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KÖHL FEATURES

- Loading stations incl. conveyor technology for loop infeed
- Floor stations made of pallet roller rails for A-articles
- Robust empty box loop
- Sorting rack or pit for B/C-articles
- System visualization
- Planning, implementation and commissioning

Sorting and commissioning of empties boxes

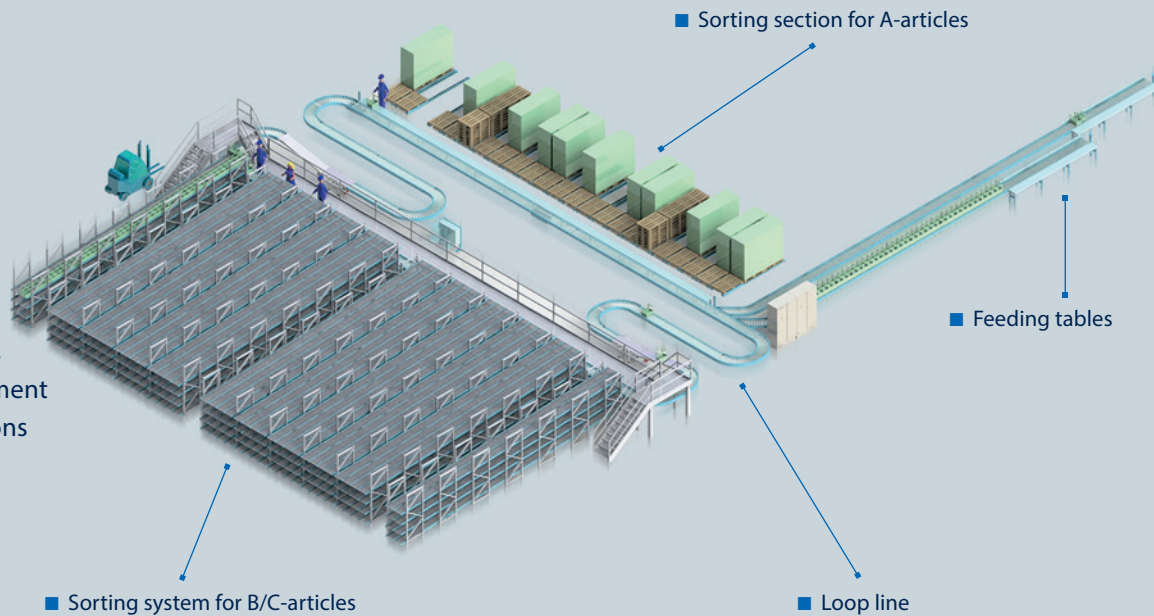
Robust loop conveyor line and rack sorting system achieve a throughput of approx. 20,000 boxes per day.

KÖHL Maschinenbau AG implemented a transport system for EDEKA Handelsgesellschaft Hessenring mbH which makes the sorting and picking of empty boxes more efficient. The system consists of a robust loop conveyor system and a rack sorting system with 160 shafts on 4 levels.

The different rates of the articles require a division of the sorting areas. Repeating A-articles are taken from the conveyor line, stacked on pallets and parked on a floor station. B/C-articles run on the loop line to the rack sorting system where they are sorted. Furthermore, a clear system visualization supports the simple and user-friendly handling of the system.

FEATURES

- Easy handling
- Efficient sorting process
- High handling capacity
- Robust construction
- Short ways for employees
- Optimized space requirement
- Optimal working conditions
- Seasonal adjustment



Sorting section for A-articles

Floor station consisting of roller conveyors with 22 pallet slots

Transport system in loop form

The empty boxes are distributed via a robust loop line equipped with roller and belt conveyors. Two 5 meter long feeding tables are available for the manual infeed of the boxes into the conveyor system.

The loop conveyor line enables the manual sorting of B/C-articles into the racking system. For this task, the empty boxes are transported by the conveyor system to the sort-area arranged on a platform.



■ Robust conveyor system in loop form

A-articles sorting system

22 pallet spaces on floor rollerways are available for the A-article sorting. For the safety of the employees, the roller rails are equipped with side guides and deactivatable push-back blocking. In addition, the roller conveyors in the removal area are protected by massive guides.

The A-articles are manually removed from the conveyor line and stacked on Euro pallets. A continuous "buffer table" minimizes congestion and simplifies removal.



■ Pallet spaces for A-articles. Fully loaded pallets are removed with an electric low-lift forklift.



Sorting system for B/C-articles

Clear storage of different brand boxes

B/C-articles sorting

The storage rack sorting system for the B/C-articles, built on a stage, consists of 4 shelf blocks and 4 levels. In total there are 160 sorting chutes equipped with galvanized steel roller conveyors.

The B/C-articles include the most varied types of brands. They are sorted into the predetermined chutes. In order to reduce search times for the right chutes, the empty crates are stopped at the infed point.



■ Loop with incline to flow storage rack



■ Sorting chutes with barcode label

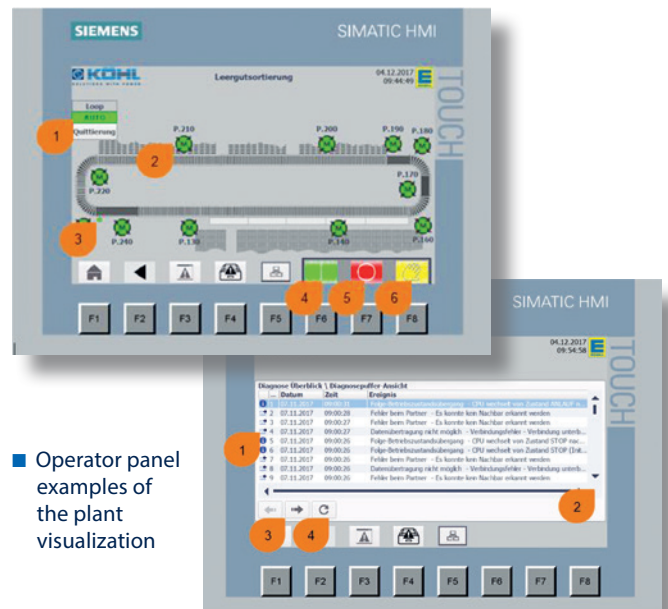


Empties sorting with data acquisition

Plant visualization for detailed reporting and analysis

The automation technology includes all transport movements and monitors the drives and bus systems. Two counting points are used to determine the necessary characteristic values, such as the number of empties boxes or the detection of boxes that pass through the loop route several times.

The system is visualized using a touch panel on the switch cabinet. The administrator has access to various operator panels for all areas of the sorting process. The real-time information about the system functions also serves to avoid errors.



■ Operator panel examples of the plant visualization

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