

# GIMATIC

## OVERVIEW



Products, solutions, and services  
for industrial automation

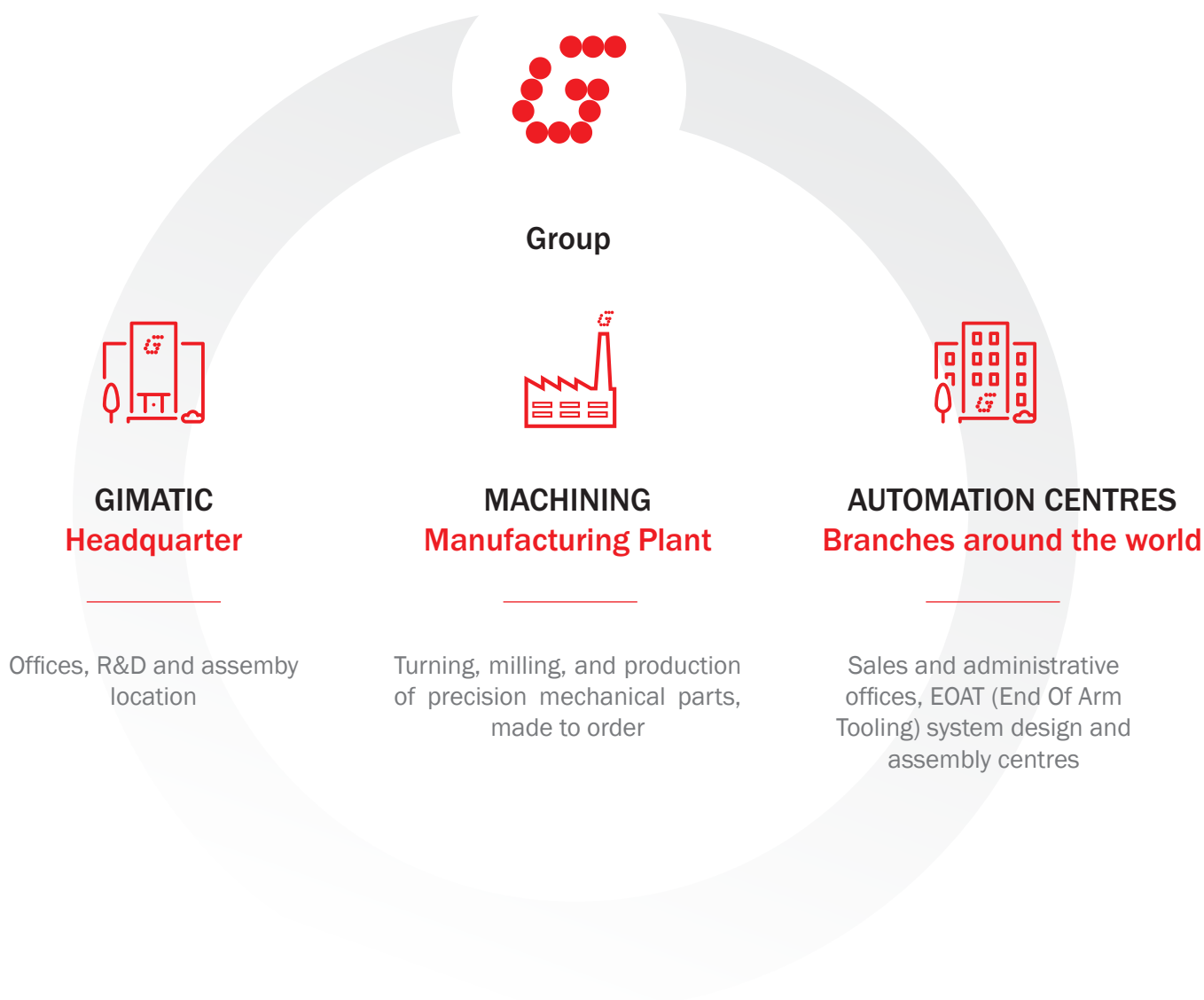
**WE INNOVATE, WE AUTOMATE.**



## Gimatic

40 years of solutions for industrial automation.

Thanks to our expertise and ability to tailor solutions to each customer's specific needs, we are able to provide complete, modular, and intelligent gripping systems, perfect for any application in the field of industrial automation. Our products are the foundation of our continuous growth, based on innovation and flexibility.





# About Gimatic

We are a reliable partner for companies operating in the most innovative industrial sectors.

Thanks to our 5 divisions, we offer a complete range of components and solutions for automation, including:

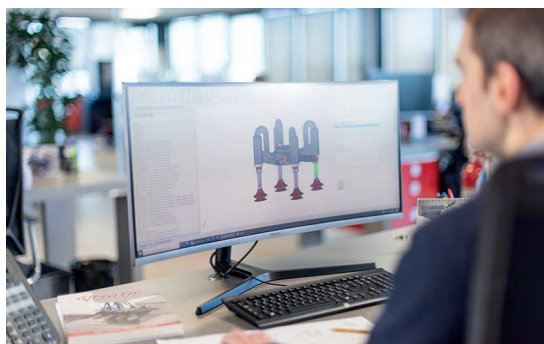
- **Solutions and components for EOATs**
- **Solutions and components for pneumatic automation and mechatronics**
- **Sensors**
- **Solutions and components for industrial vacuum**

With years of experience and extreme versatility, we can meet any customer's specific needs.

We constantly invest in the research and development of new advanced solutions. All our products are subjected to rigorous quality checks to guarantee excellent performance.

We have a network of **14 Automation Centres** around the world which provide complete support in all stages of production.

In addition to our general headquarters, we have a modern **production plant** with more than 70 CNC machining centres specialised in precision mechanical work.



**+2,000,000** Items produced per year  
**+5,000** Products on the catalogue  
**+200** Patents registered



# Gimatic Machining

Our manufacturing plant is specialized in turning, milling and in the production of very precise custom made products.

