# Calibration Laboratory

Elk Grove Village, IL

Mitutoyo America Corporation





Bulletin No. 1923

Customer Product Services Series
Dimensional Calibration Laboratory and Services

## Premier Calibration Technology and Service – The precision that you need

As the world's leading manufacturer of metrology equipment, systems and software, Mitutoyo understands the role that accuracy plays in your efforts to manufacture better, faster and at lower cost. And with the increased pressure created by growing ISO and other industrial requirements, it is more important than ever to be certain your dimensional measurement equipment and systems are operating within tolerance.

Mitutoyo continues to develop the most advanced and sophisticated metrology equipment available. We utilize this technology in our calibration laboratory, to ensure you receive calibrations with the lowest possible uncertainty at the best possible value.

## **Broadest Accreditation for Dimensional Calibration in the Industry**

The Mitutoyo Calibration Lab is accredited to ISO 17025 by the A2LA (American Association for Laboratory Accreditation). This is our assurance to you that our equipment is calibrated to accepted national standards, and that our procedures are validated as appropriate for the wide range of dimensional metrology instruments that we calibrate.



With the broadest scope of accreditation for dimensional metrology of any commercial laboratory in the US, the Mitutoyo Calibration Lab can calibrate virtually any kind of dimensional measuring device or artifact - from small tools to precision instruments, from gage blocks to roundness hemispheres. Our cal lab can calibrate almost every metrology product that Mitutoyo manufactures and our competitors' tools as well, providing many of the lowest uncertainties available from any commercial lab in North America.

### **A2LA Accreditation and Scope**



http://www.mitutoyo.com/Support/accreditations/ EGV Calibration Certificate.pdf

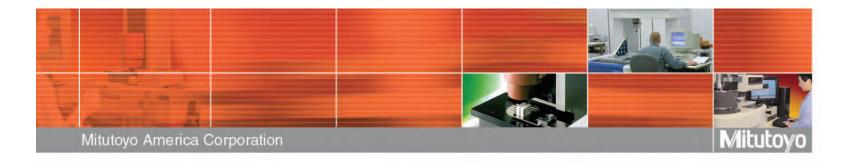
### **Premium Precision with Practical Value**

Mitutoyo's Calibration Lab masters are calibrated directly by NIST (National Institute for Standards and Technology), enabling us to provide you the highest possible accuracy and lowest uncertainty, but at a fraction of what a NIST's calibration would cost. For example, a one-inch gage block calibrated by NIST would cost about \$90 and provide an uncertainty of 1.1 microinches (0.0000011 inches). The same block calibrated by Mitutoyo with an uncertainty of 2.4 microinches would cost about \$5. For the average application, the difference in uncertainty is not relevant, but the impact on your budget could be significant!

## **Cutting Edge Technology – State-of-the-art instrumentation**

The Mitutoyo Calibration Lab utilizes some of the most precise automated equipment in the world to perform its calibrations reducing uncertainty, human error, turnaround time and cost. The lab utilizes a Mitutoyo Legex CMM, one of the most accurate CMMs in production. The Mitutoyo RA-H5000 roundness testing machine is used to achieve a measuring uncertainty of 5nm (0.000005mm) and is same model used by NIST. Mitutoyo is one of only a few calibration labs that employ a fully-automated gage block comparator. In addition, Mitutoyo has one of the most extensive libraries of master gages and specimens you will see in any dimensional cal lab.





To ensure essential performance, all technology used for calibration must be operated in a contamination-free environment. The Mitutoyo Calibration lab clean rooms are certified Class 10,000. Clean room temperature is maintained at  $20^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$  with a relative humidity controlled between 40% and 60%. Clean room access is controlled by airlock utilizing positive pressure to prevent the entrance of outside air.

Every aspect of the lab is designed to guarantee results that are of the highest possible quality while at the same time ensuring fast delivery and a great price. This is why a number of our industry competitors use our calibration services, and why you should as well.

## One Lab - Many Great Services

#### **Accredited Calibrations**

Unlike many calibration labs, accredited calibrations and accredited certificates are included in the Mitutoyo calibration labs standard pricing. Accredited calibration at no extra cost!

#### **Express Service Available**

1 day and 5 day calibration and shipping options available.

## **Calibration Training – We Can Teach You**

Presented jointly with the Mitutoyo Institute of Metrology, the Calibration Lab offers a course entitled "Hands-On Gage Calibration." This class goes beyond the theoretical to train participants to perform and reliably repeat calibration activities and procedures. The course is led by experienced calibration professionals at our Elk Grove Village Calibration facility. Classes are kept to just a few students to ensure adequate hands-on experience and every class combines core calibration training with customized content established through survey prior to the meeting date. Certificates of Completion are awarded.

For more information see the Mitutoyo Institute of Metrology website: mim@mitutoyo.com



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### **Product Services and Education**



#### Field Service

Mitutoyo America Corporation provides A2LA accredited field service calibrations. Capable of providing calibration on any service visit, Mitutoyo's field service technicians get equipment back into production quickly. Service agreements are available at the time of equipment purchase.



#### **Repair Services**

Mitutoyo America Corporation's in-house repair facilities are capable of repairing the full range of Mitutoyo precision tools. Skilled technicians provide quality repairs backed by a full 90-day warranty on parts and labor. To ensure rapid service, a 5-7 day turn-around is maintained on all repairs.



#### **Mitutoyo Institute of Metrology**

The Mitutoyo Institute of Metrology (MIM) provides education and training on topics ranging from basic principles of measurement and calibration to advanced courses in CMMs and measurement uncertainty. Seminars are led by experienced, industry-leading professionals at locations across the US and Canada or on-site in customer's facilities.

For a Customer Support Services price list, e-mail info@mitutoyo.com or see our website: www.mitutoyo.com 1-888-MITUTOYO (1-888-648-8869)

