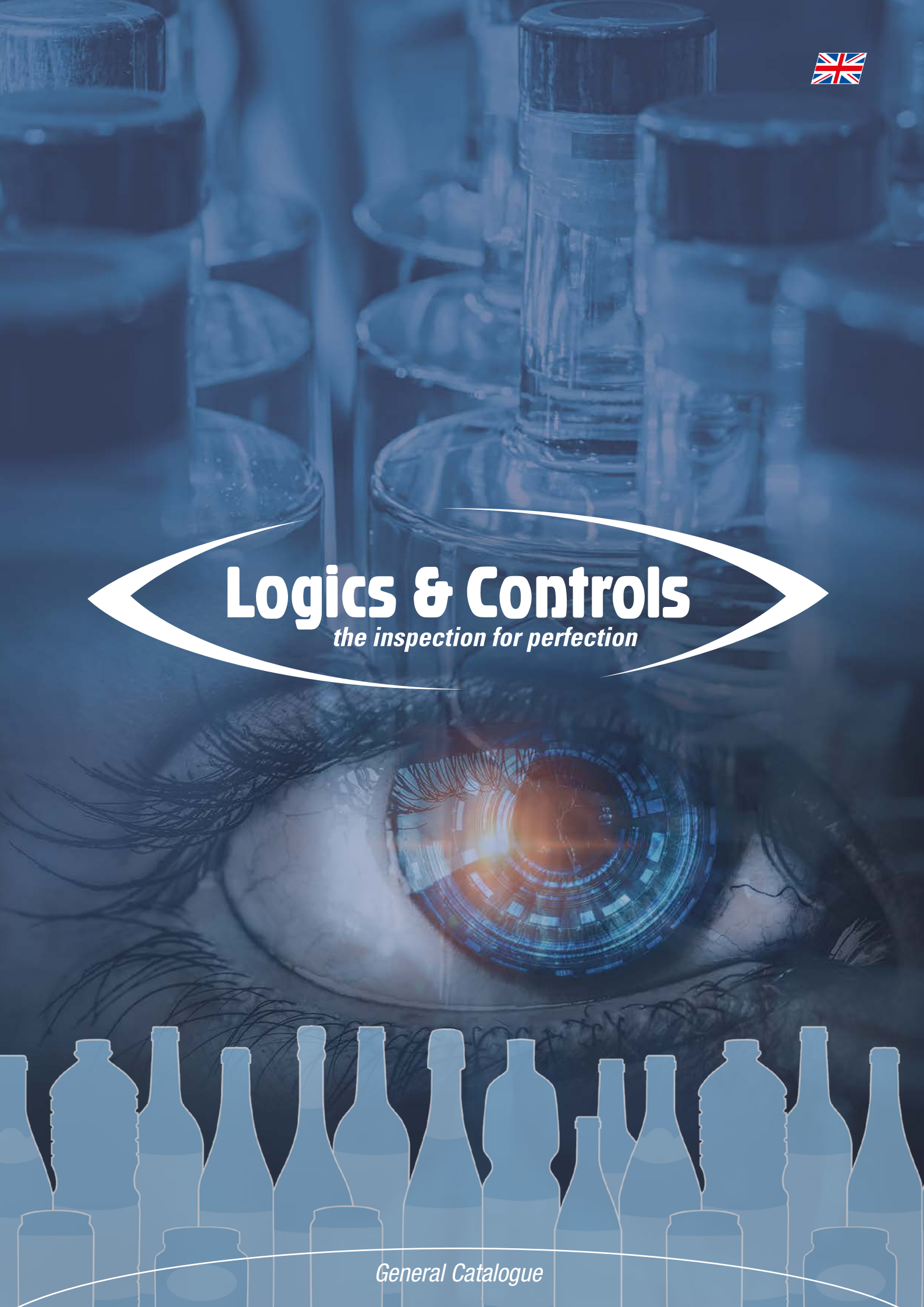


Logics & Controls

the inspection for perfection

General Catalogue

Seeking innovative solutions since 1979

From automation panels for glass and PET lines to in-line quality checking systems.
Philosophy: developing key components in-house and applying only quality components.

1979
Establishment of the company

1982
Automation of glass, PET and can bottling lines among the fastest in the world

1991
Development of the first inspection systems

1994
Creation of the first camera systems

2001
Design of lenses specifically for the bottling industry

2003
Design of driver cards for our lighting systems

2005
Smart cameras are abandoned in favour of proprietary viewing software

2007
Transition to powerful LEDs for bright energy-saving lighting

2018
In-house production of lenses, including the famous Logilook lens

Inspection for Perfection has always been our motto.

Primarily because we are machine builders, not just system integrators. This allows us to meet all our customers'needs.

Our principal features are:

- Design and construction of all our systems from scratch
- Production of key components, such as lenses and lighting systems, to solve the problems specific to bottling processes
- In-house software development with an interface specific to the sector and identical for all systems
- Testing of all our systems on our own test circuit prior to shipping, permitting rapid commissioning on the customer's premises
- Quality real-time technical assistance
- Ongoing research and development, also in response to requests and suggestions from our customers all over the world

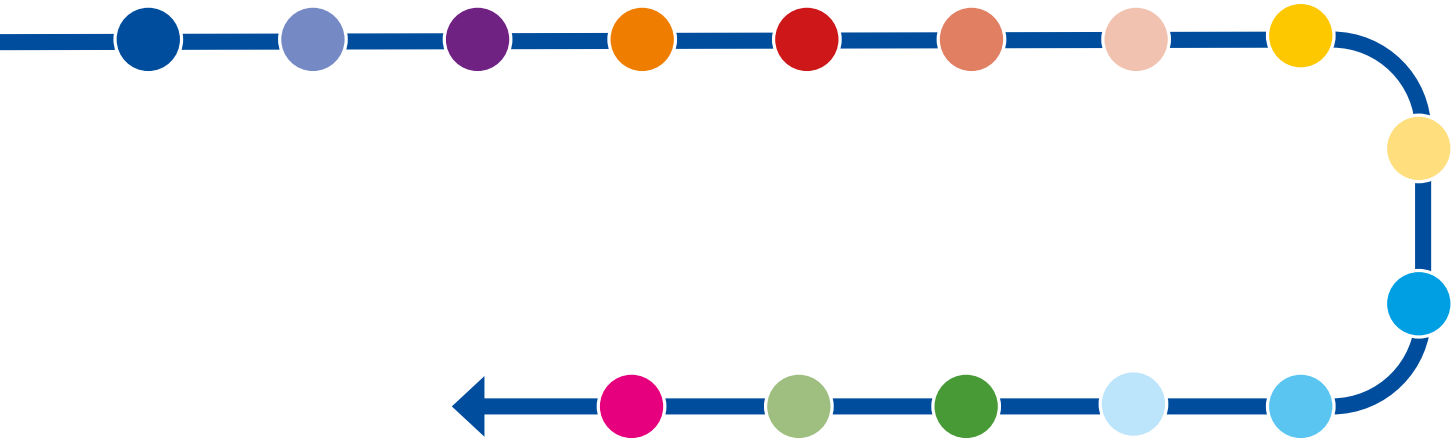
Some users of our camera inspection systems

ASV WINES *GRUPPO CEVICO* CUVAGE *VINA SAN PEDRO* BODEGAS AYUSO *SEAGRAM'S GIN* WALLA WALLA VALLEY WINES *CUSUMANO* GUIDO BERLUCCHI & C. *TOSO VINI* LUIS FELIPE EDWARDS *BRUICHLADDICH DISTILLERY* GRUPPO LUNELLI *CHAMPAGNE KRUG* VINICOLA TOMBACCO *GRANT'S* STOLLER FAMILY ESTATE *PERLINO* MARCHESI DI BAROLO *CAVES BAILLY LAPIERRE* TOGNI SPA *TALAMONTI* CANTINA MONTELLIANA E DEI COLLI ASOLANI *CORDIER EXCEL* PERNOD RICARD *MASOTTINA* CANTINA VALPANTENA VERONA *COTTINI 1925* CANTINE PELLEGRINO 1880 *MGM MONDO DEL VINO* VICENTE GANDIA PLA *INFINITY BOTTLING* HIGHLAND PARK *ARDBEG* GRANDS VINS DE GIRONDE *LATENTIA WINERY* SPRINT DISTILLERY *CHAMPAGNE VEUVE CLICQUOT* COLUMBIA CREST *CANTINE MASCHIO* CANTINE RIONDO *CHAMPAGNE CANARD DUCHENE* SAILOR JERRY *MONKEY SHOULDER* CA'MOMI *CANTINE FERRARI* DI VITA *GIROLAMO LUXARDO* MENU INDUSTRIE ALIMENTARI *ALEPAT TAYLOR* CASA VINICOLA BOTTER *CHIARLI 1860* MONTE ZOVO TERRE DI VERONA *MARIE BRIZARD WINE & SPIRITS* THE EDRINGTON DISTILLERS *GIOVANNI BOSCA TOSTI* CANTINA PRODUTTORI DI VALDOBBIADENE *CAVAS DEL CASTILLO DE PERELADA* VINPAC INTERNATIONAL *GERARDO CESARI* JAN BECHER *ACQUA PEJO* CANADIAN CLUB *DUCA DI SALAPARUTA* BOGLE VINEYARDS *MAISON ALBERT BICHOT* PODERI DAL NESPOLI *DIAGEO MEXICO* SAINTE LUCIE 1885 *TENNEESSEE HOMEMADE WINES* TENUTE PICCINI *VALDO SPUMANTI* CASA VINICOLA MORANDO *COLUMBIA CREST WINERY* ANGELO ROCCA E FIGLI *ROSSETTI VINI* GIORDANO VINI *WILLIAM PEEL* CAYMUS VINEYARDS *PREMIUM UZBEKISTAN* LA MARCA VINI E SPUMANTI *VITICOLTORI FRIULANI LA DELIZIA* WHYTE & MACKAY *MARCHESI ANTINORI* ARGIOLAS *ASTORIA VINI* MALIBU *GENAGRICOLA* PERNOD RICARD USA *SUTTO* SANTA HELENA ALPACA *ARTERRA WINES CANADA* WILLIAM GRANT'S & SONS *CITRA VINI* MARTIN RAY WINERY *TENUTA S.ANNA* CAVE DE LA COTE *OPPACHER MINERALQUELLEN* BOISSET *TULLAMORE DEW* CANTINA DANESE *BODEGAS FRANCO ESPAÑOLAS* OAK RIDGE WINERY *BARON DE LEY* CHAMPAGNE TAITTINGER *MOET & CHANDON* BODEGAS WILLIAMS & HUMBERT *CHAMPAGNE MERCIER* KENWOOD WINERY *LES GRANDS CHAIS DE FRANCE* MATTONI 1873 *BACARDI GROUP* VINI BEE *WILLIAM PITTERS* SIR PETTERSON *ACQUA SAN BERNARDO* WILLIAM GRANT'S & SONS USA *QUINTA & VINEYARD BOTTLERS* SUZE

CANTINE DI DOLIANOVA VINA SANTA RITA *ACQUA CERELIA* DOM PERIGNON *BARBANERA* BODEGAS BERONIA *CAVIRO* WILLET DISTILLERY *CLAN MACGREGOR* MEDICI ERMETE & FIGLI *CIELO E TERRA* ALEF VINAL COMPANY *CHANDON AUSTRALIA* SORGENTI SANTO STEFANO *GLENMORANGIE* RIGONI DI ASIAGO *OLEIFICIO ZUCCHI* SOVIPI DI LOVISOLO MASSIMO & C. *SYNERGY BELUGA GROUP* VINOPERA *WALDQUELLE* SYMINGTON VINHOS *PASQUA VIGNETI E CANTINE* DOMAINE CHANDON *MICHTER'S DISTILLERY* CHAMPAGNE CHARLES COLLIN *REMY COINTREAU GROUP* CASTEL FRERES *ACQUA LETE* FRANCIS COPPOLA WINERY *CANTINE LENOTTI* RUFFINO *SALTA REFRESCOS* FAMILIA ZUCCARDI *SPUMADOR* FAMOUS GROUSE *GRUPPO AVERNA* CHAMPAGNE DE CASTELLANE *FORMOSA REFRESCOS* ENOITALIA *SZENTKIRALYI KEKKUTI* WENTE FAMILY ESTATE *CANTINA PRODUTTORI BOLZANO* MACALLAN *EL COTO DE LA RIOJA* CUBA RON *COOPER'S HAWK WINERY* INVEST PARTNER *DELICATO FAMILY WINEYARDS* MHCS *GRUPO PENAFLOR* HESS COLLECTION WINERY *SUNVAL NAHRUNGSMITTEL* SCHENK ITALIA *CANTINA CLITERNIA* CANTINA DI SOAVE *KWV* NESTLE WATER *CAPETTA* CHAMPAGNE PIPER HEIDSIECK *GLEN TURNER* AMBRA S.A. *MILLER FAMILY WINE COMPANY* KRISTALL MINSK *CANTINE SETTESOLI* CAMPARI GROUP *DIAGEO* CHAMPAGNE LAURENT PERRIER *DIAGEO SHIELDHALL* REPSOL LUBRICANTES *CANTINE VEDOVA* GONZALEZ BYASS *LUIS CABALLERO* CHAMPAGNE RUINART *SACCHETTO VINI* UMANI RONCHI *HENDRICK'S GIN* LANGETWINS FAMILY *WINERY & VINEYARDS* G3 ENTERPRISES *BARONE RICASOLI* VINA DEL PEDREGAL *ARALDICA CASTELVERO* FELIX SOLIS *VILLA SANDI* BODEGA CHANDON *BODEGAS ESMERALDA* BISOL DESIDERIO E FIGLI *PALADIN CANTINE* HAVANA CLUB *CANTINA DI CONEGLIANO E VITTORIO VENETO* BACIO DELLA LUNA *FAMILIA FALASCO* CANTINE RIUNITE & CIV *CANTINA DI CUSTOZA* CONTADI CASTALDI *ZENATO AZIENDA VITIVINICOLA* ORNELLAIA *CHATEAU DE BERNE* DISTILLERIA FRATELLI TURCHETTO *SORDIS* BALVENIE *PERNOD RICARD WINEMAKERS* J.P. WISER'S *OLEIFICIO GABRO* REAL COMPANIA VEHLA *CANTINA CAVICCHIOLI* BODEGA NIETO SENETINER *CHAMPAGNE BILLECART SALMON* THOMAS ALLEN *THE COCA COLA COMPANY* WYBOROWA VODKA *ZIRKLE FRUIT* MASI AGRICOLA *LUCIEN GEORGELIN* VITE COLTE *VIGNAIOLI DEL MORELLINO DI SCANSANO* CAFE DE PARIS *CASA VINICOLA BOSCO MALERA* MENZ & GASSER *GATO NEGRO* VECCHIA CANTINA DI MONTEPULCIANO *MARTINI & ROSSI* SERENA WINES 1881 *CHAMPAGNE CHASSENAY D'ARCE* TOSTI 1820 *CLOUDY BAY WINERY* CONTRI SPUMANTI *BODEGA LUIS CABALLERO* REFRESCO ITALY *CHAMPAGNE G.H. MUMM* CHAMPAGNE HENRIOT *CANTINE PAOLO LEO* MEY ALKOLLU *THE WINE GROUP* FIRRIATO *GREY GOOSE* HIRAM WALKER *COURVOISIER* MONTE DEL FRA *FRATELLI MARTINI SECONDO LUIGI* FEUDI DI SAN GREGORIO

Accurate inspection all along the line

Our inspection systems are applied at a number of key points on the production line to guarantee high quality execution of the final product.



