

Successful Logistics Concept

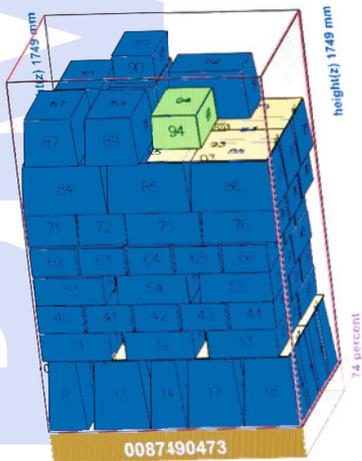
Order Picking Machinery (OPM)

Fully automated case picking

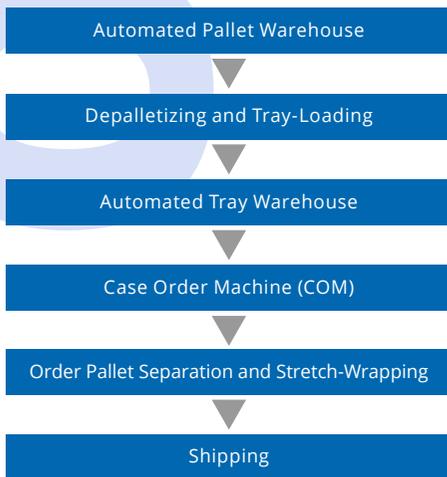
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OPM-Concept



OPM-Principle

OPM (Order Picking Machinery) is a picking solution patented by WITRON. This fully automated case picking system was developed to build store-friendly order pallets / roll containers.

OPM is considered the most successful fully automated picking system for both dry goods and fresh / frozen goods throughout the world. Many leading food retailers in Europe and North America rely on the cost-efficiency, flexibility, ergonomics, and sustainability of OPM – most at several locations.

The heart of this flexible system is the automatic loading of an order pallet / roll container with cases of various sizes and weights. Loading is accomplished using a revolutionary system – the highly dynamic Case Order Machine (COM). Unlike the typical robotic gripper and suction system, cases are carried and pushed during the entire material flow process, thereby allowing an extremely high percentage of items to be handled within the system.

A proprietary stacking algorithm determines the optimal stacking sequence and loading pattern based on case weights, case sizes, case crushability, and store planogram logic. This “pack pattern” software allows order pallets to be densely packed in a store-friendly sequence, without any case damage.



OPM-Characteristics

OPM offers fully automated case handling, from receiving, through storage, store-friendly, error-free picking, to the dispatch of order pallets. After registration in the receiving area, pallets are stored in an automatic high bay warehouse and transferred to an automated layer depalletizer. Following the depalletizing of the layers, cases are separated, automatically loaded onto trays, and buffered in an AS/RS tray warehouse.

Every order pallet is built according to its own stacking matrix generated by software that takes into account product groups, pallet stability, and flexibility. The store layout / planogram specified for every customer order is considered as a part of the stacking matrix.

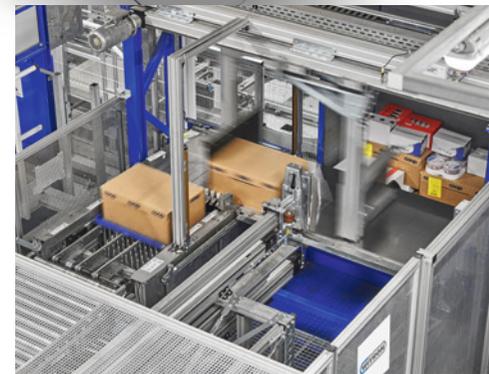
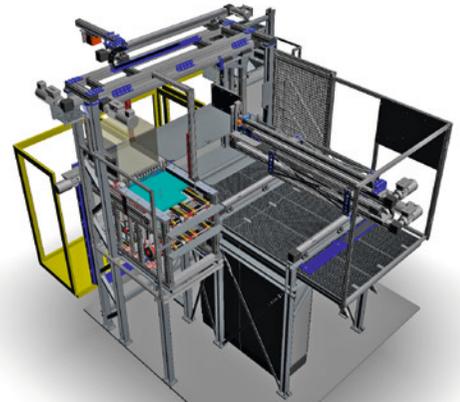
Cases on trays are automatically retrieved from the tray warehouse when required for an order. They are supplied in the optimal sequence to the highly dynamic COM loading machine (Case Order Machine). At the COM, cases are automatically separated from their trays, and stacked onto order pallets / roll containers. OPM enables order pallets / roll containers to be built in a store-friendly manner with high packing density, without any human intervention and without any errors or damage. A pack corner provides the necessary stability during the stacking process. Once complete, the order pallet / roll container is automatically removed from the pack corner and stretch-wrapped.

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OPM-Features / Benefits

- ▶ Applicable for both dry goods and fresh / frozen goods
- ▶ Picking of different cases and PET bottles is possible
- ▶ Fully automated goods handling system for the building of order pallets / roll containers from receiving to shipping
- ▶ Ergonomic work processes within the entire material flow
- ▶ Independent of the number of articles
- ▶ Automated layer depalletizing
- ▶ Loading of packaging units onto trays
- ▶ Trays with cases guarantee smooth transportation as well as storage of the cases. The use of standard components guarantees the highest possible system availability.
- ▶ Storage of cases on trays in a standardized AS/RS tray warehouse
- ▶ Access to each individual article within the tray warehouse
- ▶ Cases are carried and pushed within the entire system
- ▶ Sequential supply of articles to the loading system COM (Case Order Machine) via sequence buffers
- ▶ Error-free order picking
- ▶ Maximum flexibility within the entire picking process
- ▶ Individual requirements for every store can be considered (e. g. sorting sequence, store layout / store planogram, pallet height, etc.)
- ▶ Optimum pallet stability and filling degree by means of computer-controlled stacking algorithm
- ▶ A pack corner avoids overhang and guarantees the maximum possible load height for the order pallet as well as safe transportation to automatic stretch-wrapping
- ▶ Automatic load securing by stretch-wrapping the pallet before shipping
- ▶ Transport cost optimization based on densely packed load carriers
- ▶ Use of energy-efficient technology





About WITRON:

WITRON Logistik + Informatik GmbH, established in 1971 (headquarters Parkstein, Bavaria, Germany), designs, realizes, and operates customized logistics and material flow systems that generate sustainable competitive advantages for its clients. WITRON has all the decisive key elements of a successful project under one roof: logistics design, information and control technology, mechanics design and production, as well as functional responsibility as general contractor for logistics.

The WITRON Corporate Group has 5,100 employees worldwide. WITRON's annual revenue in 2021 amounted to 1,05 billion Euros. Other WITRON branches are located in Rimpar (Germany), Arlington Heights, Illinois (USA), Toronto (Canada), Venray (The Netherlands), Stoke-on-Trent (UK), Madrid (Spain), Strasbourg (France), Singapore and Sydney (Australia).

WITRON Logistik + Informatik GmbH

Neustädter Str. 21
92711 Parkstein
info@witron.de



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