

PICKING OPERATIONS

AUTOMATIC VERTICAL STORAGE SYSTEMS



AUTOMATIC VERTICAL STORAGE SYSTEMS: THE PICKING MAKES THE DIFFERENCE

In a market that demands ever greater flexibility, speed and precision from the supply chain, choosing the right picking system is critical.

Whatever storage system is used - from traditional metal shelving to automatic systems - there are many and different technological solutions that make it possible to meet the needs of the most varied sectors and applications.

In this guide, we want to share some of the opportunities offered by automatic vertical storage systems - with a focus on Vertimag and the exclusive Ergo-Tech system - to show you how these systems can significantly enhance efficiency and what this means for your business.

What is picking?

The term picking refers to the identification, retrieval, and handling of goods within a warehouse.

This operation can be carried out in different ways:

- manually
- using wearable equipment or palmtops
- using "pick to light" and "put to light" systems
- automatically by means of stacker cranes for pallets, miniloads or shuttles
- automatically by robot
- using "mixed" schemes





How does it work

In manual models, picking is usually carried out with the “man-to-goods” method, while automatic storage systems use the “goods-to-man” method.

In the second case, operators remain stationary in special picking stations (picking bays), where the goods are automatically conveyed, and orders are prepared for shipping.

This workstation is equipped with everything necessary to carry out activities which are guided by a data-entry screen connected to customized warehouse management software (WMS).

The workstation can also be equipped with barcode readers, scales, label printers and picking lists. To make the operators' work more comfortable, picking bays can also be configured according to ergonomic principles and have supplementary safety systems.

The advantages of “well executed” picking

Even in automatic vertical storage systems, the proper picking process can make a difference because it directly affects work organization and logistics. Just consider some of these advantages:

• SUPERIOR EFFICIENCY

Automated picking guarantees an increase in the number of order lines executed per unit of time, leaner and more accurate operations, as well as an efficient control of activities for continuous process optimization.

• INCREASED ACCURACY

The use of an automated system ensures the reduction of order picking and lead times. With the “goods-to-man” paradigm, performance is significantly increased and picking errors are eliminated.

• MORE SAFETY

Another aspect of concern in picking and placing operations is safety: with vertical storage systems the use of lifting means that can cause accidents or damage equipment and unit loads is eliminated.

• BETTER USE OF UMAN RESOURCES

An automatic storage system makes it possible to considerably reduce the personnel needed - forklift drivers, pickers - freeing up important resources to be allocated to the company's core business and thus enhancing the skills of operators.

• INCREASED INTEGRATION

A further advantage comes from the integration with the warehouse management software, which enables the optimization of the different picking activities carried out, whether individual or combined, thanks also to the connection with the company's ERP system.

A concrete example: picking operations with the new Vertimag

After this overview of the advantages offered by the proper picking method, let's see what is inside a vertical storage system in order to appreciate the main tools through which these advantages take shape and are transformed into safety, efficiency and, more generally, into an opportunity to improve a company's logistics.



Space optimization with flexible trays

Available in 15 models, Vertimag offers 120 tray combinations based on capacity, length, depth, and height. This broad range of configurations allows the use of trays with different heights according to the type of unit load stored.

Thanks to such combinations, it is also possible to have different tray heights with the same capacity, with the advantage that in the case of short products it is not necessary to use trays with high sides and this ensures considerable space savings.

Customized trays for effective picking

However, it is not just a question of space. To facilitate picking operations, and thus minimize errors, a wide range of accessories comes to the aid of operators to properly compartmentalize each tray. In this way, the retrieval of the different unit loads is much easier.



The main accessories for trays include:

- corrugated dividers
- smooth dividers
- corrugated trays
- ribbed raised parts
- cardboard boxes

Many accessories to enhance efficiency

Many other accessories make picking operations even more efficient, safe, and comfortable, guiding operators in picking and placing activities.

The most common systems are the following:

- **laser pointer**, which enables fast and accurate identification of the item to pick
- **alphanumeric LED bar**, which provides the operator with the necessary information on the item and the operations to be carried out
- **pick-put to light devices**, which guide picking and placing activities intuitively with remarkable advantages in terms of speed and precision
- **mobile trolleys**, which allow a tray to be removed and transferred to other production areas
- **jib cranes**, which make it easier to pick heavy pieces



Different bays for different needs

In addition to trays and accessories, the type of bay plays a critical role in picking operations when a vertical storage system like Vertimag is used.

