

HIGH STOPPER DETECTION

Bosch Packaging Technology
North America



CAMERA MOUNT

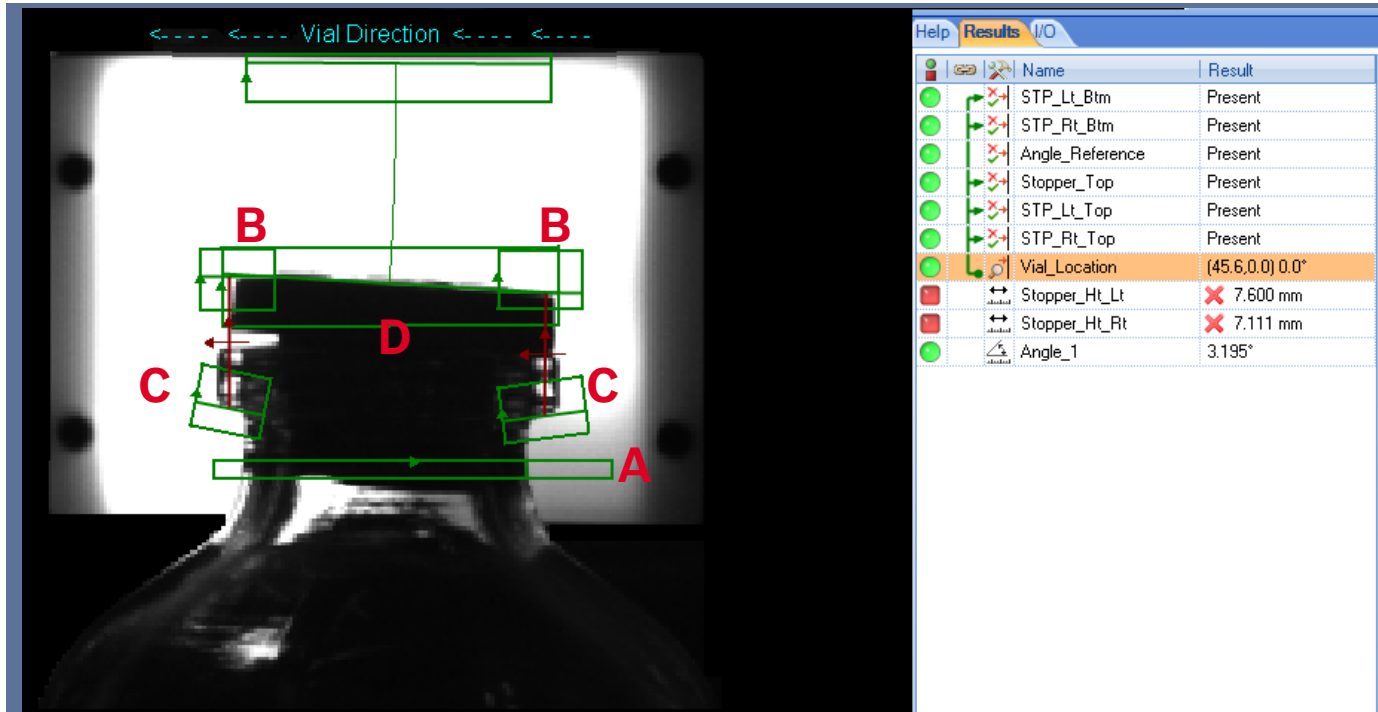


→ Camera/Backlight Mount

- Camera Position: The camera height is adjusted via a hand wheel and siko scale. Locking the camera mount in place squares the camera to the backlight and prevents height movements.
- Backlight Height: The backlight height is adjusted with the cap track height.
- Scaled Image: The camera image is automatically calibrated. Changing the vial size or format parts does not affect the image scale.
- Backlight Image: A clear outline of a vial is available with a backlight. The image is not affected by the color of glass or liquid.



