



ADVANCED PRO Control



INSTALLATION AND OPERATION MANUAL

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1. INTRODUCTION

1.1. Description

The **ADVANCED PRO** control is a versatile Plug&Play controller for air curtains, compatible with all models of:

- 2 or 5 ventilation speed
- Types of heating: unheated, water heated, electrical heated and direct expansion (DX).

Once connected, it detects the hardware, and configures itself automatically according to the air curtain model (ventilation speed and type of heating).

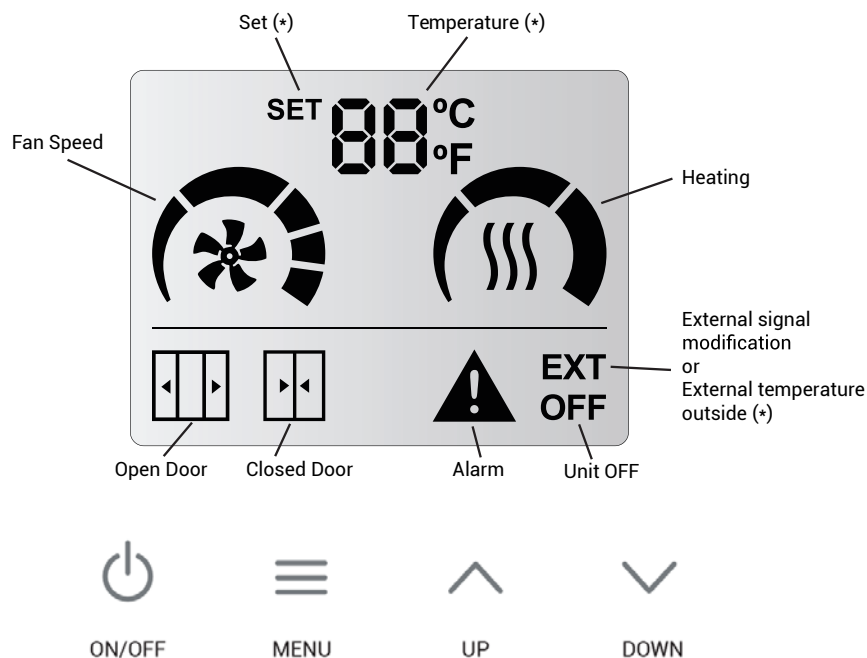
The **ADVANCED PRO** control adjusts the heating based on the desired set temperature, depending on the room temperature and the outside temperature (if an additional sensor is installed).

In addition, it allows to select different speeds and heating stages depending on the state of the door. It has a "Boost" function that to ensure comfort, increases the heating when the door is open.

1.2. Main Features

- Backlight LCD indicating fan speed, heating stage, room temperature, door state, external control, auto cooling, alarms and errors.
- Inbuild room thermostat to turn ON/OFF or modulate the heating according to set temperature.
- Ready for door contact with door delay to allow 2 different ventilation speed and heating stages depending on door state (open/close).
- 3 digital IN configured according to the program (ON/OFF external, ON/OFF heating, fire alarm, etc).
- Allows configuration of maximum limit of fan speed and heating when door is open and closed, the boost mode, the memory, etc.
- Filter/maintenance alarm by time.

1.3. Screen and Buttons



Room	
SET	
External	

- ON/OFF (circle with line)
- Use the arrows to set the temperature when electrical/water/DX heated air curtain (arrows)
- User Menu to configure (3 lines):
 - Door open and door close ventilation speed.
 - Door open and door close heating stage.
 - Set temperature when electrical/water/DX heated air curtain

2. USER FUNCTIONING

2.1. Parameter Variables

The display will know what functional limits exists and will only show the parameters that we can modify.

- **Temperature SET:** the desired temperature can be set between 10°C and 35°C. Below 10°C and above 35°C, you can select “no” and the heating will not be limited by temperature (manual mode).



- **Fan Speed:** user can select one fan speed for open and another for closed door. If the speed is set to 0 then the unit will be off.



Air Curtain Model	Open Door	Closed Door
2-speed	0-2	0-2
5-speed	0-5	0-5

- **Heating:** it depends on the air curtain model:

- *Only Air:* It has no heating.

- *Electrical heated:* the user can select between 0 and 3 heating stages depending on open and closed door and the fan speed selected.

2-Speed			
STANDARD		0	0
		1	0,1,2,3
		2	0,1,2,3
Exception 1000-9kW (Limited on the PCB of the air curtain)		0	0
		1	0,1,2
		2	0,1,2,3

5-Speed			
STANDARD		0	0
		1	0, 1
		2	0, 1, 2
		3	0, 1, 2
		4	0, 1, 2, 3
		5	0, 1, 2, 3

- *Water heated:* a single stage (ON/OFF) can be selected depending on open and closed door. If it has a proportional valve it can be regulated on 3 stages.

Single Stage (ON/OFF):

- OFF = 0 segments painted
- ON = 3 segments painted

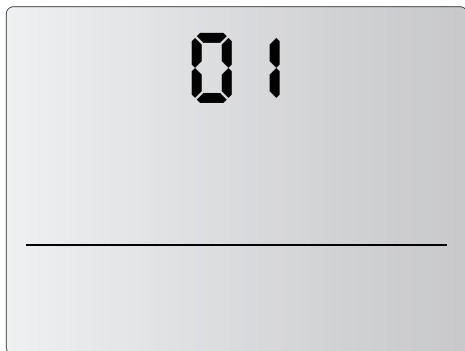
Proportional (only 5-speed):

- 0% = 0 segments painted
- 33% = 1 segment painted
- 66% = 2 segments painted
- 100% = 3 segments painted

2.2. Device Initialization

When the control is plugged into the power supply, the screen will show the firmware version, the program the equipment is working on and will scan the number of air curtains connected.

