

## Three-Point Flexure Fixture for Plastics

Built to ISO 178 — Plastics — Determination of flexural properties



### OVERVIEW

Three-point bend fixture for determining the flexural properties of rigid and semi-rigid plastics. An R5 loading edge applies force at mid-span while two R5 supports slide along a graduated beam, allowing the span to be set quickly to the specimen thickness ratio required by the standard.

### KEY FEATURES

- R5 loading edge and R5 supports per ISO 178 geometry
- Supports slide along a beam with engraved millimetre scale for fast span setting
- Symmetric scale reads directly from the centerline for accurate centering
- Quick-release pin connections on loading edge and base
- Supplied with adapters to suit your load frame (clevis or threaded)

### TECHNICAL SPECIFICATIONS

|                     |                                                            |
|---------------------|------------------------------------------------------------|
| Test method         | Three-point flexure                                        |
| Test type / loading | Compression-driven bending at mid-span                     |
| Specimens           | Preferred 80 × 10 × 4 mm bars; other sizes per standard    |
| Load capacity       | 5 kN standard; higher capacities on request                |
| Fixture material    | Hardened steel loading edges; aluminium/steel support beam |
| Contact surfaces    | R5 loading edge, R5 supports; R2 supports available        |
| Span                | Adjustable along graduated beam; approx. 0–200 mm shown    |
| Machine connection  | Pin or threaded adapter, to suit customer frame            |

### APPLICATIONS

- Moulded and extruded thermoplastics
- Fibre-reinforced plastic compounds
- Thermosets and laminates
- Material qualification and QC

### ABOUT THE STANDARD

ISO 178 determines the flexural behaviour of rigid and semi-rigid plastics, including fibre-reinforced compounds, in three-point bending. A bar specimen supported near its ends is deflected at constant rate at mid-span. Results include flexural strength, flexural modulus and the stress-strain relationship, with span normally set at 16 times specimen thickness.

**Ordering & customization:** Specify specimen dimensions, required span range, support radius (R2 or R5) and test machine connection when ordering.

Specifications are typical and may vary by configuration; confirm at time of quote. Users should refer to the current edition of the standard for test procedures. Part ref. UGC-ISO178-BF