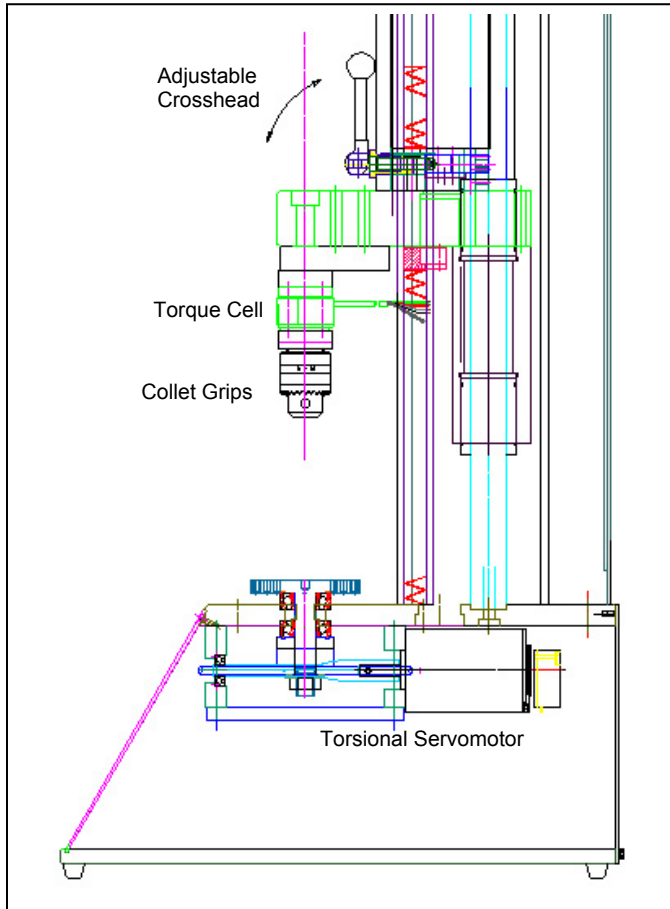


## 25T Torsional Tester

Consists of Actuator, Load frame, Torque Cell, Controller, and Optional Software.



### Test Methods

- *Torsional Strength Tests*
- *Torsional Yield*
- *Angular Position Control*
- *Peel and Adhesion*
- *Shear*

