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## **FAQ'S AND ANSWERS RELATED TO AIR CURTAINS**

**S**hould the air curtains be mounted inside or outside the doorways?

Generally, air curtains will operate with equal efficiency, regardless of which side of the doorway it is mounted on. However, there are certain exceptions, as follows: Air Curtains should be installed on the warmer side. Inside Installations are done in case of heated Air Curtains when we do not want the cold breeze to come in and want to circulate the inside hot air. Outside installation is required when used over freezer doors because when mounted inside, the fans tend to gather moisture and freeze, eventually forming a snowball around the fan, causing it to lose operational efficiency. Air Curtains installed outside offer a better prevention to mosquitoes and flies.

**Do air curtains require a cover when mounted outside?**

No, they generally do not require any cover when installed outside, until and unless there is a probability of direct rain or chances of water ingress in the machine. There is standard accessory which can be ordered to make a rain hood or protect the machine.

**Is there any difference in sound level when an air curtain is installed inside or outside?**

No, there is no difference in sound level of the machines when installed inside or outside, but since air curtains circulate a huge volume of air, in very quiet conditions it may be disturbing. Hence installing them outside gives a better protection and even affects the feel of sound level.

**How Far above the doorway header should an air curtain be mounted?**

We should install air curtains just above the door header or to a maximum of half to two inches. The closer the top of the door opening is, the more effective the air curtain will be. Extended mounting brackets are available in various lengths so the air curtain can be mounted to clear an obstruction.

In no way Air Curtains should be taken more than two inches above the Door header, generally done in case of fixed glass above the Door. People tend to put it above the fixed glass. In such conditions, air curtain efficiency will be severely affected.

**If there is an obstruction over the doorway, how far away from the wall can the air curtain be installed and still function?**

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Not more than eight inches for refrigeration and fourteen inches for insects. To seal off the ends, twelve to eighteen inch panels made of sheet metal, plastic strips or plywood can be installed on each side of door opening to improve the efficiency of the air curtain. Sometimes the air curtain air outlet nozzle may be installed between the obstruction and the wall. Precaution is necessary to prevent the obstruction from deflecting the flow of air.

### **What is the average time taken to install an air curtain?**

The average time required to install a unit is 90~120 minutes.

### **Can Air curtains be attached to doors?**

Yes, air curtains can be coupled with the doors, with help of a plunger type and magnetic limit switches. The switches can be coupled with any kind of doors, single side, double side opening, Sliding Doors, Automatic Door, high speed shutters, Roller shutters etc.

### **How long does it take to attach an air curtain with door switch?**

The average time required to install a unit is 20-30 minutes.

### **How do you clear existing lines and tracks over doorway?**

There is a variety of optional mounting hardware accessories. Side extension plates are available to further extend the outboard mounting holes. These plates are available in various sizes up to a nine inch extension for both ends of the air curtain. Adjustable mounting brackets and extended wall mount brackets for drum type roll-up doors are also available. These types of brackets are used when the air curtain needs to be

mounted some distances away from the wall. The brackets are also available for mounting on the glass and special brackets to connect the two machines together.

**When would a vertical mound be feasible?**

When installation is not possible over the top of the doorway, the air curtain may be side-mounted on both ends of the door. As per the guidelines of AMCA, in case of side installation the air curtains should be installed on both the sides or in a zigzag pattern to cover the entire length of the door. Yes, the same Air Curtains can be vertically mounted.

**Should we take air curtain more than the door-width opening?**

We should not take an Air curtain, more than the Door width. Though technically it will not affect, but commercially will not be a right decision. Air curtain length should be more or less equal to the width of the door.

**When there is no space above the door, where should the air curtain be mounted?**

Air Curtains can be mounted above the Door by cutting a false roof and you should consider following points while doing the same. First, the trap door should be provided for service and secondly there should be a space to suck the air.

**Can the door itself be removed and the air curtain allowed to operate continuously 24x7?**

Yes, with Air Curtains you can follow an OPEN DOOR POLICY, for your outlet. Air curtains when rightly installed and directional

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louver set at a right angle, can give a continuous thermal protection and can be installed without a door.

### **Can air curtains be used to hold in extreme heat on industrial conveyor or Ovens?**

Yes air curtains can be used to hold extreme hot air on the industrial conveyor or oven. Actually air curtains are very effective and can prove to be a great money saving tool because a huge amount of money is invested in heating the air through heaters/boilers. When the difference between the ambient temperature and the hot air is higher, losing the air makes an exponential effect on the cost.

The installation of Air Curtains on hot ovens and powder coating conveyors is very different than normal horizontal installation, where the thumb rule says, "We install the air curtain on the warmer side." On the contrary, when the temperature is more than 200°C, the installation cannot be done inside and in such places the installation is done in ambient air with air flowing from bottom to top, with special mounting brackets. Air Curtains are very effective on hot ovens and can hold the hot air inside and various advantages which it can give are:

- Fuel Saving
- Reduced chamber heating time
- Increased conveyor speed results in high production
- Reduced curing time

### **Can an Air curtain be used over a blast freezer?**

Yes, the air curtains should be used on a blast freezer or a cold

*The complete Guide to Air Curtains*

room door. Generally speaking, if the humidity is high you should prefer to take the chassis in stainless steel and the outer body in Aluminium or stainless steel, with plastic or stainless steel suction grills.