



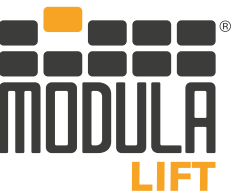
Modula World

Think Vertical, Think Modula

MODULA

is a leading worldwide manufacturer of automated storage technologies.

Our products are designed to save space and time, while improving efficiency. There is a Modula solution for every requirement to optimize storage.



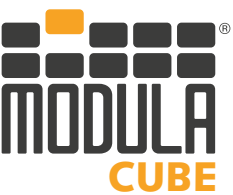
Vertical Lift Modules that solve your space, security and safety issues.



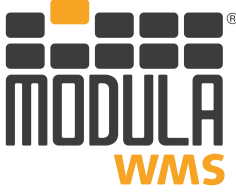
Vertical Lift Modules featuring trays with the greatest load capacity ever offered.



Vertical Lift Modules for storing lighter weight items in a reduced footprint.



Automated storage modules offering all of the advantages of traditional VLM's, stored horizontally.



Warehouse Management Software.

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Customer Care

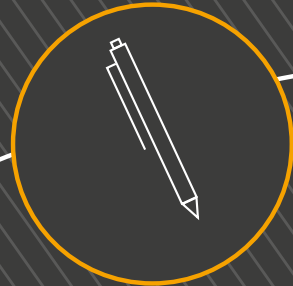
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References

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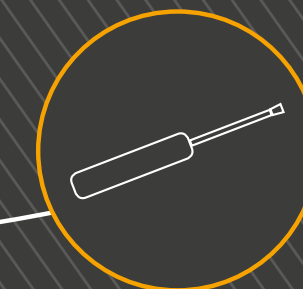
WEDESIGN



WEPRODUCE



WESELL



WEINSTALL



WETRAIN

WESERVICE



WORKING WITH YOU...

Salvatera, Italy

Italian headquarters



Our manufacturing facility and Italian headquarters, located in Salvatera, Reggio Emilia, Italy



Automated precision welding processes



Cutting edge manufacturing using automated punching and bending



Production and assembly areas

Lewiston (ME), USA

US headquarters



Automated precision welding processes



Cutting edge manufacturing



Automated punching and bending



Our manufacturing facility and US headquarters, located in Lewiston, ME, USA

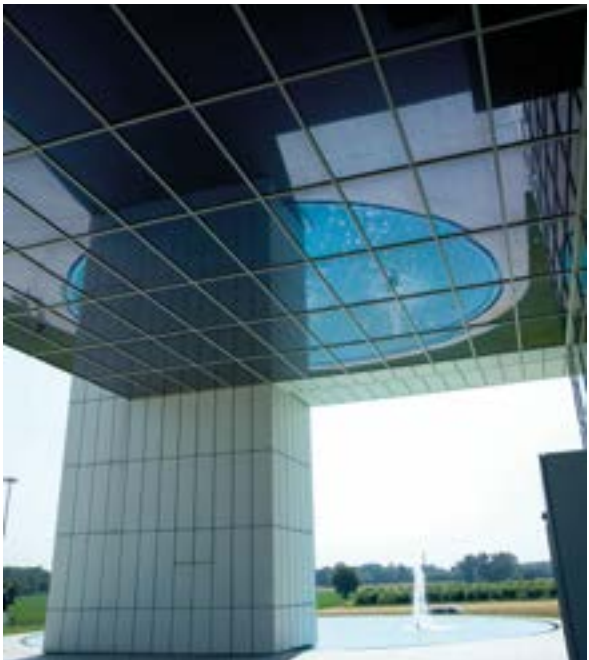
MODULA is part of System Group

System Group is a large international company that has been in business for over 40 years, working in a variety of industrial markets.

Research, development and technological innovation are the key points that guide the company. System has been granted nearly 200 patents and each year 5% of its turnover is applied to research and development.



System Group's global headquarters in Fiorano, MO, Italy



Modula worldwide presence



A technological center with infinite possibilities

System has developed numerous business units to meet the requirements of our many clients, including Ceramics, Packaging, Logistics and Electronics.



Automated warehouse technologies



Automated guided vehicles



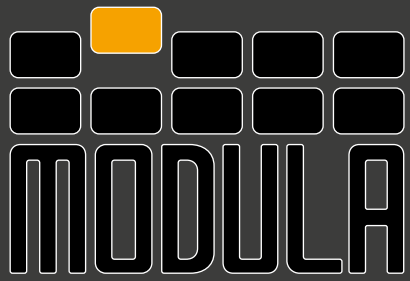
Ceramic printing technologies



Automation and control systems



System technologies for ceramics pressing



Think Vertical, Think Modula

Do you need to recover space in your facility?

Do you want to improve your efficiency?

Choose a vertical solution to

- Improve productivity
- Recover space
- Enhance ergonomics
- Grow your business (bottom line)



Vertical Technologies

Developed to utilize all of the available vertical space and recover floor space, vertical technologies are perfect for a clean, safe, secure and productive storage.

- Fewer errors
- Increased user safety
- Less wasted floor space
- No more cluttered storage
- Fewer delays in order processing
- More control over your items

The ideal solution for your business.

Before
Modula



After



Floor Space
Recovery



Up
To **90%**

Main Benefits



1. RECOVER SPACE:

Modula's vertical structure with unit heights up to 14,1 m tall, combined with its compact footprint allows users to recover up to 90% of floor space in their facility.



2. SAVE TIME:

Following the goods-to-user principle, operators are able to pick goods directly from the access opening area. There is no longer a need to walk aisles searching for items.



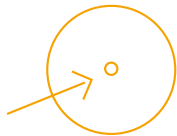
3. REDUCE RISKS:

Since operators no longer need to move as they did in standard warehouses, where they had to access elevated areas (shelves or mezzanines) and/or use stairs and trolleys. Potentially hazardous situations for the operators are avoided.



4. INCREASE SECURITY:

Access to items is controlled via password only to authorized operators. This increases operator accountability and thus item security. Every item accessed is able to be traced and it is even possible to limit access to specific trays.



5. IMPROVE ACCURACY:

Thanks to simple and intuitive visual picking aids, operators are able to quickly and easily identify the items needed to be picked or replenished from the VLM, leading to significant time and money savings.



6. BOOST INVENTORY MANAGEMENT:

Every time items are picked or replenished, operators are shown clear and useful information on current stock levels. Any adjustments to inventory levels if required is an extremely easy task for users.

