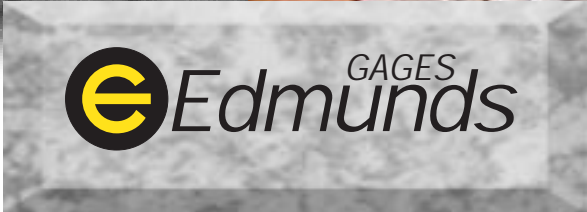




etrology Services





etrology Services



Your reliable, directly traceable, metrology services provider since 1955

Master calibration from a master gage builder

Those of you familiar with Edmunds Gages know that we are a leading manufacturer of dimensional measurement gages, from fixed limit cylindricals to sophisticated, custom gaging systems. We also build metrology laboratory equipment including our universal and twin head gage block comparators. These units are dubbed by many in the industry as “the lab standard” due to their wide acceptance and use in calibration laboratories all over the world.

Helping you meet gage calibration, certification, and reporting requirements

The exceptional quality and attention to detail we pay to the manufacturing of our equipment carries over to our metrology services. Now, more than ever, you need a credible and reliable gage calibration service to maintain and support your quality improvement programs. A key component of ISO standards, for example, is providing accurate records for all of your gages. That is a cumbersome, perhaps even overwhelming, task for most manufacturers.

We can help you.



Edmunds Gages Metrology Services offer you the complete solution!

We would like you to be among our customers who have grown to trust and value our metrology services. We offer:

- Calibration down to .0000001”;
- Certification that is directly traceable to NIST;
- ISO-required inventory and recall tracking;
- A repair service with “like new” results;
- Automatic gage block replacement;
- An environmentally-controlled sub-millionths lab;
- And, convenient on-site services.

Those are just several of the many benefits you will enjoy using Edmunds Gages Metrology Services.

To ensure accurate ID and OD measuring, we calibrate and certify all variations of cylindrical gages, including rings, plugs and discs. We accommodate ID sizes up to 22" and ODs to 19". In classes up to XXX.

Edmunds Gages Sub-Millionths Metrology Lab is an environmentally-controlled facility, maintained 365 days a year. Continuously trained and experienced metrology technicians use ultra-precise instruments to calibrate gage blocks, all types of cylindricals, taper gages and special masters.

Directly traceable to NIST

The Edmunds Gages Sub-Millionths Metrology Lab is one of the finest in the industry. It is equipped with ultra-precise, high-technology instruments, and is managed and operated by our experienced team of metrologists.

Our calibration and certification standards are *directly* traceable to the National Institute of Standards and Technology (NIST). To be directly traceable means that, for example, the master gage block we compare yours with has been calibrated with an Edmunds block that was certified at NIST. We perform "Round Robin" and direct correlation measurement studies annually with NIST to ensure our measurements are as accurate as possible. Beware of labs which claim to be only "traceable" to NIST. Their master blocks may be several generations removed from NIST blocks which makes the level of accuracy difficult to prove. (Remember, each time one gage block is calibrated to another, about 2 to 3 micro inches of uncertainty may be introduced.)

We maintain a very close relationship with the National Conference of Standards Laboratories (NCSL) to ensure that we are abreast of any new standards. We are active members in the ASQC, A2LA and the NCSL and have



Gage block calibration is one of our specialties. Suited to all users of square or rectangular gage blocks in all grades. Measurement and reporting conform to ASME/ANSI B89 1.2M and ISO 3650. Using progressive equipment and experienced metrologists, you get accurate, fast, and economical service. Many customers also take advantage of our automatic gage block replacement program.

appointments on several ASME/ANSI B89 Standards committees. Our metrology laboratory and outside calibration services meet ANSI/NCSL Z540-1 "Calibration Laboratories and Measuring and Test Equipment - General Requirements" (ISO Guide 25). We are also operating within the guidelines for the National Voluntary Laboratory Accreditation Program (NVLAP) through NIST.

The gages we calibrate, certify, repair and replace

Our metrology services include calibration and certification of gage blocks; cylindrical gages — rings, plugs, and discs; taper gages; bench micrometers; optical comparators; plus all hand-held gages from micrometers to test indicators.

Experienced and knowledgeable metrologists

Our metrology lab technicians are thoroughly and continuously trained and updated in all aspects of gage calibration. Today's government standards are quickly changing over to ISO standards, and Edmunds technicians are always among the first to receive the current data.

Your gages are in capable hands at Edmunds Gages.



Dedicated gage management software simplifies the certification and gage tracking requirements to conform to current standards.



The Edmunds Gages Sub-Millionths Metrology Lab

Robert F. Edmunds Sr. established our metrology lab in 1955, about 5 years after he founded Edmunds Gages. He set out to design and build a premier lab that exceeded NIST parameters. To this day, our lab is still a model facility. From the beginning, we measured to millionths. Today, it is common for us to calibrate to resolutions of .0000001", or one-tenth of one-millionth of an inch. Because of the extremely close tolerance of the gages we calibrate, environmental factors such as temperature and humidity are maintained and monitored 24 hours a day, 365 days a year. The temperature is held at 68° F.(±1/2°). Relative humidity is held to 35 - 50%.

height masters. With an excellent parts inventory and an expert staff, your gages get immediate attention. They return to you like new, and we stand behind each repair with a warranty. Further, we can simply replace any gages that cannot be repaired.

