

CUSTOMER SUCCESS STORY

FG Robosys creates unique robotic bottling system with OMRON technology

FG Robosys BV

Veenendaal, The Netherlands



Reduced
changeover time



Long-term
collaboration



High
performance



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Key Benefits

1

Long-term collaboration to meet customer expectations

2

Changeover time in single digits, a reduction of up to 80 minutes

3

High performance and reliability in packaging

4

Cost-effective solution

At a glance

FG Robosys, a leader in providing robotic solutions for the cosmetic and personal care industries, decided to enhance their robotic bottling line to improve efficiency and reduce changeover times at their customers' production facilities. The goal was to develop a system that could handle packing the final products without relying on traditional grippers. Thanks to OMRON's technology, including machine vision cameras, FG Robosys has enhanced the reliability and efficiency of the line. The collaboration between FG Robosys and OMRON has been essential in addressing technical challenges and developing an effective solution that meets customer expectations.



The challenge

FG Robosys decided to respond to the challenge of further improving efficiency and reducing changeover times on their bottling lines. The primary line, ROBO-smartFLEX E80 handles everything from bottle sorting and liquid filling to capping and packing, while the secondary line ROBO-PACKER X8 120 required a seamless process for packing bottles without using traditional grippers.



In an industry where customer expectations are constantly evolving, FG Robosys B.V., with its headquarters in Veenendaal, the Netherlands, is an innovation driver thanks to their advanced robotic solutions. Specializing in the cosmetic and personal care sectors, the company embraces all the possible technologies and innovations to be applied to fulfil customers' needs. FG Robosys has invented a unique bottling system that is one of the world's simplest and most reliable robotic bottling solutions. This innovation helps the customers achieve a near to zero format parts and near to zero downtime.



The solution

FG Robosys BV attributes much of the success of its solution to its long-term collaboration with OMRON. This goes beyond just utilizing OMRON's excellent products-the company also benefits from the exceptional people behind them. OMRON's team consistently provides both advanced technology and critical human support. *"When we say 'excellent,' it means above average-not only from the technology side but also from the human support side,"* Benedictus Tang, CEO of FG Robosys comments. This partnership is built on open communication and collaboration, with OMRON actively engaging in brainstorming sessions and providing essential technical guidance. Their support includes providing samples and testing units, enabling FG Robosys BV's engineers to refine their innovations effectively.

At FG Robosys BV, the use of vision cameras and sensors plays a crucial role in enhancing the flexibility and reliability of the system. *"The vision camera gives us*

the flexibility and clarity to see the product, and it's very reliable," Tang comments. The implemented solution stands out by allowing the use of four cameras with a single CPU. This advanced setup has proven to be fantastic, enabling precise product monitoring and ensuring consistent quality across operations.

OMRON technology and support have been integral in developing the ROBO-PACKER system overall. The system is equipped with OMRON's advanced FHV7 vision system, featuring the multi-color light source and a 12-megapixel high-resolution camera. The collating, sleeving and flapping systems in ROBO-PACKER feature the robust NJ5 and NJ3 machine automation controllers for seamless control and communication. High-performance 1S series servo drives and motors, coupled with flexible I/O modules, Ethernet switches and comprehensive safety controllers, provide synchronized and safe operations. The inclusion of a high-resolution touch screen HMI and a sophisticated vision system enhances user interaction and quality assurance.



Results and benefits

FG Robosys's success in the cosmetic and personal care industry is significantly strengthened by OMRON's advanced technology and reliable support. The integration of OMRON's solutions has enhanced the efficiency and reliability of their bottling lines, while also reducing changeover times, giving them a competitive edge.

Benedictus Tang summarizes the key benefit to their customers: *"Our robotic solution gives them a changeover within ten minutes while others today in the market, need a minimum is 90 minutes. So, customers that implement our technology will save at least 80 minutes."*

The collaboration between FG Robosys and OMRON has been essential in addressing technical challenges and developing effective solutions that meet customer expectations. Benedictus Tang concludes: *"Our relationship with OMRON has been established for many years. The most important aspect of developing technology is that we develop it together, in any aspect or challenge, and OMRON supported us throughout the process. This actually makes them different from other automation providers."*



About FG Robosys

For more information about FG Robosys, please visit: www.fg-robosys.com

About OMRON Corporation

OMRON Corporation is a leading automation company with its core competencies in Sensing & Control + Think technology. OMRON is engaged in a wide range of businesses including industrial automation, healthcare, social systems, device & module solutions.

Established in 1933, OMRON has about 28,000 employees worldwide, working to provide products and services in more than 130 countries, contributing to the creation of a better society. For more information, please visit industrial.omron.eu