SALT



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Dignity and Dynamics
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ST-1000

www.light-salt.kr

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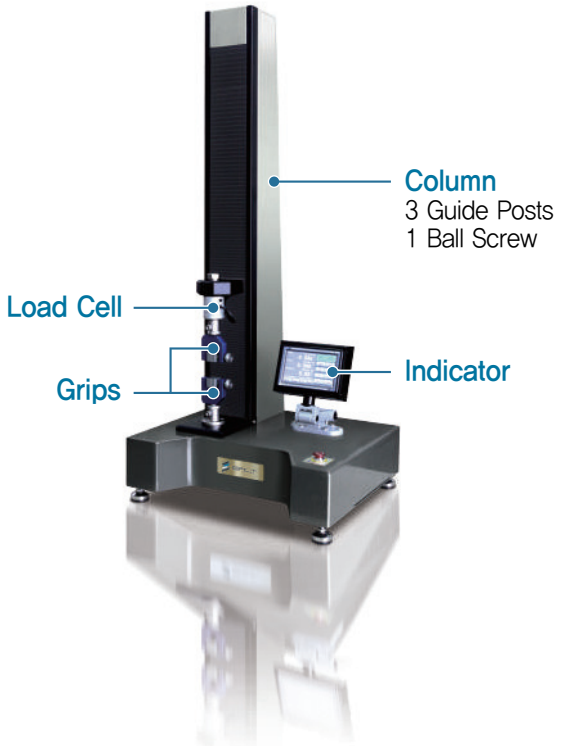
ST-1000 ST-1001 ST-1002 ST-1004



ST-1000 Series

Universal Testing Machine

The ST-1000 is designed to serve the testing and measurement requirements of laboratories, research and development, quality control, manufacturers and educational fields.
Plastic films, textiles, fabric, wire, cord, soft plastics, paper, tape etc. are ideal specimens for the ST-1000.
Tests such as tensile, compression, bending, peel, puncture etc. are test methods available on the ST-1000.

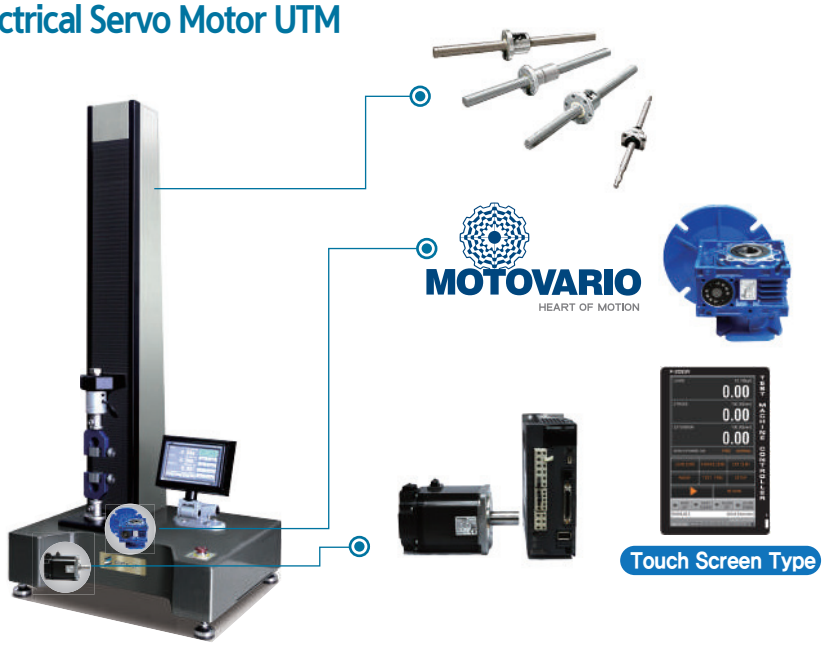


ST-1000 Features

- Frame capacity: Up to 3kN
- Single column electro mechanical table top model
- High precision load cell, class 1 and class 0.5 calibration
- 1/300,000 digital display force resolution / 0.001 displacement
- 0.01~500mm/min speed (up to 2000mm/min option)
- 220V 60/50Hz Servo motor and drive
- Overload protection limit sensor, non-contact displacement limit sensor, emergency power cut off button.

