



WINCANTON LOGISTICS, THURROCK

WINCANTON AND DEXECO JOIN FORCES
TO CREATE A GREENER SUPPLY CHAIN.

Dexeco
SOLUTIONS

ABOUT THE CLIENT

Wincanton has shown a 60% reduction in site electricity usage at one of their Thurrock warehouses since the installation of Dexeco's intelligent, energy-saving Verteco T5 luminaire.



Wincanton is a leading provider of logistics solutions with over 4,000 vehicles and 13m square feet of warehousing under management at 200 locations across the UK and Ireland. Wincanton has been certified to the Carbon Trust Standard since 2010 and are the most recent recipient of the FTA "Leadership in Logistics Carbon Reduction" Award and were finalists for the MTA "Low Carbon and Efficiency Award" 2015 .

Steve Tainton, Wincanton's Group Energy and Environment Manager, says:

"We aim to make our customers' business better every day and ensure a safe and sustainable environment for all. Reducing our energy usage and associated emissions with successful projects like this is key to achieving our wider business goals".

With lighting amounting to up to 80% of warehouse electricity usage, the logistics service provider decided to incorporate the most cost-effective energy-efficient technology, to drive down the environmental and financial costs of its Thurrock operation.

Wincanton found in Dexeco a partner that shares its goal of a sustainable future, with the strong manufacturing and delivery capabilities to back it. Joined by electrical installers, Axiom, the collaboration has exceeded expectations on this project delivering an excellent installation with an outcome that beat the project forecast.

THE BRIEF

Wincanton approached Dexeco to upgrade its existing 400w SON (or HPS High-Pressure Sodium) Lowbays, with modern, energy-efficient alternatives.

Intelligent sensor control was essential, allowing light levels to adjust to the picking patterns and storage needs of Wincanton's broad selection of clients. With the building operating 24 hours a day, an advanced control system would quickly generate substantial energy savings.

SON lighting usually offers a lower colour temperature of roughly 2,200k compared to fluorescent or LED sources (these typically produce a "cool white" temperature of between 4000k and 5000k), explaining its characteristic peachy-orange light colour. Although generally acceptable in many industrial scenarios, newer light sources can offer improved light quality and distribution for a brighter, safer and more productive working environment, whilst lowering energy consumption. Today, both T5 and LED technology can offer significantly lower lumen depreciation

and longer lifespan compared to SON or HID sources, which in turn help minimise future maintenance costs.

Wincanton also needed a lighting system that could be installed as quickly as possible; offering rapid returns by minimising labour costs of installation and service interruptions.

In short, Wincanton was after an efficient, cost-effective, flexible lighting solution to contribute towards providing a greener and more customer-centric service.



THE SOLUTION

The VERTECO T5.

The most advanced fluorescent, energy reducing, high level luminaire in its class.

After conducting a full survey of the site, the Dexeco team proposed a lighting design using over 300, Verteco T5 fluorescent luminaires with integral R14 sensors.

The market leading Verteco range exemplifies a modern, efficiency-driven approach to industrial lighting, which, much like the maxim of business logistics, focuses on providing the right lighting conditions, in the right place, at the right time, and for the right cost.

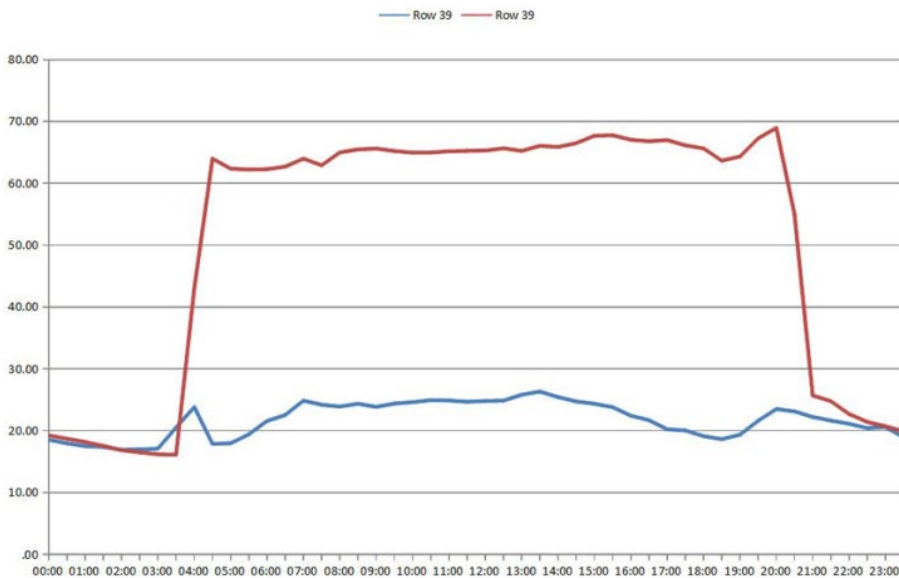
At the warehouse, the Verteco balanced these variables by combining the latest energy-efficient T5 fluorescent sources with cutting-edge optics, to allow the 3 x 80w luminaires to reduce the electrical load by over 60%, starting from 440w per existing SON fitting, down to a staggering 275w for its T5 replacement. Inbuilt intelligent sensors were then programmed to switch luminaires on when presence is detected in specific areas, and adapt to daylight levels to cut energy bills further.



