

COPELAND SCROLL OUTDOOR CONDENSING UNIT

Lee's Famous Recipe Chicken reduces energy costs



"The Copeland Scroll Outdoor Condensing Unit is an important part of our refrigeration energy savings program." - Tom Brozich, Director of Field Operations

Customer

Lee's Famous Recipe Chicken has been serving up fresh hand-breaded, honey-dipped chicken since 1966.

Challenge

Restaurant chains such as Lee's Famous Recipe Chicken are especially focused on operational issues. Their primary economic concerns are reducing energy consumption, limiting downtime due to equipment failures, attracting more customers, and satisfying customers with their experience in these restaurants.

After researching different walk-in refrigeration equipment options, Lee's Famous Recipe Chicken made a plan to compare legacy equipment to newer technology in real-world field test locations. The operators worked closely with Copeland and Astro, their equipment supplier, to identify opportunities for improvements in energy efficiency, maintenance and product protection.



Application

Refrigeration systems for walk-in coolers and freezers.

Solution

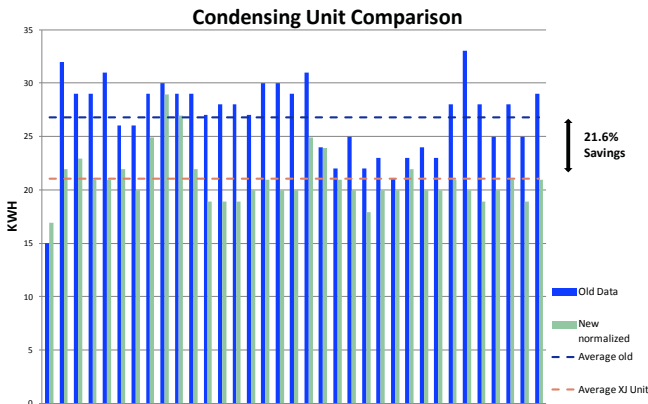
Field tests were conducted over the summer in Fremont, Ohio in a back-to-back test. The location was instrumented with data acquisition systems that recorded temperatures and power consumption twice every minute. The old condensing unit was run for a month before being replaced with the new XJ Series unit. The performance of the two units was compared during periods of similar weather and usage.

The energy efficiency of the entire system was improved beyond initial expectations. The Copeland Scroll® Outdoor Condensing Unit XJ Series accounted for approximately 21% energy savings when compared to the old unit. Additional energy savings were achieved with new energy-efficient ECM evaporator fan motors.

The chart below compares the old condensing unit to the new Copeland Scroll Outdoor Condensing Unit. The old condensing unit consumed 26.8 kWh on average. The new XJ Series condensing unit consumes 21.0 kWh on average, a 21.6% energy savings.

Result

- The Copeland Scroll® Outdoor Condensing Unit XJ Series accounted for approximately 21% energy savings when compared to legacy technology units
- Built-in CoreSense™ Diagnostics gives Lee’s Famous Recipe Chicken technicians information to quickly and accurately troubleshoot any issues, avoid unneeded service calls, and protect the system from premature failure
- Lee’s Famous Recipe Chicken is working toward a planned phase-in of the Copeland Scroll units to accelerate improvements in bottom-line financial performance



Advanced walk-in refrigeration technology

The Copeland Scroll® Outdoor Condensing Unit XJ Series ranges in size from 1.5-6 HP, and offers energy savings of up to 40% compared to standard industry condensing units, making it perfectly suited for many walk-in cooler and freezer applications. The XJ Series unit incorporates multiple advances in refrigeration as standard features into a single unit solution, including:

- The latest generation Copeland Scroll refrigeration compressors which have been optimized for the highest annual energy efficiency
- Ultra-quiet and efficient variable-speed PSC fan motors
- Large condenser coils for more efficient heat transfer
- High efficiency fan blade design
- Proprietary electronic algorithms to optimize energy performance
- Exclusive Enhanced Vapor Injection (EVI) circuit on low temperature units for added capacity and system efficiency
- Exclusive CoreSense™ Diagnostics to enable faster, more accurate service, along with compressor protection benefits to lower total lifecycle costs

The XJ Series unit’s slim profile, light weight, wall mount capability, and sound reduction features may also offer customers added benefits from:

- Crane rental savings
- Flexible location options previously not available
- Ease of installation and service savings
- Compliance with noise ordinances
- A more attractive and quieter atmosphere for neighbors and customers

Resources

Learn more about the Copeland Scroll Outdoor Condensing Unit at copeland.com/copelandoutdoorunit