ST-1000 Series Major Components

Electrical Servo Motor UTM



Touch Screen Type

Only the highest quality, proven parts for performance, accuracy and repeatability. The ST-1000 Series Electical UTMs are equipped with the industry leading parts such as Servo Motors and Drivers and Motorvario Worm Gear Reducers Precision balls screws and bearings are used to minimize backlash and improved accuracy in position and speed as well as control in applied force. Quality checks are done at every stage from the raw components and marts to manufacturing, assembly and all the way to packing and shipment.

Salts UTMs are controlled by our intuitive Touch Screen Indicator. With load cell resolution at 1/300,000 and displacement reading down to 0.001mm. Closed loop controller for a fully independent system.

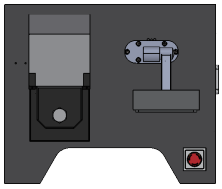
Product Specifications

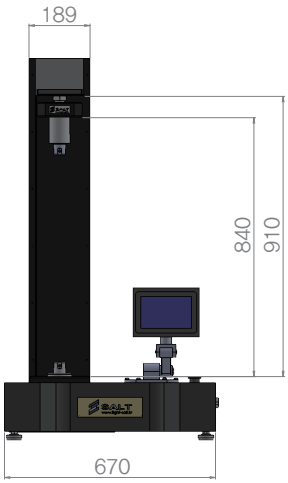


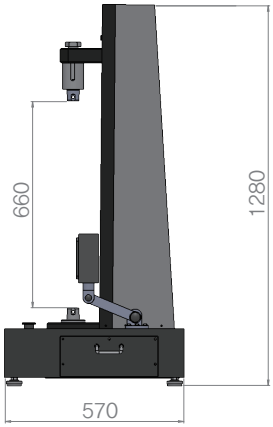
Model	ST-1000	ST-1000 High Elongation
Frame Capacity	5N-3kN	
Loading Method	Servo Motor electromechanical	
Load Accuracy	±0.5%	
Calibration	Class 1 / Class 0.5	
Force Resolution	1/300,000	
Stroke resolution	±0.001mm	
Test Room (WxH mm)	170 x 660	170 x 1100
Total Weight (Approx.)	70kg	80kg
Force Range	Up to 4 steps	
Column	Single	
Controller	Digital Indicator, Force control, Position control	
Transfer Screw	Ball Screw / Guide bar	
Crosshead Speed	0.01mm ~ 500mm/min (2000mm/min max optional)	
Speed accuracy	±0.01mm	
Driving System	Servo Motor & Server Driver	
Safety Device	Up limit, Down Limit, Load limit, Stroke Limit, Emergency stop	
Power Supply	AC 220V / 50,60Hz	
Dimension (W x D x H mm)	670 x 570 x 1280	650 x 550 x 1570
Computer Software OS	Windows only, Light-Salt UTM Software Version 12,6,0	
Extensometer	Encoder type, Strain gauge type, Position meter type (Optional)	

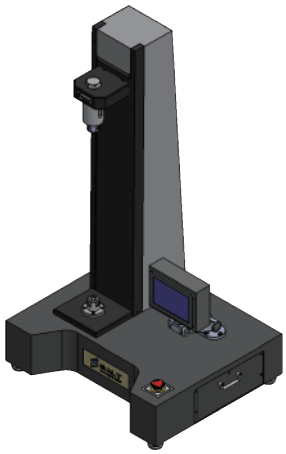
* Custom sizes can be made outside of the standard model sizes listed above.

