ETS TNE 500



ELECTRO MECHANICAL UNIVERSAL TESTING MACHINE

Precision ball screw-driven testing systems for tensile, compression, bending & shear. Available in Servo and AC drive configurations.

ETS-TNE-500 SERVO

ETS-TNE-500 AC

500 kg	1–1000 mm/min	±0.5 %	ASTM/ISO/IS
MAX CAPACITY	SERVO SPEED	LOAD ACCURACY	STANDARDS

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CHOOSE YOUR CONFIGURATION

TWO MODELS. ONE PLATFORM.

PREMIUM MODEL

ETS-TNE-500 SERVO

SERVO · TOUCHSCREEN EDITION



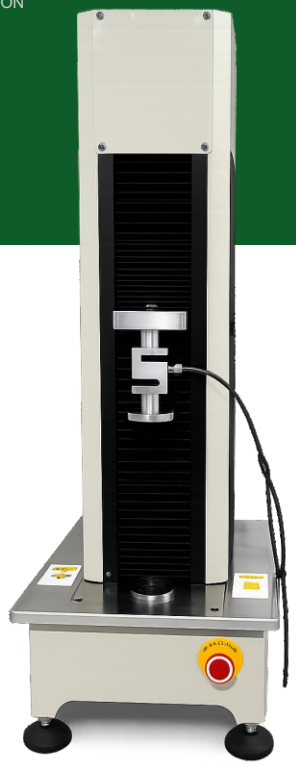
1 – 1000	500 kg	7" Touch
mm/min	Capacity	Display
Speed Range	Max Load	Controller

- AC Servo Motor + Precision Ball Screw Drive
- 5-inch Colour Touchscreen — Standalone Operation
- Speed 1 to 1000 mm/min — Continuous Digital Control
- Real-time Force-Displacement Graph on Screen
- Auto Load Cell Detection & Configuration
- USB Export + PC Software via RS232C
- Overload Protection + Limit Switch Safety Interlocks
- ASTM / ISO / IS Compliant Analysis

VALUE MODEL

ETS-TNE-500 AC

AC · PANEL CONTROLLER EDITION



5 – 500	500 kg	7-Seg LED
mm/min	Capacity	Display
Speed Range	Max Load	Controller

- AC Motor + Gearbox + Precision Ball Screw Drive
- Membrane Keypad + 7-Segment LED Display Panel
- Speed 5 to 500 mm/min — Digital / Potentiometer
- Bright LED Display for Load & Displacement
- Auto Load Cell Detection & Configuration
- USB Export + PC Software via RS232C
- Overload Protection + Limit Switch Safety Interlocks
- ASTM / ISO / IS Compliant Analysis

SIDE-BY-SIDE

MODEL COMPARISON

Parameter	ETS-TNE-500 SERVO	ETS-TNE-500 AC
Motor Type	AC Servo Motor	AC Motor + Gearbox
Drive	Precision Ball Screw	Precision Ball Screw
Speed Range	1 – 1000 mm/min	5 – 500 mm/min
Speed Control	Digital Touchscreen (continuous)	Digital Keypad / Potentiometer
Max Capacity	500 kg	500 kg
Display	7-inch Colour Touchscreen	7-Segment LED Display
Controller	Touchscreen GUI	Membrane Keypad Panel
Touchscreen	YES	NO
Real-time Graph	On Touchscreen	Via PC Software
USB Port	YES	YES
PC Software (RS232C)	Included	Optional
Auto Load Cell Detection	YES	YES
Standards	ASTM · ISO · IS	ASTM · ISO · IS

