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# Universal Testing Machine

GENESS ENGINEERS

Model - UNITEK 16100-STS





### Technical Description :

'FIE' Universal Testing Series UNITEK 1600-STS are PLC & HMI based electro-mechanical machines with servo / stepper drive designed for testing & studying mechanical behavior of various materials like metals, polymers etc. These machines offer good built-in features so offer excellent stand alone performance for standard tests & great flexibility for complex analysis. These machines confirm to IS, BS & ASTM standards.

### Features :

- Precision AC stepper motor & drive with ball lead screw gives an advanced drive system with 1.0 to 200 standard speed range.
- PLC & HMI based system to measure, store load & displacement values.
- Provision for load cell interchangeability & thereby automatic selection of load full scale.
- Facility for mounting different load cells & clamping devices to suit various tests & materials like thin wires, metal sheets, fiber glass, leather, spring, card boards etc.
- Built-in USB interface to connect USB printer for data & curve print-out.
- Safety interlock for overload, Safety doors & limit switch sensing to ensure protection during test.
- Universal applications in R&D, Education, Quality control & Production for tests like Tensile, Compression, Bending etc.

### Touch Screen Control Panel:

PLC based panel incorporating following features:

- Front panel 7" touch screen display.
- Data entry of test parameters (like speeds, rupture %, pre-load, test data & specimen data) with touch screen.
- The data will be stored in JPG format and accessible for external system with USB drive storage.
- Optional remote to ease specimen loading/unloading.
- RS 232, USB & Ethernet ports for communication.

### Optional Accessories :

'FIE' offers a wide range of optional accessories along with Unitek-1600 Machines to cover almost every material test requirements.

### Load Cells :

'FIE' offers Strain gauge type Universal load cell indifferent capacities in the following nominal ranges:

10kN, 50kN, 100kN load cells as per customers requirements.

### Grip & Clamping Devices :

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

- Wedge type grips (Manual or Hydraulic)
- Vice type grips
- Single threaded grips
- Compression plates
- Bending fixtures
- Shearing attachments

### Extensometers :

- Electronic extensometers are offered with extension on the touch screen to measure with resolution of 1 micron.

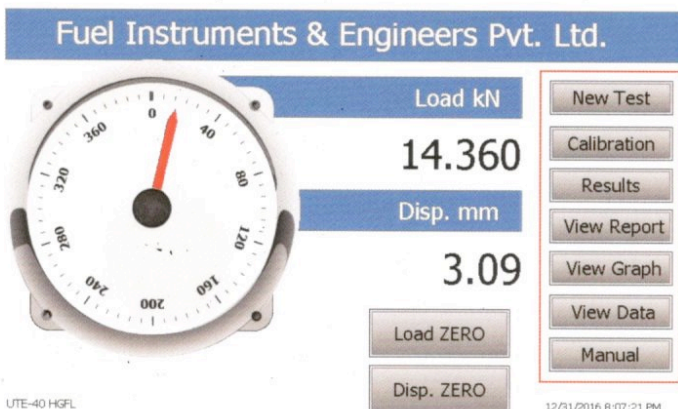
Model : EE2-Strain Gauge.

- Long travel extensometer, Model - LTE 800.

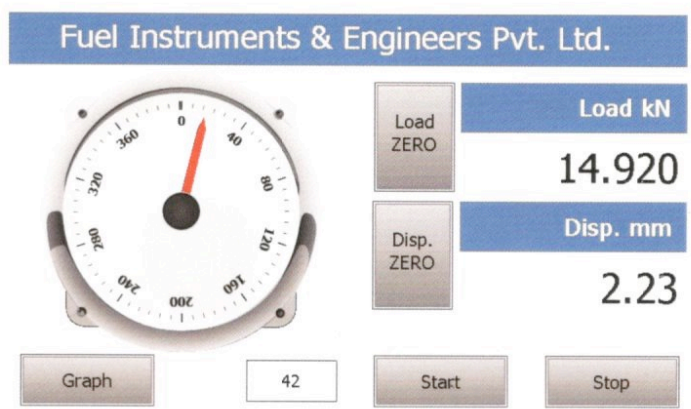
USB port for printer or USB drive interface for :

- Graph & result print-out
- Test certificate print-out
- Simple statistics print-out
- RS 232 interface for data transfer to desktop.
- Ethernet port for network printer access.
- Facility to export X,Y points in .csv format.
- Facility to export batch results in . csv format.

