

Robi

GERARDI
SMART
VERTICAL
AUTOMATION



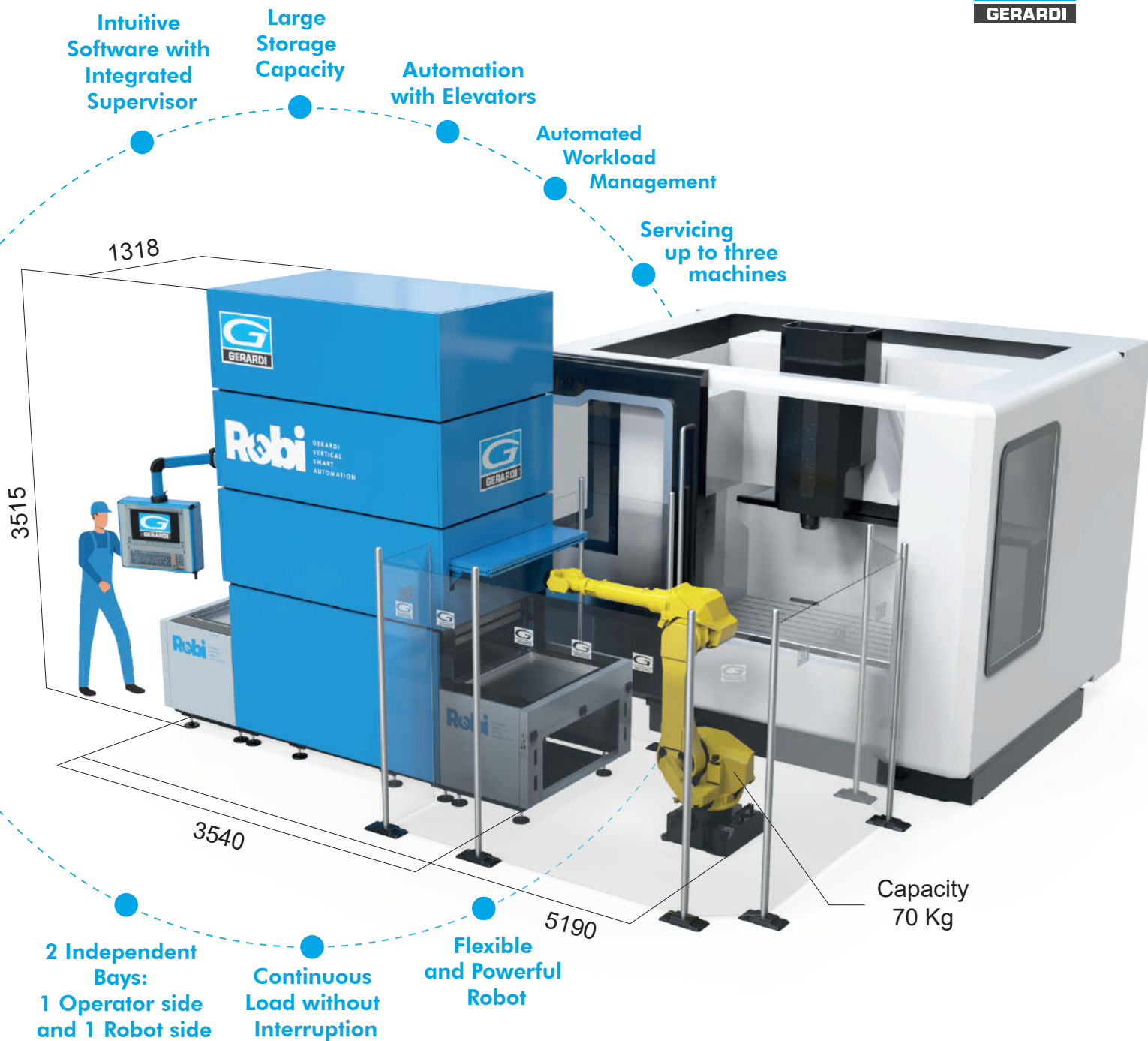
ENGLISH



Robi is a Revolutionary Fully Automated Modular Production System Created to Optimize Production and Storage Activities:

THE AUTOMATION OF PRODUCTION CHANGEOVER.

