



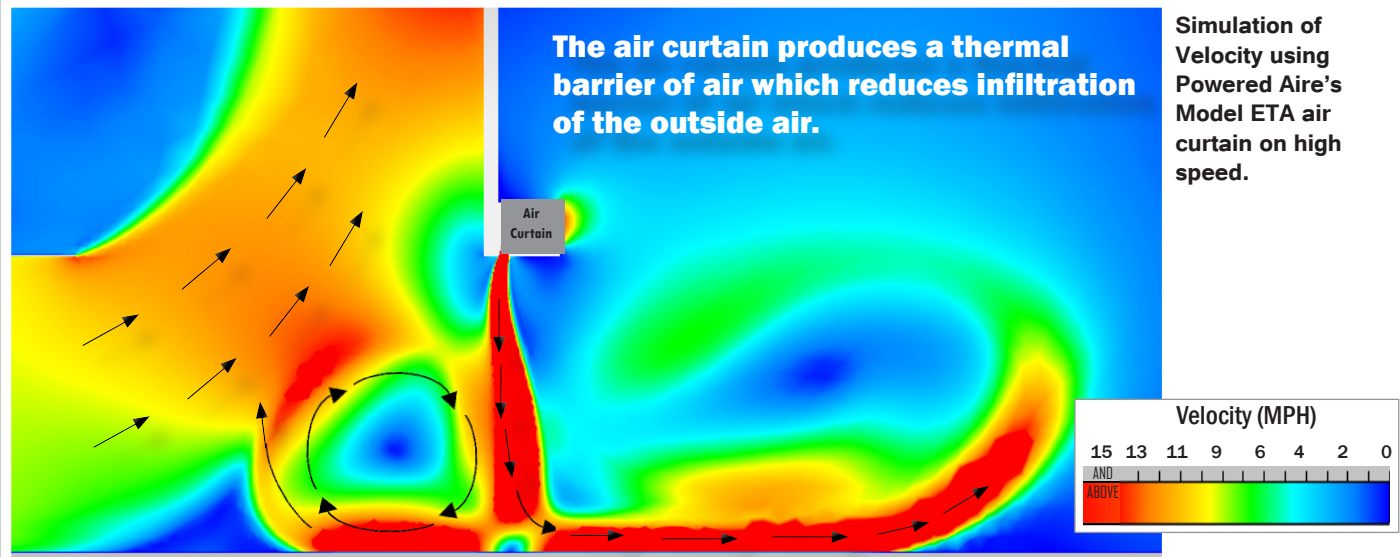
Stainless Steel Air Curtains

POWERED AIRE inc.®

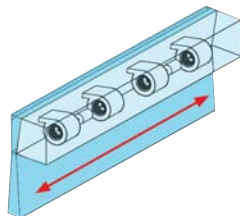


How does an air curtain work?

An air curtain is a thermal barrier that separates one environment from another. It does this by projecting a 'curtain' of downward moving air over the opening of a doorway. This wall of air reduces infiltration of air from one side to the other.

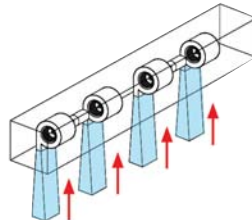


Outlet Air Velocity Uniformity is an indicator of the consistency of air velocities across the air curtain width.



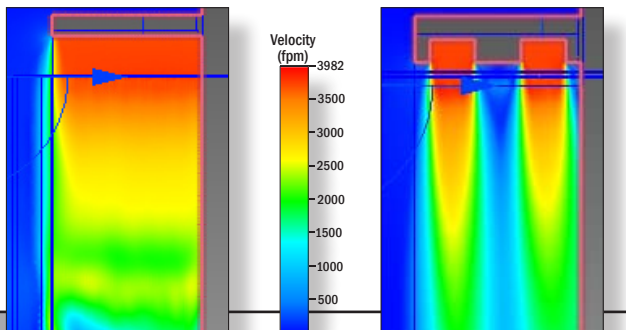
POWERED AIRE INC. AIR CURTAINS

Powered Aire aims the air from the blowers towards the back of the air curtain, where it fills a plenum and is then forced out evenly across the width and length of the air curtain.



