AMH
AUTOMATED MATERIAL HANDLING

AUTOMATED STORAGE SYSTEMS:

Is Vertical Carousel or Vertical Lift right for you?

Automated high-density storage systems are a critical tool for solving two costly and common business problems: Lack of space and cost containment.

For example, automated storage systems can free up to 75% of warehouse floor space by turning unused ceiling height into valuable storage space. And, by making more effective use of distribution center floor and air space, these modern marvels can help you put off for years — or avoid altogether — expensive expansions or moves to larger facilities.

Standard warehouse shelving requires employees to spend 60-70% of their time walking between parts/product locations, leaving only 30% of their time for productive picking & packing.

Automated storage systems, on the other hand, deliver needed parts or products directly to the hands of stationary employees… increasing operator productivity by up to 2.5 times.

There are two automated system types: Vertical Carousel and Vertical Lift. Which is best for you and your organization depends on a number of factors, including: (1) Ceiling height, (2) Size & weight of parts stored, and (3) Part/product picking rate (high or low activity).

Here's a brief summary of how you can decide which of these systems is right for your organization and its fulfillment requirements.

Uniform small parts quickly picked from access window

Capacity easily expanded with additional modules

Vertical Carousel

Vertical carousels were introduced in the 1950s, primarily to provide for efficiently storing and picking carpet rolls. They operate on a "Ferris Wheel" principle, with numerous levels of shelving rotating at an operator's direction and delivering parts or products to an easy accessible access window.

Today, carousels systems effectively store and deliver all manner of parts and products in every kind of manufacturing and distribution environment.

Vertical carousels are most efficient when:

- Ceiling height is relatively low, 12-15' or lower

- Parts and products stored are uniformly small & light

- Materials being stored are relatively similar in weight and size

- High-speed picking is required in a single module installation. (Rotating carousel shelves eliminate the need to return shelves from the access window after retrieving parts.)

- Retrieved units are hand-picked with no need to transfer to conveyor or pushcart

Increases picking productivity up to 2.5 times

Vertical Lift

Automated vertical lifts were developed in the 1970s specifically for warehouse and distribution center applications. A vertical lift is basically two columns of enclosed shelving with an extraction shelf that moves up and down an open shaft between the columns. Once selected by the extractor shelf, the retrieved part is delivered to the system operator positioned at an ergonomically designed access window.

Like carousels, vertical lifts are often integrated into inventory management systems via computer control systems and PC-based software.

Vertical lifts are most efficient when:

- Ceiling heights of 16' to 90' are available, allowing often- wasted air space to be used for parts or product storage

- Size of parts being stored varies from very large to very small, heavy to light

- Product weights vary widely from heavy (2,000 lbs.) to light (300 lbs.), which can cause imbalance problems with vertical carousel

- Frequent changes will be made in numbers, sizes and weights of products stored

- Application requires parts delivery to conveyor or pushcart

Now that you have a clearer idea of the automated storage system best suited for your needs, you're better prepared to realistically consider the cost and efficiency benefits a modern automated storage system can deliver for your organization.

To learn more about how automated vertical carousel and vertical lift systems can help make your warehouse or distribution center more cost-effective, contact us today.

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2285 Executive Drive
Lexington, Kentucky 40505

Toll-free: *(800) 838-0473*
Phone: *(859) 293-5887*
Fax: *(859) 293-6175*

www.AutomatedMH.com