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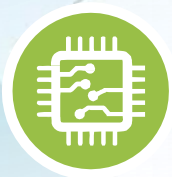
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# Electro Mechanical Universal Testing Machine

Model : UNITEK 1600-TS



Micro Controller Based Panel,  
Front Panel Touch Screen Display



Facility for mounting different load cells  
& clamping devices



Provision for load cell interchangeability  
(Automatic selection of load full scale)



Best in Class Analysis Software





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# Electro Mechanical Universal Testing Machine

Model : UNITEK 1600-TS



## Built-in Computerized Touch Screen Control Panel Series : UNITEK 1600-TS

Micro Controller based panel incorporating state of art technology with following features -

- Front panel touch screen display
- Data entry of test parameters including pre-load, rupture %, Safe Load & Specimen data etc.
- Online graph of load Vs Displacement directly on screen.
- USB Printer port for printer interface with graph & result print out.
- Facility to export the result/ Data to PDF, EXCEL & CSV formats.
- 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 :

'FIE' Universal Testing Series Unitek-1600 are Micro Controller 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 and great flexibility for complex analysis. These machines confirm to IS standard.

## Features :

- Precision AC servo motor & drive with ball lead screw gives an advanced drive system with 1 to 500 standard speed range.
- Provision for load cell interchangeability & thereby automatic selection of load full scale & Units (kN or N).
- Speed selection through data entry .
- 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.

## Optional Accessories :

'FIE' offers a wide range of optional accessories along with Unitek 1600-TS 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, 250 N, 500 N, 1 kN, 2.5 kN, 5 kN, 10 kN, 25 kN, 50 kN, 100 kN, 200 kN load cells to different capacity can be offered as per customers requirements.

## Grip & Clamping Devices :

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

- Wedge type grips for flat & round specimens with different inserts. (Manual / Hydraulic)
- Vice type grips
- Single threaded grips.
- Compression plates.
- Bending fixtures.
- Shearing attachments.

## Extensometers :

- Electronic extensometers are offered with interface card on the control panel to measure extension.  
Model : EE2-Strain Gauge (With 1 micron resolution).
- Long travel extensometer, Model : LTE-800.

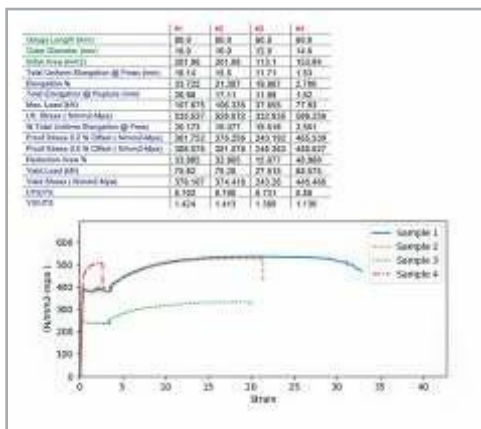


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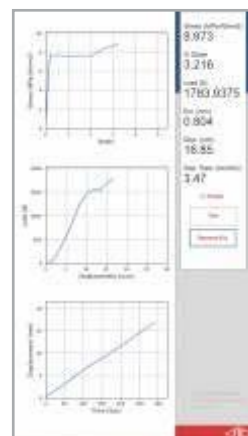
# Electro Mechanical Universal Testing Machine Model : UNITEK 1600-TS



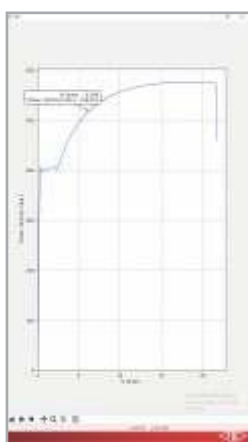
Home Screen



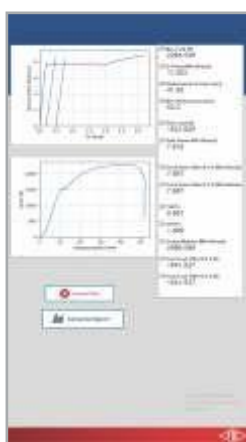
Graph of superimpose & Comparison



Real time graph



Point Tracing & Zoom



Results after Test



Results

## Specifications :

MODEL	UNITEK 1601 TS	UNITEK 1605 TS	UNITEK 1610 TS	UNITEK 1650 TS	UNITEK 16100 TS		UNITEK 16200 TS	UNITS
					250	500		
Load Range	0-1	0-5	0-10	0-50	0-100	0-200		kN
Load Resolution	0-100% of nominal load cell connected	1/40000 of F.S.	1/40000 of F.S.	1/40000 of F.S.	1/40000 of F.S.	1/40000 of F.S.		—
Load Measuring Accuracy	±1% from 2% to 100% of load cell used.	±1% from 2% to 100% of load cell used.	±1% from 2% to 100% of load cell used.	±1% from 2% to 100% of load cell used.	±1% from 2% to 100% of load cell used.	±1% from 2% to 100% of load cell used.		—
Max. Crosshead Stroke	1000 (without grips & load cell)	1000 (without grips & load cell)	1000 (without grips & load cell)	1000 (without grips & load cell)	1000 (without grips & load cell)	800 (without grips & load cell)		mm
Clearance between columns	450	450	450	450	450	430		mm
Crosshead displacement Measurement	0.01	0.01	0.01	0.01	0.01	0.01		mm
Crosshead Speed Range	0.5-500	0.5-500	0.5-500	0.5-500	0.5-250 or 0.5-500	0.5-100		mm/min
Power Supply	230 VAC, 50 Hz Single Phase	230 VAC, 50 Hz Single Phase	230 VAC, 50 Hz Single Phase	230 VAC, 50 Hz Single Phase	440 VAC, 50 Hz Three Phase	440 VAC, 50 Hz Three Phase		

- F. S. = Connected load cell full scale.
- Due to constant R & D specifications & features are subject to change without notice.
- Colour scheme subject to confirm at the time of order.



# Electro Mechanical Universal Testing Machine

Series : UNITEK 1600-TS



Over **60** years of  
consistent excellence

Manufactured By :

**Fuel Instruments & Engineers Pvt. Ltd.**

**Sales & Service By**

Force-Tech Calibration System

(NABL Accredited Calibration Laboratory vide certificate No. CC-3610)

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