

**We Automate Tomorrow**

- Gizelis Robotics is a major industrial-robot system integrator in Greece
- Is a part of Gizelis Group of Companies that produces machinery for the sheet metal industry (bending, shearing, plasma cutting, punching etc)
- Is the exclusive partner in Greece of the biggest industrial robot brand in the world **YASKAWA**
- Integrates all kind of applications like arc welding, palletizing, handling etc.
- Provides turn key solutions
- Develops new technologies

Gizelis Robotics, as a high skilled technology company, is working closely with Patra's University (LMS) and participates in Research and Development projects for tomorrow's factories supported from the EU.

- COMET: Plug-and-produce **CO**mponents and **MET**hods for adaptive control of industrial robots enabling cost effective, high precision manufacturing in factories of the future
- ENEPLAN: **EN**ergy **E**fficient Process p**LAN**ning system
- ROBO-PARTNER: Seamless Human-Robot Cooperation for Intelligent, Flexible and Safe Operations in the Assembly Factories of the Future

# Why use Robots?

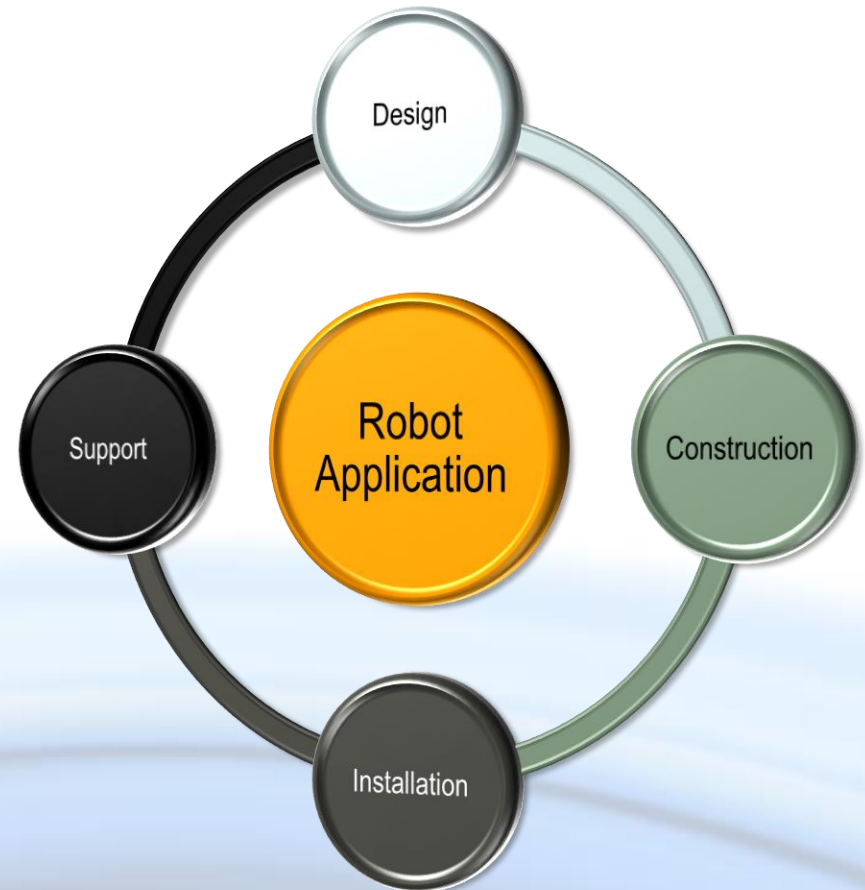
The offered robotic systems may provide industrial units with the necessary boost to take the lead against competition since they have huge advantages:

- Ongoing operation: They can work on a 24/7 basis
- Speed: They may be adapted to use in a way no human may achieve
- Repetitiveness: They perform the same task in exactly the same way and speed, providing constant quality
- Safety: Not affected by routines, or work risks
- Operating expenses: They reduce a company's operating expenses since nothing is needed but maintenance
- Flexibility: They can be easily adapted to new drills and "tasks". Moreover, given their tool changer functionality, they may serve production of different products, thus reducing costs even more

# Application Structure

All divisions of the company are working together for the success of every robotic application.

From the starting idea till the finalizing of a system there is a regular contact with the clients in order to meet the expected standards with a guaranteed success.



# Facilities



Gizelis Robotics facilities are located in Schimatari Greece together with Gizelis S.A. group in a 12.000 m2 area.

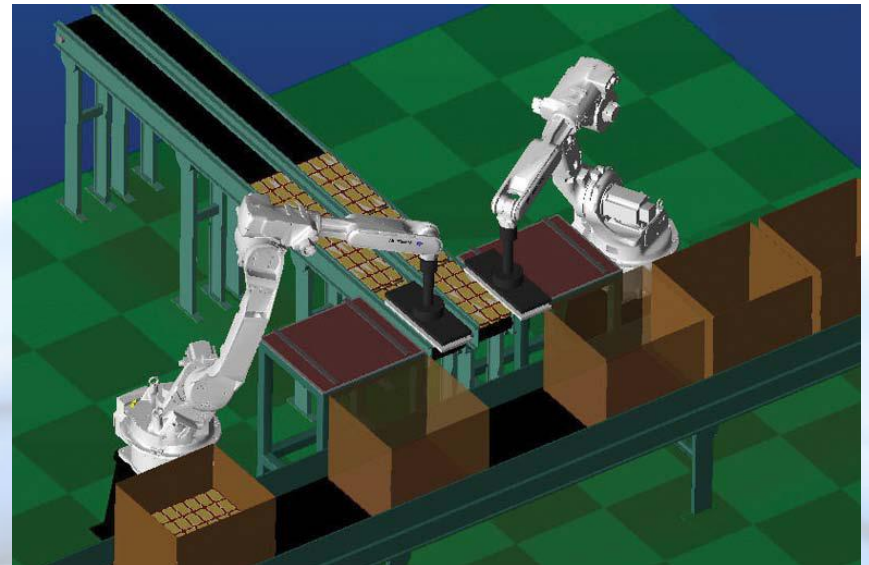
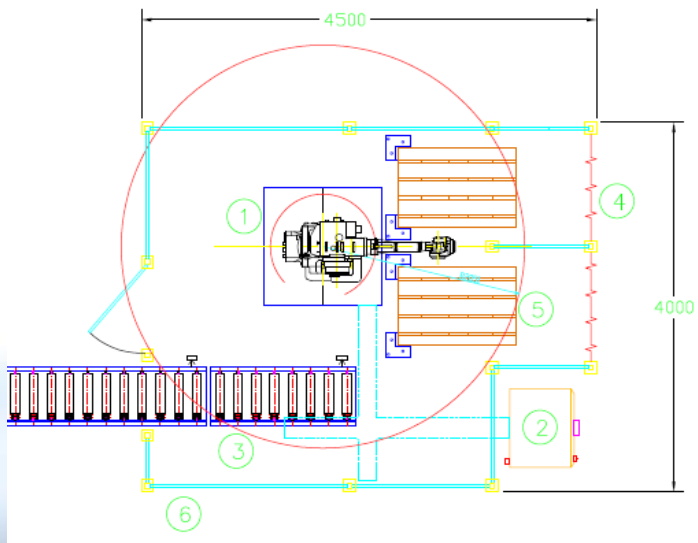


All construction and test are made in-house by using a state of the art job shop and high skilled engineers



# Design of robot cells

Every application is unique and therefore it must be designed accordingly in order to meet perfectly the production demands. High skilled engineers design the layout and all the cell elements in CAD software. In 3D simulation software the cycle time of the robot is analyzed making offline tests for having a guaranteed result.



