

TECHNICAL DOCUMENTATION

AMBIENT AIR CURTAIN

YACA1 / YACA1.5 / YACA2



CE



YAHTEC®

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1 - GENERAL RECOMMENDATIONS

The ambient air curtain meets the requirements of the European directive of « Electromagnetic Compatibility (EMC) » 89/336/CEE, to be incorporated in a complete installation. The installation must be in conformity with the EMC directive.

Those units are used for big volume (warehouse, garage, workshop...)

The guarantee and also the contractual responsibility of the constructor are excluded in case of damages caused by persons, animals or goods, further to installation, adjustment and maintenance mistakes or inappropriate uses.

Do not install the ambient air curtain in humid and corrosive environments. The air jet of the units cannot disturb the efficiency of fire fighting systems.

The installation must be done by qualified person. The access to intern electric parts could be done if it is necessary only when the power is turn off and by personal who has required qualifications.

This manual is an integral part of supplies. The installer must give it to the user and explain the functioning of the units and the installation. The manual must be conserved close to the unit.

1.1. Reception and storage

Check the condition of the unit. Unpack the device by using required protections of accident prevention.

In case of damages, inform the carrier in the moment of the delivery. Check the conformity of delivered goods in comparison to the order.

Store the equipment in a clean and dry room, away from shocks, vibration, divergences in temperature and in an ambient environment with a rate of hygrometry lower than 90%.

1.2. Recycling and end of product service life



This device is mainly built using materials that can be recycled, at the end of its service life, it is important to pay particular attention to its destruction. Some components, such as electric equipment, are subject to special legislation, applicable national regulations must be respected when disposing of them.

1- For the disposal of the product and parts, use public or private waste disposal contractors.

2- For further information on the proper disposal of the product, contact the local authorities, the refuse collection and processing department or the point of sale where the product was purchased.

Appliances or equipment bearing this symbol must not be disposed of with household waste, but must be collected separately.

Proper recycling helps to prevent environmental damage and health risks.

VEUILLEZ LIRE AVANT DE POURSUIVRE



This technical manual must be kept in good condition inside the appliance.



The features, illustrations and descriptions contained in this document are, to our knowledge, accurate at the time of their approval for printing. We reserve the right to modify, to no longer offer certain features or to stop the production of a model without notice and does not constitute any commitment on our part.

Security rules



- It is forbidden to plug and / or reduce the ventilation openings in the installation room or appliance.
- Never obstruct the smoke outlet and fresh air intake.
- Never make changes to the settings made by the qualified professional.
- Never spray water on the heater, or touch the appliance with wet and / or bare body parts.
- Never touch the hot parts of the heater, and / or moving parts.
- Do not put or hang anything on the device.
- Any intervention on the appliance is forbidden before disconnecting it from the mains and cutting off the gas supply.
- Do not change the type of gas used, the device settings, the safety or control systems, as this could create dangerous situations.

Notify the service technician in the event of change in supply voltage.

In case of a long period of non-operation, disconnect the power supply from the device. When returning to operation, it is advisable to use qualified personnel. In general, any repair or maintenance work must be carried out exclusively by authorized and qualified personnel.

Subscription to a maintenance contract is highly recommended, "see with your installer".



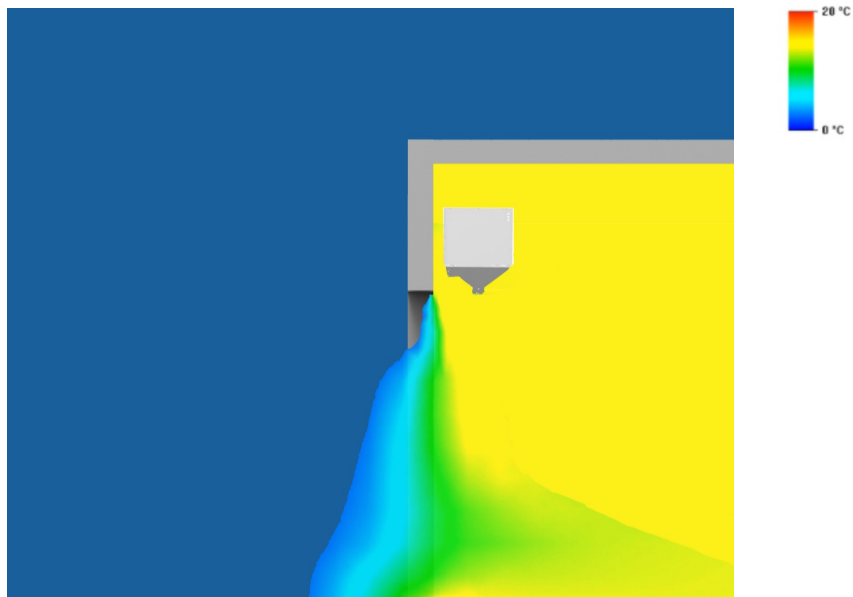
Caution

Electrical components, drive mechanisms and fuel gas can cause injury. To protect against these inherent risks during installation or maintenance, the power supply must be disconnected. All persons involved in the installation or maintenance of this equipment must comply with occupational health and safety standards.

