

STAR'S COOL SOLUTION HELPS GRANVILLE FOOD CARE TO TURN UP THE HEAT

Star Refrigeration has designed and manufactured an efficiency boosting cooling system for Granville Food Care Ltd in Northern Ireland.

Star installed the energy saving refrigeration plant at Granville's meat freezing and cold storage facility in Dungannon, County Tyrone. The innovative cooling system was designed to replace an existing R22 plant and increase production to meet demand from UK retailers.

Star's turnkey cooling solution for Granville comprised a state-of-the-art ammonia and carbon dioxide (CO₂) cascade plant. Operating on natural refrigerants, the dual purpose plant provides cooling for both blast freezing and cold storage.

The cascade plant supplies cooling to three cold storage areas and seven blast freezers at the Granville facility. Star's refrigeration system is one of the first in Northern Ireland to use CO₂ technology for blast freezing.

Star Refrigeration Sales Director Rob Lamb says: "The ammonia and CO₂ cascade plant has allowed Granville to reduce energy consumption and gain a significant increase in throughput, by improving product freeze times by 23 per cent. The plant also has a very low ammonia charge, which is isolated

to the plant room."

He adds: "Overall, the new refrigeration plant has enabled the client to expand business without further investment in building infrastructure."

The Granville plant has a total refrigeration capacity of 1,227kW. The system was designed with sufficient in-built compressor capacity to allow future expansion of the existing cold store.



Part of Star's state-of-the-art dual purpose refrigeration plant, which provides cooling for both blast freezing and cold storage at Granville Food Care.

The new plant is located in a purpose built plant room adjacent to the main building. It comprises two low temperature CO₂ compressors and surge drum. Supplying liquid CO₂ to cold stores and blast freezers. It also features two ammonia compressors and evaporative condensers, as well as two ammonia to CO₂ cascade heat exchangers.

The Granville project included the removal of R22 refrigerant from the site. Some of the original plant was designed by Star over 25 years ago and had served the client well. Star worked closely with Granville throughout the 34-week project to ensure the project was completed on time and budget.

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Two further phases of the project are currently underway, to increase both cold storage and freezing capacity on site and these are due to complete over the next six months. When complete, Granville Food Care will have a blast freezing capacity of 300 tonnes per 15 hour cycle to add to their 100 tonne per day of defrosting capacity.

Star Refrigeration is the UK's largest independent industrial refrigeration engineering company. Star focuses on the design, manufacture, installation, commissioning and maintenance of industrial refrigeration systems. The company offers a turnkey package to all users of refrigeration plant.

Star's technical advisory arm, Star Technical Solutions (STS), operates as an independent consultancy providing advice on refrigeration engineering issues. Star also owns food freezing and chilling equipment specialist Starfrost, as well as mechanical and electrical contractors Penec.

				
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