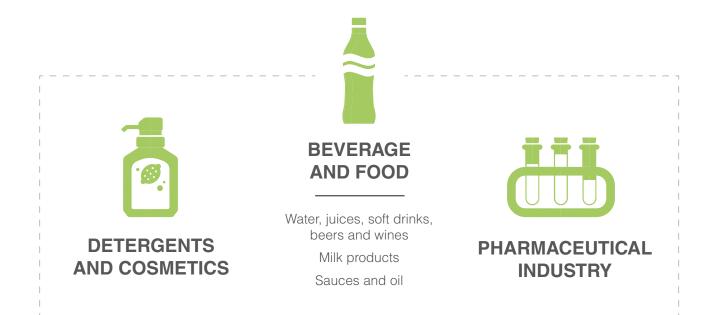




# One problem One solution



pygsa is a bespoke manufacturer specialized in the development of integral solutions for the industrial automation processes and quality control in multiple industries:



# OUR SYSTEMS ALLOW YOU TO

- Ensure products quality even in high speed production line.
- Fault reduction due to early warning in the manufacturing process.
- Product inspection eliminating the human factor.
- Reduction of customer claims.
- Integration with control systems and production optimization.

# WE OFFER TO OUR CLIENTS

- Technical multidisciplinary team specialized in the system design fabrication and integration.
- Testing laboratory to evaluate and ensure the provided equipments and applications.
- Our R&D department help us constantly develop our equipments and made us receive the innovative company stamp.









### Artificial Vision Inspection Systems

Product and manufacturing lines automatic quality control through pictures product processes even in high speed production lines.



#### **Air Drying Systems**

It removes superficial water from the sample in the production line blowing out with air. As well, it prevents possible oxidation such as product water retention and facilitates all labeling processes. It does not need any external compressed air connection.



Industry 4.0

Our software tool seeks to improve the productive and bottling processes by focusing on the system and particularly on the OEE (Overall Equipment Effectiveness). As well, on the improvement and quality of the product obtained.



**Reject Systems** 

We offer a pneumatic system capable of removal from the non-conforming product or like diverters in the production line.



#### **Dynamic Weigh Systems**

Dynamic weigh control enabling insurance of the correct quantity of the provided product. Connectivity with other monitoring unit for the dosage system synchronization.

























# INSPECTIONS



### SOFTWARE --

It includes a user-friendly pygsaVision software allowing an easy handling even for people without experience in artificial vision systems.

\_ \_ \_ \_ \_

Besides, it incorporates simple and intuitive inspection tools that allow:

- Handles multiple formats.
- Protects the system from unauthorized line staff with passwords (3 security levels).

• Provides value information to the production management system.

• Enables and disables the expulsion from the software.

• Selection of active and inactive inspections from the software.

• View the review of the latest "Bad" inspections, which facilitates the identification of productive problems and parameterization of the tolerances of inspection.

• Remote control with remote assistance.





### DATABASE

Powerful database that allows filtering of inspection results based on criteria such as; date, time, type of defect... Displays the images of faulty inspections. It has the possibility of generating reports and exporting or exporting the information. Working formats pdf and csv.



# HARDWARE --

• Fan-less industrial computer that ensures the Optimum performance of the system.

- 17 "LED display for the inspections and control of the application.
- High-performance led lighting systems power.

• Enclosure for keyboard and mouse protection.

- Power supply 220V / 12V and 24V hardware.
- Status light beacon.

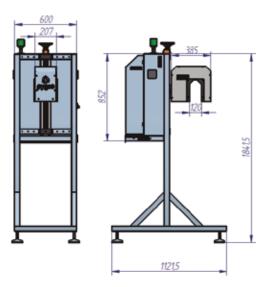
• Stainless steel finishes AISI 304 or 316 and aluminum and nylon machines.

- Baked paint to ensure its long-term durability.
- Easy and flexible change of formats, optional automatic format change system.

• Safety disconnect sequence before inadequate system shutdowns. (Do not protects against power cuts).

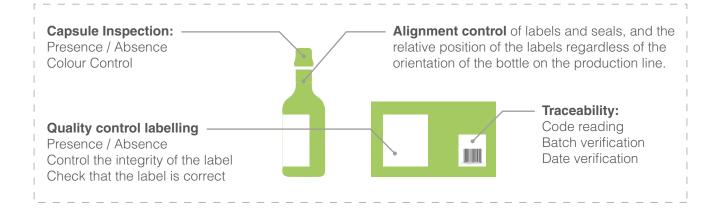
• 18 months Warranty against manufacturing defects.

