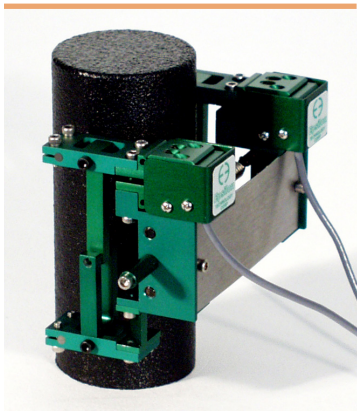
With gauge lengths of 25 and 50 mm (1 and 2 inches) and measuring ranges of 1.2 and 2.5 mm (0.050 and 0.100 inches), the Model 3442RA1 was designed for applications where tensile or compressive strength tests on small rock, concrete and other small compression samples is desired.



Model 3442RA1-0200-050T-ST with 2 inch gauge length and ±0.050 inch measuring range

Axial strain is measured on opposite sides of the test specimen and the output is an average of the two readings. The Model 3442RA1 is available in a variety of configurations for samples 50 mm (2 inches) or smaller in diameter. All are self-supporting on the specimen and mount very easily. The conical point contacts included with the extensometer are made from tungsten carbide. If desired, the two outputs can be independently configured, providing two readings. Epsilon has versions for use in oil to 1360 bar at 200 °C (20,000 psi at 400 °F). These units will fit in small inside diameter vessels. For large diameter specimens, we suggest one of the Model 3542RA averaging axial extensometers.

The Model 3442RA1 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.

Features

- Full bridge, 350 ohm strain gaged design for compatibility with nearly any test system.
- High accuracy, averaging output or optional dual independent outputs.
- Designed for smaller diameter specimens.
- Easy mounting, attaches with integral springs.
- Self-supporting on the specimen.
- Includes the Epsilon Shunt Calibration System for on-site electrical calibration.
- Rugged, dual flexure design for strength and improved performance.
- Includes high quality foam lined case.

Specifications

Excitation:	5 to 10 VDC recommended, 12 VDC or VAC max.
Output:	2 to 4 mV/V nominal, depending on model
Accuracy:	Standard configurations meet ASTM E83 class B-1 and ISO 9513 class 0,5 requirements for accuracy. A test certificate is included.
Linearity:	≤0.20% of full scale measuring range, depending on model
Temperature Range:	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)
Cable:	Integral, ultra-flexible cable, 2.5 m (8 ft) standard
Specimen Size:	Standard specimen diameters are 25mm, 38mm, or 50mm; specify when ordering. Contact Epsilon for other specimen diameters.
Operating Force:	<30 g typical per side

Options

Dual independent outputs
Connectors to interface to nearly any brand of test equipment

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Ordering Information

Model 3442RA1 Available Versions: ANY combination of gauge length, measuring range and temperature range listed below is available, except as noted. Test specimen diameter(s) must be specified at the time of order. *Other configurations may be available with special order; please contact Epsilon to discuss your requirements.*

Gauge Length

METRIC	
-025M	25.0 mm
-050M	50.0 mm
U.S.A.	
-0100	1.000"
-0200	2.000"

Measuring Range

METRIC	
-125M	±1.25 mm
-250M	±2.50 mm
U.S.A.	
-050T	±0.050"
-100T	±0.100"

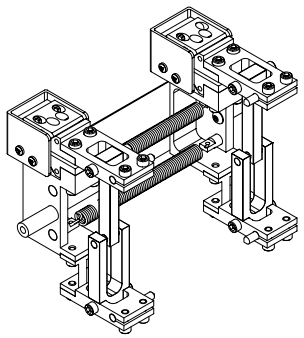
Model Number 3442RA1-__ __ __ __ - __ __ __ __ - __ __

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: 3442RA1-0200-050T-ST: 2.0 inch gauge length, 0.050 inch measuring range, standard temperature option (-40 °F to 210 °F)

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



50 mm gauge length

MODEL 3442RA1 EXAMPLE