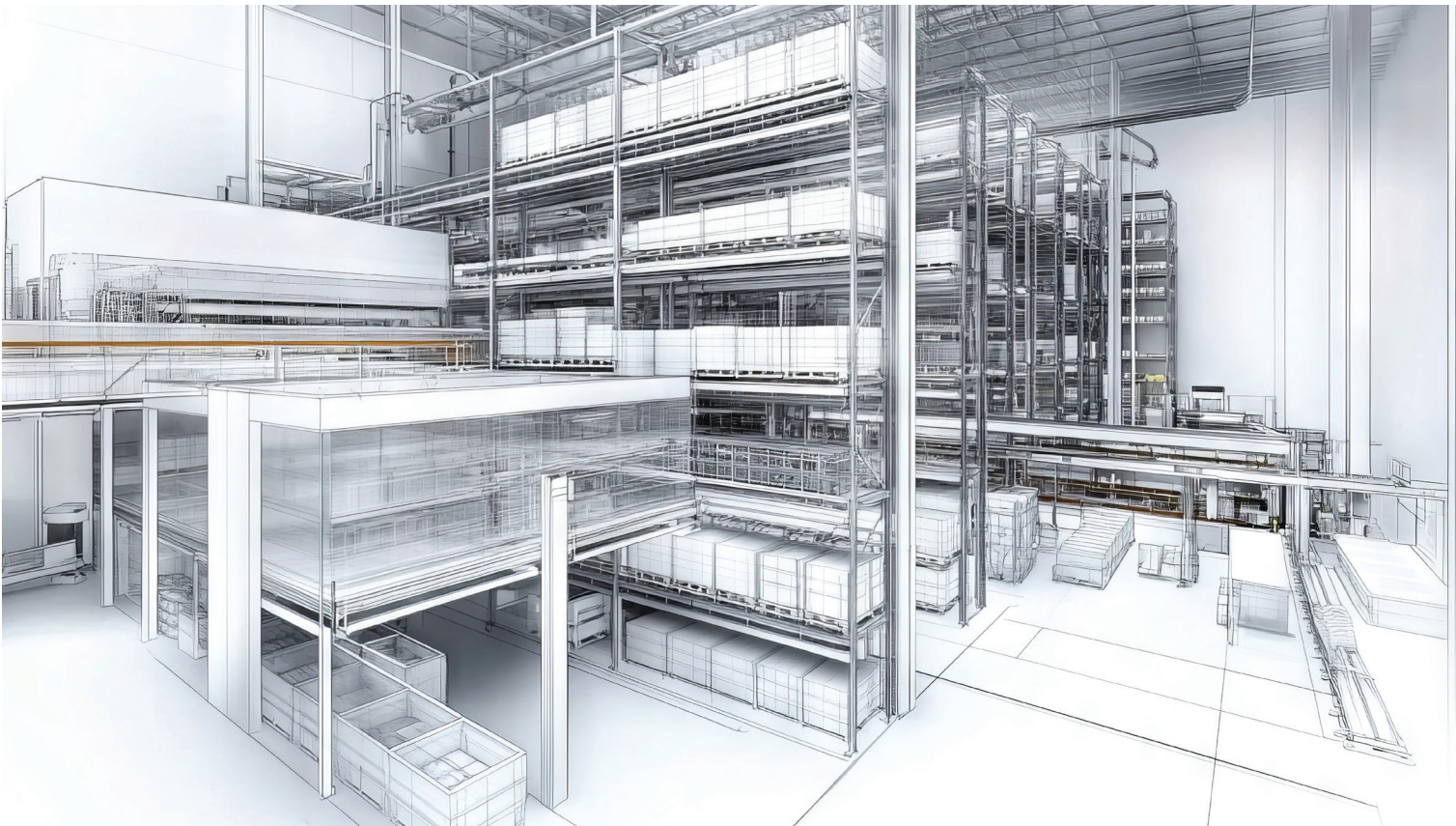


Thought Leadership Series

What AS/RS Solution Best Fits Your Industry?



What AS/RS Solution Best Fits Your Industry?

Ever since 1962, when the first automated storage and retrieval system (AS/RS) was implemented in a German warehouse distributing books, warehouse operations have been investing in and examining the different styles and benefits of an AS/RS solution.

In this FORTNA Insight, we will delve into the types of AS/RS solutions and the industries in which they can add value, reduce costs and increase throughput.

Types of AS/RS solutions



Like many solutions for warehouse operations, there are various types of AS/RS solutions, each designed to meet a specific need or challenge. From the smaller mini-load AS/RS to the pallet-based shuttle systems, each solution can bring a particular advantage to a unique industry or vertical.

Understanding the types of AS/RS solutions available, how they can impact your operations, and how flexible and scalable they are is critical to operational success and excellence.

- High-density storage
- Mini-load
- Carousel-based
- Shuttle
- Vertical, horizontal and robotic vertical lift module (VLM)
- Micro-load
- Vertical sequence systems (VSMs)
- Unit-load (crane-based)
- Mobile robot (AGVs and AMRs)
- Temperature-controlled

What does an AS/RS solution do?

While there are many different types of AS/RS solutions, they all, in their own way, complete the same tasks in the warehouse.

- **Receiving** – Receives incoming products into storage locations. It can also be used for returns.
- **Storage** – Stores products in bins, totes or on pallets, generally in a denser space, leading to greater capacity.
- **Inventory management** – AS/RS solutions offer an optimized inventory management structure and visibility.
- **Retrieval** – Whether it is a robot or a shuttle, each solution offers an automated retrieval of ordered products.
- **Delivery to goods-to-person (GTP) station** – One of the main benefits of an AS/RS system is products are delivered to a GTP station where a worker will consolidate the order, eliminating the need to walk the warehouse floor fulfilling orders.

