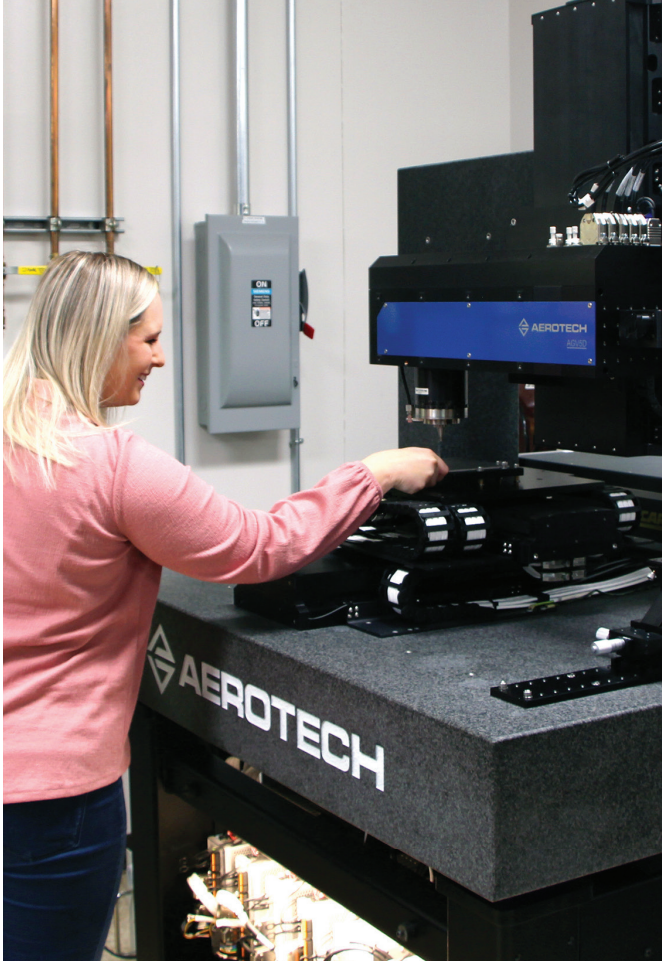




# Metrology and Measurement Systems

## WHAT WE CAN PROVIDE

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Our metrology and manufacturing experts engineer and build turnkey systems that solve your most challenging applications. We provide:

- ◆ **Design & Manufacturing**  
Capital equipment machine design and manufacturing
- ◆ **Consultative Sales Support**  
Metrology tool selection, integration and application testing
- ◆ **Automated Programmable Routines**  
Process development and software user interface programming
- ◆ **Turnkey Systems**  
Standard and custom turnkey solutions
- ◆ **Post-Sales Support**  
Installation, training and support

### TOOL EXPERTISE

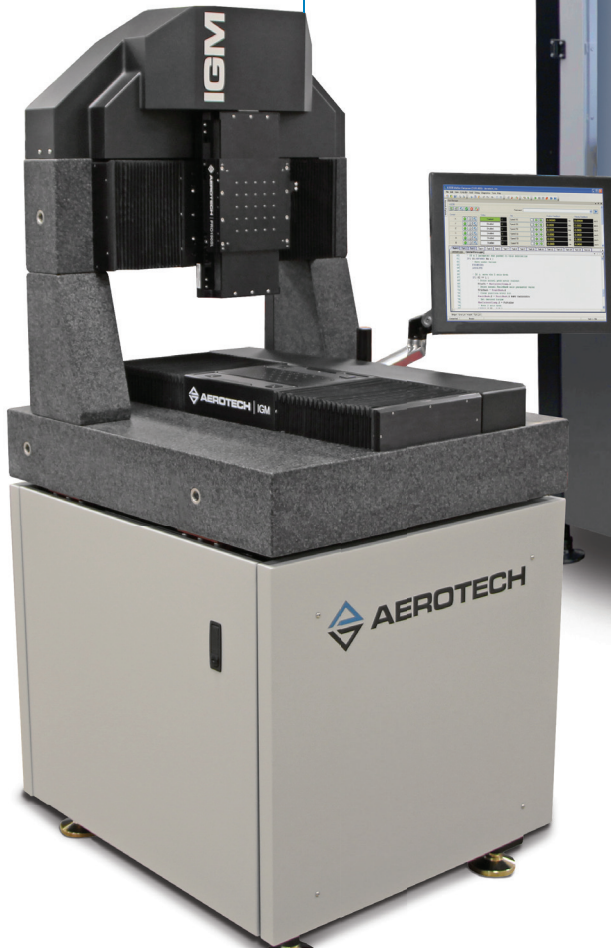
- Laser and Focus Variation Microscopes
- Optical Profilers
- Laser Triangulation Sensors
- Confocal Point/Line Sensors
- White Light Interferometric Sensors



