SHEAR FIXTURES

Arcan Shear Test Fixture

Angle-adjustable Arcan fixture for shear and mixed-mode testing



OVERVIEW

An Arcan-type fixture for determining shear and combined shear-tension properties of composites, wood and bonded joints. The specimen is clamped between two semicircular halves with a series of pin positions, so the loading angle can be adjusted from pure shear to mixed-mode. Versions are available for composites at 50 kN and for clear wood at 20 kN.

KEY FEATURES

- Adjustable loading angle for shear and mixed-mode tests
- 50 kN version for composite materials
- 20 kN version for shear properties of clear wood
- Hardened, nickel-plated steel construction for long service life
- Extended temperature version from -60 to +120 °C

TECHNICAL SPECIFICATIONS

Test type	Arcan shear / mixed-mode
Max. load	20 kN or 50 kN
Loading angle	Adjustable
Coupling	Female clevis Ø 15.9 mm or Ø 31.8 mm; male Ø 35 mm (13 mm pin); others via adapter
Material	Steel, hardened, nickel-plated
Temperature range	0 … +70 °C; -60 … +120 °C version
Specimen	Arcan butterfly or block specimen (size on request)

AVAILABLE VERSIONS

Composite Arcan, 50 kN	-60 … +120 °C, male clevis Ø 35 mm, 13 mm pin
Angle-adjustable shear grip, 50 kN	0 … +70 °C, female clevis Ø 31.8 mm (1-1/4 in)
Clear wood Arcan, 20 kN	Female clevis Ø 15.9 mm (5/8 in)

APPLICATIONS

- Fiber-reinforced composites
- Clear wood
- Adhesive joints
- Mixed-mode research

Ordering & customization: Specify material and specimen geometry, required capacity, temperature range and the machine coupling.

Drawings available on request
Contact us for dimensional drawings or 3D models of this product.

Specifications are typical and may vary by configuration; confirm at time of quote. Custom versions, couplings and adapters available on request. Part ref. UGC-SF-040