



envirovent

# energiSava 210

Instruction leaflet



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1. General information
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6. Operating the energoSava 210

The following items are included :

1. 1 x energoSava 210
2. 1 x remote control
3. 1 x wall bracket
4. 2 x drain ducts
5. 1 x drain connector
6. 1 x cable gland M12
7. 1 x cable gland M16
8. 1 x 4 connections tab
9. 1 x 3 connections tab
10. 1 x Instruction manual

# 1. GENERAL INFORMATION

## **1.1 - Introduction**

This manual is intended for the use of the central balanced-flow high efficiency energiSava 210 and its peripherals (ductwork, vents, controllers).

It is designed to provide clear and safe guidance for the design, installation and use of the product.

The products are constantly evolving and so, Envirovent reserves the right to modify this manual without prior notice.

## **1.2.- Warranty and Liability**

### **Warranty**

The energiSava 210 heat recovery system has three years warranty from the date of purchase. This warranty includes free delivery of necessary spare parts.

### **The warranty does not cover:**

Installation and removal costs

Defects that, in the opinion of Envirovent, are due to improper installation, handling, neglect or accidental damage.

Those defects that arise as a result from operations or repair performed by a third party without permission from Envirovent.

To return a defective part, the user should contact their installer.

### **Liability**

EnergiSava 210 is designed for ventilation systems in individual dwellings.

Envirovent is not responsible for damage caused by:

- Improper use,
- Normal wear of components,
- Failure to follow the instructions in this manual concerning safety, use and installation.
- The use of parts not supplied by Envirovent.

## **1.3.- Safety**

### **General health and safety standards**

The heat exchanger energiSava 210 has been designed to be incorporated into a ventilation system.

Following installation, there should be no risk to safety, health and the environment according to EC directives. This also applies to other products used in the installation.

The following general guidelines are important:

Follow the safety instructions to prevent injuries and damage to the motorised fans.

The technical characteristics described in this manual may not be changed.

The motorised fans must not be modified.

The motorised fans must be supplied with a single phase AC supply of 230 V / 50 Hz.

So that the installation complies with **EC** directives, the energiSava 210 must be connected to the electricity grid according to current national standards.

The device must be installed so that under normal operating conditions, there is no risk of contact with moving parts and power.

The energiSava 210 meets legal requirements for electrical equipment.

Before working on the machine, always turn the power off.

Use appropriate tools.

Use the machine only for the purpose for which it is intended.

## 2. TECHNICAL INFORMATION

### 2.1.- General information

The energiSava 210 ensures optimum ventilation of a house with a maximum energy recovery. It draws air from the rooms (bathroom(s), toilet, kitchen and wash room(s)) and supplies fresh air through the main rooms (living room, bedroom (s), office, etc ).

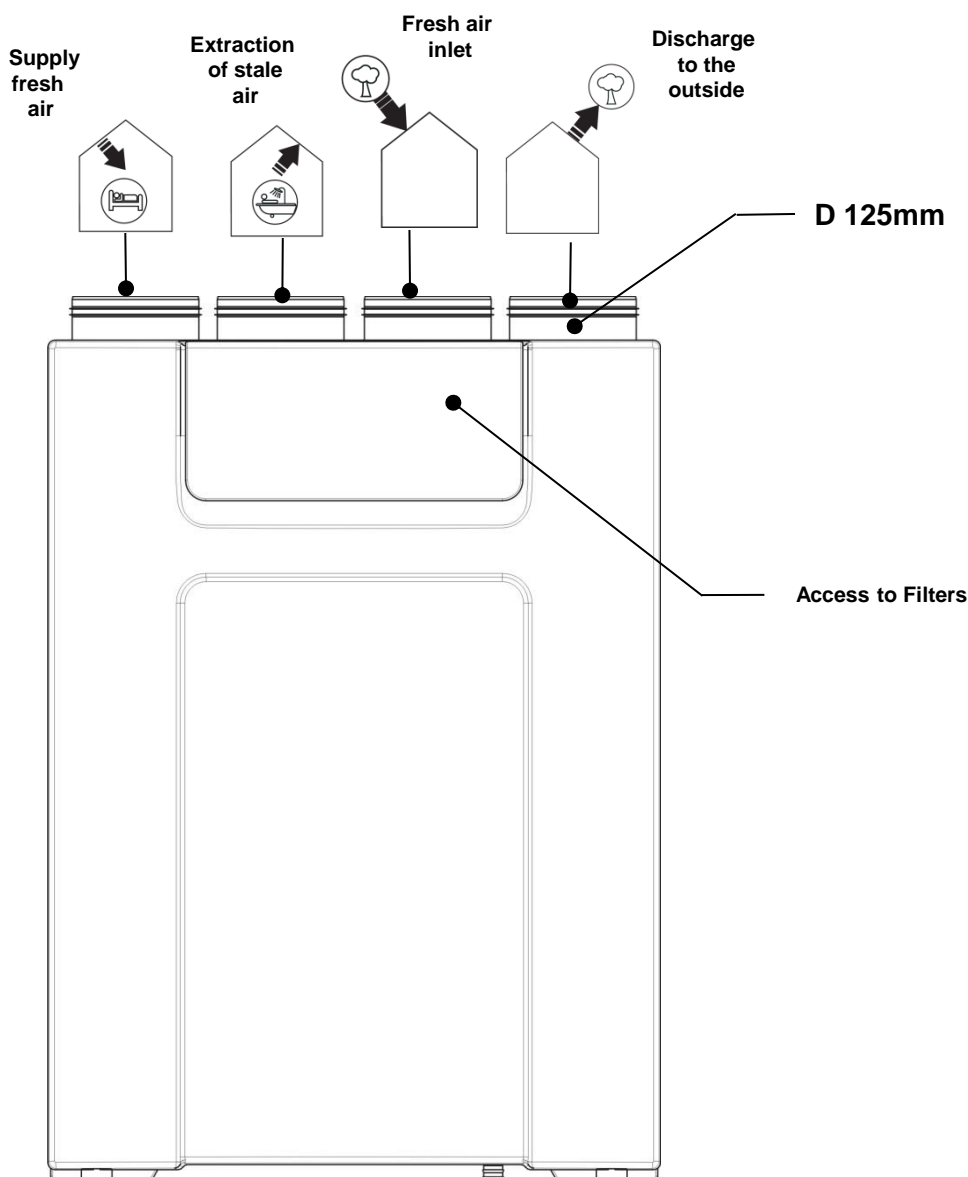
The fresh and extract airflows are separated and filtered. Only heat energy is transferred to the fresh filtered air that is introduced. Due to the high-efficiency heat exchanger used in the energiSava 210 performance can reach 95%.