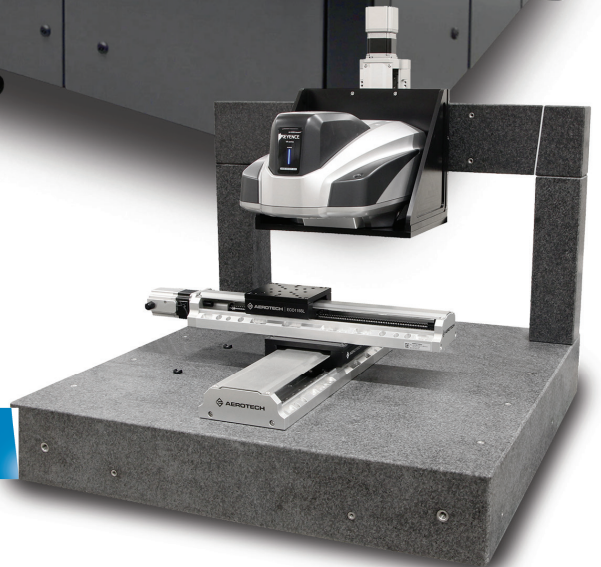
# COMMON APPLICATIONS/CONFIGURATIONS

ENCLOSED AUTOMATION CELLS

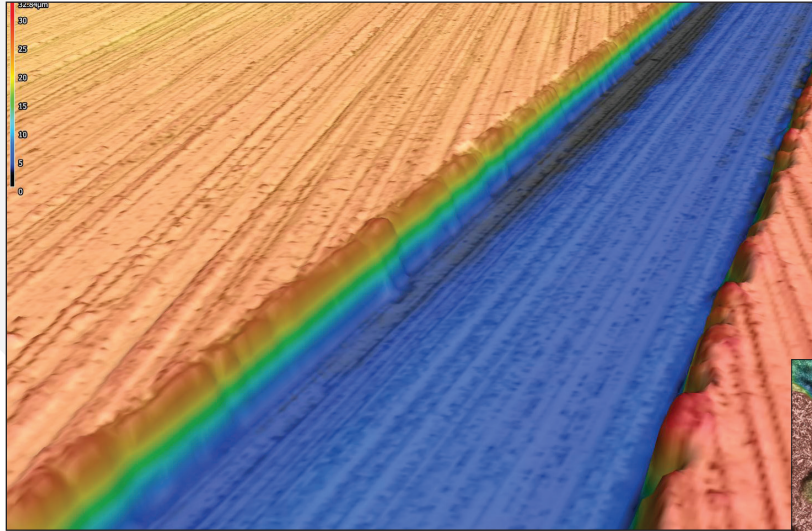
OPEN PRODUCTION FLOOR TOOLS



SMALLER SYSTEMS SUPPORTING BENCHTOP APPLICATIONS

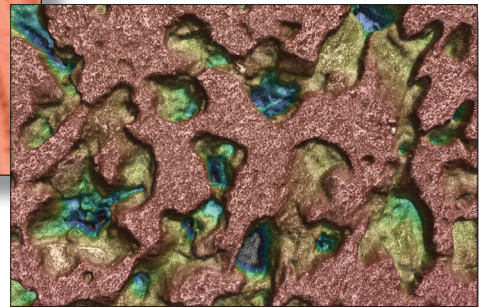