Beyond the production of Gimatic mechanical parts, **Gimatic Machining** extends its services to external clients across **a wide range of industries**, including automotive, appliances, hydraulics, industrial automation, agriculture, tooling automation, and electromedicine.

We can machine each type of materials either starting from bars and casted parts (steel, stainless steel, non ferrous materials -brass, bronzal, aluminum, titanium, technopolymers, cast iron).

In our **8,000** square meter production plant, we have over **70 CNC machining centres** that allow us to produce components and products of absolute quality (**ISO 9001 certified quality system**)



## Our plus:



Customized design



High technology



Quality and Sustainability



**8,000 sqm** Production site  
**+65** CNC Machining Centres  
**5** Automatic Storages for the tools management



# Gimatic Around the World

Our flexibility and agility, combined with a global service network, allow us to present unique value to customers.

## Why choose our solutions?

### Wide range of products

We offer a wide range of components, comprehensive and customized gripping solutions, and services to meet any requirement.

### Technical skill

Our product specialists, with a local presence worldwide, can assist you in selecting the optimal solution for your application.

### Quality and reliability

We only use high-quality materials and advanced technologies to guarantee reliable, long-lasting products.

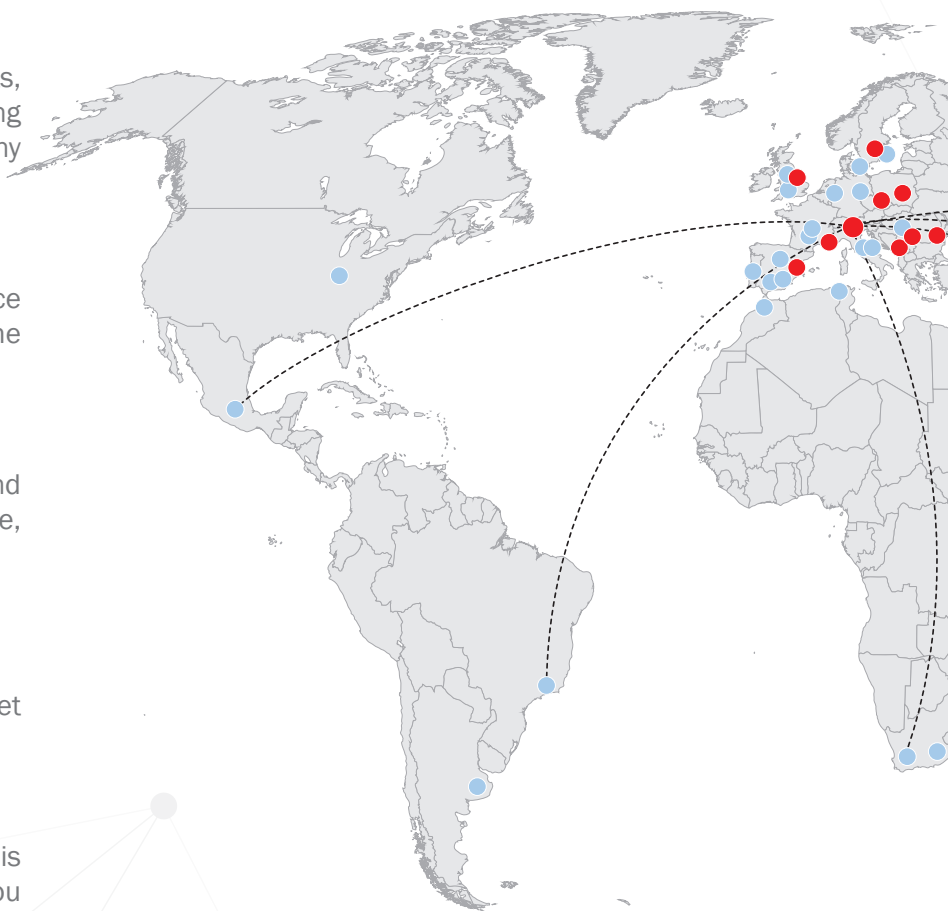
**ISO 9001 and ISO 14001 certifications**

### Flexibility

We develop custom gripping solutions to meet your specific needs.

### Customer assistance

We offer full customer assistance that is precise and local around the world to help you solve any problem.



