



WITRON ETP

Ergonomic Tray Picking



WITRON Logistik-Hof



Ergonomic solution for case picking - TUV certified

ETP Functionality

Once pallets have been identified in receiving, they are transported to an automatic depalletizing process in which the cases are automatically removed by layer. The cases are then automatically loaded onto a plastic system tray measuring 900 x 800 mm. The number of cases per tray is calculated based on the actual SKU dimensions and weight.

The trays are automatically stored in a single-deep miniload warehouse using AS/RS cranes. All articles in the total merchandise assortment are stored in each individual ETP aisle. Because of the high article variety ensured by this method, the individual ETP aisles are independent and every order can be completed in full in one picking aisle. Order picking is done manually with automatically controlled pick

shuttles. An automatic height control between the cabin and the load carrier enables an ergonomic picking process - no lifting, no carrying, no bending.

Empty trays are automatically removed from the pick front by cranes. Each single order is picked in accordance with its individual requirements with the right merchandise categories and in accordance with the store layout of the retail store. For this purpose, a computer system calculates the ideal stacking matrix per order. With the help of cranes, the items are staged statically and, if required, dynamically in the picking aisle. The stacking algorithm used corresponds exactly to the algorithm that has been used successfully for many years in mechanized OPM systems.

ETP - Areas of use

The ETP (Ergonomic Tray Picking) storage and picking solution is a combination of fully automatic replenishment and ergonomic order picking. Cases are picked from a tray miniload warehouse onto a pallet or roll container using specially designed man-board cranes. Picking is both accurate and store-friendly.

The ETP concept is designed for the typical merchandise assortment of the food retail business and is ideal for:

- ▶ Food retail distribution centers
- ▶ Regional warehouses that carry fast movers
- ▶ Discounter' retail distribution centers

The ETP solution can be used for projects in both ambient and cooled environments.

In the past, conventional warehouse systems have been used for these applications - usually accompanied by un-ergonomic work movements and work processes.



WITRON Logistik-Hof

▶ WITRON designs and implements innovative logistics and material flow systems that offer their customers sustainable competitive advantages. WITRON has the key elements for a successful project under one roof: logistics design, information technology, control engineering, mechanical design and mechanical production, as well as the responsibility to act as a general contractor. Another important factor: WITRON builds long-term and trustful customer loyalty by offering individual service and operating solutions that exactly match the requirements of their customers.

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Pick Shuttle with ergonomics certified by TUV

The pioneering ergonomics of the ETP systems is achieved by the pick shuttle especially designed for this solution.

The shuttle's excellent ergonomic qualities have been certified by German technical inspection association, the TUV. The picking cabin and the order load carrier have independent height positioning.

For every item removed, the picking cabin is placed automatically in front of the case's picking station by computerized controls in such a way that the operator is always positioned in relation to the case in an ergonomically ideal way - both, when removing the goods from the pick front and placing them on the load carrier. Thus un-ergonomic movements like lifting, carrying, bending, and reaching are no longer required.

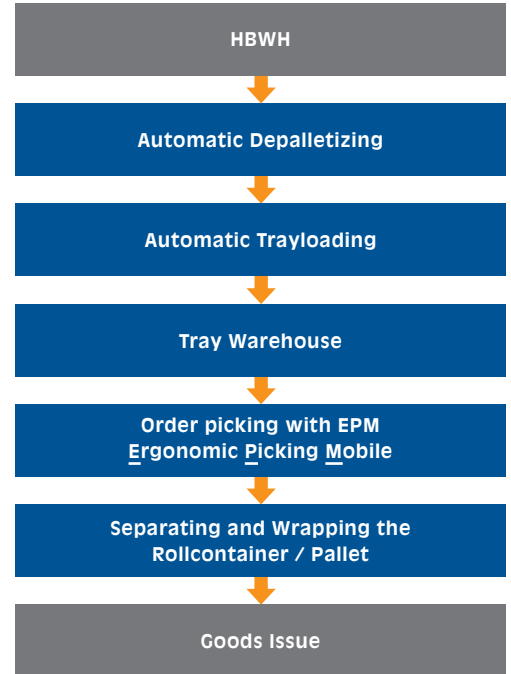


100% picking reliability

100% picking reliability is ensured because the operator moves to the right picking station with computer-controlled features ensuring the picker removes the right article. The key optical tool is a beamer mounted on the vehicle. This visualizes for the operator, by means of an equivalent illuminated field, where, and in what position, he should place the case on the store pallet or the roll container.

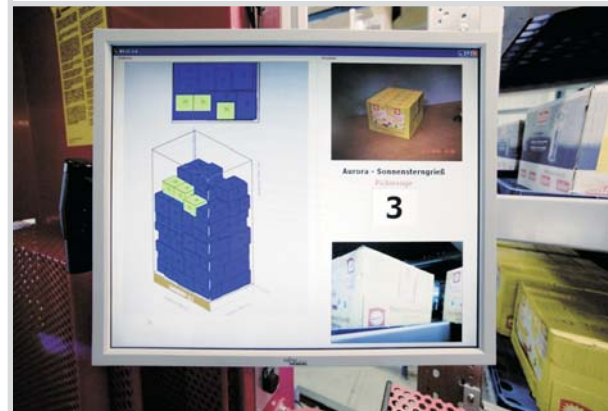
This considerably improves picking effectiveness. This function also optimizes the building of densely packed order pallets and prevents all subsequent re-sorting of the cases caused by sub-optimum grouping on the pallet. The operator is provided with an on-screen image of the article, its position on the load carrier, and the volume or quantity required. Parallel order picking onto two load carriers (e. g. roll containers) simultaneously is possible.

