

Martini perfects the packaging of pasta with OMRON technology

New solution improves speed, accuracy and sealing quality

Based in Italy, Martini srl produces high-precision weighing and packaging machines for the food sector. Its new MCRS-VD packaging system enables the packaging of up to 180 packs of pasta per minute. At the heart of the solution is an OMRON NX701 1600 machine controller. This manages the movements of the MCRS-VD. OMRON's NX-TC Perfect Sealing technology enables the end user to improve the stability of the thermoregulation involved and reduces the costs associated with the use of packaging films.

A fast and flexible system

The MCRS-VD automates all of the stages of packaging - including folding, sealing and labelling. The system was

created by Martini to meet the growing need for greater speed, efficiency and flexibility from pasta producers all over the world. A key aspect of the structure of the new machine is two continuous, vertical box-motion packaging machines. These are mounted on a segmented belt with intermittent feed, and are fed by a double weighing system that uses Infinity - a digital, multi-head model.

Precision, speed and accuracy

The weighing system is one of the differentiating elements of the solution: Martini's Infinity weigher enables users to dose the pasta quickly and very precisely, with the doses conveyed to the two packaging machines. A digital filter, equipped with the control electronics of each head of the weigher, ensures the accuracy of each dosage.



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The creation of the new system depended largely on OMRON's automation technology and technical advice. The final performance of the packaging system is managed by the OMRON NX701 1600 machine controller. This coordinates and synchronises the operation of the weighing system with the packaging system. The machine controller was chosen mainly because of its speed capabilities. Thanks to its CPU and available memory, the NX701 1600 can manage up to 128 axes in real time. It supports all of the main industrial communication standards, including EtherCAT (to the field), EtherNet / IP and OPC-UA.

The OMRON controller manages 34 OMRON 1S servos and six 3G3MX2 inverters. Part of the drives are responsible for sealing the package based on OMRON's NX-TC Perfect Sealing thermoregulation system. This technology stabilises

the temperature by filtering all disturbances related to thermoregulation so that end users can vary the thickness of the packages. In particular, the possibility of operating in very low temperature ranges (about two degrees) allows pasta manufacturers to use thinner or eco-friendly films (down to a minimum of 7µm). This reduces both waste and material costs.

The Martini MCRS-VD can pack up to 180 packs of pasta per minute per pillow and 160 double-square packs. Associated with the packaging system, there is also a double volumetric weighing system, or a mixed dosage version consisting of a multi-head weigher and a volumetric doser for packaging various types of products (including cereals, rice and legumes). The new system has been designed to deliver maximum reliability with minimum waste.



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About Martini srl

Since 1973, Martini srl has been active in the industrial packaging sector, offering high-precision packaging machines and weighers, modelled according to the needs of each individual production facility. The company has established itself in the packaging and weighing of food products sector - ranging from dry pasta to baked goods in all major formats, including Pillow, Square Bottom, Double Square Bottom and Doypack. For more details, visit the website: <https://www.martinisrl.com>

About OMRON Corporation

OMRON Corporation is a global leader in the field of automation based on its core technology of 'Sensing & Control + Think'. OMRON's business fields cover a broad spectrum, ranging from industrial automation and electronic components to automotive electronic components, social infrastructure systems, healthcare, and environmental solutions. Established in 1933, OMRON has over 30,000 employees worldwide, working to provide products and services in 120 countries and regions. In the field of industrial automation, OMRON supports manufacturing innovation by providing advanced automation technologies and products, as well as through extensive customer support, in order to help create a better society. For more information, visit OMRON's website at: industrial.omron.eu