### Applications

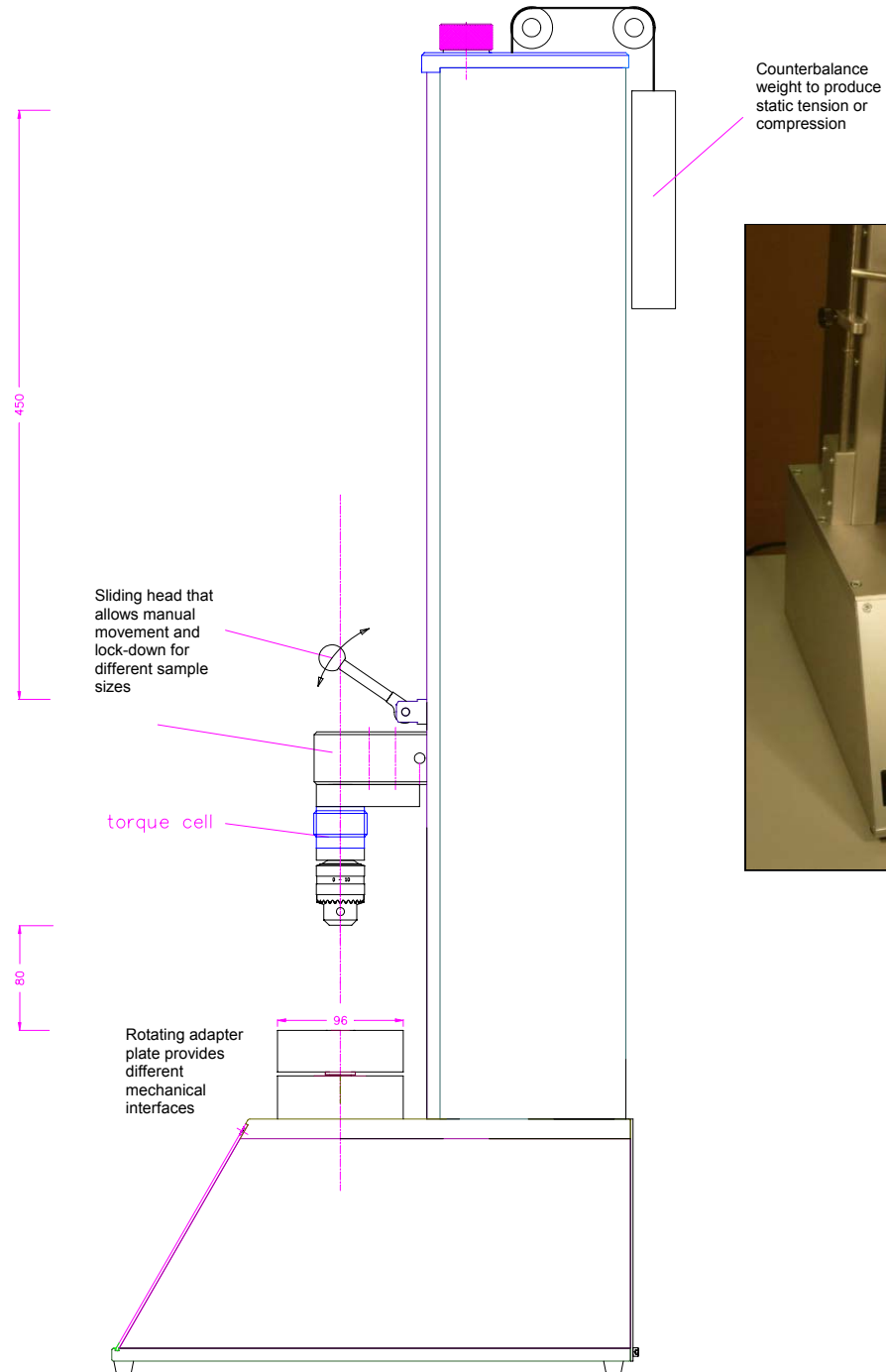
- *Tubing*
- *Screws*
- *Wire*
- *Adhesives*
- *Fasteners*
- *Medical Devices*

System Specifications	
Model Reference	25T
Torque Capacity	25 N-m (220 in-pounds) at 10 RPM
	12.5 N-m (110 in-pounds) at 20 RPM
Load Capacity	Deadweight Counterbalance allows tension or compression loads on sample
Mode	CW and CCW Rotation
Torque Cell Accuracy	+/- 0.5% of reading to 1/200 <sup>th</sup> torque cell rating
Angular Position Resolution	0.001 degrees

### System Services

- 12 month Warranty
- Manuals & Support Documentation
- Local calibration and engineering services available via field service network
- Optional – Grips, Fixtures and Software

## Load Frame



### Features

- Robust single column load frame
- Slider travel 450 mm (standard)
- Compact tabletop design
- Static Tension and Compression Loads

Attribute	Specification
Drive Technology	Electromechanical Motor & Ball Screw
Load Capacity	25 N-m (220 in-pounds)
Test Speed Maximum	10 revolutions per minute
Return & Jog Speed Maximum	10 revolutions per minute
Clearance CL to face	2.6 inches
Head Slide Maximum	450 mm ; 1100 mm optional
Mechanical Interface	Jacobs Chuck Grip; General Adapter Plate
Mechanical Interface	Jacobs Chuck Grip; General Adapter Plate
Dimensions	41"H x 12"W x 16"D
Weight	100 Pounds
Power	115 VAC
Position Limits	Adjustable Upper and Lower Mechanical limits
<b>Torque Cell</b>	
Torque Cell Rating	1.7, 100, 177, 200 inch pounds

## MT Controls

Consists of intelligent motherboard, firmware, signal conditioners and appropriate enclosure.



The MT Controller is an intelligent 16 bit controller that controls and measures machine and test data in torsional test systems. It is based on our popular M series axial controller and includes special preset software with display and keypad input that is easy to use and torque cell signal conditioning, machine output and data acquisition. Test results may be sent to software to be printed, stored or sent to Excel for further analysis.

