Universal Testing Machine

Model - UNITEK 1650-TS

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

PLC 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, WORD & 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.

UNITEK 1650-TS		
Load Range	0-50	kN
Load Resolution	1/20000 of F.S.	----
Load Measuring Accuracy	±1% from 2% to 100% of load cell used.	----
Max. Crosshead Stroke	1000 (without grips & load cell)	mm
Clearance between columns	450	mm
Crosshead displacement Measurement	0.01	mm
Crosshead Speed Range	0.5-500	mm/min
Power Supply	230 VAC, 50 Hz Single Phase	----

- F. S. = Connected load cell full scale.

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

Technical Description :

'FIE' Universal Testing Series Unitek-1600 are PLC 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, BS & ASTM standards.

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 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.

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.
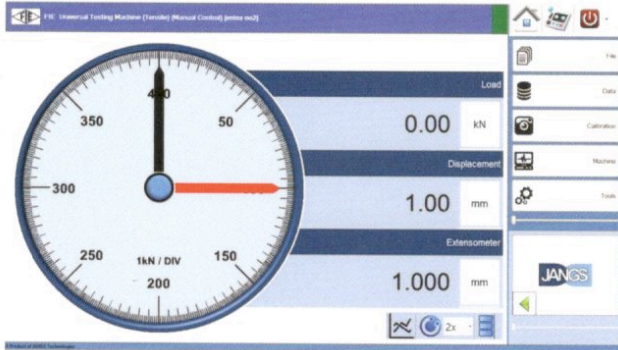
Grip & Clamping Devices :

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.
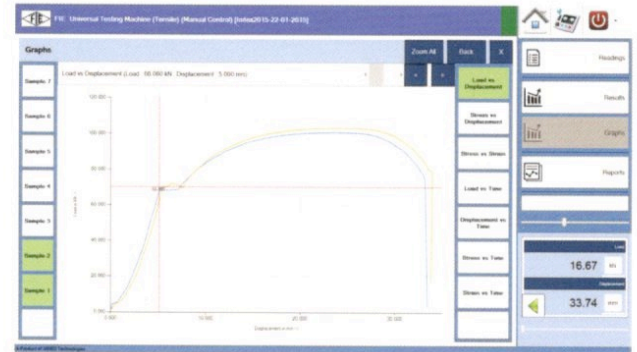
- Shearing attachments.

Extensometers :

- Electronic exetensometers 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.
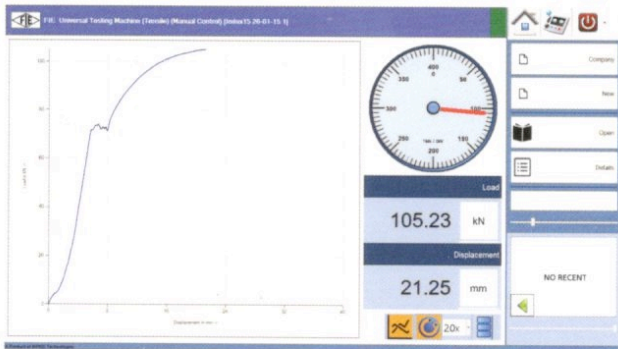
Home Screen

Displays values of load, displacement & extension with dial for displaying load.

Graph superimpose, Comparison & point tracing

Graph comparison, superimpose of batch sample tests with Graph zooming and point tracing facility.
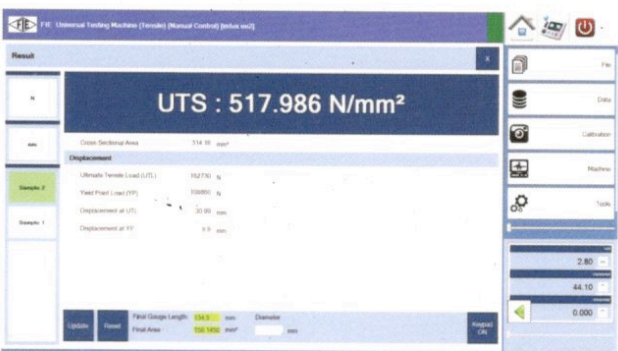
Real time graph

Real time values of load and displacement / extension used for plotting its graph & can be seen real time during testing & facility to convert the units simultaneously.
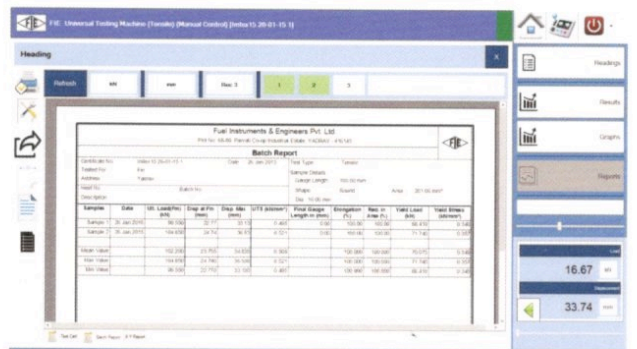
Load Vs Extension

Displays graph for extensometer readings against load with proof lines for proof stress.

Final Result

Displays basic results of test conducted & automatically pop ups after test ends with facility to convert the units.

Statistics

Batch test reports with statistics for batch sample results & can be exported to various formats (DOC, XLS, CSV & PDF)