OTHER MANUFACTURERS

Other air curtain manufacturers aim the discharge of each blower down, resulting in dead spots wherever there are spaces between the blowers.



The Powered Aire Advantage

- Stainless steel construction for corrosion resistance and durability.
- Widths ranging from 2.5 ft. to 30 ft. and heights up to 50 ft.
- High efficiency plenum provides uniform air distribution across the full width and height of door opening. (See illustration at left)
- Heavy duty direct drive motors for longer life.
- Prewired motors save on electrical installation costs.
- Motor/blower plate is all one removable assembly for ease of service.
- Units factory tested and shipped fully assembled.
- Units crated and secured to wooden pallet for shipping.

Air Curtain Annual Cost Savings

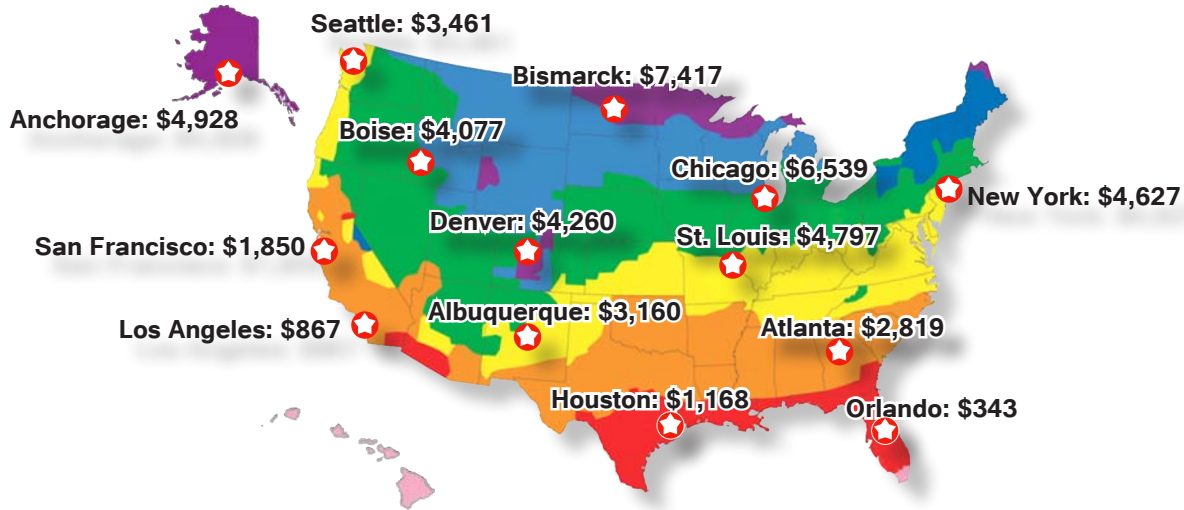
Application: Air curtain at 6 ft. wide x 7 ft. high retail door opening during HEATING SEASON -- **Model CED-2-72**

Inside temperature: 70°F

Hours per day that door is open: 4 (all open door times combined)

Time range that door is in operation: 7 a.m. to 11 p.m.

Days per week that door is in operation: 7



ADDED BENEFITS:

Air curtains can function as space heaters

Powered Aire can wire its two-speed heated air curtains to operate on LOW SPEED as a space heater to add supplemental heat to the space via the thermostat signal, and HIGH SPEED from the door switch when a stronger barrier is required as an air curtain.



Solve unique problems with custom air curtains

Powered Aire can customize its air curtains to solve application or installation issues. Units with reduced heating capacity can be supplied when there is insufficient power available in the building to run standard heaters, or units with additional heat can be supplied when circumstances require a unique sequence of air and heat. For example, the electrically heated air curtain pictured at right is utilized in a hospital hallway to temper the cold air rushing in from an adjacent parking garage. Due to a stack effect taking place, the air cannot be prevented from entering, but it can be warmed to a comfortable level with the aid of custom heating coils within the air curtain.



