We build vibration test equipment that performs...

☑️ The tests YOU need to do...
☑️ To evaluate the package YOU have designed...
☑️ To protect the product YOU must get to market
Hydraulic Vibration: The Big Picture…

A hydraulic vibration system is an analytical tool that performs the full-range of testing, all the way from repetitive bounce tests through real-time road data replication. If YOUR needs dictate a higher level of sophistication, then a hydraulic vibration system is for YOU. But be careful…

This is the biggest investment in test equipment you will probably ever make!

Take advantage of our 60 years of engineering and manufacturing expertise, rather than accepting a cookbook, one-size-fits-all approach. L.A.B. offers YOU the low-risk, low-cost solution. And we’re willing to prove it! So please, we invite you to spend a few minutes with us here, and…

✓ CHECK US OUT…

✓ Hydrostatic Bearing Hydraulic Actuator

State-of-the-art features on L.A.B. Actuator include self-centering hydrostatic bearing, absolutely no piston rings on high-pressure seals, truly effective built-in overstroke damping cushions, and low distortion design. What do these features mean to YOU? They mean that L.A.B. Actuators offer the following advantages over less-sophisticated designs:

✓ Superior protection against catastrophic failure that, with other actuators, is often caused by off-center payloads or sudden power loss.

✓ Optimal accuracy and test repeatability because L.A.B.’s piston rod is guided by pressurized oil bearings with no inherent friction.

✓ Low operating costs because L.A.B. Actuators last longer and require less maintenance than the competition’s actuators.

✓ Vibration Table

L.A.B. Vibration Tables are constructed of high-strength aluminum or magnesium and are specially welded and stress-relieved. Utilizing advanced Finite Element Analysis and Computer Aided Design techniques, L.A.B. will build YOU a table that:

✓ Provides uniform consistency of vibration across its entire surface;

✓ Eliminates erroneous distorted test results throughout YOUR entire test range;

✓ Is any size or shape YOUR test requirements dictate.

L.A.B.’s welded tables are the no-compromise solution. Weldment allows us to optimize the relationship between cost and performance for YOUR application, unlike the competition’s one-size-fits-all cast designs.
**Hydraulic Power Supply with Service Manifold**

The computer-controlled L.A.B. Hydraulic Power Supply and its accompanying Hydraulic Service Manifold are specifically configured to provide YOUR system with:

- Consistently clean, temperature-controlled and pressure-regulated oil supply which assures longer system life;
- Fail-safe protection and controlled shutdown in case of over-temperature or low oil level, both of which allow for unattended operation of the system;
- Remote-control of the HPS from the system control panel which permits it to be isolated away from the vibration table for thermal and acoustical reasons;
- A filter indicator to tell the system operator if and when the filter needs replacing.

**Reaction Mass System**

The Reaction Mass System, consisting of a solid steel mass mounted on a hydraulic damped air-mount suspension (original copy: suspension) system, isolates vibration forces from the surrounding structures. L.A.B.'s Reaction Mass Systems are individually sized by our design engineers to give YOU optimal overall system performance. Benefits of an L.A.B. Reaction Mass include:

- Minimized floor loading which allows the Vibration System to be mounted on a standard commercial grade concrete floor;
- Higher performance for lower cost through optimization of the Reaction Mass's size which allows a smaller Hydraulic Power Supply to be used;
- Special engineering services available for very large Vibration Systems, which may require seismic bases, permanent foundations, sub-floor pit configuration, and above-floor, access platforms.

**Hydraulic Vibration System Controller**

L.A.B. engineers select the best digital, closed-loop vibration controller for YOUR particular application. Typically, these state-of-art systems provides:

- A user-friendly interface;
- Closed-loop control & specimen monitoring;
- Sine sweep and dwell capability
- Random vibration test capability;
- Resonance search and detection
- Road time history replication
- Easy report generation

L.A.B.'s customer-focused, individualized approach to the Controller selection process ensures YOU will get YOUR test requirements met most completely at the best value possible. Don't just take our word for it (or theirs). Put us head-to-head with the competition!
CHECK US OUT… Only L.A.B. will…

A Hydraulic Vibration System that Works for YOU! And, We’ll Guarantee It!!

