

STAR COMPLETES COOL CONTRACT AT GUINNESS BREWERY

Cooling specialist Star Refrigeration has completed a major project for RWE Solutions at Diageo's Guinness production plant in Ireland.



St James Gate Brewery in Dublin

Diageo, the global leader in premium drinks, was looking to increase production of its world famous Guinness stout at the St. James's Gate Brewery in Dublin. The company wanted to boost the production capacity of its brewing process plant and associated utility equipment to the equivalent of 12 million kegs per annum.

A significant increase in refrigeration plant capacity was critical to the success of the scheme. It was essential that the upgrade of existing plant and additional refrigeration capacity required was achieved within a six-month programme of work, with minimal disruption to production.

Star was contracted by RWE Solutions for the design and installation of a new industrial refrigeration system for the Guinness plant. RWE Solutions is the energy services company which owns, operates and maintains all utilities equipment at the Dublin facility, including refrigeration, under a fifteen year contract.

Star's engineering team worked with RWE Solutions to conduct an extensive evaluation of the existing ammonia refrigeration plant and associated glycol system. The solution was to design and install 3.5MW of additional refrigeration capacity to work in conjunction with the existing plant. It was vital that the extended and upgraded plant operated with enhanced efficiency and environmental benefits.

The refrigeration plant upgrade was completed on time and on budget. The plant provides a total of 8.9MW of refrigeration capacity at an overall evaporating temperature of minus 4.5C. This increase in refrigeration capacity has been achieved without adding a significant increase in refrigerant charge. As well as providing an environmentally friendly solution, the new refrigeration system was designed to enhance overall operating efficiency and reliability.



Primary Glycol Pumps

Star's project and site management team worked closely with RWE Solutions and Diageo to ensure that installation and commissioning work were programmed to prevent disruption to the brewing process. Careful planning enabled the duration of four programmed shut downs to be reduced from two days to twelve hours. This enabled production to be maintained throughout the project.

Star Refrigeration's Managing Director Andy Pearson says: "The Guinness project demonstrates Star's strength in applying best practice and new thinking to create a first class installation. Our engineering team worked in close partnership with RWE Solutions to improve and optimise a traditional refrigeration system with a high level of technical innovation. We were also able to ensure major site works were expertly managed and completed without disruption to production."

The new refrigeration plant comprises two Star compressor package units with twin-screw

compressors and high efficiency drive motors. A new surge drum and two gravity fed plate heat exchanger evaporators were also installed to work alongside four existing shell and tube evaporators. Existing evaporator glycol pumps were augmented with three additional pumps complete with variable speed drives, to pump glycol through the plate heat exchangers. Extra condensing capacity is provided by an additional evaporative condenser.



Howden Pack

Star also introduced a new computerised control system to optimise plant operation and ensure accurate temperature control. The Telstar PLC system is integrated with the plant's existing control system and is designed to improve system management, reliability and efficiency.

				
<p>Thornliebank Ind. Est. Glasgow UK G46 8JW</p> <p>T: 0141 638 7916 E: star@star-ref.co.uk W: www.star-ref.co.uk</p>	<p>Starfrost House Newcombe Road Lowestoft Suffolk NR32 1XA</p> <p>T: 01502 562206 E: info@starfrost.co.uk</p>	<p>Unit 11 Prime Enterprise Park Prime Park Way Derby DE1 3QB</p> <p>T: 01332 224141 E: info@penec.co.uk</p>	<p>Thornliebank Ind. Est. Glasgow UK G46 8JW</p> <p>T: 0141 638 7916 E: aprado@elearning-training.com W: www.elearning-training.com</p>	<p>Thornliebank Ind. Est. Glasgow UK G46 8JW</p> <p>T: 0141 638 7916 E: dblackhurst@star-ts.co.uk</p>

On completion of the Guinness project, Star conducted comprehensive on site training for RWE Solutions' engineering staff and advised on safety management procedures. Star will provide specialist refrigeration plant maintenance services on site to RWE Solutions as required in the future.

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.

For more information, phone Star on 0141 638 7916, email star@star-ref.co.uk or visit www.star-ref.co.uk.
 Star Refrigeration, Thornliebank Industrial Estate,
 Glasgow G46 8JW.

				
<p>Thornliebank Ind. Est. Glasgow UK G46 8JW</p> <p>T: 0141 638 7916 E: star@star-ref.co.uk W: www.star-ref.co.uk</p>	<p>Starfrost House Newcombe Road Lowestoft Suffolk NR32 1XA</p> <p>T: 01502 562206 E: info@starfrost.co.uk</p>	<p>Unit 11 Prime Enterprise Park Prime Park Way Derby DE1 3QB</p> <p>T: 01332 224141 E: info@penec.co.uk</p>	<p>Thornliebank Ind. Est. Glasgow UK G46 8JW</p> <p>T: 0141 638 7916 E: aprado@elearning-training.com W: www.elearning-training.com</p>	<p>Thornliebank Ind. Est. Glasgow UK G46 8JW</p> <p>T: 0141 638 7916 E: dblackhurst@star-ts.co.uk</p>