



CircumSpect[®]

MACHINE VISION CONSULTING

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Machine Vision Consulting (MVC) is a full service machine vision integrator providing consulting, turnkey product solutions, custom projects and training in support of manufacturing and OEMs, in the machine vision industry.

Overview

CircumSpect is a fully integrated hardware & software turnkey solution that provides 360 degree package and label inspection without requiring contact or product orientation. Our 100% inspection can verify up to 750 units per minute on round or cylindrical products.

CircumSpect eliminates the possibility of product mislabeling (e.g., food allergens or medication) by verifying that pre-printed labels correctly match or are correctly applied to the container with matching contents.

Capabilities

CircumSpect™ verifies that the correct label or pre-printed container is present as it exits the labeler, filler, or lid applicator.

- ✧ Handles random container orientation
- ✧ Verifies correct label or container and lid are present
- ✧ Reads a UPC code
- ✧ Reads a 2D matrix code
- ✧ Matches a pattern, such as flavor, brand logo, or special graphics
- ✧ Verifies printed characters, such as a lot code or product code
- ✧ Provides quick training of new labels and containers
- ✧ Inspects up to 750 ppm
- ✧ Supports product changeover in 15 seconds or less

How CircumSpect Works

1. Containers move through an inspection station armed with 4 cameras
2. Cameras simultaneously acquire 4 separate images - random container orientation is acceptable - no special handling is required
3. Separate images are integrated into one un-distorted virtual image on which Machine Vision Consulting's label verification solution is applied



Event and Image Logging

Every key event, such as log-in, log-out, container change, run start time, and run end time are automatically logged. CircumSpect supports secure access to this data by password protecting actions based on Administrator, Supervisor, and Operator permission levels. Image archiving and real time statistics are logged to provide traceability, history, and a documentation trail.

CircumSpect® System Components

Standard

- ✧ Image Enclosure
 - Firewire or GIG-E Cameras
 - Custom Lighting Solution
- ✧ Operator Workstation/Electronics Enclosure
 - 17" Touchscreen
 - Cooled via Fan or Vortex
 - Opto-isolated I/O via Allen Bradley PLC
- ✧ User's Manual
- ✧ Systems Schematics (available upon request)
- ✧ IQ/OQ/PQ Documentation Package (available upon request)

Optional

- ✧ NEMA 4/4X: Stainless Steel Food Grade Construction
- ✧ Reject Mechanism
- ✧ Lockable Rejector Box
- ✧ Product Singulator

System Specifications

Inspection Speeds	750 ppm (based on number of cameras)
Number of Cameras	1 – 5 (dependent on inspection/product)
User Interface	17 inch Touchscreen
Typical Lighting	LED, Fluorescent, IR or UV (dependent on product)
Product Tracking	PLC and Encoder based tracking
Environmental Controls	Fan or Air Conditioning



CircumSpect, by Machine Vision Consulting, is a fully integrated turnkey hardware/software solution that ensures perfect product presentation preserving brand image.

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CircumSpect Main Operator Screen and CircumSpect Inspection Enclosure