ETP concept



Product group friendly order picking

The sequence of items picked in the ETP system corresponds to the sequence they will be positioned on the store shelf at a later point of time. Every item can be designated individually for the respective store requirement. Parameters like prohibition of combined storage or "from heavy to light" are considered. Thus, the processes in the logistics center optimized by ETP will at the same time increase efficiency and ergonomics at the store.



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Advantages of the ETP solution



Advantages for humans

- ▶ Pioneering workstations based on optimally ergonomic picking processes - TUV-certified
- ▶ No lifting, no carrying, no bending
- ▶ High picking efficiency through effortless work processes and visualization (beamer)
- ▶ Reduced employee absence time due to fewer injuries
- ▶ More stable working performance for each employee and less fluctuation in performance between different employees

Advantages for the store

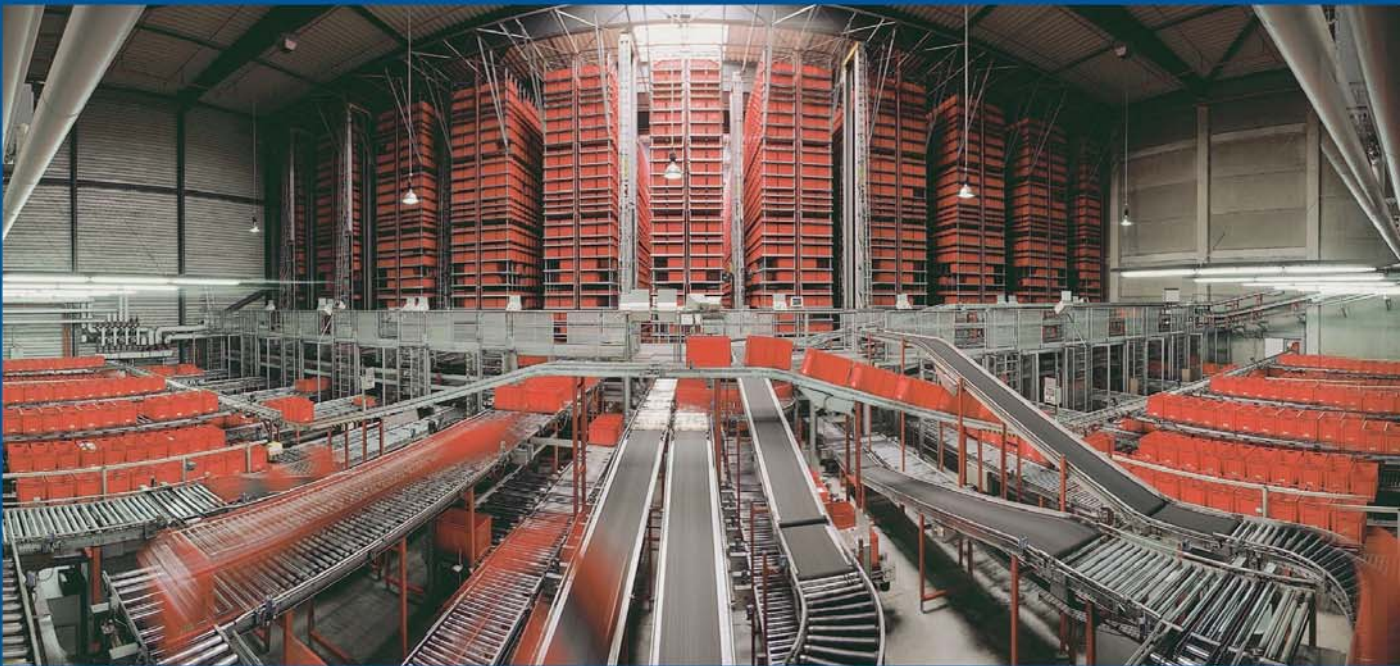
- ▶ Very high picking reliability through system-guided process, no more wrong deliveries
- ▶ Received goods no longer need to be checked
- ▶ Store-friendly delivery based on product groups
- ▶ Faster replenishment of the shelves in the store
- ▶ Products are carefully handled

Efficiency increase

- ▶ Reduced cost per case through high picking output and short order throughput times
- ▶ Optimization of transport costs due to improved filling degree and densely packed load carriers
- ▶ Optimum and flexible disposition of personnel
- ▶ Solution can be used for both greenfield and retrofit concepts
- ▶ Optimum use of the building - savings on investment costs for construction
- ▶ Improvement of the entire supply chain from receiving to store supply



Our technology - your advantage



WITRON stands for reliability and dedication.

Both values are reflected in the architecture of our Logistik-Hof. They form the foundation of our work. Likewise they are the pre-condition for developing and realizing highly available and efficient system solutions based on mechanized logistics technology. Here we only implement profitable technology.

The consequence: Successful customers and longtime cooperations which we are proud of.

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