

## CASE STUDY: ASDA

## PROJECT: Two Stage Pump Circulation Plant

### STAR TREATMENT IS NATURAL FOR ASDA

<b>Location:</b>	Rochdale
<b>Equipment:</b>	Two stage pumped circulation cooling system
<b>Refrigerant:</b>	NH <sub>3</sub>
<b>Capacity</b>	3.2 MW
<b>Temperature</b>	- 21°C Frozen; +3°C Chill; +13°C Produce

The green credentials of Asda's new chilled and frozen distribution centre in the North West have been bolstered by an environmentally conscious cooling system from Star Refrigeration.

Asda's new central distribution centre occupies a 44-acre site at the Kingsway Business Park in Rochdale, Greater Manchester, serving stores across the M62 corridor. The 493,000 sq ft multi-temperature storage facility incorporates many carbon reduction and energy saving features.

A world leader in cooling and heating system innovation, Star worked with Asda's project team to design an energy efficient refrigeration plant for the new facility. Star has over 40 years experience in industrial cooling systems for the cold storage sector and is currently working in partnership with Asda at the majority of its UK distribution sites.

Star engineered and installed a two-stage pumped circulation cooling system for Asda, operating on

natural ammonia refrigerant. The plant provides 1MW (Mega Watt) of cooling for Asda's new frozen food cold store (-21°C), 1.7MW for the chill chamber (+3°C) and 0.5MW of cooling for the produce chamber (+13°C).



Star Refrigeration's Director of Sales – Food Market, James Ward says: "This was a new style of building for Asda in the UK, with a single skin construction that demanded a specific type of cooling system. Our team worked closely with the principal contractor to engineer a bespoke refrigeration plant that would deliver the vital energy saving and environmental benefits Asda required."

James Ward adds: "The Asda plant provides optimum efficiency and uses an environmentally benign refrigerant in terms of global warming and ozone depletion."

The refrigeration plant at Asda's Rochdale facility features Star-built variable speed drive compressor

packages, surge drum units and pumped circulation evaporators with EC fans. The operating efficiency of the plant is enhanced by Star's energy saving Aether system, which reduces condenser fan speed and uses floating head pressure control to optimise performance.

The new refrigeration plant is located in a purpose built Energy Centre adjoining the main building. Star was also responsible for supplying underfloor heating for the cold store and a dehumidification system for vehicle docking stations.

Star's Telstar PLC computerised control system ensures optimum plant performance, with HMI touch screen interface. A range of built-in monitoring systems including pressure, temperature and gas detection are incorporated in the plant design.

Operational since late 2012, the new Asda site is now benefiting from Starcare, Star's planned, preventative maintenance (PPM) programme for refrigeration plant operators. This pro-active PPM programme ensures optimum long-term performance and reliability, to increase energy efficiency and reduce lifecycle costs.



When it comes to designing energy efficient cooling and heating systems, Star is a natural innovator. Star works with strategic partners across the globe to deliver low carbon, cost saving solutions.

**For more information, phone Star Refrigeration on 0141 638 7916, email [star@star-ref.co.uk](mailto:star@star-ref.co.uk) or visit [www.star-ref.co.uk](http://www.star-ref.co.uk).**

 <p>Thornliebank Ind Est Glasgow UK G46 8JW</p> <p>T: +44 (0)141 638 7916 E: <a href="mailto:star@star-ref.co.uk">star@star-ref.co.uk</a> W: <a href="http://www.star-ref.co.uk">www.star-ref.co.uk</a></p>	 <p>Thornliebank Ind Est Glasgow UK G46 8JW</p> <p>T: +44 (0)141 638 7916 E: <a href="mailto:dblackhurst@star-ts.co.uk">dblackhurst@star-ts.co.uk</a> W: <a href="http://www.star-ts.co.uk">www.star-ts.co.uk</a></p>	 <p>Wincanton Close Ascot Drive Derby DE24 8NB</p> <p>T: +44 (0)1332 861370 E: <a href="mailto:info@star-mesolutions.co.uk">info@star-mesolutions.co.uk</a> W: <a href="http://www.star-mesolutions.co.uk">www.star-mesolutions.co.uk</a></p>	 <p>Thornliebank Ind Est Glasgow UK G46 8JW</p> <p>T: +44 (0)141 638 7916 E: <a href="mailto:info@i-know.com">info@i-know.com</a> W: <a href="http://www.i-know.com">www.i-know.com</a></p>	 <p>Craftsman's Way Lowestoft Suffolk NR32 3LQ</p> <p>T: +44 (0)1502 562206 E: <a href="mailto:info@star-frost.co.uk">info@star-frost.co.uk</a> W: <a href="http://www.star-frost.co.uk">www.star-frost.co.uk</a></p>
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