



## Averaging Axial Strain Gage Extensometers



**Figure 1.** Model 3542RA2 averaging axial extensometer.

In this application, we have used averaging axial extensometers that are designed for the compressive strength testing of rocks, concrete and other large compression samples. The model 3542RA extensometer measures axial strain on opposite sides of the test specimen, and the output is an average of the two readings.

The model 3542RA is available in a variety of configurations with gage lengths from 1 to 8 inches (25 to 200 mm) and measuring ranges from 0.05 to 0.25 in (1.2 to 6mm). All are self supporting on the specimen and are easy to mount on the specimen. For tests where a single diameter specimen is typically used, the fixed diameter model 3542RA1 is recommended. For applications where a variety of specimen diameters are used, the model 3542RA2 is recommended.

If wished, the two readings can be independent, so providing two outputs. All model 3542RA extensometers are designed so they can be used together with the model 3544 circumferential extensometer or the 3975 diametral extensometer (as seen in Figure 2). Tininius Olsen's rock extensometers can withstand the punishment of daily high volume testing, using, as an example, tungsten carbide for the material for the conical point contacts to withstand the high wear.

### Features:

- Full bridge with 350 ohm strain gage design
- High accuracy, averaging output or optional dual outputs
- Meets ASTM class B1 and ISO 9513, class 0.5 accuracy
- Rugged dual flexure design
- Self supporting on specimen
- Easy mounting on specimen with integral springs.

### Specifications

- Excitation:** 5 to 10 VDC recommended, 12 VDC or VAC max
- Output:** 2 to 4 mV/V nominal
- Linearity:** < 0.2% of full scale measuring range, depending on model
- Temp. Range:** -40 °C to +100 °C (-40 °F to 210 °F)
- Operating Force:** <30g typical per side

### Options

- Shunt calibration module
- Dual independent outputs
- Fixed or variable diameter configurations

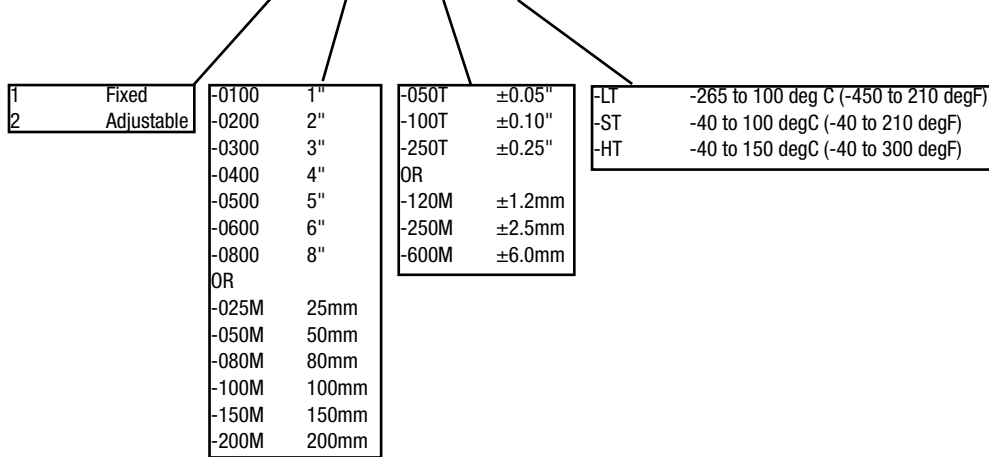
**Figure 2.** Model 3542RA extensometer may be used simultaneously with the model 3975 diametral extensometer (shown) or model 3544 circumferential extensometers.



# Ordering Information

The model 3542RA extensometer is available in a variety of combinations of gage length, measuring range and temperature range. Test specimen diameters must be specified at the time of ordering.

## Model No 3542RA



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