700°C High-Temperature Un-Cooled Transverse Extensometers

Series 7675

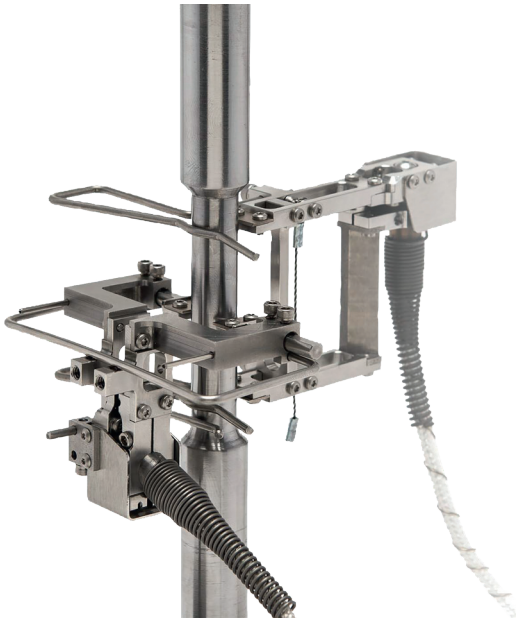
The 7675 Models of High-Temperature Extensometers are designed for transverse or diametral strain measurement and control at elevated temperatures inside environmental chambers.

These extensometers use a high-temperature capacitive sensor with the ability to withstand high temperatures without any cooling up to maximum temperature limit.

The model 7675 is ideal for the determination of Poisson's ratio, and for characterizing anisotropic materials such as composites.
The Rugged, dual flexure design for strength and improved performance enables also cyclic testing at higher frequencies.

All units can handle both positive and negative displacements. These extensometers are compatible with a number of Model 7642 high-temperature axial extensometers.

The extensometer come standard with a freestanding sensor conditioner unit providing a electric calibration 0-10 V signal output with exceptionally low noise that can be connected to the strain channel of the controller of the testing system. This conditioner system provides a number of functional enhancements, including high speed digital output, built in calibration and tare functions, analogue and digital filters, and more.



walter+bai ag · Industriestrasse 4 · 8224 Löhningen · Switzerland
Tel. +41 (0)52 687 25 25 · Fax +41 (0)52 687 25 20 · info@walterbai.com · www.walterbai.com

Features

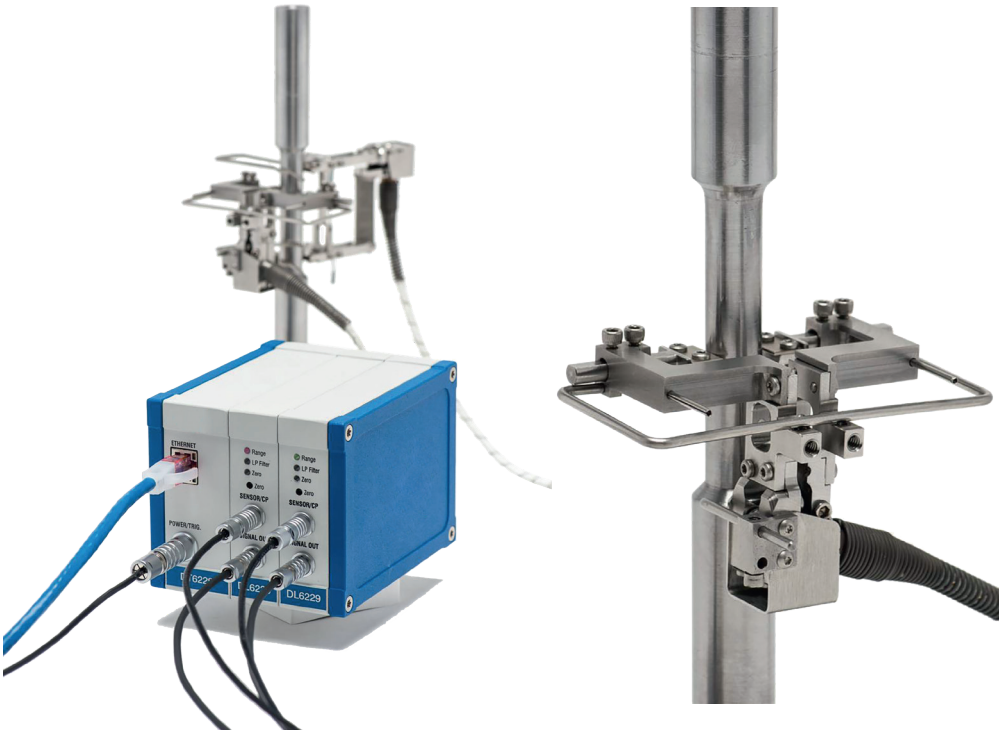
- May be left on through specimen failure
- Self-supporting on specimen
- Standard configurations meet ISO 9513 class 0,5 and ASTM E83 class B-1 requirements for accuracy.
- Better resolution, accuracy, and noise rejection at high temperature
- Minimized size and weight, and better high frequency performance
- All standard models are ideal for cyclic testing, >25 Hz is typical
- Digital controller and power supply included. Provides high level DC voltage output with low noise. Easily interfaced to test controllers, data acquisition boards, and chart recorders.
  - Includes high speed analogue and digital outputs
  - Intuitive web-based user interface for setup, calibration, and data acquisition
  - Built-in calibration reference and auto-zero features
  - Multiple extensometer calibration files may be loaded for use with one controller
  - Multiple temperature-specific calibrations may be stored
  - Selectable analogue and digital filter options from 2 Hz to 3 kHz
- Mechanical over-travel protection
- Delivered fully calibrated with electronics (traceable to NPL (UK)) with user specified voltage output
- Ideal for measuring Poisson's ratio per ASTM E132 with most materials and specimens
- Durable stainless steel knife edges
- High quality foam lined case is provided
- Rugged, dual flexure design for strength and enhanced performance. The next-generation design enables cyclic testing at much higher frequencies