# Construction

By using a state of the art job shop we can construct all necessary equipment that a robot application needs. We can also construct big rails and gantry systems completely in-house.





# Construction

*Large 5-axis machining center*



*Painting*



# Applications

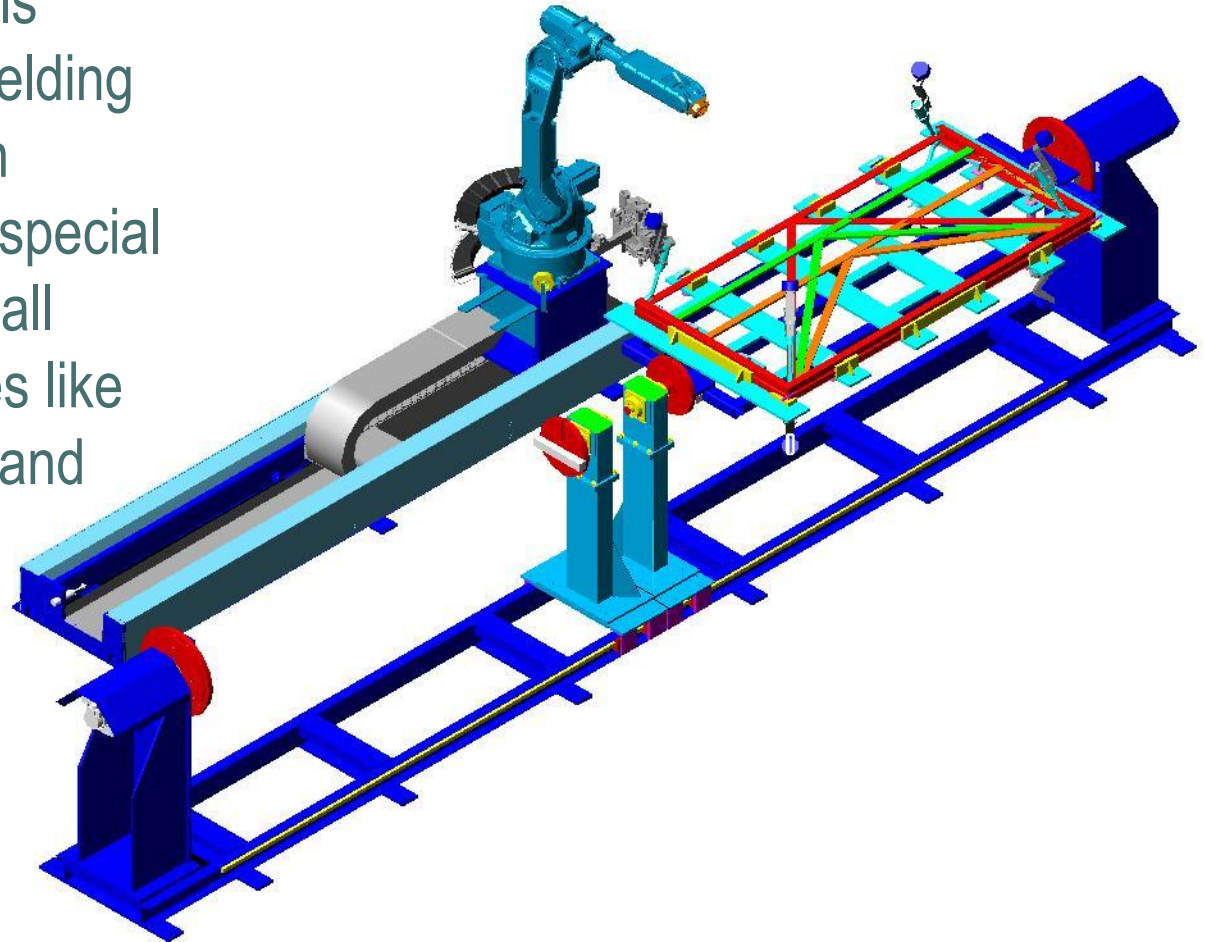
Gizelis Robotics integrates all kind of application than can automate the production process.

- Welding (MIG, MAG, TIG, Laser ...)
- Cutting
- Palletizing
- Packing
- Handling
- Painting
- Bending
- CNC Machining
- Assembly
- Grinding



# Welding

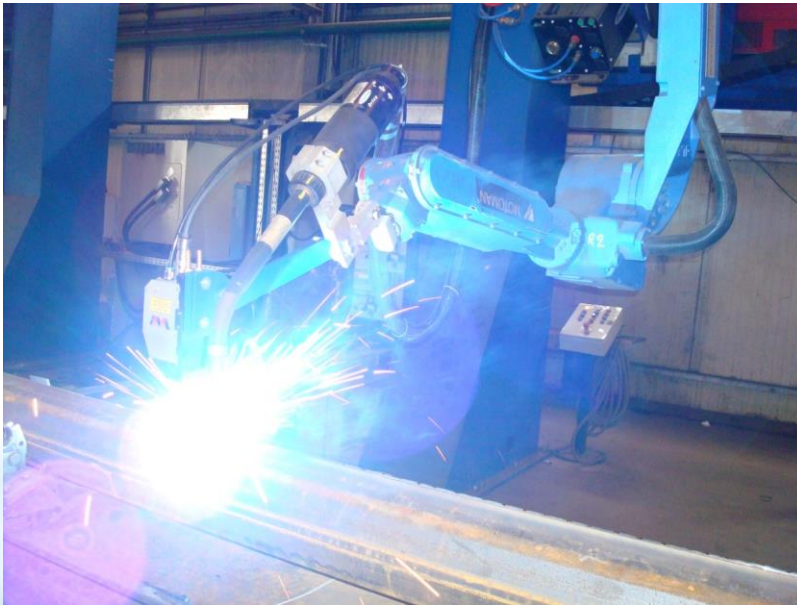
Turn Key solutions for all types of welding. Welding cells consists from Robot, welding source, automatic torch cleaner, shock sensor, special jigs on request as also all necessary external axes like linear axis, positioners and gantry cells.





# Welding

Special equipment can be used like laser sensors to follow the welding path in large scale welding processes.



# Welding

The use of Gantry systems expands the working envelope of the robot and makes easy the use of cranes inside the factory.

