



UNIVERSAL TESTING MACHINE



Description

The Universal Testing Machine (Model: KUTM-50) is a high-precision material testing system designed for evaluating the mechanical properties of various materials such as elastomers, polymers, plastics, paper, plywood, leather, fabrics, metals, and conductors. Manufactured under strict quality control, the system ensures accurate and reliable testing in compliance with BIS and ISO standards. It supports a wide range of tests including tensile, compression, and bending, making it suitable for laboratory and industrial applications.

Features

- Windows-based user-friendly software
- Automatic data capture, storage, and graphical display
- On-screen calculations (UTS, yield strength, proof stress, etc.)
- Load measurement through load cell
- Overload and over-travel protection
- Real-time display of load, elongation, and graph
- Tare load and reset elongation facility
- Multiple unit selection (N, kN, kgf, lbf, mm, inch)
- Printing and report generation facility
- Optional electronic extensometer
- Multiple load cell support for wider range
- High accuracy within $\pm 1\%$

Applications

- Material testing laboratories
- Industrial quality control
- Research institutions
- Manufacturing industries
- Educational laboratories

Uses

- Tensile strength testing of materials
- Compression testing
- Bending and flexural testing
- Material quality evaluation
- Research and development testing



KUTM-50

Technical Specifications

Parameter	Specification
Model	KUTM-50
Product Type	Universal Testing Machine
Max Capacity	Up to 50 kN
Measuring Range	0 – 50 kN
Least Count	5 N
Elongation Resolution	0.01 mm
Grip Separation	700 mm
Speed Range	5–50 / 10–100 / 50–500 mm/min
Motor Power	0.5 HP / 1 HP / 2 HP
Power Supply	3 Phase, 415V, 50 Hz
Accuracy	±1%
Fixtures	Wedge Grip / Vice Grip / Bending Fixture
Drive System	AC Motor & Drive

Technical Specifications

MODEL	KLTM-2.5	KLTM-5	KLTM-10	KLTM-30	KLTM-50	KLTM-100
Max. Capacity	2.5 kN	5 kN	10 kN	30 kN	50 kN	100 kN
Measuring Range	0–2500 N	0–5000 N	0–10 kN	0–30 kN	0–50 kN	0–100 kN
Least Count	0.25 N	0.5 N	1 N	1 N	5 N	10 N
Elongation Scale	0.01 mm	0.01 mm	0.01 mm	0.01 mm	0.01 mm	0.01 mm
Grip Separation	700 mm	700 mm	700 mm	700 mm	700 mm	700 mm
Speed (Low)	5–50 mm/min	5–50 mm/min	5–50 mm/min	5–50 mm/min	5–50 mm/min	5–50 mm/min
Speed (Medium)	10–100 mm/min	10–100 mm/min	10–100 mm/min	10–100 mm/min	10–100 mm/min	10–100 mm/min
Speed (High)	50–500 mm/min	50–500 mm/min	50–500 mm/min	50–500 mm/min	50–500 mm/min	50–500 mm/min
Motor Power	0.5 HP	1 HP	2 HP	2 HP	2 HP	2 HP
Power Supply	3-Phase, 415V, 50Hz AC	3-Phase, 415V, 50Hz AC	3-Phase, 415V, 50Hz AC	3-Phase, 415V, 50Hz AC	3-Phase, 415V, 50Hz AC	3-Phase, 415V, 50Hz AC
Safety	Over Travel Protection	Over Travel Protection	Over Travel Protection	Over Travel Protection	Over Travel Protection	Over Travel Protection
Fixtures	Wedge / Vice / Bending	Wedge / Vice / Bending	Wedge / Vice / Bending	Wedge / Vice / Bending	Wedge / Vice / Bending	Wedge / Vice / Bending
Drive System	AC Motor & Drive	AC Motor & Drive	AC Motor & Drive	AC Motor & Drive	AC Motor & Drive	AC Motor & Drive