

VORTEC CHILLS OUT CONTROL PANELS IN FOOD MANUFACTURING PLANTS

Food manufacturing equipment must withstand frequent washdowns in order to maintain quality standards. Electrical panels on this equipment therefore must maintain NEMA 4X ratings. High temperature areas in manufacturing plants, which become even hotter during the summer, make maintaining these control panels even more challenging. Food manufacturing plants can benefit from Vortec enclosure cooling products which protect control panels subject to the rigors of frequent washdowns and extreme temperatures.

The Challenge

A large ice cream manufacturing plant faced serious heat-related issues with a large Allen-Bradley control panel. The panel frequently overheated during the summer, resulting in shutdowns which caused massive loss of production. The plant maintenance supervisor estimated that for every hour of shutdown, the food manufacturer lost \$10,000 in potential revenue.



A Freon air conditioner cooled the panel. However, the panel's placement between two adjacent panels provided very limited space for cooling equipment with an extremely small mounting footprint available on the panel's front door. Due to these space limitations, a small Freon A/C unit with lower cooling capacity had been installed. This compromise resulted in two problems. The small air conditioner was still too heavy to be supported by the panel's door, leaving the panel door unsealed with electrical equipment vulnerable to the dirt, heat and humidity of the plant environment. Also, the small unit failed to provide adequate cooling. During the summer, when temperatures inside the panel soared to 135°F, the Freon A/C unit failed, causing production line shutdowns.

The Solution

The plant maintenance supervisor called Vortec about an alternate solution to this unsatisfactory Freon A/C unit. A Vortec applications engineer responded promptly to his query, demonstrating the cooling capabilities and benefits of the Vortex Coolers in food manufacturing plants. Unlike the bulky and heavy Freon A/C unit, the compact and lightweight Vortex A/C Cooler mounted easily on the panel door without compromising the door seal. Whereas the old Freon unit did not provide sufficient cooling for the panel, the cool dry air produced by the Vortex Cooler is routed (via the Cooler's cold air ducting kit) directly to a PLC to keep it within its specified operating parameters while also providing heat abatement for the rest of the panel.

Conclusion

Impressed with the performance of the Vortec equipment, the plant maintenance supervisor purchased several of Vortex A/C Coolers. The Vortex Coolers were immediately installed on the A-B panel and are keeping the panel and the production lines at the ice cream manufacturing plant up and running. He says, "I'll be installing additional Vortex A/C Coolers next summer. The cost/benefit is very favorable – the Vortex A/C Coolers are inexpensive and I can't afford a production shutdown. The installation is quick and easy. Vortex A/C Coolers are ideal for panels in washdown areas that cannot be cooled effectively with traditional thermal management products."

For more information on Vortex A/C, [click here](#) or scan this QR code with your smart phone.



Vortec, an ITW Company
10125 Carver Road
Cincinnati, OH 45242

1-800-441-7475
sales@vortec.com
www.vortec.com