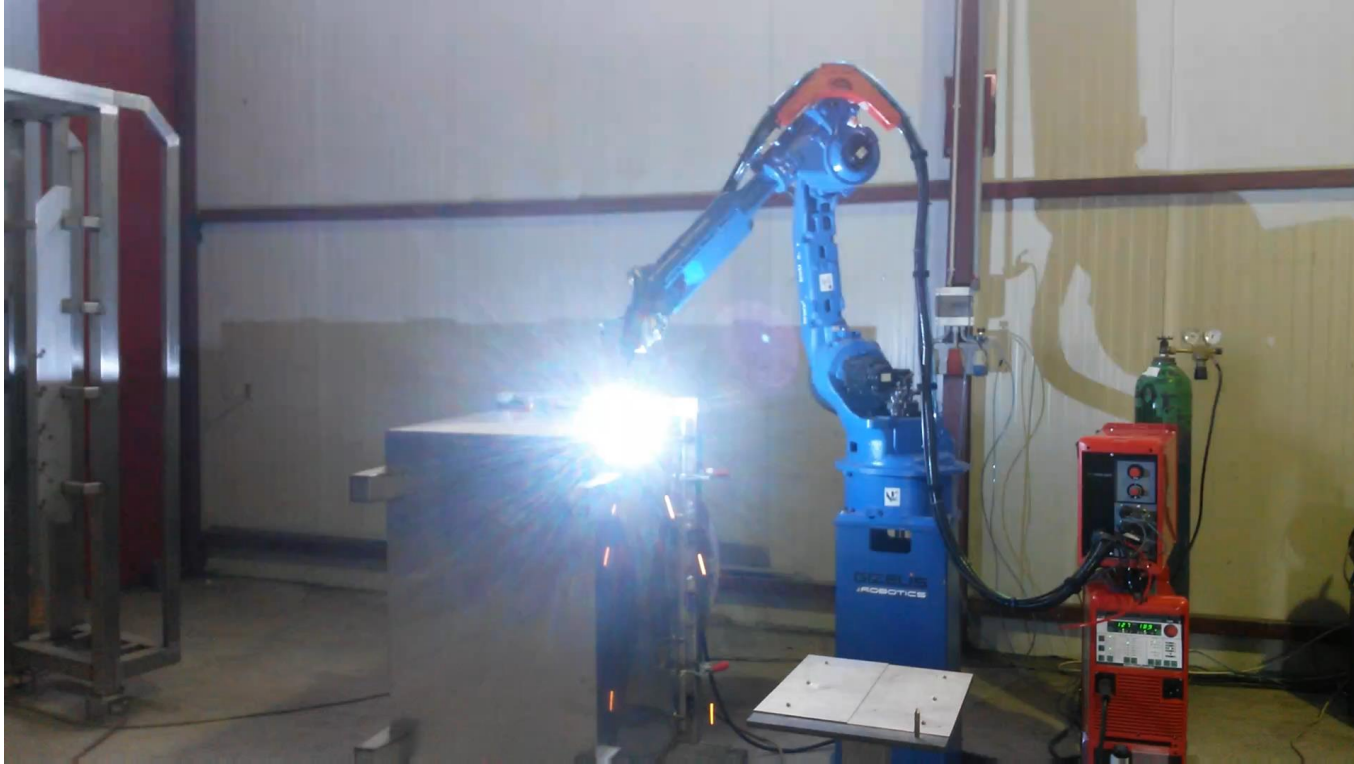




# Welding



Jigs can be constructed from our company or we can provide help to the clients in order for them to reduce the final cost of a robotized welding system.



St. Steel welding driven with Laser Camera. First integration of connection welding source, camera and robot through Ethernet in Europe.

# Welding





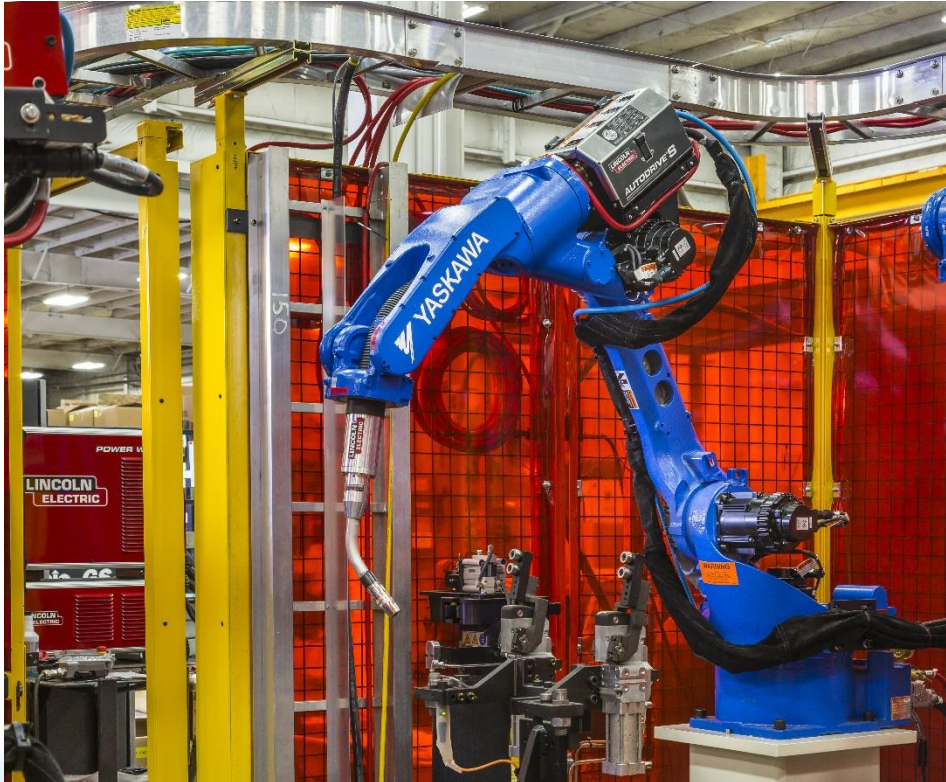
# Welding

## ROBOWELD

New compact cell design for  
welding entry in factories



# Welding



Gizelis Robotics has now exclusive partnership with biggest welding source provider in the world Lincoln Electric.

Yaskawa is also the biggest robot supplier in the world with 40% of global welding robots.



# Spot Welding

Bigger robots with spot welding machines can be installed. Use of spot welding applications is common in automotive, elevator industries, shelves etc.



