

Radio-Pharma Presentation



About PBL



PBL was established as an industry-leading custom solution provider to global pharmaceutical corporations.

The entrepreneurial mindset of Franco Serventi and Marco Serventi – father and son – started in 1979 when the first automation solutions for beverage, chemical, and pharmaceutical sectors were designed, built, and installed. Four decades of extensive engineering knowledge obtained from thousands of successful projects are available to our clients.

The Serventi's history and passion for excellence, combined with the support of highly skilled engineers, makes PBL a unique partner for innovative and efficient solutions for global manufacturing corporations.

About PBL - Timeline

1979

Franco Serventi established GF



2002

New plant 9,000 m²



2014

Serventi's sold GF to an Italian tobacco group



2019

PBL purchased Lusardi and Ominidermal



2024

PBL was inserted in ranking of 1000 European companies with the greatest growth in the three-year period 2021-2022-2023, by "Financial Times"



2024

Timeline

2001



PBL was founded as a R&D company for GF

2013



Over 1,000 pharmaceutical machines successfully installed

2018



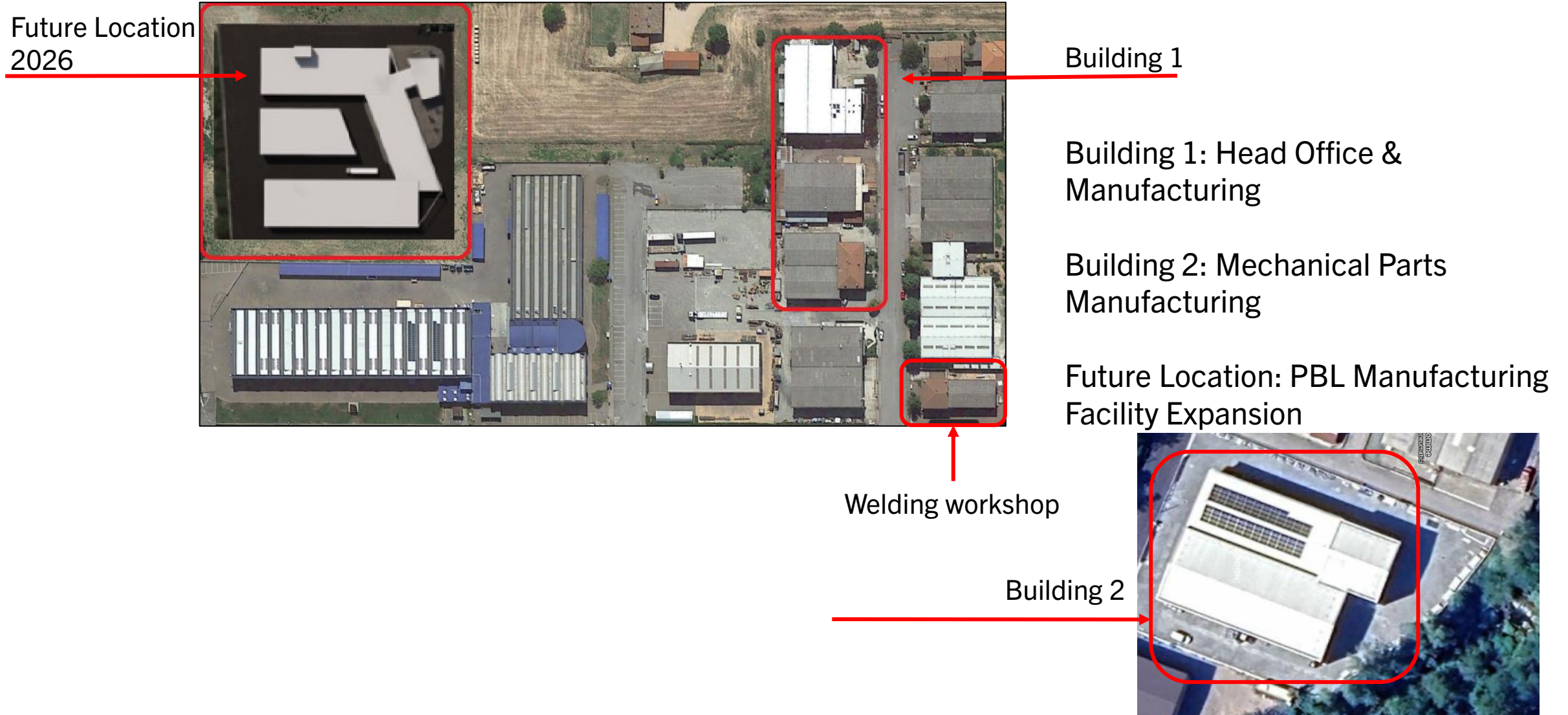
PBL enters the world market with its own brand

2020



First AI trained AVI Machine installed and Validated in pharma field

PBL Facilities



PBL Facility Expansion

PBL is expanding their manufacturing facility. The new state-of-the-art building will triple PBL's manufacturing capacity to 10,000 square meters

Expected construction completion is 2026.



PBL Today

Employees



110 high
skilled workers

Workshop



18 state-of-the art
machining centers

Know-how



45 + years of
experience

Our Certifications



The **CE marking** designates a set of mandatory practices for all products for which there is a Community directive in this regard.



Good manufacturing practice (GMP) is a system for ensuring that products are consistently produced and controlled according to quality standards.



UL certification is issued by an NRTL. The UL certification attests to a product's compliance with a particular standard and is valid in the United States.



Industry 4.0 is the propensity of today's industrial automation to include some new manufacturing technologies to improve working conditions, create new business models, increase plant productivity and improve product quality.



The **Machinery Directive 2006/42/CE** foresees to carry out specific activities in order to increase the safety level of the plants by integrating safety in the design and construction phases, up to a correct installation and maintenance.



PBL ISO 9001:2015

Integrated Environment



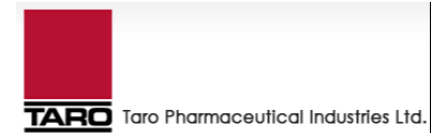
PBL is ideal partner for pharma, radio-pharma and cosmetic customized solutions applied to primary and secondary packaging. In a collaborative approach, our experts offer flexibility, innovation, technical expertise and value on your investments.



PBL is able to design and supply filling and packaging lines for single serve coffee, capable to satisfy any customer's request and react quickly to continuous market developments.



Customers looking for complex and customized software and hardware solutions can find an ideal partner at PBL. Our expertise in Artificial Intelligence and Deep Learning is offered to companies in need of dedicated industrial solutions based on innovative and efficient technologies.



Smartsheet provides essential tools for effective project management.

Smartsheet allows PBL to strategically plan project development with a real-time view of the data.

Visibility is one of the most important outcomes of standardized and streamlined process management, Outlaw says.

PBL uses dashboards to aggregate and visualize data so stakeholders can see at-risk projects, budget performance and development trends that could affect the business.

All PBL projects require collaboration between teams, so defining which roles handle particular tasks avoids confusion about which team is responsible for the next step.



