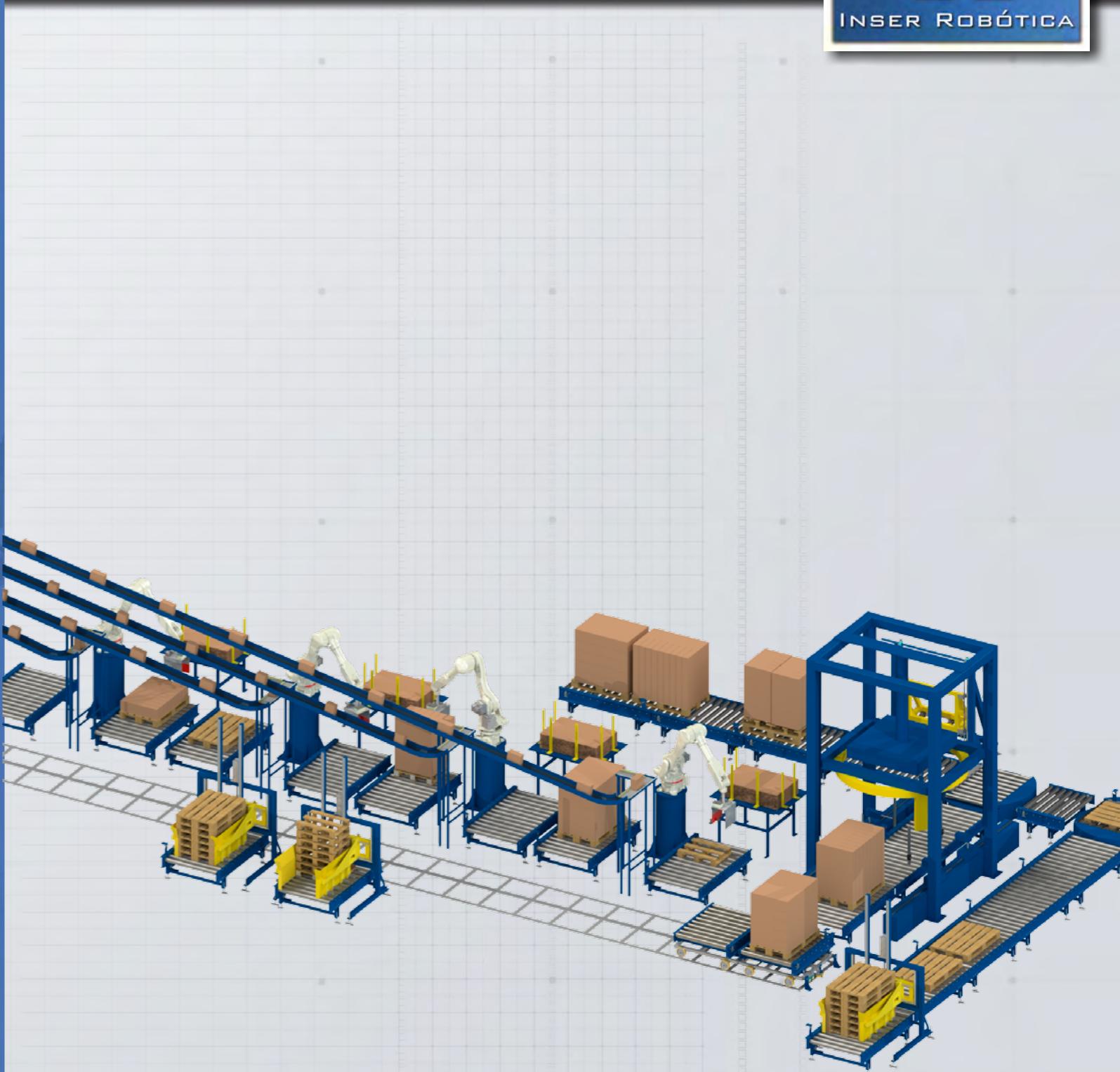




roboconcept INSER IR Robótica EiNA Solution
ROBOTICS

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ROBOTIC SOLUTIONS FOR FULL PRODUCTION LINE AUTOMATION



More than 1.000 systems provided worldwide including more than 1.200 robots.

WWW.INSER-ROBOTICA.COM

ROBOTIC SOLUTIONS FOR FULL PRODUCTION LINES.