*Shelves industry*

*Elevator industry*

# Spot Welding



*Storage industry*



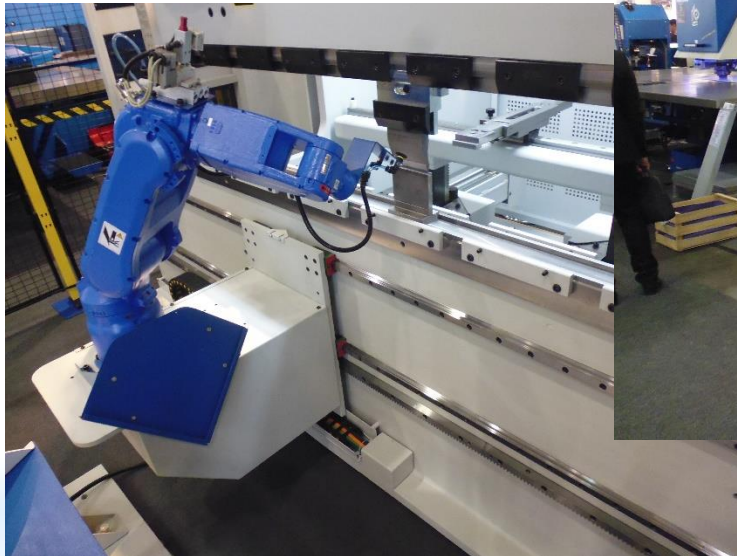
# Bending

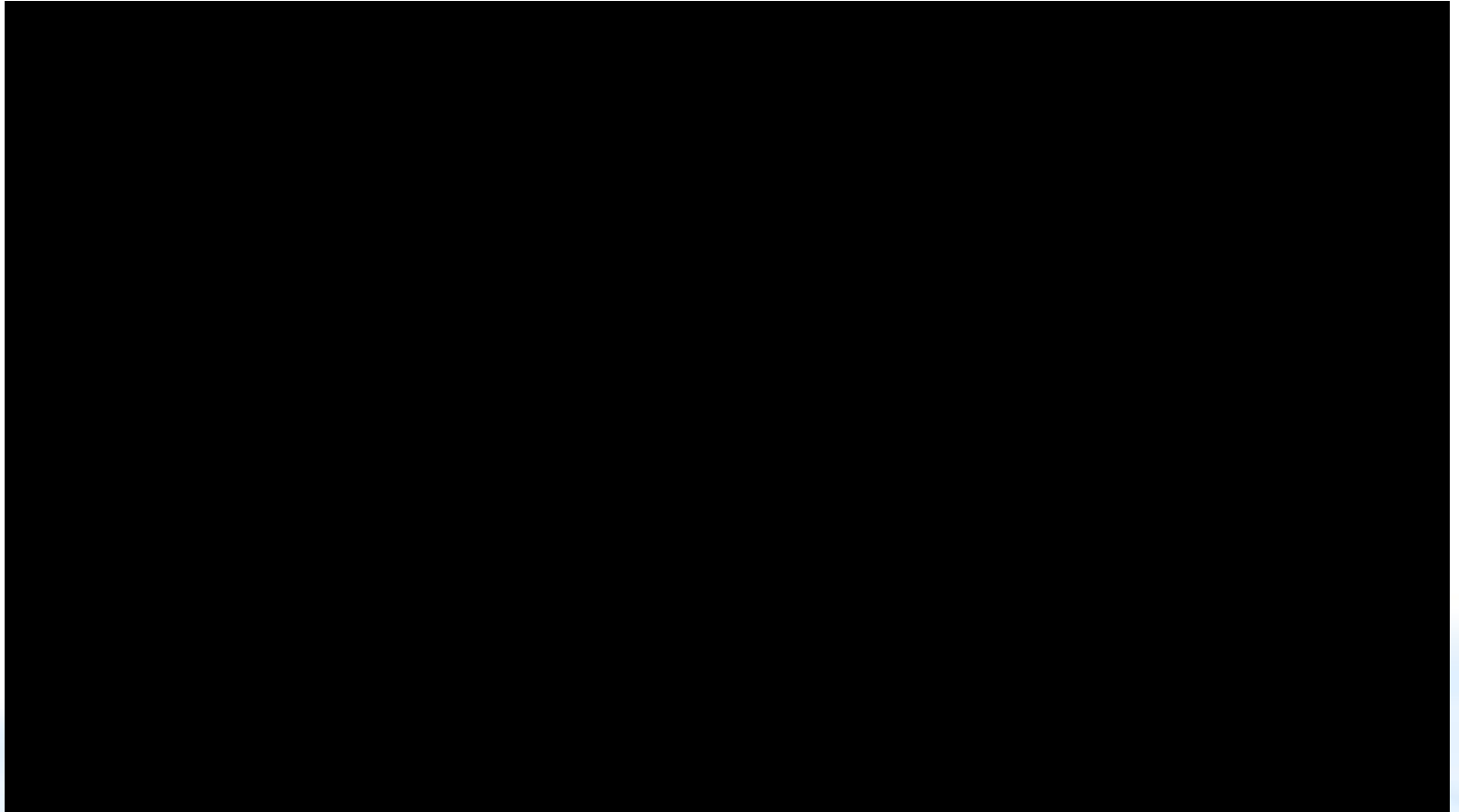
Turn Key solutions for the  
Bending automation process.



The 40 years of experience of  
Gizelis SA in press brakes ensures  
the application's knowhow

## RoboBend Solution Robot + Manual Bending







# Palletizing

Robots can handle the palletizing of various products like boxes, bags, cans, bottles etc. We can provide complete turnkey solutions including, conveyors, grouping mechanisms, pallet destackers, grippers and automatic stretch film wrappers.



