

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

GLASTONBURY SOUTHERN GAGE CO. TN  
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CALIBRATION

Valid until: October 31, 2010

Certificate Number: 1553.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations<sup>1</sup>:

I. Dimensional

Parameter/Equipment	Range	Best Uncertainty <sup>2,3</sup> ( $\pm$ )	Comments
Plain Rings – Internal Diameter	(0.06 to 4) in (4 to 22.5) in	(7.2 + 1.5L) $\mu$ in (3.2 + 2.8L) $\mu$ in	Federal 136 B-3, gage blocks
Plain Cylindrical Plugs and Discs – External Diameter	(0.01 to 5.5) in (0.01 to 4) in (4 to 20) in	(3.3 + 1.8L) $\mu$ in (6.8 + 1.8L) $\mu$ in (3 + 2.8L) $\mu$ in	Heidenhain Federal 136 B-3, gage blocks
Length – Between Two Planes	(0.01 to 6) in (0.01 to 26) in	200 $\mu$ in (26 + 0.9L) $\mu$ in	Sylvac DiaLectron and gage blocks
Plain Tapered Plugs – External Diameter			
0.75 TPF	(0.01 to 3) in (3 to 12) in	53 $\mu$ in 58 $\mu$ in	Taper blocks with: Mikroktor DiaLectron
All Tapers	(0.01 to 8) in	41 $\mu$ in	Standard measuring machine, gage block, rolls

Parameter/Equipment	Range	Best Uncertainty <sup>2,3</sup> (±)	Comments
Plain Tapered Rings – Internal Diameter  0.75 TPF  All Tapers	  (0.04 to 3) in (3 to 12) in  (0.4 to 8) in	  90 μin 100 μin  81 μin	  Indicator, taper plug
External Straight Thread Plugs –  Pitch Diameter  (0.5 to 120) TPI  Major Diameter	  (0.047 to 3) in (3 to 24) in  (0.047 to 3) in (3 to 24) in	  54 μin (49 + 1.5L) μin  35 μin (25 + 2.1L) μin	Blocks and wires with:  Mikrokator Standard measuring machine  Mikrokator P & W standard measuring machine
External Thread Lead Straight and Tapered	(1/2 to 120) TPI	47 μin	P&W laser lead checker
External Thread Flank Straight and Tapered	0° to 180°	4'	Optical comparator
Internal Straight Thread Ring –  Pitch Diameter  (0.5 to 120) TPI  Minor Diameter	  (0.06 to 12.5) in  (0.04 to 0.40) in (0.40 to 6.0) in (6.0 to 12.5) in	  54 μin  94 μin 95 μin (88 + 0.8L) μin	In accordance with ASME B1.2, para 5.1.1; the ring is sized to a plug, with the plug's uncertainty given.  Taper pins & micrometers Fowlers Micrometers

Parameter/Equipment	Range	Best Uncertainty <sup>2</sup> (±)	Comments
External Tapered Thread Plug –  Pitch Diameter  0.750 TPF, (0.5 to 120) TPI  Major Diameter	(0.047 to 3) in (3 to 12) in  (0.1 to 3.0) in  (3.0 to 12) in	91 µin 96 µin  53 µin  58 µin	Mikrakator, blocks, taper block, wires  Standard measuring machine, blocks, wires  Taper block and Microkator  Taper block & DiaLectrion
Internal Tapered Thread Rings –  Pitch Diameter  0.75 TPF, (0.5 to 120) TPI  Minor Diameter	(0.06 to 3) in (3 to 12) in  (0.40 to 3.0) in (3.0 to 12.0) in	270 µin 270 µin  90 µin 100 µin	Tapered master plug, Sylvac  Taper plug & indicator
Thread Wires –  Inch  Metric	(4 to 80) TPI  (0.2 to 10) Pitch	17 µin  17 µin	Master wire, Heidenhain

<sup>1</sup> This laboratory offers commercial calibration service.

<sup>2</sup> “Best Uncertainty” is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards of nearly ideal measuring equipment. Best uncertainties represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of  $k = 2$ . The best uncertainty of a specific calibration performed by the laboratory may be greater than the best uncertainty due to the behavior of the customer’s device and to influences from the circumstances of the specific calibration.

<sup>3</sup> In the statement of best uncertainty,  $L$  is the numerical value of the nominal length of the device measured in inches.



THE AMERICAN ASSOCIATION FOR  
LABORATORY ACCREDITATION

## ACCREDITED LABORATORY

A2LA has accredited

**GLASTONBURY SOUTHERN GAGE TN**

**Erin, TN**

for technical competence in the field of

### **Calibration**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General Requirements for the Competence of Testing and Calibration Laboratories* and any additional program requirements in the field of calibration. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated 18 June 2005*).



Presented this 28<sup>th</sup> day of October 2008.

A handwritten signature in cursive script, reading "Peter Meyer", positioned above a horizontal line.

President  
For the Accreditation Council  
Certificate Number 1553.02  
Valid to October 31, 2010  
Revised July 27, 2010

For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.