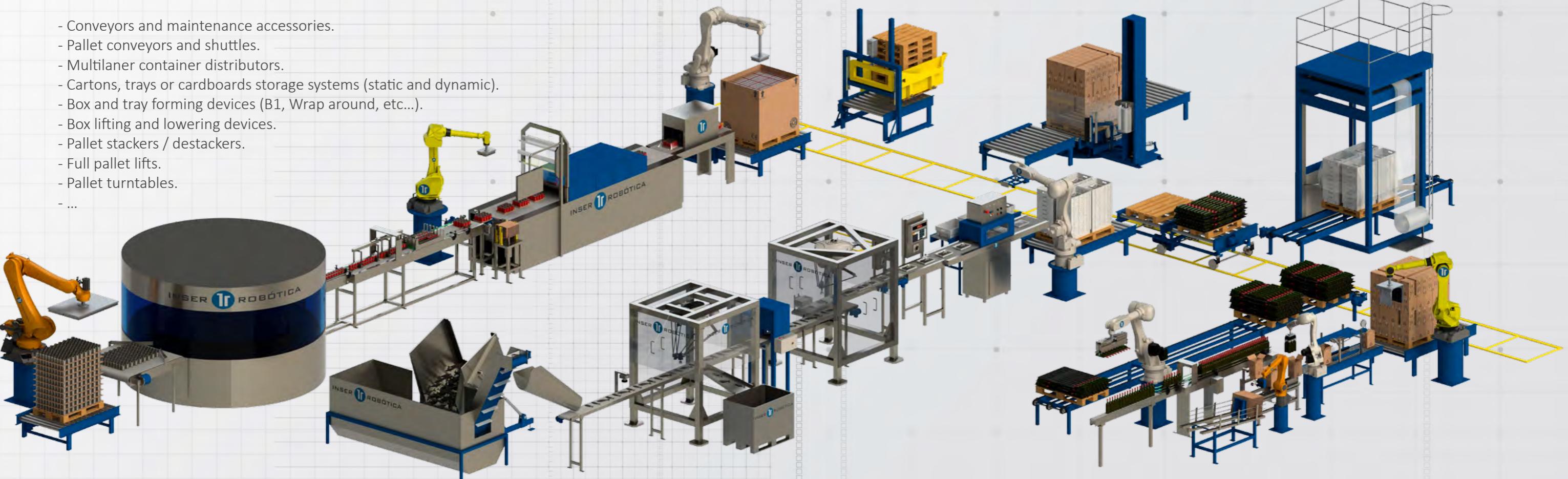
Almost three decades providing solutions in the food industry. Nowadays, we provide totally self-designed **full line solutions**, which improve substantially the functionality of the system.

We provide robotic automation solutions for:

- Classification and quality inspection using 3D computer vision.
- Palletizing and depalletizing of single product or full layer.
- Fast Picking applications with Delta Robots.
- Plastic or cardboard case filling.
- Tray filling and stacking leading to autoclave.
- Robot-assisted and stand alone box forming machines.
- Intelligent robotic labelling.
- ...

In addition to our wide experience in process automation using any brand of robot and other industrial equipment, we have designed and commissioned a wide variety of specific devices in the food industry:

- Conveyors and maintenance accessories.
- Pallet conveyors and shuttles.
- Multilane container distributors.
- Cartons, trays or cardboards storage systems (static and dynamic).
- Box and tray forming devices (B1, Wrap around, etc...).
- Box lifting and lowering devices.
- Pallet stackers / destackers.
- Full pallet lifts.
- Pallet turntables.
- ...



We have contributed to the processing of a wide range of products:

- Oil
- Wine
- Vinegar
- Soup, bouillon, purée
- Vegetable preserves
- Sauces
- Meat products
- Fish and seafood
- Soft drinks
- Coffee and substitutes
- Fruits and vegetables
- Dairy products
- Cookies
- Ice cream
- Sugar
-

Over these years, we have incorporated commercial machinery which we integrate in our production line automation solutions:

- Liquid product filling machines.
- Shrink wrapping machines.
- Inspection equipment: Computer vision, x-ray, weighing scales, metal detector...
- Automatic Guided Vehicles. (AGV-LGV)
- Wrapping machines.
- Automatic storage systems.
- Labelling machines.
- ...

You can expand information on this QR code link:



Experience in a wide variety of packaging possibilities:

- Cartons
- Trays
- Doypacks
- Bottles
- Cans
- Briks
- Steel drums
- Flow packs
- Blisters
- Crystal glasses
- Sticker rolls
- Bags
- Flexible packagings
- Bag In Box
- Aerosol cans
-



BOXES OR TRAYS FORMING AND AUTOMATIC FILLING.

