Case study

When precision is the target

Feeding, labeling and packing PCR tests

The PCR methodology has been established when detecting SARS-CoV-2 infections. Corresponding test kits are used by doctors and mobile medical service providers, pharmacies and labs. They are packed in fully automated plants and identified according to pharmaceutical regulations. The **Kraus Maschinenbau** company specializes in the development of systems as required. cab prepares IXOR labeling heads and CEON high-tech sensors integral to packing lines to provide reliable, accurate label applications.





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Specified machines are constructed, assembled and initially operated at the Kraus facility in Spaichingen, as well as accepted by the customers prior to delivery. In the operation at hand, Plexiglas replicas of LifePad PCR test cassettes and three-side sealed pouches are fed by friction feeders from preceding processes to a machine combined for labeling and packing.

Pouch labeling

Product-specific labels wound on rolls are applied by an IXOR labeling head to empty aluminum pouches. At this, the pouches are in motion on a conveyor belt. Then, each pouch is automatically opened and a drying agent is inserted to prevent the package from humidity.

IXOR systems enable **continuous or clocked operations.** Aluminum pouches are being labeled on this picture.

PCR test cassettes are pharmaceutical products and subject to specific requirements. Label applications using "double IXOR" ensure **explicit identifiability.**

Test kit labeling

Two further IXOR systems are installed on another feeder within the plant. One has been assembled in classic mode, the second one upside down below the first one. This enables two labels being applied simultaneously from top and bottom to the test cassettes passing through on a belt. Explicit codes on these labels ensure, amongst others, product traceability. Micro tolerances of less than +/- 0.5 millimeters have been specified by the customer in terms of the labels being applied to spots. Bruno Ott, Kraus Product Manager, pays attention to cab systems operate highly precise: "We have so far installed several units. The applications have always run perfectly."

The identified test kits are added to the drying agents into the pouches, which are then hermetically sealed and collected at the end of the packing line. Products are transfered from one process to the next under PLC control, so are all the steps of processing. Window glazing around the plant secures employees in accordance with occupational safety regulations.

Pinpoint

IXOR labeling heads usually consist of ten to 20 modular units. In all, cab has 400 individual components available. By such unique composition devices can be configured specific to customer requirements while maintaining the high quality of large-scale manufacture. A highly dynamic servo controller precisely feeds the label web. A high-torque external rotor direct drive moves even heavy label rolls in continuous operation and winds or unwinds webs reliably. Depending on the equipment, materials and size of a label, a maximum of 2,400 labels per minute can be applied synchronously to the product speed. The IXOR base unit already integrates the device control.

To detect even smallest differences in height in moving material webs, the CEON sensor can be assembled to the peel-off plate of IXOR. This prevents negative influences from stretching materials. Each label to peel off next by the IXOR plate can be verified.

Machines by professionals

Kraus Maschinenbau is feeding and separation solutions. In Spaichingen, Southern Germany, 45 employees design, develop and manufacture components and machines for customer projects worldwide, in particular pharmaceutical, logistics and e-commerce businesses. www.krausmb.de/en

Video of the application:
www.cab.de/en/kraus-video-2

Find information on the devices introduced in this study on **www.cab.de/en/print-apply**

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