

MONTROSE TECHNOLOGIES INC.

CS18/In-Line

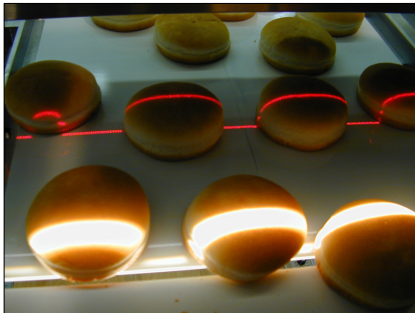
Automated Product Inspection System



System Description

The CS18/In-Line is a turn-key system which can be easily inserted in production lines in order to continuously measure critical shape and color characteristics of baked products.

The system uses a high-speed, non-contact imaging method to quantify a wide range of object information such as color, topping coverage, heights, diameters, slopes, lengths and a wide range of calculations such as ovality and surface texture. These calculations are also customizable, and allow users to create unique results such as true bake color (without topping), edge and center color, roundness of top surface, and more.



Analysis results are displayed in real-time on a simple display screen. Operators can view the individual results in numerical format, in a trend graph or in a histogram format. Statistical results such as standard deviations and Cpk's are also displayed. Analysis data is automatically archived to a database for further analysis and report generation.

System options include NEMA4X rating, external horn alarms, additional display screens, analog output signals (to control ovens), and an automatic rejection device.

Key Benefits:

- *Flexible measurement capabilities; can analyze products from 1" to 36" long*
- *Performs 100% inspection, with optional automatic rejection of defective products*
- *Allows customers to create customized analysis methods for all products*
- *Built-in SPC module, including histograms and control charts*
- *Full data storage and historical reporting*
- *Simple to setup, calibrate and operate*
- *Can integrate external devices such as weigh scales and moisture sensors*
- *Performs complex analysis, such as:*
 - *Diameters (min, max, mean)*
 - *Heights (max, mean)*
 - *Slopes (mean, end-to-end, evenness)*
 - *Bake Color (Average w/o topping, Edge, Center)*
 - *Topping (Color, Coverage)*
 - *Length/width*
 - *Surface area and Volume*

System Features

Each CS18/In-Line System can be installed directly over production conveyors, and comes as a complete, turnkey package, including:

- Sensor Head with 3D Laser Profiling
- Integrated low-profile conveyor
- Inspection Software, including SPC module with charting and statistical analysis
- User-configurable analysis and data storage (Microsoft Access format)
- Passive backplane Pentium computer, including Ethernet card, high-speed modem, and UPS
- Flat panel, VGA touchscreen
- Sealed, thermostatically-controlled cooling
- Calibration kit and Remote Diagnostics software

System Specifications

Measurement Accuracies:

Heights:	0.2 mm
Length/Width	1.0 mm
Top Surface Slope:	0.5 mm
Total Volume:	1%
Diameter:	1.0 mm
Overall Bake Color:	1dbu

Part Characteristics:

Throughput:	up to 25 products/second
Max. Length:	914 mm (36") along belt 400 mm (16") across belt
Max. Height:	200 mm (8")
Min. Length:	25 mm (1")

Processor:

CPU:	Dual Pentium III (800 MHz)
HDD:	40 GB
Memory:	256 MB
Ethernet:	10/100 Base-TX

Environmental:

Max. Temp.:	37° C (100° F) 50° C (122° F) – with cooling option
Min. Temp:	2° C (36° F)
Humidity:	5% to 95% (non-condensing)
Warm-up:	<10 minutes
Power:	
Elec. Enclosure:	20A @ 120/240VAC/60Hz , 1PH
Conveyor Drive:	6A @ 200-240VAC/60Hz,1PH
Plant Air:	30cfm (max) @ 80psig (min)

Ordering Information

Base System:

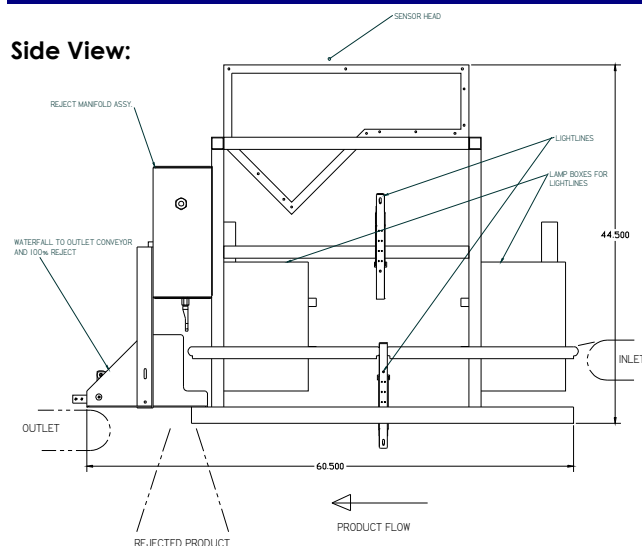
CS18/In-Line:	QV-CS18-IL
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System Options:

Rejection Device:	QV-Opt-Rejection
NEMA4x Rating:	QV-Opt-NEMA4x
Backlight:	QV-Opt-Backlight
Additional User Interface:	QV-Opt-AddGUI
External Alarm:	QV-CSx-HornAlarm
External Device:	QV-CSx-ExtDevice
A/C Cooling:	QV-CS18-AC
PLC Communication	QV-Opt-PLC

System Drawings

Side View:



Front View:

