



Design and manufacturing of industrial machines and automations.
Industrial maintenance.



PQL meccanica srl

Design and manufacturing of industrial machines,
conveyors, automations, technical innovations.
Industrial maintenance.

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Our Company

PqI meccanica srl was founded in 1983 by three partners, very experienced mechanical constructors coming from the Siemens Maintenance Department.

The company works in the Industrial Automation, mechanical production and Industrial plants maintenance fields. It is specialized in the design and manufacturing of special machines, conveying lines, format changers, rolling shutters conveyors, modular carpet belts, roller conveyors (idler and/or frictioned), chain conveyors, pallet deviators, pallet rotators, balancing dividers, etc.

Our main qualities are flexibility and skills to answer any kind of request, as well as high skill in manufacturing, relying on our own Technical Department.

After sale Support and Maintenance are our strength, by which we can maintain a strong relationship with our customers.

Our services are able to meet a wide range of requirements, always ensuring the best quality-price ratio.

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SOLE DIRECTOR

TECHNICAL - SALES - PRODUCTION MANAGER

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Mr. Giancarlo Pizzola

TECHNICAL CONSULTANT

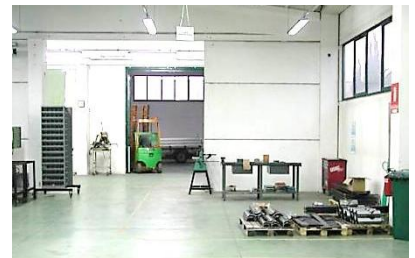
Technical Department

- R&D
- Feasibility studies
- Design
- Production planning
- Marketing



Production Department

- Manufacturing
- Testing
- Maintenances



Main References

Thanks to the know-how, the skills and expertise of its engineers and technicians, the punctuality of action and the quality of relationships that the staff has been able to establish over the years with customers, the company has succeeded in achieving excellent results in the areas where it operates.

It started working relationships with the University of L'Aquila and especially with the Mechanical Engineering Faculty, proposing internships and thesis aimed to investigate specific aspects of different issues, creating links between universities and the world of work.

We operate in various Areas: Beverage, Pharmaceutical, Food industry, Packaging, Diapers and Sanitary napkins production, Flue Pipes production, Conveyor Belts, Plastics Molding.

Our main references are:



Coca Cola HCB Italia
Coca Cola HCB Austria
Coca Cola HCB Greece
Coca Cola HCB Ireland



Gran Guizza Spa



San Benedetto Spa



Campari Crodo Spa



Spumador Spa



Krones Spa



Sanofi Aventis Spa



Kimberly Clark Spa



Alfa Wassermann Spa



De Cecco Spa



Del Verde Spa



Rexam Spa



Emsar Spa
NOVARES Spa



Chiorino Spa



Vibac Group Spa



Megadyne Spa



Trelleborg AB



Beta utensili Spa



Magneti Marelli
Suspension Systems
Spa



Pantex International
Srl



Gruppo Sacif Srl



Tecnometal Srl



Piemme Srl



Taiprora srl



Mabelt Srl



FIT Trasmissioni

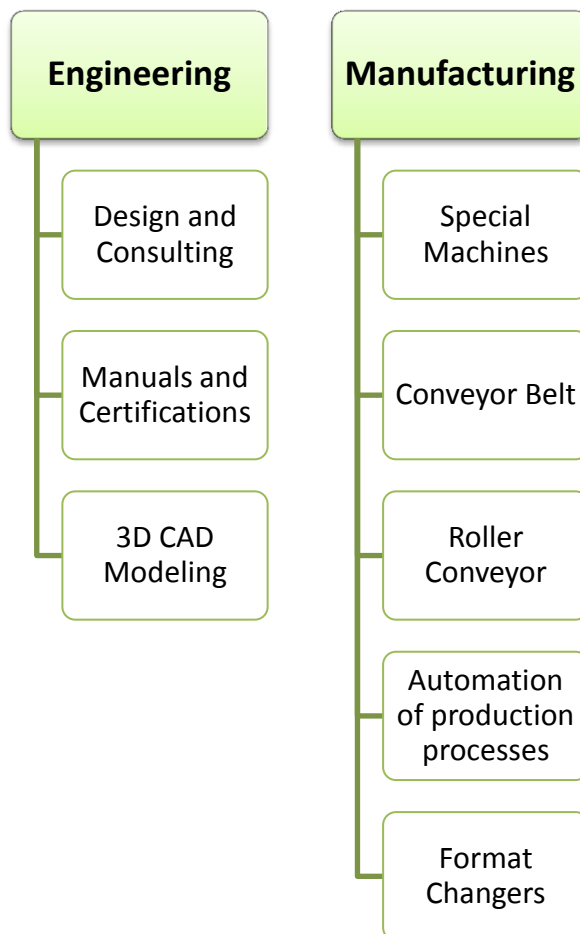
The success of the business is due to the ability to identify the consumer's needs and to design and manufacture products that meet those needs quickly and affordably.

To achieve these goals PQL Meccanica, has developed an internal efficient Engineering Department, which carefully follows every step necessary to the development of the project. We succeed in reducing both the *time to market*, the time necessary to launch a new product, and the *time to customer*, giving a more quick answer to customer's requests with targeted and innovative products.

The reduction of the product development cycle is vital for our company, not only to reduce costs, but mostly to ensure our survival on the market.

Our technical training has been mainly linked to the continuous work with the Production, which has often led to a series of design changes, due to high production costs, tight tolerances or incompatibility of the product with the available manufacturing technologies. This is the application of the **concurrent engineering**, which consist of the continuous sharing of the informations, by combining both the technical and scientific knowledge and the skills based on the experience of previous products and processes, to find the best solutions to make the most economic and efficient production.