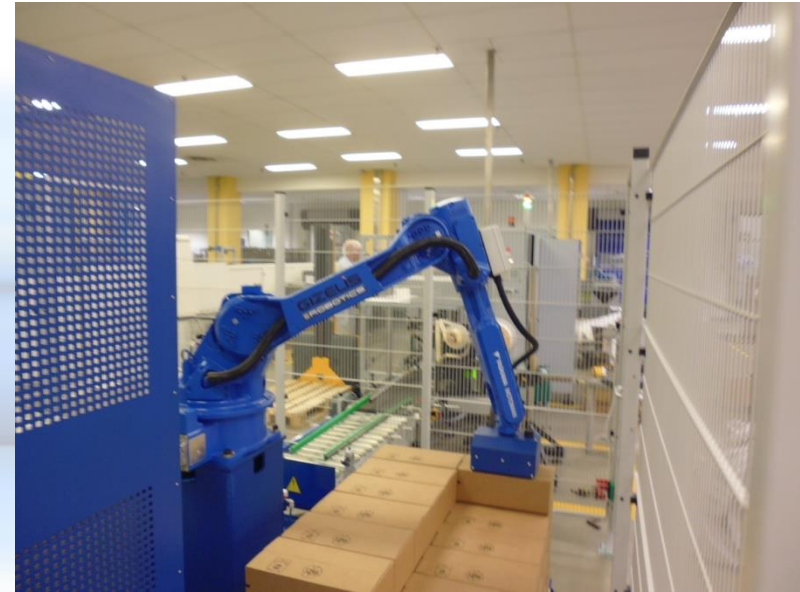
*Can industry*



*Animal food industry*



# Palletizing





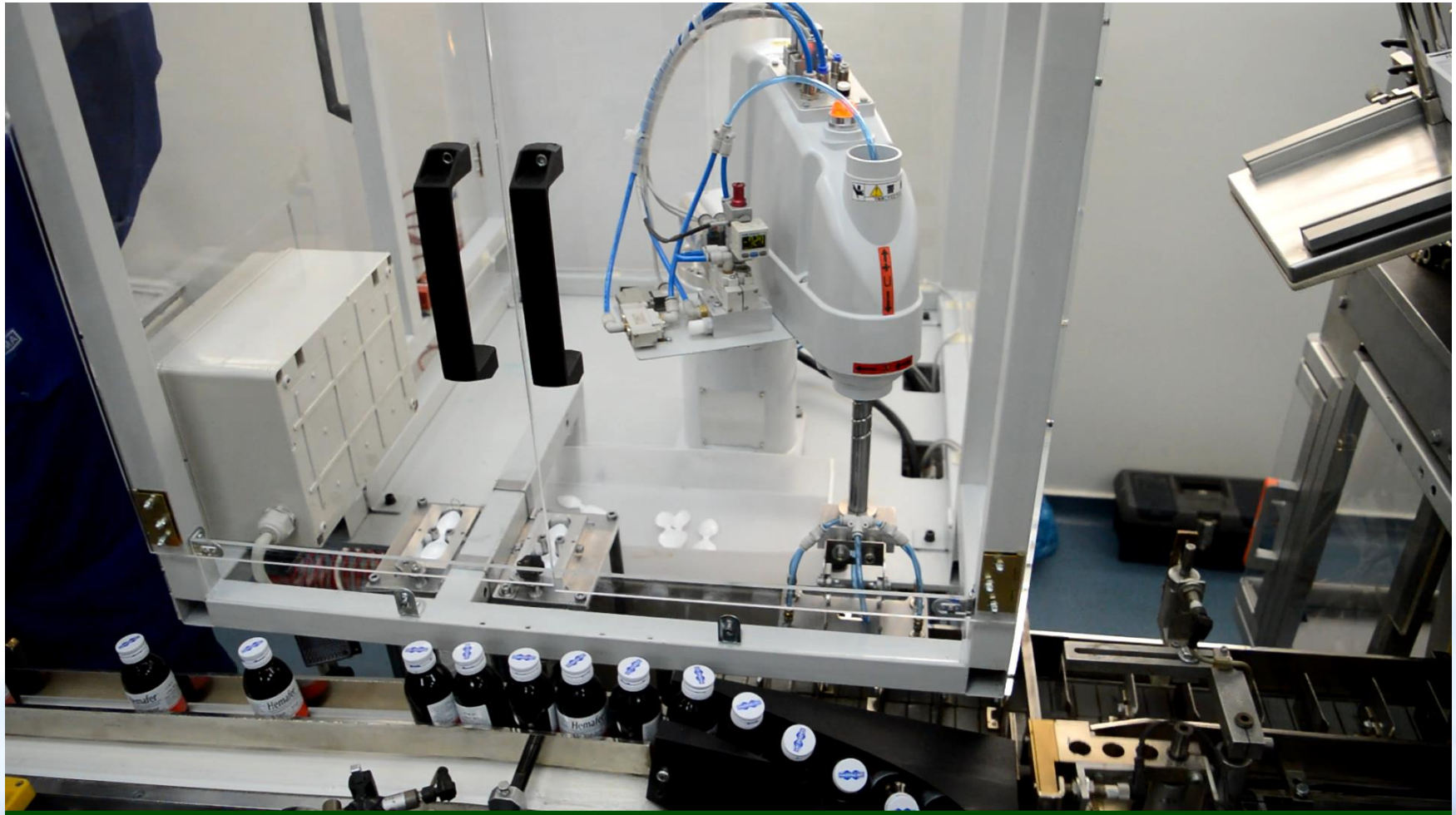
# Packaging

Inserting products to boxes or even making simultaneously the carton forming is possible with our systems. In random picking, a vision system can be placed combined with conveyor tracking for optimizing speed results



GIZELIS Robotics

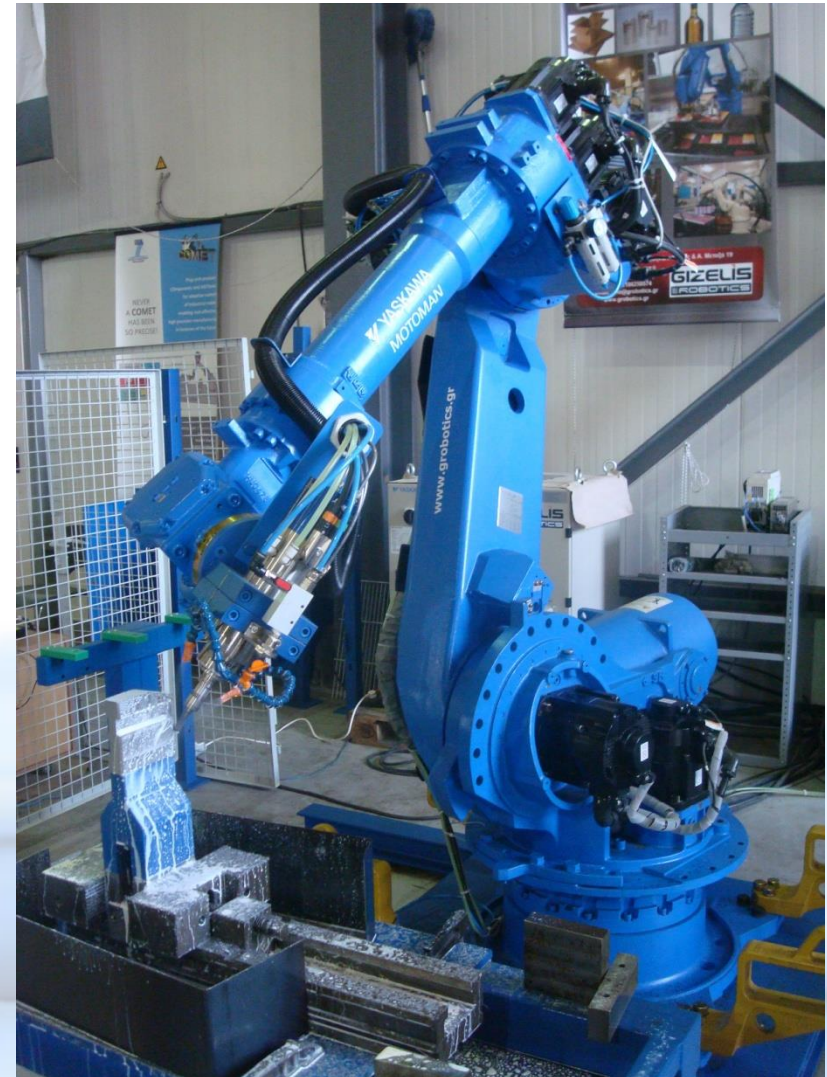
www.grobotics.gr





Gizelis Robotics provides turn-key solutions for machining with robots for all kind of materials like wood, stone, marble, aluminum, steel etc. The robot cell consists of:

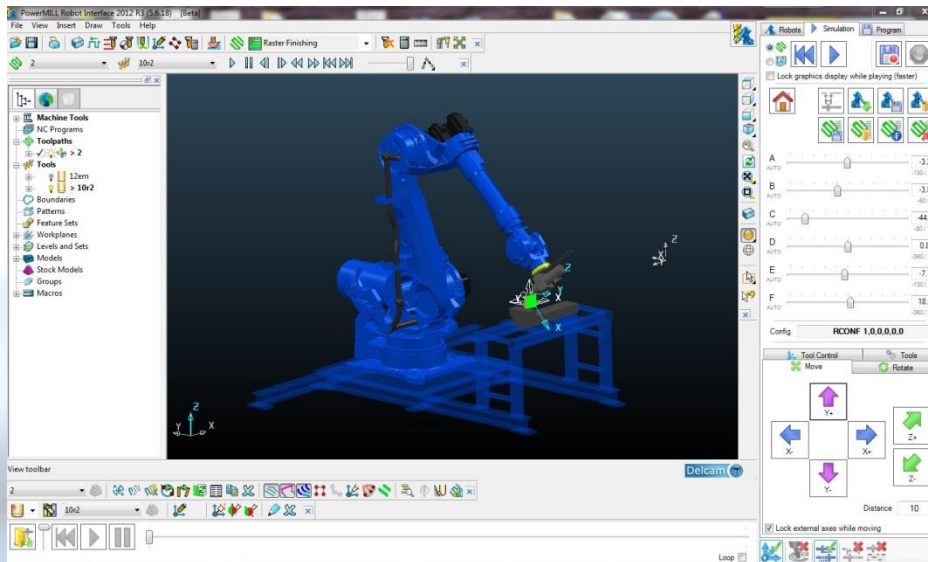
- Robot
- Spindle
- Autodesk PowerMILL Robot Interface software
- Machining table
- Automatic tool change
- Safety fence



