

We Optimize Your Supply Chain

DEMATIC



Dematic Pouch System

SOLVING DISTRIBUTION AND RETURNS CHALLENGES

About Dematic

Dematic is one of the world's leading suppliers of logistics automation systems and solutions. With a global knowledge network of highly skilled logistics professionals, Dematic provides its customers a unique perspective in world class materials handling solution design.

What this means for you: Even in international projects, you have a single point of contact — Dematic takes responsibility for throughput and system uptime in logistics projects.

SCALABLE FLEXIBLE MODULAR

DEMATIC

The Dematic Pouch System

SOLVING DISTRIBUTION AND RETURNS CHALLENGES

The Dematic Pouch System can help you get orders out the door easily, quickly, and efficiently. It can also help you process returns with minimum effort.

Growth in e-Commerce is fueling the rise in omni-channel fulfillment. Retailers need a solution that supports store replenishment and direct to consumer orders from a single distribution center.

This solution must address the needs of an omni-channel operation and also accommodate growth, demand fluctuations, SKU proliferation, and changes in order profiles. It also needs to seamlessly integrate the returns process into the fulfillment process to make the returned goods available for shipment immediately upon processing.

Regardless of the number of SKUs, order volumes, and order sizes, the Dematic Pouch System is the single solution that pure e-Commerce and omni-channel operations need to ship orders quickly and efficiently.

What is the Dematic Pouch System?

The Dematic Pouch System is a flexible and scalable solution that can be used to store, transport, sort, and sequence individual items (eaches) in support of pure e-Commerce and omni-channel order fulfillment operations. The system uses pouches suspended from rollers that travel in an overhead track.

Each pouch carries a single item, either placed inside the pouch or hanging from an attached hook (used for garments on hangers, such as dresses or bulkier items like winter coats). The system transports and sorts items based on order requirements and delivers them to operators for order consolidation, value-added services, and final packaging.

Today's challenges in e-Commerce to maintain competitiveness:



The demand for same-day/next-day delivery is increasing



The increase in the number of very small orders



The requirement to deliver faster and to an increasing number of delivery locations



The problem of late deliveries, especially during peak seasons

Target Markets

- High-volume each picking operations
- Item dimensions up to 500 x 400 x 160 mm and 3 Kg weight
- Garments on hanger (less than 3 Kg) that are attached outside of the pouch
- Any mix of small orders (e-Commerce) to large (retail)
- Space constrained or odd layouts
- Product stored and picked from conventional shelving or automated buffer (Dematic Multishuttle®)
- High seasonal peaks (for example, Black Friday, Christmas)
- High returns volumes (online apparel return rates can be greater than 30%)
- Must ship for same-day or next-day delivery
- Needs to be able to grow easily





Dematic iQ Benefits

- Advanced order fulfillment algorithms
- Easy processing of urgent and priority orders
- No need for wave planning and multi-stage sortation
- Optimizes order processing to queue, stage, and deliver items



WHAT MAKES THE DEMATIC POUCH SYSTEM SPECIAL?

The Dematic Pouch Sorter is a single solution that can handle a wide range of order profiles, from small e-Commerce orders to large retail orders:



- **Shorter cycle times**

Using the Dematic iQ on-demand order fulfillment software, the Pouch System can get orders out quickly and eliminate the need for wave planning and multistage sortation. It allows the fast, easy processing of urgent and priority orders without the need for expensive and time-consuming expediting.

- **Store-friendly fulfillment**

Items can be packed and delivered in aisle-friendly sequence or any desired arrangement (for example, size, color) to retail locations, taking costs, time, complexity, and mistakes out of restocking.

- **Easy handling of demand variations and volume growth**

The modular and flexible design allows throughput to be easily adjusted to actual volume demands and to idle unnecessary capacity, saving energy and labor. New modules can be added to existing systems to accommodate changing business conditions and growth in volume.

Easy integration:

- **Automated or manual inventory**

The Pouch System easily integrates with automated or manual inventory systems, making it suitable for a wide range of applications.



- **Integrated returns processing**

After returned items are ready for resale, they are simply placed into pouches, making them immediately accessible for new orders.

The Dematic Pouch Sorter is a single solution that can handle a wide range of product shapes and sizes, from a pen to a fragile crystal vase to a high-fashion dress:



- **Fashion industry**

The Pouch System is the ideal solution for the fashion industry, where hanging and flat items are frequently combined in one order.

- **General merchandise**

The Pouch System is an excellent solution for general merchandise, which processes products of varying sizes, shapes, and fragility.

Layout flexibility and reduced footprint:

- **Greenfield or brownfield**

The Pouch System can be implemented in new or existing facilities and can accommodate any layout or specific building need.