Our Offer



1 - Conveyor Lines

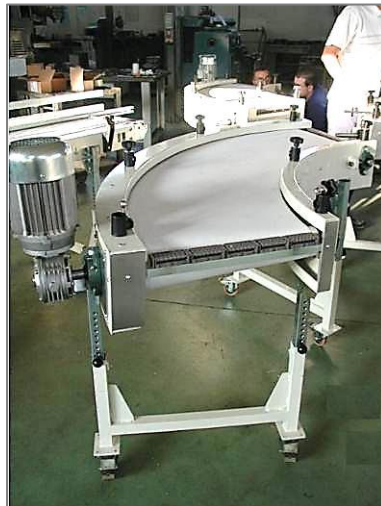
- Belts Conveyors
- Rolling shutters Conveyors
- Modular carpet Conveyors
- Roller Conveyors

PQL Meccanica designs and manufactures conveyor lines according to the specific needs of the customer, customizing the details depending on the product to be moved.

We build also full material handling lines, with the possibility to include elevators and descenders system, properly designed, to handle the material in a different plane from the production one.

Here are some applications built for our customers:

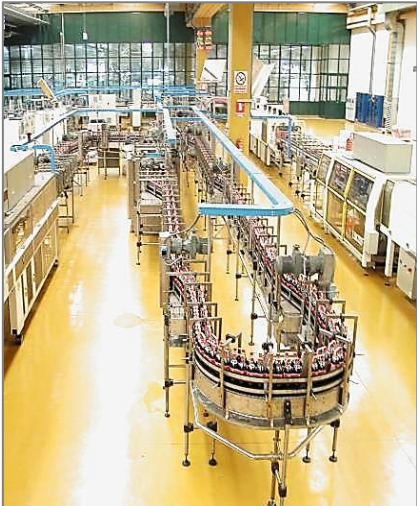
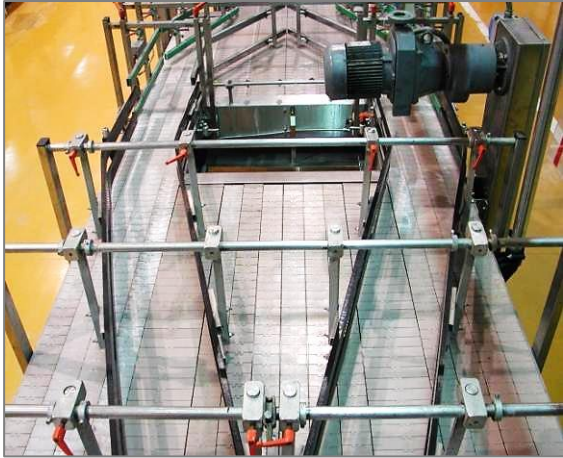
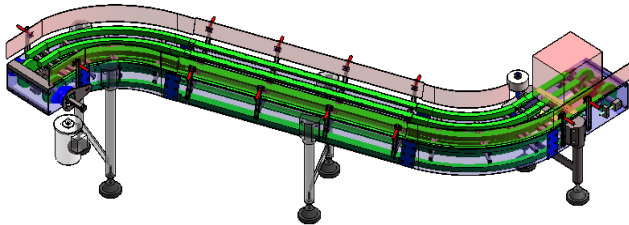
a) Belt conveyor lines



We specialize in curved belt conveyors

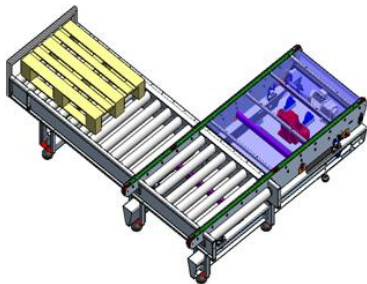


b) Rolling shutters Conveyors

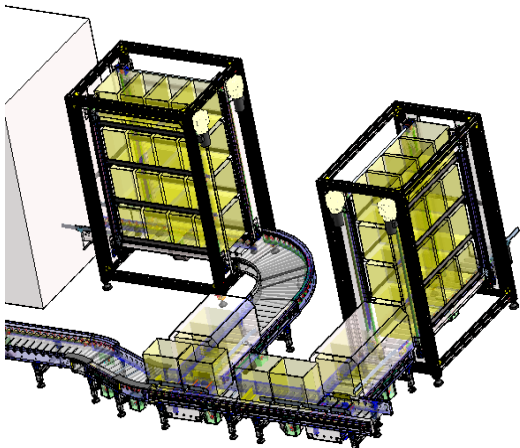
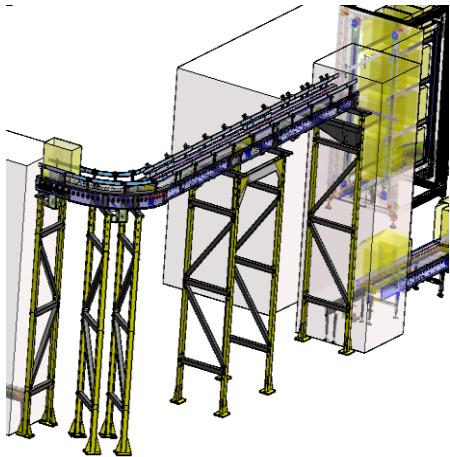
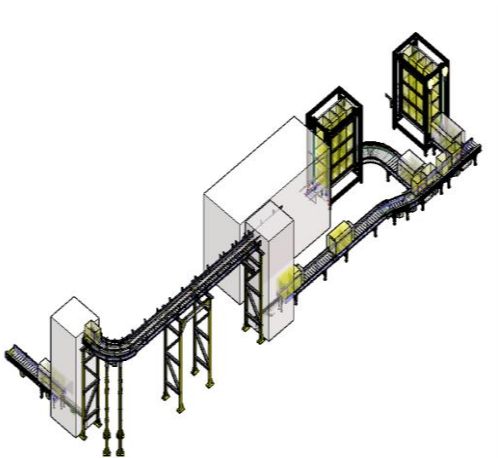


c) Roller Conveyors

PQL meccanica designs and manufactures rollers of any size and strength, for any type of material handling both for industrial and civil field. They can be built with modular criteria, developable according to customer requirements.



Example of application of elevators and descenders

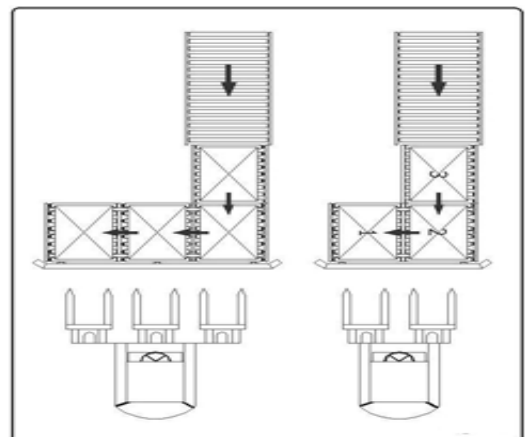


d) Modular belt conveyor lines

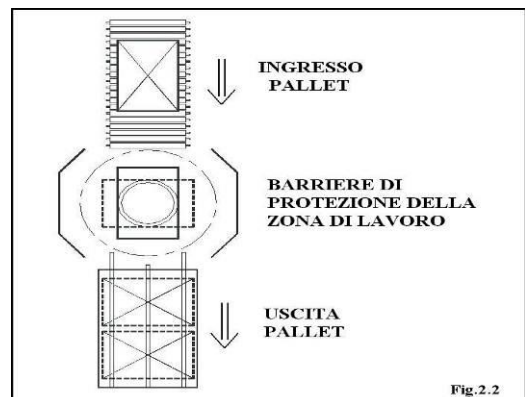


2 – Conveyor systems

- System that allows the accumulation of pallets to improve the grip by a multiple forklift truck.



- Rotary-Diverter-Shifter System



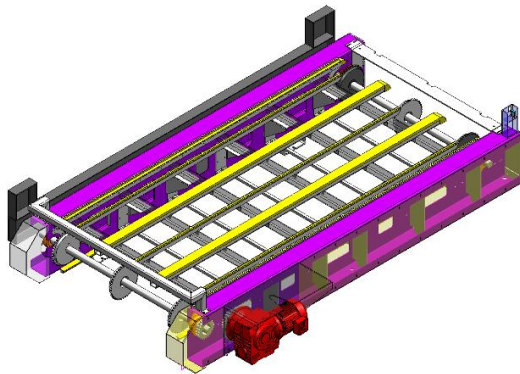


90° Rotation



180° Rotation

- *Machine for pallets handling and positioning*



- *Other applications*

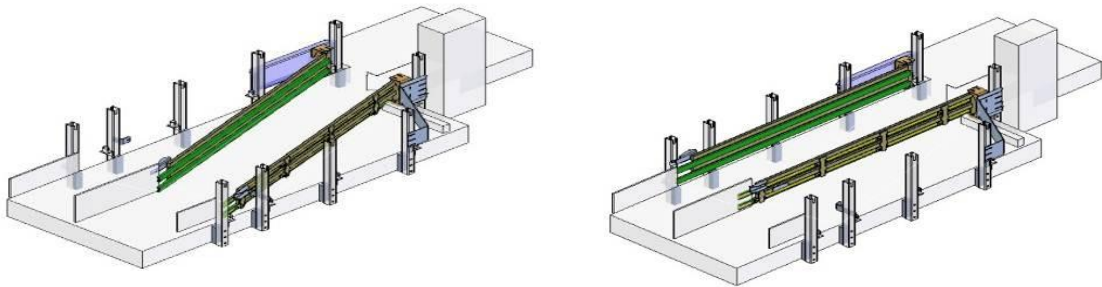


3 – Format Changers

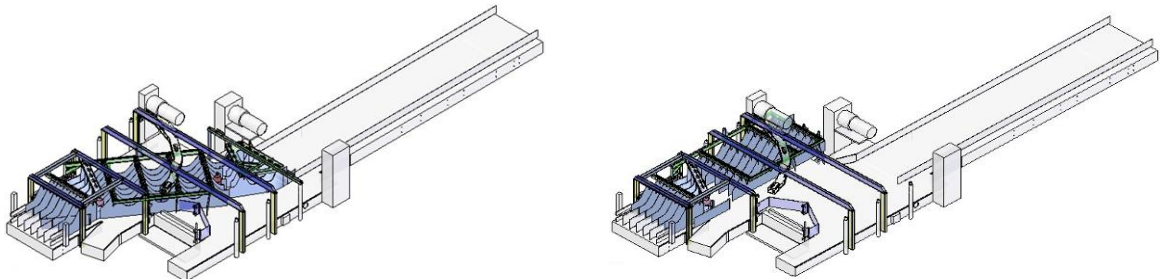
More and more often Beverage Companies ask for their lines to be flexible, in order to switch from one bottle format to another with simple adjustments.