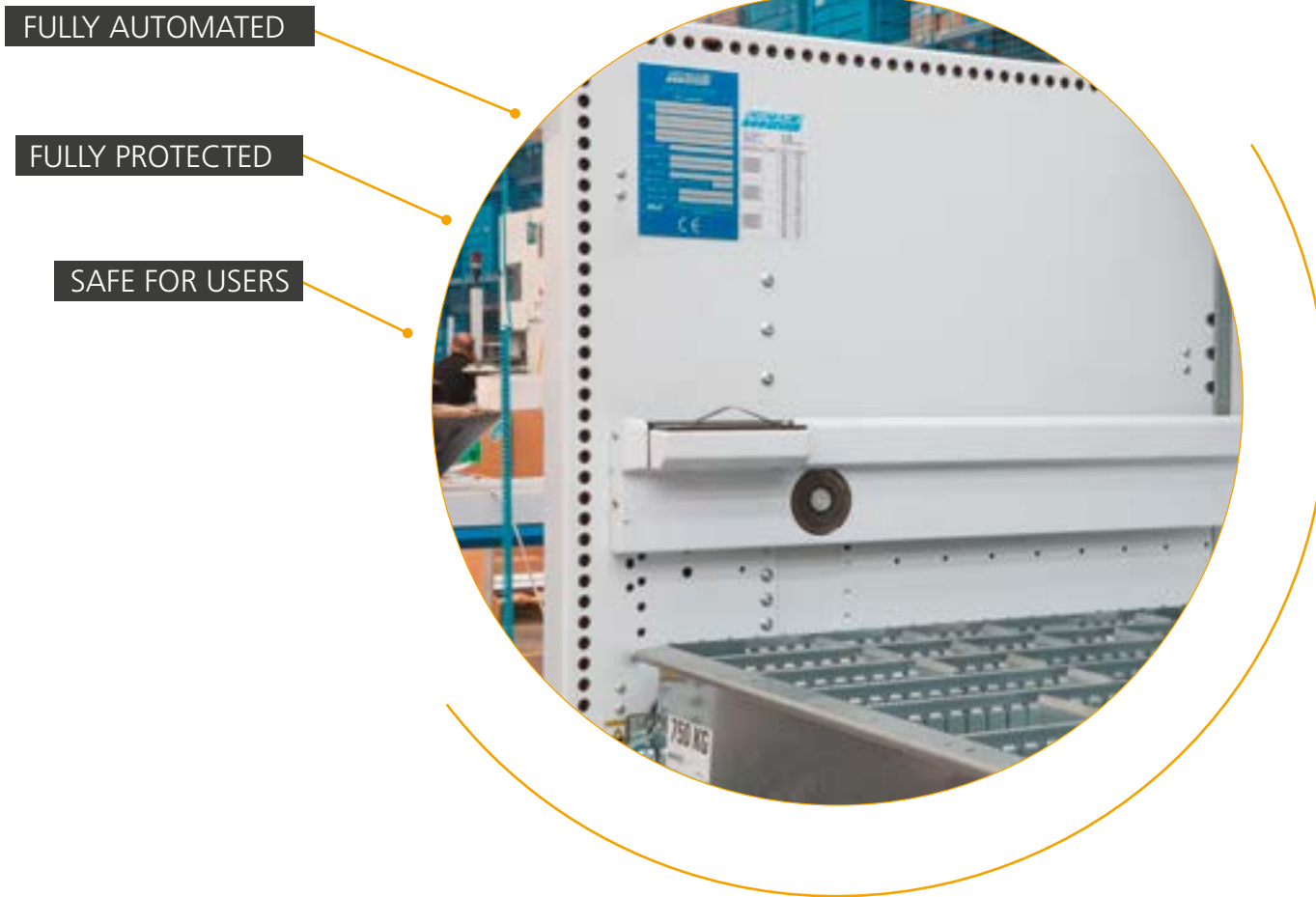
LIFT TECHNOLOGIES

Save space & time, improve safety & flexibility

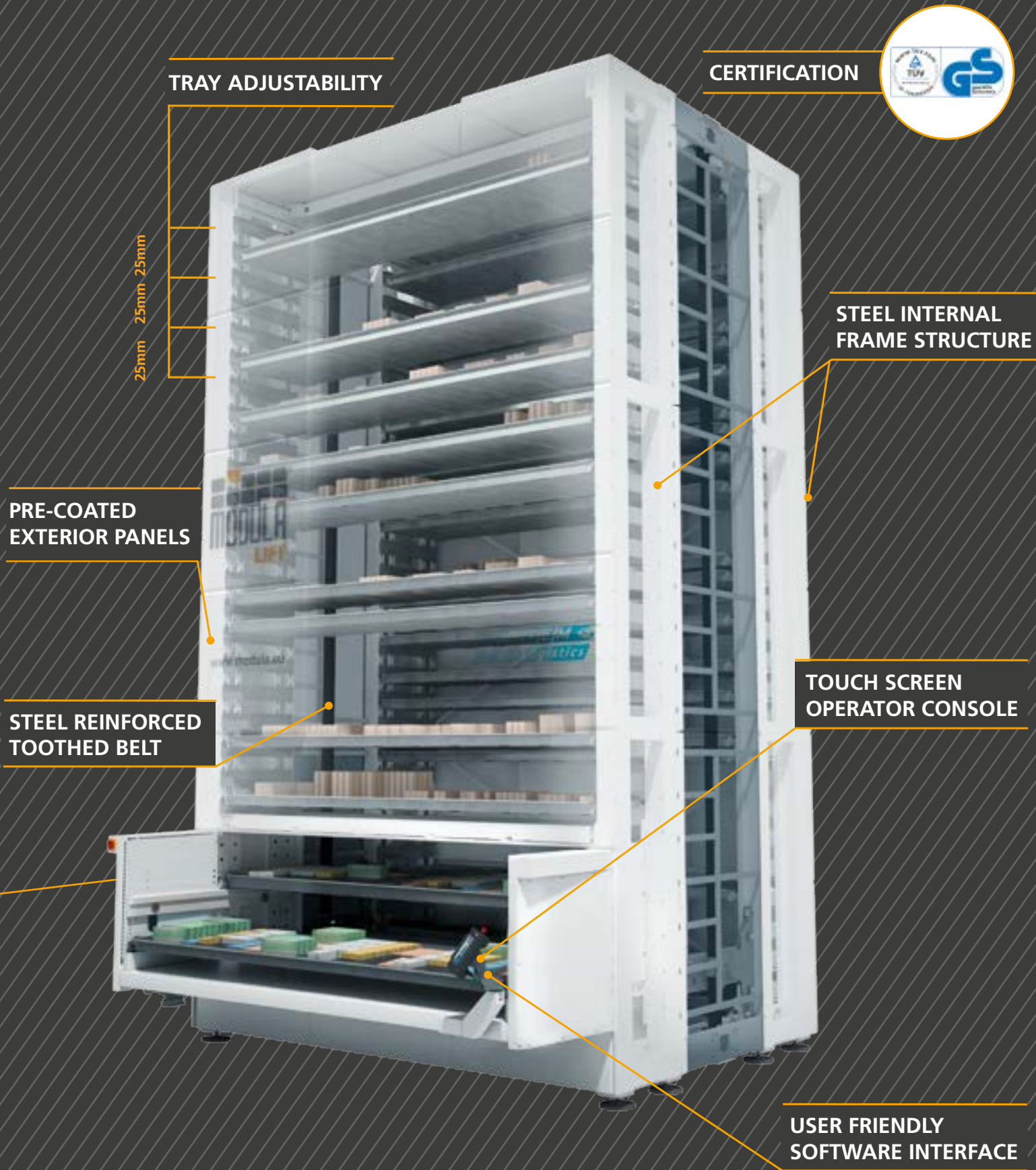
The vertical lift modules represent the most flexible solution for most of the industrial storage needs. They are made of a sturdy, self-supporting structure to house the trays, a central elevator to move them and one or more operators bays for items picking and replenishment.

Thanks to our know-how and expertise developed in more than 20 years in the Lift business we now have a full "state of the art" range of products to fullfill every customer's needs.

Modula's picking bay area:



THROUGHPUT OF UP TO 120 TRAYS/HOUR



OUR ADVANTAGE: Why choose Modula LIFT technologies?

BAY CONFIGURATIONS: INTERNAL OR EXTERNAL, SINGLE OR DUAL DELIVERY

Modula vertical lift modules offer multiple different bay configurations in order to meet any customer’s requirements, all while ensuring complete safety and ergonomics for operators.

The **internal bay** is the ideal configuration for applications with limited floor space. The **external bay** offers the most ergonomic workspace for operators. It is able to provide additional benefits when used in conjunction with external picking aids such as cranes and/or mechanical manipulators to access heavy or large items stored.

Both the internal and external bay types are able to be configured with either single delivery or dual delivery. **Single delivery** is well suited for applications with less stringent throughput requirements or when picking times are performed quickly. Modula’s true **dual tray delivery** system provides operators with greatly increased productivity by reducing wait times while the next tray is retrieved. The next tray in the picking queue is presented to the operator seconds after the previous tray operations are completed. Used in conjunction with the external bay, the nearly instantaneous tray exchange provides greatly increased picking productivity.



SINGLE DELIVERY INTERNAL SINGLE DELIVERY EXTERNAL



DUAL DELIVERY INTERNAL DUAL DELIVERY EXTERNAL



OUR ADVANTAGE: why choose Modula LIFT technologies?

COPILOT OPERATOR “CONSOLE”

Modula units come equipped with a rugged Copilot color touchscreen operator interface, which is designed for harsh industrial environments used to access all of the available functions of the units.

The Copilot’s graphical color interface is simple and intuitive to use, providing ergonomic use by operators throughout the day.

Copilot is located at an easy to access, ergonomic height next to the picking bay. Its proximity to picking operations is convenient and reduces the possibility of interference with safety barriers.

The Copilot is also equipped with an emergency stop push button that can easily be accessed and reset to stop the unit, in case of any risk.



SLIDING “CONSOLE”

The Copilot is also available in a sliding configuration, which mounts the console on a rail and allows it to be kept with the operator at all times for reduced walking while they are working.

MAXIMUM LOAD CAPACITY FOR EVERY TRAY WIDTH

All Modula VLM units guarantee unmatched performance and maximum tray load capacities, regardless of the width and depth of the tray.

Up **990 kg**
To
tray load capacity



INCREASED PERFORMANCE FOR HIGH THROUGHPUT

Modula unit’s external cladding features pre-coated panels with a PVC surface, providing a clean and aesthetic appearance. Vertical lifting is accomplished using a steel reinforced toothed belt design, which provides a quiet and highly reliable method for vertical tray movements. Combined with the correct bay configuration, Modula WMS software and various visual picking aid options, customers gain the best and most complete overall solution for their storage automation.



OUR ADVANTAGE: why choose Modula LIFT technologies?

OPERATOR SAFETY

Modula vertical Lift modules are all TÜV-GS certified for safety. This is because our products comply to the main international regulations on safety. Our machines are equipped with physical safety barriers and safety curtains to give 100% protection to the operator.



MODULA WMS SOFTWARE SUITE

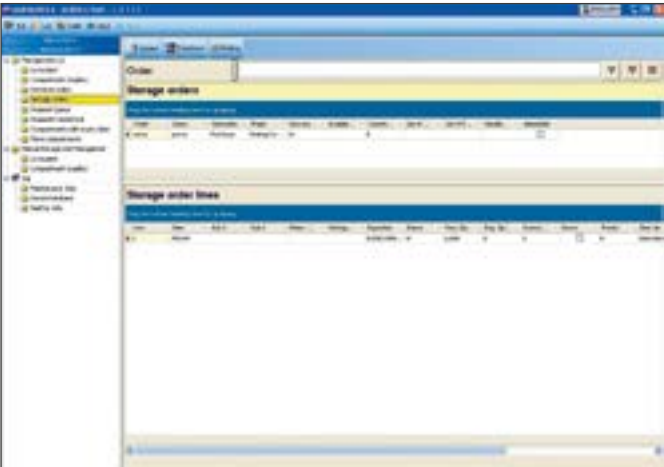
Modula WMS is a fully featured warehouse management software that can easily be used to manage the space and utilization of Modula technologies, or as a standalone software.

Modula WMS supports both automated storage equipment, such as Modula Lift units as well as manual storage locations.

It is developed and supported in-house to guarantee you with the best possible knowledge and support at any time.

There are different licenses available, and different modules that can support the requirements of every type of application.

Our software includes a graphical user interface to manage the compartments and is easily integrated with ERP systems such as SAP, Oracle and others.

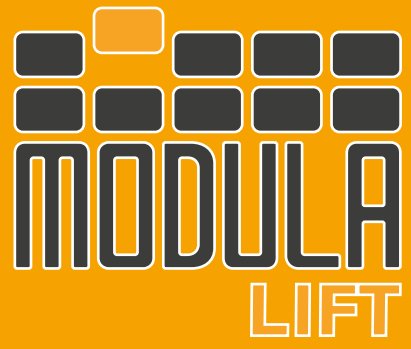


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LIFT TECHNOLOGIES





Modula **LIFT**
Vertical Lift Modules that
solve your space, security
and safety issues



Modula **LIFT**

Introduced more than 20 years ago, with thousands of installations worldwide, Modula Lift is amongst the most advanced and reliable VLM units in the marketplace.

Modula is the ideal storage solution for industrial products, components and spare parts for all possible environments and industries. Many companies have chosen Modula to help organize and improve their work-flows, thanks to its flexibility, wide range of models available, its superior design and ease of use.

Modula units can be used stand-alone or with the available WMS software to manage the space and utilization of units, increasing productivity further.

We also offer a wide range of options and accessories to provide increased speed, ease of use and productivity in your operation.