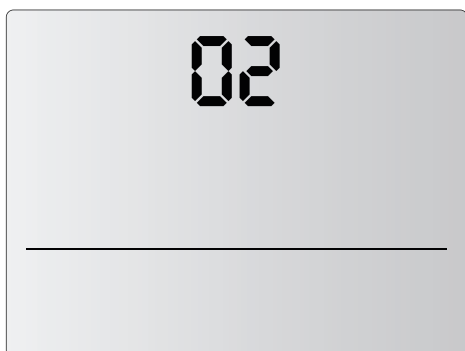
Example:



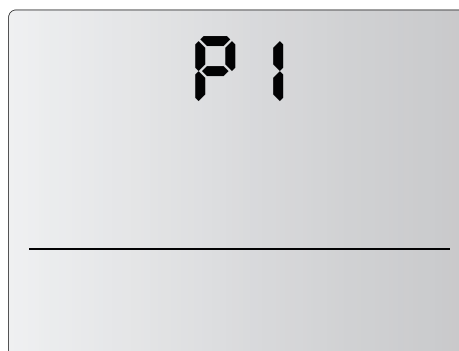
ADVANCED PRO version: 01



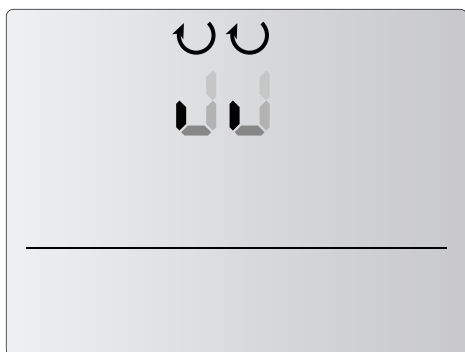
Space between version and sub-version.



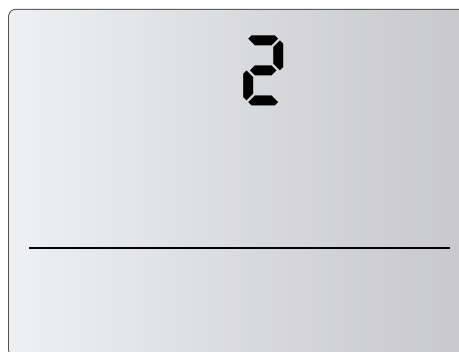
ADVANCED PRO subversion: 02



Unit Working in P1.



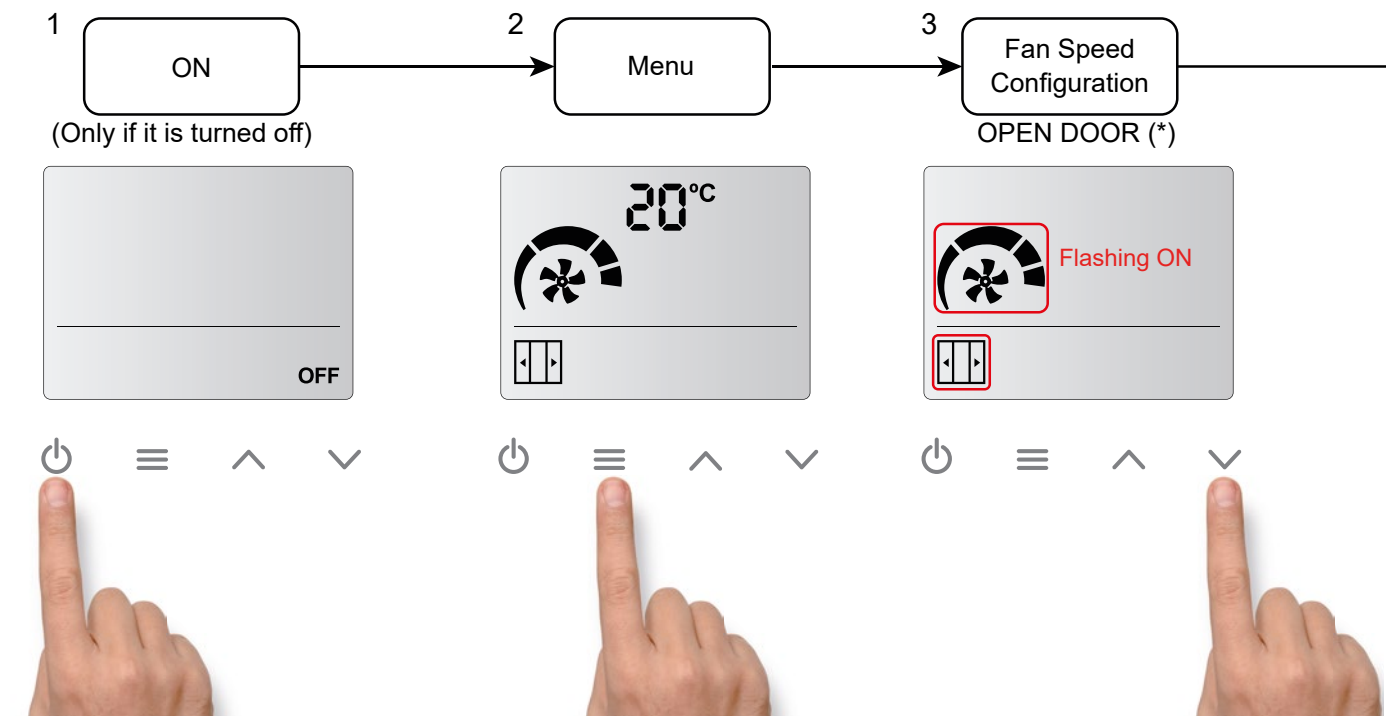
Scanning units.



