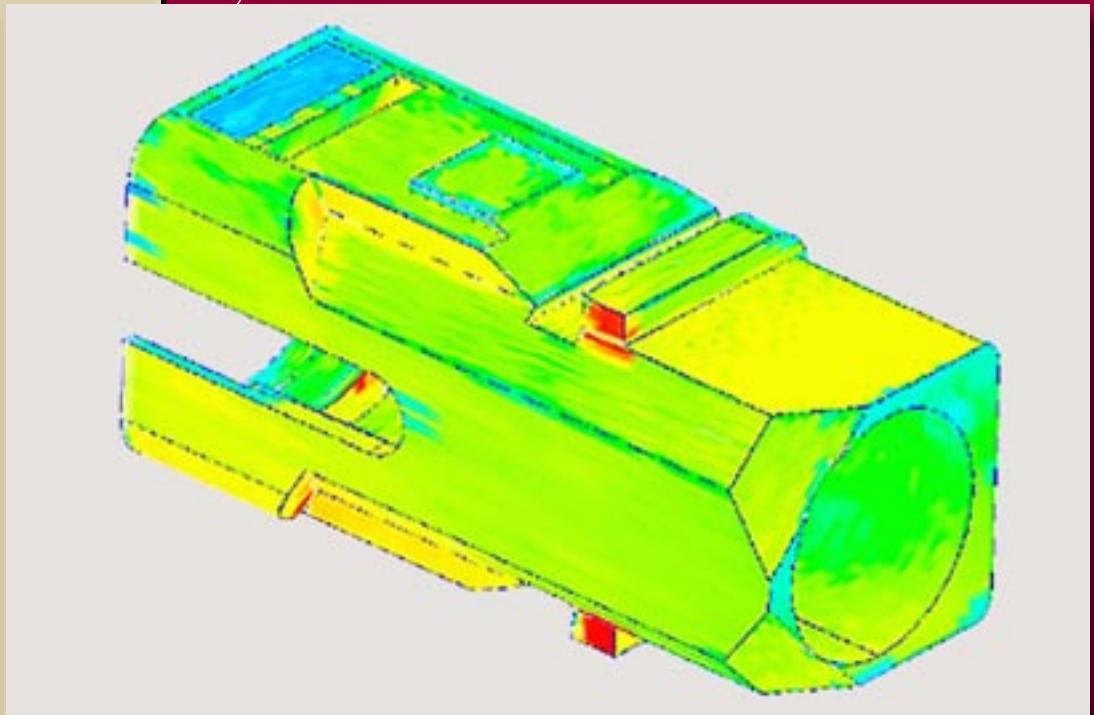
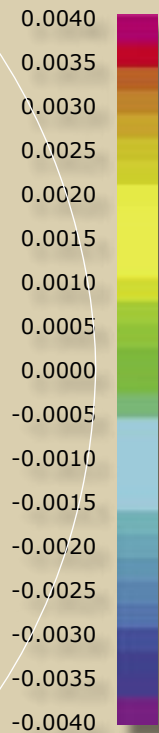


First Article Inspection System



**Capture the most complex
internal and external
geometry**

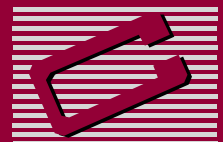
•

**Significantly reduce
inspection time**

•

**Process multiple parts
simultaneously**

CGI®
Capture Geometry Internally



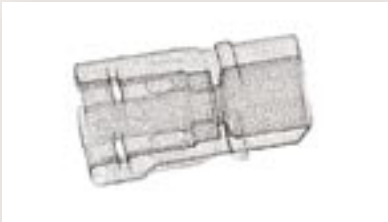
CGI® System Process Flow



First Article from Mold

Processing is automatic: start a part when you leave for the day and it will be fully processed in the morning.

See back cover for physical processing procedure



High Density Data Cloud

The CGI® system digitizes all the internal and external features: every corner, edge, and angle – including voids and undercuts.



Virtual to Physical Alignment

The data cloud and CAD surface geometry are prepped for verification, and the two files are accurately aligned for comparison.



Virtual to Physical Registration

The CAD model and data cloud are registered – hundreds of critical features are simultaneously aligned for comparison.