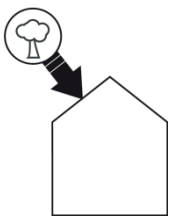
Condensation forms during the heat exchange process and is recovered in the condensate tray, which must be connected to a waste water drain.

The energiSava 210 is equipped with a double condensate drain system that allows use in winter and summer for heated homes.

The energiSava 210 has a 100% heat exchanger bypass system and this allows the introduction of fresh air at night without it being heated by contact with warm air accumulated in the house during the day. The system operates automatically or can be used manually (see section 5-2).

### 2.2.- Description

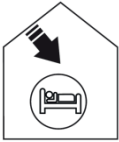




New fresh air inlet:

This spigot is to connect the supply duct of fresh air from outside. Install the fresh air intake (wall or roof) a sufficient distance from any area of high pollution (trees, exhaust fumes, road, etc).

This duct must be sealed and insulated to prevent condensation on the outside and inside.



Supply fresh air into the building:

Connected to the air intake duct in the property.

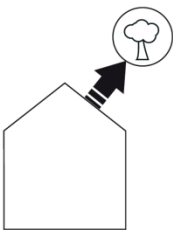
To avoid thermal losses, it is recommended to use insulated ducts for the warmed air.



Extract air from the building:

Connected to the extract duct from the property.

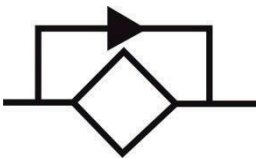
To avoid thermal losses and optimise the performance of the installation, it is recommended to use insulated ducts for the warm air.



Discharge of extract air

Connected to the discharge duct to the outside.

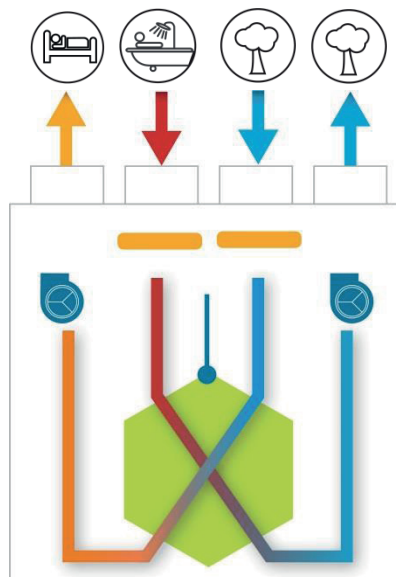
This duct must be well sealed and thermally insulated to avoid condensation both on the inside and outside.



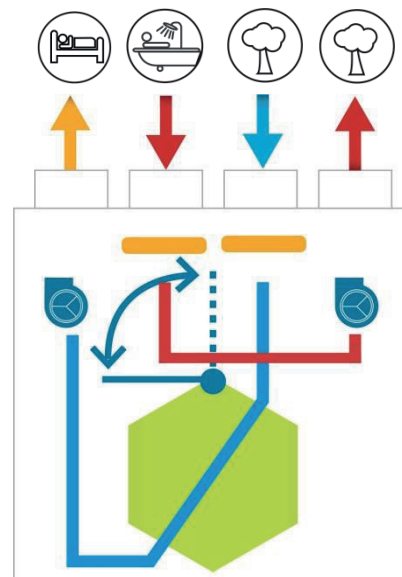
By-pass:

Having avoided the heat exchanger, the 100% by-pass system of the unit allows the introduction of cooler fresh air in the night without it being warmed by the warm air accumulated in the house during the day.

