



Summary

Industry:	Food - Dairy
Application:	Fenner TDP 3 Synchronous Belt Drives - Air Handling Units
Actual Saving:	£42,000
Payback Period:	5 months



Energy Efficiency Savings Leads to Significant Gains

Efficient Machines Leads to Improved Power Consumption

ISSUE

Our client is responsible for managing the facilities at a large dairy site. As well as ensuring the successful operation of the site services they have an ongoing responsibility to identify potential for energy efficiency savings.

As a corporate partner ERIKS were consulted and advice was provided covering many different areas, using many of ERIKS core products and services.

As a large user of electricity, Air Handling Units (AHU's) were identified as one of the main target areas of improvement.

SOLUTION

A survey was carried out and 20 different AHU's were identified in the creamery. These were all of the same type and operated continuously throughout the year. Electronic speed control was already fitted so reliable energy consumption data was obtained.

ERIKS suggested the following: replacing the existing worn wedge belt drives with new synchronous alternatives and fitting a superior single filter to replace the existing double filter arrangement.

One AHU was selected as a trial and the new items were installed. Due to the speed consistency and increased life cycle efficiency of the new belts a decrease in power consumption of around 7% was identified. Following the successful trial it was agreed that the remaining 19 units would also be converted to the new specification belts and filters.

ERIKS were contracted to supply and install all the new Fenner belts and pulleys. The Engineering Team utilised the latest recommended belt fitting practices. A contactless belt tension device was used to set the drives to operate at the correct calculated drive frequency. The work was completed as agreed and all the Air Handling Units were signed off.

OTHER BENEFITS

- Increased maintenance periods
- Speed consistency
- Improved efficiency over lifetime of drive

FURTHER COMMENTS...

Following completion of the project a review of the air flow was carried out via the Building Management System. The client was able to reduce the fan speeds by an average of 8% across all the AHU's.

A soft saving was also gained as the increased integrity of the new belt drive meant the maintenance period was increased from 6 to 12 months.

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MORE INFORMATION

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