

Case study - Lerocon

Smooth integration with complete tool systems



Nut welding cell during development. To the left, Lerocon's equipment for resistance welding; to the right, two TC20-IDs

Automation of nut and bolt welding is Lerocon's speciality. Customers are primarily in the automotive industry. The product portfolio includes resistance welding and part feed using vision systems. Robot System Products supplies automatic tool changers, complete with cable packages and valves.

Lerocon designs comprehensive robotic solutions with complete and tested customised cells.

"Our focus is on turn-key automation cells for parts welding, along with everything related to this", says CEO Daniel Erlandsson. "Our customers are buying a concept that includes nut welding, press welding and spot welding."

As a system integrator, Lerocon takes responsibility for the entire chain, something customers appreciate. This includes feed of welding parts via conveyor belts from a buffer of material, separation and picking controlled by vision systems and resistance welding with quality control – the latter with machinery developed in-house.

"We adapt Lerocon standard solutions to the needs of our customers," says Daniel Erlandsson. Proven solutions are reused and we quickly see what works in different applications.

He describes a typical query as when a customer has ten or fifteen parts with a number of fasteners and needs suggestions for solutions. On the basis of volume and production conditions, Lerocon develops the methodology, including both equipment and the determination of cell size.



Project manager Johan Westman and CEO Daniel Erlandsson at the plant in Gislaved, Sweden.

For effective changes of grippers, Robot System Products tool changers with or without swivels are used.

"Some customers use over thirty parts within a single cell and, in some cases, individual grippers are necessary for every part," says Daniel Erlandsson.

To enable the subsequent addition of new products, the cells incorporate a flexible configuration.

"Our customers' production is constantly increasing," says colleague Johan Westman. "We install new cells, give the cells more tasks, run them more hours. There are plenty of additions. For the most part, we use the TC20 tool changer."

Johan works at Lerocon as a designer and project manager. It was on his initiative that the TC20-ID automatic tool changer was constructed and adapted for robots with integrated dress packs. Development was conducted by RSP in close collaboration with Johan Westman and it is now used extensively in Lerocon's cells.

The TC20-ID enables gripper changes that are both fast and safe, and without restricting the flexibility of the robot. RSP delivers complete, function-assured tool systems, all the way from valves on the arms, via hose packages and tool changers, to tool attachments. Installation time for new cells is short and the quality consistent.

"We like to work with fully developed components to avoid having to reinvent the wheel each time," says Daniel Erlandsson.

"And it's about making things easier, avoiding separate installation of each component," Johan Westman adds, regarding RSP's tool systems.

For Lerocon, long-term customer relationships are important. Their customers are mainly in the automotive industry, and include Volvo Trucks and Scania.

"Close cooperation with our customers is key to things working so well; we jointly discuss solutions down to the tiniest of details," says Daniel Erlandsson.

Equally important are good relationships with suppliers such as RSP. This has been proven not only in respect to development projects, but also when it comes to service and support.

"You at RSP are quick to respond," says Lerocon's CEO in closing. "And helpful. This is also an important factor."



Tool changer TC20-ID enables tidy installations, free of loose cables that could inhibit robot movement.

Facts: Lerocon

Lerocon was founded in 2003, initially focusing on service and support for existing specialised machines. Over the years, the company has progressively evolved towards the delivery of complete robot cells for material handling and resistance welding of parts such as nuts and bolts. The focus is on modular automation solutions with comprehensive, embedded control systems for quality. This without sacrificing cycle time and capacity. At the core of Lerocon's operations are the company's own welding products, with special focus on the requirements of the automotive industry.



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