

910LX Servohydraulic Test System

Tabletop Compact Package
Static, Fatigue, Dynamic Testing

Force Ratings: 5, 10, 15, 20, and 25 kN (5500 lb)

Speed Range: Static to 100 Hz

Fatigue & Static Test Applications

- *Static Tension & Compression*
- *Ductile and Brittle Fracture Mechanics Research*
 - *Fatigue crack propagation*
 - *Threshold stress intensity*
- *Low & High-Cycle Fatigue (LCF/HCF)*
- *Spectrum Fatigue*
- *Medical Devices*

Overview

This compact integrated package includes a quiet power supply - no need for air or water cooling. It is ideal for classroom or lab usage. It is based on the latest 2370 Series Digital Servocontroller with high speed (12.5 kHz) 24 bit measurement and control capabilities.

Includes

- Enclosed hydraulic power pack – requires 220V electrical power.
- Actuator with Servovalve, Load cell and LVDT
- 2370 Controller with 24 bit resolution for measurement and control
- MS Series Static and Fatigue Application Software
- Optional PC with USB port
- Optional test applications software
- Optional accessories - test fixtures, grips, extensometers, ovens,
- Support Services including on site services and internet based remote access support.

2370 Control Hardware

- High Speed (300 MIPS) Digital Signal Processor
- 24 bit Analog Data Conversion
- 32 bit Digital Data acquisition
- 40 bit Servo-Loop Calculations

The 2370 Series offers the latest in electronic performance, functionality and cost savings. 2370 hardware, combined with Global Data Sharing (GDS) software, offers the test engineer a unique, flexible, and modular test control system. Each 2370 includes two strain bridge feedback channels for load cells or extensometers and one circuit that provides user choice of AC type signal conditioner for an LVDT position transducer or any transducer that can provide a high level 10V analog input signal. A digital encoder is included as the fourth feedback and control channel. Two servo-output channels provide 10V signals to actuators. Eight channels of digital input and output provide drive and device control including hydraulic pump on/off or high/low pressure in servohydraulic applications.

Data can be acquired to 12.5 kHz on all feedback channels concurrently (50 kHz total). The 50 mm (2") full scale LVDT could be set to a 500 micron expanded range, with reliable measurements to 0.5 micron resolution. The same ratios are true of strain bridges as well. An optional expansion module (-303) increases the controllers reach to include up to four potential control stations to as many as four data acquisition and signal conditioning options.

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2370 Software Technology & Products

2370 Software Products are all compatible with Global Data Sharing (GDS) which requires a PC with Microsoft Operating System (XP or Vista).

MachineBuilder Software (MTL32) enables user setup and application of machine resources (e.g. transducers) to test actuators. Panels for servotuning, calibration, and global limit setting make it possible to set up and switch test station configurations easily.

TestBuilder Software (MS32) enables users to set up, launch, and monitor tests. Test data may be saved and exported for reports. Separate user panels are available for static and fatigue tests. Users create, store and execute tests including command signal, data acquisition and export of data to Excel.

GDS Toolkit is an optional application developer's support program that facilitates software components and full applications development. GDS is a powerful capability that shortens the test development process and brings significant advantages to customers.

Standard Test Application programs are available for common test methods.

910LX Specifications

| Model | 910LX1 | 910LX2 | 910LX3 | 910LX4 | 910LX5 |
|--------------------------------|--------------------------------------|-------------------|---------------------|-------------------|-------------------|
| Force Rating | ± 5 kN (1125 lb) | ± 10 kN (2250 lb) | ± 15 kN (3300 lb) | ± 20 kN (4400 lb) | ± 25 kN (5500 lb) |
| Stroke | ± 25 mm (± 1") | | | | |
| Distance between columns | 400 mm (16") | | | | |
| Vertical Test Space (Daylight) | 500 mm (20") – longer columns option | | | | |
| Footprint | 500x450 (20" x 18") | | 600x600 (24" x 24") | | |

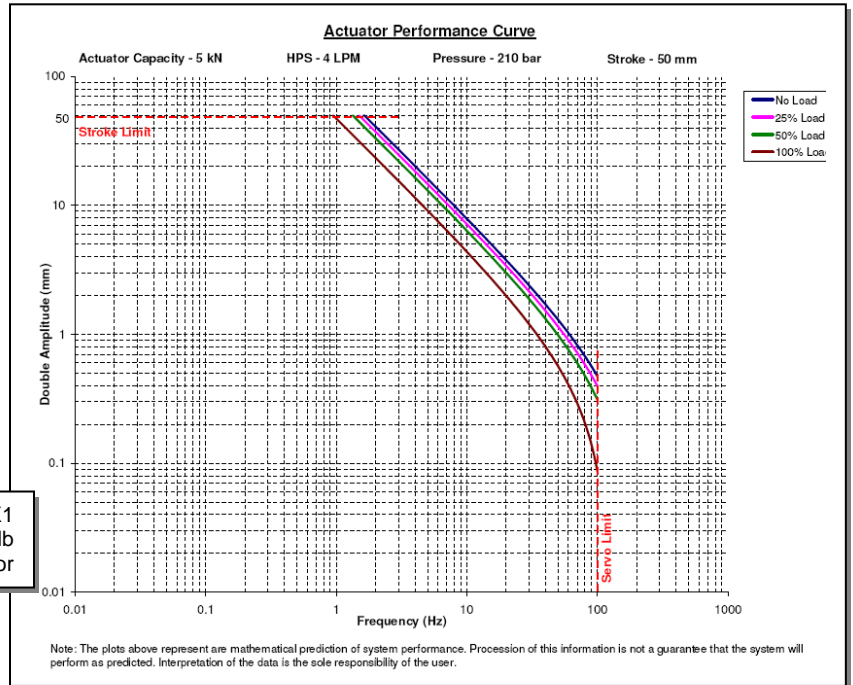
Notes – Discuss all critical specifications with an application engineer.

Performance

The 910LX pump and servovalve are the same for all models. The actuator dynamic stroke performance (disregarding the impact of the test sample) depends on force rating. The 25 kN actuator will deliver 20% of the dynamic stroke that a 5 kN actuator delivers at the same frequency.

Performance curves for all models available.

910LX1
(1125 lb
actuator)



910LX5
(5500 lb
actuator)

Optional 920 Series – shown with 50 kN (11,250 lb) crosshead mounted actuator and T Slotted table.

