

The quick manual will guide you through the quick installation of the unit, but in any case, it cannot replace the full manual. The full manual is available on our website, jeremias.es, or you can access to it via a QR code.



Ensure that there are no electrical cables, water pipes, waste, or gas lines in the area where you will be installing the unit that could be damaged during installation. Check that the electrical network parameters where you intend to connect the unit meet the unit's requirements (see product label)



Make sure that the installation of the unit will not interfere with the building's structural integrity and that it complies with all legal safety requirements. Before beginning the installation, verify the possibility of connecting to the sewer system to drain condensate from the unit.

## 1. APPLICATION AND FEATURES:

The LOGIC EKKOAIR by Jeremias model is a single-unit mechanical ventilation system with heat recovery, tested for efficiency up to 92%. The unit has a maximum ventilation capacity of 150 m<sup>3</sup>/h or 200 m<sup>3</sup>/h with low-consumption motors.

Features: 4 models in a single heat recovery unit - Multi-flow with flow rate selection (150 or 200 m<sup>3</sup>/h) via selector - Multi-position with orientation adjustment (left or right) via selector - Direct connection for up to 12 Ø75mm Ekkoflex semi-rigid ducts with guaranteed airtightness - Includes wired multifunction controller with up to 8 speed settings - Anti-freeze protection through flow balancing - 100% automatic bypass - EC motors with constant airflow - Efficiency tested up to 92% - Low-profile design with 210 mm height - Factory-equipped with M5 standard filter and wide filter options available - Option to connect to MoodBus RTU - Low noise level and zero vibrations due to lightweight materials and smart design - Compatible with WEB application, CO<sub>2</sub> sensor, humidity sensor, combined CO<sub>2</sub> and humidity sensor, pre- and post-heating resistors, and enthalpy exchanger



The outdoor air temperature can range between -20 °C and +40 °C (applicable to the version with pre-heating). If the supplied air temperature falls below -20 °C, the unit may shut down automatically to protect itself from potential damage.

## 2. Technical Specifications LOGIC 150 m<sup>3</sup>/h and 200 m<sup>3</sup>/h

150 m <sup>3</sup> /h			200 m <sup>3</sup> /h		
Parameters	Units	Values	Parameters	Units	Values
Airflow	m <sup>3</sup> /h	150 (200 Pa)	Airflow	m <sup>3</sup> /h	200 (200 Pa)
Sfp (70% Qvd)	W/m <sup>3</sup> /h	0,29	Sfp (70% Qvd)	W/m <sup>3</sup> /h	0,29
Acoustic pressure LPa-1m	dB	39,3	Acoustic pressure LPa-1m	dB	43
Acoustic pressure LPa-3m	dB	31,4	Acoustic pressure LPa-3m	dB	35,1
Power supply	V / Hz	1-230 / 50-60	Power supply	V / Hz	1-230 / 50-60
Nominal input	W	104	Nominal input	W	172
Nominal current	A	0,74	Nominal current	A	1,22
Mouth diameter	mm	2xØ130/Ø160 + 2x6Ø75	Mouth diameter	mm	2xØ130/Ø160 + 2x6Ø75
Controller		8 Speed	Controller		8 Speed
Installation		False ceiling, wall	Installation		False ceiling, wall
IP		IP 30	IP		IP 30
Filter type		M5 ePM10 55% ISO 16890	Filter type		M5 ePM10 55% ISO 16890
Weight	kg	16	Weight	kg	16
Dimensions	mm	970x600x210	Dimensions	mm	970x600x210
Multi-Function controller (200 Pa)	m <sup>3</sup> /h	1 2 3 4 5 6 7 boost 50 65 80 105 120 135 150 150	Multi-Function controller (200 Pa)	m <sup>3</sup> /h	1 2 3 4 5 6 7 boost 50 75 90 120 145 180 200 200
Body + housing		EPP + metal sheet	Body + housing		EPP + metal sheet
Efficiency* HRV - temperature	Heat	%	89,3	Efficiency* HRV - temperature	88
	Heat		80,5		78
	Humidity		43		43

\*According to UNE EN 308 at 70% of nominal airflow

### PROHIBITED USE

- The unit must not be used to extract burning or glowing substances, flammable or explosive gases, aggressive agents, or liquids.
- The unit must not be installed near flammable materials, explosion hazards, in areas with high levels of dust, or in environments with high humidity.
- Neither the manufacturer nor the supplier is responsible for any damage caused by improper use of the units. The risk is borne by the user



Scan the QR code with a smart device capable of reading QR codes.

