

MULTIVAC: Portion packs place high demands on the entire packaging procedure

Portion packs, such as those for jam, butter, salad dressings and sauces, are the focus of current trends. They place high demands on the entire packaging procedure. Highly efficient packaging solutions are required to keep the consumption of packaging material in the manufacture of such packs as low as possible, and also to ensure maximum flexibility is achieved.



Consumer behaviour is changing: demographic developments, changing social and family structures, as well as the rising level of employment among women, are just some of the factors, which have an effect on packaging trends in food. Consumers are increasingly reaching to food products and snacks in packaging units, which meet their particular requirement, for example a portion of salad dressing for the lunchtime salad. In addition to this, hotels and catering companies as well as restaurants continue using more portion packs, since they are hygienic and easy to stock.

Producing these packs in the production and packaging procedure is however very challenging. Large pack quantities, frequent format changes, complex pack

designs and shapes, as well as the handling of the products and the demands of reliable quality control, mean it is essential to have innovative die technology, extensive project experience and a high level of automation expertise.

MULTIVAC offers the right solution for every need

MULTIVAC is one of the few suppliers up to now in the market, which is able to cover all aspects of portion packaging and to offer the right solution to meet the customer's individual requirements. MULTIVAC also has a wide range of thermoforming packaging machines available. A complete and comprehensive range of cutting tools also enables many different pack geometries to be produced.

Up to now solutions for producing portion packs were primarily based on high-output packaging machines, which are equipped with a complete cutting tool and designed for large pack quantities. In future MULTIVAC will also be able to offer a new shape and contour cutter, which can be used on all thermoforming packaging machines, even on compact models. The new system was presented for the first time in May 2017 at interpack in Düsseldorf. This means producing portion packs is economically viable even on entry-level machines. The investment costs are quickly amortised, the wearing parts are cost-effective, and film consumption is reduced significantly due to the trim-free cutting unit.





Shape and Contour Cutter for entry-level machines

Thanks to its short set-up time, the cutting system offers a high degree of flexibility for the formats and pack layouts, as well as for the films that can be used. The cutting tools can be changed by operators in a short period of time. The geometry of the dies is designed in such a way, that the usual partitions between the packs are not present. This contributes hugely to reduced consumption of packaging materials.

Conventional cutting systems offer little or no possibility of a format change, and it is therefore necessary to install several cutting units one after the other, if different packs are produced on one machine. Since only one cutting unit is required with the new shape and contour cutter thanks to the easy format change, the footprint of the packaging solution is significantly smaller. This means the new cutting system can even be used on compact thermoforming packaging machines.

At interpack 2017 MULTIVAC showcased a thermoforming packaging machine, capable of being freely configured, together with the shape and contour cutter and the H 052 handling module.

The R 145 is a packaging machine in the medium output range which offers an excellent price-performance ratio. Thanks to its wide range of equipment options, it can be designed precisely to customer's individual requirements. The H 052 handling module is used to converge the packs from the cutting tool: the gripper fixes the portion packs in place during the cutting process then, based on the "Good Philosophy" principle, removes only the good packs directly and completely from the cutting tool, before feeding them to downstream process equipment. Integrating the H 052 in the line control ensures all the quality-related parameters from upstream processes are transferred reliably to the module.

Solutions for producing large batches

Thermoforming packaging machines with complete cutting tools and contour cutters are the solution of choice for producing large batches with complex pack contours. MULTIVAC is one of the few suppliers able to master the use of particularly wide and long dies in the thermoforming packaging procedure. Thanks to innovative cutting tool technology, very precise complete cutting can be performed to an individual pack design. The tools are matched to the specific materials and optimised to the width of the film, allowing the film trim created to be minimised and the packaging materials used as efficiently as possible.

When it comes to large-scale production, mono lines for producing one pack are generally used, since conversion of these machines is usually time-consuming. Food-processing companies have to constantly adjust to the increasing



demands of the market and maintain their competitiveness – wider product variety and the greatest possible flexibility can only be achieved with a highly efficient packaging procedure, which is both resource-saving and efficient. In order to cut a greater number of packs after sealing, MULTIVAC switches two cutting tools one after the other. Even at low cycle rates, this enables a large number of

portion packs to be produced, and the packaging procedure can therefore be well controlled while producing high output.

Thanks to the use of handling modules, removing the packs from the cutting tool is efficient and monitored, as is the pack transfer to downstream process equipment such as quality inspection, outer packaging and palletisation.

MULTIVAC R145.

MULTIVAC'S advantage in expertise creates benefits

MULTIVAC's advantage in expertise in regard to die technology and automation creates many benefits for manufacturers of portion packs: and the innovative cutting technology, which is designed to meet specific requirements, leads to a reduction in packaging material consumption, lower costs for trim disposal and a higher level of machine availability. Thanks to MULTIVAC's comprehensive machine range, efficient and cost-effective packaging solutions can be used, which are tailored to specific needs and deliver the desired packaging results with the required output – whether it is on compact entry-level machines or high-output packaging lines. When large batches with complex pack contours need to be produced, the maximum output of the thermoforming packaging line can be achieved despite lower cycle rates, by using several cutting systems on the machine. And the use of innovative and precise cutting technology has a positive effect overall on the process reliability and pack quality. ♦