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Modula HC

HORIZONTAL CAROUSEL

HORIZONTAL TECHNOLOGY FOR EASIER PICKING

The Horizontal Carousel is **ideal for all intensive picking applications,** both in distribution and in production, or in environments where it is not possible to exploit the vertical space.

Each carousel is composed of a series of **bins** that rotate horizontally on a **stainless steel rail** and bring the products ready for bring the products to the picking area ready for picking by the operator, using the goods-to-person concept.

KEY BENEFITS

1. INCREASED PRODUCTIVITY

Following the "goods-to-person" concept, the products are delivered directly to the operator, eliminating any waste of time compared to traditional manual picking methods.

2. MAXIMIZED USE OF SPACE

Products are stored and organized in a compact and high density storage area.

3. REDUCED RISKS AND IMPROVED ERGONOMICS

The operators work in an ergonomic position while the safety systems prevent any contact with the moving parts of the carousel.

4. QUICK RETURN ON INVESTMENT

The ROI ranges between 6 and 18 months, depending on the size and characteristics of the design.

5. COMPLETE TRACEABILITY AND INVENTORY IN REAL-TIME

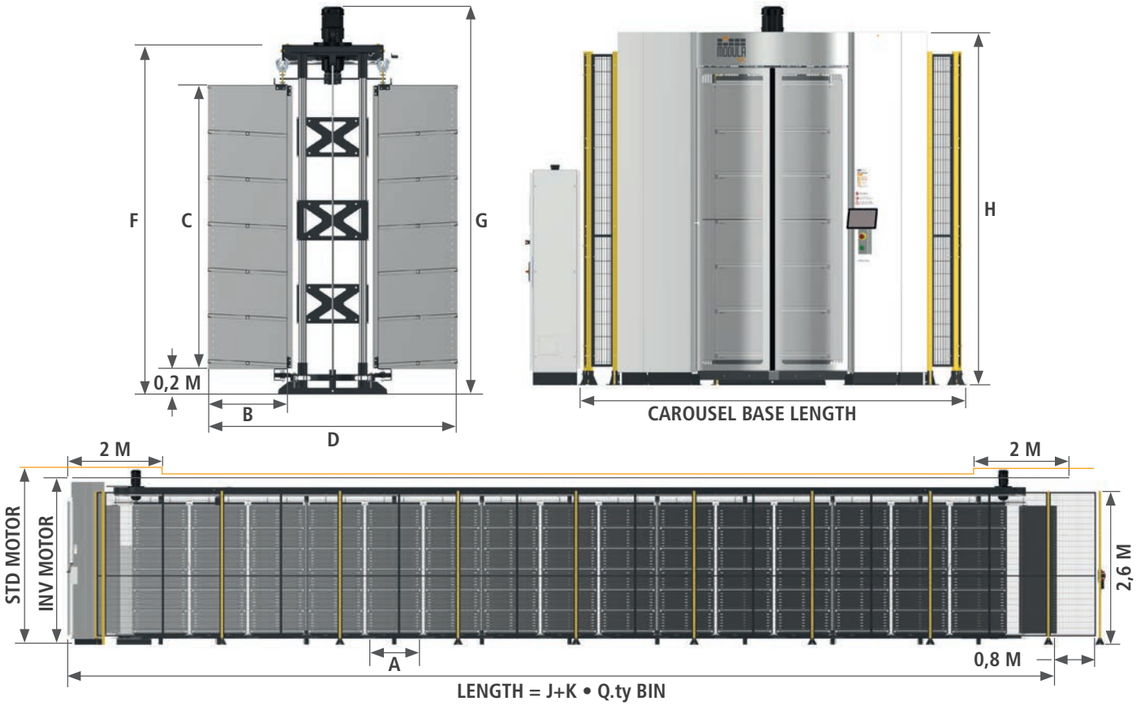
All picking operations are monitored and documented, enabling full traceability of orders and stock levels.

6. FLEXIBILITY FOR EVERY STORAGE NEED

The management of the carousel units as well as the distance between the shelves for the bins can be easily adjusted to adapt them to changing product mixes or to meet temporary needs.

7. PRECISE PICKING

Thanks to the visual picking aids, operators are able to quickly identify which and how many products to pick. This method reduces human error, increasing accuracy to over 99%.



