

## Innovative cobot application improves safety at Leica Geosystems

Collaborative robot automates tray handling and improves safety and ergonomics in a hazardous working area.

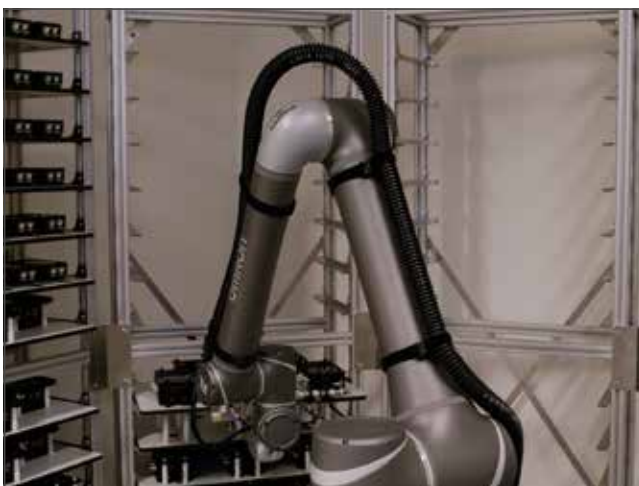
*When Leica Geosystems needed a versatile solution to automate the handling of trays of items being filled with epoxy material, it decided to use an OMRON TM collaborative robot (cobot). The OMRON cobot was recommended by Gibotech, one of OMRON's Solution Partners.*

Leica Geosystems is a global company that specialises in supplying premium sensors, software and services to professionals in surveying, construction, infrastructure, mining, aerospace, manufacturing and other industries. At its machine control facility in Odense, Denmark, the company needed a flexible, accurate and safe way of moving trays from a rack. These then needed to be placed precisely so that the items on the tray could be filled with epoxy material. The new solution also needed to be scalable.

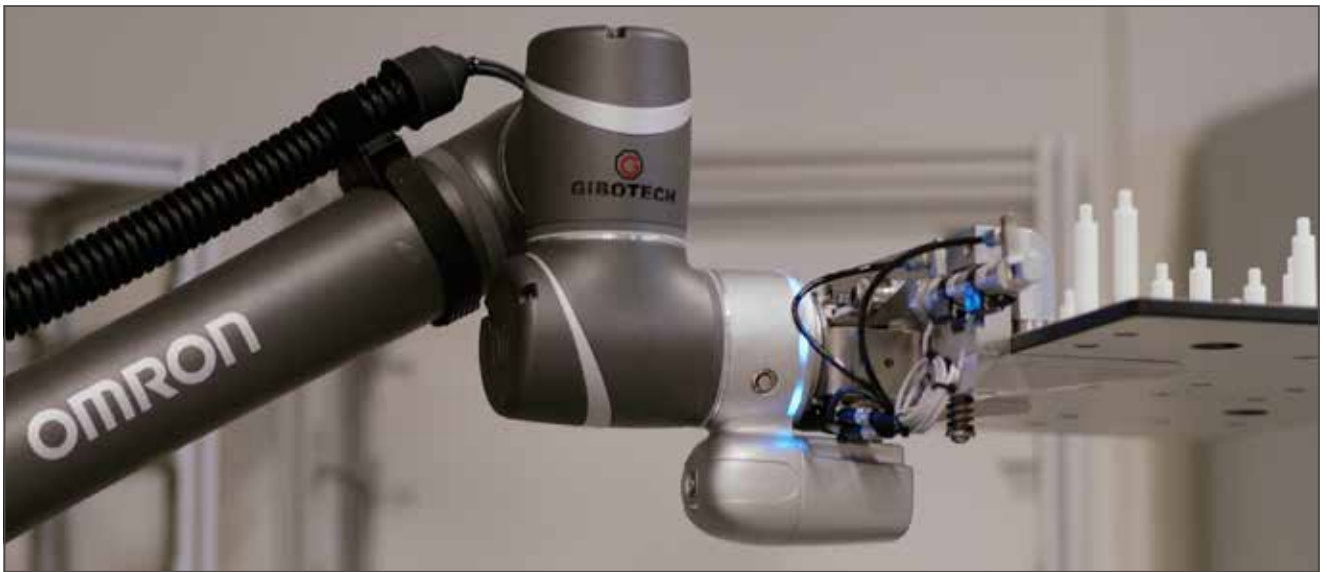
### Protecting people

One of the key issues was that epoxy fumes can be harmful to people, as they can cause inflammation and irritation of the nose, throat and lungs.

The OMRON TM cobot provided a perfect solution, as it can be easily deployed in areas that can be hazardous for people to work in. Other components of the solution include OMRON's NX and NXIO systems of machine control and its Sysmac machine automation platform. The solution was easy to install in Leica's production process and Gibotech carried out the system integration.



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*The new solution has reduced production costs for the company.*

So, how does the OMRON TM cobot automate the tray handling process? Firstly, it picks up a tray of units from a rack, using the TM landmark. This is a logo or marker that can be attached to the rack and can be easily detected by the cobot's vision camera. The marker provides a reference point for the cobot's movements, as other points can be defined in relation to the landmark's position.

This means that the cobot can be trained to identify the location of an item. It can then use the landmark to pick and place each item with great accuracy. Even if the rack is moved, the cobot still knows where to move based on the landmark's position.

For the Leica process, the cobot collects the tray and moves it so that it's underneath an epoxy extruder. It adjusts the position of the tray so that the various types of items on the tray can be filled with epoxy material. The cobot then places the tray with the epoxy units in racks for curing and hardening for several hours. Following this, it replaces the tray in the rack, again using the TM landmark as a locator.

### Benefits of the cobot solution

The new system means that different items on the trays can now be filled with epoxy material without any people being present. This improves ergonomics and safety in the working environment and protects Leica's employees, who have been moved to other business-critical tasks. At the same time, the new solution has also reduced labour and production costs for the company.

OMRON's Project Manager, Kenneth Jochumsen, comments: "This was a very special and innovative cobot application never seen before in the Nordics. We were able to develop it due to our integrated technology solutions and our extensive knowledge of industrial automation. The whole project was in line with OMRON's underlying philosophy of interactive and safe collaboration between people and machines."

Bent Andersen, Product Supply and Process Service Manager for Leica Geosystems, adds: "Our company expects to expand significantly in the future, so it was important to find a solution that can grow as the company grows. We therefore particularly liked the flexibility and scalability of OMRON's automation solution, and the implications it has for greater worker safety."



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#### **About Leica Geosystems**

Revolutionising the world of measurement and survey for nearly 200 years, Leica Geosystems is the industry leader in measurement and information technologies. Known for innovative product and solution development, professionals in a diverse mix of industries, such as surveying and engineering, building and heavy construction, safety and security, and power and plant trust Leica Geosystems for all their geospatial needs. With precise and accurate instruments, sophisticated software, and trusted services, Leica Geosystems delivers value every day to those shaping the future of our world. Leica Geosystems is part of Hexagon, a leading global provider of information technology solutions that drive productivity and quality across geospatial and industrial landscapes. For more information, visit: [www.leica-geosystems.com](http://www.leica-geosystems.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 social infrastructure systems, healthcare, and environmental solutions. Established in 1933, OMRON has about 30,000 employees worldwide, working to provide products and services in around 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, to help create a better society. For more information, visit OMRON’s website at: [industrial.omron.eu](http://industrial.omron.eu).