

CASE STUDY | FIRE EQUIPMENT SUPPLIER

Firefighters save lives. But they need to rely on first-class equipment and firefighting technology to do so. This equipment and technology is produced by the Austrian Rosenbauer Group and delivered all over the world. The quality requirements are extremely high, just as they are for the company's own intralogistics processes. As a C-parts supplier and integration partner, Kellner&Kunz has continued to perfect replenishment in production with the help of a Kathrein RFID infrastructure.



ROSENBAUER: ZERO-DEFECT SOLUTION IN C-PARTS MANAGEMENT

> INDUSTRY | FIRE EQUIPMENT SUPPLIERS

About Rosenbauer International AG

- > Biggest fire equipment supplier in the world, with HQ in Austria
- > Manufactures vehicles, extinguishing technology, equipment and much more
- > Turnover €1,044.2 million (2020)
- > Represented in approx. 120 countries

Key Benefits

- > Disruption-free production
- > Automated, secure Parts replenishment
- > Zero-defect solution
- > Meeting delivery commitments to end customers

> KATHREIN PRODUCTS

- > RAIN RFID Reader RRU 4500
- > RAIN RFID Antenna WIRA-30-circular-ETSI
- > Kathrein CrossTalk

> PARTNER BENEFITS

- > Integration of RFID replenishment solution with existing systems via Kathrein CrossTalk
- > RFID Gates with direction recognition

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The Kathrein RFID gates detect the direction in which the KLT-boxes are moving. That lets us know precisely which are empty and which are filled. Human error is ruled out.

Ing. Harald Dobesberger-Hofer, Kellner&Kunz

Undesirable production pauses

To supply the production lines in its plants with the corresponding C-parts, Rosenbauer uses RFID-tagged KLT boxes from RECA. To ensure seamless replenishment, these KLT boxes are to be sited in a permanent circuit between the C-parts warehouse at Kellner&Kunz and the production line. The material flow at Rosenbauer, however, was disrupted when empty KLT boxes remained at the workplace and were not returned to the nearest RFID collection box. The unfortunate consequences: No C-parts or too few of them were delivered to the line, and replenishment consequently had to be triggered manually. That cost time and money. A situation that Rosenbauer's management urgently wanted to remedy by bringing in a zero-defect solution.

From PoC to a RFID solution for better process quality

The partners Kathrein and Kellner&Kunz had already focused on optimizing the processes by extending the use of another RFID solution in the joint proof of concept, and so creating expectations of an error-free, automated replenishment. As soon as the employees on the production line use up all the C-parts from the RECA RFID KLT boxes, they begin to pack the empty boxes into an RFID collection box¹, the so-called RECA RFID iBox. The tigger train driver transports all the boxes of this iBox and can pick up other empty KLT boxes along the route. KLT boxes that the production workers accidentally failed to place into the iBox are now also taken into account. These can be detected along the transport route in the same way as KLT boxes stacked inside each other. The RFID gate eliminates the previous sources of error and ensures higher process quality.

Kellner&Kunz implement the zero-defect solution

Two production sites now benefit from this Kellner&Kunz replenishment system that has more than 15,000 KLT boxes. The Kathrein partner solved the challenge of the RFID reading processes in the drive-through area by deploying Kathrein antennas on both sides. When the tigger train driver drives through the RFID gate with the empty KLT boxes at a speed of 10–20 km/h, an average of 200 KLT boxes are reliably detected. The direction of travel is also recognized. This is important for clearly distinguishing empty from filled KLT boxes while they are being transported.

Integration costs reduced by using Kathrein CrossTalk

Kathrein's software CrossTalk platform offers a huge advantage for both Rosenbauer and Kellner&Kunz: A swift integration of RFID hardware into existing systems. Normally, RFID-generated data cannot be transferred 1:1 to other systems, e.g. the ERP. They must first be converted to standard formats. CrossTalk takes over this task quickly and cost-effectively by using standardized preconfigurations for setting up the readers, the reading process, the transfer to other data formats, and interfaces to further systems.

Summary

The automated replenishment through the deployment of Kathrein RFID antennas, readers and CrossTalk has proven persuasive for Manuel Schwarzbauer, Head of Logistics Plant 1 at Rosenbauer: "Today, we no longer have unwanted production breaks due to missing C-parts. The boxes deliver reliably, fully, and just-in-time. The zero-defect solution has also given us a read accuracy of near 99%."



Figure: Supply with increased process quality. Empty RECA RFID KLT boxes are recognized as such and clearly read by the Kathrein RFID gates in only one direction of travel. They are thus automatically distinguished from the full boxes.