



3542RA2 for 50 to 150 mm diameters, 100 mm gage length.

Designed for compressive strength tests on rock, concrete and other large compression samples, the 3542RA measures axial strain on opposite sides of the test specimen, and the output is an average of the two readings. Gage lengths from 1 to 8 inches (25 to 200 mm) and measuring ranges from .050 to .250 inches (1.2 to 6 mm) are available.

The Model 3542RA is available in a variety of configurations. All are self-supporting on the specimen and mount very easily. For tests where a single diameter specimen is typically used, the fixed diameter Model 3542RA1 is recommended. For applications where a continuously adjustable diameter extensometer is required, the Model 3542RA2 is available. If desired, the two readings can be independent, providing two outputs. Many rock tests are done in tri-axial pressure vessels. Epsilon has versions for use in oil to 1360 bar at 200 °C (20,000 psi at 400 °F). These will fit in unusually small inside diameter vessels. For small diameter specimens, we suggest the Model 3442RA1 averaging axial extensometer.

All Model 3542RA extensometers are designed so they may be used together with the Model 3544 circumferential or 3975 diametral extensometer. Epsilon's rock extensometers can withstand the punishment of daily, high volume testing. Some units have been used for several thousand tests without damage. The included conical point contacts are made from tungsten carbide.

3542RA with 3544

The Model 3542RA may be used simultaneously with the Model 3544 circumferential extensometers (shown) or the Model 3975 diametral extensometers.



Features

- Full bridge, 350 ohm strain gaged design for compatibility with nearly any test system.
- High accuracy, averaging output or optional dual independent outputs.
- All standard units meet existing ASTM class B-1 and ISO 9513, class 0,5 requirements for accuracy.
- Rugged, dual flexure design for strength and improved performance.
- Includes high quality foam lined case.
- Easy mounting, attaches with integral springs.
- Self-supporting on the specimen.
- May be used simultaneously with Model 3544 circumferential extensometers or Model 3975 diametral extensometer.

SPECIFICATIONS

- Excitation:** 5 to 10 VDC recommended, 12 VDC or VAC max.
- Output:** 2 to 4 mV/V nominal, depending on model
- 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)
- Cable:** Integral, ultra-flexible cable, 8 ft (2.5 m) standard
- Specimen Size:** Wide range of specimen sizes available, including AX, BX, NX and larger, to 8 inches (and 200 mm) diameters standard (larger sizes on special order)
- Operating Force:** <30 g typical per side

OPTIONS

- Connectors to interface to nearly any brand test equipment
- Shunt calibration module (see page 96)
- Dual independent outputs
- Fixed or variable diameter configurations

ORDERING INFORMATION

Model 3542RA Extensometer Standard Versions: ANY combination of gage 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.

Gage Length		Measuring Range	
U.S.A.			
-0100	1.000"	-050T	±0.050"
-0200	2.000"	-100T	±0.100"
-0300	3.000"	-250T	±0.250"
-0400	4.000"	METRIC	
-0500	5.000"	-120M	±1.2 mm
-0600	6.000"	-250M	±2.5 mm
-0800	8.000"	-600M	±6.0 mm
METRIC			
-025M	25.0 mm		
-050M	50.0 mm		
-080M	80.0 mm		
-100M	100.0 mm		
-150M	150.0 mm		
-200M	200.0 mm		

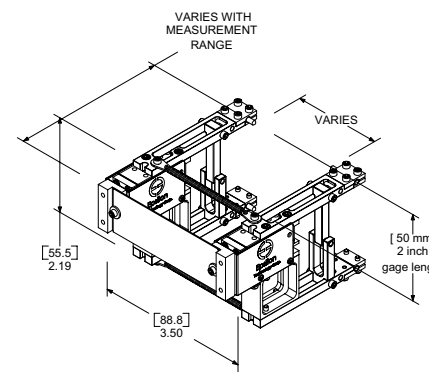
Model Number 3542RA - - - - -

Diameter Type ¹	
1	Fixed
2	Adjustable

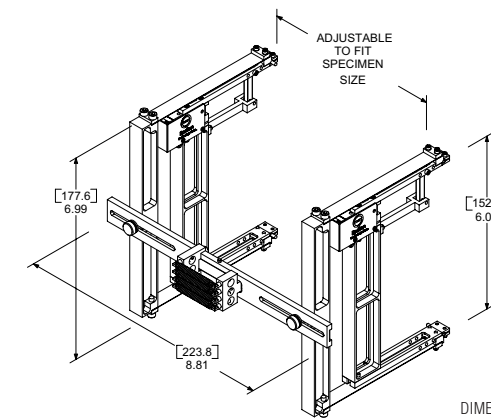
Temperature Range	
-LT	-265 °C to 100 °C (-450 °F to 210 °F)
-ST	-40 °C to 100 °C (-40 °F to 210 °F)
-HT1	-40 °C to 150 °C (-40 °F to 300 °F)
-HT2	-40 °C to 200 °C (-40 °F to 400 °F)
-LHT	-265 °C to 200 °C (-450 °F to 400 °F)

¹ Additional diameter configurations are available with special order.

Example: 3542RA1-100M-600M-ST: Fixed size, 100 mm gage length, 6.0 mm measuring range, standard temperature option (-40 °C to 100 °C)



3542RA1 WITH 2" OR 50 MM GAGE LENGTH



3542RA2 WITH 6" GAGE LENGTH, TO FIT SAMPLES FROM 2" TO 6" IN DIAMETER

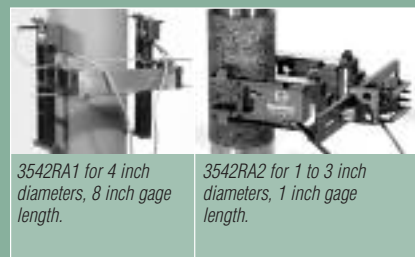
DIMENSIONS: [mm] inches



3542RA1 for 2 inch diameters (NX size).



3542RA and 3544 in test.



3542RA1 for 4 inch diameters, 8 inch gage length.

3542RA2 for 1 to 3 inch diameters, 1 inch gage length.