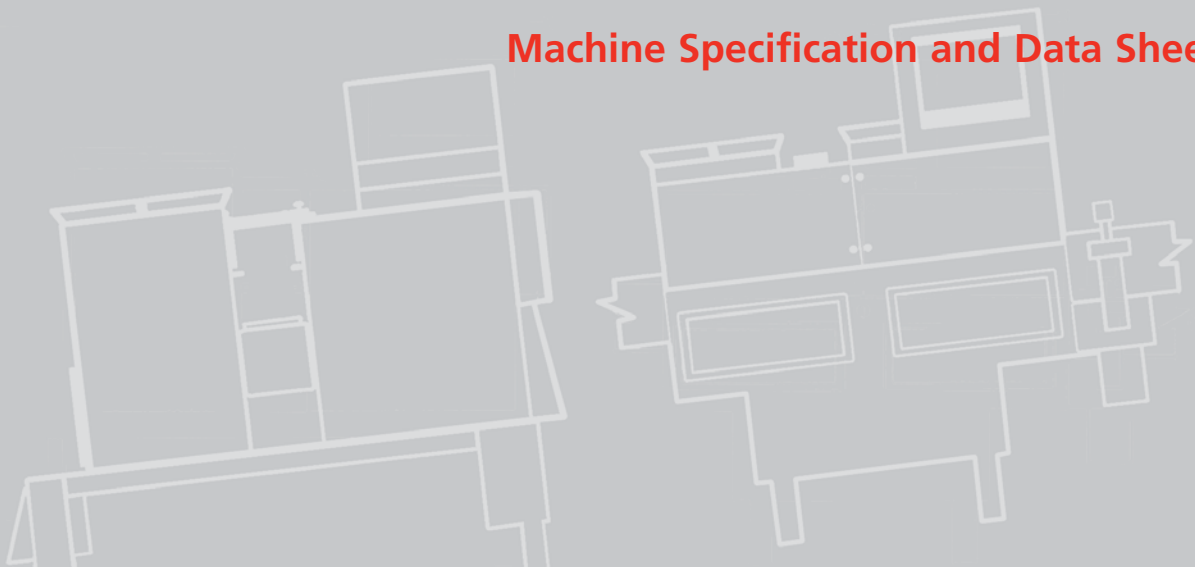




SUPER INSPECTOR³

The SuperInspector³ is a 5-camera system that provides sidewall and dimensional inspection for round glass containers. A "contact" system, the SuperInspector rotates containers 90° during inspection to provide comprehensive inspection. Three inspection range options accommodate a variety of container sizes. Options include a precision conveyor and dual rejection, plus an auto-rotation device that permits inspection of containers on variable speed conveyors.

Machine Specification and Data Sheet



a business unit of Emhart Glass, a Bueher company

SUPER INSPECTOR³

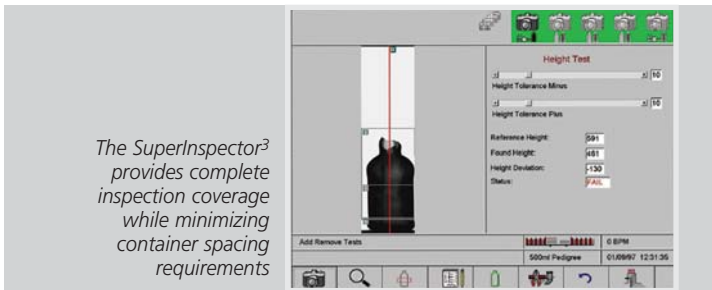
A better surface inspection machine

- Exclusive 2X sidewall inspection ensures 360° surface coverage
- Inspects round containers of any color
- Reduced mechanical setup time



System Operation

Containers enter the SuperInspector³ and are scanned by five high-resolution cameras. Three cameras are used for sidewall inspection; two are used for dimensional measurement. Containers are scanned, rotated 90° and scanned again. The images are digitized and analyzed, and the results are compared to user-defined test criteria, which is stored on a hard drive and is password-protected.



The SuperInspector³ provides complete inspection coverage while minimizing container spacing requirements

This system features straight-through container handling which ensures smooth operation and simplifies changeover. The LCD screen can display container images and inspection results during operation, enabling the freeze-on-reject feature which allows a line attendant to react to rejects as they occur.

The SuperInspector³ uses intelligent 2D and grey-level image processing technology to identify defects by size, shape, and contrast. This provides increased accuracy with fewer false rejects.

Inspections

Sidewall defects detected:

- Blisters
- Ribbon Tears
- Blow-out
- Stones
- Fused glass
- Mold dope
- Cracks
- Bird swings

Dimensional measurements:

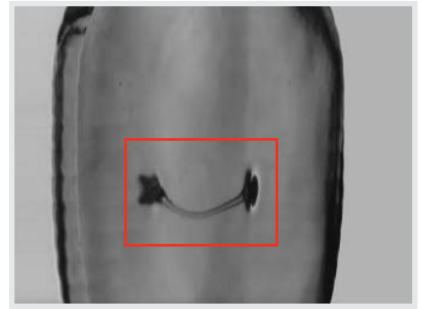
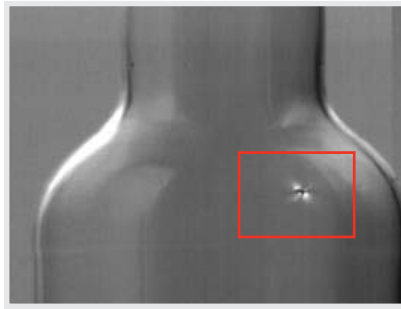
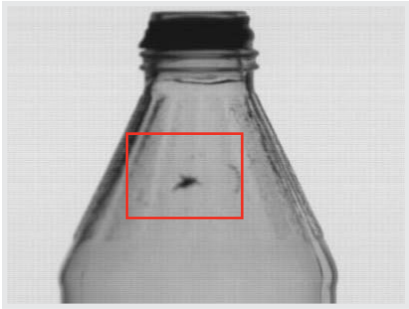
- Lean
- Height
- Diameter
- Bent neck

