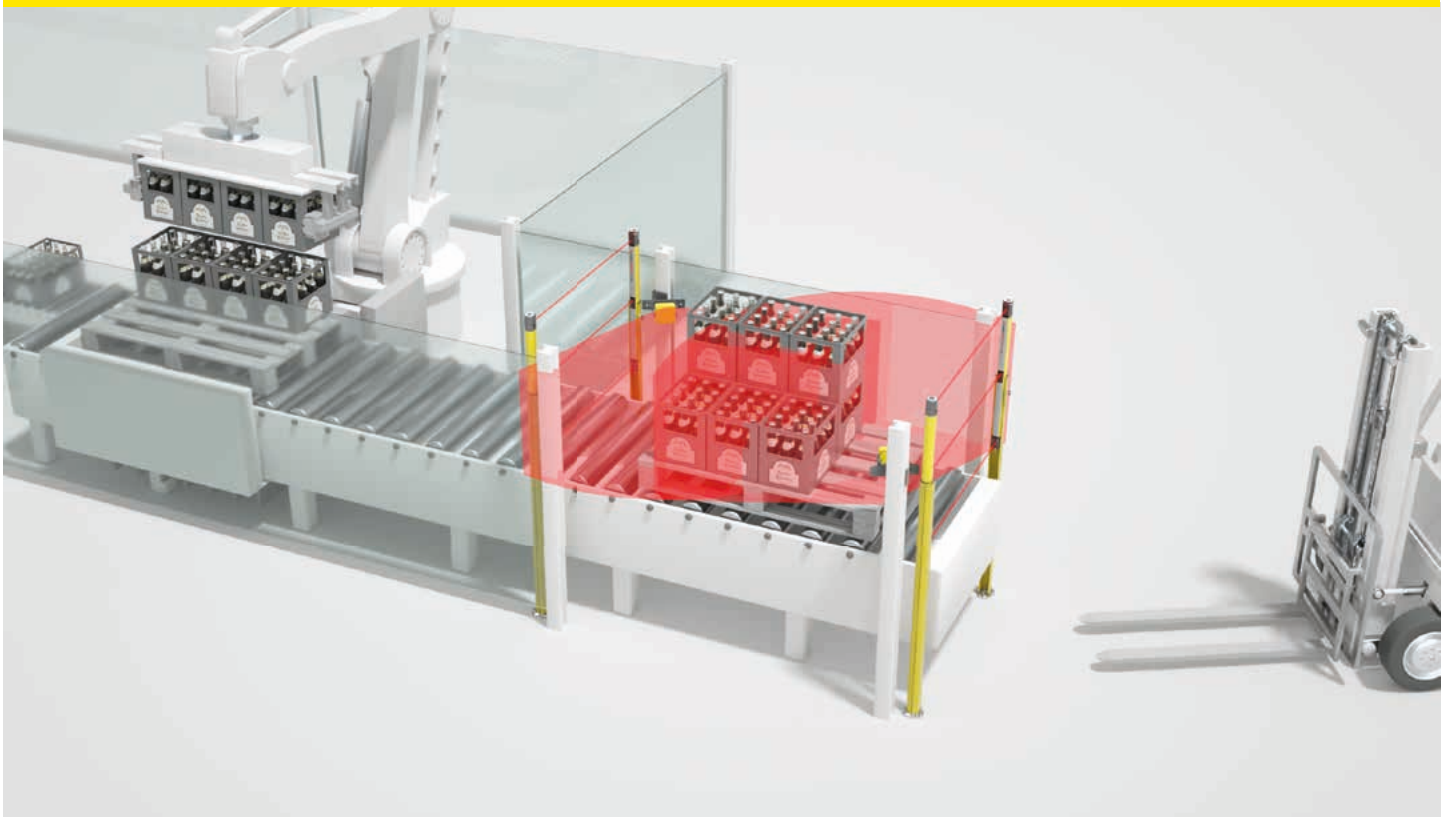


Safety Solutions

Access guarding at material transfer station

Safety at Leuze



Simple. Safe. Productive.

From risk assessment to validation: our safety solutions provide complete solutions for your systems. The innovative safety concepts of our expert teams ensure efficient material flow, gapless safety and high availability of your system. Even in applications where classic concepts are pushed to their limits. Always with legal certainty, CE certification and compliance with standards.