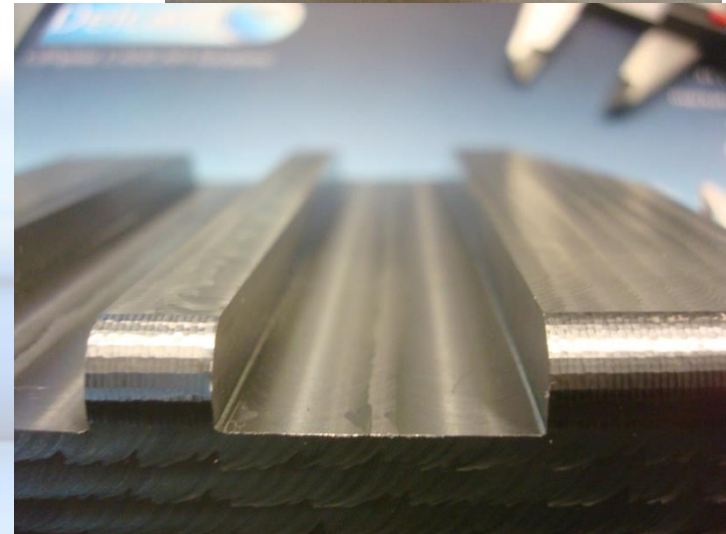


# CNC Machining

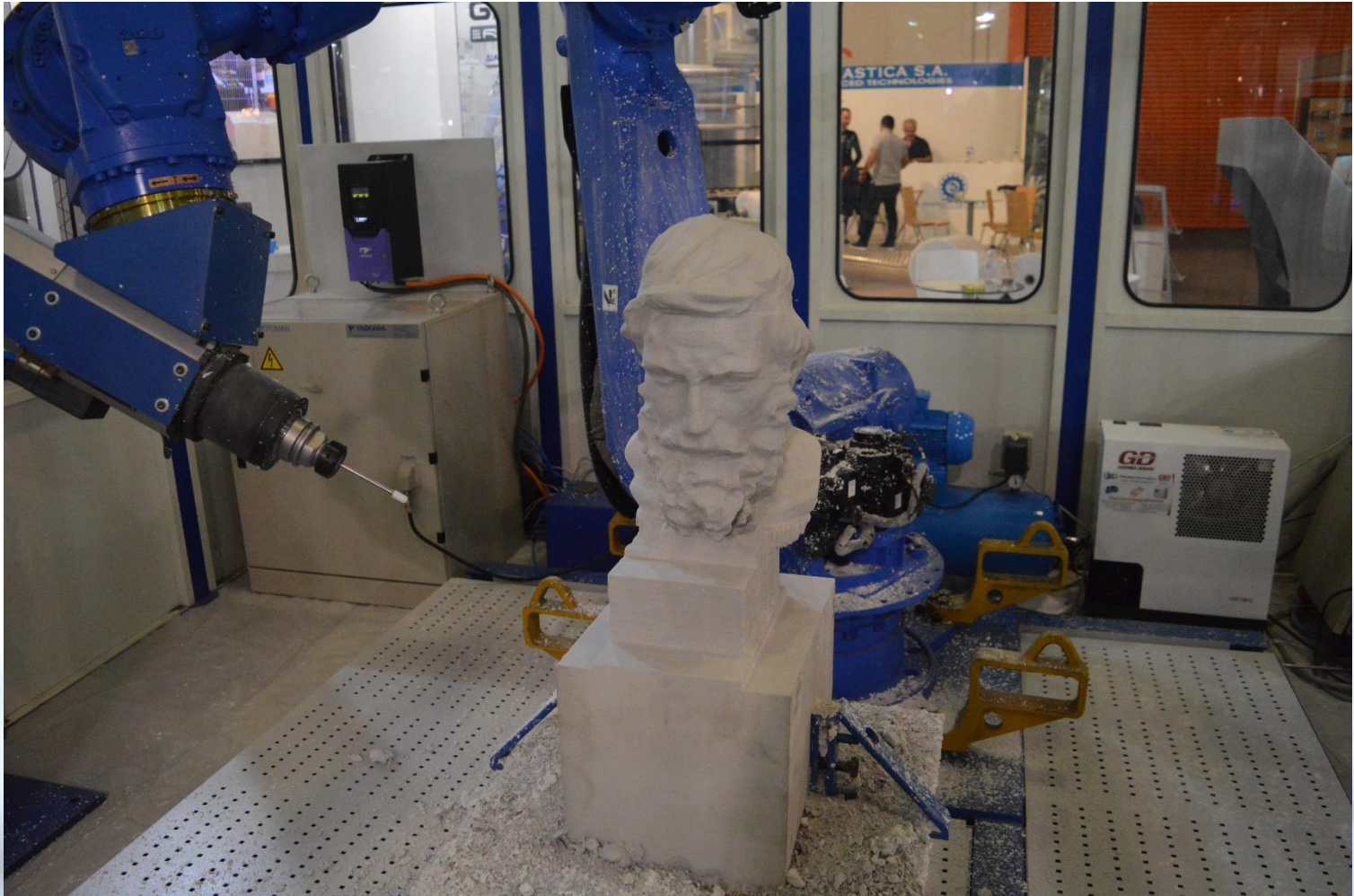
Through the software the operator can select the type of machining and the available tool, and the toolpath will be generated automatically. The software exports directly to the robots native language. Movement analysis, cycle time, material removal simulation as also approach selection of the robot are available.



