TestWorks® Software

A highly versatile and easy-to-use solution for performing mechanical testing of materials, components and finished goods
TESTWORKS SOFTWARE PROVIDES THE SOPHISTICATION TO ADDRESS COMPLEX RESEARCH DEMANDS; THE FLEXIBILITY TO ADAPT TO CHANGING DEVELOPMENT REQUIREMENTS; AND THE SIMPLICITY AND EASE-OF-USE NEEDED FOR QUICK AND EFFICIENT PRODUCT QUALITY ASSURANCE AND QUALITY CONTROL TESTING.
**TestWorks Software:**

The industry’s most comprehensive package of test definition, execution and report generation capabilities

The world’s most elegant universal testing package, TestWorks software is designed to enhance your ability to perform accurate and repeatable mechanical testing of materials, components and finished goods across a full spectrum of applications. TestWorks software delivers the industry’s most complete set of test definition, execution and report generation capabilities. With TestWorks software your test engineers will quickly create, customize and share test methods to meet both industry test standards and more unique, custom requirements. Your lab will save additional time by utilizing the growing array of pre-packaged TestWorks methods or MTS Custom Test Template Development Services. Your operators will run these tests from a simple, easy-to-use interface and report on results in the format of your choice. Fully compatible with all MTS electromechanical or servohydraulic load frames—or other frames outfitted with MTS ReNew™ controller upgrades—Test Works software can be readily configured to perform monotonic and cyclic testing at both low- and high-force capacities, meet most ASTM, ISO, and DIN specifications and fulfill a broad host of other standard and custom testing needs.

SCALABLE TO YOUR SPECIFIC NEEDS:

The highly scalable TestWorks solution features three distinct packages to help you fully address existing and evolving test needs:

- **TESTWORKS ESSENTIALS** runs a variety of basic, pre-packaged test methods, including peel, tear shear, tensile, compression, creep, stress, cyclic and strain at low- to high-force capacities. This package is the base product for both the Advanced and Creator packages.

- **TESTWORKS ADVANCED** runs preset testing methods with the added ability to introduce non-motion control test segments and calculations.

- **TESTWORKS CREATOR** provides knowledgeable users the ability to create or modify test methods by adding and sequencing motion or control segments.

TestWorks software enhances your ability to perform accurate and repeatable mechanical testing on a full spectrum of test specimens, including textiles, plastics, metals, composites, adhesives, ceramics, elastomers, foam and more.
VERSATILITY TO MEET YOUR NEEDS

FULL-FEATURED TEST DEFINITION:
TestWorks software features an extremely rich set of test creation utilities to speed the development, customization and sharing of test methods to meet your exact test needs.

USER-FRIENDLY RUNTIME OPERATION:
The TestWorks interface greatly simplifies runtime operation with a push-button Windows environment and easy-to-understand displays.

ROBUST ANALYSIS & REPORTING:
TestWorks software facilitates the flexible handling and sharing of test data to meet a full range of industry-standard reporting requirements.

BROAD COMPATIBILITY:
TestWorks software runs effectively across a wide range of test platforms, enabling you to establish a truly global testing methodology.

UNMATCHED MTS SUPPORT:
MTS is committed to your testing success. We field the largest, most experienced worldwide service, support and consulting staff of any testing solution provider to maximize your test laboratory’s productivity and help you complete test programs as quickly and efficiently as possible.

TestWorks software can be deployed across a broad array of electromechanical or servohydraulic test platforms, such as MTS Insight, Bionix® or MTS Landmark systems.
Full-featured Test Definition:

Efficiently tailor methods to address your unique test requirements and laboratory needs.

TestWorks software provides all the test definition capacity and flexibility you’ll need to create even the most complex test sequences while accommodating the specific runtime needs of your lab personnel. You’ll have the capability to configure test methods and build an environment suitable for performing a wide variety of standard and advanced tests such as peel, tear, shear, tensile, compression, creep, stress, cyclic and strain.

Intuitive Test Method Creation

Scalable TestWorks software packages feature an extremely rich set of test creation utilities designed to speed the development, customization and sharing of methods for a full spectrum of testing—from simple to extremely complex.

Using the TestWorks Advanced package you’ll be able to introduce non-motion control test segments and calculations into preset testing methods. With TestWorks Creator you will quickly develop methods from scratch, or modify existing methods by adding and sequencing motion or control segments. Both Advanced and Creator packages employ easy-to-understand menus and controls, and an intuitive graphical depiction of your test flow, to help you efficiently configure and customize test sequences that address your exact testing needs. Testing steps are divided into logical sections to facilitate more streamlined configuration and runtime operation. Results, inputs, reports, units and other classes are readily accessible so you can reach the information you need without searching through complex menu structures or performing cumbersome step-by-step processes. Test developers also have the ability to specify and sequence operator-targeted segments such as input prompts, messages, images, sounds and even video clips.

New or inexperienced test developers will benefit from features such as Method Assistant, which walks a user through each step of test method creation, and the Method Validator, which continually checks all aspects of the test method to help detect and correct mistakes and inconsistencies.

