



Machine Specification and Data Sheet

veritas™ iC inspection systems

The Veritas iC is a 6- to 9-camera, non-contact sidewall, side-wall stress, and dimensional inspection machine designed to inspect round and non-round containers. All inspections are completed in two stations using a unique, wrap around lighting design that enables overlapping inspection of the entire container sidewall. The wrap around lighting design also significantly improves inspection of non-round and embossed containers, as well as containers with special characteristics, such as flutes.



A better sidewall/dimensional/stress inspection system

- No job change parts
- Six views, full coverage of the container
- Unmatched transparent defect detection



Standard Inspections

(6-camera system with double-image acquisition)

- Opaque sidewall defect detection (6 views)
- Transparent sidewall defect detection (3 views)
- Sidewall stress defect detection (3 views)
- Dimensional inspection (uses either the 3 transparent or 3 opaque inspection images)

Optional Inspections

(9-camera system with double image acquisition)

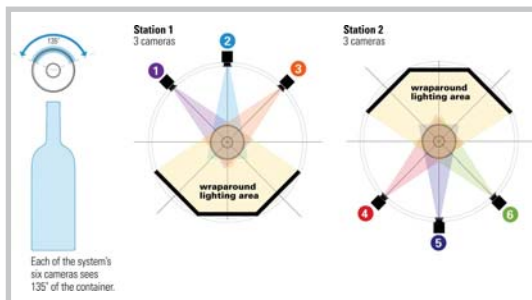
The 9-camera system enables the use of more views of the container for transparent defect detection and provides unique views of the container that have been optimized specifically for dimensional inspection.

- Opaque sidewall defect detection (6 views)
- Transparent sidewall defect detection (6 views)
- Sidewall stress defect detection (3 views)
- Dimensional inspection (3 views dedicated to dimensional inspection)

Machine Speed

The Veritas iC is designed to acquire images at a maximum speed of 600 bpm. The actual maximum speed is based on container diameter, container spacing, and conveying speed. Maximum speed for a particular container can be calculated by using the following formula:

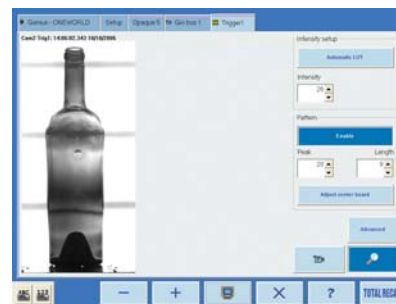
$$\text{Conveyor speed (mm/min)} \div (\text{maximum container diameter} \times 2)$$



With wraparound lighting Veritas iC captures overlapping views enabling it to actually see more than 360°

Defects Detected

- Stones
- Birdswings
- Seeds
- Dirt
- Fused Glass
- Mold dope
- Cords
- Out-of-spec height
- Out-of-spec lean
- Soft blisters
- Ribbon tears
- Loading marks
- Heavy washboard
- Blow-out
- Stones causing stress
- Out-of-spec diameter
- Out-of-spec profile
- Filler offset



Patterned lighting used during inspection for transparent defects makes it possible to see defects that are almost impossible to see with conventional lighting techniques

User Interface

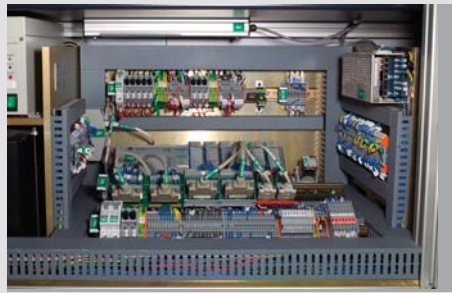
The Veritas iC is available with either a tip-out or pendant-style touch screen user interface. The icon-based interface is designed for ease of use and requires minimal training to set up and operate.

Networking

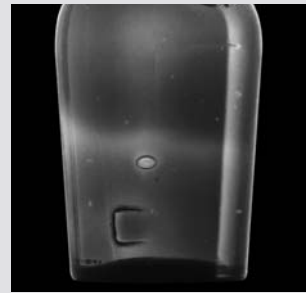
The Veritas iC is designed for easy data communication over most plant (Ethernet) networks. This enables access to important inspection results data, as well as remote troubleshooting.