Contents

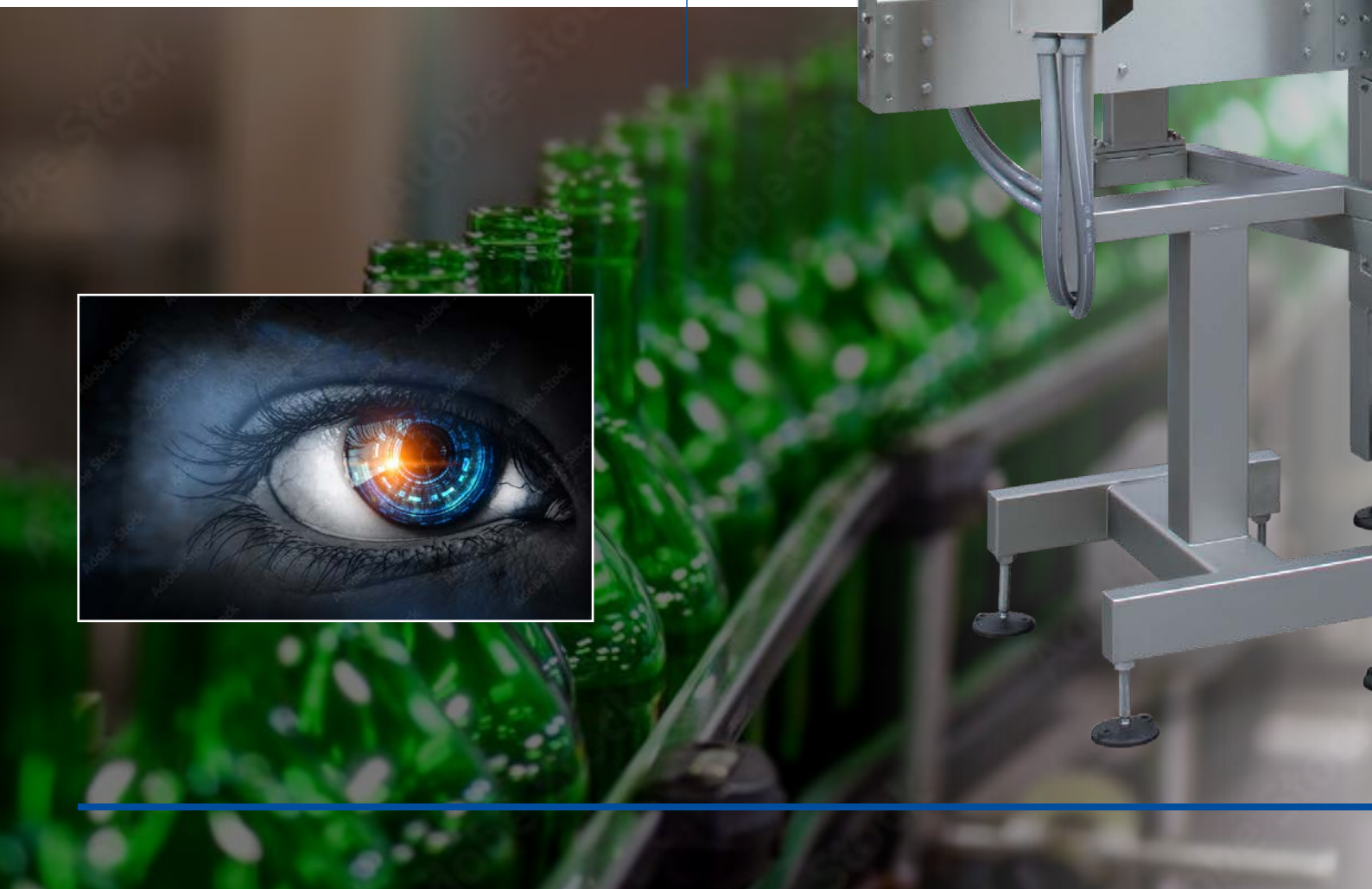
Loginspect

Empty container inspection - *Checks the integrity and cleanliness of empty cans and glass or*

Linear inspection system to check quality, condition and cleanliness of empty containers. Modular inspection system, installed before the filler, to inspect the surfaces of empty bottles and jars made of either glass or PET. It checks that containers are in good condition and clean, free of foreign matter and liquid residues.
The main module moves the containers by gripping them on their side by means of four special belts provided with an elastic contact surface. The firm grip of these belts enables the bottom and the lip of the container to be inspected effectively.

1. Incoming wall inspection unit
2. Outgoing wall inspection unit
3. Liquid residue inspection unit
4. Lip and thread inspection unit
5. Bottom inspection
6. Belts with independent drive units

Loginspect checks for:
- Presence of opaque and transparent foreign bodies
- Presence of cracks or breakage
- Presence of calcareous inclusions or bubbles in the glass
- Liquid residues




Logics & Controls
Loginspect
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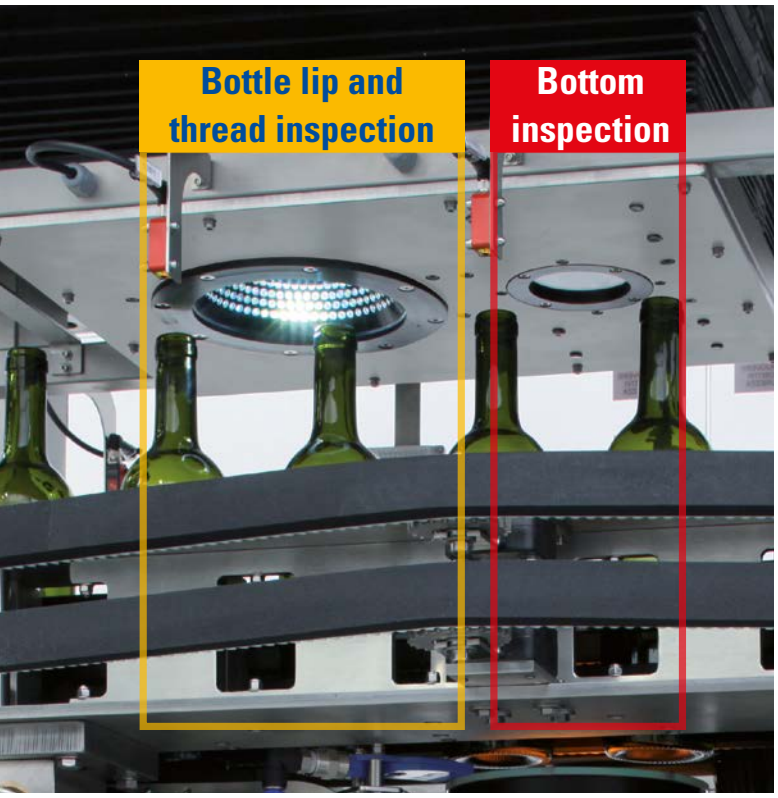
Logics & Controls

Loginspect

Empty container inspection - *Checks the integrity and cleanliness of empty cans and glass or*



Bottom inspection

The bottom is inspected for foreign matter and breakage. A special optical unit is used that moves the focal point inside the neck, enabling the bottom to be seen fully even in long-necked bottles such as Bordeaux bottles.

STANDARD
inspection system

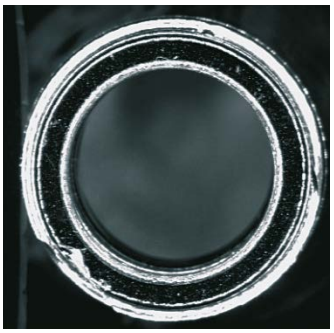
In conventional systems, the camera's focal point is outside the bottle neck:
- if the neck is tall or narrow, the system cannot see all of the bottom
- the camera is very close to the mouth of the bottle and has focus issues when format changes.

LOGICS & CONTROLS
inspection system

Our system employs an optical unit to shift the focal point inside the bottle neck:
- the the camera can see all of the bottom of the bottle, and also a part of the walls.
- the distance of the camera from the bottle neck always ensures optimal focus on the bottom.

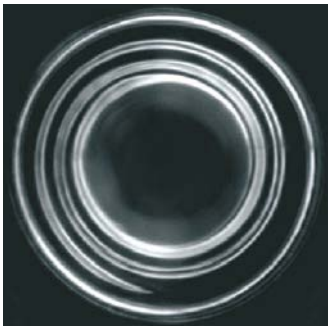
Bottle lip inspection

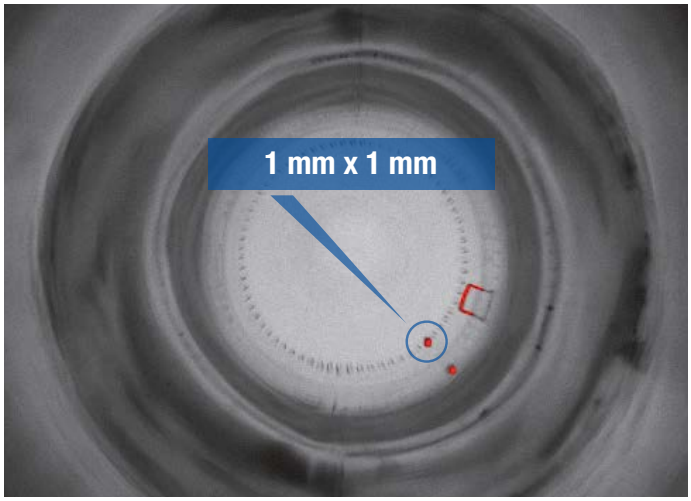
The bottle finish is inspected for breakage or scuffing on the sealing surface. A special angled light is used to inspect the inner and outer edges of the bottle finish.



Thread inspection

The thread is inspected to identify breakages or scuffing using a special optical unit that enables the entire length of the thread to be checked.





LOGINSPECT
may be combined with:

Logipush

Logisort

Sidewall inspection system with multi-camera system

• The side walls are inspected to detect foreign matter, contaminants and breakage and to check the degree of scuffing.

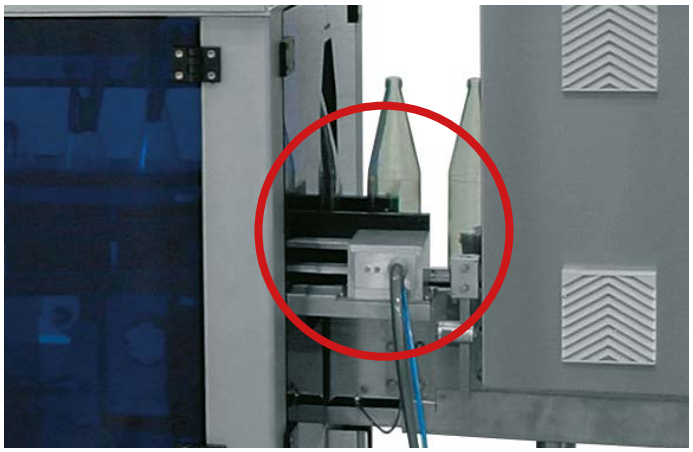
• It uses a special multi-camera system, paired with the controlled rotation of the bottle inside the central module. This ensures that the check performed is of a higher quality and resolution than standard mirror systems.

Residual fluid inspection check

• This identifies bottles with residues of water in the bottom by means of a special high-frequency sensor.

• It is particularly sensitive to even the smallest traces of caustic soda.

• A special bottle guide enables the maximum sensitivity to be obtained even in the presence of changes in bottle diameter.

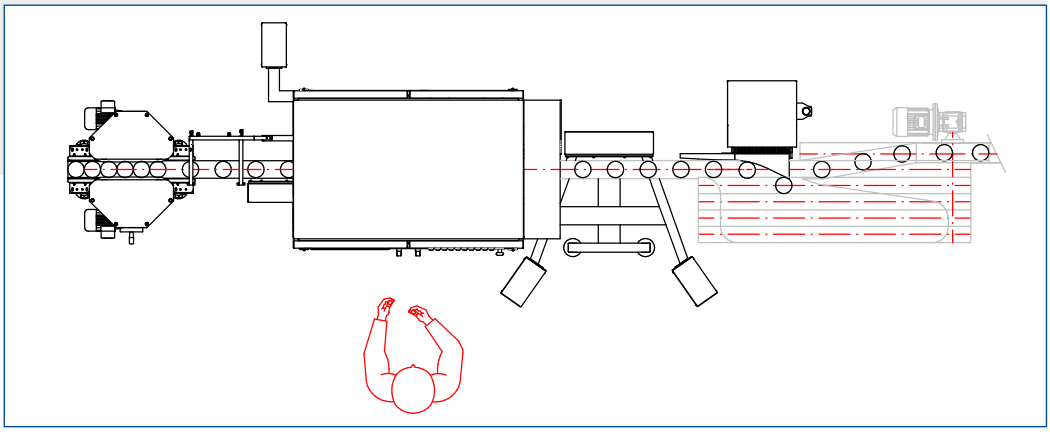


Technical features:

• Stainless steel frame and panels.
• Quick changeovers with no need for replacement of mechanical parts, simply adjusting camera height and belt width.
• Machine base free of obstructions for easy and quick sanitation.
• All the lighting systems feature high efficiency pulsed LEDs, to guarantee maximum reliability, long life and image repeatability over time.
• High-end industrial PC with touchscreen monitor: no hard disk and no UPS needed.
• Can be integrated with a push reject device or smooth segmented diverting system.
• Preset for remote assistance via internet and for Industry 4.0.

