



**BEUMER**  
technology in motion

Sortation and distribution systems  
for mail order companies

## **Logistics service providers expect an optimized system design with the highest performance**



 **HERMES**  
WAREHOUSING  
SOLUTIONS

# BEUMER – high capacity sortation systems for Hermes Warehousing Solutions



Finest architecture – Hermes Warehousing Solutions: Dispatch Centre Haldensleben

The logistics centre in Haldensleben is designed to handle the mail order articles. The modular concept of the buildings allows for easy expansion and growth.

## The sorter solution for the Logistics center in Haldensleben

Due to the expansion of the goods distribution center, HWS required an additional packing sorter to supply newly created packing stations. Apparel and small hard goods weighing up to 7 kg (15 lbs) are handled on this sorter.

In order to fulfill the operational and business requirements of HWS the new packing sorter has to provide a machine capacity of 18,000 items/hour, contain 1,024 order destinations and has to be installed in an area of merely 6,000 m<sup>2</sup> (64,500 sq ft).

## Requirements

- 1 Capacity increase to the existing system**
- 2 Maximized utilization of the existing area**
- 3 Minimized maintenance and operating costs**
- 4 Ergonomically designed packing locations with increased functionality**

## Hermes Warehousing Solutions

Hermes Warehousing Solutions GmbH (HWS) is a wholly owned subsidiary of the Otto Group and provides numerous warehousing-services for the group as well as for external customers. HWS offers logistics services according to the customer's requirements including receiving, storage, order fulfillment, shipping and returns processing.

Hermes Warehousing Solutions includes logistics centers in Hamburg and Haldensleben as well as stores in Burbach, Löhne and Ohrdruf, Germany.



Multi Level Sorter with height-mobile Belt Trays



## Multi Level Sorter creates accurate customer orders from random items

### Multi Level Sorter optimizes use of the available area

To achieve the capacity requirements while minimizing the necessary floor space BEUMER developed a space-saving solution: the BEUMER BS25 Multi Level Belt Tray Sorter: a system with two stacked double position cross belt elements, the "Belt Trays".

Ten double deck induction units feed the upper and lower sorter level simultaneously.

To reduce the required floor space, the sorter is configured with a U-shaped routing and each linear sorter chute is divided into 4 stacked compartments.

Using contactless energy and data transfer to operate the Belt Trays, an essential weakness of other systems is eliminated. Accordingly, maintenance costs (labor and wear parts) have been considerably reduced compared to the conventional and contact-dependent solutions of our competitors.



Several 4-level chutes are assigned to a packing station



Feed of items on an induction unit, ready for scanning

The sorting machine is a BEUMER Belt Tray Sorter. Its load carriers are arranged on two stacked levels. Two stacked Belt Trays form a vertically mobile unit which enables sorting items to four different levels.

The single Belt Trays discharge the items into the destinations. The destinations are located on both sides of the sorter and on four different levels. Normally, each destination is assigned to a specific customer. After an order is complete at one destination, a pneumatically-driven table lowers the completed order to the packing station. The destination is then ready for a new order.

A packing operator is assigned to a bank of chutes. This assignment is variable and depends primarily on the volume and quantity of items per order.

### Order Fulfillment

A huge volume of items representing many different customer orders are pre-picked into totes and staged, by batch, into an intermediate buffer.

The totes are transported via conveying technology to the packing sorter and automatically emptied in chutes at the induction unit of the sorter.

An operator removes the items from the chute and places item by item on the first belt. Upon scanning the picking label on each item, a vertical sorter belt lifts the items, depending on their sorting destination, to the upper or lower induction level and loads them onto the Belt Tray of the sorter.

### Solutions

- 1 Development of a Multi-Level Belt Tray Sorter from the existing BEUMER sorter modules**
- 2 Minimization of the required floor space by stacking the sorting levels**
- 3 Use of the proven contactless energy supply for a significant reduction in service and maintenance costs**
- 4 Ergonomic packing station design improves packing efficiency.**



## Technical data

<b>Items:</b>	Apparel and small hard goods weighing up to 7 kg (15 lbs) and maximum dimensions of 620 mm (24") x 420 mm (16.5") x 250 mm (10")
<b>Sorter type:</b>	BEUMER BS 25 Multi Level Belt Tray Sorter
<b>Sorter length:</b>	368 m (1207 ft)
<b>Speed:</b>	2.0 m/s (400 ft/min)
<b>Sorter pitch:</b>	800 mm (31,5")
<b>Destinations:</b>	256 chutes providing 1024 individual sort destinations, several special destinations
<b>Sorting Capacity:</b>	23,400 items/h
<b>Induction capacity:</b>	3,300 items/h
<b>Control:</b>	BSC (BEUMER Sorter Control) on PLC basis with remote I/O's

*Induction on two levels with a vertical mobile unit*



BEUMER is an international leading manufacturer of intralogistic specialized in the conveying, loading, palletizing and packaging technology as well as in sortation and distribution systems.

Having approx. 900 employees and a turnover of around 180 M. EUR, BEUMER has, with subsidiaries and representations, a worldwide presence for various industries.

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