



## Application

The Refabricated Bending Moment Apparatus is designed for experimental determination of beam deflection under applied loads. The setup is suitable for studying bending behavior of simply supported beams and is widely used in engineering laboratories for strength of materials experiments.

## Type

Mechanical Bending Moment Apparatus with Dial Gauge

## Operating Principle

The apparatus measures deflection of a beam subjected to incremental loading. Deflection is measured using a precision mechanical dial gauge mounted on a rigid support structure.

## Technical Specifications

### Beam Support Condition

- Freely Supported Beam (Simply Supported Configuration)

### Dial Gauge

- Type: Mechanical Dial Gauge
- Measurement Range: 0–10 mm (minimum) or suitable for laboratory deflection measurements
- Least Count: 0.01 mm or better
- Mounting: Dial gauge fixed to a rigid horizontal mounting bar

### Beam / Test Bar

- Type: Detachable metallic test bar
- Construction: Lightweight yet rigid
- Suitable for repeated loading cycles

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



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- Material Options:
  - Aluminum Alloy (lightweight, corrosion-resistant)
  - Mild Steel

### Support Structure

#### Support Towers:

- Two vertical towers positioned symmetrically
- Designed to hold and align the dial gauge mounting bar

#### Stand / Base Frame:

- Rigid metallic construction
- High structural stability

#### Base Support:

- Pin-point type supports
- Ensures steady positioning and accurate load distribution

### Load Application System

- Standard laboratory load hangers
- Slotted weights for incremental loading
- Maximum Load Capacity: As per beam design and standard laboratory requirements

### Performance & Stability

- Designed for standard campus and laboratory experiments
- No wobbling or vibration during loading
- Stable and accurate deflection measurement

### Maintenance

- Low maintenance design
- Easy calibration
- Minimal risk of mechanical failure

### Finish

- Powder-coated or corrosion-resistant surface finish
- Durable and suitable for long-term laboratory use

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