#### White Paper

## Automate Returns Management







## Introduction

Flexible automated storage and retrieval systems (ASRS) quickly organize returned items by return category. This speeds up the inventory recovery value and minimizes labor and space demands.

### Returns rise as e-commerce sales skyrocket

COVID-19 catapulted e-commerce ahead 2 years in only 10 months, realizing projected 2022 results in 2020. In the U.S., e-commerce sales were up an astounding 44% from 2019 to 2020, accounting for the entire 6.9% increase in overall retail sales<sup>1</sup>. The global marketplace is similar with 2020 growth estimates just over 27%, for a total of \$4.28 trillion in global e-commerce sales. However, total global retail sales declined 3%, resulting in just short of \$23 trillion<sup>2</sup>.

More packages arriving in mailboxes leads to an increase in customer returns. Handling returns has long been a challenge for retailers, and the problem is only growing. This white paper details how an automated returns management process helps your operations:





## The statistics behind e-commerce returns

While returns rates to stores are around 8%, e-commerce returns rates are  $20 - 30\%^3$ . Why is this and how is it impacting retailers?

### The reason for e-commerce returns

- 30% of shoppers deliberately over-purchase and subsequently return unwanted items<sup>3</sup>
- 19% admitted to ordering multiple versions of the same item so they could make their mind up when they're delivered<sup>3</sup>
- Clothing & shoes have the highest return rate at 56%, with electronics coming in second at 42% followed by accessories and jewelry at 30%<sup>3</sup>
- 80% of returned items are listed as damaged or broken (often in transit), for 64% consumers site the product does not match the description and 37% claim they simply didn't like the product<sup>3</sup>

### The impact on retailer operations

- 57% of retailers said that dealing with returns has a negative impact on the day-to-day running of their business<sup>3</sup>
- 33% of online retailers offer free returns but offset the cost of this by charging for delivery<sup>3</sup>
- 20% said they'd increased the price of products to cover the cost of returns<sup>3</sup>

#### Returns policies impact customer loyalty

- 68% of shoppers view returns policies before making a purchase<sup>4</sup>
- 50% of shoppers had abandoned a purchase due to a lack of choice of returns channels<sup>5</sup>
- 84% of respondents said a positive returns experience encourages them to shop with a retailer again<sup>6</sup>



With e-commerce returns just as explosive as online shopping, many e-retailers are discovering their returns management processes aren't efficient. Returns management is one of the most often overlooked processes of the warehouse. An unmanaged, uncontrolled returns process can put tremendous strain on a facility's available space, labor and costs.

When returns are put in a corner waiting to be processed, that's putting valuable revenue generating inventory aside. If processes are not properly managed and systems become overwhelmed, items will have to be sold at a discount to get them out of the system before eating into profits.

Returns are a significant cost and put an enormous impact on the bottom line. 2020 returns were estimated to cost retailers \$550 billion<sup>7</sup>. When it comes to returns, the top challenge facing retailers is cost containment. As retailers expand return policies to meet customer demands (free shipping and no restocking fees), their internal returns costs increase.

## Simplify returns

The first steps of receiving and processing returns is manual. Trained operators must open received parcels, assign tracking numbers via barcode labels and test/inspect the returned item. Based on this inspection as well as the item's age, seasonal category, defects, etc; they are assigned a disposition destination.



Once returned items have been inspected and labeled with a disposition destination, however, things tend to fall apart for many return operations. Inundated with a potentially overwhelming number of discrete items, managing their sortation and routing can be a real challenge for fulfillment centers. Boxes and totes of returned items can quickly overwhelm both the space allotted, and the labor assigned to their management.

Especially for facilities with conventional racking, sending an operator to physically return one item to its stock location can be a time-consuming and ergonomically fatiguing task.



# Automated technologies

To move returned items through the disposition process quickly, ASRS can speed up the processing time to maximize asset value recovery in a smaller footprint while reducing cycle times and labor costs. Horizontal Carousel Modules, Vertical Carousel Modules and Vertical Lift Modules are self-contained systems offering higher density storage in a more compact footprint when compared to manual storage.

### Horizontal Carousel Modules (HCMs)

Consist of bins mounted on an oval track that rotate horizontally to delivery storage locations to an operator. These ASRS systems eliminate unproductive travel and search time by delivering the product to an operator.