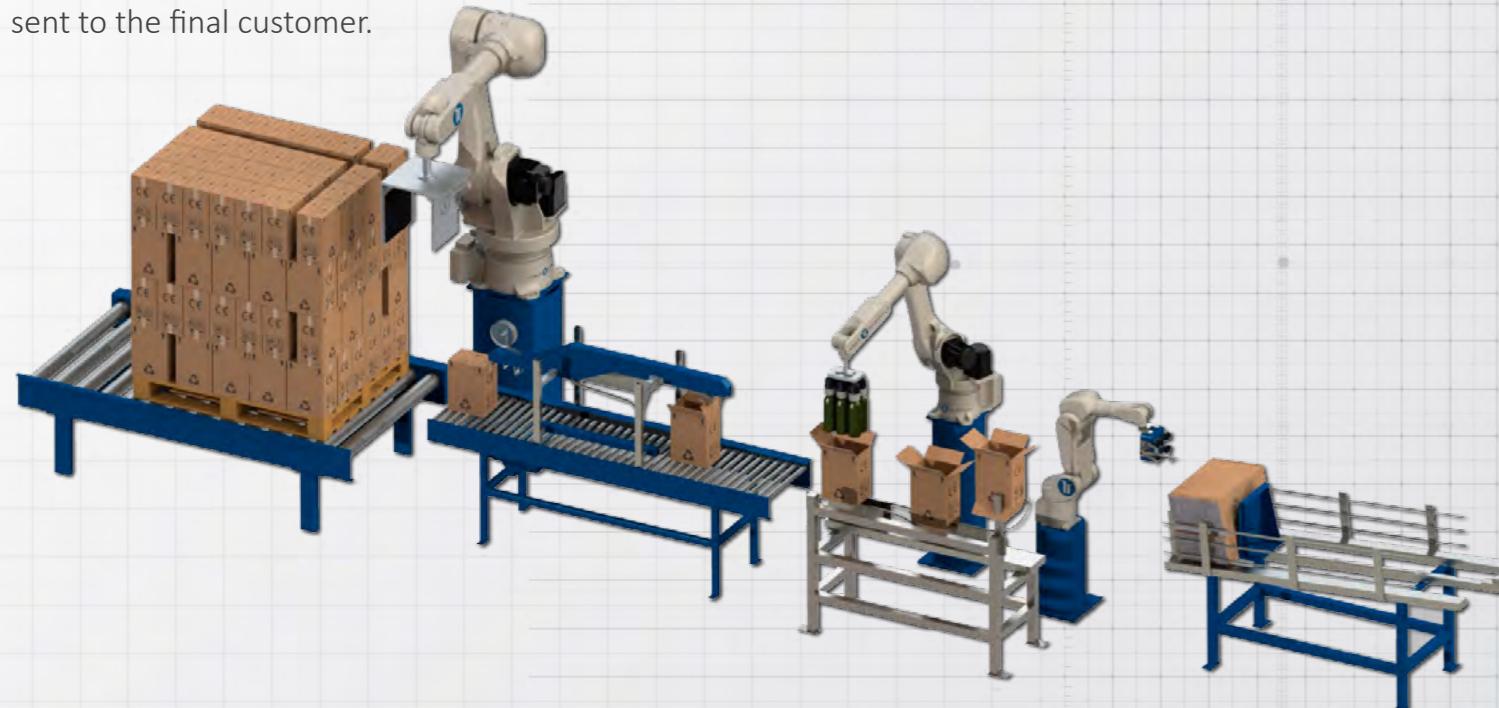
We provide an automatic wrap around or B1 box/tray forming machine designed by us. It's able to form 25 units per minute. Box divider insertion is also available as an option if needed.

Our automatic bottle filler machine introduce up to 2.000 bottles per hour.

Both machines are designed with a monobloc support for an easier and faster transport and commissioning.

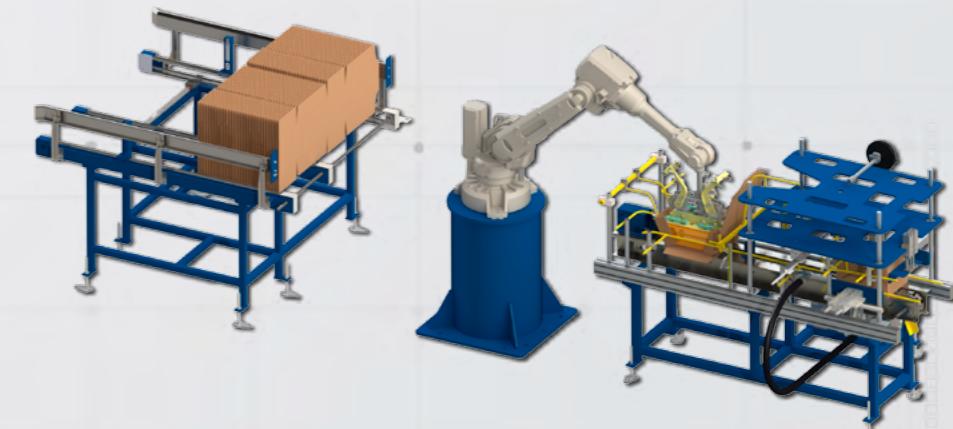
As an alternative to classic filling machines, we develop robot-assisted filling systems, which allow the box to be unfolded, filled with the products, closed with upper and lower seals, and palletized according to the required pattern.

In this example, the complete filling and palletizing process is performed using a folded carton store, a short-range robot, an attachment for the lower closure of the carton, a robot that fills the boxes with the product, a sealing machine and a 5-axis robot that palletizes the product in its box, ready to be stored and sent to the final customer.



BOXES OR TRAYS FORMING AND AUTOMATIC FILLING.

This other solution uses a 6 axis robot that is responsible of feeding unfolded wrap around boxes and previously grouped products to the machine that will close the box with hot-melt adhesive.



We also provide robot based tray forming and filling cells.



It's very common to use collapsible plastic crates with some fresh food products like fruits or vegetables. Our systems also integrate crate openers, robotic fillers and palletizers.



ROBOTIC PALLETIZING.

After filling the containers and placing them in boxes or trays, our solutions also take care of palletizing in a precise way according to the specified pattern. The automated palletizing is the end of the production line. We design our palletizing solutions to suit your needs.

Compact solutions of palletizing with a single robot, pneumatic paddle gripper, whose strong point is the little investment, the little space occupied in plant and the fast investment return.



Large multi-robot systems that include options such as pre-layer preparation prior to fully layered palletizing, capable of assuming the most ambitious productions.

We provide all the system components like conveyors, multiliners, pallet wrapping and strapping machines, shuttles, quality control devices or Human Machine Interface to simplify the control of the production.

Metal cans manufacturing end of line sample.

Including 1 robotic palletizers on a long track to increase the palletizing possibilities.



Dairy products manufacturing end of line sample.

Including 4 robotic palletizers and a long shuttle to manage the pallet movements.



FROM COMPACT CELLS TO COMPLETE END OF LINE AUTOMATION.

