Electromechanical Universal Testing Machine

LT-E Series | Mechanical tests on metallic and non-metallic materials

Load / displacement control • Modular fixtures • Computerised data recording



5-300 kN

MODEL CAPACITY RANGE

0.01-500

MOVEMENT SPEED / MM/MINUTE

Metal • Plastic • Textile • Wood | With suitable grips, platens and bending fixtures

LT-E SERIES

Photographs and Components

Moving crosshead, tensile grips, loading frame and computer system

The Electromechanical Universal Testing Machine performs tensile, compression and bending tests with suitable fixtures. Load or displacement control follows the selected test programme; PC software records measurements and prepares reports.

MOVING CROSSHEAD

Crosshead movement applies load or extension at the selected speed.

TENSILE GRIPS

Upper and lower grips hold both ends of the specimen during the test.



LOADING FRAME

The column frame carries the crosshead and specimen loading arrangement.

COMPUTER SYSTEM

Software supports test settings, live graphs, data recording and reports.



Tensile grips and specimen working area



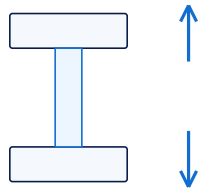
Computer screen for test management

LT-E SERIES

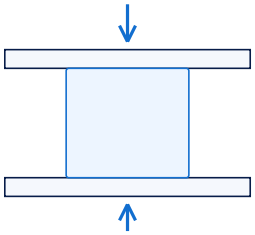
Tensile, Compression and Bending Tests

Suitable fixtures • Controlled crosshead movement • Load and deformation monitoring

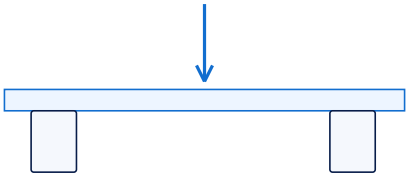
TENSION



COMPRESSION



BENDING



Tensile Test

Grips hold both specimen ends. Crosshead movement extends the specimen in a controlled manner.

Compression Test

Controlled compression load is applied to the specimen between suitable platens.

Bending Test

Suitable supports and a loading fixture allow specimen flexural behaviour to be evaluated.

Specimen geometry, material and the test method determine fixture selection. The load cell measures force; crosshead movement indicates displacement. An extensometer measures extension directly on the specimen.

Load and Displacement Control

Select load or displacement control for the test programme. Movement speed from 0.01 to 500 mm/min supports different methods. Record test speed, specimen dimensions and the fixture used.

Extensometer and Software

An extensometer measures local specimen extension. PC software records load, displacement and deformation, and generates graphs and reports. Keep the measurement setup and specimen identifier with the results.

LT-E SERIES

Model Capacities and Dimensions

LT-E Series • 5, 10, 20, 50, 100, 200 and 300 kN options

Product Code	Capacity	Dimensions (mm)	Weight
LT-E0005	5 kN	610 × 480 × 1285	100 kg
LT-E0010	10 kN	686 × 525 × 1880	250 kg
LT-E0020	20 kN	-	-
LT-E0050	50 kN	945 × 654 × 2266	700 kg
LT-E0100	100 kN	1010 × 750 × 2225	1100 kg
LT-E0200	200 kN	1100 × 770 × 2685	1560 kg
LT-E0300	300 kN	1100 × 770 × 2817	1560 kg

Capacity and Accessory Selection

Assess expected maximum force, specimen dimensions and test type together. Build the test arrangement with a suitable load cell, grips, compression platens, bending fixture and extensometer.

Force System Verification

ASTM E4 • ISO 7500-1
EN 10002-2 • BS 1610 • DIN 51221

Assess force-measurement calibration and verification requirements against the selected standard and machine configuration.

Extensometer Verification

ASTM E83 • ISO 9513
BS 3846 • EN 10002-4

Plan calibration and classification of the extension measurement system for the extensometer and test method being used.

LT-E SERIES

Measurement, Control and Test Workflow

LT-E Series • Speed, accuracy, resolution and modular test arrangements

Technical Specification	Value / Function
Test Types	Tensile, compression, bending; suitable fixtures
Control Modes	Load or displacement control
Movement Speed	0.01-500 mm/min
Load Measurement Accuracy	Approximately ±1%
Load Accuracy Measuring Range	2-100% of full scale
Deformation Accuracy	±1% of the indicated value
Displacement Resolution	0.01 mm
Crosshead Travel	1200 mm
Modular Accessories	Load cells, grips, platens, extensometers
PC Software	Test management, data, graphs and reports

Crosshead Movement and Specimen Extension

Crosshead displacement and specimen extension are different measurements. Use a suitable extensometer for direct specimen deformation.

Test Workflow

01
Select Setup
Choose capacity, load cell and fixture.

02
Mount Specimen
Align specimen and install the measurement setup.

03
Run Test
Select control mode and speed; monitor data.

04
Report Results
Store graphs and results with specimen details.

Product Page | liyatest.com.tr/en/urun/electromechanical-universal-testing-machine-tensile-compression-testing-machine/