Operation without the bypass

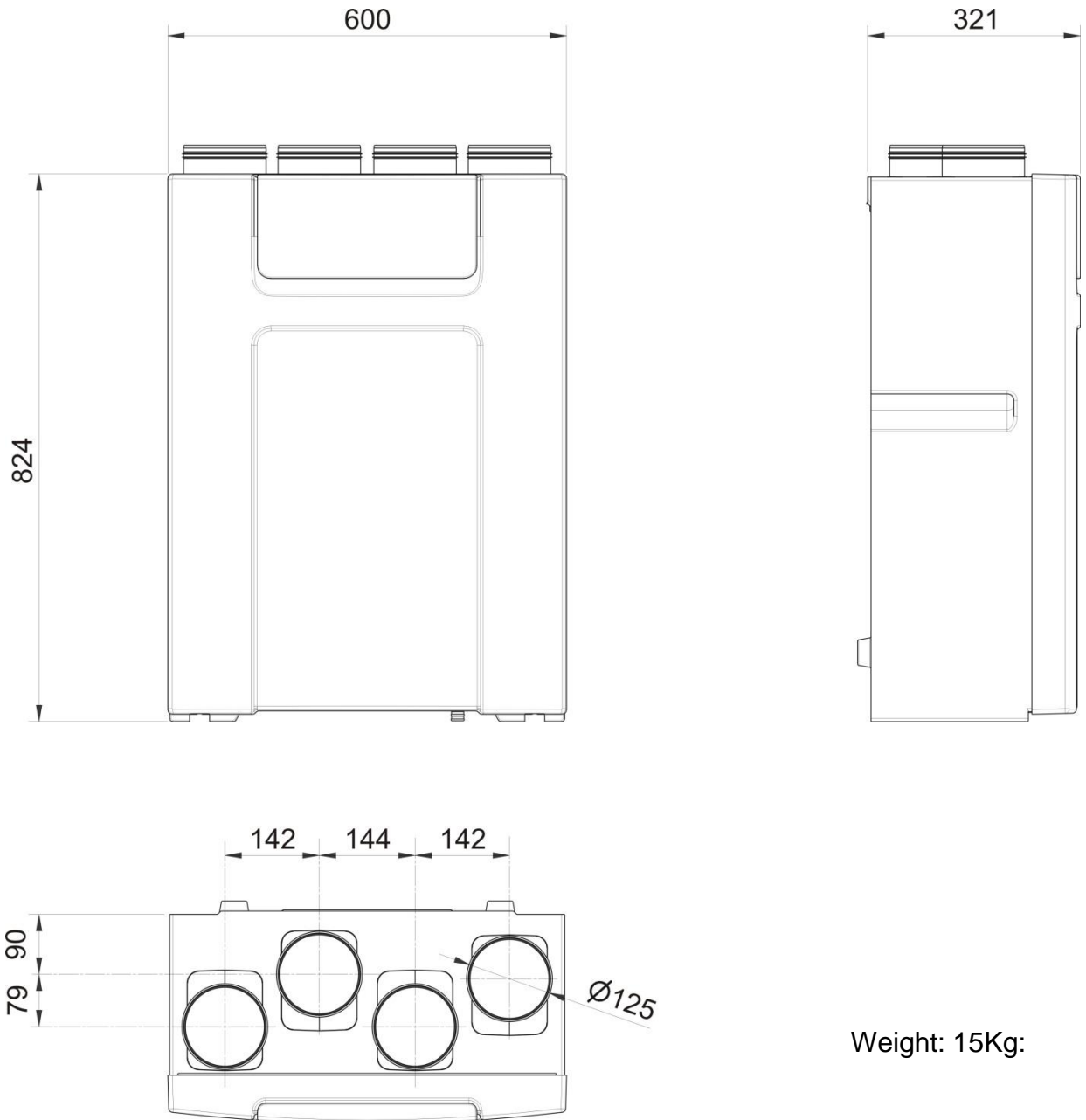


Operation with the bypass



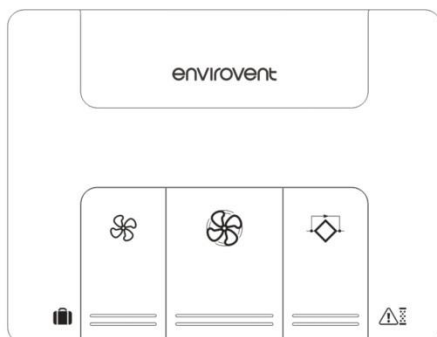
## 2.3.- Dimensional characteristics

### 2.3.a - Central:

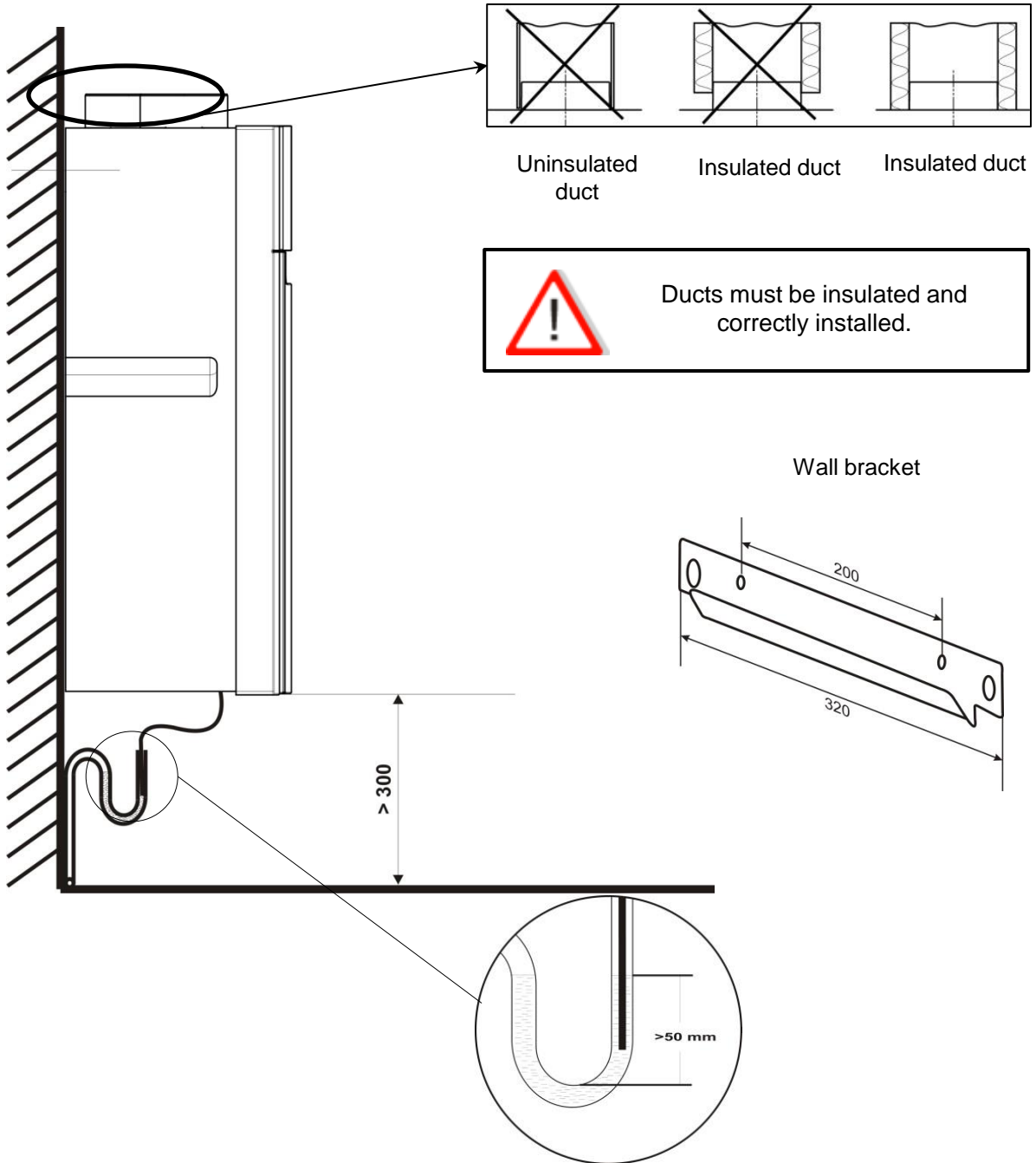


Weight: 15Kg:

