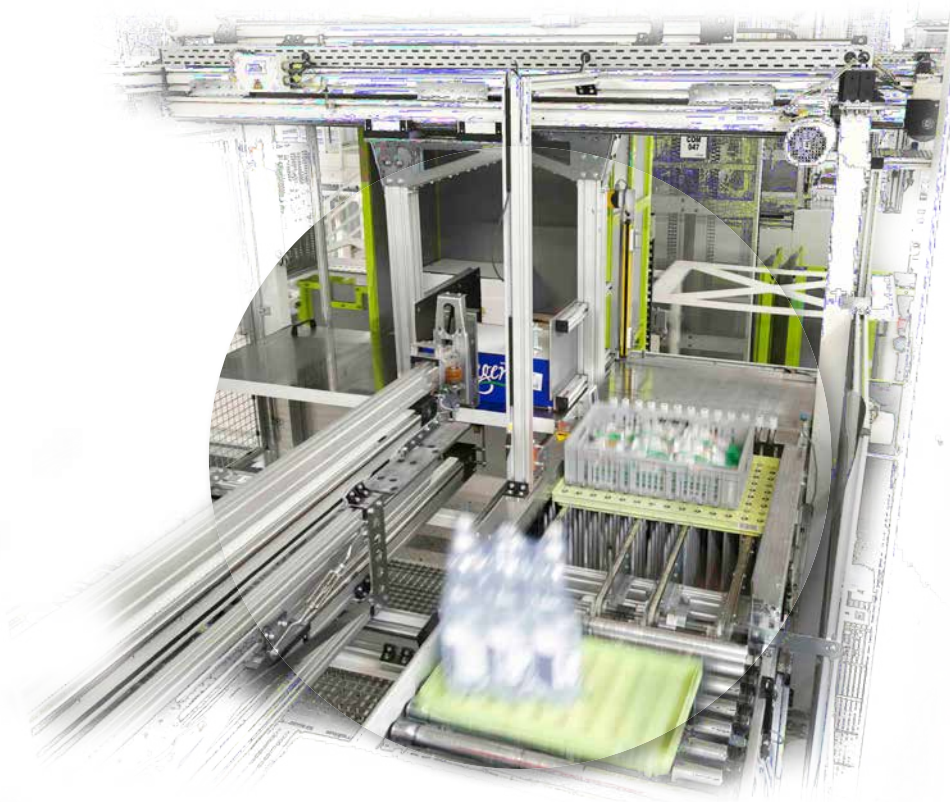


OPM

Order Picking Machinery

BLUECOMPETENCE
Alliance Member

Partner of the Engineering Industry Sustainability Initiative



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.

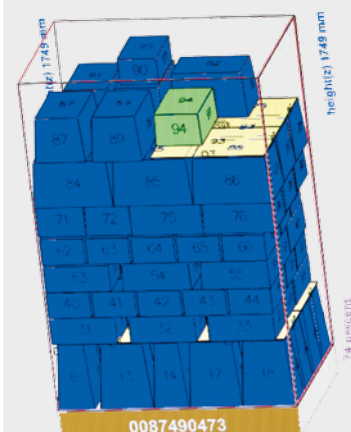
OPM-Characteristics

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.

OPM-Concept





WITRON Logistik-Hof

WITRON Logistik + Informatik GmbH designs and implements innovative logistics and material flow systems with leading-edge ergonomic workstations and processes that generate sustainable competitive advantages for their customers.

WITRON has 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.

Numerous market-leading enterprises from trade and industry throughout Europe and North America have been using WITRON's solutions in their distribution centers for many years.

Please do not hesitate to contact us in case of any questions.

WITRON
Logistik + Informatik GmbH
Neustaedter Str. 21
D-92711 Parkstein
Phone: +49 9602 6000
Fax: +49 9602 600 211
info@witron.de

WITRON
Engineering BV
Keizersveld 47c
NL-5803 AM Venray
Phone: +31 478 551 855
Fax: +31 478 551 850
info@witron.nl

WITRON
Engineering
Unit C3, The Hub,
Trentham Business Quarter
Bellringer Road
CB-Stoke-on-Trent,
Staffordshire, ST4 8GB
Phone: +44 1782 64 11 19
Fax: +44 1782 65 87 88
info@witron.co.uk

WITRON
Integrated Logistics Corporation
3721 Ventura Drive
USA-Arlington Heights IL 60004
Phone: +1 847 385 6000
Fax: +1 847 398 6140
info@witron.com

WITRON
Canada Corporation
480 University Avenue, Suite 1500
CAN-Toronto, Ontario M5G 1V2
Phone: +1 416 598 7096
Fax: +1 416 598 1840
info@witron.com

WITRON
España
Avenida de las Palmeras 16, A6
Polígono Industrial La Sendilla
ES-28350 Ciempozuelos / Madrid
Phone: +34 918 753 466
Fax: +34 918 753 317
info@witron.es

WITRON
France
37 boulevard d'Anvers
F-67000 Strasbourg
Tel./Fax.: +33 388 443 769
info@witron.fr

www.witron.com

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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 build-ing 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