## Employees



## Manufacturing & Design

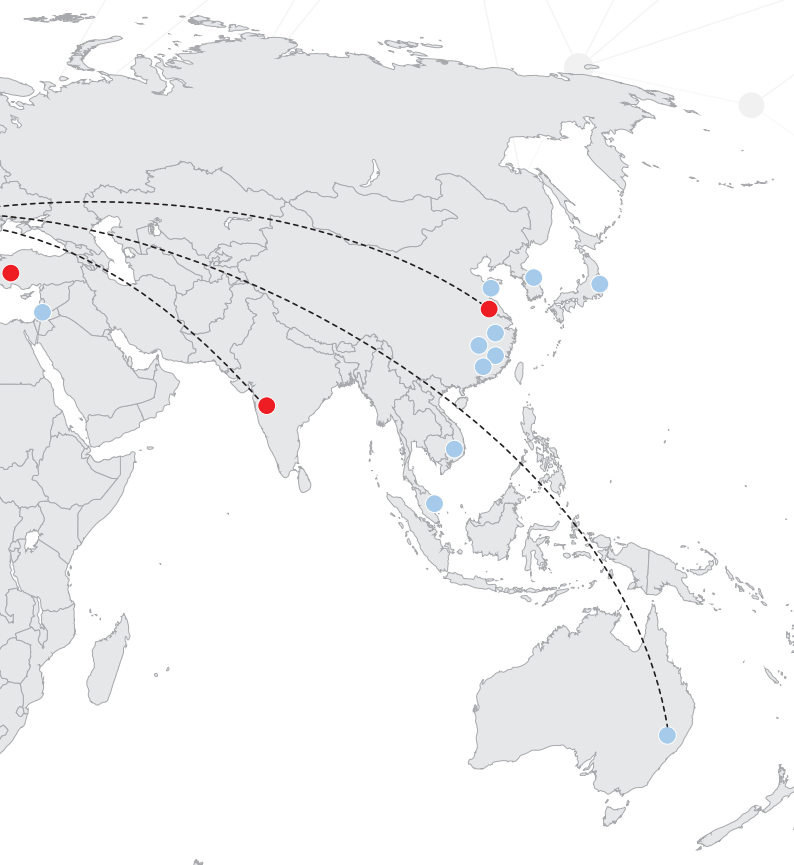
**1985**  
Foundation Year

**+300**  
Employees

R&D / Assembly  
Location

Component  
Manufacturing  
Location

Made in Italy



Since 2018 we have formed part of the **Barnes Group**, a global provider of highly engineered products, differentiated industrial technologies, and innovative solutions.

With leading brands such as ours, Barnes is committed to building world-class, customized automation solutions that address customers' biggest challenges.

[www.onebarnes.com](http://www.onebarnes.com)



## Automation Centres

**7**

EOAT System  
Design &  
Assembly  
Centres

**12**

Sales &  
Administrative  
Offices

**14**

Countries



## Distributors

**100**

Distributors

**25**

Countries



# Industries

We offer a full range of components, custom gripping solutions, systems and technologies to meet the needs of every industrial sector.



## Automotive

Specific components for car and body assembly applications, as well as moulding lines for press departments.



## Factory Automation

The traditional mix of slide units, grippers and rotary actuators for the mostly typical industrial applications.



## Pharma & Medical

Certified products for cleanroom applications in severe environment too.



## Food & Beverage

Solutions and materials food grade approved for the food industry.



## Packaging

Full range of high-performance polyurethane suction cups. FDA-approved suction cups for handling flow packs, cartons and unpackaged food.



## Cobots/Robots

Pneumatic or electrical grippers and tool changers to suit industrial Robot & Cobot.



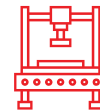
## Machine Tending

Several choices for loading/unloading CNC machines as well as dedicated grippers with IP67 protection against wet and dusty environments.



## Assembly Machines

Full range of grippers, slides and rotary units for any pick and place and assembly needs.



## Assembly & Test Machines

Reliable, durable, fast and lightweight components for harsh environments and heavy-duty applications.



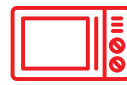
## Logistic

Custom projects using 3D printing technology to ensure greater flexibility in gripping and meeting customer requirements.



## Wood

Suction cups with high wear resistance, ideal for handling porous and uneven surfaces. Vacuum pumps with integrated blow-off and tolerant of dust, which is typically present in the sector.



## Household Appliances

Solutions tailored to the handling of plastic components for appliances.



## Metal sheet

Suction cups with high grip and high shear strength to handle irregular sheet metal, even in the presence of oil. Grippers designed for heavy-duty applications.



## Plastic

Full range available for the sector. Vacuum pumps easily integratable in EOATs, extremely lightweight, with compact form factor and complete with integrated configurations. Suction cups are mark-free and high-temperature-tolerant.



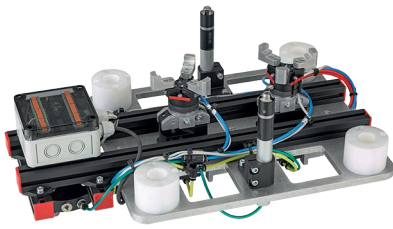
## Glass

Mark-free suction cups, suitable for regular, irregular/curved surfaces.

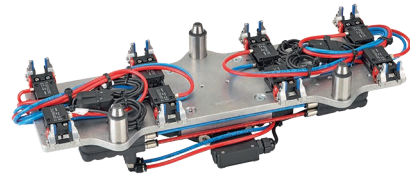


# Solutions

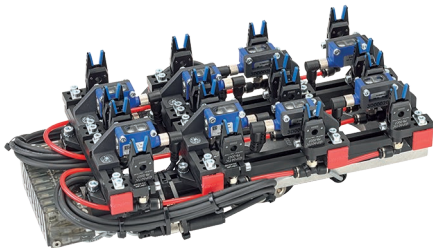
We go beyond the simple supply of components, developing gripping solutions for every industrial sector. We work with customers to optimise their production processes and increase their efficiency.



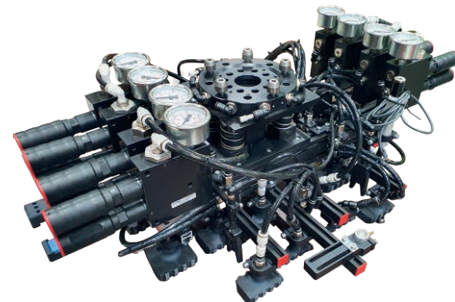
Gripping and loading a copper ring into the mould with a TH three-jaw gripper. On the opposite side of the EOAT for gripping and unloading the co-moulded bearing.



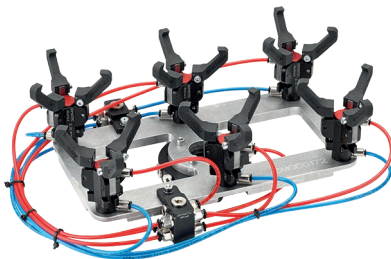
Handling of injection system components.



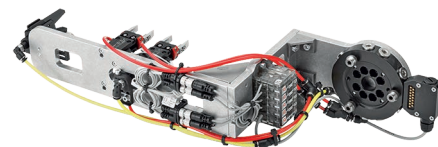
Handling of soft silicone covers.



