

STAR DELIVERS TOTAL SOLUTION FOR PET FOOD MANUFACTURER

Location:	Leeds
Equipment:	2 x DX air cooled plants Insulated envelope Mains Electrics Structural Steel Builders work
Refrigerant:	R404a
Capacity	2 x 14kW
Temperature	-18°C

Star Refrigeration has recently completed the installation of a new cold store facility within an existing warehouse building for pet food manufacturer and distributor, Anglian Meat Products Ltd.

Anglian Meat Products is a leading manufacturer and distributor of frozen and ambient pet food products exported to over 20 overseas territories, whose portfolio includes the Natures Menu and Prize Choice pet food ranges. Due to continued business growth and space constraints at their original storage depot in Leeds Anglian Meat Products took the opportunity to move into larger warehouse premises when they became available on the same industrial estate.

Unlike their original depot the new warehouse premises comprised no cold storage facility and as

such cooling solutions specialist Star Refrigeration was approached to design and manage the total solutions installation of a new 70 pallet -18°C refrigerated cold storage chamber. As well as the cold store refrigeration plant and insulated structure, Star was also responsible for upgrading the mains and sub-mains electrical distribution within the building, cold store lighting, emergency lighting, small power, builders work to accommodate the new condensing units, evaporator support steelwork and the role of Principal Contractor and CDM Co-ordinator as defined by the CDM Regulations 2007.



Anglian Meat Products new Leeds Depot

Anglian Meats Managing Director Scott Maunder says: “Star’s ability to deliver a total solution meant that we could undertake this project on a satellite site with minimal input, whilst confident of a successful outcome. They developed a cost effective, energy efficient solution and delivered it on time and on budget”.

The cold store chamber measures around 850 cubic metres and requires to be maintained at a temperature of -18°C. Cooling is provided by two independent refrigeration plants operating on a direct expansion basis with the synthetic refrigerant R404a.

The two refrigeration plants each comprise a ceiling mounted evaporator connected to an air cooled condensing unit. The capacity of each plant is nominally 14kW i.e. 60% of the estimated maximum heat load.



A Guntner evaporator within the cold store chamber at Anglian Meats depot

The plants have been designed with efficiency in mind incorporating the use of electronic expansion valves and 'defrost on demand' functionality. The use of electronic expansion valves means that the plants can operate at lower head pressures for significant periods of the year and also that much

closer superheat control is achieved thereby increasing the wetted surface area within the evaporator and enhancing performance. The use of electronic valves guarantees optimised performance all year round regardless of load on the plant and enables energy savings of around 15 to 20% when compared to an equivalent system fitted with a standard thermostatic valve.

The newly installed evaporator controllers not only look after control of the electronic expansion valve but also incorporate a 'defrost on demand' functionality. This enables significant energy savings when compared with standard timed defrost systems as the evaporator is only defrosted when required thereby avoiding the introduction of unnecessary heat into the store.

Anglian Meats are delighted that initial records show the new plant is consuming 15% to 20% less energy.

For more information, phone Star Refrigeration on 0141 638 7916, email star@star-ref.co.uk or visit www.star-ref.co.uk

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