



# MECHANORMA



**GRUPO R**  
CONSTRUÇÃO & INOVAÇÃO

**GENERAL  
PRESENTATION**  
2025

## MISSION

Design, develop and manufacture precision parts and components, mechanical devices, jigs, tools and industrial equipment, focusing on a high standard of quality and rigor service, aiming to automate, improve and make our clients' processes more effective and efficient.

## VISION

We aim to be recognized in global markets as a leading company in the creation of innovative solutions in industrial equipment and with high levels of know-how in precision metalworking and industrial engineering. We aim to reach new markets by offering increasingly complex products using methods and processes based on the most advanced technologies, which create value for our company and for society.



## Integrity and Loyalty

We establish solid and lasting relationships with our employees, customers and suppliers, based on trust, competence and honesty. We rigorously protect all information and intellectual property received from our customers, suppliers and partners. We respect the agreed commercial conditions, promoting solutions in accordance with the pre-established and current legal requirements.

## Innovation and Knowledge

We continually seek to innovate in development and manufacturing methods and techniques, using the latest technologies and anticipating trends and needs to develop solutions that benefit the company and society.

## Quality

We encourage a culture of quality through the commitment and dedication of all employees to our Quality Management System. We also use the latest tools and technologies that allow us to produce increasingly efficient solutions with a high level of rigor from the design, development and production phases, until the final product reaches the customer.

## Human Capital

Provide a workspace that allows growth, creativity, innovation and cooperation in order to involve and motivate our employees in their activities.



## Where we come from...

Mechanorma is an industrial company that was born from the legacy of the former Micronorma, which had over 33 years of experience, and Tecnisata, which has been in business for 50 years.

This merger between the companies constitutes valuable know-how in the areas of metalworking, mechanical engineering, automation and robotics, whose track record of excellence was recognised by Grupo R, which acquired its businesses, recognising its enormous potential and investing in its long-term success.

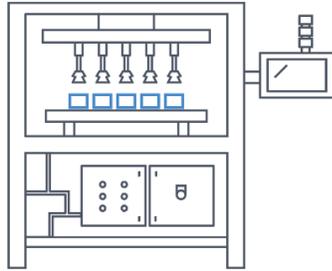
The dedication and knowledge of the team, as well as the good commercial relationships established with clients and strategic partners, have enabled us to restart our activity in this new chapter of our history, with very optimistic prospects for the future.



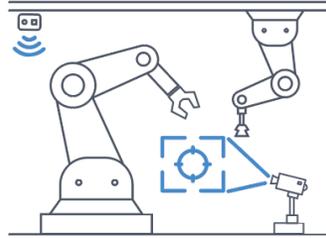
## Where are we going...

Today, under the management of Grupo R, Mechanorma is more capable than ever, maintaining its commitment to delivering high-quality services to which its customers were already accustomed, continuing to anticipate market needs and develop solutions that improve the efficiency and effectiveness of customers' production processes, standing out for its ability to adapt and continuously evolve.

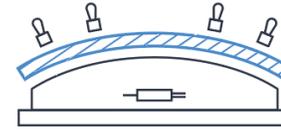
Our journey began as a metalworking workshop especially geared towards wiring solutions and the automotive sector, but we have grown and gained notoriety in more diversified sectors such as pharmaceuticals, aerospace and defense.



INDUSTRIAL  
EQUIPMENT



AUTOMATION  
& ROBOTICS



JIGS

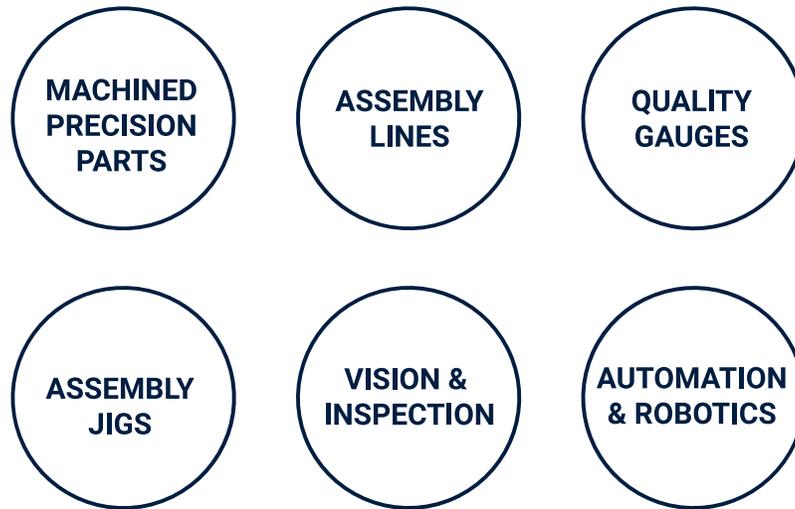


MACHINED  
PARTS

Development, manufacture and testing of precision metalworking and mechanical and industrial engineering products, such as parts, components, assemblies, devices, tools and equipment tailored to the needs and requirements of our customers. Technical advice and support. Industrial equipment with integration of automation, robotics and artificial vision systems. Turnkey solutions that include design, development, production, assembly, on-site training, equipment start-up and after-sales support.