Modula Lift is available in the followings models:

- **MA - MAD**
- **MC - MCD**
- **MX - MXD**
- **ML - MLD**

840 m²

of traditional storage in a small footprint

70.000 kg

gross unit load capacity



Technical highlights

Unit heights: **from 3.300 mm to 14.100 mm**

Unit height increments on: **200 mm**

Tray storage adjustability: **25 mm**

Tray widths: **from 1.900 mm to 4.100 mm**

Tray depths: **654 mm & 857 mm**

Maximum height of stored materials: **695 mm**

Net tray payload capacity: **250-500-750 kg**

Net unit load capacity: **60.000 kg**

Gross unit load capacity: **70.000 kg**

Throughput: **up to 120 trays/hr. (depending on the unit's configuration)**

Operator interface: **rugged 10.4" color touchscreen operator control console**

Number of bays: **up to 3, also higher than ground and on the same side**

Type of bay: **internal or external with single or dual tray delivery**

Minimal energy consumption: **3kW vertical axis motor**

Automatic weight control at the intake of each tray

Dynamic allocation of trays depending on specific materials height

Internal zined coated steel structure

Vertical axis driven by 2 steel reinforced toothed belts

Extractor's vertical guidance system with 8 HDPE rollers for each side

Modula Lift can be integrated with

Modula **WMS**

WMS software solutions are available for all Modula units, designed to manage and improve every storage solution

Modula **OPTIONS**


A wide range of dedicated options are available for Modula Lift units, to further increase productivity and ease of use

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LIFT Models


MA & MA-D

	Model	Tray Width (mm)	Tray Depth (mm)	Tray wall Height (mm)	Maximum Tray Load Capacity (kg)	Unit Footprint INTERNAL BAY (Width x Depth)	Unit Footprint EXTERNAL BAY (Width x Depth)
	MA25	1.900	654	45/70/120	250	2.317x2.556	2.317x3.246
	MA25D	1.900	857	45/70/120	250	2.317x3.165	2.317x4.058
	MA50	1.900	654	70/120	500	2.317x2.556	2.317x3.246
	MA50D	1.900	857	70/120	500	2.317x3.165	2.317x4.058
	MA75	1.900	654	70/120	750	2.317x2.556	2.317x3.246
	MA75D	1.900	857	70/120	750	2.317x3.165	2.317x4.058
	Modula reserves the right to make variations without prior notice.						


MX & MX-D

	Model	Tray Width (mm)	Tray Depth (mm)	Tray wall Height (mm)	Maximum Tray Load Capacity (kg)	Unit Footprint INTERNAL BAY (Width x Depth)	Unit Footprint EXTERNAL BAY (Width x Depth)
	MX25	3.100	654	45/70/120	250	3.517x2.556	3.517x3.246
	MX25D	3.100	857	45/70/120	250	3.517x3.165	3.517x4.058
	MX50	3.100	654	70/120	500	3.517x2.556	3.517x3.246
	MX50D	3.100	857	70/120	500	3.517x3.165	3.517x4.058
	MX75	3.100	654	70/120	750	3.517x2.556	3.517x3.246
	MX75D	3.100	857	120	750	3.517x3.165	3.517x4.058
	Modula reserves the right to make variations without prior notice.						

MC & MC-D

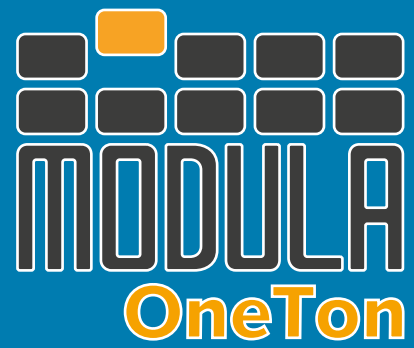
	Model	Tray Width (mm)	Tray Depth (mm)	Tray wall Height (mm)	Maximum Tray Load Capacity (kg)	Unit Footprint INTERNAL BAY (Width x Depth)	Unit Footprint EXTERNAL BAY (Width x Depth)
	MC25	2.500	654	45/70/120	250	2.917x2.556	2.917x3.246
	MC25D	2.500	857	45/70/120	250	2.917x3.165	2.917x4.058
	MC50	2.500	654	70/120	500	2.917x2.556	2.917x3.246
	MC50D	2.500	857	70/120	500	2.917x3.165	2.917x4.058
	MC75	2.500	654	70/120	750	2.917x2.556	2.917x3.246
	MC75D	2.500	857	70/120	750	2.917x3.165	2.917x4.058
	Modula reserves the right to make variations without prior notice.						

ML & ML-D

	Model	Tray Width (mm)	Tray Depth (mm)	Tray wall Height (mm)	Maximum Tray Load Capacity (kg)	Unit Footprint INTERNAL BAY (Width x Depth)	Unit Footprint EXTERNAL BAY (Width x Depth)
	ML25	4.100	654	70/120	250	4.517x2.556	4.517x 3.246
	ML25D	4.100	857	70/120	250	4.517x 3.165	4.517x4.058
	ML50	4.100	654	120	500	4.517x2.556	4.517x3.246
	ML50D	4.100	857	120	500	4.517x3.165	4.517x4.058
	ML75	4.100	654	120	750	4.517x2.556	4.517x3.246
	ML75D	4.100	857	120	750	4.517x3.165	4.517x4.058
	Modula reserves the right to make variations without prior notice.						

Modula **LIFT**





Modula OneTon
Vertical Lift Modules featuring
trays with the greatest load
capacity ever offered



Modula OneTon

Modula OneTon has the same models, functions and features as Modula Lift units and it is the ideal solution for storing heavier items and materials.

Sharing its design with the original Modula Lift, all Modula OneTon units provide a maximum tray load capacity of 990 kg per tray for the entire range of models, regardless of the tray width or depth.

Modula OneTon is available in the followings models:

- MA - MAD
- MC - MCD
- MX - MXD
- ML - MLD



Real heavy duty...
990 kg
tray load capacity

Technical highlights

Unit heights: from 3.300 mm to 14.100 mm

Unit height increments on: 200 mm

Tray storage adjustability: 25 mm

Tray widths: from 1.860 mm to 4.060 mm

Tray depths: 654 mm & 857 mm

Maximum height of stored materials: 695 mm

Net tray payload capacity: 990 kg

Net unit load capacity: 60.000 kg

Gross unit load capacity: 70.000 kg

Throughput: up to 80 trays/hr (depending on the unit's configuration)

Operator interface: rugged 10,4" color touchscreen operator control console

Number of bays: up to 3, also higher than ground and on the same side

Type of bay: internal or external bay, single or dual tray delivery

Minimal energy consumption: 3kW vertical axis motor

Automatic weight control at the intake of each tray

Dynamic allocation of trays depending on specific materials height

Internal zined coated steel structure

Vertical axis driven by 2 steel reinforced toothed belts

Extractor's vertical guidance system with 8 HDPE rollers for each side

Modula OneTon can be integrated with

Modula WMS

WMS software solutions are available for all Modula units, designed to manage and improve every storage solution.

Modula OPTIONS

A wide range of dedicated options are available for Modula OneTon units, to further increase productivity and ease of use.

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OneTon Models

MA & MA-D



Model	Tray Width (mm)	Tray Depth (mm)	Tray wall Height (mm)	Maximum Tray Load Capacity (kg)	Unit Footprint INTERNAL BAY (Width x Depth)	Unit Footprint EXTERNAL BAY (Width x Depth)
MA1000	1.860	654	120	990	2.317x2.556	2.317x3.246
MA1000D	1.860	857	120	990	2.317x3.165	2.317x4.058

Modula reserves the right to make variations without prior notice

MX & MX-D



Model	Tray Width (mm)	Tray Depth (mm)	Tray wall Height (mm)	Maximum Tray Load Capacity (kg)	Unit Footprint INTERNAL BAY (Width x Depth)	Unit Footprint EXTERNAL BAY (Width x Depth)
MX1000	3.060	654	120	990	3.517x2.556	3.517x3.246
MX1000D	3.060	857	120	990	3.517x3.165	3.517x4.058

Modula reserves the right to make variations without prior notice

MC & MC-D



Model	Tray Width (mm)	Tray Depth (mm)	Tray wall Height (mm)	Maximum Tray Load Capacity (kg)	Unit Footprint INTERNAL BAY (Width x Depth)	Unit Footprint EXTERNAL BAY (Width x Depth)
MC1000	2.460	654	120	990	2.917x2.556	2.917x3.246
MC1000D	2.460	857	120	990	2.917x3.165	2.917x4.058

Modula reserves the right to make variations without prior notice

ML & ML-D

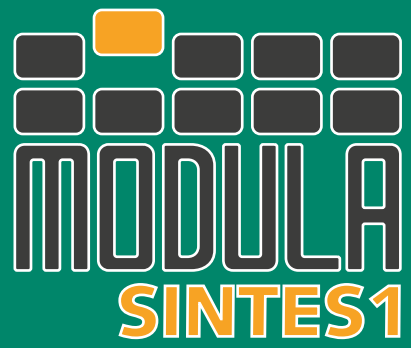


Model	Tray Width (mm)	Tray Depth (mm)	Tray wall Height (mm)	Maximum Tray Load Capacity (kg)	Unit Footprint INTERNAL BAY (Width x Depth)	Unit Footprint EXTERNAL BAY (Width x Depth)
ML1000	4.060	654	145	990	4.517x2.556	4.517x3.246
ML1000D	4.060	857	145	990	4.517x3.156	4.517x4.058

Modula reserves the right to make variations without prior notice

Modula OneTon





Modula SINTESI1 Vertical Lift Modules for storing lighter weight items in a reduced footprint.

- Fast
- Easy
- Smart



Modula **SINTES1**

The Sintes1 is a vertical lift module that has been tailor-made for small to medium-sized applications. It is ideal for storing and picking items such as electronic components, pharmaceuticals and tooling. The Sintes1 optimizes the available space in your facility, allowing you to recover every square meter possible.

Modula Sintes1 units feature a modern and aesthetic appearance, with a coated steel internal frame structure that is clad in pre-coated exterior panels for durability and protection, all of which are entirely manufactured using a state of the art production line.



