

VERTICAL LIFT MODULES

REB Storage Systems International

A vertical lift module, commonly referred to as a VLM, is a semi-automated material handling solution. A VLM is an enclosed systems of vertically arranged trays stored in both the front and rear with an extractor device operating in the center.

In a vertical lift module, trays are stored using the least amount of space, ensuring maximum storage density within the VLM. This is accomplished by the system scanning the height of the products going back into the system and placing that tray in the ideal storage location slot.

Read to learn how a vertical lift module works, commonly seen advantages once implemented, operation features that are a good fit for a VLM, and how a vertical lift module can be integrated into an efficient material handling system.

How a Vertical Lift Module Works

The vertical lift module automatically delivers trays with the stored items to an access window with a push of a button or a scan of a barcode. It can also generate a list directly imported from an ERP.

VLMs are modular, meaning that you can easily add or remove trays as well as add or take away height if you move it to a different location with different height restrictions.

A vertical lift module can be setup as a stand alone system, or connected to a WMS. This system will also generate a number of reports for as needed. These reports can include quantity on hand, which items have been accessed and who accessed them, and so on. There are a number of standard fields and up to 8 customizable fields that you can have the system track and report on.

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How a Vertical Lift Module Works- Continued

Here's an example of the steps taken in a vertical lift module:

1. Picker scans a barcode or pushes a button associated with the item needed.
2. VLM retrieves the product and presents the tray via the access window.
3. A laser pointer or LED screen will identify the specific pick location on the tray.
4. Once the item is picked, the picker indicates to the VLM that the task is complete.
5. The VLM repeats this action for the next item on the scanned list.

Is a Vertical Lift Module System Right for Your Operation?

A vertical lift module system is ideal for a number of applications, including:



High value items: a secured locking door keeps items locked away. You can also include a feature where it requires a second authorization or manager-level clearance. You can restrict this by individual tray.



Kitting: Building GPS unit. You can have the screens, buttons, circuit boards, etc. You can include them all on the same tray, so when you build. Or you can put all fast movers on the same tray.



Small parts / partial case picks: Individual, organized treys make it easier to keep track of and store small parts. Small parts are typically harder to manage and result in more mispicks.



Parts that need to remain clean: Since the inventory is stored in an enclosed unit, it keeps items clean. Especially for slow-turn inventory.



Batch picking: VLMs can pull exact quantities needed in order to fill multiple orders at once. The machine will clearly indicate to the operator the exact quantity of the SKUs needed in order to fulfill each order. This minimizes the time spent by the operator at each SKU location.



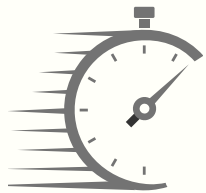
Multilingual warehouses: VLMs are fluent in 28 languages. Each pickers profile can be setup with their preferred language, which the machine will recognize when they login.

Vertical Lift Module Advantages

Once you've assessed the prior information and have concluded that a vertical lift module is a good fit for your operation, but are still unsure, you should consider some of the advantages that a vertical lift module has. Commonly seen advantages include:



Reduced labor costs: by delivering items directly to the operator, travel and search time commonly associated with a rack system is drastically reduced. This allows the operator to spend more time picking, increasing overall productivity. It's been shown to provide up to 2/3 less labor costs.



Increased picking speed: VLMs can increase productivity up to 500%. This is due to the machine locating and presenting each item, which is done in 30 seconds or less. This feature eliminates 'dwell time' the picker may spend searching an aisle.

Another feature that helps increase pick speed is that the VLM learns overtime. It will learn which products are your fast movers, and will adjust the location of where they place those trays within the system so they are more readily available.

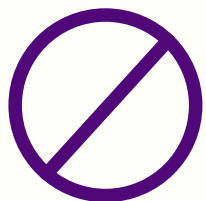


Eliminates dwell time: Less time spent in the aisle pulling the product. The machine presents the item to you upon request in less than 30 seconds, on average.

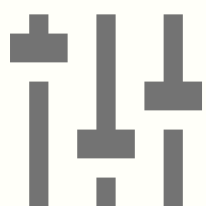


Saves 75-88% of the footprint: meaning that by consolidating a racking or shelving system into a VLM, you will free up 75% - 88% of the current floorspace being used to store.

Additionally, VLMs can support up to three access openings (vertically), so it can be used in a multi-floor operation. This can be accomplished either via multiple floors or via mezzanines.



Eliminates shrinkage: the machine tracks everything. It knows who used it last, what they did, and so much more. There are reports that can be generated to see this information.



Improved ergonomics: the machine will compensate for the height of the picker. The picker's preferred picking height is specified in their profile setup in the system and recognized upon employee sign in.

Integrating a Vertical Lift Module

Incorporating VLMs into an integrated material handling system is very beneficial. By including a VLM as a part of a full system it will improve the efficiency of a distribution center.

There are a variety of solutions that are good complements to a vertical lift module. Some of which include:

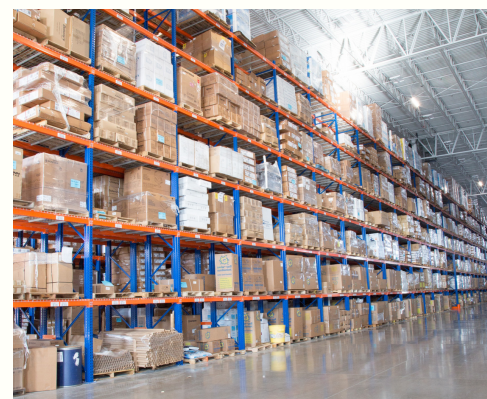


Conveyors

..... Can help transport items from the VLM system to the packing and shipping areas.

Put-to-Light Wall

Product can be picked from the VLM and then transferred to the put wall. This helps make sure that the items are placed in the proper cartons for shipping more efficiently.



Pallet Racking

..... Pallet racking helps store any overflow product that the VLM does not have room for at the moment.

All three of the above mentioned can be incorporated into a single system with a VLM. The product that is kept inside the VLM is stored initially on the pallet racking. The VLM located along the back wall holds the individual components used for cartons that are shipped out. Those pieces are placed into a bin and are transferred to the pick wall via the conveyor. From the conveyor the cartons are placed in the appropriate area as indicated by the put wall.



Your Next Steps for a Vertical Lift Module System

Whether your next step is to gather more information or request a quote, consider REB Storage Systems. REB is a highly experienced systems integrator, in business since 1962. REB has 17 in-house project managers and engineers, all highly experienced in the material handling industry. These people know this industry inside and out.

REB is highly knowledgeable and experienced in designing, engineering, and installing vertical lift module systems and will make sure your system is the best fit for your space. We work with you to provide a turnkey system. From engineering, design, products procurement, subcontractor management, install, and permitting support, REB handles it all for you.

We'd appreciate the opportunity to help you further, whether that be more information or a quote. Email or call us to get in touch with a REB representative.



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