

# Packaging automation technology follows trend of “personalized packaging” and lot size 1

The trend toward smaller and more customized packaging units is particularly apparent in the B2C segment. Consumers can even order their own combinations of products, such as customized coffee pods or packages that feature their name. Packaging machine manufacturers must respond to this demand, and many have already done so. This was clearly demonstrated in Düsseldorf, Germany at the 2017 Interpack trade show by the large number of new machines that can accommodate lot sizes of 1, even in low-cost product segments.

## Highly flexible packaging machines play critical role

Modular packaging machine design remains the basic prerequisite to meet rising demand for product diversity. This is the only way to achieve the short product changeover times made necessary by this trend. And as more machine functionalities are handled by the control software, these rapid changeovers can be implemented more easily. The eventual goal is to adapt even the most complex workflows to new products with a simple mouse click and minimize the need for mechanical changes.

The benefits of this approach extend to far more than customized products. It also shortens the time to market, which can give the machine's user a critical leg up on the competition. This is particularly true when new products are introduced.

Software- and PC-based machine controls also play a major role in the ability to implement modern Industrie 4.0 concepts. With their openness to the IT world, they form the ideal basis to send detailed machine and production data to higher-level ERP

systems and/or to the cloud. Analyzing this data, in turn, enables highly efficient energy and lifecycle management capabilities, resulting in improved sustainability through minimized energy and resource usage. Opening up new ways for enhancing the efficiency of production planning and control, cloud service solutions also offer enormous saving potentials. By streamlining the available production capacities with production orders, the available production systems, that is, the machines, can be optimally utilized – whether they are located on site or distributed all over the world. In addition, the machines can be selected in such a way that transport distances are minimized.

## Linear eXtended Transport System (XTS) for maximized machine flexibility

The prime example for replacing conventional mechanics with software functionalities is the eXtended Transport System from Beckhoff, because it opens the door to a new level of innovation in machine design. Implementing motion and handling tasks with highly flexibly configurable XTS motor modules and movers that can be controlled just like individual servo axes simplifies the machine's mechanics considerably. In addition, XTS-based machines are much more compact and light-weight, and require a lot less wiring. On the bottom line, machines are more flexible, operate faster, and require less maintenance with XTS. XTS-based machine design also allows equipment manufacturers as well as end users to face the future with confidence. The ability to quickly replace, modify or add modules makes it as easy as possible to accommodate new products and new market requirements.

The flexibility of XTS also shines in connection with other technological trends like digital printing, which offers ideal ways to personalize products and is fully supported by XTS. And because of their huge potential for optimization, collaborative robots that work side-by-side with humans (hence the term “cobots”) will play an increasingly important role in manufacturing as well, which is why the packaging machine industry is already working on the next phase of machine innovation.



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