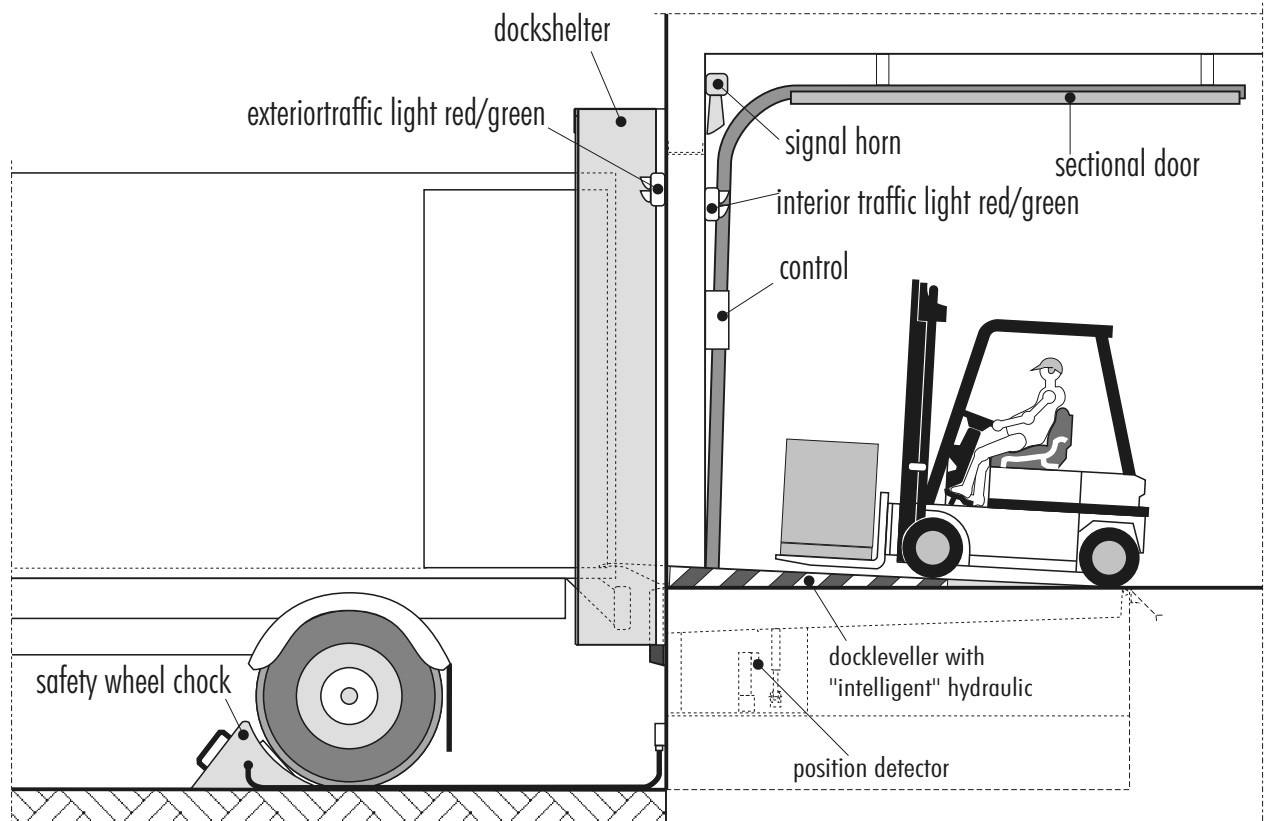


## Nani - "Safety-package" for loading docks



The interface between the ramp and the truck is still the main focus of accidents. The reason therefore is less the loading dock equipment than the loading process itself. The departure of the truck that should be loaded/unloaded mostly is the case for the heaviest accidents, because thus it could come to a crash of the industrial truck from the ramp onto the yard. Nani offers a comprehensive "safety package" for to prevent this and to ease this danger area.

Function: An exterior traffic light red/green signalizes the truck while its docking "green". An interior traffic light red/green shows the fork-lift operator "red". Only if the truck-driver puts the wheel chock with status detection system under the wheel does the traffic light show "green" what means that the truck stands secured at the ramp and that the loading process could begin now.

(At the same time has the control of the dockleveller been unlocked.)

Now can the sectional door be opened and the dockleveller be positioned at the truck. The exterior traffic light shows the truck-driver "red". An "intelligent" hydraulic lets the interior traffic light only show "green" if the dockleveller is positioned at the truck. Now can the fork-lift operator begin to load/unload the truck. After the loading process will the dockleveller be positioned in its home position. The interior traffic light shows "red" during the process. Only after that shows the exterior traffic light "green" - the truck can leave after the wheel chock is put away. Should the wheel chock be taken away during the loading and the truck try to drive away signalize signal-horn and interior traffic light "red" and the fork-lift operator knows the danger!

