

Improving quality, safety and efficiency

Know-how protection built in **hardware and software: partnership and individual development**

A customer-optimized solution offers another important advantage: the customer's know-how can be deeply integrated into the control firmware and reliably tied to a specific hardware. Plagiarists or attackers have virtually no chance of gaining access to the knowledge. The housing of the control system can be adapted to the available installation space or the design of the OEM partner in housing technology. In this way, a customer-optimized control system also fits seamlessly into the machine in terms of appearance.

Development partner – for the life of the machine

As an experienced electronics developer and manufacturer, Eckelmann supports its OEM customers throughout the entire product life cycle. Components from longevity programs are deliberately selected as early as the design stage. Discontinued critical components are kept in stock. This ensures long-term investment security for OEMs and their end customers. In the case of machines and systems that are sometimes decades old, function-equivalent or function-expanding re-designs may also be necessary.

Our engineers support pharmaceutical manufacturers and accompany manufacturing processes with expertise and cutting-edge technologies.

One-Stop-Shop

Specialist in the regulated environment
Full-service provider for automation and digitalization

The Eckelmann Group presents itself as a full-service provider for automation and digitalization. As a specialist for requirements in the pharmaceutical industry, biotechnology and medical technology, Eckelmann engineers offer industry-specific solutions from a single source:

- Consulting
- Customized hardware and software solutions
- Turnkey automation systems
- Lifecycle Management
- Smart Service
- Vertical and horizontal system integration
- Data analysis and digital twin: FactoryWare®
- Optimizing productivity throughout the lifecycle

We meet high regulatory requirements

It goes without saying that we are **ISO 9001** certified. We also demonstrate quality management and certifications in the regulated environment, for example with **ISO 13485** as a supplier of medical technology, **ISO 62304** (medical device software), processes for **GMP/GAMP 5** and the manufacture of electrical equipment in accordance with **CE, UL** and **UKCA**.

In lifecycle management, we tailor organizational and technical service packages – and write the success story over the entire service life of machines and systems.

Eckelmann – Partner for Automation and Digitalization

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Eckelmann FCS GmbH
Herford | Germany

Eckelmann IBE Software GmbH
Wilhelmshaven | Germany

Rex Automatisierungstechnik GmbH
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Eckelmann

Blister machines optimize the medication management

Economical and safe medication supply

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Case Study
Pharma
Industry



Functional samples, tests and application from a single source

Customer-optimized series control E°EXC 881
Automatically blister medications

Modern blister machines pack up to 700 different medications, for example tablets or capsules individually for each patient. During the development of the automatic machine, a functional sample was first constructed in a short time using standard control technology from Eckelmann.

This enabled the customer to start developing its application at an early stage. Within four months, an application-specific control system including extensive IO functions was developed. The series blister machine was equipped with the customer-optimized E°EXC 881 series control system.

Economical and safe handling of the medication supply

700 different medications – controlled by 700 individual drives in the automatic blister machine

The tailored compilation of medications according to daily and weekly schedules in tablet boxes or weekly dispensers is time-consuming, error-prone and must meet the highest hygiene standards. Automation is the solution: so-called blister machines have revolutionized medication management. This is a service that is used, for example, by hospital pharmacies or large pharmacies that supply nursing homes.

Modern blister machines pack up to 700 different medications using just as many individual drives. A customer-optimized control system from Eckelmann efficiently solves these requirements. During the development of the machine, a functional sample was first constructed in a short time using standard control technology from Eckelmann. This enabled the customer to start developing his application at an early stage. In parallel, the control specialists developed an application-specific optimized control system including extensive IO functions within four months. The series blister machine was directly equipped with the customer-optimized E°EXC 881 series control system.

Correct medication administration takes place in accordance with medication schedules

In an automatic blister machine, medications are put together in blister packs for each individual patient, at each point in time when the medication is taken. These are small plastic bags that are wound into a tube with the medications shrink-wrapped inside and inserted into a dispenser. The patient then tears off the front sachet at each intake time and removes the medication.

In this way, even with complex medication schedules, such as those found in oncological therapy, correct intake according to the therapy plan improved and higher adherence to therapy achieved. This also protects, for example, elderly people with dementia or chronically ill patients with multiple medication regimens from taking the wrong medication. In addition, the blisters are easy to open, which is particularly beneficial for patients with limited mobility of the hands.

Medication supply can be handled more economically and safely thanks to the blister dispenser. The sachets are individually printed with the batch information and instructions for taking the medication correctly. In this way, the patient knows exactly what to do, and complete and transparent traceability is ensured.

„We speak our customers’ language and know their tasks.“

Dr. Marco Münchhof, Executive Board Eckelmann AG

When it comes to customized control equipment, Eckelmann becomes the customer’s solution partner. Specialized knowledge makes the difference: from application development to hardware development and user interface development to cloud solutions.

Based on this extensive experience and the existing solution modules, new customer products are created in a short time, in which automation contributes significantly to value creation. Developments in the medical technology environment are also possible thanks to IEC 13485 certification.

We do not supply components, but solutions

Eckelmann’s range of services includes not only its own standard automation technology components such as control and drive technology, industrial PCs, safety and image processing, but also customer-specific hardware and software development. The offer is completed by in-house hardware production.

Particularly in times of chip shortages and fragile supply chains, the close proximity of development and production allows the company to react quickly to problems in the supply chain.

The demonstration of the new blister machine with all its functionalities attracted a great deal of interest at trade shows even before the actual market launch. The corresponding hardware and software tests took place well in advance of the series launch. This enabled a short time-to-market to be achieved.

