

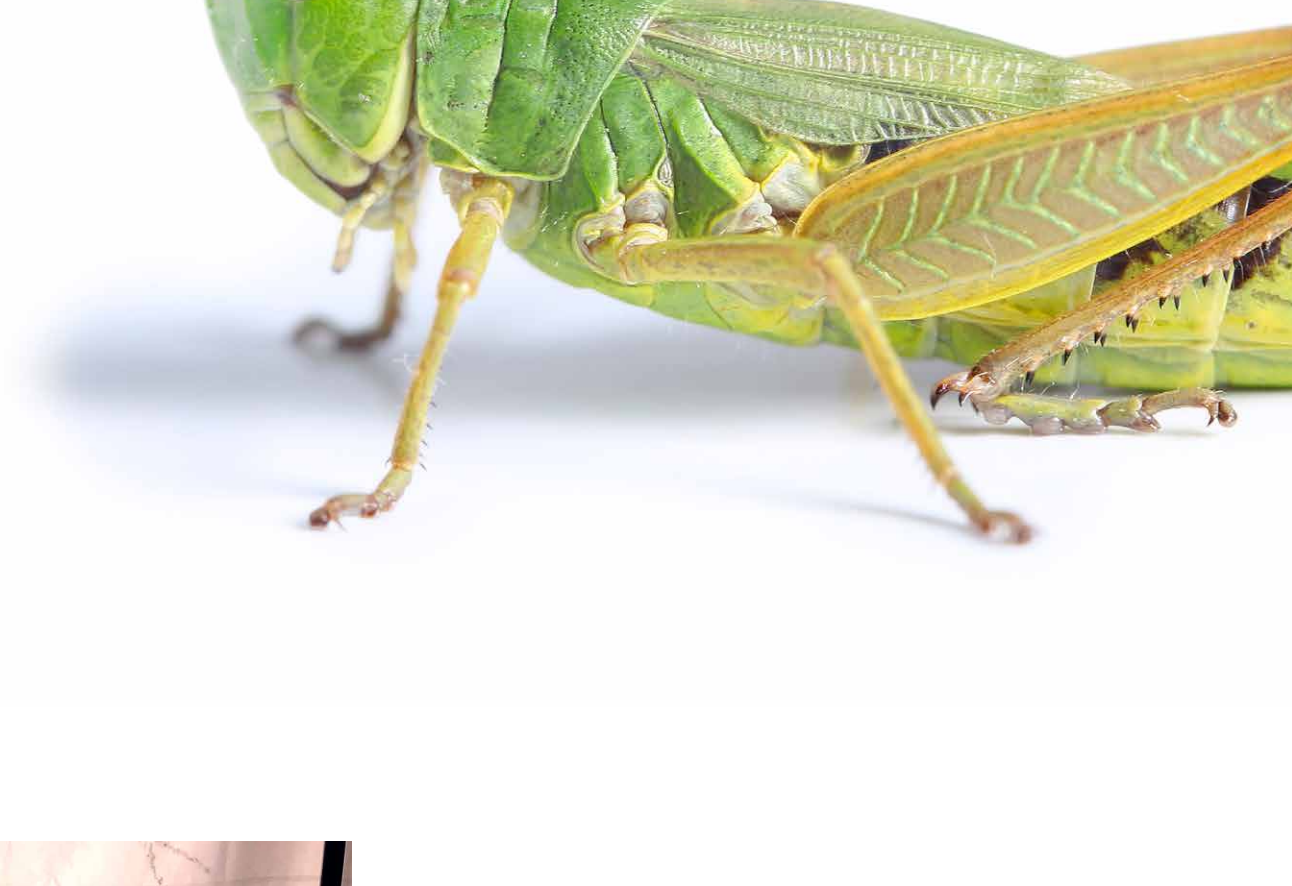
HOW DO crickets detect danger?

They have evolved small hairs that can **detect** the air current of a nearby frog opening its mouth.

Safety-Assist Retrofits

Laser-based crane adaptations allowing operators to detect dangerous objects and situations.

Safety. Evolved.



ADAPT AND THRIVE

Konecranes is the premier **port services** provider to brownfield terminal developments.

Our range of retrofit products will enable your fleet to adapt to a fast-changing environment.

Welcome to your **evolution**.

Small, incremental changes that enable existing fleets to continue to adapt and thrive.