www.gerardi.it



RETURN ON INVESTMENT - ROI

With a normal machine we hardly reach 1400-1500 h/year, but assuming we use Robi for a minimum of 8 hours and on three unmanned machines, for 200 days we would have the following data:

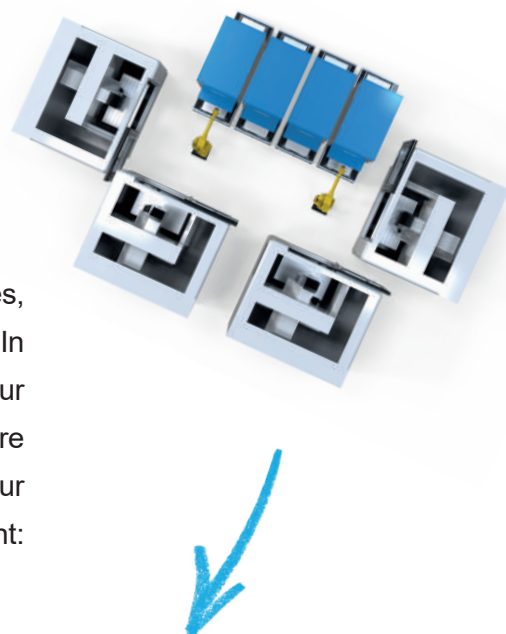
$$8 \text{ h} \times 200 \text{ days} \times 3 \text{ machines} = 4800 \text{ h / year}$$

Assuming we work at an hourly cost of **50 euros/h**, we have a turnover of **240,000 €**. Obviously the hours and days of continuous production will be many more, so the calculation is done quickly, implementing the third machine changes considerably.

MODULAR PRODUCTION SYSTEM

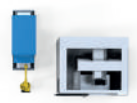


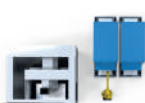

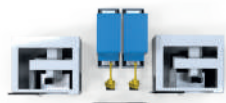







You can **expand** the number of warehouses and machines, resulting in more combinations and production capacities. In addition, you can **change the layout** of machines to fit your space and optimize workflow. You have the freedom to configure and rearrange the space according to your needs. Robi fits your machines perfectly, eliminating the need to buy new equipment:

WE RECONFIGURE YOUR EXISTING MACHINE!



**YOU HAVE THE FREEDOM TO EXPAND WAREHOUSES,
ADD MACHINES, AND CHANGE THE LAYOUT**

TO GET THE MOST OUT OF THE ENTIRE SYSTEM.

		NUMBER OF MACHINES			
		1	2	3	4
NUMBER OF WAREHOUSES	1				-
	2				-
	3				
	4	-			



ROBOT

Robi is equipped with a FANUC robot: with advanced functions and intuitive controls, it excels in precision and efficiency.



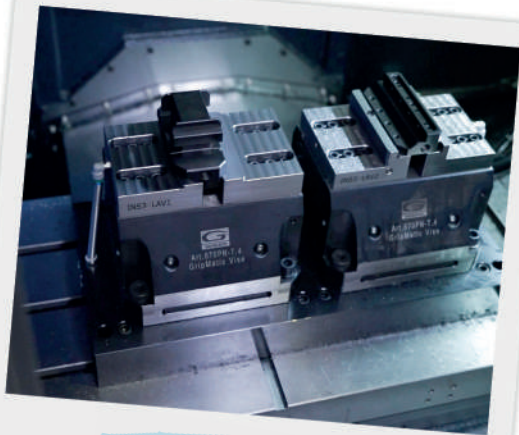
ORGANIZATION

Robi is an automation and storage system managed by supervisor software.



Robi

GERARDI
SMART
MODULAR
AUTOMATION



BASE FIXTURE

By integrating Robi with existing equipment, you will achieve improved processes, optimized storage solutions and increased productivity.



