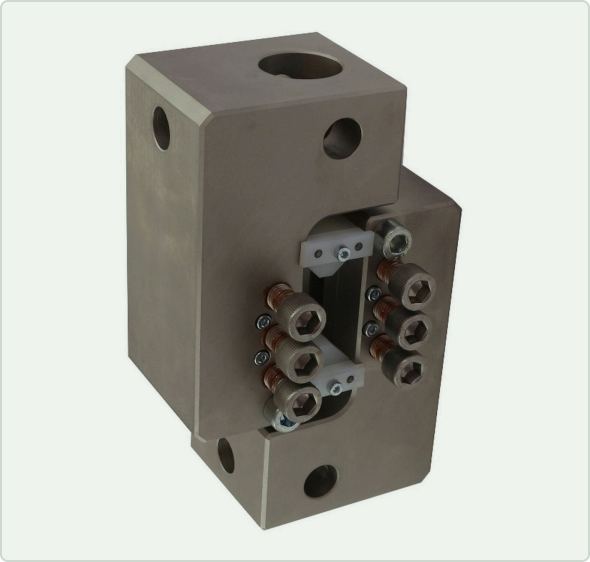
SHEAR FIXTURES

V-Notched Rail Shear Fixture

V-notched rail shear grips for composites per ASTM D7078



OVERVIEW

A pair of V-notched rail shear grips for the shear properties of composite materials to ASTM D7078. The V-notched specimen is bolted between serrated jaws on two rails and loaded in tension, producing a large, uniform shear zone. Available as 50 kN and 100 kN versions, supplied with nylon positioning tools for consistent specimen alignment.

KEY FEATURES

- Conforms to ASTM D7078 V-notched rail shear
- 50 kN and 100 kN versions
- Hardened 58 HRC serrated jaws, 1.2 × 45° pyramids
- Bolted specimen clamping at a defined tightening torque
- Nylon positioning tools included for consistent specimen alignment
- High-temperature version from -100 to +600 °C

TECHNICAL SPECIFICATIONS

Test type	V-notched rail shear, tension mode
Max. load	50 kN (75 kN clamping) or 100 kN (150 kN clamping)
Clamping torque	55 Nm (50 kN) / 120 Nm (100 kN)
Jaws	Hardened steel 58 HRC, pyramid serrated 1.2 × 45°
Coupling	Female clevis, Ø 31.8 mm (1-1/4 in) pin; 100 kN also Ø 40 mm; others on request
Material	Steel, nickel-plated
Temperature range	0 … +70 °C (others on request)
Weight	4 kg per grip

AVAILABLE VERSIONS

50 kN	Female clevis Ø 31.8 mm (1-1/4 in), 1 pair
100 kN	Female clevis Ø 31.8 mm or Ø 40 mm, 1 pair
High-temperature special, 20 kN	Hardened, TiAlN-coated; -100 … +600 °C; M16 female thread

APPLICATIONS

- Fiber-reinforced composites
- Composite laminates
- Aerospace materials
- Composite test labs

STANDARDS ASTM D7078

Ordering & customization: Specify capacity, the machine coupling and test temperature range.

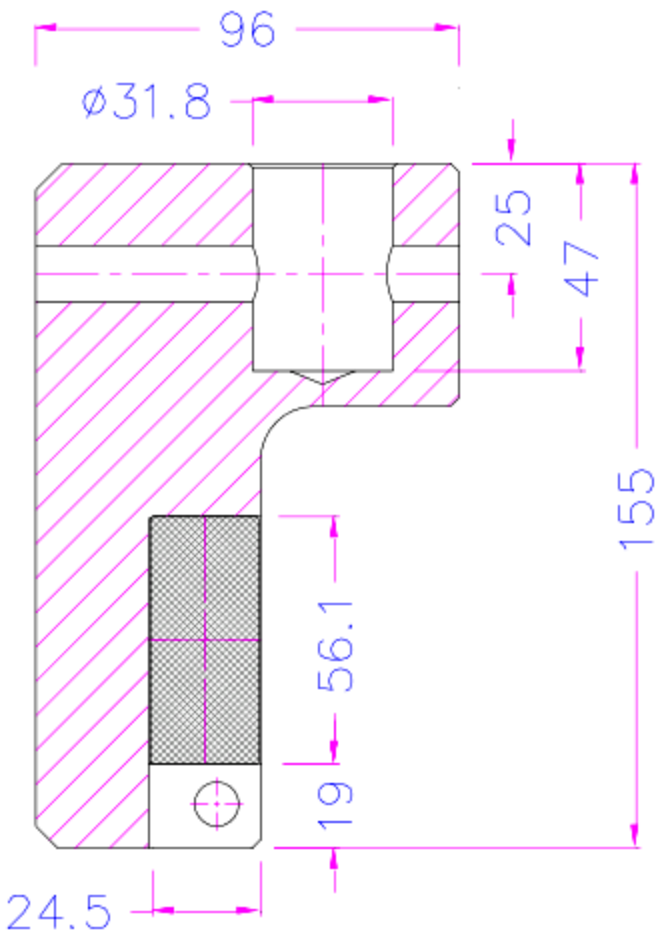
Dimensional drawings
See page 2. Certified drawings and 3D models available on request.

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-250

V-Notched Rail Shear Fixture

DIMENSIONAL DRAWINGS

FIG. 1



Dimensions in mm. Drawings are representative of the product family and may show optional versions or accessories; dimensions are for reference only and may change without notice. Certified dimensional drawings and 3D models are available on request.