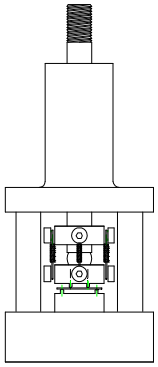
MONOTONIC EQUIBIAXIAL FLEXURAL STRENGTH (RING-ON-RING) & BIAXIAL FLEXURE TEST FIXTURE (CS)



Specimen:	Diameter	Up to 30mm round
	Thickness	Up to 1mm
Fixture:	Construction	High strength steel with protective black oxide
	Temperature	-120 to 250°F (-85 to 122°C)
	Mounting	12mm male clevis top, 1/2”-20 coupling bottom
	Capacity	1,000 lbs (4.4 kN)
	Weight	Approximately 13 lbs
	Dimensions	3” diameter x 12”
	Standard	Manufactured in accordance with ASTM C1499 & F394

Model No. ASTM.C1499.11 - Ceramic Monotonic Equibiaxial Flexure Fixture with Ceramic Biaxial Flexure Option
Ceramic Monotonic Equibiaxial Flexure loading specimen supports for specimens of the following dimensions - 30mm x 30mm (or 30mm round) x 1mm thick specimen dimensions
The fixture includes a 17.8mm diameter support ring with a 0.725mm height radius and load ring with 8.87mm diameter with a 0.785mm height radius . The sub-press consists of a circular base, three support columns, two linear bearings, a 1/2” diameter loading rod. The fixture is constructed from high strength steel with a protective black oxide finish in accordance with ASTM C1499.

Ceramic Biaxial Flexure - The 0.125” diameter loading balls are fixtured in a support plate centered on a 1” diameter. The loading head consists of a 1/16” diameter hardened and ground dowel pin. The sub-press consists of a circular base, three support columns, two linear bearings, a 1/2” diameter loading rod. The fixture is constructed from high strength heat treated steel with a protective black oxide oil finish in accordance with F394. ***Sub-press is used for either method.

MODEL NO. ASTM.C1499.11
ASTM, MONOTONIC, EQUIBIAXIAL, FLEX,

ACCESSORIES

ACC.C1499.1101 - 5 & 10mm Rings with 0.24mm R
ACC.C1499.1102 - 7 & 15mm Rings with 0.7mm R
ACC.C1499.1103 - 10 & 20mm Rings with 0.725mm R
ACC.C1499.1104 - 15 & 30mm Rings with 0.75mm R
ACC.C1499.1105 - 15 & 30mm Rings with 0.725mm R
ACC.C1499.1106 - Any Size Rings with Shaft and Collar Assembly

Lower fixture attachment is supplied with 1/2" -20 female coupling (Common adapter sizes include:)

Model No. M01S21 - 1/2" Male Clevis (Type B) to 1/2" -20 Threaded Stud
Model No. M02S21 - 5/8" Male Clevis (Type C) to 1/2" -20 Threaded Stud
Model No. M03S21 - 1.25" Male Clevis (Type D) to 1/2" -20 Threaded Stud
Model No. M12S21 - 12mm Male Clevis (Type O) to 1/2" -20 Threaded Stud
Model No. S36S21 - 1" -14 to 1/2" -20 Threaded Step Stud
Model No. LN21 - 1/2" -20 Threaded Locking Nut with Knurled OD

SPARE PARTS

SPA.C1499.1101 - Extra Set of (2) Bearings
SPA.C1499.1102 - Extra Set of (3) Springs
SPA.C1499.1103 - Extra Ball
SPA.C1499.1104 - Extra Collar
SPA.C1499.1105 - Extra 12mm (Type O) Male Clevis Adapter
SPA.C1499.1106 - Extra Round Dish Plate with (3) Divots (F394)
SPA.C1499.1107 - Extra Shaft with Pin (F394)
SPA.C1499.1108 - Extra Set of (6) 1/8" Diameter Balls (F394)

REFERENCE DOCUMENT AND TEST METHOD SCOPE:

http://www.astm.org/Standards/C1499.htm
ASTM C1499-15
Standard Test Method for Monotonic Equibiaxial Flexural Strength of Advanced Ceramics at Ambient Temperature
1.1 This test method covers the determination of the equibiaxial strength of advanced ceramics at ambient temperature via concentric ring configurations under monotonic uniaxial loading. In addition, test specimen fabrication methods, testing modes, testing rates, allowable deflection, and data collection and reporting procedures are addressed. Two types of test specimens are considered: machined test specimens and as-fired test specimens exhibiting a limited degree of warpage. Strength as used in this test method refers to the maximum strength obtained under monotonic application of load. Monotonic loading refers to a test conducted at a constant rate in a continuous fashion, with no reversals from test initiation to final fracture.
1.2 This test method is intended primarily for use with advanced ceramics that macroscopically exhibit isotropic, homogeneous, continuous behavior. While this test method is intended for use on monolithic advanced ceramics, certain whisker- or particle-reinforced composite ceramics as well as certain discontinuous fiber-reinforced composite ceramics may also meet these macroscopic behavior assumptions. Generally, continuous fiber ceramic composites do not macroscopically exhibit isotropic, homogeneous, continuous behavior, and the application of this test method to these materials is not recommended.
1.3 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.
1.4 This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.