



CASE STUDY

Bel-Garden Bi-Rite Supermarket



Supermarket improves customer comfort, saves \$35,000 per year with Advantix

A humid climate and large number of shoppers generated challenging conditions in Baltimore supermarket. Installation of an Advantix unit improved customer experience and extended product shelf life while saving an estimated \$35,000 per year in energy costs.

BACKGROUND

Bel Garden Bi-Rite supermarket opened in 1964 and has been run by the same family ever since. The 15,000 square foot store was expanded and remodeled to add a full size bakery and a prepared foods department.

Historically, the store owners have struggled to maintain their refrigeration system during the humid months, causing frozen goods to become damaged and a shorter shelf life of other products. Along with finding a viable solution to these issues, the store owners were committed to sustainability, reducing energy costs and maximizing their customers' in-store experience.

CHALLENGE

Sandy Vary, owner of Bel-Garden Bi-Rite Supermarket, said that Baltimore's hot, humid summers have been a challenge. The store has many customers so its doors open and shut frequently and its aisles are usually crowded with shoppers.

"Over the years we have struggled with conventional air conditioning systems," Vary said. "With our old system you could feel the humidity in the store. Even though we were making the air very cold, it wasn't enough to make people comfortable."

"We had shutdowns where the refrigerator would fail because of the heat," Vary added. "The extremes of heat and humidity created issues with shelf life of grocery products and produce. Our utility bills also showed the impact of those hot summers and what we endured. At one point, we considered installing a desiccant wheel but it was too expensive and used too much energy."



ADVANTIX SOLUTION

Intelligent Power & Air Solutions, Inc. installed an Advantix Systems DT 3400/9 liquid desiccant unit at the supermarket to replace a 20 ton conventional rooftop unit. Controls and a remote monitoring system with a live feed to the owner's computer and phone were also installed.

The Advantix unit has reduced HVAC energy consumption by an estimated 30%, saving an estimated \$35,000 per year. Average humidity level in the store dropped from 65% RH to 40% in the summer months, extending product shelf life and allowing an increase of the HVAC setpoint by 5 degrees. In addition, the use of anti-sweat heaters dropped from 24 hours to 1 hour per day, further reducing energy spend.

"The Advantix unit was installed at the end of the summer," Vary said, "but we have already been able to see its impact. Immediately after installation, the reduction in humidity



"The reduction in humidity made the store much more comfortable for our customers and employees."

Sandy Vary
Store Owner

made the store much more comfortable for our customers and employees. Our frozen food manager told me he does not perspire as much."

"I also noticed that our frozen products fared much better in these conditions," Vary added. "The shelf life of our fresh meat products has been extended by at least a full day. We are the first store in Baltimore using this innovative technology so we are enjoying a significant competitive advantage."

HOW IT WORKS

Advantix Systems' cooling & dehumidification systems are based on liquid desiccant's natural removal of moisture from air. This non-toxic, brine solution cools, dehumidifies and cleans the air at the same time without ever needing to be replaced and without exiting the system. When heated, the liquid desiccant releases the moisture back outside in the form of warm, vapor air, eliminating condensation from any point in the system. Liquid desiccant is also a natural disinfectant, eliminating bacteria, microorganisms, and odor from the air.



For more information:
email: info@advantixsystems.com
phone: 305.503.0446
www.advantixsystems.com