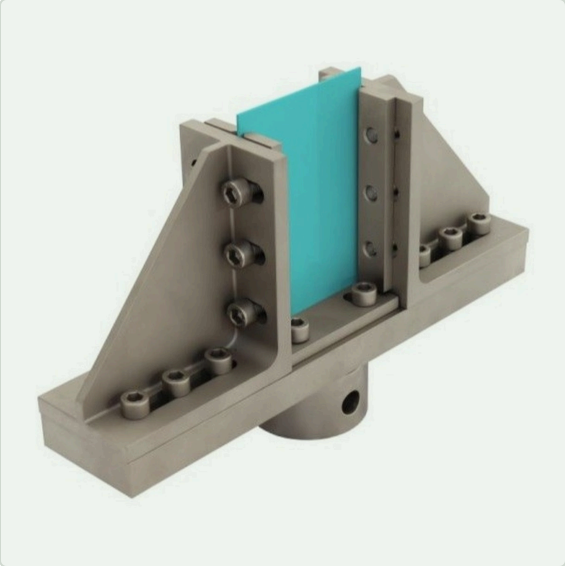
Compression After Impact (CAI) Fixture and Platens

Built to ASTM D7137 — Standard Test Method for Compressive Residual Strength Properties of Damaged Polymer Matrix Composite Plates



OVERVIEW

Compression after impact (CAI) support fixture and loading platens for testing damaged composite plates per ASTM D7137. Adjustable side and end supports stabilize the plate against buckling, while flat platens apply end compression so that failure initiates at the pre-existing impact or indentation damage.

KEY FEATURES

- Adjustable edge supports restrain the plate against buckling
- Knife-edge side supports allow rotation while preventing out-of-plane motion
- Flat, parallel platens deliver uniform end loading
- Open center for viewing damage and strain gauging
- Accommodates a range of plate thicknesses

TECHNICAL SPECIFICATIONS

Test method	Compression after impact (CAI)
Test type / loading	Static end-loaded compression
Specimens	Rectangular damaged composite plates per ASTM D7137
Load capacity	250 kN standard; higher capacities on request
Fixture material	Hardened steel, corrosion-resistant finish
Contact surfaces	Ground platens; adjustable side and end supports
Machine connection	Clevis pin or threaded adapter, to suit customer frame
Compatible frames	Electromechanical and servo-hydraulic universal test machines

APPLICATIONS

- Composite damage tolerance
- Aerospace laminate allowables
- Toughened resin development
- Impact damage screening

ABOUT THE STANDARD

ASTM D7137 measures the compressive residual strength of polymer matrix composite plates that have been damaged, typically by drop-weight impact per ASTM D7136 or quasi-static indentation per ASTM D6264. A rectangular plate is end-loaded in a fixture with edge supports that prevent buckling. Results quantify damage tolerance of laminates.

Ordering & customization: Specify plate thickness, required capacity and test machine connection.

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-D7137-CP