

When quality control of the seal is key...
our Label & Seal Inspectors will take care of your trouble!



SI XL

LI and SI



In today's world, customers are getting more and more demanding. Quality control is essential in delivering a product that will meet the customer's expectations. The Label Inspector will check if the expiration date, barcode, and all promotion labels are present and have been printed correctly. If you upgrade the Label Inspector to the Seal Inspector it doesn't stop with the label!

Sealed products (MAP filled with CO² and nitrogen) have an added dimension; material left in between the seal or bad seals, not only look bad, it will also compromise the storage life: the seal is not airtight anymore. The Seal Inspector checks the seal for intrusion of foreign material, air bulbs and residual material from cutting; guaranteeing satisfied customers.

The Seal Inspector XL can inspect even bigger trays or double packages.



The Label & Seal Inspector guarantee your quality

What do the Label and Seal Inspector inspect for you?

The Label Inspector will check if the expiration date, barcode, and all promotion labels are present and have been printed correctly.

The Label Inspector verifies in a split second:

- ▶ Are the labels and codes (1-2D) present?
- ▶ Is there any marking on the label?
- ▶ Is the information on the label correct?
- ▶ Are characters (partly) missing?
- ▶ Is the label position and orientation correct?
- ▶ Is the Best Before Date correct?

The Seal Inspector checks even more

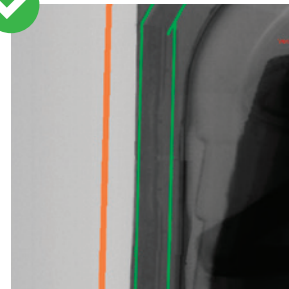
If you upgrade the Label Inspector to the Seal Inspector it doesn't stop with the label! The Seal Inspector checks the seal for intrusion of foreign material and bad sealing (due to air bulbs, or damaged or dirty seal plate).

The Seal Inspector also verifies in that same split second:

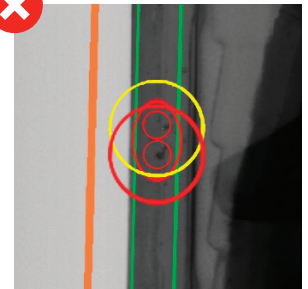
- ▶ Is there any content in the package?
- ▶ Is the shape of the package correct?
- ▶ Is the product equally distributed in the package?
- ▶ Is the shape nicely cut?

Performance checkpoints & tolerances

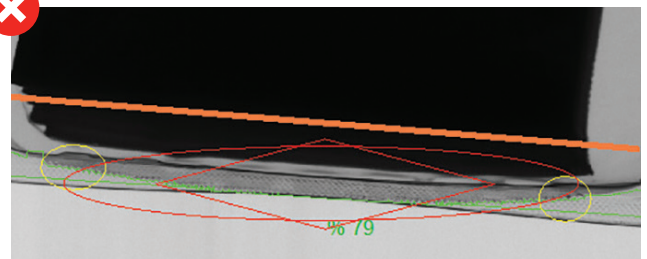
- ▶ **Automatic Seal width detection**
 - ≥ 2mm is generally used for MAP packages
- ▶ **Multiple shape selection of packages possible**
 - Automatic corner recognition
- ▶ **Deep learning feature to recognize print**
 - Automatic print sensitivity adjustment
- ▶ **Top & back label(s)**
 - Adjustable out of norm position (standard ≤ 5 mm)
 - Adjustable angle deviation position label
 - No wrinkles or air bubbles (optional)
- ▶ **The Seal**
 - If the seal is interrupted or has enclosures as defined by the customer for instance ≥ 1mm: reject package
- ▶ **Back label**
 - Check on the correct position and also the correct data for traceability and production/ best before date etc.



Correct seal



Intrusion of foreign material



Incorrect sealing due to seal plate

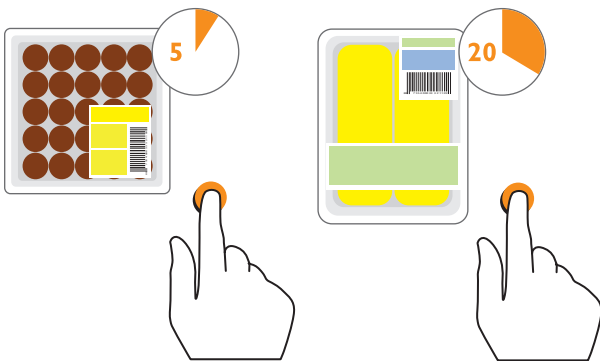
Summary

General

- ▶ 100% inspection of the product, 24/7
- ▶ Up to 240 sealed packages per minute (@60m/min) (LI / SI)
- ▶ Up to 80 sealed packages per minute (@30m/min) (SI XL)
- ▶ Minimal detectable defects 1mm²
- ▶ Two-sided inspection of label and seal (SI's)
- ▶ The Seal Inspector inspects 100% of your production volume with a accuracy better than 1:5000
- ▶ Possibility to view all images or only rejects per measurement

Installation

- ▶ Easy installation at existing lines
- ▶ Equipment needs 760 belt length - for all types
- ▶ Height of the belt is 900mm ±50mm
- ▶ Remote access by VPN, EWON
- ▶ Access control on various user definable levels
- ▶ Automated recipe change (set-up parameters) takes only 1 second. Manually 5 - 20 seconds max.

