



Opteon™



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Super Ledur chooses Opteon™ XP40

to replace R-22 with
efficiency and sustainability



Innovation in Valley of Caí

A traditional supermarket chain in the Valley of Caí region of Rio Grande do Sul, Super Ledur has over 100 years of experience in the food retail sector. Founded by Afonso Jorge Ledur and now led by brothers Gerhard Ledur and Bernardo Ledur, the supermarket chain is headquartered in the city of Bom Princípio and operates three stores offering more than 30,000 items, including a wide variety of frozen and refrigerated products.

With a focus on modernizing its stores to provide better customer service and more sustainable operations, the group selected its São Sebastião do Caí, RS location to operate with Opteon™ XP40 (R-449A; GWP = 1282¹) as a replacement for R-22 (GWP=1760¹). The store's project and retrofit were carried out by the refrigeration engineering company GLM, led by Amaral Gurgel, in partnership with Thermovolt Refrigeration and Automation, led by Leonel München.

Technological Advancement and Sustainability

The São Sebastião do Caí store began its operations using self-contained plug-in units, which, after a few years, were replaced by condensing units. However, with the growth of operations and increased demand for chilled and frozen products, the rising need for refrigeration led to a system overhaul, transitioning to centralized racks that operated with R-22 until last year.

To comply with the regulations of the Montreal Protocol and the Kigali Amendment, Super Ledur chose Opteon™ XP40 to upgrade its refrigeration system, since it does not deplete the ozone layer (zero ODP) and reduces global warming potential (GWP) by 27% compared to R-22. Additionally, when compared to traditional HFC refrigerants such as R-404A (GWP=3943¹), Opteon™ XP40 offers a 67% reduction in GWP and up to 12% lower energy consumption.



"The choice of Opteon™ XP40 was quite straightforward, as it offers the best balance of performance, sustainability, and safety for replacing R-22 in supermarkets", adds Amaral Gurgel.

The medium temperature system operates in indirect expansion using propylene glycol to meet a cooling load of 96,500 kcal/h, supported by three Bitzer 4JE-15Y-35P compressors. Meanwhile, the low temperature system uses direct expansion to meet a cooling load of 33,600 kcal/h with two Bitzer 4GE-23Y-35P compressors. Both systems are equipped with Guntner V-shape condensers and Full Gauge automation systems, and together have a total charge of 250 kg of Opteon™ XP40 refrigerant.

Efficiency and Cost Reduction

In addition to the environmental benefits, upgrading the system to Opteon™ XP40 has enabled a significant reduction in corrective maintenance, lowered operational costs, and increased equipment availability. Carried out by Thermovolt, the installation and operation, focused on preventive maintenance and supported by remote monitoring of the refrigeration systems, have brought greater reliability to operations, ensuring that temperature, a key factor for food quality, is always kept under control.



“We’re already used to working with Opteon™ XP40 in commercial refrigeration systems. So, carrying out the replacement and keeping up with preventive maintenance was no challenge at all. Simplicity, sustainability, and high efficiency are hallmarks of this new generation of refrigerants”, says Leonel München.

With the modernization, Super Ledur remains committed to offering high-quality products, ensuring customer satisfaction and highly efficient operations, even as demand increases.

“Refrigeration is fundamental to our business. Investing in an efficient, safe, and sustainable system was a strategic decision that allows us to continue growing responsibly”, emphasizes Gerhard Ledur.



Investment in Sustainability

The Super Ledur case reinforces the chain's commitment to innovation, investment in sustainability, and maintaining operational excellence - serving as a benchmark for the Brazilian supermarket sector.

Learn More

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(1) According to AR5 - Fifth Assessment Report of the Intergovernmental Panel on Climate Change

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