PQL Meccanica, thanks to the experience gained over the years, has developed a lot of applications to speed up the operation, some of which are operated manually, other directly from the machine. Here are some applications built for our customers:

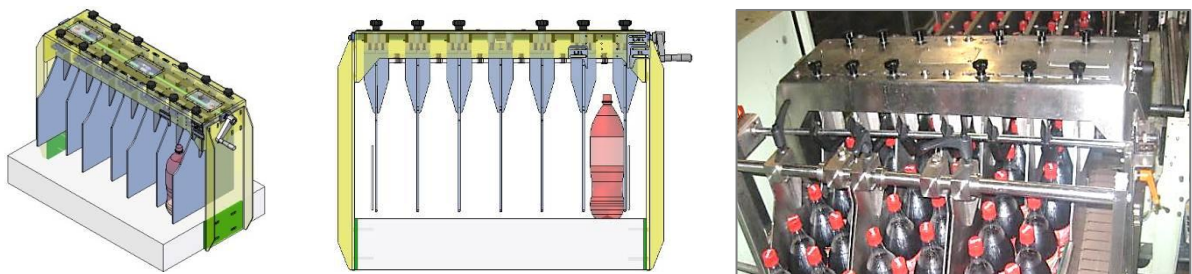
a) Rapid format changer on rolling shutter conveyors



b) Rapid format changer on rolling shutter conveyors with manual direction changer



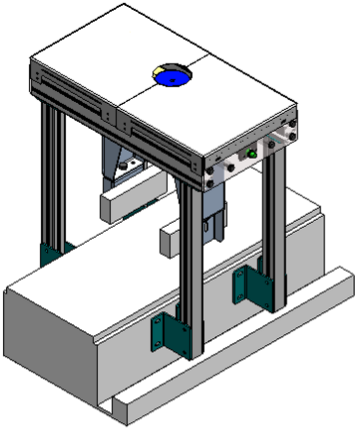
c) Symmetric divisor for format changer



d) Synchronized Regulation system, moved by crank / motor directly connected to the machine framework



e) Motorized and synchronized guide rails regulation system



4 - Special Machines

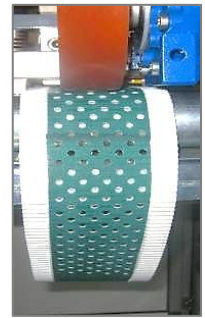
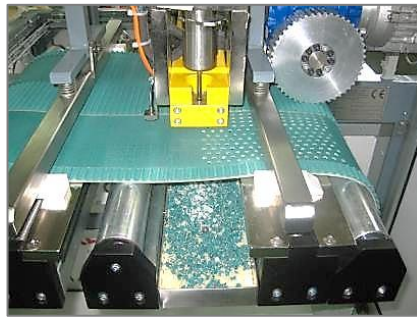
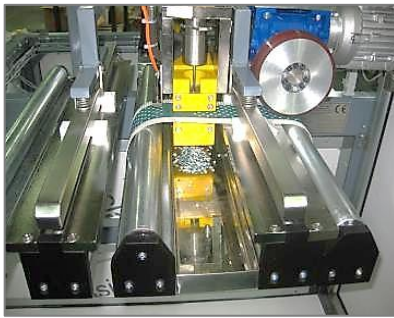
- Puncher for tapes and belts



The puncher allows to drill holes both on closed ring and opened tapes and belts.

A pulling wheel drives the belt under a punch, which moves perpendicularly to the belt's moving direction that is provided by a linear guide. The composition of two motions allows high flexibility on the drilling design.

The machine is controlled by PLC.



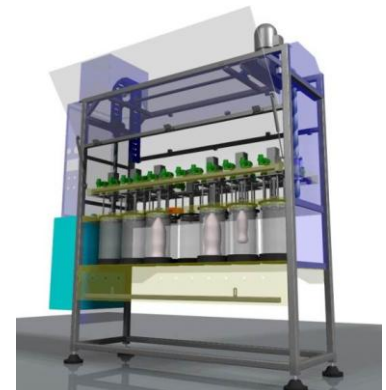
- Stress Cracking Machine

The "Stress Cracking" testing machine was specifically designed to test the quality of PET bottles, using destructive tests according to UNI 11127/2004.

The purpose is to determine the quality of PET bottles and in particular the tendency to develop cracks on the bottom and the outbreak of the same after the capping. It is applied to bottles designed to contain water or carbonated beverages with carbon dioxide concentration equal to or greater than 3.0 volumes.

The internal memory of the machine allows to manage up to 16 types of bottle sizes. The machine consists essentially of a "fixed structure" and a "moving block" which translates vertically. The empty bottles are housed in the "movable block" in the slots. It is possible also to have the machine with automatic loading of the solution.

The machine is controlled by PLC.

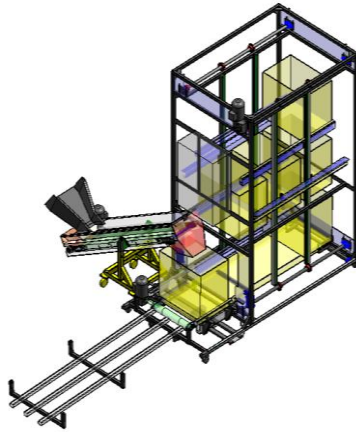


- **Boxes change automation**

Automation of boxes filling for plastics mold press. The system allows to perform the function of accumulation of empty boxes for different number of productive hours. Once the right quantity of material is reached, the box is automatically changed.

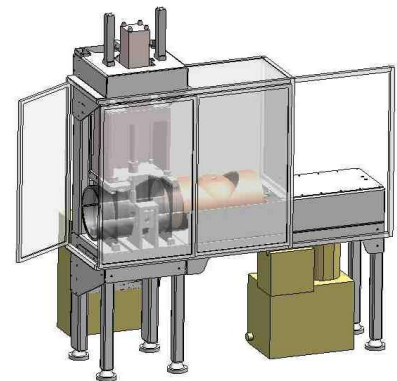
It can be used with various kinds of industrial machines.

