



Endoline Type 221 Mk3 automatic case erector

Objectives:

- To increase the speed and volume of production
- To increase the efficiency of production
- To reduce labour-intensity of packing and thereby reduce the risk of operator injury and RSI



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Scenario

ICI, a world leading industrial company, required a fully automated system for a printing and dye line. The packaging operation had been carried out by hand, with 4kg tubs being manually packed into cases and sealed. This was a slow and labour intensive process, which was reducing overall production line speeds. ICI wanted a level of automation that would handle the packaging of tubs of random weights and materials, thus easing the workload of the operators and increasing production line speeds.

Solution

After performing a site survey and reviewing the packaging area, Endoline designed a bespoke, fully automated system for ICI incorporating the newly revised **Endoline Type 221 Mk3 case erector**, an **Endoline Type 311 pick and place machine** and an **Endoline Type P6 case sealer**.

The Endoline 221 Mk3 case erector features dual opposing vacuum case opening - a unique system designed to ensure each case is opened positively from both sides, overcoming problems associated with stiff board and glue migration from the manufacturer's joint. As an average box consists of four tubs, manual intervention would be required to programme the pick and place machine when fewer tubs were needed. Endoline overcame this problem by ensuring that each box was filled with four tubs - including 'dummy' tubs if the amount required within the box was less than four. A scanner was fitted to the conveyor system which could identify from the label on each tin if it was a 'dummy' tin, enabling the pick and place machine to readjust itself accordingly.

Objectives Achieved:

Increased speed and volume of production

With the new system range, the production line is running at 20 tubs per minute - a six fold increase of activity for ICI

Increased efficiency of production

A conveyor system fitted with optical sensors achieved this by allowing the production line to continue running without the need for manual intervention when faced with a 'dummy' tub

Labour intensive packing and risk of RSI reduced

The pick and place machine and case erector eased workload for manual operators