Why Modula Sintes1?

- Storage of smaller and/or lightweight items.
- Perfect for smaller sized applications.
- For applications with reduced room height available.
- Electronics, pharmaceutical and tooling applications.
- High throughput.
- Limited investment.

Modula Sintes1 is available in two models:

- **SINTES1.3**
- **SINTES1.7**

Simply Intelligent



Technical highlights

- Unit heights: **from 2.600 mm to 7.100 mm**
- Unit height increments on: **100 mm**
- Tray storage adjustability: **25 mm**

- Tray widths: **from 1.300 mm to 1.700 mm**
- Tray depths: **654 mm**
- Maximum height of stored materials: **680 mm**
- Net tray payload capacity: **200 kg**
- Net unit load capacity: **25.000 kg**
- Gross unit load capacity: **30.000 kg**

- Throughput: **up to 140 trays/hr (depending on the unit's configuration)**
- Operator interface: **rugged 10.4" color touchscreen operator control console**

- Nr. of bays: **up to 2 only on ground level**
- Type of bay: **internal or external bay, single or dual tray delivery**

- Minimal energy consumption: **1,5kW vertical axis motor**
- Automatic weight control at the intake of each tray
- Dynamic allocation of trays depending on specific materials height
- Internal powder coated steel structure
- Vertical axis driven by 4 steel reinforced toothed belts
- Extractor's vertical guidance system with 4 urethane rollers for each side

Modula SINTES1 can be integrated with

- Modula WMS**
WMS software solutions are available for all Modula units, designed to manage and improve every storage solution.
- Modula OPTIONS**
A wide range of dedicated options are available for Modula Sintes1 units, to further increase productivity and ease of use.

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SINTES1 Models

Sintes1.3

	Model	Tray Width (mm)	Tray Depth (mm)	Tray wall Height (mm)	Maximum Tray Load Capacity (kg)	Unit Footprint INTERNAL BAY (Width x Depth)	Unit Footprint EXTERNAL BAY (Width x Depth)
	SINTES1.3	1.300	654	31-56	200	1.650x2.376	1.650x3.101

Modula reserves the right to make variations without prior notice

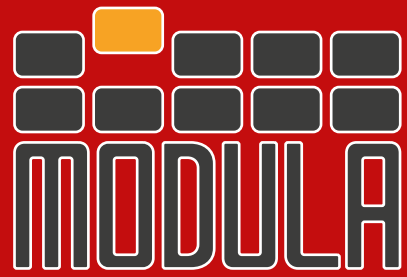
Sintes1.7

	Model	Tray Width (mm)	Tray Depth (mm)	Tray wall Height (mm)	Maximum Tray Load Capacity (kg)	Unit Footprint INTERNAL BAY (Width x Depth)	Unit Footprint EXTERNAL BAY (Width x Depth)
	SINTES1.7	1.700	654	31-56	200	2.050x2.376	2.050x3.101

Modula reserves the right to make variations without prior notice

Modula **SINTES1**





Modula **OPTIONS** Options and accessories to improve any application!



X-Axis LED bar



Alphanumeric LED bar



Laser pointer



Badge reader



EKS reader



Put-to-light



Tray accessories



Piece counting scale



Label printer



Bar code reader



Sliding console



Weight distribution plate



ESD protection



Automatic door



Modula Green



Tray removal & transportation cart



Telescopic internal bay

Modula **OPTIONS**

Modula **OPTIONS**

Available Options	LIFT	OneTon	SINTES1	WMS REQUIRED	NOTES
X-Axis LED bar	•	•	•	•	
Alphanumeric LED bar	•	•	•	•	
Laser pointer	•	•	•	•	
Badge reader	•	•	•	•	not avail. with EKS reader
EKS reader	•	•	•	•	not avail. with Badge reader
Put-to-light	•	•	•	•	
Tray partitions, dividers, extensions	•	•	•		
Piece counting scale	•	•	•	•	
Label printer	•	•	•	•	
Barcode reader	•	•	•	•	
Sliding Console	•	•			not available with telescopic bay and transportation cart
Weight distribution plates	•	•	•		
ESD protection system	•	•	•		not available with telescopic bay and transportation cart
Automatic door	•	•	•		
Modula green	•	•	•		
Telescopic internal bay	•				internal bay only / not available with ESD protection system, transportation cart and sliding console
Tray removal & transportation cart	•		•		internal bay only / not available with ESD protection system, telescopic bay and sliding console

VISUAL PICKING AIDS

These optional accessories make picking operations easier and more efficient, improving operators' accuracy.

X-Axis LED bar

The X-Axis LED bar clearly displays an item's position information to users. The X-Axis LED bar is located above the picking bay area; when a specific segment of the bar illuminates it clearly indicates the correct location across the tray's width for the operator to pick or put items to.

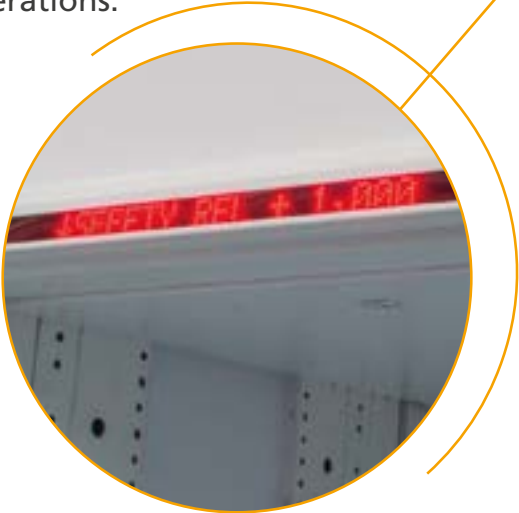
The result is increased picking accuracy and speed as operators are quickly and easily able to locate the correct item or location.



Alphanumeric LED bar

The Alphanumeric LED bar adds to the features of the X-Axis LED bar, by providing the ability to display additional information to operators. Information able to be displayed includes: item position in both the width and depth axes of the tray, item number, quantity, material codes, description and any additional notes required.

This additional information provides users with enhanced picking accuracy and speed during operations.



VISUAL PICKING AIDS

Laser pointer

The laser pointer provides the ability to point directly to the location of the item required. The laser pointer works on two axes, with the picking location indicated by the intersection of a **red laser line** which allows users to quickly locate the correct location across the tray's width and a **green laser spot** which indicates the correct item location across the tray's depth.

The result is greatly increased picking accuracy and speed as operators are quickly and easily able to locate the correct items.



USER AUTHENTICATION

Badge reader

The badge reader allows operators to quickly and easily use a badge to log into their role on Modula units. When the operators swipes their personal badge to access the unit, their credentials are automatically recognized and operations begin.

The badge reader is connected to the Copilot console via the available USB port for a quick and simple implementation. The result is that unauthorized access to units is prevented in the case where the standard unit login procedure with password is not sufficient.



EKS reader

The EKS reader is an electronic “key” reader, that allows operators to quickly and easily use an EKS key to log into their role on Modula units. When an operator places their personal EKS key into the reader, their credentials are automatically recognized and operations begin. When the EKS key is removed after operations are complete, the unit automatically logs out the operator to maintain security for items within the unit.

The EKS reader is ideal for demanding industrial applications, thanks in part to its robust construction and IP67 protection rating. The EKS reader is connected to the workstation PC running Modula WMS software via an Ethernet interface for a quick and simple implementation. Benefits of the EKS reader are similar to that of the badge reader, with the additional possibility to also control the user logouts automatically when the EKS key is removed after picking has been completed.



ORDER PICKING SOLUTIONS

Put-to-light

The put-to-light system is designed to further improve productivity, allowing operators to increase the number of orders able to be processed at the same time in what is known as “batch picking”. The system provides the hardware to indicate the correct quantity and location for multiple orders as they are able to be processed simultaneously during picking operations. As operators pick a quantity of an item for multiple orders, the user is clearly shown where to put items for specific orders and the quantity to put.

The position and quantity displays are arranged on a bar which is available in 3 m lengths that are able to be connected together and to include the required number of displays to meet any applications requirements. Each display has the ability to display three possi-

ble colors (**amber, green and red**) for applications when multiple Modula units are in use to indicate to the operator which machine’s picks are to go to which location. The operator is able to pick items from one unit and then place them in the appropriate order location where the matching color light is displayed.

The display also indicates the quantity of pieces for each item which need to be put to the specific order locations and the operators are able to confirm the put by pressing a task complete button for each location after the put is made. The system is able to operate in either “batch” or “multi-order” modes depending on the operational requirements for specific clients.



TRAY ACCESSORIES

Partitions, dividers and tray side wall extensions

Modula’s available tray accessories include tray slotting for tray accessories such as partitions and dividers as well as tray side wall extensions. Partitions and dividers allow users to easily and accurately subdivide the tray into specific compartments for individual items to be stored within. Partitions and dividers are designed with superior flexibility in mind and both feature adjustability on 20 mm centers based on the slotting profile increments provided.

Tray layouts are able to easily be modified if needed based on the user’s needs by simply moving the partitions and dividers to create location sizes that are a perfect fit for the specific item stored within. Tray side wall extensions are also available, which further extend the height of the tray’s sidewalls for applications requiring additional retention for larger and/or loosely stored materials.



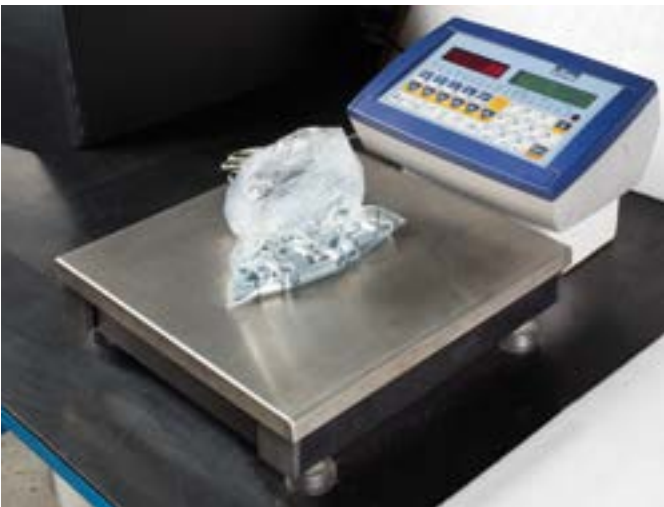
OPTIONAL TO IMPROVE PRODUCTIVITY

Piece counting scale

The piece counting scale accessory allows operators to place a quantity of small items into the scale and based on the item’s specific weight per piece, determine how many of the item have been picked or are to be replenished by the operator.

