

Air curtains on walk-in cooler entrances lengthen equipment lifecycles; comply with Energy Policy & Conservation Act mandates.



While many foodservice industry members are not yet aware of the EPCA code, those who try to comply confront both cost and installation obstacles when implementing a door with an air curtain, activation switch and electrical power supply wiring. Consequently, after the EPCA code enactment, Berner International developed the Walk-In Cooler Efficiency Kit in 2010, an air curtain and control package combination that streamlines the compliance procedure and is easily installed by contractors or in-house maintenance employees.

Berner International Corp.

Arby's Franchisee Test Proves Air Curtains Improve Walk-In Cooler Efficiencies By 27%

Butler, Pa.--Green experts' claims that air curtains installed on walk-in cooler entrances save significant energy and refrigeration equipment wear-and-tear is now proven as correct by a fast food restaurant franchisee's recent in-house energy test.

Donoghue & Pivrotto Enterprises Inc., Wexford, Pa., which operates four Arby's stores, performed a two-week audited test on a 10 x 12-foot walk-in cooler at its 3,300-square-foot Arby's in Butler, Pa. After outfitting the walk-in cooler entrance with an air curtain, the results state the refrigeration circuit's compressor ran 1.75-hours less during one week--a 27-percent reduction in compressor run-time and equipment wear-and-tear. The improvement results in nearly 100 fewer operating hours per year for an estimated annual savings of \$447 and a 1.6-year payback on a walk-in cooler entrance air curtain.

Aside from operational savings, the test results are important for restaurateurs, foodservice operations and food retailers faced with the new Energy Policy and Conservation Act (EPCA) (Section 312) compliance. The code mandates air infiltration reduction methods, such as strip curtains, spring-hinged swinging vinyl doors or other options, for all walk-in coolers manufactured after Jan. 1, 2009, but doesn't specify which is the most efficient. Air curtains undoubtedly require less maintenance, have longer life spans and are safer for employee passage than the alternatives. Now, the Arby's test proves the assumed energy efficiency of air curtains.

"We're one of Arby's higher volume stores, and we've now proven that installing an air curtain on a walk-in cooler reduces energy and wear-and-tear," said Doug Cygan, vice president of operations, Donoghue & Pivrotto Enterprises. "Larger, higher volume restaurants, especially those with the newer design trend of freezer-cooler combinations that result in double the weekly door cycles, would no doubt save more than 27-percent using this technology approach," said Cygan, a 10-year refrigeration industry veteran who has an HVAC/R vocational technology degree and also operates a mechanical contracting company, ICA Mechanical LLC, Butler, Pa.

Other options Cygan considered were strip curtains and hinged vinyl doors, neither which seal a doorway as well as air curtains and both impede employee ingress. "They're instructed not to, but employees eventually tie the strip curtains out of the way to a piece of conduit because they're impeding and not very user-friendly," said Cygan.

The test compared one week of unaltered operational statistics of a 26-year-old, two-ton walk-in cooler manufactured by Kolpak, Manitowoc, Wis., to another week's results after installing a E/K-Zone air curtain by Berner International. The test recorded five variables: temperatures in the back interior and at the door entrance of the walk-in cooler, kitchen temperature, and amp draw of both the compressor and the air curtain.

Now that air curtains are proven to improve walk-in cooler efficiencies, Cygan plans a walk-in cooler efficiency kit to be installed at another Donoghue & Pivrotto high volume store. Cygan also expects word about walk-in cooler air curtains to spread throughout the chain when Arby's corporate Franchise Business Manager makes an expected stop in Butler this year.



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