

CONVENIENCE STORE CHAIN PUTS R-455A TO THE TEST

The co-operative food
Welcome to Brooklime Way community store

Carbon Footprint Reduction and Cost-Effectiveness
are Key for Central England Co-operative

Case Study

Central England Co-operative used the Tamworth store to confirm their expectations about Solstice® L40X – which were safety, energy efficient technology, simplicity and a long-term solution, aligned with current and future environmental standards and regulations.

SOLSTICE L40X IS A LONG-TERM SOLUTION

“Our aim is to have a cost-effective, low-carbon solution for our new-build refrigeration systems, that would protect us for the long-term,” said Kevin Collins, Head of Facilities & Technical Services, Central England Co-operative. “Solstice L40X offered exactly what we were looking for in a refrigerant: low global warming potential (GWP), simplicity, no new or specific training for our maintenance teams, and with system footprint and CAPEX equivalent to R-404A.”

COMMITTED TO A SUSTAINABLE FUTURE

The retailer has taken tangible, visible steps towards a sustainable future, such as installing doors on chiller equipment in over 90% of its trading estate and reducing their carbon footprint by 72% since 2010. “We have achieved a lot that is worthy of celebration and we are committed to continually improving,” said Luke Olly, Energy & Environment Manager. “Our ambitious targets are designed to

provide stretch and challenge to ensure all areas of the business find new and better ways of making a positive impact.”

SOLSTICE L40X: SAFE FOR USE IN COMMERCIAL REFRIGERATION

Central England Co-operative worked with a consulting firm that conducted an initial, rigorous risk assessment of Solstice L40X, along with Carter Synergy, a national organization headquartered in Birmingham, for the installation.

“In line with requirements to conduct an A2L trial, we have been part of a working group including Honeywell, to deliver this project. R-455A was selected for its great capacity properties, against alternative refrigerants and system requirements,” said Craig Chinnock, Account Principal, Carter Synergy. “The system was charged and setup effortlessly, with glide not causing any difficulties. We believe this A2L solution has a place in the low/medium temperature market place.”

“Saving energy and maintenance costs is important to every owner. Our independent operators care about their local communities. Every pound we can save in energy means more we can return to our members.”

– KEVIN COLLINS,
HEAD OF FACILITIES & TECHNICAL SERVICES,
CENTRAL ENGLAND CO-OPERATIVE

THE OPPORTUNITY

Improvements in energy efficiency and the need to comply with environmental regulations are issues for all supermarkets. When planning a new Central England Co-operative store in Tamworth, Staffordshire, UK, the company sought a cost-effective, simple solution to achieve both goals.

THE SOLUTION

The retailer selected Honeywell Solstice® L40X (R-455A) refrigerant, not only because it is easy to implement and meets long-term environmental goals, but also because the commissioning and maintenance team did not need any new or additional training.

Honeywell

Solstice L40X can be used safely in refrigeration systems. It carries an ASHRAE classification of A2L (mildly flammable), but its unique flammability profile contributes to its safety characteristics.

ENCOURAGING RESULTS

Central England Co-operative used the Tamworth store to confirm their expectations about Solstice L40X – which were safety, energy efficient technology, simplicity and a long-term solution, aligned with current and future environmental standards and regulations. “We plan to apply best practices and learnings from Tamworth to future site openings,” said Collins.

TEST STORE SPECS

- 280 sqm / 3010 sqft
- Location: UK
- System architecture: Dual-temperature, outdoor-located, centralized pack supplying both medium-temperature (13 kW) and low-temperature (2.5 kW) display cases / Cold room (3.3 kW) and freezer room (2.9 kW) equipped with Zanotti® monoblocks on Solstice L40X (R-455A)
- Compressor pack outdoor location maximizes sales area
- Total refrigerant charge: 35 kg



SOLSTICE L40X (R-455A)

Solstice L40X is a low GWP HFO blend refrigerant designed for commercial refrigeration systems like direct expansion racks, condensing units and self-contained systems.

- Designed to replace R-404A / R-507 in new systems
- Mild Flammability (ASHRAE A2L)
- GWP of 146 (AR5) is >96% lower than R-404A
- Glide management is simple due to the availability of many heat exchanger brands having now qualified Solstice L40X (R-455A)
- Efficiency benefit (6 - 8%) and similar capacity when compared to R-404A
- Much larger allowable charge size than with hydrocarbons (A3) and alternative A2L refrigerants

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