It is built in different sizes according to customer requirements.



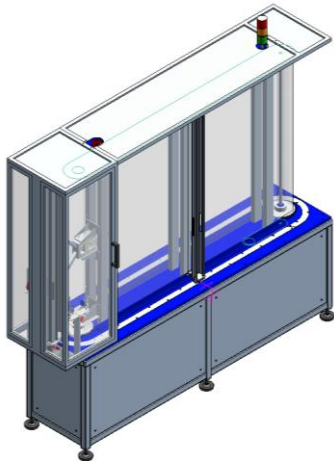
- **Centaurus**

Semiautomatic hydraulic machine to deep drawing 0,4 mm thickness inox tubes, to obtain "T" and "Y" junctions. Designed to draw tubes with sections from $\varnothing 80$ mm to $\varnothing 400$ mm, just replacing the molds. Electrical control panel with buttons for manual handling.



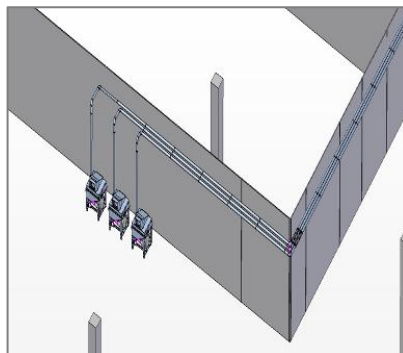
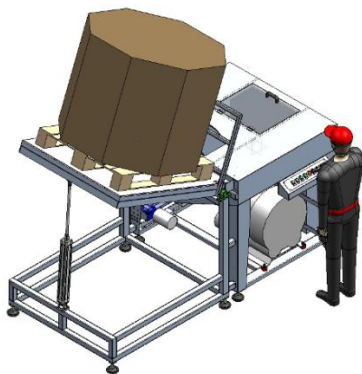
- **Double Feeder**

The double feeder was designed to move the cans' covers to the lines. The machine consists essentially of a series of mobile loaders which rotate around a fixed structure by a chain transmission. The introduction of the caps' packages can be made in a single predetermined area. The whole machine is controlled by PLC. We can also design its whole caps handling line.



- **Capsules transportation line**

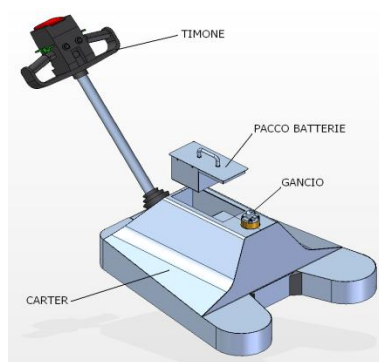
The line has been made for the automatic vacuum carriage of capsules (caps for PET bottles). May be composed of one or more separate units for the collection of Octabin containers from which depart the pipes carrying the caps. It may consist of one or more different units for the collection of Octabin containers, from which start the carriage pipes.



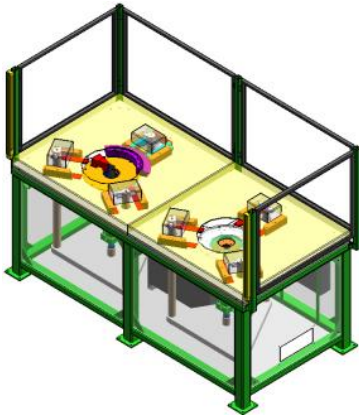


- **Battery powered Fork Lift**

The motorized monowheel Fork Lift is a system designed and manufactured to make the transport and handling of special packages easier, such as trolleys equipped with its own wheels but too heavy and bulky to be handled manually. Allows to move the carriage up and down, forward and backward. Power is supplied by the Ni-mh battery pack, extremely compact and light and perfectly integrated into the system. Each machine has its own charger and an additional battery pack, to have continuity of work. Due to its small size and ease of use, is particularly suitable for production departments. Moreover the materials and its shape makes it suitable to the pharmaceutical and food industries.



- **Bell Joint Machine**

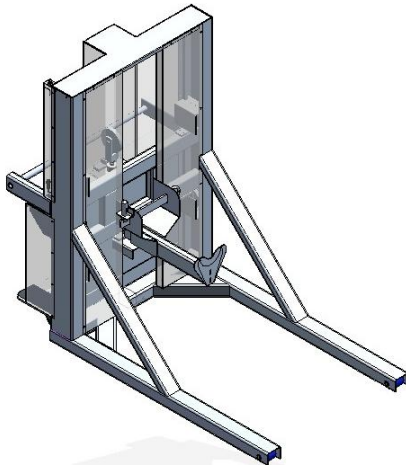


The machine allows to work, by plastic deformation, small thickness steel tubes.

The two workstations of which is provided, work simultaneously. A 12 sectors external dolly contributes to complete the process. Replacing molds and dollies it can be possible to work different sizes.

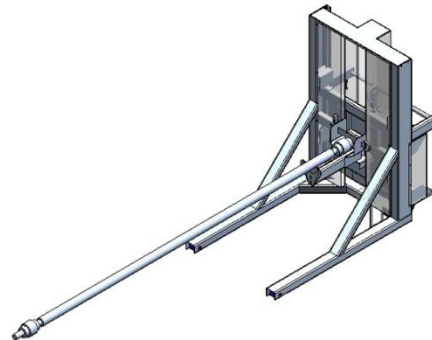
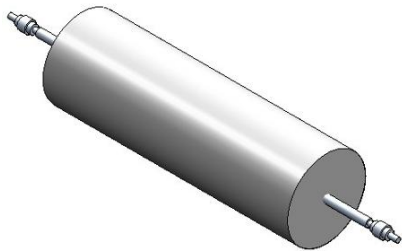
The machine is hydraulically powered.