### Vertical Carousel Modules (VCMs)

Comprised of a series of shelves rotating around a track, like a Ferris wheel. It delivers stored items safely and quickly to an ergonomically positioned counter at the operator's command, eliminating walk and search time.

### Vertical Lift Modules (VLMs)

Enclosed ASRS with two columns of trays. A center inserter/extractor automatically locates and retrieves stored trays from the columns and presents them to a worker at a waist-high pick window. The VLM eliminates travel and SKU search time.

### Vertical Buffer Modules (VBMs)

A discrete bin handling system consisting of enclosed shelving with a movable mast in the center that stores and retrieves totes, delivering them to an ergonomic turntable picking station or automatically delivering them via outbound conveyor.



## Choosing an ASRS

The selection of the most appropriate ASRS for a given reverse logistics operation is dependent on a variety of factors, including number of inbound returns received per day, the size variability of the returned items, and the desired rate of throughput for returns.

Pairing items routed to the automated returns processing area with fixed mounted or radiofrequency (RF) scanners for barcode reading, light-directed picking workstations and/or put walls helps operators to quickly identify the right storage location in the ASRS. The automated systems deliver the appropriate bin directly to the worker and highlights the position to put the item. This eliminates both walk and search time, enabling fewer personnel to sort and route more returns.

In certain applications, the storage bins in the ASRS can even be utilized as forward pick areas. This functionality is enabled by integrated inventory management software that not only keeps track of the contents held within the machine, but also interfaces with a facility's warehouse management system (WMS) and enterprise resource planning (ERP) system. This function allows picks to be sourced from the most convenient location (in this case, the returns processing area) for even faster restocking and resale of returned inventory. Likewise, when the inventory management software recognizes that a predetermined quantity of returned inventory has been reached, it can work with the WMS to assign and create a task for those items. This might include routing to outbound shipping for return to a vendor or transfer to a secondary market reseller; transport by conveyor or cart to a stock position within the warehouse; or shipment to a reclamation or disposal service provider.

Click here and read the e-commerce ASRS Buyers Guide

Compare the types of ASRS technologies available and the impact they can have on e-commerce operations.

## An example

A major omni-channel retailer who sells a broad variety of items online and through broadcast television uses a combination of software, put walls and six Horizontal Carousel Modules to sort returns by disposition destination.

After passing through a manual inspection to assign a disposition category, returned items are routed in totes via conveyor to the automated sortation area. There, they are scanned with a fixed-mounted scanner. This triggers the warehouse control system (WCS) to pass the item details onto the HCMs inventory management system, determining the storage location in the HCM. This triggers a light beneath a cubbyhole position on one of the two put walls.

The operator places the item into the cubbyhole and moves to the next scan. Meanwhile, the inventory management system tracks all product SKUs, dispositions and quantities as they are placed in each put wall location; the system also sends confirmation of the put to the operation's labor management system (LMS) via the WCS.





While the WCS suggests locations within the carousels for item put away, the inventory management system makes the ultimate decision based on a variety of factors, including what other inventory is already in each HCM and the items' sizes. The illumination lights on the HCM-side of the put wall indicates time for placement of items into the HCM. This alerts an operator positioned between the put wall and the Horizontal Carousel Modules (three per put wall) that items are ready to be picked from the put wall and placed into the automated storage system.



The right software set-up is important. It controls all processes and determines the best storage location.

The HCM spins until presenting the correct carrier. Lights illuminate to show which storage bin the item should go into. Bins can be subdivided internally to hold multiple stock keeping units (SKUs), or multiple units of the same SKU. Different colors indicate a different disposition destination (vellow = restocking, blue = return to vendor, red = recycling).

The inventory management software is in continuous, real-time communication with the WCS, passing pick information to the LMS and WMS. Users assign pick tasks to retrieve inventory, as HCM-only picks or mixed picks that marry items picked elsewhere. This prevents items from returning to stock and saves time, travel and costs. When a pre-determined number of items is reached within a disposition category – a minimum number of items required for a return to vendor - for example, the inventory management software sends a transaction to the WCS.

## Benefits of ASRS for returns processing

By combining a flexible and affordable ASRS system with integrated inventory management software to create an automated returns handling system, retailers



### References

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