CUSTOMER ENTRY Applications



USED AT:

- *Retail stores
- *Grocery stores
- *Convenience stores
- *Schools/universities
- *Banks
- *Casinos
- *Hospitals
- *Nursing homes
- *Museums
- *Libraries
- *Hotels
- *Resorts
- *Night clubs
- *Office buildings
- *Churches
- *Military bases
- *Veterans facilities
- *Government buildings
- *Interior room separation
- *Breweries/wineries



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VESTIBULE EXCEPTION

MODEL **ETA** MODEL **CHA**

Tested in accordance with ANSI/AMCA 220 to be used as an exception to the vestibule requirement per guidelines of the 2015 International Energy Conservation Code.

- Model ETA has stainless steel case.
- Model CHA is installed above ceiling and features a decorative white grille; other colors and metals optional.



ChameleonTM

Standard
White Grille

Custom
Brass Grille



MODEL **CLD**

MODEL **CHD**

The Chameleon is designed to be installed above the ceiling over customer entryways where a standard air curtain cannot be exposed.

- Model CLD is light duty with 1/2 HP motors.
- Model CHD is heavy duty with 3/4 HP motors.
- Decorative white grille is standard; other colors and metals optional.
- Unheated, electric, hot water/steam heated.



MODEL **CED**

The Customer Entrance Door (CED) air curtain is designed for high traffic facilities where customer satisfaction is essential. The CED has a comfortable airflow and is one of the quietest air curtains in the industry.

- Available in 1-ft. increments from 3 to 12 ft.
- Unheated or electrically heated.
- Dual speed 1/2 HP motors.
- Can be used with building management systems.
- Easy installation.
- Aesthetically pleasing.



CLIMATE CONTROL Applications



MODEL **ETD**

The ETD is used to stop cold or warm air from entering a climate controlled environment.

- Available in 1-ft. increments from 3 to 12 ft.
- Unheated or electrically heated.
- Dual speed 3/4 HP motors.

USED AT:

- *Dock doors
- *Service doors
- *Food processing doors
- *Climate separation



Air Curtain Savings Surpass Customer's Expectations!



A Seattle business has two busy 9 ft. wide x 10 ft. high dock doors and a warehouse that must maintain a temperature above 65°. After being hit with a \$2,361 monthly gas bill, the company installed two Model ETD-3-108 air curtains over the dock doors and one Model MP-1-36 air curtain over a man door. The coastal company was amazed to see monthly savings of between \$356 and \$704 over the previous year's same three month period. "I had no idea the savings would be so great in a relatively mild climate," the company owner said.

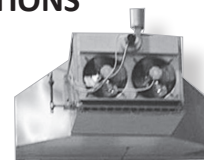
DATE	GAS BILL 2012	DEGREE DAYS*	DATE	GAS BILL 2013	DEGREE DAYS*	SAVINGS!
Jan. 23, 2012	\$1,816.00	24.8	Jan. 18, 2013	\$1,460.00	24.8	\$356.00
Feb. 16, 2012	\$1,854.00	21.6	Feb. 14, 2013	\$1,459.00	19.3	\$395.00
March 16, 2012	\$1,678.00	20.9	March 18, 2013	\$974.00	16.3	\$704.00

*Days below the standard temperature of 65°F, the temperature below which buildings need to be heated.

OTHER COMMERCIAL HEATING OPTIONS



Hot Water/
Steam Heat



Indirect
Gas Heat

Direct
Gas Heat



INSECT CONTROL Applications



MODELS **BCE/BCT**

The BCE and BCT are used to stop insects, dust and other debris from entering through openings.

- Available in 1-ft. increments from 3 to 12 ft.
- Can be ETL listed for indoor or outdoor use.
- BCE has 1/2 HP motors; BCT has 3/4 HP motors.

USED AT:

- *Restaurants
- *Hospitals
- *Cafeterias
- *Clean environments



MODEL **RBT**

The ETL Sanitation Listed RBT air curtain is specifically designed to stop flying insects from entering through restaurant and other food service doors.

