



The Four-Point Rotating Bending Fatigue Testing Machine is a high-precision system designed to evaluate the fatigue strength of materials under fully reversed bending loads. With a versatile speed range, advanced control options, and robust construction, it is suitable for both research and industrial applications.

## Technical Specifications

### Loading Type

- Rotating bending (fully reversed,  $R = -1$ )

### Number of Load Points

- **4-point configuration:** 2 supports + 2 loading arms

### Maximum Bending Moment

- 10 Nm to 100 Nm

### Speed Range

- 500 – 10,000 RPM

### Drive System

- High-performance **AC servo motor** or variable-speed motor

### Load Application

- Dead weights/servo-controlled actuator

### Specimen Size Range

- Diameter: **6 – 12 mm**

*Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.*



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- Gauge length: **30 mm typical**

**Fatigue Life Range**

- $10^4$  to  $10^{10}$  cycles

**Cycle Counter**

- **Digital/Programmable** with auto-stop function

**Fracture Detection**

- Automatic stop on specimen failure (integrated crack detection switch)

**Cooling System**

- **Optional fan or air jet** for high-speed tests

**Machine Frame**

- Heavy-duty **steel** or **cast aluminum enclosure** for stability and low vibration

**Software Integration**

- PC-based data acquisition and analysis

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