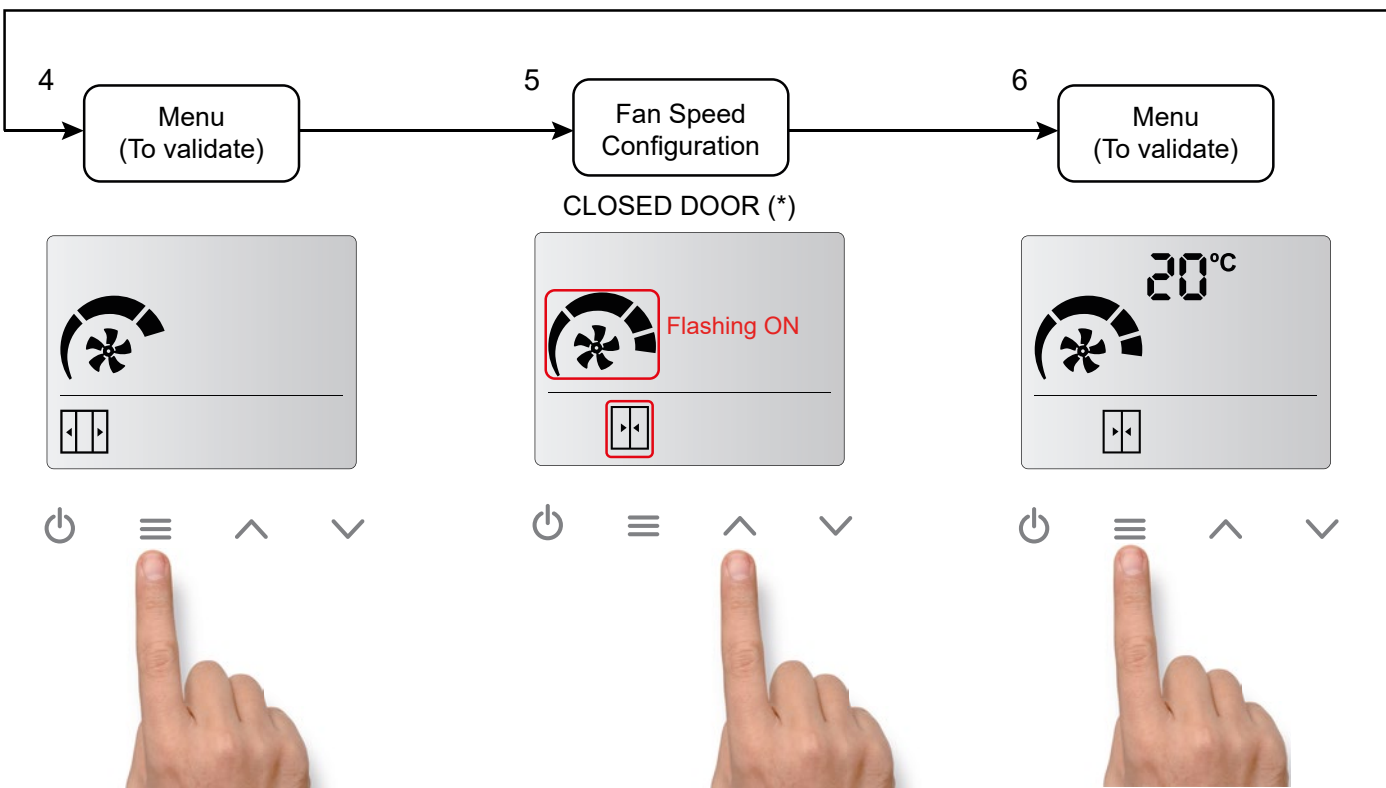
2 units connected to the control
(last number shown during initialization)

2.3. LCD User Menu Workflow

Menu Flow for Only Air (Non-heated) models:

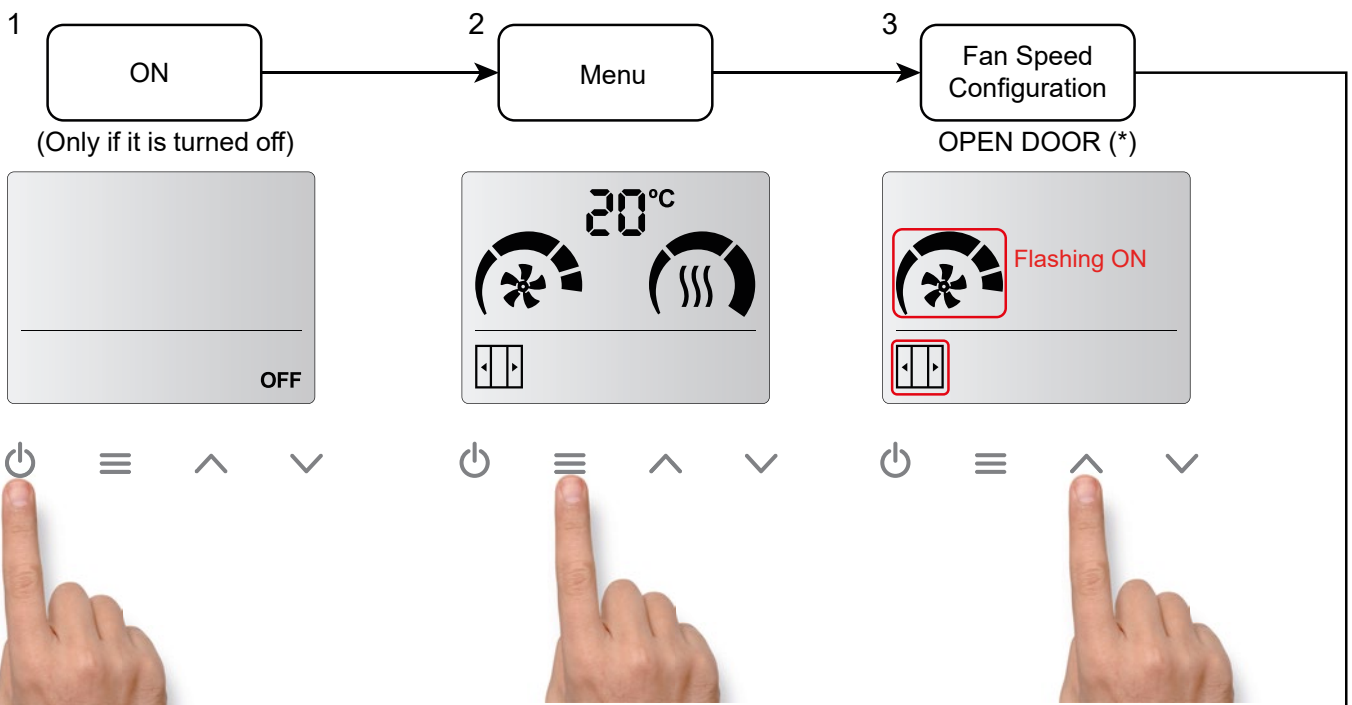


When turn on the unit or power supply is restored: if memory is ON, it will return to the configuration it had before turn off or external incident (power supply fail).