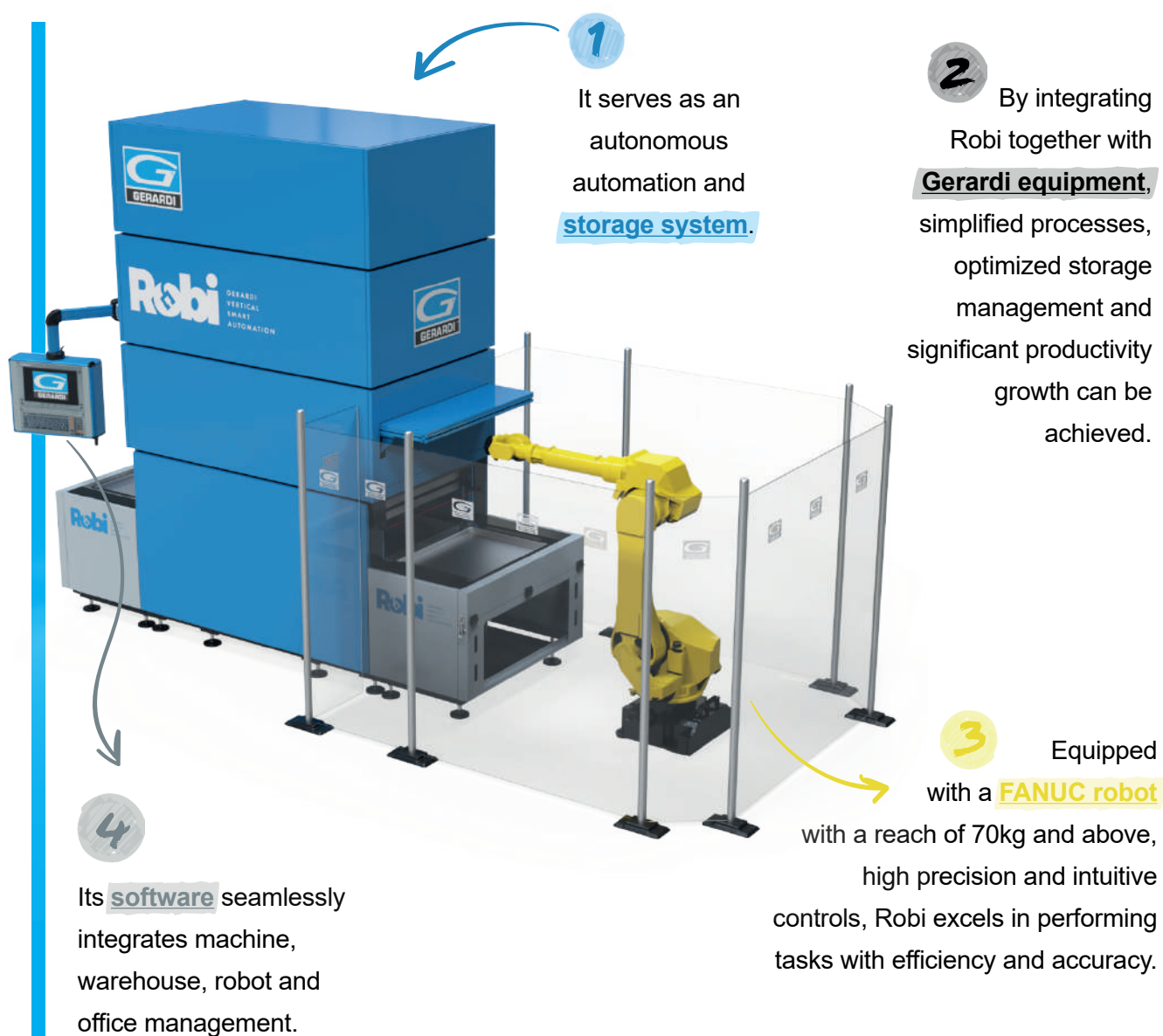
INNOVATIVE SOFTWARE

Robi's built-in software solution perfectly links machine, warehouse, robot and office management, making process change automation possible.

ROBI.

