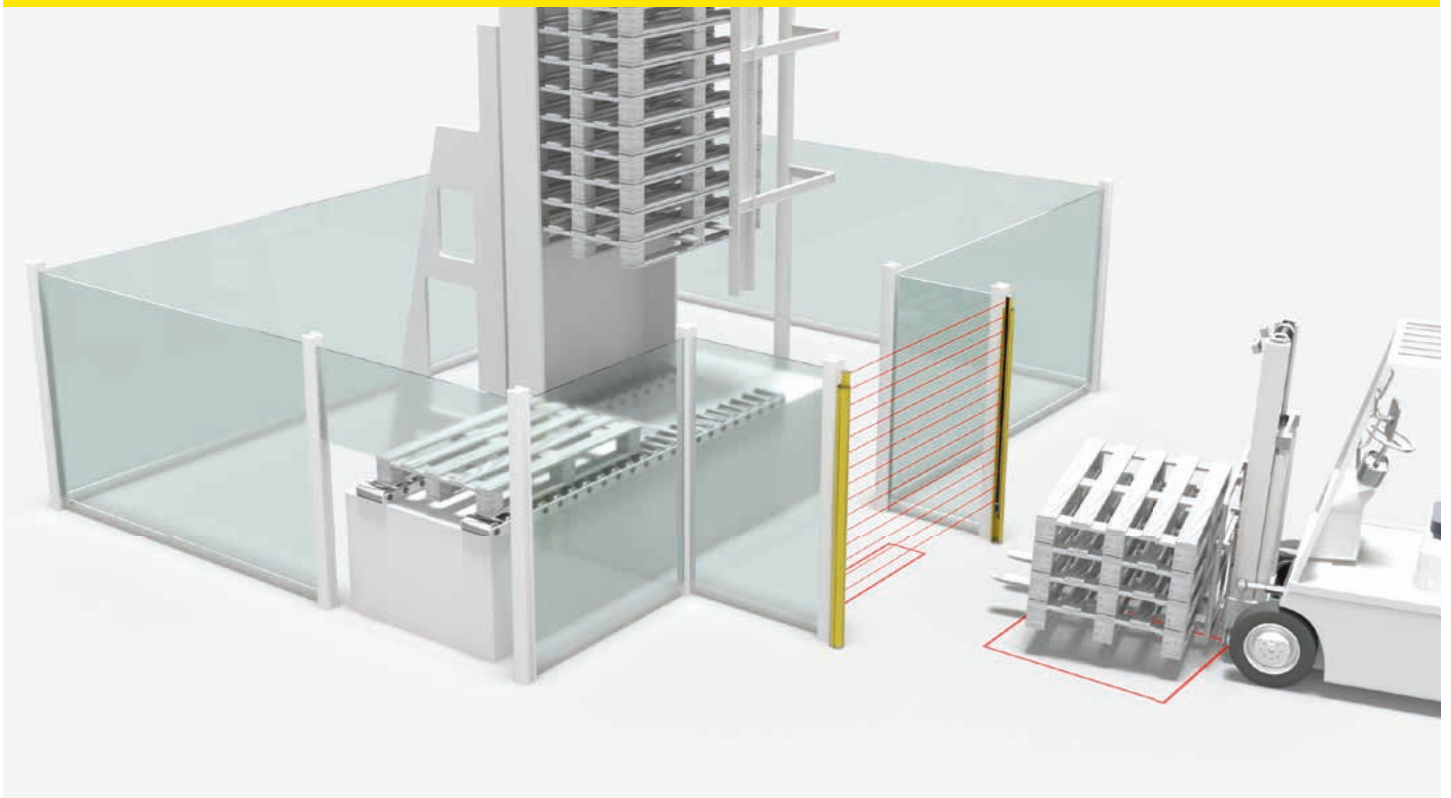


Safety Solutions

Access guarding on pallet magazines – with automatic restart

Safety at Leuze



Efficient material flow and maximum safety

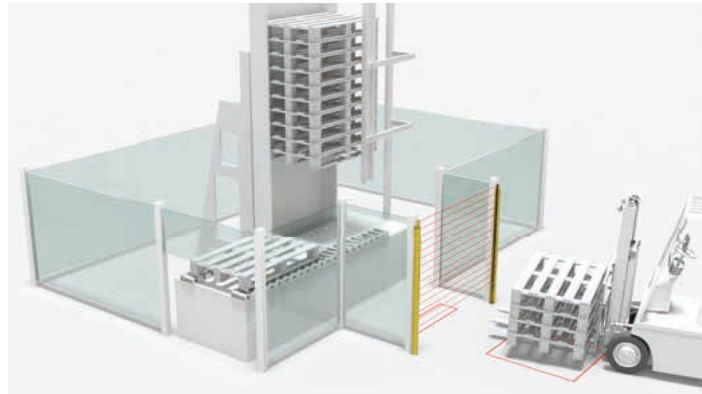
The increasing automation of machinery and systems places growing demands on the necessary safety concepts. Classic concepts, such as muting, are often pushed to their limits here. Our innovative safety solutions guarantee gapless safety, efficient material flow and high availability of your system, even with automated processes.

Pallet magazines are generally loaded using manually operated corridor supply vehicles – such as forklift trucks. Access guarding at the pallet magazine must ensure material transfer that is safe for the operator. Simultaneously

should reduce interruptions of the work process to a minimum. This challenge was also taken up by the standardization body of EN 415-4 (Safety of packaging machines - Part 4: Palletizers and depalletizers). The current draft of the standard describes a defined series of signals for initiating an automatic restart for this purpose. The safety concept of our safety solution based on the revised standard ensures optimum utilization of the pallet magazine and requires no manual operator interventions.

Access guarding on pallet magazines – with automatic restart

Requirement: Access guarding of the pallet magazine should prevent the entry of persons and simultaneously permit the entry of pallets by a forklift truck. After the forklift truck has again left the transfer area, restart should occur automatically to minimize the interruption of the work process.



Solution: The access area is safeguarded by a safety light curtain. In addition, induction loops are embedded in the floor in the areas in front of and behind the safety sensor. The safety system can thereby distinguish between forklift truck and persons.

Operating principle