PBL's Key Strengths

Flexibility & reliability

Custom designed equipment

Filling Accuracy

$\pm 2\%$ from 50 μl , down to $\pm 0.5\%$

Automatic Inspection with Artificial Intelligence

Increased detection rate while reducing the false rejection rate



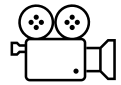
Semi-Automatic Formulation and Dispensing Hot Cell

Components and Process

- Shielding 135 mm (equivalent glass)
- Vial 10ml 10R (pre assembled)
- Manual formulation HOT CELL
- Automatic dispensing HOT CELL
- Automatic dispensing machine
- Automatic stoppering
- Automatic crimping
- Assay control by dose calibrator
- Robotic handling
- Sampling station
- Operator safety protection

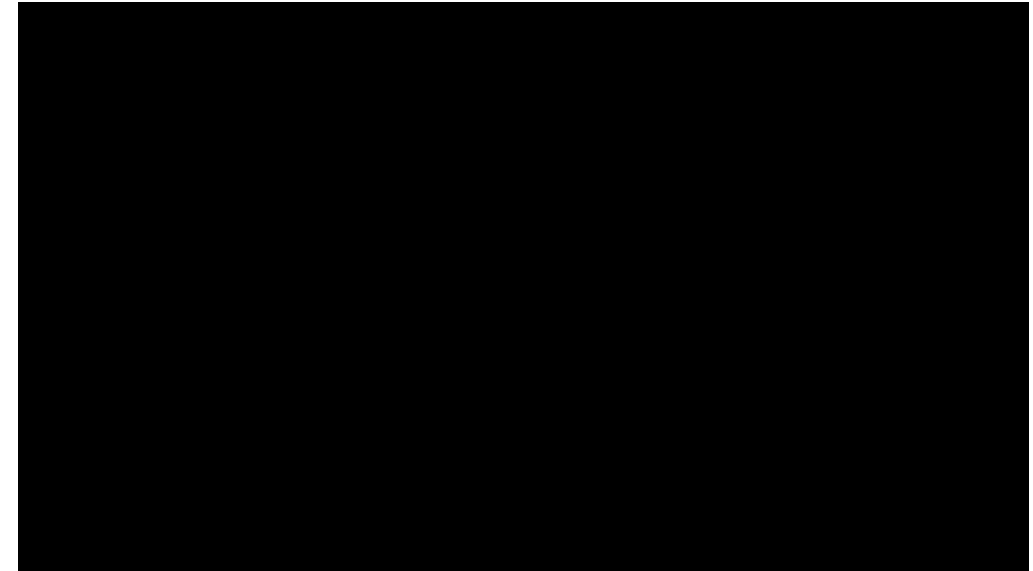
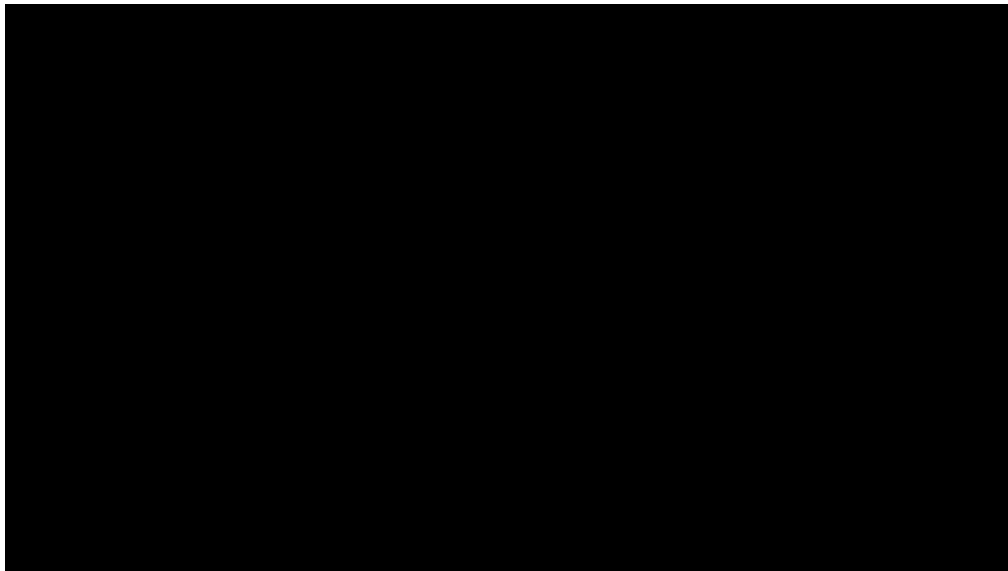
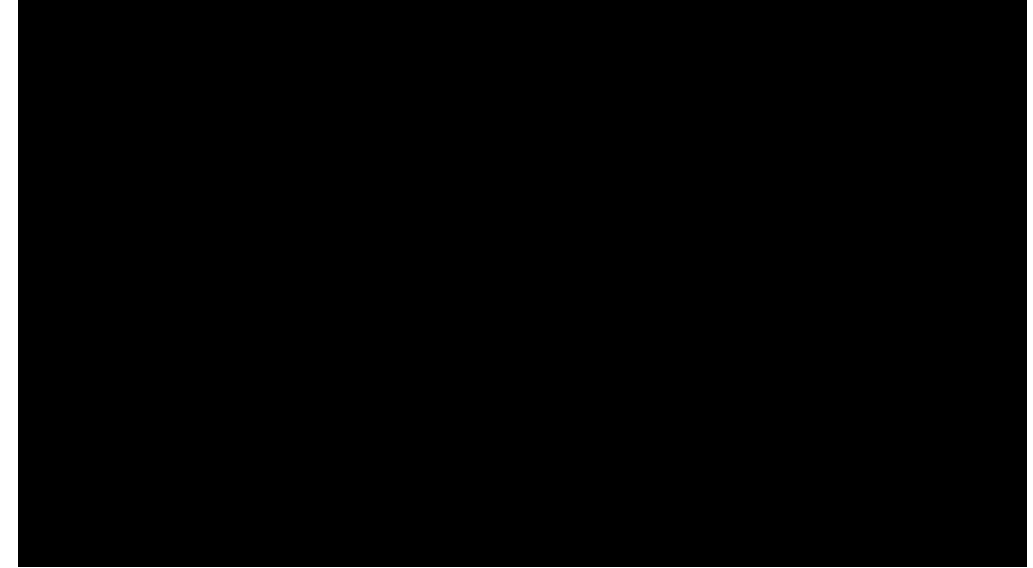
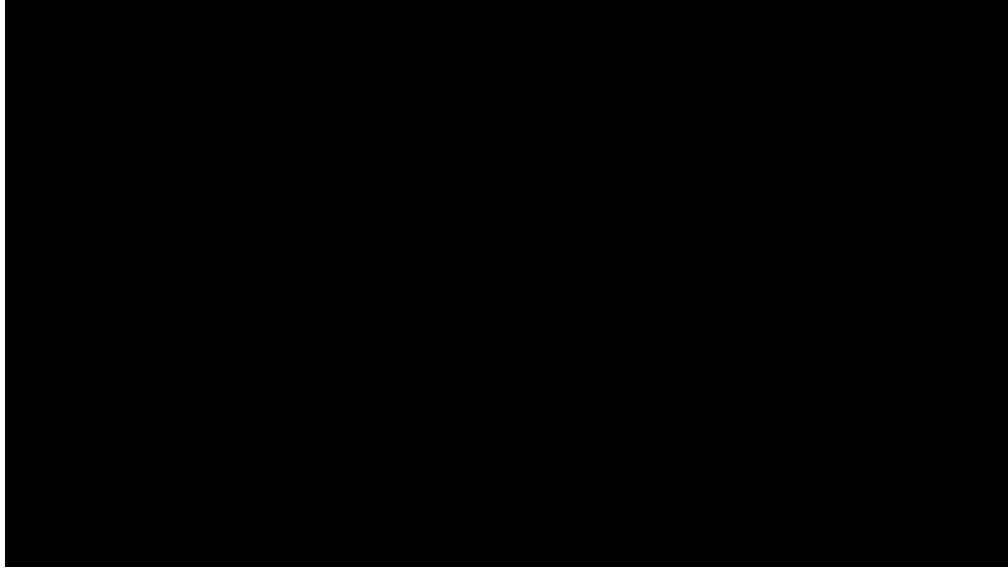


