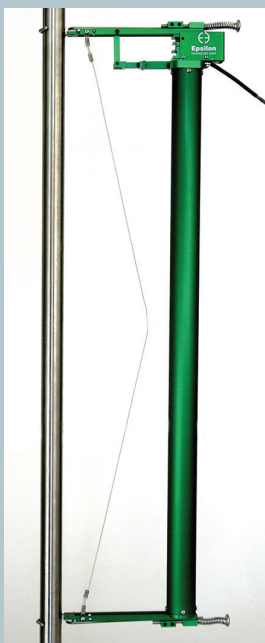


**Long gauge length extensometers with gauge lengths 100 mm**

**(4 inches) or greater for tensile and compression testing. These units**

**have been specially designed for long gauge length applications where**

**low level strain measurements are required.**



*Model 3542L with 500 mm  
gauge length and +10 mm/-6 mm  
measuring range*



*Model 3542L with 8 inch gauge  
length and +0.5 inch/-0.25 inch  
measuring range*

The dual flexure design makes the 3542L very rugged and insensitive to vibrations. These extensometers are designed for testing a wide range of materials including metals, plastics, composites and ceramics. Epsilon's Model 3543 is recommended for applications requiring long gauge lengths and larger measuring ranges.

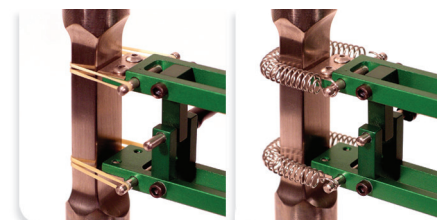
The Model 3542L comes standard with Epsilon's quick attach kit, making it easy to mount the extensometer on the test specimen. The quick attach kit can be removed, allowing mounting of the extensometer with springs or rubber bands.

The 3542L 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.

For gauge lengths less than 100 mm (4 inches), see Model 3542.

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



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

## 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 ASTM class B-1 requirements for accuracy. A test certificate is included. ISO 9513 class 0,5 test certificates are available upon request.
- 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 -270 °C to +200 °C (-454 °F to +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.
- Standard quick attach kit allows quick mounting to specimens.

## SPECIFICATIONS

<i>Excitation:</i>	5 to 10 VDC recommended, 12 VDC or VAC max.
<i>Output:</i>	2 to 4 mV/V, nominal, depending on model
<i>Linearity:</i>	≤0.15% of full scale measuring range
<i>Temperature Range:</i>	Standard (-ST) is -40°C to +100°C (-40 °F to 210°F) Optional (-LHT) is -270 °C to +200 °C (-454°F to 400 °F)
<i>Cable:</i>	Integral, ultra-flexible cable, 2.5 m (8 ft) standard
<i>Standard Quick Attach Kit:</i>	Fits round samples up to 25 mm diameter (1.0 inch) and flats to 12 mm thick by 31 mm wide (0.5 inch by 1.25 inch)
<i>Operating Force:</i>	Depends on model configuration, less than 30 g typically

## OPTIONS

- Quick attach kit wire forms for large specimens
- 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 120)
- Specialty knife edges (see page 100)



## ORDERING INFORMATION

Model 3542L 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.*

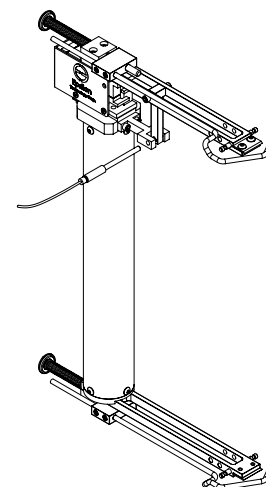
Gauge Length		Measuring Range	
METRIC		METRIC	
-100M	100.0 mm	-002M	±2.5 mm
-150M	150.0 mm	-006M	±6.0 mm
-200M	200.0 mm	-012M	+12.5 mm/-6.0 mm
-250M	250.0 mm		
-500M	500.0 mm	U.S.A.	
-600M	600.0 mm	-010T	±0.10"
		-025T	±0.25"
		-050T	+0.50"/-0.25"
U.S.A.			
-0400	4.000"		
-0600	6.000"		
-0800	8.000"		
-1000	10.000"		
-2000	20.000"		
-2400	24.000"		

Model Number 3542L- \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Temperature Range	
-LT	-270 °C to 100 °C (-454 °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	-270 °C to 200 °C (-454 °F to 400 °F)

Example: 3542L-200M-006M-ST: 200 mm gauge length, ±6.0 mm measuring range, standard temperature option (-40 °C to 100 °C)

Visit our website at [www.epsilontech.com](http://www.epsilontech.com)  
Contact us for your special testing requirements.



MODEL 3542L EXAMPLE