

# COMPUTERIZED UNIVERSAL TESTING MACHINE



MODEL: SSS-UTM-40(E)

# Features for Electronic Control Panel

- Auto-ranging Microprocessor based digital display
- Data entry & parameter selection through membrane dust free sealed keyboard.
- Non volatile memory, so the input data remains saved during power OFF.
- Result & Graph print out facility.
- RS 232 C serial interface to PC with variety of optional windows based software for data analysis.
- Overload and Over travel protection.
- Preload selection to start the graph from zero position.

### **Electronic Extensometer**

**SSS** offers electronic extensometer EE-2 to measure material extension with a resolution of one micron. Strain guage type extensometer to be used up to elastic limit to determine important parameters like 0.1% to 0.5 proof Stress and Young's Modulus.

#### **SPECIFICATIONS**

Gauge length : 25mm & 50 mmMaximum Extension : 2mm

Resofution: 1 micron

Specimen Diameter: 0.5 to 30 mmSpecimen Thickness: up to 30 mmSpecimen Width: up to 30mm

# **Features**

- Loading accuracy as high as + 1%
- Straining at variable speeds to suit a wide range of materials.
- Motor driven threaded columns for quick effort. Less adjustment of middle cross-head-to facilitate rapid fixing of test specimen.
- Simplicity in reading because of digital readouts.
- Wide range of standard and special accessories,
- Easy change from plain to threaded and screwed specimens.
- Large effective clearance between column enables testing of standard specimens as well as structures.
- Simple controls for ease of operation.
- Robust straining frame of an extremely rigid construction.
- Safe operation ensured by means of safety devices.
- Fully enclosed and protected pressure transducer.
- Optional serial port to transfer data to computer for analysis / storage evaluation etc.

## **Application**

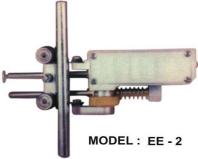
**SSS** Electronic Universal Testing Machine is designed for testing metals and other materials under tension, Compression, bending, transverse and shear loads. Brinell Hardness test (BHN) on metals can also be conducted.

#### **Principle of Operation**

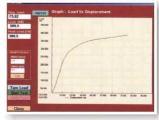
Operation of the machine is by hydraulic transmission of load from the test specimen though pressure transducer to a separately housed load indicator. The Hydraulic system is ideal because it replaces all mechanical parts for transmission of load, Which may wear out & Damage due to shock after rupture of test sample. The machine is equipped pressure transducer & digital encoder as a sensor.

Hand operated wheels are used to control the flow to and from the hydraulic cylinder. The regulation of oil flow infinitely variable, Incorporated in the hydraulic systems a regulating valve, which maintains a practically constant rate of piston movement. Control by this valve allows extensometer readings to be taken.





MODEL	UNITS	SSS-UTM 10(E)	SSS-UTM 20(E)	SSS-UTM 40(E)	SSS-UTM 60(E)	SSS-UTM 100(E)
Maximum Capacity	KN	100	200	400	600	1000
Measuring Range	KN	0-100	0-200	0-400	0-600	0-1000
Load Resolution	KN	0.005	0.01	0.02	0.03	0.05
Resolution of Piston Movement (Displacement)	mm	0.1	0.1	0.1	0.1	0.1
Clearance for tesile at fully descended working piston	mm	50-700	50-700	50-700	50-800	50-850
Clearance for compression test at fully descended working piston	mm	0-700	0-700	0-700	0-800	0-850
Clearance between columns	mm	500	500	500	600	750
Ram Stroke	mm	150	200	200	250	250
Straining / Piston speeds (at no load)	Mm/min	0-300	0-150	0-150	0-100	0-80
CONNECTED LOAD						
HP @ (Voltage: 440 V, Phase: 3, Hz: 50 )		1.3	1.3	2.3	2.5	3.5
DIMENSIONS						
LxWxH (approx)	Mm	2032 x 750 x 1960	2032 x 750 x 1960	2100 x 750 x 2200	2300 x 750 x 2534	2415 x 825 x 2900
WEIGHT (approx)	Mm	1500	1500	1800	2500	3500
STANDARD ACCESSORIES						
FOR TENSION TEST Clamping for round Specimens diameters	Mm	10-20 20-30	10-20 20-30	10-25 25-40	10-25 25-40 40-55	10-25 25-45 45-70
Clamping jaws for flat specimens thickness	Mm	0-10 10-20	0-10 10-20	0-15 15-30	0-15 15-30	0-22 22-44 44-65
Width	Mm	50	50	65	70	70
FOR COMPRESION TEST						
Pair of compression plates of diameter	Mm	120	120	120	120	160
FOR TRANSVERSE TEST						
Table with adjustable rollers width of rollers	Mm	160	160	160	160	160
Diameter of Rollers		30	30	30	50	50
Maximum clearance between supports	Mm	500	500	500	600	800
Radius of Punch tops	Mm	6,12	6,12	12,16	16,22	16,22



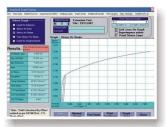
Real time graph on PC



**Graph comparison & point tracing** 



**Statistics** 



Graph with EE-2 Extensometer

#### **SPECIAL ACCESSORIES:**

These include load stabilizer, Brinell Test Attachment, 180° bend test attachment, shear test attachment and a wide range accessories offered on request at an additional cost.

Due to constant R & D, specifications and features are subject to change without notice.

The dimensions given above are approximate.

#### **INSTALLATION:**

It is recommended that machines be erected on a foundation. Details of foundation can be given on request.



#### SSS INSTRIIMENTS

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