Semi-Automatic Formulation and Dispensing Hot Cell



Video Link: <https://vimeo.com/663006931/5d5af3234c>

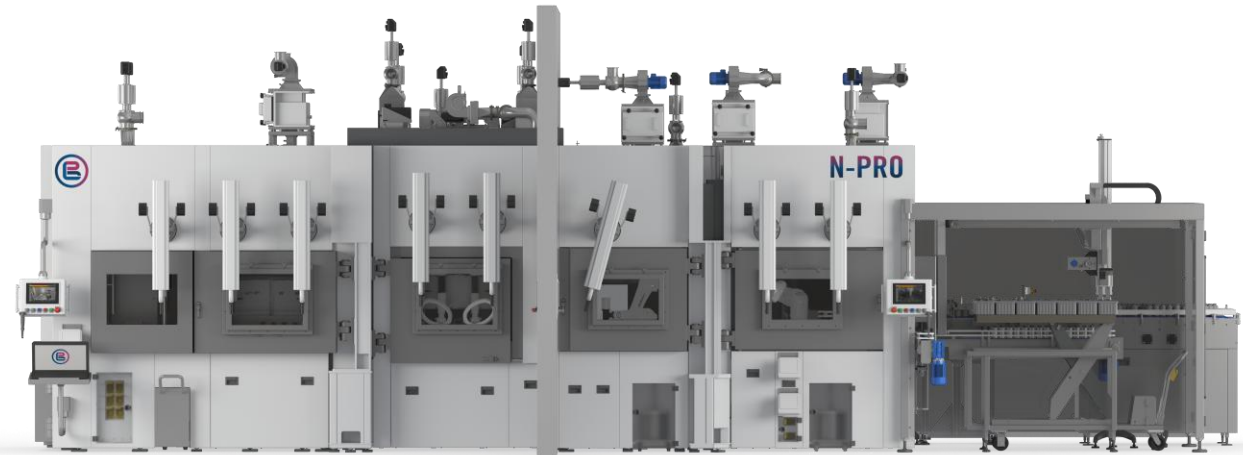
Semi-Automatic Formulation and Dispensing Hot Cell



Formulation, Dispensing, Inspection, and Packaging Hot Cell Line

Components and Process

- Shielding 60-170 mm (equivalent glass)
- Vial 10ml 10R (pre assembled)
- Manual formulation HOT CELL
- Automatic dispensing HOT CELL
- Automatic/Manual Inspection HOT CELL
- Automatic packaging HOT CELL
- Automatic dispensing units (2)
- Automatic stoppering (2)
- Automatic crimping (2)
- Assay control by dose calibrator (3)
- Robotic handling
- Lead Pot vials insertion unit
- Operator safety protection
- Redundancy process system (for batch recovery)

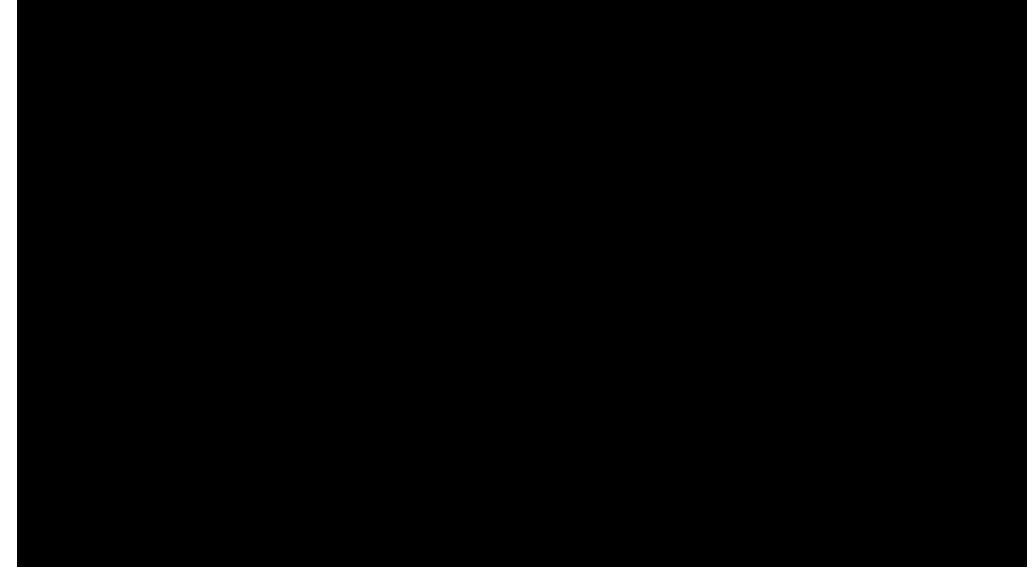
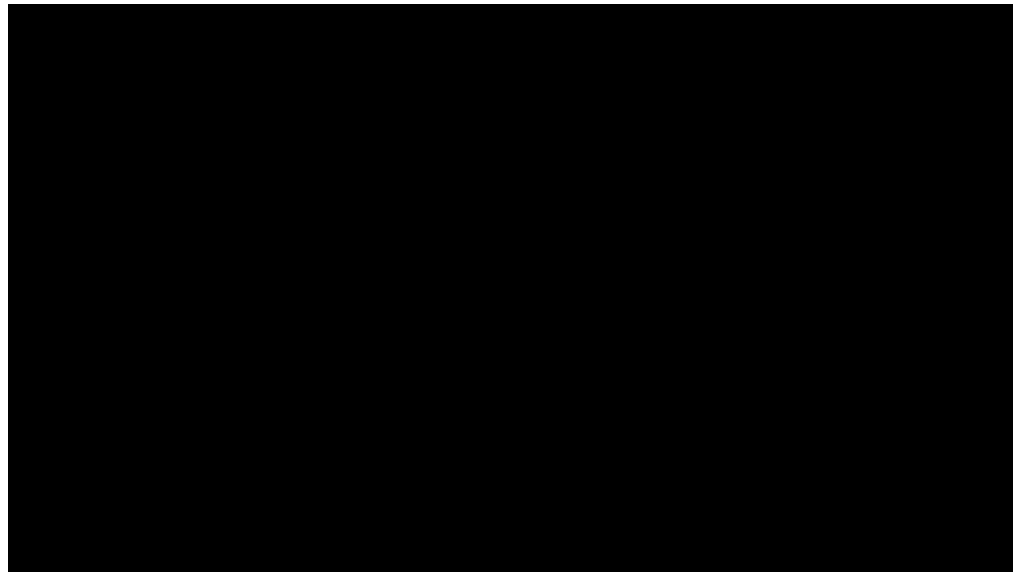
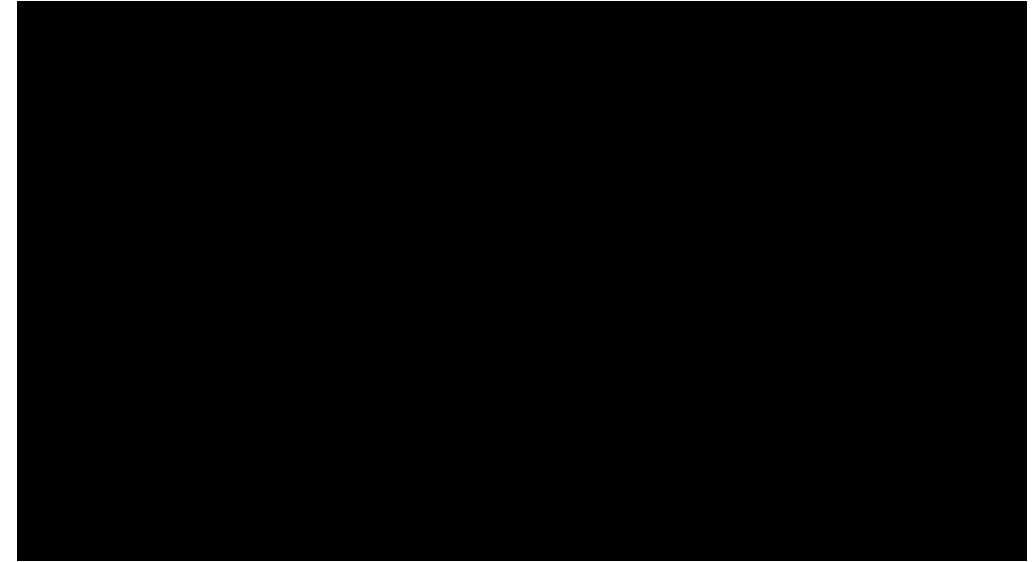
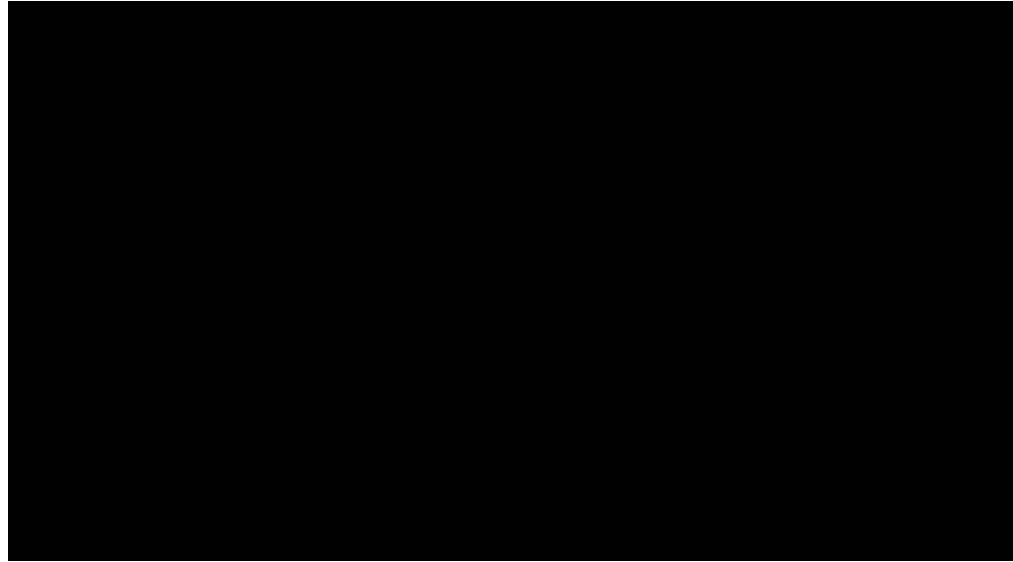


