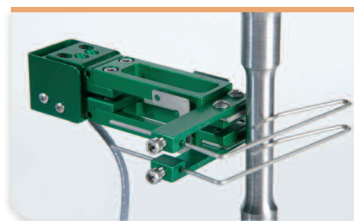


Very small and rugged, yet ultra-light weight, these units are widely

used for testing small and delicate samples. Ideal for many

biomedical tests, as well as for wire and thin sheet materials. Also

great for low cycle fatigue testing where short samples are used.



Model 3442 with 0.25 inch gauge length and 100% measuring range

extensometers will fit in the small space between grips, which usually results when small test samples are used.

The Model 3442 extensometers are strain gaged devices, making them compatible with any electronics designed for strain gaged transducers. Most often they are connected to a test machine controller. The signal conditioning electronics for the extensometer is typically included with the test machine controller or may often be added. In this case the extensometer is shipped with the proper connector and wiring to plug directly into the electronics. For systems lacking the required electronics, Epsilon can provide a variety of solutions, allowing the extensometer output to be connected to data acquisition boards, chart recorders or other equipment.

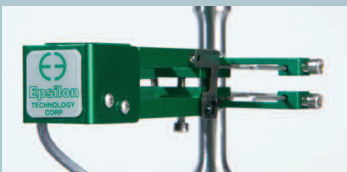
See the electronics section of this catalog for available signal conditioners and strain meters.

Extensometers for Composites Compression Testing

Models 3542 and 3442 extensometers can be furnished to clip directly onto composites compression fixtures, such as for ASTM D695. These use specially made quick attach kit wire forms for the test fixture. Consult the factory for specifics. Also see the Model 3542 extensometer.



Model 3442 with 6 mm gauge length and 10% measuring range



Model 3442 with 0.25 inch gauge length and 100% measuring range



Model 3442 with 1 inch gauge length and 5% measuring range (Special order)

Weighing as little as 8 grams, these tiny extensometers have very low operating force, resulting in low specimen contact force and influence. All use an Epsilon proprietary dual flexure design, which makes them very rugged for their size. Most are only 0.6 inches tall (15.25 mm). These

Features

- May be left on through specimen failure.
- Full bridge, 350 ohm strain gaged design for compatibility with nearly any test system.
- All models can measure in both tension and compression and can be used for cyclic testing.
- Mechanical overtravel stops in both directions.
- Standard units meet existing ASTM class B-1 and ISO 9513, class 0,5 requirements for accuracy.
- Hardened tool steel knife edges are easily replaced. A spare set comes with every extensometer.
- High and low temperature options extend operation from as low as -265 °C (-450 °F) to +200 °C (400 °F).
- Includes high quality foam lined case.
- Replaceable arms and spacers for ease of repair. This also allows changing the gauge length for different test requirements.
- Rugged, dual flexure design for strength and improved performance. Much stronger than single flexure designs, this also allows cyclic testing at higher frequencies.

SPECIFICATIONS

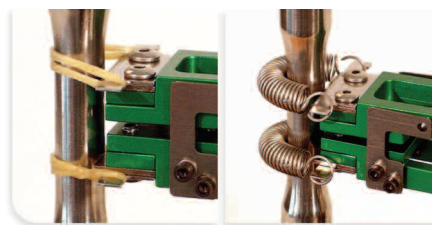
- Excitation: 5 to 10 VDC recommended, 12 VDC or VAC max.
 Output: 2 to 4 mV/V nominal, depending on model
 Linearity: 0.10% to 0.15% of full scale measuring range, depending on model
 Temperature Range: Standard (-ST) is -40 °C to +100 °C (-40 °F to 210 °F)
 Cable: Integral, ultra-flexible cable, 8 ft (2.5 m) standard
 Standard Quick Attach Kit: Fits round samples up to 0.5 inch diameter (12 mm) and flats to 0.5 inch thick by 1.0 inch wide (12 mm by 25 mm)
 Operating Force: 10 to 20 g typical

OPTIONS

- Adapter kits to change gauge lengths
 Connectors to interface to nearly any brand test equipment
 Special coatings and stainless steel knife edges available for biomedical tests.
 Shunt calibration module (see page 104)
 Specialty knife edges (see page 105)



Model 3442 with Compression Fixture



Optional rubber band and spring attachment options included with Model 3442 and 3542

ORDERING INFORMATION

Model 3442 Available Versions: ANY combination of gauge length, measuring range and temperature range listed below is available, except as noted. Other configurations may be available with special order; please contact Epsilon to discuss your requirements.

Gauge Length		Measuring Range	
U.S.A.		DESIGNATION	% STRAIN
-0025	0.250"	-005 ²	±5%
-0050	0.500"	-010	±10%
-0064	0.640"		
METRIC			
-003M ^{1,2}	3.0 mm	-020	+20%/-10%
-004M ^{1,2}	4.0 mm	-025	+25%/-10%
-005M ¹	5.0 mm	-050	+50%/-5%
-006M	6.0 mm	-100	+100%/-5%
-008M	8.0 mm		
-010M	10.0 mm		
-012M	12.0 mm		

Model Number 3442 - - - - -

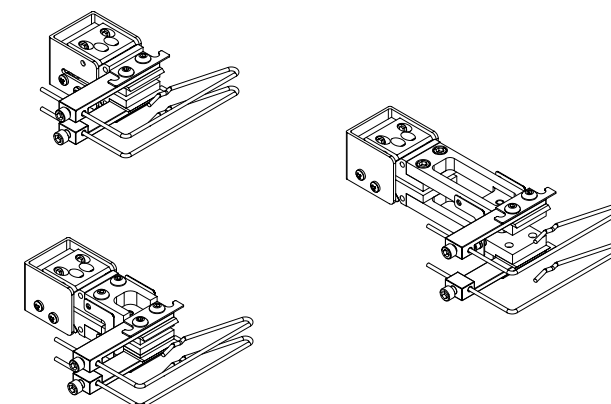
Temperature Range	
-LT	-265 °C to 100 °C (-450 °F to 210 °F)
-ST	-40 °C to 100 °C (-40 °F to 210 °F)
-HT1	-40 °C to 150 °C (-40 °F to 300 °F)
-HT2	-40 °C to 200 °C (-40 °F to 400 °F)
-LHT	-265 °C to 200 °C (-450 °F to 400 °F)

¹ Special order.

² 5% strain range not available in 3 or 4 mm gauge length versions.

Example: 3442-008M-010-ST: 8.0 mm gauge length, ±10% measuring range, standard temperature range (-40 °C to 100 °C)

Visit our website at www.epsilontech.com
 Contact us for your special testing requirements.



MODEL 3442 EXAMPLES