



Press Release

Upgrading refrigeration fans can deliver 80 per cent energy savings for retail businesses

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Supermarket retailers can reduce energy consumption by up to a massive 80 per cent, by simply upgrading their refrigeration fans. Furthermore, the overall energy savings means that a return on investment can be seen in as little as two years.

Despite this, many supermarket retailers still rely on older models which are noisy, have high heat load and a poor carbon footprint. One of the simplest and most cost effective ways of improving the chiller cabinet's energy performance is to upgrade the fans from AC to EC.

The EC fan concept uses a high efficiency permanent magnet motor, as opposed to the AC induction motor traditionally used. EC fans incorporate on board electronics which allows control of the power input to the motor, thus achieving the required fan speed. Utilising EC fan technology in chiller cabinets results in far lower running costs than traditional AC fans, and consequently lower 'life-time costs'.

Transforming energy efficiency for Henderson Group

The Henderson Group owns popular retail brands including Spar and Eurospar and is the largest convenience retail brand in Northern Ireland with over 400 stores. Following a review of its energy output from its existing stock of 2,000 fridge fans, which were all conventional shaded pole motors, Henderson Group realised it could deliver substantial energy savings with an upgrade project. The business worked with ebm-papst and Cross Group, which delivers industrial and commercial refrigeration solutions, to install over 2,000 new fans throughout the company's 400 stores.

Minimal disruption

Conducting such a large-scale upgrade programme is less disruptive than you might think. EC fans are usually directly interchangeable with their predecessors, making the replacement process quick and simple.



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For the Henderson Group, most existing AC fridge fans were simply replaced with our energy efficient EC fans. However, in some cases the Cross Group had to use adapters as some of the stores had a different type of refrigeration cabinet. In both scenarios, disruption to the customer experience was minimised.

Longer term ongoing maintenance is also minimised, as the EC technology means there is less heat flowing through the motors, which in turn leads to fewer rotor copper and slip losses.

Energy efficient fans

The fans used during the upgrade were our EC 8W fans. Compared with the business' existing 38W AC fridge fans, the kW demand was reduced from 91.2kW to 17.60kW. This led to a total power consumption reduction of 644,736kWh, with the new EC fans consuming just 154,176kWh in a year, compared to the 798,912kWh of the old fans.

The fan upgrade also led to carbon dioxide savings of 318.50 tonnes per year across all the stores involved in the project – the equivalent of 2,023 double decker buses!

An energy efficient future

Upgrading to EC fans is a great choice for supermarket businesses looking to quickly reduce their carbon footprint. It directly impacts on the bottom line with significant cost savings that will quickly pay back the original upgrade costs. For Henderson Group, this was estimated to be a cost-saving in excess of £70,000 annually for the group.

Upgrades mean retailers will also improve the customer experience by reducing noise, improving reliability and less maintenance disruption, all whilst allowing them to get a step closer to their environmental goals.

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About ebm-papst

www.ebmpapst.co.uk

The ebm-papst Group is Europe's leading manufacturer of fans and motors and is a pacesetter for the ultra-efficient EC technology.

ebm-papst employs over 12,000 people at 17 production facilities (including Germany, China and the USA) and 57 sales locations worldwide.

ebm-papst is represented in many industries, including heating & ventilation, air-conditioning and refrigeration technology, domestic & commercial appliances, IT/telecommunications and industrial engineering.

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