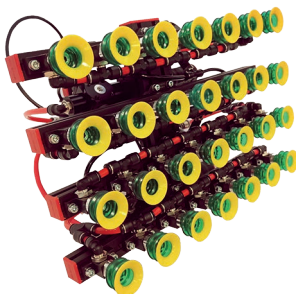
Picking elastic sealings from the mold. 3D printed parts are following the parts shape and spring compensator with brake is helping to have a central suspension effect and keep the position locked. High vacuum flow is generated by vacuum ejectors.



Handling of post-moulded spectacle lenses with PN-016-3 grippers and customised 3D-printed gripper fingers.



Handling of co-moulded material. Gripping and loading plastic components into the mould, handling the finished product after the overmoulding and rubber coating processes. Keypad for Automotive control unit.



EOAT made from standard components, QC90 quick tool changer, integrated EJ-SLG-LARGE pneumatic pumps and VG.BP polyurethane suction cups. Handling of cardboard boxes for end-of-line packaging in the pharmaceutical industry.



Handling of aluminium drawer units: custom solution with VG.CF mark-free suction cups in HNBR, EJ-XPRO vacuum pump with built-in control logic and decentralized pumps for feeding VG.IS suction cups for handling the protection interlayer.





# Solutions and components for EOATs

## Beyond components: custom gripping solutions for every need.

We have a wide range of products to develop the ideal gripping solution for every application. We use the most advanced technologies and high-quality materials to guarantee the highest **efficiency**, **reliability** and **durability**.



### TILT UNITS

- 90° rotation
- High lifting torque
- Safety lock
- Optional magnetic sensors



### MANUAL QUICK CHANGERS

- Used to quickly change EOATs following mould changes on the press
- Enable a significant reduction of tool change time as they feature built-in air chan
- RFID for EOAT identification



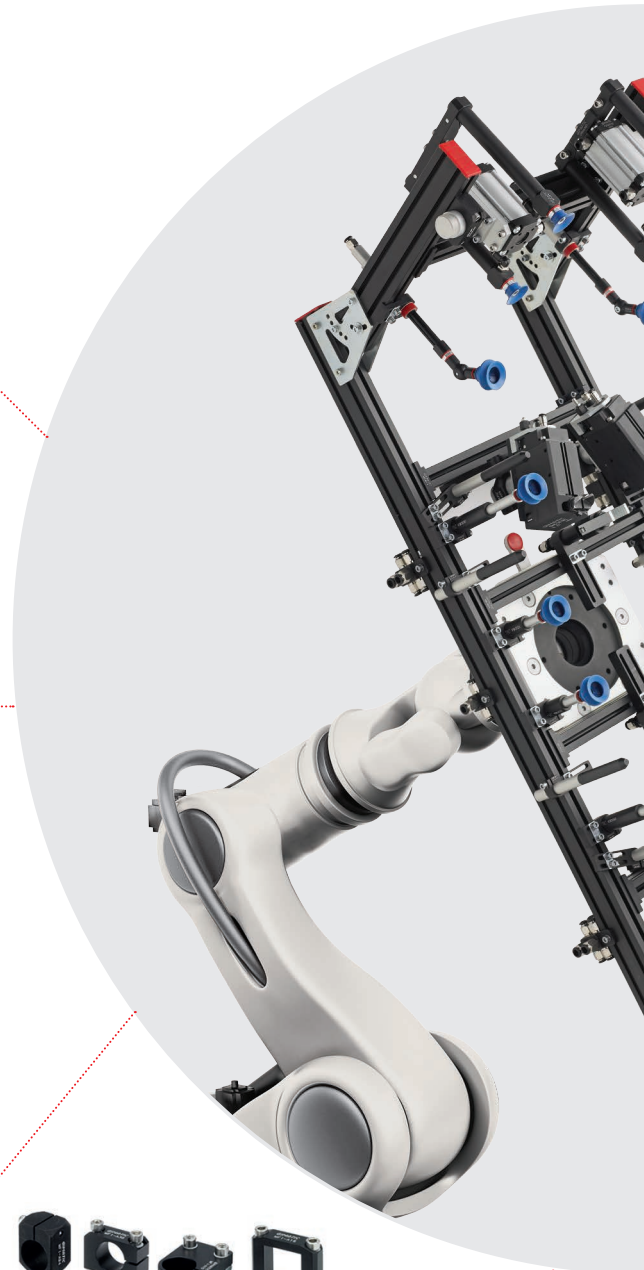
### FRAMEWORKS

- Aluminum profiles for the EOAT framing
- Special nut design for a rigid fastening
- Black or silver anodization
- Square or round shape
- 15 sizes



### MODULAR CLAMPING SYSTEMS

- Brackets for the actuator mounting on the frame
- More than 500 part numbers for a perfect positioning
- Aluminium or technopolymer version
- Only M5 allen key assembly
- Perfect trade off between stiffness and weight
- Heavy duty version





Plastic



Glass



Packaging



Metal Sheet

**+3,000 EOAT**  
**installed per year**



### SENSOR BOX

- Store EOAT sensors set up for processing the signals from the actuators
- Compatible with every Robot and every Sensor
- 2-4-6-8-12 input Fixed version
- Modular version able to process more than 20 sensors
- PNP/NPN-2 wires Input option
- Series or Parallel NC/NO output
- Easy set up by dip switch



### VACUUM CUPS AND SUSPENSIONS

- Vacuum cup holders
- Suspensions with internal spring
- Rotative or non-rotative
- Non-marking rubber materials
- More than 1,500 Vacuum part numbers dedicated



### GRIPPERS

- One or two finger pneumatic grippers
- Expansion grippers
- Grippers for the part holding
- Grippers for the sprues holding
- Grippers for accurate insert positioning
- More than 200 part numbers EOAT dedicated
- Embedded sensors

### AIR NIPPERS

- Available in various versions with different body and blade options
- The body can be vertical or horizontal
- The blade can be straight, angular or perpendicular
- Heating option to facilitate sprue cutting without damaging the moulded plastic part



# EOAT: services for international projects

The construction of an EOAT follows a standardised method that guarantees the **highest quality** and **accuracy**. We have local facilities around the world to support all stages of production of EOATs (End of Arm Toolings).

