AUSTRALIAN CALIBRATING SERVICES
A Trescal company

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Introduction

TruTest 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. It provides the simplicity and ease-of-operation needed for quick and efficient quality assurance and quality control testing, the flexibility to adapt readily to changing requirements, and the sophistication to address unique or complex demands. The software's intuitive operator interface, powerful analysis and reporting, and growing host of test methods make it an excellent foundation for establishing and sustaining a truly global standardized testing methodology.

TruTest software is fully compatible with all ACS testing machine series, with different modules for different type of tests. This software features a large, growing host of pre-packaged test methods to help you quickly and efficiently meet the requirements of global test standards such as ASTM, ISO, DIN, EN, BS, and more. Selected by an operator at runtime, these methods are crafted to meet the specific test flow, analysis and reporting requirements of industry standards across a range of specimen and test types. Pre-packaged test methods are available in a wide selection of bundled sets, including: Polymers & Plastics, Metals, Construction Materials, Biomedical Products, paper Products, adhesives, foam, textiles and more

Features

- Versatile, easy-to-use TruTest software with a large and growing library of standards-compliant test methods (ASTM, ISO, DIN, EN, BS, and more)
- Modular design permits easy upgrading
- Multiple graphs on the same screen & report to observe multiple events at the same time: real time display curves, like displacement-load, stress-strain, displacement-time, load-times, and others.
- Powerful analysis function can calculate typical value and display on the curve, like Fm, ReL, ReH, Rp.
- Measurement unit: Users can select SI, or others, like N, kN, kgf, lbf, MPa, and so on, user can define the unit by themselves using formula.
- Customizable report format with full flexibility of adding & removing items in terms of layout, content, graphing to suite the exact test requirement, like company information, statistics, and etc. Test report can export to Excel or Word.

Modular design is simple for operation and upgrading

126 Oxford Street, Collingwood
PO Box 1174, Collingwood, Vic 3066, Australia
Tel: +61-3-94175688   Fax: +61-3-94171578
Web: www.auscal.com.au
Email: acs@auscal.com.au
A.B.N. 33 623 153 736

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User Authorization Management

User authorization management is easily to define software access for different level of operators, like lab manager, operator and others.

User Accounts ✖

| Add | Delete | Edit | Save | Cancel | Change Password |

ID	User Name	Password	Manager	Unit	Setup	Calibration	Verification	Linearity	KeyBoard Speed	Standard	Method	Rounding
1	Administrator	*****	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

Verification

Verification ✖

Load | Extensometer

| New | Open | Save | Read(R) | Undo(U) | Print |

Test direction	Tension
Nominal value	50000 N
Verification Points	5

	%	Standard Value(N)	Reading Value(N)	Deviation(%)	Reading Value(N)	Deviation(%)	Reading Value(N)	Deviation(%)	Average(N)
1	20.000	10000.000							
2	40.000	20000.000							
3	60.000	30000.000							
4	80.000	40000.000							
5	100.000	50000.000							

