



CaseStudy:

Dierbergs Supermarket

Creve Coeur, Missouri

Summary -

Equipment on Site:

- Four 230V rooftop condensers
- (2) 8-Fan
- (1) 6-Fan
- (1) 4-Fan

Equipment Applied

- (2) 8-Fan KE2 Fan Controls
- (1) 6-Fan KE2 Fan Control
- (1) 4-Fan KE2 Fan Control
- All 230 volt

Results

- reduced energy usage by 54%
- reduced carbon emissions by 195,719 lbs. annually

Payback

2.1 years with rebate



Dierbergs supermarkets is a St. Louis based chain of 23 supermarkets that has enjoyed almost 100 years of success. One need only visit their website, and view the list of philanthropic organizations that Dierbergs supermarkets are involved with, to know, this is a company that is not only motivated by continued financial success, they are truly concerned with creating a better community. As such, the company was eager to pursue the opportunity to reduce energy consumption and shrink their carbon footprint using the KE2 Fan Control to manage their condensers.

The need to replace their four roof mounted condensers at the Dierbergs West Oak store prompted their initial search for alternate controllers. The store uses two 8-fan condensers, a 6-fan condenser and a 4-fan condenser to feed liquid refrigerant to their four racks. Using the KE2 Fan Control, which incorporates VFD technology to vary the fan speed according to demand, benefited the company in several ways. First, through energy reduction, but additionally, by eliminating the stop and start surges typical with standard step control, there is less wear and tear on motor windings and bearings.

The installed split condenser option allowed even further savings and reduction of refrigerant charge in the system. Head pressure during VFD operation was within a few psi of setpoint, aiding system stability and making additional savings possible.

For the Dierbergs West Oak store the net result was a 54% energy saving over the previous step controlled system. Dierbergs satisfaction with the retrofit is apparent in their commitment to use the KE2 Fan Control on the condensers in their 24th store scheduled to open soon.

Conclusion:

The 54% energy savings amounts to 102,095 kWh, at \$.09 per kwh, for a savings of \$9,188 annually. First year savings with the local utility (Ameren Missouri) rebate amounts to \$15,493. **Payback is realized in 2.1 years.**