



Sustainable Refrigeration Solutions

Picard's Implementation of ZX
Solution with **Opteon™ XL20** for
Energy-Efficient Cold Storage



Introduction

Picard, a leading frozen food retailer in France, has embarked on a journey to enhance the energy efficiency of its stores in response to the evolving F-Gas regulations. The company aims to adopt solutions with low Global Warming Potential (GWP) across its 1,100 stores nationwide. This case study focuses on their pilot project at the Quincy-sous-Sénart store, testing the innovative ZX condensing unit by Copeland with Opteon™ XL20 (R-454C) designed to reduce environmental impact while maintaining operational efficiency significantly.

Key System Facts

- Outdoor Copeland condensing unit (ZXLY075 A2L) suitable for a 14 m² cold room
- A 7.5 kg charge of R-454C refrigerant
- Thermostatic expansion valves



The Project

Picard's primary objective was to find an energy-efficient and ecologically sustainable refrigeration solution that could be implemented swiftly and seamlessly across multiple locations. "We sought a reliable solution that could perform exceptionally, even during the intense summer heat," stated Willem Kancel, Refrigeration Manager at Picard. This project aligns with Picard's ISO 50 001 certification goals and its commitment to innovative, sustainable practices.



Installation Process

The installation was completed by MCI, a contractor familiar with both the refrigerant and Copeland's technology, in less than a week and a half. Minimal adjustments were required from previous setup, ensuring a smooth transition from using higher GWP refrigerants like R-449A without compromising on performance and reliability.

Supervised through MVISION technology, the installation's performance was meticulously monitored, focusing on energy consumption and temperature stability within the cold storage area.

Alternative Solutions Considered

Prior to adopting the ZX solution, Picard evaluated several other refrigerants and systems. However, the long-term benefits of R-454C, including its lower GWP and compatibility with existing technologies, made it the preferred choice.

Solution Adopted

The project team opted for the ZX unit with R-454C due to its proven efficiency and ease of integration.

"This new setup not only meets our environmental goals but also enhances our operational efficiency." - Willem Kancel, Picard.



Energy Efficiency

The new system demonstrated a **10% improvement** in Energy Efficiency in the first few months



Reliable

It maintained stable temperatures of **-22 to -25 °C**, even when external temperatures reached 35 °C.



Easy to install

The pilot project's success has led Picard to plan further implementations across its network.

Conclusion

Picard's pilot project at Quincy-sous-Sénart has proven that adopting low GWP refrigerants like R-454C can meet the dual goals of operational excellence and environmental stewardship. This case study is a testament to the effectiveness of forward-thinking energy solutions and invites other businesses to consider how such innovations could benefit their operations.

10% improvement
in energy efficiency

Minimal adjustments
required from previous setup

"We are thrilled with the results and excited about the potential impacts on our other locations."
- Willem Kancel, Refrigeration Manager at Picard



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