45:
1 = “type 1” alarms
2 = “type 2” alarms
1+2 = “type 1+2” alarms



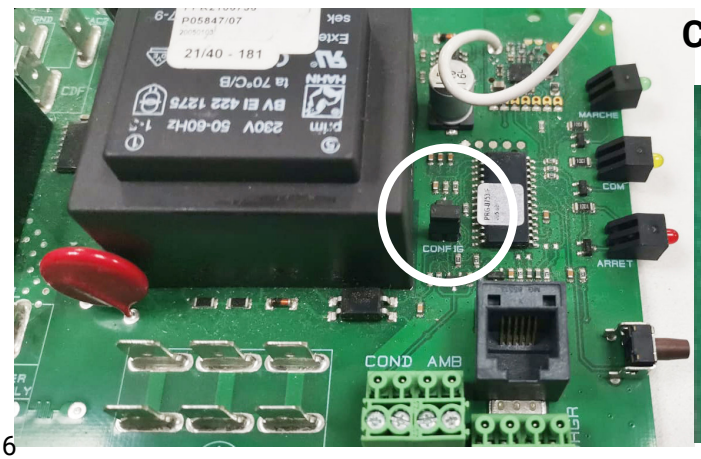
Electronic Board Configuration for 50°C Condensation:

By default, FRIAX air conditioners are designed for a nominal capacity with condensation at 45 °C (Configuration 1) and a maximum outdoor temperature of 35 °C.
It is possible to increase the condensation temperature to 50 °C (Configuration 2) in cases where the installation is located in a region or country where the outdoor temperature is between 35 °C and 43 °C.

Procedure to switch to Configuration 2:

- Locate the control board of the air conditioner.
- Move the corresponding switch on the board to activate Configuration 2.
- Perform a hard reset to apply the modification.

Note:
This modification allows the air conditioner to adapt to local climate conditions. However, a performance loss of approximately 10 % should be expected in this configuration.



Configuration 1 :



Configuration 2 :



Maintaining your cellar air conditioner

The following maintenance operations, repeated **every 6 months**, will ensure that your air conditioner retains its optimum performance and lasts as long as you and your wine.

Warning!

Before any maintenance operations, turn off the device using the remote control then cut off the power supply at the main circuit breaker to avoid any risk of electrocution.



Any intervention on a refrigeration circuit must be carried out by a professional authorized by an accredited body certifying the competence to handle refrigerant fluids.

Maintenance of the cellar evaporator:

1. Switch off the power supply of the evaporator.
2. Open the cabinet and disconnect the drain pipe. Beware of the water reserve accumulated in the tank.
3. Use a hoover and a compressor fitted with a blower to remove dust from the battery and fan. (Be careful not to damage the fins).
4. Wash the tray with clean water, taking care with the electrical connections, and apply an odourless bactericidal disinfectant such as KNET125 (sold separately) to treat biofilm bacteria.
5. Check that the drain hose is not blocked, then reconnect it to the drip tray.
6. Check that the drain is free-flowing and watertight by pouring a glass of water into the drip tray.
7. Check for refrigerant leaks using a leak detector.
8. Close the body.
9. Restore power at the main circuit breaker.

Maintenance logbook

DATE	COMMENTS	TECHNICIAN

NOTES

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