

## TECHNICAL REPORT

### VISIOCANEND, THE MACHINE THAT DETECTS DEFECTS IN CANS AT HIGH SPEED AND WITH PRECISION

VisioCanEnd is an automated inspection solution that uses computer vision technology and advanced algorithms to identify defects in cans. These defects may include sealing defects, dents, bangs, scratches and other issues that could compromise the quality and integrity of the packaged product.

#### Discover our specialised models

Our years of experience working with cans has allowed us to develop different versions of our inspection machine, VisioCanEnd. Our deep understanding of the specific characteristics and challenges of different types of cans has allowed us to adapt and optimise our technology to meet the unique needs of each industry.

The different possible configurations allow the system to work with cans facing up or down, with different screen prints, and different materials. The model used depends on each customer's needs.



The different VisioCanEnd models are compatible with different sizes and shapes of cans, making it a flexible solution for each customer, since it can be adapted to the specific requirements of each production line.

To provide a complete solution, VisioCanEnd can have 4 or 6 cameras depending on the measurements of the cans, with an upper camera, and optional can separators with a very easy and quick format change and simple and economical impact or blower air ejectors.

Everything is controlled using the VisioInspect 2.0 software, which communicates with a PLC that regulates all the elements of the equipment for its seamless integration into the automated production line.

#### Maintain the integrity of your products: Detect defects with VisioCanEnd

Our solution and its software were designed to robustly detect a wide variety of defects. It does this by analysing the sealing area and ensuring that level peaks do not occur. Here is a sample:

#### Defects of the sealing line

- **False sealing/Bent lip:** This occurs when part of the body flange bends without fastening onto the hook on the end of the seal. The flange does not protrude from below in the case of false sealing, while it does in the case of a bent lip. These defects occur for the same reasons, normally due to a damaged or bent flange while the container is being filled or due to poor alignment during assembly.



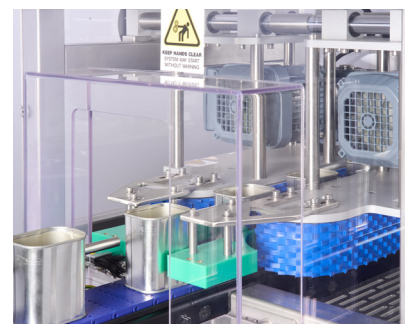
**Breakage or dropping from the sealing line:** This refers to a fracture in the radius of the final seal hook. It can be caused by too tight a seal, too much solder material, or a defect in the plate used for sealing.

- **Second rolling:** These are any defects when the sealing plate has not been correctly assembled with the body of the can due to the application of insufficient pressure or when the sealing process has not been completed.
- **Droop:** A subtle projection below the bottom of the ideal seal line. This can occur at any point around the can and is due to causes such as too much material in the seam or too weak an assembly.
- **Vee:** A 'V' shaped projection below the bottom of the seal line results in no overlap between the can flange and the plate that closes the container. It can be caused by the presence of foreign material during sealing or by a sealing process that is too weak.

## ■ Can body defects

- **Breakages:** serious error that prevents the sealing of the can, normally caused by the transporting the can.
- **Blows:** For different reasons, a can may be struck in the sealing area.

## ■ Top defects



Apart from the defects that can be detected with the side cameras, we can add a top camera to study defects on the top of the can.

- **Damaged/Missing Ring:** the ring is an essential part of many cans. This may be damaged or missing due to factors such as a weak connection, knocks or a defective lid, or the lid may not have been directly installed at all. Our VisioInspect software uses pattern analysis to ensure that the ring is correctly positioned and fully complete.
- **Sealing defects:** Certain sealing defects can only be detected with an upper camera, since the fracture is hidden from the side cameras. These defects can be due to reasons as diverse as excess welding material or excess pressure during assembly.

- **Mark printing error:** Both the reference and batch numbers can be found printed on the top of the can. Printing errors occasionally take place, usually due to not enough pressure applied to the can.

■ **Improve your quality control with VisioCanEnd**

In conclusion, VisioCanEnd provides an efficient and reliable solution for detecting defects in cans. Its high speed and precision helps companies ensure the integrity of their products and maintain high quality standards.

**Please contact us for a viability study:**

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