Product Specifications





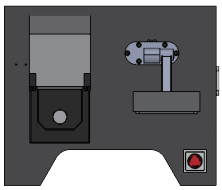


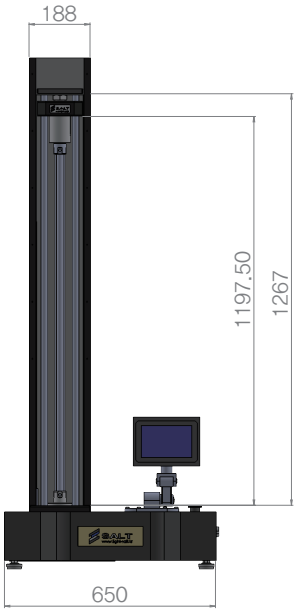


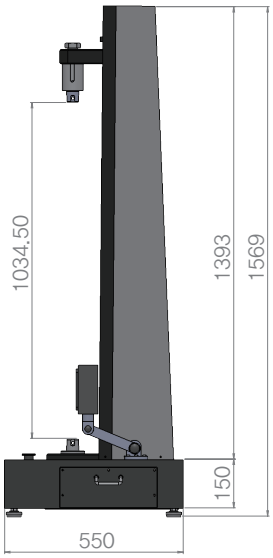
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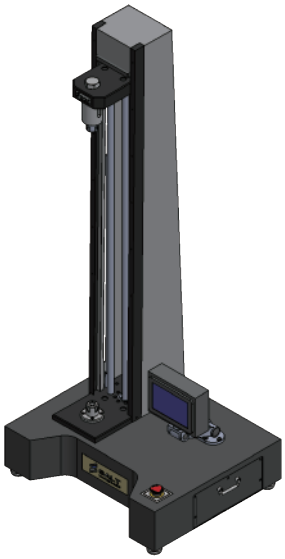
ST-1000 (3kN)
Universal Testing Machine

Sizes in diagram may differ slightly on actual product.
Test zone may differ slightly depending on the accessory used during testings









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High elongation type
ST-1000 (3kN)
Universal Testing Machine

Accessories

As the ST-1000 is a lower capacity testing UTM (≤3kN) it is ideal to use for testing of materials such as films, tapes, rubber, thin wires etc. With different accessory configurations tests for friction, peel, tear, tensile, flexural can be tested.

Grips for Testing


Swivel/self centering compression plates


Flexural jig


Inverted Probe tack jig


Mini wedge grips


Capstan wire jig

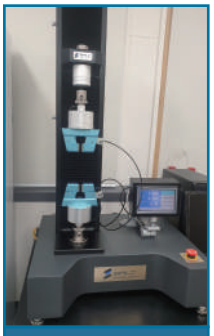

Side action accent grips


Spring actuated wedge grips


Film grips with accessory load cell


Medical suture jig


Tape Unroll jig


Pneumatic grips


Eccentric roller jig


Micro compression (Hydrogel)

High Elongation Extensometer

Salt Co.'s encoder type high elongation extensometer is perfect for use with samples with high elasticity such as plastics and films for yield point analysis and sensitive enough for samples such as paper, textiles, metals and durable enough for break point analysis.

Encoder placed directly behind clamps for ideal sensitivity, the most accurate reading and to reduce backlash

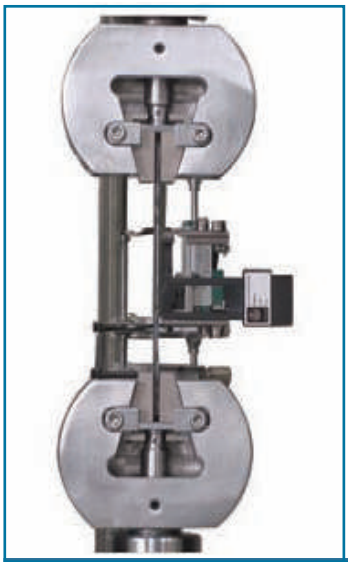


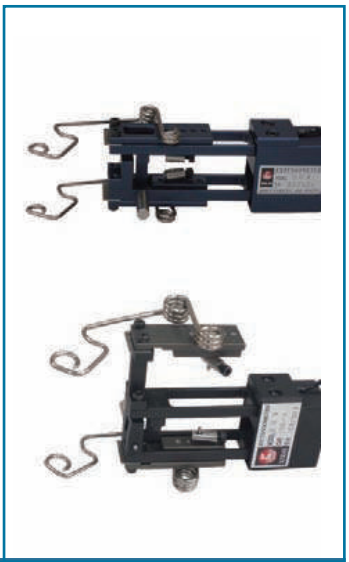


High Elongation Extensometer	
Encoder resolution	2500 Pulse, 0.005mm
Gauge length	20-200mm
Measurement distance	up to 800mm
Width of specimen	10mm max
Application	rubber, plastic, urethane, film etc.

