

Feature Focus: Enhanced Shock Capabilities

When specifying a new electrodynamic shaker, it is common for a high-force shock specification to require a larger, more powerful vibration system than required by the random and sine specifications, significantly driving up the price point. Thermotron has a cost effective, alternative solution.

By altering the electromagnetic response of our armatures, Thermotron can tailor any of its electrodynamic shakers to match specific shock tests without altering the vibration test system's random and sine capabilities. Instead of moving to a larger electrodynamic shaker, extreme shock requirements can often be accommodated for a fraction of the cost by adding one or two inverters. End result: Better ROI and lower cost of ownership on a single vibration system that can run multiple tests.

One example of this modification is the DSX-8000/16-960/5 shaker model. This electrodynamic shaker model was created for an automotive customer that needed an 8,000 force-pound random rating, but also needed to drive a 200 pound mass (including the sliptable) through the GMW3172 test (a 100g, 11 msec half-sine shock; this system is also ideal for similar 10 msec tests used by Ford, Mazda, and Toyota). Other electrodynamic shaker manufacturers have fulfilled this specification with a 20,000 force-pound electrodynamic shaker at double the cost.

Beyond the capital cost of the system, the larger electrodynamic shaker would likely have needed three times the electrical utility, taken up significantly more floor space, and required a water-cooling system utility. Thermotron's solution did not need any of these items, making it a more cost effective solution.

Thermotron engineers are committed to finding optimal solutions for all environmental and vibration testing needs. Contact us to see how we can help you with a testing solution.