Formulation, Dispensing, Inspection, and Packaging Hot Cell Line



Video Link: <https://vimeo.com/842518034/29ffbd08d6?share=copy>

Formulation, Dispensing, Inspection, and Packaging Hot Cell Line

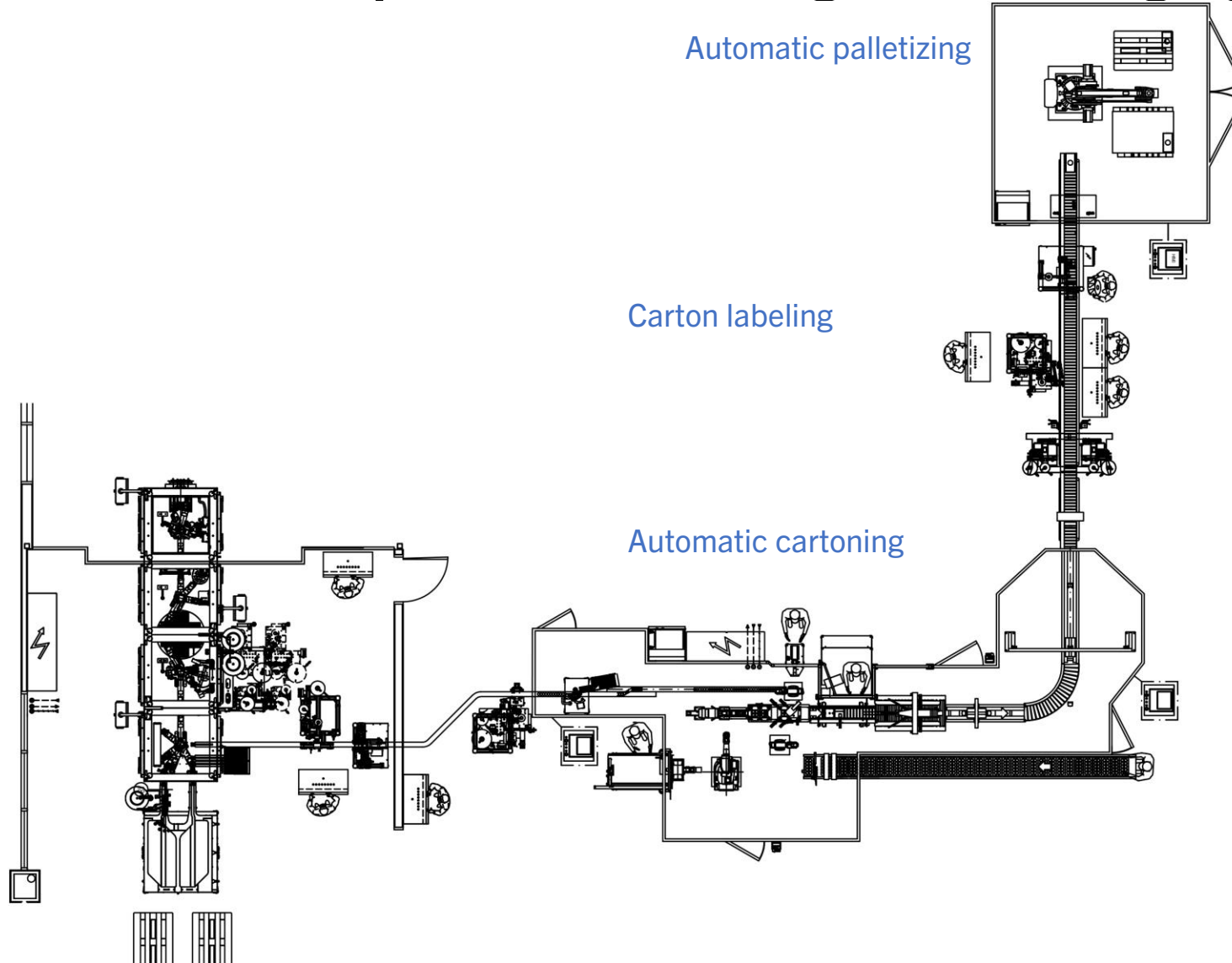


Automatic Inspection, Labeling and Packaging

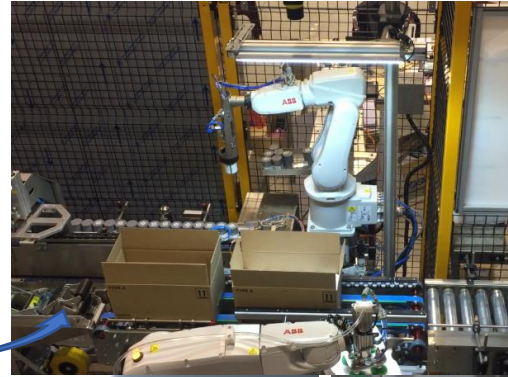
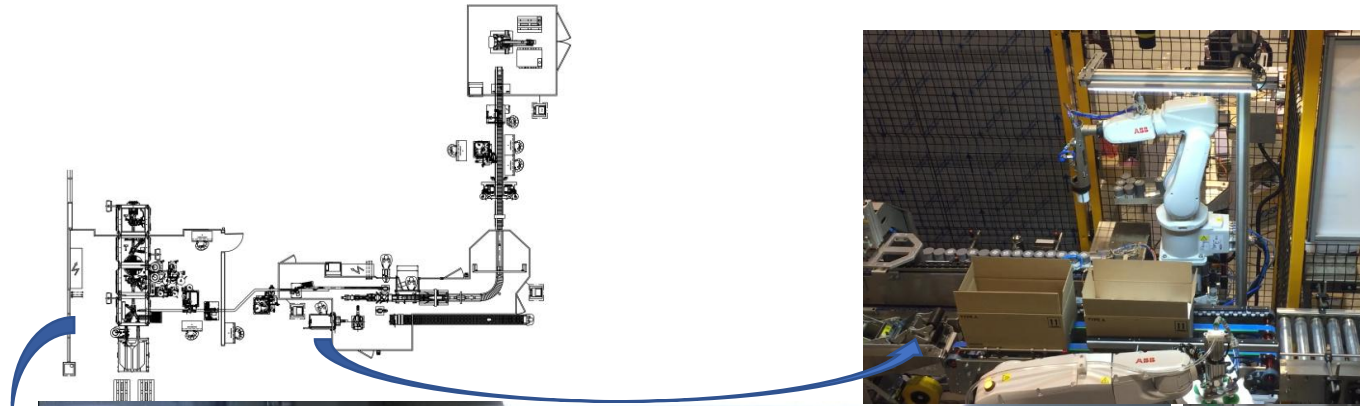
Automatic Visual
Inspection