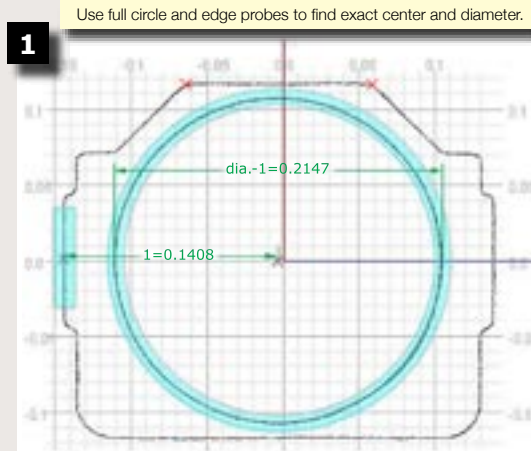
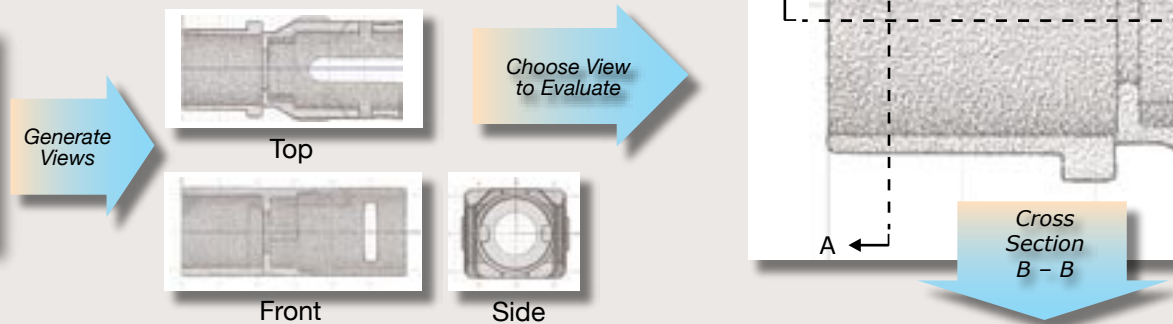


Computer Aided Inspection

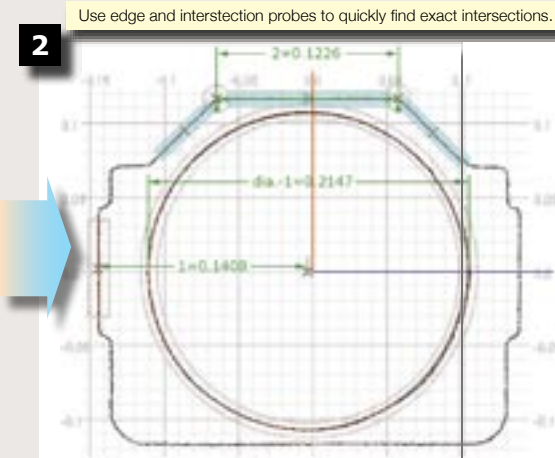
Adjustable color gradients show the deviation of the data cloud from the CAD model.

Is Manufacturing Accurately Pro-

With the CGI® System and SpecCheck™ And You Can Do It *Faster*,



The *full circle* and *edge probes* quickly locate the exact center of a circle, the diameter, and the distance to the outer wall.



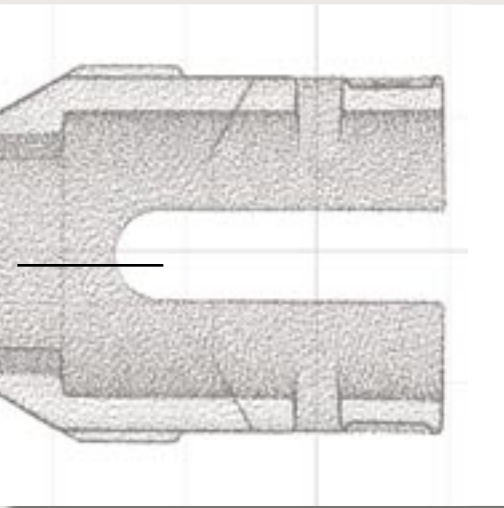
The *edge probe* accurately identifies the planes of a surfaces and the *intersection probe* finds the precise intersection of the planes.

Capture the most complex internal and geometry and process multiple parts

First article inspection is an essential and crucial step in product development and in proving a new mold. But when the part geometry is complex – and especially when the internal geometry is complex – the measuring and qualifying process can take days, if not weeks. This is unacceptable in terms “time to market” as well as in terms of “cost.” The CGI® System and Spec.Check™ solves these problems by providing complete measured results in one to two days instead of the weeks that others processes require.

Reducing What Engineering Ordered?