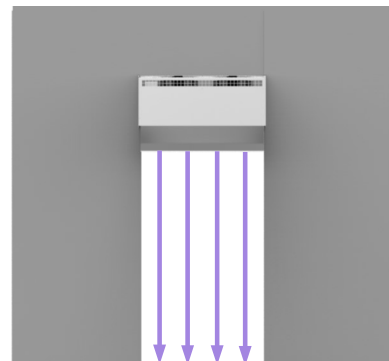
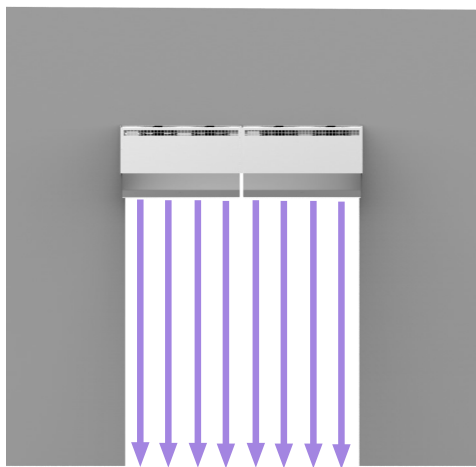
2. OPERATING PRINCIPLE

The ambient air curtain is designed to create an immaterial barrier to avoid the exchange between inside air and outside air of the building.

The installation of those devices at each door reduces the losses of heat or cold, increase the comfort of the people and helps saving the energy.

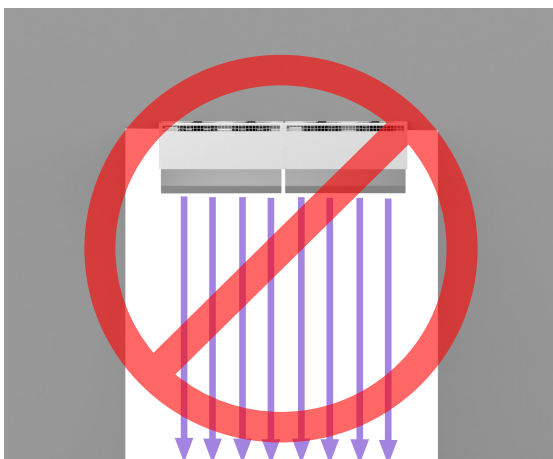


For a full efficiency, the door must be completely covered by the air curtains. The ambient air curtain can cover the door from 3 to 6 meters for application such as industrial building, supermarket, etc.

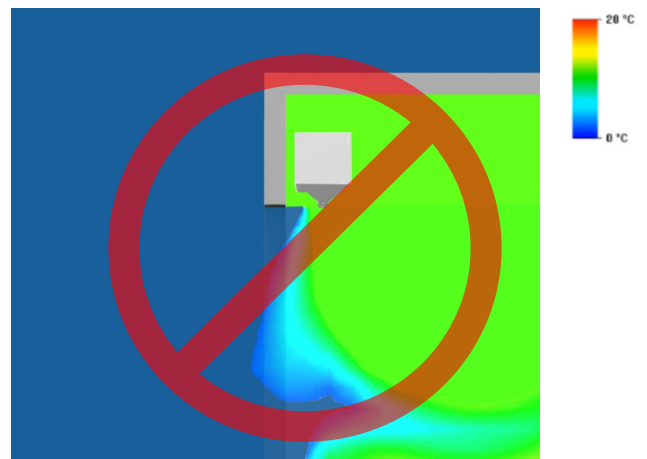


A bad selection or inappropriate installation of the air curtain eliminate the effectiveness of the protection.