- ETL Sanitation Listed to Standard NSF-37.
- Available in 1-ft. increments from 3 to 12 ft.
- Can be ETL listed for indoor or outdoor use.
- Totally enclosed 3/4 HP motors.

USED AT:

- *Doors that are required to meet sanitation codes



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LOW PROFILE Applications



MODEL **MP**

The MP's compact design is ideal for openings where headroom is limited.

- Only 8.5 inches high & 13.5 inches deep.
- Unheated or electrically heated.
- Available in 30, 36 and 42-inch widths and thereafter in 1-ft. increments up to 10 ft. wide.
- Variable speed controller (480/575 voltage is dual speed)
- Aesthetically pleasing.

USED AT:

- *Amusement parks & zoos
- *Concession stands
- *Office entryways
- *Residential doors
- *Resorts/country clubs



PASS THRU WINDOW Applications



MODEL **PTW**

The PTW is used to stop cold or warm air from entering pass thru windows.

- Stainless steel.
- Unheated or electrically heated.
- Plugs into standard 120 volt receptacle.
- Optional door switch with Timer.
- Only 5-inches high!

USED AT:

- *Restaurant
- Pass-Thru windows
- *Drive-up pharmacies
- *Photo pick-up windows
- *Toll booths
- *Ticket windows
- *Concession stands



Corrosive Duty Applications



MODELS **LDC** and **HDC**

The LDC and HDC air curtains differ from Powered Aire's standard units by featuring a higher grade stainless steel case and stainless steel internal components for added protection against rust and corrosion that may occur when corrosive fumes or vapors are present.

- LDC is light duty with 3/4 hp motors.
- HDC is heavy duty with 3 hp motors.

USED AT:

- *Maritime facilities
- *Beachfront properties
- *Swimming pools
- *Car washes
- *Food processing plants
- *Locations with corrosive atmospheres

Hazardous Area Applications



MODELS **LDX** and **HDX**

The LDX and HDX air curtains provide spark resistant construction for hazardous areas. They are manufactured for Class 1 Division 1 Group C & D and Class II Group F & G hazardous areas. Hazardous area door switch available for activation.

- LDX is light duty with 3/4 hp motors.
- HDX is heavy duty with 3 hp motors.

USED AT:

- *Manufacturing plants
- *Pharmaceutical areas
- *Grain storage
- *Mining industries
- *Locations where combustible liquid is stored



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INDUSTRIAL Applications

Powered Aire's line of Industrial Air Curtains are designed to be used at large openings in an industrial environment including: Dock doors, ground level doors, warehouses, manufacturing plants, distribution centers, airport hangars, bus garages and other transportation applications.

- Stainless steel.
- Includes control panel.
- Top, bottom and front access panels for servicing, without having to lower unit to ground.



BIG Doors get GREAT Protection with Powered Aire Curtains

Wind measurements, temperature and site conditions were all important considerations when Powered Aire Inc. selected EHD model air curtains for the Red Deer Civic Yards in Alberta, Canada, where temperatures can drop to -40 F degrees on a cold winter day.

Powered Aire utilized its state-of-the-art Computational Fluid Dynamics (CFD) design software to determine the specific feet per minute (FPM), cubic feet per minute (CFM) and nozzle width the air curtains would require for maximum all-season effectiveness.


MODEL TFD Up to 14 ft.

MODEL TSD Up to 17 ft.

MODEL EHD Up to 22 ft.

MODEL BPA Up to 30 ft.

MODEL XPA Up to 50 ft.





TSD air curtains protect a row of dock doors at a busy food facility

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CASE STUDY

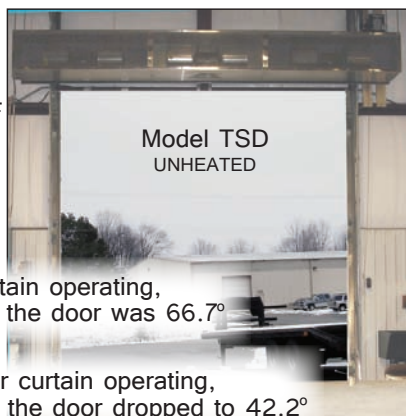
Outside Temperature: 36.5° F
Initial Inside Temperature: 67.6° F

Overhead door left open
for 2 minutes.