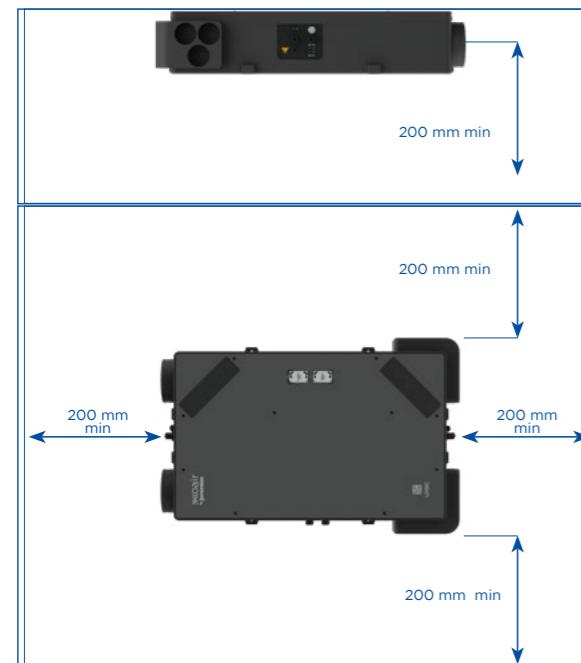


### 3. INSTALLATION



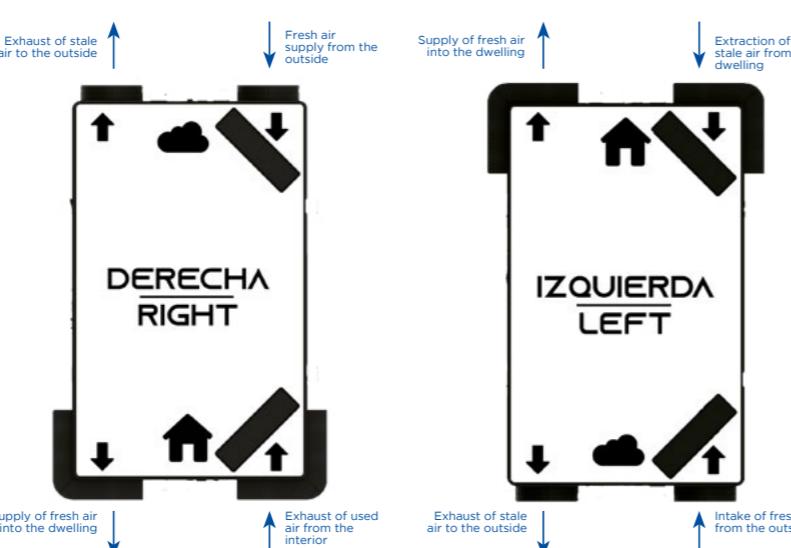
- Installation and connection must only be carried out by a qualified person with proper authorization to connect electrical equipment and who has the appropriate tools and resource. All instructions and recommendations contained in the manual must be followed during installation.
- It must be ensured that there are no electrical or other types of lines (such as gas or water) at the installation point that could be damaged during the process.
- The installation of the unit including wall openings or penetrations (depending on the chosen installation position) for duct passage must not compromise the structural integrity of the building and must comply with all legal safety requirements.
- Failure to respect the specified distances may result in malfunctioning of the unit, fan damage, increased noise, or restricted access for technical service.
- Only the positions shown in the manual are valid so any other installation method is prohibited.
- The unit must always be accessible from the front side (cover side) to access the filters and perform maintenance. If the unit is mounted on a wall or ceiling an inspection opening must be provided with dimensions large enough for the technician to access easily and to remove and reinstall the heat recovery unit if necessary.
- The wall supporting the unit must always be sufficiently strong.
- If needed a materials specialist or structural engineer should be consulted.

