



Seal Control

Consumers rightly expect sealed food products to have flawless sealing. Quality control performed manually, however, has proven to be flawed simply because the repetitive strain reduces the alertness of controllers over time.

To overcome this challenge TriVision, the Danish high tech leader in vision systems, has developed yet another ground breaking vision system solution that makes manual inspection of gas sealed and vacuum sealed products a thing of the past. A fully automated and highly reliable vision system, which effectively sorts badly sealed products from perfectly sealed products based on detection of impurities in the seal, is now available from TriVision. On top of that, the TriVision system has removed the remaining obstacles to fully automate the entire packaging process.

System Accuracy

The quality control task consists of detecting impurities in the sealing of gas and vacuum packed products. Additionally, the system checks if part of the seal has been cut away by the punching machine, an issue which in principle is just as critical as the sealing itself for assuring the product quality.

Typical product types are shown in the images below.

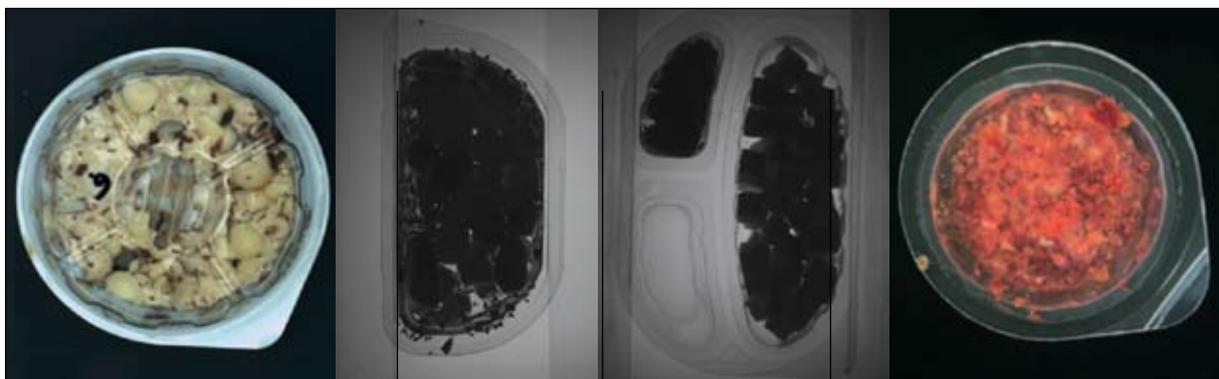
The product images show that the system can easily be adapted to any kind of shape, the products may have.

The system allows the user to set tolerances for the percentage of the sealing, which has to be flawless to be accepted. Even different kinds of tolerances for different parts of the sealing can be specified.

The system is able to check defects down to a size of 0.25 mm² without any false rejections.

System Advantages

- *Quality improvements.* The TriVision system ensures a homogeneous control of product and product labelling and obviously offers the end-user a better product.





- *Waste reduction.* Not the least, hand in hand with the quality improvements, waste can be reduced to a minimum.
- *Optimisation of the production time.* The TriVision system operates in real-time, and any general failure in the production line or a drift in any control measure will be detected immediately saving valuable production time.
- *Operation analysis.* The availability of the Business Intelligence Module allows the user to analyse the data from past productions and simulate production consequences based on tolerance changes. This will give the user the possibility of estimating the cost of changing the tolerances and thereby the quality of the product.
- *Removal of "Repetitive Strain Injuries" (RSI).* Manual inspection of products is a hard and tedious job, which is difficult to get staffed and hard for the staff to endure for longer periods.
- *Complete automation.* Automatic quality assurance has been "the missing link" in many automation plans for years. With the introduction of TriVision's system product inspection will not only be automated - it will also be much faster, better and constant over time.

Overall, the TriVision system ensures a very high and uniform product quality.

The efficiency of the system is by far better than any human quality control can hope to be. The system provides a way to eliminate tedious and injury producing manual quality control and makes way for a full automation of the production line.



About TriVision

TriVision develops highly sophisticated Quality Control systems for the Food and Related Industries using advanced IT and camera technology. Among TriVision's Blue Chip clients are corporations like Arla Foods, Tulip, Superfos, Danfoss, and

KelsenBisca. TriVision has received the Danish Automation Award in 2001, a part of the Danish Robot Award in 2003, the prestigious European Grand IST price in 2006, nomination to the FoodPharma Innovation Award 2008, and has also received

high acclaim from the end users in general. The products from TriVision are at the same time technological advanced, industrial sturdy and exceptional user friendly.