• No maintenance required.





**pygsaVision 360Label** is an equipment specially designed for the control of the correct labeling of bottles. The system allows the control of cylindrical and square bottles in the same point of inspection, regardless the cylindrincal bottles orientation in the production line since the system is able to absorb the turns of the bottle and the position on the conveyor belt.

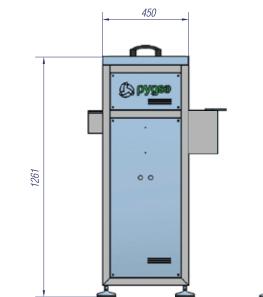


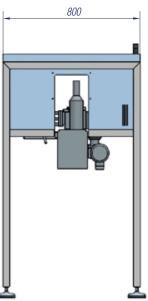






# **LOW SPEED**



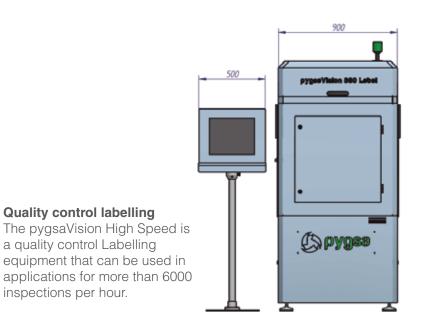


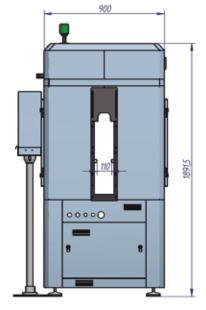
**Quality control labelling** The pygsaVision Low Speed is a quality control Labelling equipment that can be used in applications for less than 6000 inspections per hour.

**HIGH SPEED-**

**Quality control labelling** 

inspections per hour.



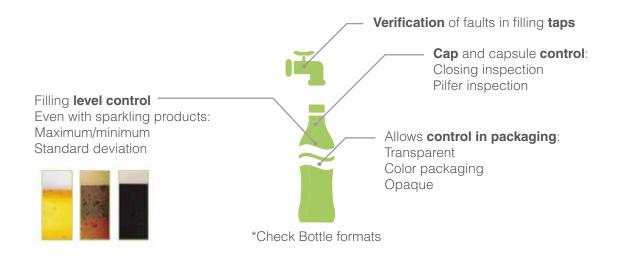








**pygsaVision CheckLevel** is a specially designed system to control the filling level of the containers, such as the cap closure control.







**pygsa CheckLevel** performs inspections with the use of sensors:

- Capsule inspection (presence/absence)
- Minimum level inspection
- Maximum level inspection (optional)
- Presence of metal capsule (optional)

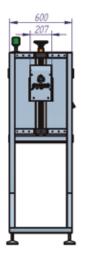


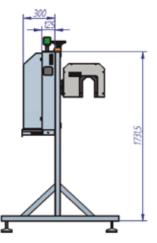


**pygsaVision CheckCode** is a specially designed equipment for the coding and product lots control. This system is able to ensure traceability, as well as food products safety.





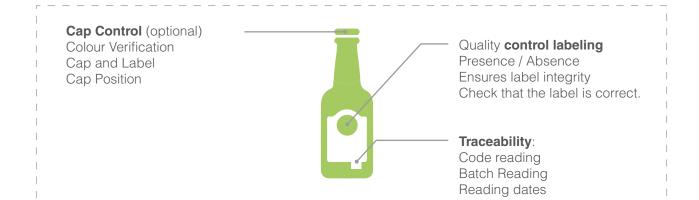




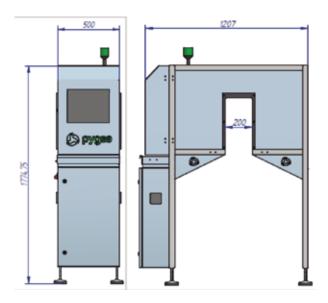




**pygsaVision CheckLabel** is a specially designed equipment for the product labelling quality control, the serigraphy or the shrink wrapping in cylindrical bottles/can/containers with controlled orientation and square ones on the conveyor belt.









