

# Unika makes Landmark decision to bring quality levels to new heights

OMRON TM cobots with integrated vision system eliminate human error, increase production efficiency

***Unika Danmark AS is a leading producer of high-precision tooling and injection mouldings for the plastics industry. With help from three OMRON TM cobots, the company has raised its quality levels, reduced product returns, enhanced worker engagement, improved throughput and made impressive cost savings.***

High-precision plastics is an exacting science, with toolings and mouldings measured in microns, for end products that can enhance the quality of life of global customers. That's certainly the case for Unika, which recently signed a partnership with Grundfos, the world-leading specialist

in advanced pump solutions. For Grundfos and other Unika customers, quality is of the utmost importance, which is one of the reasons Henrik Schwensen, Plast Production Manager, opted for an OMRON cobot solution.

## **The need for a flexible solution**

"Our work involves a wide range of different end-products," says Henrik, "produced using the toolings we create in-house. The products can range in size, weight, and shape, so we needed a flexible system that would fit in with our changeable production line. Specifically, a unit that would enhance our quality control at end-of-line."



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Prior to the OMRON installation, quality control was purely human, with operators responsible for checking each individual piece, ensuring that they were true to form. "This is repetitive work of course," explains Henrik, "and as with anything monotonous, people's attention can waver, concentration can lapse, and that's when errors creep in."

### Improved output through automation

So, the Unika team looked to automation as a solution, specifically, automation supported by machine vision. "We have around 40 modules on our production line, each of which uses some form of automation, so we know that this is an effective way to improve our output," says Henrik. "We looked at all sorts of robots that might help, comparing the options from different suppliers of industrial, mobile and cobot units. In the end, the clear winner was OMRON TM."

Working with local OMRON system integrator KS Service, the OMRON TM with integrated vision system was eventually selected by Unika, and brought into service soon afterwards. "We now have three OMRON TM cobots at work in the plant, performing a variety of tasks alongside our operations team," says Henrik. Unika reported some of the key benefits of the OMRON cobot approach to be flexibility and mobility – it doesn't need a dedicated space, or danger-zone ring-fencing, or the other expenses associated

with a fixed industrial installation. "This makes it ideal in our busy production space, where our 75 employees are constantly at work, moving between lines and working in harmony with the OMRON cobots."

### Ideally suited for multiple tasks

The OMRON cobots are highly flexible systems that can be adapted to perform a range of tasks. For Unika, the primary function of the quality cobot is anomaly detection, a task it performs tirelessly and accurately, thanks to the OMRON Landmark vision system. This enables the cobot to find the relative position of the product in three dimensions, correcting for rotation, depth, pitch and roll, and then scan for errors. Only if the product meets the strict Unika quality requirements, the cobot lifts the product and packs it for shipment.

Henrik sums up the benefit of a collaborative robot with vision system: "The fact is, the OMRON cobot doesn't get tired, doesn't make mistakes, doesn't need a break, nor get distracted or bored. It gets to work, and keeps at it, raising our quality levels and making sure no sub-standard products leave the factory. Importantly, it also frees up our operators' time, so they can be assigned to more value-add and varied tasks elsewhere in the factory."





*Using its integrated vision system, the cobot checks the labelling placement on the curved plastic.*

The Landmark system is also used further up the line, where a pick & place labelling programme has been introduced for customer Grundfos. In this installation, the cobot takes a plastic product destined for a Grundfos domestic pump and moves it to the labelling line. Using its integrated vision system, the cobot checks the labelling placement on the curved plastic, then picks the product carefully before replacing it on the line.

### Enthusiastic welcome

It's not just efficiency and throughput that's better for Unika. For operators working with the OMRON cobots, working life has improved too. "Fewer repetitive tasks makes a job more interesting," says Henrik, "and when workers are more engaged with their work, productivity is higher, so this is an all-round benefit for the entire team.

### About Unika

Unika Danmark A/S is one of the leading suppliers of injection moulded plastic materials for technical purposes in Denmark. With the company's startup in 1971 and experience built over two generations, Unika has a highly specialized knowledge that its customers appreciate. For more information, please visit: [www.unika.dk/home-GB](http://www.unika.dk/home-GB)

### About Omron

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 social infrastructure systems, healthcare and environmental solutions. Established in 1933, OMRON has about 30,000 employees worldwide, providing products and services in some 120 countries and regions. In the field of industrial automation, OMRON supports manufacturing innovation by providing advanced automation technologies and products, as well as extensive customer support, to help to create a better society. For more information, visit OMRON's website at [www.industrial.omron.eu](http://www.industrial.omron.eu).