FULL DATA SHEET

TECHNICAL SPECIFICATIONS

Parameter	ETS-TNE-500 SERVO	ETS-TNE-500 AC
Max Capacity	500 kg	500 kg
Least Count	0.01 kg	0.1 kg
Load Accuracy	±0.5 % of reading	±0.5 % of reading
Drive System	Precision Ball Screw (backlash-free)	Precision Ball Screw (backlash-free)
Motor	AC Servo Motor	AC Motor + Gearbox
Speed Range	1 mm/min to 1000 mm/min	5 mm/min to 500 mm/min
Crosshead Travel	600 mm standard	600 mm standard
Load Units	kg / kN (auto-selectable)	kg / kN (auto-selectable)
Display	5-inch Colour Touchscreen	7-segment Bright LED
Real-time Graph	Force-Displacement on screen	Via PC software only
USB Port	Yes	Yes
RS232C	Yes — PC software	Yes — PC software
Safety	Overload + Limit Switches + E-Stop	Overload + Limit Switches + E-Stop
Frame	Heavy-duty steel, vibration-dampened	Heavy-duty steel, vibration-dampened
Power	230V AC, 50Hz, Single Phase	230V AC, 50Hz, Single Phase

Load Cell Capacities: 50 kg · 100 kg · 200 kg · 500 kg · 1000 kg · 2000 kg · 5000 kg · 10000 kg

All load cells auto-detected. Other capacities available on request.

PLATFORM ENGINEERING

KEY FEATURES — BOTH MODELS

Ball Screw Drive

01

Backlash-free precision ball screw ensures repeatable crosshead motion with superior load accuracy across the full speed range.

PC Software

02

Windows software with graph plotting, data analysis, statistics, point tracing, superimposed graphs and detailed curve evaluation.

Microcontroller

03

Fast signal processing with safety interlocks, intelligent test automation and auto load cell detection for seamless changeovers.

Rigid Frame

04

Heavy-duty vibration-dampened steel frame for consistent, drift-free performance over extended testing campaigns.

Load Cells

05

Auto-detected interchangeable load cells. Range 50 kg to 10,000 kg — swap and system auto-configures without manual setup.

Safety System

06

Upper/lower limit switches, overload cut-off and front-panel emergency stop safeguard specimen and machine at all times.

OPTIONAL ADD-ONS

GRIPS, FIXTURES & ACCESSORIES

Wedge-Type Grips
Flat & round specimens with hardened inserts. For wire, strip and shee…

Vice-Type Grips
Secure clamping for irregular sections. Self-aligning design prevents …

Threaded Grips
For threaded rod & bolt testing. M6–M30 metric and imperial thread for…

Compression Platens
Hardened ground plates for foam, elastomer and cardboard compression t…

3 & 4-Point Bending
Fixtures for flexural strength and modulus of plastics, composites and…

Shear Attachments
Single & double shear fixtures for adhesive films, leather and rubber.

Extensometer EE2
Strain gauge type, 1-micron resolution. Direct interface for elongatio…

Remote Handset
Optional remote handset for easier specimen loading and unloading conv…

TESTING APPLICATIONS

WHAT CAN YOU TEST?

Metals
Wires, strips, sheets, rods, fasteners, springs

Polymers
Films, moulded parts, pipes, profiles

Textiles
Yarn, woven, non-woven, leather, belts

Packaging
Cardboard, adhesives, seals, foils, films

Composites
FRP, GFRP, CFRP, laminates, sandwiches

Rubber
Seals, gaskets, O-rings, moulded parts

Construction
Fibre glass, wood, mortar specimens

General R&D
Academic, QC & production labs

MANUFACTURER

EKLAVYA TECHNO SOLUTIONS PVT. LTD.

About Us
Eklavya Techno Solutions Pvt. Ltd. manufactures precision electro-mechanical universal testing machines for R&D, academic, quality control and production industries across India. All machines comply with ASTM, ISO and IS standards.

Testing Applications
Ideal for tensile, compression, bending and mechanical property testing on metals, polymers, composites, textiles, leather, springs, cardboard and more across R&D and production environments.

Load Cell Capacities
50 kg · 100 kg · 200 kg · 500 kg · 1000 kg · 2000 kg · 5000 kg · 10000 kg — Other capacities on request. All auto-detected.

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PRODUCTS