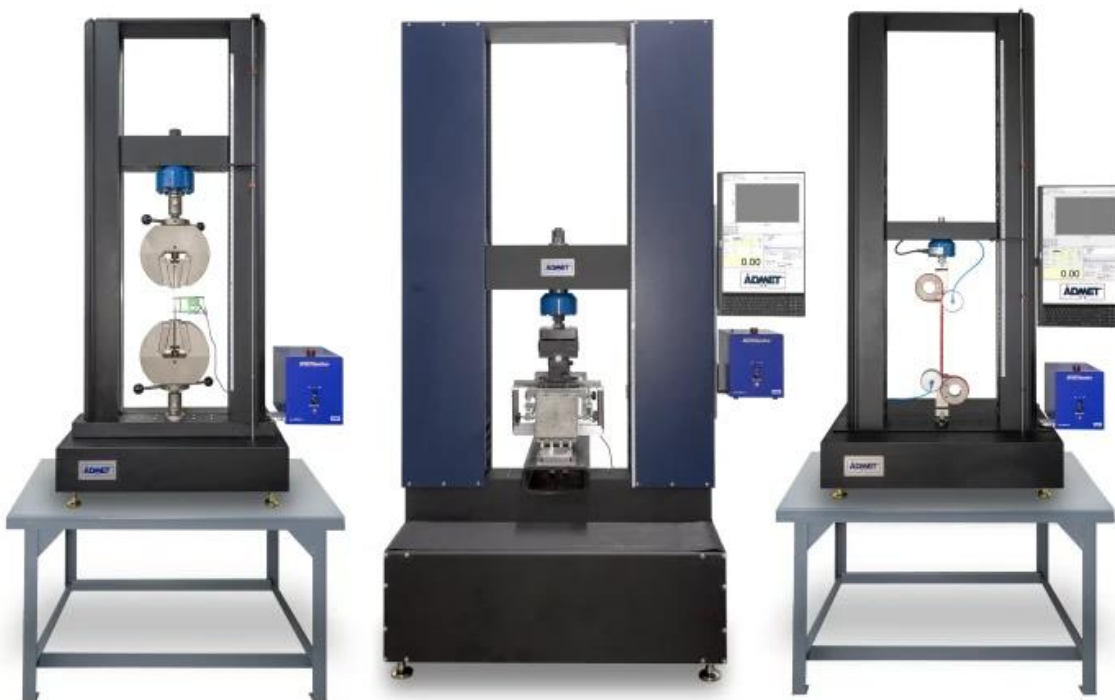


Calibration, Training, and Validation

ADMET Materials Testing Services



Materials Testing Systems Calibration Overview

Over time, the accuracy of all electronic components such as load, strain and displacement transducers can change due to many factors such as age or misuse. While ADMET uses the highest-quality equipment available, regular calibration ensures these components continue to perform to spec, providing test results that can be trusted with confidence.

Organizations like ASTM and ISO create standards and procedures which dictate how the calibration for a specific piece of equipment should be performed. For the highest level of confidence, customers should choose calibrators accredited to **ISO/IEC 17025:2017**. This standard—and accreditation to it—confirms that an independent third-party organization has audited the laboratory and verified that it **operates with technical competence, impartiality, and consistency**. ISO/IEC 17025:2017 accreditation also ensures that the calibration equipment used is traceable to recognized standards bodies, such as the National Institute of Standards and Technology (NIST) in the United States.



Key Benefits of Calibration

- **Confirms measurement accuracy**
- **Provides traceability to international/government standards**
- **Meets quality requirements as set by regulated industries**
- **Builds credibility across int'l boundaries**

For inquiries, contact us at calibration@admet.com

ADMET ISO/IEC 17025:2017 Calibration Scope

ADMET is accredited to **ISO/IEC 17025:2017 by A2LA (cert # 7128.01)**. ADMET offers calibration services to customers who operate both ADMET equipment and systems made by other manufacturers. Below is a partial list of internationally recognized procedures ADMET follows to calibrate testing equipment:

- **ASTM E4 – Tension/Compression Force Calibration**
- **ASTM E2624 – Torque Calibration**
- **ASTM E2309 – Crosshead Displacement Calibration**
- **ASTM E2658 – Crosshead Speed Calibration**
- **ASTM E83 – Extensometer Calibration**

Supported Brands

We calibrate systems made by a range of manufacturers including ADMET, MTS, Shimadzu, Tinius Olsen, retrofitted Instron®, and SATEC®. Complete a Calibration Request form at www.admet.com/calibration.



IQ/OQ Documentation and Software Validation Services

This additional site service requires that the customer be present during the entire installation and start-up process at their facility. Documentation will be supplied for verification of **Installation and Operational Qualifications**. The documentation is for the customer and ADMET to use during the installation and training process and beyond to ensure that the equipment meets specifications.