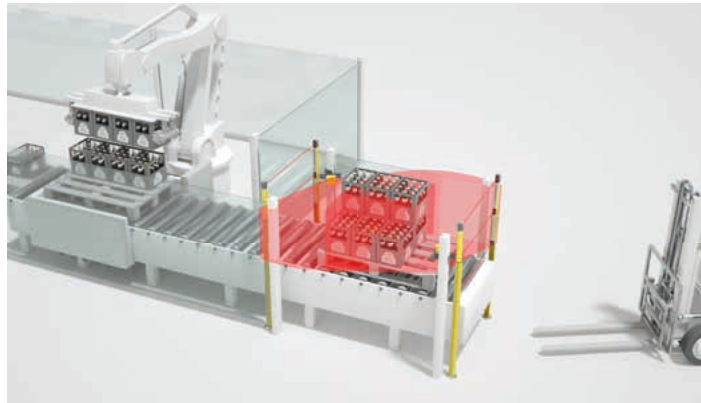
One challenge at material transfer stations is the reliable differentiation between people and material - regardless of the shape and size of the conveyed goods. While consistent

safety concepts can be found if the load is always the same, safety gaps can easily arise if the load changes or is incomplete. Often the safety concepts also require that the subsequent process must be stopped during the handover in order to guarantee the necessary protection of the operating personnel. This reduces the utilization and thus the efficiency of the system.

With its superior safety concept, the Leuze Safety Solution for material transfer stations offers the right solution for any load and guarantees best utilization of the safeguarded cell.

Access guarding at material transfer station

Requirement: The robot cell is fed automatically. The material is loaded onto the conveyor line, e.g. using a forklift truck, and then transported into the cell. Access to the cell must be safeguarded. To guarantee optimum capacity utilization of the robot cell, the safety concept must also allow uninterrupted operation of the cell during loading.



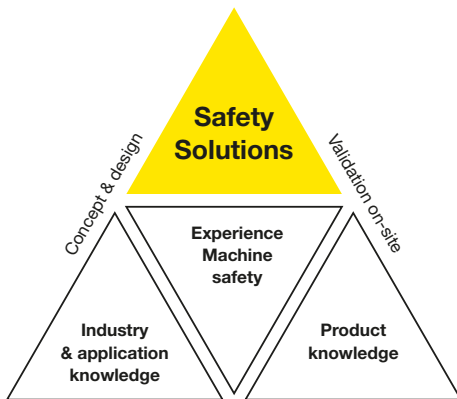
Solution: The loading area of the conveyor line is safeguarded at both the entry and exit side by multiple light beam safety devices. The area between the photoelectric sensors is monitored for the presence of persons by means of safety radar sensors.

Advantages for you

- Higher capacity utilization of the system through interruption-free operation of the robot cell, even during loading
- Infeed of transported goods of any shape or size thanks to an optimized safety concept
- Safe and reliable even under demanding conditions, e.g. with partly loaded or empty pallets
- Supports automatic starting of the conveyor line to improve efficiency and safety
- No operator action required
- No visual monitoring of the danger zone necessary

Working principle

After the safety sensor on the entry side has been interrupted and released again, the loading area is checked. Safety radar sensors monitor this area for presence of people. Only if no person has been detected in the loading area, the system releases the safety sensor on the exit side and the conveyed goods can be transported into the cell. The safety-related correct processing is monitored by the system. All necessary release signals for the implementation of automated loading processes are provided by the system as well.



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System components and safety parameters

- Safety sensors:
multiple light beam safety device MLD 500,
LBK safety radar sensors with controller
- System control: safety control MSI 400
- Leuze safety program
- PL e in accordance with EN ISO 13849-1,
SILCL 3 in accordance with IEC 62061
- 2-channel safety output, 2 signalling outputs

Your partner for professional safety solutions

For more than 35 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 designing safety concepts and comprehensive knowledge of the latest norms and standards.

In the projects, we accompany you from the risk assessment up to the safety-related acceptance. Our teams make sure that our solution meets your requirements and ensure that your project runs smoothly.

Complete solutions – Tailored to your needs

Our 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 PLC programming and configuration according to project requirements
- Comprehensive, CE-compliant documentation
- Start-up support
- Validation of the safety function



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