

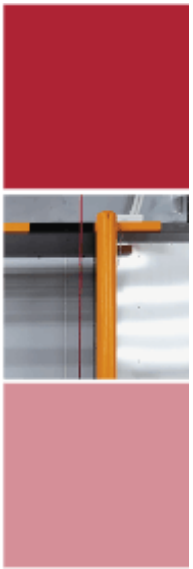
CASE STUDY: OPTIMISATION OF FREEZING COLD ROOM WITH HOT GAS DEFROST



Optimisation of cold room with hot gas defrost

Main challenge:

Reduce electricity consumption, improve product conservation, reduce maintenance costs and the risk of gas leaks



■ 15%

A refrigeration installation that does not optimise its operation can increase its electrical cost by up to 15%.

■ 30%

30% of the heat input to a cold room comes from the door opening.

■ ISSUE

The time in setpoint was only 66.8%.

This was caused in particular by high heat levels in the cold room as the defrosting cycles were scheduled at alternating times. Furthermore, the cold room is active 24 hours a day, which also resulted in very high traffic.

In addition, there was no warning system for excessive door opening time., nor were the fans turned off if the door was opened for too long, so operators were sometimes unaware of how long the door had been open, and the degree of comfort while operating in the chamber was very low due to the continuous ventilation suffered by the operators.



Reduce electricity consumption of services.



Improve product retention



Reduce system maintenance costs



Reduce the risk of refrigerant gas leaks

Optimisation of cold room with hot gas defrost Solution – Result:

AKO proposed its **AKOCORE ADVANCE** solution. An efficient solution that in addition to optimising the installation's operation for its good performance and it is eco-friendly.

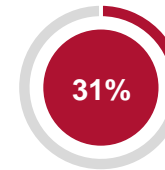
SOLUTION

AKOCORE ADVANCE, by means of its SELF-DRIVE® algorithm and its robust mechanism capable of controlling loads of up to 2 CV through its five relays, acts on all cold room loads (compressor, fans, defrosting, drainage resistor, etc...), optimising the installation's electrical consumption, product conservation and operational life.

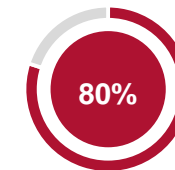
In addition, thanks to the **CAMM Module** connected to the **CAMM TOOL** application, it is possible to constantly record the data collected in order to acquire valuable information to make the right decisions and verify the installation's improvement.

RESULT

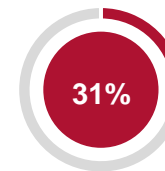
REDUCED ELECTRICITY
CONSUMPTION



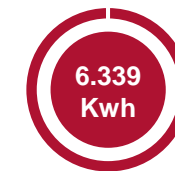
REDUCED DEFROSTING
TIME



INCREASED
CONSIGNMENT TIME



REDUCED Kwh PER
YEAR



RETURN ON INVESTMENT
IN <5 MONTHS




Optimisation of cold room with hot gas defrost

Benefits of the solution:

The AKOCORE ADVANCE state-of-the-art temperature control makes it possible to manage the installation components more efficiently, reducing consumption.



BENEFITS

-  Energy efficiency. Reduces electricity consumption by up to 35%.
-  Detects ice formation.
-  Minimises the number and duration of defrosts.
-  Detects refrigerant gas status.
-  Reduces installation and commissioning times.
-  Monitors door opening.

AKOCORE ADVANCE + CAMM Module

An efficient and sustainable solution based on advanced temperature control thanks to its SELF-DRIVE® algorithm and intelligent monitoring to know the status of your cooling installations at any time and from any place and device.

The CAMM Module registers and monitors the cold room activity to optimise its regulation. It also has local and remote connectivity from a mobile phone, without the need for a local network or webserver, avoiding travel costs to the installation.



CASE STUDY: OPTIMISATION OF FREEZING CHAMBER WITH HOT GAS DEFROST

