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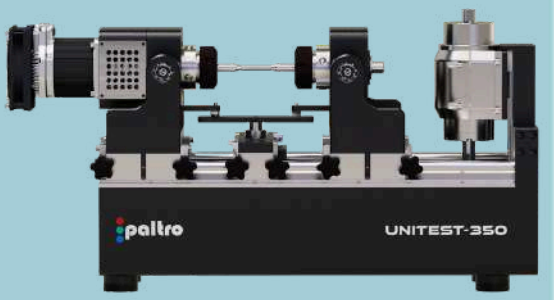
Building industry leading test platforms to automate sensing and improve measurements by reducing human errors.



UT-350 Rotating Bending Fatigue Tester

UniTest 350 (UT-350) is a powerful, yet compact and modular test system suited for a variety of mechanical and fatigue tests. The UT-350 is a fully automated desktop instrument that can perform standardized tests like the ASTM/DIN/ISO as well as comfortably execute fully custom test procedures.

The UT-350 is the only truly fully automatic system where everything, including loading, test termination and failure detection are all fully automated.

The Rotating Beam Fatigue Tester is used to evaluate the mechanical behaviour of materials and machine parts subjected to stresses, which continuously or repeatedly alternate about a mean value of zero between positive and negative values of equal magnitude. Software controlled automatic loading system applies a wide range of loads. The sample is made to rotate, and each revolution corresponds to one cycle of stress (S). Motor stops when specimen fails. Number of rotations (N) to failure is recorded. Rotating beam fatigue testing machine facilitates testing of materials for the generation of S-N curve from which endurance limit can be determined in accordance with ISO 1143 standard.

Features

- Single point (cantilevered) and four point dual pivot (RBFT) testing configurations available
- Accepts a wide range of specimen diameters and lengths using different collets
- Modular design to future-proof your investment (several options can be upgraded after purchase)
- Corrosive fluid testing with recirculating module
- Fully automatic operation
- High precision load and speed control
- Microprocessor based system controls
- PC based control and LabIQ data acquisition
- User configurable test sequences for custom tests
- Plug-and-play functionality
- Fast interchange of all sensors for ease of maintenance
- Specimen failure detection and auto-stop functionality
- Load and speed data acquisition for entire test duration
- Quick report generation and S-N plotting options
- Safety enclosure around test area with interlock

UT-350
Rotating Bending Fatigue Tester

Single point configuration

Safety enclosure

LabIQ test interface

- Load: 50 to 500 N (cantilever), 50 to 1000 N (four-point), other load ranges possible
- Bending moment: 5 to 50 Nm (cantilever), 2.4 to 48 Nm (four-point), as per standard specimen geometry
- Bending stress: 200 to 2000 MPa (cantilever), 95 to 1900 MPa (four-point), as per standard gage diameter
- Sample: Round bar with neck (as per standard drawing)
- Speed: 1 to 3000 rpm
- Number of cycles: counter upto 99,999,999 (higher cycles available)

Options

- Corrosion cell
- Liquid dispensing module

Specimen Sizes

- Geometry: Round bar, hourglass
- Length 102 to 150 mm, depending on configuration
- Gage diameter: 6.35 mm
- Gripping diameter: 12.7 mm, variable

Power Requirements

- Electrical: 110–230 VAC, 50/60 Hz, 1 Ph

Weight & Dimensions

- Net dimensions: 1000 × 500 × 600 mm
- Net weight: 70 kg

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