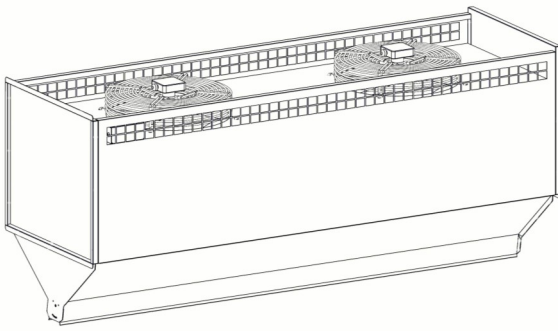
Air curtains do not cover properly the door



The door is too high



3 - TECHNICAL PERFORMANCES



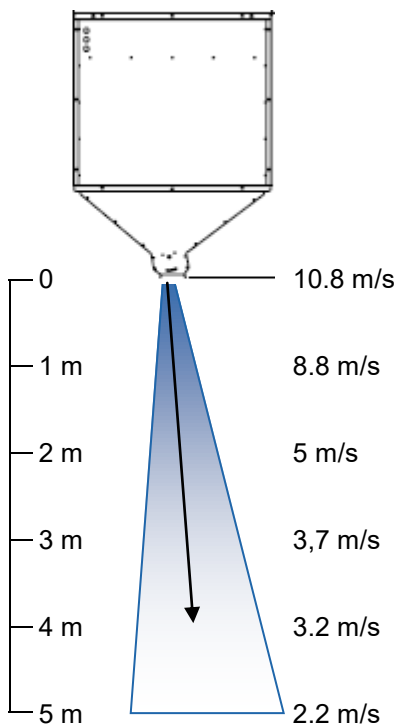
Ambient air curtains are specially elaborated for protection against uncontrolled external airflow through the doors or building openings in such places as warehouses, industrial buildings, supermarkets, public places etc.

Ambient air curtains are used for protection of doors and building openings of height from 3 up to 6 meters.

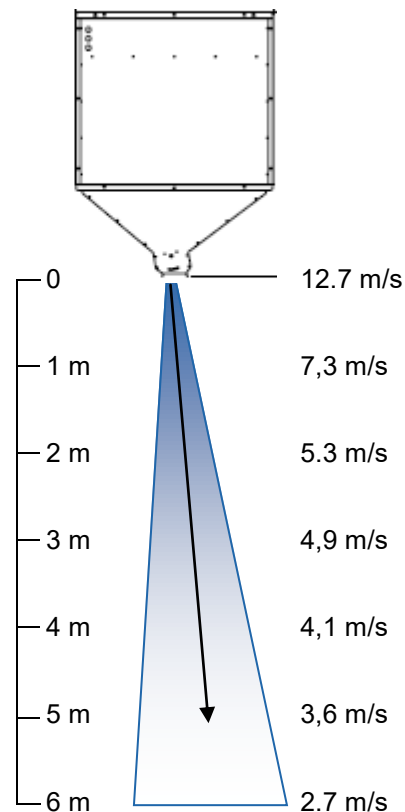
The range includes 5 models: 1 meter, 1.5 meter and 2 meters with different airflows following the model.

Models		YAC1A	YAC1.5A	YAC2A	YAC1.5A HF	YAC2A HF
Air flow at 20°C	m ³ /h	3 340	5 000	6 680	6 680	10 200
Number of fans		1	2	2	2	3
Rotation speed	Rpm	1 150	1 150	1 350	1350	1350
Supply voltage		Single-phase 230V AC IP42				
Electrical power	W	425	620	850	850	1 200
Rated current	A	2	3.4	4	4	6
Weight	kg	30	55	73	55	84