Smart Modular Automation

Robi represents an innovative solution that spans **four** key areas:



ALL IN ORDER TO ACHIEVE A TRUE

AUTOMATIC CHANGE OF PRODUCTION

WORKPIECES TO BE MACHINED, EQUIPMENTS, GRIPPERS, WORKING CYCLES



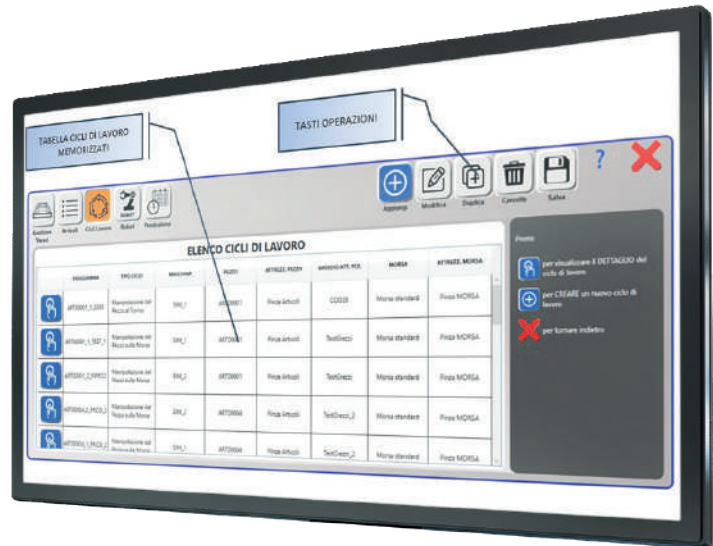
INNOVATIVE SOFTWARE

It is the supervisor software that makes the **real difference**: with this system, operators no longer have to manually run points on the robot panel at the beginning of production. This is a great advantage because machine tool operators are generally not experts in handling robots, a task that would require specific training. Thanks to Robi, however, everything becomes easier: **each operator can work autonomously**; by entering the data (raw size) the software independently determines where and what the robot should do and consequently proposes the free machine.

**THE SOFTWARE AUTOMATICALLY MANAGES
PROCESS AND PRODUCTION CHANGE**

The real strength of Robi is that this software **manages the entire production cell, from the warehouse to the robot to the machines involved in the process.**

- **Program:** indicates the work program, part program to be used in the machine
- **Cycle type:** indicates the type of cycle among the predefined ones that is used
- **Machine:** indicates the machine tool being served by the cycle
- **Workpiece:** part to be produced
- **Workpiece fixture:** gripper used to manipulate the part
- **Equipment tray:** type of tray used
- **Clamp:** vise used
- **Vise equipment:** Gripper used for the vise



WORK CYCLES STORED IN THE SYSTEM ↙

BASED ON MACHINING CYCLES, THE SOFTWARE SUGGESTS PRIORITIES AND OPTIMIZES WORKLOADS:

A FEATURE NO OTHER AUTOMATION SYSTEM OFFERS TODAY.

WITH ROBI, PRODUCTIVITY HAS NEVER BEEN EASIER TO ACHIEVE

In addition, **machine programs are loaded and stored directly in the software**, simplifying management of the production process.

ROBOT

Robi is equipped with a FANUC model M710iC/70M robotic arm.

FANUC

M-710IC/70

STANDARD 70 KG PAYLOAD
MULTIPURPOSE ROBOT

The new lightweight robot series has an **innovative design** with a slim wrist and a rigid arm, taking up little space.

With the best payload and inertia in its class, this powerful 6-axis model is suitable for various applications and combines a **payload of 70 kg** with extremely high **axis speeds**.



Very high axis speeds, repeatability of ± 0.04 mm and a lifting capacity of up to 70 kg ensure:

01.

Extraordinary
Repeatability

02.

Easy handling of
large plates

03.

Excellent speed and
motion performance and
unparalleled reliability

**EXCELLENT PERFORMANCE AND
UNMATCHED RELIABILITY**

**GRIPPER
INNOVATION**



GRIPPERS

PNEUMATIC JAWS

FEATURES:

- The Gerardi Gripper offers high quality and optimal balance;
- Made of durable anodized aluminum, it is lightweight, compact and wear-resistant;
- Its innovative design minimizes the number of parts, thus ensuring greater reliability, ease of assembly and reduced maintenance than conventional models;
- It offers the possibility of custom grippers;
- Is a high-quality, lightweight gripper with a durable and compact aluminum body;
- Gripper offers a range of high quality, versatile and easy to use, suitable for various needs and industries;
- With competitive prices and fast delivery, it meets your needs efficiently.

VERTICAL WAREHOUSE

Robi, with 56 trays and a load capacity of up to 250 kg each, offers flexibility in storing different materials. Standard 600x800 trays simplify transport and moving.

