March
28
2012

Tight-Sealing Doors

Keep a Tight Hold on Costs

Company:
Save-A-Lot Food Stores
Humboldt, TN

Challenge:
Installing a cost effective and energy efficient dock door for use with existing vertical storing dock levelers

Solution:
VertiCool™ by TKO®

Industry:
Food & Beverage

Geography:
Humboldt, TN

"Our energy problems were aggravated by a negative air flow."

Tony Schmitt, Save-A-Lot

Retail grocers such as Save-A-Lot, which have built a market niche by offering customers value priced products in a well-merchandised setting, have to keep an eye open for savings at all points in the operation. As the company says on its web site, "Our highly efficient supply chain enables us to sell at prices well below other retailers (great prices), and our customers can use the money they save for other things that are important to them; necessities or fun times."

Their people and equipment must contribute to these efforts, and that includes the dock doors at their 300,000 square foot distribution facility in Humboldt, Tennessee. Like all cold storage facilities, energy costs represent a major line item on the operating budget.

The Save-A-Lot building dates back to the 1980s with standard sectional metal dock doors. No matter how well the doors were maintained, they were not designed to contain the 40 degree air on the chilled Save-A-Lot dock.

Door damage, a common problem on most docks, was not occurring here because they used vertical storing dock levelers which doubled as steel barriers to protect the doors from impacts. Nevertheless, plant manager Tony Schmitt and his crew observed that their doors were still inadequate because of seal design and panel thickness.

If overhead dock doors are not properly sealed, thousands of dollars of cold storage energy can be lost annually. To cap these losses, the Save-A-Lot facility installed the recently introduced VertiCool™ Door by TKO®, specifically designed for use with a vertical storing dock leveler to seal up the building envelope at thirteen dock positions along their cold storage shipping wall.

The Save-A-Lot engineering department consulted with TKO Dock Doors to find the right solution for these doorways. The facility was already using TKO WelterWeight® Doors on its dry docks and appreciated the protection provided by these impactable doors against forklift damage. The Save-A-Lot Vice President of Engineering was on the fence; he liked the operation of the doors but was not sure whether the cold storage docks warranted the investment since the vertical levelers were preventing door impacts.

Coincidentally, TKO Doors had developed the VertiCool door, designed specifically for use with vertical storing dock levelers in temperature-controlled

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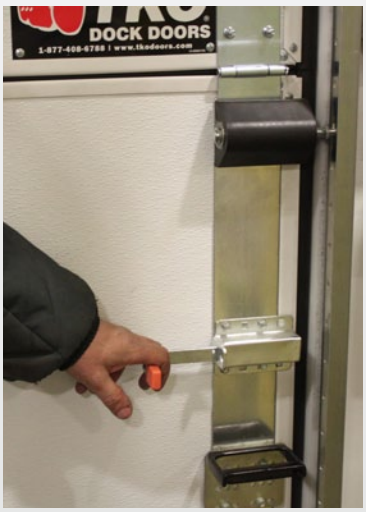

facilities. Because they are protected by the vertical leveler's steel platform, the VertiCool door does not require the impactable features available on other TKO door models. However, the VertiCool door does share many design elements, along with several unique aspects specific to cold storage applications.

Since the VertiCool door was designed specifically for temperature-controlled docks, it has the type of panels all doors in cold storage facilities should have. At four inches thick, the R-23 panels equal the thickness of the building wall for superior thermal protection and year-round energy efficiency.

Another area of potential energy loss on the Save-A-Lot dock was the door seals. And on standard doors they hardly stand up to the demands of a typical distribution center, let alone one that is storing refrigerated and frozen products. Blade-style seals can leave significant gaps at points along the dock sections; even worse, they are mounted to the doorframe, making them susceptible to being torn off by passing forklifts all creating the perfect atmosphere for precious energy loss.

VertiCool doors are equipped with compression seals which find and fill every gap along the door jamb. These seals are mounted on the door panel rather than the door frame. Raising the door removes the seals from the impact zone to avoid damage and provide a consistent seal. The VertiCool door also has a dual overlapping header seal and equally durable double-loop compression seal at the bottom for a

tight seal to the warehouse floor.

Thermal breaks are also reduced based on the door design. Rather than the standard 24-inch wide panels, the TKO VertiCool employs 48-inch wide panels for 50% less exposure between the panels. Galvanized panel hinges keep the panels close together to further reduce air infiltration.

The VertiCool door has a patent-pending, heavy-duty, full-height polymer thermal break track, which is also wrapped in energy-reflective foil fabric. Unlike metal tracks, the VertiCool's thermal break track design not only helps prevent energy loss, it also prevents the accumulation of moisture on the dock that can cause mold buildup and make the dock floors dangerously slippery.

The VertiCool door also remedies another problem for the Save-A-Lot distribution center. According to maintenance supervisor Randy Durham, the old doors would soak up moisture, particularly during the humid Tennessee summers, and become difficult to raise, straining the backs of the dock workers. To avoid the strain, employees were tempted to leave the doors open between deliveries,

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exposing the dock to significant energy loss.

The VertiCool door panels feature a closed-cell XEPS foam core. Along with providing a significant level of insulation, the foam resists moisture accumulation, avoiding extra work for both the dock crew and the area's chillers.

"The energy savings," according to Schmitt, "is the main benefit these doors have brought to this facility." However, Schmitt says that another factor that swung them to the VertiCool door was TKO's ability to engineer the product to meet their specific application needs. For example, although the original straight-up vertical door was designed with a counterbalance lift-assist system, TKO Doors provided specialty torsion springs to accommodate the tight wall area on the Save-A-Lot facility.

With the VertiCool doors helping to save dollars at the dock, Save-A-Lot can keep its promise to customers, allowing them to walk out of the store with more dollars in their pockets.

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Tony Schmitt, Save-A-Lot

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