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**pygsaVision CheckPlus** is a versatile modular combination vision inspection system. It allows to select the desired product inspections. Depending on the number of issues that wish to identify, the system is provided with a larger or smaller set of inspection modules.

#### - Control of codes and lots

- Cap control
- Control of filling levels
- Color control
- Label control

The modular system allows you to combine inspections of other models according to your needs.
You can implement various additional features to be carried out by standard models (subject to status).





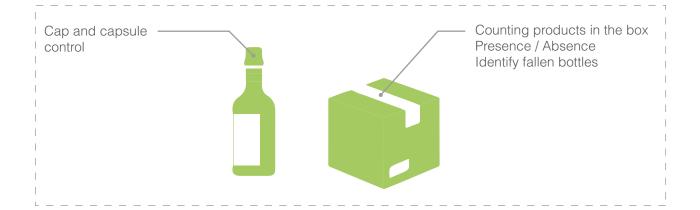






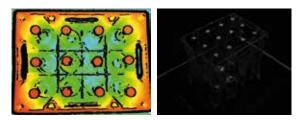


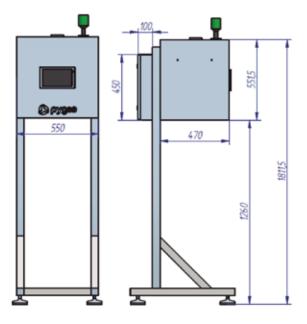
**pygsaVision CheckBox** is designed to inspect boxes at the end of the production line. System designed to control the quality of your boxes and checking the number of products before sealing.





Images from our inspections









**pygsaVisión CheckNeck** is a specially designed equipment for the quality control of the Neck and Lip of the bottle, ensuring the absence of breakage, which can compromise the quality of the product or the consumer safety.



**pygsaVision Compass** is an equipment specially designed for the advanced labeling systems with rotation systems and high speeds. The software allows you to correct the bottle positioning ensuring perfect labeling by elements such as seals, reliefs, blemishes or other representative bottle elements.



**pygsaVision EmptyBottle** is a specially designed equipment empty bottle quality control, verifying its correct cleaning and safety. It also allows identifying external elements to the bottle such as:



**pygsaVision ThermalSystem**, ideal for the hot glue application verification on the box, to control the adhesion of the flaps.





# **PrintControl**



**pygsa PrintControl** is the perfect system for verifying the graphic material that is supplied by the printing companies. The system allows control the size, the text in differents alphabets, colors and other sorts of defects.

# ADVANTAGES -

• Scans and collates a printing sample with the pattern. Compares two images which may be original-copy, original-original, copy-copy.

• Detection of stains, tonalities and lack of ink in the printing process.

• Analyses and validates differences detected and highlights defects in red.

• 1D and 2D code reading.

• Verification reports are saved in the PC in PDF format for being verified at any time.

• Compatible with sources type: high resolution scanner, graphic files: BMP, PNG, PDF, AI and JPG.

• Partial images of the label can be taken for comparison, images from the PC, scanner or central server can be taken.

• Remote control with remote assistance.





# **OTHER ADVANTAGES**

• Each character can be partially or totally viewed, it means that if labels are written in another language (Russian, Chinese, Japanese, Arabian, etc.), we guarantee with our system that what is written is correct.

• Errors concerning letters, accent marks, numbers, punctuations, symbols and even paragraphs.

- Search zones can be cancelled.
- OCR-OCV verification. Mathematical applications for price check or boxes resulting from mathematical functions.
- Scanning is compatible with a degree of ration of +/- 100 degrees of rotation.

• Adjustable sensitivity, minimum size of fault to be seen is defined.

• Creating an "Error Report" file in which details of the inspection carried out are shown including pictures of errors for easy visualization.

• Maximum scanning size A3 Gold and Silver print are supported (depending on the scanner model).







System to ensure the presence of all the elements and products in the final packaging, withouthaving to stop them down or slow the line. Allows control of multiple box formats and the combination with artificial vision inspection systems.

#### ADVANTAGES --

- Early identification of problems in the production line.
- 100% inspection at high production speeds.
- Elimination of the human factor in the product review.
- Reduced costs for customer returns.
- Check weight of different product formats depending on the model selected.
- Allows the combination with inspection by reducing the space required in the manufactory for both controls.
- Possibility of connectivity with others dosing systems.
- Classify the product based on its weight.