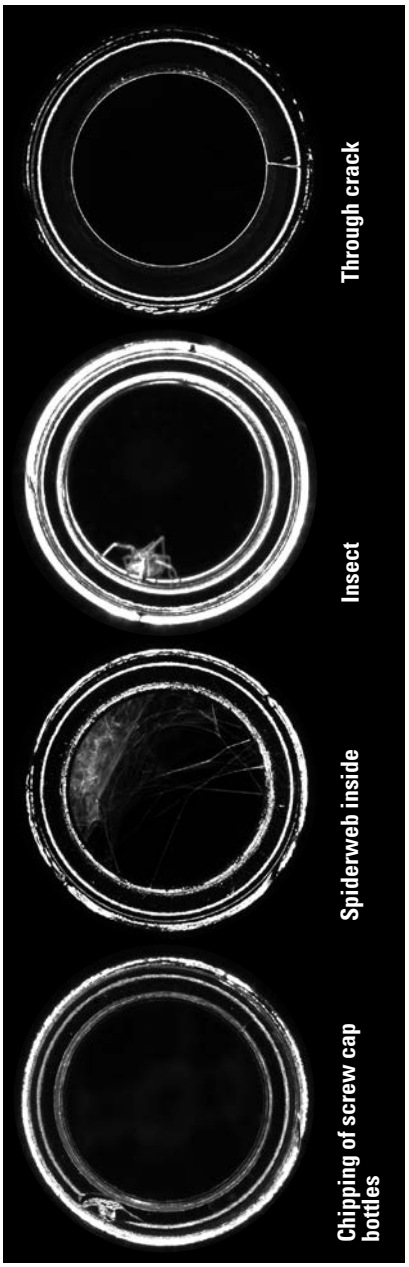
Available options:

• Separate rejectors for different reasons for rejection.
• Automatic motorised changeover.
• Adjustable conveyor belt height.

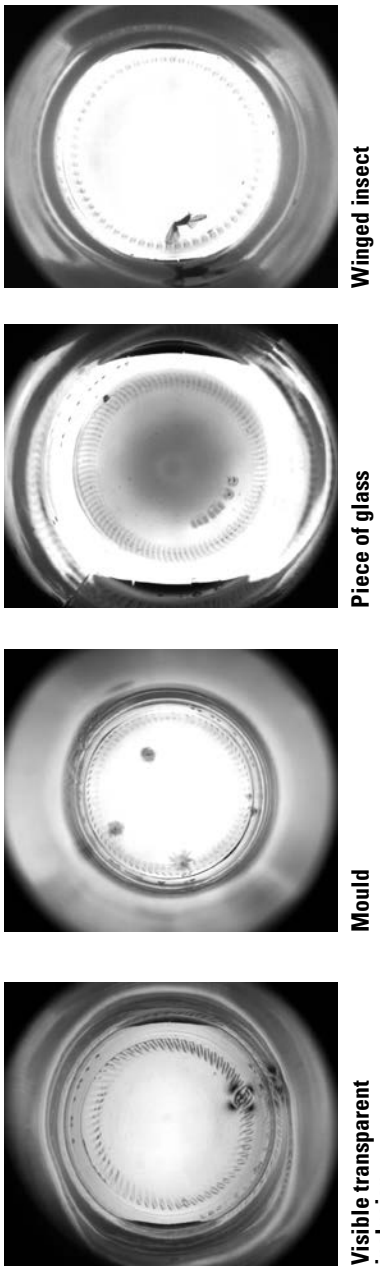


Some examples of defects and foreign bodies identified by Loginspect

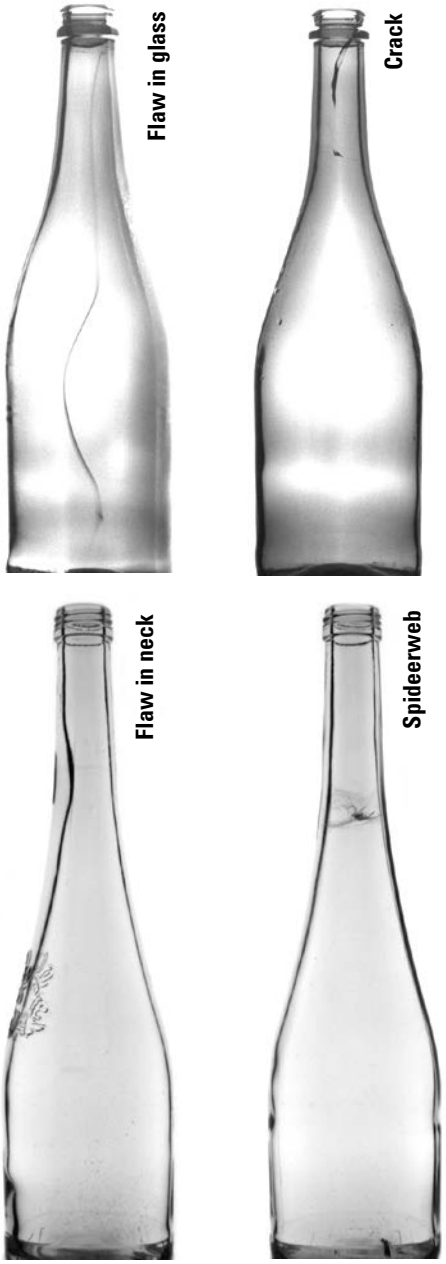
Bottle lip inspection system



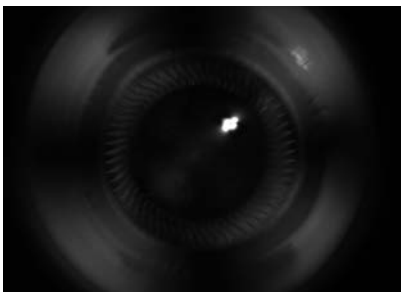
Bottom inspection

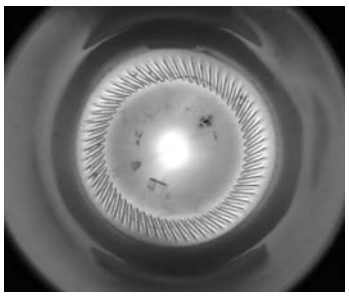


Wall inspection

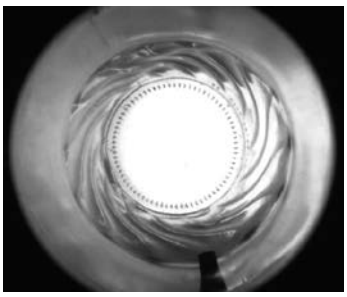


Double bottom inspection against dark background to identify inclusions in the glass





Inspection of inside walls to detect foreign bodies on printed or decorated bottles

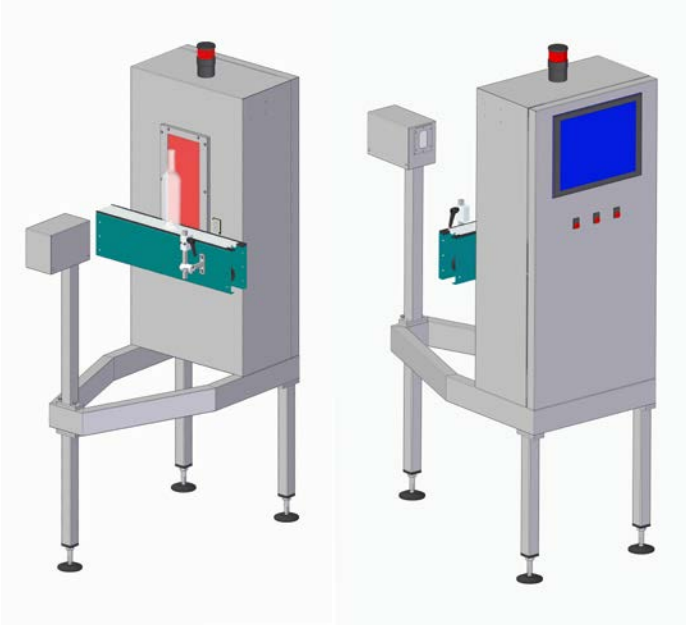


Logiselect

Empty container inspection - *Selects conforming containers on the basis of shape*

Checks the shape or sidewalls of containers in transit using one or more cameras with back-lighting. Can be used to check the correct shape of **returnable glass** bottles being processed and detect the presence of label or cap residues upstream of the bottle washer.
On filling lines using **new glass** bottles, it may be used to check for certain flaws in the container and be completed with Logifinish finish inspection
(if complete inspection of the empty container is required, a Loginspect inspection machine will be necessary).

May be used in **glass factories** in combination with Logisort to divert containers on the basis of shape.
Self-learning can be used to automatically set the acceptance parameters for container shape.
A belt-style bottle separator may be added to ensure spacing of containers before they reach the inspection system.

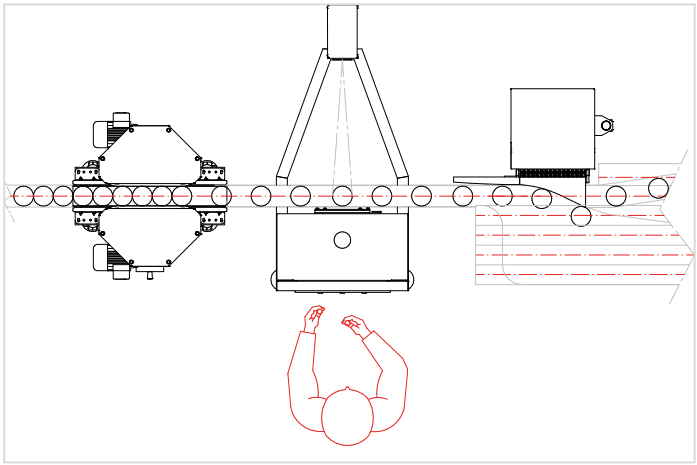


Technical features:

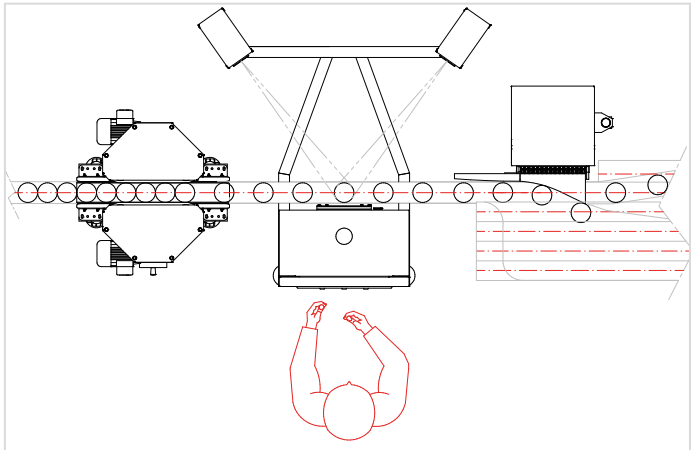
- The operator has everything under control on a single screen, viewing an image of the bottle, the tolerances set and the reasons for rejection, both graphically in the image and in numerical form
- The backlighting system features high-efficiency pulsed LEDs, to guarantee maximum reliability, long life and image repeatability over time.
- High-end industrial PC with touchscreen monitor: no hard disk and no UPS needed.
- Can be integrated with a push reject device or smooth segmented diverting system.
- Preset for remote assistance via internet and for Industry 4.0.

Available options:

- Additional cameras for more complete container inspection.
- Bottle finish inspection.
- Belt-style bottle separator.



Example of Logiselect with 2 cameras
Allows the bottle to be viewed from a second point of view for more complete inspection.

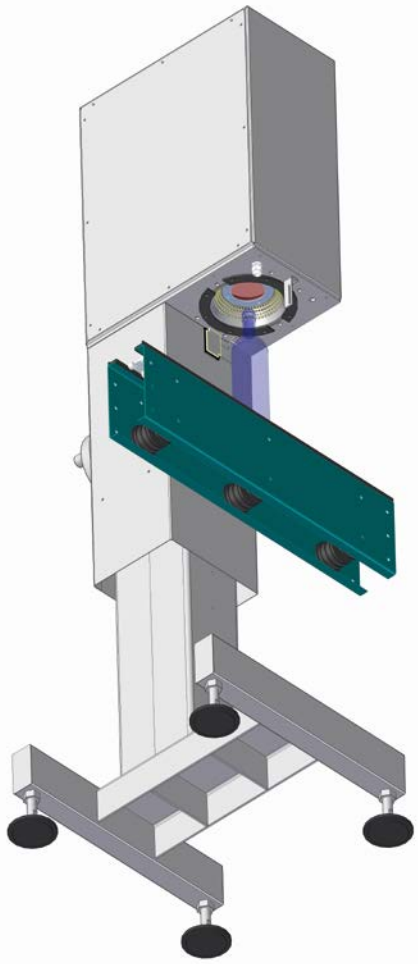


LOGISELECT may be combined with:

Logifinish | Logipush | Logisort

Logifinish

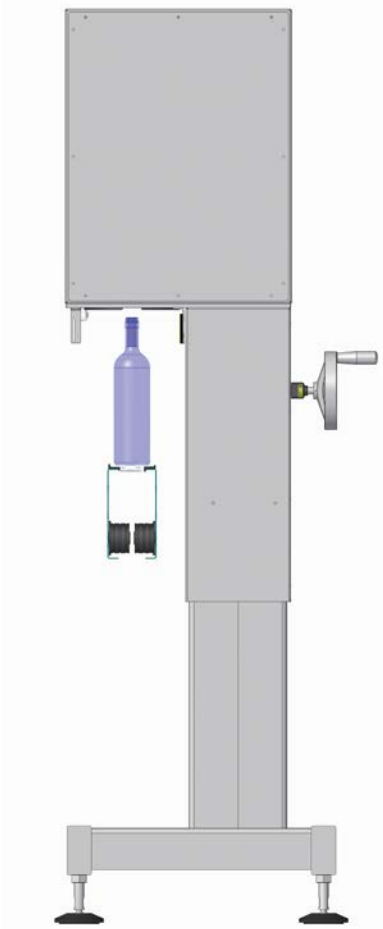
Finish inspection - *Checks the integrity of the empty or capped bottle finish*

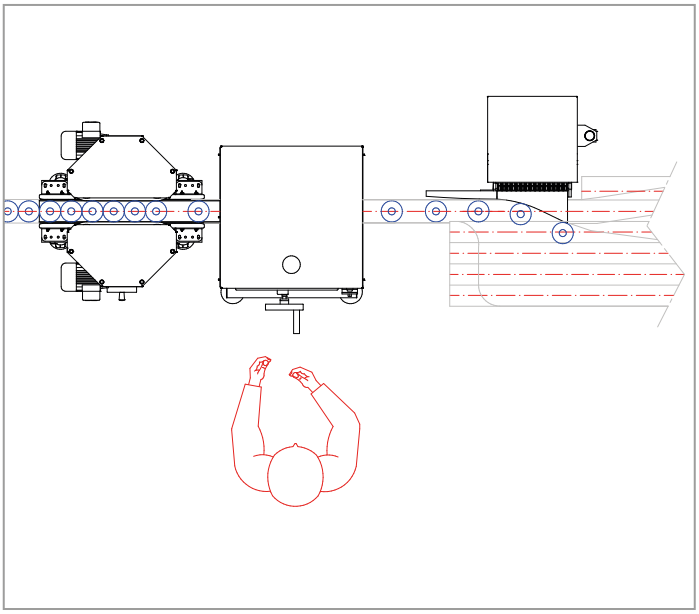


The bottle or jar finish is inspected for breakage or scuffing on the sealing surface. A special angled light is used to inspect the inner and outer edges of the bottle finish.