An intuitive test flow display makes configuring test sequences easy and efficient.

Testing steps are divided into logical sections to facilitate more streamlined test configuration and runtime operation. Results, inputs, reports, units, and other classes are divided into logical groups for easy access.
CONVENIENT PRE-PACKAGED TEST METHODS

In addition to its intuitive method creation toolset, TestWorks software features a wide array of pre-packaged test methods, including applications for:

- Biomedical
- N, R & K for sheet metals
- Metals
- Plastics
- Cellular products
- Textiles
- Food
- Paper
- Adhesives
- Foam application package
- Hysteresis
- Advanced cyclic
- Limited cyclic
- Creep/stress relaxation
- Torsion applications

MTS CUSTOM TEST TEMPLATES

Faced with increasing test complexity and volume, many test engineers turn to MTS consulting services to develop customized test templates for their more unique applications, accelerating the test definition process and saving valuable time and resources.

MTS custom test templates can be crafted to meet the specific test flow, analysis and reporting requirements of even the most challenging test applications. This optimizes cost-efficiency by freeing lab personnel to focus on testing rather than test flow, analysis and report creation, and helps you realize the greatest return on your TestWorks software investment.

MTS custom templates are delivered in a timely and affordable manner; many can be completed and delivered via e-mail within 10 business days. Equally important, every template MTS develops comes with 30 days of free technical support to ensure your test needs are met completely.

Highly Configurable Operator Environment

TestWorks software affords test developers the flexibility to tailor test methods to accommodate the unique needs of a particular lab environment.

To keep test data safe and simplify runtime environments, TestWorks software provides complete control over user privileges. Test developers can easily define each user’s access to various software functions, data and test methods to precisely match their level of experience or responsibility. This level of control is often necessary to fully adhere to the requirements of established standards, such as FDA CFR Part 11.

The highly configurable TestWorks runtime interface can also be customized to meet the particular needs of operators and technicians. Test developers can easily define how system channels are presented in real-time within the runtime data display by pre-configuring channel size, color, order, and units. The option to display multiple channels allows for the real-time monitoring of multiple graph/data segments (including load, crosshead, stress, strain, etc.), additional hardware or calculated channels.

Additionally, test developers can incorporate custom input screens, which feature an array of standard windows input elements, to make prompts for operator input easy-to-understand and intuitive.

TestWorks software allows you to configure the real-time display of single or multiple system channels.

TestWorks software affords administrators complete control over operator privileges.

Custom input screens make prompts for operator input easy-to-understand and intuitive.
User-friendly Runtime Operation:

Easy-to-understand displays simplify test selection, initiation and real-time monitoring

The TestWorks interface greatly simplifies runtime operation with a push-button Windows®-based environment and easy-to-understand displays. Operators need simply select and run a defined standard test or custom method, follow preset prompts, and then monitor the test using the TestWorks Virtual Control Panel. This display can be configured for real-time monitoring of multiple graph/data segments, including load, crosshead, stress and strain.
1. To initiate a test sequence operators simply select and run a defined standard test or custom test flow and then follow the intuitive, user-definable prompts.

2. Once started, operators then monitor the test using the real-time auto scaling graphics and digital displays of the TestWorks Virtual Control Panel.

In addition to the real-time display of test data, the Virtual Control Panel provides an unmatched level of test flexibility, including:

- Performing start/stop, jog, go to, return, and pause functions with the system keyboard or mouse;
- Monitoring or controlling external devices such as environmental chambers;
- Controlling of load, strain, or virtually any data channel;
- Reading data from a variety of sources, including micrometers, calipers, thickness gauges and scales;
- Acquiring additional data channels and creating new virtual (calculated) channels from existing ones.
Robust Analysis & Reporting:
Make the most of test results with flexible, intuitive data display, handling and sharing capabilities.

TestWorks software facilitates the flexible display, handling and sharing of test data to meet a full range of industry-standard analysis and reporting requirements.

Post-test Analysis
The TestWorks Review Screen enables you to make the most of test results with easy-to-understand results displays and highly flexible, interactive data plots. Features include movable markers, text, and construction lines, and the ability to define a region of interest and easily zoom in for closer inspection. The review screen also allows post-test data to be displayed across multiple graphs, simultaneously. For example, a force vs. displacement plot could be contrasted with displacement vs. time, or force vs. time, yielding richer insight into specimen properties and facilitating accurate test process verification.

The ability to contrast multiple graphs of the same post-test data yields rich insight into specimen properties.

TestWorks interactive data plots feature movable markers, text, and construction lines, enabling operators to define a region of interest and easily zoom in for closer inspection.

The TestWorks Review Screen features easy-to-understand results, displays and flexible, interactive data plots.
TestWorks software allows you to choose from a variety of standard calculations for analyzing or re-analyzing test data, or you can create your own custom formulas. Data can be imported for reanalysis from other applications such as MTS’ MultiPurpose TestWare®, and a Series IX test and data file import utility enables the use of legacy Instron data files—no costly and time-consuming switching process required. Additionally, a stand-alone TestWorks Reanalysis package is available for analyzing test data outside the test lab environment on a PC removed from the test system.

