

### 150R Advanced Mechanical Test System

Modular Actuator – horizontal or vertical mount

150 Series Test Table Included

Tension & Compression

Static, Dynamic, Fatigue Testing

#### Modular Systems Approach

TestResources test systems are configured to match each customer's test requirements. A common single actuator test system will consist of a frame or test table, linear or torsional actuator, load, strain, or position transducers, controller, and software. Due to a modular product structure, system modules can be swapped or re-configured during as requirements change.

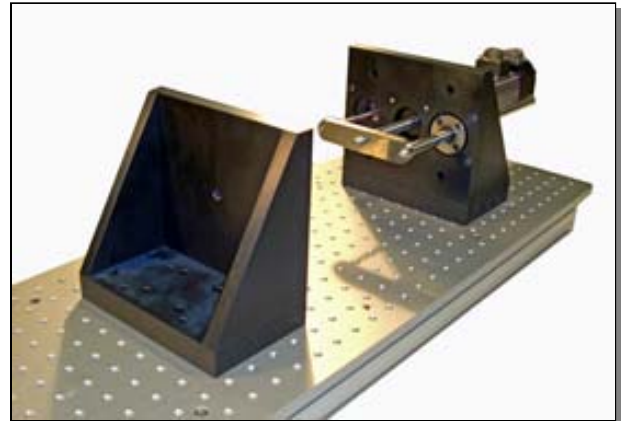
#### R Servocontrol Hardware and Software

The R Controller is an integrated hardware and software package that enables test machine users to develop, maintain, and execute tension, compression, stress-strain, stress relaxation, creep, and cyclic tests on servocontrolled test machines.

During the test, data is collected from transducers, results plotted and displayed in real time, then analyzed and a custom report generated. Each procedure may be saved and rerun as desired. Virtually any mechanical quasistatic or dynamic test may be performed. Basic fatigue testing is possible since the controller is capable of sinusoidal load and position controlled tests. Cycle count can be monitored and test limits set. Customized procedures involving a mix of monotonic, cyclic and segmented control profiles and blocks of repeated profiles – e.g. ramp, hold, sinewave cyclic, hold, sawtooth cyclic profile under the control of choice can be faithfully reproduced. For continuous usage or sophisticated fatigue tests, consider our L Series Controller.

Each system includes:

- 150 Test Table
- Actuator on modular mounting bracket
- Load cell, encoder or LVDT
- Power Pack
- R Controller in enclosure
- R Controller Software
- PC with USB port
- Grips, Extensometers, Bathes, Test Software



**Model 150 Test Tables**

- Modular Actuator Mount
- Threaded base or T Slot





R controlled test systems are easy to learn and use, considering their flexibility and power. Our PC based controllers serve labs where operators or tests change day to day. PC based controls improve test data quality and efficiency because test setups and test data are saved, built upon or available for re-analysis. The R is a good fit for high throughput test labs and research labs where flexibility is needed. Create, save and recall your special test methods. Protect different set up modes with a password as desired. English, Metric and SI units and large easy-to-read numeric displays present friendly live, peak and rate readings. The R package also includes many calculated routines for established test analyses and procedures.

Produce full single test reports or test reports covering multiple tests. Generate load - deflection (XY) plots to match ASTM, JIS, SAE, TAPPI, Euro Norm and other standard requirements. Data and plots can be presented in a single test report or a group of like tests can be combined to generate a statistical summary for each analysis result. The multiple test report stores a group of tests to the same file and provides a statistical summary for each analysis parameter. A plot with multiple XY curves overlaid on the same set of graph axes is optional. Store test data and results to hard disk in ASCII delimited format for easy import into popular spreadsheet and database programs.

R hardware features high speed (to 1000 samples per second) data acquisition and control so it can be used in high speed dynamic tests. Control is based on PID algorithms for high precision load, strain or stroke control. Up to 5 channels of sensors are optionally available to collect data or provide control of load, encoder position, LVDT, strain, or auxiliary use (10V DC). R hardware (reference A300 or A400) uses proven noise reduction techniques to lower the noise floor to effective resolution of one part in a million.

## 150RE Servo-All-Electric Test System

Actuator Model*	E216 Linear Actuator	E316 Linear Actuator	Options
Static Force Rating	± 2.5 kN (575 lb)	± 6 kN (1350 lb)	Higher Forces
Fatigue Force Rating	± 1.1 kN (250 lb)	± 3 kN (650 lb)	Higher Forces
Velocity Max	200 mm/s (8 in/s)	200 mm/s (8 in/s)	Faster Speed
Stroke	± 62 mm (2.5")	± 62 mm (2.5")	Longer Stroke
Cyclic Range	0.00001 to 15 Hz	0.00001 to 15 Hz	Faster Speed

\* Actuators are matched to specific test requirements and specifications shown are general in nature. Multiple options are available to satisfy specific customer needs. Performance curves and life predictions for fatigue testing applications are available. Discuss all critical specifications with an application engineer.

Actuator assembly  
includes 90 degree  
mounting bracket for  
conversion to vertical  
mount applications.