Designed for inclusion in the line as an autonomous system, between the depallettiser and the filling block.
Compact and easily positioned.
The electrical panel and the interface may be integrated, or they may be separated by the control panel to obtain an even more compact in-line system.
It can control all our rejection or diverting systems.
A belt-style bottle separator may be added to ensure spacing of containers before they reach the inspection system.

If there is a need to inspect other parts of the container, it can be integrated with a sidewall inspection system such as Logiselect, or a complete bottle inspection system such as Loginspect can be used.





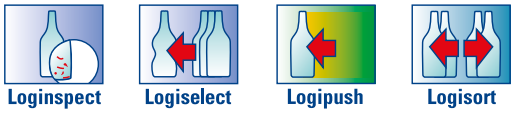
Technical features:

- The operator can keep everything under control on a single screen, viewing the bottle image, the tolerances set, and the reasons for rejection, both graphically in the image and in numerical form
- The backlighting system uses high-efficiency pulsed LEDs, to guarantee maximum reliability, long life and image repeatability over time
- High-end industrial PC with touchscreen monitor: no hard disk and no UPS needed
- Can be integrated with a push reject device or smooth segmented diverting system
- Preset for remote assistance via internet and for Industry 4.0.

Available options:

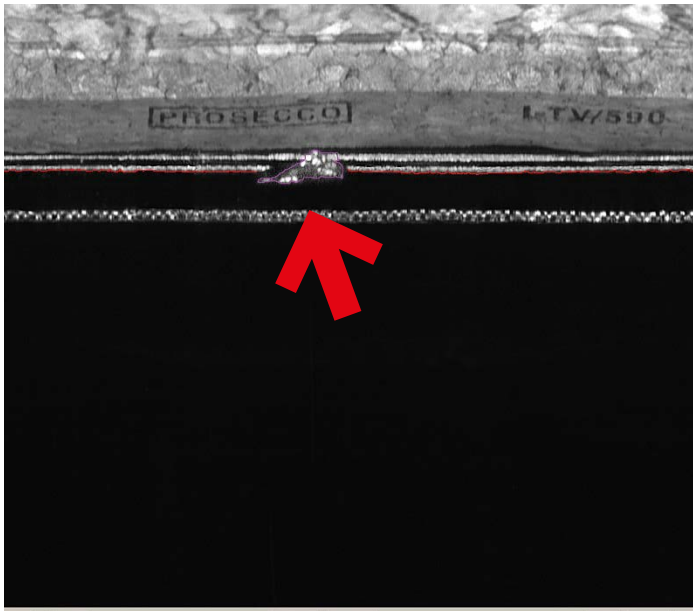
- Belt-style bottle separator
- Logiselect sidewall inspection.
- Automatic motorised changeover.

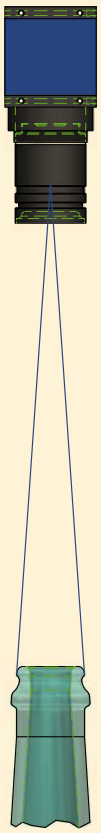
LOGIFINISH
may be combined with:



It is possible to inspect lip even in capped bottles. Bottles can be inspected with corks, or with mushroom corks, using a lens system similar to the one used in Logilook.

The device may be combined with level and capping checks, and may be installed in a monoblock unit prior to application of capsules or wirehoods.

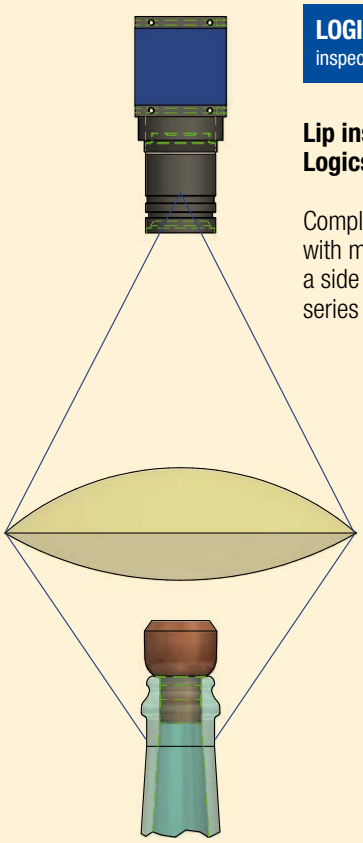




STANDARD
inspection system

Standard bottom lip inspection

Works only for bottles without corks or with corks.
The lip of bottles with mushroom corks cannot be inspected as the cork blocks the view.



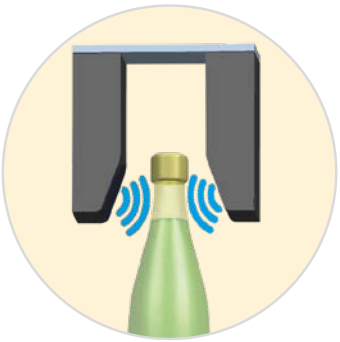
LOGICS & CONTROLS
inspection system

Lip inspection with lenses Logics & Controls

Complete lip inspection even with mushroom corks, with a side view permitted by a series of lenses.

Logilevel

Level check - *Checks correct filling level*

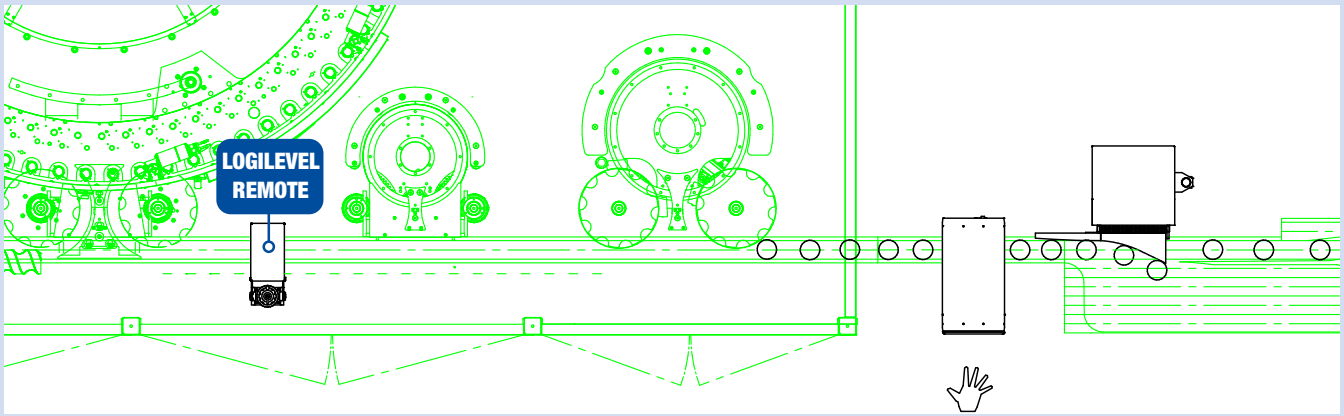


With great precision, this checks the fill level inside glass, plastic or ceramic containers, including totally opaque ones, through a high frequency capacitance system. It can measure the level of any liquid, such as water, wine, distillates, beverages, oil, vinegar, milk, distilled water, detergents, etc. Available in several versions for containers from 20 to 5,000 ml. It can be expanded to perform other inspections, even at different points on the bottling line, using the same electronics.

Logilevel Remote

Logilevel Remote is a compact version of Logilevel including the measuring bridge only. It can be installed on lines with little available space, or on the filling and capping monoblock. If it is installed on the feed screw or starwheel at the filler exit, it detects level problems immediately, so that nonconforming bottles will not be capped.

Control electronics may be installed at the exit of the monoblock and used to check for the presence of the cap and/or perform a second level check.



Why choose Logilevel?

Because it measures liquid volume directly.
There are a number of level measurement technologies on the market, all based on absorbance of radiation. There is a transmitter on one side of the container in transit and a receiver on the other. The receiver measures the amount of radiation absorbed and converts this into a level. There are systems that absorb infrared rays, and others that absorb radio frequencies, visible light or X-rays.

But Logilevel measures the volume of material crossing through its measurement bridge directly.
It uses a symmetrical high-frequency electrical field. The Logilevel measurement bridge looks like competitors'systems, but there are substantial differences in the way it works. This makes it much simpler to construct, more dependable over the years, and more precise.

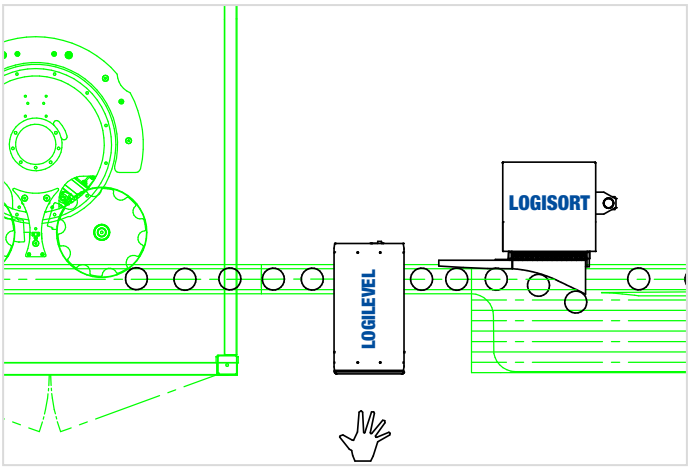
It doesn't just check whether or not the correct level is present; it performs a precise numerical measurement. Through self-learning, it learns the reference values; the minimum and maximum thresholds for acceptance and rejection are numerical. It has no difficulty measuring glass or plastic containers, even if they are completely opaque. It doesn't matter whether the product conducts electricity. It measures level with precision, even inside the first part of metal caps.

Main features:

- Self-learning of the reference level.
- Setting of minimum and maximum level thresholds.
- Display of counters and statistical data and transmission to external systems for Industry 4.0.
- It can control all our rejection systems or operate as a basic alarm.

Available options:

- Automatic motorised changeover.
- Excess foam compensation.
- Tracking of the filling valve and capping head that processed the bottle.
- Samples bottles periodically, or on the operator's request.
- Checks for the presence of the cap, wirehood and capsule at the same station or at another point on the line.



All Logilevel models can be supplied with a floor mount.

LOGILEVEL may be combined with:

Logicork · Logiclosure · Logilabel · Logilook · Logipush · Logisort

Logiclosure

Closure inspection - *Checks the presence, position and integrity of the cap applied to the bottle*

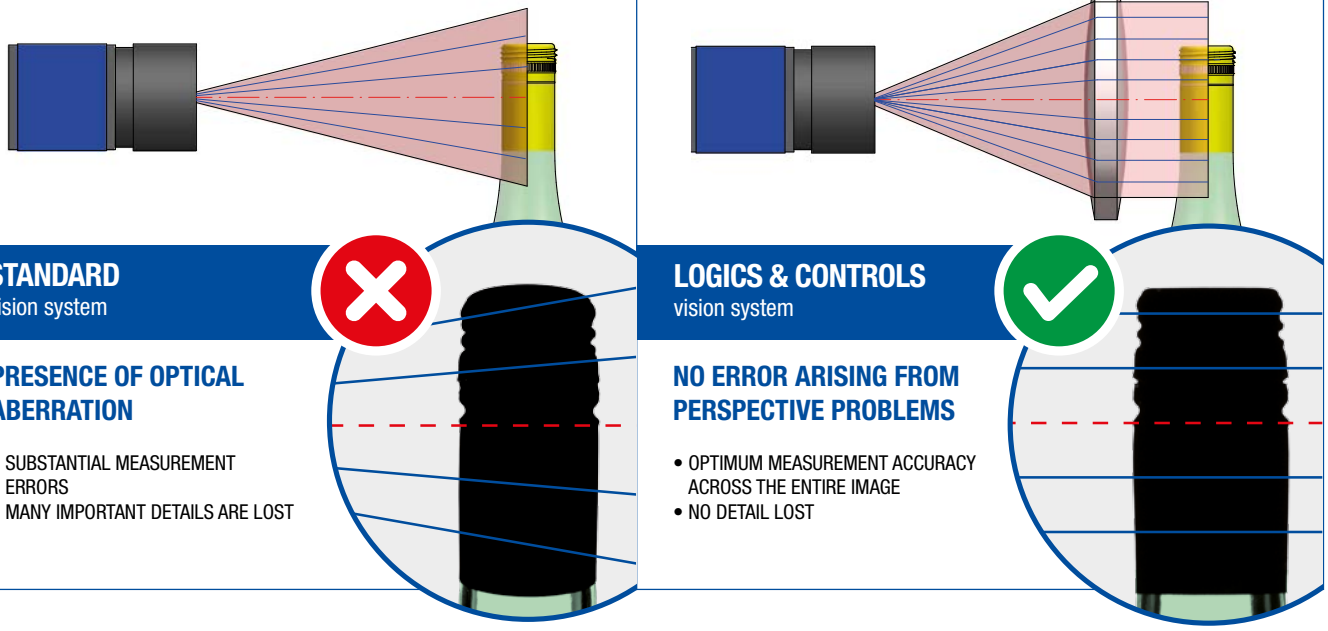
This camera system checks correct closure of containers passing through the line. It inspects actual container closure and the correct position of both the cap and guarantee ring with great precision.

