



Machine Specification and Data Sheet

veritas™ iB inspection systems

The Veritas iB is a 6-station, belt-handling machine with step-per motor drives, designed to inspect round and non-round glass containers. All mechanical movements of components within the machine, including the handler and optics, are motorized. Job changes between saved jobs usually can be accomplished in less than five minutes, and require no tools and little operator intervention. The Veritas iB is designed to be mounted over a break in the production conveyor.



A better base/finish inspection system

- No job change parts
- Round and non-round inspection
- Up to 7 inspections in a single machine

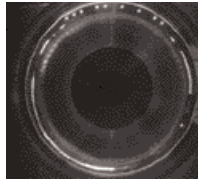


Standard Inspections

- Sealing surface
- Base
- Vision mold number reading in base image

Optional Inspections

- Base stress. This option uses a second camera and polarized light source at the base inspection station to detect stress defects that cannot be detected during conventional base inspection.
- Vision plug gauging. This option uses a high-speed, area matrix camera with a telecentric lens to permit detection of choke neck defects up to 140 mm [5 in.] deep.
- Wire edge. This option is an add on to the Vision plug. It uses mega pixel area array camera with a telecentric lens and axial illuminator to detect even the smallest wire edge defects.
- Vision dip/saddle. This option uses four light sources with a mega pixel area array camera to capture overlapping side views of the top of the container finish. Note: Vision plug and vision dip/saddle inspections on the Veritas iB, when used in combination with vision ring inspection on the Veritas iM, eliminate the need for mechanical gauging.
- BU-VNMR (bottom up vision mold reader). This mold reading option is used to read the mold codes cut into the heel of glass containers. This option is recommended when running containers that have diameters smaller in the body than in the heel where the code is cut. This is a recommended option, when running narrow neck bottles with straight sides and small heel radii.
- Top down (Alpha code / bottom dot reader). This mold reading option is used to read the mold codes cut into the bottom of the container. Unlike the base inspection station that is designed to minimize the effects from features in the glass bottom, the Top down reader is designed to enhance the features of the bottom codes for improved mold reading capabilities.

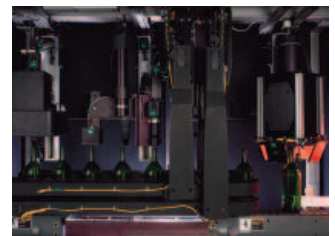


Defects Detected

- Chips
- Lineovers
- Finish blisters
- Base blisters
- Fused Glass
- Plunger pull
- Dirt
- Tramp glass
- Birdswings (contacting the lower heel or base)
- Seeds
- Overpress
- Cords
- Choked neck
- Oval neck
- Spikes (contacting the neck)
- Dip finish
- Saddle finish



Vision dip/saddle inspection image showing four overlapping side views of the container finish



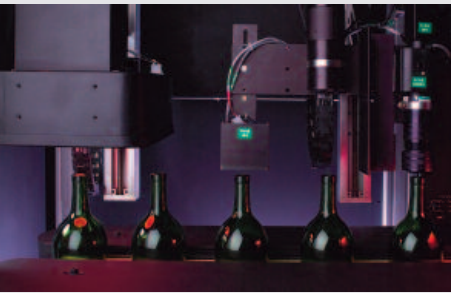
Veritas iB inspections (left to right): Sealing surface, bottom-up vision mold number reader, vision plug/wire edge, base/base stress, dip/saddle/height

User Interface

The Veritas iB 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

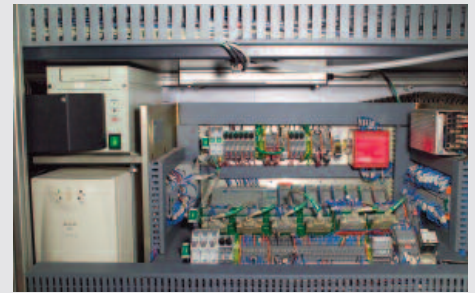
The Veritas iB is designed for easy data communication over most plant (Ethernet) networks. This enables access to important inspection results data, as well as remote troubleshooting.



