SHRI ENGINEERING

Electro Mechanical Universal Testing Machine

Model : UNITEK 9700

Microprocessor Based Panel

Facility for mounting different load cells & clamping devices

Best in Class Analysis Software

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Features :

- Precision AC servo motor & drive with ball lead screw gives an advanced drive system with 1 to 500 standard speed range.
- Computerized microprocessor based instrumentation to measure display & store load & displacement valve.
- 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, metal sheets, fiber glass, leathers, springs, card boards 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 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, pre load, modulus data,, test data & specimen data.
- 20 input data set storage, 50 result 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.
- RS232C serial port. Optional windows based software available for - Online 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 print-out.
- Test Certificate print-out.
- Batch certificate print-out.
- Simple statistics print-out.

Technical Description :

'SE' 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 standard.

Optional Accessories :

'SE' offers a wide range of optional accessories along with Unitek-9700 Machines to cover almost every material test requirement.

Load Cells :

'SE' offers Strain gauge type Universal load cells in different capacities in the following nominal ranges :
100N, 250 N, 1 kN,2.5 kN load cells to different capacity can be offered as per customers requirements.

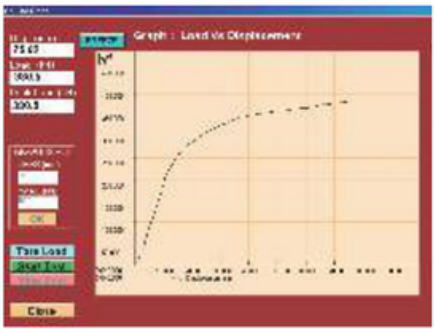
Grip & Clamping Devices :

A wide range of grips are available from 'SE' such as :

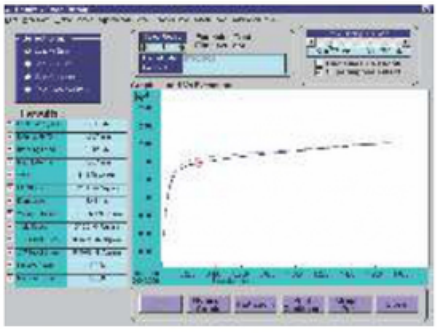
- Vice type grips
- Single threaded grips.
- Compression plates.
- Bending fixtures.
- Shearing attachments.

Extensometers :

Electronic exetensometers are offered with interface card on the control panel to measure with a resolution of 1 micron.
Model : EE2-Strain Gauge.

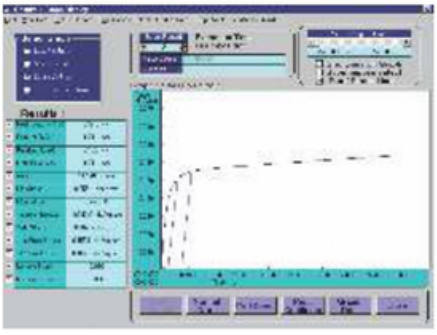


Real time Graph on PC



Graph compression & point tracing

Statistics



Graph with EE2 Extensometer

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Serial Communication & Software Package on PC :

the Universal 2001 series control panel can be hooked to any PC using RS-232 communication port. 'SE' 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 diagram, mean deviation, frequency distribution, Screw dig. Histogram. Also calculates max. value, min. value, mean value, variance , standard deviation. (Other statistical parameters on request). Selectable batch & statistical print-outs.
- 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.