It is normally completed with the Logilevel to check the fill level too.

The Logifiller function can also be added to troubleshoot filling valves and to check for bottle bursting.

A compact system that can easily be installed on any new or existing line, this product has all the necessary features to check the correct operation of filling and capping systems.

Logiclosure can make highly accurate measurements on any part of the image using our exclusive optical units that eliminate the problem of perspective, and therefore the parallax error, which can be an issue with standard optical systems.



STANDARD
vision system

PRESENCE OF OPTICAL ABERRATION

- SUBSTANTIAL MEASUREMENT ERRORS
- MANY IMPORTANT DETAILS ARE LOST

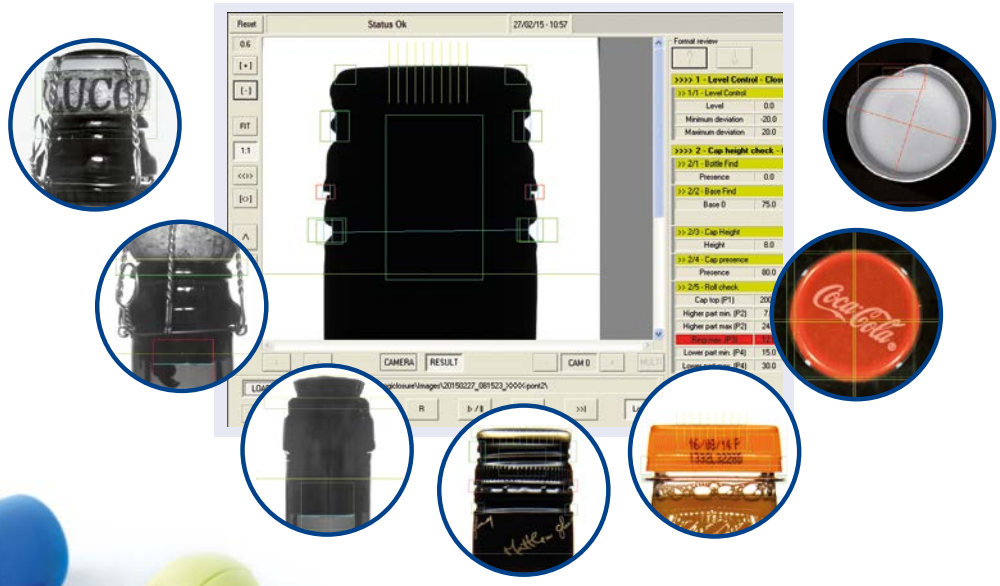
LOGICS & CONTROLS
vision system

NO ERROR ARISING FROM PERSPECTIVE PROBLEMS

- OPTIMUM MEASUREMENT ACCURACY ACROSS THE ENTIRE IMAGE
- NO DETAIL LOST

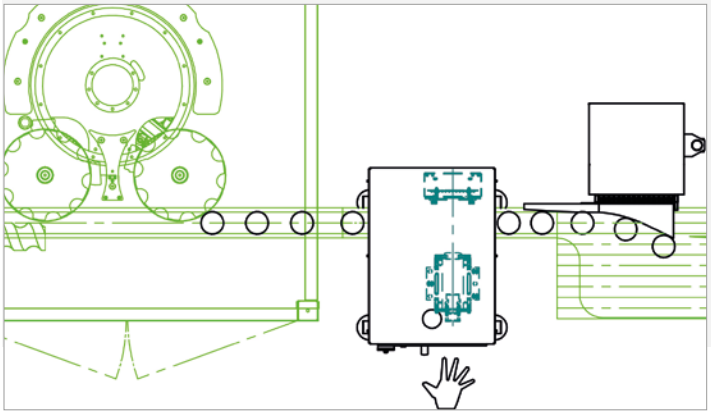
ONE SINGLE camera system for all caps type

Closure quality control can be performed on all kinds of caps: plastic, cork, metal.
With aluminium screw caps the system can also inspect the rolling depth.



Main features:

- The operator can keep everything under control on a single screen, viewing an image of the cap, the tolerances set and the causes for rejection, both graphically in the image and in numerical form.
- Our proprietary lens system designed for this specific application permits extremely precise measurement at any point in the image.
- The lighting system features high-efficiency pulsed LEDs, to guarantee maximum reliability, long life and image repeatability over time.
- High-end industrial PC with touchscreen monitor: no hard disk and no UPS needed.
- Compact in size.
- Preset for remote assistance via internet and for Industry 4.0.



Available options:

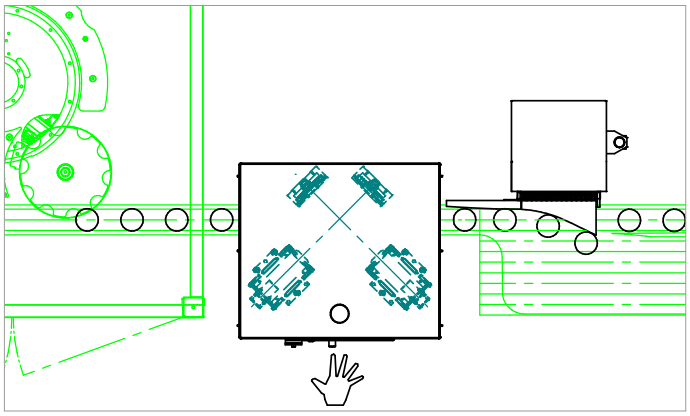
- Level check with foam compensation, using high frequency devices or a camera.
- Closure inspection from different angles using a camera.
- Check for cap ovalisation before capping.
- Automatic motorised changeover.
- Tracking of the filler valve and capping head that processed the bottle.
- Samples bottles periodically, or on the operator's request..

Logiclosure

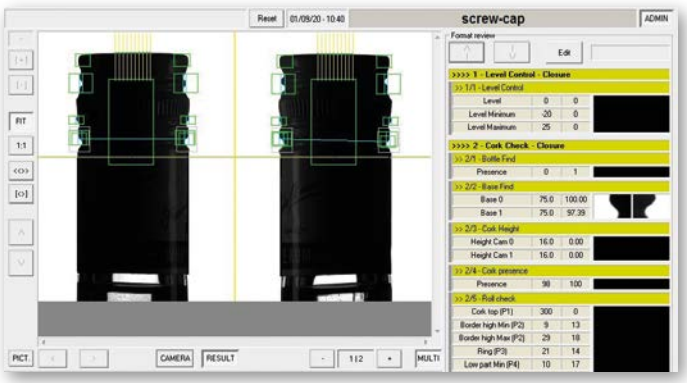
Closure inspection - *Checks the presence, position and integrity of the cap applied to the bottle*

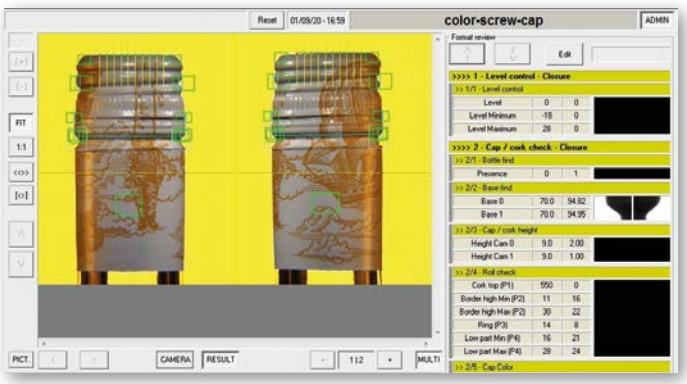
Logiclosure 2x allows you to inspect the closure from two different angles, for a more complete inspection than the standard Logiclosure.

It is used in a variety of applications, such as:
- Correct rolling depth on screw caps
- Detached ring in mushroom corks for sparkling wines
- Correct orientation of mushroom corks with the logo on the top
- Flaws in the guarantee ring on PET caps.

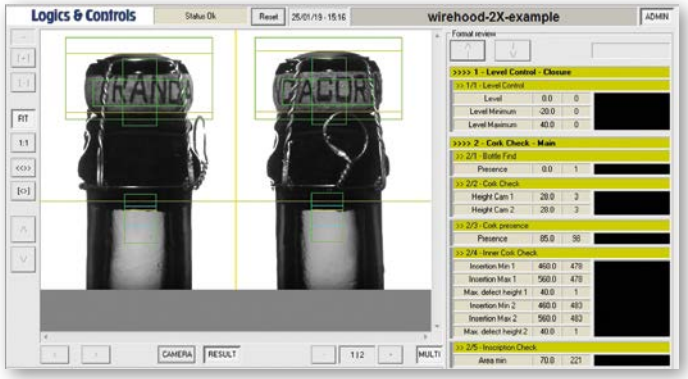


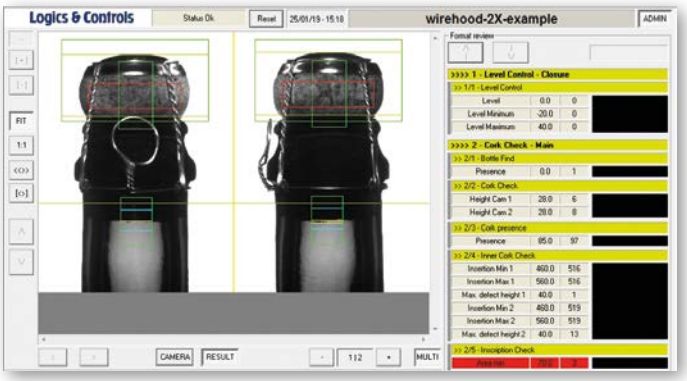
2x inspection of rolling depth

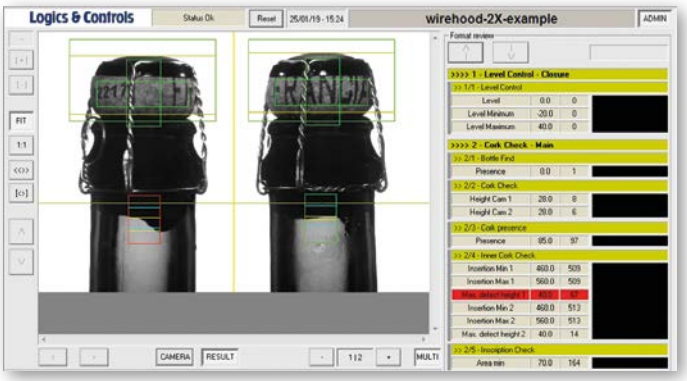




2x inspection of mushroom cork







LOGICLOSURE
may be combined with:

Logilevel | Logifinish | Logipush | Logisort

Logicork

Closure inspection - *Checks for the presence of cork, plastic or screw caps*

This solves the problem of the check for the presence of any type of cork and/or wirehood, by means of one or more sensors.
It can work in two ways: as an autonomous check or as an extension of the level check, by carrying out a check simultaneously with the level check or by carrying out a check at a different point on the line, but still controlled by the level check electronics.
It can control all our rejection or diverting systems or operate as a simple light or audible alarm. To go beyond simply checking cork presence, the Logiclosure camera system may be used to check the position and condition of caps or capsules.

LOGICORK may be combined with: Logilevel, Logilabel, Logipush, Logisort

Logiconvex

Closure inspection - *Checks the convexity of metal lids on vacuum-sealed containers*

Checks the convexity of metal lids on containers to ensure that they have been packaged in a vacuum.

It can operate as an independent check, or as an extension of other forms of inspection. It can, for example, be integrated into the Logilevel inspection station, and performed at the same time as the level check.
Or it can be installed on the infeed of the Logilook label check. It can control all our rejection or diverting systems

Indipendent Logiconvex

Logiconvex on Logilook infeed

LOGICONVEX may be combined with: Logilevel, Logilabel, Logilook, Logipush, Logisort

Logicapsule

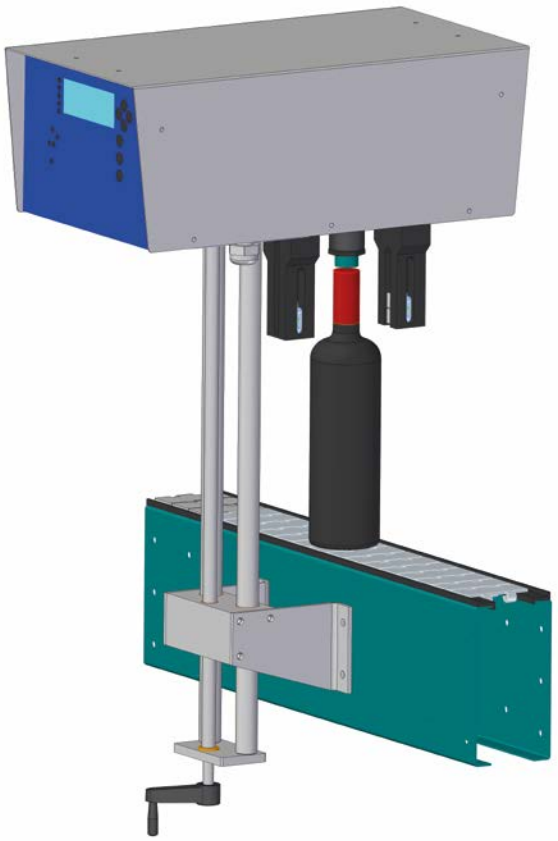
Capsule inspection - *Checks capsule presence with sensors*

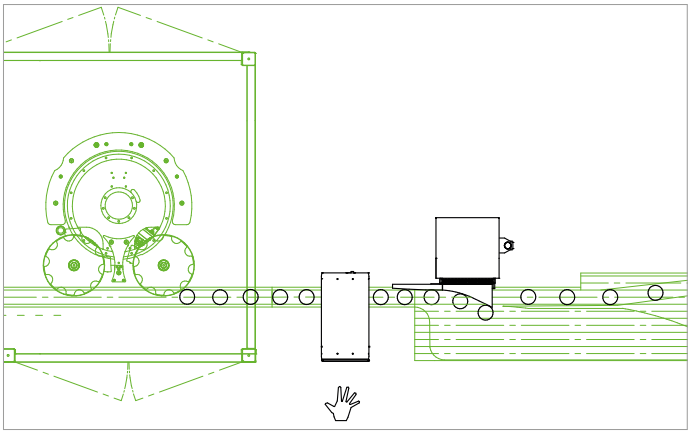
Checks the presence of the capsule applied to the cork. A combination of optical and inductive sensors checks for the presence of a rolled or heat-shrunk capsule.
It can also check that it has been applied entirely, measuring its length.
It can operate as an independent check, integrating the inspection bridge and command interface in the station at the capsuler outfeed.

