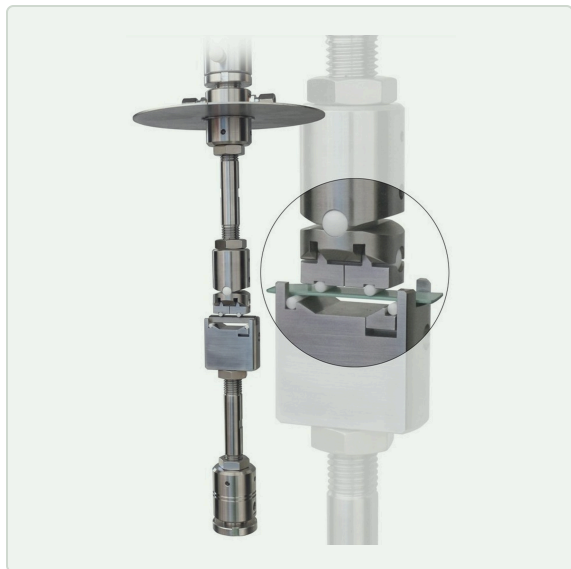


# ASTM C1211 High-Temperature Fixture

## High-Temperature Flexure Fixture for Advanced Ceramics

Built to ASTM C1211 — Standard Test Method for Flexural Strength of Advanced Ceramics at Elevated Temperatures



### OVERVIEW

High-temperature three- and four-point flexure fixture for advanced ceramics per ASTM C1211. Load train and fixture components are made from refractory ceramics suited to furnace operation, with articulating bearings so specimens are loaded correctly and consistently at the elevated test temperature.

### KEY FEATURES

- Refractory ceramic fixture components for furnace operation
- Articulating bearing design maintains correct load distribution
- Spans configured to standard specimen sizes
- Push-rod load train designed for use through a furnace
- Compatible with split-tube or box furnaces on request

### TECHNICAL SPECIFICATIONS

|                           |                                                               |
|---------------------------|---------------------------------------------------------------|
| <b>Test method</b>        | Three- and four-point flexure at elevated temperature         |
| <b>Test temperature</b>   | Elevated, to suit fixture material and furnace                |
| <b>Specimens</b>          | Rectangular bars per ASTM C1211 configurations                |
| <b>Load capacity</b>      | 5 kN standard; higher capacities on request                   |
| <b>Fixture material</b>   | Silicon carbide or alumina, per temperature range             |
| <b>Loading members</b>    | Ceramic bearing cylinders                                     |
| <b>Machine connection</b> | Push rods with adapters to suit customer frame and furnace    |
| <b>Compatible frames</b>  | Electromechanical and servo-hydraulic universal test machines |

### APPLICATIONS

- Silicon nitride and silicon carbide
- Ceramic matrix and oxide ceramics
- Hot-section and refractory components
- High-temperature materials R&D

### ABOUT THE STANDARD

ASTM C1211 determines the flexural strength of advanced ceramics at elevated temperatures in air or inert atmospheres, using rectangular bars in four-point or three-point flexure. It addresses fixture materials, furnace heating, temperature measurement and loading rate, since slow crack growth and creep can affect high-temperature strength.

**Ordering & customization:** Specify maximum test temperature, specimen configuration, furnace dimensions 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-C1211-HF