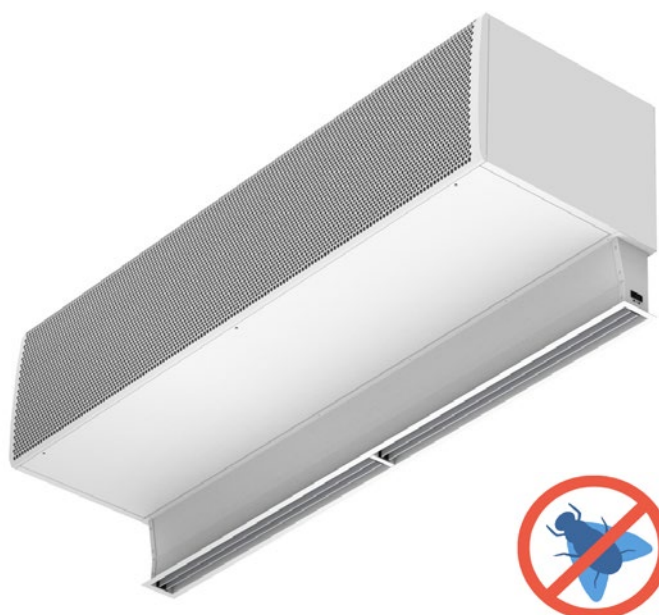


# Air Curtains: Fly K, KBB, KL, KXL



## INSTALLATION, OPERATION AND MAINTENANCE MANUAL



*Please, read these instructions carefully before attempting installation  
Deliver this manual to the final user.*

### SECURITY ADVISE SYMBOLS



*Attention, Danger, Safety Advice!*



*Danger from electric current or high voltage!*



*Injuries risk!*



*Danger! Do not stay underneath: Heavy load.*



*Important information.*



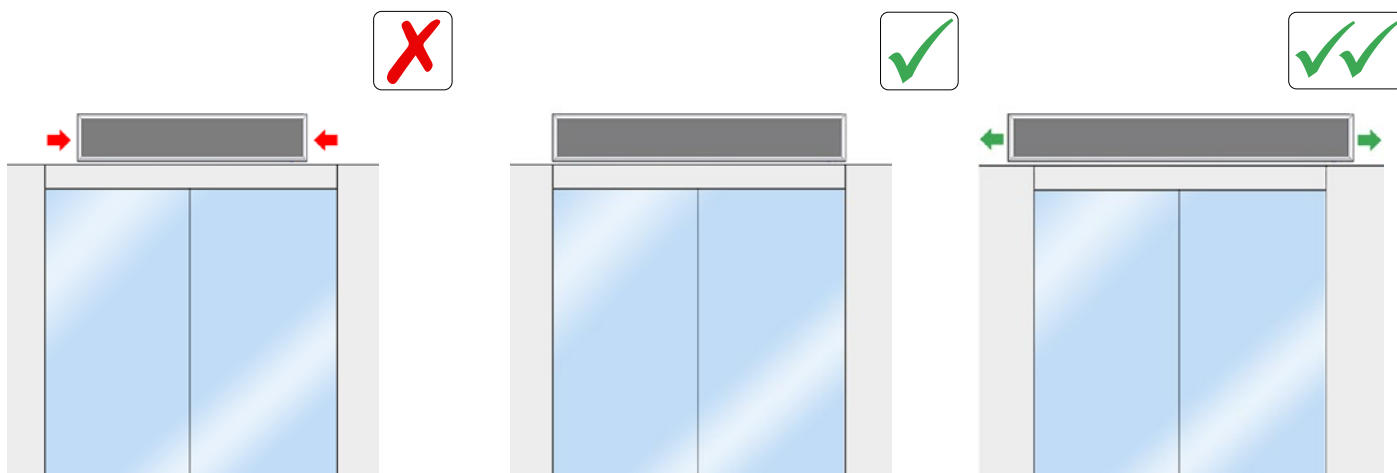
## INDEX

INSTALLATION .....	4
TRANSPORTATION AND STORAGE .....	11
OPERATING INSTRUCTIONS.....	11
Parameter Variables.....	12
Device Initialization .....	12
LCD User Menu Workflow.....	13
Control locking .....	14
Autoenfriamiento y control externo .....	15
Input/Output configuration.....	15
Configuration.....	16
Temperature sensor (aux) room/exterior .....	17
ELECTRICAL DIAGRAMS .....	19
DATASHEET.....	24
MAINTENANCE INSTRUCTIONS .....	32
REPAIRS AND REPLACEMENTS .....	34
TROUBLESHOOTING .....	36
DECLARATION OF CONFORMITY.....	37
IDENTIFICATOR .....	39
GUARANTEE .....	39

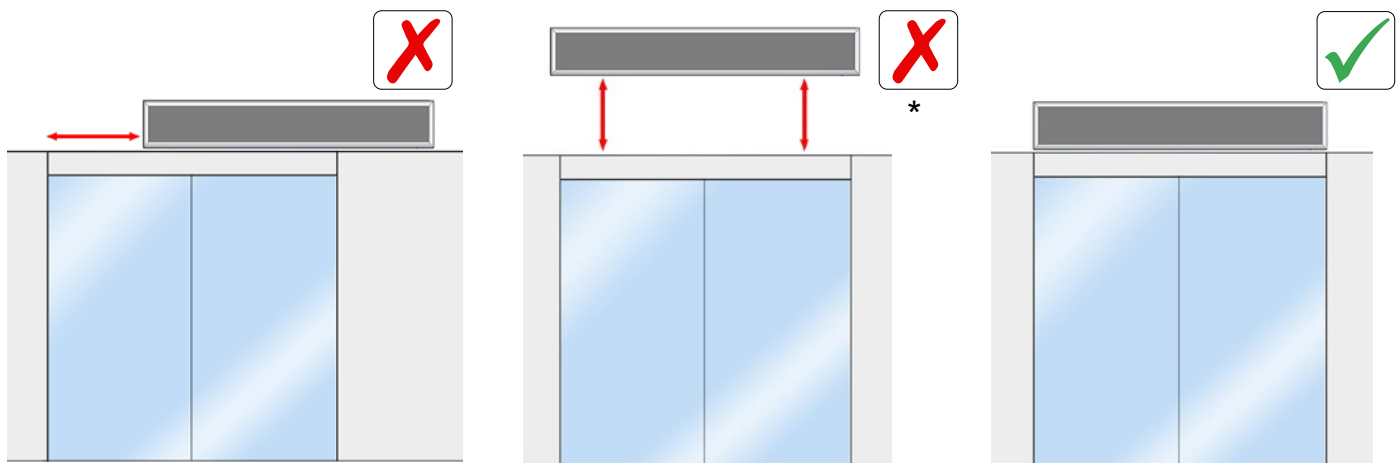
# INSTALLATION

## Tips and recommendations for a good installation

### LENGTH

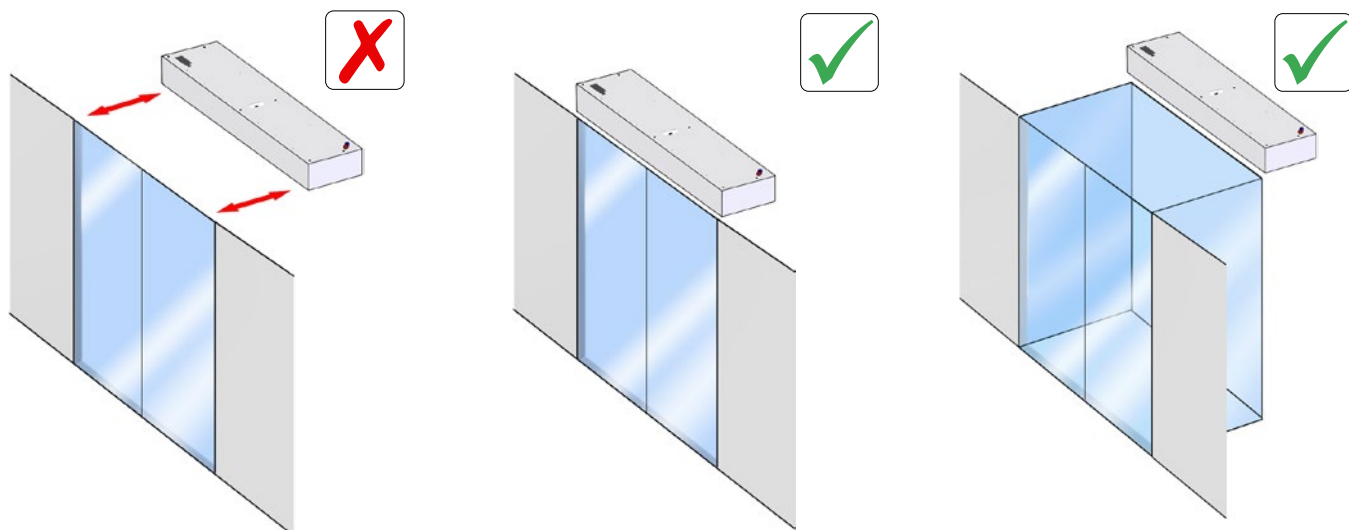


### CENTERED / HEIGHT

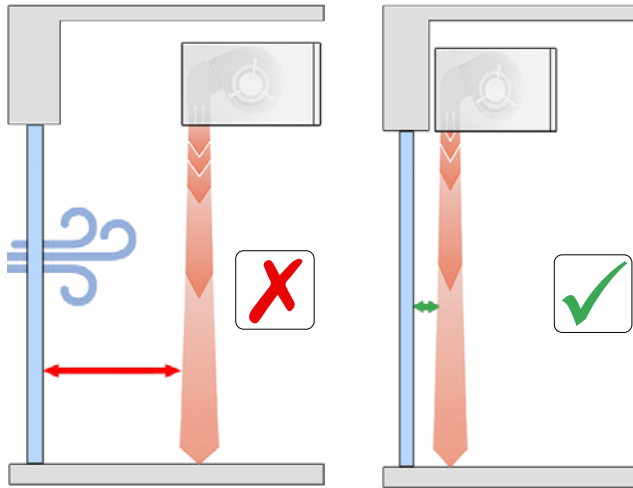


(\* Unless it has been designed to be installed at that height.