## PROCESSES WE AUTOMATE



### SURFACE MEASUREMENT AND ANALYSIS

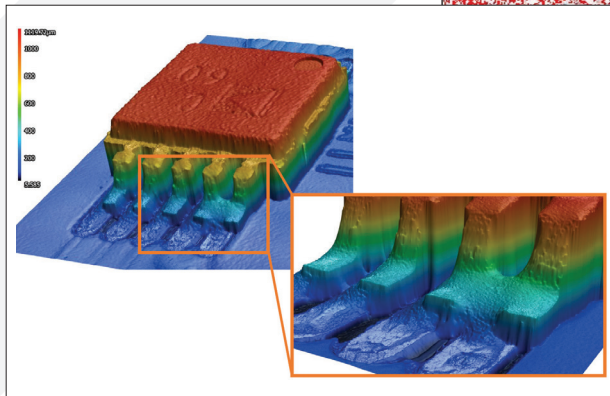
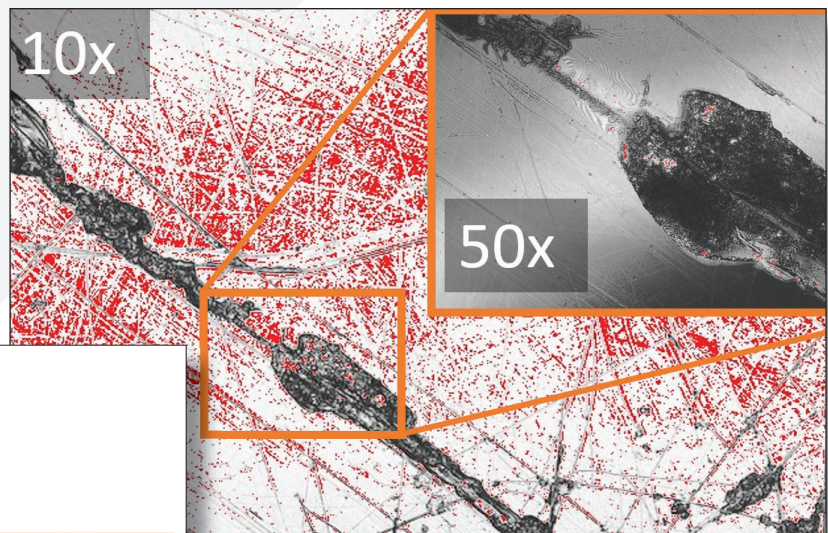
- Dimensional Inspection
- Profile Analysis
- Roughness & Waviness
- Height & Thickness
- Form

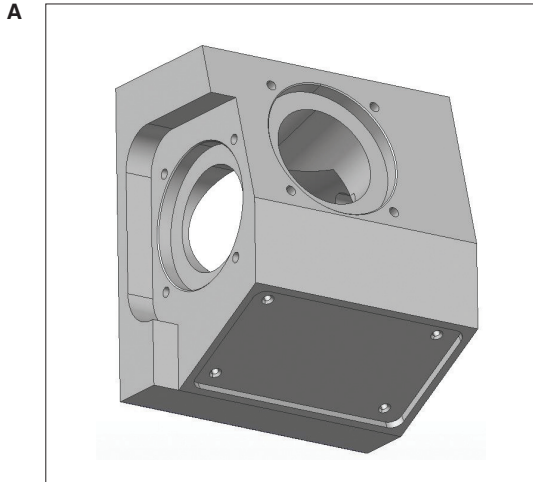


### DEFECT INSPECTION

Locate and interrogate undesirable part defects.