Model	A Bin width *(mm)*	C Bin height *(mm)*	B Bin depth (mm)	G Carousel height *(mm)*	F Carousel height inverted motor *(mm)*	D Carousel width *(mm)*	J Carousel base length *(mm)*	K Multiplier coefficient	NB Number of bins *(min-max)*
MD84	610	2,134	457	3,100	2,740	1,626	775	337	12/ 150
MD84D	610	2,134	610	3,100	2,740	1,930	1,080	337	12/ 150
MD96	610	2,438	457	3,400	3,040	1,626	775	337	12/ 150
MD96D	610	2,438	610	3,400	3,040	1,930	1,080	337	12/ 150
MG84	914	2,134	457	3,100	2,740	1,626	838	505	8 /100
MG84D	914	2,134	610	3,100	2,740	1,930	1,130	505	8 /100
MG96	914	2,438	457	3,400	3,040	1,626	838	505	8 /100
MG96D	914	2,438	610	3,400	3,040	1,930	1,130	505	8 /100

• Min. ceiling H with standard motor, outer area: G + 280 mm
• Min. ceiling H with standard motor, middle area: F + 310 mm
• Min. ceiling H with inverted motor: F + 110 mm

Carousel length (L) = J + K x NB

MAXIMUM CAPACITY
36 t

SHELF CAPACITY
110 kg

BIN CAPACITY
550 kg

SHELVES PITCH
50MM

SPEED OF ROTATION
26 m/min

MAXIMUM ATTENTION TO SAFETY

Horizontal carousels were designed to guarantee the **highest safety standards** for operators and goods.

Each unit is supplied with:
- automatic door
- 2.4 m high perimeter fence with safety door and shutdown keyed switch.

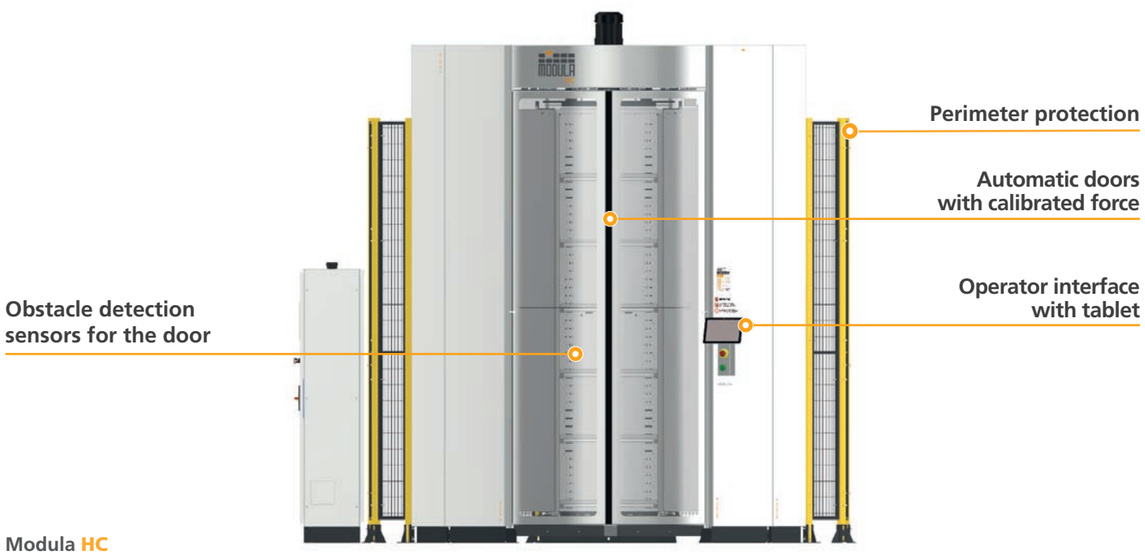


AUTOMATIC DOORS

The high-speed automatic doors (opening/closing) guarantee **operator safety** as they prevent access to moving parts until the carousel is completely still and ready for picking.

The doors are made of high-strength polycarbonate and were specially designed with a semi-curved and highly ergonomic design to facilitate picking operations.
The doors are also equipped with sensors to prevent foreign objects from accidentally interfering with them, while the closing force is also adjusted to prevent crushing injuries.