## 1

### Briefing

First meeting with the customer. Local Gimatic Automation Centres are qualified to support the specific needs of each customer.



## 2

### Design

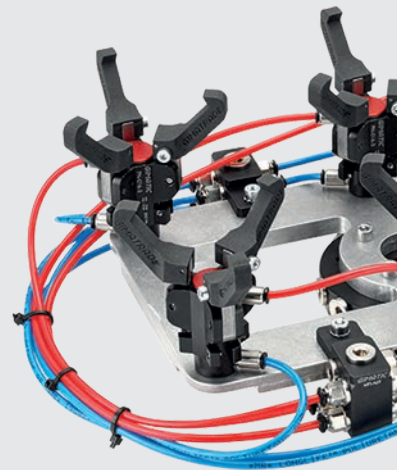
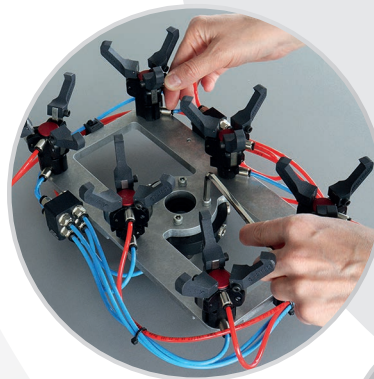
Fully tailor-made EOAT design based on CAD drawings.



## 3

### Assembly and test with moulds

The electrical and pneumatic diagrams follow the customers' technical specifications to be easily integrated in the users' robots.



## 4

### Installation and after-sales service

The installation and start-up service is guaranteed worldwide by the Gimatic distribution network.

After sales service located and standardized worldwide, to support the customer.





## Why choose Gimatic as a global partner?

**INTERNATIONAL PROJECTS MANAGING**



**CUSTOMIZED ITEMS PROVIDING**



**GLOBAL BLANKET ORDERS MANAGEMENT**



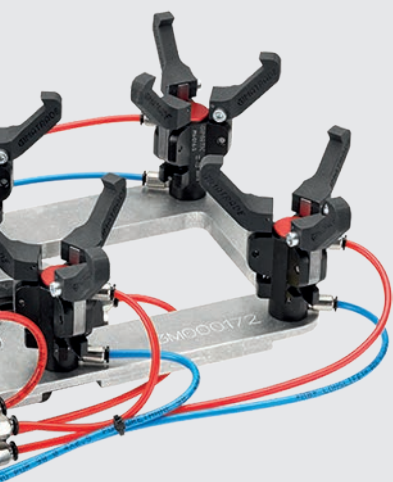
**TRAINING AND UPDATING**



**COMPETITIVITY**



**STANDARDIZATION**



**5**

### Predictive maintenance

Monitoring the primary EOAT information using RFID systems. With this solution, you can check the conditions of the product and collect important information in terms of predictive maintenance.



# Handling



Robot Integration



Assembly  
Machines



Machine Tending



Automotive

## Custom solutions for any need.

With a wide range of products and years of experience, we can design and build handling systems that are perfect for your unique production process. We'll keep your workflow smooth and safe, no matter what you need to move, from tiny delicate parts to big, heavy loads. Our solutions are **tough**, **versatile**, and **reliable**.



### PARALLEL GRIPPERS

- From 3mm to 200mm stroke
- Force from 10N to 10,000N per claw
- Normally open or Normally closed versions
- High speed or High protection versions (IP67)



### ANGULAR GRIPPERS

- Self-centering or NON selfcentering option
- From 7° to 34° swivelling angle
- From 10Ncm to 1,000Ncm torque
- Normally open or Normally closed versions
- High speed application
- 3 Jaw version available



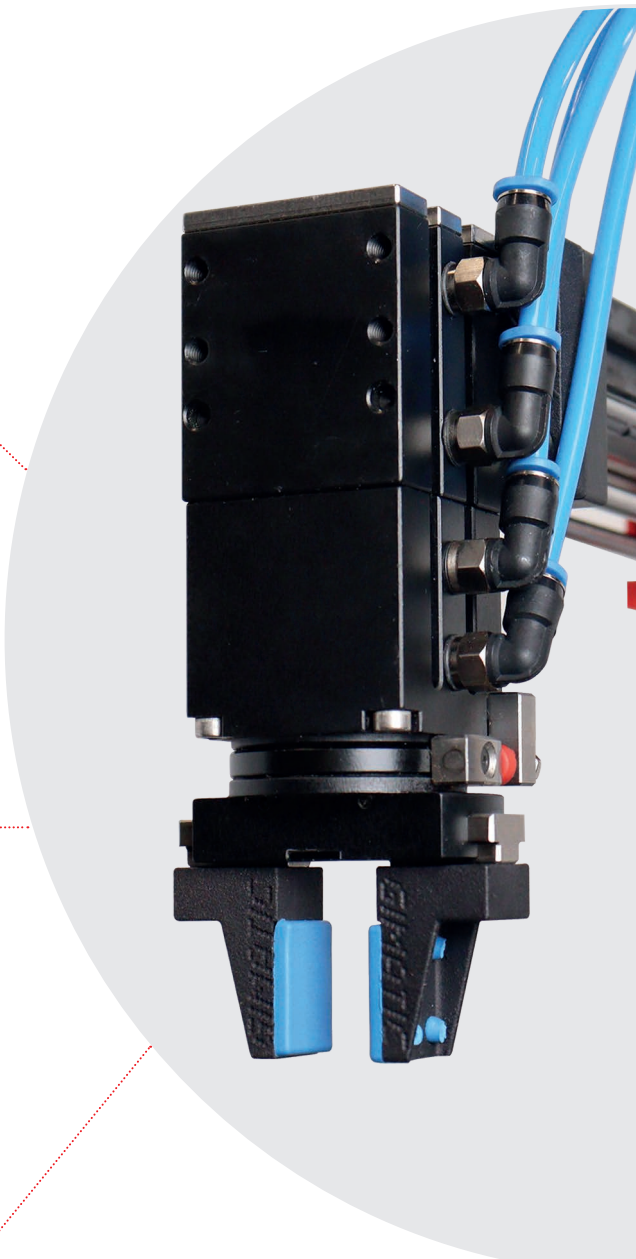
### RADIAL GRIPPERS

- 90° swivelling angle
- From 60Ncm to 3,600Ncm torque
- Constant torque or increasing torque



