

CONNECTED SOLUTIONS FOR ENERGY EFFICIENCY

AKO
www.ako.com

ADVANCED CONTROL

Reduction of electricity consumption in your facility up to 35% thanks to SELF-DRIVE ALGORITHM®



Free-cooling



Smart on-demand defrost

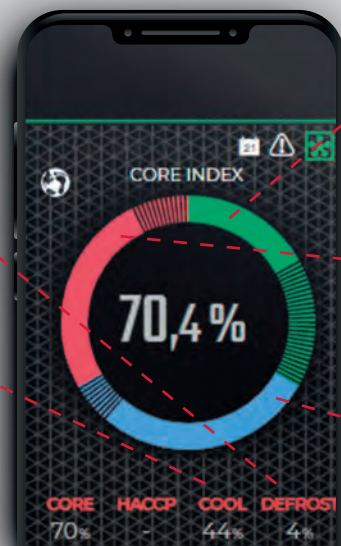


COMMUNICATIONS GATEWAY TO AKONET.CLOUD

Enterprise value through a powerful, comprehensive set of apps for energy efficiency, product care and environmental care



CLOUD MULTISITE MONITORING PLATFORM Core Index



Energy efficiency
Operating time of the components with higher electricity consumption

Maintenance
Stress caused by defrosts and compressor activations

Product care
Time in Set Point range



Remote management and monitoring of connected devices from anywhere and any device.



Report management to improve global quality and reduce product losses and customers complaints, increasing the user's satisfaction



Save costs in alarm management, prioritising by severity. Plan ahead maintenance tasks analysing remotely



Improve the preservation conditions and the quality of the stored product



Simple analysis based on efficient data to improve the performance of your facility

WITH ONLY 2 PROBES, SELF-DRIVE ALGORITHM:



Detects the state of the refrigerant inside evaporator



Calculate ice level in the evaporator



Determines the Heat Transfer Ratio between cold room and evaporator

HOW CAN WE AVOID ICE FORMATION AND SAVE ENERGY?

By free cooling technique:

Reduce the temperature in the cold room avoiding the need to activate the compressor and its operating time up to 45%, one of the components in the refrigeration circuit with higher electrical consumption.

By Smart on demand defrost technique:

Knowing at any moment the ice level in the evaporator, we can avoid unnecessary defrost and reduce its number, reducing heat input into the refrigerated space, thermal stress in the evaporator and as a result, the energy consumption.

ADVANCED COLD ROOM CONTROLLER AKOCORE ADVANCE

Easiest installation in the market, with a 2-steps setup wizard

- Reduce maintenance costs by avoiding ice formation in the evaporator
- Increase product care thanks to an efficient temperature control
- Reduce electricity consumption by effectively managing the components in the refrigeration circuit

COMMUNICATIONS GATEWAY AKONET.Edge

Provides connectivity to AKONET.Cloud via Ethernet or GPRS and datalogging to all devices connected

CLOUD MULTISITE MONITORING SYSTEM AKONET.Cloud

Easy and intuitive remote management and monitoring platform, allowing:

- Display data and graphs
- Notifications and alarm send
- Automatic reports
- Remote change of parameters

COLD ROOM OPTIMIZATION: AKOCORE ADVANCE CASE STUDY

FOOD RETAILER (SPAIN)

THE CASE

We detected the need to save energy and improve product care on Cold Rooms (33% of electricity consumption and big value on food).

AKOCORE ADVANCE was the perfect solution that allow saving costs without modifying installation and integrating on his monitoring system.

THE PROJECT

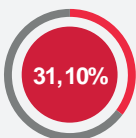
Freezing Cold Room with two refrigerant circuits
(2 coolers + 2 condensing units)

- 11KW III Power
- Hot Gas Defrost
- Two Solenoid Valves operating at same time
- Independent programmed defrost on each cooler
- Usually ice formation on coolers
- Intensive and long door openings during 24h

GOALS

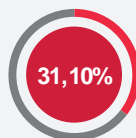
1. Reduce the supermarket's energy consumption.
2. Reduce costs of maintenance due to ice formation
3. Introduce remote monitoring, control and alarm system and improve product care

RESULTS



ENERGY EFFICIENCY

More than 30% on energy savings thanks to 80% less time of defrost and 17% less time of compressor



TIME ON SETPOINT

Even with 31% energy reduction, we achieved better product care



PAYBACK:

Fast and profitable return of investment



COST OF ENERGY SAVED/YEAR:

Projection of results for a single cold room