### 2.3.b - Remote control:



### 3- INSTALLATION



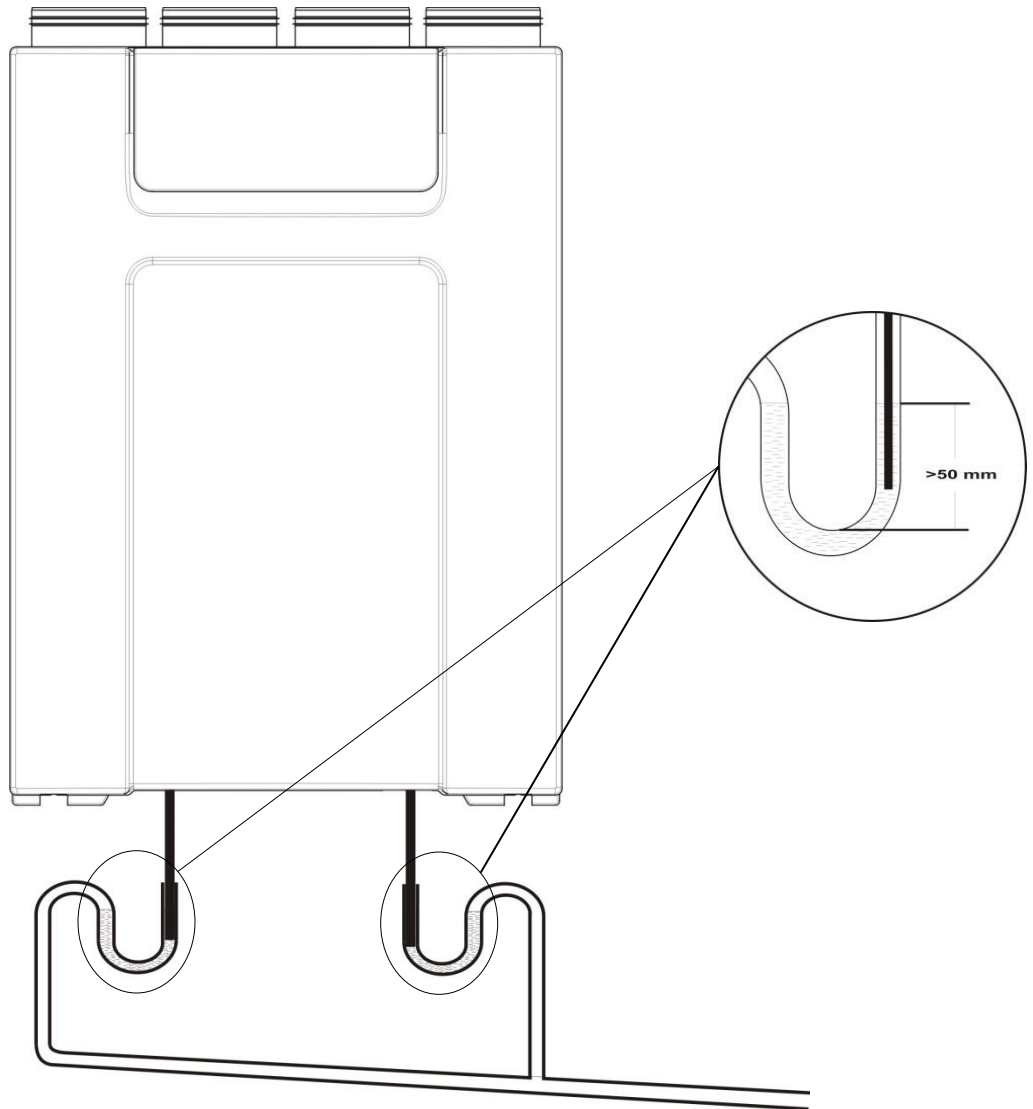
It is advisable to install the energisava 210 in the heated area of the house. If not, it is essential to isolate the condensation drain.



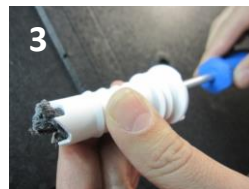
In areas where temperatures are regularly negative or can drop below  $-10^{\circ}\text{C}$ , it is advisable to install a preheating battery.

- **Heating housing**

In summer, in this configuration, the condensation is generated on the other side of the heat exchanger. So, the energiSava 210 is equipped with a dual condensate drain system.

