



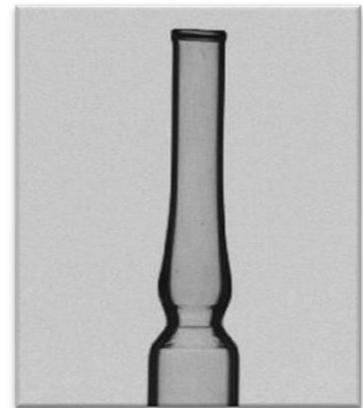
# Prospero

## Dimensional inspection of ampoules

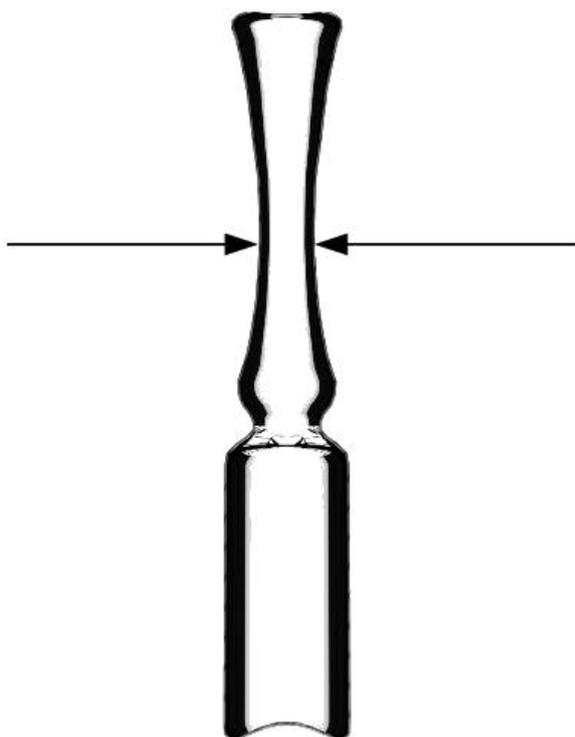
The Vimec Prospero inspection system is designed for dimensional inspection of borosilicate glass ampoules. The Prospero system is installed in the forming machine and inspects the top of the ampoule, while the ampoule is held in the machine chuck.

### Inspection principle

The ampoule is presented to the Prospero system while it is held in the machine chuck. During the rotation of the chuck, multiple images of the top of the ampoule are taken by the Prospero system. Reject criteria can be set on the dimensional aspects of the ampoule according to the customer requirements. The Prospero system will provide a reject signal to trigger the reject unit if the ampoule dimensions are not within the tolerances.

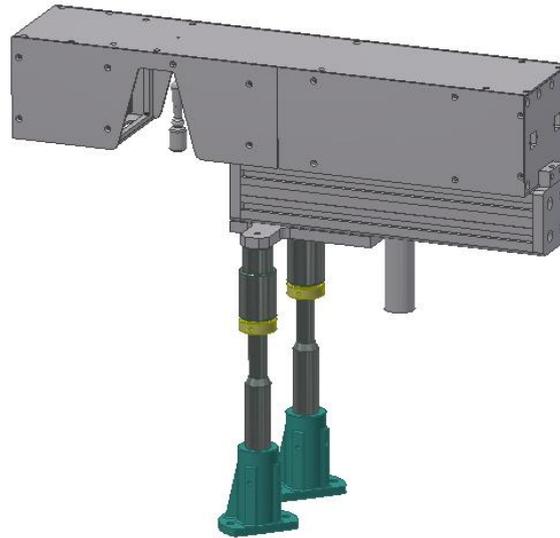


Screen shot of image by Prospero system



### Stem diameter control

The stem diameter can be influenced by adjusting the burners. To perform this adjustment the Prospero uses a PID (Proportional-Integral-Derivative) control loop mechanism. The Prospero measures and tracks the produced stem diameter for each individual chuck. When a diameter is found to be out of tolerance the PID adjusts the burner settings to compensate and get the stem diameter within tolerance. Using this control loop variation within the tube diameter can be compensated and the number of rejects due to out of tolerance stem diameters can be reduced.



Schematic drawing of the Prospero system

## Key figures:



100 parts per minute



1 camera



ISO size ampoules



In forming machine



Production insight



Vimec VCenter Software

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