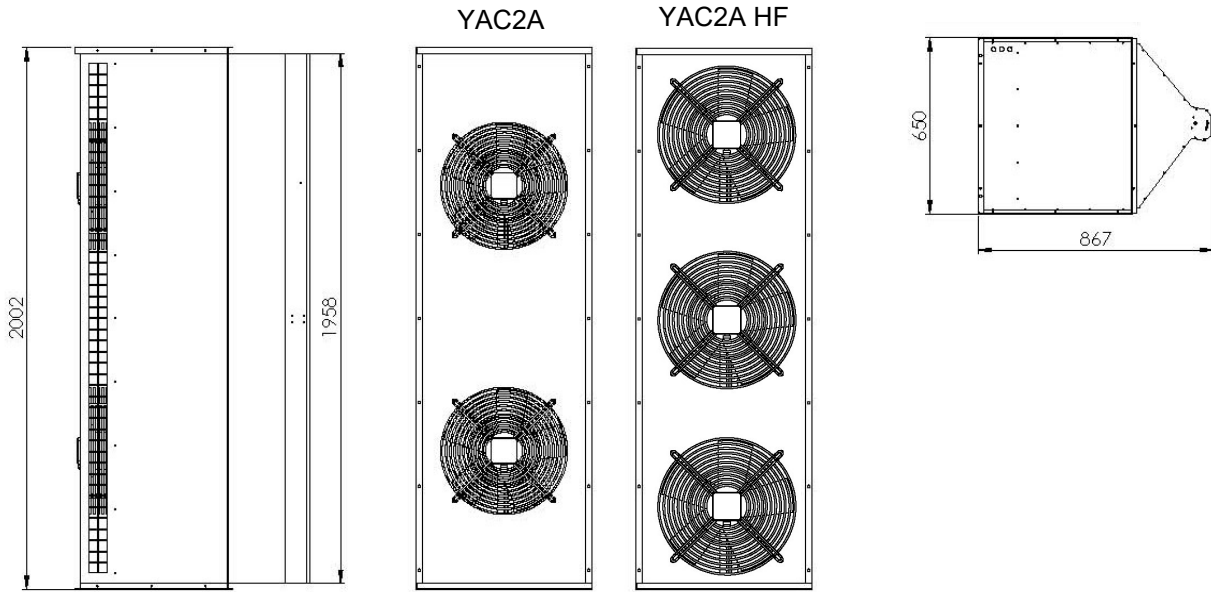
Models : 1A, 1.5A et 2A



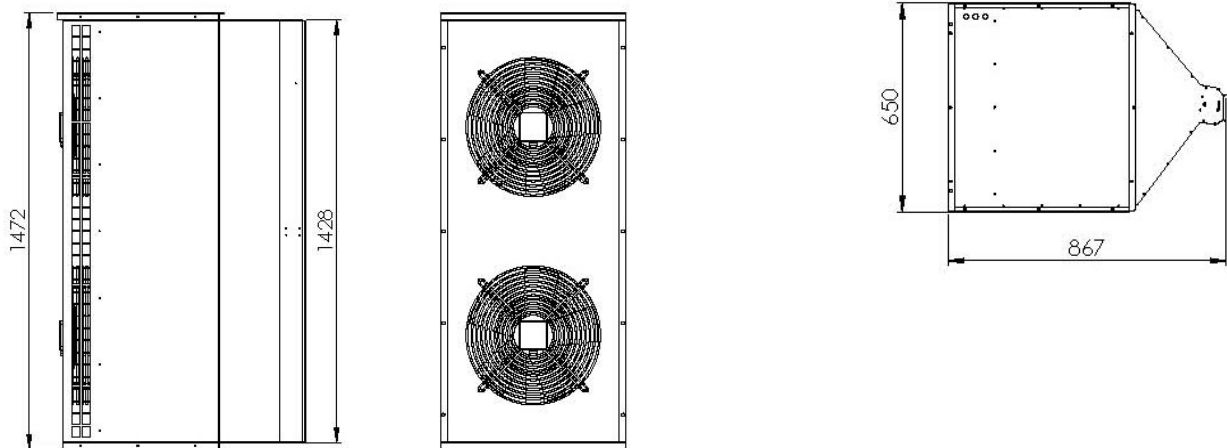
Models : 1.5AGD et 2AGD



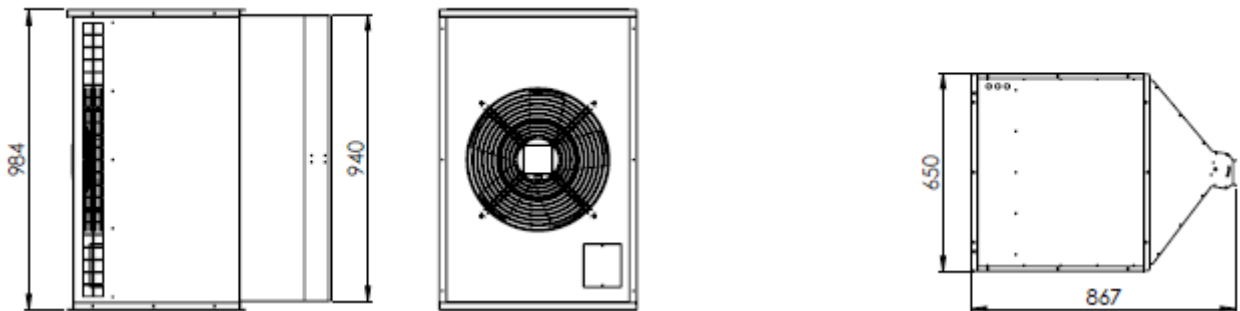
Dimensions of the 2 meters ambient air curtain:



