

500LT Servo-All-Electric™ Test System Torsional System

System Overview

The 500LT performs fatigue, dynamic characterization and static torsional tests of materials, devices and components. It is powered by 220V single phase electrical power - requiring no special utilities such as pneumatic air, hydraulics or water. Each system is application configured from standard cost-effective modules selected to match your test needs.

Each system includes:

- 500L Test Table
- Actuator matched to torque, displacement and speed requirements
- Torque cell and Angular Displacement Transducer
- Power Pack
- 2350 Controller in enclosure
- Control Software
- PC with USB port
- Accessories such as Grips and Fixtures



Highlights

- Wide number of options – expandable controller, choice of test table sizes and attachment schemes, and choice of actuators to ensure you meet almost any test requirement (force, speed, and travel).
- Perform fatigue, dynamic and static testing on a variety of materials and components.
- High resolution option - industry leading 24 bit measurement and control of torque cells, ADT's and strain gauges. Includes low noise digital filtering. Perform high resolution micromechanical tests.
- Wide choice of lightweight test tables with mounting holes for brackets and fixtures. Actuator and sensor brackets enable positioning for different sample lengths and sizes

2350 Digital Controller

- Hardware and firmware based controller requires PC.
- Control loop updates up to 20 000 times per second.
- Standard single channel configuration includes 4 auxiliary data acquisition channels for high level 10V analog inputs plus 3 channels analog output.
- Configurable cards expand to 24 signal conditioned channels, control of up to 8 test stations or actuators, and more than 64 channels of data acquisition.

Powerful Software

- Control software allows users to create test setups, generate dynamic wave-shapes, monitor feedback data with scopes and displays, set limits, tuning, calibration and report generation.
- Single, Multistation, and Multichannel control software products available. Expand to 8 stations per controller.
- GDS Developers Kit allows you to create your own special applications with Visual Basic or C development tools.
- Applications Test Software that matches either industry standards or made-to-order. You can reduce operational effort running standard tests where control or analysis is time consuming – including static tests, dynamic materials characterization, fracture mechanics, and other tests. These optional modules automate test control and analyses.

Actuator Specifications

Actuator Model	T7	T25	Options
Dynamic Capacity	± 10 Nm (88 in-lb)	± 35 Nm (308 in-lb)	To 500 Nm
Static Capacity	± 7 Nm (62 in-lb)	± 25 Nm (220 in-lb)	To 350 Nm
Stroke	Continuous rotation		
Cyclic performance	0.00001 to 20 Hz		
Centerline Clearance	75 mm (3") – made to order		
Test Table Size	Made to order - Many sizes available		
Power Pack	220 VAC single phase		

Notes – Specifications are based on typical test samples and may vary depending on actual conditions. Performance curves are available. All speed specifications based on 220V Power Pack. Discuss all critical specifications with an application engineer.

Options

Test Tables & Actuators

- T Slot Torque Table
- Multiple Torque Table Sizes

Accessories

- Torque Cells – 1.7 in-lb (0.2N-m) to full rating of machine.
- Grips and fixtures - for regular and irregular specimens.
- Saline baths, environmental chambers and furnaces
- Encoders – High resolution.

Control Products & Software

- High Resolution (24 bit)
- Auxiliary Data Acquisition – up to 64 additional channels
- Global Data Sharing Developers Toolkit
- Multi-channel Control Software – up to 8 axis
- Dynamic Properties Application Software
- Multi-station Control Software – up to 8 test stations
- Static standalone controller – **QT**