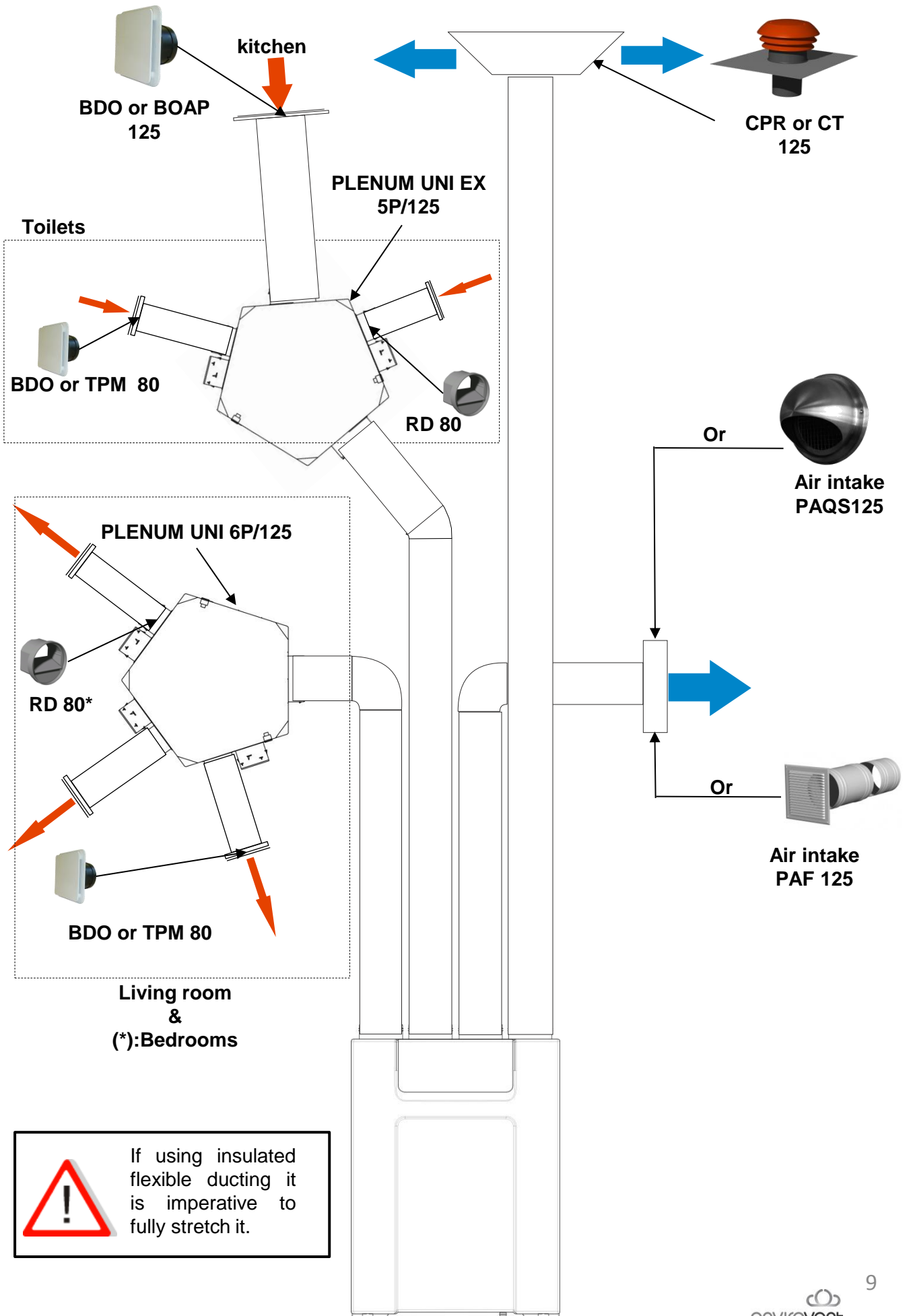


- **Installing and connecting the drain kit for heated housing**

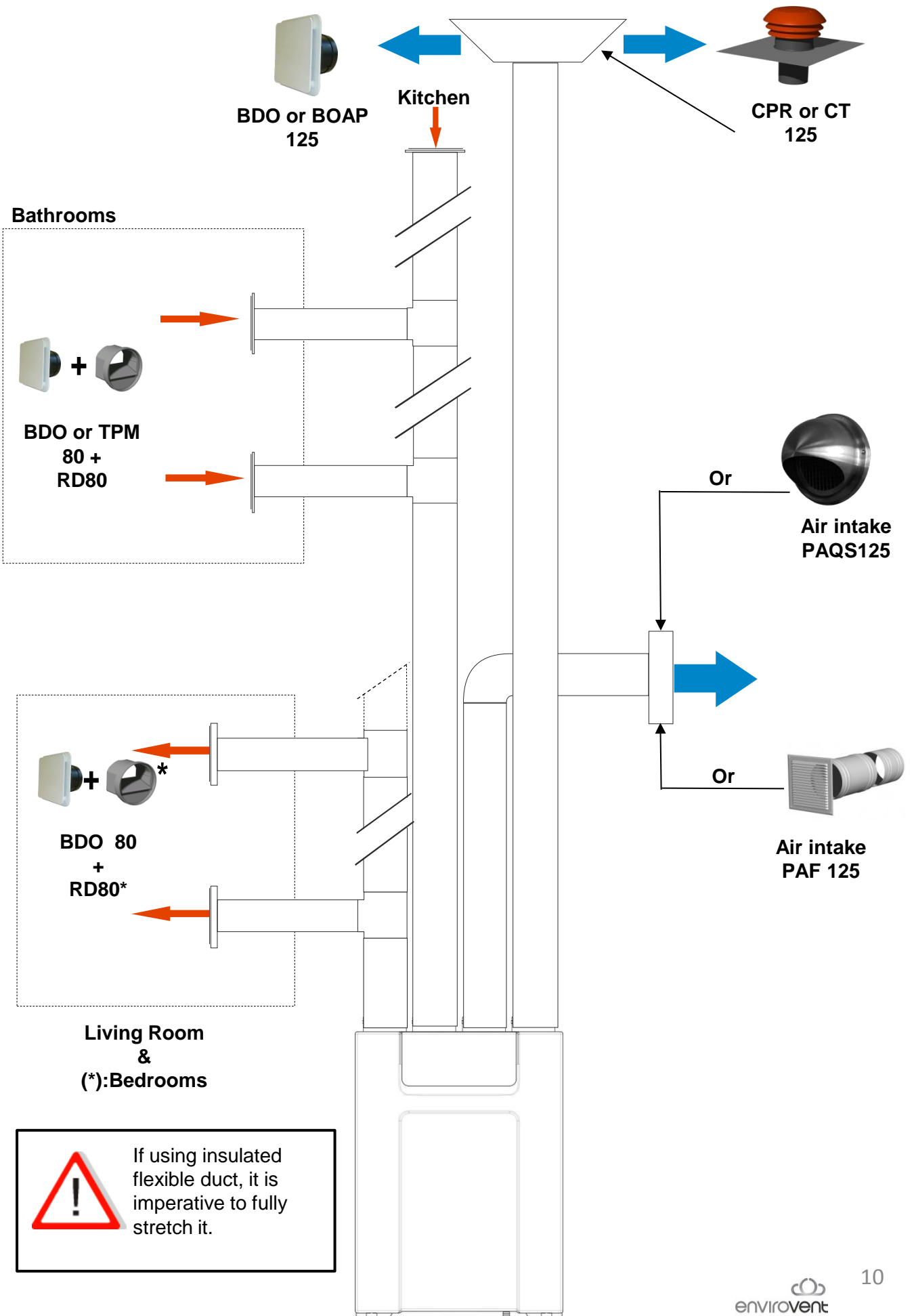




# SAMPLE " DISTRIBUTION" ASSEMBLY

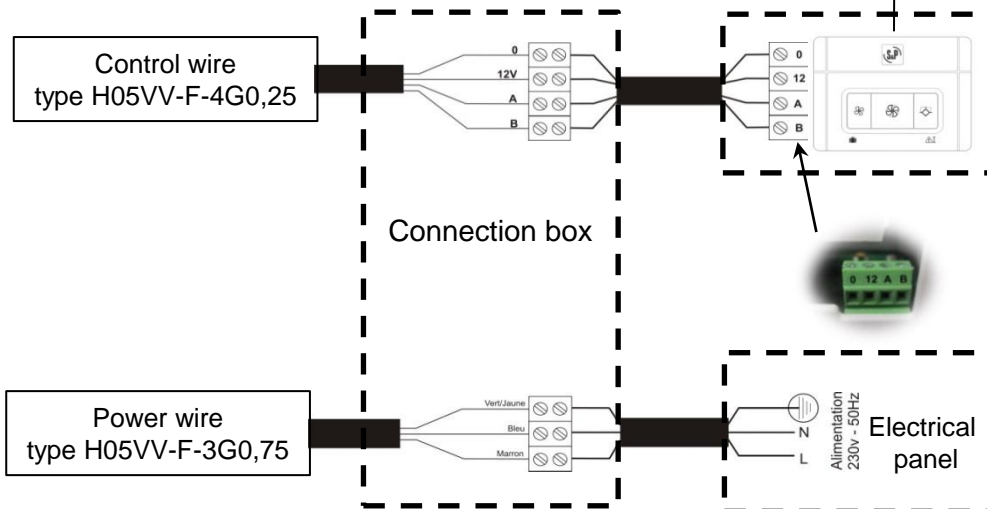
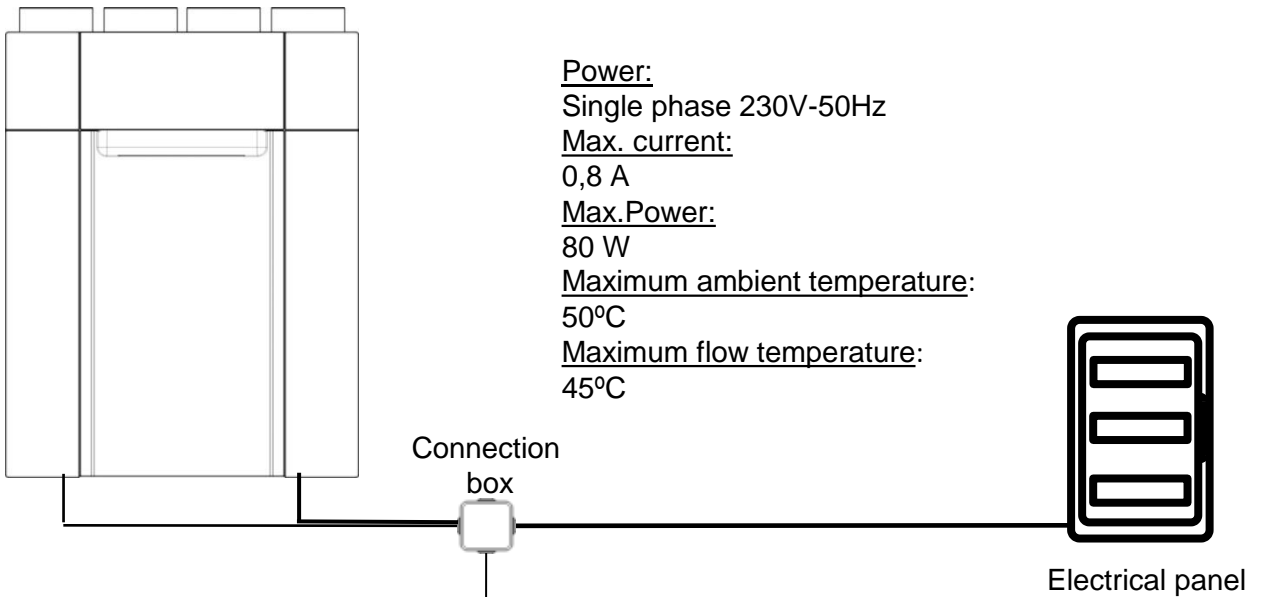