External Steel
Covers



01. Modular protection systems

Allows for customization according to specific needs. Options include basic wire mesh and the ability to install crystals to increase outdoor visibility and protection.

02. Control Panel

is mounted on a telescopic arm so that it can be easily moved by the operator to the most optimal position.

03. Electrical cabinet and robot controller

The electrical cabinet is located below the robot loading bay while the robot controller is located down in the opposite bay so as to facilitate its operation.

04. Storage capacity

With Robi, each tray can hold 20 pieces, and by having 56 trays, we will have storage space for as many as 1,120 pieces.



05. Automatic filling system

It uses an electronic measuring system to evaluate the height of the tray and its incoming contents. Using a specially designed algorithm, the system accurately determines the optimal position for parking the tray, maximizing available space and preventing damage if the maximum allowable height is exceeded.

06. Shuttle

is equipped with a movable platform located in the middle side that is used to move the trays up and down. A mechanism allows the trays to be moved to the left and right for lateral positioning. Is equipped with 8 brake pads for added safety.

07. Tray Guides

Maximum capacity of 56 trays. Each tray can hold up to 250 kg load, with standard dimensions of 600x800 and a maximum accepted height of 300 mm. 240 internal guides support the trays. The minimum distance of 65 mm between the guides maximizes the available storage space.

Aluminum Profiled Structure

08. Operator side bay

The operator can load and unload parts or equipment. The tray is easily removable for quick replacement. The bays are independent so you can unload / load the operator bay while from the other bay the robot is serving the machines.

09. Robot side bay

The tray is positioned for handling operations by the robot.



WHAT DO YOU HAVE

WHAT WE OFFER YOU

Software Supervisor

The **production cell** is managed as a set of **separate entities** requiring more manual intervention and coordination, with the risk of inefficiencies and errors

The software manages the entire production cell: **it proposes priorities and manages workloads**. Operators no longer have to manually perform part positioning and gripper plunge on the robot panel at the start of production

Modularity

Increasing the number of machine tools is **difficult to replicate** or needs to increase the number of plants (machine + robot)

Optimized and expansion-oriented system: up to 3 machine tools can be serviced with one Robi system

Operations of loading and unloading

Part loading is done before the robot operations begin and **cannot be integrated** during machining. Part loading into the vise is done in **manual mode**

Robi offers two **independent bays**: a robot-side bay for handling operations and an operator-side bay for loading and unloading activities

Storage Capacity

Traditional drawers with lower capacity. To increase it, it is necessary to place one drawer next to the other; this requires more space and materials

Robi can hold **up to 56 trays**: almost **20 times more** than other automation systems



WHAT DO YOU HAVE

WHAT WE OFFER YOU

Process management

Manual intervention to handle part picking and other operations: increases the possibility of human error making the process **less efficient**

Automatic production changeover: the software enables **automatic management** of workpiece gripping, knowing the dimensions of the blank. By entering the dimensions and depth of the grip, it automatically manages production. A virtual grid is created so that production templates can be prepared

Tray Automation

Not having automated systems with elevators, requires more **manual intervention**

Automated system with elevators that position and store trays. If pieces are taller than 65 mm (minimum distance between trays), it **self-levels** and takes up extra space

Robot Adaptability

Competitors' robots can **only** carry **10-15 kg**, limiting the type of parts that can be stored or handled

Robi includes a standard Fanuc robot (**70 kg capacity**) but you can choose versions with a **larger extension** if needed, offering flexibility to work with medium and large parts