### 3 JAW GRIPPERS

- Double acting with optional springs (NC/NO)
- Long stroke or short stroke
- Possibility of front fastening with through screws
- High efficiency force transmission
- Optional magnetic or inductive sensors





Pharmaceutical



Packaging



Electronics

## INDUSTRIAL AUTOMATION



### AUTOMATIC QUICK CHANGERS

- No actuators needed
- Suitable for both automatic and manual tool changing
- Safety mechanical system
- Radial air ports
- Optional electric connectors
- Payload up to 50kg



### LINEAR ACTUATORS

- High loads
- Various sizes and strokes
- Integrated shock absorber



### ROTARY UNITS

- Flat and strong design
- From 2 to 8 indexing position
- Clockwise or Anticlockwise option
- Sensors detection



### SPECIAL PURPOSE GRIPPERS

- Expansion grippers for internal grip
- Magnetic grippers for ferromagnetic parts manipulation
- Needle grippers for textile, sponge or porous parts manipulation



# Vacuum



Packaging



Food



Wood

## Draw on the power of industrial vacuum: complete solutions for every need.

We offer a range of innovative, high-performance products. Each is made using high-quality materials, guaranteeing **reliability** and **excellent performance**.

Our team of experts is available to provide qualified technical assistance and help you choose the best vacuum solution for every need.



### SUCTION CUPS

- Available in different materials to meet the needs of multiple applications (NBR, PU, HBNR, SILICONE, FDA-COMPLIANT SILICONE, DETECTABLE FDA-COMPLIANT SILICONE, PTFE)
- A wide range of products with different diameters and number of bellows

**Typical applications:** handling sheet metal, glass, plastic, wood, porous surfaces, hot surfaces, polymers, or packaged and unpackaged products — snacks and bags — and unpackaged food products



### VACUUM GRIPPING SYSTEMS

- Available with foam or suction cups
- Available in different sizes to meet the needs of multiple applications
- Modular, versatile solutions available with calibrated holes or self-closing valves
- Models with integrated solenoid valves

**Typical applications:** palletising and handling in packaging sectors; gripping bags, sheet metal, glass and wood; or for palletising cardboard boxes, interlayers and pallets





Metal Sheet



Glass



Plastic



## VACUUM PUMPS

- Available in different sizes depending on the need.
- Can be used with different cartridges
- Versions with integrated silencer
- Models with ISO valve for an excellent ratio of suction flow rate to air consumption
- Models with integrated smart operation
- Models with integrated blow-off valve and quick-release system
- Light, modular and compact pumps for elevated suction flow rates

**Typical applications:** decentralised, centralised, pick & place, dusty environments and porous applications



## MULTISTAGE CARTRIDGES

- Multistage ejectors for custom integrations
- Available in 2- or 3-stage versions
- Available in 3 different sizes (small, medium, large)
- Available in 3 different models (EJ-HF high suction flow rate; EJ-HV high vacuum level; and EJ-LP low feed pressure)



## SYSTEM ACCESSORIES

- Adjustable electromechanical and pneumatic vacuum switches to detect the vacuum level in the circuits
- Release system designed to reduce the gripping release time and increase the number of pieces gripped in a given time
- Wide range of suspensions for complete gripping solutions

**+1,800  
VACUUM  
PRODUCTS**



# Mechatronics

## The utmost flexibility and efficiency for your robots.

Our electric solutions with grippers, rotating actuators and tool changers offer unprecedented **versatility**, optimising production processes and plant energy consumption.

### Advantages:

- Maximum flexibility
- Cycle time reduction
- Greater precision and control
- Ease of use
- Reduced maintenance costs
- IO-Link Technology



 **IO-Link**

**COMING SOON**

## PLUG&PLAY GRIPPERS

- 2 jaws self-centering parallel grippers with short, extra and long stroke
- 3 jaws self-centering parallel grippers
- Multi-purpose parallelogram gripper
- Radial 180° grippers
- Tilting grippers
- Plug&Play devices that require no driver
- Security retention and energy-saving mode (no power consumption when the device is idle)
- Clean room certified



## ELECTRIC QUICK CHANGERS

- Automatic tool changers driven by a built-in electric motor
- Plug&Play devices that require no driver
- Electrical connectors available for power transmission from the robot to the tool (up to 32 pin), also with RFID system
- Security retention and energy-saving mode (no power consumption when the device is idle)
- Up to 100kg payload
- Up to 6 pneumatic connections
- Clean room certified





Robot



Assembly  
Machines



Pharmaceutical



Cosmetic



## CLEAN ROOM

- Certification by the Fraunhofer institute
- FDA silicone Silpuran
- VHP H2O2 + UV cleaning procedure
- IP65 protection rate
- GMP class A/B

**NO AIR NEEDED**

**CLEAN ROOM  
CERTIFIED**



## SERVO GRIPPERS

- Integrated 24VDC brushless motor
- Various solutions with integrated or external drives
- Multiple communication protocols available (CANopen, Profinet, EtherCAT)
- Position, speed, and force control
- Design suitable for collaborative robot applications



# Sensors

## Sensors for EOATs: a world of possibilities.

Our team of experts has developed a wide range of sensors to complete our solutions, offering a variety of functions that allow the robots to adapt to any task **precisely** and **safely**. The sensors allow precise detection of the gripping fingers in relation to the object to be grasped, ensuring an accurate and secure grip.