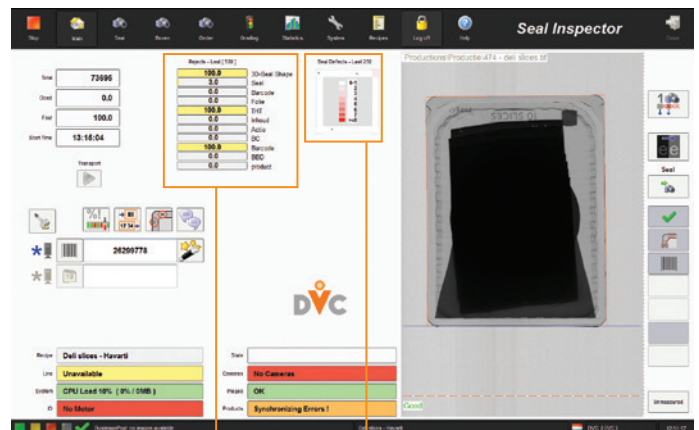


Benefits

- ▶ 100% inspected products
- ▶ Non-contact inspection
- ▶ Historical production information
- ▶ No return of products
- ▶ Customer satisfaction

User interface

- ▶ The measurement areas are indicated
- ▶ Auto view of latest false product
- ▶ Statistical information for process improvement
- ▶ Touchscreen
- ▶ Highest reject cause graph
- ▶ Location most frequent seal defect



Location most frequent seal defect

Highest reject cause graph



Food products have an added dimension; with today's strict regulations it is very important that food products have correct and readable labelling for the consumer:

Technical specifications

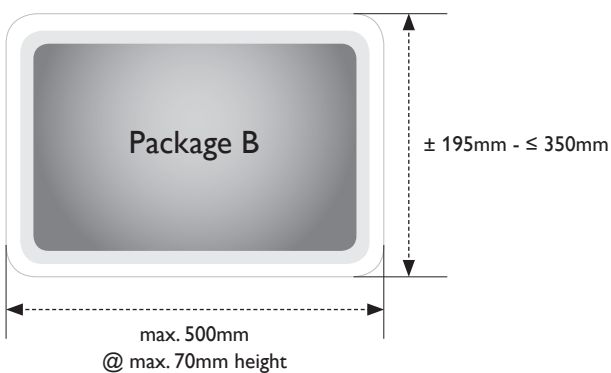
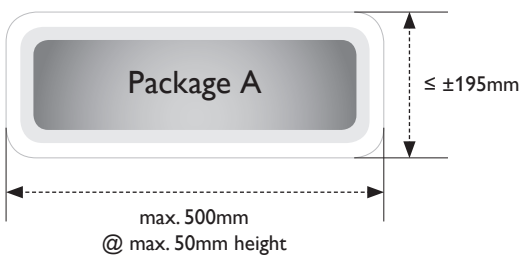
| Specifications | Label Inspector | Seal Inspector | Seal Inspector XL |
|---|-----------------------------------|-----------------------------------|-----------------------------------|
| Belt length | 760mm | 760mm | 760mm |
| Small footprint | 778 x 760mm | 778 x 760mm | 1008 x 760mm |
| To be upgraded to SealInspector | ✓ | ✗ | ✗ |
| Fiber tech housing, stainless steel optional. (foodgrade certificate available) | ✓ | ✓ | ✓ |
| No calibration required, intuitive learning | ✓ | ✓ | ✓ |
| Inspection performance | 240 products/min. 24/7 | 240 products/min. 24/7 | 80 products/min. 24/7 |
| Top and bottom simultaneously | ✓ | ✓ | ✓ |
| Height belt (in mm) | 900 ±50mm | 900 ±50 mm | 900 ±50mm |
| Scan area | 195mm product width x 50mm height | 195mm product width x 50mm height | 320mm product width x 70mm height |
| Max. size inspected product | Package A (see drawing) | Package A (see drawing) | Package B (see drawing) |
| Line speed belt | 60m/min. | 60m/min. | 30m/min. |
| Line integration | up and downstream | up and downstream | up and downstream |
| Min. character size: - 100% readability - sample testing | ≥ 1,8mm ≥ 1,5mm | ≥ 1,8mm ≥ 1,5mm | ≥ 1,8mm ≥ 1,5mm |
| Foil displacement | ✓ | ✓ | ✓ |
| Presence of all labels and printed information | ✓ | ✓ | ✓ |
| Optical Character Verifications (OCV) of: - expiration date - barcode - promotional text | ✓ | ✓ | ✓ |
| Check deformation labels | ✓ | ✓ | ✓ |
| Check position labels | ✓ | ✓ | ✓ |
| Barcode 1-2D all colors (even red and green) | ✓ | ✓ | ✓ |
| Seal | ✗ | ✓ | ✓ |
| Multi-shapes (round, rectangle, star, twins... etc) | ✓ | ✓ | ✓ |
| Forming | ✗ | optional | ✗ |
| SpareKit available | ✓ | ✓ | ✓ |