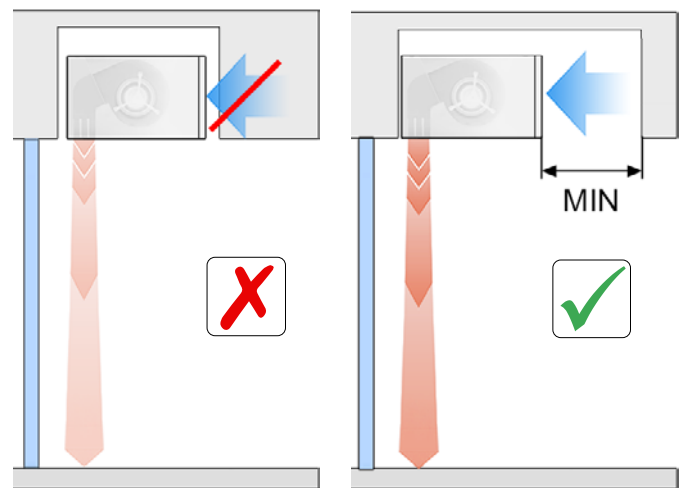
### DOOR DISTANCE



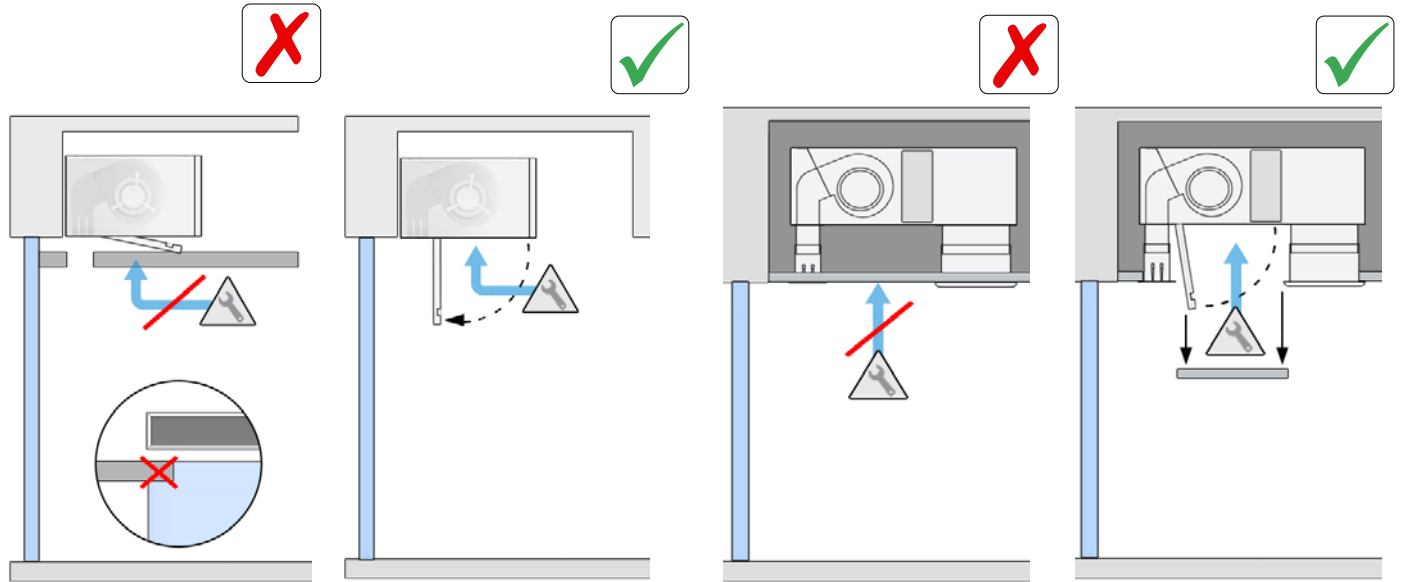
### AIR DISCHARGE



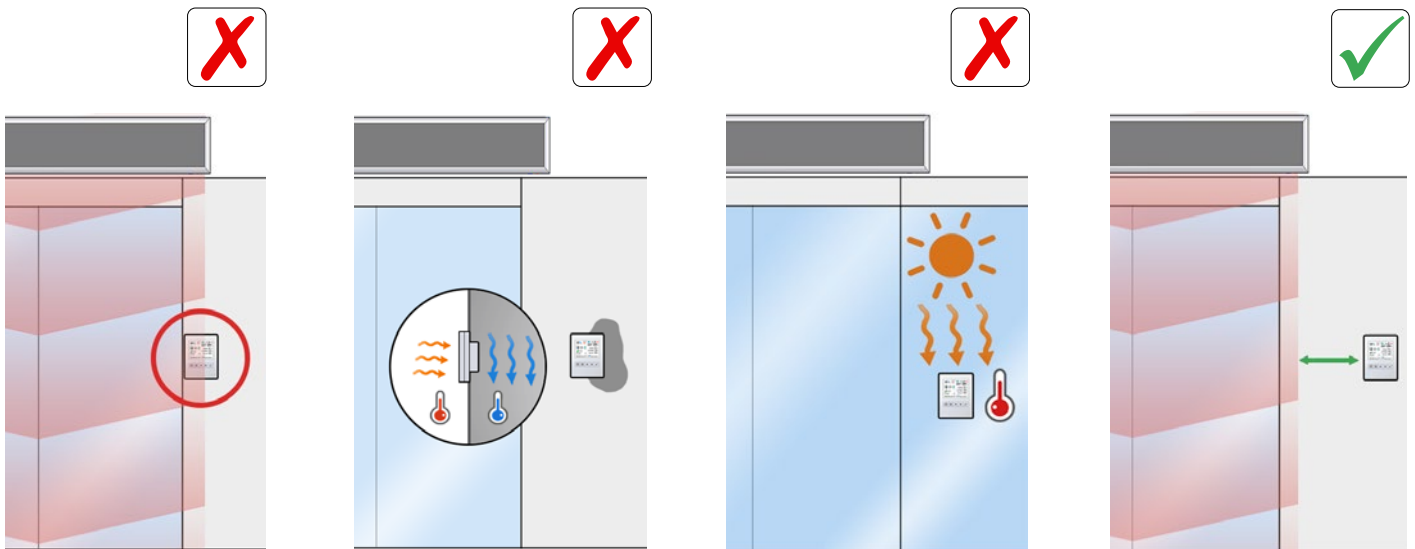
### AIR ASPIRATION









### MAINTENANCE ACCESSIBILITY



### CONTROL (CLEVER)



## Fly K, KBB, KL, KXL Model

	<p><b>Installation work, connection, disconnection, electrical wiring mechanical maintenance and service must be carried out by qualified personnel only, following this instruction manual and in compliance with the applicable standards. If the unit is operated with additional controller, please consider its specific instructions.</b></p>
	<p><b>Each machine must have an electrical protection system (grounding, differential, etc.) according to the regulations of each country.</b></p>
	<p><b>The cable used by the installer must comply with the country's regulations, and the cable section must support the working point of the equipment at maximum power.</b></p>
	<p><b>Do not expose electrical parts to water, moisture or corrosive environments.</b></p>
	<p><b>Maintenance or installation work must always be carried out without voltage, disconnecting the differential.</b></p>
	<p><b>There is no need to open the service door to connect the air curtain. All connections (power supply, control, water pipes when existing) and fixations are external. They are placed on top or lateral of the units. See how to open service door at repairs section.</b></p>

### Aplicación y recomendación de instalación

FLY air curtains are used to prevent insects from entering the building.

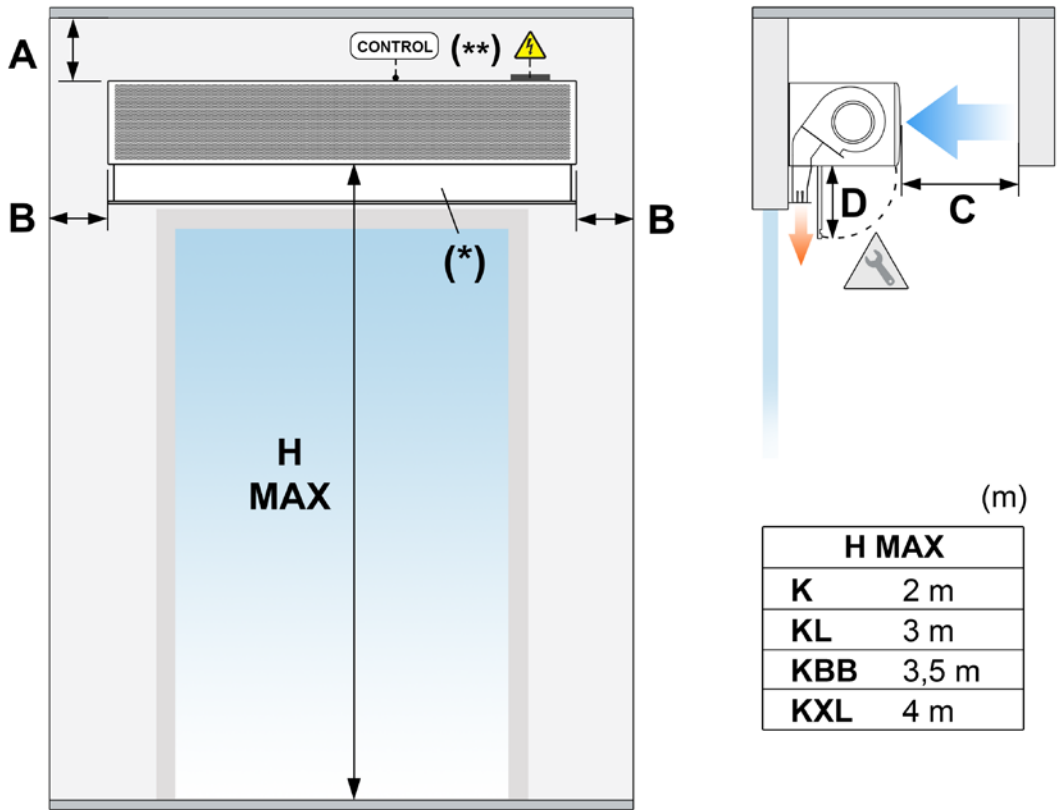
To substantially reduce the entry of flies and other flying insects into the building, a high velocity air jet is required (standard climate separation curtains are not valid).

FLY air curtains are specially designed to comply with NSF/ANSI Standard 37 "Air Curtains for Feed Inlets and Feed Service".

The presence of these insects in beverage and food production plants, restaurants, soup kitchens, supermarkets, hospitals and other food service premises can lead to food contamination and consequently endanger public health.

Installation recommendations:

- Respect the maximum installation height according to the catalog.
- Air barrier must cover the entire width of the opening.
- It must be installed just above the door (not separated from it).
- When the door is open, the curtain must be at maximum speed.
- In the case of indoor odors that encourage insects to enter, the curtain should be installed outside so that it works with clean air. If it is placed outside, it should be protected from rain with a roof to prevent the curtain from getting wet.



(m)

H MAX	
<b>K</b>	2 m
<b>KL</b>	3 m
<b>KBB</b>	3,5 m
<b>KXL</b>	4 m

(mm)

	<b>A(MIN)</b>	<b>B(MIN)</b>	<b>C(MIN)</b>	<b>D</b>
<b>K</b>	100	10	200	226
<b>KL</b>				260
<b>KBB</b>			404	
<b>KXL</b>			415	

H MAX. Maximum recommended range, MIN. Recommended minimum distance

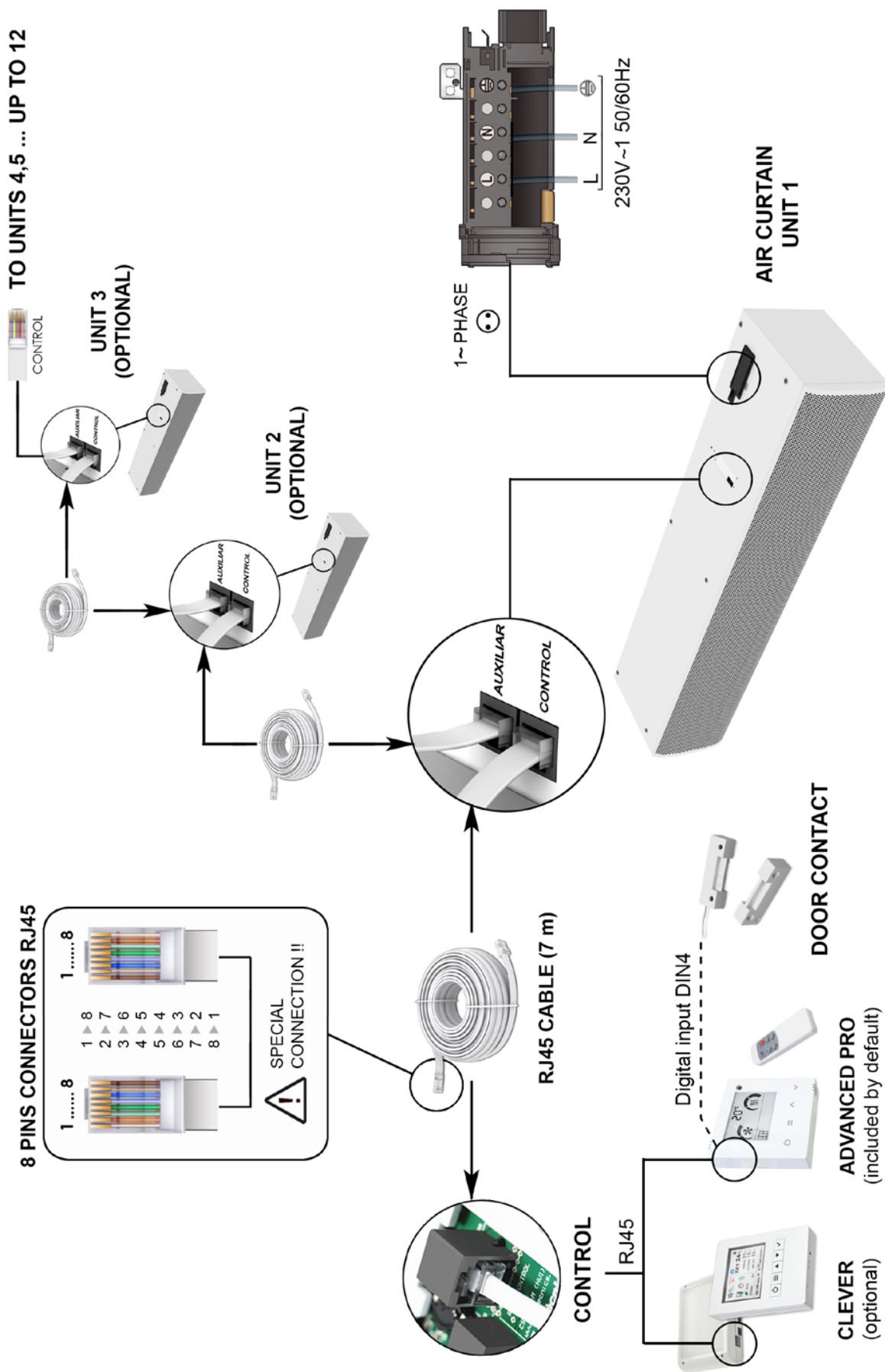
(\*) Standard equipment. Upon request, this distance can be reduced to 10 mm when the connections are located inside the equipment

The minimum recommended distance between the suction grille and any obstacle is 200 mm (Dimension C)

Dimension D: service opening distance.

