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Dignity and Dynamics
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 **ST-1001** Catalog

Contents

⚡ ST-1001 UTM Catalog

Universal Testing Machine	03
Product Specifications	04
Light-Salt Testing Software	06
High Elongation Extensometer	10
Yield point extensometer (Strain gauge type)	10

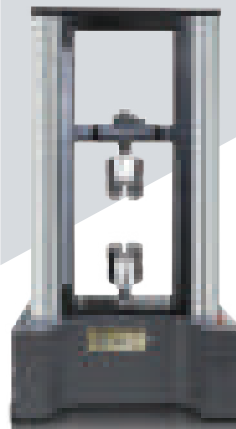
⚡ ST-1000



⚡ ST-1001



⚡ ST-1002



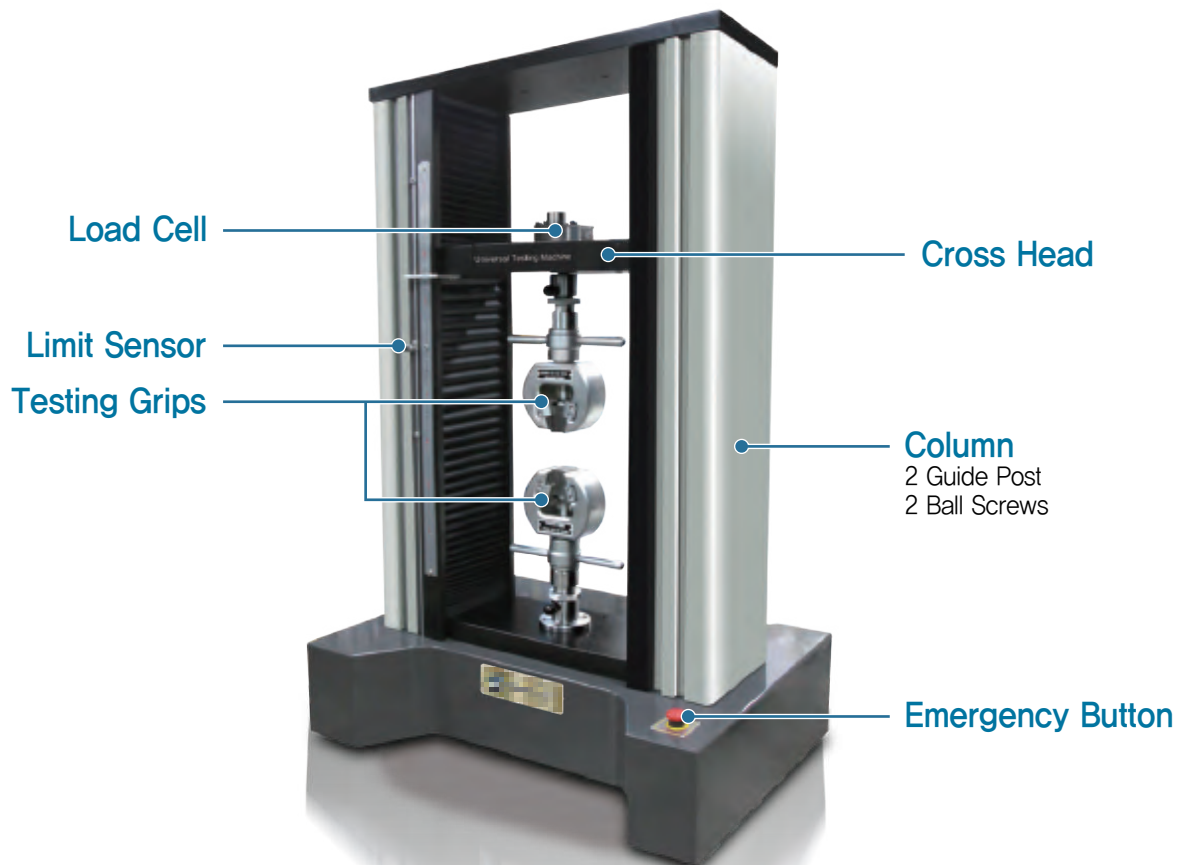
⚡ ST-1004



Universal Testing Machine

The ST-1001 is designed to serve the requirements of laboratories, research and development, quality control, manufacturers and educational fields. Plastic, textiles, fabric, wire, cord, rubber, wood etc. are ideal specimens for the ST-1001.

