



Challenge:

Overhaul 20 heavily-used and worn out dock bays and associated equipment in a 24-year-old pre-owned food warehouse, as well as increase warm air flow in dock door areas due to the removal of a gas heater that presented safety concerns.

Solution:

Two 24-foot Entrematic I-Class™ industrial HVLS fans, as well as 20 each of the following: Serco VSL Series vertical storing dock levelers (VSL) with Master Control Panels, Serco S-2500G Guardian® Dock Seals with XL-100 Super Fabric, energy-efficient TKO WW Series WelterWeight Impactable Doors, Serco SL60 Series PitBull® Powered Vehicle Restraint as well as G-Flex LED Dock Lights™.

Results:

Projected annual reduction of 400 therms (400,000 cubic feet) of natural gas usage while providing a comfortable and well-heated dock bay area for all personnel during colder months, increased safety with easy-to-maintain dock pits, better protected dock doors and tight seals when doors are fully closed, and the ability to now safely and properly restrain any trailer with a lift gate.

Application:

Catania Oils
Distribution Center

Environment:

Food Distribution Center

Geography:

Ayer, Massachusetts

Family-Owned Edible Oils Provider Upgrades Pre-Existing Food Warehouse with HVLS Fans, Vertical Storing Dock Levelers and More



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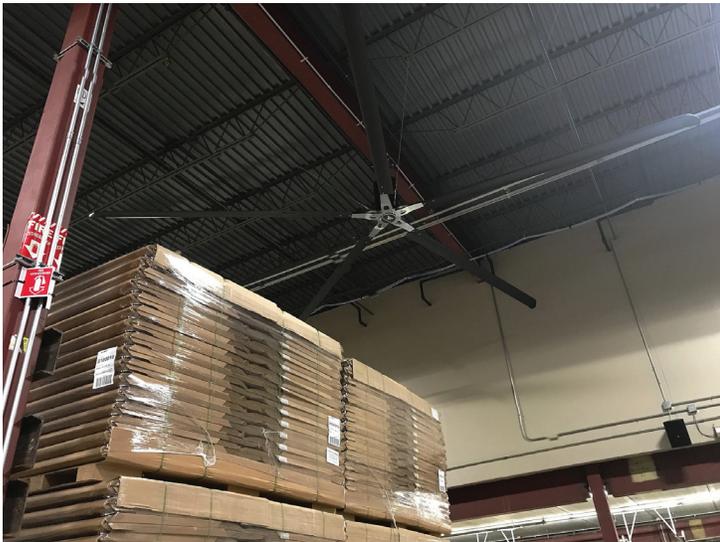
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A family-owned, multi-generation company for more than 100 years, Catania Oils has experienced a surge in growth over the last seven years. In fact, growth has been so strong that two years ago, the provider of Non-GMO Project verified and organic vegetable oils, olive oils and blended oils needed to relieve mounting pressure on its main manufacturing and warehouse facility in Ayer, Massachusetts.

Catania Oils, which markets its products to the ingredients, foodservice and retail markets, decided to expand distribution operations into a vacant 24-year-old food warehouse located directly across the street. The company now has 100,000 additional square feet of distribution center space for finished product with 20 dock bays to help manage its product shipments.

The new distribution center is very active, with at least ten dock bays in use 16 hours per day handling 15 daily transfers from Catania Oils' manufacturing facility. At least (25) 53-foot trailers leave the distribution center daily with either mixed or full product loads. Some finished product is also shuttled as needed between the distribution center and the manufacturing facility's warehouse.



“The company is anticipating the fans will help lower heating energy costs in the distribution center, with a projected decrease of 400 therms per year.”

–Dan Brackett, Director of Manufacturing and Engineering, Catania Oils, Ayer, Massachusetts

Serious safety risk removed

When Catania Oils acquired the late 1980s-era facility, it needed serious improvements. The dock bays were in poor shape with heavily used and damaged doors, hard to maintain and faulty manual dock levelers, as well as inappropriate trailer restraints. In addition, a gas heater located inside and directly above the loading dock area presented a critical safety risk.

“We immediately faced a problem with a low-clearance gas heater located directly below a mezzanine office area above,” said Dan Brackett. He further explained that a lift truck carrying a high stack of pallets, for example, ran the risk of hitting and/or damaging the heater, or worse yet, rupturing a gas line and starting a fire.

Catania Oils decided to remove the heater to eliminate that risk. Although, that decision presented another problem: keeping the dock area comfortable and warm. “During the first winter without the heater, we knew we had to find a way to resolve the cold areas near the dock bays, eliminate the heat loss issue and better circulate heat throughout the building,” Brackett added.

The solution? Two 24-foot diameter Entrematic I-Class™ industrial HVLS fans positioned about 75 feet apart and 20 feet above the floor. While the distribution center's primary gas heater (located far from any lift truck traffic) pumps warm air into the distribution center, the HVLS fans then circulate the warm air that collects near the ceiling and pushes it down and across the dock positions (known as destratification) to mix with the colder air below.