Yield point extensometer (Strain gauge type)

Strain gauge extensometer for metal - Strain gauge type (Sensor resolution / 0.005mm), Width 9~26mm, Thickness 2~14mm, Gauge length 25 or 50mm / Measurement distance 0~10mm or 0~20mm Application to: Metal, composites, plastics etc.





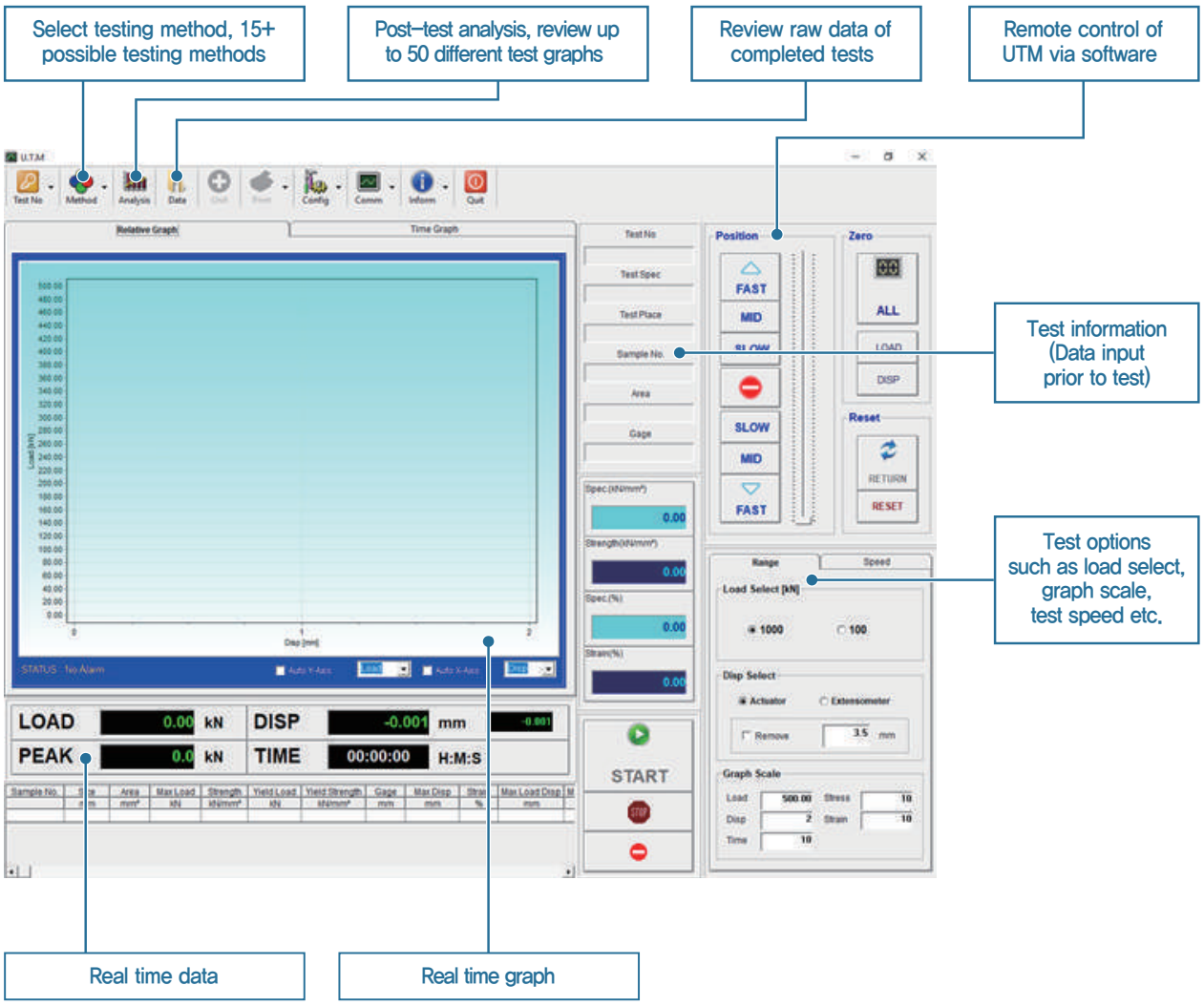
Yield Point Extensometer (Strain Gauge Type)

