

CASE STUDY

Intelligent Compressed Air Management in Practice

The Challenge

The Trinity Mirror Group print works is one of the UK's largest newspaper printers with a large annual electricity bill. As part of a drive to cut energy use and the knowledge that nearly one third of the electricity at the site was consumed by its compressed air plant, Maziaks were asked to review the installation for possible savings.

The compressor installation at the plant was new in 2004 and although it included some relatively sophisticated controls, the configuration of the units was not making the most of their capabilities. The standard control configuration meant that the variable speed compressor (180kW) was always the lead unit. During times of low demand, this could adjust its flow rate and energy consumption effectively, but as demand rose and the other compressors (3 x 160kW fixed speed) were switched on, control efficiency was substantially reduced.

Results

The EnergAir installation has led to substantial energy savings, with electricity consumed dropping by 45%. These savings have been independently validated by Trinity Mirror Group's sub-metering system.

Fewer big electrical events due to less compressor switching and a more intelligent compressor duty cycle have also improved power quality at the plant and there have been **cost savings on servicing** which is a major benefit. Maziaks, in keeping with our proactive approach, have found a solution and delivered it to the highest standards and with incredibly positive results both in terms of cost and quality for the client.

Client Testimonial

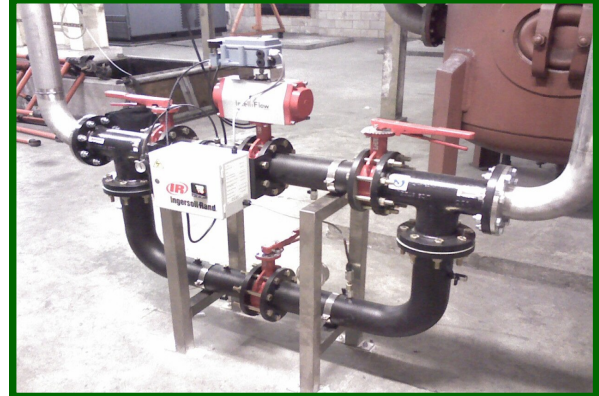
We originally expected a payback period for our investment of 15 months. In fact it has paid for itself in less than six.

Kieran Flemming, Commercial Manager

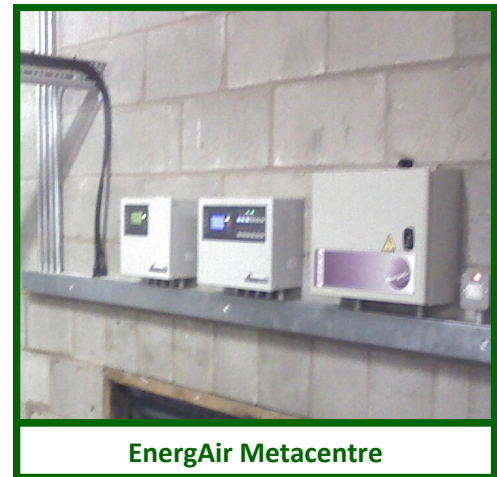
Maziaks' Solution

Our recommendation was the replacement of the existing OEM compressor control unit with an EnergAir Metacentre **Intelligent control system**. Using software that learns from previous events, this unit makes decisions about the optimum combination of compressors to use in order to maximize overall system efficiency. For example, by minimizing the number of costly load-unload events undertaken by the fixed speed compressors.

We also made a number of other changes, including adding an intelligent flow control valve to the facility's existing compressed air accumulator system. Some of the air needs to travel more than 600m from the compressor house to its point of use, causing a substantial pressure drop. Our solution meant delivery pressure was reduced to 7.7bar from 9bar.



Precise pressure control valve



EnergAir Metacentre

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