

Press release

A world of experience in automation

At HANNOVER MESSE, SEW-EURODRIVE is making its modular system for automation and its research work tangible in a playful way.

Bruchsal/Hanover 2025 – Young and young-at-heart visitors to stand B26 in Hall 6 at HANNOVER MESSE can look forward to several fun attractions there. The drive and automation specialist from Bruchsal uses a specially created experience and research area to make it interactive to understand where the company portfolio is used all over the world and the exciting research topics developers and students – including software specialists – are working on at SEW-EURODRIVE.

Just stand on the edge and watch? Of course, this is also possible at the SEW-EURODRIVE trade fair stand. However, if you would like to take part yourself, the company offers exciting opportunities for interaction in its experience area.

Motion exhibit of automation technology with industry reference

The interactive motion exhibit shows an example of 15 cubes with 15 products from the SEW-EURODRIVE modular system. These cubes run in circles on a roller conveyor. If a visitor starts one of five possible industries or applications at the touch of a button, the three cubes that are primarily used there light up. Two of the cubes are taken from a robot and placed on a mobile assistance system. A third cube is brought from a portal to a presentation conveyor.

The products shown range from gear unit oil, motors, industrial gear units, precision planetary gear units and stainless steel motors to inverters and control technology. These cover the following industries:

- Logistics
- Mining
- Battery cell production
- Food industry
- Beverage industry

This motion model offers visitors another highlight on the topic of human-robot cooperation. An mobile assistance system responds to gestures recorded with cameras and can be moved forward and backward or from left to right by the appropriate arm and hand movements and also rotated in circles. For this purpose, a safety zone is generated via laser scanners within which the vehicle is allowed to move. "With this model, SEW-EURODRIVE would like to draw attention to the fact that robots are not only used to replace humans," emphasizes Christopher Gänßmantel, who is responsible for operational support in construction and facility

Image

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Link

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management at SEW-EURODRIVE. "Rather, they are supposed to assist and work with people to relieve the burden of manual activities."

Drone area

Drones are also being used more and more frequently in SEW-EURODRIVE service. If, for example, a storage/retrieval system stops in a high-bay warehouse, every minute is precious. Here, a drone can be flown into difficult-to-access system areas. This allows service employees to quickly get an idea of the cause of the fault and, thanks to this initial diagnosis, to act more specifically.

At the trade fair stand, this topic is taken up in a playful way. Visitors can fly small drones through a ring course in a drone cage above their heads using gesture control. When the drone successfully reaches its end position in front of a MOVIGEAR® drive system, a camera detects the CDM® label (CDM = complete drive management) that is applied to the product. If the visitor then goes to the control center at the trade fair stand, they can find out more about the company's associated digital service precisely for this product.

Research campus

In Bruchsal, SEW-EURODRIVE operates a separate research location on a former barracks site. In this case, young people in particular are to be inspired by new technologies and SEW-EURODRIVE as an employer, detached from the manufacturing plant. Accordingly, the family-owned company is working intensively with many universities nationwide and internationally, and allocates research work to interested students. The aim is to be able to think beyond the normal business operations without pressure and without the usual limits of possible usability, while opening up completely new technologies. If these technologies are needed at a later date, the research campus can transfer not only the knowledge to the company's development department, but also the associated knowledge carriers.

Another exhibit contains a so-called Wiegand wire. This is a pulse wire sensor that continues to count even in the event of a power failure. Young people can experience how this works through interaction. To do so, you can turn a scroll wheel and count the revolutions by the sensor. With power supply, the revolutions are recorded together with the angle of rotation (e.g. 90° for a quarter of a revolution). If the visitor interrupts the current supply, the Wiegand sensor continues to count the revolutions made. "This is a technology that is relevant for safety applications and that is taught to young people in an exciting way," explains Frank Schönung, Head of Innovation Project Group 5 at SEW-EURODRIVE.

The third exhibit is a logistics assistant developed for outdoor use. This vehicle is showing ongoing research on the topic of "safe identification of persons". When using autonomous vehicles and assistants in the tidy factory hall, a laser scanner is sufficient to maintain the necessary distance to surrounding objects. On the other hand, the requirements are more demanding in the exterior of a plant site. While objects such as cardboard boxes can be stopped at a short distance and driven around them in a narrower radius, the vehicle must provide more safety when people are detected, stop earlier and drive around more widely so that no danger occurs. To achieve this, different sensors must fuse together exactly. Accordingly, a radar sensor, a time-of-flight camera, thermal camera, ultrasonic sensors and laser scanner are installed in the exhibit. What these sensors see is visualized at the trade fair stand via a screen embedded in the floor. Visitors stand on this monitor and experience how safe person recognition works live.

"It's not that easy to reliably identify people in the outdoor area as such," says Yannik Wunderle, who is a doctoral student at SEW-EURODRIVE's research campus dedicated to the

topic of "safe person recognition", and explains why: "The RGB camera cannot see well enough at night, so a thermal camera is better suited. This, in turn, is not optimal if the external temperatures are 37 °C and the difference between human body temperature and the environment is not present. Ultrasonic sensors such as those used in cars, on the other hand, are very suitable for various weather conditions, but provide relatively little information themselves." The right mix of sensors is therefore crucial here, but the solution is unthinkable without the use of AI. Objects that are directly connected to people, such as bicycles, are now also being taught in. Because wherever a bicycle is on the road, people are always moving.

"I am still surprised by the extent and depth of SEW-EURODRIVE software development and the breadth of its research position. I particularly like the freedom and variety of our research campus. I am already looking forward to presenting the progress achieved in recent years to other enthusiastic researchers at the HANNOVER MESSE. In particular, I look forward to showing students and young researchers what we do and inspiring them to do research," says Yannik Wunderle.

About SEW-EURODRIVE

Founded in 1931, SEW EURODRIVE GmbH & Co KG is a family business headquartered in Bruchsal, near Karlsruhe, in the Baden-Württemberg region of Germany. Today, SEW EURODRIVE is one of the world's leading specialists in drive and automation technology, with more than 22 000 employees, 17 production plants, and 92 Drive Technology Centers in 57 countries.

As a market leader in its field, SEW EURODRIVE keeps applications, processes, systems, and machinery moving in countless sectors – from airport logistics to industrial processes. With around 800 employees working in research and development, the company is making an innovative contribution to shaping the future of drive technology.

Proximity to customers is one of SEW-EURODRIVE's top priorities. An extensive sales and service network provides professional advice on site and ensures the rapid availability of spare parts and repairs – anywhere in the world.

Alongside its headquarters and production facilities in Bruchsal and its plant in Graben-Neudorf, the company operates 30 other sites across Germany. SEW EURODRIVE has also had a presence in Canada, the partner country for Hannover Messe 2025, for over 50 years. Its headquarters there are in Toronto.