AB

Any Brand

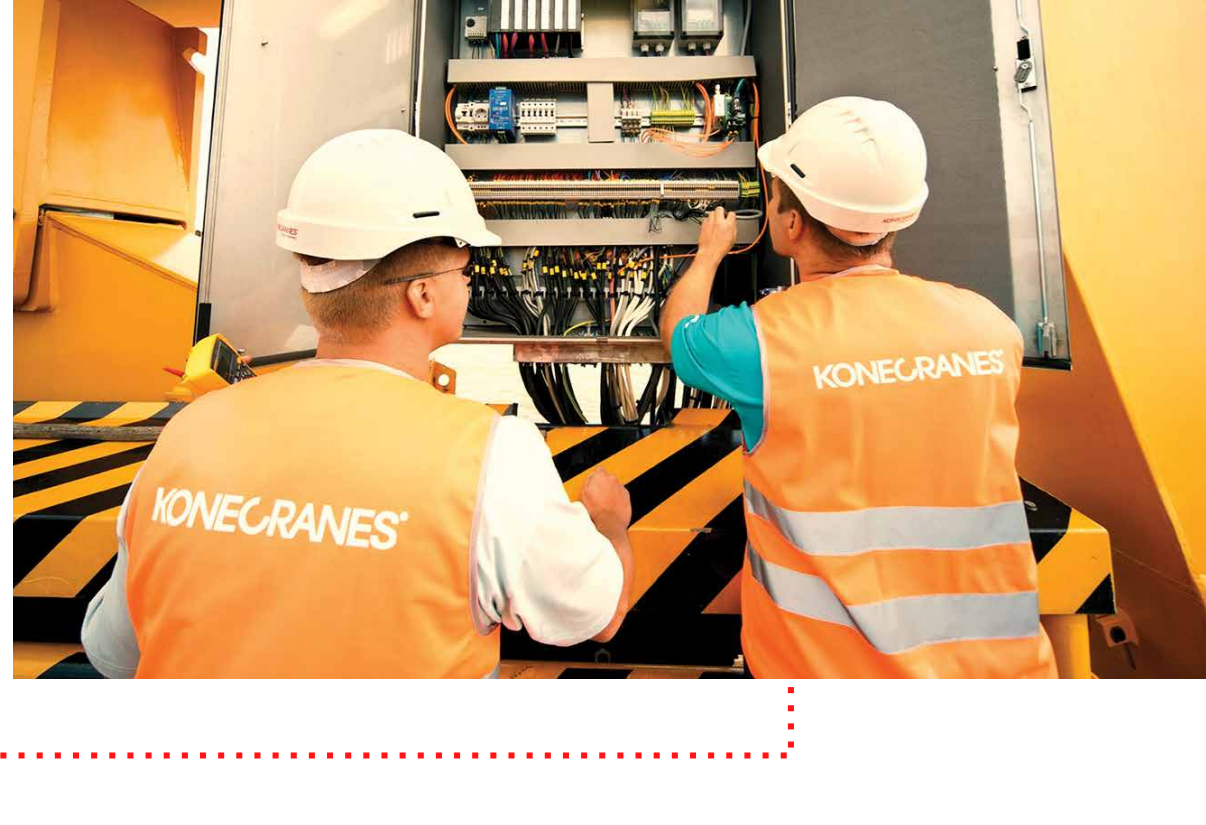
With some limitations these products can be retrofitted to any other crane brand.

QUICK AND EFFECTIVE

Each of these products uses almost the same technology and equipment.

The average time required to install a laser detection retrofit is 2-3 days onsite per RTG, **no matter how many products you choose**.

