

Iceland

Case study



The challenge

Iceland is a leading high street supermarket chain with 800+ stores across the UK selling frozen and chilled food and groceries. Famous for its pedigree in frozen foods, Iceland worked with Airedale to deliver a standard, optimised, control system which could be applied across all stores to maintain store environments and produce significant energy cost-savings.

Iceland required a standardised control system that could be integrated into all of the retailer's stores for both new cooling plant and retrofit, to offer optimised control, free-cooling and simplified spares availability. The controller had to be pre-programmable for a standard store and configurable on site, with selectable install parameters.

Airedale solution

- 800+ stores
- Energy savings increased by 10%
- Savings of £6,000 per store
- 2 year payback period
- ACIS™ control system across all stores
- ACIS™ building energy management system across 10 stores

“ Previously we had infrastructure in place to incorporate free-cooling, but our standard range of controllers had only fixed capability. Airedale's controls solution allows us to use the same strategy, whilst enabling attainable energy savings to be achieved. ”

Graham Ireland, Project Manager,
Iceland



In more detail

Iceland retail environment

Intelligent controls

The ACIS™ controls system offered the perfect solution to complement the requirements of Iceland. The ACIS™ controller is integrated with bespoke software, which has been developed by Airedale specialists, to provide complete control of any site.

ACIS™ enables the management of smart cooling and other building services across multiple sites through a single central system. It can be applied to new and existing refrigeration and cooling products from Airedale or any other manufacturer. The sophisticated software links the programmable controller to key components within the cooling system, allowing units to be optimised for increased energy efficiency.

The ACIS™ controls system was initially introduced to 50 stores undergoing a major upgrade programme. This initiative proved so successful, with such excellent savings in energy that the ACIS™ controls system has now been rolled out across all stores.

Results

Efficient control, coupled with free-cooling and part load efficiencies, has enabled Iceland to recoup significant energy savings. In the stores where the ACIS™ controls system is installed, but no changes to plant were made, Iceland is able to compare energy draw before and after installation.

Energy costs in our stores have reduced by **10%** through tighter, more intelligent levels of control. Based on these results, over the course of a year, across all stores, Iceland's total building energy costs of £45 million is expected to reduce by **£6,000 per store**.

Benefits of ACIS™ to Iceland:

Energy efficiency and complete control

Time scheduling, alarm triggers, adjustment of dual set points and remote access enables system optimisation allowing significant energy reduction, particularly during non-trading hours.

Optimise free-cooling

If the outside temperature is 1°C or more below the return air temperature, free-cooling can be used, reducing the need for mechanical cooling.

Integration of all store systems

For enhanced comfort, this includes ceiling cassettes, over till and over door heaters.

Building Management System capability

ACIS™ can be integrated with a wide range of BMS protocols from various manufacturers.



“We have yet to find a store where we cannot use the ACIS™ control system.

Whenever an individual store criterion varies, Airedale accommodates this by adapting the software. We can add in multiple time functions and know instantly, by checking the easy-to-read display, exactly what the controller is doing.

As the controller is standardised and uses one type of software, the system enables information to be centralised, which allows functionality to be easily monitored and evaluated. This streamlines the management process and simplifies the procedure for service contractors. ”

Graham Ireland, Project Manager, Iceland