Spring Testing Machine

CAPABILITY SHEET · LOAD · MEASURE · RELEASE · RECORD · ENGINEERED TO ORDER

THE ONE IDEA

PRINCIPLE	A spring's rate is the easy number. Whether it comes back is the one that decides its life.
WHY IT MATTERS	A spring that passes its rate once can still take a permanent set, or fail after many cycles, in ways a single reading under load will never show.

THE MACHINE

FRAME	A load frame with a screw or servo-driven crosshead, built stiff enough that its own flex never enters the reading.
LOAD CELL	Matched to the spring under test, not fixed to the frame's own maximum, so a light spring is read as carefully as a heavy one.
FIXTURES	Platens for compression, hooks for extension, and a torque arm for torsion, matched to the spring's own ends.
RECORD	Load and position logged together throughout, so the rate, the set after release, and, if cycled, the fatigue life all come from data.

THE TEST

ORDER	Mount, zero, load, hold and read, release and recover, record and cycle. The spring is always released and left to find its own length before the test is called complete.
LIMITS	Every result is set against the limits in the spring's own drawing, which the customer provides.

CONFIGURATIONS

BENCH MACHINE	One fixture, for static rate and set testing.
FATIGUE RIG	Built to cycle a spring for endurance.
MULTI-MODE RIG	Compression, extension and torsion fixtures on one frame.

STANDARDS & SCOPE

STANDARDS	EN 13906-1, EN 13906-2 and EN 13906-3 are the public references for compression, extension and torsion spring design, and ISO/IEC 17025 for calibration.
SCOPE BOUNDARY	This is the machine built around a spring's own rate, set and fatigue life. It is not a general load frame, not a single-blow impact test, and not a test of a complete suspension unit.
STATUS	Neometrix has quoted against successive spring testing machine requirements, and no delivered spring testing machine is claimed.

DEFENCE PROGRAMMES DESK

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