Labeling

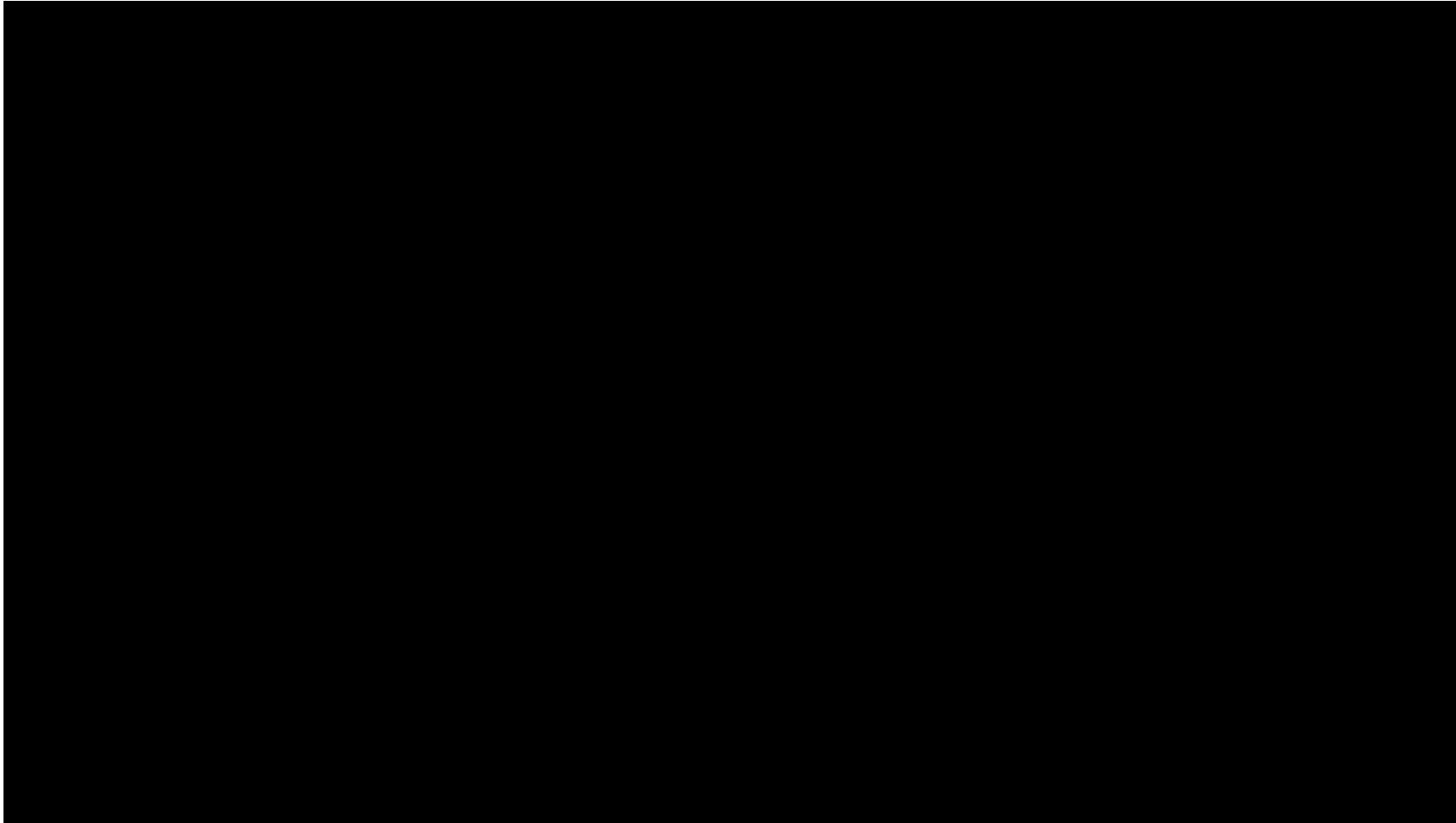
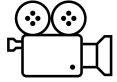
Lead pot vial
packing



Automatic Inspection, Labeling and Packaging

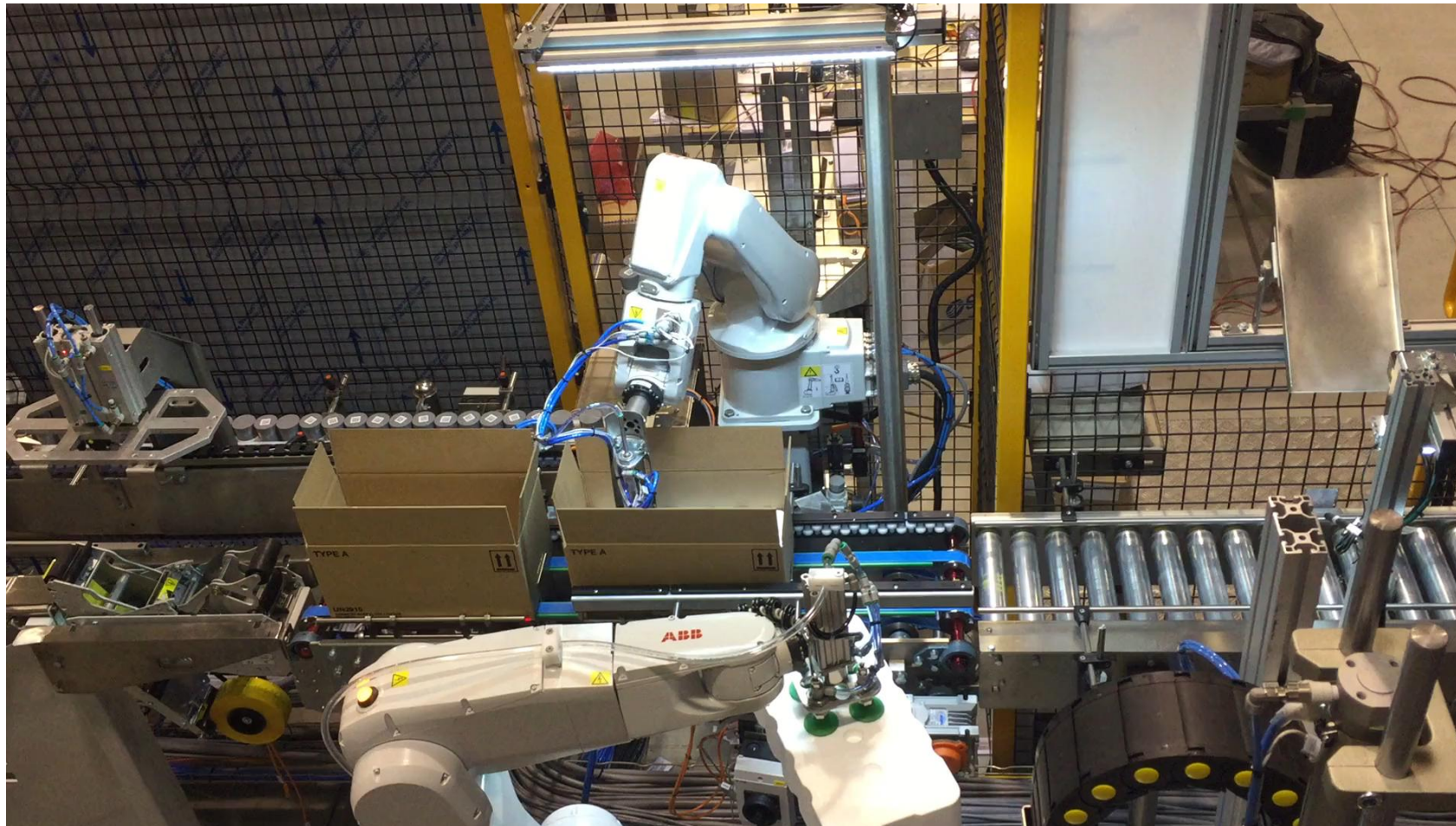
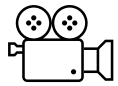


