

General Domestic Appliances saves £17,000 with ABB energy survey

A massive reduction in the power drawn by a fan is saving £17,000 a year for a Staffordshire-based cooker manufacturer, following the installation of an ACS 600 drive from ABB.

- Over 50% reduction in power
- Improved reliability
- Payback in only four months



Since installing a variable speed drive to a fan extracting waste vitreous enamel from the paint booths, cooker manufacturer General Domestic Appliances is saving 440,000 kWhrs per year

APN-GDA-0102

Problem

General Domestic Appliances Ltd (GDA), at its manufacturing plant in Stoke on Trent in Staffordshire, manufactures 12,000 cooking products a week for its market leading Creda, Hotpoint and Cannon brands.

As part of a continuous programme to improve quality and energy efficiency at the factory, the company decided to look at the energy consumption of its wet fume extraction plant, which extracts waste vitreous enamel from four paint booths. Some of the booths were not in constant use and were closed off by a mechanical shutter, yet the 132kW fan used to extract the waste enamel was run at a constant speed, wasting energy and money.

Solution

An energy audit of the wet fume extraction plant by ABB Drives Alliance Partner, Central Electrical, revealed that the speed of the fan could be reduced by 20%. The installation of an ACS 600 AC drive from ABB resulted in a 56 percent reduction in power from 118kW to 51 kW, saving over 440,000 kWh a year.

Equipment: ACS 600 AC drive

Savings p.a: £17,000

Payback: 4 months

Benefits

Andy Rowe, Plant Engineer for General Domestic Appliances commented: "Central Electrical estimated we would save approximately £16,000 on the energy bill for the wet extraction plant in the first year. In fact we saved £17,000 and achieved a payback period of only four months."

Central Electrical's energy appraisal is a systematic analysis of key fan operations. The energy consumption at the plant was assessed over a typical week with an energy monitor and dedicated software to calculate the speed reduction needed to save energy while still maintaining the required sufficient extraction from the plant. The recommendations were then prepared into an executive summary and the appraisal was repeated after the AC drive had been supplied and commissioned, to confirm the savings figures.

Central Electrical also helped to train staff at General Domestic Appliances to continue the process.

Central Electrical's appraisal is the cornerstone of ABB's new six-step energy saving plan, designed to help companies save energy. It can involve effective management schemes to maximise savings, as well as replacing older, less efficient drives with new, more advanced technology.

With the introduction of the Climate Change Levy (CCL), the need to maximise uptime and minimise downtime is a priority, along with bringing down operating costs and maintaining quality in processes.



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Around 65% of the electricity used in industry is used by electric motors, and some 20% of this is lost through wasteful control mechanisms. Energy efficiency means longer life for component parts, resulting in less maintenance, higher productivity and above all, reduced emissions of CO₂ and other pollutants to the atmosphere.



To find out more about ABB Drives Alliance, visit: www.abbd rivesalliance.com

*For further information on how an energy survey can save you money, call us FREE on **0800 783 7491**, or fax back the coupon below. Alternatively, you can send an email to enquiries@gb.abb.com*

FAXBACK

- Please send me more information about how I can save energy at my plant
- I would like an ABB representative to contact me to discuss energy savings

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