

RALSPEED HELPS WHITFORD PLASTICS MAKE A SMALLER FOOTPRINT



Variable speed drive systems supplied by drive technology expert, Ralspeed, have enabled Whitford Plastics, a leading supplier of fluoropolymer coatings, to reduce the carbon footprint of the extract fan installation at its manufacturing plant in Runcorn by more than 65%. Additional benefits of the new drive systems include lower running costs, extended equipment life, and reduced noise levels.

To ensure that its production operatives always have a clean and pleasant environment in which to work, Whitford Plastics makes extensive use of air extraction systems. Until recently, the fans used in these systems were driven by motors with ordinary direct-on-line starters that provided no speed control.

However, in their constant quest to improve the energy efficiency of the company's operations and to minimise environmental impact, the engineers at Whitford Plastics decided to take advantage of Ralspeed's energy appraisal service, which examines drive applications and provides information about the energy savings that can be achieved by using the latest drive technology.

In the case of Whitford Plastics, the information produced by the appraisal service was compelling. Each of the extract plant's 7.5 kW fan motors was running at full speed for 59 hours per week, 50 weeks of the year, consuming 18,800 kWh of electricity per year at a cost of £1,540.

On the basis of its investigations, Ralspeed suggested fitting the fans with variable speed drives that would allow them to run at a speed optimally matched to the requirements of the manufacturing process. Calculations showed that this would allow the annual consumption for each motor to be cut to around 6,500 kWh and the energy cost to £528. The calculations also showed that the carbon footprint of each fan would be reduced from 8.09 tonnes of CO₂ per year to just 2.78 tonnes.

"After seeing these figures, we decided that we wanted to go ahead with installing variable speed drives, and that we should seek funding support from the Carbon Trust," said Des Griffiths, Plant Engineer for Whitford Plastics. "Ralspeed was very supportive in helping us to prepare and make our submission to the Carbon Trust. As a result, we got a quick decision, and we secured an interest-free loan to cover the cost of the project."



To date, Ralspeed has converted five extract fans to variable speed operation, and conversion of the site's remaining fans is planned for the near future. In each case, the conversion has involved fitting a control panel designed and built by Ralspeed, which incorporates a Vacon NXL AC variable speed drive. These drives were chosen on the basis of their consistent performance, proven reliability and value for money.



Once the new drive systems had been installed, it quickly became apparent that they would not only reduce energy usage and costs, but that they would also provide other important benefits. For example, smooth controlled starting and stopping of the fans, as well as the lower running speed for much of the time, is minimising wear and tear on the drive belts and bearings, which will extend the life of the equipment and reduce maintenance requirements.

In addition, when they are operating at reduced speed, the fans run much more quietly, something that is greatly appreciated by the plant operatives who now find that they can converse without shouting!

“The installation of the new drive systems went very smoothly,” said Des Griffiths, “and there was minimal disruption to the operation of our plant. We received excellent advice and support from Ralspeed at every stage of the project, from the initial appraisal right through to installation and commissioning, and we're delighted with the savings we're making. This has, without doubt, been an exceptionally worthwhile project.”

Ralspeed will continue to provide support for the systems it has supplied to Whitford Plastics. As an official Level 3 Service Partner for Vacon, the company is fully equipped and trained to diagnose problems and, in the unlikely event that it should prove necessary, to provide warranty repairs for the drives.

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