Piece counting scales are available in multiple different weight ranges to meet any application’s requirements. Scales are available in either single or double platform designs with weight capacities of 3/6/15/30 kg respectively.

The piece counting scale is the ideal accessory when large quantities of smaller items are stored and it is an essential tool for operators during their picking and replenishment operations. The result is increased speed and accuracy as operators no longer have to manually count out the quantity of items.



Label printer

The label printer quickly and easily prints labels for items and/or their shipping containers directly at the workstation area. Label printers allow operators to print customized adhesive labels and tags containing the information of the materials.

Operators simply enter the desired information using the Copilot operator console while picking and the label is printed as operations take place. Label printers are available in a variety of models depending on label type requirements to meet any application’s needs.



OPTIONS TO IMPROVE PRODUCTIVITY

Barcode reader

The barcode reader allows operators to quickly and easily scan items as they are being picked or replenished for item verification. Barcode readers are often used when items have complex part numbers or may be difficult to distinguish from similar items for increased accuracy and assurance that the correct item has been selected by the operator.

Barcode readers may also be used to confirm orders or to log into the Modula unit by scanning an operator's unique badge bar code. Barcode readers are wireless units for ease of use and are available in either 1D or 2D versions to meet application requirements.



Sliding console

The sliding Copilot console allows operators to have the Copilot console with them at their picking location at all times. This further eliminates the need to walk back and forth to the console to confirm operations or to select the next tray or item to request. The result is greatly improved operator efficiency and a more pleasant working environment.

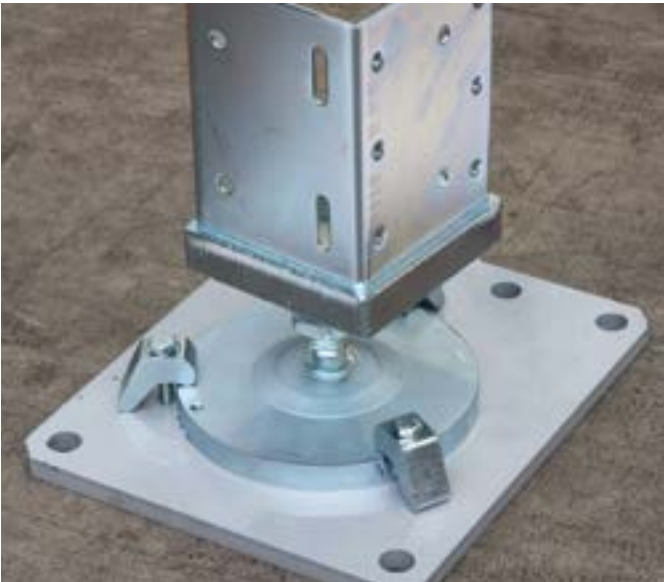


MISCELLANEOUS

Weight distribution base plates

When Modula units are required to be installed in areas where floor point loads may be in excess of the existing slab, weight distribution plates are used to lessen the floor load on the slab and to provide additional anchoring locations.

In some specific unit configurations, based on taller unit heights and/or very heavy tray loads, the anchoring of units may be required.



ESD protection

The ESD (Electro-Static Discharge) protection system has been designed to safeguard the units and items stored to provide a level of protection against electro-statically built up charges. The ESD protection system is equipped with a grounding point which is able to accommodate up to 3 devices which may be connected. Device examples include: operator wrist straps, ankle straps or anti-static mats (optional). The grounding point is connected to the operator's grounding device with a total resistance value of 1MOhm.

In addition, the ESD protection system includes additional tray contact points installed at the picking bay location. As the tray is delivered, it contacts these points prior to reaching the operator as an additional means of protecting items. The tray contact points are also connected to the grounding point and again feature a total resistance value of 1MOhm.

The ESD protection system includes one (1) anti-static operator wrist strap. Additional operator wrist straps and/or anti-static mats are available as optional items if required.



BAY OPTIONS

Automatic door

The automatic door provides a one piece sliding door within the access opening area. The door opens and closes automatically as trays are delivered and returned. The automatic door provides users with the following advantages:

- Increased security for items stored within units, which are not accessible when the unit is off or is unattended.
- Reduced noise levels for operators.
- Reduced external contaminates from the surrounding workspace, providing increased cleanliness for items stored within units.

For certain unit configurations, such as units with an internal-bay and having dual-tray delivery, or for units with elevated access openings, the automatic door is required to ensure operator safety.



Tray removal & transportation cart

The tray removal and transportation cart is available for both Lift and Sintes1 VLM units having an internalbay picking area. The tray removal and transportation cart allows users to take fully loaded trays from within the VLM unit's picking bay and bring them to another area based on application's requirements.

The tray removal and transportation cart is available on models having a tray load capacity up to 500 kg.



Telescopic internal bay

The telescopic internal bay configuration is available on all internal bay Modula Lift VLM units. It allows operators to quickly and easily pull a tray out of the internal bay area, for easy loading or picking of large or heavy items using an overhead lifting device. The feature is only possible for standard bay height units and for the lower delivery position. For Modula Lift models with a tray load capacity up to 500 kg and 750 kg, it includes additional supporting legs to assist operators in pulling out the tray and feature heavy-duty wheels at the base of each support. When the telescopic internal bay is not needed, it simply is pushed back into place and there is no additional space required in the operator's picking area. It is a perfect solution for users needing to deliver trays out of the internal bay area infrequently or for user's who do not have the available floor space for the fully automatic external bay. It is not available for bays other than at ground level for 500 kg and 750 kg, due to the supporting legs and the gap between VLM and floor.

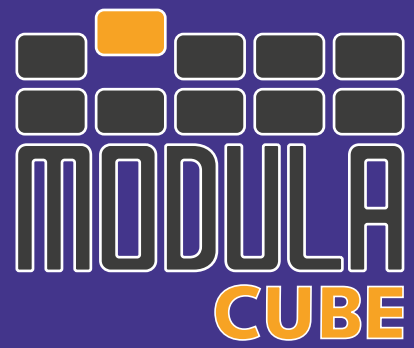


Modula Green

The Modula Green energy recovery system works in conjunction with the VLM unit's electrical system to recover power typically lost as the lifting platform is lowered, which otherwise is dissipated as heat. Energy recovered is available to be sent back into the facility's power grid to reduce overall power consumption costs.

A unique inverter placed between the unit and the facility's electrical panel acts as both a voltage stabilizer and as a generator. The Modula Green system is environmentally friendly as it can provide up to a 40% energy savings and a quick return on investment for users.





Modula CUBE
Automated storage modules
offering all of the advantages
of traditional VLM's,
stored horizontally



Modula CUBE

Modula Cube is an automated horizontal lift storage system, that is the ideal solution for high value items in low ceiling applications.

The Cube has an intuitive color touchscreen console and interface similar to other Modula equipment, providing efficient and easy to use picking for users and increased inventory control.

How does it work

Modula Cube is made up of multiple modules to build its overall length, where trays are stored in two columns within each module, one at the front and the other at the rear. Trays are transported between modules and to operators at the access opening area via a shuttle that travels both vertically and horizontally within the unit.

Trays move from the rear of the unit to the access opening location at the base of the modules. In essence it acts much like a traditional VLM as far as storage is concerned, but it also have the ability to transfer trays between modules for a longer machine instead of only storing items vertically.

Safety systems

- Product height measurement light curtains for measuring incoming items.
- Personal protection safety light curtains at the access opening area to prevent injury when trays are being delivered or returned.
- Automatic doors for the access opening area.
- Picking bay area lighting to allow for easy viewing of items.



Technical highlights

- Unit widths: 2.930 mm / 3.580 mm
- Unit height: 2.730 mm
- Number of modules: from 1 to 6 / from 1 to 5
- Unit depth (depending on modules nr): from 2.270 - 13.620 mm / from 2.570 to 13.100 mm
- Tray adjustability: 100 mm
- Tray widths: 2.530 mm / 3.185 mm
- Tray depths: 651 mm / 752 mm
- Maximum product height stored: 275 mm
- Net tray payload capacity: 125 & 250 kg
- Net unit load capacity: 49.500 kg
- Gross unit load capacity: 58.000 kg
- Throughput: up to 60 trays / hr.
- Operator interface: Dico 605 with touch screen technology
- Number of bays: up to 2, front and back
- Type of bay: internal with single or dual tray delivery
- Minimal energy consumption: 1,5 kW / 3,5 kW
- Self-supporting steel structure

Modula CUBE can be integrated with

Modula WMS

WMS software solutions are available for all Modula units, designed to manage and improve every storage solution.