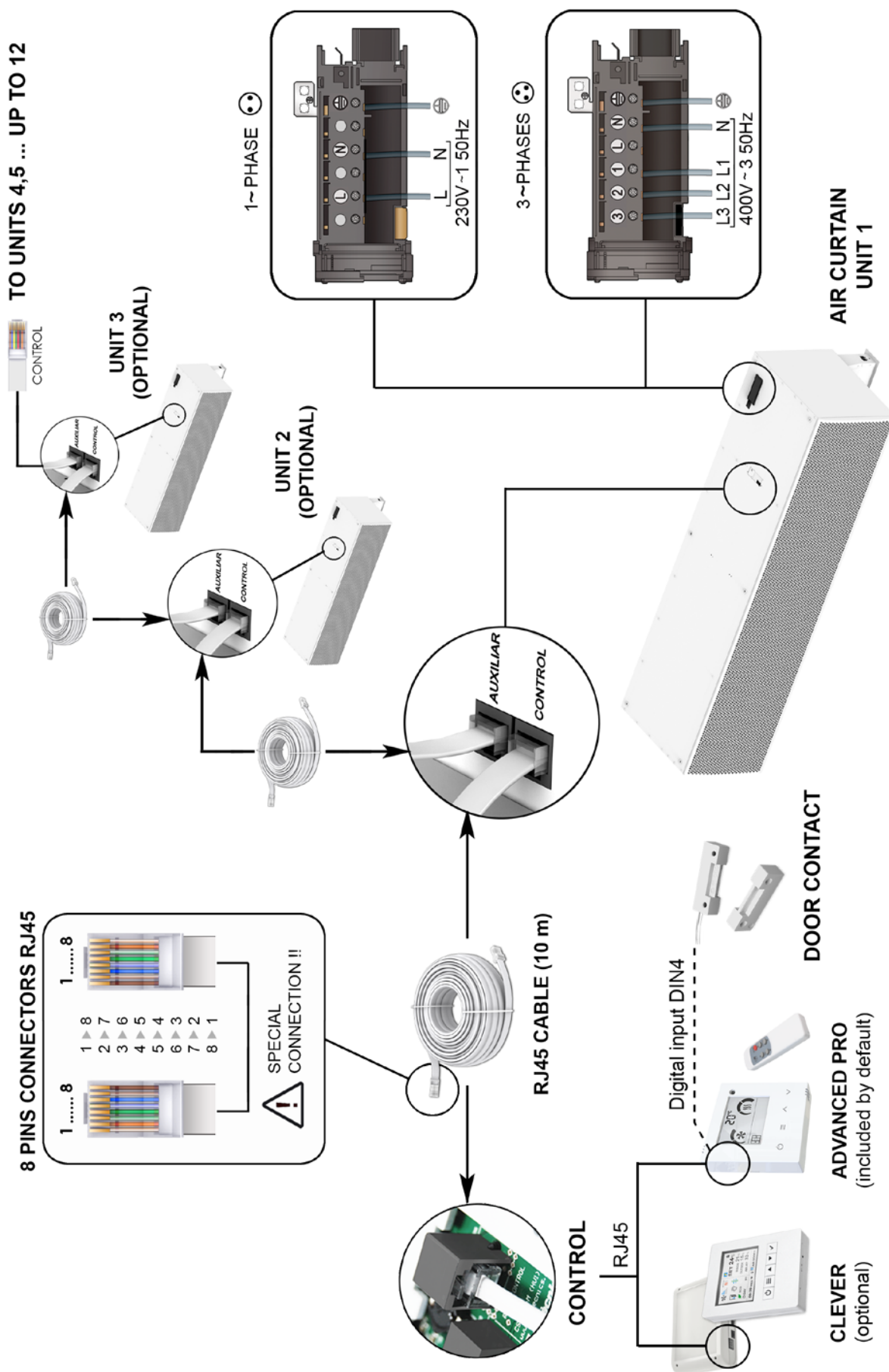
# Connection diagram

## Fly K, KBB



# Connection diagram

## Fly KL, KXL



## Power supply

To connect the device to power, there is a black junction box at the top of the exterior of the air curtain.

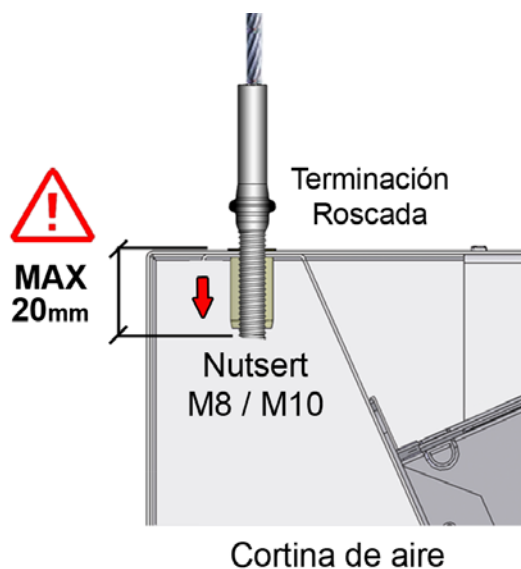


For curtains without heating or with water heating, the curtain must only be connected to a 230V single-phase current for the operation of the fans.

## Fixings

The curtain has several external fastening points depending on the weight and length (see situation in the model characteristics section).

Generally, air curtains are installed horizontally. For vertical installation, use the feet kit (see accessories section). The anchor must be sized according to the weights of each curtain indicated on the technical data page. The installation can be done using threaded rods, tensioners or other supports (see available supports in the accessories section).



## Regulator and board

To connect the controller to the curtain, there is a connector located on the top of the outside of the air curtain. It is not necessary to open the curtain to connect it, except for internal connections. Use the 7 meter RJ45 cable supplied with the equipment. The communication between the controller and the board is digital and low voltage.



## TRANSPORTATION AND STORAGE



**Warning! Heavy load.**  
**Do not stand under the suspended load during transportation or assembly.**

Store in a dry place protected from the environment. If the package is opened, cover the curtain to protect it from the dust. Do not step on or place heavy loads on it to avoid damage to the material. Storage temperature between -20 °C and +40 °C.

When transporting the material, you must ensure that it is not damaged by the forklift. (possible penetration of the fork in the packaging). Observe the instructions on the packaging for correct manipulation of the product.



## OPERATING INSTRUCTIONS



**For safety, the air curtains must never be stopped by disconnecting the current, always do it through the controller. If the power is turned off to turn off the shade, or within ten minutes of turning it off with the controller, internal components may be damaged.**

### Characteristics of regulation boards

Depending on the type of fan, the air speed is regulated by:

- AC (MG): 110 - 230 V voltage range.
- EC (ECM - ECG): from 0 - 10V DC voltage range.

### **Parameter Variables**

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

- **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.

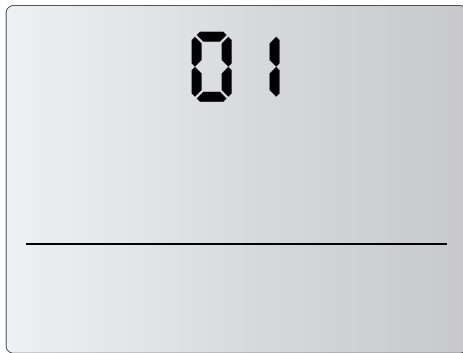
Air Curtain Model	Open Door	Closed Door
2-speed	0-2	0-2
5-speed	0-5	0-5

To be able to use the new ADVANCE PRO RJ45 control with old PCB, the control must be configured beforehand according to the air curtain model.

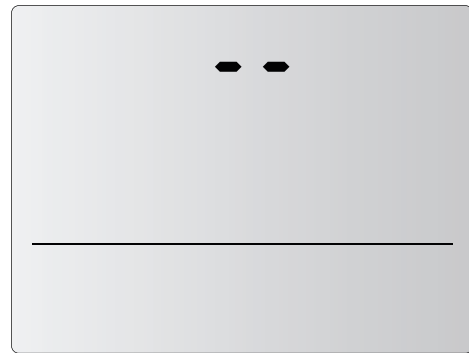
### **Device Initialization**

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.

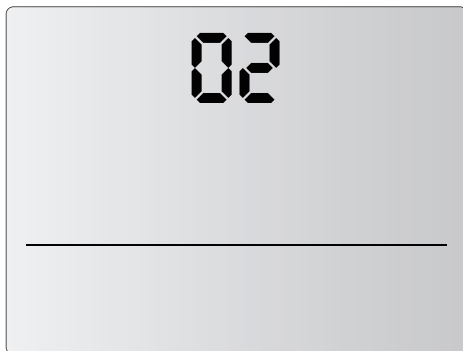
Ejemplo:



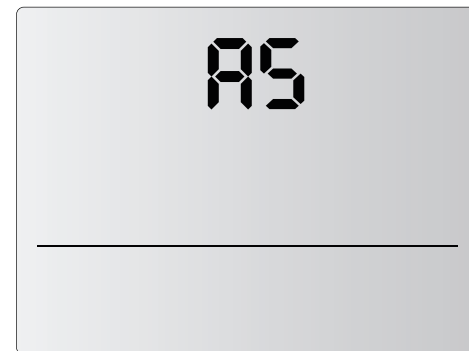
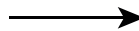
ADVANCED PRO RJ45 version: 01



Space between version and sub-version.



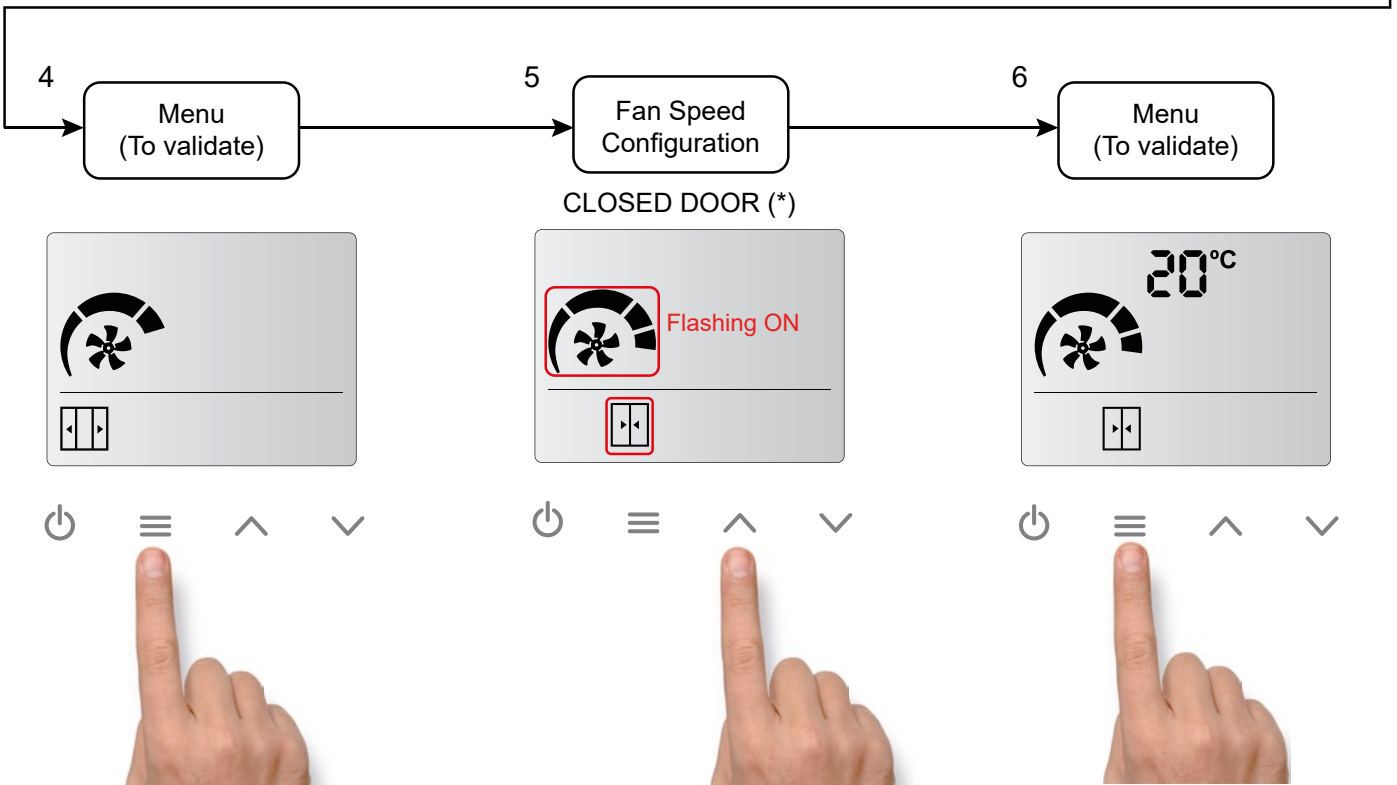
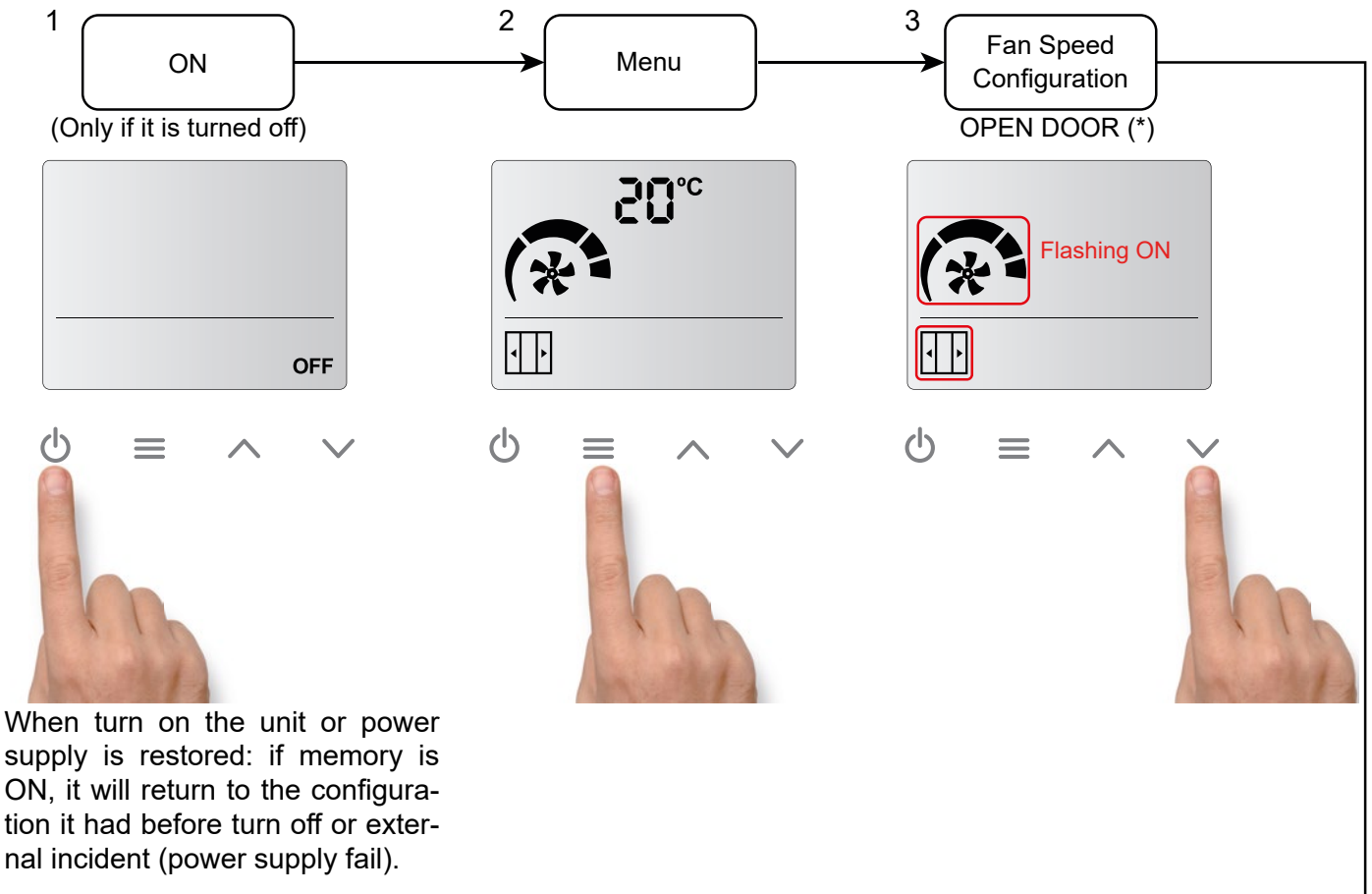
ADVANCED PRO RJ45 subversion: 02



