

**+70% Saving**



**EnerJon**

**Energy Efficiency**

# AHU Efficiency Improvement

A multi-national manufacturing site wanted to reduce energy consumption, one of the projects identified, installed and commissioned by Enerjon was the fitting of a Variable Speed Drives (VSD) onto the Four main production hall AHU fan motors. The project involved:-

- Full up front costs / saving analysis and summary report.
- Identification of all electrical & control requirements.
- Installation and commissioning of VSD's onto the AHU fan motors.
- Developing and setting up additional AHU switch off to maximize saving.



**Variable speed Drive units fitted to each of the four AHU**

Autumn / Winter / Spring - Main Pack AHU switch off plan

Month	AHU1	AHU2	AHU3	AHU4
Jul	ON	ON	Timer	ON
Aug	ON	ON	ON	ON
Sep	Timer	ON	Timer	ON
Oct	Timer	ON	Timer	ON
Nov	OFF	ON	OFF	ON
Dec	OFF	ON	OFF	ON
Jan	OFF	ON	OFF	ON
Feb	OFF	ON	OFF	ON
Mar	OFF	ON	OFF	ON
Apr	Timer	ON	Timer	ON
May	Timer	ON	Timer	ON
Jun	Timer	ON	Timer	ON

Key

ON	Unit running 24hrs per day
Timer	Unit switched off w/e & nights
OFF	Unit switched off 24hrs per day

**AHU annual run plan / switch off selector**

## The Results

The installed AHU VSDs & switch off plan achieved the following improvements:-

- The annual power consumption of the complete AHU system was reduced by an incredible 74%.
- Achieved annual power savings to the site of 388,438KWH, reduced annual carbon emissions by over 167 tonnes.
- Payback period for all project costs was under 7 months.
- Other benefits include controlled soft starting of equipment, reducing electrical spikes and mechanical stresses on fan and motor, extended equipment life due to reduced rotations.

**Enerjon**

Tel:- (01670) 505898

24hr Mobile (07709) 132566

Email:- jon@enerjon.co.uk