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Automated. Practical. Good.

Jungheinrich optimises transport logistics at Alfred Ritter GmbH & Co. KG

- **Approximately 90 per cent of ground transport automated – stable processes at high throughput**
- **Seamless interaction between mobile robots, manual narrow-aisle trucks and intelligent software in mixed operation**
- **Innovative “handshake” process ensures safe gear changes and maximum operational and process reliability**

Jungheinrich has implemented a high-performance, semi-automated material handling solution for chocolate manufacturer Ritter at its external warehouse in Dettenhausen. The combination of four EKS 215a mobile robots, manual EKX and EFX narrow-aisle trucks, and intelligent control software automates around 90 per cent of ground transport and ensures an efficient, safe material flow for approximately 37,000 pallets per year.

Hamburg/Dettenhausen – For four generations, Alfred Ritter GmbH & Co. KG has produced chocolate for customers worldwide under the brand name Ritter Sport. All raw materials and packaging materials – from hazelnuts, almonds and marzipan to biscuits – are delivered from the external warehouse in Dettenhausen to the nearby plant in Waldenbuch. In order to meet the increasing demands for availability, speed and safety, Ritter expanded its warehouse and opted for a scalable, semi-automated solution.

“Jungheinrich vehicles are a great help to us – they handle around 90 per cent of our ground transport,” explains Daniel Vrbán, site manager at the Dettenhausen warehouse of Alfred Ritter GmbH & Co. KG. “The combination of manual and automated technologies works



extremely well. The simulation in advance and the exchange of experiences during operation particularly helped us to further optimise our processes. We would choose Jungheinrich again anytime.”

Mobile robots handle up to 60 transport tasks per hour

At the heart of the solution are four EKS 215a automated guided vehicles (AGVs) with lithium-ion technology. Thanks to warehouseNAVIGATION, they navigate precisely through the warehouse and complete up to 60 transport tasks per hour. Two automatic charging stations with a capacity of 300 amps ensure short charging cycles and high availability in multi-shift operation.

The AGV fleet is supplemented by EKX 516k and EFX 413 manual narrow-aisle trucks. Together, they form a continuous material flow chain that is orchestrated by the Jungheinrich Logistics Interface. The system controls the mixed operation of humans and machines, coordinates gear changes, and prevents collisions by means of an intelligent traffic light system.

One particular challenge was posed by the handling of big bags that protrude up to 15 centimetres beyond the edges of the pallets. To manage this, Jungheinrich developed project-specific control modifications and special spacing solutions to ensure damage-free transport.

Innovative “handshake” process for maximum operational reliability

Jungheinrich implemented a special “handshake” process to ensure smooth cooperation between automated and manual vehicles. When narrow-aisle trucks signal a lane change, all mobile robots are automatically guided out of the area and only released again once the forklift truck has returned to its lane. This ensures that the material flow remains protected and stable at all times.

“What makes this project special is the interaction between narrow-aisle trucks and mobile robots, including the specially developed handshake. The system significantly increases process reliability,” says Hennes Fischbach, project manager at Jungheinrich. “The engineering composition is simply a joy to behold, and it fills me with pride to see it in action.”

Full-service, future-proof complete solution

Ritter is also opting for a five-year full-service contract, which ensures fast response times and high system availability. The contract includes remote support via a dedicated hotline and close technical support from the highly qualified Jungheinrich service network. If necessary, a technician will be on site within four hours — vital for maintaining around-the-clock operation.

With the new facility, Ritter has expanded its storage capacity, increased efficiency and laid the foundation for further growth. Thanks to its scalable architecture, the system can be expanded at any time, either by adding additional mobile robots or by automating more storage areas.

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About Jungheinrich:

As one of the world's leading providers of material handling solutions, Jungheinrich has been advancing the development of innovative and sustainable products and solutions for material flows for more than 70 years. As a pioneer in the sector, the family-owned listed business is committed to creating the warehouse of the future. In the 2024 financial year, Jungheinrich and its workforce of around 21,000 employees generated revenue of €5.4 billion. The global network comprises 12 production plants and service and sales companies in 42 countries. The share is listed on the MDAX.