

Tinius Olsen

Model 100R Extensometer

The Tinius Olsen model 100R is a high elongation extensometer that is designed to measure the 'stretch' of a wide range of materials including elastomers and non-rigid plastics. The initial measuring length, or gauge length, can be changed to suit the specimen size or the test standard that is being applied.

The unique design ensures an extremely low tracking force for testing sensitive materials, as well a robust construction that can easily withstand the high release forces and breaking energies with certain specimens. The design also incorporates a simple yet effective method with which the extensometer followers are attached to the specimen, allowing rapid throughput of testing.

Extension is measured by attaching two counterbalanced extensometer clamps to the specimen at a pre-selected gauge length. When tensile forces are applied to the specimen by the testing machine, the slightest change in gauge length is measured by an optical encoder. Signals from the optical encoder are fed into the signal conditioner interface for processing.

The 100R extensometer can be fitted to all sizes of screw driven materials testing machines.



MODEL		100R
ELONGATION MEASUREMENT RANGE	in mm	28.35 (extended options available) 720 (extended options available)
ACCURACY		1% on 25 mm gauge length, BS5214 grade D
RESOLUTION	in mm	0.0004 0.01
SPECIMEN THICKNESS	in mm	0 to 0.2 0 to 5
TRACKING FORCE	lbf g	<0.02 <10
DIMENSIONS H x W x D	in mm	40 x 2.1 x 7.9 1015 x 53 x 200
WEIGHT	lb kg	11 5.5

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Fig. 1. Model 100R long travel extensometer.



Fig. 2. Model H5kS testing machine with 100R long travel extensometer.

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