Personal care products manufacturer end of line sample.

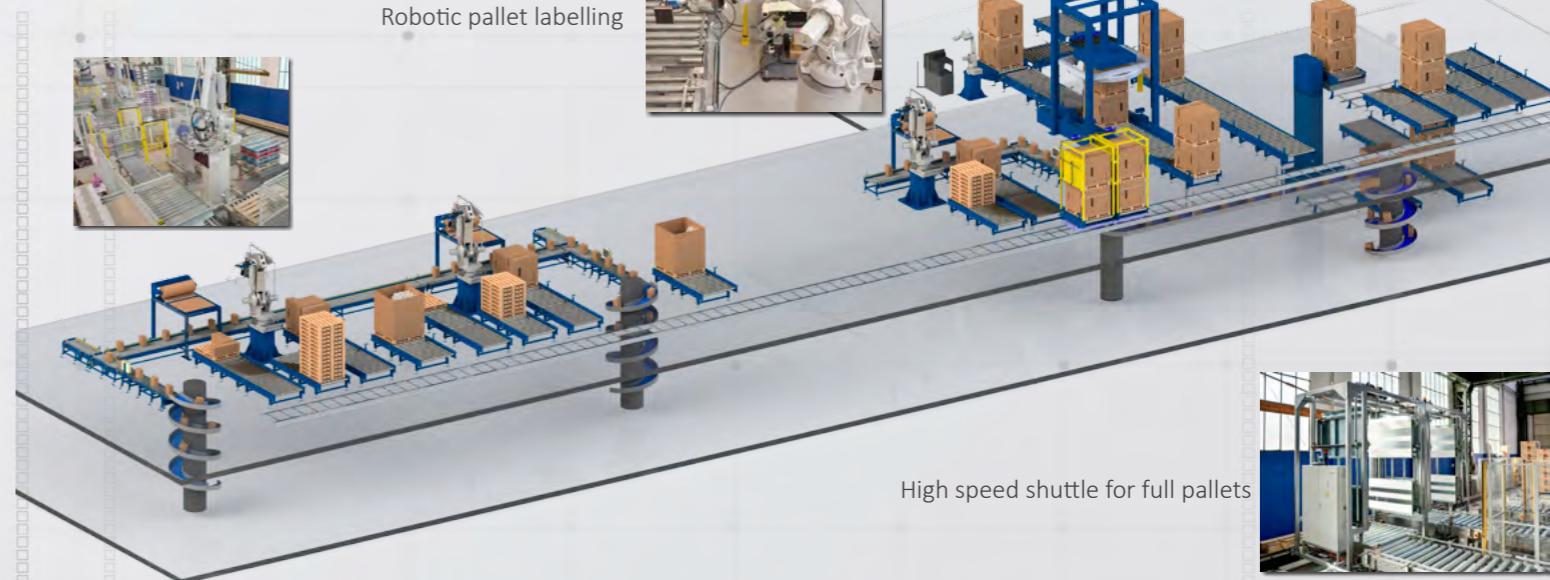
Including 3 robotic palletizers, spiral conveyors, ring wrapping machine with cardboard edge protectors, a robotic labeller, a pallet elevator and a 100 meters double pallet high speed shuttle.



Robotic pallet labelling



Wrapping machine with edge protectors



High speed shuttle for full pallets



FULL LAYER PALLETIZING

We have developed a gripper that is able to take full layers of almost any product.

Using small size and high speed robots, the boxes are grouped according to the pre-established pattern.

With the configuration of the example you can palletize productions of up to 100 boxes per minute.
(Depending on the size and weight).



AUTOMATIC DEPALLETIZING

Depending on the product we can depalletize using different techniques.

- Computer vision and specific gripper able to get almost any size boxes for heterogenic pallets.
- Full layer gripper equipped with magnets or vacuum gripping systems.



EXPERIENCE PALLETIZING WIDE VARIETY OF PRODUCTS.

We palletize everything you can imagine.

Boxes, bags or trays containing almost any type of product. From food products to delicate automobile components.

Bags.



Bottles and Ice Cubes.



Crystal and PET containers.



Aerosol cans and folded cartons.



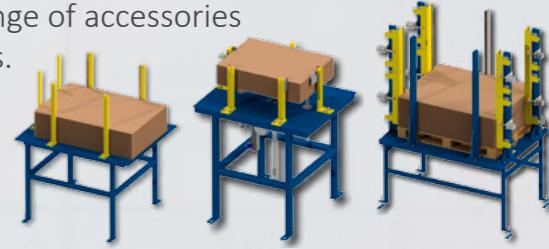
Metal cans and PET in en Box-Pallet.



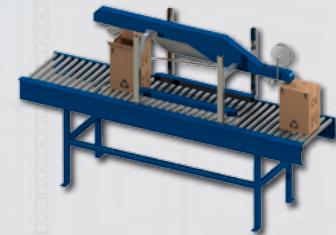
SOME OF OUR PACKAGING ACCESORIES.

In these 30 years of specialization, we have developed our own range of accessories that allow total integration while maintaining our quality standards.

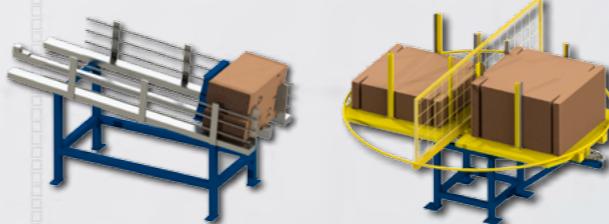
- Cardboard stores.**
- Simples, with manual loading.
 - With pneumatic compactor.
 - Self-leveling to improve the picking process.



