

CASE STUDY

Roche Bros. realized a one year payback on TrilliumSeries™ Condensers at their Westwood, MA location, by drastically reducing energy costs.



The Background

Roche Bros. Supermarkets, founded in 1952 by Pat and Bud Roche, strives to offer their customers an exceptional shopping experience by putting a pleasant twist on the traditional supermarket. The success of this family-owned supermarket business is largely due to their passionate approach to customer service, an exceptional shopping experience, an incredible menu of prepared foods and a renowned catering service. Roche Bros. is like having several specialty stores in one, as they pride themselves on enhancing their customers' experience.

The Challenge

Properly refrigerating food products is an absolute priority for supermarkets. As ambient temperatures rise, refrigeration systems must run harder to keep food cold. This typically results in increased energy usage. Roche Bros. had an outdated refrigeration system in need of being improved. The system consisted of three racks with a combined capacity of 125 tons. Prior to the retrofit, these were connected to three air-cooled condensers. On hot summer days, the system often suffered from insufficient cooling capacity. In turn, Roche Bros. paid exorbitant energy bills.

The Solution

As Roche Bros. required reliable cooling capacity and desired to lower its energy usage, the BAC TrilliumSeries™ Condenser was a natural fit. A study was conducted on the proposed retrofit, projected annual savings were 232 MWh and 35.6 kW peak demand. This energy savings yielded a rebate of \$75,000 from National Grid, the local electric utility, lowering their initial investment cost and increasing their ROI.

The TrilliumSeries™ Condenser achieves the largest benefits in summer months, when a small amount of water is used to keep the system running at peak efficiency. However it runs in dry mode much of the year, only using water when the ambient temperature rises above a predetermined set point. The TrilliumSeries™ Condenser also keeps water use at a minimum, by utilizing cleansing recirculation, whereby the water that is not evaporated in the unit is recycled over the pads a few times before being drained away. With no standing water, Roche Bros. does not have to perform chemical/biological treatment. All of this together offers Roche Bros. huge energy savings over their old refrigeration system.

The Results

Roche Bros. is benefiting from high energy savings with their two new TrilliumSeries™ Condenser units. The actual payback on their investment of the BAC TrilliumSeries™ Condensers is one year, with a projected annual savings of 232MWh and 35.6 kW at peak demand.



TrilliumSeries™ Condenser



KEY FEATURES PROVIDING SUPERIOR RESULTS FOR ROCHE BROS.

Variable Speed Electronically Commutated (VSEC) Motor/Fan Assembly

Failsafe operation protects refrigerated product. 92% system efficiency provides savings, and quiet operation allows installation flexibility

Dry Coil Adiabatic™ Technology

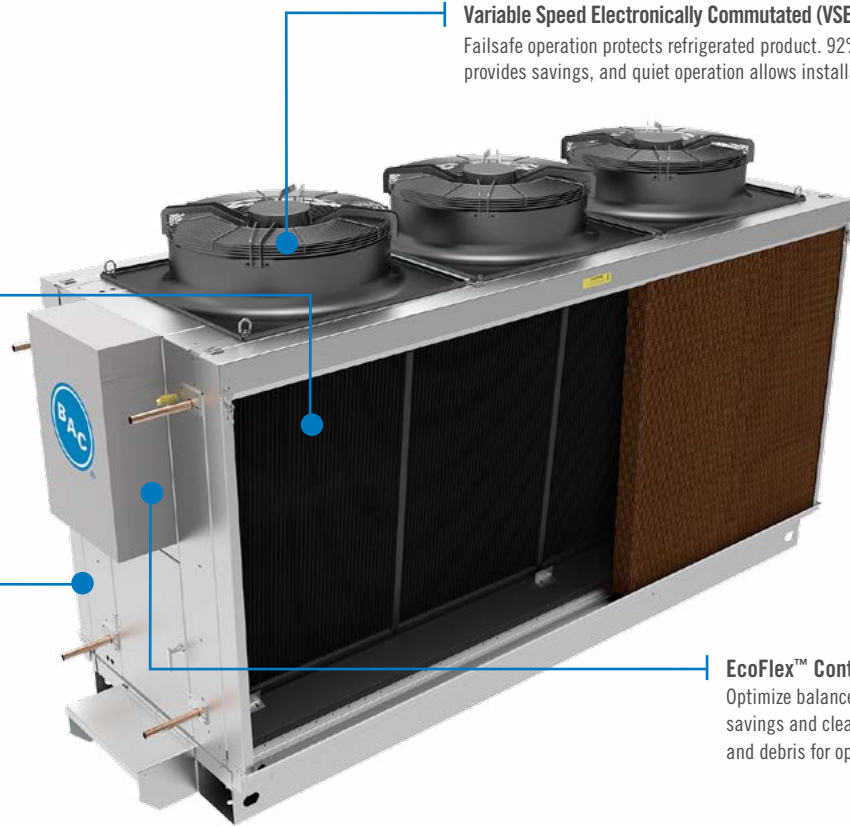
Coated coils provide long life and corrosion resistance, while microchannel coils reduce refrigerant charge by 90%

Hybrid Design

Minimizes water and energy costs, saving on system energy and peak energy costs.

EcoFlex™ Controls

Optimize balance of water and energy savings and clear the unit of dirt and debris for optimal performance.



BAC TrilliumSeries™ Condensers installed at Roche Bros.
338 Washington St, Westwood, MA 02090



 SYSTEM ENERGY SAVINGS

 LOWEST TOTAL COST OF OWNERSHIP

 WATER CONSERVATION

 REDUCED REFRIGERANT CHARGE


 INSTALLATION COST SAVINGS

 EASY MAINTENANCE

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