



Drive Provides Cool Energy Saving Solution at Henry Denny



The installation of a large free-standing iMEC variable speed AC drive has improved temperature control in a food company's chilled rooms, and is well on the way to delivering a massive saving of around £23,400 in their annual electricity bill – a cut of 50% of the plant's total power usage!

Henry Denny & Co manufactures a wide range of pies, sausage rolls, pasties, cottage pies and so on, at its Portadown plant in Northern Ireland. A complex of 20 chilled rooms stores a huge amount of not only the company's own production output, but, as the site acts as a regional distribution depot for Northern Ireland, it also holds many thousands of cheeses, butter, hams and bacon from other companies in the Kerry Group too.

"We have a large ammonia compressor to keep the cold rooms within very carefully controlled temperatures," explains Henry Denny's Electrical Engineer, Ciaran McSherry, "and, previously this was soft-started and run up to full speed on demand."

When the company had to replace the soft starter for the compressor, Mr McSherry recommended a change to a variable speed AC drive.

"The compressor is a major contributor to the plant's total base load," he says, "and I felt that there were savings to be made by providing more precise control of the compressor. But even I was surprised when the payback turned out to be just six months!"

The company turned to iMEC drives. The recommendation was for a free-standing Unidrive SP for the task, additionally meeting the space constraints for the drive's required location and, subsequently supplying a compact 315 kW unit just 400mm wide in October 2006.

"We find them easy to programme, install and maintain. Plus the support and service is very good," says Mr McSherry.



Following installation and commissioning over a three day period, the improvements became clear from the outset. The drive is set up to give a feedback pulse for each kWh to the factory management system, so that the company can monitor energy usage.

The savings proved to be better than the conservative estimate, giving savings in the region of 7,500 kWh (@ 6p per kWh) per week. When combined with other factory energy savings initiatives, the installation of this drive is generating 75% of the total savings of £600 per week.

The free standing drive is part of the Unidrive SP AC drive range and comes complete and ready for easy connection, in a small footprint, standard size and colour cubicle that allows ease of integration with existing equipment, as at Henry Denny. The compressor controller calls for more or less compression of ammonia coolant with immediate response from the drive.

“We used to have a slow reaction time to temperature swings with the soft starter,” says Ciaran McSherry, “but now it is easy to hold the temperature pretty well bang on our target of -10°C as well as cutting our energy bill by around 50%.”

“The project has been enormously successful and has really reinforced the energy-saving benefits that can come from variable speed drives.”