Dimensions of the 1.5 meter ambient air curtain:



Dimensions of the 1 meter ambient air curtain:

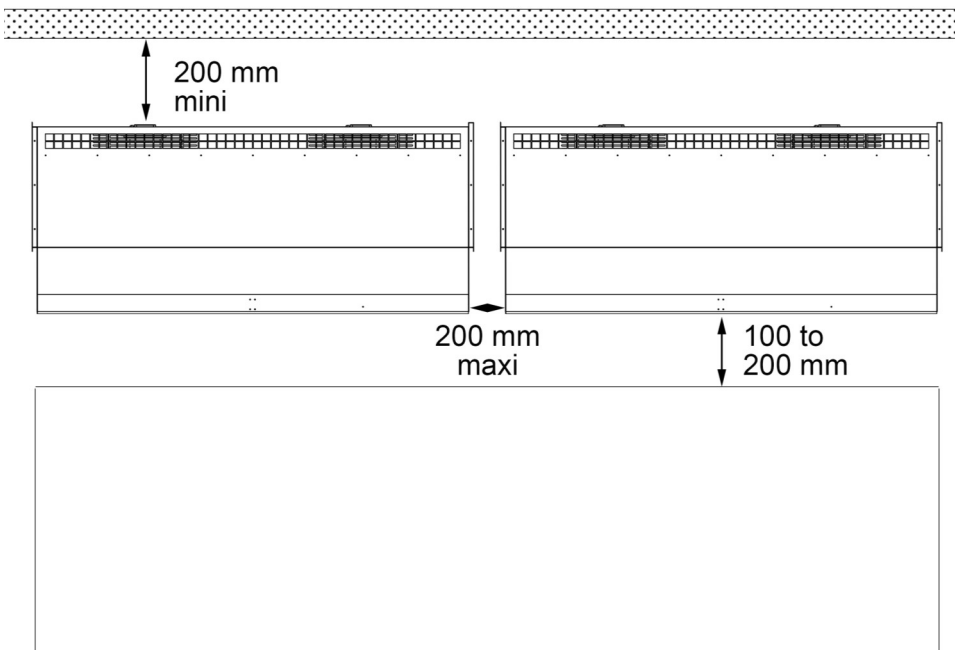


4- MOUNTING

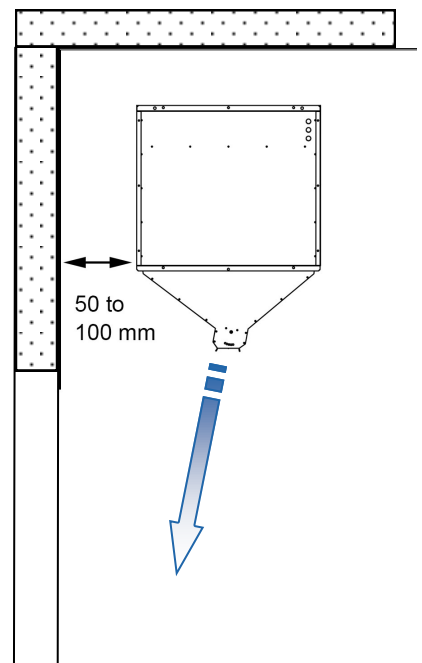
4-1 Horizontal Installation - Vertical blowing

The air curtains must be fixed using the brackets and fixation nuts M8 situated on the fan side. Make sure that the fixation is strong enough and adapted to the weight of the air curtain.