**Reporting and Sharing Results**

Test results can be output to standard presentation—quality reports and plots, or a format customized to meet your particular data sharing needs. Easy-to-create formulas efficiently export test results to intuitive TestWorks reports and Excel, Word, HTML, Laboratory Information Management System (LIMS), PowerPoint, e-mail and text formats. Built-in auditing features support various industry requirements, such as FDA CFR 21 part 11.

TestWorks analysis and reporting capabilities are augmented by the software’s compatibility with a broad variety of commonly used software applications, such as Microsoft Office, and can be integrated easily into an organization’s network for efficient data and test method storage, backup and sharing.

A text-based output template generator allows TestWorks software to maintain seamless communications with virtually any LIMS and also allows users to customize and export text files to Excel and other third party analysis tools.
Broad Compatibility:
Extend powerful TestWorks capabilities across a full spectrum of test platforms

TestWorks software runs effectively across a wide range of test platforms, enabling you to establish a truly global testing methodology. You can deploy TestWorks software on a broad array of electromechanical or servohydraulic test systems, such as MTS Insight, Bionix or MTS Landmark systems, while standardizing test programs on the latest operating system, such as Windows Vista.

Additionally, broad controller compatibility and ReNew upgrade capabilities allow you to leverage the power of TestWorks to extend the life and productivity of outdated, legacy universal testing equipment.

System-revitalizing ReNew Upgrades
The cost-effective alternative to a new system, a ReNew Upgrade extends the life, productivity and reliability of your existing EM test system through software and electronics updates. With a ReNew Upgrade, MTS refurbishes your existing universal test system with state-of-the-art MTS digital controls and a personal computer running best-in-class TestWorks software. By choosing a ReNew Upgrade you benefit from the latest in MTS Insight hardware and TestWorks software innovation, including:

- TEDS self-identification capabilities (IEEE 1451.4 standard compliance);
- The convenient, ergonomic MTS Insight handset (optional);
- Series IX test and data file import capabilities;
- A Text-based Output Template Generator to achieve compatibility with virtually any LIMS.

### Compatible Operating Systems
- Windows XP
- Windows Vista

### Compatible Universal Test Machine (E/M) System Controllers
- IEEE
- Mongoose
- MTS Insight
- Thwing Albert
- and others

### Compatible Servohydraulic System Controllers
- FlexTest 40, 60, 100, 200
- FlexTest SE

### Compatible Universal Test Machines (with ReNew Upgrade)
- Instron® E/M systems
- SATEC™ E/M systems
- Zwick E/M systems
- Thwing Albert E/M systems
- Synergie
- Alliance
- QTest
- other E/M systems

### Compatible Servohydraulic Test Systems
- MTS Landmark
- MTS Model 311, 322 and others

### Compatible Peripheral Devices
- Support for Modbus Eurotherm temperature controllers
- Support for RS-232 laser extensometers
- Extended support for NiDaq-MX boards

![ReNew Upgrade](image)
Unmatched MTS Support:
Realize the greatest possible return on your TestWorks software investment

MTS is committed to your testing success. With the largest, most experienced worldwide service, support and consulting staff of any testing solution provider, we’re ready to maximize your laboratory’s productivity and help you complete test programs as quickly and efficiently as possible. This support includes custom test template development services to help you fulfill your most demanding test challenges, and ME&S (Management, Enhancement and Support) agreements to ensure the viability of your TestWorks software investment well into the future.

MTS Custom Test Templates
Test engineers can accelerate the test definition process, saving valuable time and resources, by employing MTS consulting services to develop customized test flows, report templates and export templates. Crafted to perform to your exact specifications, MTS Custom Templates include up to 30 days of free technical support to ensure that your unique test requirements are met completely.

ME&S Agreements
To keep your test application software current with evolving PC technology, and optimize the effectiveness of your TestWorks-driven test systems, MTS offers a Maintenance, Enhancement, and Support (ME&S) agreement. With an ME&S agreement from MTS you will receive:

AUTOMATIC UPDATES, INCLUDING:
» New features added to your software in response to demands from the testing community;
» All software updates that become available after initial program purchase;
» New capabilities added to your previously purchased software packages;
» New software that stays compatible with evolving PC operating systems.

EASIER BUDGETING WITH FIXED COSTS
» An ME&S agreement is more cost-effective than purchasing upgrades and updates separately.

ASSURED TECHNICAL ASSISTANCE
» You will qualify for preferential technical assistance by telephone from MTS software experts at no additional cost.

A PLAN TO FIT YOUR SPECIFIC NEEDS
» ME&S agreements are purchased along with test equipment purchase, or shortly thereafter. Agreements are sold in 12-month coverage increments; however, you can buy up to 48 months of coverage at the same low annual rate. Purchasing multiple test systems qualifies you for an ME&S discount.