

Baltimore Aircoil Co.

Kavita Vallabhaneni, manager of product marketing for Baltimore Aircoil Co., says installing the proper air-cooled condenser can help supermarkets see significant energy savings.

What are some of the latest developments in aircooling towers?

Kavita Vallabhaneni: In May of 2012, Baltimore Aircoil Co. (www.baltimoreaircoil.com) released yet another innovative product; this one geared towards the supermarket industry. The TrilliumSeries Condenser is a "hybrid" condenser that only utilizes water to help with heat rejection on the hottest of days and runs dry on milder days. Storeowners that make the switch from a traditional air-cooled condenser will see significant energy savings.

What should retailers look for when choosing an appropriate air-cooling tower for their store?

When it comes time to replace a condenser, the storeowner should give special consideration to the following areas: kW (kilowatt) and kWh (kilowatt hour) use or reduction, quietness of operation and ease of installation and maintenance. The TrilliumSeries Condenser delivers in all three of these areas utilizing variable speed electronically commutated (VSEC) fan motors, Whisper Quiet fans and onboard controls. Although the TrilliumSeries Condenser uses water to reduce peak energy use, it requires no water treatment, and water does not spray onto the coil, minimizing maintenance requirements.

How can updating or replacing an air-cooling tower save a retailer on energy costs?

An owner can see dramatic energy savings (kW and kWh) compared to a standard air-cooled condenser and dramatic water use savings compared to an evaporative condenser. The TrilliumSeries Condenser comes standard with VSEC fan motors, which are the most efficient fan motors on the market, as well as a micro-channel condensing coil, the most efficient coil available with reduced charge requirements.

How often should an air-cooling tower unit be replaced?

As needed. Total Cost of Ownership (TCO) calculations are done assuming a 15-year life span. Reliable maintenance can extend the life of the unit, while negligence can, of course, decrease the life cycle of the unit.

The frequency can vary based on the application and maintenance of the unit. However, new units usually incorporate new technology to reduce unit footprint, provide environmentally friendly options and energy savings.

How are modern cooling towers helping the environment?

The TrilliumSeries Condenser is a new breed of condenser designed with the owner-end user and environment in mind. The micro-channel coil significantly reduces the amount of refrigerant required while at the same time increases the surface area dramatically. This increased face area allows the unit to run dry the majority of the time.

The TrilliumSeries Condenser reduces the amount of water used by operating dry on milder days and it saves energy by using adiabatic water cooling during high heat, high load times of the year. The less energy used, the lower the carbon footprint of the location (these are called "indirect CO2 emissions"). The micro-channel coil has a significantly reduced refrigerant charge, which reduces direct CO2 emissions— EPA Greenchill estimates an average 18% refrigerant leak rate for supermarkets.

Are there tax credits available to help retailers recoup the cost of installing a new or updated unit?

In several regions of the U.S., tax credits or rebates from local utilities may be available. Retailers should consult their local energy provider. Baltimore Aircoil Co. can estimate the annual operating cost of your refrigeration system should you require prior to rebate submission. Rebates are available for most utilities, which will offer reimbursement based on a peak kW or total kWh reduction. **edo**





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