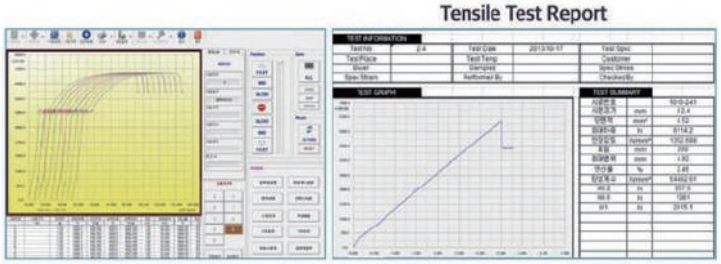
Strain Gauge Extensometer	
Rated output	2±40% mV/V
Non-Linearity	.02 (20mm-0.3)%
hysteresis	.02 (20mm-0.3)%
Temperature range	
Compensated:	-5~40℃
Operating:	-20~70℃
Resistance	
Insulation (Min)	2,000
Input	350±3.5
Excitation	
Recommended	10V
Maximum	15V
Specimen Sizes	
Round	ø5-20mm
Plate	Width 10-25mm, Thickness 3-15mm

Light-Salt Testing Software

- Light-Salt testing software, close loop. Control of load, displacement, extension, stress and strain.
- Remote control via software, text execution, data analysis available through RS-232 port
- Software updates and modification installation available via email or remote support

Software testing screen



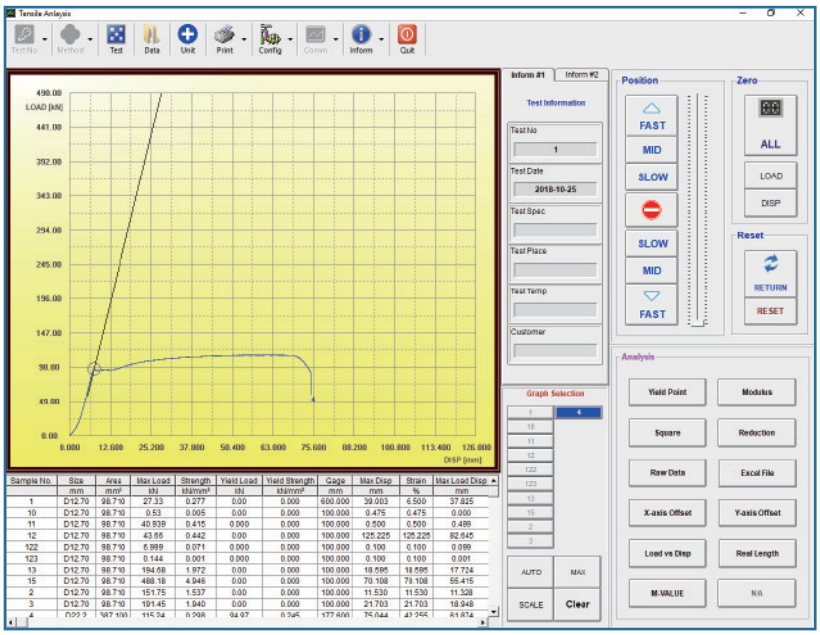


Light-Salt Software exclusively for the ST-1000 Series enables users to find the intrinsic characteristics of various materials – such as stress, strain, modulus, yield point etc. These are the main measures of material property tests such as tensile, compression, flexural, cyclic, fatigue etc. Software can be modified for special tests and measurements upon user's requirements and may be analyzed post-test.

