Third-Point Beam Fixture for Fiber-Reinforced Concrete

Built to ASTM C1609 — Standard Test Method for Flexural Performance of Fiber-Reinforced Concrete (Using Beam With Third-Point Loading)



OVERVIEW

Third-point flexure fixture for fiber-reinforced concrete beams per ASTM C1609. Rolling supports and a two-point steel loading head bend the beam while a yoke-mounted transducer measures net mid-span deflection, giving first-peak strength, residual strengths and toughness under closed-loop deflection control.

KEY FEATURES

- Third-point loading head with rolling, rotating load points
- Supports free to rotate per C1609 requirements
- Yoke for net deflection measurement at mid-span
- Adjustable span for standard beam sizes
- Supplied with adapters to suit your load frame (clevis or threaded)

TECHNICAL SPECIFICATIONS

Test method	Third-point flexure of FRC beams
Test type / loading	Four-point (third-point) bend, deflection control
Specimens	Concrete beams per ASTM C1609
Load capacity	100 kN standard; higher capacities on request
Fixture material	Steel, corrosion-resistant finish
Loading members	Rolling, rotating supports and load points
Machine connection	Clevis pin or threaded adapter, to suit customer frame
Compatible frames	Closed-loop, deflection-controlled test machines

APPLICATIONS

- Steel and synthetic fiber concrete
- Slabs-on-ground and precast design
- Fiber dosage and product comparison
- Specification compliance testing

ABOUT THE STANDARD

ASTM C1609 evaluates the flexural performance of fiber-reinforced concrete using a simply supported beam with third-point loading under closed-loop deflection control. Results include first-peak and peak strengths, residual strengths at specified deflections and toughness, reflecting the post-cracking load-carrying contribution of the fibers to the cracked section.

Ordering & customization: Specify beam size, span, deflection yoke requirements, capacity 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-C1609-BF