Compression Platens for CLC Composite Testing

Built to ASTM D6641 — Standard Test Method for Compressive Properties of Polymer Matrix Composite Materials Using a Combined Loading Compression (CLC) Test Fixture



OVERVIEW

Precision-ground compression platens for loading a combined loading compression (CLC) fixture per ASTM D6641. Flat, parallel platens deliver an even end load to the fixture, which transfers it into the composite specimen through a combination of end loading and shear loading at the clamped faces.

KEY FEATURES

- Hardened, precision-ground faces held flat and parallel
- Even end loading of CLC fixture blocks for accurate results
- Large face diameter accommodates CLC fixtures and other end-loaded tools
- Optional spherical seat for alignment on lower-precision frames
- Threaded or clevis adapters to suit customer load frame

TECHNICAL SPECIFICATIONS

Test method	Combined loading compression (CLC)
Test type / loading	Static compression through CLC fixture
Specimens	Straight-sided laminates per ASTM D6641, in CLC fixture
Load capacity	100 kN standard; higher capacities on request
Platen material	Hardened tool steel, ground flat and parallel
Contact surfaces	Precision-ground platen faces
Machine connection	Clevis pin or threaded adapter, to suit customer frame
Compatible frames	Electromechanical and servo-hydraulic universal test machines

APPLICATIONS

- CLC compression of composite laminates
- Unidirectional and cross-ply compressive strength
- Aerospace material allowables
- Composite R&D and QC labs

ABOUT THE STANDARD

ASTM D6641 determines the compressive strength and stiffness of polymer matrix composites using a combined loading compression fixture. An untabbed or tabbed straight-sided specimen is clamped in the fixture so load enters partly through the ends and partly by shear at the clamped faces, reducing end crushing. The fixture is compressed between flat platens.

Ordering & customization: Specify platen diameter, required capacity, fixed or spherically seated lower platen and test machine connection. Matching CLC fixture available.

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-D6641-CP