- **Pole outtaker trolley**



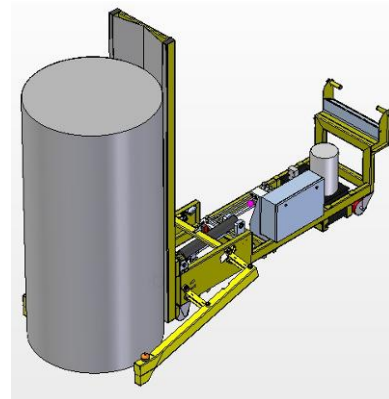
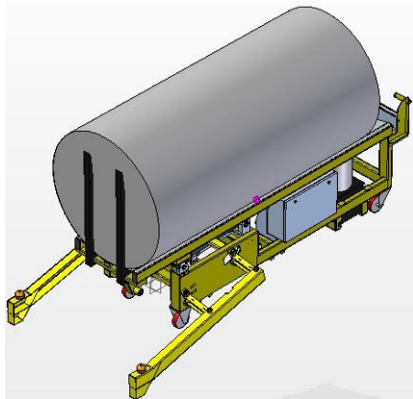
The machine has a device that allows to lock and to remove the core from the inside of a "non-woven fabric" coil.

It is pneumatically controlled and also allows the up and down movements for the positioning of the core.



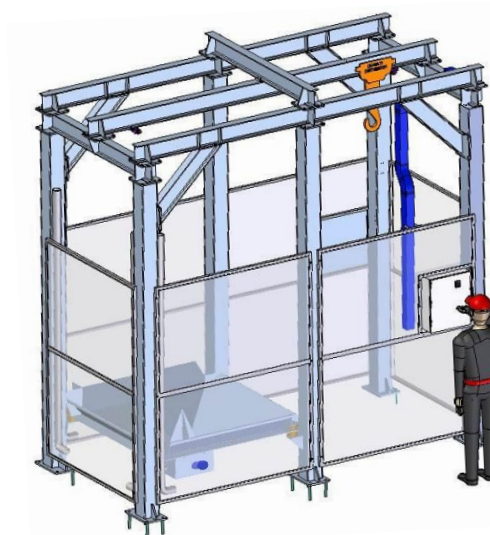
- **Overturmer machine**

Hydraulic machine that allows to lock and overturn a 1000 Kg coil of "non-woven fabric", coming out from the line, placing it on the pallet; the operation comes before packaging and shipping.



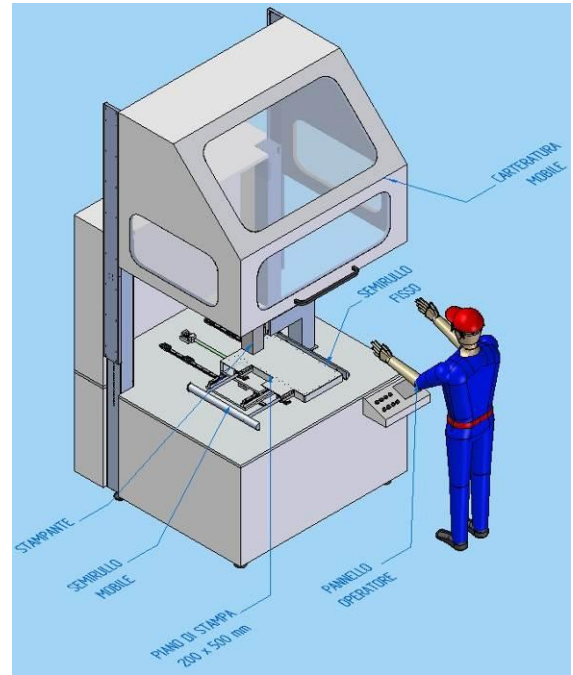
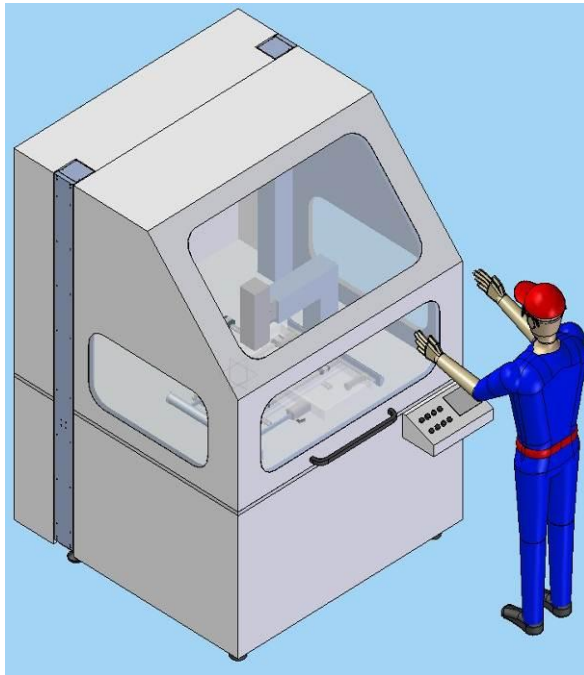
- **Machine for handling bags, with their opening and sending to the production lines**

This is a system for handling big-bags, to open and send them to the production lines.

