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Refrigeration World



Advanced Solutions
for your Store

Tengelmann's Eco-store Klimamarkt chooses Epta

Epta, together with its brands Costan, Bonnet Névé, Bkt, George Barker and Euro'Cryor, has been selected as the supplier of the cooling system for Tengelmann's eco-store (Klimamarkt), opened in Mulheim an der Ruhr (Germany) on December 2, 2008.

Klimamarkt has been built with a focus on energy saving and CO₂ emissions control, leading to a reduction of energy consumption by around 50% compared to a conventional supermarket, as well as to an abatement of carbon dioxide emissions, according to Tengelmann.

In this specific case, Epta Deutschland, headquartered in Mannheim, has been selected as partner for supplying food refrigerated display cabinets.

It is important to point out that about 52% of

the energy consumed by a middle-size supermarket (1,500 sqm) is absorbed by the cooling system and, therefore, retailers need to be able to rely on effi-



Viseo Bonnet Névé
with glass doors and led

All the cabinets are lit with LED's on the front, on the shelves, also on the handrails in the islands and are completely closed with sliding covers and glass doors. The high performance, low energy consumption lamps ensure about 100,000 hours of operation.

The sliding glazings closing the refrigerated display cabinets enable a significant reduction of power consumption for both positive temperature (-30%) and frozen food (-50%) cabinets.

According to Epta, the low temperature cabinets are also equipped with a special triple glazing that works without a glass door heater, for improving their efficiency.

In the new Klimamarkt, Epta has implemented a rainwater recovery system which, by means of a sprinkler device, improves the cooling capacity of the refrigeration system, increasing its performance.

The installation of equipment recycling the heat produced by the cooling system in order to meet most of the store's energy demand also contributes to the eco-compatibility of the supermarket. After optimization of the plant it is planned to meet 75% of the heating requirements.

Other solutions adopted in order to save energy include: heat recovery devices tapping the heat of the earth, the efficient use of natural light and lighting plants "adjusting" according to daylight intensity, and a 1,140 sqm photovoltaic system generating up to 45,000 kWh of energy per annum. //

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cient technology.

Products supplied

These are the products supplied under the Bon-

net Névé brand: Viseo LRD and Viseo LID vertical cabinets, Maxima LC serve over cabinets, Aeria L Plus semi-vertical cabinets, Cosmos Eco frozen food containers and Ampleo R vertical freezers, all operating with CO₂, a natural substance which can be used as an alternative to conventional HFC refrigerants.

In order to achieve the maximum efficiency, the CO₂ refrigeration system is equipped with inverters on both the low temperature and the normal temperature sides, consisting of two and four compressors respectively. A telemonitoring system allows a remote control of settings and a continuous optimization.



Maxima Bonnet
Névé with led