

Intelligent automation beats offshoring your manufacturing



SCARA robots offer affordable high-speed assembly

Hauff-Technik is a leading manufacturer of sealing systems for cable, duct and leadthrough bushings. It could have moved its manufacturing to the Far East, where cheap manual assembly would suit its low batch sizes, but it instead decided to automate its assembly line, so products could still be 'Made in Germany' and be financially viable.

A highly flexible automation solution with a clever stocking system, consistent utilisation of robots and multifunctional workpiece carriers can make small batch sizes as economical as if assembled by hand.

All components, including core components such as moulded rubber parts and punched bending parts as well as all supply parts like screws, nuts, and washers are stored in a large number of magazines and containers that are either directly docked to the plant or arranged in clustered modules alongside the plant. Epson SCARA robots are deployed at all stations of the assembly line.

Automating the assembly line

Station 1: At the first station, the SCARA G10 with an 850 mm operating range takes out the right punched bending parts from the magazines and put them in the correct position on the workpiece carrier. For the standard variants, the punched bending parts are directly stocked at the station. If more exotic batches are launched, the according feed modules with the necessary stainless steel parts are simply docked with the pallet truck. From a total of 48 variants, over 50% can be directly installed on the machine without major conversions. To assemble the remaining types, the machine operator swaps the docked modules for available modules.

Station 2: A SCARA robot adds moulded rubber parts that are to be put on the workpiece carriers according to defined criteria. A second Epson robot is responsible for the ejection of the fully assembled sealing members that actually pass this station again on the opposite lane of the transfer system.

Station 3: A SCARA G10 inserts the necessary screws and washers quickly and accurately into the boreholes of the moulded rubber parts provided for this purpose. Due to the overhead mounting, maximum flexibility is ensured on a smaller area.

Station 4: The final screwed connection where the screws only need to be loosely tightened is also realised by a SCARA robot.

Hauff Technik

A cleverly designed automated production line can keep costs as low as using manual manufacturing in a developing country, making it easier to justify retaining local production.

Volker Spanier

Head of Robotics - Epson

Key Facts

Hauff-Technik chose to invest in Epson robots for its automated assembly line rather than moving manufacturing overseas.

The highly flexible automation solution chosen helps keep costs as low as they would be using offshore manual manufacturing.

The automated system means the company can react flexibly to market fluctuations.

Keeping manufacturing in-house means the company is less reliant on third parties.

For more information, visit www.epson.eu