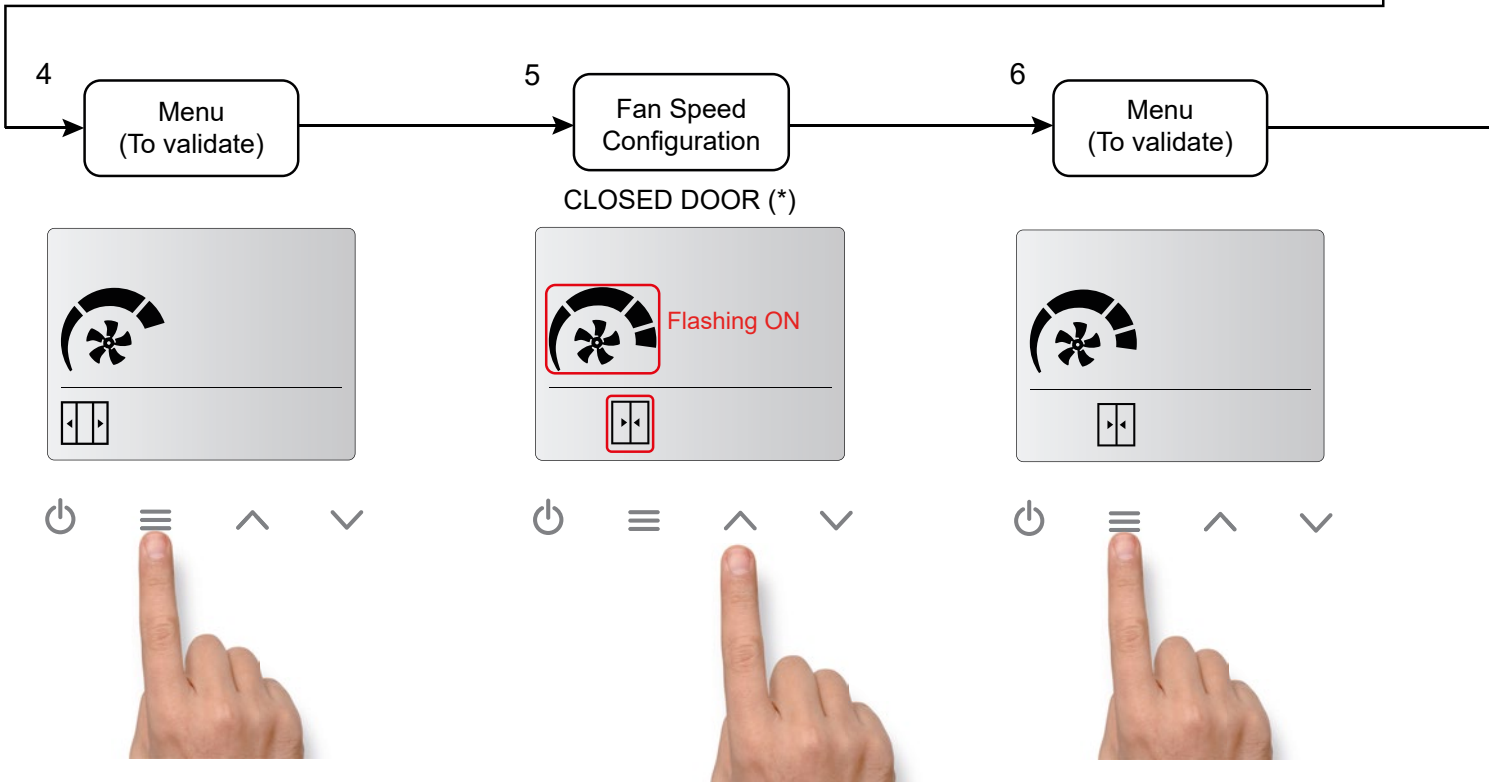


(*) If the door contact is not detected, the door open and door closed icons will not appear. Only one speed and one heating will be available.