Front view



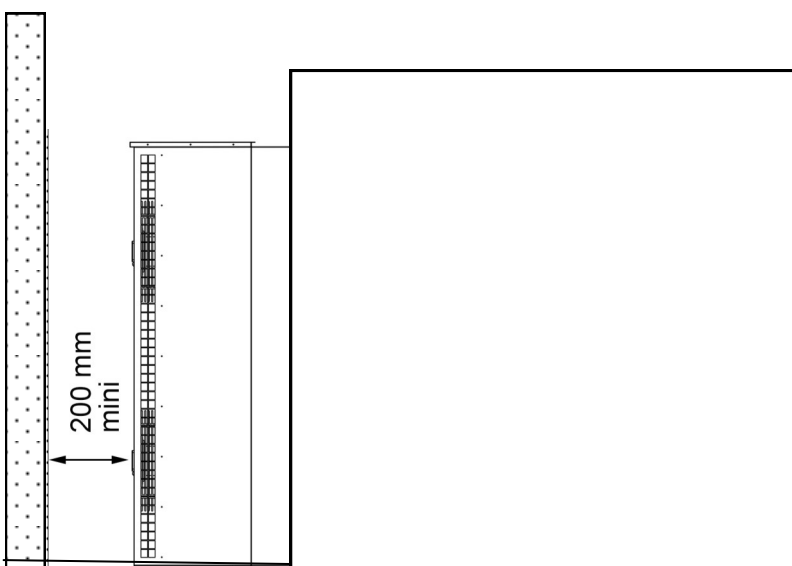
Top view



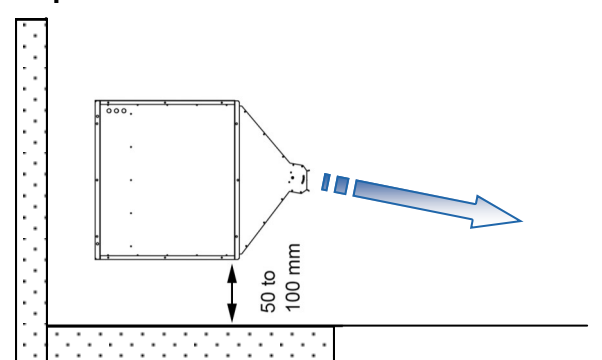
4-2 Vertical Installation - Horizontal blowing

The air curtains must be placed on a perfectly flat and horizontal floor. Make sure that the fixation is strong enough and adapted to the weight of the air curtain.

Front view



Top view



Vertical mounting

The fixing kit KYACV sets vertically the air curtains. The kit is composed of a side plate (N°3) to maintain both units together. It includes also 2 wall mounting brackets (N°1 and N°2) that allows to fix the unit on the wall.

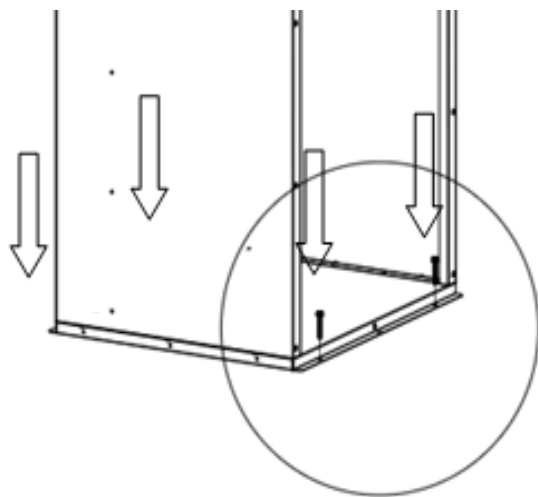
Fixing kit KYACV



Please follow step to step instruction for safety.

Step 1 : Place the first air curtain on the ground

1) Temporarily place the air curtain into position, the edge of the diffuser needs to be protected and not in the doorway.



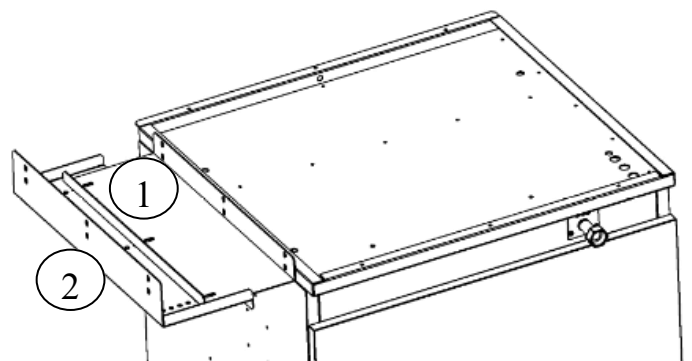
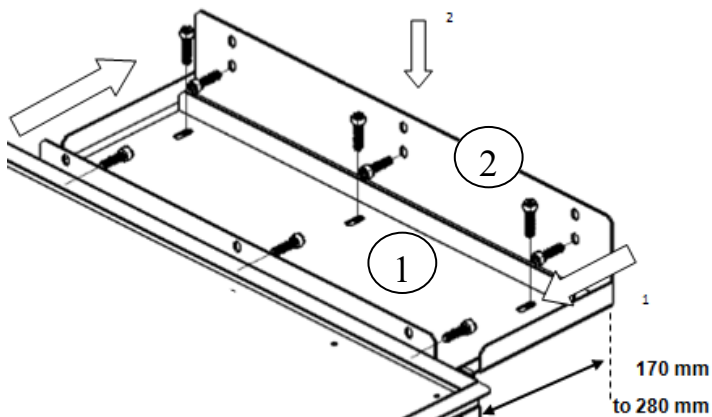
The distance between air curtain side near the wall and wall has to be between 170mm and 280mm.

