

# STATIONARY PULL AND PUSH SYSTEM

**HORIZONTAL PALLET EXCHANGERS  
ARE IDEAL FOR PHARMACEUTICALS,  
WHERE PRODUCTS MUST NOT BE  
TILTED OR ROTATED.**

- Compact, stationary pallet exchange machines for efficient horizontal pallet transfer.
- Suitable for pushing goods from wooden to plastic pallets or vice versa.
- Ideal for goods on slipsheets that need pallet replacement.
- Can be integrated into full pallet handling lines e.g., pallet dispensers.



# SAFE PALLET EXCHANGE FOR HIGH-VALUE MEDICATIONS

Some medicines cannot be rotated because their formulations are extremely sensitive to movement. Suspensions and liquid drugs can separate or lose stability when heavily tilted. Excessive agitation may introduce air or foam, reducing effectiveness — especially in delicate biologics. Pressure changes can also cause leaks or breakage in glass vials or prefilled syringes. Finally, strict temperature and light controls mean that even temporary changes in orientation can compromise product safety and regulatory compliance.

## Transferring goods without manual handling is more efficient and helps prevent damage and injuries.

For decades, Meijer Handling Solutions has been manufacturing stationary pallet changing machines that transfer goods from one pallet to another—without tilting the load. This is essential for certain pharmaceutical products where tipping or rotating the goods is considered a risk.

The stationary KOOI® solutions move the load horizontally, either by pushing the goods off the pallet or by pulling a slipsheet from underneath. The significant advantage of this process is that there is no direct contact with the product, minimizing the risk of packaging damage.

Each unit is typically custom-built, as pallet dimensions are not always standard. Additional safety features can be implemented, and the load-handling platform can be adapted to work with various logistics equipment, such as different forklifts or pallet trucks.

### Key Benefits:

- Stationary unit, Compact design
- Horizontal load movement during pallet exchange
- Goods transferred within 30 seconds
- Equipped with a standard laser light curtain
- No direct product contact when using slipsheets
- Minimal contact surface when pushing loads
- Maximum capacity: 1000 kg

### Safety: CAT3 / Pl d

All the stationary pallet transfer units meets CAT3 / Pl d, ISO 13849-1 safety standards, ensuring fault-tolerant operation with a high level of risk reduction in case of component failure.

# CUSTOM-BUILT STATIONARY MACHINES

**As mentioned earlier, the stationary machines are custom-built to meet customer-specific requirements. Various platform configurations are available:**

## **Key Benefits:**

- PL-LD

Designed to hold two pallets simultaneously—the pallet with goods and the new pallet for transfer. Pallets can be placed onto the low platform using a (powered) pallet truck.

- PL-HD

Also designed for two pallets at once. Pallets are loaded using a forklift. This configuration allows the unit to be relocated when needed.

- PL-HS

Intended for situations where the pallet with goods is placed on the platform, while the receiving pallet remains on the forklift forks.

## **Laser Light Curtain**

Depending on the layout and available space, different safety configurations can be provided. A minimum of two columns is required to protect the long side, but additional columns (e.g., a third one for the short side) can be added if necessary.

The distance between the laser light curtain and the machine is determined by the approach speed of personnel and the system response time.

## **Hygienic Design**

For applications with strict hygiene requirements, the unit can be supplied fully or partially in stainless steel.

### **Safety Sensors**

Additional sensors can be integrated for enhanced safety—such as monitoring oil temperature and oil levels, or distance sensors that verify correct pallet positioning and confirm that the goods have been fully transferred.

## **Components**

We use components from reputable, well-known suppliers who guarantee high product quality, ensuring our units operate reliably and deliver consistent performance.

# INTEGRATION INTO AUTOMATED PALLET EXCHANGE SYSTEMS

Our horizontal pallet exchangers are perfectly suited for integration into fully automated pallet-handling lines. Since every pallet exchange process requires smooth pallet infeed and outfeed, our units can be seamlessly combined by system integrators to create compact and efficient automated pallet exchange solutions.



## Who we are:

Meijer Handling Solutions is part of the Meijer Group, which also includes Meijer Metal, one of the leading Dutch suppliers to OEMs in sectors such as transport, food processing and logistics.

Meijer Metal operates with a high level of automation, including a 24/7 production environment. Automated Guided Vehicles (AGVs) supply semi-finished parts from a buffer warehouse to advanced robotic cells for welding, bending, milling and other key processes.

Because Meijer Handling Solutions and Meijer Metal share the same facility, we maintain full control over production and quality throughout the manufacturing process. This integrated approach supports consistent product performance and dependable lead times.

## What We Also Offer:

We are the world's largest producer of telescopic forklift forks, both manual and hydraulic — sold under the KOOI® ReachForks brand and manufactured in the Netherlands and Vietnam. In addition, Meijer Handling Solutions develops other unique load-handling attachments for forklifts and related equipment.

## Production and safety standards

Meijer Handling Solutions requires its KOOL® SYSTEMS to be of the highest quality and we can only guarantee this by complying with all applicable international standards.



### ISO 9001-2008

Model for quality assurance in design/development, production, installation and servicing.



### ISO 4406

Hydraulic fluid power - Fluids Method for coding level of contaminations by solid particles.



### CE

European Machinery Directives  
2006/42/EC

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