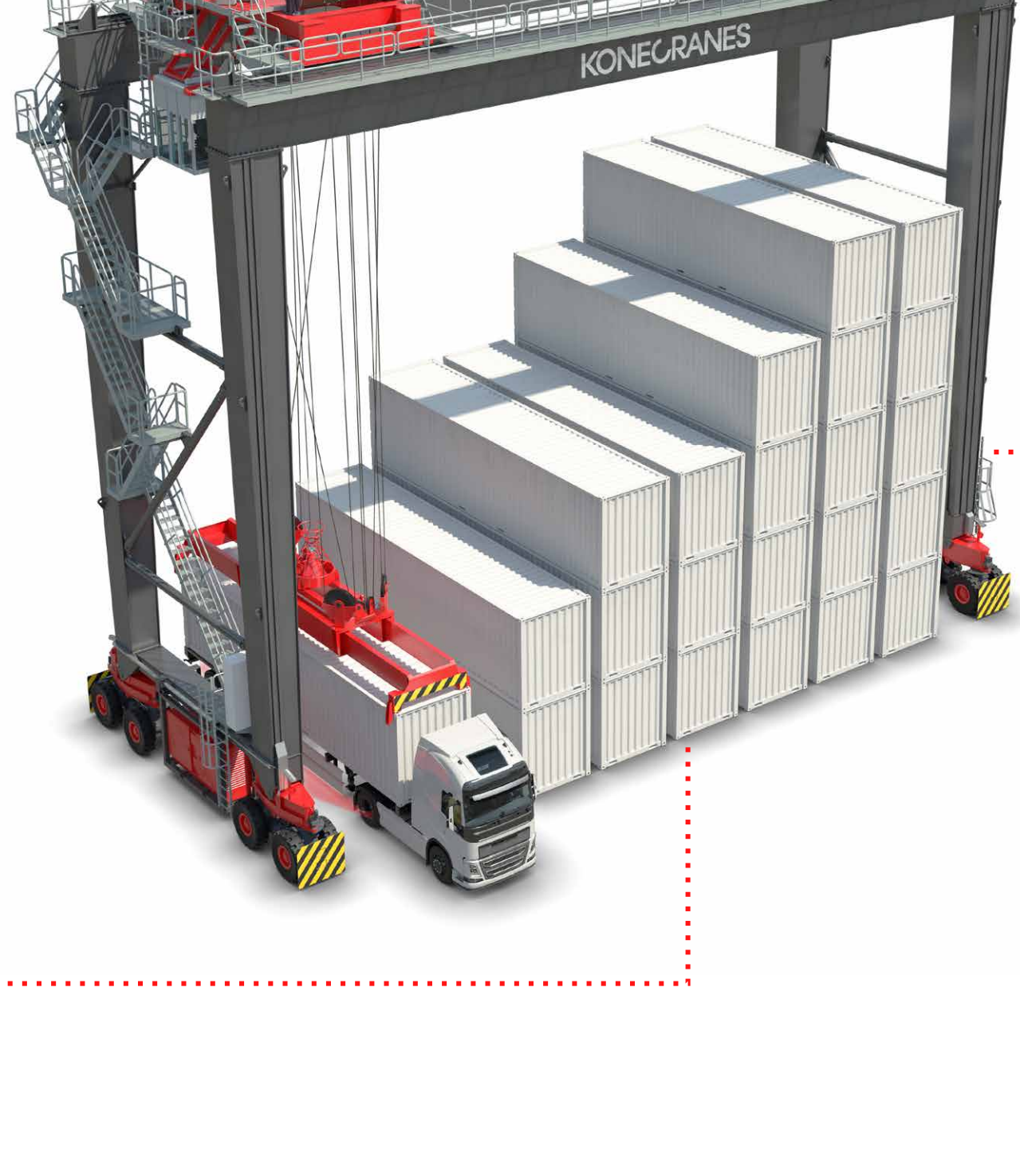
Get it all done, in one.



Truck Lift Prevention

Sensor technology at ground-level detects any truck/trailer lift, and immediately halts the hoisting action for improved safety in manual handling mode.