| Performance of quality | Label Inspector | Seal Inspector | Seal Inspector XL |
|--|-----------------|--|--|
| Accuracy repeatability at 100 packages | 100% | ≥ 99% at small seal defects ≥ 1mm ² | ≥ 99% at small seal defects ≥ 1mm ² |
| Machine availability, correct flow of packages (process depending) | ≥ 99,97% | ≥ 99,97% | ≥ 99,97% |
| False - Negatives | ≥ 1:40.000 | ≥ 1:5.000 (transparent seal) ≥ 1:1.500 (printed seal) | ≥ 1:5.000 (transparent seal) ≥ 1:1.500 (printed seal) |
| False - Positives | zero | 1:5.000 (transparent seal) 1:2.500 (printed seal) | 1:5.000 (transparent seal) 1:2.500 (printed seal) |
| Resolution | 0,1mm | 0,1mm | 0,1mm |

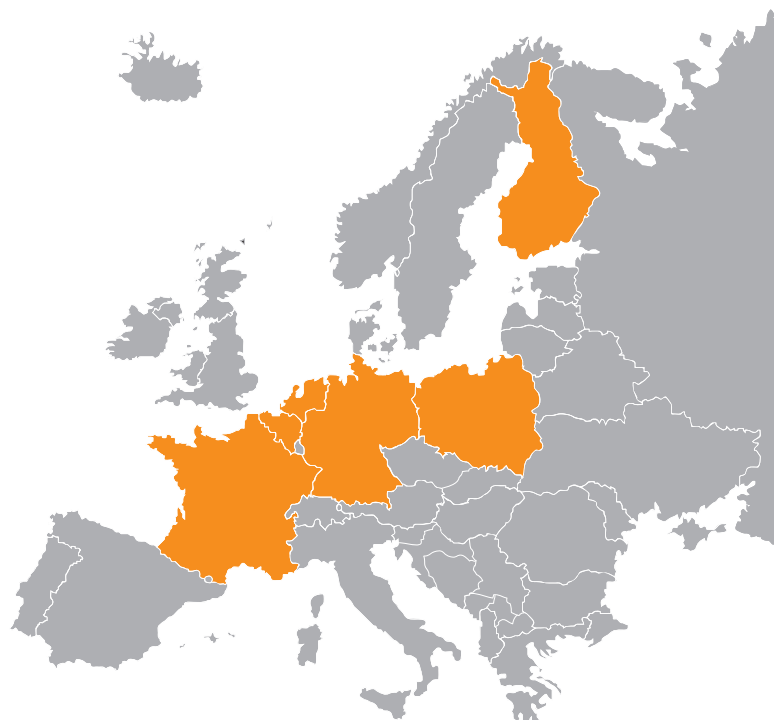
Technical specifications

| Features | Label Inspector | Seal Inspector | Seal Inspector XL |
|---|-----------------|----------------|-------------------|
| Inspection settings adjustable during production | ✓ | ✓ | ✓ |
| Possibility to view all images, selected images or only rejects per measurement | ✓ | ✓ | ✓ |
| Historical reporting | ✓ | ✓ | ✓ |
| Low maintenance and easy replacement of mechanical parts | ✓ | ✓ | ✓ |
| Try-out settings using review or production images | ✓ | ✓ | ✓ |
| Remote access by VPN, eWON | ✓ | ✓ | ✓ |
| Grant access to various user definable levels | 3 | 3 | 3 |
| Recipes (set of inspection parameters) can be stored and retrieved easily | ✓ | ✓ | ✓ |

| User Interface | Label Inspector | Seal Inspector | Seal Inspector XL |
|--|--|-----------------------|-----------------------|
| Deep learning algorithm finding seal | X | ✓ | ✓ |
| Automatic label teaching | ✓ | ✓ | ✓ |
| Easy and quick change of recipe Send by production computer | min. 5 sec. max. ≤ 20 sec. ≤ 1 sec. | ≤ 20 sec. ≤ 1 sec. | ≤ 20 sec. ≤ 1 sec. |



Countries supplied to



Typical for Label Inspector



The Label Inspector (LI) checks the following

- ▶ Presence of all labels
- ▶ All labels present like:
 - Expiration date
 - Barcode
 - Promo labels
- ▶ Control of all marking
- ▶ Positioning labels



Typical for Seal Inspectors



The Seal Inspector (SI) can check the following

- ▶ All inspections of the LI
- ▶ Seal
- ▶ Shape
- ▶ Forming
- ▶ Distribution product in package
- ▶ Correct cutting shape

