



**FORUM**

## **Metrology Services**

From prototype to production. Get there faster with Forum.

[www.forummolding.com](http://www.forummolding.com)  
Forum Plastics LLC  
105 Progress Lane  
Waterbury, CT 06705





Fig.1 - Metrology Lab

## OVERVIEW

Forum Plastics' innovative metrology services offer the confidence and assurance of consistent molded parts. Forum offers traditional hand measurement services, such as calipers, micrometers, and drop indicators, vision inspection utilizing Micro Vu, RAM, and Keyence inspection systems with touch probe capabilities. We have also made significant investments in equipment for our metrology lab, including a CT scanner, to help reduce product production lead times, manufacturing issues, overall costs, and guesswork.

## WHAT INSPECTION SERVICES DOES FORUM OFFER?

Forum offers a full range of inspection and documentation services, including:

- First article inspection reports (FAIs or FAIRs)
- Capability studies
- Measurement system analysis (MSA)
- Gage repeatability & reproducibility studies (GR&R)
- IQ/OQ/PQ
- Production part approval process (PPAP) documentation

## QUALITY AND METROLOGY LAB ENVIRONMENT

Our Quality and Metrology Lab environment is fully air-conditioned and monitored. The 1,100 sq. ft. lab is operated and fully staffed across the three shifts of manufacturing operations. Electronic records are backed up in an off-site vault for protection, and our lab has an extensive array of electronic measurement equipment and an experienced staff.

## CT SCANNER SERVICES

Forum's metrology lab leverages CT scanning capabilities to use industrial computed tomography equipment. Using our CT scanner, Forum can measure parts, especially small components, without the need for cross-sectioning or damaging the part. We can also check for internal defects and compare the geometry to the CAD model.

### Forum's CT Scanner Fact Box

#### Scanner Type:

RX Solutions Desk Tom CT Scanner

#### Resolution:

Captures measurements with 10  $\mu\text{m}$  accuracy and 4  $\mu\text{m}$  resolution

#### CT Scanner Analysis:

The CT scanner has the ability to provide data outside of normal FAI and Capability studies such as nominal/actual comparison, porosity analysis, assembly analysis, and reverse engineering.



Fig.2 - CT Scanner Station

## WHAT ARE THE KEY ADVANTAGES OF USING FORUM'S METROLOGY SERVICES?

### 1. Dedicated New Part Validation Inspections

Forum Plastics is the only local injection molder to offer a CT scanner for its inspection services. Our metrology team is dedicated to new part validation inspections, allowing validation work to be completed faster.

### 2. Custom Programs

Forum utilizes many templates for our FAIs and Capability Studies as well as programs for our inspections. Programs are developed during the tool design phase with 3D printed models developed in-house on our 3D printers. This allows us to work out the details of the inspection program prior to molded parts being produced.

### 3. Technical Staff

Our staff is trained in many aspects of quality and manufacturing systems, including multiple levels of ASQ, Blueprint reading, GD&T, Micro Vu and RAM optical basic and advanced training, as well as CT scanner software and hardware operation.

## Get Started With Forum

To learn more about our metrology services, quality systems, validation protocols, and lab, please contact our Quality Team or visit us online.



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