Upon triggering of the safety light curtain, the work process of the pallet magazine is interrupted – regardless of whether a person or a forklift truck interrupted the protective field. If, however, the presence of a forklift truck is detected by the induction loops installed in the floor and if this then correctly executes the specified process sequence, the safety system initiates the automatic restart of the work process.

Tailored to your needs

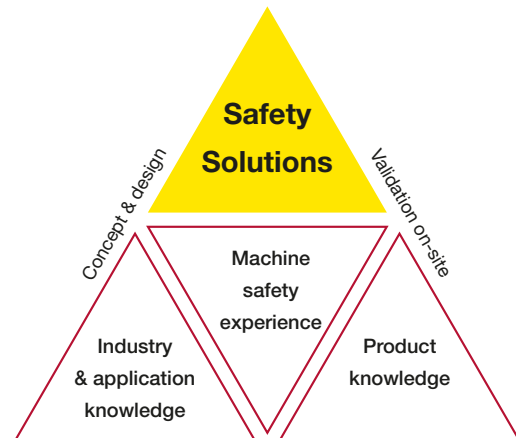
Our safety solutions are based on qualified safety concepts which, if necessary, can also be extended or created new. Every solution is individually tailored to your system layout and includes

- All necessary hardware and software components
- Engineering services, such as control programming and configuration according to project requirements
- Start-up support
- Validation of the safety function
- Full documentation



Advantages for you at a glance

- Optimum system utilization through automatic restart of the machine without manual operator interventions
- High reliability and availability
- Low service costs
- Optimum protection against manipulation
- Simple integration in the safety circuit of the primary control



System components and safety parameters

Safety sensor: MLC 500 safety light curtain, with device columns for floor mounting
Induction-loop set with evaluation unit
System control: MSI 400 safety control
Leuze safety program
PL d in accordance with ISO 13849-1, SIL _{CL} 2 in accordance with IEC 62061
2-channel safety output

Your partner for professional safety solutions

For more than 30 years, we have been supporting safety-related applications in different industries by offering a broad range of products. Our certified safety experts have extensive experience in the design of safety concepts and have detailed knowledge of current norms and standards. Benefit from our know-how: In projects, our knowledgeable teams accompany you from the gathering of the requirements to the safety acceptance. They make sure that our solutions meet your requirements and ensure that the projects run smoothly.

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