Light-Salt Testing Software

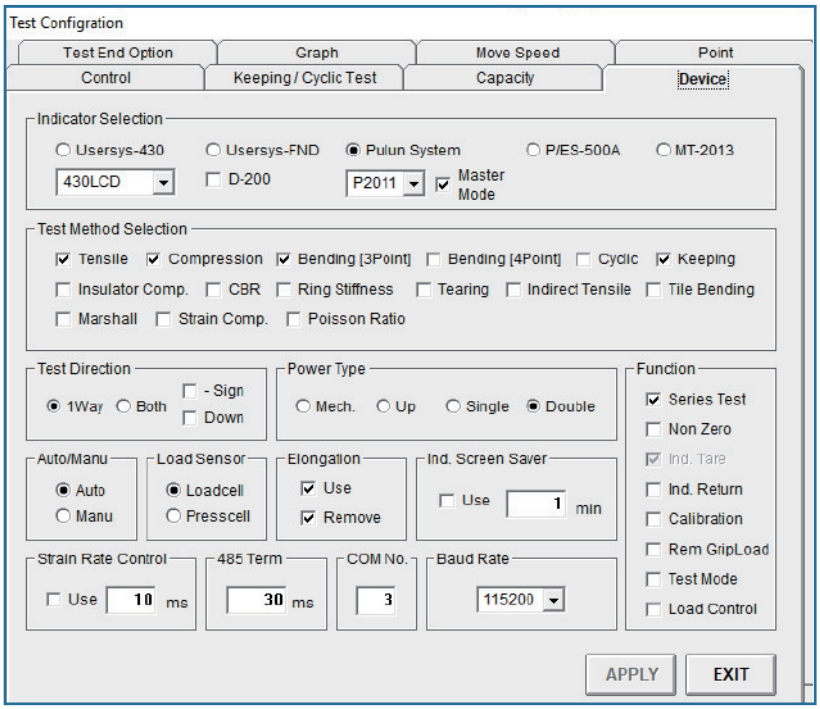
- Diverse and robust configurations for automatic test end options, graph options, PID values, crosshead movement speeds etc.
- 15+ different Testing Methods including cyclic, creep, relaxation, keeping etc.

Test Analysis Screen

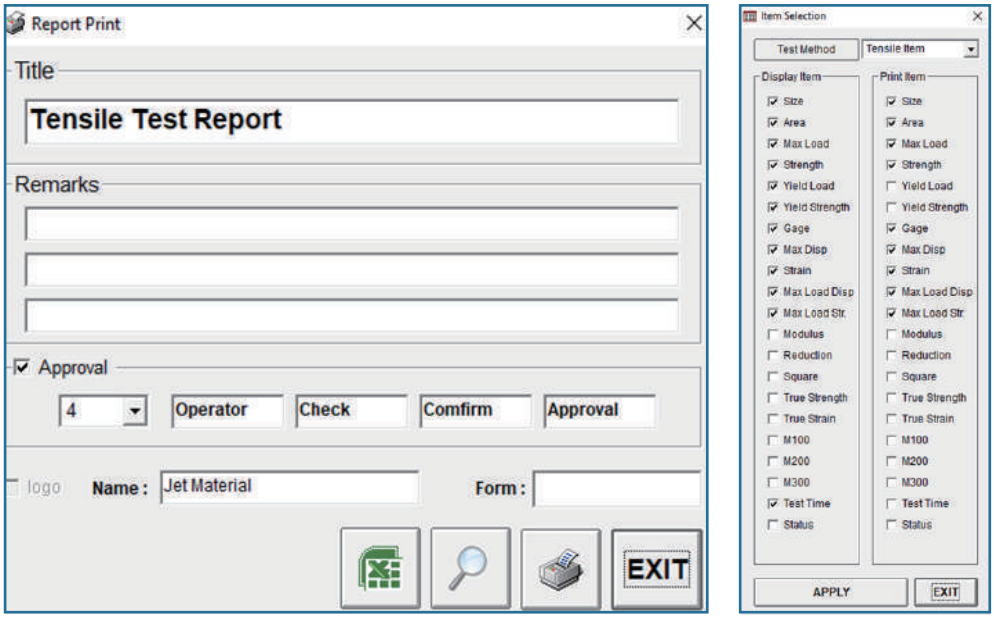


- View data and graphs of previously ran tests
- Determine and analyze data points such as yield point, breaking point, modulous etc.