#### Minimum installation distances



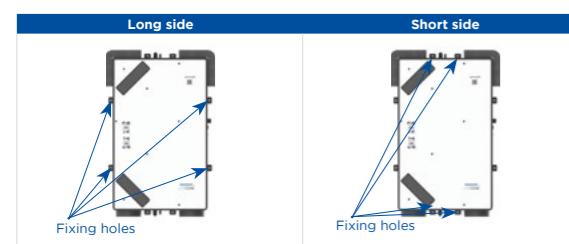
#### Positioning

Switch the unit version (right/left) using the rocker switch on the control cover plate.



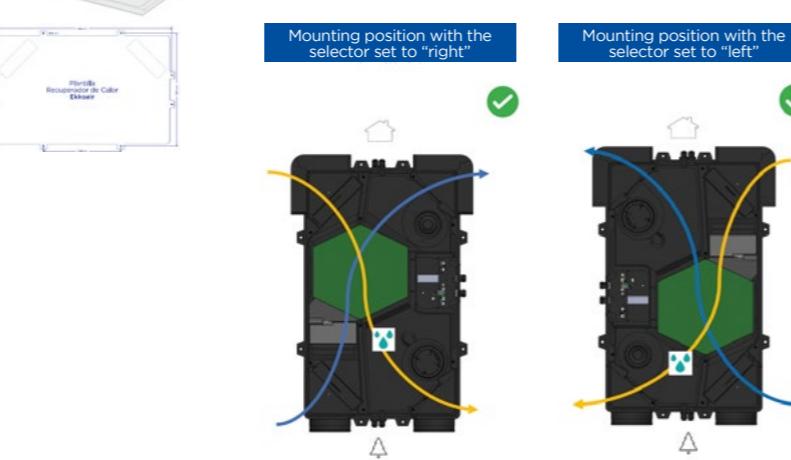
#### Ceiling Installation

- The LOGIC box includes a template to facilitate the installation of the unit on the ceiling or wall.
- Use the installation template to position it on the wall or ceiling and easily mark the unit's holes.
- Drill the marked surface and screw the unit in place.



#### Wall installation

If we want to install the LOGIC vertically on the wall there are two mounting positions available



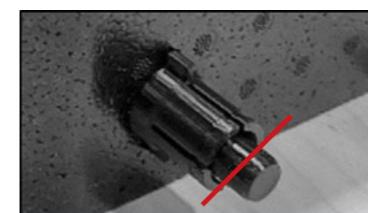
#### CONDENSATE DRAIN CONNECTION

If you are installing on the roof, it is important to place the condensate trap on the drain located on the side of the ducts that connect to the exterior of the building. Of the two drains located in that area, the trap must be connected to the one positioned at the bottom of the unit. The drains on the side facing the interior of the building must not be handled and must remain sealed. In the case of a wall installation: install the condensate trap on the nearest lower drain closest to the wall. The other drains must not be handled and must remain sealed.

#### Drain Unit Installation with Trap

We have a trap available as an additional accessory which is easy to install thanks to its various adapters allowing adjustment to different types of pipes

- A) Cut the edge of the condensation outlet and remove any burrs

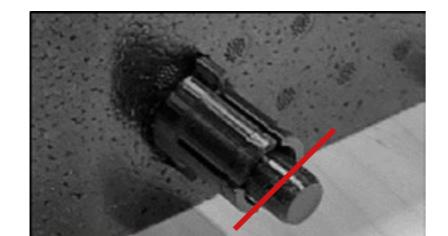


- B) Connect one end of the supplied tube to the condensate outlet and the other end to the trap ensuring the trap is positioned as vertically as possible

**! Jeremias is not responsible for any malfunctions caused by incorrect connection of the trap or by installing the drain outlet on the wrong side of the unit.**

#### Drain unit installation without trap

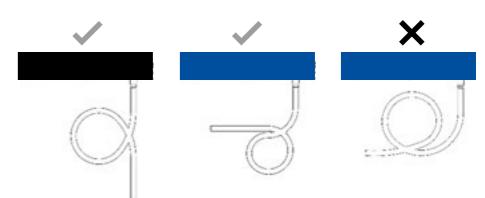
- A) Cut the edge of the condensation outlet and remove any burrs



