

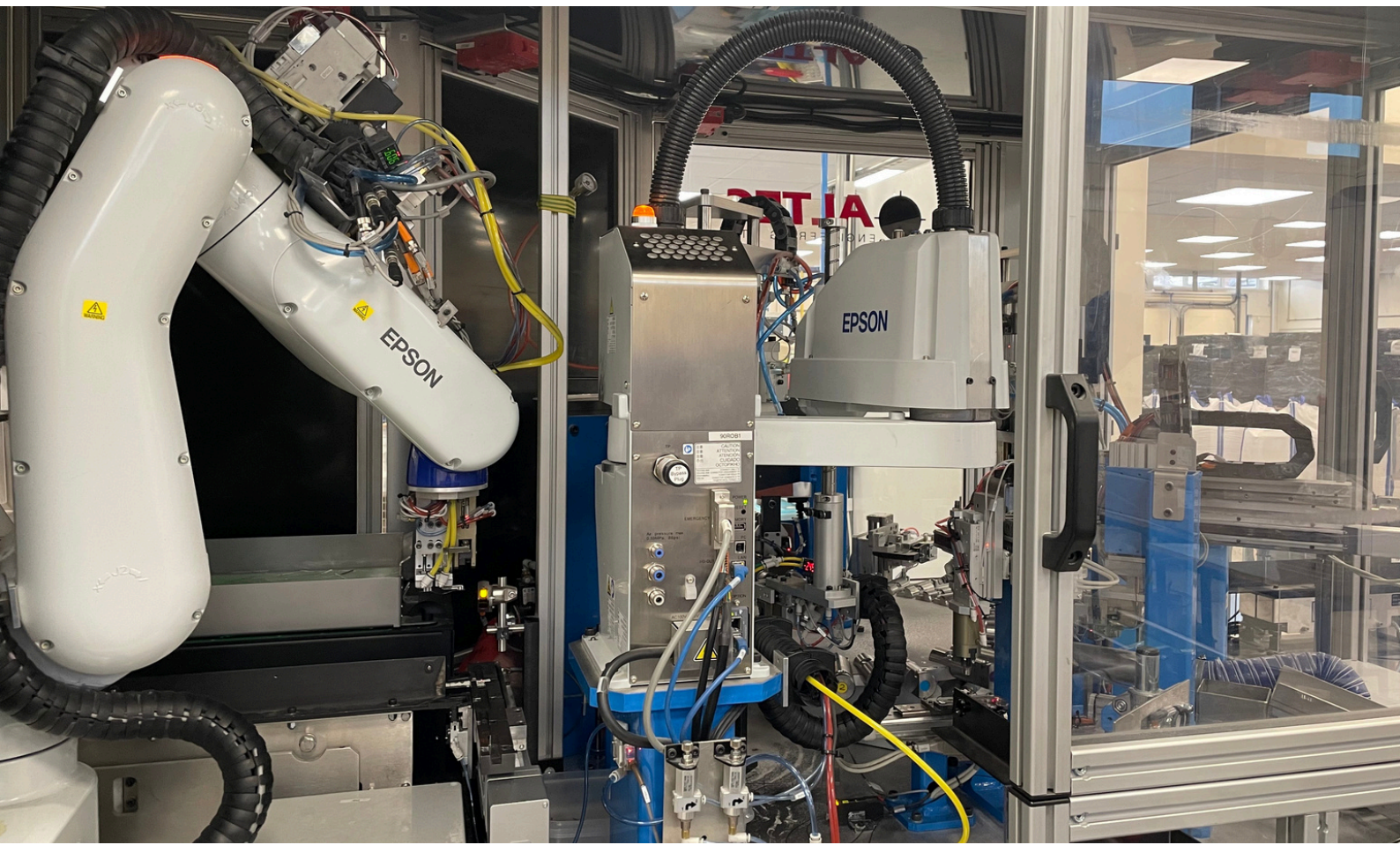
COMPLEX IDEAS. SIMPLE SOLUTIONS.



CASE STUDY

Intelligent Automation

How the Epson VT6 Six-Axis robot and Epson T6 SCARA robot are working in collaboration to produce HRC low voltage fuses.



