

LACON ELECTRONIC GMBH TO OPTIMISE ITS SMD PRODUCTION WITH JUKI ISM STORAGE CABINETS

As part of the Lacon Group, Lacon Electronic GmbH from Karlsfeld sees itself as an EMS accelerator and product implementer who provides a sophisticated and rapidly advancing technology market with customised assemblies, devices and systems whilst never losing sight of the ever decreasing time to market.



In order to continue to achieve these goals, Lacon decided to advance its SMD production through automated material handling using JUKI ISM storage systems. Lacon GmbH wanted to automate its classic warehousing activities, but also attached great importance to an automatic reconciliation with both the manufacturing support system and the ERP system.

Lacon opted for an ISM configuration comprising two combinations of the automated ISM3600 & ISM3900 systems and a stationary ISM500 storage cabinet. The installation was rounded off by an ISM incoming goods desk intended to make the internal receipt of SMD components safer and quicker.

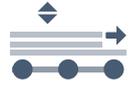
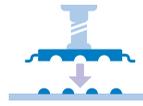


Thanks to the design of the automated storage cabinet combinations, Lacon benefits from storage space for more than 4000 component reels. What is more, the ISM500 offers 400 storage places for varying component containers, in this case primarily for sticks and/or bagged component segments. By relocating the SMD components into the ISM system, it was possible to remove an existing high-bay rack of more than 10m in length. The freed-up space can now be used for other production units.

Transparency through continuous cross-system data synchronisation

The interface framework is the centrepiece of the installation. Custom-programmed for Lacon, it interlinks the on-site Infor ERP system and the Samsung PartStation with the new ISM storage system, thus forming the used placement machines' material management system.

The implementation took place in the course of the annual inventory. An X-ray component counter was used for determining the actual stock quantities of all materials, which were then updated in the Samsung PartStation. These up-to-date quantities were adopted in the course of the components' transfer into the ISM storage system, which in turn made it possible to generate stock removal orders for production. The linking of all three systems makes it possible to book the component reels with the actual consumption values when they are returned to the storage system after production. Until then, the company had worked with the planning data of the calculated consumption for the respective production job, which, at the end of the year, had resulted in significant deviations between the actual inventory and the book inventory according to the ERP. This "grey area" has been dramatically reduced by the interconnection of and the reconciliation between the systems, i.e. the synchronisation of the actual consumption data of the placement machine in the PartStation, the storage system and the ERP.



What is more, the automated storage system has been able to significantly reduce the order preparation time. The working time hitherto needed for the components' manual picking and provision for installation is now mainly taken over by the ISM system. The material required for the respective order, which is input by the ERP, is retrieved by the operator at the ISM control panel. Within a few minutes, the ISM3600/3900 will place the material at the operator's disposal. The same applies to the components returning from production: the component reels, which are each marked with unique barcodes, are simply placed into the storage cabinet, whereupon the material is stocked with the inventories transmitted by the Samsung PartStation. The effort spent by the responsible employee on completing this task is limited to a few minutes.



The ISM incoming goods desk accelerates the goods receipt process for the SMD production warehouse. Using a barcode for the respective batch, the components (reels, sticks, PCBs...) are picked from the central warehouse and delivered to the incoming goods desk, where the batches are separated and the individual containers labelled with a unique ID (including a barcode). They are automatically logged as inventory and immediately made available for inclusion and use in upcoming orders. This semi-automatic process reduces the working time to a significant extent whilst ensuring inventory transparency within the systems.

The ISM storage system's installation at Lacon Electronic GmbH is a good example when it comes to quick efficiency increases in the stock management of SMD components. The efficiency improvement is reflected in cross-system inventory transparency, quick component retrieval (and re-storage) and, not least, in the employees' freeing from time-consuming tasks and the minimisation of human errors.