

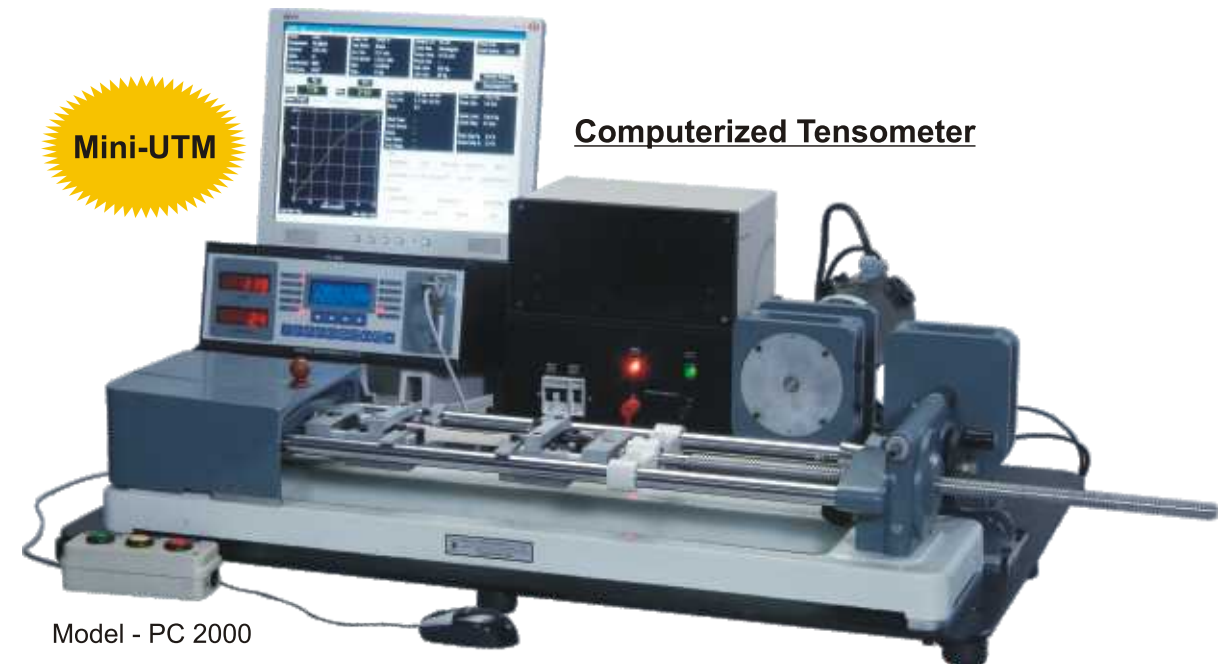
Specifications and facilities in Different Models of Electronic Tensometer

Description	Model TM-ER1	Model TM-ER3	Model PC-2000
1. Mechanical Frame			
a. Capacity	20 KN max. (2000 Kg)	20 KN max. (2000 Kg)	20 KN max. (2000 Kg.)
b. Dimensions	H230 X W235 X L965 mm. approx.	H230 X W235 X L965 mm. approx	H300 x W700 x L1050mm approx.
c. Weight	18 Kg (approx)	20 Kg (approx)	60 Kg (Approx)
2. Motor Drive Unit	Optional	Optional	Essential
a. Specifications	Motor : 3/4 HP, 230 V Single Phase, 1440 rpm AC Motor	Motor : 3/4 HP, 230 V Single Phase, 1440 rpm AC Motor	Motor : Permanent Magnet DC Servo, 3.6 V, 4.8 A, 1600 rpm, 0.16 KW.
b. Speed Variation	A set of 15 Nos. of pulley. For every speed, pulley to be replaced & stand to be adjusted accordingly. (0.2 to 500 mm/min)	A set of 15 Nos. of pulley. For every speed, pulley to be replaced & stand to be adjusted accordingly. (0.2 to 500 mm/min)	Servo Drive, Speed variation through timer belt & pulley arrangement computer control system. (0.2 to 500 mm/min.)
3. Load Measurement	20 KN max. with interchangeable load cells	20 KN max. with interchangeable load cells	20 KN max. with interchangeable load cells
a. Load cells available	0.2 KN, 2 KN & 20 KN	0.2 KN, 2 KN & 20 KN.	0.2 KN, 2 KN, 5 KN, 10 KN & 20 KN
b. Measuring Unit	Newton & Kg.	Newton & Kg.	Newton & Kg.
4. Displacement Measurement facility	Optical encoder as sensor 0 to 500mm. (Excluding grip) (Extra displacement on demand)	Optical encoder as sensor 0 to 500mm (Excluding grip) (Extra displacement on demand)	Optical encoder as sensor 0 to 500mm (Excluding grip) (Extra displacement on demand)
5. a. Least count & Load Accuracy	L.C. + 0.05% of load Cell Accuracy 1%	L.C. + 0.05% of load Cell Accuracy 1%	L.C. + 0.05% of load Cell Accuracy 1%
b. Displacement	LC : 0.1 mm	LC : 0.1 mm	LC : 0.1 mm std. with PC 0.010 mm software
6. Pre-test data	Not Available	Available	Available
7. Test Facilities	Peak-break Values for load and displacement	i Peak break test ii Preset length iii Preset load iv Cyclic-preset length v Cyclic-preset load	i Peak test ii Break test iii Preset load iv preset length v Graph analysis through software for various Test results
8. Test Results	Peak / break load & displacement Value display through micro processor base system	All the details regarding test on micro processor base system	All the details regarding test on Computer
9. Graph of the test	Not Available	Off line graph through a. DRO on Dot Matrix Printer b. Through PC using DTU & Software (optional accessories) on any printer	On line graph through PC Software on any printer
10. Computer Interface facility	Not Available	With or without Computer Machine can be used	Computer Controlled Machine
11. Memory of Display Unit	Not Available	Up to 900 mm displacement Data on micro processor based unit. Also test Data can be saved on PC with DTU & Software	Test data saved on PC directly
12. Graph Zooming	Not Available	Auto Scaling	With Software zooming possible. (Proof stress, Area under curve)
13. Over load & over Travel Protection	Available	Available	Available