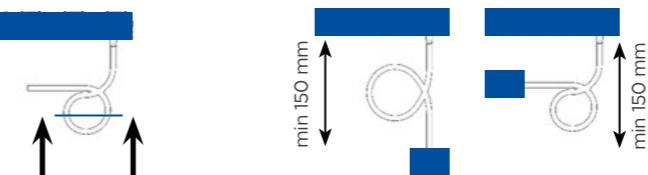
- B) Create a trap by securing the hose and the fastening clamps



- C) Choose the correct position of the trap for connection to the drain pipe



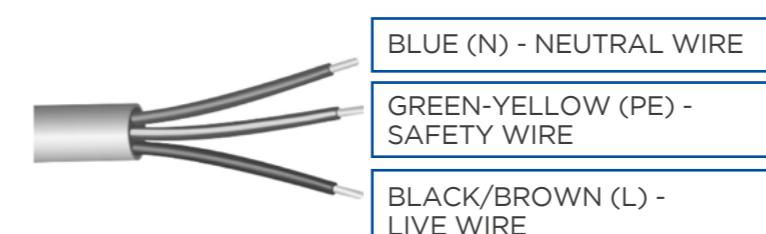
- D) Fill the trap with water connect the hose to the unit outlet and secure it with a strap



- E) Connect the trap to the drain system

**! WARNING** when using air conditioning in a ventilated building for cooling in summer it is necessary to connect the second condensate outlet see full manual

#### Connection of the LOGIC unit to the power supply



#### Connection of the unit to the electrical panel.

- The input cable is prepared by the manufacturer for connection to the electrical panel.
- To connect the input cable to the power network, use the appropriate components such as IE connectors or spring clamps. Connection of the unit to the power outlet.
- The input cable can be connected using a plug with a safety connector which is not included in the delivery.



Installation of the input cable to the electrical box or installation of the plug on the input cable and connection to the power network must be performed only by an authorized person and in accordance with the safety instructions applicable in the installation area.

## CONNECTION TO THE POWER SUPPLY NETWORK

The electrical installation must comply properly with all relevant regulations. Before starting any installation work make sure that the wiring box or the power outlet you intend to use to connect the device is equipped with a protective wire or plug (ground).

If you use a wiring box to electrically connect the unit you must disconnect the power supply and secure the power source to prevent accidental activation. The LOGIC panel includes two selectors and a switch with different functions to allow choosing the option that best suits the user's needs.



### Multi-position Section

- Left
- Right

### Multi-channel Section

- 200
- 150

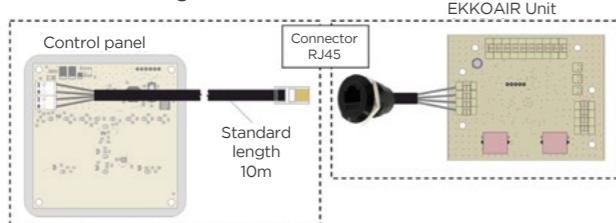
- Power on/off switch.
- Selector for choosing left or right orientation where the LOGIC will be used.
- Flow rate selector to choose between two positions 150 m<sup>3</sup>/h or 200 m<sup>3</sup>/h.
- 230V power cable with a length of 1 meter.
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The two cable glands located on the panel allow the cables from different sensors and the power supply to pass through comfortably while ensuring the unit's airtightness.

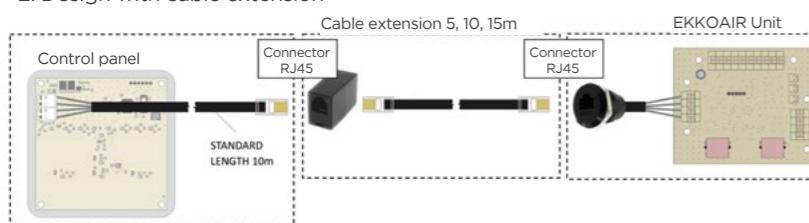
The LOGIC heat recovery unit also has 2 external connections which operate as follows.

**EXT1:** Connected to the bathroom light via a relay increases the extraction and supply airflow to maximum up to 1 minute after it turns off.

#### 1. Standard design



#### 2. Design with cable extension



**EXT2:** Connected to the extractor hood via an inductive relay increases the supply airflow to maximum when it starts operating up to 1 minute after it turns off. The extraction airflow does not change.