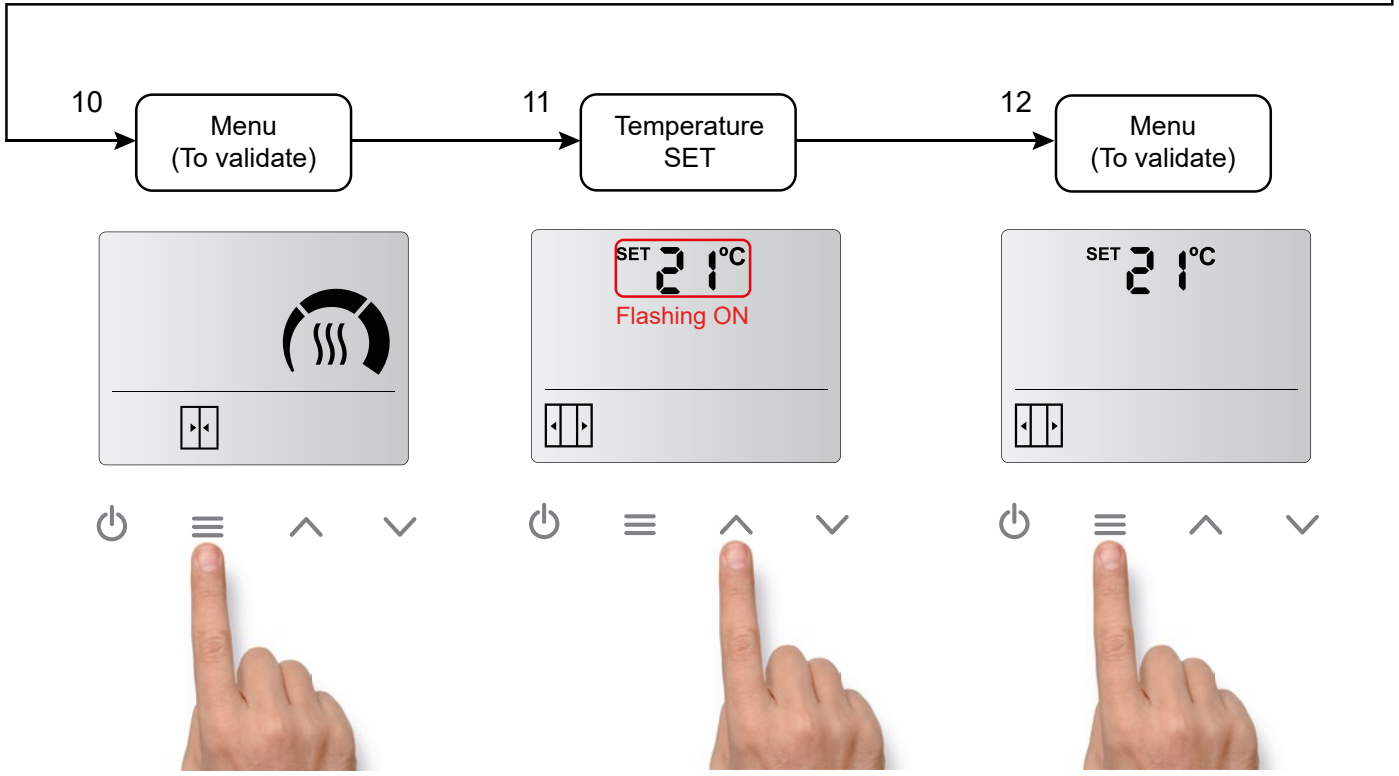
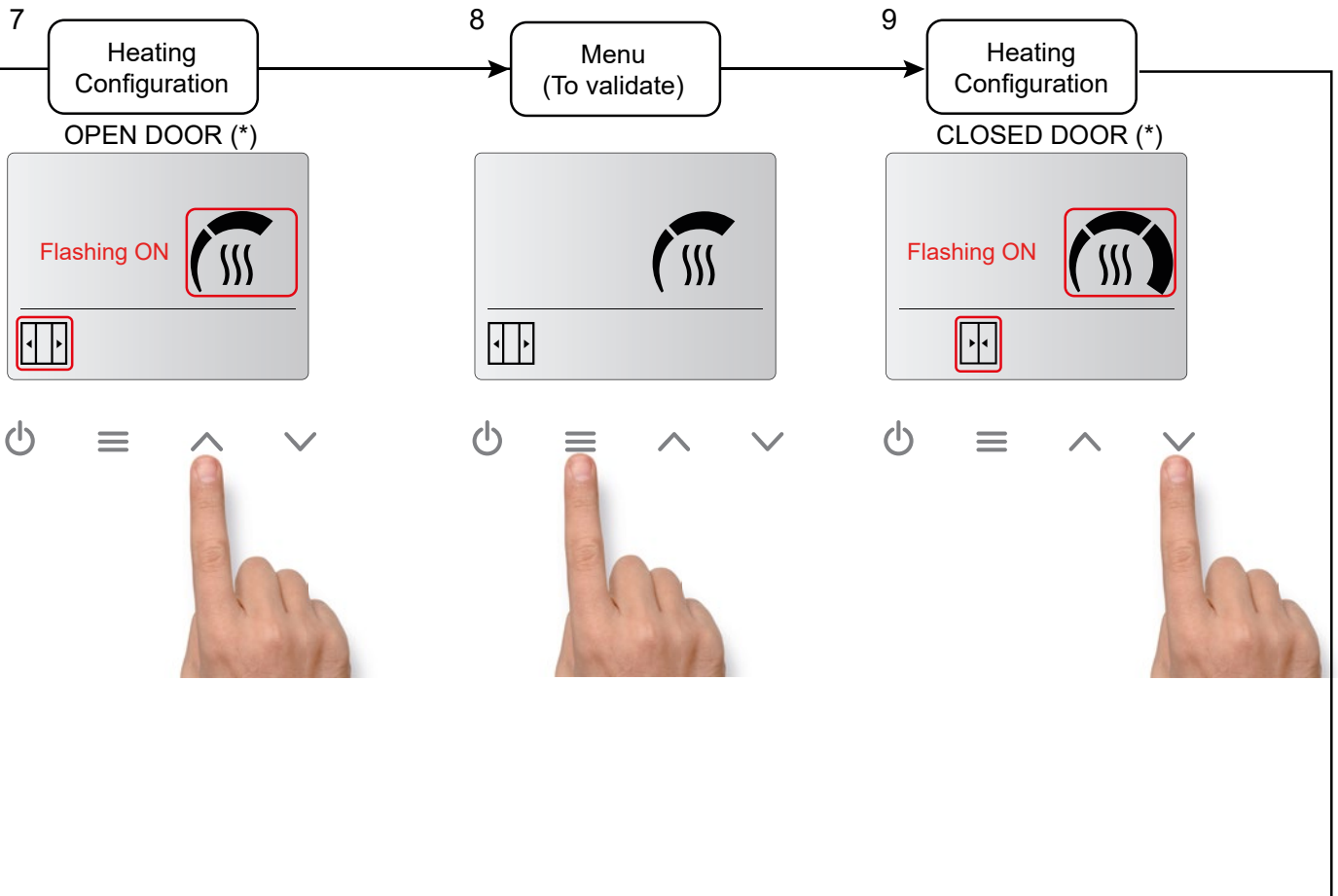
Menu Flow for heated air curtains models (it's the same process for electric heated, water heated or heat pump units):



When turn on the unit or power supply is restored: if memory is ON, it will return to the configuration it had before turn off or external incident (power supply fail).