Box closers and sealers.

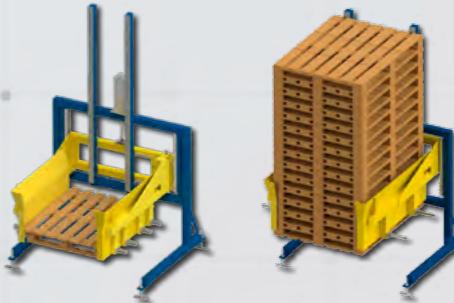


Folded cardboard or tray stores.

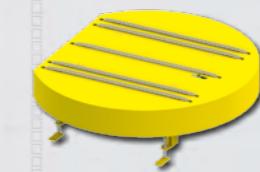


Automatic pallet feeders.

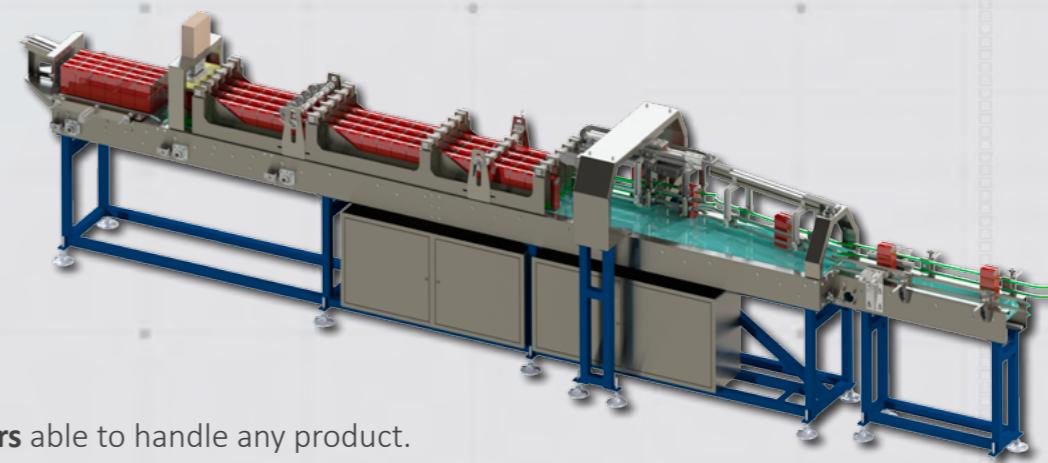
Suitable for Europallets, UK Pallets, half pallet or quarter pallet in any position.



Tracks, conveyors, elevators and turntables for pallets.



- Multiliners or lane dividers.** Servo controlled. For almost any type of product and frequency. Briks, cans, PET containers, bottles, etc.



Robot grippers able to handle any product.

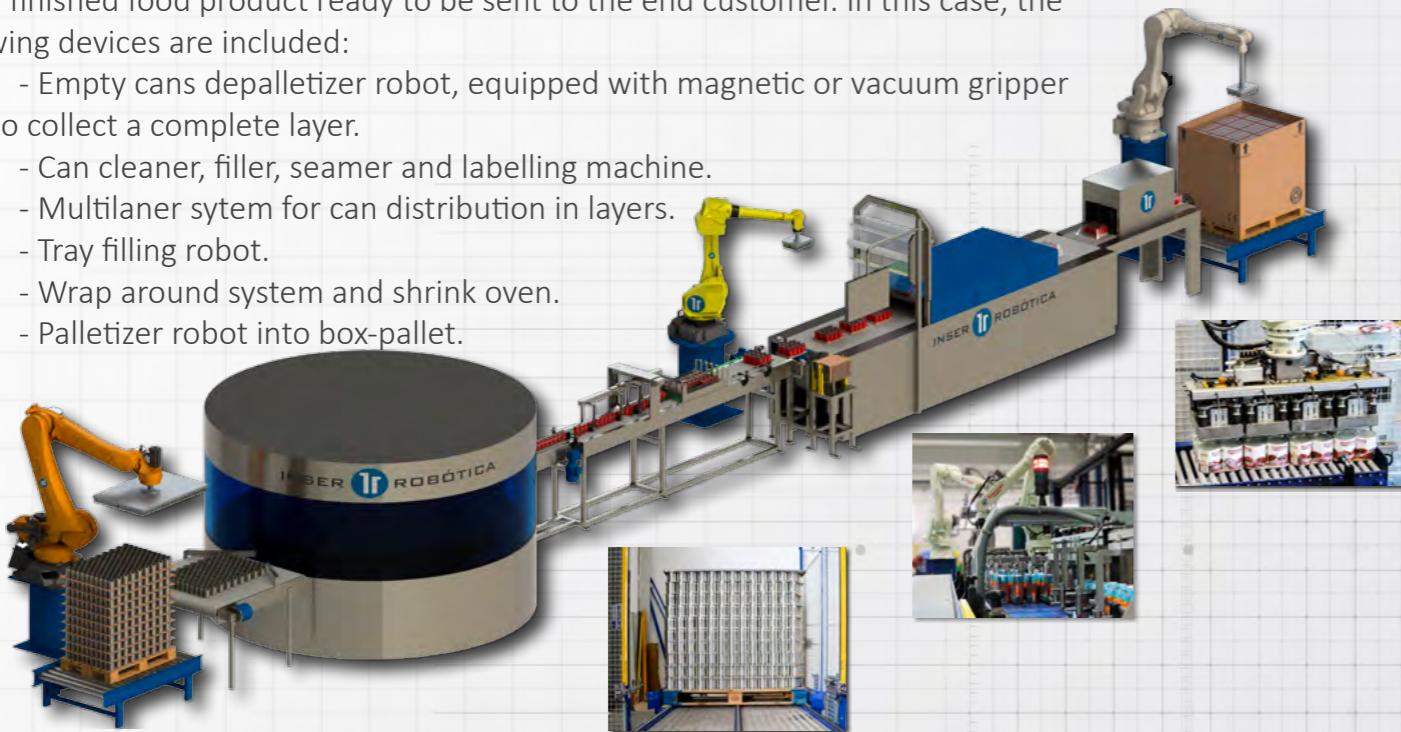
Of course, we design our own robot grippers. From a very small gripper dedicated to delta robots and very quick picking, to bigger palletizing gripper able to get rows or full layers of products using magnets, vacuum grippers or roller curtains.



