GDO BV with headquarters in Eygelshoven, The Netherlands, has earned itself a reputation as a specialist for production automation and inspection systems. The combination of in-house engineering and manufacturing of tools and machines has made GDO BV a coveted partner for international manufacturers. Thanks to its long experience in the automotive and healthcare industry, the company is in a unique position to implement tailored solutions on the basis of proven modular systems using the very latest technologies – from product design to complete production lines. GDO BV chose Siemens as a partner for the automation of its high-speed inspection systems.

The first machine to be equipped with a Siemens solution was the AISAP inspection machine, which uses the innovative SIMOTION™ motion control system. This system provides every degree of freedom required to build advanced machines. Mechatronic machine concepts improve flexibility, increase the number of cycles, shorten the changeover times and reduce the amount of maintenance required. Of course, SIMOTION is an integral part of Totally Integrated Automation.

The main reason for GDO BV’s decision to use Siemens is its firm belief that Siemens offers the most advanced technology for motion control and drive applications as well as the right support structure for every phase of the application: from consulting to fine-tuning to operation. The end customers in the automotive industry, such as VW/Audi, Opel, Ford, etc. are also satisfied with the use of Siemens products on GDO machines.

High inspection capacity

The AISAP (Advanced Inspection System for All Products) is one of the latest high-tech automated inspection systems built by GDO BV for defect finding in all kinds of products. The inspection system is able to detect defects, check dimensions and recognize colors on a single conveyor belt at a speed of 50 products per second. The AISAP capacity can easily be doubled by adding a second track of products and using three cameras on the same conveyor belt. This achieves the inspection capacity to an astonishing 360,000 products per hour.
Ready, set, go!

One of the main design requirements was the flexibility of the system. The system is able to handle products ranging from 5 to 80 mm in diameter and up to 40 mm in height. By a simple manual or automatic height adjustment of the secondary conveyor and supply, the system can handle different products within a set-up time of just a couple of minutes.

High-speed inspection

In the past, GDO BV has built many inspection systems that have been applied in different industries such as automotive, aviation, life science and sealing. This inspection system concept was developed as a general high-speed inspection tool for all products in all industries and can be adjusted to customer requirements. The design principle enables the customer to inspect the side, upside and downside of a product without damaging the product during handling. One of GDO’s strong characteristics is the short development time for automation solutions. This system, for example, was developed in just 4 months, from the concept to the functional inspection system.

Optimum equipment for high-end machines

Whether seal or belt inspection machines or seal packing machines for the automotive industry or inspection machines for the healthcare industry – to date, Siemens has equipped about 10 machines from GDO BV with the appropriate automation solutions.

Special features of high-speed product inspection:

- Highly flexible inspection system – designed to handle all kinds of products for the pharmaceutical, healthcare, automotive and sealing industry
- Especially developed for cleanroom applications
- Suitable for products with diameters ranging from 5 to 80 millimeters and heights ranging from 2 to 40 millimeters
- Text recognition, color recognition, dimension measurement and defect finding
- The inspection system can be installed directly between production units for in-line inspection

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