



Exclusive on MULTIVAC

New pack design and automated processes contribute to growth

With its new product design, its consumer-friendly packaging and its new pack sizes, norrmeyerier wants to consolidate its position in the cheese market still further. The use of more robots and thermoforming packaging machines, instead of pouch packaging solutions, are just two of the innovations in norrmeyerier's large new factory, where cheese blocks are unpacked and portioned, and the product is then packed in primary and secondary packaging.

“After five months of thorough project planning and the line then successfully being put into service, the top speed of the system has been almost doubled, now amounting to just over 70 units per minute.”

The Christmas rush has just ended, and Micael Höglund, technician and sub-project manager at Norrmejerier in Umeå, Sweden, is satisfied with the results. The new packaging system over an area of approx. 2,300 m² with an output of up to 9,000 tons per year comprises three lines for processing cheese blocks, as well as a line for manufacturing grated products.

After five months of thorough project planning and the line then successfully being put into service, the top speed of the packaging line has been almost doubled, now amounting to just over 60 packs per minute on the 750-gram line.

“Our old system was pretty worn out: the output was too low, and the grated cheese came out looking like Lego bricks. A new packaging line with cutting-edge technology was the only way for us to increase our output, cut lead times, minimise wastage, optimise our work environment and regain control of the entire production process. In total, we invested approximately SEK 200 million in the project. We estimate that the cost will be amortised within the next six years,” says Micael Höglund.

Modern operating concept

The new packaging line was designed by an international project group, which received input throughout the project from twelve different suppliers. The output capability of the system is impressive. It takes only approx. 10 minutes for

a cheese block, which can weigh up to 18 kg, to be completely cut up and packed. The product runs through the following stations: cutting, weighing, 3D scanning, loading into the pack cavities, quality inspection, sealing the pack, labelling, outer packaging and palletising.

The handling processes are performed by more than twenty robots, which ensure a high level of precision is achieved. Thanks to automation, the number of operators on the line has been

significantly reduced. Today the system can be operated by just twenty people. Due to further improvements on the line, operation is due to be switched from treble shift to double shift.

“Complex processes with increased levels of automation mean more training, so we send our staff on both internal and external training courses. It’s taken a while, but we’re almost there now,” says Micael Höglund.



New design, new packaging

A number of efficient product solutions have been integrated into the new system. With three new thermoforming packaging machines, two MULTIVAC R 535 machines and one R 245 machine, Norrmejerier has developed a practical solution for a consumer-friendly pack with a completely new visual design. The project got started when a large order was received for Herrgårdstost, Prästost and Grevé, which Norrmejerier produces using milk from the Norrland region in the north of Sweden.

The label on the pack will make the Norrland dairy region a household name throughout Sweden. And the Västerbotten cheese pack, the star of the quartet, has a new black-gold design intended to support the launch of the product on export markets.



“Norrmejerier was looking for an efficient and comprehensive solution, which would present the cheese in a way that was both attractive and customer-friendly. The shrink bags that had been used to date were not suitable.

“The new technology stands for a more intelligent and cost-effective approach in the packaging: the material costs are lower, and there is no longer any need for a separate labelling process for the packs,” says Thomas Rahmner from MULTIVAC Sweden in Lund, who was responsible for the delivery and installation of the system. ♦

Basis for growth

The packaging procedure itself starts with a MULTIVAC Delta robot, which loads the pieces of cheese into the pack cavities, before the upper web is sealed. In order to be able to run different sizes of cheese, the three thermoforming packaging machines were equipped with a total of nine format sets. This means three pack shapes for each of the 450 g, 750 g and 1000 g weights can be produced.

“Conversion of the machines takes between 20 and 30 minutes. In the case of the large machines, the different forming dies are already built into the machine. Here the die change is carried out via the machine control and can be performed at the push of a button on the HMI,” explains Martin Lunblad, the MULTIVAC technician, who was involved in the installation in Umeå.

“Experience has shown, that the loading of the pack cavities is the most critical part of the operation. At this point in the process, there are many factors that have to be taken into account, and which require a certain amount of supervision and operator training. We are also in the process of reviewing all the dies, and some of them will be replaced soon. Overall however, we are extremely satisfied with the whole project,” says Micael Höglund, before adding that the capacity of the line can be expanded if required.

“We have also looked at options for packing readysliced cheese, but that idea is on hold for now. Unlike the rest of the western world, Swedish consumers still prefer their cheese in large, intact pieces.”



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