CANNED FOOD PRODUCTION AUTOMATION SAMPLE.

The system is able to make the required operations to transform a pallet of empty cans into a finished food product ready to be sent to the end customer. In this case, the following devices are included:

- Empty cans depalletizer robot, equipped with magnetic or vacuum gripper able to collect a complete layer.
- Can cleaner, filler, seamer and labelling machine.
- Multiliner system for can distribution in layers.
- Tray filling robot.
- Wrap around system and shrink oven.
- Palletizer robot into box-pallet.



BOTTLED PRODUCTS AUTOMATION SAMPLE.

Wide experience in beverage industry.

We use robots that allow to depalletize empty bottles and place them on the filling line. Once they are filled, we can place them in plastic trays or boxes.



DELTA ROBOTS AUTOMATION SAMPLES.

Our solutions include Artificial Vision, 3D scanner, conveyor tracking and specially designed grippers linked to the most efficient industrial robots in the market.

This kind of systems represent a huge progress in primary sector, improving product classifications by size, category, volume, weight, color or sex.

It's now available our vision system able to classify almost any fish species working on board fishing vessels.



We have also use delta robots to create delicious recipes of pre-cooked food like lasagne, using computer vision, conveyor tracking and special gripper to get highest speed pick and place.



This kind of technology is proving to be a reliable alternative to manual labor, achieving a large production capacity and optimal conditions in terms of hygiene.

In primary products like vegetables, our systems classify products by color, size and category, discarding damaged ones and creating groups by accurately adjusting the total weight to be packed or for its sale.

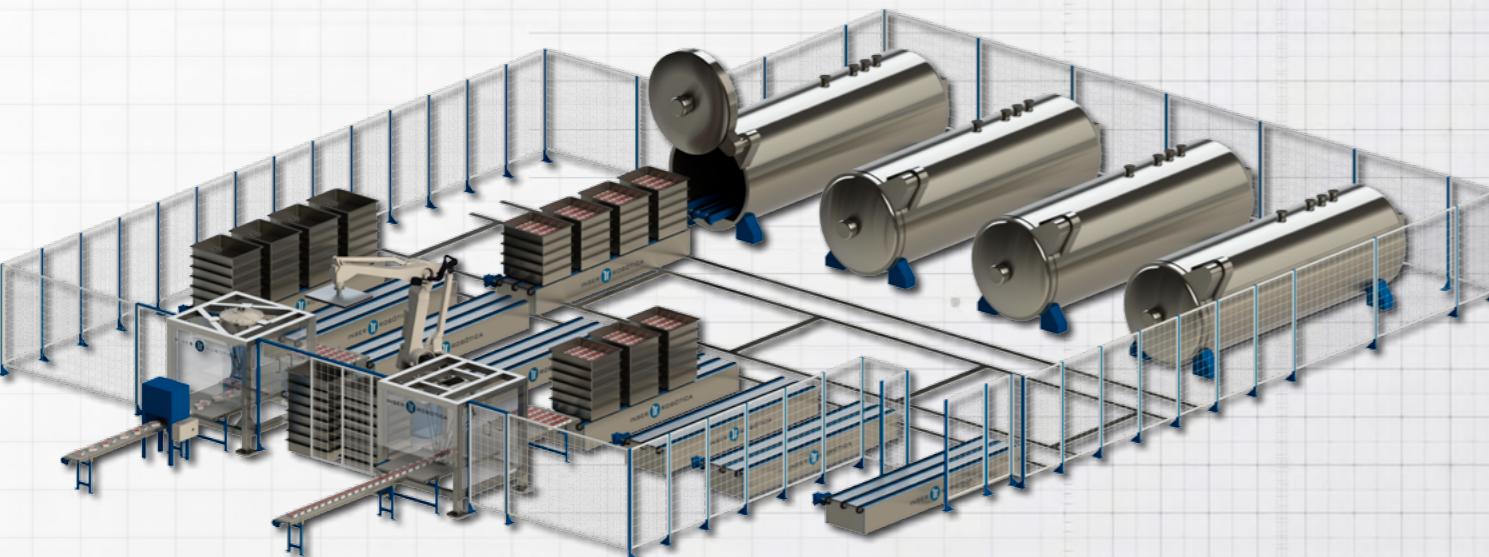
This allows producers in the primary sector to have an accurate control of the quantity of product supplied.