Supplied Parts

- Includes one set of spare knife edges
- Includes power supply for your country (specify)
- Includes high quality foam lined cas

Important Note

- Unit Calibration at specific high-temperature available on request
- This extensometer can be used with a number of Model 7642 high-temperature axial extensometers



Specification:

Analog Output:	User specified, ±5 VDC or ±10VDC typical, ±10.8VDC rail
Digital Output:	24 bit high speed Ethernet output with built-in web interface
Linearity:	11 point linearization, ≤0.1% of full scale typical
Resolution:	<55 PPM (0.006%FS) RMS @ 4 kHz, <6 PPM (0.0006%FS) @ 100 Hz
Analog Filter:	Selectable 100 Hz analog and 2 Hz – 3 kHz digital filters
Temperature Range:	Ambient to 700 °C (1300 °F). Use up to 800 °C is possible – contact Epsilon for details. Springs may require periodic adjustment or replacement after long-term testing above ~600 °C.
Temperature Sensitivity (Gain):	<100 PPM / °C (0.01%FS/°C) typical
Temperature Sensitivity (Offset):	20 PPM / °C (0.002%FS/°C) typical
Sensor Cable:	0.7 m (2.5 ft) tri-axial high temperature cable, plus 1.5 m (5 ft) room temperature extension cable
Specimen Size:	Fits round samples up to 25 mm (1.0 inch) diameter and flats up to 25 mm (1.0 inch) wide
Operating Force:	1-2 kgf (30-60 oz) typical, depending on model
Environment:	Recommended for elevated temperature testing in dry air or inert / non-corrosive gases
Power:	Includes power supply for your country (specify)

Technical Data

Model 7675 Available Versions: Available standard measuring ranges are listed below. *Other configurations may be available with special order; please contact us to discuss your requirements.*

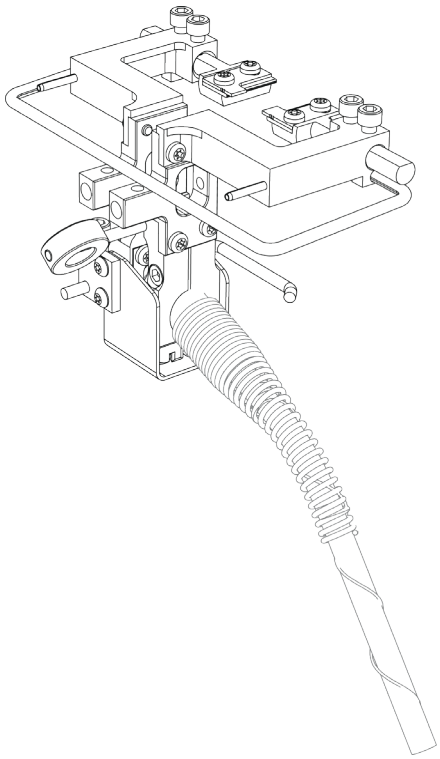
Measuring Range	
-012M	±1.2 mm
-025M	±2.5 mm*

*Preferred configuration

Example: 7675-025M: ±2.5 mm measuring range

Options:

- Reverse cable exit available
- Connectors to interface to nearly any brand of test equipment
- Bulkhead adapters for vacuum chambers
- Specialty Knife Edges
- Dual-channel sensor conditioner available in order the extensometer can be used together with axial extensometer model 7642



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