Works by detecting the trailer wheels

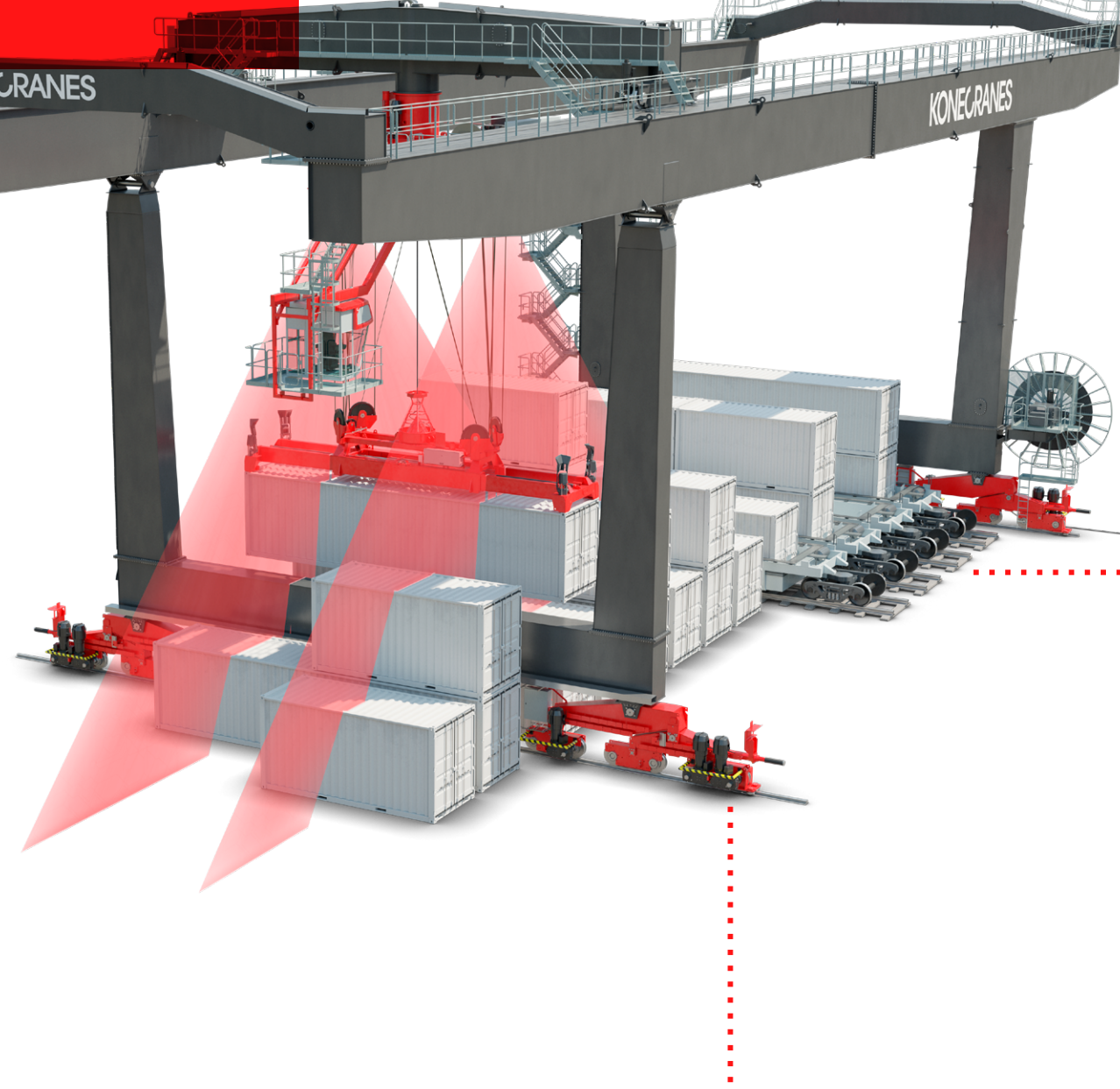


BENEFITS

- Prevents the lifting of a trailer by automatically and rapidly stopping the lifting motion when a trailer lift is detected
- Stops hoist automatically and smoothly
- Monitors the movement of the truck's tyres, most other brands only follow the gap between the container and truck tyres
- Saves significant time in resolving trailer/truck lift incidents
- Works with terminal tractor, road trucks or AGVs.

Stack Collision Prevention

Assists operators to lift, lower and place containers with a higher degree of safety and accuracy.