# SAMPLE "DISTRIBUTION" ASSEMBLY

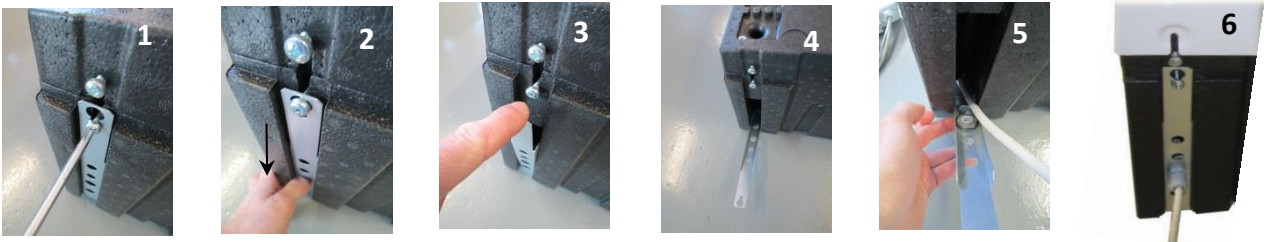


## 4 - CHARACTERISTICS AND ELECTRICAL CONNECTIONS

Connect the supplied cable to the mains using a sealed connection box.

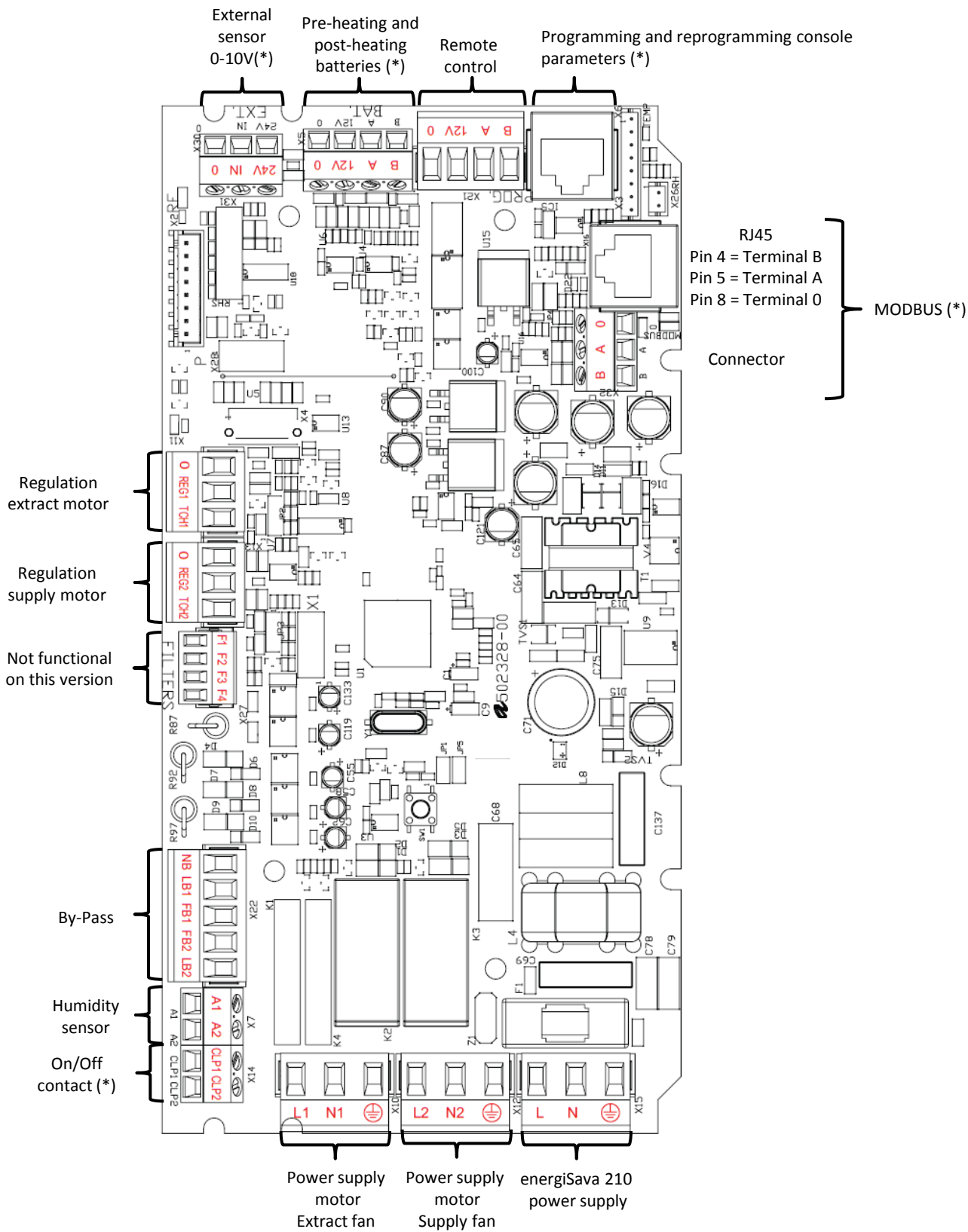


### • Installation of cable glands



In areas where temperatures are regularly negative or can drop below  $-10^{\circ}\text{C}$ , it is advisable to install a preheating battery.

