

CASE STUDY

Farming for Agriculture

Dematic automates Röthlein Logistik's spare parts warehouse



Röthlein Logistik GmbH
Schweinfurt, Germany

- ▷ **Röthlein Logistik GmbH specialises in spare parts logistics in agriculture and — in case of an emergency — even delivers the required parts to its customers within just one hour. In 2016, the logistics service provider commissioned a 14,000 square metre multi-user facility in Röthlein near Schweinfurt for this purpose. There, the company stores spare parts while simultaneously processing all e-commerce orders. To ensure that all components reach the customer within the shortest possible time, intelligent automation specialist, Dematic, provided the logistics centre with a customised automation solution.**

INITIAL SITUATION

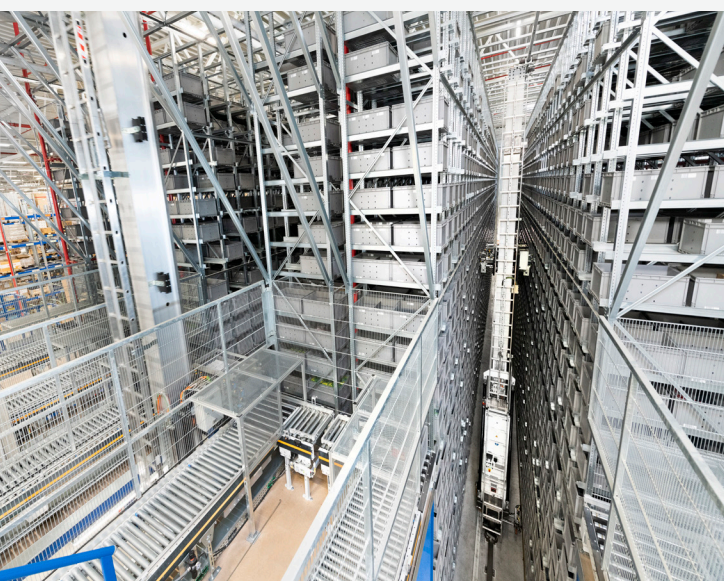
Fast response times with precise delivery around the clock — spare parts logistics is one of the most demanding tasks for a logistics service provider. It is a true balancing act: Companies must always maintain an equilibrium between fast deliveries and the costs of storing and shipping components. This is the challenge for Röthlein Logistik GmbH, a joint venture between BayWa AG and Schäflein AG.

When a spare part is needed, it creates a critical situation for a farmer. Machines come to a standstill and business is interrupted. Every minute costs money, so the delivery of spare parts is always a race against time. Agriculture is more seasonal than almost any other industry and dependent on external conditions such as the weather, so even short delays can determine the success or failure of a harvest. Every machine has to be operating at top performance. Röthlein Logistik has therefore made it its business to deliver spare parts for the agricultural industry as quickly as possible.

The assortment of spare parts that Röthlein Logistik provides ranges from rings weighing only a few grams to the cutter bar of a combine harvester weighing several tonnes. To store the approximately 96,000 different spare parts properly, Röthlein Logistik has integrated a wide variety of storage types into its multi-user system. The bulk of the storage space is taken up by a shelf storage system with 60,000 storage locations and an automatic small parts warehouse (miniload) with 18,000 bins. In addition, a multishuttle system offers space for 4,560 totes, a 10.5 metre tall high-bay warehouse for pallets has 6,000 storage positions, and a honeycomb warehouse another 10,000. Slightly less large, but no less important, are the pane warehouse with 800 storage positions, a cantilever warehouse with 200, a cable drum and cut-to-length warehouse with 32 and 400 respectively, and a hazardous materials warehouse with 360. In addition, there is a block storage area of 1,500 square metres.

TECHNICAL DATA

- **Automatic small parts warehouse with 3 RapidStore ML10 miniloader and 18,000 bin locations**
- **Multishuttle buffer storage system with 20 static shuttles and 4,560 storage locations**
- **6 goods-to-person picking stations with pick-by-light systems**
- **12 combined workstations for incoming and outgoing goods**
- **9 mobile workstations**
- **Modular Conveyor System (MCS)**
- **Conveyor technology for totes and pallets as well as an electric overhead conveyor**
- **SAP Extended Warehouse Management (EWM) software with material flow system (MFS) installed without middleware**



THE SOLUTION

Automation technology from Dematic ensures that the material flow at Röthlein Logistik's logistics centre operates smoothly. The customised solution consists of a three-aisle miniload AGL with three Dematic Miniloader for four-deep tote storage and retrieval. In addition, there is a Dematic Multishuttle system with 20 shuttles that serves as buffer storage. With their high speed operation, the shuttles can store and retrieve up to 1,200 items per hour.

“With Dematic’s automation solution, we have increased our goods turnover fourfold”.