Test Standard Library

Pre-packaged test standards are available in a wide selection of bundled sets, including: Polymers & Plastics, Metals, Construction Materials, Biomedical Products, paper Products, adhesives, foam, textiles and more.
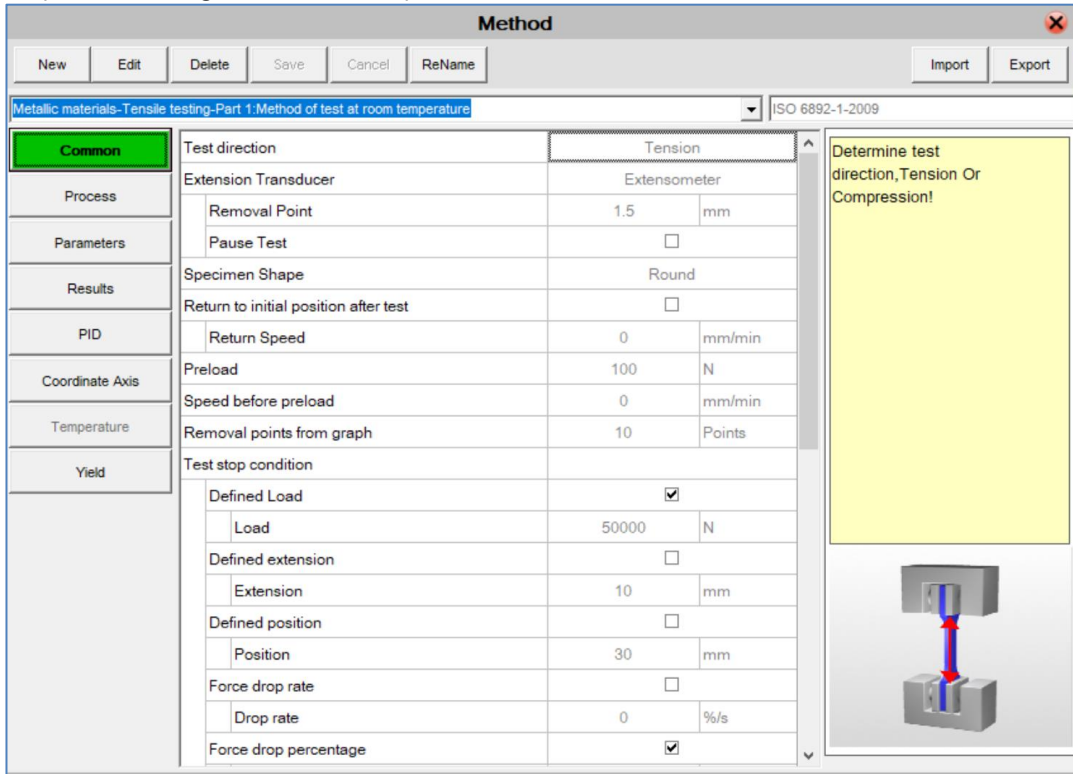
- ➢ End user is able to add/edit the predefined standards.
- ➢ Calculation formula can be defined by end user freely.
- ➢ Import / export standards from the same version software.

Standard ✖

| Add | Edit | Delete | | Import | Export |

	Standard Code	Standard Name
1	AST D412	Rubber tensile oroperties determination
2	ISO 37-2017	Rubber, vulcanized or thermoplastic Determination of tensile-strain properties
3	ISO 7438-2005	Metallic materials-Bend test
4	ISO 6892-1-2009	Metallic materials-Tensile testing-Part 1:Method of test at room temperature
5	ISO 6892-2-2009	Metallic materials-Tensile testing-Part 2:Method of test at elevated temperature
6	ISO 178-2010	Plastics-Determination of flexural properties
7	ISO 527-1-2012	Plastics-Determination of tensile properties
8	ASTM E8-2011	Standard Test Methods for Tension Testing of Metallic Materials
9	ASTM E9-2009	Standard Test Methods of Compression Testing of Metallic Materials at Room Temperature

Standard Editor ✖

| Add | Delete | Edit | Save | Cancel |

Standard Code:ISO 6892-1-2009 Standard Name:Metallic materials-Tensile testing-Part 1:Method of test at room temperature

Name	Percentage yield point extension
Type	Result Parameter
Unit Type	None

Expression

| Add a row | Delete a row |

Temporary Variable		Parameter Type 1	Parameter Name 1	Operator	Parameter Type 2	Parameter Name 2
temp	=	Base Para	Yield End Extension	-	Base Para	Deformation at Yield
temp	=	temp		/	Extend Para	Extensometer gauge le

Original gauge length
Original thickness
Original width
Parallel length
Percentage elongation after fracture
Percentage plastic extension at maximum force
Percentage reduction of area
Percentage total elongation at maximum force
Percentage total extension at fracture
Percentage yield point extension
PI
Proof load,plastic extension
Proof load,total extension
Proof percentage plastic extension
Proof percentage total extension
Proof strength, plastic extension
Proof strength,total extension
Tensile strength
Total elongation at maximum force
Upper yield strength

Percentage yield point extension = (Yield End Extension - Deformation at Yield) / Extensometer gauge length

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Test Methods

Very intuitive design to define a test procedure

Run the test

Select one test project and click "Run".
Real-time display of test data and graph: maximum 3 curves can be displayed in one window.

