# IV1000 Vision System for Bottles Inspection

The FT System IV1000 Vision system will detect the integrity, the cleanness, the presence of foreign bodies and of soda residual in empty containers. The system uses an independent camera to inspect each container at full production speeds. The ergonomic design provides easy access to the control panel. Planned for being installed in any production line.

IV1000 VISION - TECHNOLOGY

Theory of Operation

The FT System IV1000 Empty Bottles Inspection system uses an inspection unit to capture the image of each container. The unit includes a camera with microprocessor for image acquisition and processing and industrial optics. The enclosed inspection tunnel utilizes an analog light driver to control lighting intensity. As the container passes through the system the independent cameras capture the image the bottle. The bottle transfer happens through two adjustable belts. Thanks to the special couple of belts and to the double independent motorization, with electronic regulation and management of different speeds, it is possible to obtain the maximum reliability when taking and rotate the containers during their transfer (rotation speed is determined in accordance with bottom bottle kind and diameter).
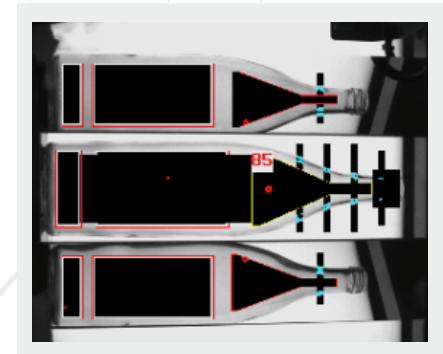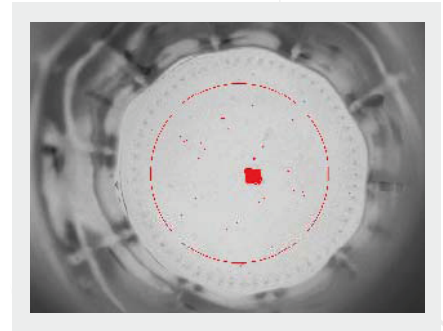
Base inspection for clear and opaque substances
- **Neck finish inspection**
- **Sidewalls inspection (dirt and/or damage)**
- **Scuffing detection**
- **Thread inspection**
- **Washing residual liquid detection**
- **Bottle shape verification at machine in feed**
- **Rejection of broken or damaged bottles**
- **Dirty bottles guided back to washer by means of progressive rejection unit**

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CAMERA SYSTEM FEATURES

Stainless steel independent support
structure for camera and illumination source.
Industrial camera with dedicated microprocessor
Enclosed illuminator designed for uniform lighting of all closure surfaces
Strobing LED light source with analoglight driver. Lighting intensity can be set
for each container type to optimize image quality
Standard 1600x1200 (high resolution) cameras

CONTROL SYSTEM FEATURES

- Independent controller housing
- Microprocessor unit with integrated UPS (uninterrupted power supply)
- Ethernet communications port
- Industrial PC with 15" TFT touch screen monitor
- FT System Control Manager Software
- Simple user interface designed for easy set up and change-over
- Dynamic position compensation algorithm that compensates for containers that have moved laterally on the production conveyor. Software scales the image to improve image analysis
- Segregated data base for storage of historical production data for up to 18 months including storage of past failure alarms with date and time stamp.

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