Designed to allow the gauge length to be set prior to mounting on the test specimen, this model allows hot mounting on samples after they reach the test temperature.

Model 3548HI mounted to split furnace

These extensometers mount on a slide bracket (included) that attaches to the furnace side cut-out or with other support brackets; optional load frame mounting brackets are available. The gauge length for this unit can be set prior to mounting on the specimen, which allows mounting on specimens after they are heated to the test temperature. Water-cooled and furnace bracket mounted, they are for use in split type materials testing furnaces to 1200 °C (2200 °F). The high temperature option allows use to 1600 °C (2900 °F). These extensometers can be used in carousel systems for rapid high temperature testing.

The standard temperature version (to 1200 °C) is supplied with high purity alumina rods. The high temperature option is furnished with alpha grade silicon carbide rods. Rods are made to order to the length required for your furnace. Mounting brackets may be integrated with the furnace cut-out. Epsilon can also provide load frame mounting brackets to fit your test frame.

The Model 3548HI 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.

Features

- **May be left on through specimen failure.**
- Full bridge, 350 ohm strain gaged design for compatibility with nearly any test system.
- All models can measure in both tension and compression and can be used for cyclic testing.
- Mechanical overtravel stops in both directions.
- Most standard units meet existing ASTM class B-1 and ISO 9513, class 0,5 requirements for accuracy. Rod length configurations can affect the final class rating. Measuring ranges greater than 50% will meet these class requirements in lower calibration ranges.
- All units come with either high purity alumina ceramic rods (1200 °C) or alpha grade silicon carbide rods (1600 °C).
- Rugged, dual flexure design for strength and improved performance.
- Includes high quality foam lined case and a spare set of ceramic rods.
- Innovative slide mount allows the extensometer to engage the specimen once the test temperature has been achieved.

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, depending on model
Temperature Range:	Standard (-ST) is to 1200 °C (2200 °F), optional (-HT) 1600 °C (2900 °F)
Cable:	Integral, ultra-flexible cable, 8 ft (2.5 m) standard
Contact Force:	Adjustable up to 400 g
Operating Force:	<30 g typical

Options

Model 2050 constant temperature water re-circulating bath
High temperature option (-HT suffix) for use to 1600 °C
Load frame mounting brackets
Connectors to interface to nearly any brand test equipment
Specify rod tip style desired. Available choice are:
- Straight chisel, vee chisel, conical tip

Shunt calibration module (see page 104)

Ordering Information

Model 3548HI Available Versions: ANY combination of gauge length, measuring range and temperature range listed below is available, except as noted. *Ceramic rod lengths are made to fit furnaces as required. Please provide furnace dimensions at the time of order. Larger compressive ranges are available with special order.*

Gauge Length

U.S.A.	
-0050	0.500"
-0100	1.000"
-0200	2.000"
METRIC	
-0125M	12.5 mm
-025M	25.0 mm
-050M	50.0 mm

Measuring Range

DESIGNATION	% STRAIN
-010[1]	±10%
-020	+20%/-10%
-050	+50%/-10%
-100[2]	+100%/-5%

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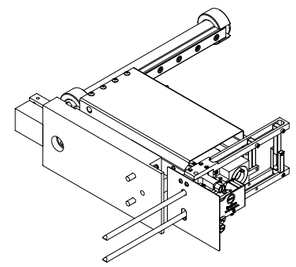
Temperature Range

-ST	Ambient to 1200 ˚C (Ambient to 2200 ˚F)
-HT	Ambient to 1600 ˚C (Ambient to 2900 ˚F)

1 *10% strain range with 0.5" or 12.5 mm gauge length possible only with short ceramic rods.*

2 *Not available in 2" or 50 mm gauge lengths.*

Example: *3548HI-0100-020-HT: 1.0 inch gauge length, +20%/-10% measuring range, high temperature option (room temperature to 2900 °F)*



MODEL 3548HI EXAMPLE