



COLD STORAGE AIR CURTAINS

AIR CURTAINS FOR COOLERS AND FREEZERS

If you're familiar with Cold Storage operations, you know there is a constant battle against the elements. Each time a door opens, ambient, cooler, and freezer air clash, often times leading to problematic conditions. And while high traffic and open doors mean steady business, it can also mean condensation, ice, and fog around the openings. These hazards may create unsafe conditions for workers and equipment passing through, as well as strain the doors and refrigeration systems, increasing operational and door maintenance costs. If your current solution for these problems includes a pick and shovel, there may be a better answer.

Powered Aire air curtains offer effective, affordable solutions for your cold storage challenges.



BENEFITS OF AIR CURTAIN ON A COOLER OR FREEZER DOOR

- Reduce ice or frost on the walls and header of the freezer doors
- Improve safety with streamline workflow
- Reduce/eliminate frozen or wet-ground hazards in door areas that can be dangerous to forklifts and plant personnel
- Prevent icing and condensation on high-speed cooler and freezer door panels
- Replacement for strip doors/curtains that may create visibility, safety and sanitation problems due to build-up of dirt, debris and contaminants
- Separate conditioned temperatures inside coolers and freezers from ambient/unconditioned temperatures in warehouses

TYPICAL APPLICATIONS FOR COLD STORAGE AIR CURTAINS

Sliding Insulated Doors • High Speed Doors
Insulated Panel Doors • Cargo Dock Doors
Swing Doors • Personnel Access Doors

WITHOUT AIR CURTAINS



FOG



ICE



MOISTURE

COLD STORAGE AIR CURTAINS KEY DESIGN FEATURES

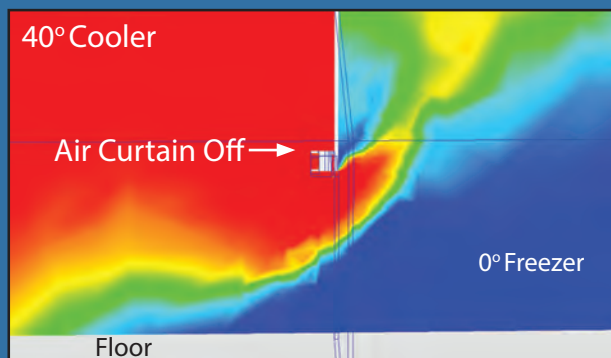
Freezer Aire Curtains include electric heat to condition the air around the primary door, helping to maximize performance and safety around freezer doors, where the drastic change in temperatures can create unsafe conditions and door downtime.

Cooler Aire and Freezer Aire Air Curtains offer:

- Standard corrosion-resistant stainless steel case stands up to the most difficult environments
- Heavy-duty direct drive motors for longer life
- Easy Installation. Units come preassembled and can mount directly to freezer wall or with mounting brackets and extensions to clear any obstructions
- Air Curtains include defrost cycle timers to protect the door during periods of inactivity
- Freezer Aire electric heater helps reduce fog, condensation and ice buildup when door opens
- Aire Controller 2.0 allows user to easily adjust all timing, sequence and operational functions of the air curtain.

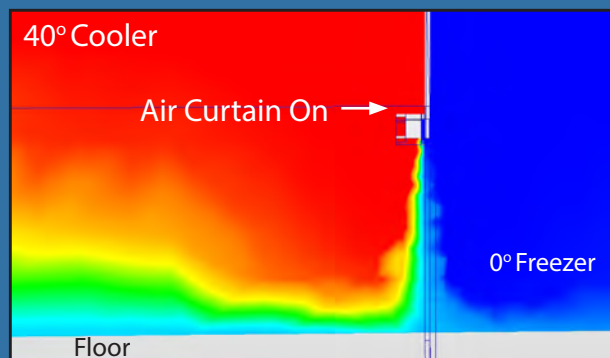


AIR FLOW SIMULATION 10 SECONDS AFTER OPENING THE FREEZER DOOR



Air Curtain OFF

VS.