### SOFTWARE ----

- Intuitive and easy to handle.
- Creation of a machine database and reports with total and partial data.
- You can optionally offer the aggregated information by batches, matches, ...
- Allows the correction of errors without load, as well as the maximum time without product.
- Handles multiple formats.
- Protects the system from unauthorized line staff with passwords (3 security levels)
- Management of expulsion with the option of enabling and disabling it from the software itself.

- Optionally allows integration with the PygsaVision software, with a single interface reducing:
- Production Line Staff training times
- Times in the analysis of Information by having a single vision and heavy system report.







# HARDWARE ----

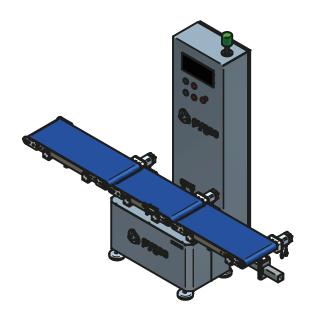
- Stainless steel finishes AISI 304.
- Status light beacon.
- Allows you to generate up to 50 different programs.

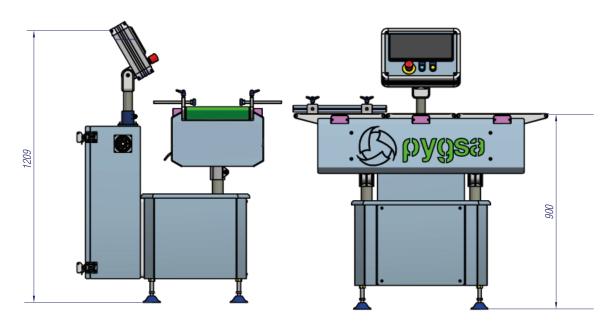
• Managed Data: Date, Time, Turn, Line, Lot, Units Rejected / Accepted, Total Units, Average Weight and Deviation.

• Autozero correction available in motion weighing.

• It has up to 5 physical outputs that allow you to set 4 levels of control or clasify by weight up to 5 different products.

- Standard weighing range: 3-30 kg.
- Production: 50 units. / Min.
- Speed 40 heats / min. With varying frequency.
- Accuracy +/- 20 grams.
- Minimum scale 1 gr.





\*New checkweight with rotating screen







Systems for the withdrawal of non-compliant products or as diverters in the lines. According to the model, it allows the expulsion of products even in high speeds, heavy or with little stability.

### HARDWARE -----

• Stainless steel finishes AISI 304 or 316 and aluminum and nylon machines.

- Requires compressed air pressure with a pressure of 6 bar.
- It incorporates pressure regulating valves of expulsion.
- The size and number of fingers will depend on the speed and the type of product to handle.
- May be associated with a table or an accumulation tape.

### STEP 1 ------

Single finger system that deflects the product by impact.



Indicated for fragile products or with little stability. It has a set of 8 Fingers that deflect the product avoiding falls on the line or breakages thereof.



#### STEP 1 BB ------ ACCUMULATION BELT -----

Accumulates non-conforming products.



Single finger system that deflects the box by









Systems that allow the personnel cleaning surface dirt in the production line. Safe and effective alternative to compressed air.

# **JETBLACK**

- Low cost system.
- Designed for wall anchoring or portable version.
- Complies with acoustic regulations.
- Weight 6.8 kg dimensions (450 x 257 mm).
- Power 1.4 Kw.
- Available with 230V power supply. Or 115V.
- Easy handling of the blowing nozzle.

# **PORTABLE JETBLACK**

- Designed to be easy to transport.
- Especially suitable to use in products operations cleaning on the line or cleaning of machine.











### **CLEANING CABIN**

- It has a JetBlack inside it for the cleaning and an absorption particles system that prevents its dispersion in the environment.
- It has lighting in cabin and window built into the door.
- Modular system.
- Available in interior and exterior versions.









On-line water surface removal from the product by sweeping with air. Does not require compressed air for operation our technical team allows designing the drying station according to their productive needs and those of their product.

### ADVANTAGES --

• Facilitates online processes with wet products by the removal of surface water (this occurs during the labeling process with the condensation, or after subjecting the product to thermal treatments with steam, water cleaning, etc. • Prevents possible oxidation by retention of water on metal products.

