

CTS

Universal Testing Machine

Model - UNITEK – 97050 α



Technical Description :

"FIE" Universal Testing Series UNITEK-97000 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 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 servo motor & drive with ball lead screw gives an advanced drive system with 0.5 to 350 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.
- Speed selection through data entry or variable speed through potentiometer.
- 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.
- Safety interlock for overload & limit switch sensing to ensure protection during test.
- Universal applications in R & D, Education, Quality control and Production for tests like Tensile, Compression, Bending etc.

Optional Accessories :

'FIE' offers a wide range of optional accessories along with Unitek-9700 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 :
100 N, 250 N, 1 kN, 2.5 kN, 5 kN load cell as per customers requirements.

Grip & Clamping Devices :

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

- Wedge type grips
- 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.

Touch Screen Control Panel :

PLC based panel incorporating following features :

- Front panel 7" Touch Screen
- Data entry of test parameters (like speeds, rupture %, pre-load, test data & specimen data) with touch screen
- Data storage ranges as: at input, at output; during power off
- Optional remote to ease specimen loading/unloading
- RS 232, USB & Ethernet ports for communication.
- The data will be stored in JPG format & accessible for external system with USB drive storage.

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 Electronic Control Panel

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Load ZERO	Load N
	53.00
Disp. ZERO	Disp. mm
	9.10



UNITEK - 97050

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New Test	Calibration	Results
View Report	View Data	Manual

Home Screen

Screen Display for Test

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Load ZERO

Load N
1911.00

Disp. ZERO

Disp. mm
16.41

Dial

Start Stop

Fuel Instruments & Engineers Pvt. Ltd.

Tensile Strength

228.482 Mpa

Ultimate Load : 1919.250 N

Disp. @Fmax : 15.18mm

Max Disp. : 18.95mm

Area : 8.400001mm²

Elongation : 12.50 %

Red in Area : 100.00 %

Load Unit

Disp Unit

Save Exit

Fuel Instruments & Engineers Pvt. Ltd.
Plot No. 68-89, Parvati Co-op Indl. Estate, Yadav - Ichalkaranji

Sample No. : 1
Sample Id : fe
Heat No. : none
Batch No. : none
Sample Type : none
Area (mm²) : 8.40 G.L. (mm) : 200.00

Ultimate Load : 1919.250 N Elongation : 12.50 %
Max Disp. : 18.95mm Red In Area : 100.00 %
Disp. @ Fmax : 15.18mm
UTS : 228.482 Mpa

Real time Graph with load & displacement

Test Result Display

Test Report with Graph

MODEL	UNITEK-97050	UNITS
Load Range	0-5	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	900 (without grips & load cell)	mm
Crosshead displacement measurement	0.01	mm
Crosshead speed range	0.5-350	mm/min
Power Supply	230 VAC, 50 Hz Single Phase	----