Automatic Inspection, Labeling and Packaging



Video Link: <https://vimeo.com/577216179/23f32a7120>

Automatic Cartoning and Palletizing Line

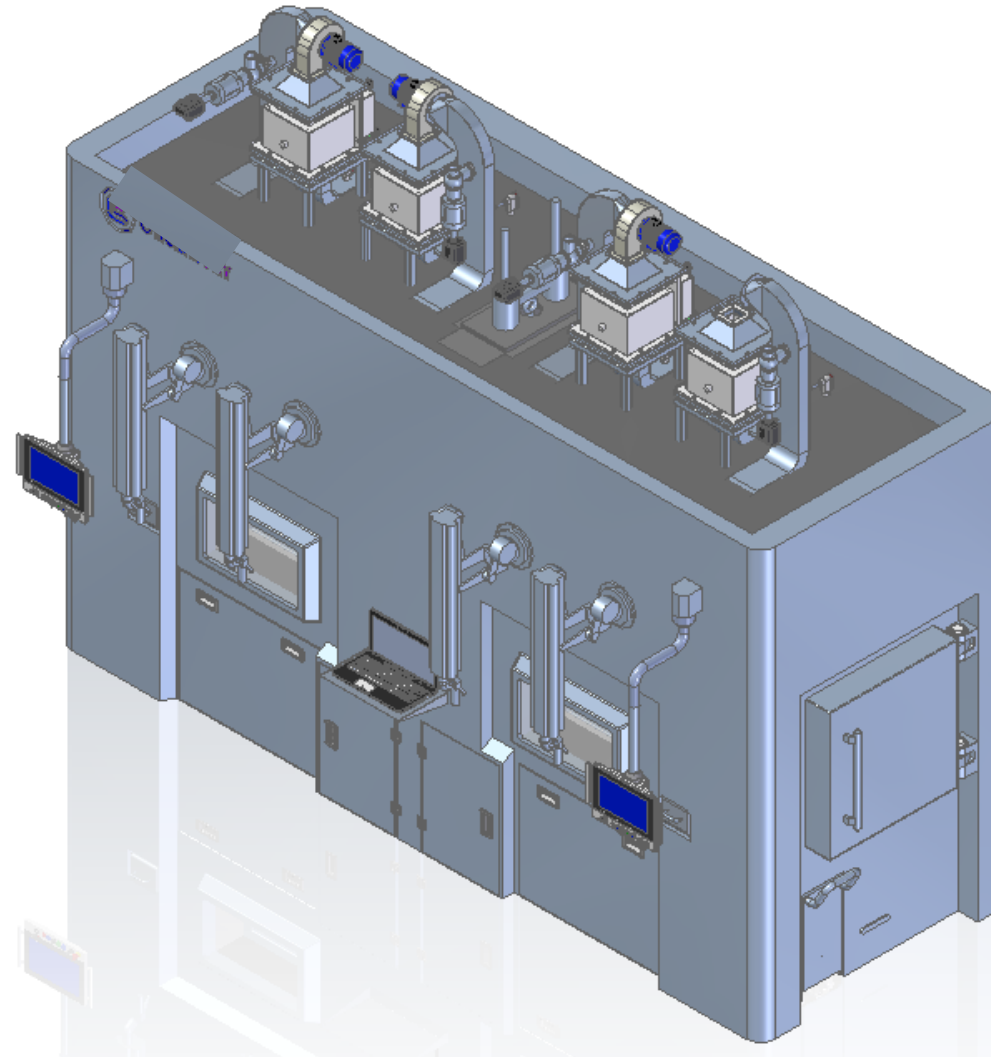


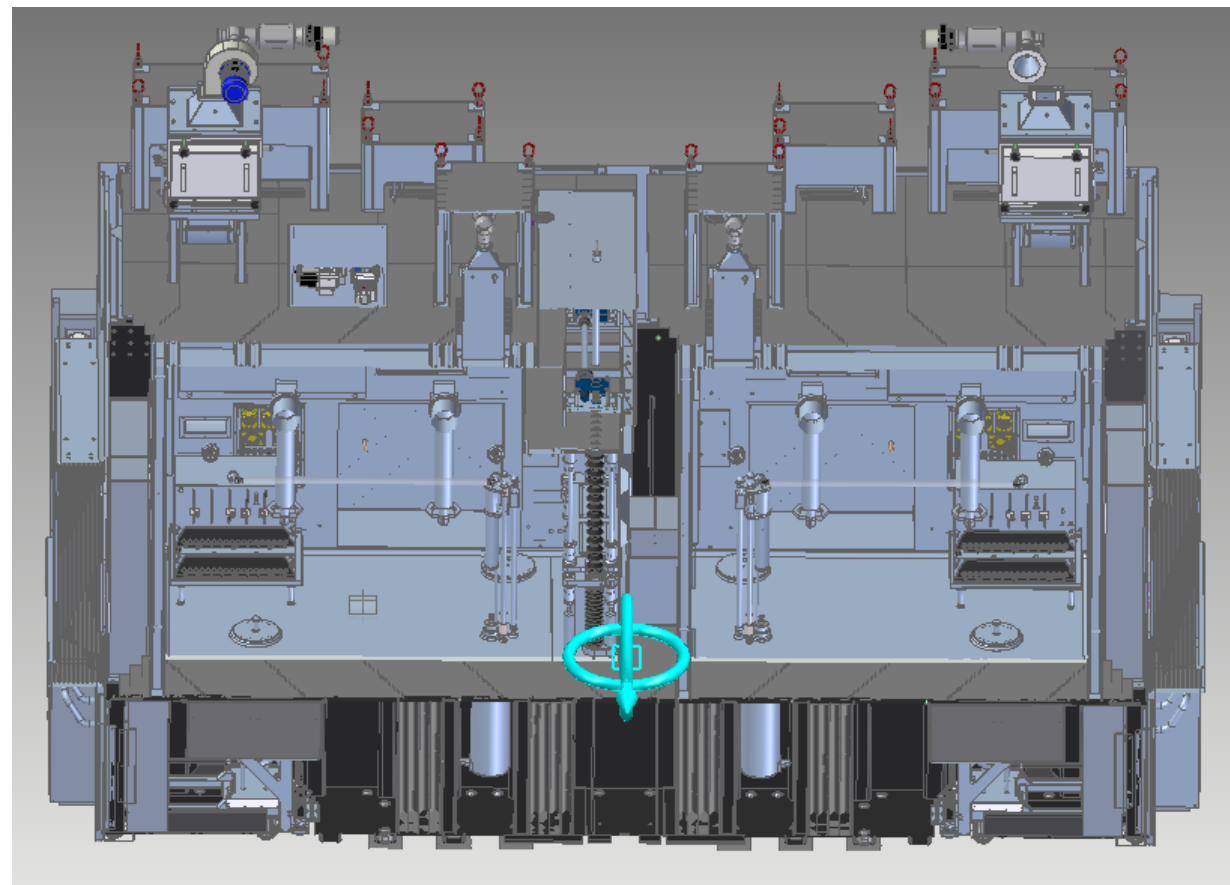
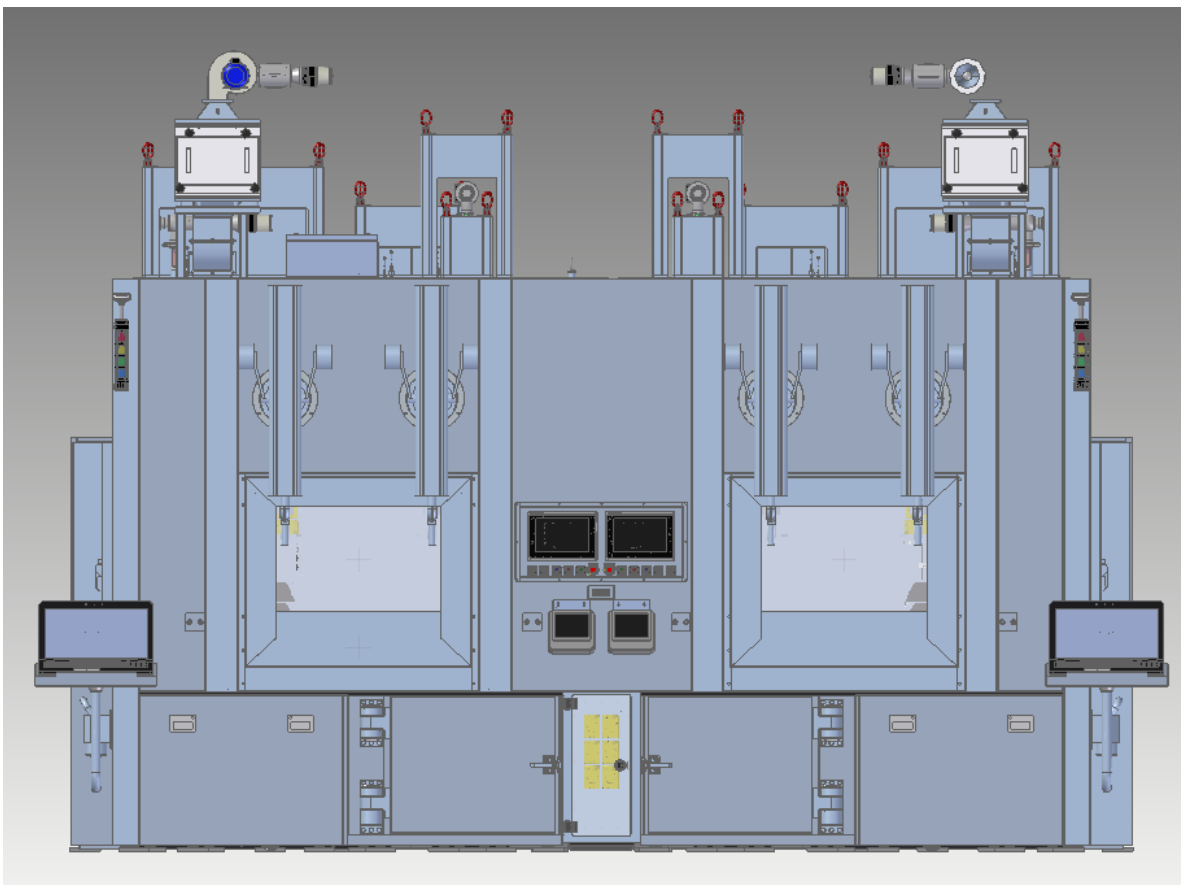
<https://vimeo.com/689408782/b36f1de567>