2-speed and 2 stages Electrical heating Model

## LCD User Menu Workflow

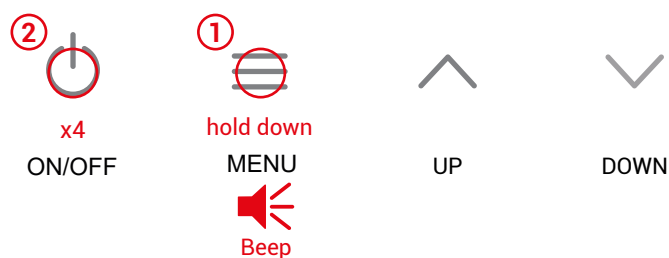
### Menu Flow for Only Air (Non-heated) models:



(\*) 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.

## 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:

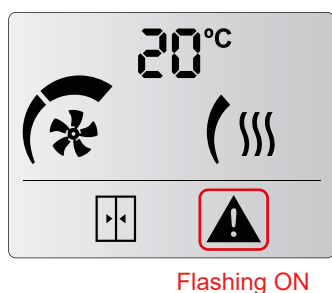


Hold down the menu button until the beep sounds and press the ON/OFF button 4 times and release the MENU button. Then it will be heard a higher-pitched beeping sound.

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.



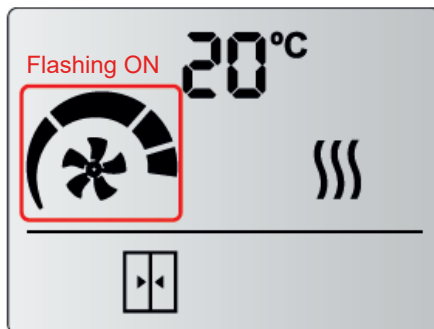
To **unlock the unit**, the user must repeat the same combination of buttons as for locking.  
Then it will be heard a higher-pitched beeping sound, indicating that the control has been unlocked.

## Autoenfriamiento y control externo

### Autocooling:

Autocooling is only available for Electric heating only.

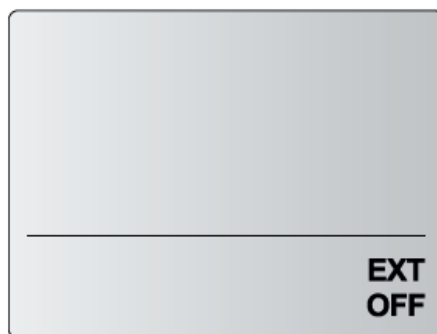
If the air curtain has been running with heating for more than 10 seconds at a time and the user switch it off, the ventilation continues ON (at the same speed before stop the control) up to a maximum of 90 seconds depending on the heating working time. The fan and speed stages icons will flash intermittently.



### 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.

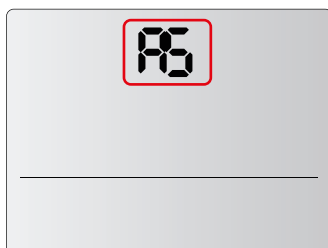


EXT CONTROL OFF

## Input/Output configuration

As shown in the initialization section, each air curtain model comes with a predefined program. The control configures the connected inputs and outputs differently depending on the selected model.

### A5 - Only Air. 5-speed stages.

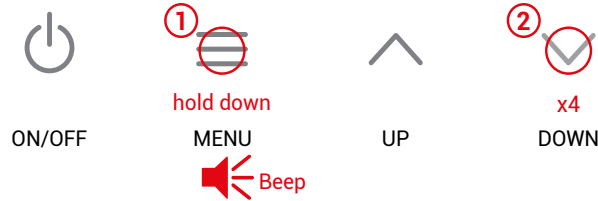


#### Digital Input:

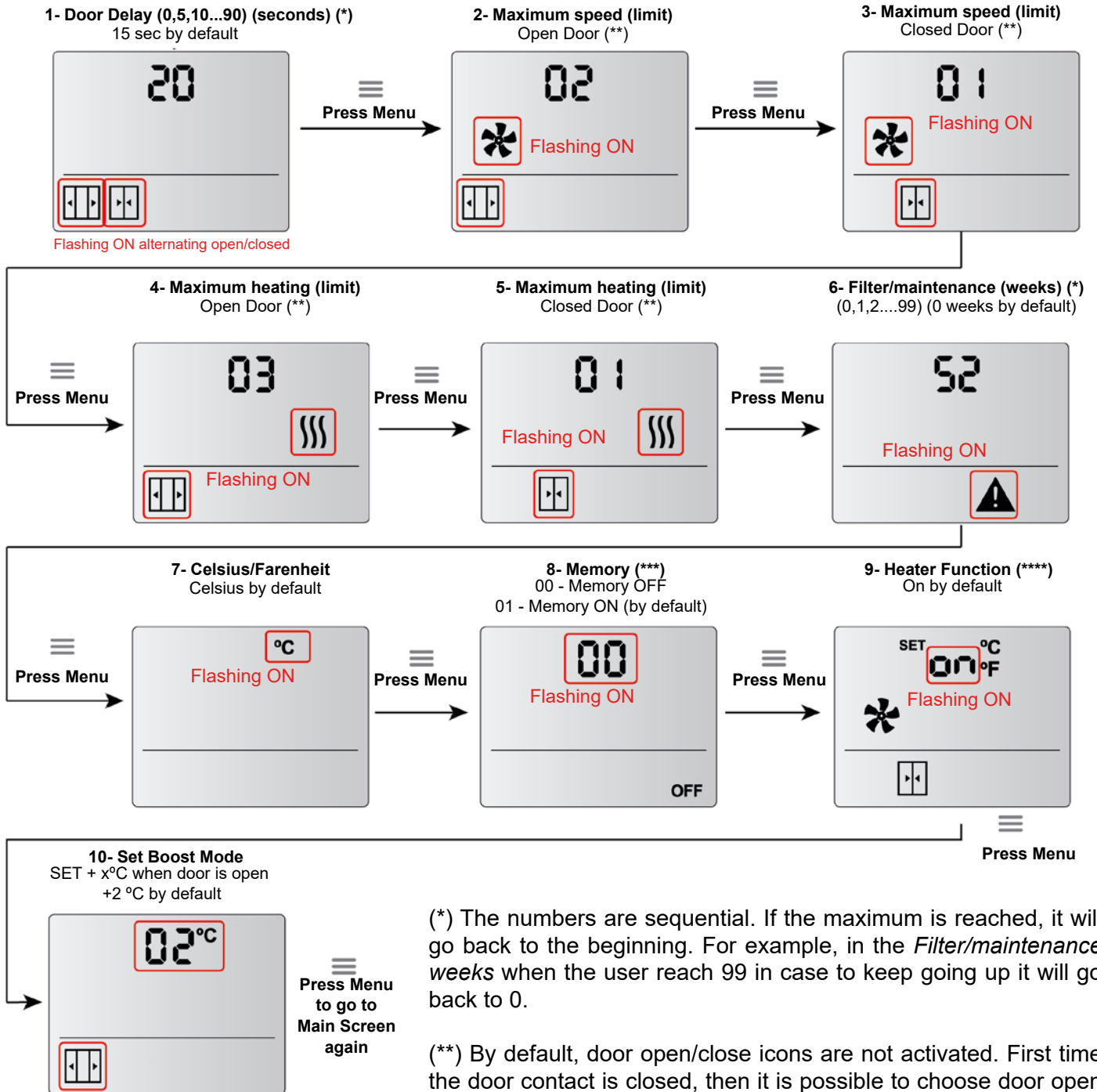
DIN1 - OFF  
DIN2 - n/a  
DIN3 - n/a  
DIN4 - Door  
DIN5 - n/a  
DIN6 - n/a  
DOUT - n/a

## 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.

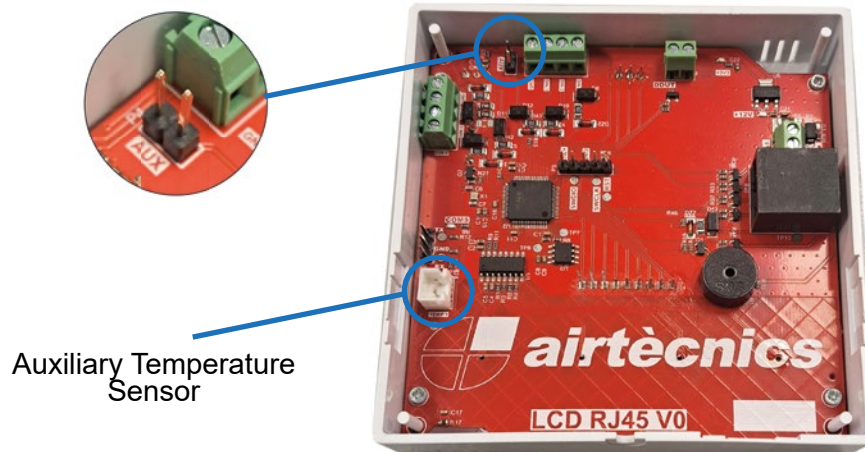
## Temperature sensor (aux) room/exterior

The functionality of this sensor depends on whether the AUX jumper is connected or not.

### - Without jumper:

Room temperature - inbuilt temperature sensor

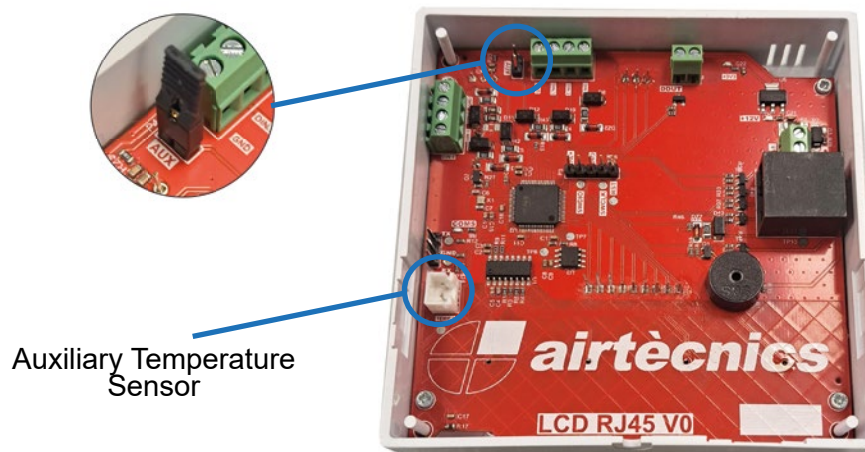
Outside temperature - auxiliary temperature sensor (optional)