### MAGNETIC SENSORS

Developed for applications on Gimatic components and industrial cylinders.

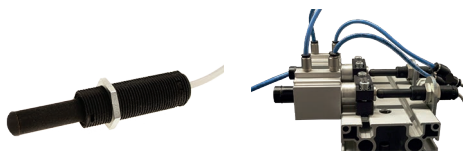
- REED and GMR technology
- Output PNP/NPN, 2 wires, and analog
- C,T, Dovetail slot and Tie-Rod cylinder suitable
- Full range of brackets and adapters
- Cable, M8 and M12 connector output



### VACUUM SENSORS

Used to monitor the achievement of the desired vacuum level when the suction cup is in contact with the object and for diagnosing the vacuum system's operation.

- > Monitor and regulate vacuum for automated object handling
- > Regulate vacuum during package sealing process
- > Monitor vacuum for pneumatic material transport
- > Monitor and maintain vacuum in tanks and storage environments



### TOUCH SENSORS

Designed to detect touch or pressure in applications requiring monitoring or control of physical contact between two surfaces or objects.

- > Detect the presence or position of components or objects on production or assembly lines
- > Detect the end position of linear or rotary actuators, ensuring stopping at the desired point
- > Monitor the force applied during the fastening of sensitive components, preventing damage due to excessive pressure

- M14x1 mm reed switch
- Soft head to avoid damage to the product
- Detecting stroke range 2.5÷15 mm



### OPTICAL SENSORS

Optical sensor, designed to detect the presence of objects in industrial environments.

- > Detect the presence of objects passing along a production line
- > Monitor the position of components during the assembly process

- M18x1 mm photoelectric sensor
- 100 mm sensing distance
- PNP/NPN output





## PRO SENSORS

Developed for Gimatic products where sensor mounting space is limited and multiple monitoring signals are required.

- 3 outputs in a single sensor
- Programmable outputs
- 3 switching points
- PNP or NPN outputs
- NO/NC settable output
- Cable or M8 and M12 connector outputs
- Available in IO-LINK version

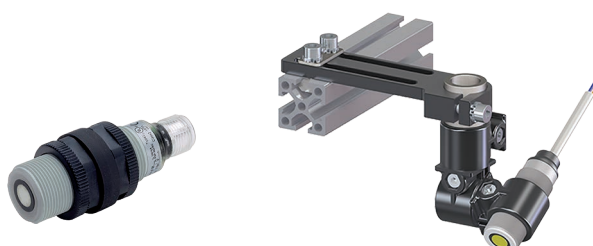


## INDUCTIVE SENSORS

Used to maximise reading precision and to operate in the presence of external magnetic fields (which prevent the normal use of magnetic sensors).

- > Detect metal component presence on the assembly line
- > Determine end position of linear actuators
- > Measure the fill level of metal containers

- Diam. 3/ 4 mm available
- 1mm nominal sensing distance
- PNP/NPN output
- PUR cable output



## ULTRASONIC SENSORS

Used to identify the piece via ultrasound, enabling measurement of the distance to the piece.

- > Measure the fill level of a food-grade tank
- > Detect object presence or absence on a production line conveyor

- M18x1 mm ultrasonic sensor
- PNP/NPN NO/NC output
- 40-300 mm sensing distance
- Lightweight technopolymer body
- Easy installation and versatile use

**OPTIONAL  
CUSTOM SENSORS**



# Cobot Kit



Automotive



Machine Tending



Food&Beverage



Electronics



Logistic

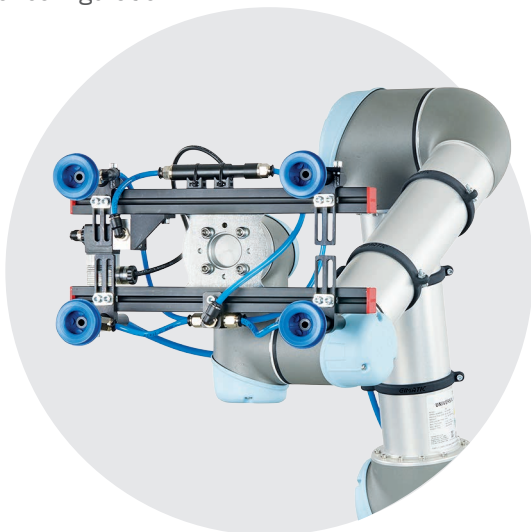
## Specific solutions for collaborative robots: quality and competitiveness.

Our **Plug&Play kits** come complete with plug-in software, collaborative grippers and tool changers, and are compatible with the main brands of collaborative cobots. Kits and certifications with **UR** and **TM** are available.



### KIT-EQC20

- Electric tool changer that allows a simple replacement of the EOAT on the robot.
- Plug&Play solution. It makes installation simple, without the need for configuration.



### KIT-V

- End of arm tool with vacuum system for Pick&Place operations.
- EJ-LINE vacuum generator that allows quick responses and high energy efficiency.
- Plug&Play solution. It makes installation simple, without the need for configuration.

### KIT-G

- The Kit is composed by 2-jaws electric gripper MPPM1606 with plastic cover and Capacitor Box. The Capacitor Box allows direct connection to the robot's wrist, providing at the gripper the needed energy.
- Plug&Play solution. It makes installation simple, without the need for configuration.



**KITS  
COMPATIBLE  
WITH MAJOR  
BRANDS**



### KIT-QC75

- Manual tool changer with pneumatic and electrical connections.
- By manually moving the lever, the user can connect or disconnect the two parts.
- Plug&Play solution. It makes installation simple, without the need for configuration.



### KIT-QC

- Manual tool changer with pneumatic and electrical connections.
- By manually moving the lever, the user can connect or disconnect the two parts.
- Plug&Play solution. It makes installation simple, without the need for configuration.