# - Characteristics electronic chart



\*: Not supplied

## 5- COMMISSIONING OF THE energiSava 210

### 5.1.- For installation:

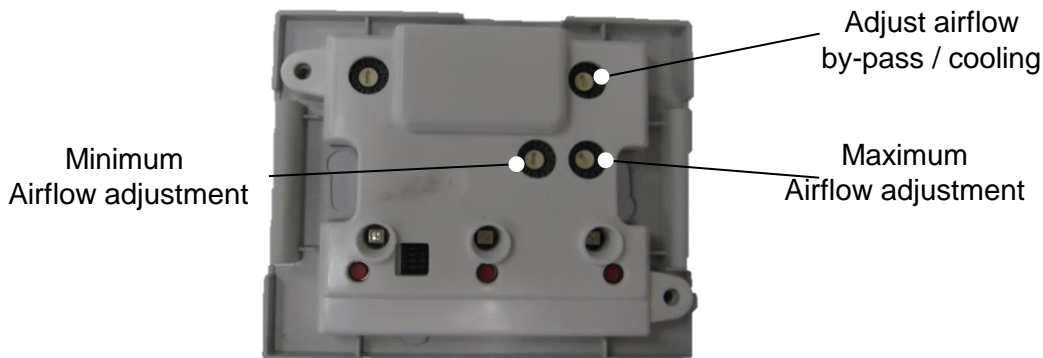
The remote control allows:

- Adjust the airflows (Minimum, kitchen boost and by-pass airflow (night cooling))
- Adjust the timing of a dirty filters (6, 9, 12 or 15 months) (factory setting 9 months)
- Adjust the balance of supply / extraction airflows (chimney or imbalance of airflow between supply and extraction)

#### 5.1.a- Airflow adjustment:

Airflows depend on the configuration of the house, depending on the number of main rooms (living room, dining room, bedroom, office, etc..) and the number of toilets and bathrooms.

Open the unit and set each potentiometer as shown in the table below according to the configuration of the house, :



potentiometers/airflows setting					
Minimum airflow (m <sup>3</sup> /h)-(l/s)	Adjustment Q <sub>minimum</sub>	Maximum airflow (m <sup>3</sup> /h)-(l/s)	Adjustment Q <sub>maximum</sub>	Cooling airflow (m <sup>3</sup> /h)-(l/s)	Adjustment Q <sub>cooling</sub>
60 - 16,7	0	120 - 33,3	0	120 - 33,3	0
75 - 20,8	1	135 - 37,5	1	135 - 37,5	1
90 - 25	2	150 - 41,7	2	150 - 41,7	2
105 - 29,2	3	165 - 45,8	3	165 - 45,8	3
120 - 33,3	4	180 - 50	4	180 - 50	4
135 - 37,5	5	195 - 54,2	5	195 - 54,2	5
-	-	210 - 58,3	6	210 - 58,3	6

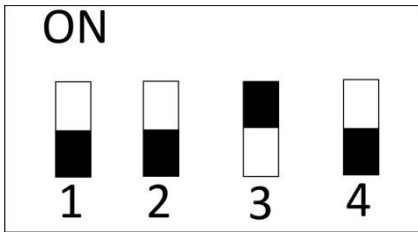
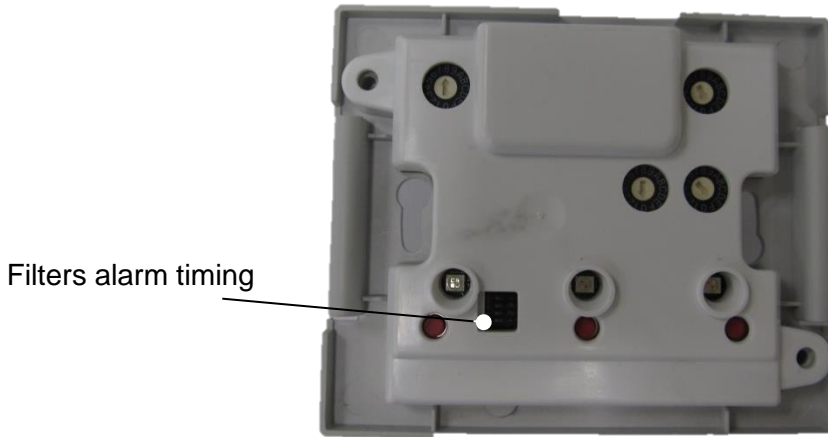


Measure the duct diameter at a maximum airflow(Boost or By-pass)

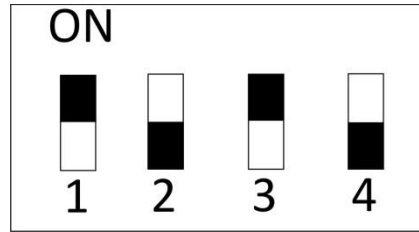
### 5.1.b - Timing dirty filters alarm

It is possible to set the timing to 6, 9, 12 or 15 months (9 months factory setting). Fouling is linked to the external environment (pollution, pollen,..) and the use of housing (dust, cooking fats..). It is advisable to modify this parameter after the second alarm. Of course, after the installation, the extract air is dusty and not representative of a normal conditions. During the second filter check, if you notice that the filters are clean you can increase the time (12 or 15 ,months). However, if you notice that the filters are very dirty should decrease the time (6 months).

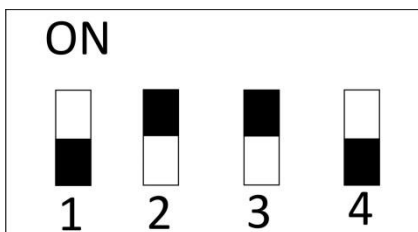
Open the box and adjust the timing as shown. To do this, set the micro contacts 1 and 2 by the number of months to suit your installation.



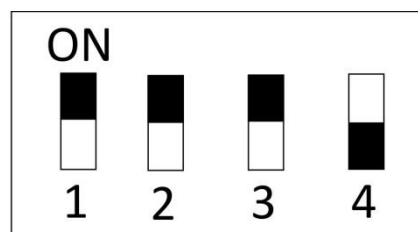
6 months



9 months  
(factory setting)



12 months



15 months

### 5.1.c - Supply/extraction airflow out of balance adjustment

This setting can be useful in some cases:

#### 1. Case of a chimney:

It is necessary to add a supplementary air supply equal to the extract airflow due to the natural draught of the chimney.

