

INDUSTRY
5.0
COMPLIANT

ICAM INDUSTRIAL
INTELLIGENT SPACE SOLUTIONS



RIGO, THE CUSTOM-MADE HORIZONTAL AUTOMATIC LIFT SYSTEM

RIGO is our multi-column automatic horizontal lift system with shifting trays for intensive storage and fast picking of light goods and/or small to medium-sized items.

 **ri90**













MORE SPACE, EVEN IN LOW PREMISES

BENEFITS AT A GLANCE

- High storage density in low-premises facilities
- Efficiency and accuracy thanks to the “goods-to-person” principle
- High flexibility in machine configuration
- Accurate identification, security and traceability of stored materials
- Improved ergonomics, safety and comfort for operators
- Best price / storage capacity ratio (€ / m³)



THE IDEAL SOLUTION, FOR ALL KINDS OF LIGHT AND SMALL-SIZED GOODS

- | | |
|--|---|
|  Raw materials |  Small parts and hardware |
|  Electrical materials |  Personal Protective Equipment |
|  Labels and packaging |  Bottles and vials |
|  Parts and components |  Finished products |
|  Light tools |  Consumable materials |
|  Electronic boards |  Spare parts |

THE CUSTOM-MADE HORIZONTAL AUTOMATIC LIFT SYSTEM

RIGO is an automatic storage system with sliding trays, which operates according to the “goods-to-person” picking principle: operation occurs via a PC on board the machine, or via any other mobile device on which ICON, the software for managing and controlling handling sequences, has been installed.

Thanks to an internal handling system, the operator is given the tray where he can pick up or deposit items directly at the station, in total comfort and safety.

RIGO is horizontal in its volume development, ensuring high storage capacity in spaces that are unsuitable for vertically developed lift modules (e.g., low rooms, basements, with complex layouts), as well as outdoors, in situations where it is necessary to limit the visual impact on the landscape.

Unique in its kind for modularity and dimensional flexibility, it can be configured from **2 to 20 storage columns**, allowing the realization of **storage system up to 4.5 meters high and 20 meters wide.**

MODULAR AND SMART, CUSTOM-MADE FOR LOW SPACE PREMISES

RIGO consists of two opposing rows of shelving units on which the trays containing stored materials are arranged.

The handling is managed by a **mini shuttle** which, by means of a transmission belt, **moves along the horizontal axis (x)** between the two rows of shelving units. On board the mini shuttle is **the elevator (y)** with the **retrieval and depositing system (z)**.

Operations of RIGO storage system can be accomplished using an incorporated PC, positioned near the picking and refilling stations, or via any mobile device on which ICON, ICAM's automated warehouse management software, has been installed.

Multi-beam photoelectric barriers and an **automatic closing panel** allow operators to work safely during tray movement in the picking/refilling station.

Emergency pushbuttons located on the front of the storage system enable the machine to be stopped immediately at any time.



■ TECHNICAL DATA

TRAY	
Maximum load	105 kg
Useful width with tray edge	800 / 1,000
Useful depth with tray edge	600 mm
Useful height with tray edge	75 ÷ 475 mm
Minimum tray spacing	100 mm
STORAGE SYSTEM	
No. of storage columns	2 ÷ 20
Maximum load capacity per column	7.6 t
Width	3,085 ÷ 20,005 mm
Depth	2,294 mm
Height	2,200 ÷ 4,500 mm
Module height pitch	100 mm
Working environment operating tempera-	0 ÷ 40°C
Relative humidit	50 ÷ 85%*
PERFORMANCE	
No. of trays / hours	59 ÷ 86 **

* On request for special requests it is possible to equip the storage system with components capable of withstanding climatic conditions which exceed these limits

** The value is calculated considering two side-by-side picking/refilling stations



■ WIDTH OF THE MACHINE (mm) BASED ON QUANTITY AND DIMENSIONS OF THE COLUMNS

		USEFUL WIDTH OF TRAYS WITH SIDE PANELS (mm)	
		800	1,000
NO. OF STORAGE COLUMNS	2	3,085	3,485
	3	4,025	4,625
	4	4,965	5,765
	5	5,905	6,905
	6	6,845	8,045
	7	7,785	9,185
	8	8,725	10,325
	9	9,665	11,465
	10	10,605	12,605
	11	11,545	13,745
	12	12,485	14,885
	13	13,425	16,025
	14	14,365	17,165
	15	15,305	18,305
	16	16,245	19,445
	17	17,185	-
	18	18,125	-
	19	19,065	-
	20	20,005	-

From **2**
to **20** storage
columns

THE RIGHT TRAY, TO SUITE ANY NEEDS

The perfect organization of products within trays enables optimal warehouse space utilization, maximum accuracy, and reduced access time.

The trays, designed to support a maximum load capacity of **105 kg**, are available in **two different widths** (800 / 1,000 mm) and one depth (600 mm).

With the use of side panels, removable dividers and containers, each tray can be configured or reconfigured over time for organized and flexible storage of items of various

sizes and shapes within the same warehouse: from small components (fasteners) to medium-sized items (spare parts, tools, PPE, production kits, medicines, consumables, etc.). Accessories can be installed at later times for scalable investment.