discover more
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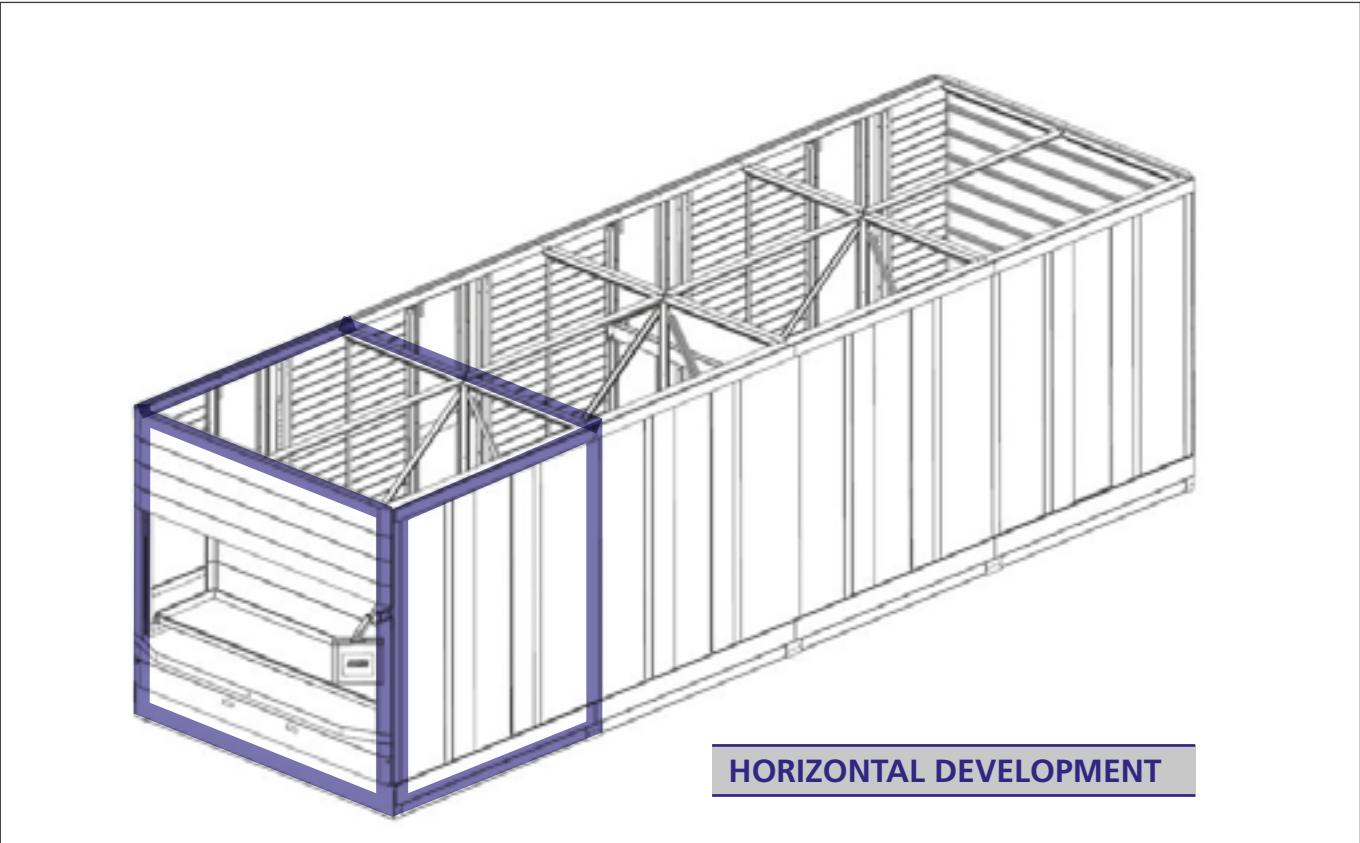
Cube Models

Cube Model



Model	CUBE
Unit width (mm)	2.930
Unit height (mm)	2.730
Number of modules	da 1 a 6
Unit depth (mm)	from 2.270 (max. 13.620)
Tray width (mm)	2.534
Tray depth(mm)	651
Net tray load capacity (kg)	125/250

Modula reserves the right to make variations without prior notice

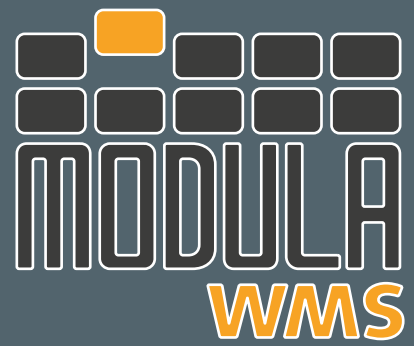


Cube+ Model

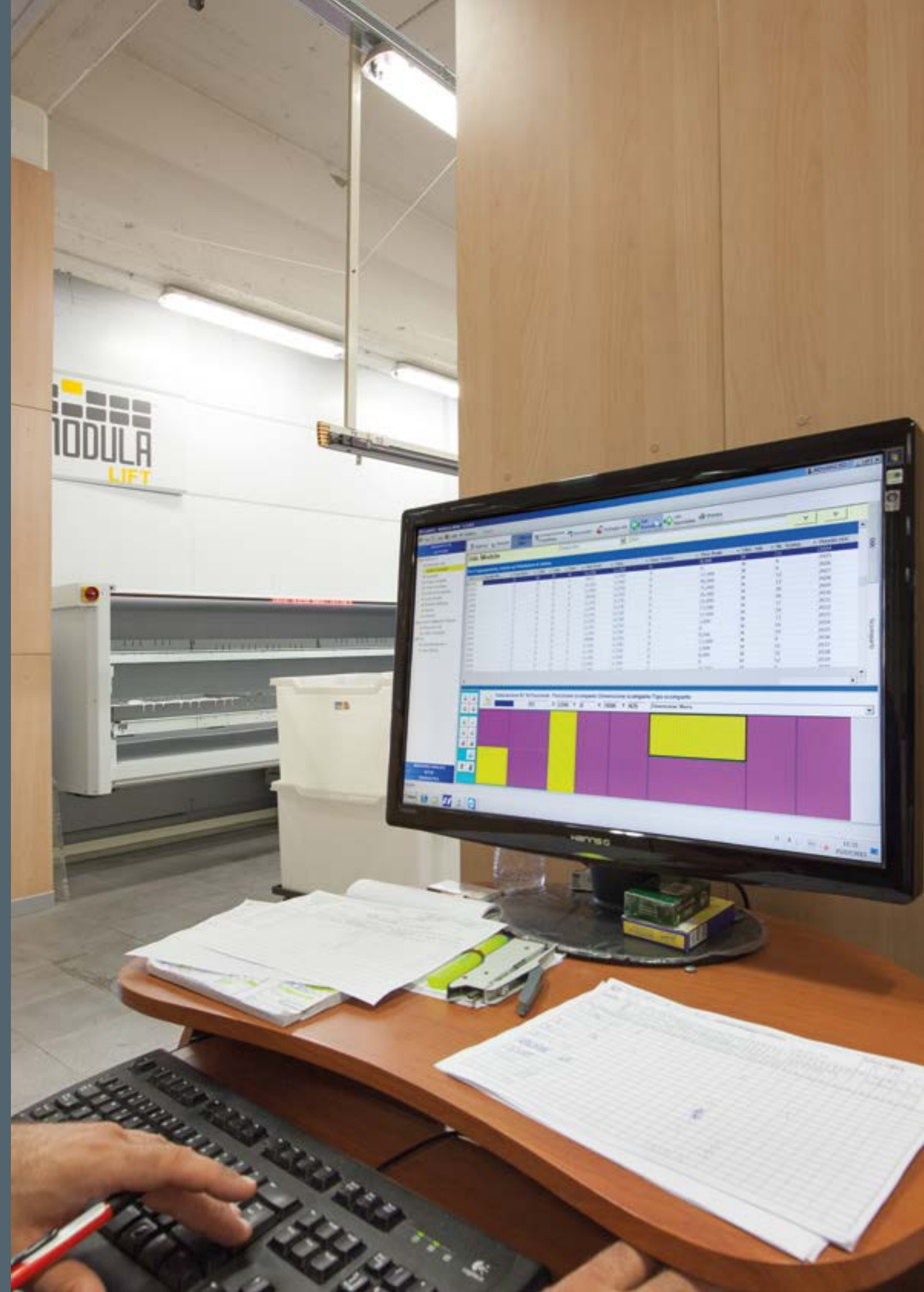


Model	CUBE+
Unit width (mm)	3.580
Unit height (mm)	2.730
Number of modules	da 1 a 5
Unit depth (mm)	from 2.570 (max. 12.850)
Tray width (mm)	3.185
Tray depth(mm)	752
Net tray load capacity (kg)	125/250

Modula reserves the right to make variations without prior notice



Modula WMS Warehouse Management Software



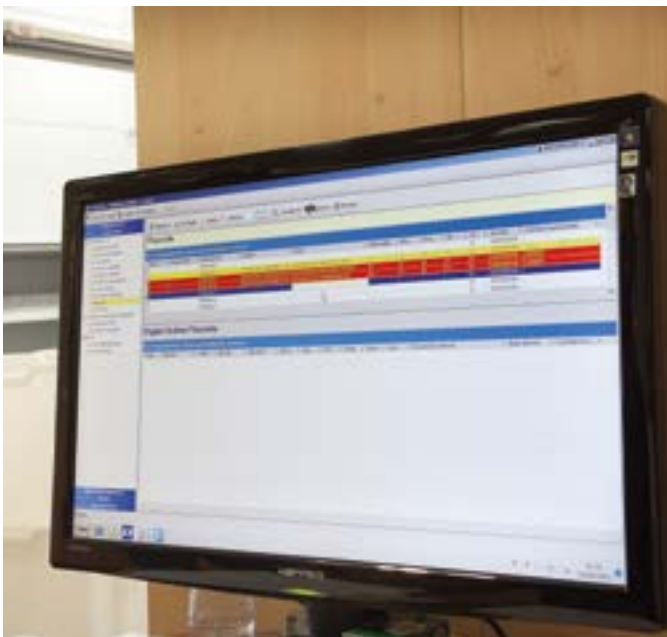
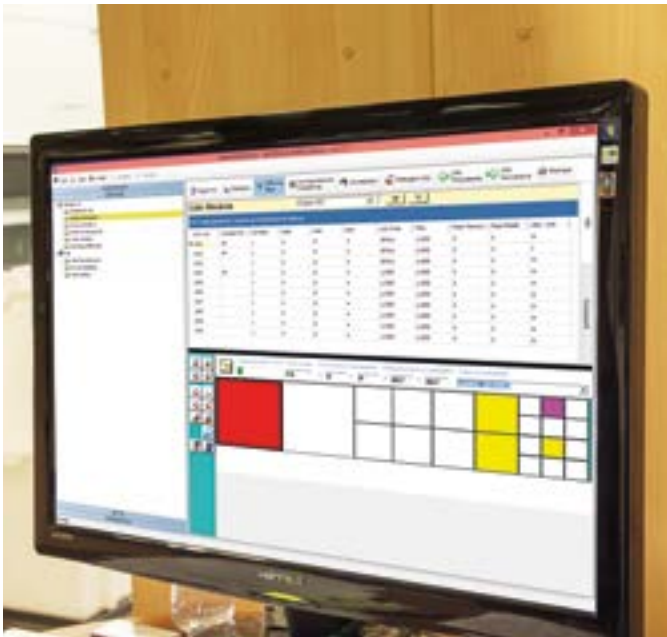
Modula WMS

Modula WMS software is a complete inventory management software ideal for all Modula automated storage equipment, such as VLM's, vertical carousels and horizontal carousels as well as with traditional storage methods, such as shelving or racking. Modula WMS software is able to be used as the perfect complement to all Modula units for additional space and utilization management or even as a stand alone software tool for your warehouse.

