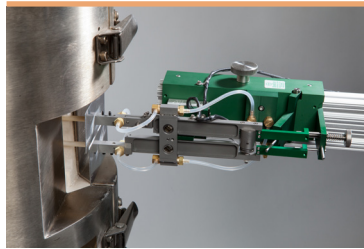


This model was designed for applications that require ultra-low contact force when using split type materials testing furnaces or induction heaters.

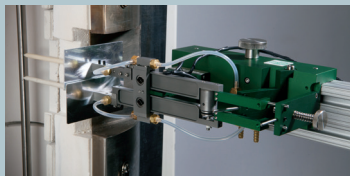
It features very low specimen contact force and includes a slide bracket for mounting. Liquid cooling allows use to 1200°C (2200°F) standard or 1600°C (2900°F) with the high temperature option.



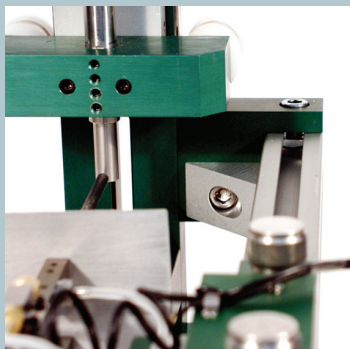
Model 3648 with 1 inch gauge length shown with a split furnace



Model 3648 with 1 inch gauge length



Model 3648 slide mounting system



Model 3648 extensometer mounted to a calibrator

These extensometers use a high temperature capacitive sensor in combination with an innovative design to achieve high accuracy strain measurements in low measuring ranges. They mount on a slide bracket (included) that can attach to the load frame of your test system; optional load frame mounting brackets are available.

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. These units are made to order in many different gauge lengths and measuring ranges.

The extensometer comes with a signal conditioner. The output is an analog DC voltage, factory calibrated with the extensometer to 0 to ± 10 VDC typically. They are readily interfaced with most existing test controllers and may be directly connected to data acquisition systems. Bringing the signal into a spare DC input channel (or external input) on the test controller allows the extensometer to be used for strain controlled tests like low cycle fatigue.

Features

- **May be left on through specimen failure.**
- Designed for applications requiring ultra-low contacting force with a measuring range less than ± 2.5 mm (± 0.10 inches). Epsilon recommends Model 3549 or Model 7650A for most applications.
- Capacitive signal conditioner and power supply included. Provides high level DC voltage output with low noise. Easily interfaced to test controllers and data acquisition boards.
- Hot mountable and retractable.
- Shipped fully calibrated with electronics (traceable to NPL) with user specified voltage output.
- All models can measure in both tension and compression and can be used for cyclic testing.
- Mechanical overtravel stops in both directions.
- Innovative slide mount allows the extensometer to engage the specimen once the test temperature has been achieved.
- Includes high quality foam lined case and a spare set of ceramic rods.

SPECIFICATIONS

- Output:** User specified, ± 5 VDC or ± 10 VDC typical
- Accuracy:** Standard configurations meet ASTM E83 class B-1 and ISO 9513 class 0,5 requirements for accuracy. A test certificate is included. Rod lengths >250 mm (10") can affect the final class rating.
- Linearity:** 0.15% of full scale measuring range (rod length dependent)
- Temperature Range:** Standard (-ST) is to 1200 °C (2200 °F), optional (-HT) 1600 °C (2900 °F)
- Cable:** Integral, ultra-flexible cable, 2.5 m (8 ft) standard
- Coolant Interface:** Two barbed hose fittings for 1/8" (3.2 mm) ID coolant hoses
- Contact Force:** Adjustable up to 150 g (30-50 g typically used)
- Operating Force:** <10 g typical
- Power:** Includes power supply for your country (specify)

OPTIONS

- Model EPS170 constant-temperature recirculating chiller - see the Options tab on the web page for important details about liquid cooling requirements
- High temperature option (-HT suffix) for use to 1600 °C
- Load frame mounting brackets
- Connectors to interface to nearly any brand of test equipment
- Rod tips can be straight chisels or conical tips; specify when ordering
- VREF Module (see p. 129)

Model EPS170 Constant-Temperature Recirculating Chiller

This chiller provides a continuous flow of coolant at a constant temperature for liquid-cooled extensometers. Capable of cooling or heating the coolant, coolant temperature is maintained within 0.1 °C. These units are ideal for obtaining the maximum stability of liquid-cooled extensometers. See website for dimensions.



ORDERING INFORMATION

Model 3648 Available Versions: ANY combination of gauge length and measuring range listed below is available, except as noted. Contact Epsilon for additional gauge length options. Ceramic rod lengths are made to fit furnaces as required. Please provide furnace dimensions at the time of order. Other configurations may be available with special order; please contact Epsilon to discuss your requirements.

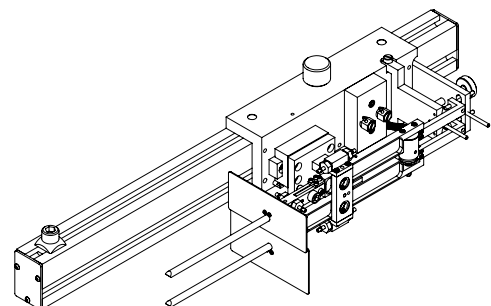
Gauge Length		Measuring Range	
METRIC		METRIC	
-010M	10.0 mm	-005M	± 0.5 mm
-0125M	12.5 mm	-010M	± 1.0 mm
-025M	25.0 mm	-025M	± 2.5 mm
-050M	50.0 mm		
U.S.A.		U.S.A.	
-0050	0.500"	-020T	± 0.020 "
-0100	1.000"	-040T	± 0.040 "
-0200	2.000"	-100T	± 0.100 "

Model Number 3648-_____ - _____ - _____

Temperature Range	
-ST	Ambient to 1200 °C (RT to 2200 °F)
-HT	Ambient to 1600 °C (RT to 2900 °F)

Example: 3648-025M-010M-ST: 25.0 mm gauge length, ± 1.0 mm (± 4 % strain) measuring range, standard temperature option (room temperature to 1200 °C)

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



MODEL 3648 EXAMPLE