



CKF deliver their intralogistics warehouse automation to the award winning, Gardiner Brothers

GARDINERS
FOOTWEAR SPECIALISTS

Gardiners is the UK's leading distributor of global footwear and workwear brands to the retail trade. An award winning, family run business, established in 1860, the business has recently invested in their brand-new logistics building at St Modwen's logistics park, Gloucester, tripling their warehousing capacity to a total of 230,000 sq. ft. CKF Systems Ltd were awarded the contract to provide the solution and deliver an automated intralogistics system for the pick, pack and despatch operation of their direct fulfilment teams.

Challenge

Gardiner Brothers handle in excess of 10,000 product lines of shoes and clothing with high profile brands including Hushpuppies, Caterpillar, Skechers and Hunter. With the growth of e-commerce and B2C (business to consumer) direct fulfilment routes, Gardiners now distribute 2.8 million items per annum. Declaring their goal "to be the best partner that brands and retailers have", Gardiners appointed the CKF Systems team to provide their automated system solution, capable of delivering the performance necessary for the next phase of their expansion.

Approach

CKF Systems are a major UK supplier of warehousing solutions and automation systems, our Engineering team reviewed the User Requirement Specification provided by Gardiners and presented a high-level concept to the Gardiner Project team. A collaborative approach was undertaken with the CKF Engineering team and Gardiners' representatives to refine the concept and identify the most cost-effective solution that would deliver the competitive, operational efficiencies for Gardiners.

Concept simulations and designs using the latest technology ensured the ease of discussion at all levels of the Gardiner business. CKF's multi-functional team of Engineers collaborated with the Gardiners team on the integration of the operation, the mechanical equipment, control and communication systems, ensuring that there would be a seamless integration with the master Oracle Cloud warehouse management system and operational methodology.



Solution

Designed, manufactured and installed by CKF, the system operates on four levels, ground floor level and across three mezzanine floors in the new warehouse. Tote bins are used as the transfer medium for the manually picked shoes and clothing. Pick stations, with an accumulation of tote bins are located at each floor for order fulfilment, manually picked from adjacent storage racking.

The system on each floor is connected with three vertical spiral conveyors. The efficient combination (one featuring a twin conveyor on a common inner support) provides the system layout with a continuous recirculating system across all floors for the full and empty tote bins.

The installed system comprises approximately 500m of modular conveying and includes CKF's range of ZPA accumulation and 24V transport modular conveyor sections utilising the Interroll DC platform. The ZPA conveyors provide individually controlled zones and zero pressure accumulation of tote bins, whilst the transport conveyors provide a cost-effective conveying medium over long distances. Conveyor switches are integrated strategically to provide the tote / order intralogistics routing between the pick and packing stations throughout the system.



On the ground floor a recirculating carousel system feeds the filled tote bins to a series of packing lanes. Prioritisation of the tote order to a designated lane, where the contents are removed and packed, provides the Gardiners operational team with a fully flexible automated packing solution. Empty tote bins are re-designated and returned onto the recirculating system ready for the fulfilment of new orders.

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I would be very happy to recommend CKF as a warehouse automation partner. They are professional and knowledgeable, happy to take on our unique challenges and work with us to find cost effective, efficient solutions. They are responsive when issues arise and able to work closely with our teams in Operations and IT to develop solutions. I would happily work with them again as we look to develop the next stage of our business.

Matt Trobe,
COO - Gardiner Bros

IFM vision camera barcode readers together with tote bin unique bar codes provide the task data flow. CKF Engineers used an SQL database as the interface between the Siemens PLC and the Oracle Factory Management System. The database provides Tote Bin tracking and defines the tote order routing to the pick and pack destinations. The system has the capability and flexibility of managing the live order of single and multiple items across one or more tote bins.

The master control cabinet on the ground floor houses the Siemens 1516F PLC, with remote Operator panels on each of the Mezzanine floors each fitted with Siemens HMI interfaces. The comprehensive safety system is managed through Pilz safety relays.

The new system installed and commissioned by the CKF team of Engineers delivers the next generation of automation and efficiency for the expansion of the Gardiner Brothers operation. Employees have reduced manual handling in the warehouse, with improving working conditions and safety.

For more information on CKF Systems and their extensive experience in utilising automation to drastically improve their customer's operations visit www.ckf.co.uk



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