SHOULDER & BUTTON HEAD GRIPS

# Fracture Mechanics Clevis Grips

Clevis grips for compact tension fracture toughness and fatigue crack growth testing



## OVERVIEW

Clevis grips for linear-elastic plane-strain fracture toughness and fatigue crack growth tests on compact tension (CT) specimens. The specimen is pinned between the clevis arms so load is applied through the loading holes, as specified in ASTM E399 and ASTM E647. Grips are available in several pin hole and gap sizes to suit specimen thickness and load range.

## KEY FEATURES

- Designed to ASTM E399 and ASTM E647 clevis geometry
- Pin loading of compact tension (CT) specimens
- Several pin hole and gap sizes for different specimen widths
- Clearance for clip-on crack opening displacement gauges
- Suited to static and cyclic (fatigue) loading
- High-temperature versions with protection shield on request

## TECHNICAL SPECIFICATIONS

| | |
|---|---|
| **Test type** | Fracture toughness (K_IC) and fatigue crack growth |
| **Specimen** | Compact tension (CT) specimens |
| **Pin hole / gap** | 6.35 / 13.08 mm, 12.7 / 25.4 mm, 15 / 16 mm, 19.18 / 42.16 mm |
| **Max. load** | Version-dependent; 5 kN for smallest version, others on request |
| **Material** | Steel, nickel-plated |
| **Coupling** | Female clevis Ø 15.9 mm (5/8 in) or Ø 40 mm, internal thread M12 × 1.25 or M27 × 2 |
| **Operation** | Manual, pin-loaded |

## AVAILABLE VERSIONS

| | |
|---|---|
| **Pin hole 6.35 mm, gap 13.08 mm** | Max. 5 kN, internal thread M12 × 1.25, base 25 × 25 mm |
| **Pin hole 12.7 mm, gap 25.4 mm** | ASTM E399, female clevis Ø 15.9 mm (5/8 in) |
| **Pin hole 15 mm, gap 16 mm** | ASTM E647, internal thread M27 × 2 |
| **Pin hole 19.18 mm, gap 42.16 mm** | Female clevis Ø 40 mm |
| **High-temperature version** | With protection shield, up to 1150 °C |

## APPLICATIONS

- Metals fracture toughness
- Fatigue crack growth rate
- Aerospace and power generation alloys
- Weld and material qualification

**STANDARDS** ASTM E399, ASTM E647

**Ordering & customization:** Specify the CT specimen width and thickness (pin hole and gap), the maximum load, static or fatigue use, test temperature and the coupling of your testing machine.

**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-SH-270