



## Omron helps Danish manufacturer automate materials transport needs with flexible mobile robot fleet

VOLA, a Danish manufacturer of kitchen and bath faucets and taps, recently expanded its Horsens, Denmark plant by 5,500 square meters. This additional space houses a new warehouse, product delivery area and assembly hall. VOLA has over 50 years of experience in its industry and is considered one of the leading manufacturers of high-quality, modern-style taps in Danish design. The primary reason for its expansion was to meet market demands for high product variance.

VOLA is a very old company, having been founded almost one and a half centuries ago in 1873, and its factory is “very strict and

very minimalistic,” according to Chief Operating Officer Peder Nygaard. All taps are produced in the Danish town of Horsens, and the company wishes to keep it this way. For this reason, VOLA is continuously trying to improve its efficiency and lead time. To do so, the company sought a new manufacturing line to deliver higher speed and throughput.

VOLA chose to work with Omron because there are very few robot manufacturers that can handle the sort of advanced fleet management that Omron is capable of. The company was unable to find anything similar in the entirety of Northern Europe.

### Business need

VOLA needed an automated solution to quickly move boxes of product from one location to another in order to streamline production and liberate its employees from the burden of manual materials transport.

### Unique solution

VOLA implemented a fleet of nine Omron LD-90 mobile robots along with Omron's Fleet Manager to provide a fully coordinated solution for autonomous materials transport throughout the factory.

### Customer benefits

The mobile robot solution has improved overall throughput, production flexibility and working conditions while making it possible for the company to easily change its factory layout whenever necessary.

# The solution

## A new line with a mobile robot fleet



### The need

VOLA's old production line had a large proportion of manual tasks, both in assembly and materials transport processes. In order to be able to react to different demands in the market and make a high-end, high-quality product, the company wanted to keep most of its manual assembly processes, but it saw an excellent opportunity to improve speed and throughput by automating materials transport.

To move boxes more quickly from one place to another, VOLA decided to replace manual transportation with round-the-clock automated transportation performed by mobile robots. The company noted that this development would also provide employees with a better work experience by eliminating the need for them to carry heavy trays from place to place.



### The technology

Using Omron's LD Series mobile robots as a foundation, VOLA implemented a flexible manufacturing application for its faucet products that operates around the clock. A fleet of nine LD-90 mobile robots is tasked with transporting components and finished items back and forth between storage and the assembly department.

The robots take empty totes out to the assembly area, where workers scan them to see what's going to be produced. After the workers assemble the parts, mobile robots pick up the finished goods in totes and transport them back into the warehouse. The robots operate as a fleet thanks to Omron's Fleet Manager, which works like a taxi central dispatcher to efficiently control where the robots are going.



### The outcome

The main advantage of VOLA's mobile robot solution is that it enables changes to the factory layout whenever necessary, as opposed to using a conveyor system. The company has achieved a new level of factory flexibility that wasn't possible before, and it can fulfill existing and new customer demands much more quickly. This has been a key contributor to its annual growth.

By automating cumbersome and time-consuming materials transport tasks, the new solution has also made the workday easier for VOLA's employees. The company is currently in its first phase of implementation with nine robots, but it's already looking at ways to incorporate the LD Series into other parts of the factory to improve process flow and throughput.

