

U.S. Grocer Lunds & Byerlys Chooses FTE CO₂ System for Energy Savings at New Store

September 27, 2022 COMMERCIAL REFRIGERATION NORTH AMERICA



From left, Reid Paulsen and Jeff Carlson of Lunds & Byerlys at Manufacturer/Retailer Exchange during FMI Energy & Store Development Conference in Orlando, Florida.

U.S. supermarket chain Lunds & Byerlys has installed a transcritical CO₂ (R744) system incorporating FTE (Full Transcritical Efficiency) technology at its newest store that opens this week in the Highland Bridge development of St. Paul, Minnesota.

The rack, which will provide refrigeration for the 51,000ft² (4,740m²) supermarket, was manufactured by Kysor Warren Epta US, the U.S. subsidiary of Italian OEM Epta.

According to Epta, its FTE technology – which is commonly used across Europe and first introduced to the U.S. market in 2020 – increases the energy efficiency of a transcritical CO₂ system by 10% and reduces installation and maintenance costs by 20%. Epta has released results from its Life-C4R (Carbon 4 Retail Refrigeration) project, summarizing three years of efficiency data from seven European supermarkets testing commercial CO₂ refrigeration systems that use FTE.

The potential energy savings of the system were part of the appeal, said Jeff Carlson, Refrigeration Specialist for Minneapolis, Minnesota-based Lunds & Byerlys during an interview with R744.com at the FMI (Food Industry Association) Energy and Store Development Conference, which took place in Orlando, Florida, September 19–21.

In addition to Kysor Warren's FTE transcritical CO₂ racks, the Highland Bridge store includes an adiabatic gas cooler from Baltimore Aircoil Company (BAC) and direct-air heat reclaim from its Seasons-4 air handler to boost system efficiency, explained Carlson.

The store has a separate system for air-conditioning, he added.

Clipping Online
Testata: R744.com
Data: 27 Settembre 2022

Efficiency savings with transcritical CO₂

Of Lunds & Byerlys' 28 stores located across Minnesota, this is its third location to utilize a CO₂-based refrigeration system.

The retailer's first transcritical CO₂ system – manufactured by Georgia (U.S.)-based OEM Hillphoenix – was installed at its White Bear Lake, Minnesota, store in 2018 and has seen a 22% reduction in energy use compared to a similar store that uses an R407A system. Another store, in Minneapolis, uses an R744 system produced by Zero Zone.

According to Carlson, Lunds & Byerlys is interested in testing different systems to see which works best for them, noting that moving forward, all new stores will use CO₂-based refrigeration.

For the retail chain's existing stores, the transition to CO₂-based refrigeration is "definitely on the radar... but we haven't looked down that avenue yet," said Carlson.

To complement its use of natural refrigerant systems, Lunds & Byerlys recently joined the U.S. Environmental Protection Agency's (EPA) GreenChill program, which works collaboratively with the food retail industry to reduce refrigerant emissions and explore alternative refrigeration systems.

Need for more NatRef technicians

Lunds & Byerlys has partnered with two contractors – Minneapolis-based South Town Refrigeration & Mechanical and Chicago-based Climate Pros – for the installation and servicing of its CO₂ systems. According to Carlson, South Town is responsible for the Hillphoenix system at White Bear Lake and the new Kysor Warren system at Highland Bridge.

While happy with the service provided by both contractors, Carlson noted that the industry is struggling with a lack of CO₂-trained technicians.

As a trained technician himself, Carlson frequently teaches students at Minneapolis Technical College about CO₂ in supermarkets and offers tours around Lunds & Byerlys stores.

Clipping Online
Testata: R744.com
Data: 27 Settembre 2022