- Check the tests YOU need to perform and L.A.B. will build YOUR Hydraulic Vibration System According:
  - ISTA Pre-Shipment Tests (including ISTA 3A)
  - Repetitive Bounce Tests
  - Resonance Detection
  - Package Design/Evaluation
  - Product Development
  - HM-181- Revision to the DOT’s Hazard Material Regulation
  - ASTM D 999 – Vibration Testing of Shipping Containers
  - ASTM D 3580 – Vibration (Vertical Sinusoidal Motion) Test of Products
  - ASTM D 4169 – Performance Testing of Shipping Container (Elements D, E, F)
  - ASTM D 4728 – Random Vibration Testing of Shipping Containers
  - MIL-STD-810 Vibration

INNOVATIVE TECHNOLOGY

L.A.B. is a world leader in the design and manufacture of dynamic testing systems, which provide accurate determination of both:

- Package duration, and
- Product structural integrity

With nearly 11,000 shock, drop, vibration and compression testing systems worldwide, L.A.B. continues to establish its leadership through innovative design, advanced engineering, and quality manufacturing.

TRADITIONAL SERVICE

At the core of our process is a total commitment to customer satisfaction through our personalized approach to traditional service. L.A.B. provides:

- A service engineer to perform final system connections, alignments, start-up, and final calibration;
- Training of your personnel in the safe use and proper maintenance of the equipment;
- Long-term service & maintenance performed by L.A.B. technicians.

L.A.B. Equipment, Inc.
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P: 630.595.4288 • F: 630.595.5196
E-mail: sales@labequipment.com Web: www.labequipment.com
### Standard Field-Test™ Configurations

<table>
<thead>
<tr>
<th>Model</th>
<th>FT-24</th>
<th>FT-36</th>
<th>FT-48</th>
<th>FT-60</th>
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<tbody>
<tr>
<td><strong>Table Size</strong></td>
<td>24&quot;x24&quot; (600x600 mm)</td>
<td>36&quot;x36&quot; (910x910 mm)</td>
<td>48&quot;x48&quot; (1220x1220 mm)</td>
<td>60&quot;x60&quot; (1520x1520 mm)</td>
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<tr>
<td><strong>Maximum Stroke (Peak to Peak)</strong></td>
<td>4&quot; (100 mm)</td>
<td>4&quot; (100 mm)</td>
<td>4&quot; (100 mm)</td>
<td>4&quot; (100 mm)</td>
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<tr>
<td><strong>Actuator Stall Force</strong></td>
<td>5,000 lbs (2,268 kg)</td>
<td>5,000 lbs (2,268 kg)</td>
<td>5,000 lbs (2,268 kg)</td>
<td>8,000 lbs (3,629 kg)</td>
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<tr>
<td><strong>One G Supports</strong></td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td><strong>Servo-Valve Flow</strong></td>
<td>10 GPM</td>
<td>10 GPM</td>
<td>10 GPM</td>
<td>15 GPM</td>
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<tr>
<td><strong>Hydraulic Power Supply Size</strong></td>
<td>15 HP</td>
<td>15 HP</td>
<td>15 HP</td>
<td>30 HP</td>
</tr>
<tr>
<td><strong>Load Capacity</strong></td>
<td>1,000 lbs (454 kg)</td>
<td>1,250 lbs (567 kg)</td>
<td>2,000 lbs (907 kg)</td>
<td>3,000 lbs (1,361 kg)</td>
</tr>
</tbody>
</table>

**Typical Sine Performance Curves**

(the below system performance curves show typical performance with an infinite reaction mass.)

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**Optional Equipment**

- **Reaction Masses** from 3,000 lbs (1,361 kg) to 12,000 lbs (5,443 kg) isolate vibration forces from surrounding structures with a tuned pneumatic suspension system and hydraulic dampers.

- **Test Fixture Set** allows easy specimen attachment to the vibration table.

- **Stacking Fences** maintain shipping container alignment during testing. The fences consist of four welded aluminum structures with slotted adjustable base plates.

- **Custom Systems** are available for heavier payloads, larger displacement or velocity, and broader...