AUTOCLAVE AUTOMATION SOLUTIONS.

The load / unload of an autoclave is a sector where the automation is not so common nowadays.

Inser Robótica designs complete solutions including:

- Artificial vision for positioning and quality control.
- Dynamic weighing scales.
- High speed Delta robots for layer forming.
- Big range and big payload robots for full layer and stainless steel trays handling.
- Fully automated conveyors for trays and cages handling towards the autoclaves.



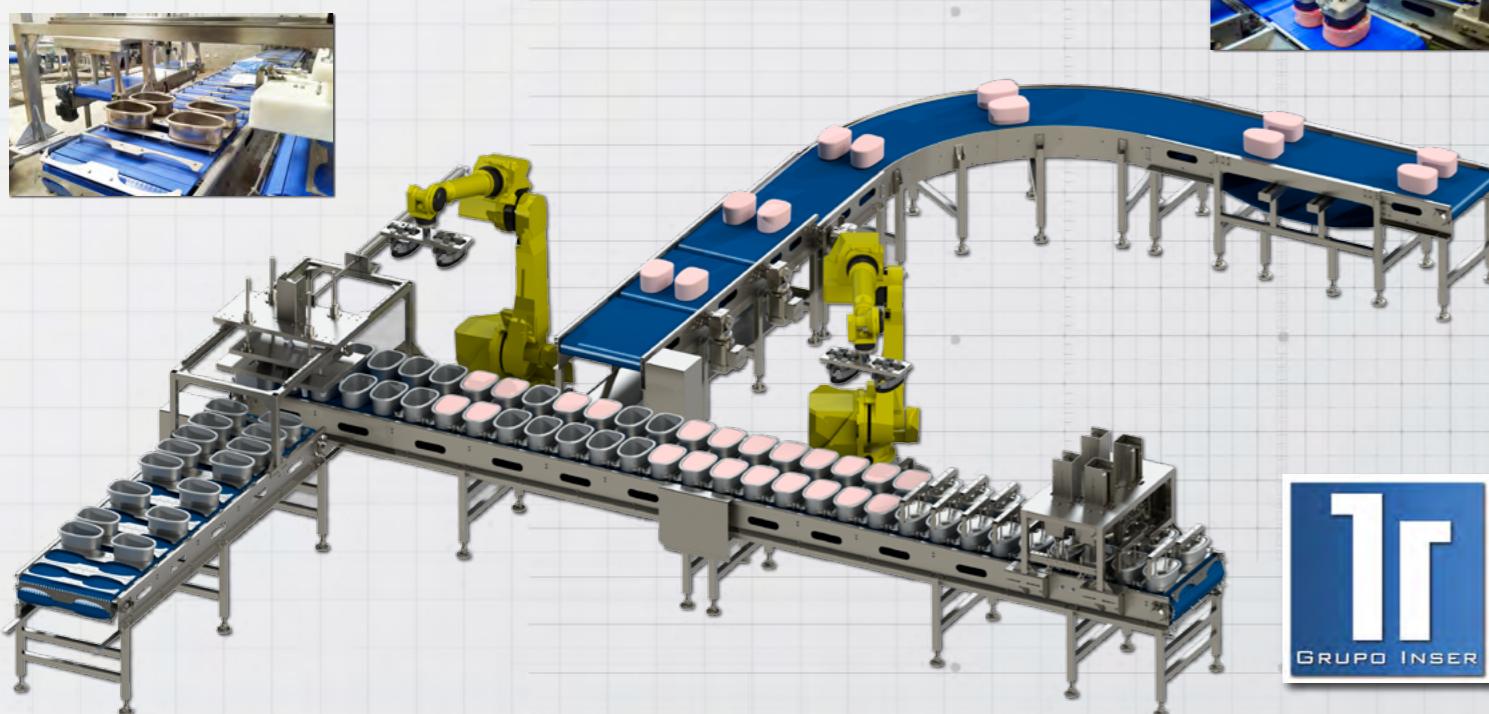
HAM HANDLING AUTOMATION.

In addition to the classic boxing and palletizing systems, we also provide solutions for manipulating parts of any shape related to the fast movement consumer goods market.

In the following example the robots handle pieces of raw ham.

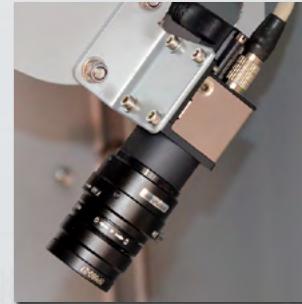
We also perform a quality control of the package sealing term.

With two robots the system achieved a production of 40 pieces per minute.



COMPUTER VISION APPLICATIONS.

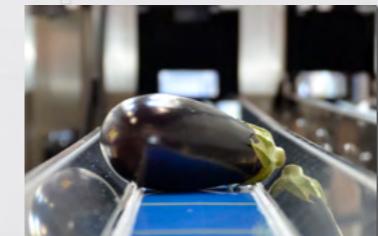
Many of our packaging systems contain devices to check the quality and traceability of the products being handled, ensuring that there isn't any strange element in food through the use of metal or X-ray detectors.



