

## product data sheet

# LaseLCPS-3D-2D

## LOAD COLLISION PREVENTION SYSTEM 3D 2D

LaseLCPS-3D-2D is a combined 3D/2D measuring system for crane systems. It avoids collisions of containers in the container stack in the trolley travel direction and adjacent container stacks in the crane travel direction. Furthermore, it serves for low-noise and wear-reduced setting down of containers by means of the integrated soft-landing function.

### THE MEASUREMENT SYSTEM

The LaseLCPS-3D-2D system consists of a control cabinet with PC and software, a 3D laser scanner and a 2D laser scanner, which are mounted under the crane's trolley.

The two laser scanners formed two different scan planes, offset 90° to each other. The 2D scanner is primarily responsible for collision monitoring in the trolley-travel direction and the height profile. The 3D scanner is used to create a 3D profile used for collision avoidance with adjacent container stacks. The system records the position of the spreader or the height of the container at the spreader via the so-called spreader tracking function. The measuring system automatically decides whether there is a possible risk of collision. In addition, the topography of the stack, i.e. the height profile, is permanently measured. Based on this topographical information, collision points are automatically and dynamically detected and a surveillance cube is created, representing the virtual safety area in both cross travel directions.

LASE can also offer a SIL certified variant of the LaseLCPS-3D-2D.



Orthogonal 2D scan plane projection



Dynamic 3D surveillance cube

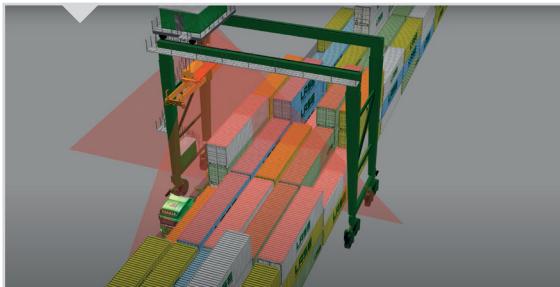
### THE FEATURES

- ✓ SIL-certified system available
- ✓ Height profiling of the container stack
- ✓ Spreader tracking

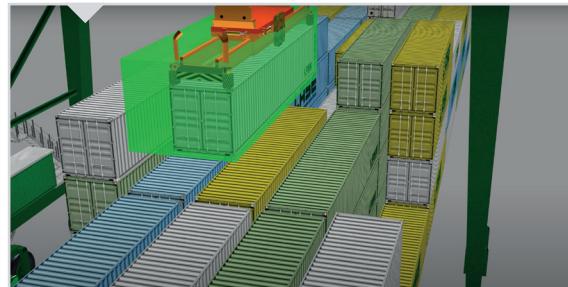
### THE BENEFITS

- ✓ Collision prevention in the stack in cross travel direction
- ✓ Collision prevention with adjacent containers in crane travel direction
- ✓ Soft landing function for noise- and wear-reduced setting down of containers

## THE FUNCTION PRINCIPLE



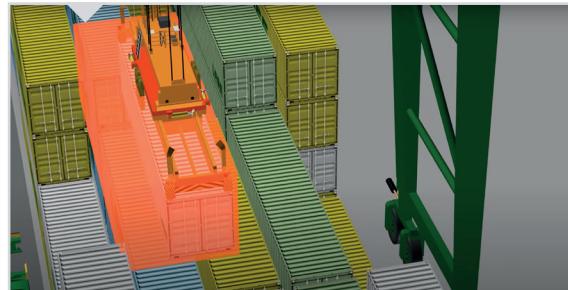
LaseLCPS-3D-2D detects surrounding containers and continuously monitors their position.



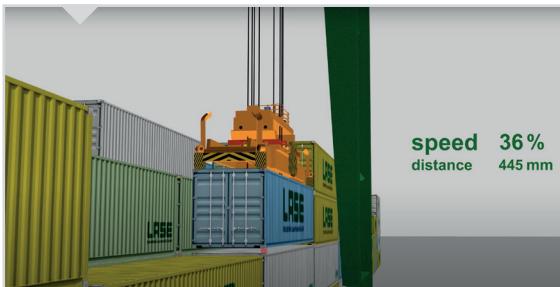
As soon as a container is moved, the system measures distances to surrounding objects.



The system warns of collisions due to insufficient height of movement.



Incorrectly positioned / shifted containers in the stack are also detected.



When setting down the container, the speed is reduced as the distance decreases.

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PRODUCT  
VIDEO



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