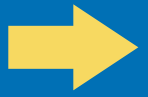




# ELECTRONIC UNIVERSAL TESTING MACHINES

## Unitek 9700 Series



### WITH PC INTERFACE & REAL TIME GRAPH (Panel/PC Controlled)

#### Technical Description :

FIE Universal Testing Series Unitek 9700 are microprocessor based electro mechanical machines with servo drive designed for testing & studying mechanical behavior of various materials like metals, polymers etc. These machines offer good built-in features to offer excellent stand alone performance for standard tests & great flexibility for complex analysis. These machines confirm to IS, BS & ASTM standards.

#### Main Features :

- Precision DC Servo motor & drive with ball lead screw gives an advanced drive system with 1 to 1000 standard speed range.
- Computerised Microprocessor based instrumentation to measure display & store load & displacement value.
- Provision for load cell interchangeability & thereby automatic selection of load full scale.
- Speed selection through Data entry or variable speed through potentiometer.
- Facility for mounting different load cells & clamping devices to suit different tests & materials such as thin wires, metalsheets, fiberglass, leathers, springs, cardboards etc.
- Built-in parallel interface to connect Dot matrix printer for data & curve print-out.
- Safety interlock for overload & limit switch sensing to ensure protection during test.
- Universal applications in R & D, education, quality control & production for test like tensile, compression, bending etc.

#### Electronic Control Panel : (Series Universal 2001)

- Microprocessor based panel incorporating state of art technology with following features.
- Front panel membrane type key board for machine operation with numeric keys for data entry.
- 7 segment display.
- Auto load cell identification.
- Data entry with numeric keyboard of test parameters including speeds, rupture % peak, preload, modulus data, test data & specimen data etc.
- 20 input data set storage, 50 results storage, maintains data & results during power off.
- Batch test facility for generating batch & statistics result. using same data set.
- Optional remote to ease specimen loading/unloading.
- RS 232C serial port. Optional windows based software available for ...
- On line graph on PC. Data analysis, statistics, point tracing superimposing graphs to compare with standard, zooming graph etc.

Printer port for printer interface with ...

- Graph & result printout.
- Test certificate printout.
- Batch Certificate printout.
- Simple statistics printout.

#### Optional Accessories :

FIE offers a wide range of optional accessories along with Unitek 9700 machines to cover almost every material test requirement.

#### Load Cells :

FIE offers strain gauge type Universal load cells in different capacities in the following nominal ranges :

100N, 250N, 1kN, 2.5kN, Load cells of different capacity can be offered as per customers requirements

#### Grip & Clamping Devices :

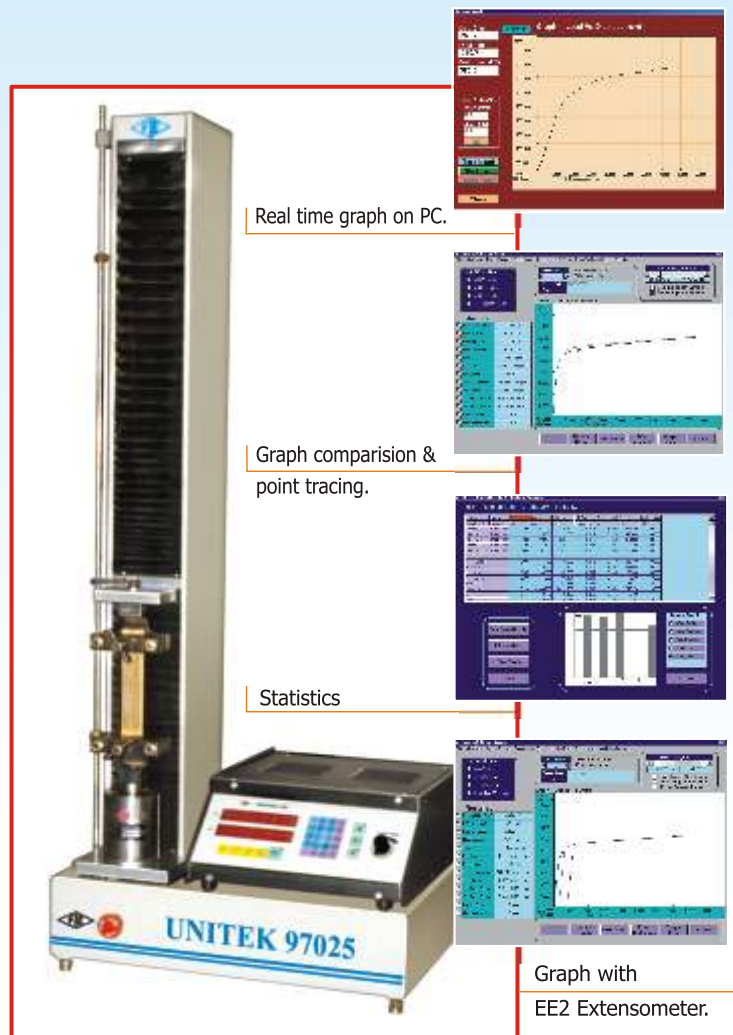
A wide range of grips are available from FIE such as :

- Vise type grips.
- Single threaded grips.
- Compression plates.
- Bending fixtures.
- Shearing attachments.

#### Extensometers :

Electronic analog extensometers are offered with interface card on the control panel to measure with a resolution of 1 micron.

**Model : EE2- STRAIN GAUGE.**





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## WITH PC INTERFACE &amp; REAL TIME GRAPH (Panel/PC Controlled)

**Serial Communication & Software package on PC :**

The Universal 2001 series control panel can be hooked to any PC using RS-232 communication port. FIE offers different , window based software packages with real time graph on PC to enable the user to effectively evaluate different parameters. The features include :

- Real time graph, User friendly software.
- Extensive graphics on screen for curve plotting, magnification and zooming.
- Software features includes Graph comparison, point tracing facility. Different units selection for load & displacement.
- Statistical evaluation with water fall dig., Mean deviation, frequency distribution, Skew dig., Histogram. Also calculates max . value, min. value, Mean Value, Variance, Standard Deviation. (Other statistical parameters on request). Selectable batch & statistical printouts.
- Evaluation of wide range of user selectable parameters such as % elongation, % reduction in area, young's modulus, yield stress, proof stress etc.
- Software packages for Shear, Bend, Torsion, Rubber, Textile testing etc.
- Custom built application software to suit customer requirements.

**SPECIFICATIONS :**

MODEL NO.		UNITEK 9701	UNITEK 97025	UNITS
Load Range		0 - 1	0 - 2.5	kN
Load Selection	<b>1st Range</b> 0 - 20% of F.S.	1/20000 of nominal load cell connected.	1/20000 of nominal load cell connected.	—
	<b>2nd Range</b> 20 - 40% of F.S.	1/10000 of nominal load cell connected.	1/10000 of nominal load cell connected.	—
	<b>3rd Range</b> 40 - 100% of F.S.	1/4000 of nominal load cell connected.	1/4000 of nominal load cell connected.	—
Load measuring accuracy :		± 1% from 2% to 100% of nominal load of loadcell used.	± 1% from 2% to 100% of nominal load of loadcell used.	—
Max. Crosshead stroke :		800 (Without grips & load cell)	800 (Without grips & load cell)	mm
Crosshead displacement measurement :		0.01	0.01	mm
Crosshead speed range :		0.5 - 500	0.5 - 500	mm/min
Power Supply :		230 VAC, 50Hz single phase	230 VAC, 50Hz single phase	—

● **OPTIONAL : EE2 Extensometer, Software Packages.**

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



Manufactured by :

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