

AUTOMATION

case study



Servo Drives Key to Vertical Packaging Revolution

One of Italy's leading packaging companies is using the speed and accuracy of Control Techniques' state-of-the art Digitax servo drive, at the heart of each of its key ranges of vertical form, fill and seal packaging machines.

The Challenge

The ability to quickly and easily setup various formats while increasing productivity, accuracy and coordination of processes in highly precise repeatable movements.

The Solution

Sabalpack of Mortara near Milan is an extremely innovative young company that has the capability to produce 100% custom machines alongside proven mass produced products. Its flagship 'Leopard' Stabilo packaging line is a range of fully automatic electronic vertical packaging machines that are fitted with brushless motors to provide the sealing crimper and packaging feed functions.

The stainless steel machines, designed primarily for the food industry, have an output rate in excess of 150 packages per minute. In addition to the stabilo bag, the machines can accommodate traditional bag formats including pillow and square block bottom bags.

More and more, the food industry is looking to the new format TRAY & BAG style of packaging patented by Sabalpack that shows the product fresh and double packed, preserved by the bag and kept intact by the tray at the same time. This concept combines flexibility and quality of vertical filling with the faster throughput of horizontal packaging. The new solution fills trays vertically, which is an intelligent solution to the problem of product spillage,

focusing more on end results and producing high quality packages. In fact, in the TRAY & BAG system, products are looked after more carefully thanks to the special combination of the four-side seal, high quality 'stabilo' package - again produced using the consistency assured by the repeatability of Digitax servo drives - and the tray, which shows the quality of the product to the customer in a traditional and wholesome way. Furthermore, unlike flow-packs, TRAY & BAG has the unique advantage of remaining upright on both supermarket shelving and household larders.

The Benefits

The Digitax includes industry-leading features and an extremely compact in size. Sabalpack opted for the Digitax that features a full functionality motion controller, optimized for high performance machines requiring synchronized motion. The on-board drive-to-drive networking links multiple axes and enables true distributed control. Configured using Control Techniques' software, the drive's advanced motion features are configured in a flexible IEC61131-3 software development environment using PLC-open motion function blocks within Control Techniques' software. Digitax combines reliability, high-performance to increase operating speed, repeatability and accuracy, while at the same time reducing panel sizes and costs.

Control Techniques' drives also feature on the Sabalpack 'Arrow Fill' automatic dosing and filling system for foodstuffs, suitable for use in-line alongside any type of flowpack machine such as thermo-forming and heat sealing machines. The drive of choice in this instance is the Commander variable AC speed drive, in vector mode, giving outstanding flexibility and fast fill rates. The Arrow Fill is customized to ensure perfect alignment with the containers used, and is fitted with a pneumatic clean-edge system to keep the edges, that are usually heat-sealed, perfectly clean.

KEY BENEFITS

- Extreme accuracy
- Precise & repeatable operation
- High quality end package
- Format changes quick & easy
- Full functionality motion controller

CONTROL TECHNIQUES™

Nidec
All for dreams