Or the inspection bridge can be an extension on another main system, positioned at a different point on the line. It might, for example, be managed by the electronics commanding level check at the filling and capping monoblock outfeed.
Or a label check on a labelling machine.

If the monoblock includes the capsuler and labelling machine in a single block, the inspection bridge may be installed on the feed screw joining the two, sending a no-label signal to the labelling machine if no capsule is detected.

It can control all our rejection or diverting systems or operate as a simple light or audible alarm.
To go beyond the simple presence check, the Logicapsule camera system may be used to check the position, condition and codes of caps or capsules.





Example of independent positioning on the capsuler outfeed.

Main features:

- Stainless steel structure for the command unit, supported by the conveyor sidewall or free-standing
- Microprocessor control electronics.
- Displays counter and statistics, with transmission to external systems for Industry 4.0
- It can control all our rejection systems or operate as a basic alarm.

Available options:

- Automatic motorised changeover.
- Associates the reasons for rejection with the capsuler head number.
- Samples bottles periodically, or on the operator's request

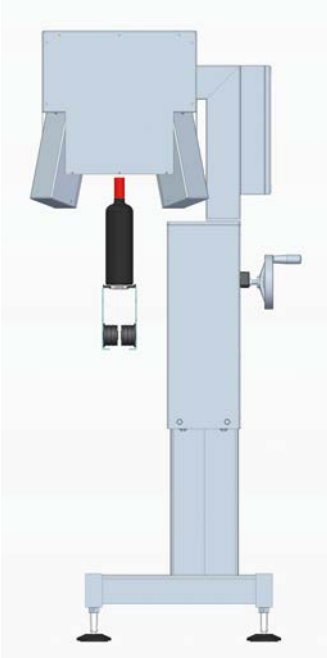
LOGICAPSULE may be combined with:

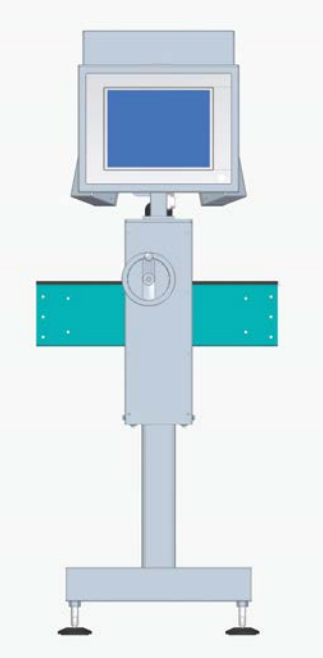
Logilevel | Logicork | Logilabel | Logipush | Logisort

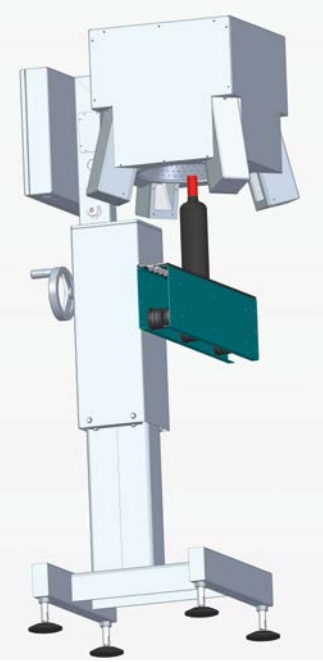
Logicapsule camera

Capsule inspection - *Checks the presence and condition of the capsule with cameras*

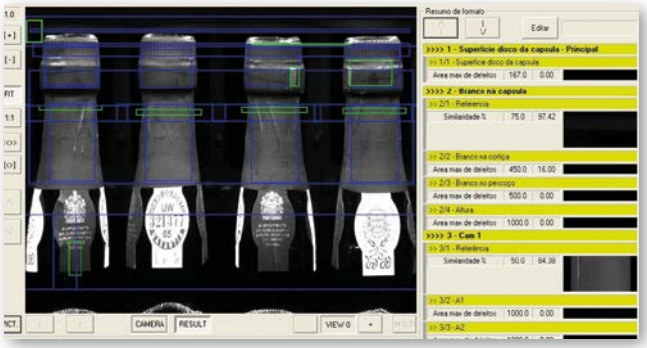
Checks correct capsuling. Four side cameras on the four corners check for the presence, correct application and integrity of rolled and heat-shrunk capsules. An optional fifth camera can inspect the top of the capsule, checking its condition and the presence of the logo, where applicable.







The standard system uses cameras in shades of grey, but a colour version is also available in the event that it is necessary to distinguish among different capsule colours or conduct a more thorough analysis.
The images captured by the cameras are combined to provide the operator with an overall view of the same bottle to keep the results of processing under control.
It is highly compact and easy to install on the capsuler outfeed.
Or it may be combined with the Logilook label check to provide in-depth inspection of capsuling on the same station.



Main features:

- The operator can keep everything under control in a single screen, with views of the same bottle from all the cameras, along with the set tolerances and the causes for rejection
- The lighting system features high efficiency pulsed LEDs for maximum reliability, long life and image repeatability over time.
- High-end industrial PC with touchscreen monitor: no hard disk and no UPS needed.
- Reasons for rejection may be associated with capsuler head numbers.
- May be installed on the outfeed of the Logilook label check.
- It can control all our rejection or diverting systems.
- Preset for remote assistance via internet and for Industry 4.0.

LOGICAPSULE CAMERA may be combined with:

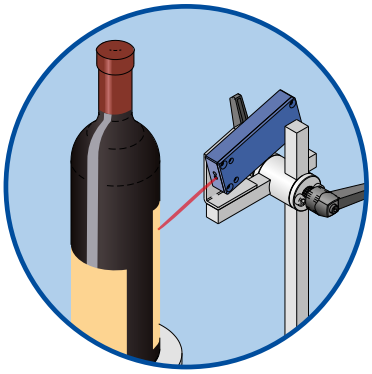
Logilook | Logipush | Logisort

Logilabel

Label check - *Checks label presence with optical sensors*

This checks for the presence of paper and plastic, glued and self-adhesive labels, neck labels and stamps, through optical sensors placed on the labelling machine.

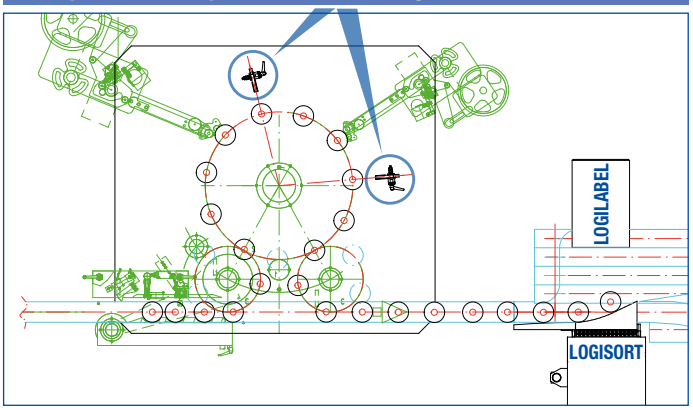
When the labels are wraparound labels or the bottles are shaped and the labels face outwards, the check can be made on the conveyor through in-line sensors.
It can also be an extension of the level check. It drives both Logipush rejection systems and progressive Logisort diverters.



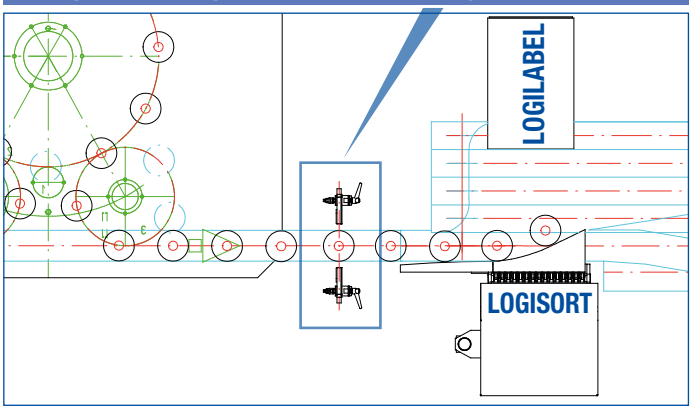
Main features:

- Photocell type optical sensors with adjustable supports.
- Stainless steel frame on control unit, with support from conveyor or the floor.
- Microprocessor control electronics.
- Display of counters and statistical data and transmission to external systems for Industry 4.0.
- It can control all our rejection systems or operate as a basic alarm.

L&C optical sensors placed on the labelling machine



L&C optical sensors placed in line on the conveyor



LOGILABEL
may be combined with:

Logilabel Camera

Label check - *Checks correct labelling with cameras on labelling machine*

Labelling quality control system requiring installation of cameras on the labelling machine.

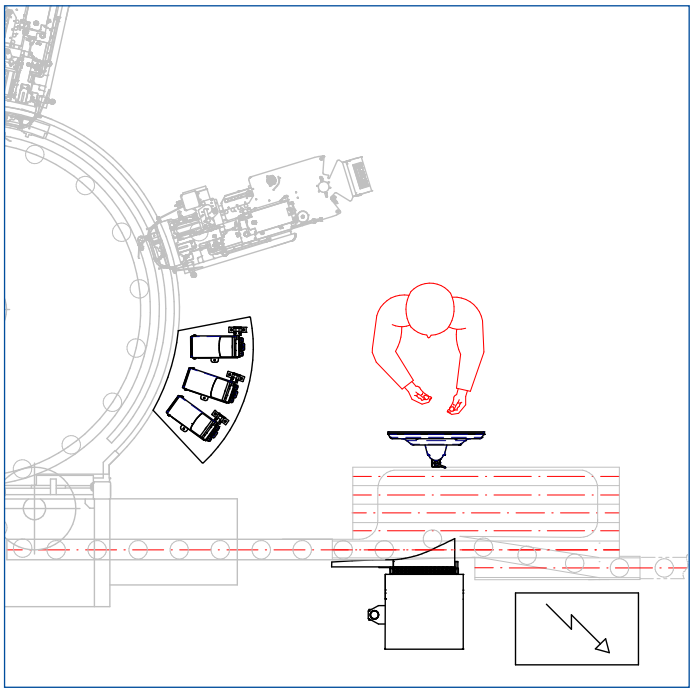
Can check a number of aspects of labelling, depending on the number of cameras installed: label presence, position, integrity and alignment, reading of numerical codes, bar codes or 2D codes. Label alignment with decorations or notches on the bottle.

Cameras may be installed on existing or new labelling machines, directly on the premises of the labelling machine manufacturer. They may be installed on the inside or outside of the carousel, or on both sides, to save space. They are normally designed to ensure a wide enough field of vision to ensure that their position need not be changed during changeovers.

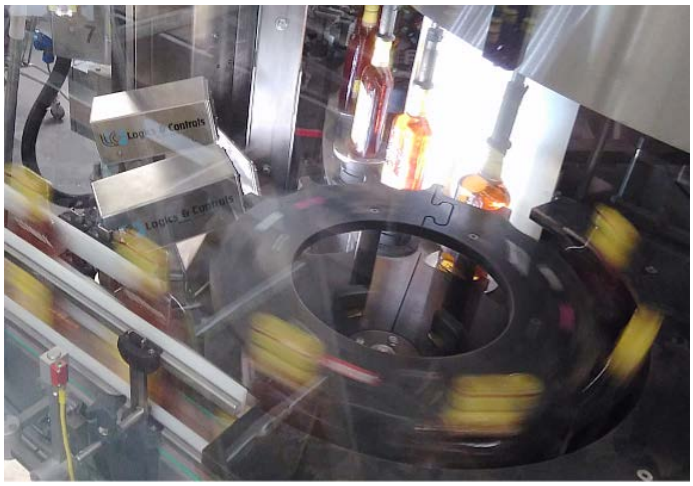
The images captured by the cameras are combined to provide the operator with an overall view of the same bottle to keep the results of processing under control.

To eliminate any limitations due to camera positioning and ensure simultaneous control of all bottle labelling, a Logilook unit may be installed on the labelling machine outfeed.

L&C cameras on the labeller



Examples of applications:



Main features:

- The operator can keep everything under control in a single screen, with views of the same bottle from all the cameras, along with the set tolerances and the causes for rejection.
- The lighting system features high efficiency pulsed LEDs for maximum reliability, long life and image repeatability over time.
- High-end industrial PC with touchscreen monitor: no hard disk and no UPS needed.
- Display may be integrated into the electrical panel or installed in a remote location more convenient for the operator.
- Reasons for rejection may be associated with the labelling machine platform number.
- Can be integrated with a push reject device or smooth segmented diverting system.
- Preset for remote assistance via Internet and for Industry 4.0.

