

Customer

A large brewer with many regional breweries

Customer Requirements

Reliable presence detection of small parts on high-capacity rotary filler in washdown area

Banner Solution

iVu TG vision sensor with 50mm C-Mount lens, lens extender and remote touch screen

Why Banner?

Remote Inspection – 50mm C-Mount lens with extender lengthens the working range of the sensor

Speed – Sensor performs inspections within 16 ms on bottles traveling at 900/minute

Customer Benefits

Flexibility – User friendly tools and sensor options simplify any application changeover

User Interface – Remote display allows the operator to manage the device and monitor inspection results from outside the wet area



iVu TG with 50mm C-Mount
Lens and Remote Screen

iVu TG with C-Mount Features

- 3.5" diagonal color LCD flat-panel touch screen with wide viewing angle
- C-mount lens offers better light sensitivity, reducing blur in high-speed applications
- No external PC required to configure, change or monitor

Learn More

Visit www.bannerengineering.com for product information and to locate a distributor

- [iVu TG with remote screen overview](#)
- [iVu C-Mount lens overview](#)

Image Sensor Inspects & Verifies Vent Tube Presence on High-Speed Rotary Filler



Deployed 32" from its target, an iVu TG with 50mm C-Mount lens and lens extender inspects for the location and presence of spreader washers and vent tubes on a high-capacity rotary filler

Background

A large-scale brewing company brews and bottles many popular and well known brands of beer in regional breweries throughout the United States. The company uses high-capacity rotary fillers to keep pace with the demand for their products.

Challenge

The rotary fillers dispense beer into bottles traveling at speeds of up to 900 bottles per minute. Periodically a spreader washer and/or a vent tube may become loose and drop into a bottle or onto the line. Beer will continue to dispense but the bottles will not fill correctly and product will be wasted. If undetected, affected bottles may be capped, packaged and even shipped. These products will have to be recalled.

The company needed a solution capable of detecting spreader washers on the vent tubes as well as loose or missing tubes. However, the movement of the rotary filler and the wet washdown environment made close proximity deployments difficult and the range required for a remote solution could compromise inspection reliability.

Solution

The company installed an iVu TG at target level 32" from the target. Two air knives protect the iVu from spray and prevent associated interference. A 50mm C-Mount lens with extender lengthens the sensor's working distance. This allows the company to deploy the sensor away from the target while providing the resolution needed to detect loose or missing vent tubes as well as missing spreader washers.

Configured as an Area sensor, the iVu TG inspects for spreader washer and vent tube location and presence within 16 milliseconds. The operator defines the region of interest using the remote touch screen. If a washer drops below the region – indicating a loose tube – or if the washer or tube is missing, the single powered I/O will shut off the filler. The operator can then remove any affected product, correct the problem and get the filler working again with minimal downtime.