Modula WMS software has been developed in-house based on Modula's many years of experience in the integrated management of automated storage equipment. It is designed using the most advanced technologies available and makes use of international best practices in software design and storage automation.

Modula WMS is not only software, it's a fully integrated solution for the entire operation and is able to improve:

- ORDER MANAGENT
- PRODUCT SECURITY
- SPEED
- EFFICENCY
- ACCURACY



Benefits of Modula WMS



1. INVENTORY OPTIMIZATION

Modula WMS software continuously searches for optimal locations to further maximize space and optimize inventory in the best possible manner.



2. INTEGRATION TO YOUR HOST SYSTEM

Modula WMS provides an easy ability to integrate with your ERP or Host systems (SAP, Oracle, Microsoft, etc.), MRP or other applications, providing an exchange of accurate and continuous information between systems and Modula WMS.



3. PRODUCTIVITY IMPROVEMENTS

By optimizing order management, Modula WMS provides users with the ability to increase speed of order execution for both picking and replenishment operations, all done with complete item traceability.



4. CONFIGURABILITY

Modula WMS is easily adapted to existing corporate software systems and organizational needs. The result is minimal impact to current procedures and preferences.



5. CONTROL AND EFFICIENCY

Using your data to its fullest potential to improve and maximize the overall performance of your operation:

- Repetitive tasks and procedures are automated
- Material movements are well planned to optimize tasks
- Processes and paperwork are substantially reduced



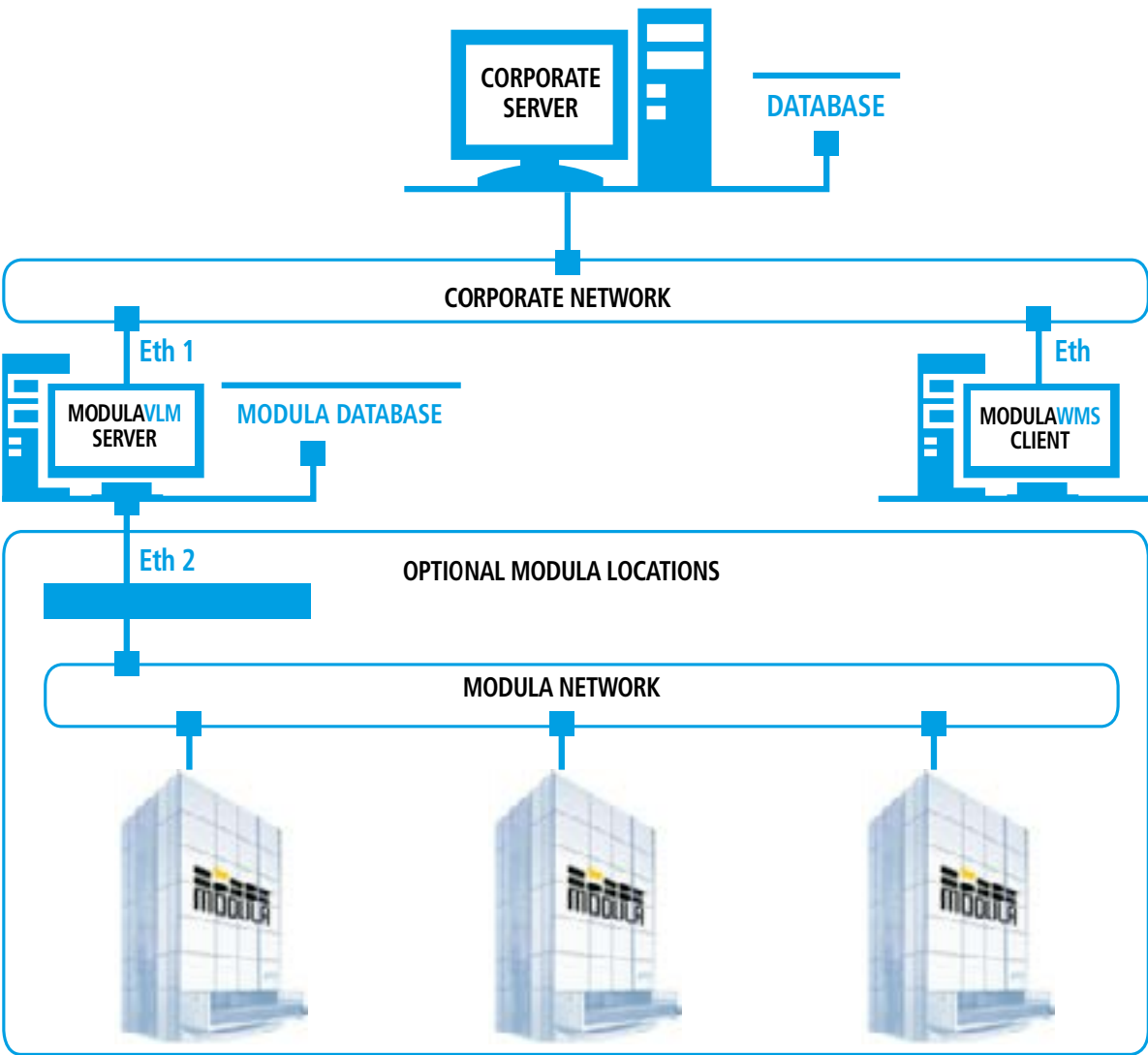
6. EASE OF USE

Operating procedures are efficiently designed for an intuitive and easy to use experience, by even lower skilled users.


System Architecture

Modula WMS software allows for a real-time management of items via a **PC interface**. All that is needed to be supplied is a PC to act as the software's server and customers may choose to add additional "client" PC's for their use, depending on the number of storage area locations or specific needs.

Modula WMS installs the **Express version of Microsoft SQL Server**, which is free and does not require any additional licenses. The SQL Server database used must be exclusively for Modula WMS to use.




Software Packages




MODULA WMS BASE

The BASE software module is the included package provided with all Modula units sold. It provides the basic tools necessary to manage the space and utilization of units, such as order register management, graphical tray location management, the ability to request individual items by way of orders or individual item requests, execution of physical inventories and the ability for integration with a client's management system by means of a manual text file exchange with a predefined path.



MODULA WMS BASE PLUS

The BASE PLUS software module adds two important functionalities in addition to the BASE software module. Advanced security management to limit access to specific trays or items, based on the user's login profile. An automatic and configurable import/export data exchange with a client's management system, using text files or shared tables accessible via ODBC, XML, ASCII or Excel files.



MODULA WMS STANDARD

The STANDARD software module includes functionality designed to make Modula units as efficient as possible, added functionalities include:


- Dynamic item to compartment allocation management.
- Dynamic batching and item serial & lot number management.
- FIFO and expiration date management.

It also provides warehouse statistical analysis tools as well as print report customization.



MODULA WMS DRIVER

The DRIVER software module allows clients who already have a "Host Management" type of software in place to have the ability to manage several Modula units for their picking, replenishment and cycle-counting needs using the in place Host system. Communication is made possible using text files or shared tables. It is possible to use visual picking aid accessories such as the X-Axis LED Bar, Alphanumeric LED Bar and Laser Pointers. The Copilot console is used to allow operators to interact with units, although all item and order requests are done using the existing WMS.



MODULA LINK

Modula LINK allows clients who already have a "Host Management" type of software in place to have the ability to control the automation commands of several Modula units. Communications with the supervisory Host PC is accomplished via sockets. In this case there is no order information exchanged, rather specific machine movement commands to move storage locations are sent based on the items needed. It is possible to use visual picking aid accessories such as the Alphanumeric LED Bar and Laser Pointers. The Copilot console in this case is not used by operators to interact with the unit. with Modula LINK it is necessary to use RF terminals or another PC to execute orders and interact with the external Host system.



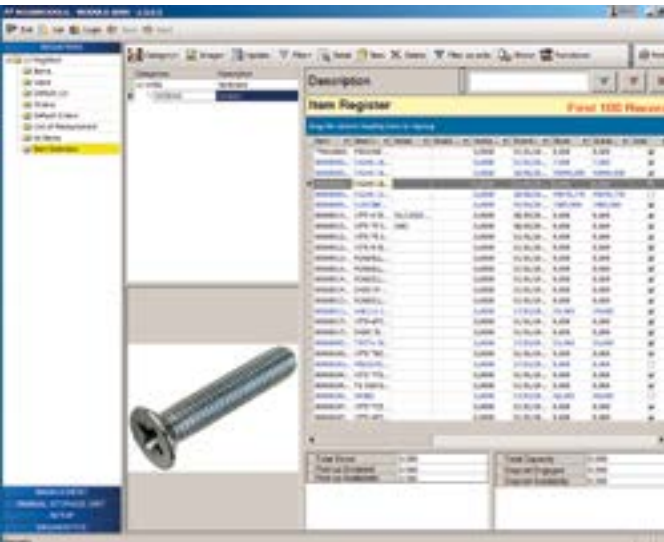
Supplementary software modules

Available to be added to Modula WMS Standard

ADVANCED ITEM MANAGEMENT

The advanced item management module provides additional functionality to the Standard software:

- Extended fields for advanced item management
- Ability to associate images to items for picking operations
- Ability to group items into families for improved search and filtering capabilities
- Advanced security management options able to limit access to specific trays for users
- Multiple, pre-defined types of order management possible.



MANUAL WAREHOUSE MANAGEMENT

The manual warehouse management module allows for the creation and management of manual storage areas. Users can also manage material transfers between areas as well as incoming materials received.

