

Profit from efficiency

## Poultry Savings For 2 Sisters

Like most organisations, 2 Sisters Food Group is coming under increasing pressure to reduce its environmental impact and control costs.

With this in mind, engineering staff at the chicken products supplier's Haughley Park facility invited Excalibur to conduct an energy efficiency survey of the site's existing refrigeration systems.

Based on this survey and results from an internet-based refrigeration efficiency monitoring system, Excalibur made a number of rec-

ommendations and was contracted to carry out modifications to the site's equipment.

Initially the plant's Roast 95 pack was selected for modification: This installation features four Bitzer OSK 7471 screw compressors and an aircooled seven-fan condenser. The system is used to chill cooked chicken and operates seven days a week.

Excalibur undertook the installation of Liquid Pressure Amplification and installed a Variable Speed Drive system to control

the unit's condenser fans. The work was undertaken with no disruption to production, pre-fabrication being completed during normal working hours and final connections made during a weekend shutdown.

The internet-based refrigeration monitoring system used in the initial survey was left in place and this also allows online access to all refrigeration operating parameters.

Following 12 months of monitoring, the engineering staff at Haughley Park are now in a position to assess the improvement in refrigeration efficiency as a result of Excalibur's modifications to the system.

Since the improvements were implemented, energy consumption has been reduced by 38 per cent, giving a return on investment of less than 15 months and an annual reduction in carbon emissions of 177 tonnes.

The introduction of low head pressure operation and inverter control of condenser fans has also reduced the mechanical stress on compressors and fans, which will reduce the risk of potential failures.





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## Testimonials

### **Manchester Airport**

*"Throughout the LPA project at Manchester Airport Excalibur provided a thorough and professional service ensuring the project was delivered on time with minimal operational disruption. The project delivered savings as quoted, the refrigerant change helped re-life ageing equipment and was seen as a great success, so much so that we are about to embark upon a second phase during 2010"*

### **2 Sisters Food Group**

*"Excalibur installed LPA and inverter control to our Bitzer screw pack, the work was completed to a very high standard with minimum effect to production. Monitoring over the first 12 month period showed a reduction in power consumption of 38%. Several evaporators which had been starved of refrigerant now achieve temperatures where previously they struggled. There have been no reliability issues and we are benefiting from a system which is not only energy efficient but also provides improved refrigeration performance"*

### **Norland Managed Services**

*"I would like to take this opportunity to thank you and all others from within Excalibur involved with the development of this project, from my initial involvement through to today's handover meeting. All of which has run extremely well, with any issues uncovered being easily resolved with the proactive nature of you and your site team, which are a credit to Excalibur. Hopefully, in the not to distant future I will have the opportunity to call upon Excalibur's assistance and experience again on another LPA Project. Though in between times I would thank you again for your support and guidance".*