### Built – In Touch Screen Display



Home Screen



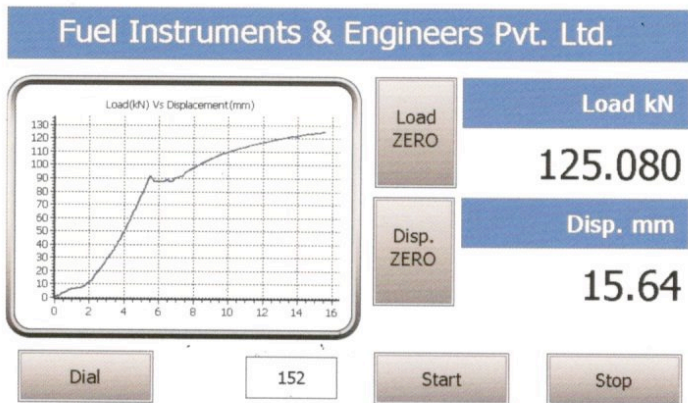
Test Reading Screen



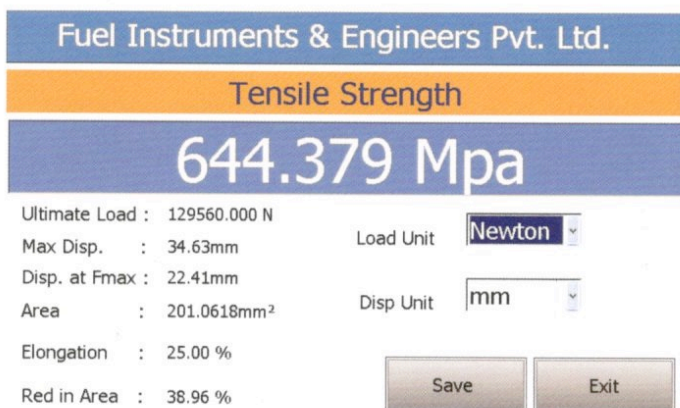
### Specifications :

MODEL	UNITEK-16100-ST5	UNITS
Load Range	0-100	kN
Load Resolution	1/20000 of Nominal Load Cell Connected	----
Load Measuring Accuracy	± 1% from 2% to 100% of Nominal load of load cell used	----
Max Crosshead Stroke	1000 (without grips & load cell)	mm
Crosshead displacement measurement	0.01	mm
Crosshead speed range	1.0-200	mm/min
Power Supply	440 VAC, 50 Hz Three Phase	----

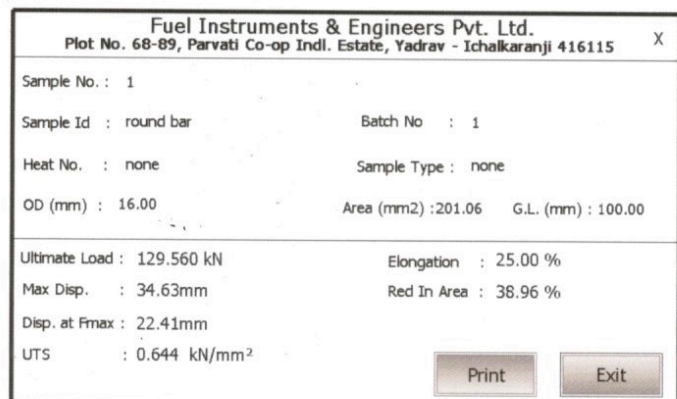
Due to constant Research & Development, Specifications and Features are subject to change without notice.



Real time Graph with load & displacement

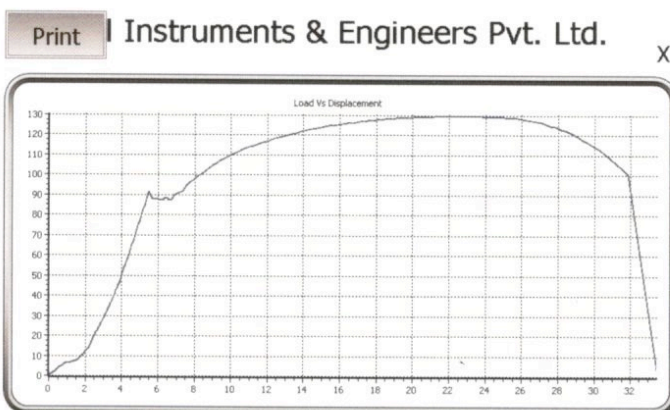


Test Result Display



Test Report

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Test Report Graph

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