In addition to those devices, we have developed our own systems that are able to perform more complex quality controls.

From the verification of safety elements in the automotive sector, to the detection of damages in food products like cheese, fruit, vegetable, meat or fish.

Our own computer vision laboratory is also providing fast and reliable non-destructive method to ensure the quality of packaging by detecting incomplete seals, partial or weak areas, and common seal defects.

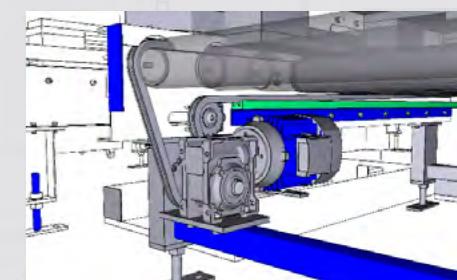
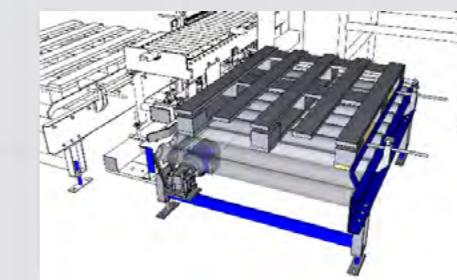
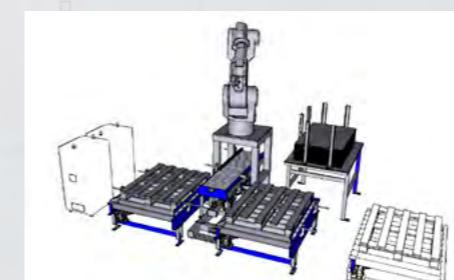


We can provide solutions for visual image analysis by demand including 3D, or multispectral images.

HUMAN MACHINE INTERFACES.

We pay special attention to the usability of our systems.

The customer can select standard touch panels of leading brands, and the Inser Scada, windows based and customized for each application.



For palletizing cells, we can provide to the end customer our software to create new palletizing patterns.

This windows based program considers all the factors needed to create the program for industrial robots, including location of conveyors, robots, labels, boxes, grippers and pallets dimensions and weight.



24/7 WORLDWIDE TECHNICAL SUPPORT.

We know how important it is to have professional technical assistance in the shortest possible time.

For 3 decades, we have provided In Situ and telephone assistance to our customers in Spain and Europe.

We have a team of engineers, experts in programming and maintenance, capable of responding to any incident in any location.

Nowadays, due to our internationalization process, the distance with our clients has grown so much that it is essential to have a quick way of communication that drastically reduces the time and cost of each assistance.

Our goal is to keep your production running, with tools like:

- **Training.** We provide complete information about programming and good use of the systems provided.
- **Preventive Maintenance.** Essential for mechanics and electronics to function properly for many years.
- **Predictive diagnosis.** As an option to preventive maintenance.
- **Programming.** New references or small changes.
- **Optimization.** Improvements on original operations.
- **Remodeling robots.** Or replacement for a new model.
- **Remote or on-site assistance.** Serving your incidents as quickly as possible.

We have developed a system that reduces to zero that distance between our headquarter in Bilbao and our clients. With "**SICOR**" we can instantly access our robotic cells even thousands of kilometers away. It is able to work connected to the customer's Wi-Fi network or be completely independent thanks to its versatile 2G / 3G / 4G / GPRS / UMTS telephony connection.

Thanks to this connection, our engineers will be able to access the programming of robots, PLC, servo motors, security elements, scada software, cameras and computers that are part of the robotic cell, in order to perform diagnostic tasks, software updates, or any programming changes that may be required.

SICOR is another good reason to choose Inser Robótica as **your global supplier of robotic automation solutions.**

In addition, we develop software that facilitates both the programming of cells and the management of work for operators. Our **palletizing pattern generation software** is capable of automatically generating the program that will run the robot, once the dimensions of the product to be palletized and environment data have been introduced.

For ease of use and maintenance, we integrate **our own scada software** that operates under Windows, or integrate HMI screens of the most reliable brands in the market.



You can expand information about our packaging applications on this QR code link:



ABOUT US.

Created in 1.986, being a spin-off of a previous company active in robotics since 1.973.

A company with a great experience in a wide range of activities including food and beverage industries, metal fabrication, automotive, foundry, and many others.

Inser Robótica S.A. is an engineering company that develops its own mechanical and electrical designs, manufacturing, commissioning and try out of turnkey solutions.

More than 1.000 successful systems including more than 1.200 robots.

In 2013 **Inser Robótica acquired two automation companies, Roboconcept and Eina, forming Inser Group.**

In this way, we have increased our capabilities to provide automation solutions for full production lines of a wide range of products.

That same year, we got the **ISO 9001:2008 certification** approval that guarantee the quality of our internal procedures.

After 2 years providing solutions in Brazil, in 2015 acquired the company **Sollution Robotics in São Paulo** to improve the assistance to our customers in the country.

In 2016, Inser Robótica moved to a new facilities in Mungia, closer to the Bilbao airport, where we can integrate bigger projects in size and quality matters, creating our **computer vision laboratory and software division**.

In addition to the packaging process for food products, we continue providing automation solutions for welding, cutting, handling, etc, in metal, aerospace or automotive auxiliary industries.



Pallet racks manufacturing cell.



Fire protection pipes manufacturing cell.