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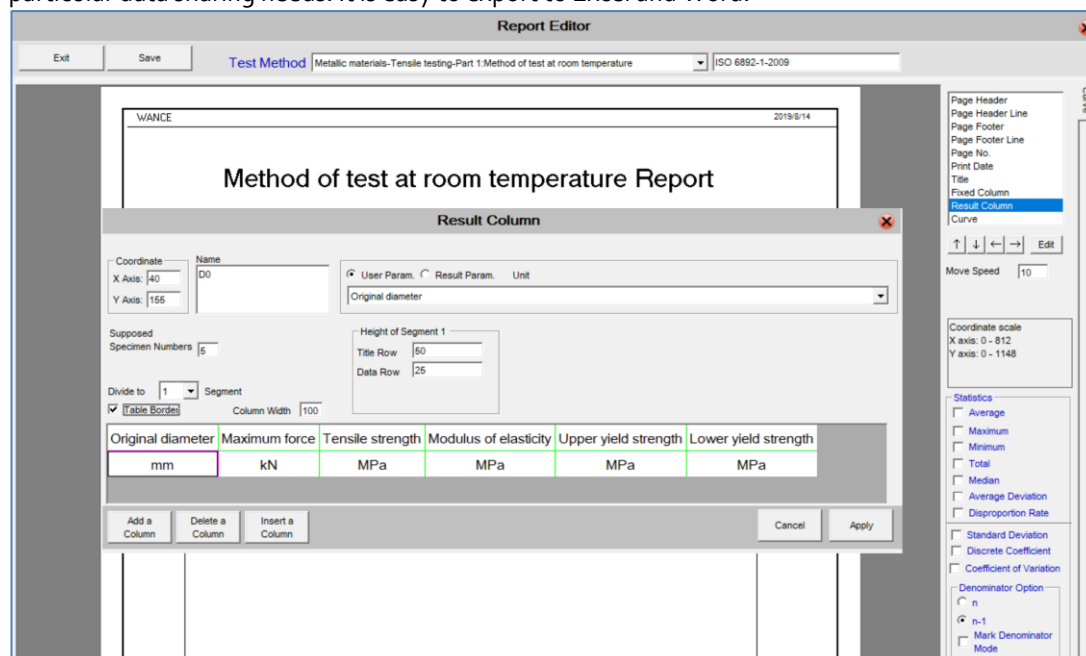ACCREDITATION
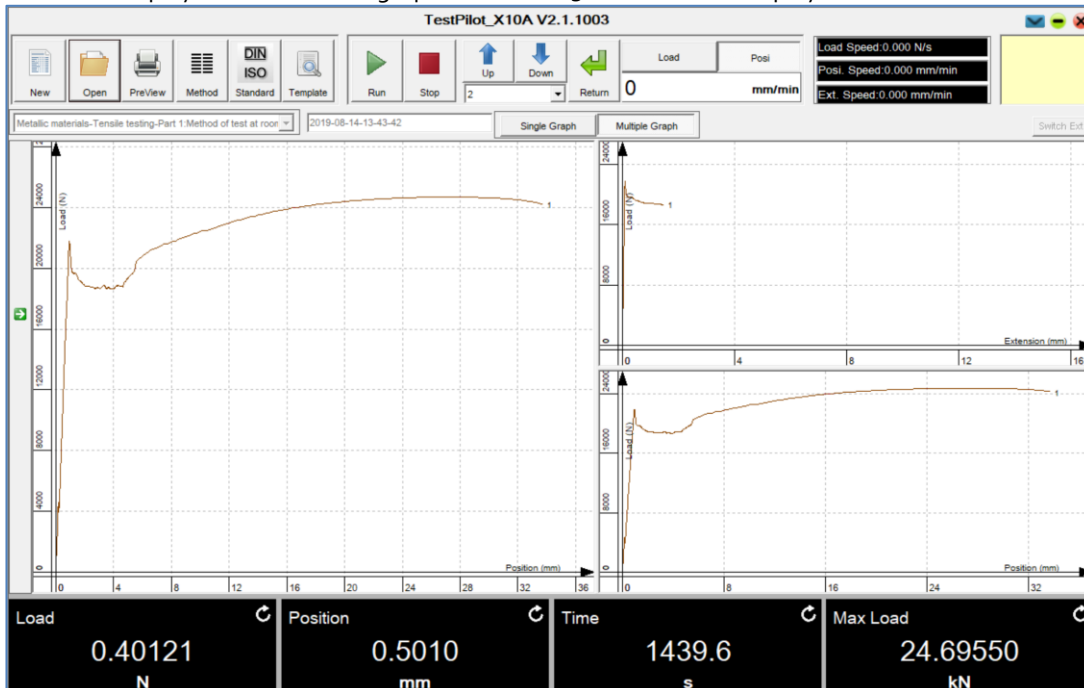
Test curve analysis

