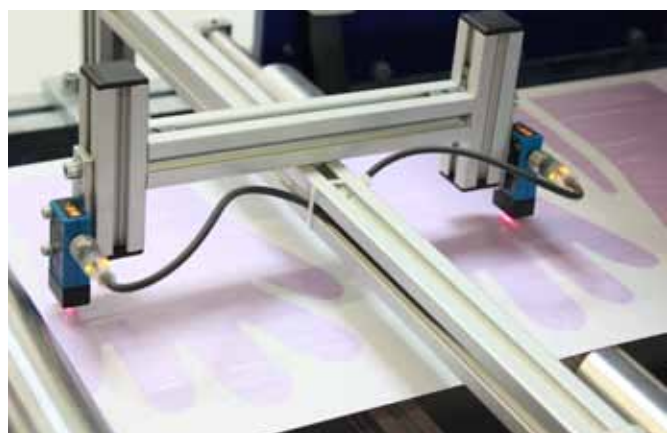


Industry: Packaging industry
Products Used: Modular PLC /// HMI /// Servo /// Inverter

Permanently sealed: The right film-sealing solution for every application

For more than 40 years, joke Folienschweißtechnik GmbH from Bergisch Gladbach has been making automated systems for producing disposable PE gloves supplied on paper for handling hair dye products. In order to keep the costs down for the end customer in the highly competitive cosmetics market, their plan was to increase production efficiency and double the production output from 60 to 120 pairs of gloves per minute. A new system concept incorporating additional automation elements from Mitsubishi Electric was developed.



What was called for was the fault-free, safe interaction of motion sequences and functions. In particular, the automation components needed to ensure a fast, steady feed of products in the cutting section since that is where after being sealed, adjacent pairs of gloves are fed to the cross-cutter every few seconds at twice the normal speed. The process was optimised as planned by using Mitsubishi Electric components, including Motion Control servo motors which have proved to be invaluable.

The FSA 504 film-sealing system is based on the modular concept of Mitsubishi Electric's iQ Platform and incorporates the PLC CPU module Q03UDECPU and the Motion Controller. The GT 1275-VNBA GOT 10.4 inch touch screen display. The HF-SP compact servo motors are ideally suited for applications with high dynamics such as conveyor belts or loading/unloading devices and the digital MR-J3-B-series AC servo amplifiers are connected to the Motion CPU by means of fibre optic cabling.

The high data transmission rate of the motion CPU allows precise synchronisation and numerous multi-axis interpolation curves. The FR-D720S frequency inverters have a self-diagnosis function which makes them particularly fail-safe.

joke and Mitsubishi Electric have been working together for over ten years and Mitsubishi Electric equipment has also been used in two other types of system. There is currently a new project in the pipeline: the existing PLD-S 800 edge-sealing system is to be combined with the functions for producing stand-up resealable bags in order to enable the production of stand-up bags with tear-off perforations which can be resealed. A modular system will enable joke to fulfil customer-specific requirements. The optimised PLD-S 900 film-sealing system with fast change-over times is to provide a flexible production facility for a variety of products where all the process parameters can be adjusted during normal operation. The components used for the FSA 504 and the PLD-S 900 are essentially of identical construction in order to optimise warehousing and ensure cost efficiency.

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The special solutions we have been provided with by Mitsubishi Electric have brought us clear market advantages. After our initial positive experiences, we decided that we would call in Mitsubishi Electric whenever we need to find solutions to meet control and drive requirements in connection with our products. A decisive factor behind our decision was the competent advice and project support that Mitsubishi Electric is able to provide.

(Martin Heinrich, Managing Director of joke Folienschweißtechnik GmbH)

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