“We expect to use the fans more during the colder months because in the summer the facility stays surprisingly cool in the 70-degree (F) range due to the cement slab it's built on,” Brackett pointed out. “When humidity levels rise, or in the event of extreme temperatures during the summer, I'm sure we'll rely on the fans to provide the air movement we need.”

Anticipated energy savings

To mount the large HVLS fans, Brackett relied on Dock & Door Handling Systems (Saco, Maine) and the company's installation team. Brackett said Catania Oils opted to handle the electrical work and further revealed that “the company is anticipating the fans will help lower heating energy costs in the distribution center, with a projected decrease of 400 therms per year.” That's equivalent to an annual savings of 400,000 cubic feet of natural gas or 40 million Btu's.

So far, Catania Oils has finished upgrading 15 of its distribution center's 20 dock bays, with five more dock bay upgrades planned for the summer of 2017.

“We didn’t want to just ‘fix’ existing problems we inherited from a structure built in 1988,” Brackett emphasized. “So we decided to pull out all of the old spring-loaded dock levelers and replace them with new vertical levelers as well as other equipment.” The distribution center’s dock bays upgrade project includes:

- Serco VSL Series vertical storing dock levelers (VSLs) each with a dedicated Master Control Panel;
- Serco S-2500G Guardian® Dock Seals with XL-100 Super Fabric;
- TKO WW Series WelterWeight Impactable Doors;
- Serco SL60 Series PitBull® Powered Vehicle Restraints that replace older restraints from another manufacturer;
- G-Flex LED Dock Lights™.

“One of the improvements we’re really excited about is that we have safety interlocks on all leveler master control panels that prevent a vertical dock leveler from being accidentally lowered and taking out a dock door or injuring an employee,” said Brackett. “The reason the old doors were so damaged from lift trucks is because the facility didn’t use vertical levelers or other protective measures. The new levelers will definitely prevent damage to the doors.”

Tight door seals

Brackett also added that since the new dock doors have such a high R-value and are so energy efficient, Catania Oils’ energy provider, National Grid, provided beneficial energy savings incentives. Because the doors close directly on the cement floor instead of on a dock leveler, that means no light penetration for better energy efficiency and protection from unwanted pests.

As a food provider, Catania Oils’ warehouse and distribution operations are subject to regular food safety audits. “We pride ourselves in maintaining extremely high standards,” stressed Brackett. “The vertical levelers are much easier to keep clean, especially in the case of an accidental food related spill.”

Although Catania Oils relies on Dock & Door Handling Systems to clean its dock pits annually, Brackett said that the VSLs are very safe and easy for personnel to sweep around and clean as well. “That saves us money in the long run since the dock bays are much easier to maintain, and that helps with our regular food safety audits, too.”

Brackett is convinced the VSLs will result in much less dock bay downtime. “I intuitively know that because the way the vertical leveler is designed, it will be much easier to maintain than our older, aging equipment. The vertical levelers resolve



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a number of potential issues in one complete solution. Because we’re a family-owned business and not going anywhere, we expect to use the vertical levelers for a very long time.”

Agreeing that the VSLs and other dock equipment investments were a smart decision, Brackett replied with a chuckle, “I like to think I make smart decisions.” But he quickly emphasized that decision is a direct reflection of the strong, long-term partner-based relationship between Catania Oils and Dock & Door Handling Systems.



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Trailer restraint improvement

Brackett further acknowledged that Dock & Door Handling Systems is great at looking at Catania Oils’ needs from a challenge/solution perspective, including important issues like cleanliness and food safety, preventing dock door damage, energy loss and savings, etc. For example, Dock & Door Handling Systems provided a clear perspective on choosing the right trailer restraint for Catania Oils’ distribution center.

“We requested a specific restraint to accommodate trailers that have lift gates, which was a real problem at our new facility. Dock & Door took the time to explain how another company was using that type of older design and the problems they ran into,” Brackett related. “Dock & Door demonstrated exactly what we needed to deal with this issue. Now, trailers with lift gates can pull up to any dock bay on our distribution center without a problem.”

Before the dock bays upgrade project, Catania Oils sent trucks with lift gates to a door with no lock, which resulted in the need to use chock blocks to secure the trailers. Serco SL60 Series PitBull Powered Vehicle Restraints also allow Catania Oils to take advantage of their dual locking range, which reduces

trailer creep, ensures a safer working environment and a tighter seal against the Guardian dock seals.

Brackett concluded, “You can easily see that our relationship with Dock & Door goes beyond just calling them up and saying we need three more dock levelers. If we’re going to invest money into an opening in a building, Dock & Door helps us ensure the highest degree of success in our investment.”

For more information about Entrematic’s I-Class industrial HVLS fan products and features, log on to www.entrematicfans.com/industrial, or contact us at 866-696-2464. To learn more about Serco’s full line of dock products and other equipment, or to experience Serco-In-Person, visit www.sercoentrematic.com, or call 800-933-4834.



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