GVS–Glass Vision System

With Glass Vision System (GVS), several deviations and product defects can be detected, while deviation and defect trends can be calculated and analysed. The system provides both trend-based data and real-time detection and rejection of glass containers with critical parameters.

Example of detection:

Bottle surface:

- Multiple areas are inspected for any gradient change above a preset level
- Stones, seed, blisters
- Extensive swabbing, oil spots
- Irregular bottom distribution
- Wings and over-presses
- Obvious streaks and surface flaws
- Bird swings

Dimensional:

Bottle width:

- Top of container
- Distance is measured between left and right side of container
- Middle of container
- Bottom of container

Bottle height:

- Measured from top of container to reference point representing the bottom of the container

Bottle lean:

- Difference between calibrated centerline and measured centerline

Material distribution:

- Tracking of changes in intensity indicating material movement
- Up to 10 zones of the container are analyzed

Dimensional and defect detection:

Top camera:

- Inspects finish for any sudden changes in height (detectable minimum 0.2 mm)
- Height measurement
- Surface inspection
- Top diameter measurement

Process monitoring – monitoring

By analysing types of defects and trends with the help of the GVS system, it is possible to identify problems in the process through the IS machine.

Specification

Camera technology:

- CCD matrix camera

Accuracy of dimensional measurement*:

Dimensional accuracy:	± 0.1 mm
Container height:	± 0.1 mm
Diameter/Lean:	± 0.1 mm

*) The dimensional and resolution accuracy is based on a 400 mm container

Minimum defect resolution: 0.3 mm^2

Material distribution:

Detect a shift of 10% in distribution in sidewall and base areas

Conveyor height: 737 – 1092 mm

Operational speeds: 900 bottles per min.

Dimensions:

Camera module:

Width:	270 mm
Height:	1220 – 1580 mm automatic adjustable
Depth:	350 mm

Back light module:

Width:	400 mm
Height:	1320 – 1680 mm automatic adjustable
Depth:	closed 150 mm, open 300 – 450 mm

GEDEVELOP
INDUTRADE GROUP

Gedevelop AB, Florettgatan 27A, SE-254 67 Helsingborg, Sweden, Phone: +46 42 38 66 70, Fax: +46 42 20 16 86, info@gedevelop.com, www.gedevelop.com

SEEING IS KNOWING