### KIT-J

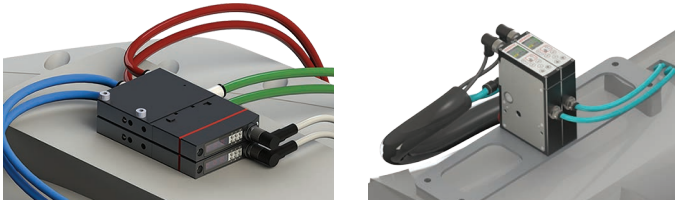
- The Kit is composed by MPRJ2553NP parallelogram electric gripper with plastic cover and Capacitor Box.
- The gripper is perfect for making long strokes in short times since the force remains constant along the stroke.
- Plug&Play solution. It makes installation simple, without the need for configuration.



# Research and Development

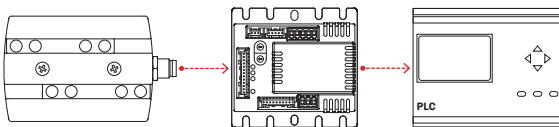
## Smart solutions: greater efficiency and longer durability.

Our in-house R&D team designs smart industrial automation solutions that are **efficient** and **connected** to optimise our customers' performance. In addition to standard products, we specialize in developing customized solutions, working closely with the customer to design bespoke devices and EOATs, capable of meeting any specific application requirements.



## ENERGY EFFICIENCY

- Mechatronic design aimed at improving performance and energy efficiency.
- Unique and patented solution



Gimatic Servo Gripper

Servo Drive

Fieldbus Connection

## FIELDBUS COMMUNICATION

- Data collection and processing from the application
- Easy device installation
- Energy efficiency due to continuous parameter monitoring
- Process optimisation

CANopen

EtherCAT

PROFINET

## IO-LINK COMMUNICATION PROTOCOL

- Smart Integration - Standardized and bi-directional communication for advanced management of grippers and sensors.
- Monitoring and Diagnostics - Optimize predictive maintenance and reduce downtime.
- Ease of Installation and Configuration - Less wiring, greater efficiency, and adaptability to any system.



IO-Link







Pharma

## ROTARY ELECTRIC GRIPPERS

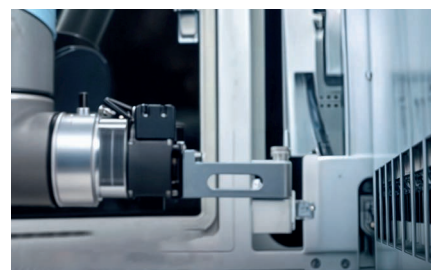
### Typical applications:

- Inspection machines for syringes, test tubes, ampoules and vials
- Handling of vials or plates for assembly line or laboratory
- Decapper



## EOAT TRACEABILITY - NFC/RFID

- Ability to save the main EOAT data on a memory (TAG)
- Up to 255 different TAGs for a single reader (located on the tool changer)
- The data that can be stored includes: component list, mold/part name, geometric and mass properties, and geolocation



**+ 200 PATENTS**

## SUPERCAPBOX WIRELESS

- EOAT with supercapacitor technology
- Power Bank to perform several cycles
- Improve system reliability through the removal of movable cables from the robot
- Programmable output



# Services



## 3D PRINTING SERVICE

Following the demand of the market, we have dedicated an area of our production site to 3D printing. Through a rapid prototyping service based on the customer's design, we are able to create completely customised gripping solutions that can meet the specific needs of the final customer. This technology enables us to make complex parts in PA12 glass-bead filled nylon plastic, a material that gives lightness and stiffness, allowing our customers to receive high quality products at low cost.

- > Maximum printable dimensions 284x380x380 mm
- > Shipping within 48h

3D-printed components can be fitted with rubber pads (HNBR) or silicone pads to provide a soft touch on the products to be handled. Threaded metal inserts are also available for mounting.

### PADS

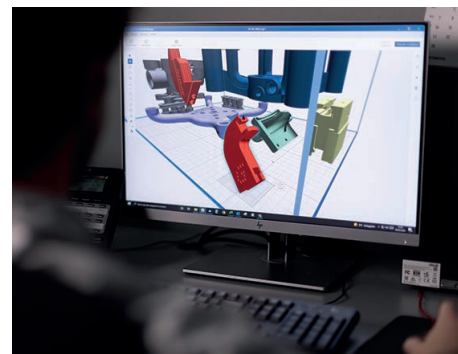
- > HNBR 60Sh.A
- > TPU 70Sh.A
- > PU 70Sh.A
- > Silicone 80Sh.A



Grippers with 3D-printed jaws

### METAL INSERTS

- > Threaded metal inserts
- > Mounting in 3D-printed parts
- > Different thread sizes available





## 3L LASER CUTTING AND 3M METAL WORKING SERVICES

### 3L LASER CUTTING

Laser cutting and bending service according to customer's drawing also for individual parts (without minimum quantities).

Lead time: 3 working days.

Materials:

- > AISI 304 stainless steel (thickness: 1, 2 and 3 mm)
- > Aluminium alloy 5754 (thickness: 2, 3, 4 and 5 mm)

### 3M METAL WORKING

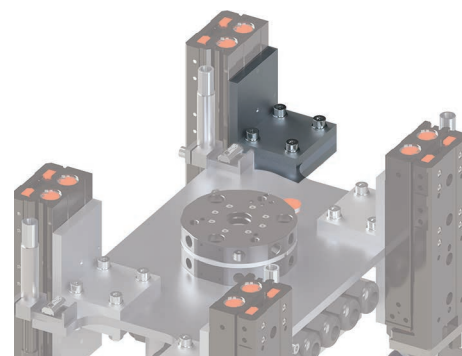
5-axis CNC machining service according to customer's drawing, also for individual parts.

Lead time: 5 working days.

Materials:

- > Acetal resin (POM)
- > Aluminium alloy (6000 series)

**CUSTOMIZED  
COMPONENTS**





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