Refrigerated Engineering

Profile of the Company

Kilkenny Cooling Systems is a leading manufacturer of refrigerated storage equipment for the dairy, brewing and food processing sectors. A sector they are particularly prominent in is the beverage cooling industry. Their equipment is currently installed in over 12,000 pubs, clubs, hotels, and restaurants houses throughout Ireland and abroad. The equipment currently used relies on ice as a phase change medium for stored cooling. This technology is simple, reliable and has been used for decades in their products for various cooling applications from beer chilling to food production system.

Problem to be Solved

Wishing to maximise the performance of their beer cooling system, John Smee, owner of Kilkenny Cooling Systems, approached Technology Gateway in the Nimbus Research Centre at Cork Institute of Technology, to do some work on a prototype beer cooler. Kilkenny Cooling Systems is an award-winning refrigeration equipment manufacturing business who have been designing, developing, and manufacturing high-quality cooling systems in Kilkenny, Ireland since 1971. The company has been commended by the Institute of Refrigeration Ireland and has reached the final of the European Commission Awards for the Environment for new developments in energy efficiencies in beer cooling systems.
Innovative Solution

1. Through an Enterprise Ireland funded Innovation Voucher and Partnership Feasibility study, the Nimbus Research Centre in CIT undertook a performance assessment of the company's VS prototype beer cooler, and benchmarked it against competitor cooling systems such as a conventional ice bank system and a full glycol system. Parameters investigated included cooler performance co-efficient, dispense temperature variation and electricity consumption. Analysis of the comparative experimental data demonstrated the superior performance of the VS prototype in terms of thermal cooling and energy consumption performance.

2. Nimbus then implemented changes to the product resulting in the superior performance of the VS prototype in terms of thermal cooling and energy efficiency. The system can measure demand in a bar and run the cooling system fast enough to meet that demand and no more. This means product lines cool and fresh during quiet periods, using 39% less electricity than a modern standard coolers. This makes VS Beer Cooler more efficient than any other system on the market.

Client Testimonial

John Smee
CEO & Founder, Kilkenny Cooling Systems

Having expertise on hand such as that provided by Nimbus was extremely helpful and definitely contributed to this project's successful outcome. The Enterprise Ireland Innovation Voucher scheme played a key role in the progress of our VS Beer Cooler R&D project. I would strongly encourage any business considering undertaking their own R&D to avail of an EI Innovation Voucher."