### - With jumper:

Room temperature - auxiliary temperature sensor

Outside temperature - not available



External = Outside

## Special regulators

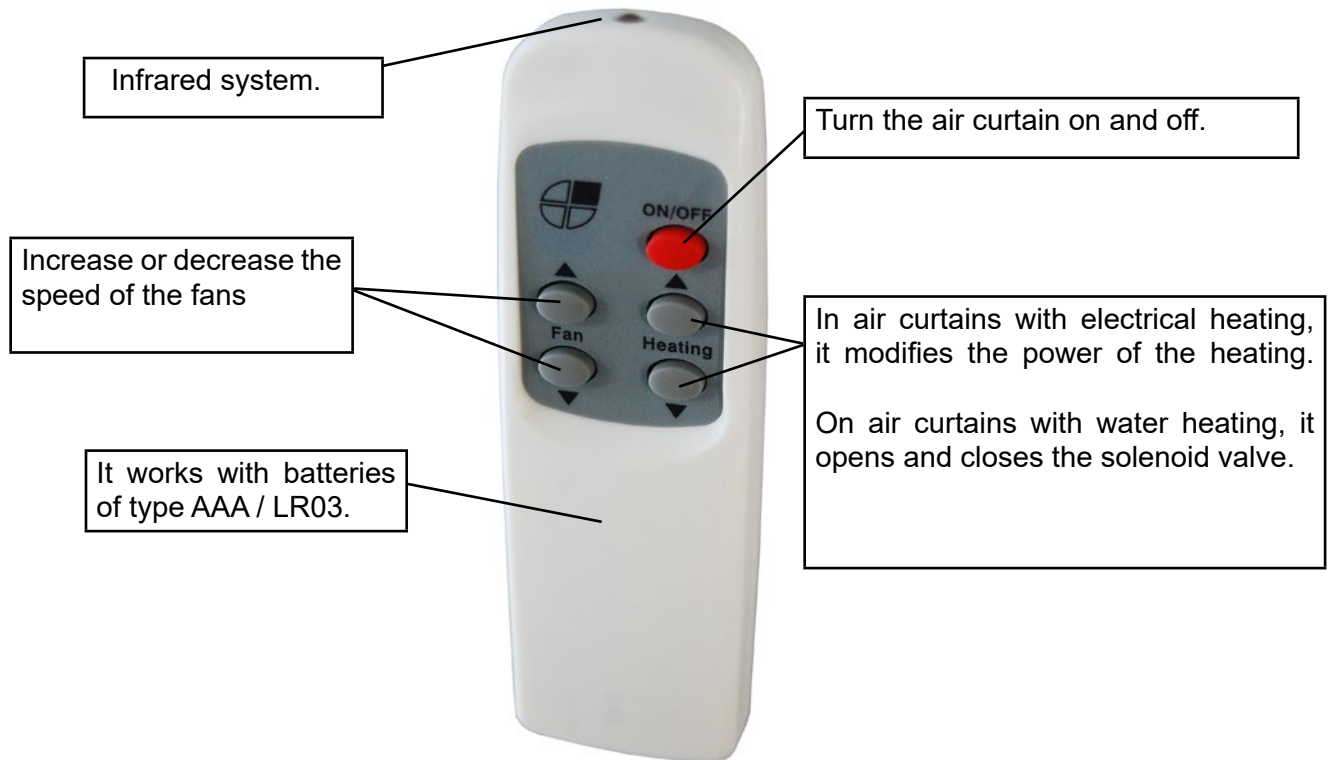
---

If there is a need to be able to control more parameters (intelligent proactive regulation, automatic/manual operation, door delay, time programmer, energy saving mode, multi-device management and BMS Modbus connection, among others) , there are two controllers that allow much more possibilities than the standard controller, especially the Clever. The following regulators have their own manual:

- Hand Auto
- Clever control

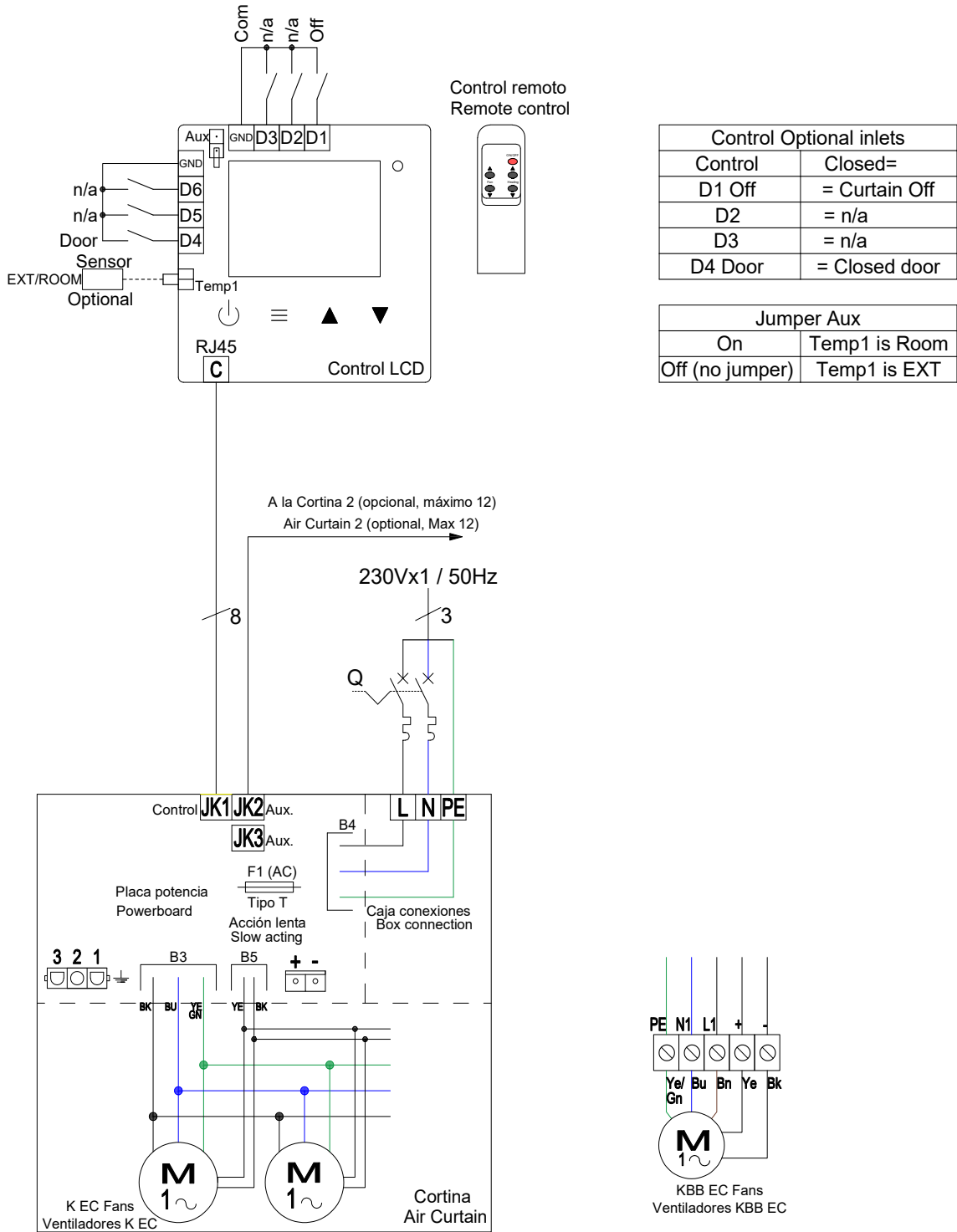
## Remote Control Features

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# ELECTRICAL DIAGRAMS

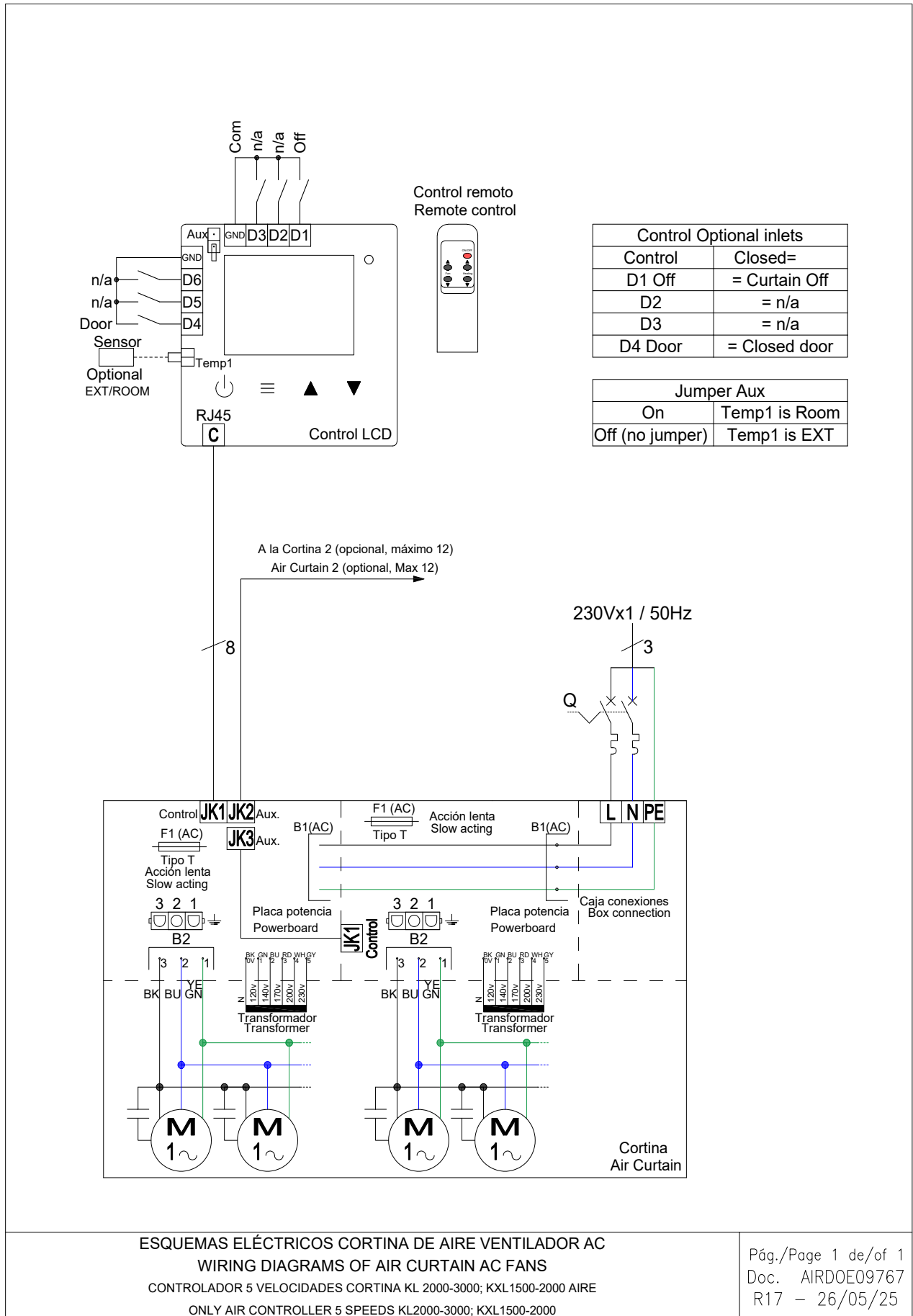
## Fly K, KBB 1000-2000 only air with Advanced Pro RJ45 Controller (AIRDOE09044)



ESQUEMAS ELÉCTRICOS CORTINA DE AIRE VENTILADOR EC  
WIRING DIAGRAMS OF AIR CURTAIN EC FANS  
CONTROLADOR 5 VELOCIDADES CORTINA FLY K 1000-3000; FLY KBB1000-2000 AIRE  
ONLY AIR CONTROLLER 5 SPEEDS FLY K 1000-3000; FLY KBB1000-2000

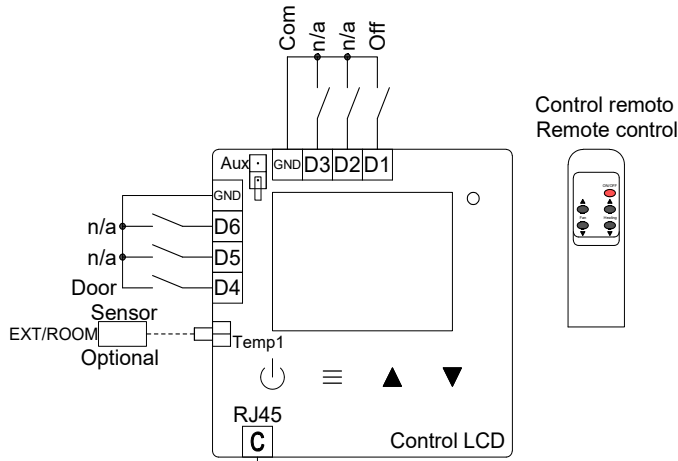
Pág./Page 1 de/of 1  
Doc. AIRDOE09044  
R17 - 26/05/25

# Fly KL, KXL 2000-3000, 1500-2000 only air with Advanced Pro RJ45 Controller (AIRDOE09767)



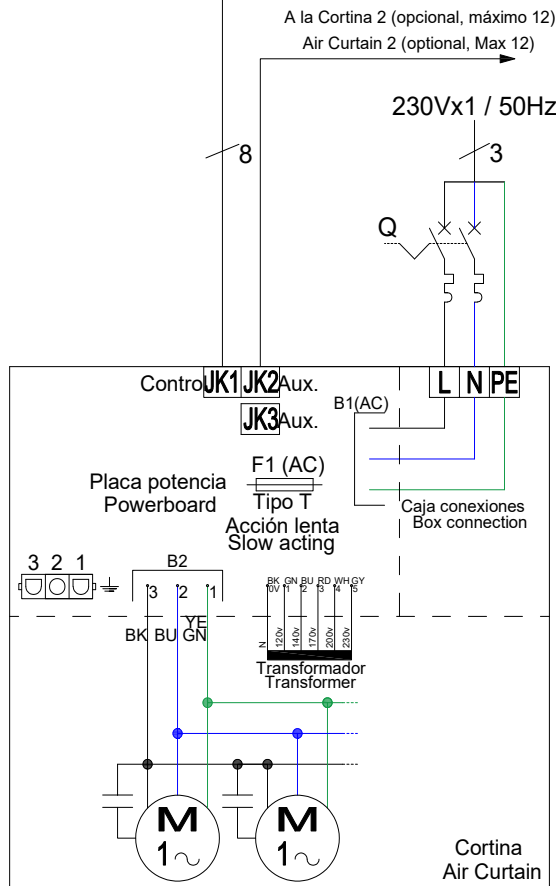
ESQUEMAS ELÉCTRICOS CORTINA DE AIRE VENTILADOR AC  
 WIRING DIAGRAMS OF AIR CURTAIN AC FANS  
 CONTROLADOR 5 VELOCIDADES CORTINA KL 2000-3000; KXL1500-2000 AIRE  
 ONLY AIR CONTROLLER 5 SPEEDS KL2000-3000; KXL1500-2000

