CASE STUDY

COPELAND REMOTE MONITORING SOLUTIONS

Increasing savings and reducing food waste for grocery store chain in Indonesia

An Indonesian-based branch of a multinational grocery chain needed a solution to monitor its facility remotely to help prevent food spoilage and reduce operational cost.

Solution

Costs can escalate when refrigeration units are adjusted incorrectly or simply when a customer forgets to shut the cooler door. This is where Copeland store monitoring solutions play an important role. Our **XWEB500D Pro** is a supervisor and monitoring solution designed to enable energy savings, helping stores reduce operating costs. It is the ideal solution for medium-sized installations of up to 50 devices, such as petrol stations, supermarkets and convenience stores. Its innovative features make the solution suitable for applications such as production facilities and cold storage centers.

The solution is comprised of a **XR77CH** refrigeration controller, suitable for blast cooling and chilling applications. Equipped with an integrated real-time clock (RTC), which enables program defrosting and target value changes (energy-saving mode) for specific times and days. The **XC1015D** advanced digital controller allows the simultaneous management of compressor racks with up to 15 compressors and fans.

The **EM21D Energy meter** is designed to monitor voltage, current, power, energy, and other electrical parameters on single and three-phase electrical systems with revenue-grade accuracy.

Copeland monitoring solutions are designed to meet customer needs with a focus on reliability, versatility and efficiency.

Result

The Copeland solution was comprised of the XWEB500 for control and monitoring the refrigeration system, the XR77CH case controller for cold rooms and features a night set point helping boost energy efficiency, and the XC1015D with its patented CRO (Compressor Rack Optimization) Suction Floating Setpoint. The CRO algorithm installed on the XWEB500, XWEB500D and XWEB5000 servers fully maximized the compressor rack set point of the connected devices, helping deliver annual energy savings of 10–20%. The refrigeration system was

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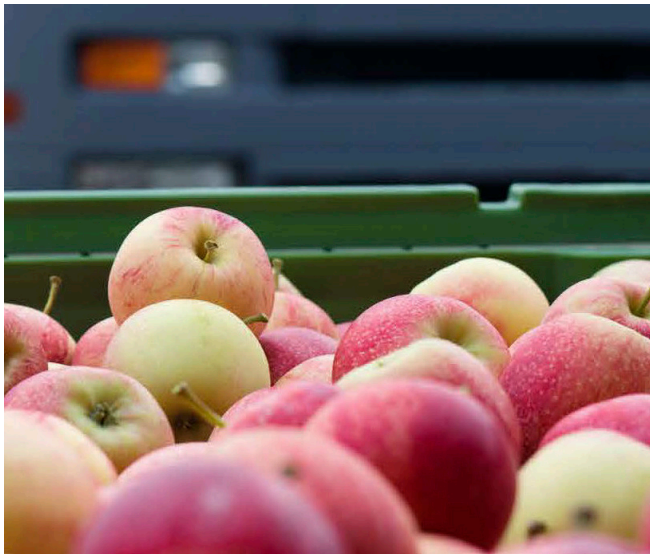
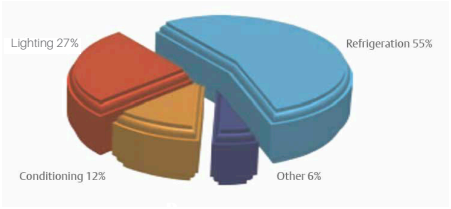
equipped with the CRO function, which analyzes information from the controllers to determine the optimum cooling requirements.

The suction set point is continuously analyzed in order to achieve the system's optimized settings. The supervising system then sends data to the XC1000D compressor rack controller to update the new set point. EM21D (energy meter) measures energy consumption, resulting in improved energy savings by increasing visibility, allowing for timely temperature adjustments and increasing store operational efficiency. Additionally, the supermarket noticed a marked reduction in food losses by being able to monitor the temperature of their perishables to maximize their optimal storage life.



Average energy use in supermarkets

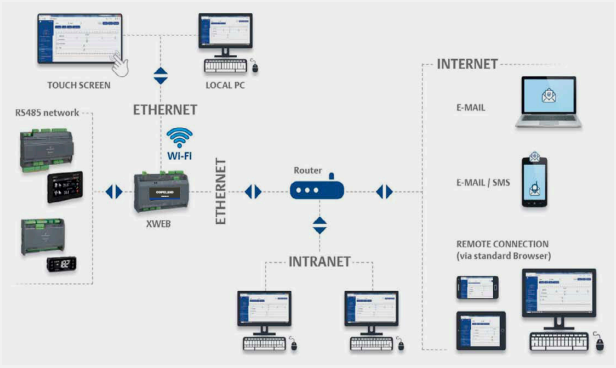


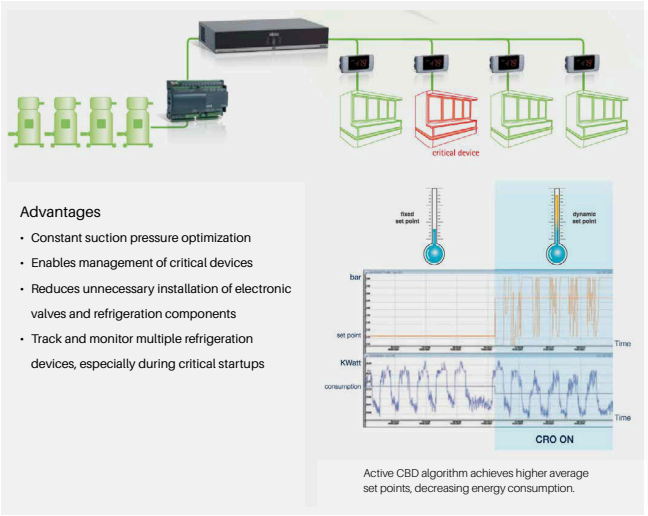
XWEB500D Pro

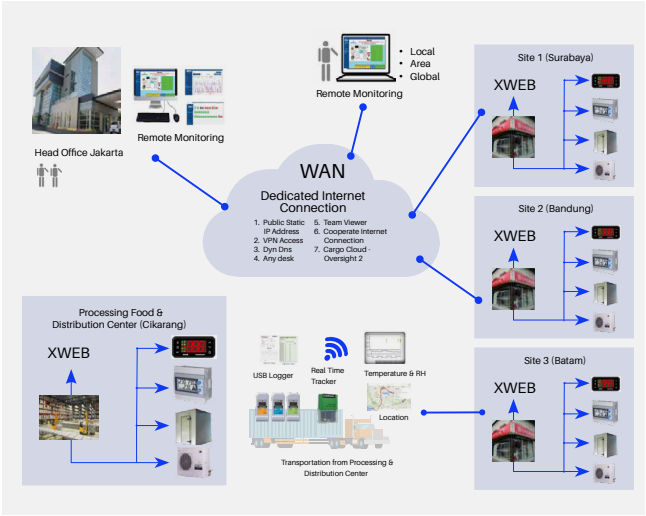
XC1015D

XR77CH

EM21D







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