### **GENERAL SYSTEMS** -

#### RM

- Low cost system.
- Reliable operation.
- Easy adjustment of air knives, JetPlates...

#### EL

- Engine paneling system.
- The engine complies with the PRL acoustic standards.
- Optimum occupation of floor space.

# LNL

- Fully panelized system.
- It has windows for monitoring the process.

• The installation complies with the acoustic standards of PRL in the area of the engine as in the area of product drying.

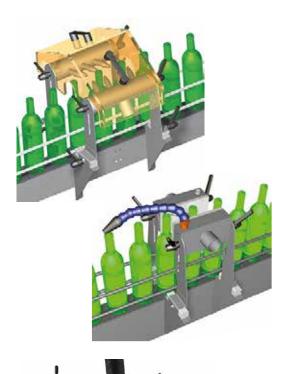
• Containment of splashes, which prevents their transfer to others processes.





### HARDWARE

- Stainless steel finishes (optional aluminum knives).
- Enables compliance with acoustic standards.
- Our systems provide between 40-60% more flow than other similar systems, which allows us to dry with a lower installed power generating a considerable saving during the life of the system.
- The constant air flow that we supply allows us to properly sweep the surface to dry increasing efficiency.
- Power supply voltage 380-420 VD / 660-690VY-50HZ.
- Power consumed according to installed blower.
- Maintenance: change of belts and filters.



# **SPECIFIC SYSTEMS**

# **CAP DRYER**

Designed for the removal of water under the plug crown. It allows the prevention of corrosion and dirt.

# **NECK DRYER**

Designed for drying water on the necks of bottles, facilitating the adhesion of labels or the placement of the heat shrinkable capsules wrinkles in the capsule. It does not require modifications in the line and its design by means of JetPlate allows an easy regulation to different formats.

### CAN DRYER Easy to install, m

Easy to install, maintain and adjust. Your specific design guarantees a drying level of up to 0.003 grs. of water residual of the surface of action of the drying.









pygsa offers you a specifically developed software tool for the bottling lines that allows to improve the management of themselves. Our system is focused on OEE (General Efficiency of the Equipment) and in the improvement of the quality of the obtained product.

#### **ADVANTAGES** -

LineView Solutions will help you to:

- Uncover the true cause of productivity losses.
- Expose the hidden potential within your manufacturing operation.
- Improve your plant efficiency.

With a track record of successful implementations going back to 2001 we have

developed proven methodologies that will help your team create real and sustainable change with our systems. Throughout the years, our solution has been used to replace a number of our competitors systems. LineView has never been replaced.



Improve Machine Efficiency Increase your machine and line efficiency by 8%+in 12 months



Increase Production Output Software that tells your teams where to focus to drive output every minute



Reduce Manufacturin Costs Sites typically get payback in less than 9 months

Single source of data. – Eliminate all other systems.

Ready-to-go solution – with industry standard measures, configurable to your KPIs

Low maintenance & easy to maintain.



Able to offer a full turnkey or assisted solution.

 Always succeed in delivering a working system that becomes the most valuable data to operations team.





# PRODUCTS

Our software solutions are the result of more than just powerful technology. They are developed in conjunction with our in-house operational excellence experts. Our skills, experience and proven deployment methodology help deliver the highest level of customer results.



#### SERVICES

Our highly-skilled multi-disciplined team will work with you to ensure smooth transition from your current state to a World Class Manufacturing business, wherever you are on your improvement journey.

Installation & Implementation

Product Training

Operational Support

Systems Support





### **OUR CUSTOMERS**

Coca-Cola Enterprises have chosen the LineView system as the standard production line monitoring system for their European Supply Chain Division. Our operational consultancy team have helped develop their 'Coke Way' over the last 13+ years and it is this knowledge, expertise and understanding that permeates through the system.



EXPERIENCE

"It is simply the most powerful management tool that I have seen in my 15 years of experience In the management of operations"

Richard Davies, Vice President of Operations, Coca-Cola Enterprises Ltd.





"Proyecto cofinanciado por los Fondos FEDER, dentro del Programa Operativo FEDER de la Comunitat Valenciana 2014 - 2020"



INSTITUT WALENCIA DE COMPETITIVITAT EMPRESARIAL







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