# CNC Machining

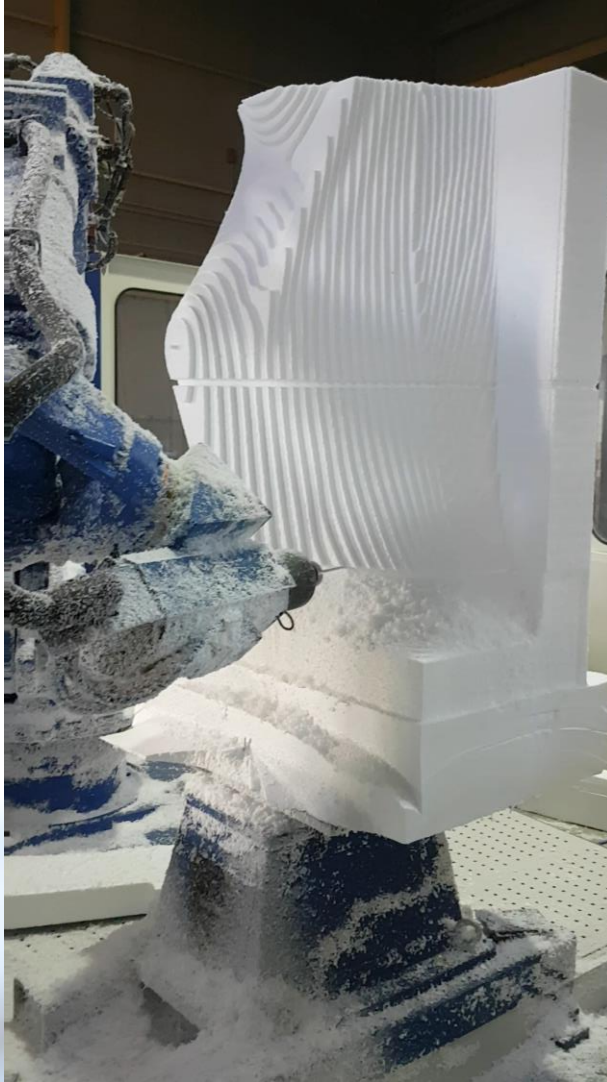




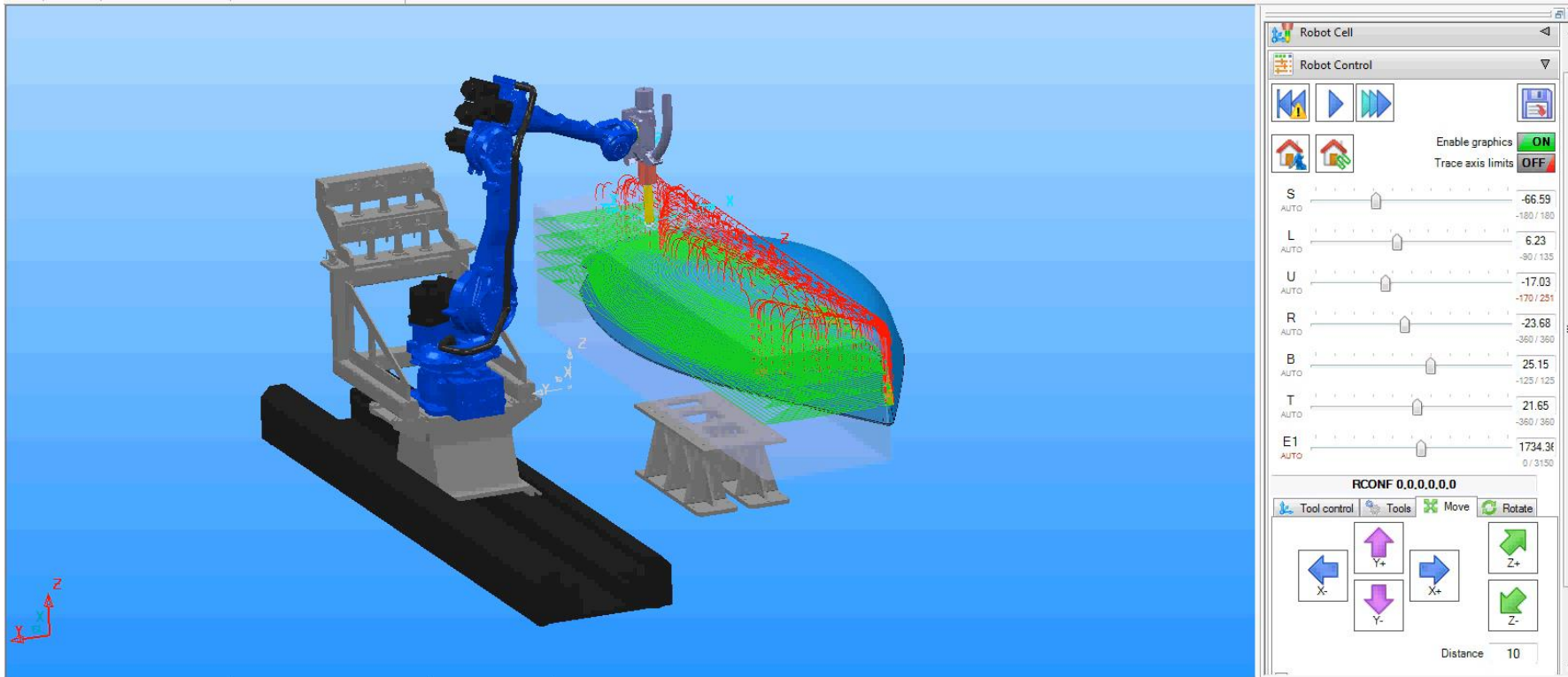




# CNC Machining







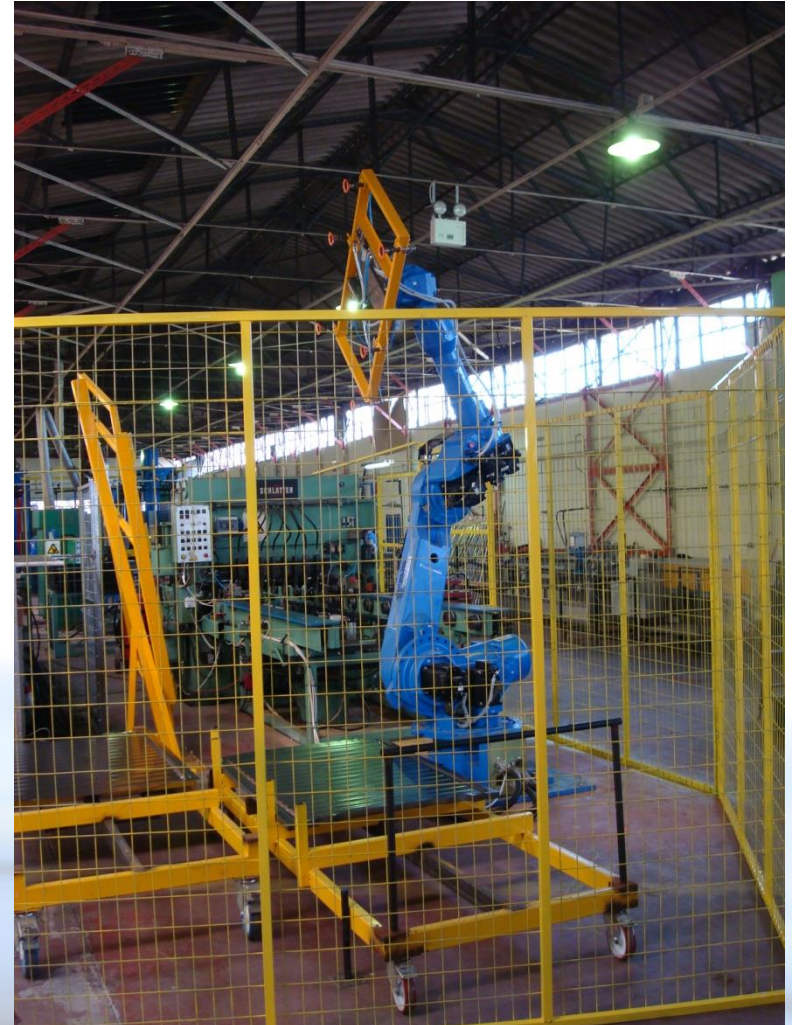


# Handling

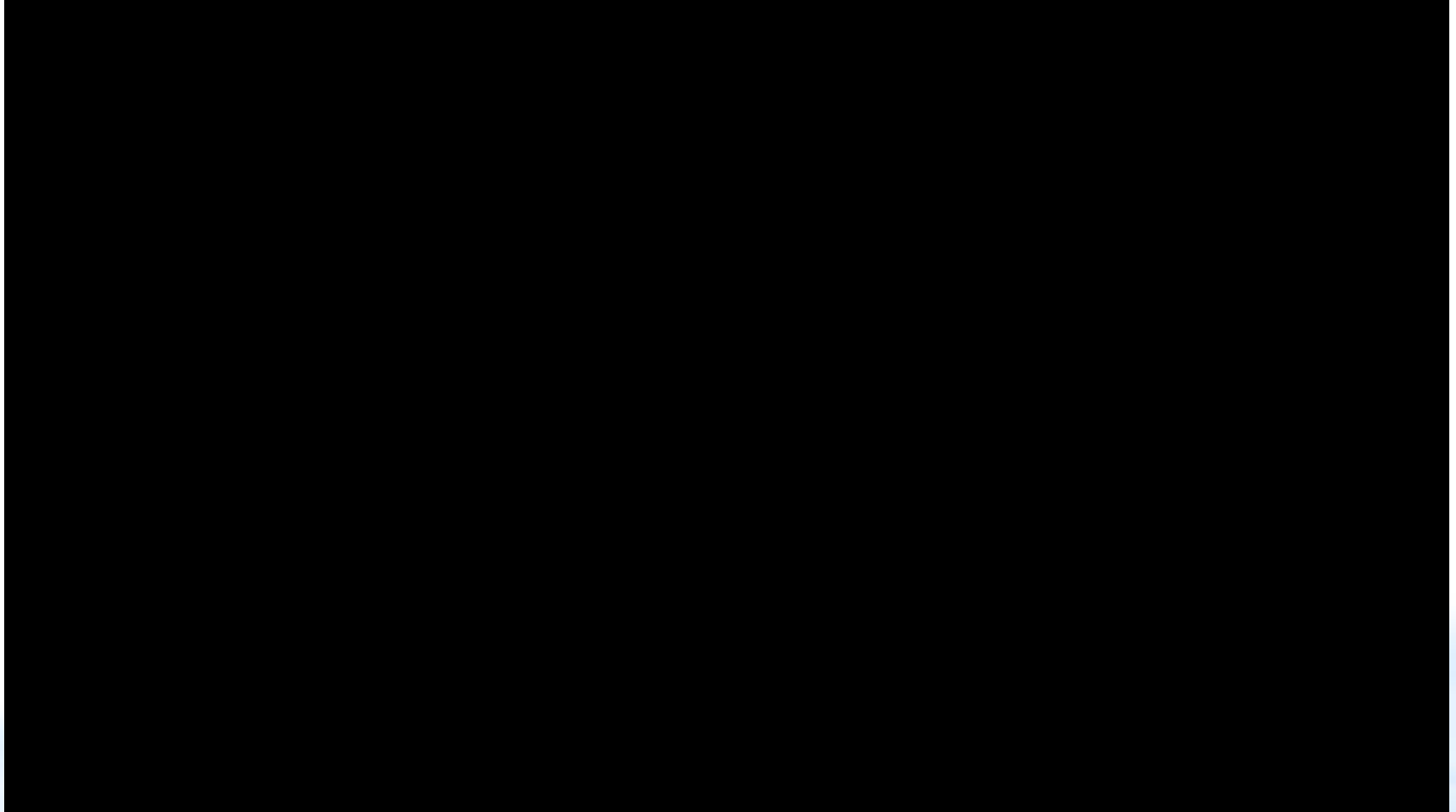


*Complete line for Boiler Handling*

Robots can automate a production line while interacting with an existing machine. Every kind of handling application is possible as robots are very flexible and grippers can easily be changed through automatic tool changers.



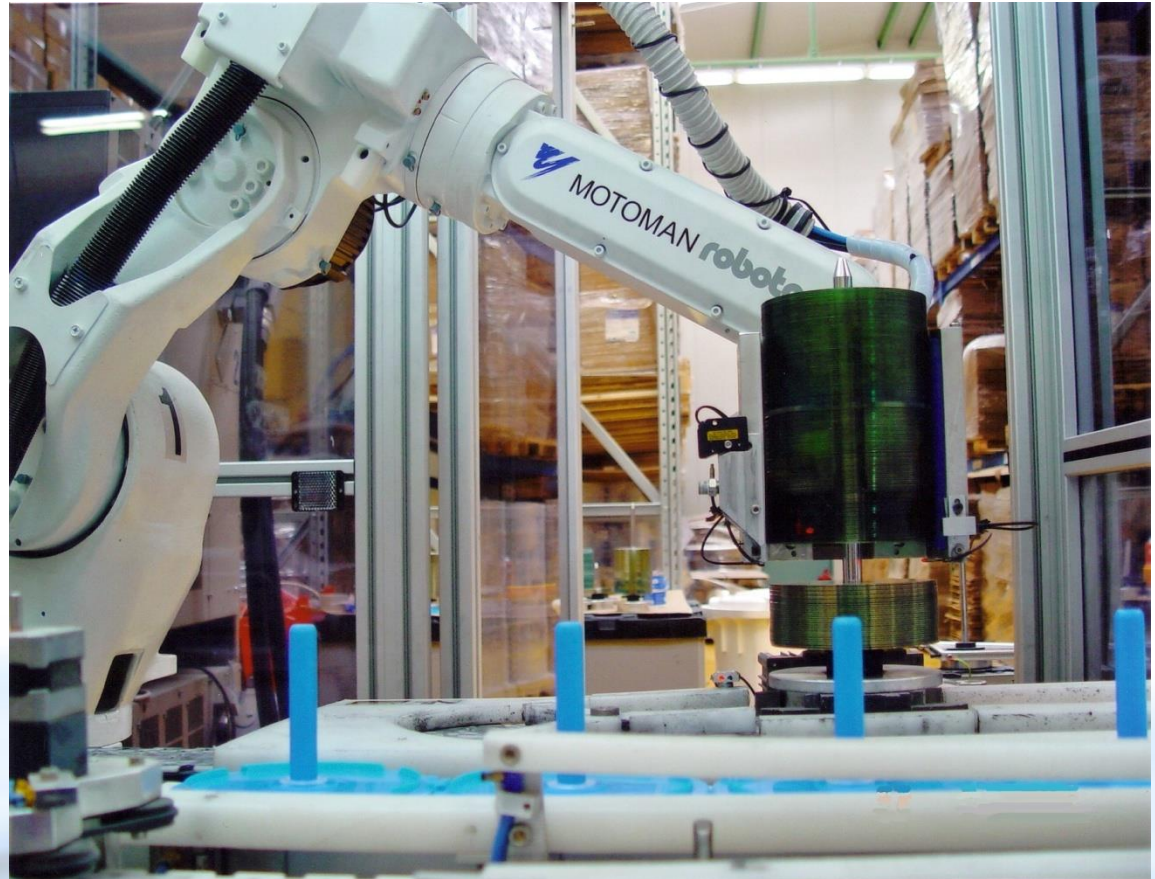
*Handling large sheet-metals to a spotwelding machine*





# Assembly

The total production cost of an assembly line can be significantly improved with the use of robotic automation. Robots can substitute personal in assembly operation and increase