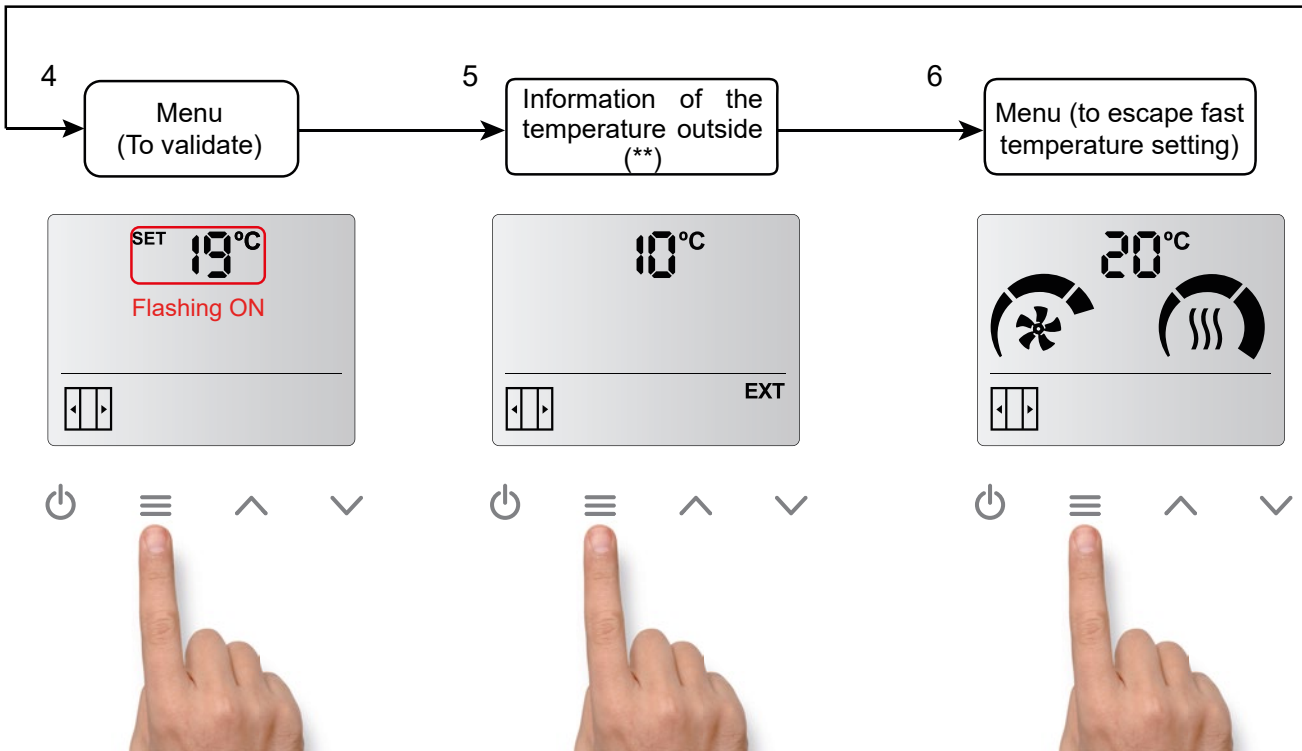
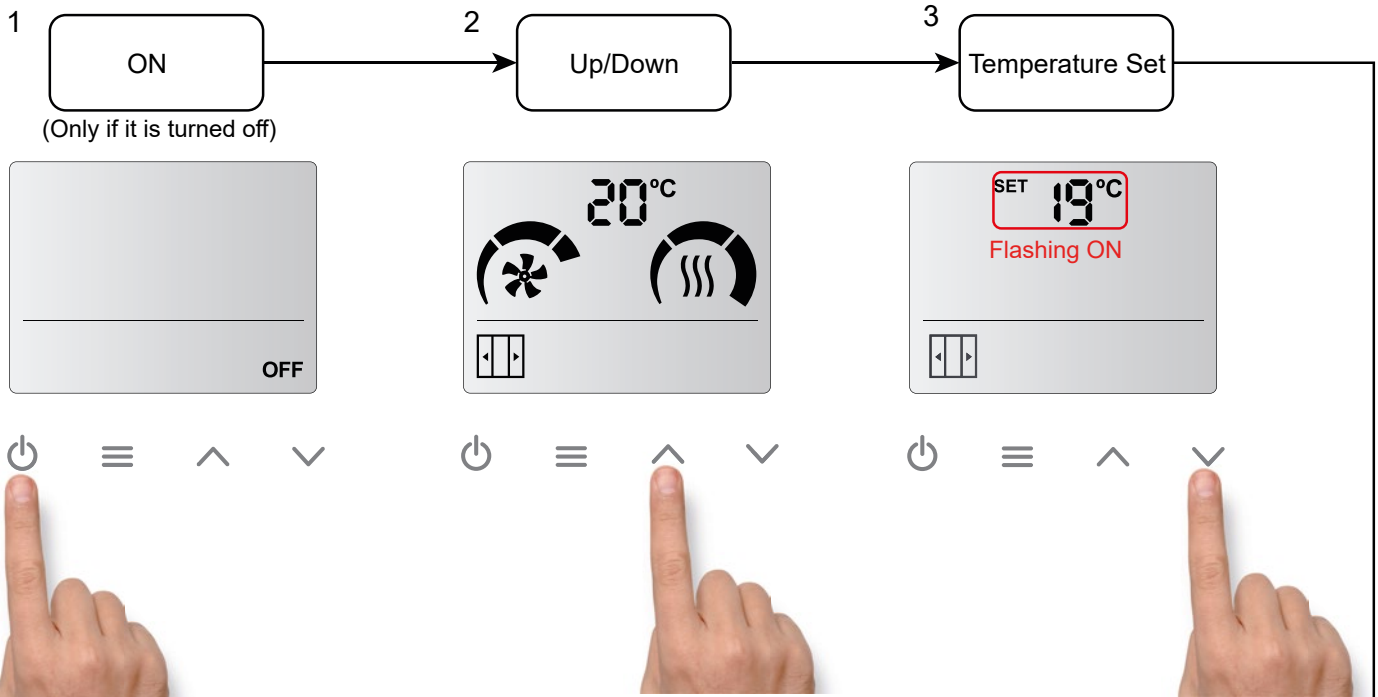


(*) If the door contact is not detected, the door open and door closed icons will not appear. Only one speed and one heating will be available.



(*) If the door contact is not detected, the door open and door closed icons will not appear. Only one speed and one heating will be available.

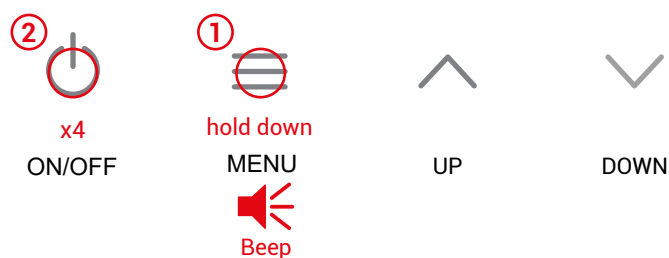
Fast access for temperature setting (only for heated models):



(**) Only if an outside temperature sensor is installed on the air curtain PCB.

2.4. Control Locking

The control can be locked, but the air curtain will still operate normally.
To lock the device, the user needs to press the following key combination:

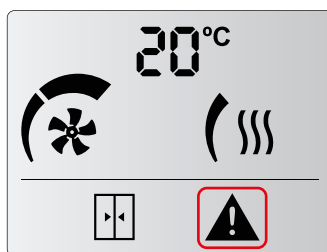


Hold down the menu button until the beep sounds and press the ON/OFF button 4 times and release the MENU button. Then it will be hear a higher-pitched beeping sound.

When the equipment is locked, we will not be able to carry out any action. This limitation also applies with the remote control.

For example, when pressing the menu, we will hear a lower-pitched beep indicating that the equipment is locked.

In addition, the alarm symbol shall appear on the display.



Flashing ON

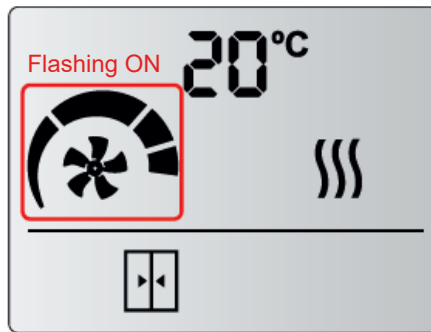
To **unlock the unit**, the user must repeat the same combination of buttons as for locking.
Then it will be hear a higher-pitched beeping sound, indicating that the control has been unlocked.

3. AUTOCOOLING AND EXTERNAL CONTROL

Autocooling:

Autocooling is only available for Electric heating only.

If the air curtain has been running with heating for more than 10 seconds at a time and the user switch it off, the ventilation continues ON (at the same speed before stop the control) up to a maximum of 90 seconds depending on the heating working time. The fan and speed stages icons will flash intermittently.