Semi-Automatic Isotope Recovery and Purification Hot Cell

Components and Process

- Shielding 190 mm (equivalent glass)
- Vial 10ml 10R (pre assembled)
- Manual HOT CELL 1
- Manual HOT CELL 2
- Assay control by dose calibrator
- Manual handling





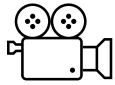
Semi-Automatic Visual Inspection Hot Cell

Components and Process

- Shielding 10mm (equivalent lead glass)
- Vial 10ml 10R
- Manual Vials feeding by LEAD BOX
- Manual Inspection
- Automatic rejection system
- Manual unloading by LEAD BOX



Semi-Automatic Visual Inspection Hot Cell



Video Link: <https://vimeo.com/577215991/84cbd2364b>

Semi-Automatic Visual Inspection Hot Cell



N-FILL: Vial Dispensing System



- Capability to fill pre-assembled vials.
- Output speed: 30 seconds/vial.
- Dispensing system using peristaltic pump (additional syringe pump filling nozzle available upon request).
- Sealed with rubber stoppers and aluminum caps or press-fit caps.
- Integrated bubble-point test.
- 100% IPC - integrated weight check with retroactive feedback to the dosing station.
- User-friendly and fast, tool-free format change over.

- Operator manually places the vial in the dispensing vial holder.
- Robotic vial handling available in PBL hot cells, as an option.
- Filling and closing operations are performed automatically.

N-FILL: Vial Dispensing System



N-VISIO: Vial Inspection System



Cameras

Illuminators
(underneath and
behind the vial)