# SOLUTIONS AND MARKET SECTORS



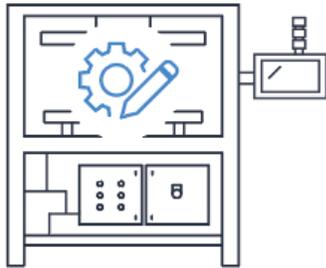
# PRODUCTION CAPACITY

<p><b>PRODUCT DESIGN &amp; DEVELOPMENT</b></p>	<p><b>CAD 3D/2D</b></p>	<p><b>CAM PROGRAMING</b></p>	<p><b>MECHANICA L ASSEMBLY</b></p>	<p><b>ELETRICAL ASSEMBLY</b></p>	<p><b>AUTOMATION &amp; ROBOTICS</b></p>	<p><b>TECHNICAL ASSISTANCE</b></p>
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<p><b>CNC MACHINING</b></p> <p>3-axis   Qtd: 4 1450x700x550 3+2 axis   Qtd: 1 500x450x400</p>	<p><b>WEDM</b></p> <p>Qtd: 2 370x270x255</p>	<p><b>MILLING</b></p> <p>CNC   Qtd: 1 Conventional   Qtd: 2</p>	<p><b>TURNING</b></p> <p>Conventional   Qtd 2 600x4000</p>	<p><b>GRINDING</b></p> <p>Surface   Qtd: 4</p>	<p><b>CMM</b></p> <p>Qtd: 1 1500x700x600</p>	<p><b>LASER MARKING</b></p> <p>Qtd: 1 110x110</p>	<p><b>BRIGDE CRANE</b></p> <p>Qtd: 1 6,3T</p>
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## AUTOMATION & ROBOTICS



Mechanorma develops and manufactures special machines according to customer specifications to ensure innovative and cost-effective solutions:

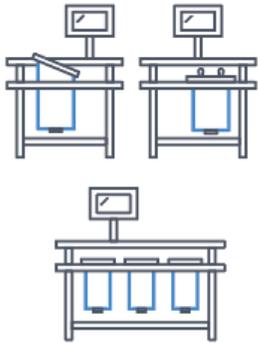
- Single unit work cell
- Fully integrated assembly lines
- Machine Modules
- Tools and devices
- Robotics
- Vision and Sensors Systems
- Upgrades and Retrofits
- Automation & HMI

CE Marking | Systems Integration (Pneumatic, Hydraulic, Vision, Robotics, etc)

On Site Start Up | Onsite Training | After sales assistance



## STANDARD INDUSTRIAL EQUIPMENT



Mechanorma concept, design, manufacture and assembly several equipments that become a standard of our costumers, based on that we produce in Make-To-Order:

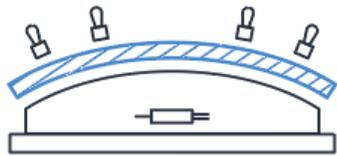
- Grommet Watertight Test Equipment
- Ucab Workstation
- Sensor Calibration Machine
- Terminal Bending Machine

CE Marking | Systems Integration (Pneumatic, Hydraulic, Vision, Robotics, etc)

On Site Start Up | Onsite Training | After sales assistance



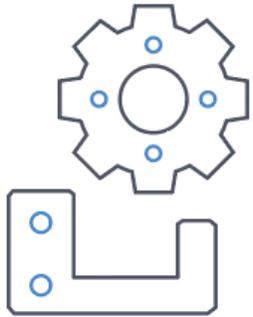
## JIGS



Mechanorma supplies jigs for several tasks. From the simplest to the most complex model, our solutions always consider the ease of handling, including visual aids, operation sequences. It may include measuring equipment to aid validation (comparators and go-no-go jigs). Jigs may have a fixed or mobile independent workbench, with interchangeable carriages.

- Welding
- Machining
- Assembly
- Quality control

## PRECISION MANUFACTURING



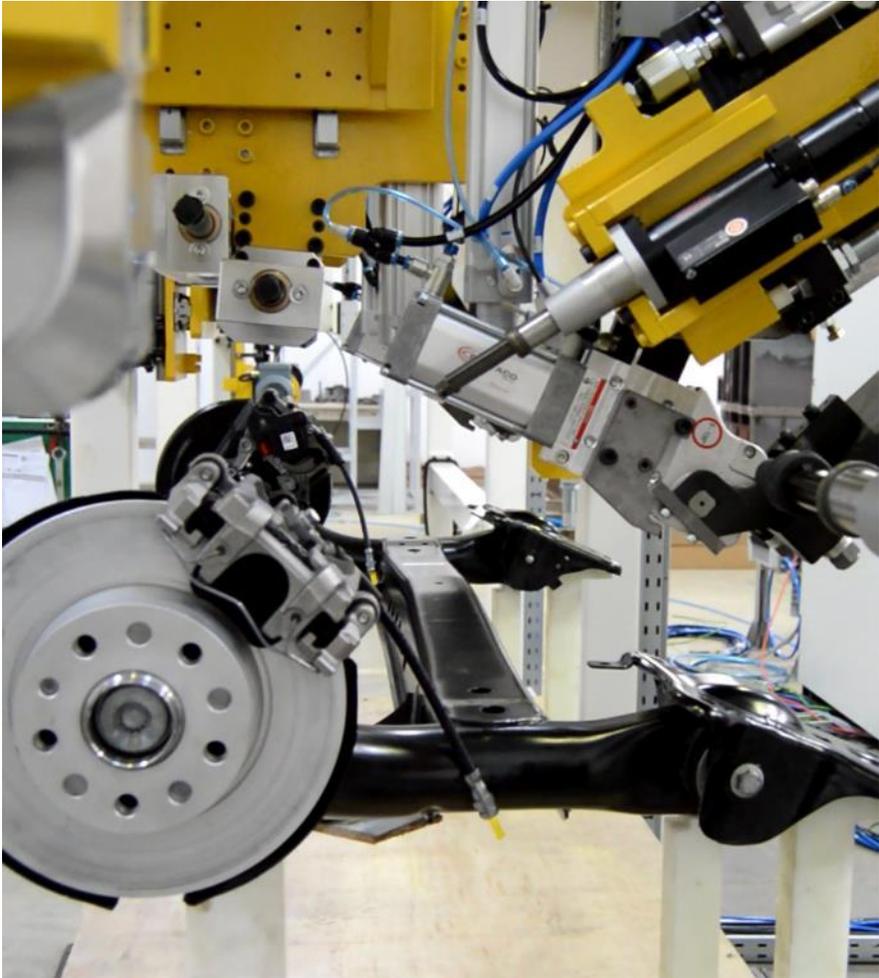
Mechanorma sells services as a subcontractor in the area of fine mechanic, since it holds a vast experience in the area of precision machining and mechanical assemblies:

- Crimping Punches & Anvils
- Stamping Tools spares
- Machinery parts for high tech and other manufacturing sectors

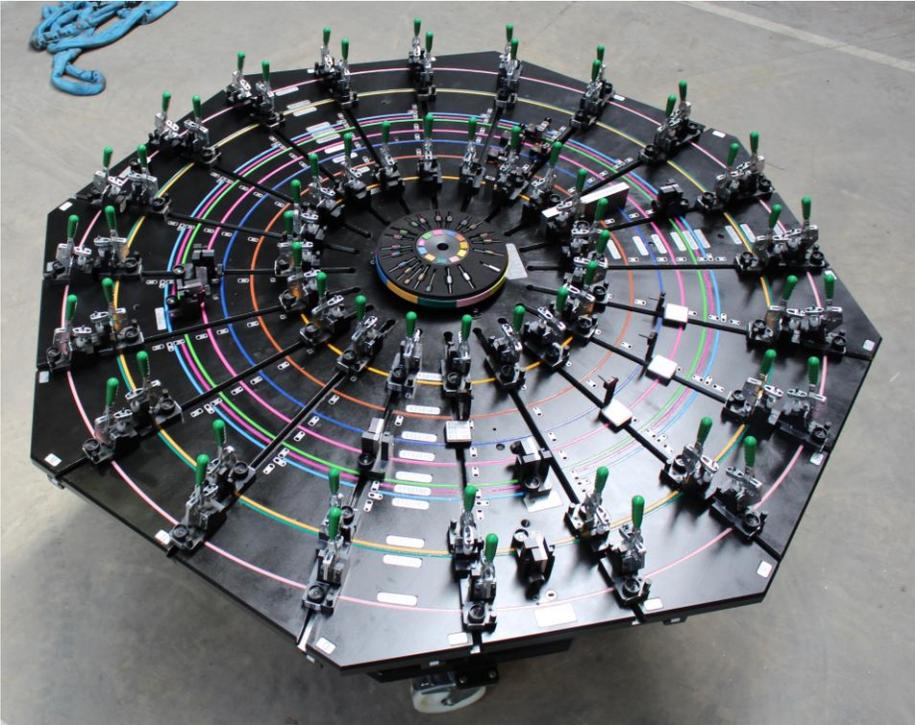
Precision mechanics parts in different raw materials:

- Alloy steels
- Aeronautic aluminum
- Titanium
- High grade polymers (POM, PEEK, nylon, antistatic, etc)

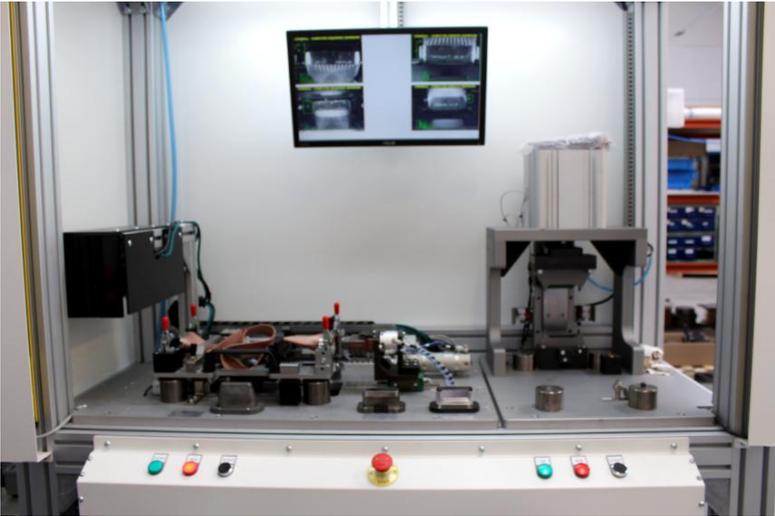
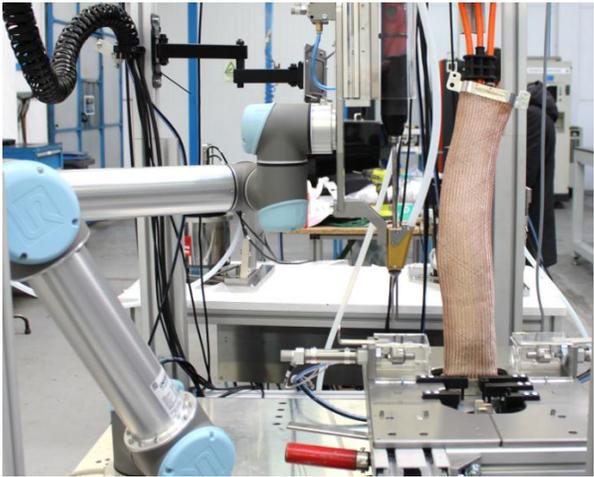
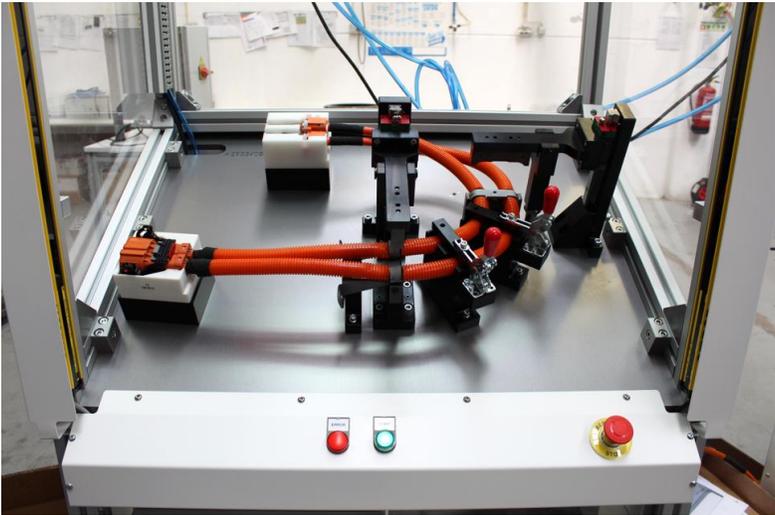
# SOLUTIONS FOR AUTOMOTIVE SECTOR