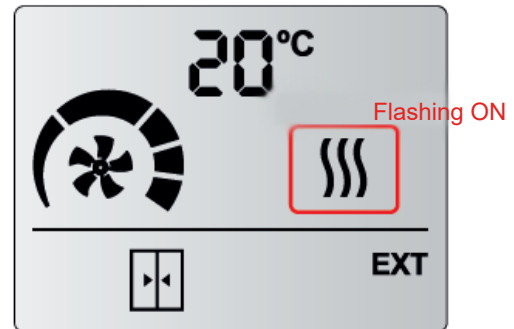
External control:

The "EXT" icon indicates that there is an external control to the unit and it is affecting the unit. There are two external signals available:

- **EXT OFF**: The unit has been stopped by External OFF contact. Not considered an alarm.
- **CALE OFF**: Heating OFF, stopped externally. Not considered an alarm.



EXT CONTROL OFF



CALE OFF

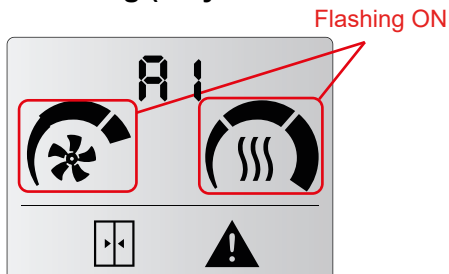
4. ALARMS AND ERRORS

To indicate an alarm (A) or an error (E), it will be displayed with a letter and a number in the same place as the temperature.

4.1. Alarms

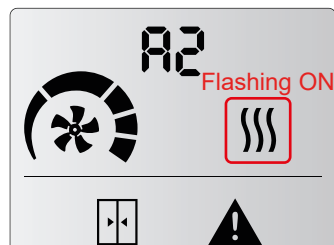
Alarms will remain fixed on the display because it affects to the device functioning.

A1 - Overheating (only electrical heated)



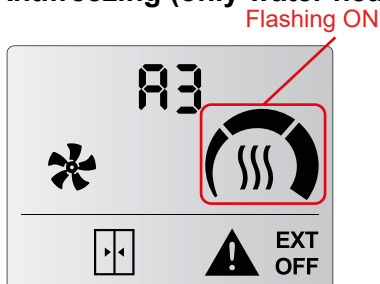
When the unit goes into overheating, it starts a process to cool it down. The ventilation starts to rise up to the maximum each 2 minutes. If overheating persists, the heating is turned down each 2 minutes until it is switched off. If it is still not solved, after 2 minutes heating is blocked and alarm A2 is activated (check A2).

A2 - Heating Blocked (only electrical heated)



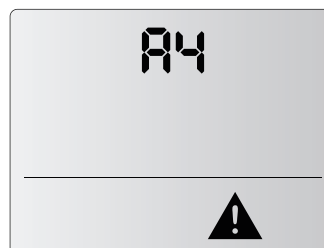
The heating is blocked and switched off. It is the overheating safety program. Service must check the unit and fix the problem to avoid internal damages. Once solved, reset the unit.

A3 - Antifreezing (only water heated)



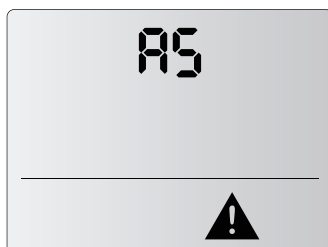
When ambient temperature is below antifreezing temperature set (5°C), the valve opens to protect the water coil and the fan stops functioning. It can be also activated by external antifreezing sensor connected to the PCB or a discharge temperature sensor installed on the air curtain PCB.

A4 - Communications Error



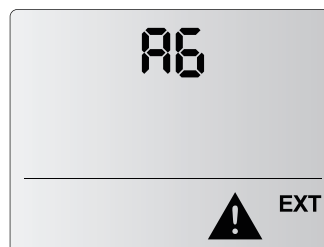
No unit found.

A5 - Inappropriate device



Wrong combination of 2 different heatings (electric with water or heat pump) It is only possible to mix unheated units with one type of heating units.

A6 - Fire Alarm

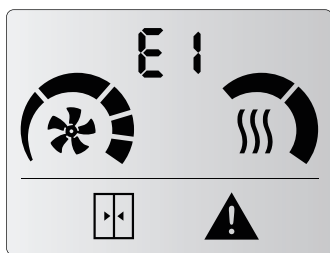


Stops and locks the unit. To unlock it, the power supply must be switched off. It is activated with DIN3 digital IN on the control unit.

4.2. Errors

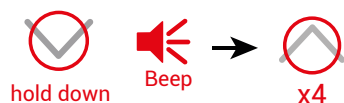
Errors will not remain on the display, they will alternate with the ambient temperature. Unit operation remains working normal or adapted.

E1 - Filter/maintenance

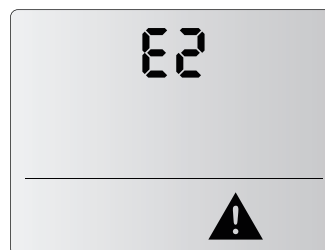


Indicates filter change or cleaning / maintenance.

This alarm is activated by time counter. It does not affect operation. To reset the counter:



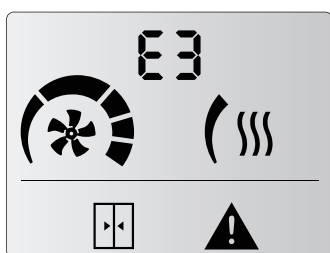
E2 - Missing device



One of the working units is not found. Please consult service to check the unit.

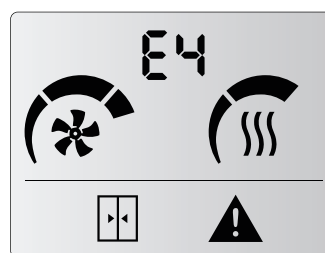
Other devices remain working normally. Check the connections between units to see that none is wrongly connected.

E3 - Missing temperature sensor



Missing temperature sensor or temperature out of range. Unit operation adapts and remains working according to inbuilt room temperature sensor.

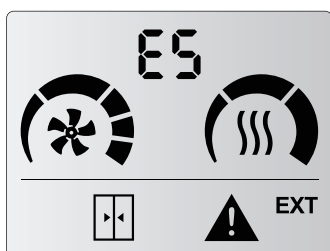
E4 - Fan Error



Some fan has stopped. Check the unit.

Unit operation remains normal. Not available in 2-speed range.