This software facilitates the flexible display, handling and sharing of test data to meet a full range of industry-standard analysis and reporting requirements.
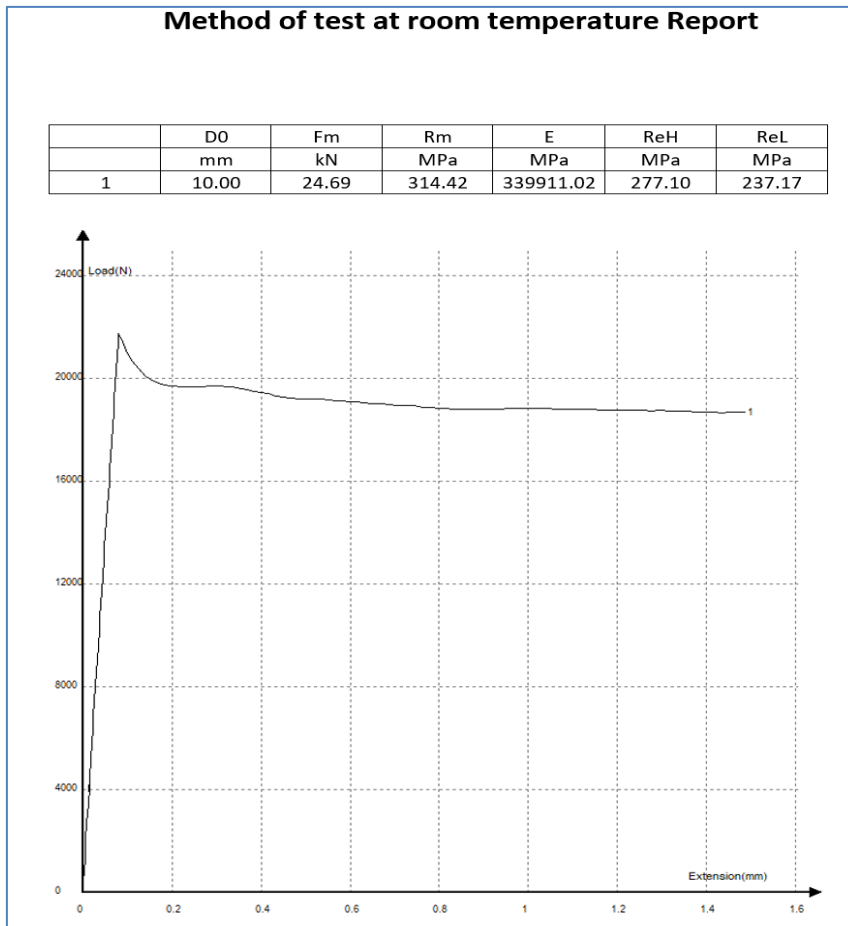
It features post-test analysis with easy-to-understand displays and highly flexible, interactive data plots. Features include movable markers, text, and construction lines, and the ability to define a region of interest and easily zoom in for closer inspection. The review screen also allows post-test data to be displayed across multiple graphs, simultaneously.
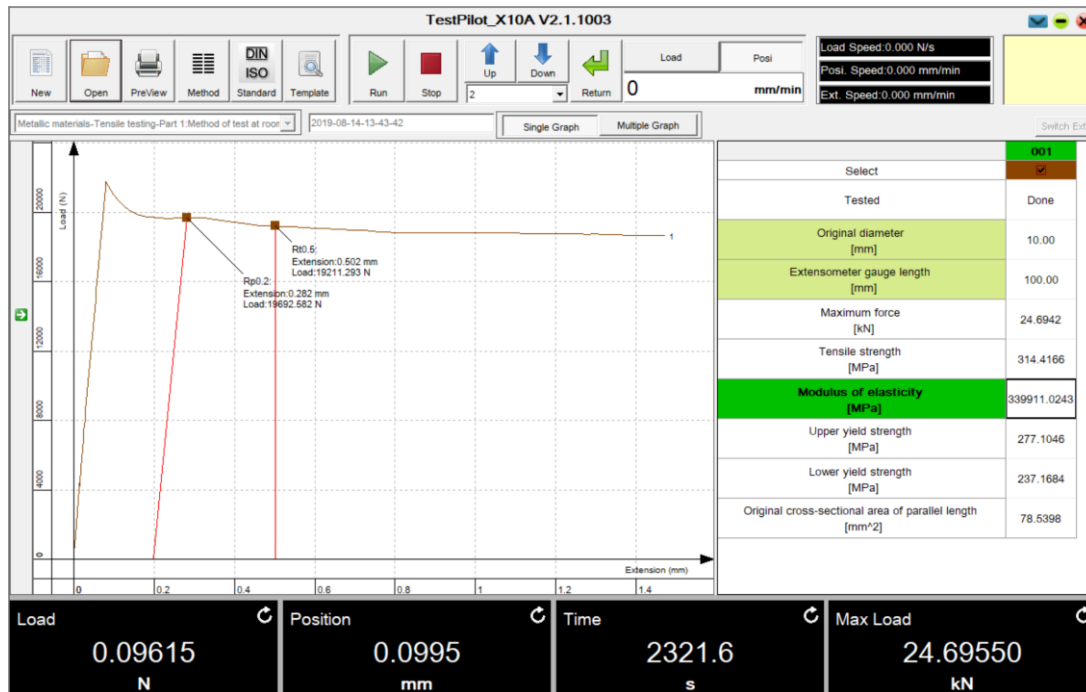
Test report

Test results can be output to standard, presentation-quality reports and plots, or a format customized to meet your particular data sharing needs. It is easy to export to Excel and Word.

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Method of test at room temperature Report

	D0	Fm	Rm	E	ReH	ReL
	mm	kN	MPa	MPa	MPa	MPa
1	10.00	24.69	314.42	339911.02	277.10	237.17

Hardware parameter configuration

It is convenient to add and modify hardware parameters and very useful when add some extended accessories, like micrometer.

Setup

Add	Edit	Save	Cancel	Delete

Name	50kN
Full code	520000
Correction value	1.
Sensitivity	4.273 mV/V
Nominal value	50000 N
Max value	51500 N
Sensor Position	Middle Beam Up

Connection
Main Frame
Position
Load
Extensometer
Long Travel
Extended

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Measurement unit setup

User can select SI and other measurement unit according to test requirements.
The unit can also be customized by use for specific use.

Type	Unit	Coefficent	Basic unit
Strength	MPa	1	MPa
Strength	GPa	1000	MPa
Strength	N/mm^2	1	MPa
Strength	kN/m^2	0.001	MPa
Strength	kgf/cm^2	0.0980665	MPa
Strength	psi	0.00689	Mpa