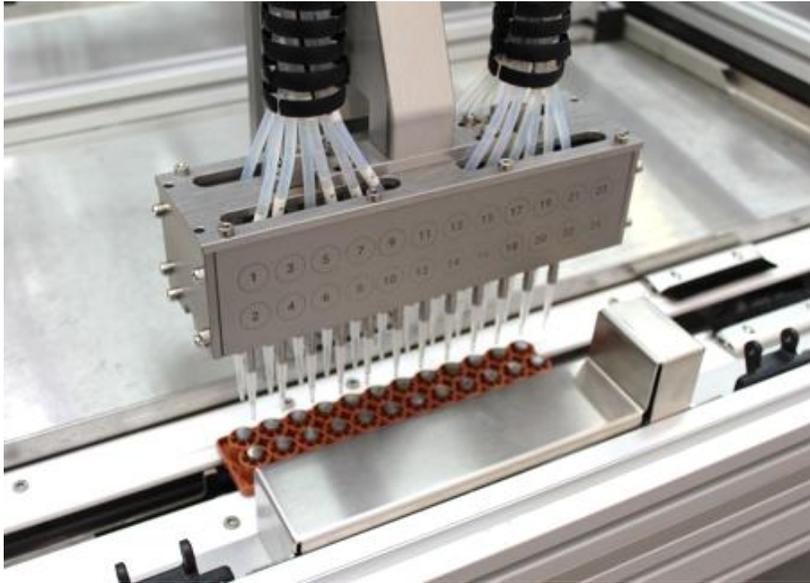
# SOLUTIONS FOR AEROSPACE SECTOR



# SOLUTIONS FOR WIRE HARNESS SECTOR



# SOLUTIONS FOR ELECTRONICS SECTOR



# SOLUTIONS FOR FOOD AND BEVERAGES



# SOLUTIONS FOR PHARMA



# AUTOMATION & ROBOTICS

## STAND ALONE



PROFILE BENDING PRESS

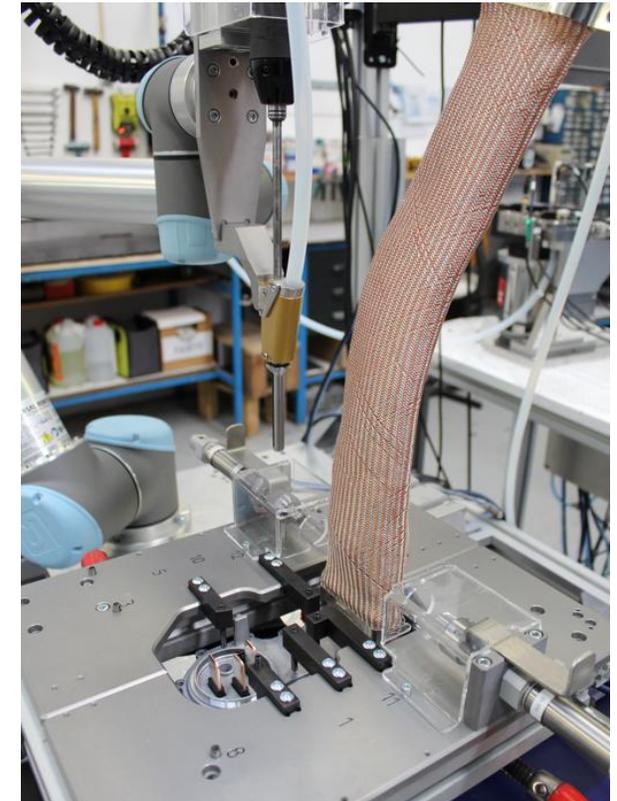
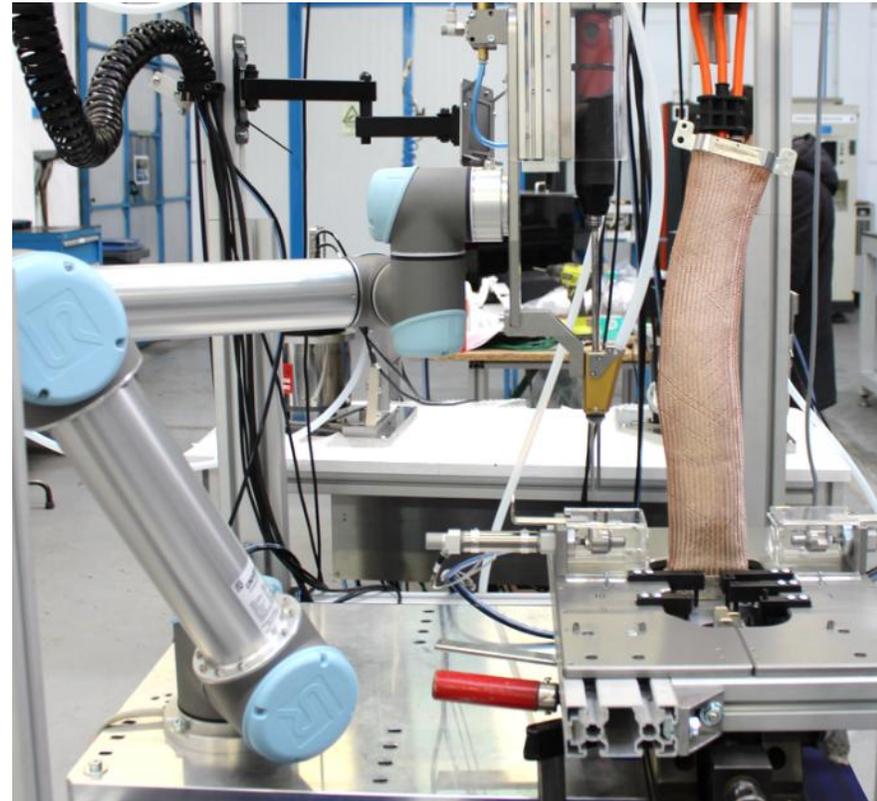