E5 - External Alarm



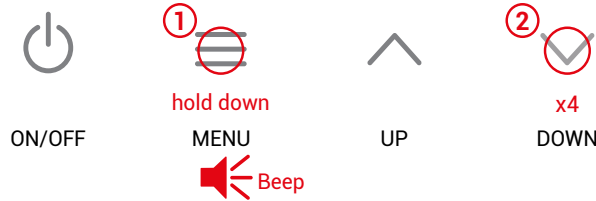
Indicates an external alarm.

Unit operation remains normal.

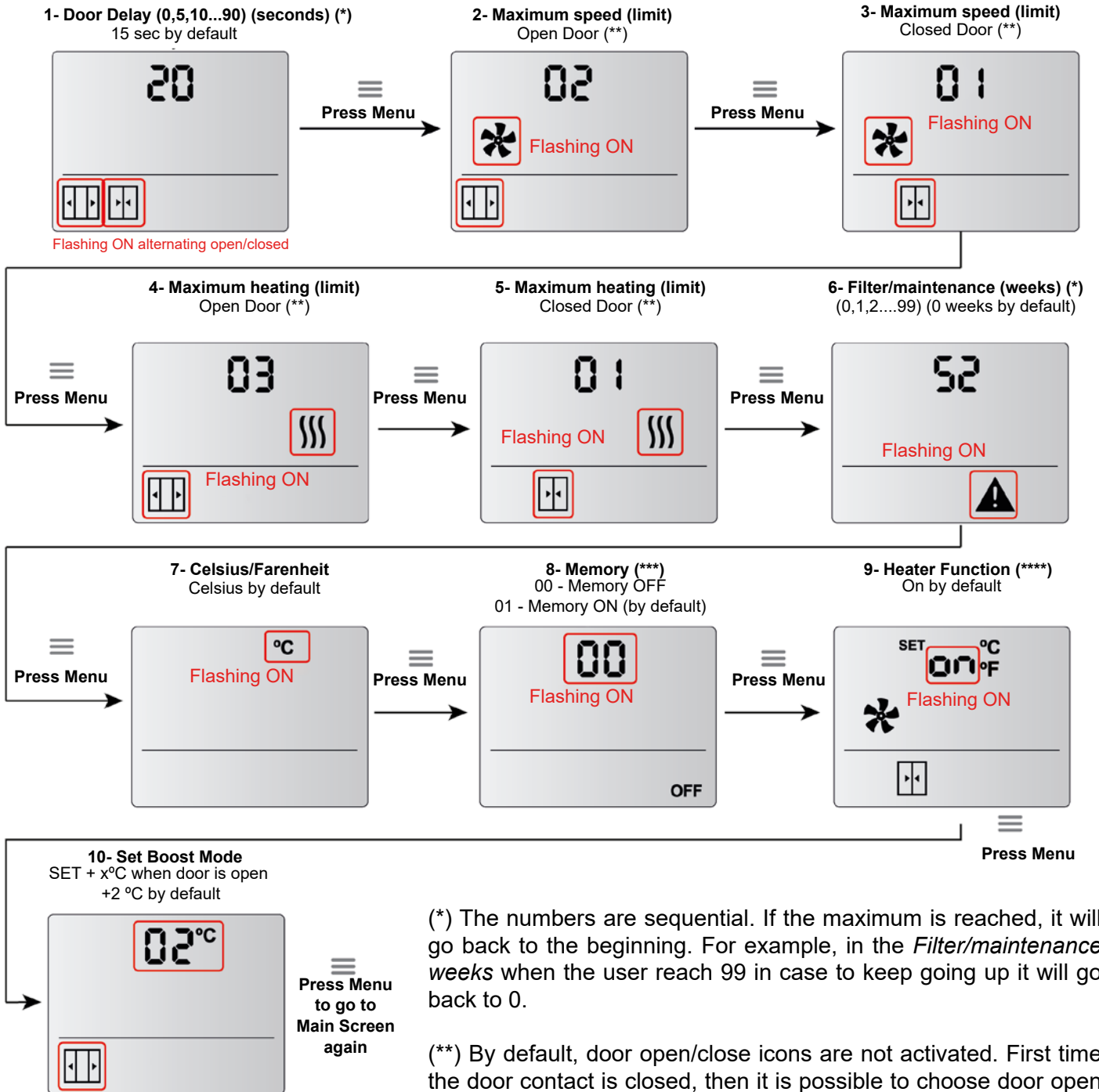
Only programmable with CLEVER PRO control (consult CLEVER PRO Manual).

5. CONFIGURATION

To access the advanced menu, hold down the menu button (until a beep is heard) then press the DOWN button 4 times and release the MENU button.



In this menu is possible to modify operation parameters of the air curtain like the door delay, the max speed and max heating with open or closed door, the frequency of filter maintenance, temperature units system used, memory or setting the boost mode.



(*) The numbers are sequential. If the maximum is reached, it will go back to the beginning. For example, in the *Filter/maintenance weeks* when the user reach 99 in case to keep going up it will go back to 0.

(**) By default, door open/close icons are not activated. First time the door contact is closed, then it is possible to choose door open heating/ventilation and door closed heating/ventilation.

(***) **Memory.** In a power failiure:

- If Memory is set as ON. Once power supply is restored, the unit will go back to work with the same parameters than before the failure.
- If Memory is set as OFF. The unit will remain switched off.

(****) **Heater Function.** Configurable Fan Status: When door is closed and room temperature is higher than SET temperature, fan can be set to continue ON and be ready for when the door is opened again, as an immediate protection. If function is set to OFF, the air curtain will stop if the same conditions are met.

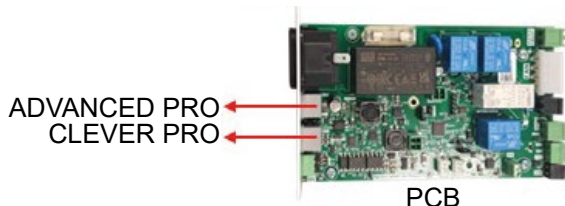
6. FIRMWARE UPDATE

UPDATE (AUX)

Slave mode to be updated by CLEVER PRO Control using an USB pen drive. Please consult.



To update the controller, the user must connect the jumper as shown in the image.



To update the control, ADVANCED PRO and CLEVER PRO must be connected to COM1 and COM2 ports from the air curtain's PCB. To complete firmware update, consult CLEVER PRO manual.



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AIRDOM05800-R1(10/24) ORIGINAL USER MANUAL
Airtècnics reserves the right to modify some of the specifications in this manual.