

Hearth Pizzeria Reclaims Space with Berner Air Curtain

"Our energy bill the first December of air curtain operation was considerably lower than the previous December, even though both months had similar weather," said Millan-Pulecio.

Berner Air Curtain proves to be most effective and less costly indoor air comfort alternative to vestibules and fabric curtains.

While Millan-Pulecio's main impetus was indoor air comfort, **the air curtain will also help bolster Hearth Pizzeria's bottom line with energy savings.**

By preventing outdoor air infiltration through the doorway, the air curtain will save \$1,141.97 and \$306.55 in heating and cooling costs, respectively, for a grand total of \$1,448.53 annually (167.7--MMBtu/yr), according to Freeman's energy calculations.



Berner Architectural High Performance 10 Air Curtain on Customer Entrance

Hearth Pizzeria's interior entrance area was so cold during the winter months that patrons moved tables and chairs away from the pizzeria's sunny storefront views of downtown Needham, Mass.

It's uncertain whether the uncomfortable indoor air from busy door traffic during winter hurt the 2,800-square-foot suburban Boston business, however Owner Ivan Millan-Pulecio was sure it wasn't helping to attract customers. Thus, about 300 square-feet went unused and its 64-seat capacity shrunk to 50 during busy prime time lunch and dinner periods because of the chilly entrance.

Millan-Pulecio previously tried a ceiling-hung, 16-foot-high red velvet curtain on the interior side of the doorway to block open door drafts. The same strategy is used with mediocre success by several other of the 12 tenants located in the block-long, one-story-high strip center with no entrance vestibules. Hearth's curtain wasn't inviting to foot traffic, children tended to play with it, and new Hearth patrons found it intimidating to walk through while not knowing what loomed on the other side. "It was very confusing to new customers and some people likened it to walking onto a stage," said Ivan Millan-Pulecio, who is also the executive chef and owner of Hearth Pizzeria's parent company, Sol Soul Family Foods.

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Hearth Pizzeria's Berner Air Curtain

was designed for 8 to 10-foot-high, three-foot-wide doorway applications. Sullivan also specified an onboard 9.5-kW heater to provide supplemental heating near the entrance. The unit's low voltage, two-pole thermostat can be mounted onboard or remotely and is set for a specific recovery temperature set point after a door opening. The deluxe control package includes a time delay that's factory-set for 60 seconds to maintain operation until timer expiration. Thus, the air curtain runs continuously during high foot traffic periods.

The fabric curtain seemed like the only option until Millan-Pulecio got a recommendation of electric-heated air curtains from Boston Showcase, Boston, a national foodservice design, equipment and installation firm. Boston Showcase specified an **Architectural High Performance 10 model air curtain manufactured by Berner International LLC, a New Castle, Pa.-based leader in air curtain technology.**

Millan-Pulecio was unfamiliar with air curtains, but less skeptical after Owen Freeman, v.p. of manufacturer's representative, Pardee, Freeman Inc., Gloucester, Mass., presented successful air curtain application examples from retail, office building, hospital and other commercial building categories. Collaborating in tandem with Millan-Pulecio and Boston Showcase, Freeman was able to suggest the proper model, control accessories and mounting position to ensure a good working installation.

"We sell air curtains for a lot of foodservice purposes, such as back door models for flying insect control, air comfort at QSR drive-thru windows, energy reduction on walk-in cooler entrances," said Jeff Sullivan, a Boston Showcase dealer sales rep. "We designed his restaurant with great foodservice equipment, so Ivan trusted our opinion on air curtains," added Sullivan who originally specified an open flame pizza oven by Wood Stone Corp., Bellingham, Wash.; heated cabinets by Cres Cor, Mentor, Ohio; walk-in coolers by Bally Refrigerated Boxes Inc., Morehead City, N.C.; cooking equipment by Vulcan-Hart Co., Baltimore, and other foodservice equipment.

Air Curtain Price Advantages

Besides its mediocre success, Millan-Pulecio's custom-made, fabric curtain solution cost \$6,000, of which one-third went to certified fire-retardant fabric treatments to comply with National Fire Protection Association (NFPA) codes. The velvet curtains have since been repurposed for more of a decorative function elsewhere in the restaurant. "There was also the potential where a fire inspection could determine the fabric curtain was detrimental because it was blocking the entrance's exit visibility," added Sullivan.

Another potential solution was a glass vestibule costing an estimated \$9,000. Vestibules help, but when both doors are opened simultaneously, it creates a wind tunnel to a building's interior. Furthermore, air curtains were proven in a study as more effective than vestibules for conserving energy, which could also apply to cold air infiltration. "**Air Curtains: A Proven Alternative to Vestibule Design**" verified by second-party research/validation consultant, Blue Ridge Numerics, Charlottesville, Va. used computational fluid dynamics (CFD) analysis technology to prove that an **air curtain/automatic door combination is 10-percent more effective in environmental separation performance than conventional automatic two-door vestibules.**

THE BERNER AIR CURTAIN HAS:

- ✓ Stopped air comfort complaints
 - ✓ Made the entire restaurant floor space usable during winter
 - ✓ Reduced costly heating/cooling losses through the doorway
 - ✓ Allowed natural, unobstructed sunlight into the storefront
- Thus, Millan-Pulecio now plans an additional air curtain on a secondary back door entrance in the future.*