

Vibration & Shock Test System

CAPABILITY SHEET - ELECTRODYNAMIC VIBRATION & SHOCK - ENGINEERED TO ORDER

THE SYSTEM

WHAT	A vibration and shock test system that reproduces the ride a product endures - transport, launch, service - and proves it survives, to MIL-STD-810, IEC 60068 and ECSS.
MACHINE	An electrodynamic shaker (force to ~100 kN) with power amplifier, closed-loop vibration controller, horizontal slip table and head expander, on a seismic-mass foundation.
OUR ROLE	The shaker, amplifier and controller are bought-in; Neometrix engineers the system - foundation, slip table, head expander, fixtures, safety and controls.

REPRODUCE THE ENVIRONMENT

RANDOM	Real environments are random, not neat sines. Random vibration reproduces the measured spectrum (a PSD) under closed-loop control - the core of a real qualification.
SINE + SHOCK	Sine sweep and dwell with resonance search, sine-on-random, classical shock (half-sine, sawtooth) and shock response spectrum (SRS) - the full set of test types.
CONTROL	It is a control problem: accelerometers close the loop so the table matches the reference - no over-testing (breaks good units) or under-testing (passes bad ones).

GET IT RIGHT

FIXTURES	A fixture can lie - a poor one adds its own resonances and distorts the test. Slip tables, head expanders and rigid fixtures are core engineering, not accessories.
COMBINED (HALT/HASS)	Mount the shaker to a climatic chamber for vibration at temperature and humidity (HALT/HASS) - it precipitates failures that vibration or temperature alone never reveal.
THREE AXES	A head expander for the vertical axis and a horizontal slip table for the two horizontal axes, so a real product is excited the way it will be in service.

DISTINCTNESS & ENGAGEMENT

THE FAMILY	The dynamics leg of our environmental-qualification family - alongside the climatic chambers, the EMI/EMC lab and the thermal-vacuum chamber. The complete suite.
NOT A DYNO	Distinct from a chassis dynamometer (road load) and a snubber/shock-arrestor test facility (hydraulic dampers) - this is electrodynamic vibration and shock qualification.
ENGAGEMENT	Send the specimen, the test levels and the standard to sales@neometrixgroup.com for a clause-by-clause compliance matrix in two working days.

DEFENCE PROGRAMMES DESK

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