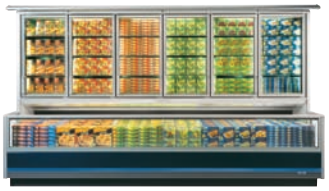
New
High Efficiency Frame
for Vertical Freezer Display Cabinets

Vantis E5



Vantis E5 – NEW Cabinet Frame

Energy savings
35%

Velando E6

Velando E6 – NEW Cabinet Frame

Energy savings
41%

Electricity consumption reduced by up to 41%

Lower electricity delivery charges

Payback period achieved in 1 year or less

improve refrigeration™

New cabinet frame technology delivers high energy savings

What is the actual purpose of the cabinet frame?

The main cabinet frame not only meets the essential structural requirements for the freezer display case, it also serves as the mounting frame for the insulated glass doors. The door seals must touch the main cabinet frame so as to prevent cold spots. The frame construction used to consist mainly of aluminum, plastic and insulating material. With temperature differences as great as 50 degrees C between the inside and outside of the display case, the frame must be heated constantly in order to prevent condensation from forming on the external parts of the frame not covered by the door seals. As a result, the continuous heating of a five-door freezer display case (clear height), without interval operation, can require a connected load of up to 809 Watts.

Reducing the electricity consumption of a cabinet frame

Glass fiber reinforced plastic (GFRP), used in the new frame construction instead of aluminum, plays a major role in reducing display case energy consumption. GFRP has excellent characteristics in terms of stability, processing and thermal resistance. Also high electrical insulating properties and good insulation properties make this construction material very suitable to be usedfor vertical freezer cabinets. Optimized Carrier LED lighting and special insulating materials combined to form **High Efficiency Frame (HEF)** technology for vertical freezer display cases with glass doors.

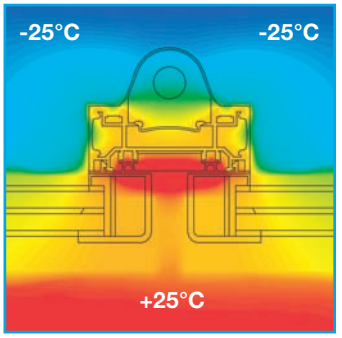
What are the savings with the new frame technology?

The new HEF frame technology reduces the operating power of a five-door freezer display case in L-Height (2220 mm) by 66%, from 809 W to 275 W. Additional techniques such as operating the frame heating at intervals by means of a dew point controller allow the average operating power for continuous heating to be lowered even further to around 220 W. Overall, for a five-door freezer display case this results in an immediate saving in electricity costs* of approximately €560.00 per year, and it also accounts for direct savings in electricity of around 40%. With a large number of freezer display cases and freezer combinations in a store, this new frame technology can considerably lower the annual delivery charges for the electricity purchased.

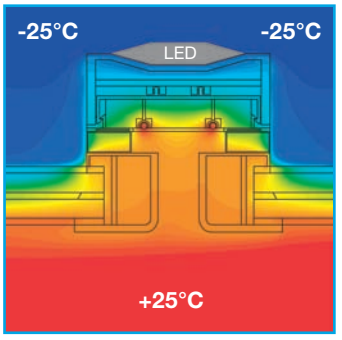
*Electricity price: € 0.16 per kWh

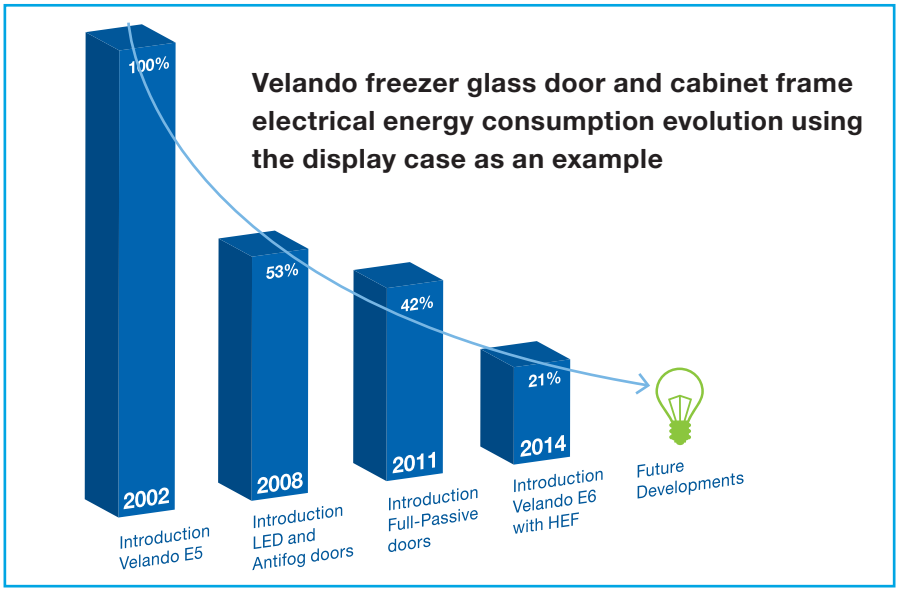
Thermographic images demonstrate the difference

Old frame technology



New frame technology





The advantages of the new frame technology

- Reduces direct electricity consumption and cuts electricity costs
- Lowers the store's connected value and consequently the electricity delivery charges
- Reduces the refrigeration load of the display case
- Optimized Carrier LED lighting fitted as standard
- Payback period for HEF frame achieved in 1 year or less*
- Available for all Carrier vertical freezer display cases

*Calculated based on price difference between HEF and standard frame

Carrier
United Technologies

www.carrier-refrigeration.com
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