LOGILABEL CAMERA may be combined with:

Logipush

Logisort

Logilook

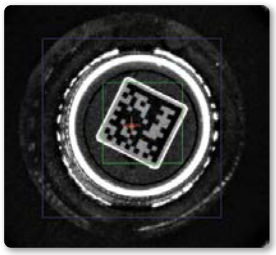
Label check - *All-round check of correct labelling on the labelling machine outfeed belt*

Different analysis levels

- Checking label presence and orientation.
- Checking the position of the labels in relation to each other and to decoration on the glass.
- Checking the graphic content, gradient and intactness of each label.
- Checking specific details at various levels, such as text or parts of text, codes, capacities and alcohol content.
- Checking the neck label and capsule.
- Checking the top of the cap, capsule or lid

All-round labelling quality control system

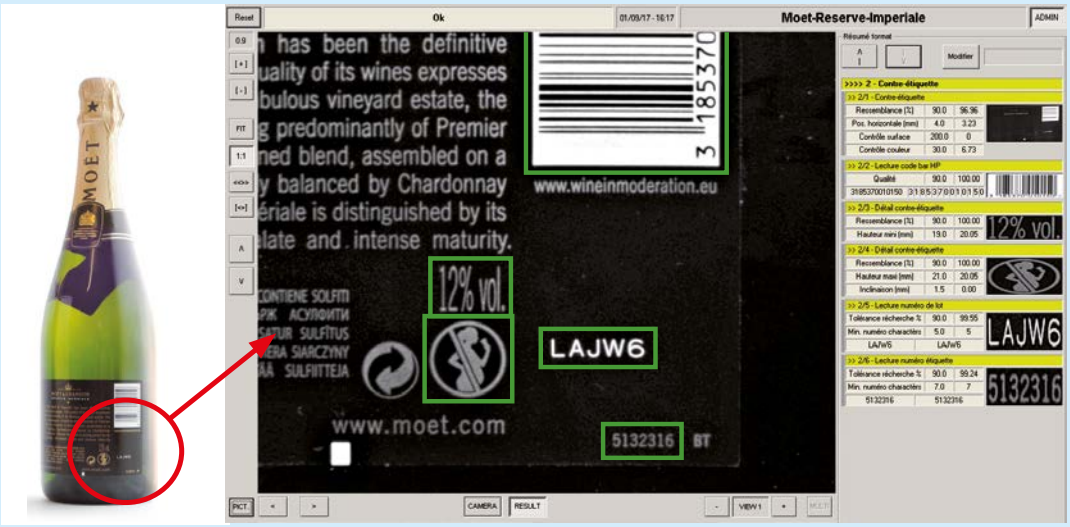
Particularly appropriate for use in traceability systems



Performs total, simultaneous, all-round inspection of all the labels, the capsule, the motifs and decorations present on the container. Regardless of the way the bottle is facing, the system checks all labelling on the vessel using a single high-resolution camera and a special optical unit designed and manufactured exclusively by us. It is the only system that can operate on the line with any container shape (cylindrical, conical, oval, square, rectangular or triangular) and contents (wines, distillates, oil, preserves, jam, etc.).

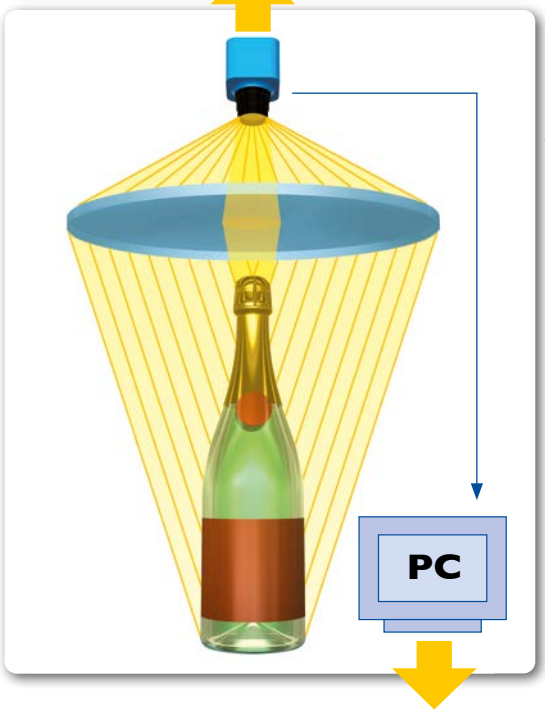
Logilook HP

The HP module is an integration of Logilook that can read bar codes, batch codes, label codes, matrix codes and almost any small detail. It consists of optical units added and positioned inside Logilook to increase the resolution of the focus areas.

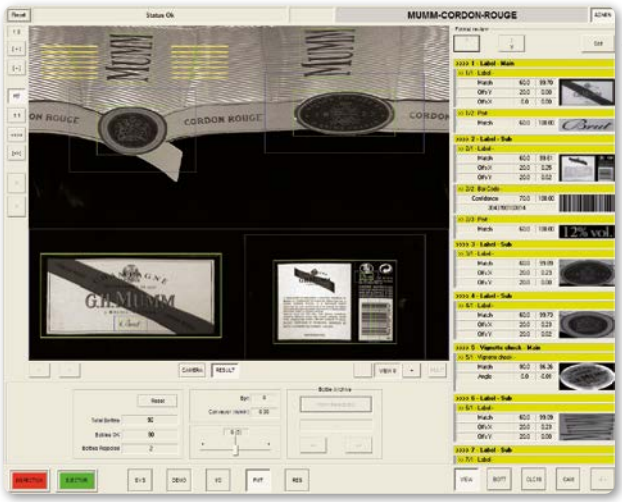


Operating principle

Image taken with a camera



Optical system

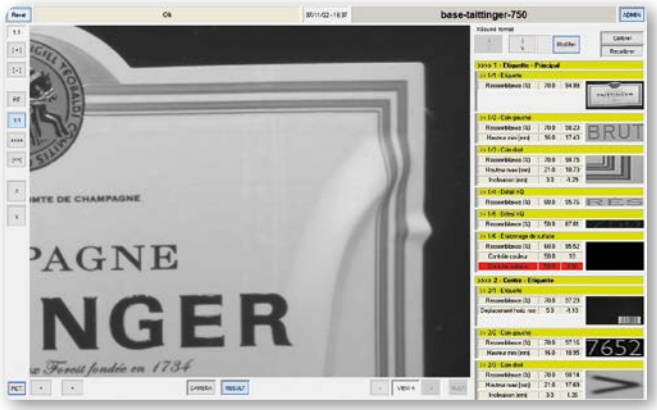


User interface

Automatic check for folds and other flaws

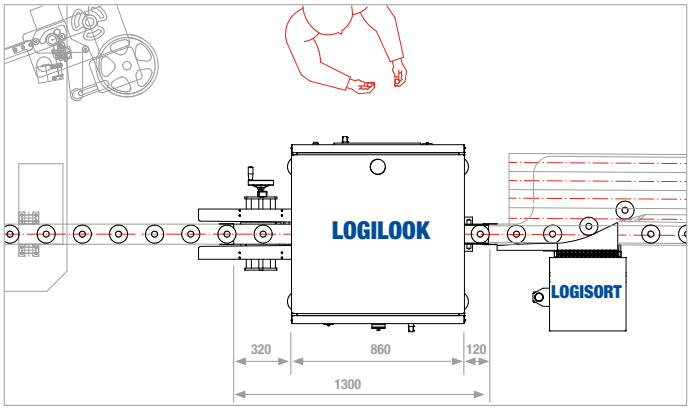
NEWS

We have introduced a new form of automatic labelling self-learning permitting rejection of flaws such as folds, tears, and raised or folded corners with just a couple of clicks.

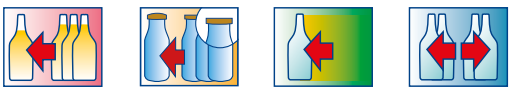


Main features:

- The operator can keep everything under control in a single screen, the full image of the bottle is presented on a single display, with the specified tolerances and reasons for rejection, both graphically in the image and in numerical form.
- A single sample bottle is sufficient to create a new format.
- The lighting system features high efficiency pulsed LEDs for maximum reliability, long life and image repeatability over time.
- High-end industrial PC with touchscreen monitor: no hard disk and no UPS needed.
- Reasons for rejection may be associated with the labelling machine platform number.
- Can be integrated with a push reject device or smooth segmented diverting system.
- Prepared for remote assistance via Internet and for Industry 4.0.



LOGILOOK may be combined with:



Logipush

Rejection and diversion - *Push rejector for sideways movement of the containers*

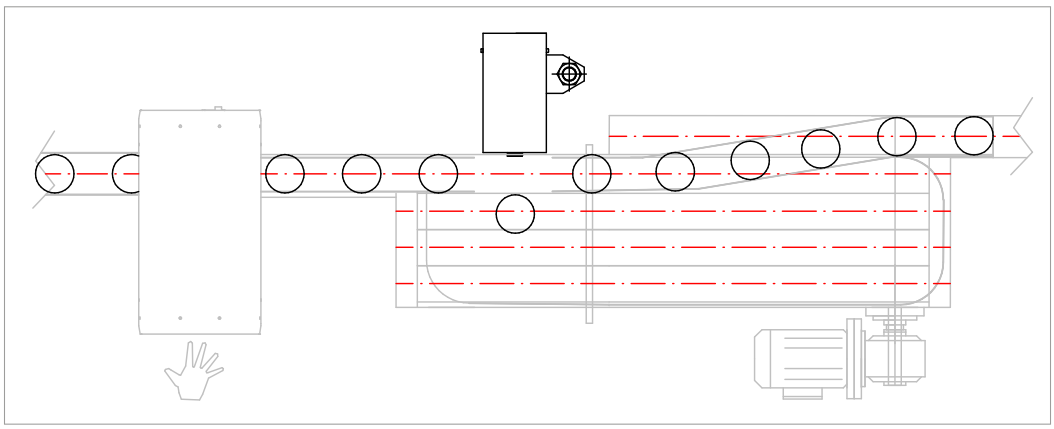
By means of a pneumatic cylinder, this pushes the defective container sideways onto an accumulation table or into a disposable container. It is possible to adjust the height, to adapt it to the container's centre of gravity, or adjust the depth, to come closer to the passing container.

It can be connected to any of our inspection systems because they are all able to dynamically manage the reject signal according to the instantaneous speed of the conveyor belt.

Choose from the following models:
LP, standard rejector,
up to 36,000 containers / hour
HP, high-speed rejector,
up to 72,000 containers / hour

Depending on the type of container (plastic or glass) and type of rejection (to the accumulation table or for disposal), a contact sponge appropriate for the application is provided. For special requirements (such as extra small/extra large or rejection onto a second chain), a customized rejection system may be requested.

Use of the Logisort progressive diverter instead of a push rejector like this one is recommended when a guarantee of container stability is required, irrespective of speed, container shape and fill level.



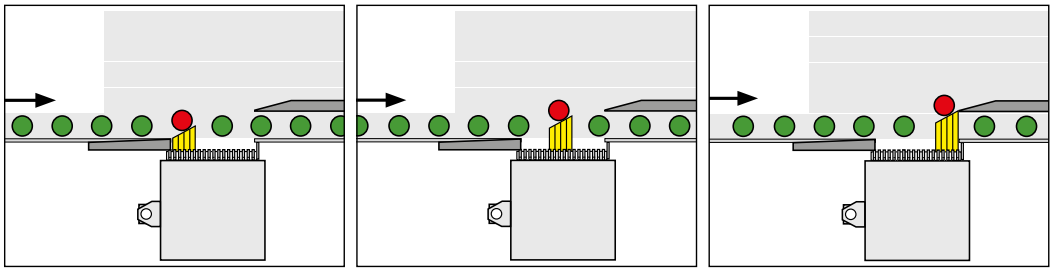
LOGIPUSH may be combined with all bottle checking systems

Logisort

Rejection systems - *Progressive diverter for gentle sideways movement of containers*

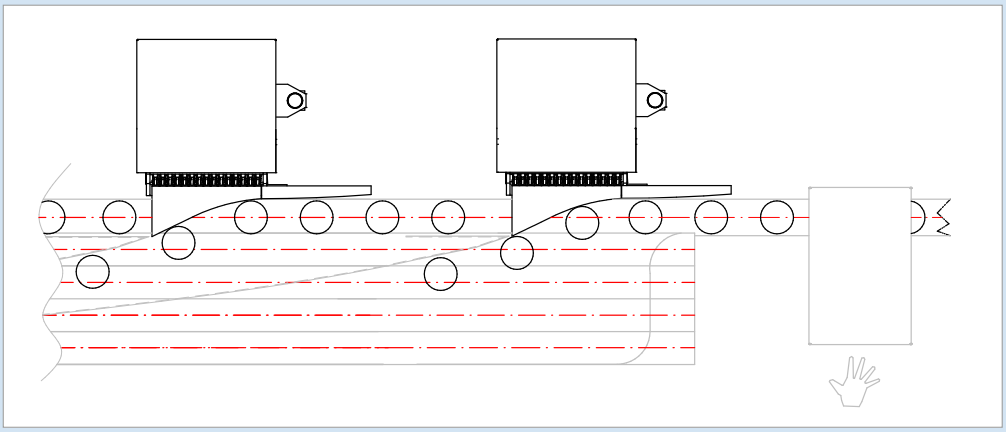
Carefully diverts the containers, ensuring that they remain stable, regardless of their shape or the production speed.
By using several small diverter segments, this dynamically creates a guide as the container progresses along the line and takes it onto a parallel conveyor belt. Guiding the container, rather than pushing it, ensures that it does not fall over during sideways movement.

It is suitable for use with any type of container, be it full or empty, made of glass, plastic or metal, and in any shape (cylindrical, conical, rectangular, triangular, oval, etc..)



Operating principle

Logisort can also be used as **stand-alone system for continuous diversion** into several lines to feed packaging machines.



LOGISORT may be combined with all bottle checking systems

Logiweight

Weight check - *Checks the weight of cases, cartons, bundles and drums*

Checks the weight of cases, cartons and bundles, and accurately detects those that are non-conforming as a result of one or more missing containers or the condition of the containers.

The system is accurate, reliable and easy to use. Its composition in combinable modules makes it easy to incorporate into already existing lines. It performs an optimal final check, before the palletising stage.

As a fully automatic system, it only requires an operator to be present when changing the format for self-learning of the reference weight, or when pulling up a format that has been previously saved.

The **central module** in the device weighs with a motor-driven high-adherence belt and a load cell system. Weighing is dynamic, without stopping the belt.
An **infeed module** may also be added, depending on the layout of the line. This is a high-adherence motor-driven belt which travels at a lower speed than the weighing belt to keep containers separate. Even if they arrive in contact with one another.

The **outfeed module** expels the container.
It features a low-friction motor-driven belt and an electro-pneumatic rejection system.
On high-speed lines, the outfeed belt may be replaced with a motor-driven rollerway featuring a built-in electro-pneumatic rejection system.