There are two possibilities:

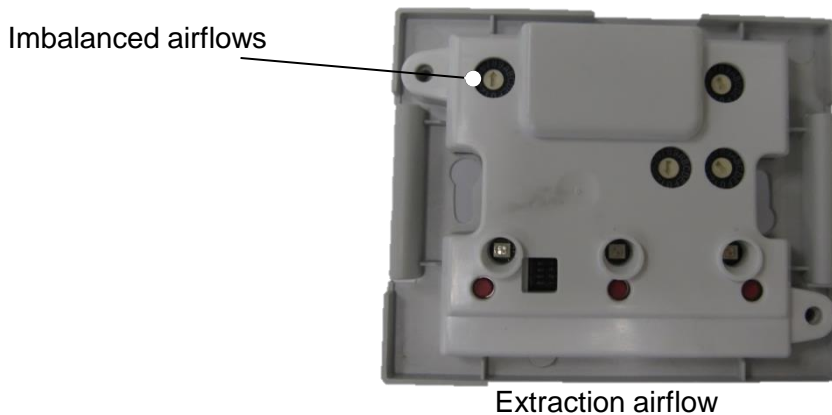
- Create an air inlet specific to the chimney.
- add an additional supply airflow to the calculated energiSava 210 airflow to facilitate the natural draught of the chimney.

Follow the recommendations below:

- Ensure that all doors and windows are closed.
- Light a fire in the chimney,
- Adjust the imbalanced airflow with the potentiometer until there is a good draught of the chimney.

#### 2. Imbalance between supply and extract airflow:

This situation can occur when one of the two circuits is very unbalanced compared to the other. In this case, adjust the airflow imbalance with the potentiometer.



Potentiometer setting	9	A	B	C	D	E	F	0	1	2	3	4	5	6	7	8
% QSupply/QExtraction	-14	-12	-10	-8	-6	-4	-2	0	2	4	6	8	10	12	14	16

#### Example:

- Minimum calculated airflow= 90m<sup>3</sup>/h
- Supply airflow necessary= 99 m<sup>3</sup>/h  
→ Potentiometer position 5 = +10%

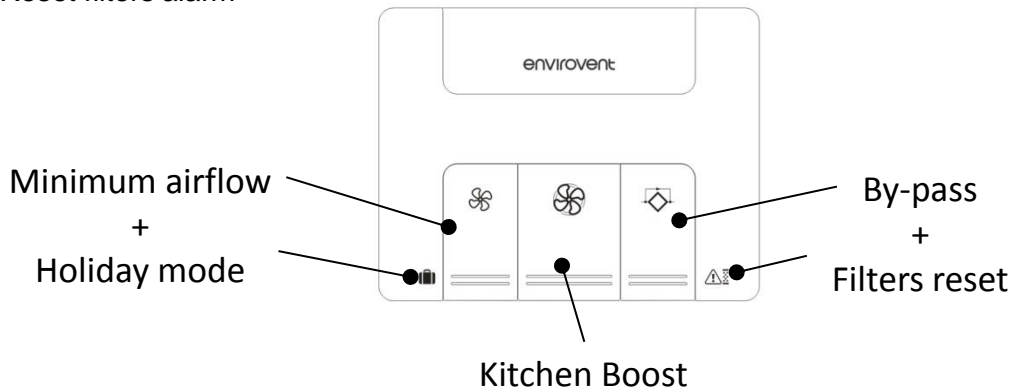


The adjustment is made on the supply airflow compared with extraction airflow.

## 5.2 - During use

The remote control allows the user to:

- Activate the kitchen boost for ½ hour.
- Return manually to the minimum airflow
- Put energiSava 210 in holiday mode
- Manually switch to by-pass mode
- Display filters alarm
- Reset filters alarm



### Minimum airflow (green LED):

When the energiSava 210 is in Boost mode, it is possible, by pressing the left button, to return to the minimum airflow before ½ hour has elapsed



to return

### Boost kitchen (green LED):

A button that enables the boost airflow for the kitchen to be selected in ½-hour steps.



### By-pass (green LED):

On having avoided the heat exchanger, the 100% by-pass system of the energiSava 210 allows the introduction of fresh air in the night without being warmed

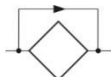
the warm air accumulated in the house during the day.

This system works automatically with these conditions:

$$- T^{\circ} \text{ inner} > 1 + T^{\circ} \text{ outer and } T^{\circ} \text{ inner} > 24^{\circ}\text{C and } T^{\circ} \text{ outer} > 12^{\circ}\text{C,}$$

The specific airflow can be adjusted to optimize the cooling night time or free cooling (see paragraph 5-1-a)

If you want, you can manually switch to by-pass mode for a period of 8 hours, by pressing the by-pass button. During this operation it is possible to cancel this function by pressing the by-pass key once more.



by

### Holiday mode (Flashing red LED):

Press the left key for 3 seconds to activate Holiday mode (50% minimum airflow). It is possible to return to normal mode by pressing the same key once more.



### Filters alarm (red LED):

When the filters are dirty a red LED appears on the right hand key. The factory setting is 9 months after commissioning or changing the filters. When changing the filters.

If the 9 month interval is not ideal for the configuration or use of your installation (filters too dirty or clean) it is possible to adjust this setting from 6 to 15 months (in 3 monthly steps – see paragraph 5-1-b)



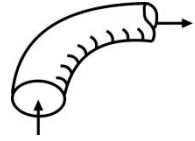
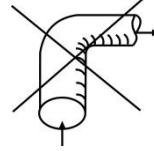
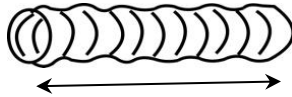
**Once changes have been made push the button 3 seconds to deactivate the alarm and reset the timer.**



## 6 - SWITCHING ON THE energiSava 210

To start your energiSava 210 unit use the following process:

1. Verify that all system components are correctly installed and connected:
  - Fresh air intake duct insulated and connected correctly (Do not use a fresh air intake equipped with insect screen)
  - Fresh air and exhaust ducts insulated and connected correctly
  - Fresh air and exhaust vents connected
  - Flow regulators mounted in the right direction (if installed)
  - Air outlet using insulated duct and connected to the outside (Using a roof cowl or outlet without an insect screen)
  - Insulated flexible ducts taut and large radius bends (if installed)



- Check that the unused spigots on plenums are sealed (if installed)
- Condensation drain well connected (siphon)
- Check that all connections are sealed (on the energiSava 210, on plenums and vents)
- Check the setting of the power circuit breaker

2. Turn on the energiSava 210

3. Adjust the minimum airflow, the kitchen Boost and refresh rate (Free cooling).



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