

Pearl-700 Desktop 3D Inspection System

For your smaller and more complex injection molded parts

... complete 3D scanning of parts with internal features.

The system that captures internal and external part geometry simultaneously

The latest in QA Measurement Inspection

The CGI Pearl-700 Desktop 3D Inspection System and its Spec.Check software can significantly reduce the time and expense currently spent in measuring and qualifying your injection molded first article parts.

The Tool: Cross Sectional Scanning

The process starts by encasing the part in CGI's Encase-It material, which covers and fills the entire part completely. Once the part is encased and de-bubbled, it is placed into the Pearl-700 Desktop 3D Inspection System. An ultra-thin layer of the encased part is machined off and the Pearl-700's camera captures a high-resolution image of each newly-exposed cross-section. Then, the Pearl-700's software converts the digital bitmap image into edge detected points. These points are stacked up, layer-after-layer to create a very accurate and complete 3D point cloud model of the part.

The Result: Measuring the Part

CGI Spec.Check software establishes cross-sections through the 3D point cloud. Measurements are easily taken on these planar cross-sections. Diameters, linear distances, angles, arcs and measurements using centerlines can be made. Spec. Check prints inspection reports in an easy-to-read PPAPS format, in addition to creating 2-D color maps.



The Pearl-700

System Specifications:

Inspection Envelope: 2.50" x 1.75" x 3.50"
Accuracy: +/-0.0008" (20 microns)
Layer Thickness: 0.001" or 0.002"



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