Air Curtain ON

CHECK OUT OUR AIRE CONTROLLER 2.0

New from Powered Aire! A Next generation air curtain controller for complete air curtain automation

- **2.8-inch High-Speed LCD Touch Screen**
- **Eliminates need for multiple switches including fan mode, fan speed, heat and timing**
- **Optional lockable home screen**
- **Mounts directly to air curtain or can be mounted remotely, offering POE (power of Ethernet) capability**
- **Designed for complete and customized Air Curtain Automation**
- **Ideal for cold storage operations with daily operation of high-speed doors**

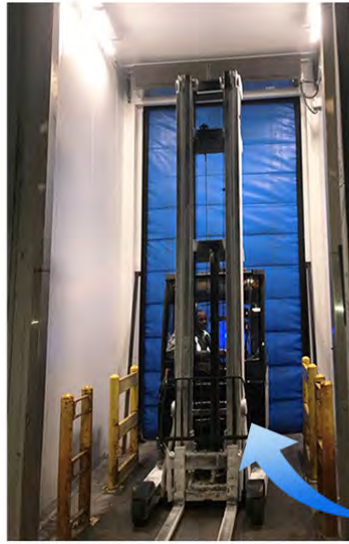


A REAL-WORLD COLD STORAGE APPLICATION

BEFORE INSTALLING A
FREEZER AIR CURTAIN



AFTER INSTALLING A
FREEZER AIR CURTAIN



A Food Distribution Center was constantly having issues with the buildup of ice and condensation in their busy cold storage warehouse. With nearly nonstop forklift traffic, the issues only worsened, causing production to suffer and creating viable safety concerns.

Powered Aire supplied Freezer Aire air curtains and immediately created a safer, more productive workspace free of ice and moisture buildup. The air curtains also eliminated the need for downtime to de-ice the area, further improving operations and generating instant ROI.

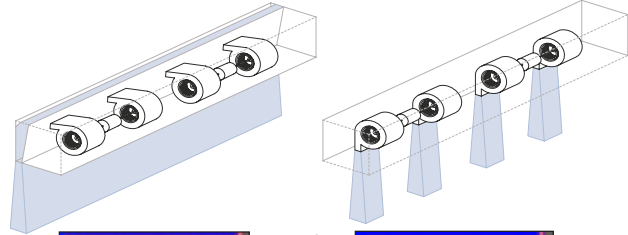
PROTECTING THE DOOR WITH A UNIFORM STREAM OF AIR IS CRITICAL.

Our plenums create consistent airflow across the entire length of the nozzle, while keeping the air moving around the opening. When air leaves the blowers (prior to exiting air curtain), it fills a specially designed plenum where it is pressurized before being distributed evenly across the entire width of opening.

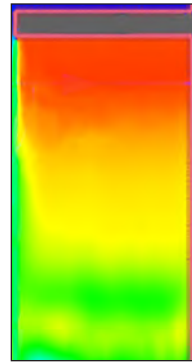
Most air curtain manufacturers aim the blowers downward and the air flows directly from the nozzle, creating considerable gaps in the coverage. Furthermore, they place motors between the blowers, creating additional dead spots.

When safety and workflow are at stake, it's imperative that the air curtains perform at the highest level.

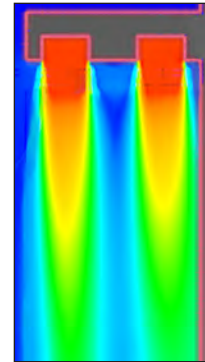
PLENUM CHAMBER HELPS MAXIMIZE AIR FLOW AND UNIFORMITY



POWERED AIRE directs the fans to the rear of the curtain, creating a Plenum effect. The result is a quieter curtain, better performance and a uniform discharge.



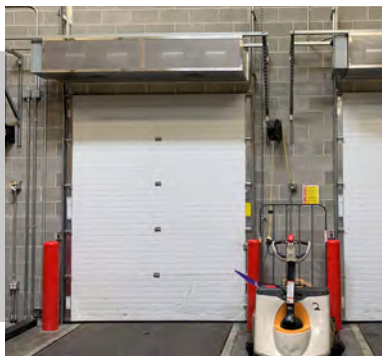
Speed (fpm)
3982
3500
3000
2500
2000
1500
1000
500



MOST MANUFACTURERS position the air curtain's blowers so that they expel the air directly into the opening. This generates an uneven discharge and additional noise.

*The output speed uniformity is an indicator of the consistency of air velocity across the width of the curtain. **Uniformity at the top of the opening is critical.***

WE ALSO MAKE COMMERCIAL & INDUSTRIAL AIR CURTAINS



Have Questions? Need Assistance? info@PoweredAire.com

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