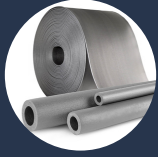


CARULLA SUPERMARKET

Breaking new paradigms in refrigeration with ThermaSmart® PRO



ThermaSmart® PRO



Certificates



PROJECT INTRODUCTION

As one of the largest supermarket chains in Colombia, Carulla's expansion is still in full swing. However, upholding high standards of food quality and shopping satisfaction is not an easy task in a tropical climate. The energy losses and catastrophic conditions of refrigeration equipment due to condensation in Carulla's Medellin branch greatly testified to this.

Considering the energy consumption of the average supermarket is already 1000 times that of a normal household, a more efficient and durable renovation solution was key to lowering operational costs while making sure the supermarket's motto; "an everyday pleasure", could be effectively sustained.

GOALS

This project was born from the need of the supermarket's maintenance department to find a solution that is efficient, and permanent to the problems presented in the drainage lines of the refrigeration equipment installed in the warehouse. Noteworthy is that these pipelines also cross commercial spaces outside Carulla's premises, and thus a permanent solution to the original insulation system's flaws was sought to also mitigate the maintenance problems and discomfort for the other users (stores) in the mall.

It was clear that most problems had arisen because of the condensation that persisted in the previous insulation system. The maintenance manager, who operates at the national level, had been in search of alternatives that could offer a definitive solution to these inconveniences while allowing easy replication in other stores. Key to this solution was that it would:

- Prevent condensation of permanently operated pipes.
- Eliminate the need for draining excess water from condensation.
- Mitigate the complaints, claims, and restitution for the tenants due to the damages caused by condensation in their facilities.

PROJECT PROCESS

- The project started with identifying the pipelines where condensation problems occurred, and where the maintenance team had to implement an emergency solution to collect the excessive condensation water in trays in order to drain the technical spaces.
- The operating temperatures of the pipes, their diameters, and lengths were also identified.

PROJECT INFORMATION

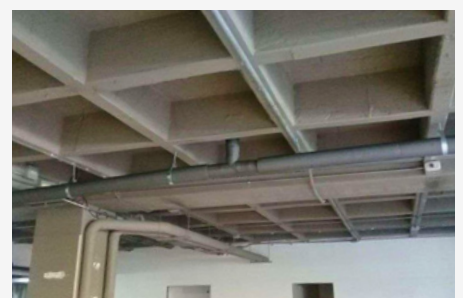
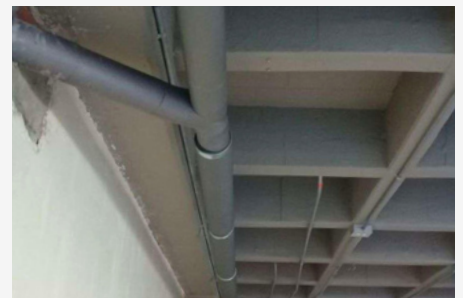
- 📍 Medellin, Colombia
- Duration: 6 Months
- 80% relative humidity
- 0 condensation problems at +30°C ambient temperature
- 0 complaints since the system operation

APPLICATIONS

- Airconditioning

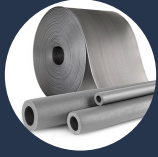
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PROJECT PROCESS

- The next step was to find the optimal insulation thickness and to identify how to prevent condensation from forming again.
- Subsequently, the installation personnel were trained and specific recommendations were made to ensure full-proof installation.

A pilot test was carried out in order to verify that the proposed solution based on ThermaSmart® PRO insulation responds to challenges such as resistance, condensation prevention, and stable insulation performance. Ideally, the base maintenance group should be able to intervene in the systems immediately if necessary.

RESULTS

The project was well received by Carulla's maintenance department, meeting all the expectations that were raised from the beginning. The aim was met so that, when necessary, any intervention could be done by the maintenance group as they received sufficient training and installation support. The complaints of the connected stores and other third parties were completely eliminated.

Financial

Savings were generated in maintenance costs due to the expulsion of the frequent corrective maintenance routines that had to be executed.

Environmental/health

The renovation of the insulation systems was carried out with ThermaSmart PRO: a non-toxic, durable, and 100% recyclable insulation material.

Results after 1-3-5 years of usage

This project was realized in the first quarter of 2017. It is currently in operation, enjoying high approval ratings from the maintenance teams and the supermarket chain.

Given the above, the proposed solution now enjoys the full endorsement of Carulla, with ThermaSmart® PRO as the first option for future interventions in other stores nationwide.