Location

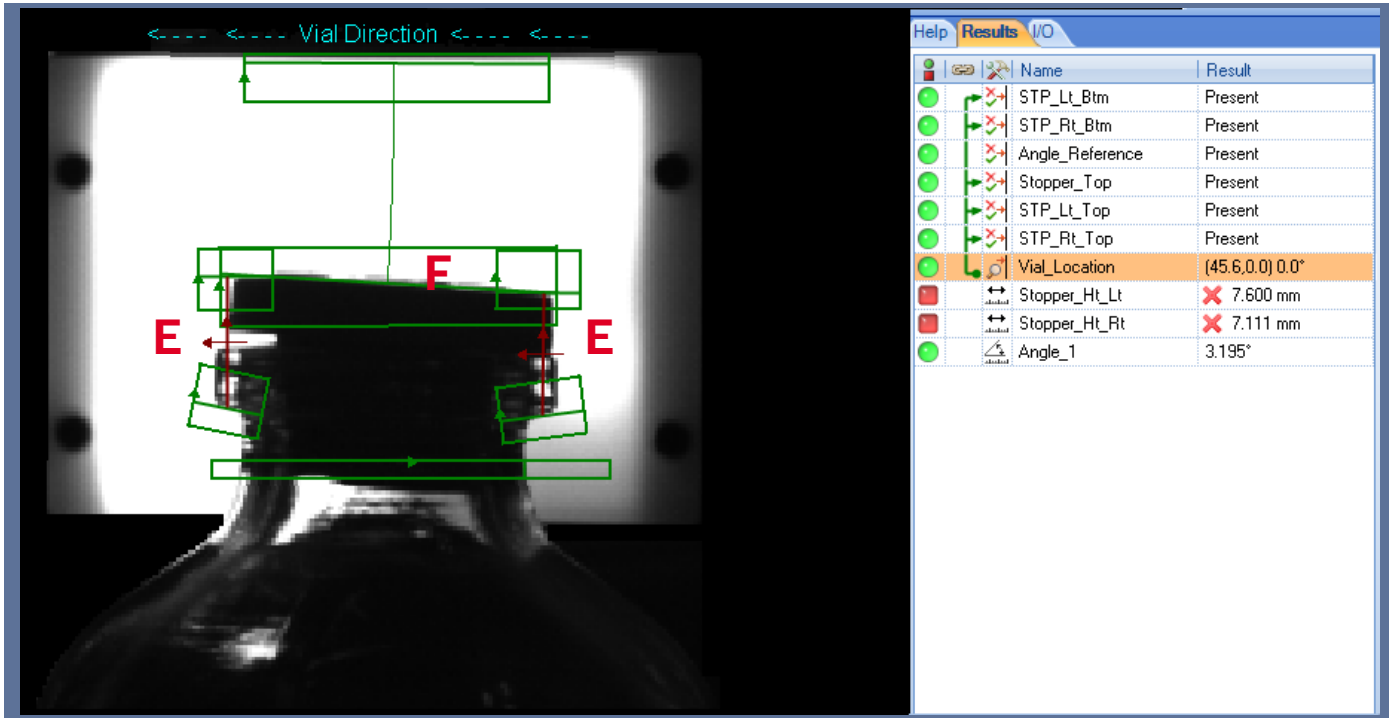


→ Location

- Vial Location (A): The last dark/light transition of the vial neck is detected. All location and inspection tools are offset with respect to this position.
- STP_Lt_Top/ STP_Rt_Top (B): The Top edges of the stopper are detected.
- STP_Lt_Btm/ STP_Rt_Btm (C) : The Bottom edges of the vial lip are detected.
- Stopper_Top (D): A straight line approximation of the stopper top.



Inspection



→ Inspection Results

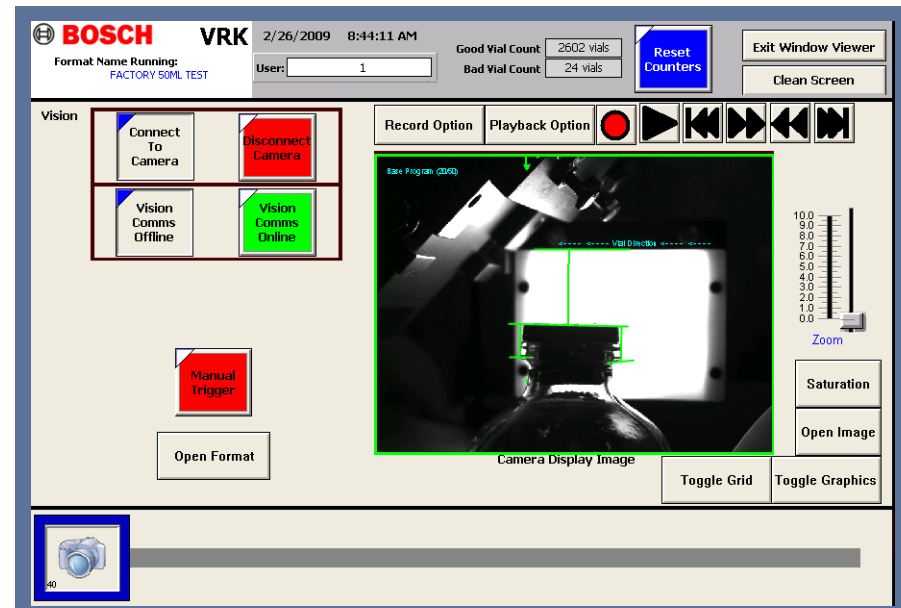
- Location: If any location tools fail, the vial is rejected.
- Distance (E): If the distance between the Stopper top and the Vial lip is greater than the acceptable distance the vial is rejected. Changing the maximum acceptable distance varies by customer and HMI/PLC interface.
- Angle (F): If the stopper angle is greater than 5° the vial is rejected.



OPERATOR INTERFACE

→ Wonderware Integration (Standalone)

- Load existing formats
- Live View of Inspections and results
- Manual Inspections
- Configurable recoding functions of inspections
- Playback of recorded inspections
- Security based on Wonderware login access
- Multiple Camera from one HMI (Optional)



CONTROLS INTERFACE

→ Vision to PLC

- Discrete Communications
 - Trigger
 - Pass (HS Out0)
 - Fail (HS Out1)
- Power Over Ethernet (120VAC)
- 12VDC Power supply (Backlight)

