



## Case Erecting + Vertical & Horizontal Packing + Sealing

Wipe Products

### Project Overview

In the midst of the Covid-19 outbreak, this co-packer needed to install two lines capable of handling a variety of wipe pouches, packed in both vertical and horizontal orientations and running at high speed. The lines would need to form shipping cases and display caddies, pack them with product both, horizontally and vertically and seal the cases.

It was equally important that the equipment manufacturer be equipped to quickly turn around a collaborative solution and provide comprehensive support once the lines were operational.

## Customer Objectives

A collaborative solution with a quick turnaround

Needing to begin operations as soon as possible, the customer required a supplier already equipped with the tools for remote evaluation and consulting, line design, proof-of-concept, and vetting.

## Pearson Solutions

Pearson sales and engineering resources located across the country were already set up with tools, programs and internal processes to work through packaging challenges in an efficient remote capacity.

Additionally, the use of simulation software allowed Pearson's team to "test" the robotic line designs and identify and correct points of error early on in the design process before building began, yielding a quicker turnaround.

### High-volume vertical & horizontal packing

With multiple product types and case styles, including shipping cases for horizontally-packed products and display-style caddies for vertically-packed products, the automated solution would need a high-level of flexibility to accommodate multiple pack variations.

Within a limited footprint, the two lines would also have to achieve high rates of speed in order to provide the output volumes required.

While competing companies encouraged the manufacturer to change their case styles to work with their own existing solutions, Pearson designed a pack solution that could switch from horizontal to vertical product orientations with a simple HMI selection and no mechanical adjustments.

In horizontal pack mode, the robot picks and places products into (6) cases simultaneously to reach rates of 150 products per minute. In vertical pack mode, empty display caddies are first stuffed into the shipping cases, while the wipe packages are placed horizontally into a cassette and secured through a clamping mechanism. The robot then rotates the cassette into a vertical position and descends into the case to release the products into the caddies. Vertical loading speeds reach rates of 90 products per minute.

### Ongoing remote support

Amidst travel restrictions and the uncertainty of the pandemic, the customer needed assurance that prompt support was readily accessible should they need it once operations began.

All of Pearson's equipment comes standard with remote access capability. With the router in place, Pearson's service and engineering team would be able to support the customer at a moment's notice without incurring costly service trip charges. Remote support has proven to diagnose and troubleshoot up to 80% of service support calls.



## Sequence of Operation:

Cases are formed with glue on a Pearson CE25-G case erector and conveyed into the packing cell, where they are sequenced into position to match the number of load heads. The wipe products are received in a single lane narrow side leading and sent across a right angle vacuum jump transfer before being conveyed into the packer now broad side leading.

### For horizontally-packed products:

The product is then collated on a pocketed dual belt servo conveyor and grouped for loading. The number of groupings match the load heads and case load positions. While the first belt is being picked by the robot, the second belt receives new product. Products are placed into the cases a full layer at a time.

### For vertically-packed products:

Display caddies are formed on an integrated third-party carton former and stuffed two-at-a-time into shipping cases by a mechanical mandrel. The cases enter the packing cell, where the robot picks and places the products horizontally into a metal cassette with dividers. After the correct number of products have been placed, the cassette closes around the product to hold it in position and rotates into a vertical state. The robot then descends the cassette into the case and releases the wipe pouches upright into the caddies. Full cases exit the packing cell and are then transported to the CS25-42T case sealer where top tape is securely applied, and the process repeats.

- 1 Pearson CE25-G Case Erector
- 2 Pearson Robotic Case Packer
- 3 Pearson CS25-42T Case Sealer
- 4 Third-party Carton Former