Retail

One of the largest verticals for e-Commerce and online buying, the retail market is poised to reach 10 trillion by 2030¹, and global e-Commerce sales are projected to reach almost 7 trillion by the end of 2025².

Labor availability, eCommerce competition and maintaining customer loyalty are a few of the challenges that retail warehouse operations face daily. Real-time visibility into inventory, order fulfillment and returns management can be the key to selecting the right AS/RS solution for your retail operation. Other factors to consider are improving capacity and space utilization, product characteristics, order accuracy, and customer service.

While each operation is unique, here are a few AS/RS solutions geared to help the retail industry:

- High-density storage
- Mini-load
- Carousel
- Mobile robot



1 <https://capitaloneshopping.com/research/retail-statistics/>

2 <https://www.dash.app/blog/ecommerce-statistics>

Industrial distribution

Electronics, safety and aftermarket parts are examples of organizations that deliver products to a specific niche or customer segment. These operations distribute a wide range of products with varying weight, size and shipping needs.

While the product mix is broad, this vertical still needs to embrace customer loyalty, fast order fulfillment and capacity management. With the overall market size growing along with the demands of e-Commerce, integrating an AS/RS solution can take an operation to the next level.

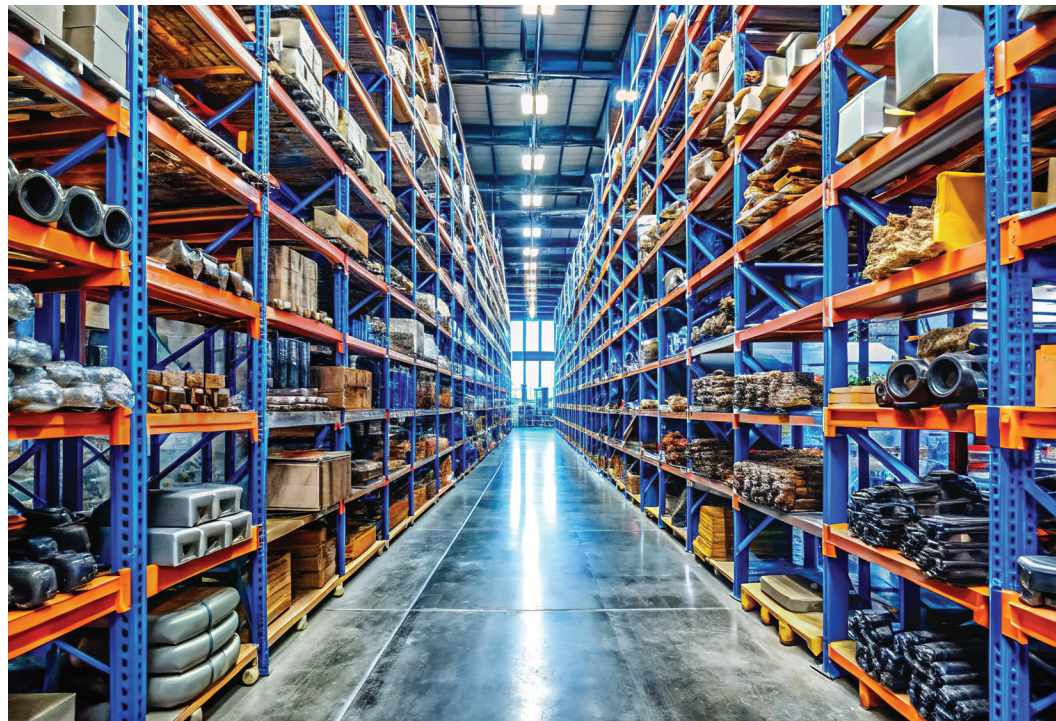
AS/RS solutions geared to help the industrial distribution industry are:

Small to mid-sized items

- High-density storage
- Mini-load
- Carousel

Wide range or heavy products

- Vertical lift
- Shuttle
- Unit-load
- Mobile robot



Industry specific

Food and beverage (F&B)



AS/RS solutions can significantly impact the F&B vertical market. Inventory control, tracking, and fast delivery to stores and customers before products expire are critical for success. Dependable and consistent receiving, storage and fulfillment can maintain customer satisfaction and drive brand loyalty.

One unique factor in the F&B industry is the need for automated solutions to operate in cold, temperature-controlled environments.

AS/RS solutions geared to help the food and beverage industry are:

- High-density (temperature-controlled)
- Mobile robot
- Shuttle

Industry specific

Life sciences



As with the other verticals, an AS/RS solution can be vital for success in life sciences distribution. Regulatory compliance, temperature control and real-time visibility are only a few challenges. Integrating an AS/RS solution can give you a competitive advantage and address the complexities of your operations and customers' needs and demands.

AS/RS solutions geared to help the life sciences industry are:

- Vertical lift
- High-density
- High-density (temperature-controlled)
- Mini-load

Selecting the right AS/RS solution for your unique vertical and product mix is crucial for optimizing warehouse operations, enhancing efficiency and meeting industry-specific challenges. Whether in retail, industrial distribution, food and beverage or life sciences, understanding the unique needs of your sector and the capabilities of various AS/RS solutions can significantly improve inventory management, order fulfillment and overall productivity.



FORTNA CAN HELP

By partnering with FORTNA, our experts and unique approach, you can ensure you select and integrate the best-fit AS/RS technology, ensuring your warehouse operations are well-equipped to handle current demands and future growth, ultimately driving success and customer satisfaction in your industry.

Contact us today at www.FORTNA.com