We calibrate and certify internal and external taper gaging to very tight tolerances using our own custom designed "taper comparators".

Dedicated gage management software simplifies the documentation process

Formal quality standards dictate that all gages be inventoried, calibrated, and tracked for recalls. To help you meet the requirements for ISO 9000 and QS 9000, we use software specifically developed for the gage calibration business. It is an efficient, effective program that generates reports conforming to ISO 10012-1 (MIL STD-45662A) and ANSI/NCSL Z540-1. Via modem or fax, we can instantly transfer information about any of your gages.



Cost-effective repair and replacement services

In the interest of time and cost efficiencies, most calibration customers also use our repair service on any gage that needs restoration to regain accuracy. We repair all mechanical measuring instruments from test indicators and dial calipers to dial bore gages and



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Convenient, efficient, on-site services

Some gages must be handled in our lab, such as gage blocks, cylindrical gages — rings, plugs, and discs, taper gages and thread gages. However, others may be conveniently calibrated at *your* facility. These include mechanical gages of all sorts, such as test indicators, dial calipers, height gages, bench micrometers, and other equipment such as optical comparators. We are performing “on-sites” more frequently today as companies need to calibrate and create supporting documentation for each gage. We dispatch experienced technicians to your plant with traceable masters, computers, printers and the latest generation of gage management software.

On-site procedures are followed at your facility as carefully as those we follow in our lab: each gage is inspected and documented as it was found — an ISO requirement. Then it is cleaned and checked for performance and overall condition. We make adjustments and simple repairs if necessary, often right on the spot. Then the gage is calibrated to the proper master. All data is keyed into the computer, and at the end of our visit you will have certification reports; clean, calibrated gages with current calibration labels all in good working order; as well as a detailed gage inventory list that is designed to your individual requirements.

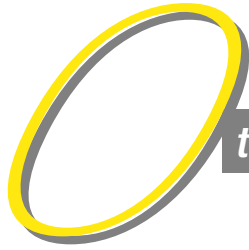
During our visit we can take any gages that must be calibrated in a “controlled environment” back to our lab. Often, they are returned to you before the on-site work is completed.



For your convenience, Edmunds Gages also will conduct calibration, certification, replacement, and minor repair services at your facility. Large gages, such as optical comparators, must be checked at your site, and we can also service your mechanical gages that do not need to be handled in a controlled environment. Utilizing dedicated, gage management software, we leave you with a complete inventory of your gages and establish an automatic recall system to ensure your gages are always up to date.

Call us today to get the complete metrology services solution: Calibration. Certification. Computerized tracking and recall. Repair. Replacement. From a master gage builder with over 40 years calibration experience.

Edmunds Gages.



ther Edmunds Gages Products and Services

Cylindrical Gages We offer a complete line of inch or metric plain ring gages, setting discs plus plain, progressive, or reversible plug gages in AGD classes Z through XXX. Choice of materials, including steel, chrome or carbide.

Air Gage Tooling Air gaging is one of the easiest and most accurate non-contact measurement methods. We make tooling for our own and other air gaging systems. We offer many tooling styles in standard and special designs, plus system accessories.

Electronic Bore Plugs Our durable, highly precise LVDT plugs are available in a choice of styles. They are ruggedly designed for demanding production use.

Column Readouts We manufacture columns for air and electronic gaging. Our Accu-Setter™ is a microprocessor-based column featuring single-button operation, L.E.D. digital alphanumeric display and 3-in-1 column capability allowing simplified operation, reduced setup time, and at-a-glance monitoring of part measurement.

The Trendsetter™ column has quickly interchangeable plug-in modules for a variety of gaging needs. The ten-inch scale has digital scale values and a choice of inch or metric ranges. It works with most every make of air or electronic tooling.

Gage Heads Compatible with all Edmunds electronics, our LVDTs are available in cartridge, lever, and reed float styles.

Computer Aided Gaging (CAG™) Microprocessors Our CAG™ system offers a computer-based readout and SPC data gathering ability in a convenient unit designed for industrial environments. This proven system can be applied to manual or automatic gages requiring up to 32 inputs. The ultimate CAG software provides closed-loop feedback when networked with CNC machine tools, providing continuous process control.

The Micro CAG™ is a similar and smaller version of the same menu-driven, easy-to-use CAG with up to 8 inputs.

Gage Block Comparators We offer single-head and twin-head comparators, capacities up to 20", and resolution to .0000001". Unique functional features, such as "click stop" for rapid head positioning and auto zeroing save time.

Universal Comparators The standard of accuracy, our comparator is universal for comparative ID, OD, and length measurement with a resolution of .000001". Auto zeroing eliminates time-consuming setting of meters. The preferred instrument in most calibration labs.

Custom Design and Build Whether you need a single- or multi-dimensional fixture, a special hand-held gage or a completely automatic gaging system, Edmunds can furnish it. We have produced over 35,000 different designs from cylindrical gages to fully-automatic, computerized, post-process gaging systems.



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