



Disruptive compact line layout at BINA Switzerland with an ultra-flexible shrink-wrapping infeed for squared bottles

Part of Swiss M-Industry (Migros Group), Bischofszell Nahrungsmittel AG (BINA) is driving the increasing health and wellness trend in the country via new formats for their organic juices and iced teas. To help shrink-wrap their latest, squared bottles alongside the traditional rounded ones, BINA needed a flexible, compact and easy-to-handle shrink-wrapping system for film packs and tray plus film packs. The solution came from Sidel in the form of a lean, unifilar 90° infeed system integrated in one of their proven shrink-wrappers to deliver a reliable, disruptive and compact line layout.

Founded in 1909, Bischofszell Nahrungsmittel AG (BINA) is a leading manufacturer of convenience and fruit products as well as ready meals and beverages. "Our more than 1,000 employees make products for daily enjoyment, using state-of-the-art equipment and a wide



variety of manufacturing processes," explains Yasin Kapusuzoglu, Project Manager Technology at Bischofszell Nahrungsmittel. In addition to the production facility in Ecublens, the BINA Group also has plants in Vuadens and in Frastanz, Austria. BINA belongs to M-Industry, which combines 23 companies in Switzerland as well as nine production facilities and various trading platforms abroad. M-Industry offers over 20,000 high quality food and near-food products, making it one of the largest private label producers worldwide.

Like many other nations across the globe, Switzerland is currently experiencing a health and wellness surge. One way in which this manifests itself is portion control. To benefit from this very compact and reliable unifilar 90° infeed system where the flow is managed on one lane – directly from the sleeving machine with no lane dividing system needed. The flow of juice and iced tea bottles is instead going straight to the shrink-wrapper.

The high reliability of this innovative and unique infeed secures a very critical part of the shrink-packer, allowing the management of any shape of bottle, round or squared. Valérie explains the unique design, "First, a selecting device with lateral brackets delivers the right number of products per row while ensuring the necessary distance between each row. These rows are then transferred at a 90° angle by an 'on the fly' pusher, which redirects the flow of three to five bottles² in accordance with the shrink-wrapper's flow direction." The installed system is technically capable of running at a maximum speed of 150 cycles/minute, depending on the exact product size and shape. "The solution is complemented by a tray module, delivering tray plus film packs," she adds.

For changeovers, the proven shrink-wrapping solution embeds automatic and easy-to-adjust systems, with operators guided through each step directly via the HMI. Most of the adjustments are done automatically, while the non-automated ones are supported by LED digital counters. The latter ones ease and speed up the process while securing it, because they are blocking the machine from



restarting if the expected settings are not met. "We appreciate the simple, streamlined unifilar infeed system where all changeover tasks are carried out automatically in three minutes, delivering a maximum changeover time of 15 minutes for the entire shrink-wrapper – worst case scenario when moving from film only to tray plus film or vice versa," says Yasin.

Increased ergonomics and compactness for a successful project

To also accommodate the need of the tray plus film option, Sidel designed a removable rolling tray magazine, which can be extracted from the shrink-wrapper when running a format without tray support. The circulation around the line is then much easier for the consumables

and the operators. It is, in essence, a Plug & Play module with a central cabling connector. In a traditional solution, the tray magazine is typically located underneath the product infeed. Thanks to the 90° infeed configuration, the upper part of the magazine is now open and accessible and therefore allows an easy and ergonomic manual refilling of the trays in the magazine.

Yasin sums up the success of the project for the Swiss company, "From project planning to implementation, the collaboration with Sidel worked well. The challenges that arose were approached in a structured way and handled in a professional manner. For us, the greatest advantage of the Sidel solution lies in the space saving from the infeed system." ♦