Device Configuration

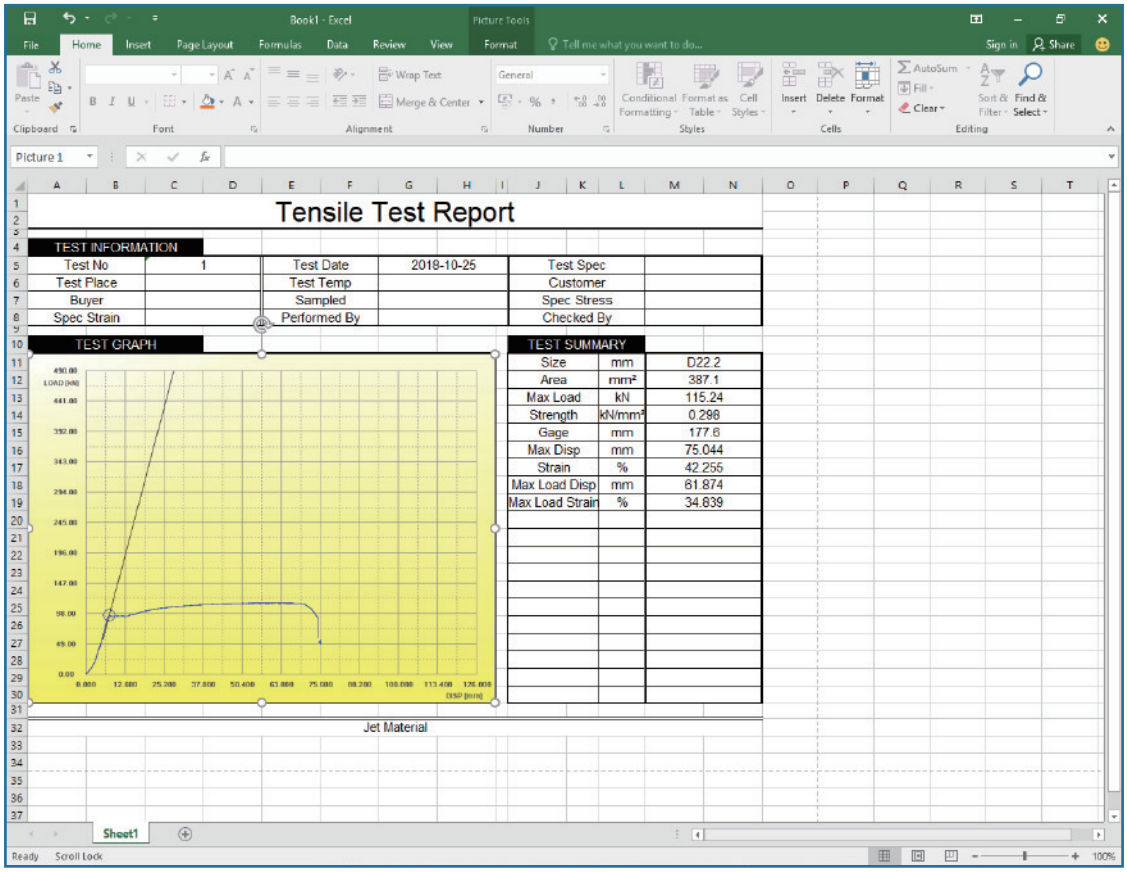


Test report print options

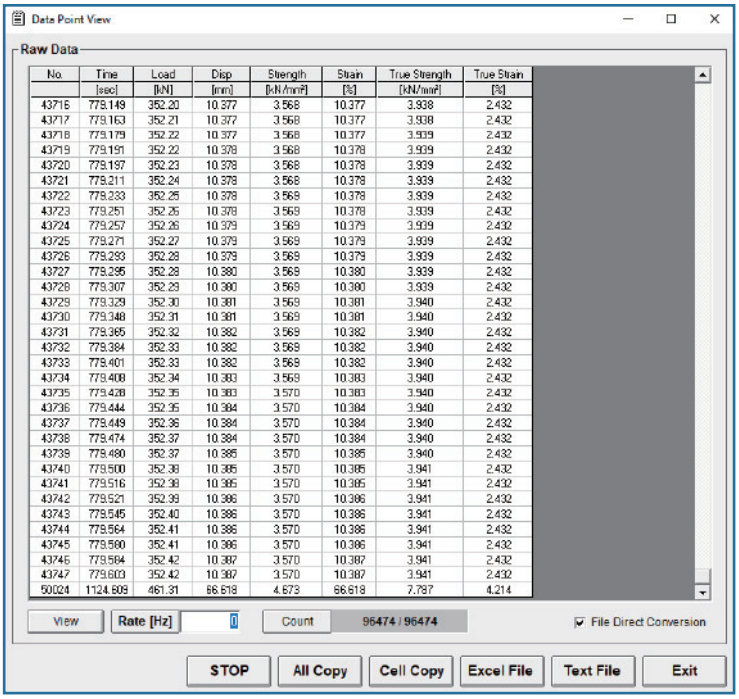


- Test report printing options include direct to printer or excel file export.
- Test report data can be configured to show only necessary data and to exclude unused data.

Export to Excel

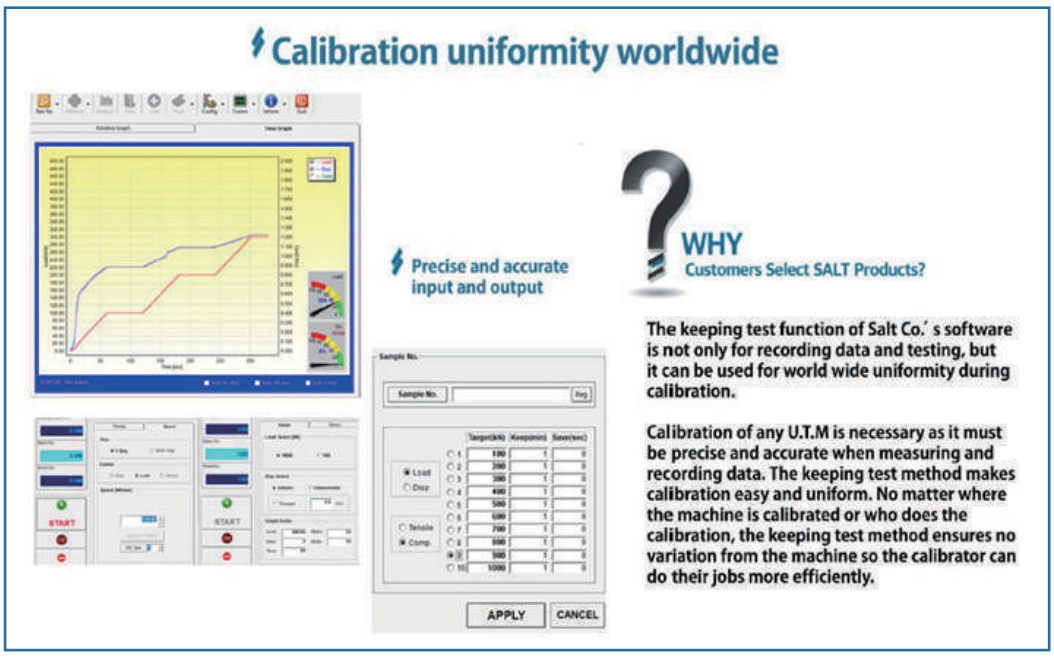


Raw data



- Raw data analysis for detailed test data
- Exportable to excel and customizable to show user required data

Uniform calibration with keeping test method



- Keeping test calibration method for easier uniformity when calibrating Salt Co., UTMs.
- Keeping test is the basis for creep test and relaxation test method.
- Over 15 different testing methods including tensile, compression, bending, keeping, tearing, CBR etc.
- All UTMs go out with a KOLAS Class 1 / Class 0.5 calibration. Yearly calibration can be done from anywhere internationally with this method.

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