## 4. INSTALLATION OF THE CONTROL UNIT

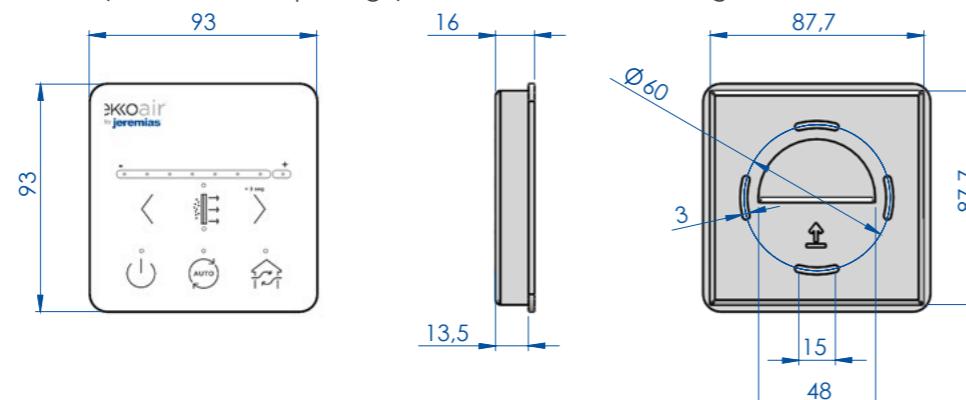
### Concealed cable installation

In the wall The connection cables between the unit and the controller must be part of the building preparation placed under the plaster and terminated in a flush-mounted box One end finishes at the unit installation site and the other at the controller location in the flush-mounted box.

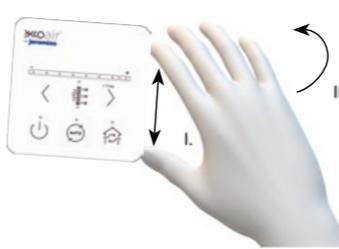
### Cables required for installation

Eight-wire UTP cable without terminals (included in the package) The connection cable length is 10 meters

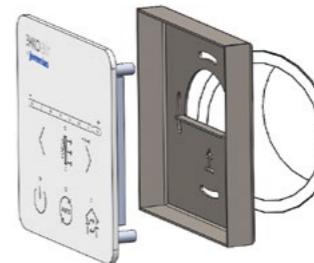
### A) Controller dimensions



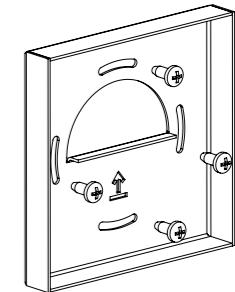
### B) Open the controller



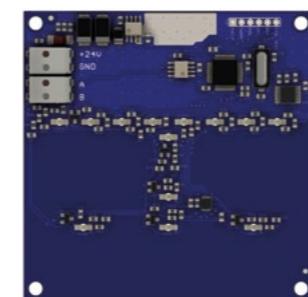
### C) Insert the wiring



### D) Fix the housing to the wall



### E) Wiring of the Control Panel



+24v: Brown

GND: Orange

A: Green

B: White

Network cable included with the control unit

Cable connected to the control unit



Pay attention to the correct connection by observing the cable positions and inserting them properly into the terminals. There is a risk of malfunction of the unit.

### Electrical installation - connection to the power network

- Before starting any installation work make sure that the junction box or power outlet you intend to use to connect the unit is equipped with a protective wire or contact (green-yellow).
- If you use a mains plug to connect the device it must remain accessible at all times in order to safely disconnect the device from the network in case of emergency.
- The corresponding power circuit must be protected with a maximum of 16 A in the electrical distribution.
- The electrical connection of the unit to the network may only be carried out by persons qualified for this activity with valid authorization and knowledge of the relevant standards and directives.
- This unit belongs to the group of products with type Y connection. If the power supply is damaged it must be replaced by the manufacturer, its service center, or a similarly qualified person to avoid a hazardous situation.
- The power supply voltage of the unit 1~230V/50-60Hz must not be modified in any way otherwise there is a risk of damage to the unit.