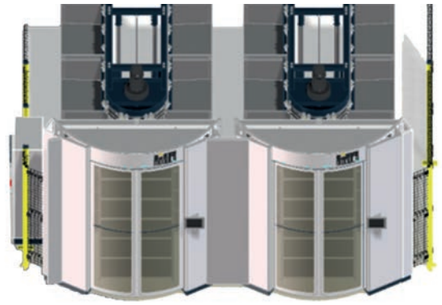


PRODUCTIVITY AND FLEXIBILITY

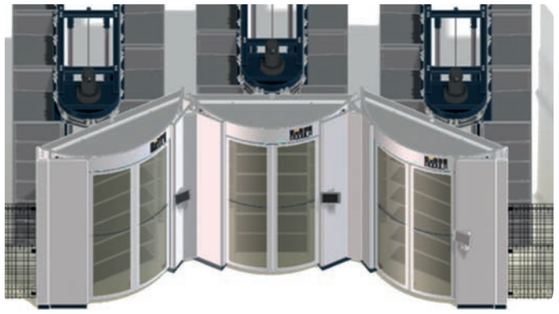
CAROUSEL UNITS

In order to increase productivity, **horizontal carousels** can be **used in groups,** also **known as "pods".**
Different configurations are available, consisting of **2, 3** or **4 carousels.**
While the operator picks from one carousel in a pod, the other carousels rotate and prepare the material for the subsequent picks.
This minimizes operator downtime, exponentially increasing performance.
The carousels can be positioned inline or in ergo mode.

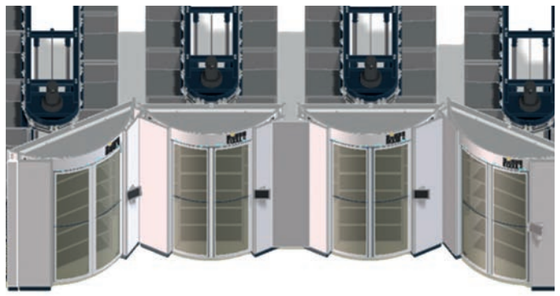
Up to 550 picks/hour can be carried out in each picking station.



2 CAROUSELS



3 CAROUSELS



4 CAROUSELS

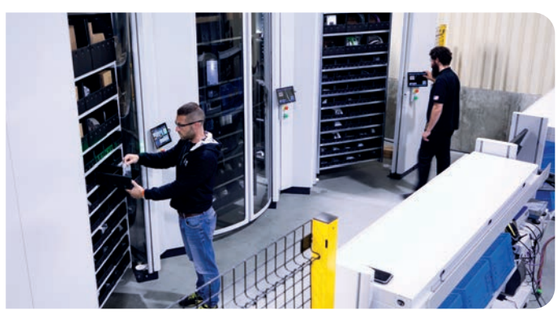
MAXIMUM ADAPTABILITY

Horizontal carousels can be installed in environments with particular geometries or in sites with architectural obstacles.

For this reason they were **designed to ensure maximum installation flexibility.**

- The distance between carousels can be adjusted in order to circumvent obstacles, such as support columns or support columns etc.
- The position of the electrical control panel can be chosen from different options.
- The perimeter fence is normally designed to suit the specific installation site.





CONTROL SYSTEMS

The horizontal carousel **uses the same control systems and graphic interfaces as all other Modula products.** This makes it extremely familiar and intuitive to use for those who already know the Modula vertical storage systems as well as for new users.

