

A seamless and undistorted image of cylindrical pharmaceutical product simplifies inspections needed for product safety and traceability



The 360-degree virtual image of cans and bottles facilitates label inspection and code reading



### Applications

The Vision 450 system facilitates traceability and performs extensive product quality checks on cylindrical food, beverage, pharmaceutical, and many other products. Packaging flexibility, food safety, productivity, and quality control all benefit from the simplified 450-degree product inspections. Here are some of the many Vision 450 application and benefits:

- Confirming package/product match – lowering the risk of a recall
- Reducing scrap – by detecting wrong or mislabeled products early in the production process
- Checking for torn or missing labels – critical to the packaging process
- Reading 1D and 2D codes – enables products to be tracked and traced through manufacturing
- Verifying label printing integrity – to ensure a positive brand image on store shelves
- Detecting damaged products – that result from operation such as cartoning
- Checking date code presence – ensuring that an inkjet printer is functioning properly
- Performing date/lot code OCR and OCV – verifies that product information is correctly printed and that labels are placed onto the right products
- Checking for roundness – for enhanced brand image
- Gauging – without a telecentric lens

### Accurate Inspection of Randomly Orientated Cylindrical Surfaces

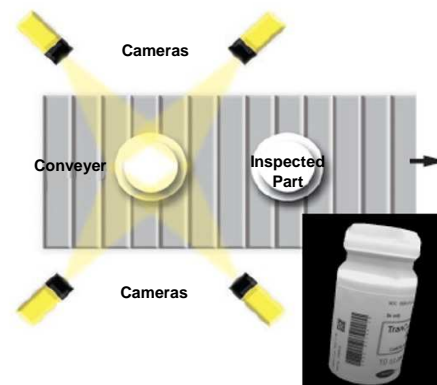
Cylindrical surfaces of three-dimensional products such as bottles, vials and cosmetic containers are difficult to inspect and handling allergenic materials is a key priority for producers and packagers of food & pharmaceutical products. Radix Controls, Vision 450 solves these problems using 4 cameras and “unwrapping” a seamless image of the label, verifying print quality, date/lot codes, labels defects, etc handling parts at 800 ppm.

In many manufacturing settings, cameras often cannot be placed in the ideal locations, the part may have unknown orientation, or the surface to inspect may span multiple camera views. The Vision 450 Inspection system resolves these setbacks compensating for rotation, tilt, uneven lighting and perspective disorientation – the factory floor problems that exist in the manufacturing process.

Vision 450 completely eliminates the complex and expensive requirement to mechanically spin parts in order to inspect them. This reduces production line complexity, lowers costs, and increases production speed.

### Advantages

- Dramatically simplifies part handling and inspection by eliminating the need to spin parts in order to inspect them
- Handles random part rotation, tilt and position
- Allows entire curved surface to be inspected at the same time
- Enables non-contact 100% inspection at up to 800ppm, at standard resolution
- Provides extremely robust solutions that result from leading-edge vision algorithms
- Offers a faster and less expensive solution than line scan cameras.
- Improved brand image – Consumers are not accidentally exposed to allergenic materials and have no involvement with product recalls.



Depending on the application, images are acquired from up to five cameras

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