The system is completed with an idle roller rollerway permitting accumulation of nonconforming containers.
An open flap check may be added, using optical sensors to check for flaps that are even slightly open in any direction.
A wet case check may also be added to identify cartons containing broken bottles.

The system may be integrated with a bar code reader or camera for reading codes on all sides of the container. In this case, the standard display will be replaced with a 12" touchscreen display.

Optional 12" display

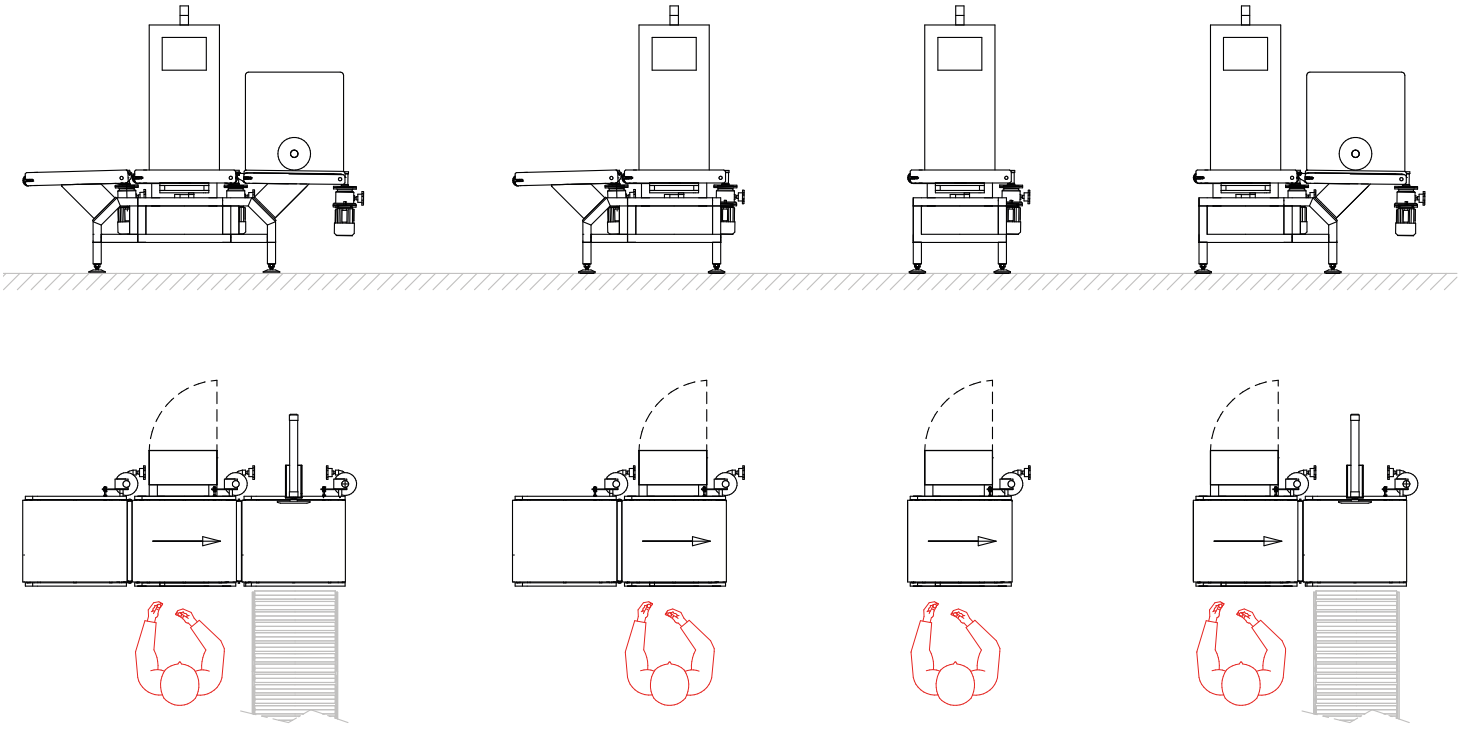
If a bar code reader or camera is added, the standard alphanumerical interface may be replaced with a 12" touchscreen display.

Main features:

- Load cell weighing system featuring conveyor unit with its own motor drive.
- Calculation of the standard reference weight with self-learning or reference to memorised formats.
- Microprocessor control electronics.
- Stainless steel weight-bearing frame and electrical cabinet.
- Signal to shut down machines upstream when the reject accumulation roller conveyor is full or there have been a number of consecutive rejections (the number of rejections is programmable).
- Display of counts and statistical data, with transmission to external systems for Industry 4.0.

Available options:

- Infeed conveyor belt with independent motor drive and high-adherence belt.
- Outfeed conveyor belt with independent motor drive and electro-pneumatic rejection system.
- Idle roller conveyor belt for accumulation of nonconforming containers.
- Bar code readers or cameras.
- Wet case check.
- 12" touchscreen display.

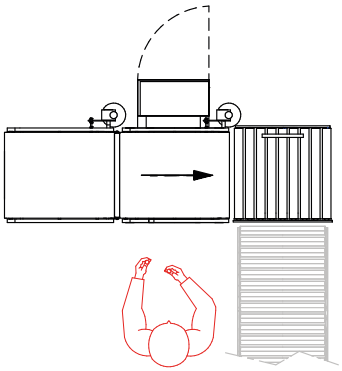


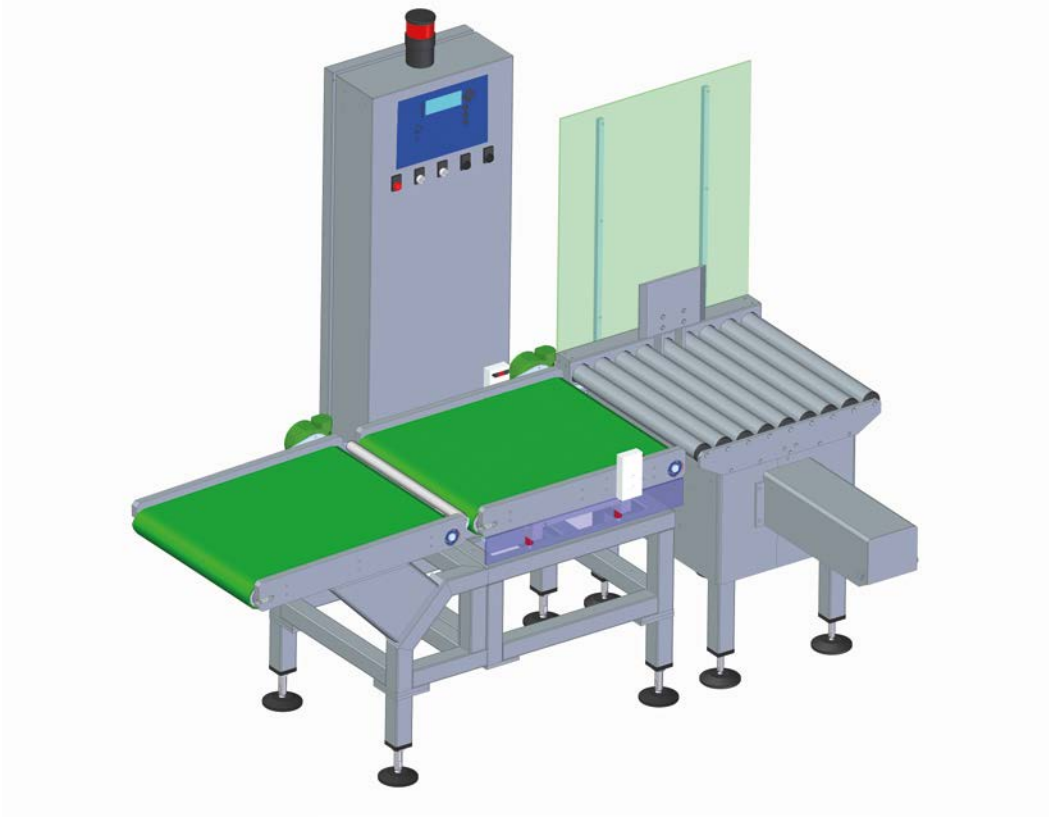
Logiweight

Weight control - *Checks the weight of cases, cartons, bundles and drums*

Logiweight with roller conveyor

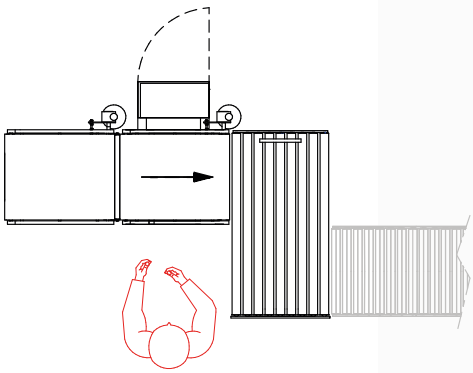
A motor-driven roller conveyor may be used on the outfeed module in place of the conveyor belt. This allows the control system to reach speeds of up to 80 cartons/minute.
The roller conveyor can also be used on lines operating at lower speeds where there is a need to save space, as the rejector is integrated into the bulk of the roller conveyor and does not occupy space behind it.

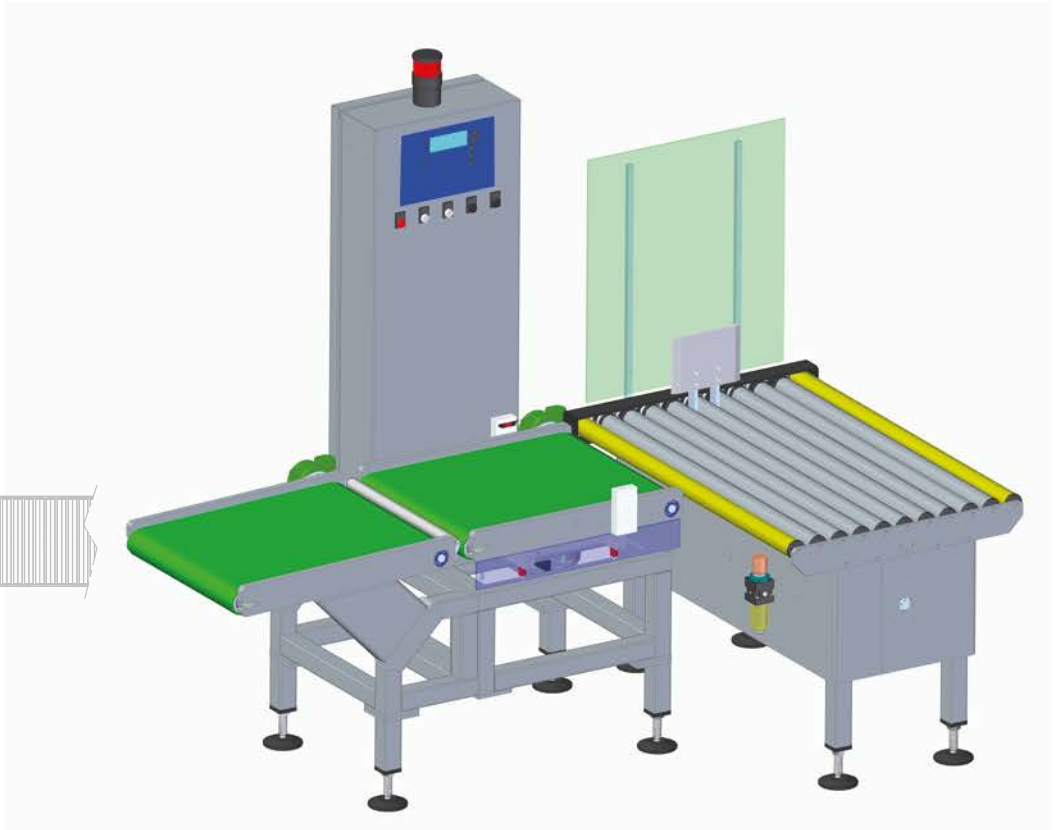




Logiweight with double-length roller conveyor

A double-length roller conveyor may be used to obtain rejection parallel to the direction of carton movement.



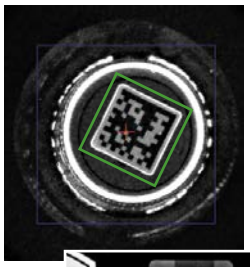


Traceability and Industry 4.0

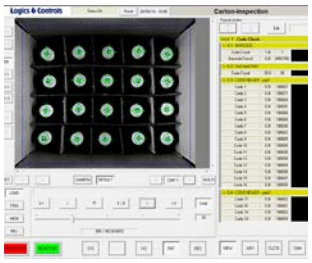
All our systems may be interfaced for exchanging data with supervision systems via standard protocols (OPC-UA, Profinet, Modbus TCP, SQL and others). In addition to production counters, container codes may be provided, or recipes to be loaded may be received remotely.
This feature makes them a key to traceability and verification of production trends.
In addition to communicating with external systems, our devices can communicate with one another to create a network that tracks the container all the way from pallet to pallet.

A concrete example of traceability, from the labelling machine to the pallet

BOTTLE
The Logilook system reads the code on the label applied to the side of the bottle and associates it with the code applied to the top of the capsule.



CARTON
A second visual inspection system checks the carton, reads the codes on the capsules, and associates them with the code applied to the carton.

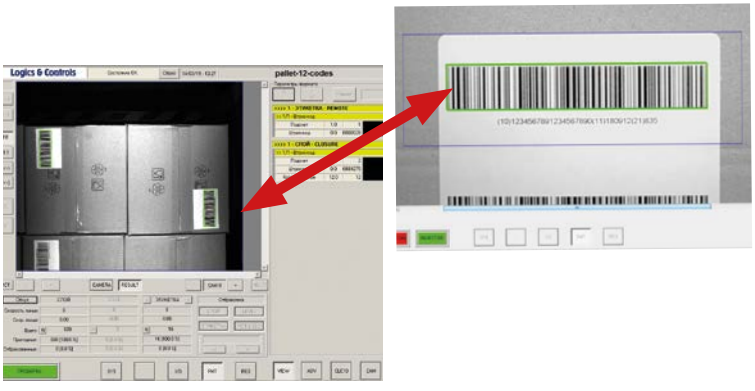


PALLET
A third visual inspection system reads the codes on the cartons in the pallet layers and associates them with the pallet code.

All systems communicate with the central database in real time and save the codes they read.

The carton check system checks that the bottles have already been read by the Logilook system.

The pallet check system checks that the cartons have already been ready by the carton check system.



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