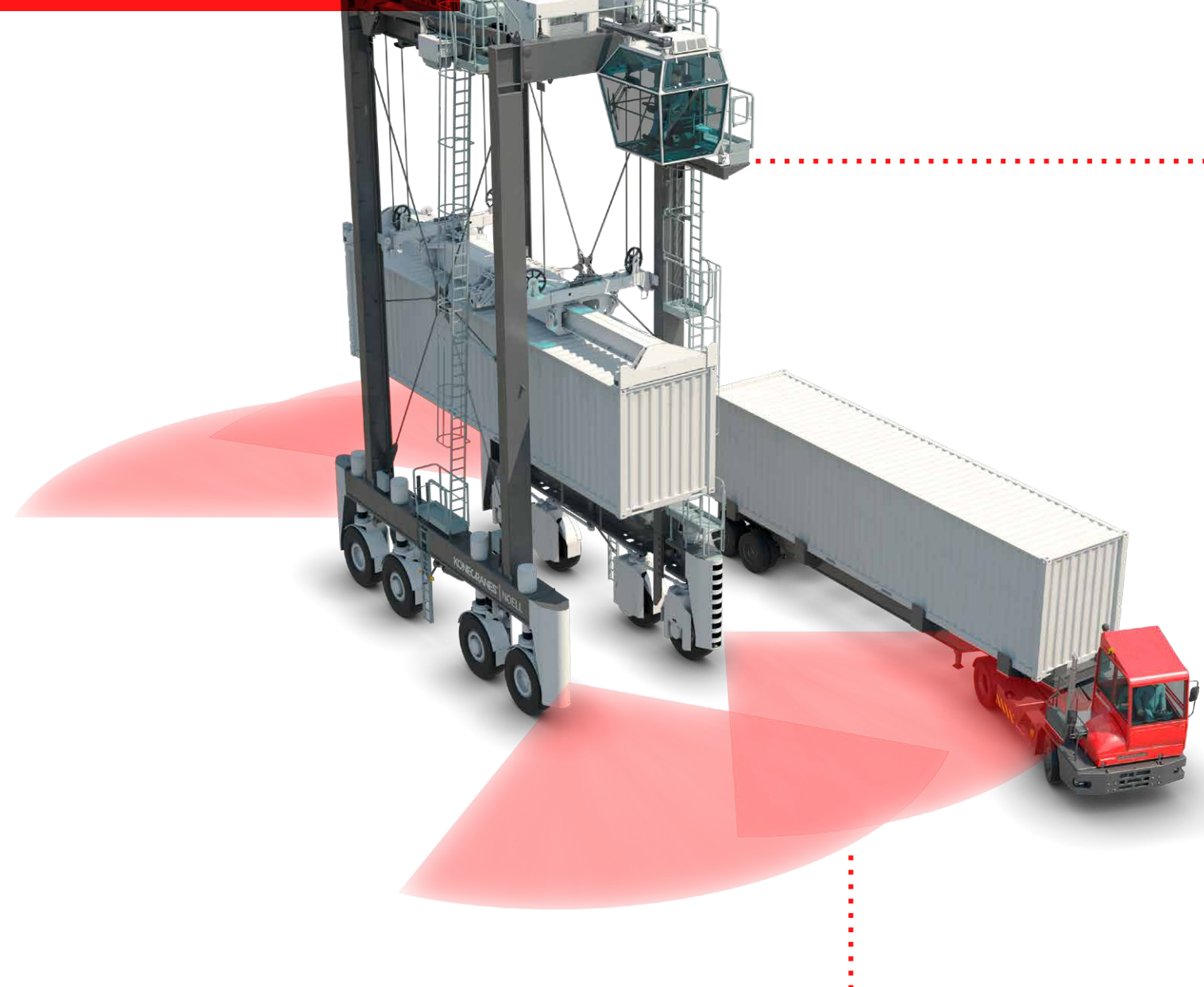


BENEFITS

- Prevents container collisions and knock-downs as the trolley moves towards the bay
- Prevents unsafe loading in the mixed bays
- Works with both loaded and empty spreaders
- Allows for fine positioning
- Operator can navigate container in bad weather and around stacks of uneven height
- Easy to use and maintain: only uses electrical components so only sensor cleaning is required.

Gantry Collision Prevention

Assists in avoiding crane-to-crane and crane-to-obstacle collisions.



BENEFITS

- Laser sensors in the system perform slowdown and stop-limits within a 20-meter range
- The system works in every mode of gantry travel: normal, cross and rotate
- Longer range and better weather tolerance compared to ultra-sonic sensors
- Simplest and most accurate solution in the market
- Highly resistant to adverse weather.



Konecranes is a world-leading group of Lifting Businesses™, serving a broad range of customers, including manufacturing and process industries, shipyards, ports and terminals. Konecranes provides productivity enhancing lifting solutions as well as services for lifting equipment of all makes. The Group has more than 16,000 employees at 600 locations in 50 countries. Konecranes shares are listed on the Nasdaq Helsinki (symbol: KCR).

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