Inspection (stations 1-4)

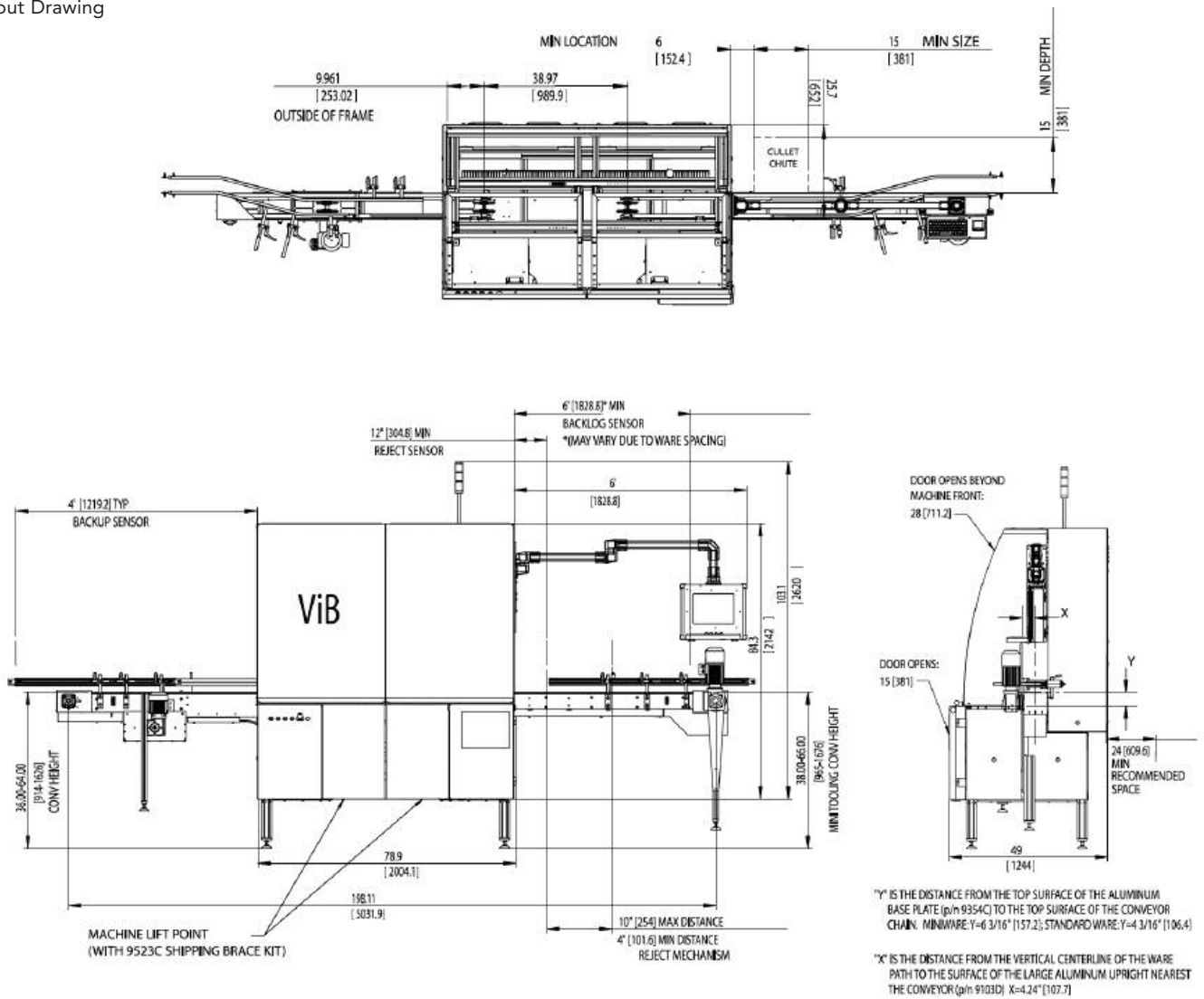


Vision dip inspection (station 5)



Compact, easy-access electronics panel

Layout Drawing



GERMANY, NEUSS

Telephone +49 (2131) 3595 0, Telefax +49 (2131) 3595 125

ITALY, DEGO (SAVONA)