# Fly KL, KXL 1000-1500, 1000 only air with Advanced Pro RJ45 Controller (AIRDOE09258)



Control Optional inlets	
Control	Closed=
D1 Off	= Curtain Off
D2	= n/a
D3	= n/a
D4 Door	= Closed door

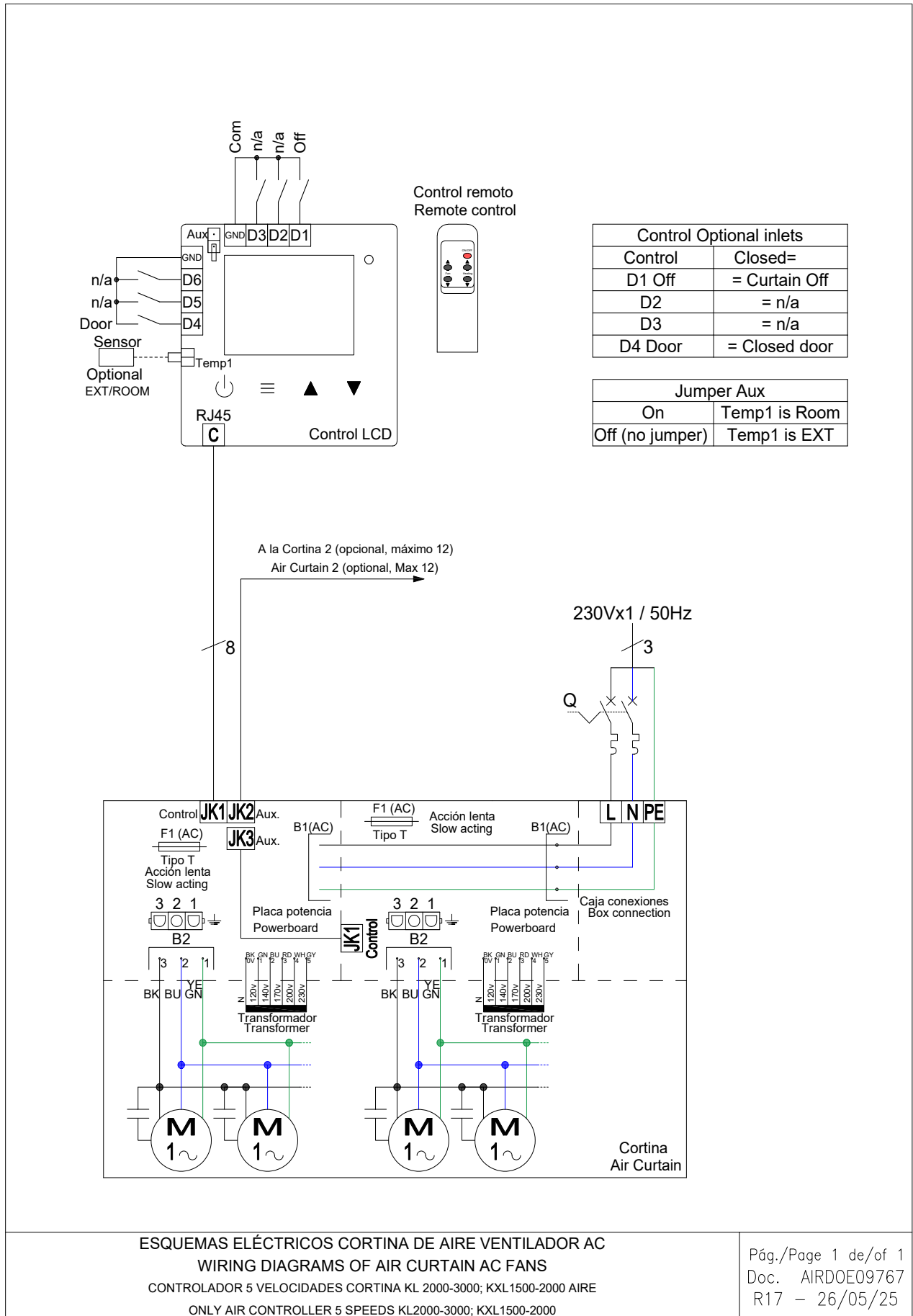
Jumper Aux	
On	Temp1 is Room
Off (no jumper)	Temp1 is EXT



ESQUEMAS ELÉCTRICOS CORTINA DE AIRE VENTILADOR AC  
 WIRING DIAGRAMS OF AIR CURTAIN AC FANS  
 CONTROLADOR 5 VELOCIDADES CORTINA KL 1000-1500; KXL1000 AIRE  
 ONLY AIR CONTROLLER 5 SPEEDS KL1000-1500; KXL1000

Pág./Page 1 de/of 1  
 Doc. AIRDOE09258  
 R17 - 26/05/25

# Fly KL, KXL 2000-3000, 1500-2000 only air with Advanced Pro RJ45 Controller (AIRDOE09767)







## Technical Features



RAL 9016 standard  Stainless steel  Other colors on request 



Range  
Service doors: Up to 2 m  
Clients doors: All



Heating type  
Unheated



Casing [\*]  
Galvanised steel



Airflow / Length  
2700 - 7200 m<sup>3</sup>/h  
1 m to 3 m



Heating capacity  
-



Inlet grille  
Circular perforated



Fans  
Centrifugal  
5-speed



Control  
Plug&Play Advanced PRO  
+ IR remote control  
(Optional Clever Control)



Outlet lamellas  
Aluminium, airfoil type  
Adjustable 0-15° each side

[\*] Customizable dimensions on request

FLY K air curtain generates a high-velocity air jet that minimizes the entry of insects into buildings through commercial doors and industrial service doors, such as food establishments and industries, hospitals or clean areas.

Works with EC Double-inlet centrifugal fans driven by an external rotor motor and low noise level, with very low consumption efficiency fans. With a compact and stylish design, and large perforated inlet grille avoiding intensive maintenance.

Advanced Plug&Play control. Includes: Advanced PRO control with LCD display, door contact, 7m RJ45 cable and remote control. Optional: Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...)

Air curtain not prepared for outdoor installation. In this case, it is necessary to select an air curtain from the Fly KBB range with the required preparation.

 UNHEATED

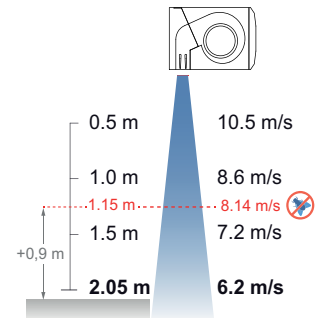
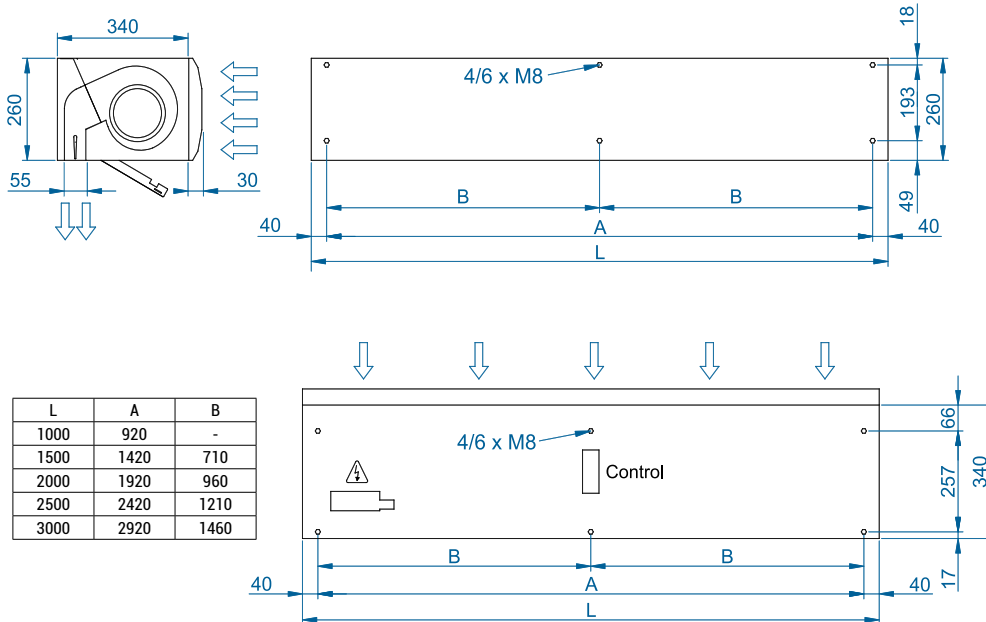
Model	Airflow m <sup>3</sup> /h	Ventilation power 230V~50/60Hz kW	Ventilation current 230V~50/60Hz A	Noise Level (5 m) dB(A)	Weight kg
FLY K 1000 A	2700	0,213	1,86	61	37
FLY K 1500 A	3600	0,284	2,48	62	56
FLY K 2000 A	5400	0,426	3,72	63	71
FLY K 2500 A	6300	0,497	4,34	64	78
FLY K 3000 A	7200	0,568	4,96	65	86



Selection program



## Dimensions



According to standard NSF-37-2012, the maximum installation height in **service doors** is the speed profile point at 8,14m/s plus 0,9m.

So FLY K can be used in service doors until 1,15m + 0,9m = 2,05m

## Optional accessories

### Supports and installation



Wall rail support  
SPWR



Silentblock supports  
SPANG-SIL / SLB



Suspension cables  
SPCT



Omega wall support

### Control



ADVANCED PRO  
✓ Included



IR Control  
✓ Included



RJ45 Cable  
✓ Included



Clever Control Kit

### Sensors



Mechanical door contact  
DC



Magnetical door contact  
✓ Included



External Temperature  
Sensor (Clever Control)

CAD drawings, BIM files, installation manuals and other documentation





## Technical Features



Range  
**Up to 3,5 m**



Airflow / Length  
**3900 - 10400 m³/h**  
**1 m to 3 m**



Fans  
**Centrifugal**  
**5-speed**



Heating type  
**Unheated**



Heating capacity  
**-**



Control  
**Plug&Play Advanced PRO**  
**+ IR remote control**  
**(Optional Clever Control)**

RAL 9016  
standard



Stainless  
steel



Other colors  
on request



Casing [\*]  
**Galvanised steel**



Inlet grille  
**Circular perforated**



Outlet lamellas  
**Aluminium, airfoil type**  
**Adjustable 0-15° each side**

[\*] Customizable dimensions on request

Commercial size air curtain with a power equivalent to an industrial unit, with an elegant and timeless design. Recommended to minimize the passage of insects in industrial service doors up to 3.5 meters high.

Works with EC Double-inlet centrifugal fans driven by an external rotor motor and low noise level, with very low consumption efficiency fans. With a large perforated inlet grille avoiding intensive maintenance.

Advanced Plug&Play control. Includes: Advanced PRO control with LCD display, door contact, 7m RJ45 cable and remote control. Optional: Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...)

In case of outdoor installation, the air curtain must be adequately protected from the weather. In addition, the electrical connections of the air curtain must be housed in a watertight box and it is recommended to protect the cabinet with AQUA AERO paint or stainless steel (see options).

### ❄ UNHEATED

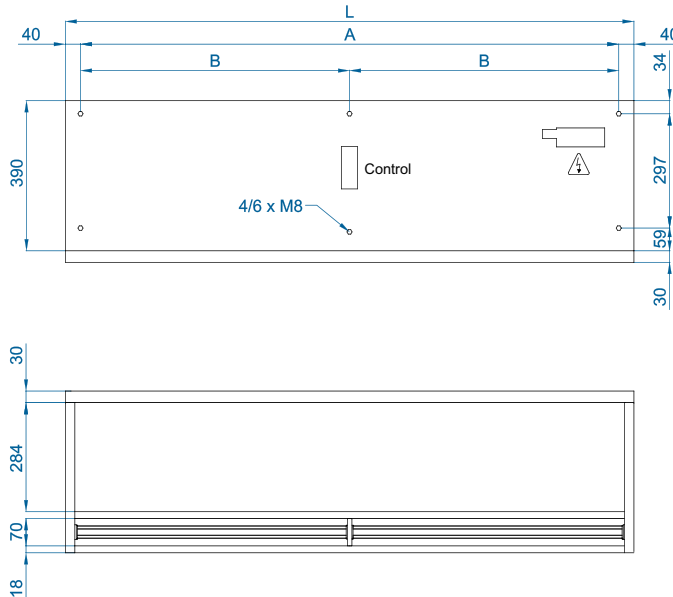
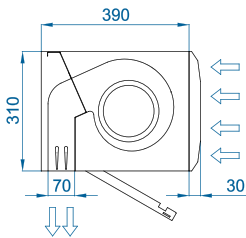
Model	Airflow m³/h	Ventilation power 230V~50/60Hz kW	Ventilation current 230V~50/60Hz A	Noise Level (5 m) dB(A)	Weight kg
FLY KBB 1000 A	3900	0,921	4,08	67	38
FLY KBB 1500 A	5200	1,228	5,44	67,5	62
FLY KBB 2000 A	7800	1,842	8,16	68	77
FLY KBB 2500 A	9100	2,149	9,52	68,5	93
FLY KBB 3000 A	10400	2,456	10,88	69	106



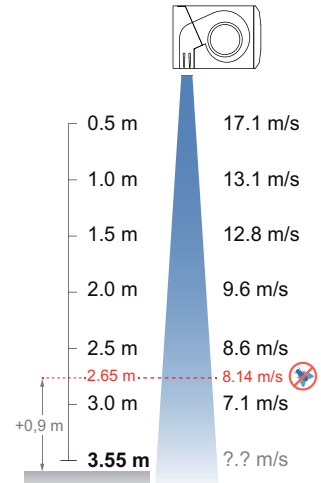
Selection program



## Dimensions



L	A	B
1000	920	-
1500	1420	710
2000	1920	960
2500	2420	1210
3000	2920	1460



According to standard NSF-37-2012, the maximum installation height in **service doors** is the speed profile point at 8,14m/s plus 0,9m.

