

Warehouse Automation 101

As supply chains continue to evolve, it will be increasingly important to equip your warehouse with the right technology to meet your labor challenges, customer demands and organizational goals. There are several types of warehouse automation systems now in use, but each varies greatly in scope, complexity and cost.

We've put together this educational overview to help you bring clarity to these technology solutions.

Automated Storage

How it works:

Automated storage systems store items within the system structure and automatically transport the goods directly to the operator as needed for picking.

Types:

AS/RS, carousels and vertical lift modules (VLM)

Traditional Automation

How it works:

A Pick Module for example, is a multi-level structure with conveyors that run between the racks, moving products from the picking areas to the shipping areas.

Types:

Automated sortation and conveyors

Mobile Robots

How it works:

Warehouse robots are used either for transporting goods or to assist in picking, packing, sorting and storing goods. These robots can perform tasks in an automated manner or work collaboratively with existing warehouse material handlers.

Types:

Autonomous mobile robots (AMR) and autonomous guided vehicles (AGV)

Key benefits:

- Optimal for e-commerce fulfillment
- Supports high-volume single piece picking
- Accommodates tight labor conditions

Key benefits:

- Transports inventory without labor
- Combines well with other forms of automation
- Used across industries and item types due to versatility

Key benefits:

- Manage labor shortages
- Accommodates high seasonality
- Budget and time friendly

Comparing Automation Tech

The key to a winning warehouse automation strategy is finding the right fit for your operation and budget, while taking into consideration future warehouse needs. As new automation technologies continue to emerge and existing technologies evolve, choosing the right option (or options) can be a challenge.

Refer to the sliding scale below to determine which metrics are most important to you and how each type of automation stacks up.

