



Lid-tray packer SOMIC 424 DT for collecting, grouping and packing products in open cartons or in lid-tray packs, lid is inside.

Reliable operator guidance for size changeover

Packaging machine manufacturer
SOMIC relies on AP05 electronic position
indicators from SIKO

By MICHAELA WASSENBERG, journalist

HEN companies need packaging machines for their products whether it is for coffee capsules, cough sweets, batteries or plasters - an important aspect of the investment is to find the most flexible solution that can handle a wide range of package sizes and formats. However, this requires intelligent size changeover in order to be able to provide such flexibility. Electronic position indicators from SIKO simplify the changeover process on SOMIC packaging machines and ensure simple operator guidance and greater process reliability.

SOMIC is well known for innovative solutions in end-of-line packaging machines, i.e. for secondary and tertiary packaging. These include wraparound packers, tray packers or tray lid packers as well as machines for display packaging presented to customers in the supermarket. Here, either the wraparound carton has a typical tear perforation or, in the tray lid version, the lid is removed

and the product is presented in the tray. SOMIC machines are characterised primarily by the fact that the respective carton is folded around the product in its primary packaging and not inserted into a pre-folded carton via picker, as is the case with those from other manufacturers. As a rule, a packaging machine consists of a product infeed, through which the individual products are fed into a so-called collection group. Typically, this is a compartment file, which groups the products in the way they are to be placed in the box later. Depending on whether it is a one- or two-piece package, a flat carton blank is transported from one or two carton magazines until the grouped product can be pushed onto the flat blank. This is finally folded around the product protected by the folding head, which means that the product is handled very gently. In the next station, the product is then lidded or individually sealed, depending on whether it is a wraparound or lid tray machine.

SIKO position indicators: clear and easy to read

SIKO mechanical position indicators

are installed in all SOMIC machines for possible size changeovers to different product or packaging sizes. "We have already enjoyed many years of good cooperation with SIKO in the field of mechanical position indicators," says Dr Johann Härtl, head of Construction at SOMIC. "For about nine years now, we have also been using the electronic, bus-compatible SIKO displays, first the AP04 and now the successor model AP05. They are very compact, easy to integrate into the machine control system and very user-friendly in terms



The SIKO position indicator AP05 with green status LEDs shows a correct machine setting. (Photo © SOMIC)





The AP05 electronic position indicator guarantees correct machine settings and fast changeover times. (Photo © SOMIC

of readability and clarity." Adjustments on SOMIC customer machines are very different: "There are machines with only one format setting, so-called Highrunner lines. Other customers, on the other hand, have up to 20 or 30 formats on the lines and make full use of the flexibility. Some even produce wraparound and tray packaging on a single machine, where a wide variety of products need to be packaged. SOMIC covers a large product range in the food sector, but also in nonfood, pharmaceuticals and cosmetics. Dr. Johann Härtl commented: "Anything in a supermarket in a tray pack could have been packed in a SOMIC machine!"

Process reliability with red/green system

The advantages of monitored size changeover, as made possible by the integration of the electronic SIKO position indicators, are faster changeover times, ergonomic operation and high process reliability. The operator simply selects the respective format, which is stored as a recipe in the machine control system, and the machine control system sends the new set values to the displays to be adjusted. The backlit LCD displays are easy to read and also feature green and red status LEDs. When the correct value is reached by turning a crank, the LED changes to green: Position reached. Otherwise the LED will continue to light up red and readjustment is necessary. In addition, arrows also conveniently indicate the direction in which adjustment is required. As the communication interface of the SIKO position indicators in the machine

control always provides the current position information, it is effectively ruled out that incorrect settings could lead to quality problems or even damage to machine parts when the machine is restarted. Adjustment with electronic displays is much more efficient, especially on machines with many adjustment points and frequent changes. The machine has stored all default values; target positions no longer have to be manually selected from format lists.

Monitored size changeover and "quick change principle"

With SOMIC, the factors of time savings and efficiency are not only guaranteed by electronic SIKO position indicators when changing formats, but also by the "Quick Change Principle". Here, format parts are changed in their entirety in the machine. All that is needed to achieve this is a quick-release fastener, which means that no further tools are required. Taken together (adjustment via electronic position indicator and Quick Change principle), SOMIC packaging machines can be converted to new dimensions much more efficiently.

Dr Härtl knows that the customers' response to the electronically monitored size changeover is very positive: "The AP05 is optional; mechanical SIKO meters are installed as standard. However, the trend is clearly moving towards electronically monitored indicators, especially since around 90% to 95% of our machines require size changeovers." Approximately 50% of customers already use the electronic

version, with SOMIC expecting a further increase here. "The digitalisation of machines continues to increase. And the AP05 is one more sensor that helps me to record machine data. So I know, for example, when I have driven which batch with which setting and can save the data," Dr Härtl says.

Next step: Full automation

The next expansion step would be the full automation of size changeover via actuators. The first concepts are already being tested at SOMIC, as the customer's desire for increasing machine flexibility while simultaneously maintaining high process reliability is strong, in order to be able to map as many different formats as cost-effectively as possible. The more adjustment points there are and the more often the formats have to be changed, the more interesting fully automated adjustment becomes. SOMIC is already in discussion with SIKO regarding fully automated actuators. "We are happy to provide support for further developments and new projects," says Moritz Müller, PositionLine Product Manager at SIKO. "This includes, for example, the integration of IO-Link interfaces to simplify integration into the machine control system or full automation via our add-on-compatible compact actuators."

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