Michael Hunstock
Head of the Logistics Centre, Röthlein Logistik GmbH

Six goods-to-person picking stations equipped with a pick-by-light system and 12 combined workstations for incoming and outgoing goods complete the system. For order picking in the manually operated warehouse areas, Dematic has also installed nine mobile workstations. The automated Dematic Modular Conveyor System (MCS) connects the warehouses. “With the automation solution from Dematic, we have increased our goods turnover fourfold,” sums up Michael Hunstock, head of Röthlein Logistik's logistics centre. Today, an average of 1,000 items are handled per day in incoming goods and as many as 5,900 in outgoing goods. Previously, many processes were carried out manually — for example, in two external warehouses in Schweinfurt, which Röthlein Logistik has now integrated into the multi-user system.

SERVICE

According to Hunstock, one of the main reasons for automating the material flow was to be able to carry out spare parts deliveries faster and more accurately. "Dematic supplied us with the complete technology as a single source," he says. "In addition to the price-performance ratio, we were particularly convinced by Dematic's comprehensive and reliable service offering." After all, Röthlein Logistik itself guarantees its customers a 24-hour service, seven days a week. If an order is placed by 4 pm, it will leave the logistics centre on the same day. For collective orders with a larger volume, the company agrees on a fixed delivery date with the customer in advance. "Our immediate delivery capability is 97.8 % thanks to our broadly diversified stock," Hunstock tells us. "We also expect this customer and service orientation from our service providers — with Dematic it is guaranteed."

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Today, up to 2,230 packages leave the logistics centre in Röthlein every day. For fast delivery to the customer, the spare parts logistics company uses various methods: overnight express, forwarding and parcel delivery as well as couriers. Self-collection is also possible. "This means we are prepared for every request and every customer wish," says Hunstock.



SOFTWARE

The linchpin for the performance of the automation solution is the appropriate software. At Röthlein Logistik, Dematic installed the SAP Extended Warehouse Management (EWM) software with Material Flow System (MFS) for controlling the system and the entire material flow, which is directly connected to the mechatronics without middleware.

All automation systems are digitally networked. Röthlein Logistik has its own control tower for the entire monitoring and control of the order flow. With the help of the software, Röthlein Logistik employees can ensure that all processes are optimally coordinated during storage and transport of the goods. "Our concept provides for proactive supply chain management," Hunstock emphasises. "The software solution from Dematic supports us in this." For example, it automatically provides information about warehouse use and helps monitor all intralogistical processes.

DEMAC SAP PORTFOLIO

Dematic's consulting focus is on the implementation of SAP EWM and SAP LES. This is independent of whether it is a pure IT project (stand-alone IT), the modernisation of an existing facility, or the construction of a new logistics centre. Based on proven and innovative components, Dematic develops logistics solutions that are precisely tailored to customer business processes.

Automated logistics systems are designed according to customer requirements for an average use of 10 to 15 years. If you are looking for a new solution, you should carefully check which of the concepts offered is actually future-proof. Dematic offers modern SAP logistics solutions that will meet your requirements now and tomorrow.

Dematic specialises in seamlessly integrating all systems — from the host to the conveyor technology — into an overall system (as well as implementing special features such as triple-deep storage).

- The **partnership between SAP and Dematic** gives you a head start in SAP know-how.
- Dematic knows at an early stage in which direction SAP is developing and implements **future-oriented solutions** for you.
- Dematic has implemented **numerous SAP logistics projects** in both manual and highly automated environments and therefore has the best prerequisites for competent SAP consulting for your logistics.



RESULT

Röthlein Logistik is prepared for growth and more extensive material handling. The facility's location in Röthlein offers enormous potential for expansion. In the next stage, the plan is to extend the logistics centre by a further 9,000 square metres. "We would then have the possibility to install a high-bay warehouse there," says Hunstock. Last year, Röthlein Logistik already put an additional 10,000-square-metre tyre warehouse into operation at the location.

CUSTOMER BENEFITS

- **Fourfold increase in goods turnover and higher delivery accuracy**
- **Immediate delivery capability of 97.8 % and higher customer satisfaction**
- **Integration of two branch offices into the new, automated warehouse**
- **Software allows monitoring of the processes and provides information on warehouse use**
- **Automatic, store-specific construction of mixed pallets for replenishment**
- **Room for future growth and easy expandability**



But Röthlein Logistik is not only prepared for further growth in terms of space. Dematic's automation solutions can also be easily expanded during ongoing operations. For example, the miniload can be expanded by three aisles in just a few steps. "The scalability of the Dematic systems gives us the opportunity to adapt precisely to the requirements of our business," Hunstock sums up.

ABOUT THE CUSTOMER

Röthlein Logistik GmbH is a joint venture of BayWa AG and Schäfflein AG and one of the most efficient service providers in spare parts logistics, tyre logistics, and logistics for trade and e-commerce in Germany. As a full-service provider, Röthlein Logistik serves the entire spectrum of logistics — core logistics tasks in warehousing and transport as well as logistics-related additional services and service functions.

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