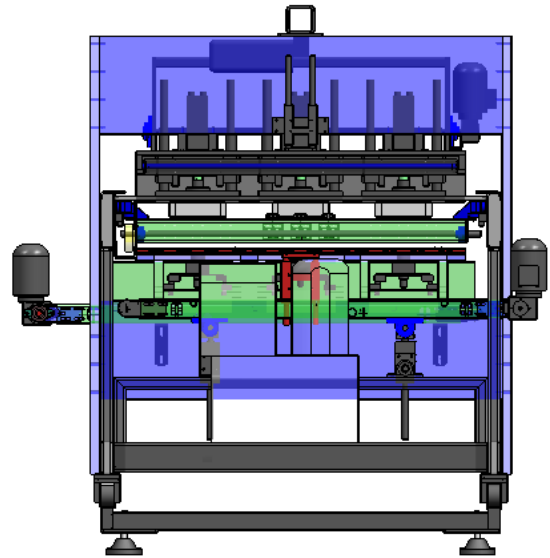
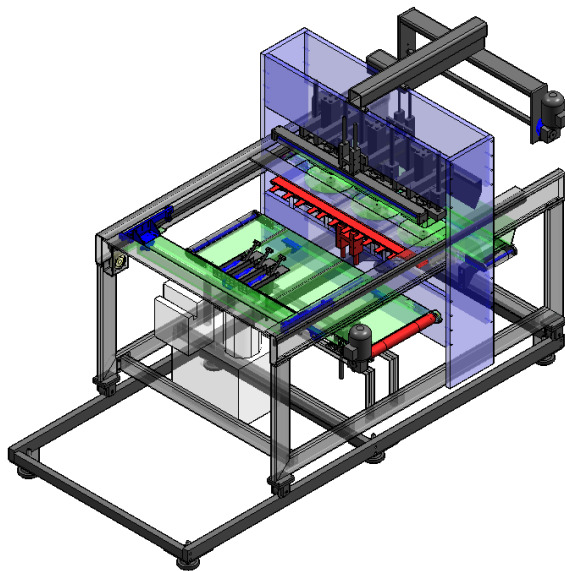


- **Sleeves printer**

This is an automatic machine to put, by ink printing, lines of text on sleeves of belts and / or ribbons. It's a 2 controlled axes system.



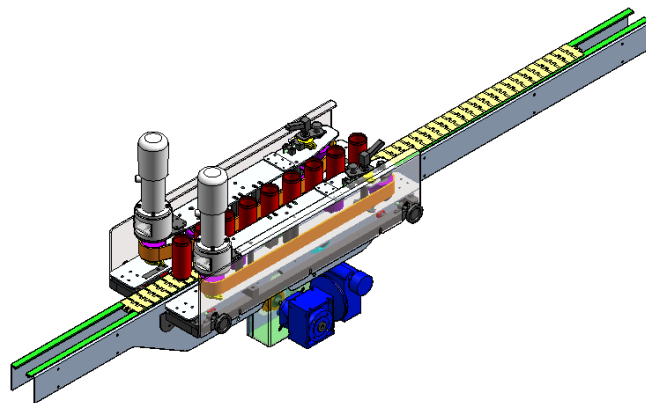
- **Automatic welder**



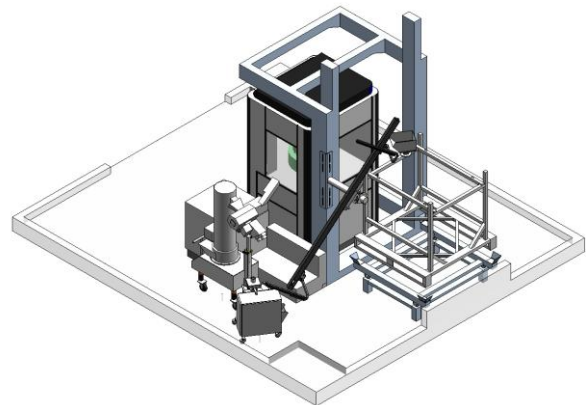
- Some coil unwinding /winding machines made for our customers.



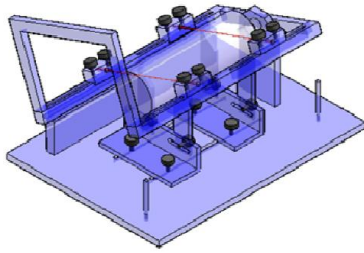
- Lateral handling with encoder



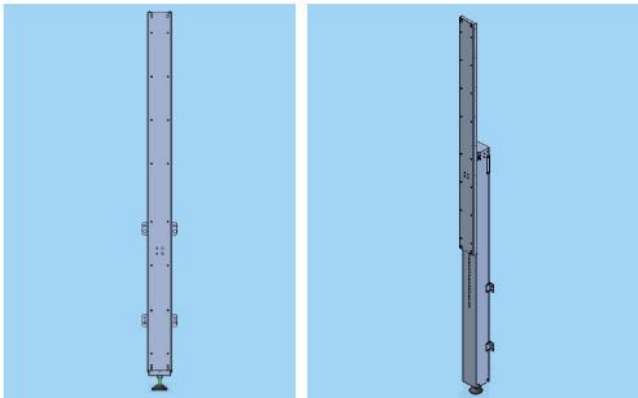
- Pneumatic logic carriage in gray room (pharmaceutical)



- Cutting device for bottles through electrically heated wire, manually adjustable

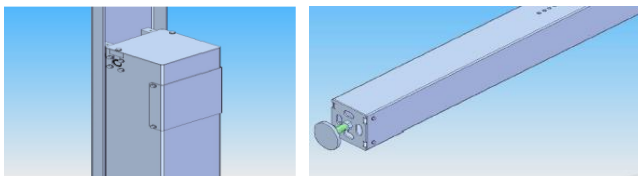


- Counterweight column



The column is a counterweighted vertical sliding equipment, capable of servo assist the lifting of the component fixed on the sliding part.

