

Edeka Chooses Epta CO₂-Based Refrigeration Technology for its New Supermarket Location

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Epta's remote CO₂-based SkyView Plus cases with doors were installed at the new Edeka Schneider supermarket in Hambach, Germany. (Source: Epta)

German retailer Edeka Schneider has partnered with Italian OEM [Epta](#) to open what they claim to be one of the most energy-efficient supermarkets in Germany, according to a [statement](#) from the refrigeration manufacturer.

"The store in Hambach is my largest and at the same time the one with the lowest energy consumption," explained the supermarket's operator Dominik Steffen Schneider.

All of the CO₂ (R744)-based refrigerated display cases in the new 1,500m² (16,145ft²) supermarket have doors, which not only create a more pleasant climate inside the store, but also lower energy costs for cooling, he added.

The refrigerated cabinets account for roughly 40% of the store's total energy costs, so minimizing their energy use has a significant impact.

In addition to the closed cabinets from Epta's Bonnet Névé and Eurocryor brands, Schneider's new supermarket has achieved a high level of energy efficiency thanks to its ECO2Middle refrigeration system, also from Epta. The efficiency of the store's centralized CO₂ system is further enhanced with heat recovery and includes Epta's [Full-Transcritical-Efficiency](#) (FTE) technology.

Compact and efficient system

ECO2Middle is the manufacturer's latest CO₂ refrigeration system, Epta explained, adding that the system is ideally suited for medium-sized supermarkets.

At the Edeka Schneider supermarket in Hambach, the central system provides 45kW (12.8TR) for medium temperatures with three normal refrigeration compressors and 20kW (5.7TR) for low temperature with three deep-freeze compressors, said Epta.

The modular and compact system – which is 2m (6.6ft) tall and 0.8m (2.6ft) deep – is designed to be easily integrated into small plant rooms. Epta also offers [ECO2Large](#) and [ECO2Small](#) systems to meet the needs of larger and smaller retail applications.

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Epta's ECO2Middle refrigeration system installed at the new Edeka supermarket in Hambach, Germany. (Source: Epta)

Epta's FTE technology operates at an increased evaporating temperature all year round, regardless of the outside temperatures.

"This works because the refrigeration points with normal cooling are operated with so-called flooded evaporators," explained the manufacturer. "This means that there's no need to overheat the components, and the resulting better utilization of the evaporator surface makes it possible to raise the evaporation temperature."

The centralized system and refrigerated cabinets are monitored remotely to ensure optimum performance and reduced down-time.

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Dominik Steffen Schneider, Edeka Schnieder

Produce preservation and time savings

The new Edeka Schneider supermarket stocks some 18,000 products in a range of Epta's CO₂ refrigerated display cases, including Bonnet N  v  s [SkyView Plus](#), [Cosmos Perform](#) and [Latitude](#), as well as Eurocryor's Bistrot counter for [fish](#), [meat](#) and [cheese](#).

The 3.75m (12.3ft)-long fresh meat counter is equipped with Eurocryor's Dynamic System and a night blind that helps to preserve produce for longer.

"This keeps the humidity constantly above 90%, even without a humidifier," explained Epta. "Meat and sausage products no longer have to be cleared out in the evening and can remain in the counter overnight – a real labor-saver."

"The employees only have to take the meat out at the weekend to clean the furniture," added Schneider.

"That really saves time. You can [also] clean the tub with water because the fans are installed in such a way that they are completely protected."

The supermarket also includes frozen food islands and a 12m² (129.2ft²) walk-in cold room for crates of beverages.

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'Next-generation technologies'

In addition to improving food preservation and reducing staff workload, Epta's Eurocryor display counters are designed to enhance product visibility.

"A fitting product display, which is able to offer adequate visibility [of] the food items, represents a strategic lever for the retailer, affecting the decision-making process of users," said William Pagani, Epta's CMO, in a statement. "Eurocryor's solutions are the result of a synergy between the different multidisciplinary teams committed to all-round excellence, where food freshness is always the most attractive quality."

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The brand is also committed to combining modern design with "next-generation technologies" that are tailored to different product categories.

For example, Eurocryor's Adaptive System "regulates the cabinet's parameters according to the external environmental conditions in order to keep the temperatures stable and optimize the balance between the refrigeration management and humidity inside the cabinets," explained Epta.

This technology is particularly useful for produce that is prone to dehydration, such as dairy products and fresh pasta. It is also results in a higher level of food safety, it added.

Another example is its Food Category Touch Screen, which was developed in partnership with the University of Gastronomic Sciences of Pollenzo, in Piedmont, Italy, and is designed to scientifically define the correct parameters of a cabinet based on its contents.



Eurocryor's Food Category Touch Screen system. (Source: Epta)

"Eurocryor offers food experts its know-how in conservation thanks to a user-friendly and intuitive touch screen control system, which allows to select the desired food category with a simple click in order to set the cabinet's working functions," explained Epta.

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