Bulletin
TD968

Circumferential Extensometers

Figure 1. Model 3544 circumferential extensometer.

These extensometers are designed for measure the change in circumference as the test specimen is compressed. This generally considered to be the more accurate way to determin diamtral strain since the measurement is taken over the entire material inside the circumference.

A high precision custom roller chain with special rollers mounts the extensometer to the specimen. As the specimen diameter enlarges during the test, the chain causes the extensometer to expand. The unit is self supporting and links can be simply added or removed from the chain to adjust for different specimen diameters.

.

Key Features:

- Full bridge with 350 ohm strain gage design
- Adapts to a wide range of diameters by adding or removing chain links.
- 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:	0.25% to 0.3% of full scale measuring range,
depend	ing on model
Temp. Range:	-40 ^{O}C to +100 ^{O}C (-40 ^{O}F to 210 ^{O}F)

Options

Shunt calibration module

Horizontal, vertical or user convertible orientations

Ordering Information

The model 3544 extensometer is available in a variety of combinations of measuring range and temperature range.

Model No 3544 - _ _ _ _ - _ _ _ - _ _

Diameter Range

-0400	2" to 4"
-0600	2" to 6"
-0800	2" to 8"
OR	
-100M	50 to 100mm
-150M	50 to 150mm
-200M	50 to 200mm

Circumferential Measuring Range

-080T	+0.080"	0.25%
-125T	+0.125"	0.25%
-250T	+0.250"	0.25%
-500T	+0.500"	0.3%
OR		
-020M	+2.0mm	0.25%
-030M	+3.0mm	0.25%
-060M	+6.0mm	0.25%
-120M	+12.0mm	0.3%

Temperature Range

-LT	-265 to 100 deg C (-450 to 210 degF)
-ST	-40 to 100 degC (-40 to 210 degF)
-HT	-40 to 150 degC (-40 to 300 degF)

Model 3975

Figure 2. Model 3975 circumferential extensometer.

Self-supporting on the test specimen, these extensometers will work on standard sized diameter specimens. They are designed for use in measuring Poissons Ratio and for applications where accurate diametral measurements with low strains are required.

The Model 3975 is the best choice for small diametral strains in large compression specimens. The units are easily attached to the specimen, and rounded contact edges maintain the position on the specimen.

Key Features:

- Full bridge with 350 ohm strain gage design
- All standard units meet existing ASTM class B-1 and ISO 9513 class 0.5 requirements for accuracy.
- Rugged dual flexure design
- Easy mounting with intral springs
- 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 ^{O}C to +100 ^{O}C (-40 ^{O}F to 210 ^{O}F)

Options

Shunt calibration module

Ordering Information

The model 3975 extensometer is available in several sizes.

Model No 3975 - _ _ _ _

	Measuring Range
-0003	+0.03" (0.76mm)
-0006	+0.06" (1.50mm)
-0008	+0.08" (2.00mm)

Contact Your Local Representative:

1065 Easton Road
Horsham, PA 19044 USA
(215) 675-7100
Fax (215) 441-0899

info@TiniusOlsen.com

www.TiniusOlsen.com

www.testingconcrete.com

6 Perrywood Business Park
Honeycrock Lane, Salfords
Redhill, Surrey RH1 5DZ England
+44 (0) 1737 765001
Fax +44 (0) 1737 764768