### Features

- Capable of either standalone operation or may be controlled via PC
- Easy to use
- Customizable

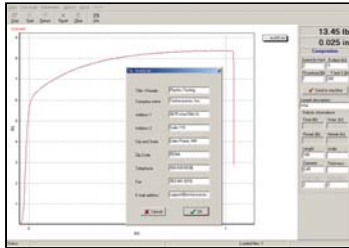
General Attributes	Specification
Model	MT Controller
PC requirements	PC not required ; Optional software would require PC with serial port ; MS Windows 98 or later
Operator Interface	
Machine Controls	Keypad Input Emergency Stop Jog Up & Down Keys Start/Stop Preset Program Key Return Home Key
Data Display	Liquid Crystal Display – test parameters that can be displayed include <ul style="list-style-type: none"> <li>▪ Live Torque</li> <li>▪ Peak Torque &amp; Peak Angular Position</li> <li>▪ Live Angular Position</li> <li>▪ Displacement Angle at Break</li> </ul>
Display Resolution	0.001 degrees
Selectable Units	<ul style="list-style-type: none"> <li>▪ Torque Load – In-Pounds, Newton-meters</li> <li>▪ Position - degrees</li> </ul>
Channels	
Channels	<ul style="list-style-type: none"> <li>▪ TORQUE - Strain gage signal conditioner and data acquisition included for system torque cell</li> <li>▪ POSITION - Controller converts output of encoder to position</li> <li>▪ STRAIN – CH 2 Extensometer or Load signal conditioner and data acquisition optional</li> </ul>
Control Modes	<ul style="list-style-type: none"> <li>▪ SPEED - operator adjustable up to 10 revolutions per minute (+/- 128 bits)</li> <li>▪ POSITION – ramp to position and hold.</li> <li>▪ LOAD - ramp to a user adjustable load and holds for time. Returns home at completion.</li> </ul>
Return to Home	Adjustable speed
Control	Adjustable gain (10 steps) for static torque control.
Load Limit	Adjustable software load limit
Data Capture	
Test Results	Peak load and displacement at break values available at conclusion of each test
Position Resolution	0.001 degrees via software capture
Standard Torque Resolution	+/- 1 part in 100 000 at 50 samples per second
Data Storage	
Test Setup	Speed, load limits, control mode and internal information saved from test to test.
Data Transfer	
ASCII Data	Machine control settings and test data are ASCII format and able to captured or input to and from controller. See MS Series Software.
Analog Output	Optional 12 or 16 bit analog output
User Programmable	
Speed Settings	Test, Jog/ Return Home variables are programmable.
Keypad Language	English, Spanish or German

Test Direction	Clockwise (CW) or Counterclockwise (CCW)
<b>Calibration</b>	
Password	Calibration data is supervisor password protected.



## M Software Products

Options consist of MStat, XY Curve Software, Excel Analysis Packages, and Upgrades to R Series



Software packages are available to acquire, display, save and export test data from the M controller. Multiple software products are available for different analyses and purposes.

### Features

- Compatible with Windows Operating Systems
- Graphical plotting of load – displacement curves
- Archive raw test data for future analysis

MStat Batch Test	Description
Description	<b>Optional</b> – MStat enables downloading of peak load and displacement at break tensile and compression test results at the conclusion of each test from a buffer of data stored within the M Controller. The program gathers multiple test results to generate test reports and includes statistical summaries of the results.
Test Data	Handles up to 50 test records including date and time stamp, sample ID, Peak load, displacement at break
Statistical Results	Summarizes results reporting minimum, maximum, average, standard deviation and number of samples.
Data Export	Exports data to MS Excel and other spreadsheet programs
Test Reports	Customizable test reports with 10 customizable data fields
Test Control	Operator may control machine through software. Stores machine settings.
Cable	Standard Serial Port cable – length 8 feet
ZPM Curve Software	Description
Description	<b>Optional</b> – MS Curve software captures, displays, stores and exports raw load and displacement test data from a tensile or compression test. The data is presented in real time in a load – displacement curve format.
Export & Analysis	Exports data to Excel and other spreadsheet and analysis programs.
Cable	Standard Serial Port cable – length 8 feet ; 100 feet cable optional.
XY Plotting (Curve)	Real Time Display of load versus displacement, load - elongation and stress - elongation % ; includes automatic scaling of plot at conclusion, Grid ON/OFF, Autoscaling & Autozoom.
Test Control	Operator may control machine through software. Stores machine settings.
Test Reports	Customizable reports
R Controller	Description
Upgrade	<b>Optional</b> - upgrade to R Series