

JAMES T BLAKEMAN & CO REPLACES R404A WITH ECO-FRIENDLY AMMONIA REFRIGERATION SOLUTION

Customer:	James T Blakeman
Equipment:	Glacier GP2 Spiral freezer
Refrigerant:	R404a
Capacity	159kW
Temperature	

James T Blakeman & Co is a meat wholesaler and manufacturer of the famous “Supreme Sausage.” Recognised as a leading supplier of cooked sausage and meat products to the ready meal and contract cooking markets, the company was searching for a replacement for their existing R404A system, which is being phased out under recent changes to environmental legislation over the next 15 years.

Star Refrigeration helped the sausage manufacturing company upgrade their existing refrigeration system, futureproof their factory and increase energy efficiency at their production site in Newcastle-under-Lyme.

James T Blakeman & Co’s recognition of more climate friendly alternatives that perform to a higher standard was one of the driving factors behind the replacement of R404a – a widely used refrigerant

accounting for 46% of worldwide F-Gases – for ammonia, which has zero global warming and ozone depleting potential.

With an overriding commitment to reduce energy consumption and CO2 emissions, James T Blakeman was looking to achieve long-term sustainability and at the same time avoid future increases in HFC refrigerant costs, linked to a decline in their availability.

In conjunction with Starfrost, one of the Star Group of Companies, Star Refrigeration introduced and installed a new inverter driven Glacier GP2 and spiral freezer system which ensures the continued freezing of cooked sausages for James T Blakeman.

Kevin Moller, Factory Manager at James T Blakeman & Co, said, “The spiral freezer/chiller system features a stainless steel dual conveyor belt around a single rotating drum, with 28 tiers in total. The dual twin belt with additional side guards allows us to process multiple products simultaneously, giving increased flexibility to the processing line. The product belts also have a stainless steel interior panel, which offers a more hygienic, easy to clean solution.”

“Our spiral system has been designed to maximise uptime and requires minimal ongoing maintenance. In addition, the temperature control and unique airflow is specially designed for our delicate

products, such as skin on sausages, ensuring product quality is maintained for our customers.”



The new ammonia Glacier plant at Blakemans

Star Refrigeration and Starfrost offered a turnkey solution for the sausage manufacturer, installing a zero carbon ammonia plant rated at 159kw at -42°C SST. The product throughput of the spiral is 900kg per hour of cooked sausage, at an inlet of 85°C and discharging of -18°C. One of the key benefits of this upgrade was energy efficiency. The Glacier uses ammonia, which besides being a naturally occurring gas which has zero GWP for a real eco boost, it is a highly efficient and low-cost refrigerant. In fact, it is 25% more efficient than its HFCs counterparts.

Phillip Blakeman, Managing Director of James T Blakeman & Co, said, “As an existing customer of Star Refrigeration, we already know the company

can provide excellent service levels. We have trusted Star with other installations and aftercare solutions, and they have proven to be highly reliable.”



The Starfrost spiral freezer maximises product quality for customers and energy efficiency for Blakemans

“We’re very satisfied with the smooth running of the installation and the post-commissioning process. The new solution has offered us security for the future and we feel it has met all the criteria specified.”

The food manufacturers’ power reduction requirements were met by installing an inverter to eliminate high spikes when starting the motor. This resulted in energy savings for the Newcastle based meat company. Kevin Fieldsend, Sales Manager – Food at Star Refrigeration, says, “The project with James T Blakeman & Co has been very successful. We replaced their old system with a solid, energy efficient and environmentally conscious solution that will ensure the performance

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of the production site for at least another 20 years. Star offered a one point of contact solution to cover all their requirements, which resulted in a straightforward and cost effective job.”

Independent specialist consultants Star Technical Solutions (STS), a business of Star Refrigeration, were the Construction (Design and Management) (CDM) coordinators.

STS Director David Blackhurst said, “We are pleased with the overall process. All parts involved delivered on time and on budget. The customer has received a robust solution, which includes site training for operators, as well as Ammonia Hazard Risk Assessment (pre and post project) and Written Scheme of Examination (WSE) to ensure legal compliance of the business.”

Star Refrigeration’s long-standing relationship with the “Supreme Sausage” manufacturer is down to understanding the strict demands of a company with a reputation for consistent high quality produce. Star have worked with the wholesaler on other projects, including a central ammonia plant serving two more spiral freezers and a single spiral freezer, and maintenance contracts including ongoing maintenance for the new installation to ensure the refrigeration plant remains reliable and efficient.

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