AIS
VISION SYSTEMS

Quality control on wine production lines

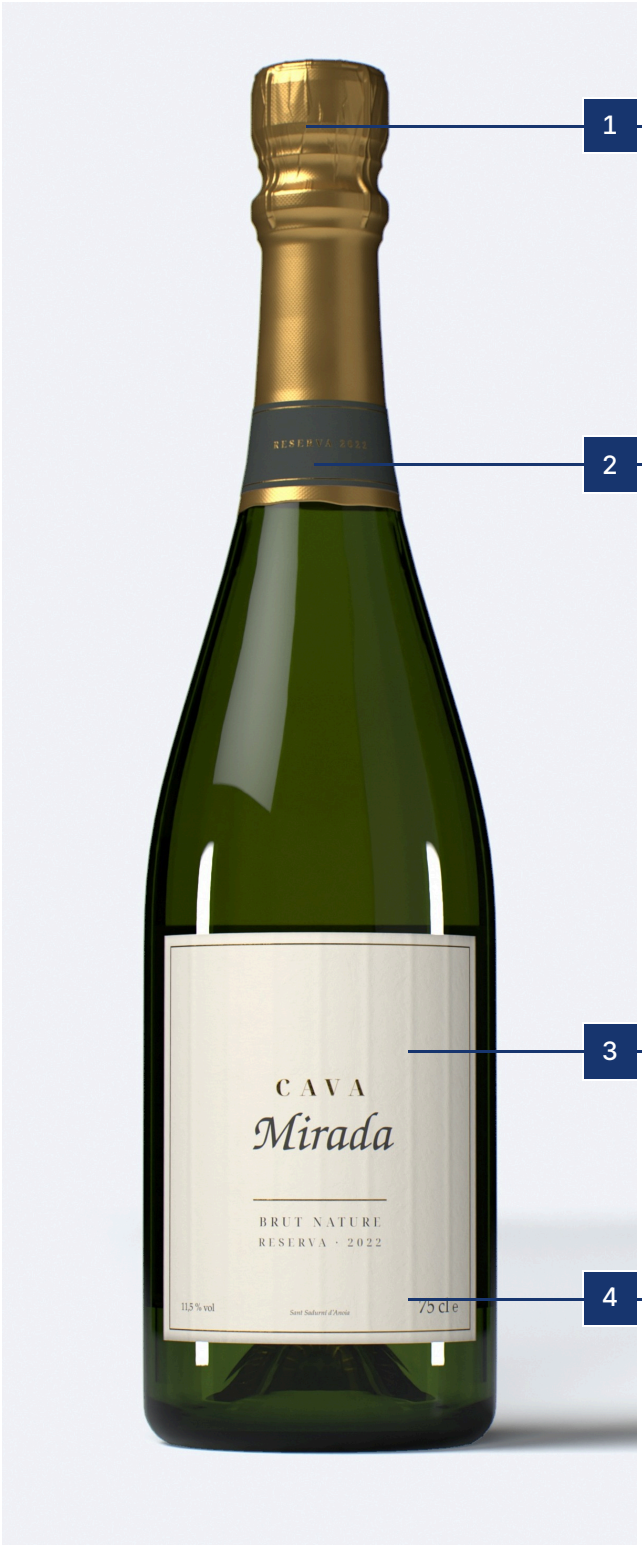
Machine vision to inspect the cap, fill level, labels and markings of every bottle.



- 360° cap inspection and liquid level
- Label: 360° position, condition and information
- OCR reading of batches and dates

What we inspect on each bottle

We help wineries control the quality of their containers and labels. Our machine vision solutions inspect each bottle in real time and detect defects affecting quality, safety and brand image.



1 Cap and mouth

360° cap inspection: presence, position and integrity of the closure.

2 Liquid level

Fill-level control for each bottle.

3 Label

All-round verification of label position, condition and information.

4 Marking

OCR reading of batch, date and other printed data.

360° cap inspection and fill level

In AIS Hopper, high-resolution cameras and deep learning models inspect each bottle's closure and liquid level, in glass, PET and derivative containers.



Equipment

Cameras	Three colour cameras and deep learning; optional fourth overhead camera
Throughput	Up to 30,000 units/hour
Rejection	Automatic rejection of defective units
Design	Versatile, adaptable to the format and line space
Data	Statistics for each production run



Live view: three views of each bottle's cap and its result.

What it inspects

- Cap presence and defects
- Tilted or cross-threaded cap
- Tamper-band integrity
- Fill level
- Batch reading and presence
- Progressive or impact rejection

The label, around the entire perimeter

AIS REV 360's all-round verification combines side views of the bottle to inspect the position, condition and information of each label without orienting the container.