RESULTS

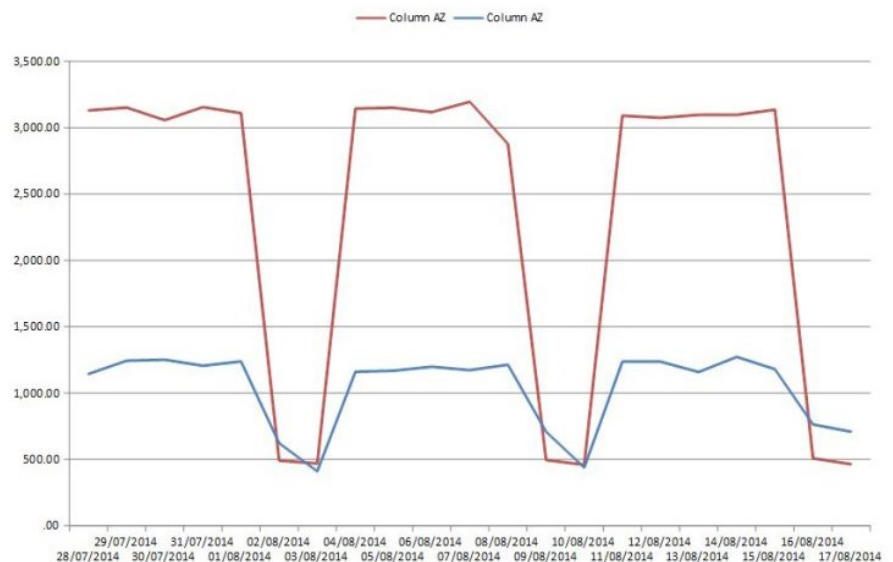
Wincanton was extremely pleased with the results of the new warehouse lighting system with the “whiter, brighter” quality of light being particularly beneficial.

Meter data shows that the installation of the sensored Verteco T5 fittings, has reduced site electricity use by over 60%.



The graph below shows half hour meter data, comparing energy use (kWh) in a selected aisle before the installation (2014 in red) and after (2015 in blue), during a fixed 35 day period.

Using the half-hourly data, the second graph compares the daily energy use (mean kWh calculated from half-hourly data) before and after the upgrade, demonstrating a clear reduction (over 60%) and a more even distribution of energy consumption throughout the day.



RESULTS

Why the VERTECO T5?

To explain how these results were achieved. Here is a breakdown of the Verteco T5's energy saving features and how they contribute to improve returns on investment.

High-performance reflectors from Dextra's Opti range

To boost the efficiency of its T5 sources, the high-level luminaire incorporates purposely engineered side profile reflectors to improve light distribution and illumination for racking, picking and forklift safety.

Designed and manufactured in-house, using high-specification materials and advanced computer modelling techniques, a choice of three reflector types (Opti-Matt for open areas, Opti-Dot for high rack and Opti-Spec for ultra-high rack applications), ensure that each area of the warehouse, from open spaces to multi-level racking aisles, is lit in the most uniform and efficient way, offering light output ratios in excess of 93% at mounting heights of 4 to 18m.

Multiple lamp configurations

With two, three, four or six T5 lamp configurations in either 35w high efficiency sources or 49/54/80w high outputs, the luminaire also offers increased flexibility to achieve the required lux levels with the most efficient spacings, whilst minimising the number of fittings used.

The integral R14 sensor for total control

To offer Wincanton the ultimate flexibility and maximum energy savings during the warehouse's long operating hours, the Verteco is supported by a state-of-the-art integral R14 sensor and DSI dimming gear for daylight regulation and presence detection, allowing each fitting to be programmed individually from ground level using the user-friendly RE-AP remote control.

The R14 sensor is also available in three lens types: narrow, wide and ultra wide, to provide the optimal detection coverage for a variety of spaces and layouts. The sensor's customisable features allowed the Verteco to synchronise with the different picking schedules of Wincanton's large clientele, by adjusting the light levels in individual storage aisles.

Quick installation and easy maintenance

The installation was carried out ahead of time, thanks to the Verteco's attractive easy-install design features. Axiom technicians were left impressed by how the Verteco's slide-out brackets allowed the fitting to be directly mounted onto the busbar and backflap. All hard wiring, was then easily performed in a timely manner, without entering the fitting itself.

Following installation, maintenance becomes a key factor in determining the rate of returns on investment, as frequent re-servicing and subsequent disruptions to warehouse operations can prove extremely costly in such fast-paced industrial settings. The Verteco keeps these added costs to a minimum thanks to the extended life of T5 lamps, compared to HID (or HPS?) sources, resulting in fewer routine lamp changes. The luminaire's ventilated body will also maintain an optimum working temperature to maximise lamp output, whilst the circulating air will reduce dust build-up on the lamps, allowing cleaning schedules to be economical. Over time, dust accumulation, can also lead to increased lumen depreciation.

Dexreco – Hassle-free, legal disposal and recycling of waste

Dexreco, a subsidiary of Dextra Group specialising in waste management, ensured all obsolete fittings and components were promptly removed and recycled where possible, according to stringent government regulations.

FEATURED PRODUCTS



VERTECO T5