

Automatic Vehicle Locking System

Smart locking mechanics for cargo bikes



Photo: Götze GmbH

Project goal

- Implementation of a secure and efficient locking solution for urban package delivery

Challenge

- High number of locking cycles or battery replacement no more than once a year
- Quick and secure without a key

Solution

- Battery-operated RFID locking solution with emergency release for swap bodies

Benefits

- Time savings through easy handling
- Enhanced security during pickup and delivery
- Quick replacement of RFID card in case of loss

Save time, increase security, and automate usage

The Fahrlogistik Götze GmbH, located in 09405 Zschopau, is a reputable logistics company specializing in the punctual and efficient delivery of packages and goods. According to Managing Director Jan Götze, a significant challenge lies in urban delivery, where cargo bikes serve as an environmentally friendly and flexible alternative.

In 2023, the Götze company introduced cargo bikes for inner-city operations. The respective swap bodies would be delivered to 'Microhubs' and then picked up by cargo bikes from there. An innovative locking solution was implemented for this purpose. Instead of conventional keys, the company opted for an intelligent RFID-based locking mechanism from deister electronic for their cargo bikes. Jan Götze explained that the decision for this system was made due to its self-sufficient power supply in the containers, the ability to perform approximately 60,000 locking cycles with one set of batteries, an emergency



Photo: Götze GmbH

release function, and easy installation capability. Especially during winter months and when wearing gloves, it facilitates for riders to open the boxes with an RFID card, while ensuring that the boxes remain securely locked at all times. Additionally, lost keys had frequently caused issues in the past. The vehicle couldn't be used as the entire lock had to be replaced. By using RFID, the cargo bike remains operational and productive.

The partnership between Götze GmbH and deister electronic represents a groundbreaking step towards secure and efficient solutions for urban logistics. Innovative technology has been utilized to ensure the secure storage of packages in cargo bike containers.



1 RFID Reader



2 Locking Element



About Götze Fahrlogistik

The specialists at Fahrlogistik Götze are a dedicated and cohesive team with over 30 years of experience. We offer innovative logistics solutions with a focus on vehicle management and transport optimization. Our wide range of services extends from vehicle identification to warehouse logistics. Our dedicated team relies on modern technologies and an environmentally friendly vehicle fleet to provide customer-oriented solutions for efficient and sustainable logistics.



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About deister electronic

For over 40 years, deister electronic has been an internationally modern and sustainably managed family-owned company, known for innovative products and solutions in the field of identification and security for people, equipment, and buildings. Our product portfolio is used for the management of workwear and valuables, vehicle identification, key management, access control, as well as in logistics.



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