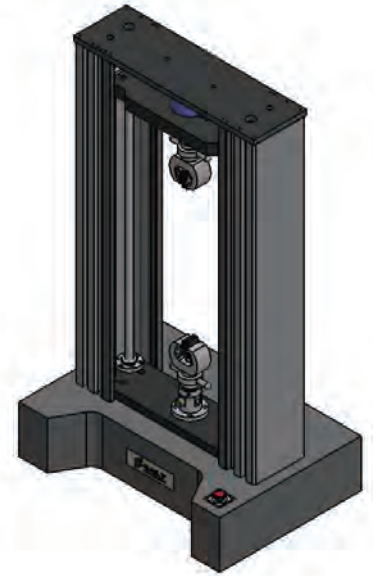
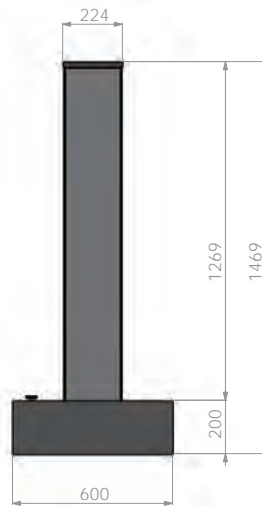
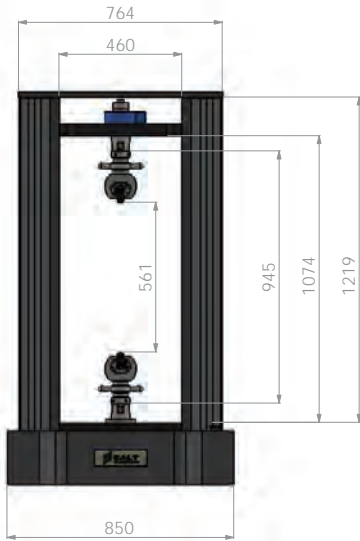
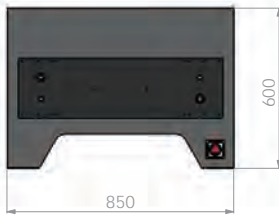
Tests such as tensile, compression, bending, peel, shear, puncture etc. are test methods available on the ST-1001.



ST-1001 Features

- ✓ Model capacity: 5kN~20kN
- ✓ Dual column electro mechanical table top model
- ✓ High precision load cell, class 1 and class 0.5 calibration
- ✓ 1/300,000 force resolution / 0.001mm/min speed accuracy
- ✓ 0.01~500mm/min speed (up to 1000mm/min option)
- ✓ 220V 60/50Hz Mitsubishi servo motor and drive
- ✓ Up to 4 step division of force capacity for more detailed readings
- ✓ Overload protection, non-contact displacement limit sensor, emergency power cut off button

Product Specifications



SALT

ST-1001 (20kN)
Universal Testing Machine

ST-1001

Universal Testing Machine
Capacity 5kN-20kN



Model	ST-1001
Frame Capacity	5kN ~ 20kN
Loading Method	220V Servo Motor (Mitsubishi) electromechanical
Load Accuracy	±0.5%
Calibration	Class 1 / Class 0.5
Force Resolution	1/300,000
Stroke resolution	±0.001mm
Test Room (W x H mm)	450 x 950
Total Weight (Approx.)	200kg
Force Range	Up to 4 Steps
Column	Dual
Controller	LCD Digital Indicator, Force control, Position control
Transfer Screw	Ball Screw / Guide bar
Crosshead Speed	0.01mm ~ 500mm/min (1000mm/min max optional)
Speed accuracy	0.001mm/min
Driving System	Mitsubishi Servo Motor & Server Driver (Japan)
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)	850 x 600 x 1470
Computer Software OS	Windows, Light-Salt UTM Software Version 12,6,0
Extensometer	Encoder type, Strain gauge type, Position meter type (Optional)
Environmental Chamber	Temperature control – 100°C ~ 150°C+ (Optional)
High temperature furnace	Room temp. ~ 1200°C (Optional)

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 main screen

The screenshot shows the software interface with several callout boxes:

- Select testing method, 15+ possible testing methods**: Points to the 'Method' menu in the top toolbar.
- Post-test analysis, review up to 20 different test graphs**: Points to the 'Analysis' menu in the top toolbar.
- Review raw data of completed tests**: Points to the 'Data' menu in the top toolbar.
- Remote control of UTM via software**: Points to the 'Control' menu in the top toolbar.
- Test information (Data input prior to test)**: Points to the 'Test No.', 'Test Spec', 'Test Place', 'Sample No.', 'Area', 'Gage', 'Spec (M/mm)', 'Strength (N/mm)', 'Spec (%)', and 'Strain (%)' input fields.
- Test options such as load select, graph scale, test speed etc.**: Points to the 'Range', 'Speed', 'Load Select (kN)', 'Disp Select', and 'Graph Scale' settings.
- Real time data**: Points to the 'LOAD' and 'DISP' digital readouts.
- Real time graph**: Points to the 'Time Graph' plot area.



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.