CRIMPING STATION



# AUTOMATION & ROBOTICS

## STAND ALONE



## SCREWDRIVING COBOT CELL



## STAND ALONE



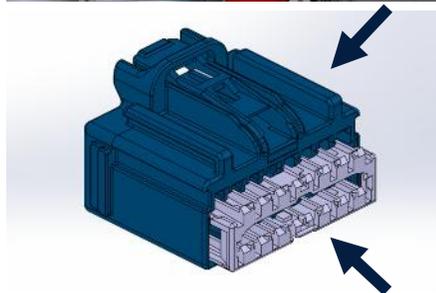
**BOOTS INSERTION STATION**



**WIRE HARNESS CLEANING STATION**



## PRODUCTION & ASSEMBLY LINES



**TERMINAL ASSEMBLY CELL WITH AUTOMATIC FEEDING AND INSPECTION**



# AUTOMATION & ROBOTICS

## PRODUCTION & ASSEMBLY LINES

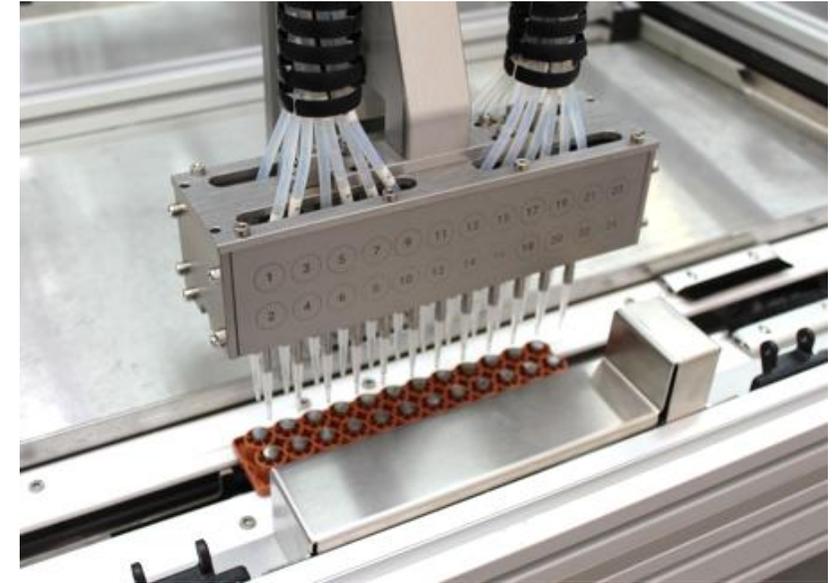


FEEDER, CONVEYOR, HEATING AND PICK AND PLACE LINE



# AUTOMATION & ROBOTICS

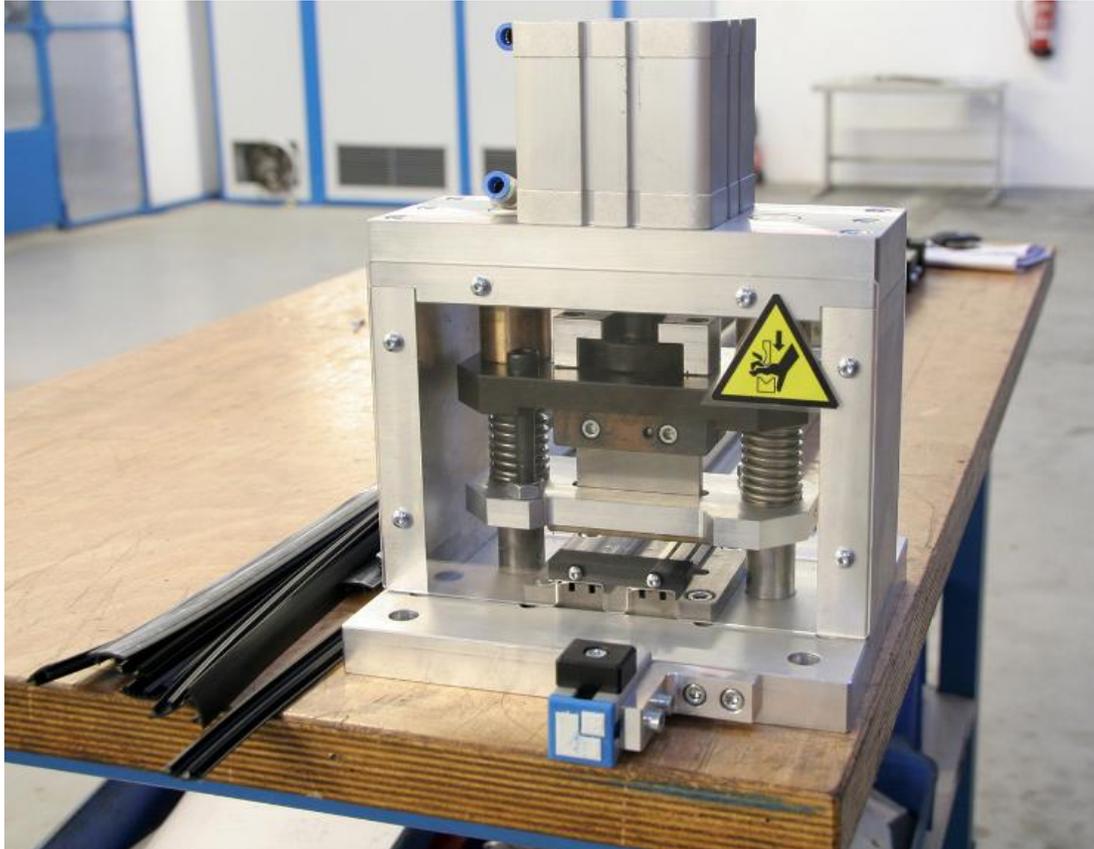
## PRODUCTION & ASSEMBLY LINES



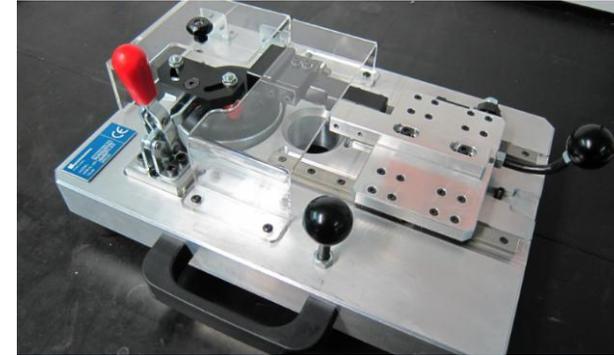
**FEEDER, TRAY MANAGEMENT, CONDENSER  
IMPREGNATION LINE, AND VACUUM  
CLEANING**



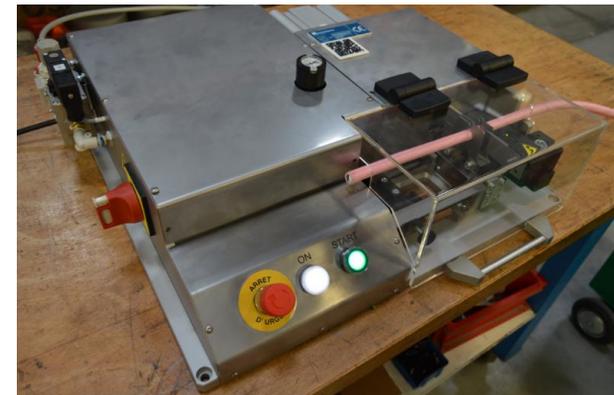