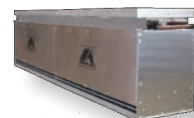
FINDINGS:

After 2 minutes **WITH** the air curtain operating,
the temperature directly inside of the door was 66.7°

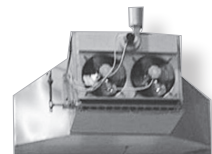
After 2 minutes **WITHOUT** the air curtain operating,
the temperature directly inside of the door dropped to 42.2°



INDUSTRIAL HEATING OPTIONS



Hot Water/
Steam Heat



Indirect
Gas Heat

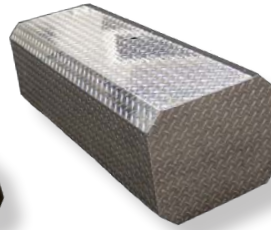
Direct
Gas Heat



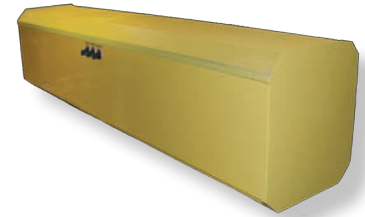
MAKE A STATEMENT WITH ONE OF THESE CUSTOM OPTIONS



**CUSTOM DESIGN
GRAPHICS**



DIAMOND PLATE



POWDER COATED

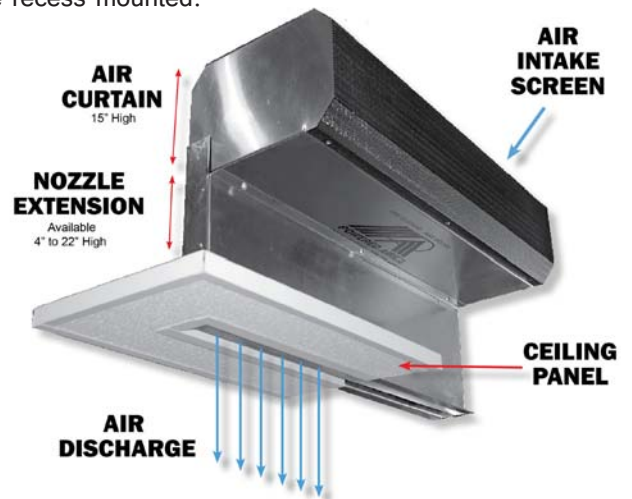
Custom Engineering Solutions

A major Big Box Retailer turned to Powered Aire to design a gas-heated air curtain that would also permit light from a glass transom above the entryway and utilize unused space created by the high ceiling. This is just one example of how custom engineering by Powered Aire can transform ideas into reality.



Air Curtains Can Be Recess Mounted

When there is insufficient room between the top of the door and the ceiling to mount an air curtain, or if it is not desirable to see the air curtain, the air curtain can be recess mounted in the ceiling with the use of a custom nozzle extension. Any of Powered Aire's air curtains can be recess mounted.

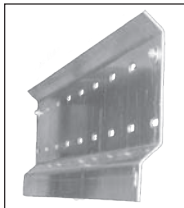


INSTALLATION OPTIONS



Existing Holes

One in each back corner for flush mounting directly to wall.



Mounting Plate

For flush mounting models CED, BCE, BCT, RBT



Extension Plate

Extends mounting width 2.5 to 3.5 inches.



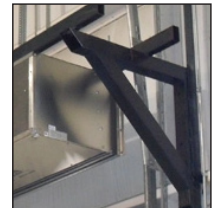
Threaded Rod

For a clean, aesthetic look.



Lt.-Duty Brackets

With strut extensions to reach brackets.



Welded brackets

Custom built for large industrial models.



Powered Aire Inc.



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