## 5. CONTROLS - ELECTRICAL ACCESSORIES FOR THE LOGIC

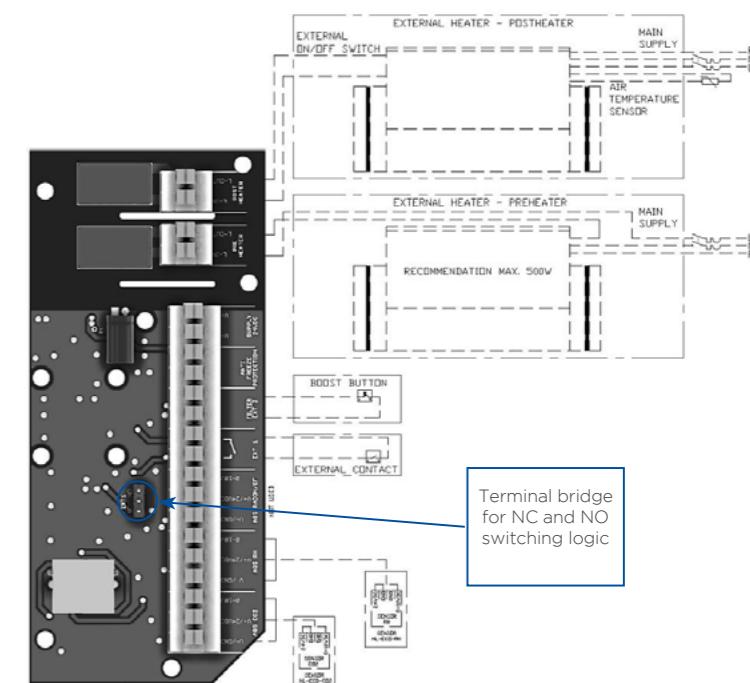
For correct operation of the unit in manual mode no additional components need to be connected. It is ready for immediate use after wall installation. For operation in automatic mode it is necessary to connect the air quality sensors CO<sub>2</sub> (NL-ECO-CO2) or humidity (NL-ECO-RH) accessories.

### Connection of electrical accessories

Spring terminals with manual locking are used for connecting the various components. Both stranded conductors (wires with ferrules) and solid conductors (wire) can be installed in the terminals with a cross-section ranging from 0.5 to 1.5 mm<sup>2</sup> and a stripping length of 10 mm.

Before inserting the wire into the terminal first press the orange locking button. Then insert the wire release the lock and check that the wire is properly secured by gently pulling on it.

If you need to remove the wire from the terminal follow the same procedure. Select the optimal conductor cross-section according to the cable run length.



## 6. CONTROLLER FUNCTIONS

### Controller operating states:

#### a) Stand-by Mode: Normal operating Mode

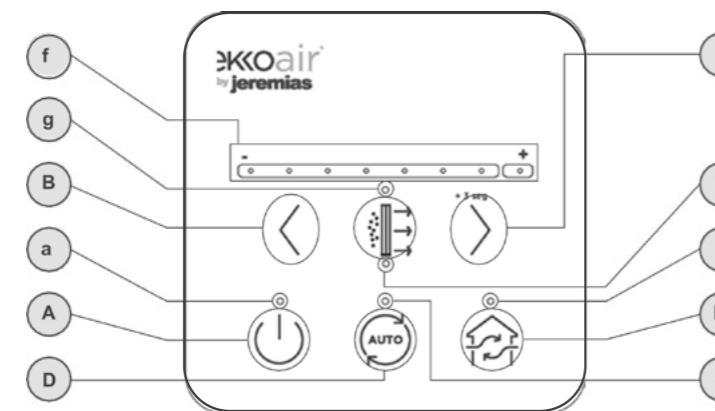
- Only the operational status is indicated – the unit is powered on, and the ON/OFF LED is illuminated (signal - position E). The unit is fully functional according to the user defined settings.

#### b) Control Mode 1: Press any button

- Shows active functions and unit settings (ventilation performance). The display persists for around 4 seconds, after which the controller reverts to standby mode.

#### c) Unit Adjustment Mode: Double button press

### Controller diagram



### Description of buttons and their functionality:

#### • “f” display showing the status of the 8 airflow levels

- 1st to 7th LED: Airflow levels according to the technical data table.
- 1st LED: EXT1 mode activated and connection signal (1 minute blinking).
- 8th LED: EXT2 mode activated and connection signal (1 minute blinking).
- 8th LED: Boost mode activated (fast blinking).

#### • Button “B” for reducing the unit’s airflow “<”

- Pressing it reduces the unit’s airflow.

