HIGH-DENSITY AUTOMATED VERTICAL STORAGE SYSTEMS CAN SAVE TIME AND FLOOR SPACE

PART 1 OF A 2-PART SERIES

BY MICHAEL CLEARY AND JOSEPH ELIE

Automotive dealership Parts Departments today are experiencing major changes in storing, distributing and selling Parts. To meet these challenges, many dealers are taking advantage of automated vertical storage systems to substantially improve customer satisfaction and achieve higher overall profit margins from their Parts and Service Departments.

Automotive dealerships that have implemented automated vertical storage systems (vertical lift modules or vertical carousels) within their Parts Departments have discovered two key things:

1. They are able to increase storage capacity of Parts using about 85 percent less floor space compared to traditional static storage methods.

2. They establish far better control of their inventory, greatly improve picking accuracy and significantly reduce the time required to get Parts to Salespeople and Service Technicians.

These two key results lead to more Service Department jobs being possible per day and thus more satisfied Parts customers.

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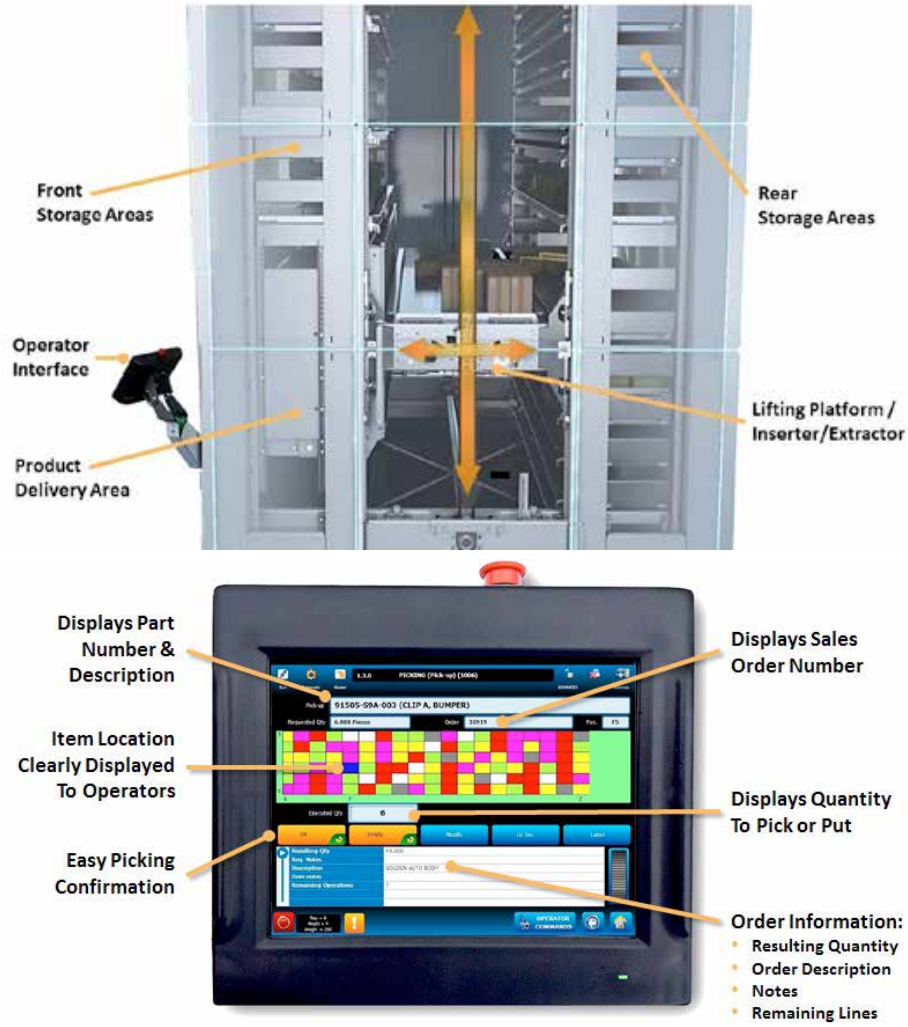

Explaining Automated Vertical Storage Systems

Vertical lift modules are fully enclosed, automated high-density storage units, which contain trays that are accessed by a lifting platform with an inserter / extractor. The trays are stored in the front and rear storage areas of units and parts are stored within trays. Trays containing parts are retrieved and delivered to operators at an ergonomic height for easy access. Vertical tray movement is accomplished by a steel-reinforced, toothed belt drive system and self-braking gear motor. Lifting guidance and stability are provided for by 16 guidance rollers located on the lifting platform.

Vertical lift modules are perfect for storing items with different sizes, heights or weights that exist in automotive dealerships. Product heights and tray weights are automatically measured by the vertical lift's on-board sensors and controller each time a tray is returned to the system. The tray is then instantly assigned to the optimal storage location based on its height.

Tray storage adjustability is provided in 1-inch increments, providing for maximum storage utilization within units. The trays within vertical lift modules are also able to easily be divided into individual compartments to create various sizes of location slots, where individual items are stored.

Vertical carousels are another type of enclosed, automated high-density storage unit; these have bidirectional vertically rotating carriers. Totes or boxes with front-to-rear dividers of various widths are stored on each carrier of the vertical carousel to contain parts in specific storage locations. Both of these systems deliver the parts to the user at an ergonomic height, which means minimal bending, reaching or climbing to access items.

A key advantage of vertical lift modules is that only the specific tray containing the parts required is moved and delivered to the operator. All other parts remain safely stored in place on other trays, which can be important for sensitive electronic parts and high-cost items. Other advantages of vertical lift modules include faster picking times, increased product visibility and the ability to store a wide range of product heights which often change based on product type or stock levels in a fully dynamic manner further maximizing storage space within units.

Users of automated vertical storage systems typically can gain an extra 60 percent or more storage capacity using minimal floor space within a Parts Department with an automated vertical storage systems. It's not uncommon for a 20-foot-tall vertical lift module, requiring only about 140 square feet of floor space, to be able to store the same amount of Parts that would require approximately 80 to 85 automotive-type shelving bays.

Part 2 of this article will be published in the March/April issue of Fixed Ops Magazine.

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