

# PET Inspection System

## Bottle and Preform Inspection Systems

Azitech Bottle and screw cap inspection system offers automatic 100% quality control of bottles, preforms and screw caps.

This includes checking for defects directly after they are blow-moulded, prior to filling and after being capped and labelled.

These systems automatically detect faulty product and outputs a reject signal with configurable time or encoder-based delay, providing complete online quality control.

### The product range includes:

- Base Inspection
- Neck Inspection
- Screw Cap / Fill Height Inspection
- Cap Dimensional Checking

Systems are customisable to meet specific application requirements and are flexible enough to automatically handle different coloured and shaped bottles and caps.

### Benefits

- 100% quality control
- Reduction of downtime
- Process improvement
- Inspection tolerance setting
- Multiple product selection and configuration
- Quality management web-based reporting available
- Rugged Stainless steel design
- Easy to use

### Inspection System

All inspection systems are based on sophisticated and robust inspection cameras with specialised lighting.



A personal computer can be used for information logging, database management or other reporting.



### Operator User Interface

Inspection systems come with an integrated control panel and display. This has full menu control that has been customised to the application, and provides real-time images of all products, or just failed images. The failed images are overlaid with result information on the inspection. Historical results are easily accessed. Password protection is available.



### Specifications

Maximum rate	25 bottles per sec*
Resolution	640x480
Accuracy	<1mm
Rating	IP67
Power Requirement	24Vdc, 2A

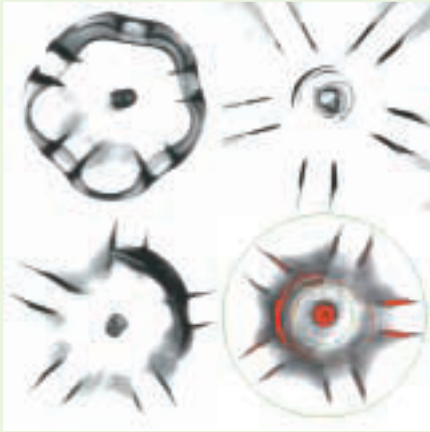
\* higher rates at reduced resolution

## Base Inspection System

The inspection system performs high-resolution visual inspections to reliably detect a range of defects on the base of PET bottles.

Each image is analysed to calculate an optimal threshold, which is used to normalize the image when they are converted from raw images to the image for analysis.

Blobs can be rejected according to their size, location and angle and the software has been developed to allow the camera to differentiate between the 'spokes' of the bottle and folding.



It allows you to detect:

- Folding - both central and perimeter folding
- Cold holes
- Incorrect gate location

## Neck Inspection System

The neck inspection system has been designed to inspect the necks of PET bottles for irregularities.

Due to the way the flashing occurs, the material becomes less transparent and sometimes opaque. With smart lighting techniques the flashing (and other abnormalities) can be highlighted.

Product selection is available to select between different coloured bottles and can be selected by an operator or automatically from a control system.



It allows you to detect:

- Flashing
- Short necks
- Distorted necks - at an angle to the bottle

Screw caps can be inspected for dimensional correctness. Algorithms have been developed for normal screw caps, as well as sipper caps.

It allows you to detect:

- Cross-threading
- Cap not tightened
- Broken or missing tamper rings
- Missing caps

In addition:

- Fill height
- Dimensional measurements

