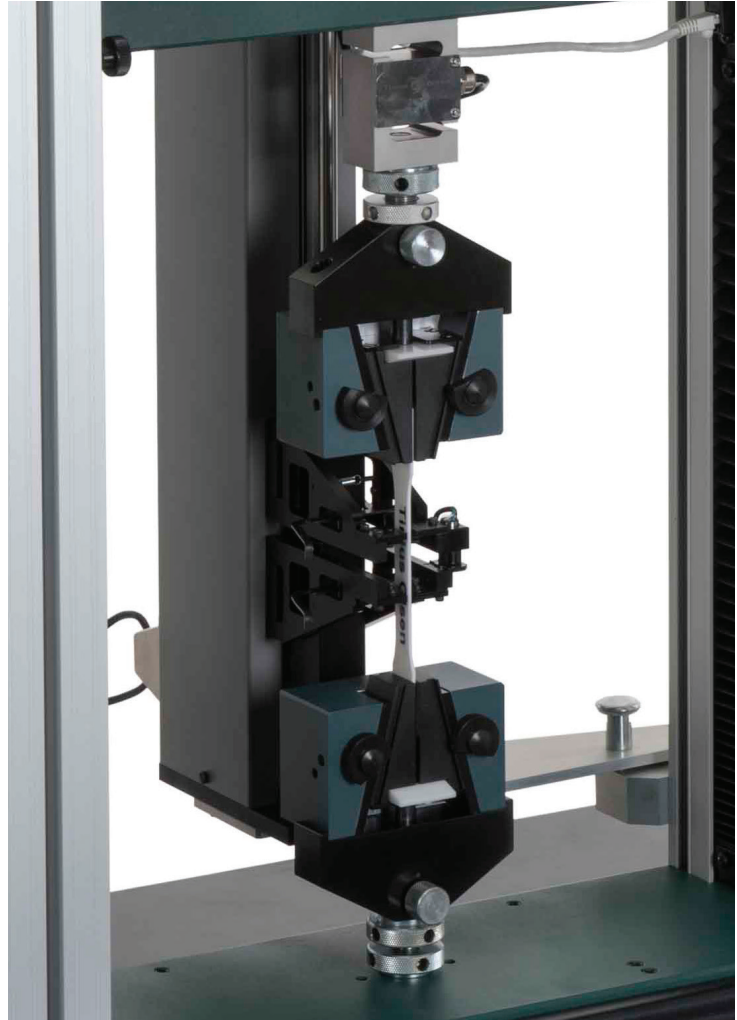


## Model 100S Dual purpose extensometer

**Compatible with**  
Tinius Olsen ST series  
of materials testing  
systems

**Gage lengths**  
25, 50(mm)



The model 100S is designed as a dual purpose extensometer to measure E modulus and offset yield stress (proof stress) on relatively high modulus materials while also providing the ability to measure high elongations up to break.

# Model 100S

Model 100S is designed as a dual purpose extensometer to measure E modulus and offset yield stress (proof stress) on relatively high modulus materials while also providing the ability to measure high elongations up to break. A typical application is the testing of polycarbonate, where a high resolution system is required to measure the E modulus (Youngs modulus) and a secondary system is required to measure elongation to the point of break, which typically could be as high as 200% strain. Other materials the 100S extensometer is ideally suited for include polyurethane, polyethylene (PET), glass reinforced plastics (GRP), and aluminum alloys.

The unique design ensures an extremely low tracking force for testing sensitive materials and a construction that is sufficiently robust to withstand the release force when the specimen breaks. An important feature is the ease with which the extensometer clamps can be attached to the specimen, resulting in very rapid testing throughput.

Extension is measured by attaching two counterbalanced extensometer clamps to the specimen at a preselected gauge length. When tensile forces are applied to the specimen by the testing machine, the slightest change in gauge length is measured by a precise LVDT transducer. If the range of this LVDT transducer is exceeded, measurement of elongation and strain transfers to an optical encoder.

Signals from the LVDT and optical encoder are fed into the signal conditioner interface for processing. The 100S extensometer can be fitted to all twin screw materials testing machines and must be used under software control.

## TO order numbers

<b>99-994-1000/06</b>	Extensometer, High Elongation 100S Metric RVII, Std. Height for Bench ST Series
<b>99-994-1000/07</b>	Extensometer, High Elongation 100S Metric RVII, Ext. Height for Bench ST Series
<b>99-994-1000/0I</b>	100S Grip Edges - Straight Steel Section Hardened/Ground Contact for Min10mm GL
<b>99-994-1000/0J</b>	100S Grip Edges - Straight Rubber Cord Section Contact for Min10mm GL
<b>99-994-1000/0K</b>	100S Grip Edges - Round Steel Section Hardened/Ground Contact for Min10mm GL
<b>99-994-1000/0M</b>	100S Grip Edges - Curved Rubber Cord Section Contact for Min10mm GL
<b>99-999-1060</b>	100SC Extensometer 25-50mm G/L (incl. Swinging Brackets) for S/T/L Series
<b>99-999-1061/1</b>	Rotating Mounting Brackets for 100SC on H5KS/T/L

## Specifications

	LVDT Transducer	Optical digital encoder
<b>Range of scan</b>	mm 5% on 50mm gage 10% on 25mm gage	720mm (970 for extended model)
	in 10% on 1in	28.35 (38.2 for extended model)
<b>Gage lengths</b>	mm	
	in	
<b>Accuracy</b>	1%, EN10002-4 Class 1	1% on 25mm gage length, BS5214 grade C&D

# Specifications

<b>Resolution</b>	mm	0.0005	0.01
	in	0.00002	0.0004
<b>Tracking force</b>	gmf	10	
	lbf	0.02	
<b>Specimen thickness</b>	mm	0 to 10	
	in	0 to 0.4	
<b>Dimensions (HWD)</b>	mm	1015 x 95 x 200	
	in	40 x 3.75 x 7.9	
<b>Weight</b>	kg	7.5	
	lbs	16.5	