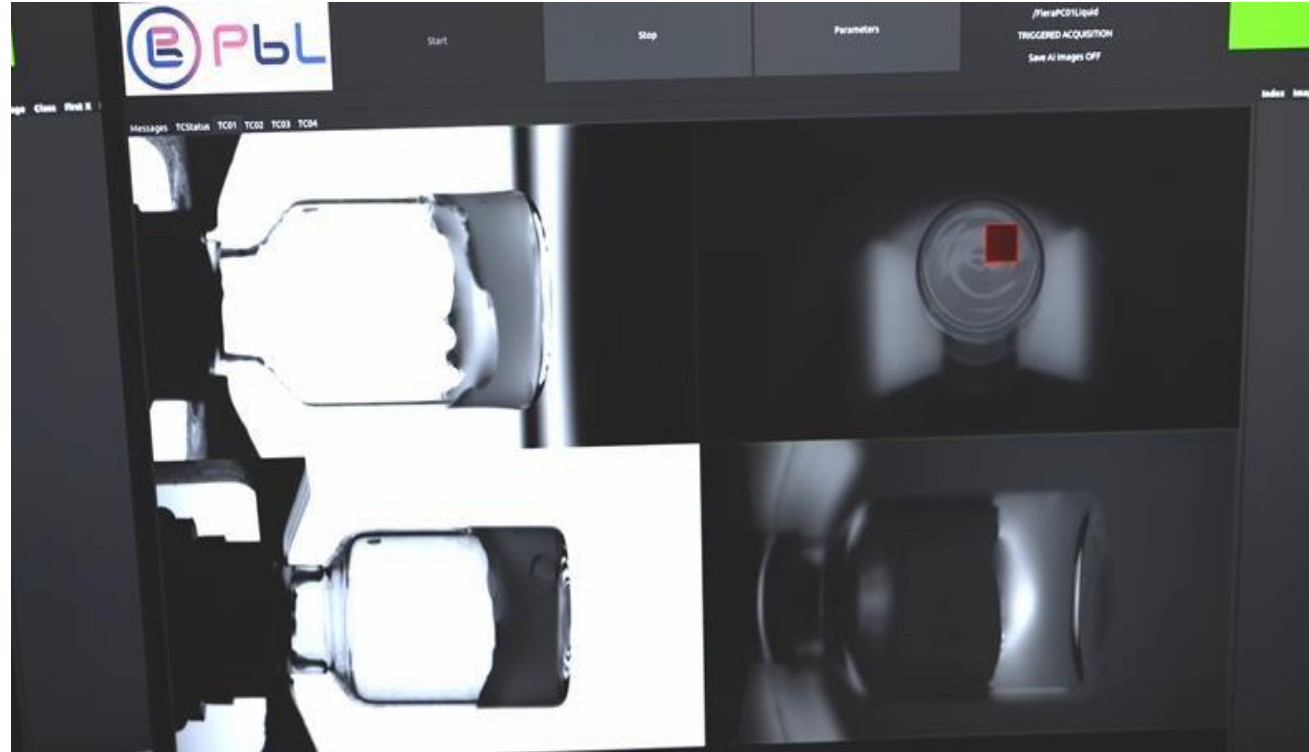


Similar machine

N-VISIO: Vial Inspection System



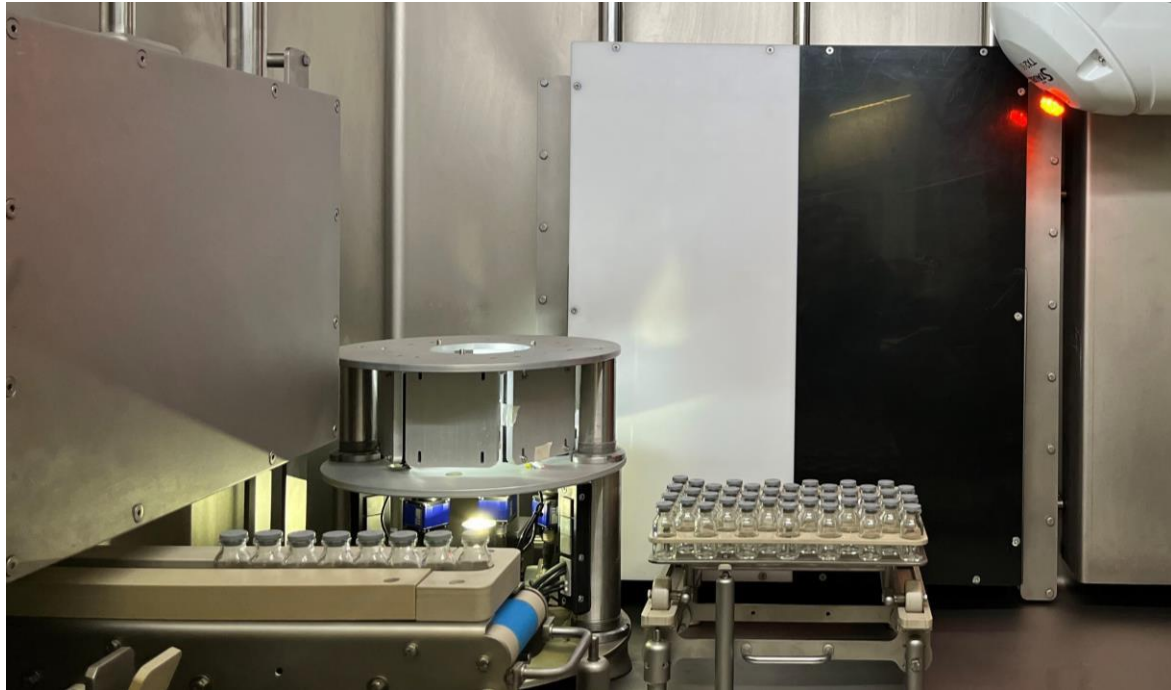
Vial holder and spinning station



Similar machine

View from HMI

N-VISIO: Vial Inspection System



Dark and white
background for
manual inspection

Similar machine



Change parts for
different format sizes
or containers

N-LAB: Vial Labeling System



Similar machine

N-LAB: Vial Labeling System



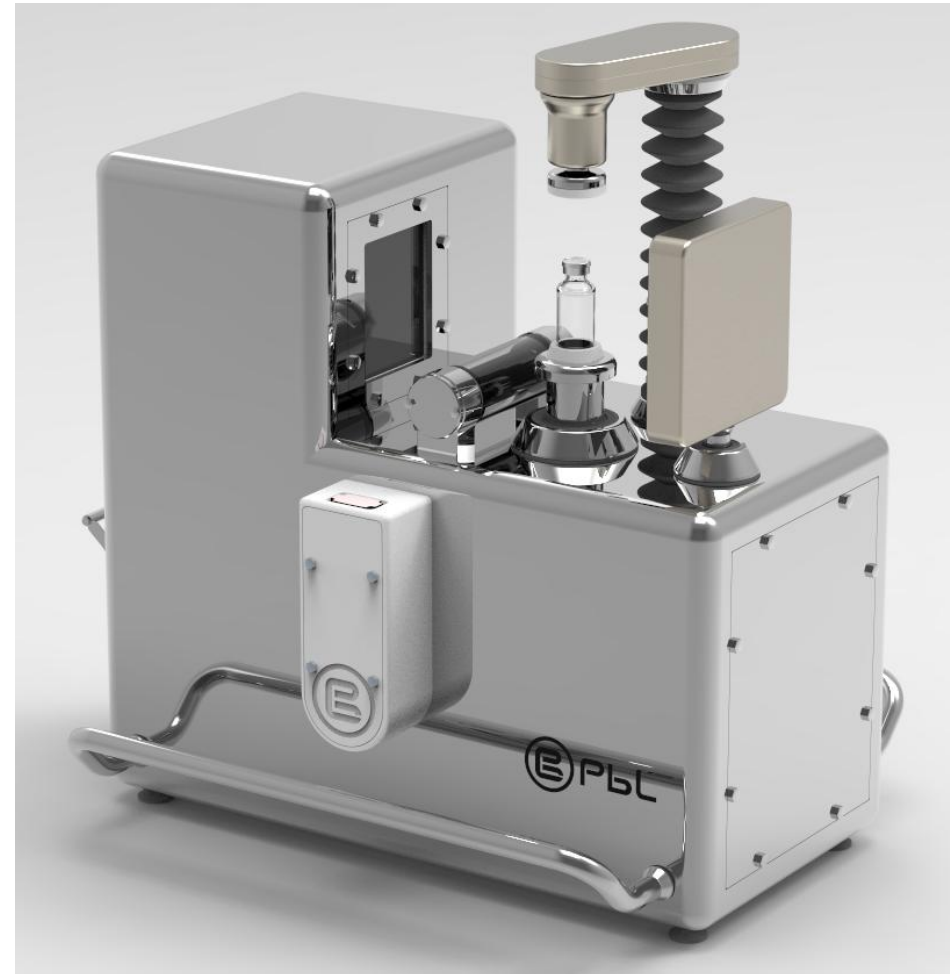
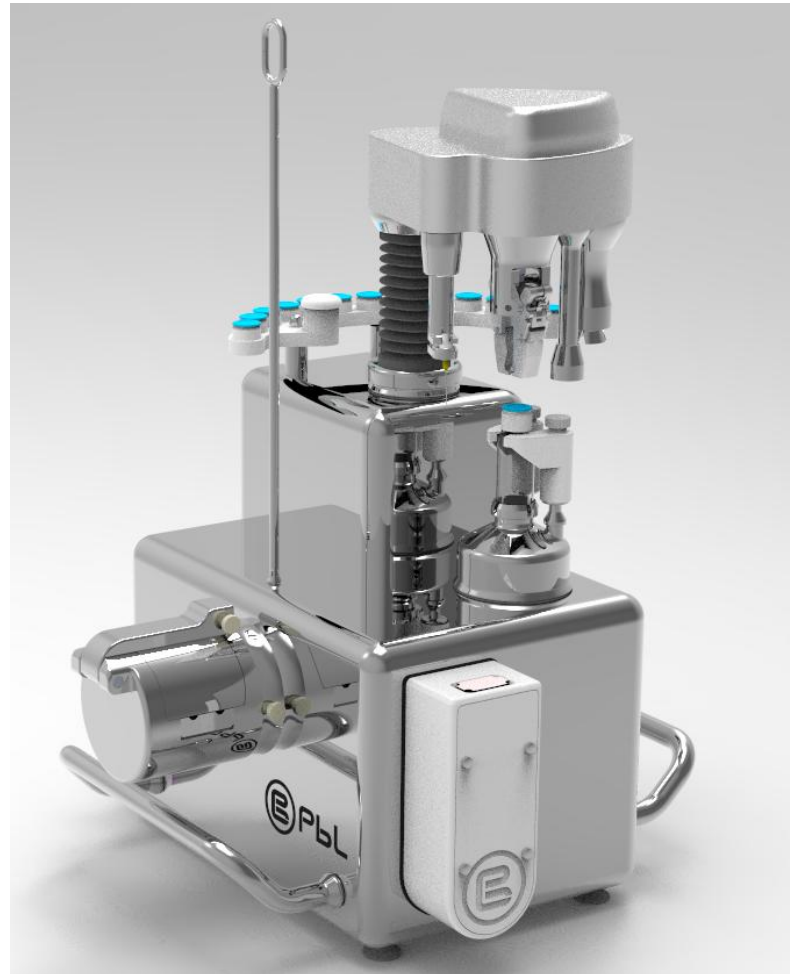
Label
application

Vial holder



Similar machine (larger scale)

N-LAB: Vial filling and Vial inspection





Find us on: www.pbl.it