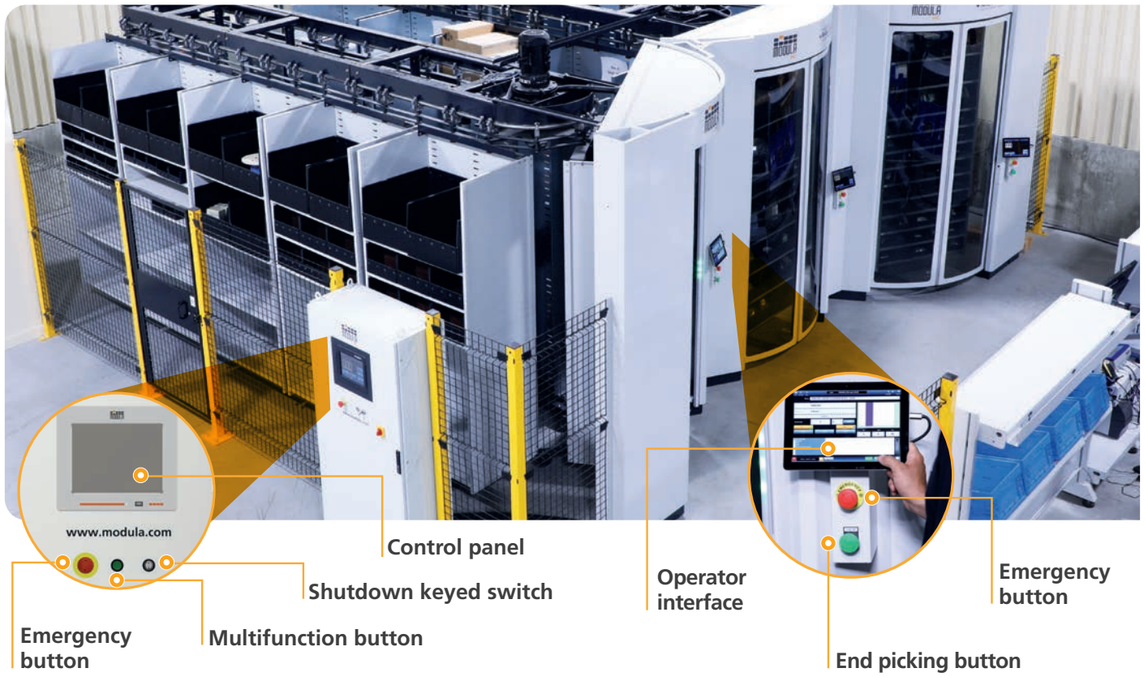
In particular, the following are supplied:

- a main control panel, used for configuration and maintenance of the carousels.

  An emergency stop button and a shutdown keyed switch for maintenance are available on the panel. Only one control panel is supplied for each pod.

- The operator interface consists of a dedicated tablet, located on the side of the door.

Each station is equipped with an end picking button and an emergency stop button.



PICKING WITH VISUAL AIDS

The tablet placed next to the door graphically shows the compartment from which the item(s) should be picked, as well as the description and quantity of the items involved in the operation. To make picking and placing even faster and more precise, each automatic door is also equipped with **LED light bars.** This visual aid immediately indicates to the operator on which shelf of the bin the item to be picked is located.

MODULA WMS

Modula WMS is the ideal warehouse management software for Modula automatic vertical and horizontal systems.

It enables **real-time management of the storage system,** in particular of user and item data, locations, material movements, picking and placing orders, and inventories. Integrates seamlessly with company ERP systems.

HIGH PRODUCTIVITY PICKING

PUT TO LIGHT

Put to Light solutions are **the best option for order preparation when a fast, intuitive, scalable and error-free process is needed.**

In a Put to Light system, the displays visually guide the operator to the locations in which the items for each order must be put.
A luminous display is associated with each location or bin assigned to an order. Sorting is carried out by item. Once an item has been identified, the displays visually indicate the bin in which the operator must place the item and the required quantity for each order.



The Modula WMS software that manages the Put to Light system enables the implementation of different picking strategies, including batch picking or multi-order.

PICKING STATION

The **picking station is fixed,** complete and modular, equipped with various picking positions.

It is made up of a sturdy coated steel structure, shelves to support the bins and a number of Put to Light displays with relative power supply.
The modules can be coupled if many orders must be processed at once. Intermediate modules are also available for the installation of monitors, label printers, barcode readers or other accessories.



The system must be equipped with the Modula WMS.

PICKING CART

The **picking cart is a mobile, complete, and modular station**, equipped with various picking positions.

It consists of a coated steel trolley equipped with 4 pivoting wheels for easy maneuverability, shelves for bins, Put to Light displays with relative control units, power/backup batteries, and a WiFi system for wireless connectivity.
The system works integrated with the Modula WMS.



AVAILABLE ACCESSORIES


1D and 2D barcode reader


Counting scale


RFID and magnetic reader


Label printer

MODULA WORLD



3
production plants

13
subsidiaries

100+
dealers

Modula is present in 5 continents with dealers and branches located in over 50 countries

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