





### Fault-free pallets ensure the proper flow of goods.

Automated checks of pallets for stability and dimensional accuracy.

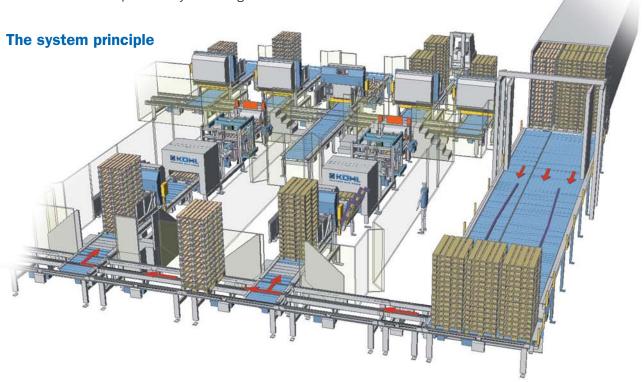


### Euro- and half pallets.

### Automatic checking and sorting.

Pallets that are to be supplied to an automated logistics system must be of superior quality in terms of dimensional accuracy and stability. Any deficiencies with regard to these quality markers can lead to hold-ups in the automated goods flow. Costly down times, service deployment, resultant repairs, and goods packed onto defective or instable pallets may be damaged.

Forward-thinking companies therefore rely on an automated quality check for the pool pallets they receive. This process will ensure that only faultless and undamaged pallets are supplied to their logistics systems.



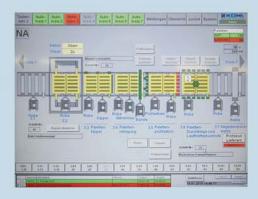
# Automatic checking and sorting will guarantee excellent quality

KÖHL offers fully automated checking systems that surpass current market requirements. These systems check Euro- and half pallets for their load bearing capacity and high shelf stackability.

Individually configurable and customisable sorting criteria allow for the correct assessment and sorting of the pallets according to their intended use. The system can check up to 365 Euro pallets or 450 half pallets per line per hour, depending on module configuration. It consists of one conveyor unit for restacking the empty pallet stack, one checking line, and a subsequent sorting unit. The empty pallet stack is transported by way of

highly reliable and robust conveyor technology. In the pallet destacker, the stacks are separated and the pallets are then supplied separately to the checking line. Depending on requirement, several checking lines can be installed in parallel. The system ensures that only fault-free pallets will be charged to the material flow (palletising and conveying systems, AS/RS area).

It furthermore offers the operator independence: The checking process no longer needs to be outsourced, and damaged or faulty pallets can be returned to the supplier immediately. A check of industrial pallets is feasible as well, provided the system is designed accordingly.



#### **Control technology**

The system can be run manually, semi-automatically or fully automated. The parameters for the pallet check are configured in the visualization screen. Any deviations from the configured parameters are analysed in the PLC.

Should the deviation surpass the defined tolerance range, then the system will set an error code for the relevant pallet and shows the specific error on screen. Checking criteria can be configured individually at any time, allowing for a high degree of flexibility.



## Checking in a continuous process.

Several checking modules can be integrated into one checking process.

1 Pallet cleaning

An electro-motor driven tilting device is used to throw off any abrasive dirt. A rotating cleaning brush will then remove any residual dirt particles.

2 Pressure roller check

Pressurised rollers determine the stability of the top- and bottom deckboards of the pallets during continuous process. Parameters like the checking pressure and max. tolerance deviation can be adjusted individually.

3 Width check

Two contact rollers detect the pallet width and any chippings.

#### **Edge zone check for running boards**

Bottom deckboards are checked for defective outer edges.



**Level check** 

The height measuring device does not only check the absolute height, but also the level of the individual top deckboards to each other.

5 Fork clearance and block inspection

The clearance between the blocks is scanned electromechanically. To avoid damages to the sensor system, the inspection flaps are swiveled away automatically, if the fork space is insufficient. The block inspection is carried out by way of laser distance measurement and verifies the presence as well as the minimum size of the blocks.

6 Deflection and spread check

Inadequate nail connections can cause the crash of pallets. The spread check is used to ensure a sufficient connection between the blocks to the top- and bottom boards.

The same process determines the maximum deflection of pallets to ensure safe operation in automated high-bay shelving systems.

7 Pallet leveling roller

Jutting elements are equalised to pallet level.

8 Spacer angle correction

Half pallets, the spacer angle of which has been deformed, are detected and transported to an automated unit, where the spacer angle is restored.

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Additional information