Its self-supporting structure made of stainless steel, as well as the possibility to combine and synchronize multiple units, makes it very suitable for production lines covering, machines and weights handling.



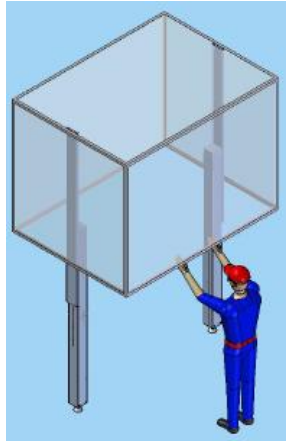
Its simple design and smooth steel surfaces, makes it particularly suitable for use in the food and pharmaceutical industries.

Even when the moving part is out, the roller chain, which supports the counterweight, remains invisible and well protected as required by the current normative.

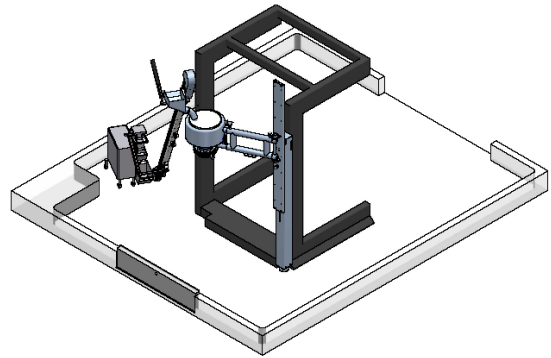
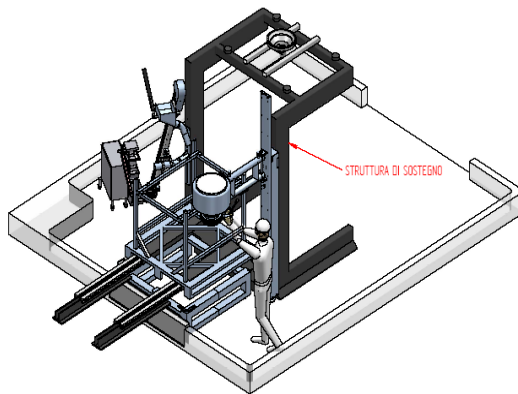
A fall protection system against the possible breaking of the chain that supports the counterweight, makes the system extremely safe. Large drainage holes on the bottom prevent the accumulation of dust inside.

- Counterweight column applications

a. Covers



b. Weights Handling: loading-unloading tablets



The operator comes close to the telescopic column with a trolley containing the hopper, its cover, the valve and all the necessary bearings. Without raising the components from the trolley, the operator install the system to the support arm, using no specific equipment. Removing the block that stops the telescopic column in a low position, the operator brings up the hopper which, at this point, it's "weightless". Once the right height is reached, the arm can be rotated and then locked in the desired position.

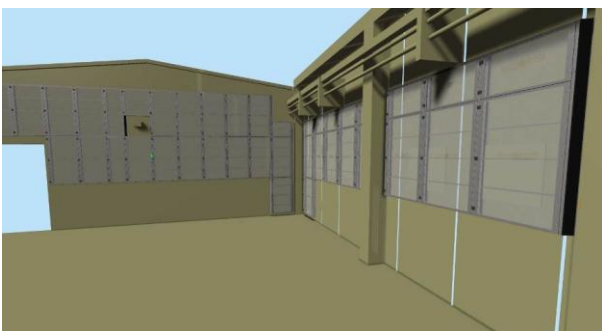
5 - Industrial maintenances



The professionalism, experience, and training of our staff allow us to perform efficiently and rapidly any maintenance, both ordinary and extraordinary. Moreover, the on time delivery and reliability of the work are guaranteed to end customers. Our offered services are:

- General Maintenances
- Industrial assemblies
- Mechanical and metalwork fabrication
- Molds maintenance
- Machining of different materials on behalf of others, made by traditional machines and CNC, on small or large series items; flat and round grinding
- Welding, Painting, Sandblasting

6 - Industrial sound-proofing



PQL Meccanica manufactures industrial internal and external soundproofing.

The operating sequence consists of a first design phase, followed by phonometric measurements with spectral analysis in order to characterize the acoustic properties of the environment and the noise sources. These informations allow us to find the best solution to solve the problem.

7 – Machinery Safety Regulations

Security must be implemented from the design and must cover the entire life cycle of a machine: design, construction, testing, installation, adjustment, operation, maintenance and scrapping. The new Machinery Directive 2006/42/EC became effective on December 29th, 2009. It establishes that manufacturers must ensure a minimum standard of safety for machinery and equipment sold within the European Union.

The machines must comply with the basic health and safety requirements, listed in Annex I of the Directive, in order to guarantee a minimum common level of protection and security throughout the European market. Before marketing a new machine manufacturers and their authorized representatives in the EU should: to ensure that the machine complies, to provide a technical dossier in the case of a justified claim by the Authority, to sign a "Compliance Declaration "and to affix the CE mark.

Very frequently you find yourself in front of constructions based on principles not complying the "safe design". The next step is to take technical security measures. These may include for example the installation of fixed or mobile protections, presence detectors to prevent unexpected start-ups, etc...

The technical security measures should prevent anyone to access or to accidentally get in contact with a dangerous element that involves a risk of personal injury, or reduce the risk taking it in a safe state before the person can get in touch with it.

The shelters can be fixed to limit or keep away from danger, or interlocking movable or adjustable manually or automatically).

The guards can be fixed, to limit your distance from a danger, or movable, or manually or automatically adjustable.

