

## Case Study: B&Z Metalcraft



**Chalmor**

Experts in Energy Saving Lighting and Heating



### The Challenge: Improve lighting and control whilst reducing energy costs

B&Z Metalcraft, a leading fine limit sheet metal and laser cutting company in Leighton Buzzard, were experiencing rising electricity costs and decreased lighting. They approached Chalmor through the Carbon Trust Green Business Fund, to implement new LED lighting, hot water control solutions and energy saving lighting controls.

### The Chalmor Approach

Chalmor surveyed the premises to understand the different spaces, including production areas, service rooms and offices and analysed existing lighting and hot water systems so a tailored solution meeting B&Z Metalcraft exacting requirements and payback targets could be designed.

The survey revealed:

- New LED lighting was needed throughout the factory to achieve optimal lighting levels, compliance and to minimise maintenance. As a 1980s factory, there was a wide mix of different types of light fittings, including some 8' T12 fluorescent lamps which have since been outlawed and posed a maintenance problem.
- Electric water heaters needed sensors to be installed to ensure efficient hot water generation throughout the building, which would only activate when the building was occupied.
- Circuits needed to be rewired to match the office layout accompanied by new sensor controlled LED lighting, would provide a far brighter and more comfortable working environment with each area being individually controlled.



Ariston water heater with sensors ensures efficient and smart heating.



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# The Solution

Chalmor provide tailored, innovative total engineered solutions using the latest and best technology available.

- ✓ **Existing lighting was replaced with powerful LED lighting**, to deliver optimal light levels and energy and carbon savings. A variety of LED lighting solutions were installed along with the latest PIRs, to deliver guaranteed performance, improve individual working environments and ensure lights only operated when the areas were occupied.
- ✓ **Hot water controlled by sensors**. Electric tea boilers and a water heater were fitted with sensors, ensuring hot water is provided only as and when needed.
- ✓ **WeControl "Internet of Things" device was installed**, allowing monitoring, adjustment and control of devices remotely. As a remote system accessed via the internet, B&Z Metalcraft were able to control hot water systems easily, switching them on or off as required.
- ✓ **Assistance was provided to complete the grant application forms**. As a recommended supplier of the Carbon Trust Green Business Fund, Chalmor supported completion of all necessary grant application documents, as well as providing a detailed payback analysis on the cost of the complete installation.

Savings analysis detailing the cost saving for each unit installed in over 20 different areas of the premises.

# The Results



Overall annual consumption reduced by 21,295kWh



Energy savings of £2,800 in the first year



4 year payback on cost of the complete installation



Lighting load reduced from 22.26kW to 12.67kW



Improved working environment, optimised comfort and light levels



# Chalmor

Experts in Energy Saving Lighting and Heating



"I cannot fault Chalmor. Their expertise, knowledge and support throughout this process has been exemplary. From assisting us with the grant documentation, through to a speedy and detailed installation, we are delighted with the substantial energy savings we are now achieving. Our premises have improved greatly, with superior lighting and automatic controls and a much better working environment for all. I have been so impressed by Chalmor that I recommended them to one of our customers. They have supported us in the procurement of a renewable energy contract with savings of £5,000, and I wouldn't hesitate to recommend them again."

David Clark | B&Z Metalcraft