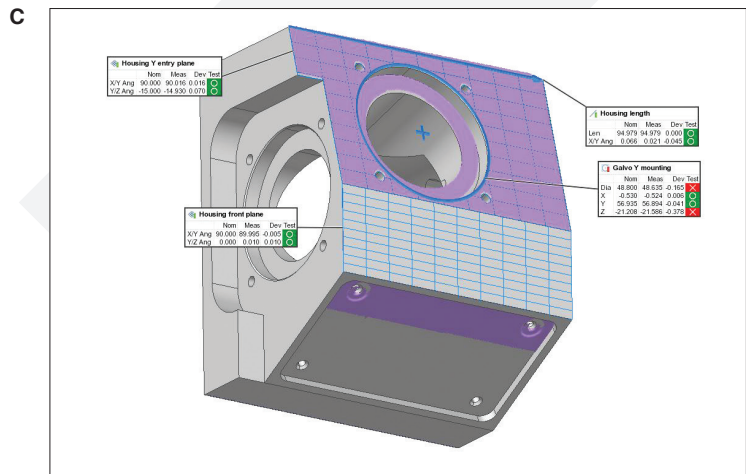
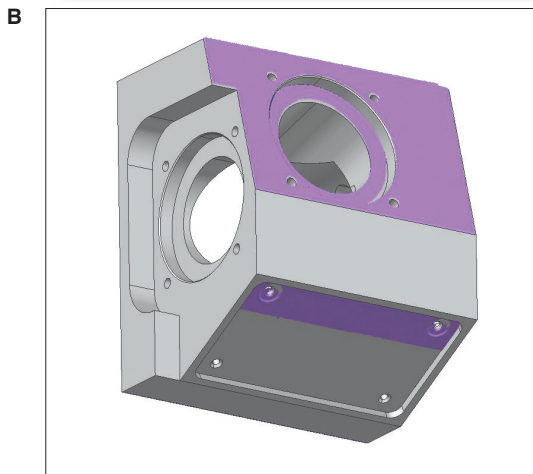
- Identification
- Dimensional Analysis
- Profile Analysis





## CAD COMPARISON ANALYSIS

- A.** Setting tolerances using nominal values from model
- B.** Measured data acquisition and alignment to CAD model
- C.** Comparison results based on specified geometric dimensioning and tolerancing (GD&T)
- D.** Control review and pass/fail verification



**D**

Control Reviewer

Control View Edit View Report

(All Controls)

Object Name	Control	Deviation	Test
Housing Y entry plane	X/Y Angle	0.016	Pass
Housing Y entry plane	Y/Z Angle	0.070	Pass
Housing front plane	X/Y Angle	-0.005	Pass
Housing front plane	Y/Z Angle	0.010	Pass
Galvo Y mounting	Diameter	-0.165	Fail
Galvo Y mounting	X	0.006	Pass
Galvo Y mounting	Y	-0.041	Pass
Galvo Y mounting	Z	-0.378	Fail
Housing length	Length	0.000	Pass
Housing length	X/Y Angle	-0.045	Pass

## HOW WE HELP

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### Achieve Difficult Measurement Resolutions or Accuracies

Aerotech has 50 years of experience designing and manufacturing solutions that achieve micrometer- and nanometer-scale precision. We have the freedom to use the best sensors on the market, eliminating hardware limitations that burden your process.

### Increase Measurement Speed Through Automation

Programmable routines to automate measurement processes and limit operator interaction provide more measurements per operator per hour. We deploy the some of the fastest data acquisition and analysis methods on the market.

### Deliver Turnkey Solutions

Our mechanical, electrical and software engineers collaborate in integrated teams to solve the most challenging applications. We can customize virtually any aspect of our standard platforms to fit your needs.

WHY CHOOSE AEROTECH



**50+**

Years of Precision  
Automation Expertise

**6**

Full-service Facilities

**> \$1.6B**

Of Precision  
Equipment Shipped



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