2) Remove diffuser from all the air door curtains.

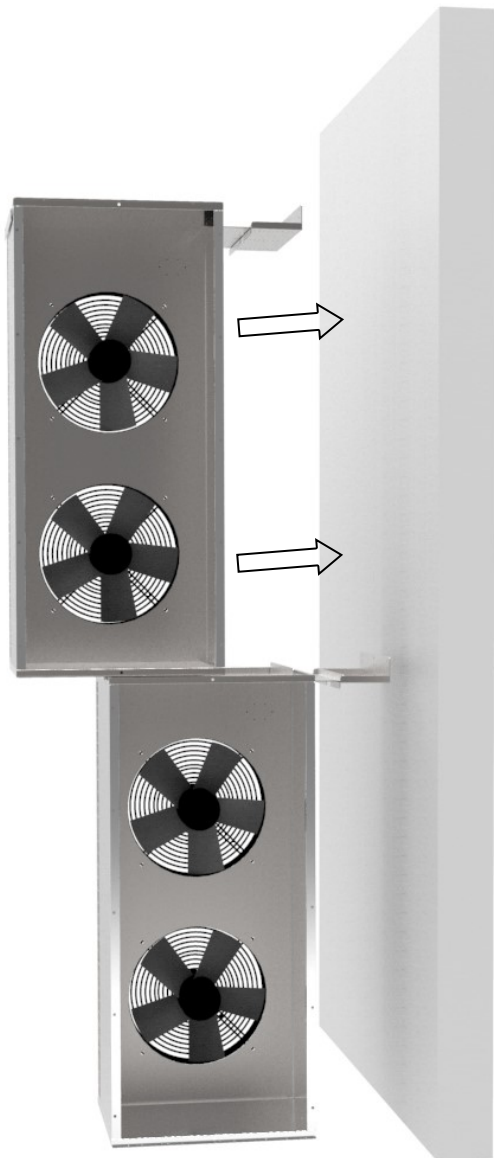
With the air curtain into position and diffuser removed, fix the bottom plate with omega shape on the ground by using the four holes. Use appropriate method and screws to do the job

4) Once the bottom of the unit is well fixed on the ground, secure the top by using the fixing steel plates supplied in the kit. Place the first steel plate (N°1) on the air curtain by using the M6 screws and washers .

Then, place the second steel plate (N°2) to fix to the wall. Fix it on the first plate (N°1) with M6 screws and nuts. Then fix to the wall by using the appropriate method and screws

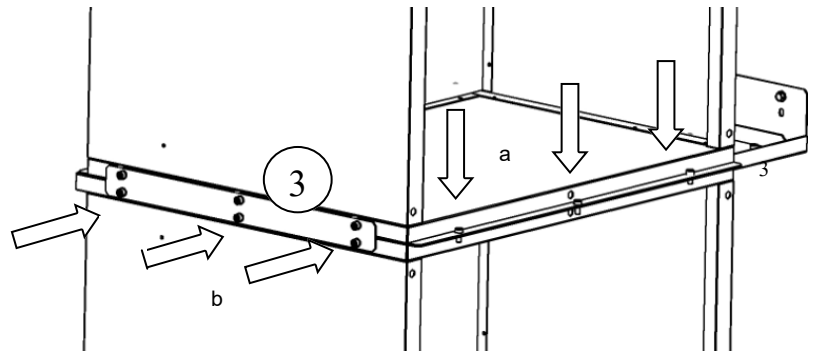


Step 2 : Place the second air curtain on the top of the first one



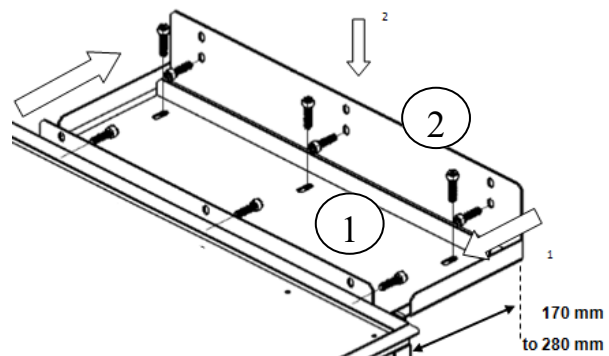
1) Bring the second air curtain using appropriate means for safety purposes

2) Once the unit is firmly superimposed, fix the lower plate of the upper air curtain on the upper plate of the lower air curtain (a) with the provided screws and washers.



