

Berner International Corp.

## Market of Choice



### Grocery Chain's Green Mission Includes Air Curtains, LED Lighting and Solar Technology



Market of Choice goes beyond organic and health food retailing to show patrons supermarket sustainability and energy savings.

Eugene, Ore.—Knowing that natural and organic grocery consumers expect the stores they patronize to maintain sustainable operations, Market of Choice continues growing a green operation that's second to none in the supermarket industry.

Located in a bastion of sustainability awareness in Eugene, Ore., the eight-store grocery chain's operational strategy is a supermarket role model of environmental and energy conservation. It employs energy-saving air curtains on front and back doorways, sells power generated from its own 130.0 kW solar photovoltaic (PV) electric rooftop system, and even composts its own food waste. The 32-year-old, family-owned chain is also amidst an ambitious energy-saving light bulb change-out program from overhead high-intensity discharge (HID) and reach-in cooler/freezer fluorescent light bulbs to LED lighting.

Since 2008 when both check-out employees and customers were feeling chilled from westerly wind drafts through the front door at Market of Choice's Willakenzie Street store, air curtains have been installed on seven of eight stores' front end and shipping doors. Originally aimed at indoor air comfort, the stores have since experienced additional air curtain benefits of increased energy savings and flying insect infiltration reduction.

Most stores use an aesthetic stainless steel Zephyr or MaxAir model air curtain manufactured by Berner International, New Castle, Pa., to match the modern interior automatic door entrances. The air curtains are activated by a limit switch triggered when the door opens and deactivated on a five-second delay setting via Berner's digital, programmable Intelliswitch™ controller. Air curtain technology draws interior air from the facility and discharges it through field-adjustable (+/-20 degree) linear nozzles that "seal" the doorway with a non-turbulent air stream that meets the floor approximately at the threshold of the door opening. A properly-sized and AMCA-certified (Air Movement & Control Association, Arlington Heights, Ill.) air curtain can contain approximately 70 to 80-percent of that air and return it to the space. Because the air curtain discharges air at velocities generally in the range from 1,000 to 3,000 ft/min., it effectively prevents outside air and flying insect infiltration.

Air curtain payback ranges from one to two years and depends heavily on periodic checks for proper air flow performance. Store managers are trained by installing electrical contractor, Revolution Electric, Eugene, to clean reusable filters and adjust the air curtain's 10-speed fan to suit patrons and weather conditions. Revolution Electric President, Jared Olsen also checks the air discharge and directional vanes for proper airflow velocity, volume and uniformity, whenever working on other electrical issues in a store.

Air curtains are critical to Market of Choice stores, according to Olsen, because their front entrances are cost-effectively designed with automatic sliding doors versus expensive and space consuming vestibules. The energy study "Air Curtains: A Proven Alternative to Vestibule Design" verified by second-party research/validation consultant, Blue Ridge Numerics, Charlottesville, Va., proved with computational fluid dynamics (CFD) analysis technology that an air curtain/automatic door combination is 60-percent more effective in environmental separation performance than conventional automatic two-door vestibules. Vestibules cost up to 75-percent more in labor/materials than air curtains, and they also consume anywhere from 50 to 2,000 square feet of valuable retail floor space.



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