- **Reduced footprint**

The Pouch System takes advantage of unused overhead space, making it ideal for space-constrained operations or areas with very expensive real estate.



WHAT DIFFERENTIATES THE DEMATIC POUCH SYSTEM?

Dematic offers end-to-end solutions incorporating

- The Pouch System
- The Dematic easy case, tote, and item storage, retrieval, and tracking, and
- Dematic iQ advanced order fulfillment algorithms

Improved Work Environment

The ergonomic working position and quiet components (for example, friction drives) make the Pouch System an operator-friendly system. New regulations identify workplace noise as a significant health risk, prompting a category change for hearing protection. Even without regulations, workplace noise is a comfort issue everywhere that can affect employee retention.

Flexible and Scalable Layout

Chain length is almost unlimited. Layout is simplified and existing loops can be extended easily to add new modules.

Dematic Services

Dematic offers comprehensive remote 24/7 support services to give you the technology you need in the smart supply chain. You can chat with Dematic Customer Service from your mobile device, share audio and video while working on the issue, and communicate easily to troubleshoot problems quickly.

Reduced Maintenance and Operating Costs

- Maintenance on a plastic chain is faster and easier than on a metal chain. Neither oil nor tensioning are necessary, reducing preventive maintenance time. If the chain breaks, it's easy to replace small segments.
- The lack of oil means the workplace is cleaner, which is more pleasant for employees and which reduces the possibility of product damage.
- A plastic and rolling friction chain uses less energy thanks to the lower weight and lower friction.
- The multiple friction drives work in parallel on a chain loop, assuring high system availability, reduced maintenance, and low noise.
- The Pouch System frequency inverter drives allow quick commissioning and a high level of system control via PC.



Solution Description

The Dematic Pouch System is a flexible storage system that consists of pouches suspended from rolling adapters running in a track. Each pouch carries a single item, which can be identified by the radio frequency identification (RFID) tag and barcode on the pouch. Items of various types can go into the pouches. These include folded garments, shoe boxes, accessories, books, and general merchandise.

Garments on hangers and items that do not fit in the pouch can be suspended from a built-in hook. All articles can be inducted into and stored in a single system, which also delivers the items to packing. The Pouch System then sorts, sequences, and delivers those pouches and hanging items to the packaging station for consolidation and further processing.

Different types of track serve different functions. Gravity lines are used for sorter drop lines and transitions. Powered lines consist of continuous loops of plastic chain that push the pouches along the track. Sorter chains positively engage the pouches keeping them evenly spaced.

A typical system includes loading, buffering, transport, sortation, and packing areas on one or more levels. The layout can be configured to fit nearly any space.

The modular design of the Pouch System supports the easy handling of demand variations (for example, Black Friday, Cyber Monday, Christmas) without sacrificing productivity. When demand is low, it is simple to idle unnecessary capacity.

The rail structure extends throughout the DC and is easily elevated to take advantage of otherwise unused vertical space.

Simple and clear workflow from loading to pack stations:

- Unique carrier equipped with RF-tags and/or barcode for a secure trace in the system
- At the loading stations, the item is married to its pouch
- After an item is in the pouch, it is not touched again until it is packed for shipping
- Sequenced delivery to pack stations possible, with the option to display pouch contents on a screen in list or product picture format

After an item is inducted into a pouch or onto a hanger, it takes only a short time for it to be delivered to operators at packing stations.

It's easy for operators to combine discrete elements of an order and to fulfill both retail and e-Commerce orders at one station. Regardless of the number of items in an order, operators only have to pull the required items out of the pouches or off the hangers as they arrive (in sequence, if required) to pack them. And because the items are delivered from overhead, there is plenty of working space for operators to perform other value-added services.



Typical System Functions

Loading

- Items are loaded into the pouch manually or automatically
- Garments on hangers are attached outside the pouch
- Option to manage oversize items in dedicated bags



Buffering

- Long loops (up to 100m) that hold inducted inventory and circulate continuously
- The inventory can consist of newly picked items needed to fill production orders for the day or returned items that have been inducted back into the system
- Inducted returned items can stay in the buffer until needed or be processed back out to bulk storage
- Store items as eaches inexpensively
- Optimized performance at the loading and packing stations



Transport

- Transport, divert, and merge product effortlessly from various areas of the warehouse
- Route items easily and quickly through even the most complex warehouse layouts
- Transport and sort irregularly-shaped items that cannot go onto traditional conveyors and sorters



Sortation

- Sort and sequence items
- Incorporate both wave and waveless order fulfillment strategies so you can meet your customer demands efficiently



Packing

- Items are picked out of the pouches and packed into final orders
- Easy integration of value-added services (VAS)

Unloading

- New Dematic solution for automatic unloading
- The Dematic automatic pouch has been granted a patent in the US and is in-process in Europe