3) Fix the side plate (N°3) on the opposite side of the wall with 6 screws and spring washers (b)

4) Fix the upper part of the YAC45V2.0 the same way as for YAC45V with the wall mounting bracket (N°1 and N°2)



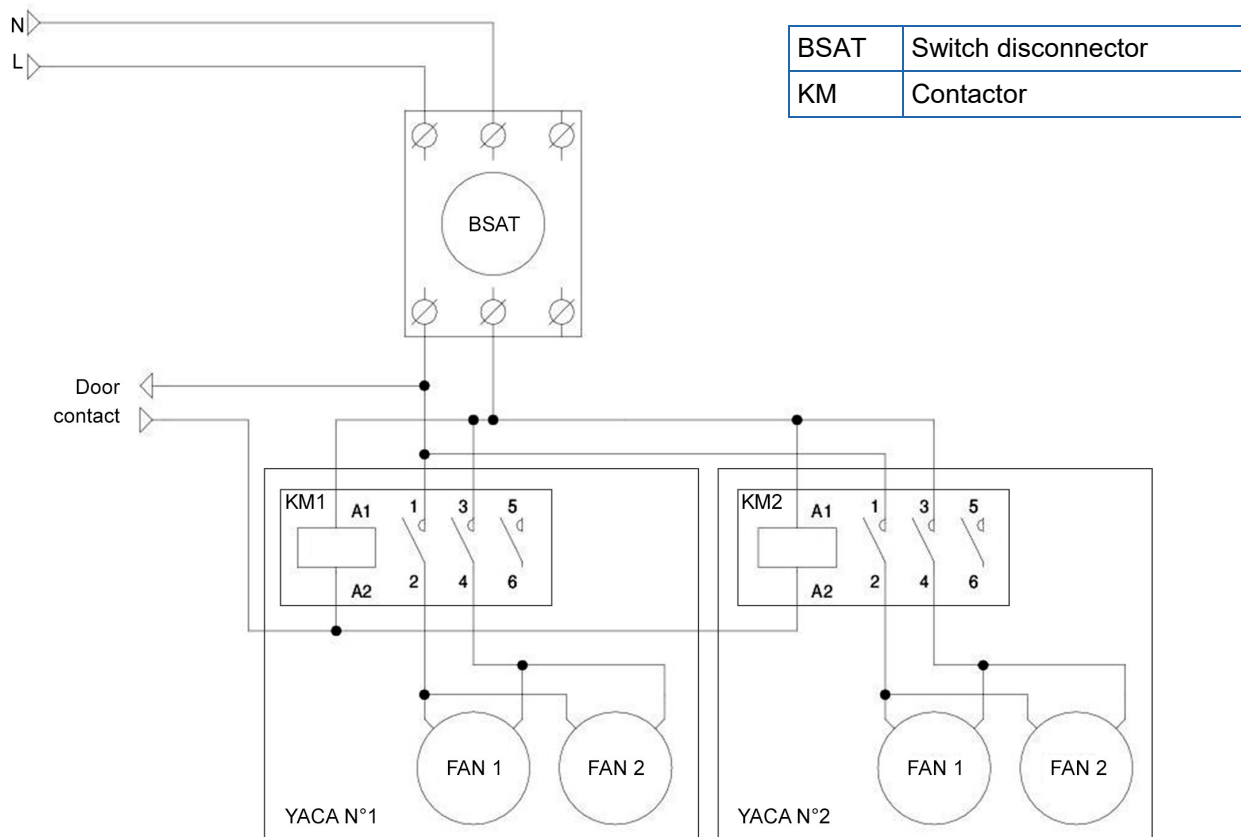
Step 3 : Replace the diffusor in the right direction. The diffusor must be oriented to the outside.

6 - ELECTRICAL WIRING

The unit must be turned off for cable connection. It must be realized by qualified professional with required qualifications. Choose the protection system and cable connections according to the characteristics on the identification plate.

Before plugging in the appliance, check the data on the label and become aware of the electrical diagram on the terminal plate and comply with indicating connection instructions .

6.1 Electrical diagram



7 - USER LIMITS

Respect the voltages and frequencies mentioned on the identification plate of the unit. (Do not go up to 5% from the extreme voltage and do not go up to 1% from the frequency).

NOTES :

- **The precautions, instructions and descriptions concern the standard functioning.**
- **It does not take account of any variation in construction or special adaptation.**
- **The non respect of those recommendations can cause a premature deterioration and the guarantee may be invalidated.**



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