Space optimization

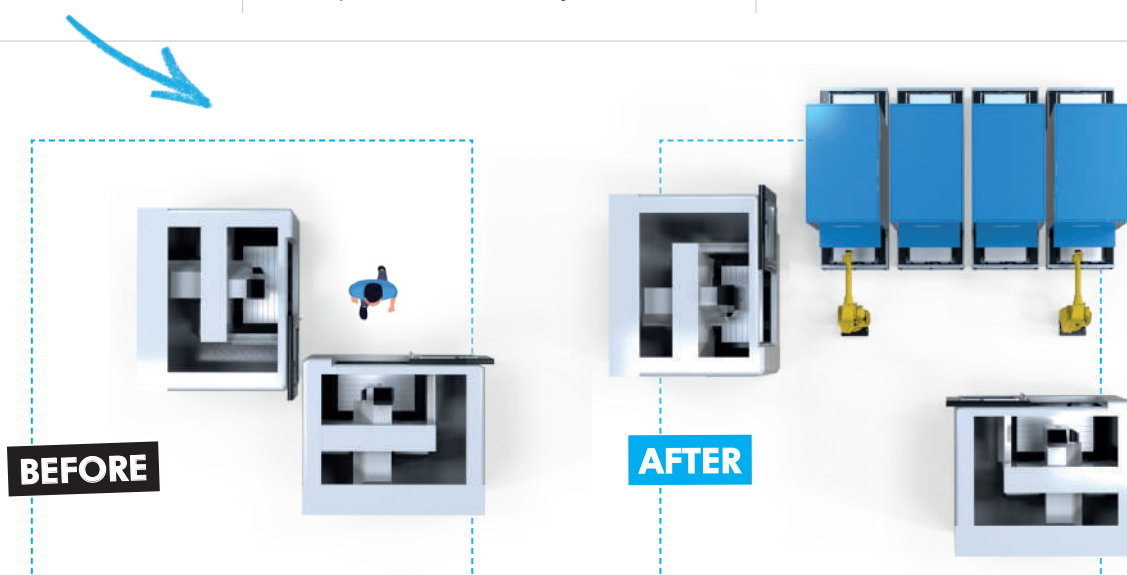
Plant automation requires the **installation of tracks** that take up essential space on the plant

By not using tracks, no additional space is taken up, allowing **more flexible installation**

Resource optimization

Existing machines that work well and in which you have already invested, but with the **need to optimize** space and operational efficiency

Robi **fits** your machines **perfectly**, eliminating the need to buy new equipment



GERARDI MODULAR SYSTEM

Robi by Gerardi integrates perfectly with the philosophy of Gerardi products, integrating their productivity and efficiency. By incorporating Robi into your workflow along with Gerardi products, you can streamline operations, optimize storage and improve overall productivity. **Is the natural evolution of Gerardi products dedicated to automation.**

**INCORPORATING ROBI INTO YOUR WORKFLOW
ALONG WITH GERARDI PRODUCTS**

**YOU CAN STREAMLINE OPERATIONS, OPTIMIZE
STORAGE AND IMPROVE OVERALL PRODUCTIVITY.**



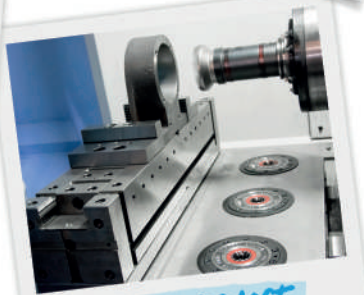
GRIPPERS



GRIP MATIC



COMPACT GRIP



ZERO POINT

GRIPPERS

Pneumatic Jaws for Robot

GRIP MATIC

Automatic self-centering vise.

COMPACT GRIP

Self-centering vise ideal for 5-axis centers.

ZERO POINT

Instant positioning and anchoring!

GERARDI AUTOMATION

Gerardi has always tried to anticipate **market trends**, investing in research and development to stay at the forefront of manufacturing. The company has developed a **wide range of products increasingly geared toward automating** part handling and machine clamping processes, with the aim of optimizing and speeding up production.

2005

Sistema Zero Point

Zero Point introduces the concept of instant positioning and anchoring: an ideal solution for quick, precise and safe clamping of fixtures on machine tool pallets.



2015

Morse GripMatic

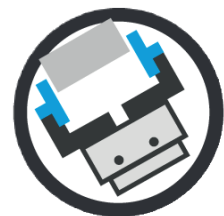
GripMatic is ideal for 5-axis machining centers. Thanks to its compatibility and control via CNC, it can fully automate part clamping processes.



2020

Gripper per Robot

Gerardi Grippers represent another significant step forward on the journey into the world of automation and robotics, easy to use and with a wide range of options.



2024

Robi

Vertical Smart Automation. Robi aims to revolutionize the way industrial manufacturing challenges are faced.



Robi GERARDI
VERTICAL
SMART
AUTOMATION



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