This important aspect is directly related to the need to provide the best working conditions in terms of safety, ergonomics, and efficiency.

In fact, the right bay makes picking operations simpler, more comfortable, and more accurate.

Vertimag, for example, can be equipped with 6 types of bays suitable for different needs:

- **internal single or double bay**
- **external single or double bay**
- **removable bay**
- **the exclusive Ergo Tech system**



Ergonomics and functionality: The Ergo-Tech bay

Ergo-Tech is the exclusive picking bay designed by the Ferretto which, thanks to a second lift placed under the bay inside the structure, offers the work flows of double bay machines while ensuring perfect ergonomics. Suitable for all types of picking, this system is the ideal solution for intensive picking cycles: it guarantees speed, thanks to the second tray in stand-by, and greater efficiency as the operator always works at an ideal height.



How it works

With Ergo-Tech, the items are automatically delivered at a single configurable height from the ground by means of a lifting device located inside the bay structure. While the operator is conducting a picking or placing operation in one tray, the system gets the second tray and puts it in stand-by ready to be delivered to the bay.

Once the picking or placing operation has been completed on the first tray, this is returned to its storage position and the tray in stand-by is immediately lifted to the bay enabling the operator to carry out a new picking or placing operation at the same height, ergonomically and without delays.

Advantages

• EFFICIENCY

Ergo-Tech ensures the flows of a double bay and, consequently, optimizes performance and increases the speed of picking and placing operations.

• FLESSIBILITÀ

Thanks to its operating principle, Ergo-Tech offers the typical flows of double bay storage systems without limitations related to the height of the items as is the case, instead, for traditional double level bays. More specifically, by lifting the second tray, the Ergo-Tech system allows materials of different formats and sizes to be stored.

• SPACE OPTIMIZATION

The lifting mechanism installed inside the structure does not alter the dimensions of the vertical storage system compared to a standard internal bay.

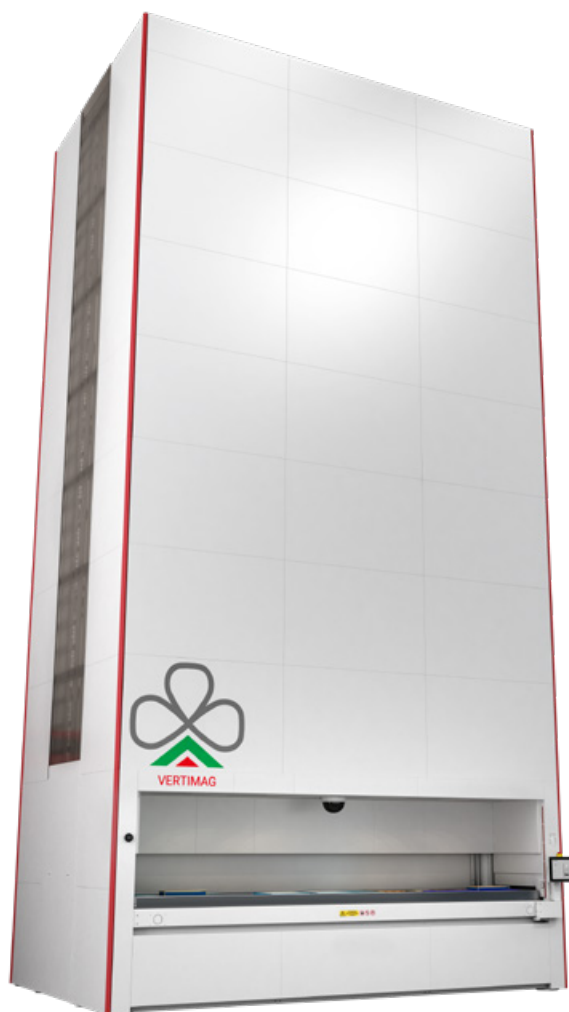
• ERGONOMICS

The structure of the system creates an absolutely ergonomic work environment for the operator. There is no risk of potential injuries: in fact, unnecessary lifting or bending during materials handling is simply eliminated.

• SAFETY

The picking bay is equipped with vertical anti-intrusion safety barriers and the automatic shutter, a standard feature, closes the opening during operations: thus, the material is protected, the noise in the work area is significantly reduced, and the safety of the operator guaranteed.





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PICKING

For more information about **Picking**,
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