You Know for Sure:
Faster, Better, and at Lower Cost



Easily create any cross-section to analyze critical dimensions:

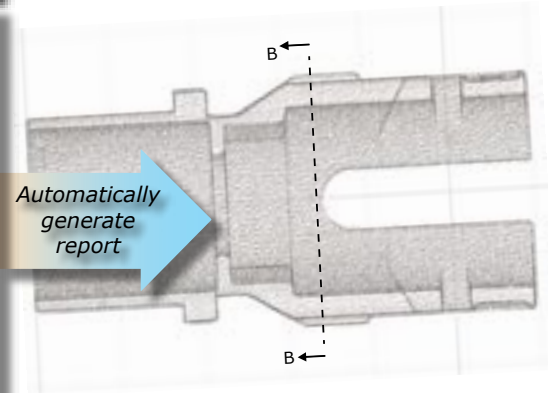
- Vertical – cross-sections A and B
- Offset – cross-section C
- Horizontal D.

Choose from an array of powerful tools to generate the information you need. As you work, SpecCheck™ automatically generates a color-coded report.

A concise report is automatically generated.

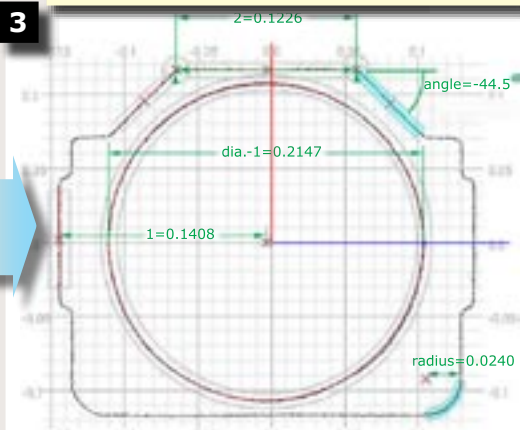
4

Cross Section B - B



3

Use edge, angle, and arc probes to quickly find angles and radii.



Edge, angle, and arc probes combine to find absolute angles and radii.

Dimension	Type	Measured	Nominal	+ Tol.	- Tol.	Pass/Fail
1	DistHorz	0.1409	0.14	0.003	0.003	Pass
2	DistHorz	0.1226	0.123	0.0025	0.0025	Pass
angle-1	AbsAngle	-44.5	-45.0	1.0	1.0	Pass
dia-1	Diameter	0.2147	0.215	0.003	0.003	Pass
radius-1	Radius	0.0240	0.025	0.003	0.003	Pass

external simultaneously.

CGI® can process, measure, and dimension molded parts in a fraction of the time and cost of your current method. If you have a multiple-cavity mold, we can create a template from the first dimensioned part and apply it to parts from the other cavities to make the inspection process even faster. You quickly get the accurate information you need to prove your mold and get it into production – therefore, your customers get their products to market sooner. Call CGI® today, or go to our website and request a Real Time Quote.

Spec.Check™ Tools
Enable Quick
Measurement of
Every Dimension,
Slope, Angle, Radius,
and Diameter.



Creates horizontal or vertical edge probe



Creates diagonal edge probe



Creates arc probe for a radius



Creates full circle probe for a diameter



Creates probes and a horizontal dimension (in one step)



Creates probes and a vertical dimension (in one step)



Find the intersection or corner of two edge probes



Find the centerpoint between two probes



Creates absolute angle dimension

5

Get a Real Time Quote

Learn how CGI's Service can accurately capture the most complex internal geometry – and save you time and money on First Article Inspection.

Visit our web site at
www.CGIinspection.com
and click on

eQuote

or eMail us at
cgi@reverse-engineering.com.

CGI® Process



First Article part requiring inspection.



CGI's specially formulated *Encase-It* potting compound provides the proper contrast between the part and the surrounding material.



The mold containing the part is gradually filled with the *Encase-It* material until the part is completely covered.



The completely encased part is then placed in a vacuum chamber where all air bubbles are removed and all voids are 100% filled.



The encased part is then mounted to the bed of the CGI Processing System. An industrial fly cutter removes ultra-thin layers of the mold material and part. Between each pass, a digital image is captured, revealing every detail of internal and external geometry. A 3-D point cloud is generated.

Get a Real Time Quote

Learn how CGI's Service can accurately capture the most complex internal geometry – and save you time and money on First Article Inspection.

Visit our web site at
www.CGIinspection.com
and click on

eQuote

or eMail us at
cgi@reverse-engineering.com.

CGI®

Capture Geometry Internally

www.CGIinspection.com

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