further the production as the production time is also improved. Since robots have high repeatability and accuracy, all products will have constant high quality.



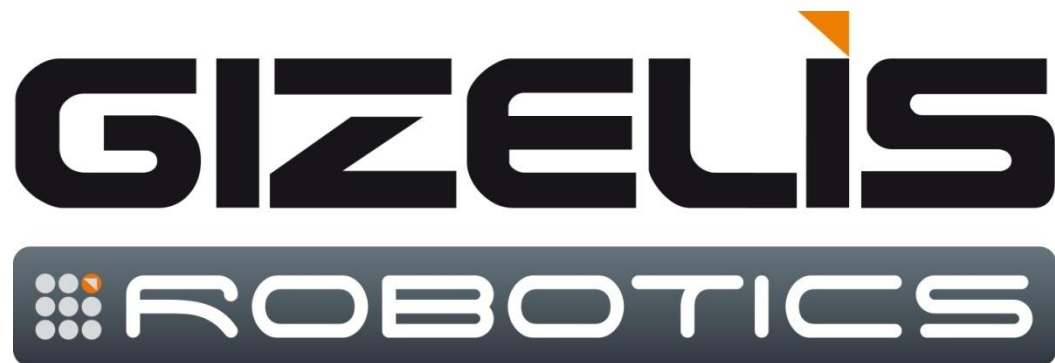
*Assembly line for CD's*



# Summarize of robotic applications

Industrial robots are used for a multitude of products and in all types of industrials units. They are already being used in metal and sheet metal processing factories, automotive industry, aeronautics, pharmaceuticals, photovoltaic modules, plastic, foundries and glass industries.

Introduction of robotics systems in all industries has generated significant profits, since it reduced production costs and provided a huge leap for growth.



THANK YOU

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