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Changes to specification maybe made without prior notification.

**Nani**  
VERLADETECHNIK

**...for optimal loading**

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*The loading dock has to be provided with the following components:*

Exterior traffic light „Red/Green“ for truck-driver	<b>AA</b>	<b>Pos. 1</b>
Interior traffic light „Red/Green“ for storage personnel	<b>IA</b>	<b>Pos. 2</b>
Wheel chock with status detection system	<b>RK</b>	<b>Pos. 3</b>
Signaler „Leveller operated“	<b>HD</b>	<b>Pos. 4</b>
Signaler „Leveller in home position“	<b>RL</b>	<b>Pos. 5</b>
Signal horn, interior	<b>IH</b>	<b>Pos. 6</b>
Signal horn, exterior	<b>AH</b>	<b>Pos. 7</b>
Light barrier	<b>LS</b>	<b>Pos. 8</b>
Locking dockleveller	<b>BV</b>	<b>Pos. 9</b>
Locking sectional door	<b>TOV</b>	<b>Pos. 10</b>
Switch cabinet		<b>Pos. 11</b>
Signaler „wheel chock under wheel“	<b>IS</b>	<b>Pos. 12</b>

#### Operating mode

- Loading dock closed, no truck
  - **Pos. 1 (AA)** „Green“
  - **Pos. 2 (IA)** „Green“
- Truck comes and docks, light barrier (LS) switches exterior traffic light (AA) to „Red“
  - **Pos. 1 (AA)** „Red“
- Truck-driver puts wheel chock (**RK**) underneath the wheel and secures the truck against rolling away.
  - **Pos. 12 (IS)** signalizes the storage personnel „wheel chock is put, truck is secured“
  - Sectional door gets opened **Pos. 9 (BV)** gets enabled
  - Dockleveller gets moved **Pos. 2 (IA)** „Red“, Safety for fork-lift
  - **Pos. 10 (TOV)** gets active and prevents the movement of the sectional door
  - Dockleveller lies on the truck **Pos. 2 (IA)** „Green“, loading begins
- Loading occurs
  - **Pos. 1 (AA)** „Red“
  - **Pos. 2 (IA)** „Green“
- Loading finished
  - Dockleveller gets moved **Pos. 2 (IA)** „Red“
  - Dockleveller in home position **Pos. 2 (IA)** „Green“
  - **Pos. 1 (AA)** is permanantly „Red“, truck must not drive away
- Wheel chock (**RK**) removed
  - if leveller is in home position **Pos. 1 (AA)** „Green“
  - is not in home position, stays **Pos. 1 (AA)** „Red“
  - Until dockleveller is in home position then **Pos. 1 (AA)** „Green“,
  - Truck can drive away

7. Sectional door gets closed

- **Pos. 1** „Green“
- **Pos. 2** „Green“

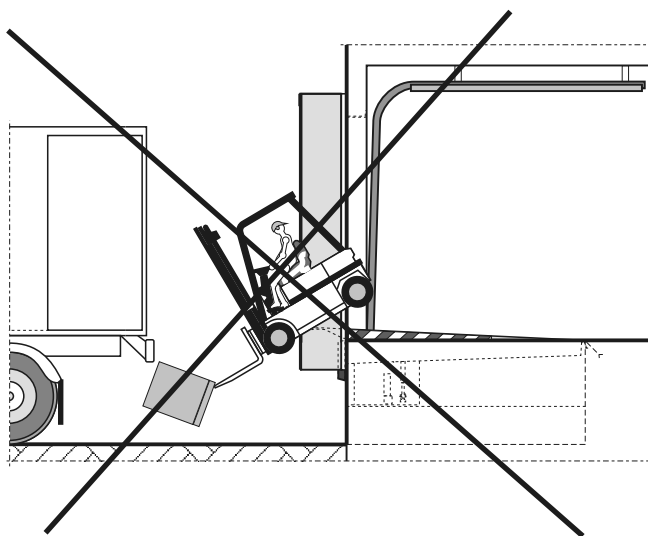
8. During the whole loading process is the following necessary:

- gets the wheel chock (**RK**) removed, then shows the interior traffic light (**IA**) immediately „Red“ and the interior horn (**IH**) and exterior horn (**AH**) signalize the dangerous situation
- if the dockleveller gets operated (lay on or move back), then show the interior traffic light (**IA**) and the exterior traffic light (**AA**) immediately „Red“ and signalize the dangerous situation

Basically is it possible to combine single components resp. to work with „minimized“ versions.

This system was planned to make the loading situations clearly more safe, to give the truck drivers as well as the storage personnel facilities to prevent (mostly very heavy) accidents.

**Safety at the loading dock prevents accidents  
= saves costs**



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