Industry



Manufacturing

Application

Assembly

In collaboration with



OVERVIEW

Element Insertion, Barrel Load and Press Station



Designed to assemble a diverse range of fuses, this multi-station manufacturing cell features six critical phases in the production of HRC low voltage fuses. Production starts with fuse elements being dosed by a hopper onto a vibratory platform, where the elements are manipulated by their orientation and position with the assistance of a vision system. Information is then sent to the robot to coordinate appropriate movements and selections of fuse elements.

At this stage, the Epson VT6 Six Axis robot then manoeuvres to select a fuse element, before transferring it into the barrel of the fuse. This serves as the first critical stage where accuracy is paramount. Once the fuse element has been placed in the correct position, the robot then transfers the combined components to the Epson T6 SCARA. The Epson SCARA robot then loads the barrel with the element inside on top of the cap. At every station of production throughout this cell, is a strong reliance on accuracy. To ensure that the element is positioned correctly, the Epson T6 gently runs over the guided block, which bends the element into the correct position, before the cap is fitted.

After one side of the fuse has been capped, the fuse moves through different stations within the cell, finalising the completed cell with a cycle time of between 0.8-0.10 seconds. This multi-station fuse manufacturing cell has the ability to run up to 65 different fuse types, allowing for control over production efforts in response to demand.

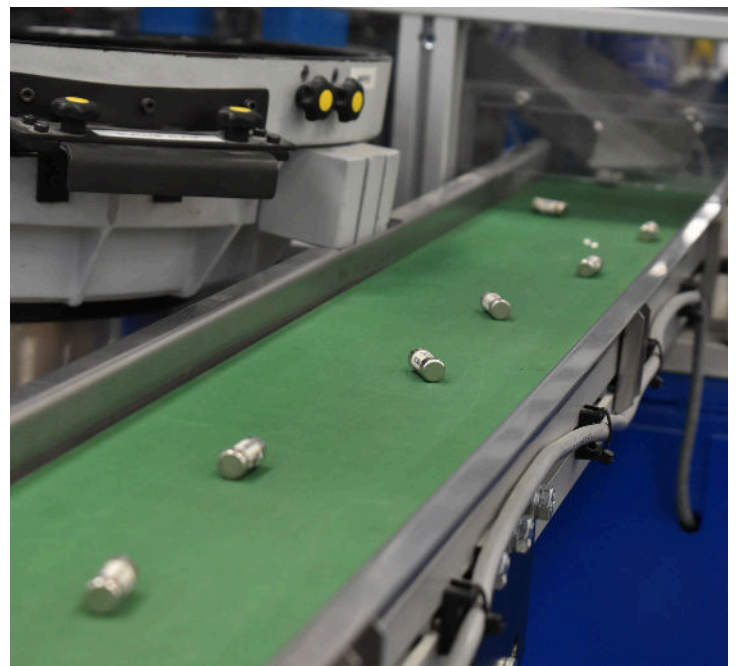
COLLABORATIVE EFFORT

Between the Epson VT6 Six-Axis and T6 SCARA Series

Utilising two different robotic classifications in the Epson Six-Axis and SCARA, allows Lawson Fuses Ltd to lean on their respective attributes to successfully automate phases within their manufacturing process of their portfolio of fuse types. The Epson VT6 Series offers a cost-effective, all-in-one robotic solution that is ideal for repetitive tasks. With the Epson T6 SCARA being a highly compact, yet versatile robot that serves as an cost-effective, space-saving model designed with ease of installation and use.

End-Customer

Lawson Fuses Ltd, part of the Lucy Group specialises in the design, development and manufacturing of HRC low voltage fuses and fuse holders. Originally founded in 1938, Lawson Fuses Ltd have long played a vital and leading role in formulating fuse standards and specifications, offering a diverse portfolio of industrial grade and household fuses.



Our Contribution

As the Official UK distributor for Epson Robots, System Devices UK played a key role in supporting Lawson Fuses Ltd with their automation project.

Our Director and Senior Engineer Ian Rennell said "The EPSON T Series SCARA and VT6 Six Axis were ideal solutions for this particular application due to their built-in controller's contributing to reducing the cell footprint in a confined area."

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