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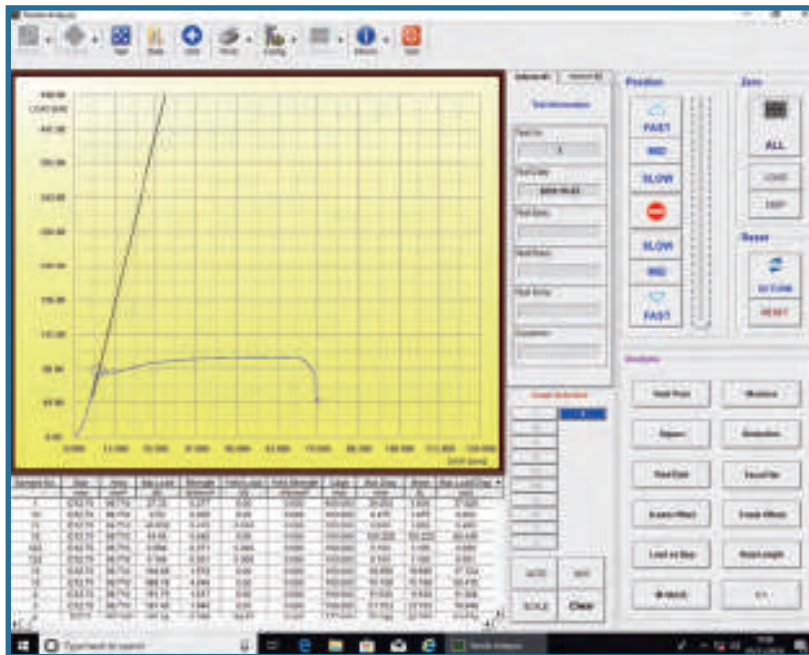
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- Test options such as load select, graph scale, test speed etc.:** Points to the 'Range', 'Load Select (kN)', 'Disp Select', and 'Graph Scale' sections on the right panel.
- Real time data:** Points to the 'LOAD' and 'PEAK' digital readouts at the bottom left.
- Real time graph:** Points to the 'Time Graph' plot area in the center.



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Test Analysis Screen



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

Device Configuration

Test Configuration

Test End Option	Graph	Move Speed	Point
Control	Keeping / Cyclic Test	Capacity	Device

Indicator Selection

Usersys-430
 Usersys-FND
 Pulun System
 P/ES-500A
 MT-2013

430LCD
 D-200
 P2011
 Master Mode

Test Method Selection

Tensile
 Compression
 Bending [3Point]
 Bending [4Point]
 Cyclic
 Keeping

Insulator Comp.
 CBR
 Ring Stiffness
 Tearing
 Indirect Tensile
 Tile Bending

Marshall
 Strain Comp.
 Poisson Ratio

Test Direction

1Way
 Both
 Down

Power Type

Mech.
 Up
 Single
 Double

Function

Series Test
 Non Zero
 Ind. Tare
 Ind. Return
 Calibration
 Rem GripLoad
 Test Mode
 Load Control