This makes it possible to choose RIGO for a wide range of storage and retrieval applications in the manufacturing, distribution, medical-hospital, and retail sectors.

Within RIGO it is possible to manage only trays with **fixed usable load height (fixed configuration)**.

**Picking/refilling station
on the long side**



Available trays:

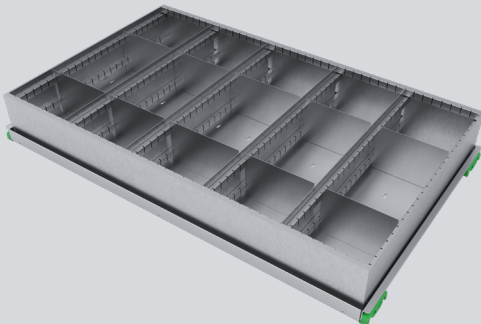
• W 800 x D 600 mm • W 1,000 x D 600 mm

**Picking/refilling stations
on the short side**



Available tray:

W 600 x D 800 mm



PRODUCTIVITY, COMFORT AND FLEXIBILITY AT THE MAXIMUM LEVEL

Designed according to the latest safety standards, the **picking/refilling stations** can be **internal with full access to stored items** or with **selective access thanks to SLOT**, the innovative optional device that allows for differentiated access rights based on role, user, and/or item categories.

Each RIGO can be equipped with a **minimum of 1 picking/refilling station to a maximum of 6**. They can be placed **on both the long and short side of the machine, either side-by-side or opposite***.

When dealing with particularly deep spaces, installing picking/refilling stations on both short sides of the machine allows access to the material even by different operators. This solution enables the utilization of RIGO to serve different departments/warehouse areas that require the same stored material. Furthermore, in case of increasing references, pairing multiple RIGOs side-by-side increases storage capacity and the number of operations per hour.

The possibility of **placing multiple side-by-side picking/refilling stations** promotes continuity, speed, and increased efficiency in picking and refilling activities: while the operator is involved in picking or refilling operations in one station, the shuttle continues with its next handling mission in the adjacent picking/refilling station, reducing or even eliminating the waiting time of the operator.

RIGO with picking/refilling stations on the short side of the machine



RIGO with picking/refilling station on the long side of the machine



Side-by-side RIGOs with multiple picking/refilling stations



RIGO equipped with SLOT for the selective access



*It is not possible, on the same machine to have picking/refilling stations on both sides at the same time

PRECISION, EFFICIENCY AND PROFITABILITY, THROUGH INTELLIGENT INVENTORY MANAGEMENT

New standards of usability, accuracy and productivity are achieved with the available command and inventory control options.

Everything is under control with ICON. This web-based software, designed and developed entirely by ICAM, enables the management and control of the entire range of ICAM warehouse systems and much more.

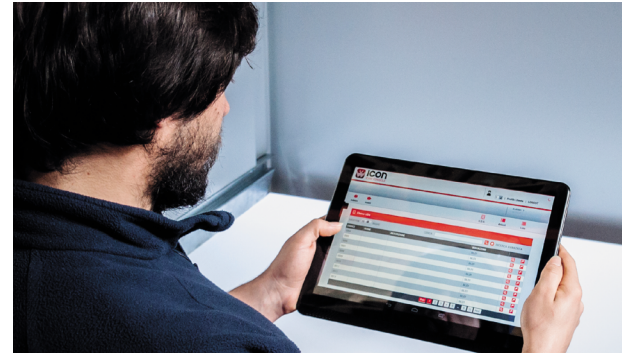
Designed in accordance with the latest technological standards, ICON meets the storage and picking needs of the most important commercial and industrial sectors, providing greater flexibility of interface with the most popular WMS and ERP management softwares.

Designed with the Microsoft.NET 4.5 framework, ICON was developed in C# with the development tools for Visual Studio. The PC is Microsoft Windows 10 embedded and equipped with a network interface, a software package developed by ICAM, and a database server program (SQL Server Express Edition).



KEY FEATURES AT A GLANCE

- Touch screen console
- Windows-based intuitive graphic interface
- Modular structure and versatile options
- Multiple inventory management strategies
- Multilingual and multiple-machine management
- Quick response times and optimized processing pathways
- Assignment of specific authorization profiles for individual users



IRIDE*, is the **innovative interactive control system** of RIGO that makes storage and retrieval operations faster, more accurate and more intuitive thanks to a digital environment fully-integrated into the machine and ICON, through 4 main functions:

■ Light Picking Guide

Guidance on picking operations through colored light beams that identify the right locations containing the material to manage.

■ Head-up Digital Dashboard

Digital dashboard with relevant handling information brought directly into the operator's line of sight.

■ Adaptive Interior Lighting

Integrated lighting system and light signaling of alarm situations (activation of safety barriers, downtime, etc. ...).

■ Active Control

Feature, which allows the operator to interact in real time with the information, projected on the 'Head-up Digital Dashboard', without having to continuously transit to the PC station

* IRIDE is available only for RIGO warehouses with a height equal to or greater than 2,600 mm.



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