Telephone +39 (019) 51 66 1, Telefax +39 (019) 51 66 302

JAPAN, KAWASAKI

Telephone +81 (44) 222 7371, Telefax +81 (44) 222 4868

MALAYSIA, JOHOR BAHRU

Telephone +60 07 863 1122, Telefax +60 07 863 7717

RUSSIA, MOSCOW

Telephone +7 (499) 746 13 40, Telefax +7 (499) 746 13 41

SINGAPORE

Telephone +65 6778 1466, Telefax +65 6778 9433

SPAIN, MADRID

Telephone +34 (91) 768 00 94, Telefax +34 (91) 383 02 35

SWEDEN, ÖREBRO

Telephone +46 (19) 307 500, Telefax +46 (19) 307 501

SWEDEN, SUNDSVALL

Telephone +46 (60) 199 100, Telefax +46 (60) 199 261

UK, MANCHESTER

Telephone +44 (161) 876 1700, Telefax +44 (161) 876 1701

USA, CLEARWATER, FL

Telephone +1 (727) 535 5502, Telefax +1 (727) 532 8513

USA, ELMIRA, NY

Telephone +1 (607) 734 3671, Telefax +1 (607) 734 1245

USA, WINDSOR, CT

Telephone +1 (860) 298 7340, Telefax +1 (860) 298 7395

USA, OWENSVILLE, MO

Telephone +1 (573) 437 2132, Telefax +1 (573) 437 3146

Emhart Glass Worldwide Presence

Principal

Emhart Glass SA

Hinterbergstrasse 22

CH-6330 Cham, Switzerland

Telephone +41 (41) 749 42 00

Telefax +41 (41) 749 42 71

www.emhartglass.com

info@emhartglass.com

Specification

Ware Range

Height	Diameter	Max Finish Inner Diameter	Max Finish Outer Diameter
38 to 381 mm	16 to 170 mm	4.5 mm	144 mm
[1.5 to 15.0 in.]	[0.625 to 7 in.]		

Inspection Specifications

Sealing Surface

Type	Cameras (all area matrix)	
	Standard	Option
Type	High speed	Mega pixel
Resolution	640 x 480 (VGA)	1390 x 1040
Speed Rating	Over 600	Over 600
Light Source	Super bright, bowl/beam splitter LED	

NOTE: Speed ratings are for the cameras only; actual inspection speeds are dependent on container handling and inspection setup.

Vision Plug

Camera (area matrix)	Resolution	Light Source
High speed w/ telecentric lens	640 x 480	Super bright LED
Finish Diameter Ranges	Kits available for finishes up to 50 mm and up to 130 mm	

Wire Edge (requires vision plug option)

Camera (area matrix)	Type	Resolution	Light Source
	Mega pixel	1390 x 1040	Beam splitter LED

Base

Camera (area matrix)	Type	Resolution	Light Source
	High speed	640 x 480	Super bright LED

Base Stress

Camera (area matrix)	Type	Resolution	Light Source
	High speed	640 x 480	Super bright LED (polarized)

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.

Vision Dip/Saddle/Height

Camera (area matrix)	Type	Resolution	Speed Rating
Standard	Mega pixel	1390 x 1040	Over 600
Light Source	4 super bright LED		
Finish Diameter Range	50 to 75 mm (standard); kits available for up to 120 mm and under 50 mm		

NOTE:

1. Speed ratings are for the cameras only; actual inspection speeds are dependent on container handling and inspection setup.

2. For finishes under 50 mm, high resolution camera kit (part number 25462A).

Mold Number Reading

Cameras (all area matrix)

Standard	Type	Resolution	Light Source
	High speed	640 x 480	Uses base inspection station

Mold Codes Heel dot (6, 7, 8, 9, extended, 10; St. Gobain, Owens), base dot (7, 8, 9), peanut (8 dot AGR), CCS die code, MSC alphanumeric

Bottom-up

Type	Resolution	Light Source
(Option) High speed	640 x 480	Super bright LED above container

Mold Codes Heel dot (6, 7, 8, 9, extended, 10; St. Gobain, Owens)

Top-down

Type	Resolution	Light Source
(Option) High speed	640 x 480	Super bright LED above container

Mold Codes Owens base dots (7, 8, 9), (8 dot AGR) peanut, MSC alphanumeric, 10 dot round bottom

Physical Specifications

Power Requirements 230 VAC, 3 phase, 50/60 Hz, 12 amps

NOTE: Transformer required for any other voltage.

Air Requirements

Minimum	Maximum	Maximum Consumption
3.5 bar [50 psi]	9.7 bar [140 psi]	0.8 to 0.85 m ² /minute [20 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 1569 mm [61.8 in.]

Covers Closed 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 3658 mm [144 in.]

(with pendant fully extended)

Approximate machine weight Crated 1452.6 kg [3200 lbs.]

Unrated 1271.0 kg [2800 lbs.]