

## STAR REPLACES R22 SYSTEMS FOR FROZEN FOOD DISTRIBUTOR

Location:	Nottingham
Equipment:	DX Condensing units
Refrigerant:	R404a
Capacity	123kW
Temperature	-25°C Cold storage

MKG Foods are a leading UK independent, family-owned, frozen food distributor. A multi-million pound turnover company, MKG Foods pride themselves on fully understanding the requirements of today's catering market and their ability to maintain a personal service that delivers consistent reliability, quality, innovation and value to their customers.

MKG sought expert advice from Star Refrigeration, to investigate and to offer replacement plant solutions.

The depot's distribution function, a 24 hour operation, could not be compromised and storage temperatures within three separate stores had to be maintained throughout the project. The replacement refrigeration systems were to be installed in conjunction with de-commissioning, removal and disposal of redundant R22 systems. Finally, MKG Foods return on any new plant investment was to be maximised.

Star carried out a thorough investigation into the existing plant, its operation, configuration and available space for locating replacement components. Star proposed a selection of viable schemes, based on a variety of refrigerants and plant configurations; the individual merits and operational economics of each were then presented to MKG.



Pre-assembled air cooled units being delivered to site at MKG

A decision was made to replace the existing refrigeration systems, associated with the three low-temperature cold-stores, with six individual air-cooled R404a systems. This solution provided a number of benefits with regard to MKG's project. The compressor/condenser units, a bespoke design unique to Star, are delivered pre-packaged and fully weather-housed; they could therefore be located immediately without any additional plant-room being required.

Although each system represented only a portion of the final capacity requirement, each would be capable of independent operation as soon as installed. This enabled a significant portion of the

new plant and replacement services to be installed prior to decommissioning the existing systems.

A replacement sequence, across all three storage chambers, was planned in collaboration with MKG's distribution and operations management. The plan protected chamber temperatures and product integrity throughout, by ensuring sufficient refrigeration capacity would always be available.



The compressor packages on site at MKG Foods

By employing multiple independent systems Star ensured each chamber had sufficient new plant in place to satisfy the full cooling demand, prior to the sequential removal of the redundant R22 systems. The independent systems approach also provides MKG Foods with a degree of "plant failure" security, should this ever become a necessity.

The project was managed throughout by Star, and all planned objectives were achieved. A summary

of Star Refrigeration's responsibilities and involvement was:

- Replacement plant design, supply and install.
- Project planning and supervision.
- Pre-preparation, builders / civil works.
- Removal of the existing redundant refrigeration plant.
- The decanting and legal disposal of R22 refrigerant.
- Re-working and routing existing power-supplies and electrical services.
- Installation of six individual R404a systems, each complete with fully automatic controls.

The project was delivered in accordance with the agreed programme, with all new plant being fully operational within 8 weeks of commencing on-site.

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

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Case Study:

MKG Foods



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