

Ice machine manufacturer exceeds energy efficiency requirements

Result

- Ice machine tested and optimized in two weeks
- System efficiency increased by 14%
- Manufacturer exceeds ENERGY STAR performance levels and meets CEE tier 3
- Optimized components with high-efficiency compressor and valves

Application

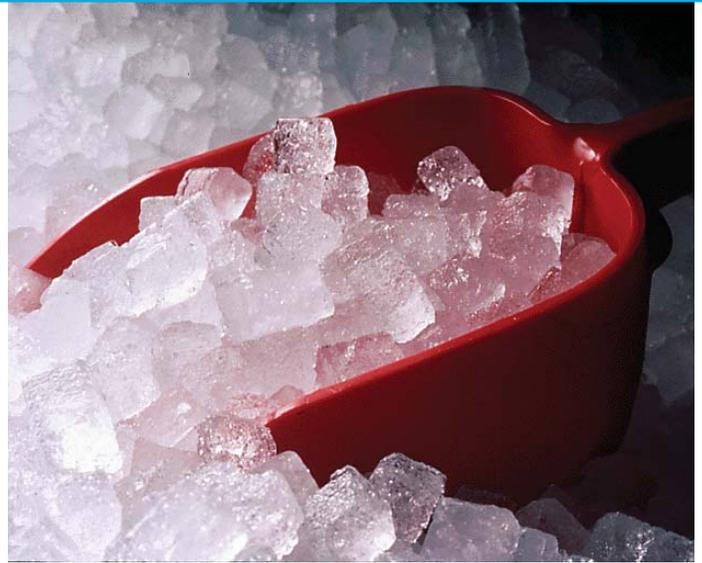
Regulatory assessment, testing and optimization of a 500 pound ice machine.

Customer

A major U.S. refrigerated foodservice equipment manufacturer.

Challenge

Tougher energy efficiency regulations have left many manufacturers struggling to improve system performance. Some of the most stringent energy requirements fall on refrigerated foodservice equipment, such as reach-ins and ice machines. OEMs need to achieve ENERGY STAR performance or better to compete in the market. This 500 pound ice machine was a popular model, but changing energy expectations had made the design non-competitive with other ice machines on the market.



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Solution

Design Services Network, a third-party test lab for the ENERGY STAR program, was able to test and optimize an ice machine in just a few weeks. The lab first ran baseline performance tests to ARI 810 and ASHRAE 29 standards, including cycle times, ice capacity, power consumption, and ice quality monitoring. The lab carefully collected data from the temperature-controlled testing and reported on energy, temperatures, pressures, and water usage. Then our engineers analyzed the data and compared the results to the energy standards such as ENERGY STAR and CEE tiers. Our final report was more than just a Pass/Fail. We recommended steps to improve the energy efficiency of the unit and offered a convenient option to implement these steps and re-test if necessary.

The ice machine that we recently tested failed to meet ENERGY STAR requirements. Design Services Network picked a high-efficiency Copeland hermetic compressor and changed the TXV. The result was a 14% reduction in energy usage and a unit which passed ENERGY STAR and CEE tier 3.

Design Services Network is a third-party test lab for the ENERGY STAR program and is certified to test food service and HVAC products. All tests are conducted in an ISO-17025 & UL/ARI/NSF approved environmental room with controlled temperature and humidity.

Resources

Design Services Network can normally test and report within two weeks of receiving a unit. We have a simple flat fee structure for most food service refrigerators, freezers, and ice machines. Learn more at EmersonClimate.com.

Beginning January 1, 2011, EPA will require third party lab testing for the ENERGY STAR program. Products must be tested in a laboratory that is accredited to ISO/IEC 17025 standards for the relevant test procedures. DSN not only meets these requirements, but also offers our customers several other services:

- As a UL third party test lab, customers can complete UL testing to several UL standards concurrent with ENERGY STAR Testing. Complete safety and efficiency assessment in one stop!
- Need to test to CEC standards - No problem! DSN is a CEC approved test lab in a variety of categories
- DSN can also test to NSF-7 sanitation standards
- Not meeting regulatory standards? DSN expert engineers can identify improvement areas, implement and re-test your product in a single engagement.