## TOOLS AND DEVICES



**MECHANICAL PROFILE CUTTING PRESS**

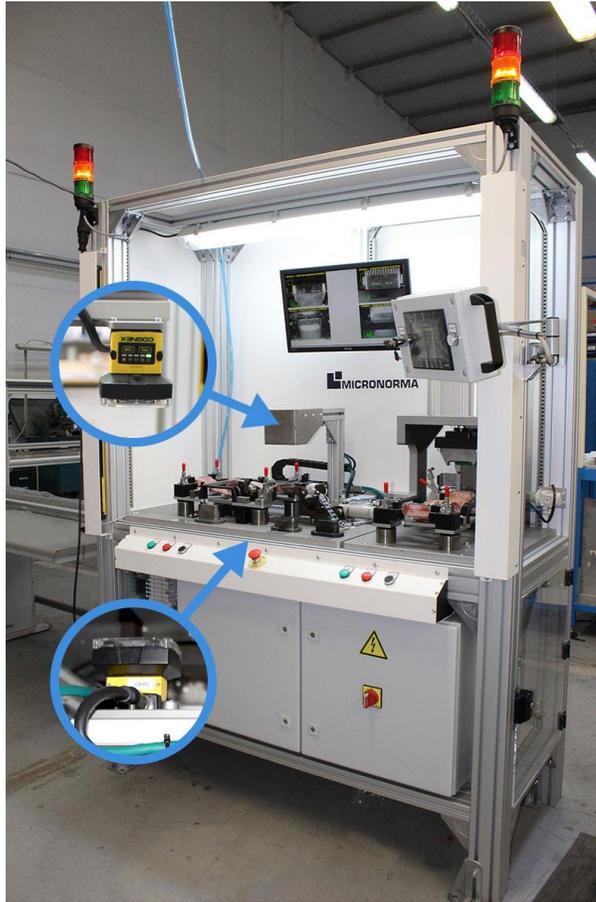


**GROMMET CUTTING DEVICE**



**CABLE CUTTING MACHINE**

## VISION SYSTEMS



CONNECTOR ASSEMBLY / CRIMPING AND INSPECTION STATIONS



## VISION SYSTEMS



**GREASE DISPENSER WITH INSPECTION**



# AUTOMATION & ROBOTICS

## PALETIZING SYSTEMS



## AUTOMATION & HMI



# STANDARD EQUIPMENT

## GROMMET WATERTIGHT EQUIPMENT



Grommet air leak test equipment with exchangeable test plates, allowing to test several grommets. Multi chambers and independent chambers test available. PLC e HMI – Interface and control

Test by: pressure; vacuum; pressure & vacuum; or pressure & water for visual inspection

Tests up to 500 mbar. Customizable chamber sizes.