Lifted label



Double labelling



Missing label



Position and tilt



Relative label position



Inverted label



Wrinkles and folds



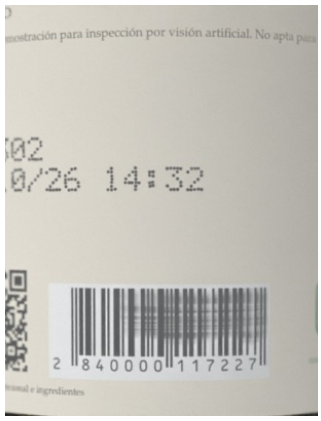
Print defects



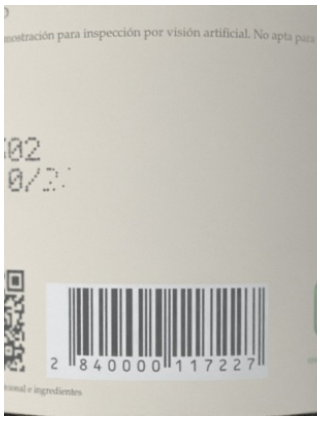
Stains



Label integrity



Barcodes and QR codes

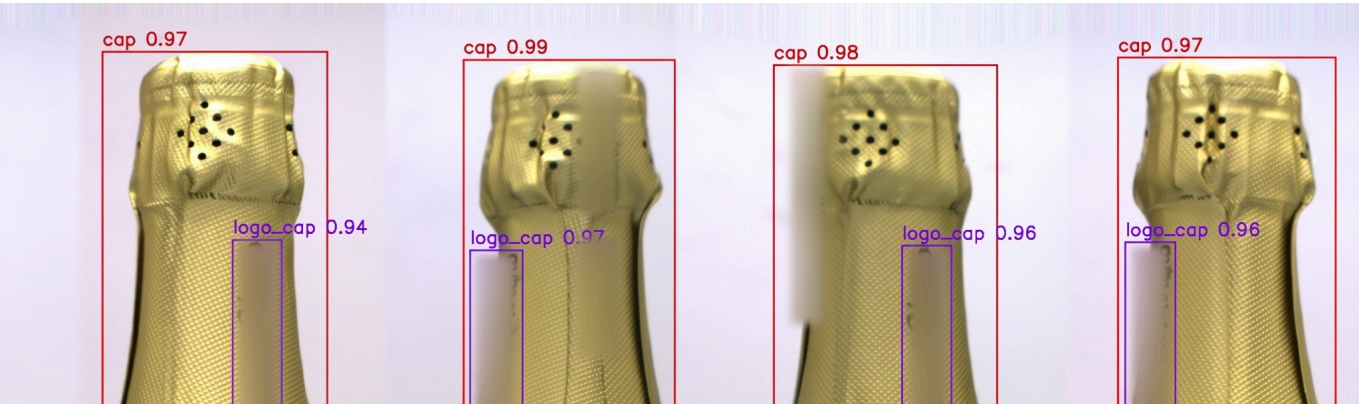


OCR marking

Four cameras and deep learning at line speed

AIS REV 360 integrates Rosepetal software with deep learning models to verify labels and codes and identify visual defects.





Capsule, medallion and neck label in all four views

Equipment and software

Cameras	Four colour cameras for side inspection; optional camera for the overhead view
Throughput	Up to 30,000 units/hour
Software	Proprietary deep learning engine; programming-free setup using examples
Unwrap	Cylindrical, square or other container geometries
Profiler	Recipes from a bottle capture or a digital design
Data	Cloud backup of recipes, images and statistics

Marking reading and verification

OPTICAIS reads text, codes and printed patterns and checks them against the criteria configured for each product reference, in line and in real time, at up to 500 items per minute.



OCR reading of batch and expiry date, with production counters.

Inspection screen

Each reading is compared with the data configured for the product reference. The result, conforming or nonconforming, is recorded with production statistics.

OCR reading

Optical character recognition reads batches, dates and serial numbers and checks them against the data defined for each production run.



The camera above the container path.

- Automated marking inspection
- Real-time processing
- Adaptable to different industrial environments
- Intuitive interface and line integration
- 1D and 2D codes, symbols and printed patterns
- TrazAIS: traceability and serialisation

Cylindrical-object inspection

GlobalVision C8 scans the printed surface of cylindrical objects for inspection against the criteria defined for each product reference.



The object is placed in the system, which captures an image of its entire surface.

Surface scanning

Objects	Different sizes; each geometry is validated with samples
Resolution	High-resolution scanning; detail depends on the object
Criteria	Inspection elements and criteria defined for each object
Operation	Stable under each project's conditions

Each check at its point on the line

Each system is installed after the stage it inspects, to separate defective bottles before they move on.



On the line

1

Filling and capping

AIS Hopper inspects the cap through 360° and the liquid level of each bottle.

2

Labelling

AIS REV 360 verifies labels, capsule and codes around the entire perimeter; OPTICAIS reads and validates the printed batch and date.

3

Print and case-packing inspection

GlobalVision C8 scans printed cylindrical objects as a complementary offline check.

Inspection adapted to your winery

Machine vision provides information to act on each bottle's quality and bottling continuity.



- Automatic real-time inspection
- Adaptable to different bottle formats
- Information to improve performance and reduce errors
- Integration into existing lines

A portfolio for different tasks

AIS Hopper	360° cap inspection and liquid level
AIS REV 360	All-round label inspection
OPTICAIS	Marking reading and verification
GlobalVision C8	Cylindrical-object scanning

Send us samples

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