

840 Electrodynamic Test System

Force Range: 0.0001 N to 2500 N (580 lbf)

Frequency Range (E2 Series): Static to 15 Hz

Overview

Electrodynamic test machines offer an extremely versatile and economically viable approach to performing static, dynamic and fatigue testing applications. TestResources unique product line is modular or lego-like, and configurable for both single and multichannel testing applications.

The 840 test machine is used to characterize and test materials, devices and components over a wide spectrum of load, strain and stroke. Each system is configured from a wide number of actuators and transducers to serve specific customer needs. When configured with small load cell, the 840 delivers unmatched accuracy and control in micromechanical testing applications.

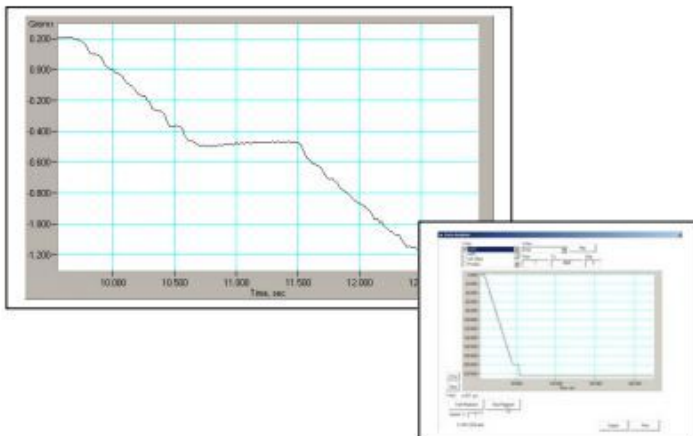
840 Systems include:

- Small, compact dual column load frame
- E2 Series actuators
- Load cell, encoder, and optional extensometers
- TestResources Servocontroller
- General Purpose Test Software
- PC



Ideal for Static, Dynamic & Fatigue Micromechanical Test Applications

The 840 test system may be configured with 50 gram full scale load cells to decrease the force range of the test system and to produce load controlled test applications at sub-gram load levels. In tissue engineering research, low or micromechanical load and position controlled dynamic and fatigue tests are common. The 840, with 24 bit measurement and control resolution has proven load control to better than 0.5 grams (see plot below).



In tissue engineering applications, the test machine needs to be placed inside an incubator chamber.

The 840SS version features a stainless steel construction for long term corrosion protection and easy cleanup. A small bath may be placed in the machine, to accommodate biological or non-ambient temperature tests.

Characterizing materials for their viscoelastic properties involves performing stress relaxation, creep and dynamic characterization tests.



Compact Load Frame with choice of actuator

The 840 Series dual column load frames feature a compact tabletop construction to minimize use of critical lab space. The moveable crosshead enables adjustable test space and column length is configured to your test sample requirements. The test machine requires single phase 110V (or optional 220V).

Specifications of Common Configurations

Model	E213	E246
Characteristics	Most Popular	Higher Speed
Static Force Rating	± 1.6 kN (360 lbf)	± 600 N (145 lbf)
Fatigue Rating	± 1.5 kN (335 lbf)	± 600 N (145 lbf)
Peak Load	± 1.5 kN (335 lbf)	± 600 N (145 lbf)
Velocity Max	200 mm/s (8 in/s)	850 mm/s (33 in/s)
Stroke	± 37.5 mm (± 1.5 in)	± 75 mm (± 3 in)
Cyclic Range	Static to 15 Hz	

* Actuators are matched to specific test requirements and specifications are shown 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.

Frame Options

Load Frame Model	840
Column Clearance	200 mm (8 in)
Vertical Test space	250 mm (10 in)

Contact an application engineer to configure a solution to your application requirements.