**So FLY KBB can be used until 2,65m + 0,9m = 3,55m.**

## Optional accessories

### Supports and installation



Wall rail support  
SPWR



Silentblock supports  
SPANG-SIL / SLB



Suspension cables  
SPCT

### Control



ADVANCED PRO  
✓ Included



IR Control  
✓ Included



RJ45 Cable  
✓ Included



Clever Control Kit

### Sensors



Mechanical door contact  
DC



Magnetical door contact  
✓ Included



External Temperature  
Sensor (Clever Control)

CAD drawings, BIM files, installation manuals and other documentation





## Technical Features



RAL 9016 standard  Stainless steel  Other colors on request 



Range  
**Up to 3 m**



Heating type  
**Unheated**



Casing [\*]  
**Galvanised steel**



Airflow / Length  
**4000 - 12000 m<sup>3</sup>/h  
1 m to 3 m**



Heating capacity  
**-**



Inlet grille  
**Circular perforated**



Fans  
**Centrifugal  
5-speed**



Control  
**Plug&Play Advanced PRO  
+ IR remote control  
(Optional Clever Control)**



Outlet lamellas  
**Aluminium, airfoil type  
Adjustable 0-15° each side**

[\*] Customizable dimensions on request

FLY KL is recommended to reduce the passage of insects across industrial service doors up to 3 meters high.

A robust and versatile insect control air curtain, provided with an extensor outlet kit to optimize the air outlet with the minimum turbulence at maximum speed. Works with double-inlet centrifugal fans driven by an external rotor motor and low noise level.

Elegant and timeless design, with large perforated inlet grille avoiding intensive maintenance.

Advanced Plug&Play control. Includes: Advanced PRO control with LCD display, door contact, 10m RJ45 cable and remote control. Optional: Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...)

In case of outdoor installation, the air curtain must be adequately protected from the weather. In addition, the electrical connections of the air curtain must be housed in a watertight box and it is recommended to protect the cabinet with AQUA AERO paint or stainless steel (see options).

 UNHEATED

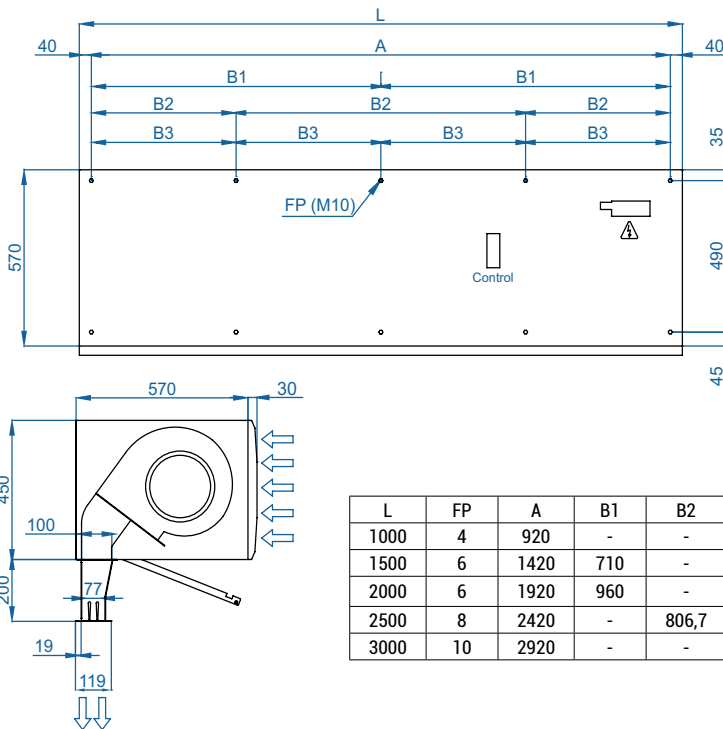
Model	Airflow m <sup>3</sup> /h	Ventilation power		Ventilation current		Noise Level (5 m) dB(A)	Weight kg
		230V~50Hz kW	230V~60Hz kW	230V~50Hz A	230V~60Hz A		
FLY KL 1000 A	4000	1,04	1,37	4,40	6,15	63	76
FLY KL 1500 A	6000	1,56	2,05	6,60	9,22	64	114
FLY KL 2000 A	8000	2,08	2,73	8,80	12,30	65	153
FLY KL 2500 A	10000	2,60	3,41	11,00	15,37	66	187
FLY KL 3000 A	12000	3,12	4,09	13,20	18,44	67	225



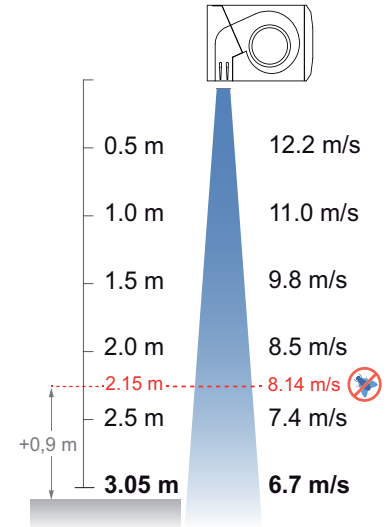
Selection program



## Dimensions



L	FP	A	B1	B2	B3
1000	4	920	-	-	-
1500	6	1420	710	-	-
2000	6	1920	960	-	-
2500	8	2420	-	806,7	-
3000	10	2920	-	-	730



According to standard NSF-37-2012, the maximum installation height in **service doors** is the speed profile point at 8,14m/s plus 0,9m. So **FLY KL can be used until 2,15m + 0,9m = 3,05m.**

## Optional accessories

### Supports and installation



Wall rail support  
SPWR



Silentblock supports  
SPANG-SIL / SLB



Suspension cables  
SPCT

### Control



ADVANCED PRO  
✓ Included



IR Control  
✓ Included



RJ45 Cable  
✓ Included

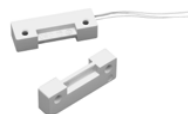


Clever Control Kit

### Sensors



Mechanical door contact  
DC



Magnetical door contact  
✓ Included



External Temperature  
Sensor (Clever Control)

CAD drawings, BIM files, installation manuals and other documentation






## Technical Features



RAL 9016 standard  Stainless steel  Other colors on request 

  
Range  
**Up to 4 m**

  
Heating type  
**Unheated**

  
Casing [\*]  
**Galvanised steel**


  
Airflow / Length  
**5300 - 15900 m<sup>3</sup>/h**  
**1 m to 3 m**

  
Heating capacity  
**-**

  
Inlet grille  
**Circular perforated**

  
Fans  
**Centrifugal**  
**5-speed**

  
Control  
**Plug&Play Advanced PRO**  
**+ IR remote control**  
**(Optional Clever Control)**

  
Outlet lamellas  
**Aluminium, airfoil type**  
**Adjustable 0-15° each side**

[\*] Customizable dimensions on request

FLY KXL is recommended to reduce the passage of insects across industrial service doors up to 4 meters high.

A robust and versatile insect control air curtain, provided with an extensor outlet kit to optimize the air outlet with the minimum turbulence at maximum speed. Works with double-inlet centrifugal fans driven by an external rotor motor and low noise level.

Elegant and timeless design, with large perforated inlet grille avoiding intensive maintenance.

Advanced Plug&Play control. Includes: Advanced PRO control with LCD display, door contact, 10m RJ45 cable and remote control. Optional: Clever control (programmable, automatic, intelligent, energy saving, Modbus RTU for BMS...)

In case of outdoor installation, the air curtain must be adequately protected from the weather. In addition, the electrical connections of the air curtain must be housed in a watertight box and it is recommended to protect the cabinet with AQUA AERO paint or stainless steel (see options).

### UNHEATED

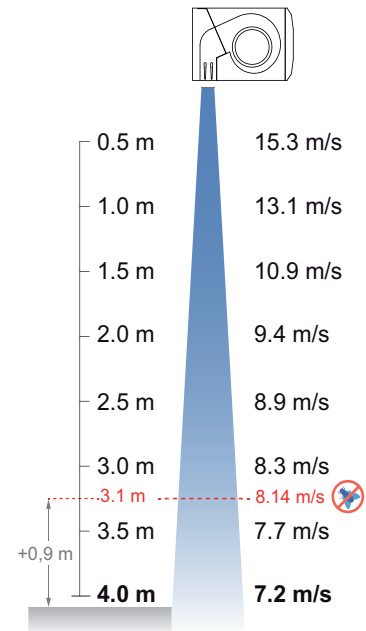
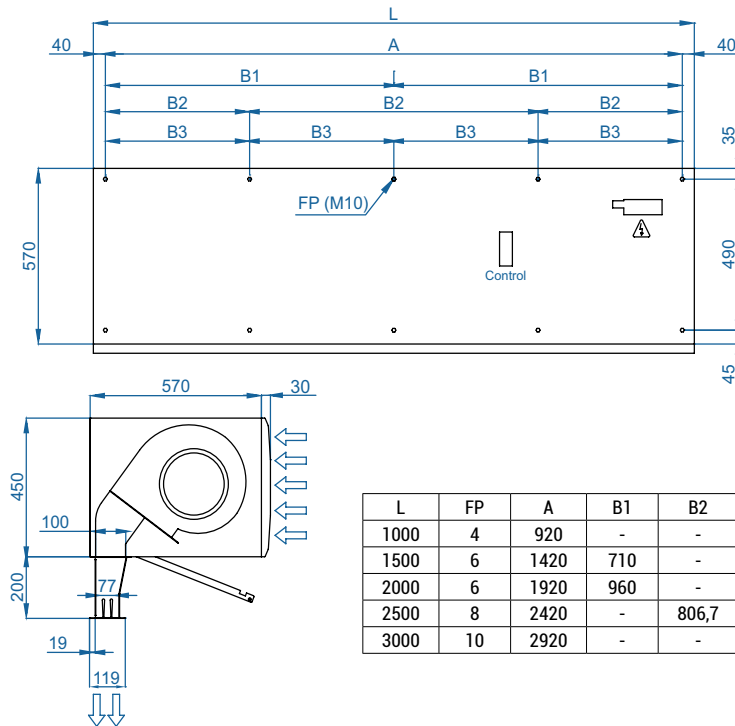
Model	Airflow m <sup>3</sup> /h	Ventilation power		Ventilation current		Noise Level (5 m) dB(A)	Weight kg
		230V~50Hz kW	230V~60Hz kW	230V~50Hz A	230V~60Hz A		
FLY KXL 1000 A	5300	1,40	1,84	6,00	8,26	65	82
FLY KXL 1500 A	7950	2,10	2,76	9,00	12,39	66	123
FLY KXL 2000 A	10600	2,80	3,68	12,00	16,52	67	165
FLY KXL 2500 A	13250	3,50	4,60	15,00	20,65	68	202
FLY KXL 3000 A	15900	4,20	5,52	18,00	24,78	69	243



Selection program



## Dimensions



According to standard NSF-37-2012, the maximum installation height in **service doors** is the speed profile point at 8,14m/s plus 0,9m. So FLY KXL can be used until  $3,1m + 0,9m = 4,0m$ .

## Optional accessories

### Supports and installation



Wall rail support  
SPWR



Silentblock supports  
SPANG-SIL / SLB



Suspension cables  
SPCT

### Control



ADVANCED PRO  
✓ Included



IR Control  
✓ Included



RJ45 Cable  
✓ Included



Clever Control Kit

### Sensors



Mechanical door contact  
DC



Magnetical door contact  
✓ Included







External Temperature  
Sensor (Clever Control)

CAD drawings, BIM files, installation manuals and other documentation



## MAINTENANCE INSTRUCTIONS

	For safety, before cleaning, stop the curtain through the controller and disconnect the device from the current.
 	Do not open the service door (risk of electric shock and entrapment in the fans). Repairs must be carried out exclusively by authorized personnel.
	The inside of the device must not be cleaned with water or steam.

### Indicative periodicity of maintenance

N° Action	Action	Frequency
1	Cleaning of the suction grill	Bi-monthly (recommended monthly)
2	Exterior cleaning	Half yearly (quarterly recommended)
3	Interior cleaning	Half yearly (quarterly recommended)
4	Internal inspection	Biannual (recommended annual)
5	Consumption and auditory control	Biannual (recommended annual)

### Inlet grille cleaning

The suction grill prevents the entry of objects into the internal elements. It is a good idea to periodically check that the suction grille is free of any object that could prevent air from entering (plastic bags, paper, etc.).

If you have a microperforated suction grille (it acts as a pre-filter and prevents dust from entering the internal elements), use a vacuum cleaner with a brush so as not to damage the microperforated grille. It is advisable to do it frequently (depending on the amount of dirt generated), since the performance of the curtain is considerably reduced.

It is recommended to clean the suction grill monthly. In addition, it is important to make sure that the air curtain is off, otherwise the mixture between the dust and a damp cloth would form a paste of dirt that could damage the fan rotor when it sucks in the air or clog the water coil. An annual cleaning of the discharge area must be carried out.



## Exterior cleaning

Wipe the entire outer surface of the air curtain (except the suction grille) with a damp cloth to trap dust particles. In addition to the damp cloth, neutral soaps that do not contain acids or are caustic can be used.