During the IQ/OQ validation process, a software validation will be performed to show the customer how and where calculations come from for their specific testing. In addition, various software feature requirements referenced in **FDA CFR 21 Part 11** will also be reviewed, including:

- MTESTQuattro maintenance log that records previous modifications to the software, including what was changed, when, by whom
- MTESTQuattro message log that records system status, including start, stop, limits, e-stop, overrange, etc.
- User permissions and password protections in order to limit the modification of test procedures/reports to authorized individuals

Testing System Retrofit Services

A **universal testing machine retrofit** is a system upgrade in which the capabilities and functionality of an outdated or malfunctioning universal testing machine are improved by pairing them with advanced indicators controllers and replacement components. The make or model of the testing machine; whether made in the United States or abroad, designed for static or fatigue testing, or powered by an electric servo motor or hydraulic power unit; will not affect the retrofit process in any consequential way.

By pairing an older system with an ADMET controller or indicator, the functionality of your test system is transformed. Our advanced PC-based **MTESTQuattro® software** incorporates a wide array of reporting, data acquisition, analysis, and control capabilities. Alternatively, ADMET offers the **EP2 standalone touch panel unit** for quality and process control measurements.

ADMET has the experience and know-how to **retrofit machines of all makes and models**. We have the ability to upgrade manually operated machines to full servo control. Our engineers can also install a new motor and drive on electro-mechanical machines or a pumping system on servohydraulic machines to enable you to perform your tests with confidence.



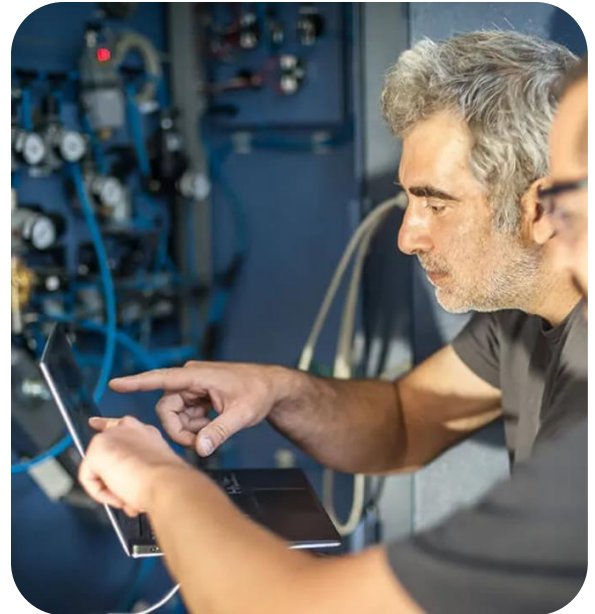
Instron 4502 (1986 – 1994) Retrofitted With MTESTQuattro® Test Controller and Software.

Training and Technical Support

We offer varying levels of training and start-up support to suit each customer's unique needs and budgets.

ADMET's **full on-site training** process begins with system and materials safety awareness and continues to take users through **hardware and software setup and detailed systems operations**. By the end of training, users will be able to create and recall saved test methods, recall and recalculate test results, and modify testing procedures.

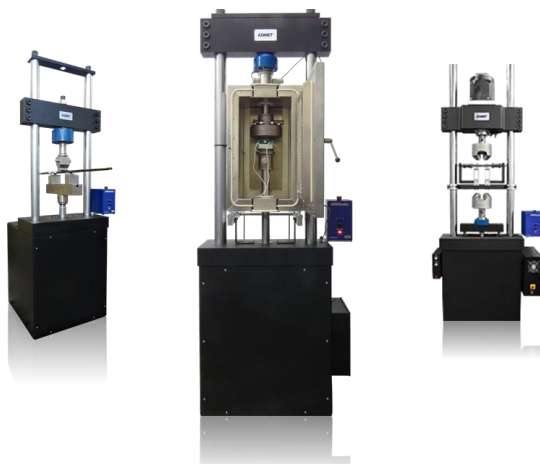
Online training is conducted by one of ADMET's Massachusetts-based engineers and instructs users via screen sharing and teleconferencing. Varying levels of training are available and can be purchased in hourly blocks. All ADMET systems come with free lifetime technical and application support.



ADMET Machine Maintenance Services

ADMET offers testing system maintenance services to ensure **years of trouble-free operation**, maximizing your investment. A qualified ADMET technician will perform maintenance on the system including inspection of all critical components and lubrication where required, troubleshooting of any potential issues, and software updates. Additionally, customers of ADMET's maintenance plan **may receive certain replacement parts free of charge**, and many others with a discounted price.

This service is frequently combined with one of ADMET's calibration plans. Discounted **multi-year bundles** are available. Contact us to discuss options.



ADMET's eXpert 1600 Servohydraulic Materials Testing Systems, with Force Capacities up to 600 Kilonewtons.

About ADMET

Founded in 1989, ADMET has established itself as a worldwide leader in innovative materials testing solutions. In addition to calibration and training services, ADMET offers a full line of universal testing machines in both standard and specialized configurations

Our engineers are standing by to discuss your needs with you.

Call us at (800) 667-3220 or visit us at www.admet.com.