

VISION VALIDATOR

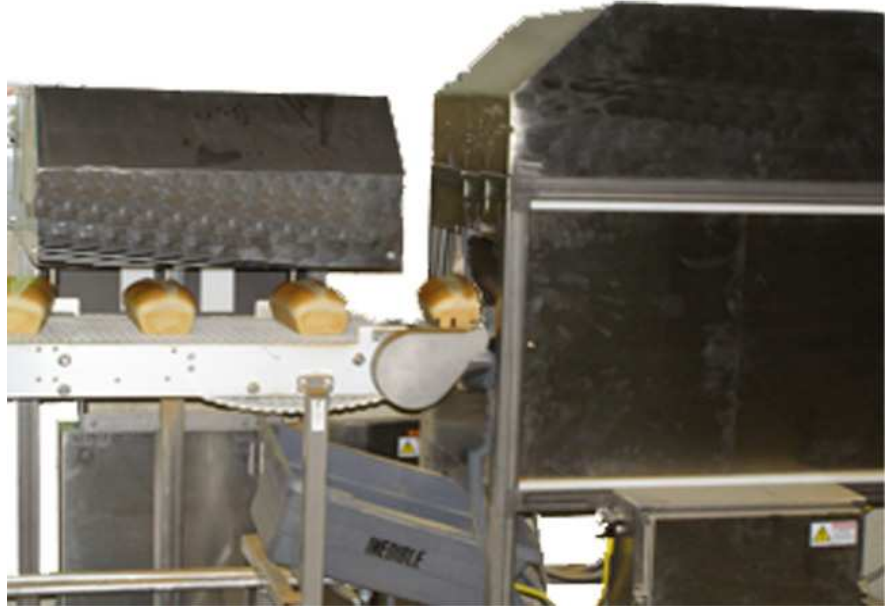
Validator Inspection System by BSI

Model VIS-200

- Touch screen graphical interface and control
- Food grade product contact surfaces
- Heavy stainless steel tube support structure
- High speed high resolution 3D camera with built in laser
- High speed high resolution color camera
- High speed high precision weigh cell
- Servo controlled indexing, weighing, and take away conveyors
- Rejection for up to 200 pieces per minute

SPECIFICATIONS:

- Production speeds up to 200 loaves per minute
- Weigh resolution 0.1 gram
- Color repeatability +/- 3 LAB units
- Height & 3D profile +/- .05 inches



Many food retailers are requiring more stringent product quality guide lines that require 100 percent product inspection and rejection of non conforming loaves.

The Vision Validator is a completely integrated quality inspection and rejection system which monitors the weight, height, and color of baked bread loaves approaching the packaging area at rates of 200 pieces per minute. This system utilizes a high precision in-motion weighing system that incorporates non-proprietary high speed height and color components. Every baked loaf is inspected prior to slicing; if any criteria fall outside an acceptable range, the loaves can be rejected into a module. The system can be adapted to any conveyor layout that precedes the wrap area including declines and incline sections. The system provides real-time graphs for each loaf inspection to identify negative process trends. All of the inspection results are written to a text file for analysis using your preferred SPC software or our CheckManager quality analysis software. Additional inspections, such as, topping coverage and disbursement, split top verification, dimensions, and roll over identification, can be added at any time with each inspection module. The Validator inspection system is perfect for satisfying customers with most demanding quality requirements.

BSI Bakery Systems, Inc.

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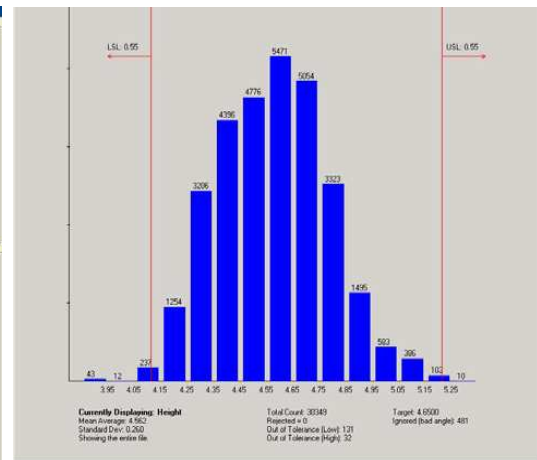
Check Manager Quality Analysis Software

The Check manager software allows a supervisor to add or edit any of the Validator's product inspection parameters and then transmit the updated product table to the controllers on-line. The system also responds back to the PC with each loaf weight, LAB (Color) value, height, count, and other pertinent information. Check Manager is a data collection system that provides easy to use statistical evaluation tools that allow you to determine the root causes of your overall process variation. Sampling 100 percent of the production population eliminates most of the guess work involved in random product sampling.

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Optional Hardware:

- Down stream reject system for out of tolerance loaves
- Bottom of product color inspection
- Desktop PC with check manager software



Process run time graphs

Height Histogram

The Bakery Systems Inc. Vision Validator uses all non proprietary off the shelf components. We understand the importance of maintainability and ease of operation in any system. We utilize components manufactured by Rockwell Allen-Bradley, Cognex DVT, Sick, and other well known automation component suppliers. By using nonproprietary components the longevity of the system is increased by the accessibility of parts not only through the OEM but directly from the component manufactures local representative. During installation operations, maintenance, and sanitation are thoroughly trained on each facet of the system. **The optional reject system** is servo driven and requires no plant air. This allows us to provide quiet operation even at 200 pieces per minute. This method of rejection is the only unit capable of same side rejection at these speeds. **The optional under product inspection** allows identification of pan related scaring, and over baking.

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