

Europe's Largest Retailer Lights Up New Stores with SynJet



Situation:

Headquartered in France, with stores throughout Europe, Latin America and China, Carrefour is one of the world's largest retailers, earning more than €85 billion in revenue in 2009. In 1963, Carrefour opened its first hypermarket, a combination grocery store and department store designed to be a one-stop-shop for those buying food, clothes and home goods. More than 50 years and 15,000 stores later, Carrefour launched a revised version of its hypermarket concept, dubbed Planet Carrefour.

Designed to make shopping more comfortable and fun, the two Planet Carrefour pilot stores are segmented into eight specialized departments and boast wider aisles, better ventilation and a color-coded signage system. Also central to the stores' new functionality is the lighting system.

Each Planet Carrefour store is outfitted with more than 2,000 SunLux LED lighting fixtures. LED lights not only provide substantial energy savings over the fluorescent lighting typically found in stores, but also greatly improve the quality of light - a key benefit to better present Planet Carrefour's wide array of products.

In order for LED lighting to be a viable option for the store, Carrefour needed its lights to have cooling capabilities that allowed the SunLux LEDs to run at a higher lumen output, while looking attractive and lasting as long as the LED itself.

Project Statistics:

End User: Carrefour

Location: Ecully and Venissieux, France

Application: Retail Low Bay

Products: 4,000 Sunlux LED fixtures

Partners: Sunlux







"SynJet is able to cool more effectively, allowing Planet Carrefour's LED lights to run two times brighter and last longer, all while enabling a dramatic reduction in energy costs."

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Solution:

For this, Carrefour turned to Nuventix's SynJet thermal management technology.

SynJet is the most effective LED thermal management solution available. By delivering targeted pulses of air directly to the LED system's heat sink, the SynJet is able to cool more effectively, allowing Planet Carrefour's LED lights to run two times brighter and last longer, all while enabling a dramatic reduction in energy costs. Furthermore, the size of the heat sink is reduced by two thirds, resulting in a more attractive lighting system for Carrefour's "comfortable and fun" hypermarket concept and minimizing the LED fixture's metal footprint and environmental impact.

Carrefour also chose to use SynJet because of the cooling module's reliability. SynJet modules are the only active cooling option that matches – and exceeds – the life of the LEDs themselves – up to 100,000 hours of run time. SynJet's patented oscillating diaphragm design is frictionless. There are no components or ball bearings to wear out and breakdown, making SynJet durable and reliable and ensuring Carrefour engineers won't have to worry about replacing the LED's thermal management system until long after the LED array itself is burned out.

The two new Planet Carrefour stores opened on August 25 to much fanfare and laudation. As a new customer exclaimed, "This is completely different. This is more clear, more clean and everything is visible. It's super."

More than 2,000 SynJets were used in each of the pilot stores. Should these stores continue seeing success, Carrefour plans to open additional Planet Carrefour stores in Europe and, eventually, around the globe. SynJet thermal management technology will be used in each of these new stores, ensuring brighter, attractive and reliable lighting for each.





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