Auto/Manu

Auto
 Manu

Load Sensor

Loadcell
 Presscell

Elongation

Use
 Remove

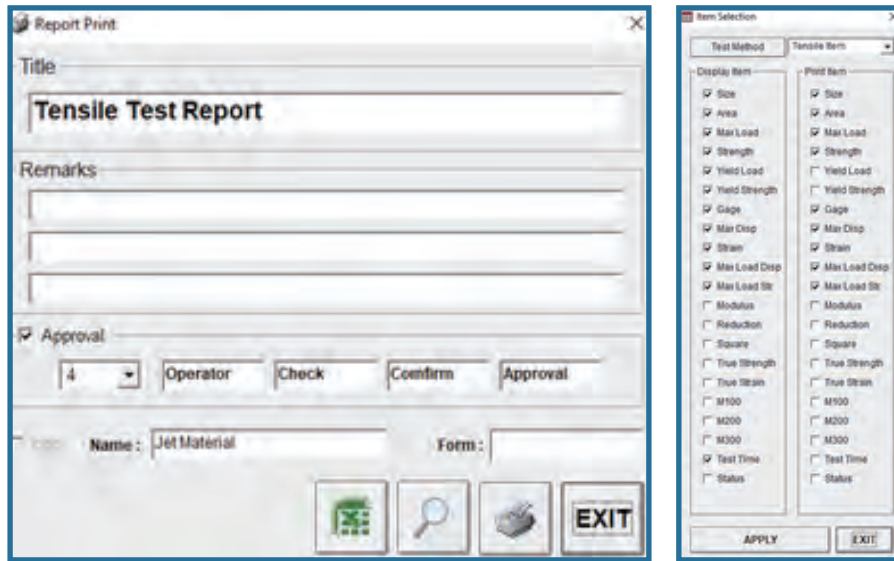
Ind. Screen Saver

Use
 min

Strain Rate Control

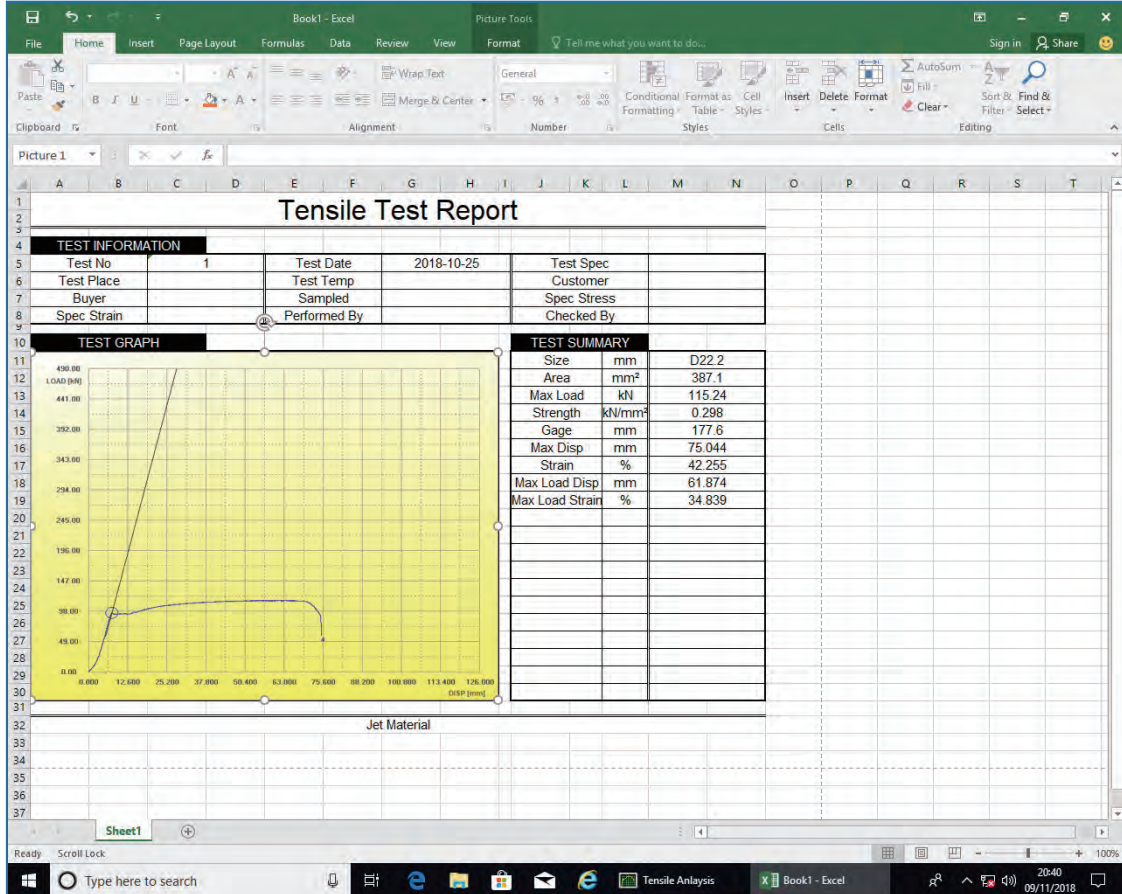
Use
 ms
 ms

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



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

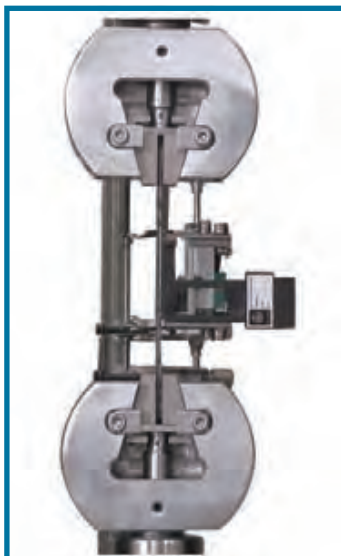


High Elongation Extensometer

Encoder resolution	2500 Pulse, 0.005mm
Gauge length	20–100mm
Measurement distance	up to 900mm
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	$2 \pm 40\%$ mV/V
Non-Linearity	.02 (20mm-0.3)%
hysteresis	.02 (20mm-0.3)%
Temperature range	
Compensated:	-5~40°C
Operating:	-20~70°C
Resistance	
Insulation (Min)	2,000
Input	350 ± 3.5
Excitation	
Recommended	10V
Maximum	15V
Specimen Sizes	
Round	ϕ 5–20mm
Plate	Width 10–25mm, Thickness 3–15mm