RADIO FREQUENCY

The RF software module is only available in addition to the manual warehouse module and it further extends its functionalities. The RF module allows the use of Windows CE or Mobile based RF terminals to manage manual storage areas.

ADVANCED ITEM PICKING

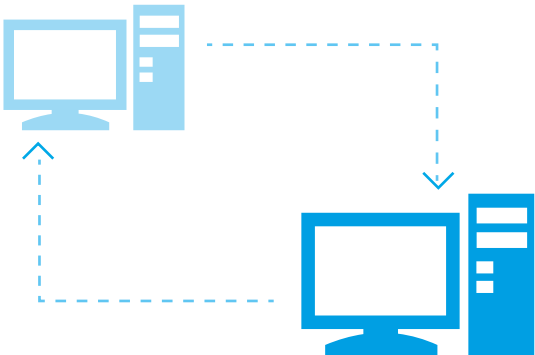
The advanced item picking module provides additional functionalities to improve picking activities such as batch picking “put-to-light” system management, packing list management, and assembly kitting management.

discover more on page 61



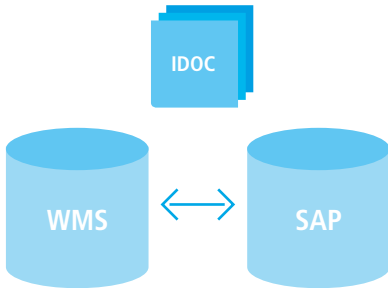
REMOTE ASSISTANCE

The remote assistance module provides the ability to connect remotely to Modula WMS through a web browser. It allows for easy error diagnostics and assistance in troubleshooting issues quickly and easily without having to wait for a software technician to arrive.



SAP® IDOC

The SAP® IDOC module allows for interfacing with SAP® WM module by means of standard SAP IDOC's.



Services provided

In addition to Modula WMS software, the following services are available to users.

WMS SW INSTALLATION

Modula WMS software is installed by computer specialists using a fast guided procedure. Once the program has been installed on the server and on any clients and the Modula VLM units have been configured in Modula WMS, the system is immediately ready for use.



STAFF TRAINING

After installation and the initial configuration of the Modula VLM units, the staff that will be using the software will receive basic training in the use and operation of the software and its functionalities. On request, additional in-depth training sessions are available to be organized if needed.



INTEGRATION WITH A HOST MANAGEMENT

Software integration consultation and support is available when required and its goal is to provide the support required for a fast and effective integration to the host or ERP system.

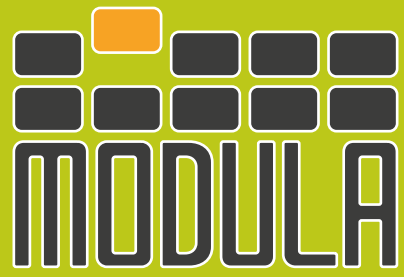


WARRANTY AND SUPPORT TECHNICAL SERVICE

Modula WMS is covered by a limited warranty and support until the end of the software's life cycle. The licensor reserves all rights not expressly stated herein.

Telephone support and/or remote service support is provided using the remote assistance module.





Customer CARE
Our team is always here
to take care of your needs





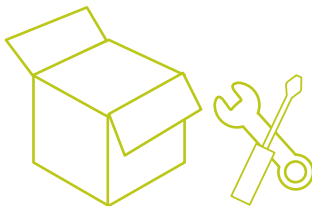
UNIT & SOFTWARE TELEPHONE SUPPORT

Modula unit and software telephone support is always available for all clients. The majority of issues or faults are able to be corrected quickly and easily by phone with a Modula technician assisting in correcting the issue or answering the client’s questions on use. For Modula WMS software users we also offer a web based service to allow technicians to connect to the WMS software remotely to assist in issues. Specific coverages and packages are available based on a client’s needs.



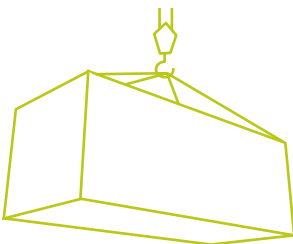
PREVENTATIVE MAINTENANCE

To ensure Modula units are always functioning correctly and efficiently, preventative maintenance service contracts are available to users at any time. Contracts are based on the operational run-time of units and their usage levels. Modula units automatically inform users when preventative maintenance is due to take place so there is no need to worry about timing. Preventative maintenance service includes a verification of all functionalities (hardware and software) as well as a thorough unit check to prevent wear and ensure units operate in the best possible manner.



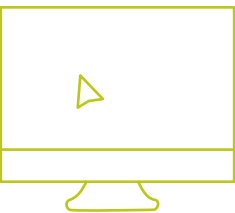
OEM SPARE PARTS & ACCESSORIES SALES

Modula also offers unit accessories and spare parts items after the original sale is made. To further optimize units, client are able to purchase additional accessories such as partitions, dividers, etc. In addition several spare parts packages are available to select based on the level of items needed so clients are able to have these items on hand for easy access if needed.



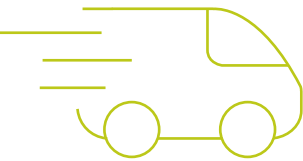
UNIT MOVES AND MODIFICATIONS

Modula offers specific services when structural modifications are required (modifying unit heights, installing unit accessories, or adding WMS software) as well as unit moves within your facility or to a new facility.



AFTER SALES SUPPORT

Modula offers additional consulting services to update and maintain WMS software databases, install additional WMS software modules if required and to further personalize units with options and accessories.



ON SITE SERVICE

Our expert, factory trained technicians are able to travel to a client’s site to solve any technical issue. Modula technicians are always equipped with the parts and tools to allow repairs to be made quickly and get the client back in operation as soon as possible. Preventative maintenance service agreements are also available.



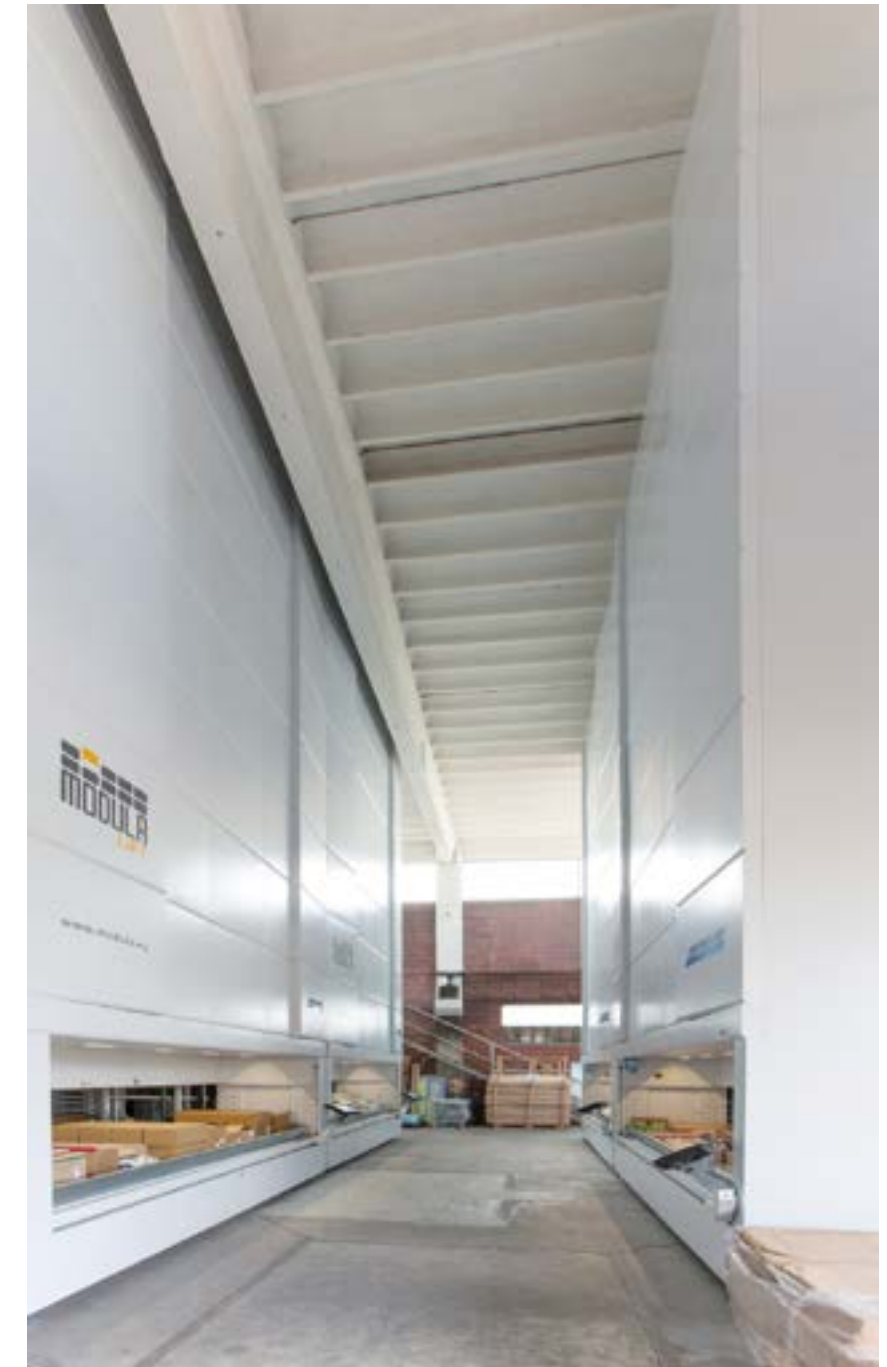
AFTER SALES TRAINING

Following the sales process and unit installation, Modula also offers additional training courses dedicated to operators and maintenance technicians, so clients are able to more autonomously operate and maintain Modula technologies.

discover more on page 54



Think Vertical, Think Modula



Modula

MODULA

Via San Lorenzo, 41 - 42013
Salvaterra di Casalgrande (Re) ITALY
Tel. +39 0522 774111
Fax +39 0522 774175
info@modula.eu
www.modula.eu

Modula is part of

