

HIGH-TEMPERATURE EXTENSOMETERS

CP118413

The Instron® range of High-Temperature Extensometers are ideally suited for testing materials such as advanced composites, metals, and polymers at elevated temperatures. This series incorporates a capacitive sensor that does not require any cooling. The extensometers are supplied with a special sensor conditioner unit providing a 0-10 V output with exceptionally low noise.

These extensometers can be attached to round and flat specimens to perform tensile, compression, and cyclic tests.

PRINCIPLE OF OPERATION

The specimen displacement is measured using a capacitive sensor rather than strain gauges, providing the extensometer with the ability to withstand high temperatures without any active cooling. The dual-flexure design makes these units very durable and allows them to be left on the specimen through failure. The extensometers are easy to mount and feature integral springs that hold the unit on the test specimen.

The freestanding sensor conditioner produces a 0-10 V output that is connected to the strain channel of the testing system. The conditioner provides an electrical calibration signal so that the strain channel on the testing machine can be set up without the need for a mechanical calibrator.

FEATURES

- High-temperature operation to +600°C (+1100°F)
- High-accuracy capacitive sensor
- No cooling required
- Rugged dual-flexure design for strength and improved performance
- Gauge Length setting pin to establish accurate initial gauge length
- Meets or exceeds ASTM E83 class B-1 and
- ISO 9513 class 0.5
- Suitable for tension, compression, and cyclic testing
- Easily replaced, hardened tool steel knife edges
- Self-supporting on specimen
- Suitable for round or flat specimens
- Over-travel protection for rugged operation through specimen failure
- Freestanding signal conditioner with 0-10 V output



APPLICATION RANGE

- Static and cyclic tests up to 100 Hz
- Suitable for tension, compression, and cyclic tests on composites, high-temperature polymers, and metals

Note: The part numbers referenced in this document are suitable for Electromechanical machine options only. Please contact Instron for other systems, gauge lengths, measuring ranges, and extensometer options.

SPECIFICATIONS

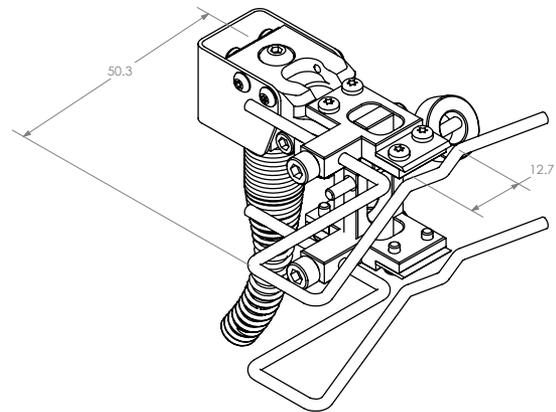
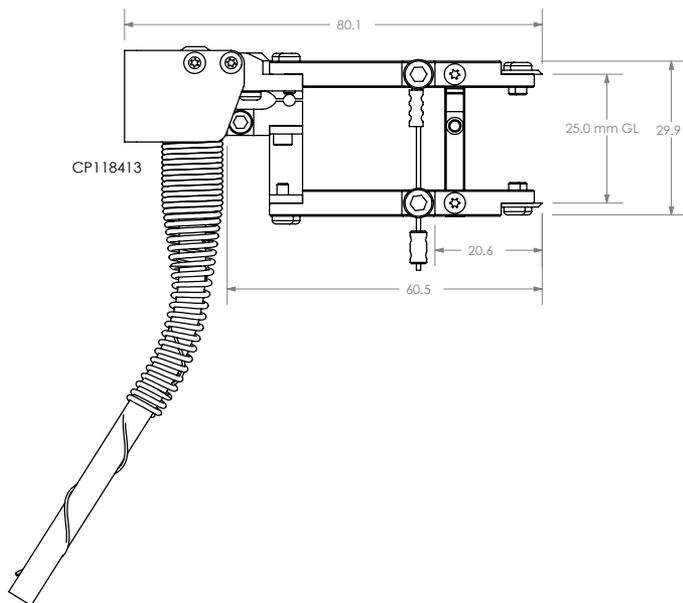
Gauge Length	mm	25
Axial Travel	%	+50 / -8

GENERAL SPECIFICATIONS

Temperature Range	Ambient to +600°C (+1100°F)
Specimen Size (Round)	Up to 15 mm (0.6 in) Diameter
Specimen Size (Flat)	Up to 50 mm (2.0 in) wide for specimens with thickness Up to 6.35 mm (0.25 in) and 19 mm (0.75 in) wide for specimens 6.35 (0.25 in) to 12.5 mm (0.5 in) thick
Classification	Meets or Exceeds ASTM E83 Class B1 and ISO 9513 Class 0.5
Operating Force	< 100 g Typical
Cable Length	0.7 m (2.5 ft) High-Temperature Cable, plus 1.5 m (5 ft) Room-Temperature Extension Cable



Sensor Conditioner Unit



www.instron.com



Worldwide Headquarters
825 University Ave, Norwood, MA 02062-2643, USA
Tel: +1 800 564 8378 or +1 781 575 5000

European Headquarters
Coronation Road, High Wycombe, Bucks HP12 3SY, UK
Tel: +44 1494 464646