Additional Features

- Job management and storage
 - Job setup, job backup/archive
 - Job changeovers
- Reject statistics
 - Reject totals
 - Reject history
 - Reject locations
 - Reject alarm
- Setup change log
- Multi-language support
- Self diagnostics
- Multi-level security system
- RS422 interface to process control
- Job backup on USB memory stick
- Compact footprint

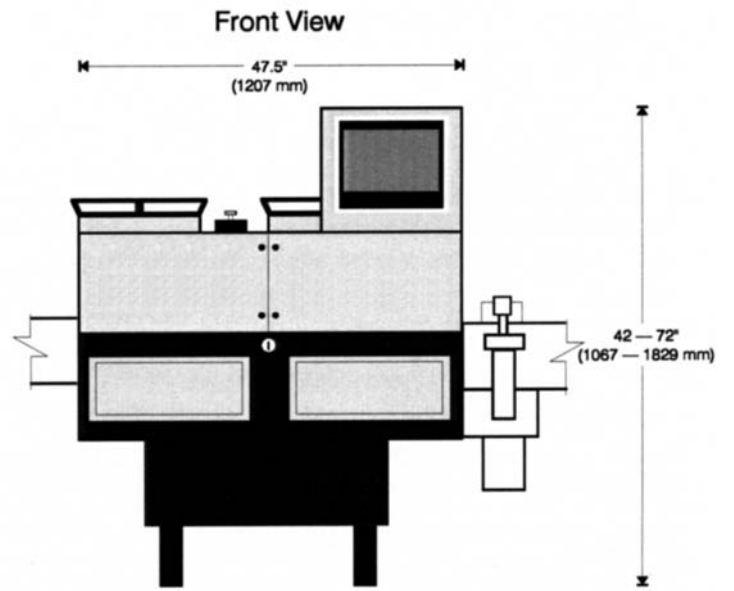
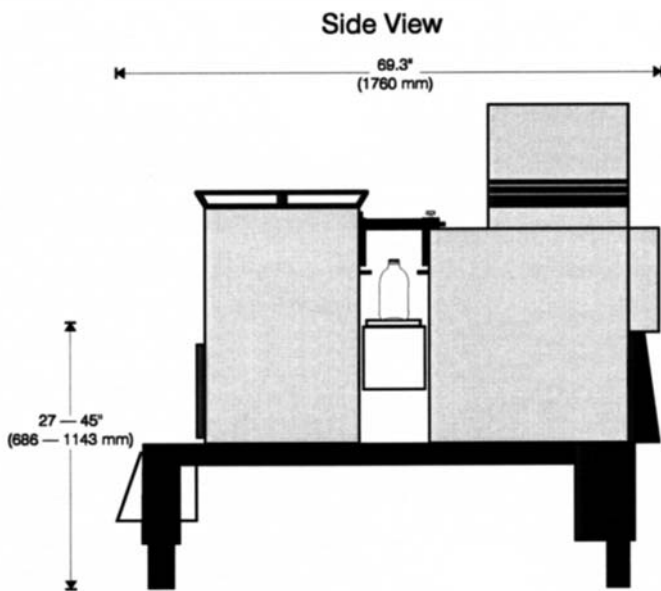


360° surface coverage eliminates "edge slice" effect and blind spots, regardless of manufacturing process, color, or bottle thickness



Typical glass container defects detected by the SuperInspector³ include (left to right) sidewall neck inclusion, stone shoulder sidewall stress, and sidewall birdswing

Layout Drawings



Specifications

Overall Ware Range

Diameter	Height
25 to 152 mm [1 to 6 in.]	30 to 374 mm [1.2 to 14.75 in.]

Cameras

Number	5 (3 sidewall, 2 dimensional)
Resolution	1024 x 1 (line scan)

Ware Characteristics

Standard

Height	Diameter	Resolution
30 to 267 mm [1.2 to 10.5 in.]	25 to 127 mm [1 to 5 in.]	0.25 x 0.25 mm

Ware Characteristics Tall Bottle Option

Height	Diameter	Resolution
30 to 349 mm [1.2 to 13.75 in.]	25 to 152 mm [1 to 6 in.]	0.35 x 0.35 mm

Ware Characteristics Small Bottle Option

Height	Diameter	Resolution
30 to 152 mm [1.2 to 6 in.]	25 to 58 mm [1 to 2.3 in.]	0.1 x 0.1 mm

Inspection Zones	32 programmable
Inspection Test	Multiple each zone
Inspection Coverage	360° (200° front, 160° back)
Inspection Rate	450 bpm maximum

Dimensional Inspection

Cameras	
Height Measurement	6 measurement positions

Maximum Height

Standard	Tall Bottle Option	Small Bottle Option
356 mm [14 in.]	375 mm [14.75 in.]	152 mm [6 in.]

Diameter Measurement	32 measurements at programmable positions
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Lean Measurement	2 measurements at programmable positions
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Physical Specifications

Power Requirements	208-240 VAC, single phase (dedicated line recommended)
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Air Requirements	Pressure	Flow
	10 Bar [60 psi]	70.8 lpm [2.5 cfm] average

Ambient temperature	1 to 50° C [32 to 122° F]
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Relative humidity	95% (non-condensing)
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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.

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