#### • Button “C” for increasing the unit’s airflow “>”

- Pressing it increases the unit’s airflow.
- Pressing and holding for approximately 3 seconds activates the Boost function for 1 minute (brief blinking of all 8 LEDs).
- Pressing and holding the same button again for 3 seconds will turn off the Boost function.

#### • LED “a” indicator ON / OFF

- If it is on – the unit is running.
- If it blinks rapidly – the unit shuts down with a “short OFF” (the unit turns off after cooling but operates at minimum airflow). Automatic cooling starts.
- If it blinks slowly – the unit shuts down with a “long OFF” and stops after cooling. Automatic cooling starts.

#### • Button “A” ON / OFF

- Pressing “short OFF” for approximately 3 seconds – the device automatically starts the necessary cooling (about 3 minutes), LED “a” blinks rapidly. After cooling, LED “a” turns off, and the device operates at minimum airflow. Vacation mode.
- Pressing “long OFF” for approximately 6 seconds – the device automatically starts the necessary cooling (about 3 minutes), LED “a” blinks slowly. After cooling, LED “a” turns off, and the device powers off. If the device is off and LED “a” is not lit, press for approximately 3 seconds to turn on the device. The device returns to the mode it was in before powering off. CAUTION with starting EXT1 or EXT2 functions while the unit is off. Once started, the unit’s behavior will correspond to the activated EXT1 or EXT2 function.

#### • Botón “D” de encendido/apagado del modo automático - control según los sensores AQS

- The AUTO function allows you to immediately activate a preset higher or lower speed, known as the “DESIGN FLOW” (preset airflow).

- One touch: the preset speed starts immediately (factory setting: maximum airflow output).
- If the button is pressed for 6 seconds: the fan speed configuration menu opens, illuminating the speed bar. The “<” and “>” buttons are used to adjust the desired airflow output speed.
- 6 seconds after the last button press, the values will be saved and the unit will return to the previous mode.
- Sensores AQS conectados:
- On the first touch, the LED next to the button blinks 3 times to indicate that a sensor is not connected, then the LED turns off – standard function.
- The speed of the heat recovery unit will switch to the speed set in the DESIGN FLOW menu.
- With AQS sensors connected:
- On the first touch, the LED next to the button lights up to indicate that automatic mode is activated.
- Once the concentration threshold of the monitored substances is reached, the ventilation switches to the flow rate preset by the user as DESIGN FLOW.
- CO<sub>2</sub> - 800ppm.
- HR - 65%.
- The unit’s control system gradually reduces the airflow as the concentration decreases.
- The goal of the control system – ventilation – is to find the ideal ventilation level (airflow) based on the concentration of the monitored substance in the ventilated space. For this reason, the unit may ventilate for an extended period until the safe concentration limit is reached or the substance is fully ventilated.
- Once the concentration is reduced to the preset value, ventilation is reduced to minimum airflow.
- CO<sub>2</sub> - 700ppm.
- HR - 60%.
- When there is a ventilation demand from multiple sensors, the control system prioritizes the sensor with the highest ventilation demand.

#### • Button “E” By-Pass:

- LED “e” lights up, indicating that the By-Pass function is activated.
- It will activate if the By-Pass conditions are met.
- The By-Pass can be manually deactivated.
- LED “e” blinks: the By-Pass function cannot be started. The unit is in frost protection mode, so the function cannot be activated.
- LED “e” off: the By-Pass function is deactivated.
- Child lock – protection against unauthorized use:
- Press the button for approximately 6 seconds.
- LEDs “d,” “e,” and “g” will blink 3 times.
- No adjustments can be made on the controller; the status is indicated by a single blink of LEDs “d,” “e,” and “g.”
- WARNING: The EXT1 and EXT2 functions remain active.
- Desactivación del bloqueo para niños.
- Press button “E” for approximately 6 seconds.
- LEDs “d,” “e,” and “g” will blink 3 times.
- The controller becomes active again.

#### • LED “h” filter obstruction

- The red LED blinks, indicating that cleaning or replacement of both filters is necessary.
- This occurs after approximately 4400 hours (half a year) of unit operation.
- The unit’s function is not limited in any way.
- To reset the filter counter, press and hold buttons “D” and “E” simultaneously for 3 seconds.