Note : Product development is a continuous process. Hence the data indicated in this catalogue is subject to change without prior notice

ELECTRONIC TENSOMETER

Horizontal Bench Model Universal Testing Machine (Capacity 20 KN)



Model - PC 2000



Model - ER3



Model - ER1

- | | | | |
|----------------------|--------------------|--------------|-------------------|
| ■ Metals | ■ Fabrics | ■ Plywood | ■ Cement |
| ■ Rubber and Plastic | ■ Wires and Cables | ■ Composites | ■ Pharmaceuticals |
| ■ Adhesives | ■ Education | ■ Foils | ■ Packaging |
| ■ Components | ■ Sub-Assemblies | ■ Ceramics | ■ Electronics |

Ask for Separate Catalogue of Tensometer Accessories



Manufactured by :

Kudale Instruments Pvt. Ltd.



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Kudale Instruments Pvt. Ltd.
ISO 9001 Company



ELECTRONIC TENSOMETERS

The Electronic Tensometer is a Horizontal Bench Model Tensile Testing Machine, Capacity 20KN. The instrument is useful for testing variety of materials such as metals, plastics, timber, ceramics, rubber, cement, fabric etc. in tension, compression shear and bend. The test results are obtained accurately and speedily.

The instrument is supplied with load cells for the load measurement. The Digital Readout System shows the test result of different parameters such as load, displacement etc. as per the facilities provided in different models.

With the machine there is a choice of over 100 accessories and grips to cover most of the varied requirements for Research and Development, Quality Assurance, In Science Industry. The instrument can be power or manually operated on any small laboratory or test-shop bench or table. An extremely legible, easy to follow Digital Readout System ensures ease of operations making the Electronic Models of Tensometer ideal for material testing or any other force measurement solution.

Models of Electronic Tensometer

Model - ER 1

Electronic Tensometer with Load Cell and Digital Readout for Force & Displacement measurement.

Facility for Automatic Peak Detection with Digital LED Display.

Load cells available : 20KN, 2KN and 0.2 KN. (Optional)



Model - ER 3

Microprocessor Controlled Electronic Tensometer with Load Cell and Electronic Display for Force and Displacement.

- Printer interfacing facility through Digital Readout System (DRO)
- Multi functional DRO
- Load V/s Displacement graph directly obtained without PC on Dot Matrix Printer
- Pre-Determined Test Data can be entered in DRO
- Auto Scaling
- Software along with Data transfer unit (Optional)
- Load cells available 20KN, 2KN & 0.2 KN (Optional)

The test results such as Peak Load, Peak Displacement, Breaking Load, Break Displacement, Accepted / Rejected results can be obtained. The other information viz. Date, Time, User Name, Suppliers reference also can be entered in DRO prior to the test. PC - P IV or above with 64 MB RAM is recommended for software use.



Model - PC 2000

The Model PC 2000 is top of the range model in the series of Tensometers. It combines the state of art Computer Technology and Precision manufacturing techniques to offer unique Mini Horizontal Universal Testing Machine. The machine is operated through PC. The on line test graph is displayed on Monitor. The feature in software is the ultimate solution for ever increasing stringent demand of material testing in quality inspection.

The Model PC 2000 is supplied with the Servo Drive Motor and the test speeds can be selected and applied through PC.

The suitable mechanism is provided for easy setting of higher or lower range of speeds as per test piece material standards.

Features of Model 2000 PC

(Fully Automatic, Computer Controlled Horizontal Tensile Testing Machine)

- Load cells for high precision load measurement
- Servo Motor Drive
- Rotary optical encoder for precise elongation measurement
- Window based, menu driven support software for complete test control.
- Load cells available - 20KN, 10KN, 5KN, 2KN and 0.2 KN (Optional)
- Well defined computer protocol for integration with computer
- Programable computer interface for data as well as control.
- Auto detection for origin as well as end of the test
- Online curve plotting of load vs displacement
- Generates calculations of stress, strain, Engineering Stress & Strain, area under the curve etc. for material study.
- Zoom facility for close view or deep study of the curve
- Extensive error indications
- Overtravel Protection
- Overload Protection
- Test report generation