ASTM C393 Bend Fixture

Sandwich Beam Flexure Fixture for Core Shear Testing

Built to ASTM C393 — Standard Test Method for Core Shear Properties of Sandwich Constructions by Beam Flexure



OVERVIEW

Beam flexure fixture for determining the core shear properties of flat sandwich constructions. The sandwich beam is supported on two lower supports and loaded through one or two upper loading bars, producing transverse shear in the core. Wide, padded loading bars spread load to avoid local facing indentation.

KEY FEATURES

- Three-point and four-point loading configurations from one fixture
- Adjustable support span on a graduated base beam
- Wide loading bars with optional pads to limit facing indentation
- Rollers free to rotate for reduced friction at supports
- Supplied with adapters to suit your load frame

TECHNICAL SPECIFICATIONS

Test method	Sandwich beam flexure, three- or four-point
Test type / loading	Quasi-static flexure inducing core shear
Specimens	Rectangular sandwich beams per ASTM C393 geometry
Load capacity	10 kN standard; higher capacities on request
Fixture material	Hardened tool steel, corrosion-resistant finish
Loading members	Hardened bars/rollers with optional load-spreading pads
Machine connection	Clevis pin or threaded adapter, to suit customer frame
Compatible frames	Electromechanical and servo-hydraulic universal test machines

APPLICATIONS

- Honeycomb and foam-core sandwich beams
- Aerospace and marine composite panels
- Core material qualification
- Bond and facing quality evaluation

ABOUT THE STANDARD

ASTM C393 determines core shear ultimate strength and, with additional data, core shear yield strength of flat sandwich constructions loaded in flexure. The beam is tested in three-point or four-point configuration, and the same set-up can be used to evaluate facing strength in other spans. It covers honeycomb, foam and balsa cores with composite or metallic facings.

Ordering & customization: Specify span(s), loading configuration, beam width and thickness, required 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-C393-BF