

CASE STUDY: Farmfoods

PROJECT: Azanefreezer & Azanechiller

STAR'S COOL SOLUTION FOR FROZEN FOOD SPECIALIST

Location:	Avonmouth, Bristol
Equipment:	2 x Azanefreezers 1 x Azanechiller Glycol Underfloor Heater Mat Wireless Temperature Monitoring System
Refrigerant:	Ammonia – Coldstore Ammonia / Glycol - Chillstore
Capacity	530kW Coldstore 120kW Chillstore
Temperature	- 22°C Coldstore + 2°C Chillstore

Star Refrigeration has completed a major cooling project in partnership with frozen food specialist Farmfoods, for their new distribution centre in Avonmouth. Farmfoods originated in Aberdeen in 1955 and now operates around 300 stores in the UK. The new distribution centre in Bristol will supply the southern retail stores as a result of a review of their distribution operation.

Farmfoods were looking for a modern and efficient refrigeration system using a natural refrigerant to compliment their existing distribution centres. Following a competitive tender process Star Refrigeration was chosen for the project and designed an energy efficient and environmentally conscious refrigeration package using their **Azanechiller** and **Azanefreezer** units. These were chosen due to their simplicity and exceptional

efficiencies across a wide range of operating conditions.

The installation comprises of two modular coldstore packages with the capability to add a third package in the future and a modular chillstore package with spare refrigeration capacity to accommodate future additional load.



The modular Azanefreezer

The coldstore packages utilize waste heat recovered from the refrigeration systems to heat a glycol underfloor heater mat contained within the coldstore floor slab. They also use Star's patented Reverse Cycle Defrost (RCD) valve ensuring quick efficient defrosts within the coldstore without the need for any additional electrical heating.

James Ward, Star's Director of Food Sales says: "The **Azanechiller** offers a significant increase in performance compared with standard HFC chillers.

Its packaged design and careful component selection result in an ultra low refrigerant charge, with all ammonia contained within the chiller and outside the production facility. This means a refrigerant charge as little as 0.1kg per kW.”



Inside the Azanechiller showing ease of maintenance

The system includes a 2 year warranty as well as a 5 year preventative maintenance programme. Both the coldstore and chillstore systems have remote dial in/out access and the maintenance package includes a number of condition based monitoring techniques such as vibration monitoring, thermographic scans and oil sampling.

The total installation offers numerous benefits including low maintenance and reduced energy consumption, as well as the environmental advantages associated with ammonia as a natural refrigerant. Other benefits include:

- Modular design – “Plug & Play”
- Small footprints
- No plant rooms required
- Low total cost of ownership
- Low maintenance costs

Star developed the **Azanechiller** and **Azanefreezer** range of ammonia packages to meet the cooling requirements in a wide range of markets. Suitable for cooling direct refrigerant, water and glycol, these packages are ideally suited to applications in food processing, temperature controlled storage, building services and process cooling.

For more information on how Star Refrigeration can help your business please visit our website at www.star-ref.co.uk or email sales@star-ref.co.uk

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