Veritas iC inspection area

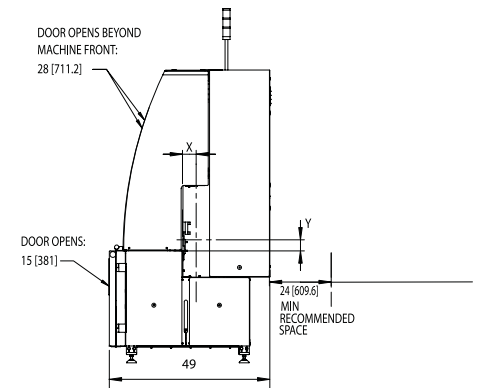
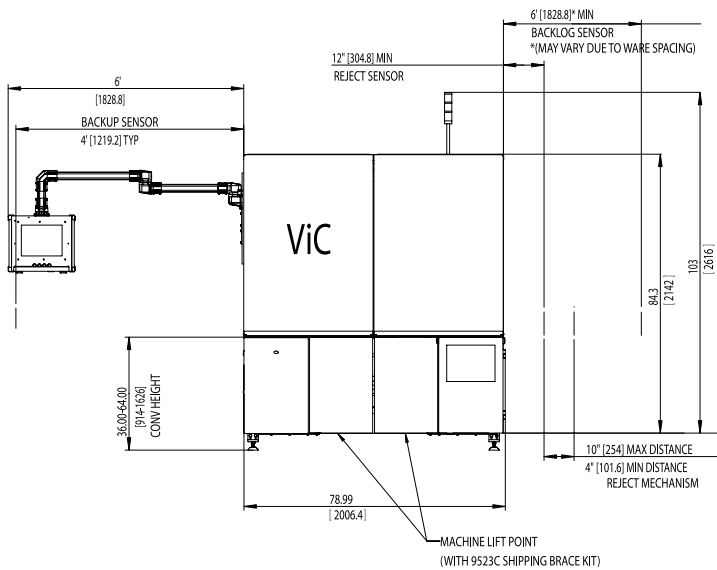
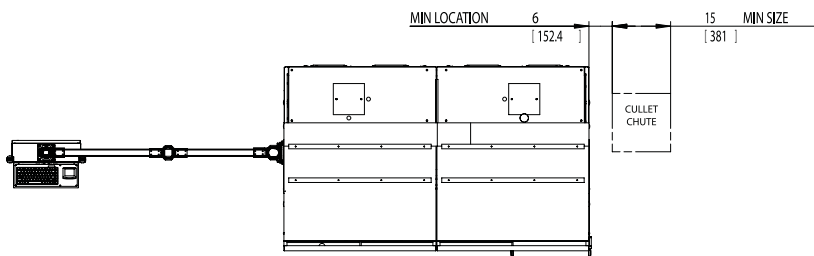


Compact, easy-access electronics panel



Blister defect seen using near-infrared light source

Layout Drawing



'X' IS THE DISTANCE FROM THE VERTICAL CENTERLINE OF THE WARE PATH (AND CONVEYOR CENTERLINE) TO THE SURFACE OF THE LARGE ALUMINUM UPRIGHT NEAREST THE CONVEYOR (p/n 8978D) X=4.24 [107.7]
 'Y' IS THE DISTANCE FROM THE TOP SURFACE OF THE ALUMINUM BASE PLATE (p/n 9354C) TO THE TOP SURFACE OF THE CONVEYOR CHAIN Y=4.1 [104.1]

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Specification

Ware Range	Height	Diameter
	38 to 381 mm	16 to 170 mm
	[1.5 to 15.0 in.]	[0.625 to 7 in.]

Inspection Specifications

Defect Detection	Lens Used	Square Pixel Side Length	Pixel Area	Part Number
Container Height				
38 to 98 mm [1.5 to 3.6 in.]	50 mm	0.095 mm	0.009 mm ²	12745P
38 to 185 mm [1.5 to 7.3 in.]	25 mm	0.191 mm	0.036 mm ²	12744P
38 to 289 mm [1.5 to 11.4 in.]	16 mm	0.298 mm	0.089 mm ²	12743P
38 to 381 mm [1.5 to 15.0 in.]	12 mm	0.397 mm	0.158 mm ²	12959P

NOTE: The smallest detectable defect size is 1 pixel based on 100% contrast. To achieve repeatable defect detection in a production environment, a reasonable defect size is 2 to 3 pixels.

Light Sources**6-camera system (standard)**

Station1 Inspections Opaque & transparent defect detection, dimensional inspection

Light Sources 3 high intensity LED panels. Light intensity of rows is adjusted automatically for transparent defect detection

Optics (Camera/Resolution) 3 high-speed XGA/1024 x 768

Station2 Inspections Opaque & stress defect detection

Light Sources 3 high intensity LED panels.

Optics (Camera/Resolution) 3 high-speed XGA cameras with electronic cross-polarizing filter for stress inspection/1024 x 768

NOTE: In 6-camera system, dimensional inspection uses either opaque or transparent inspection image.

9-camera system

Station1 Inspections Opaque & transparent defect detection, dimensional inspection

Light Sources 3 high intensity LED panels. Light intensity of rows are adjusted automatically for transparent defect detection

Optics (Camera/Resolution) 3 high-speed XGA/1024 x 768

Station2 Inspections Opaque & stress defect detection

Light Sources 3 high intensity LED panels.

Optics (Camera/Resolution) 6 high-speed XGA cameras with electronic cross-polarizing filter for stress inspection/1024 x 768

NOTE: In 9-camera system, dimensional inspection can be based on unique images optimized for dimensional inspection

Physical Specifications

Power Requirements 230 VAC, single phase, 12 amps

NOTE: Transformer required for any other voltage.

Air Requirements

Minimum	Maximum	Maximum Consumption
3.5 bar [50 psi]	7.0 bar [100 psi]	0.8 to 0.85 m ³ /minute [28 to 30 cfm]

Temperature Specifications

Maximum (without cooling)	40° C [104° F]
Maximum (with air conditioning)	50° C [122° F]
Minimum	5° C [41° F]

Relative humidity 95% (non-condensing)

Machine Dimensions	Height above conveyor	
	Covers Open	Covers Closed
	1569 mm [61.8 in.]	1303 mm [51.3 in.]
Conveyor height	914 to 1626 mm [36 to 64 in.]	
Length	2000 mm [78.75 in.]	
Machine width	1270 mm [50 in.]	
Maximum space around machine (with pendant fully extended)	3658 mm [144 in.]	
Approximate machine weight	Crated 1179.3 kg [2600 lbs.]	Uncrated 861.6 kg [1900 lbs.]

Specifications are subject to change. Actual performance depends on specific application, container size, and line speed. Dimensions represent nominal machine size and are not for installation purposes.