## Interior cleaning

It is recommended to clean the inside of the unit with a vacuum cleaner at least once every 2 years. (\*) It is recommended to clean the inside of the equipment frequently with the help of a vacuum cleaner, especially before the arrival of winter. (\*)

(\*) These periods are indicative depending on the conditions of each installation. In places with a high number of suspended particles, it is desirable to increase the frequency of interior cleaning.



## Internal components visual inspection

Check that the regulation board(s) have not suffered any damage and that they are securely fastened to the equipment frame. Make sure that the board and internal wiring connectors are still well connected. Check that the fans do not move from their mountings and check that the turbines have no impediments to rotate freely (turn it by hand, first turn off the device).



## Air curtain consumption and auditory control checking

Write down the consumption value of the fans that appears on the product label (located on the inside of the service door). Give power to the curtain and with the help of an ammeter, check that the electrical consumption of the curtain at maximum speed is between 110% and 85% of the value indicated on the label. Check that all fans blow air. Keep the curtain at full speed for a few minutes and listen for abnormal noises from the curtain.



## REPAIRS AND REPLACEMENTS

**Assembly and electrical connection must be carried out exclusively by specialized professionals and in compliance with these instructions.**  
**Before carrying out any repair, it is necessary to:**

	<ul style="list-style-type: none"> <li>• <b>Notify staff and indicate that work is being done.</b></li> <li>• <b>Disconnect the current and protect the circuit breaker.</b></li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Be sure there is no voltage in the unit.</b></li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Be sure the fans have stopped.</b></li> <li>• <b>Use only original spare parts.</b></li> </ul>



CODE	COMPONENT	COMPONENT REFERENCE	AIR CURTAIN MODEL
TERCCO33320	PCB Windbox 5 air velocities	PAR-05V-W	KL - XL : Air
VERCCO33700	PCB Windbox 5 electrical velocities EC	PEE-05V-W	K - KBB: Air and electric
AIRSEC99210	EC Centrifugal fan	GDSG9 146X188R N46-A0 EC	K
ECOVEN35020	EC Centrifugal fan	Q39-B0	KBB
AIRVEN30130	EC Centrifugal fan	DZAE 9/7 - 4	KL
AIRVEN30140	EC Centrifugal fan	DZAE 9/9 - 4	KXL
ESCCCO33005	ADVANCED PRO Control RJ45	CON-LCD-RJ45	K, KBB, KL, KXL: All models

## Service door opening

---

To open the service door, follow the steps below:

1.- With a screwdriver, holding the door, remove all the screws holding the door.



2.- Open the door carefully. In case of a curtain with plenum or suction and discharge kits, the lever must be made on the side of the door where a hole has been made to facilitate the entry of a flat screwdriver.



## Fans substitution

---

Before changing the fan, warn and indicate that it is working, disconnect the power supply, make sure that there is no voltage and that the fans have stopped.

**L:** Then identify and loosen the fan wires. Remove the fan by loosening the fixing screws and mount the replacement fan following the process in reverse order.

**XL:** Then identify and loosen the fan wires. Remove the flange screws (photo 2) to remove it from the curtain (photo 1), remove the fan screws and mount the replacement fan following the process in reverse order.



Picture 1

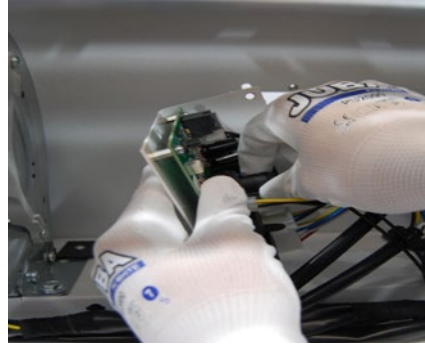
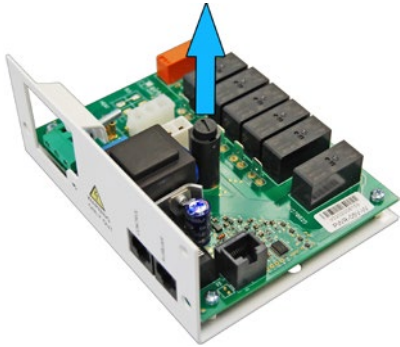


Picture 2

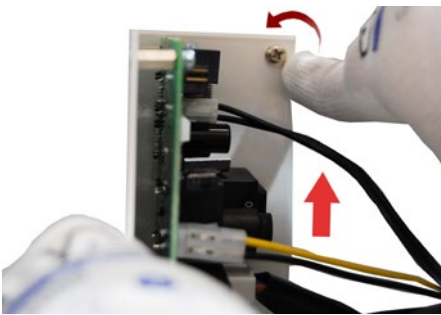
## Replacement of the power board or fuse

Before changing the power board or fuse, notify and indicate that work is being done, disconnect the power supply, make sure that there is no voltage and that the fans have stopped.

**Fuse changing:** open the service door and remove the fuse by hand or with the help of a screwdriver by pressing towards the board, turning it counterclockwise. In some cases, it is recommended to unscrew the PCB.

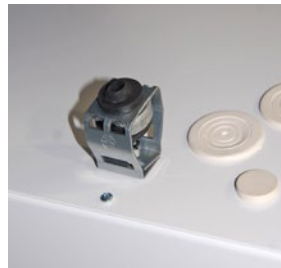


**Power board change:** open the service door and unscrew the power board from the inside of the air curtain to remove the plate and carry out the necessary repair.



### Recommendation: Instalation with silentblocks

To reduce the sound level and vibrations of the curtain, instalation with silentblocks is recommended:



## TROUBLESHOOTING

**More than 95% of the claims** occur during equipment start-up and are due to installation errors. By reviewing the following 3 points, more than 90% of the incidents are solved:



**A) Incorrect power supply.** The power supply of the air curtain depends on the type of current available and the type of heating of the unit. Connect according to the diagram.

### Most common problems and solutions

Symptom	Problem	Solution
Curtain vacuums through discharge	The fans rotate backwards	Interchange the position of the 2 different phases cables

## DECLARATION OF CONFORMITY



Declaration  of conformity / Declaración  de conformidad

Manufacturer **Motors i Ventiladors S.L. (AIRTÈCNICS)**  
Fabricante **Conca de Barberà 6, Pol. Ind. Pla de la Bruguera  
08211 Castellar del Vallès (Barcelona) Spain**

We declare, under our sole responsibility, that the product  
*Declaramos, bajo nuestra única responsabilidad, que el producto*

**Air Curtains**  
**Cortinas de aire**

with models / *con los modelos*

**Minibel, Optima, Recessed Optima, Optima Wireless, Recessed Optima Wireless, Optima K, Optima Switch, Recessed Optima Switch, Top, Recessed Compact, Aris, Windbox, Recessed Windbox, Smart, Dam, Recessed Dam, Deco, Kool, Rund, Invisair, Rotowind, Variwind, Zen, Max, Maxwell, Compact Fly, Fly K, Fly KL-KXL, Fly KBB, Windbox BB, Recessed Windbox BB, Zen BB, Invisair BB, Kool BB, Rotowind BB, Zen L-XL, Windbox L-XL, Duojet, Triojet System**

is/are developed, designed and manufactured in accordance with the following directive(s)  
*ha(n) sido desarrollado(s), diseñado(s) y fabricado(s) de acuerdo con la(s) siguiente(s) directiva(s)*

**Low Voltage Directive 2014/35/EU**  
**Directiva Baja Tensión 2014/35/UE**

**Electromagnetic Compatibility Directive 2014/30/EU**  
**Directiva Compatibilidad Electromagnética 2014/30/UE**

**Restriction Certain Hazardous Substances Directive 2011/65/EU (RoHS)**  
**Directiva Restricción Substancias Peligrosas 2011/65/UE**

**Eco-design Energy-related Products Directive 2009/125/EC**  
**Directiva Diseño Ecológico Productos Con Energía 2009/125/CE**

applying the following harmonized standards in particular  
*aplicando las siguientes normas armonizadas en particular*

**LVD: EN 60335-1:2012 + AC:2014 + A11:2014 + A13:2017 + A1:2019 + A14:2019 + A2:2019**  
**EN 60335-2-30:2009 + A11:2012 + A1:2020 + A12:2020**

**EMC: EN 61000-3-11:2020**  
**EN 61000-3-12:2011**  
**EN 55014-1:2017 + A11:2020**  
**EN 55014-2:2015**  
**EN 62233:2008 + AC:2008**

**RoHS: EN 50581:2012**

Date / Fecha  
Name / Nombre  
Position / Cargo

**04/03/2024**  
**Jordi Hierro**  
**Technical Manager / Director Técnico**

  
**MOTORS I VENTILADORS, S.L.**  
ESB58967183 - C/ Conca de Barberà, 6  
08211 Castellar del Vallès  
Tel. 937159988 - Fax 937159989

**UK  
CA**

## **UK Declaration of conformity**

Manufacturer **Motors i Ventiladors S.L. (AIRTÈCNICS)**  
**Conca de Barberà 6, Pol. Ind. Pla de la Bruguera**  
**08211 Castellar del Vallès (Barcelona) Spain**

We declare, under our sole responsibility, that the product

**Air Curtains**

with models

**Minibel, Optima, Optima Swicth, Recessed Optima, Optima Wireless, Recessed Optima Wireless, Optima K, Top, Recessed Compact, Aris, Windbox, Recessed Windbox, Smart, Dam, Recessed Dam, Deco, Kool, Rund, Invisair, Rotowind, Variwind, Zen, Max, Maxwell, Compact Fly, Fly K, Fly KL-KXL, Fly KBB, Windbox BB, Recessed Windbox BB, Zen BB, Windbox L-XL, Duojet, Triojet System.**

is/are developed, designed and manufactured in accordance with the following regulation(s)

**Electrical Equipment (Safety) Regulations 2016 No. 1101**

**Electromagnetic Compatibility Regulations 2016 No. 1091**

**The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 No. 3032**

**The Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019 No. 539**

applying the following harmonized standards in particular

**LVD: BS EN 60335-1:2012+A2:2019**  
**BS EN 60335-2-30:2009+A12:2020**

**EMC: BS EN IEC 61000-3-11:2019**  
**BS EN 61000-3-12:2011**  
**BS EN IEC 55014-1:2021**  
**BS EN IEC 55014-2:2021**

**RoHS: BS EN IEC 63000:2018**

Date  
Name  
Position

**16/10/2023**  
**Jordi Hierro**  
**Technical Manager**



**MOTORS I VENTILADORS, S.L.**  
ESB58967183 - C/ Conca de Barberà, 6  
08211 Castellar del Vallès  
Tel. 937159988 - Fax 937159989

## IDENTIFICATOR



Model <small>Modelo</small>	WINDBOX M 2000 P86		
Airflow <small>Caudal</small>	3320	m3/h	
Blowers <small>Ventiladores</small>	3,8 A	0,856 kW	230 V/50Hz
<b>Heating</b>			
<small>Calefacción</small>	<small>Temperatura</small>	<small>Capacidad</small>	<small>Water Flow</small> <small>Caudal Agua</small>
Water Coil <small>Bateria Agua</small>	80/60 °C	20,65 kW	900 l/h
Electric Heater <small>Bateria Eléctrica</small>	kW		
Serial Number <small>Número de Serie</small>	2022 01 21 / 113.864		

Each air curtain is identified by a unique serial number printed in a label located inside the door service. There is also indicated the model and their technical characteristics (flow, fans technical characteristics and power heating).

It is indispensable to have this number to facilitate possible replacements or technical information of the air curtain in question.



AIRCOR15698 113864

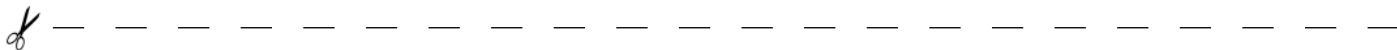
WINDBOX M 2000 P86      www.airtecnics.com

## GUARANTEE

Your air curtain is guaranteed for a period of two years from the date of purchase. We will adjust, repair or replace at our discretion from our warehouse any defect, system failure or part found to be defective. The assembly cost out of our warehouse is at buyer expense. The products that, in our eyes, have been inadequately used, incorrectly manipulated, improperly installed, connected to different nominal tensions, modified, repaired by non-authorized workers or that have suffered damages during transport are totally excluded from the guarantee.

*To validate the guarantee it should be correctly filled and enclosed with the invoice that vouches for the buying date. If it is manipulated, it will lose all validity.*

*It is the buyer's responsibility to take the necessary safety measures because in case of a failure or mistake in one of our products, no damages to third parties, sets or installations will occur.*



### Guarantee draft

**Air curtains data:**

Model: .....

Series number: .....

Invoice date: .....

Invoice number: .....

**Buyer data:**

Name: .....

Address: .....

Country: .....

Phone: .....

Mail: .....

**Seller data:**

Name: .....

Address: .....

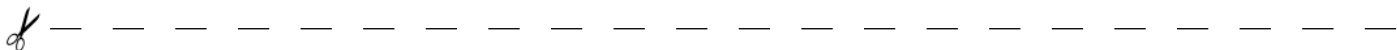
Country: .....

Phone: .....

Mail: .....

**Buyer signature and stamp**

**Seller signature and stamp**



*If you detect some error in this manual, we'll be pleased to receive your feedback, it helps us to improve even more. Airtècnics reserves the right to modify some of the specifications in this manual*

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**[www.airtecnicos.com](http://www.airtecnicos.com)**



AIRDOM05216-R17(26/05/25)

*Airtècnics reserves the right to modify some of the specifications in this manual.*