# STANDARD EQUIPMENT

## GROMMET WATERTIGHT EQUIPMENT



# STANDARD EQUIPMENT

## TERMINAL CRIMPING WORKSTATION



Crimping workstation with 1, 2 or 4 seats.  
Hydraulic Unit. Applicator to cross sections between - 0.7mm<sup>2</sup> a 40mm<sup>2</sup>  
Crimping quality monitoring system - Kistler MaXYmos TL  
PLC and HMI – Interface and control



# STANDARD EQUIPMENT

## TERMINAL BENDING MACHINE



- Wire terminal bending machine with exchangeable bending Toolkits, allowing to bend different terminals.
- Bending angle between 10° and 45°
  - Toolkit - Terminal match using barcode or RFID (optional)
  - Go-no-go bending inspection



# STANDARD EQUIPMENT

## SENSOR VERIFICATION MACHINE



Equipment to compare between a Pressure/vacuum sensor and a calibrated, higher accuracy, pressure transducer.

Tests Pressure, Vacuum or Pressure and Vacuum sensors.

Tests can be performed at up to 500 mbar.

Preset to test sensors:

Pressure SMC PSE 532

Vacuum SMC PSE 531

Press/Vac SMC PSE533

Can be set to test any sensor.

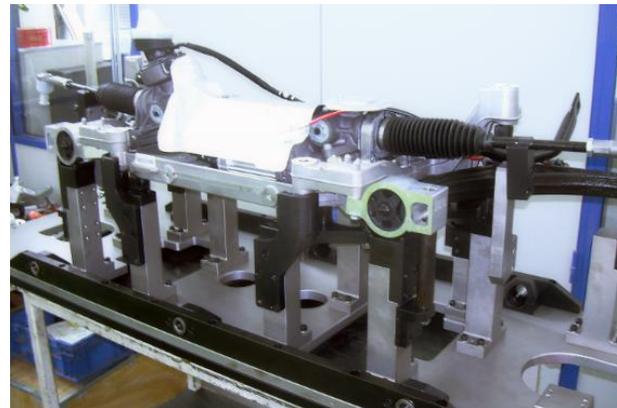




**MACHINING JIG**



**WELDING JIG**

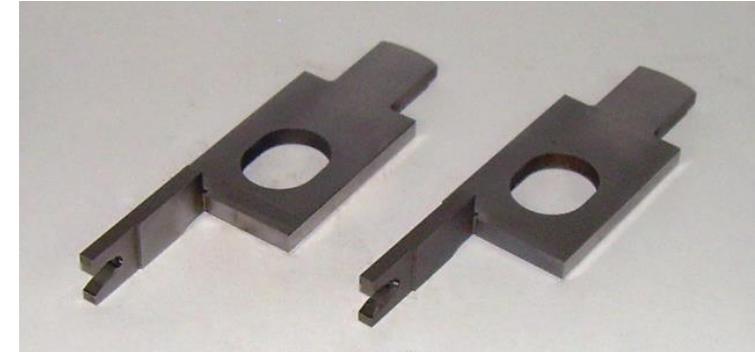
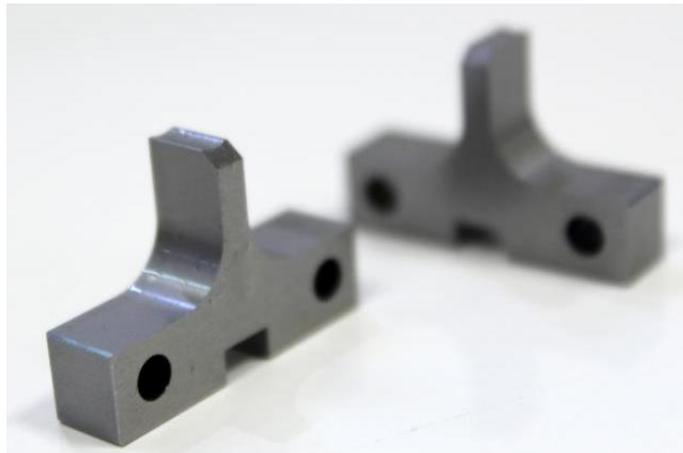
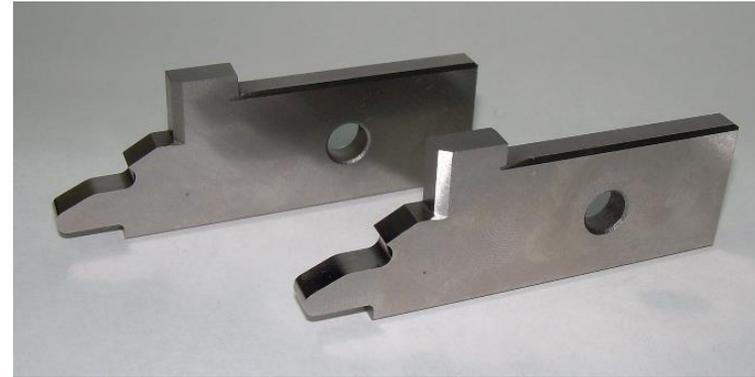
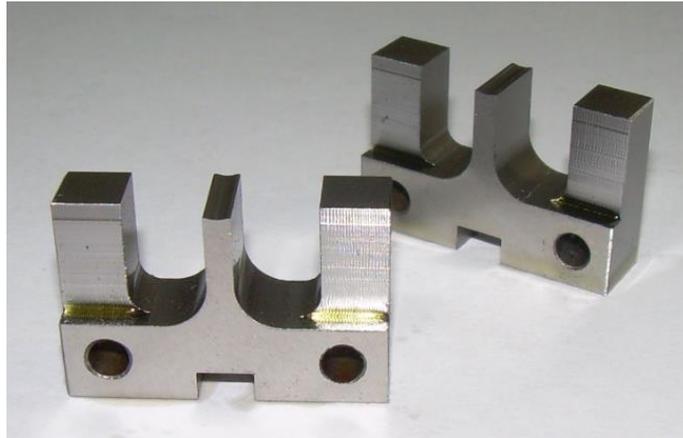