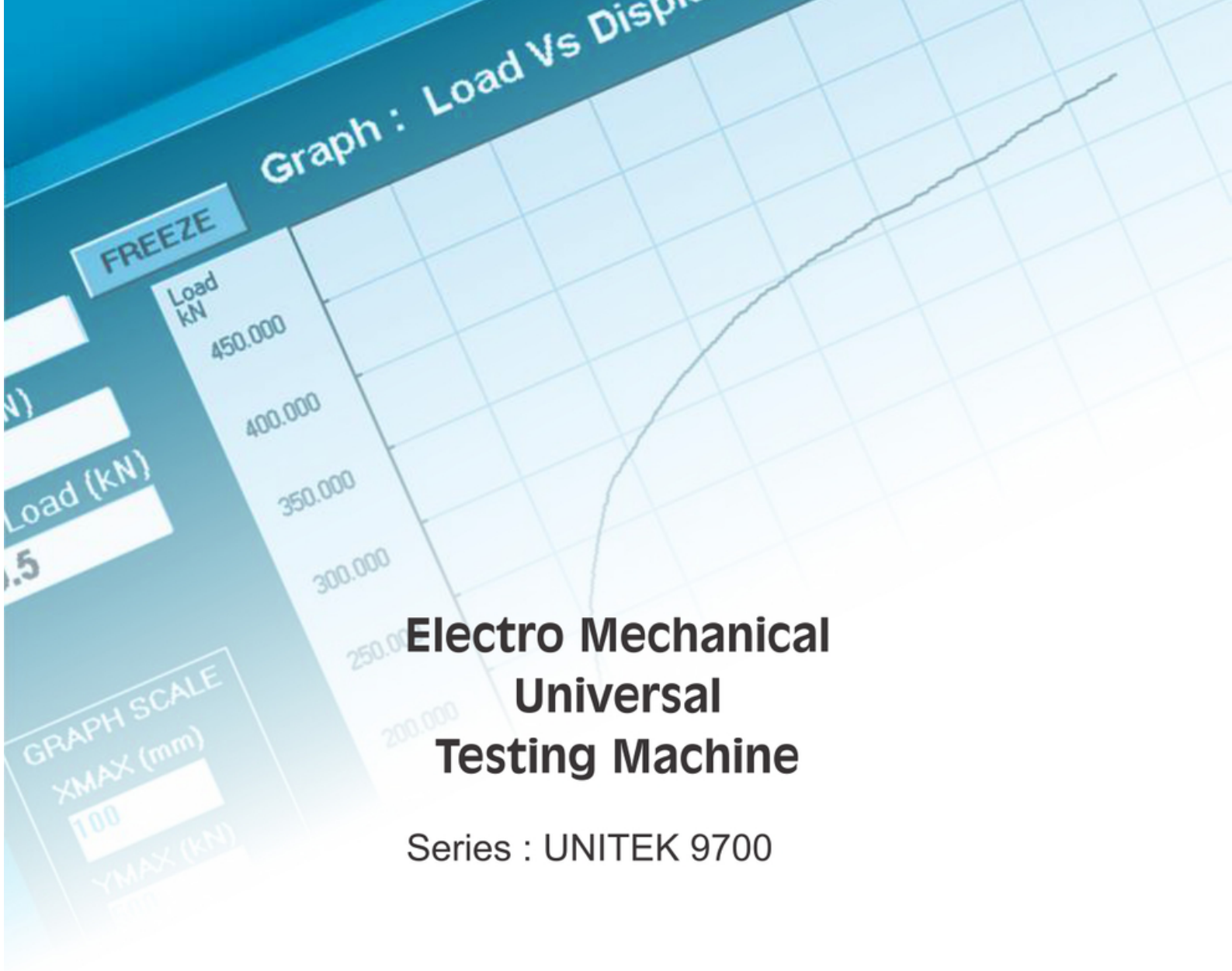
Specifications :

MODEL		UNITEK 9701	UNITEK 97025	UNITEK 97050	UNITS
Load Range		0-1	0-2.5	0-5	kN
Load Selection	1st Range 0-20% of F.S.	1/20000 of Nominal load cell connected.	1/20000 of Nominal load cell connected.	1/20000 of Nominal load cell connected.	—
	2 nd Range 20-40% of F.S.	1/10000 of Nominal load cell connected.	1/10000 of Nominal load cell connected.	1/10000 of Nominal load cell connected.	—
	3 rd Range 40-100% of F.S.	1/4000 of Nominal load cell connected.	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 load cell cell used.	±1% from 2% to 100% of Nominal load of load cell cell used.		—
Max. Crosshead Stroke		800 (without grips & load cell)	800 (without grips & load cell)	800 (without grips & load cell)	mm
Crosshead displacement Measurement		0.01	0.01	0.01	mm
Crosshead Speed Range		0.5-500	0.5-500	0.5-500	mm/min
Power Supply		230 VAC, 50 Hz Single Phase	230 VAC, 50 Hz Single Phase	230 VAC, 50 Hz Single Phase	—

Optional :

Extensometer : Model-EE 2 , Software Packages.

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



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Series : UNITEK 9700

SHRI ENGINEERING

Wholesale Trader and Supplier By :

Shri Engineering Pvt Ltd

Imperial Heights,LIG-6/503,Kabir Nagar,Ner AIIMS Residency,
Raipur,CT(22) 492099,IN

Branches: Vadodara,Chennai and Indore

Tel : +91 8349 02 0230 , Cell : +91 9979 87 8092

E-mail : ajinkya@shriengineering.com , popat@shriengineering.com , ankita@shriengineering.com

Web : www.shriengineering.com , www.shriengineering.co.in