



AUTOMATED SMALL PARTS WAREHOUSE AT HÖRMANN RETROFIT AND CONTROL SYSTEM MODERNIZATION

Rising demands for throughput, availability, and transparency are challenging existing automated storage and conveyor systems. Facilities with a high variety of load carriers and close integration into production, in particular, require a control architecture that is flexible and maintainable over the long term.

For Hörmann KG Antriebstechnik at its Steinhagen site, this meant modernizing a central automated small parts warehouse without disrupting ongoing operations. The goal was to safeguard system performance, extend the facility's service life, and prepare it for future requirements.

Project-Specific Challenges

- Modernization of a central AS/RS during live operation
- High variety of totes and carton formats
- Integration of storage, order picking, and production
- Replacement of existing control technology without structural modifications
- Reduction of cycle times despite increasing performance demands
- Future-proof design of the control and IT architecture
- Ensuring high system availability throughout implementation

From Retrofit to a Future-Ready System Architecture

The objective of the project is to technically modernize the existing facility without fundamentally changing its structure.

At its core is an integrated retrofit approach covering mechanics, electrical systems, controls, and system logic. EPG Consulting developed a modernization concept that includes tote conveyor technology, stacker cranes, picking workstations, and the connection to production. A key element is the replacement of the existing control landscape with new PLC systems, combined with the introduction of a cloud-based WCS architecture.

The Project: Retrofit of the AS/RS at the Steinhagen Site

The automated small parts warehouse in Steinhagen forms the logistical backbone of Hörmann KG Antriebstechnik. The facility comprises eleven storage aisles, two of which feature double-deep storage, providing capacity for up to 18,640 storage locations. Standardized plastic totes as well as various carton formats are stored, with a maximum weight of 50 kg. This variety requires coordinated transport and control strategies in close interaction with production and eleven picking stations. As part of the retrofit, the entire tote conveyor system is being modernized. New PLC controls replace the existing systems, ensuring a stable connection between the AS/RS, picking operations, and manufacturing.

Project Components at a Glance

1. Retrofit and Modernization Concept

Comprehensive analysis and planning for upgrading the AS/RS, conveyor technology, and controls.

Benefit: Long-term technical future-proofing with minimal intervention in the existing facility.

2. New Control Logic

Development of a modern material flow and control logic with intelligent prioritization and route optimization.

Benefit: Reduced cycle times and more stable processes, especially in dual-cycle operation.

3. PLC Modernization

Replacement of existing controls with new PLC systems for conveyor technology and production disposal.

Benefit: Higher availability, improved maintainability, and long-term spare parts security.

4. Cloud-Based Warehouse Control System

Implementation of a fully cloud-based WCS as the central control instance.

Benefit: Centralized IT structure, location-independent access, and high scalability.

5. Emulation and Virtual Commissioning

Simulation and testing of material flow strategies prior to physical implementation.

Benefit: Reduced risks, shorter commissioning times, and greater planning reliability.

6. Integration of Camera Systems

Retrofitting existing stacker cranes with modern camera systems.

Benefit: Increased transparency and more precise process monitoring.



HÖRMANN KG ANTRIEBSTECHNIK

Manufacturer of drive and control solutions

“Especially in a retrofit project of this scale, it is crucial to have a partner who understands our existing processes and develops the modernization together with us. EPG Consulting combines technical expertise with a clear focus on practical solutions for ongoing operations.”

- 11 aisles in the automated small parts warehouse
- Up to 18,640 storage locations
- Double-deep storage in two aisles
- 11 picking stations with pick-and-pack equipment
- Average daily throughput of approx. 13,500 pick lines

Flexible, High-Performance, Future-Proof

The retrofit of the automated small parts warehouse is consistently designed for long-term performance and adaptability. The new control architecture enables dynamic prioritization of material flows, early identification of bottlenecks, and the ability to meet future requirements without major system replacements.

By combining cloud-based control, modern PLC technology, and virtual commissioning, Hörmann is establishing the foundation for stable, scalable intralogistics that remains reliable even as volumes and complexity continue to grow.

Learn More About Retrofitting

Discover further details on planning and implementing your retrofit project. Scan the QR code to gain insights into technology, processes, and control architecture.

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