**ASSEMBLY JIG**



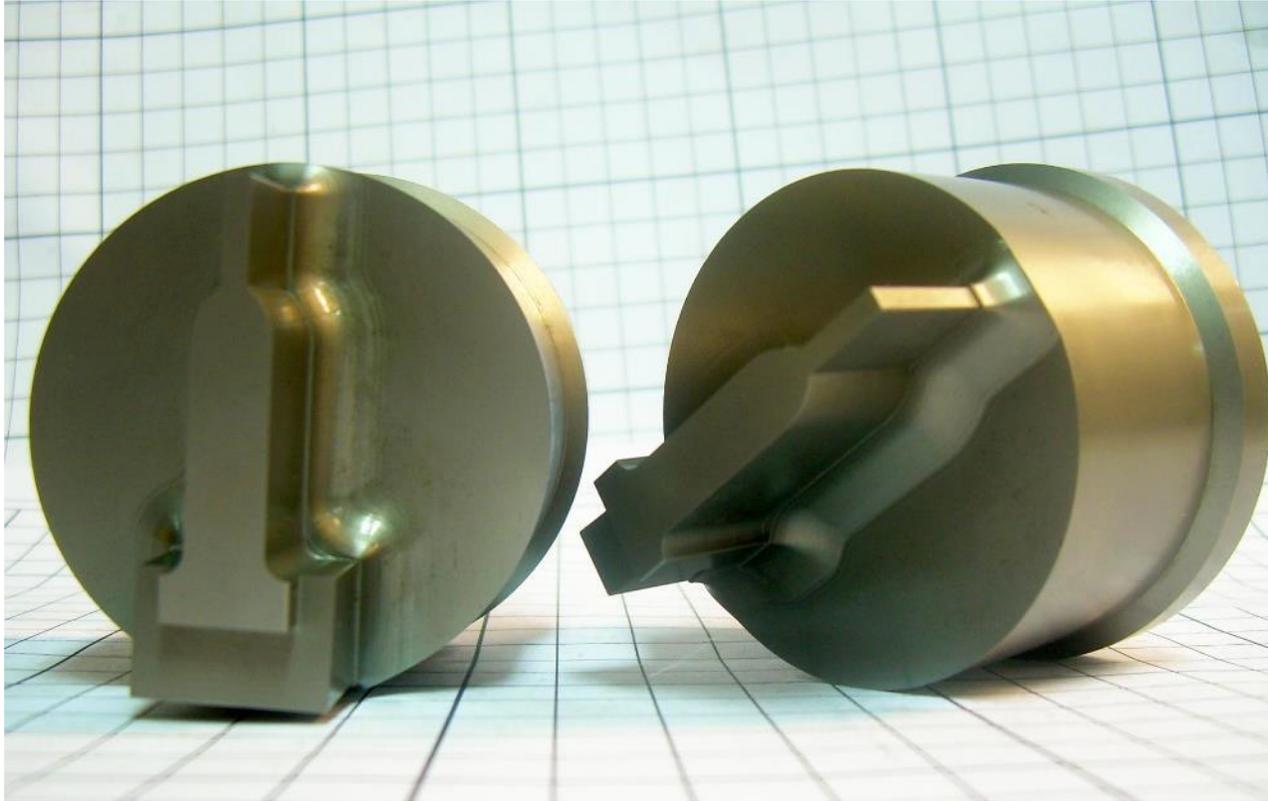
**QUALITY CONTROL JIG**





Tolerance: typically 0.01 mm (up to 5 microns)  
Polished finish  
Delivery time 3 weeks





## STAMPING TOOLS SPARES



# PRECISION MANUFACTURING



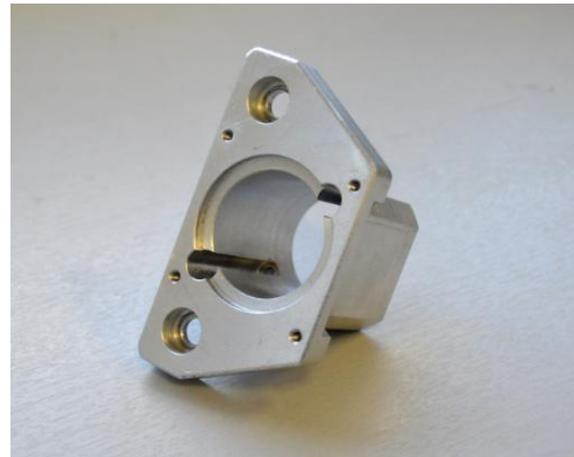
## STEEL AND TITANIUM PARTS



# PRECISION MANUFACTURING



Polyether ether ketone (PEEK)



Polyoxymethylene (POM)

## ALUMINIUM AND TECHNICAL PLASTICS



Polycarbonate





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**Thank you**

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