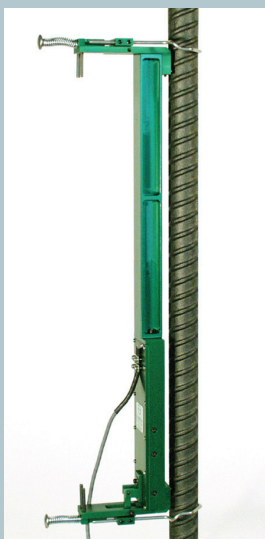


This model is available in gauge lengths from 50 mm (2 inches) and larger, with measuring ranges up to 100 mm (4 inches). The unique design separates into two halves and the extensometer may be left on through specimen failure. These extensometers are widely used where long samples and large measuring ranges are required. They are ideal for testing steel re-bar, weld joints, and wire materials.



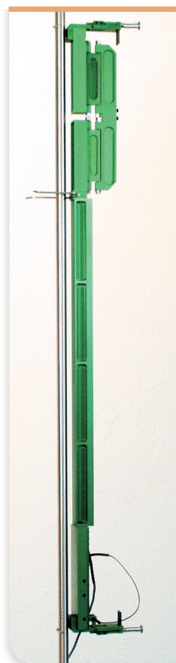
Model 3543 with 12 inch gauge length



Model 3543 with 100 mm gauge length



Model 3543-0400-200T-ST with 4 inch gauge length and +2 inch measuring range



Special Model 3543 with ability to work on test samples that twist up to 15° during the test

With over 15 years of proven reliability in the world's most demanding testing environments, the Model 3543 extensometer is designed to survive in those applications where standard axial extensometers would not. Designed by Epsilon, the Model 3543 was created to survive specimen failure by separating into two halves, thus preventing permanent damage to the module body. During operation, the upper half of the extensometer pulls out of the main body. Tapered measuring beams activate strain gaged flexures within the unit. This unique design allows long measuring ranges, yet retains compatibility with electronics for strain gaged transducers. These models offer high accuracy and are light weight but rugged, with low operating force. They are tension only units.

The units have hardened tool steel knife edges. Standard quick attach wires provided with the extensometer work on flat specimens up to 12 x 31 mm (0.5 x 1.25 inch) and on rounds up to 25 mm (1 inch) diameter. Optional quick attach kit wire forms are available for use on larger samples. See Model 3542L for long gauge lengths with smaller measuring ranges.

The Model 3543 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.

See the Model 3543 extensometer video

## Features

- **Specifically designed to be left on through specimen failure.** The unit is designed so that the two halves of the extensometer come apart to prevent damage at specimen failure.
- Full bridge, 350 ohm strain gaged design for compatibility with nearly any test system.
- All standard units meet ASTM class B-2 requirements for accuracy.
- Hardened tool steel knife edges are easily replaced. A spare set comes with every extensometer.
- High temperature options extend operation to +150 °C (300 °F).
- Includes high quality foam lined case.
- Replaceable arms and spacers for ease of repair. The optional gauge length spacers allow the gauge length of the extensometer to be easily increased for different testing requirements.
- Rugged design for reliable testing.
- Standard quick attach kit for quick mounting to specimens.

## SPECIFICATIONS

Excitation:	5 to 10 VDC recommended, 12 VDC or VAC max.
Output:	2 to 4 mV/V nominal, depending on model
Linearity:	≤0.15% of full scale measuring range
Temperature Range:	Standard (-ST) is -40 °C to +100 °C (-40 °F to 210 °F)
Cable:	Ultra-flexible cable 2.5 m, (8 ft) standard
Standard Quick Attach Kit:	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)
Operating Force:	125 g typical

## OPTIONS

Quick attach kit wire forms for large specimens  
 Spacers to change gauge lengths  
 Connectors to interface to nearly any brand test equipment  
 The 3543 is available with a twist option for use in applications where specimen twisting greater than 3° is expected. The 3543TW option can accommodate up to 15° of twist.  
 Gauge length spacers to change gauge lengths  
 Shunt calibration module (see page 120)  
 Specialty knife edges (see page 100)



## ORDERING INFORMATION

Model 3543 Available Versions: ANY combination of gauge length, measuring range and temperature range listed below is available, except as noted. Intermediate and longer gauge lengths are easily attained by adding gauge length spacers.

Gauge Length		Measuring Range	
METRIC		METRIC	
-050M	50.0 mm	-025M	+25 mm
-100M	100.0 mm	-050M	+50 mm
-150M	150.0 mm	-100M <sup>1</sup>	+100 mm
-200M	200.0 mm		
-250M	250.0 mm		
U.S.A.		U.S.A.	
-0200	2.000"	-100T	+1.00"
-0400	4.000"	-200T	+2.00"
-0600	6.000"	-400T <sup>1</sup>	+4.00"
-0800	8.000"		
-1000	10.000"		

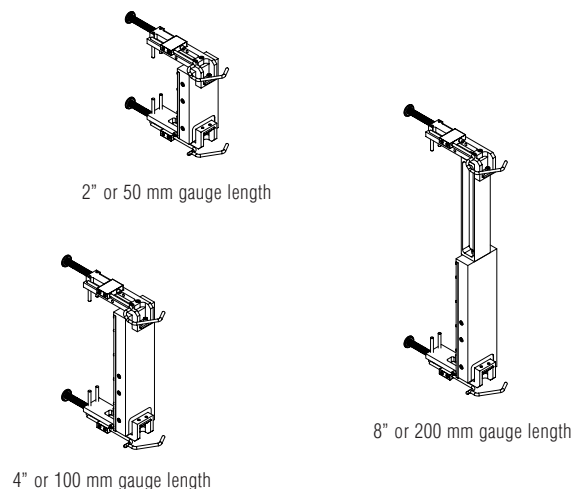
Model Number 3543- \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Temperature Range	
-ST	-40 °C to 100 °C (-40 °F to 210 °F)
-HT1	-40 °C to 150 °C (-40 °F to 300 °F)

<sup>1</sup> Not available in 50 mm or 2 inch gauge length models.

Example: 3543-0800-400T-ST: 8.0 inch gauge length, +4 inch measuring range, standard temperature range (-40 °F to 210 °F)

See more extensometry at [www.epsilontech.com](http://www.epsilontech.com)  
 Contact us for your special testing requirements.



MODEL 3543 EXAMPLES