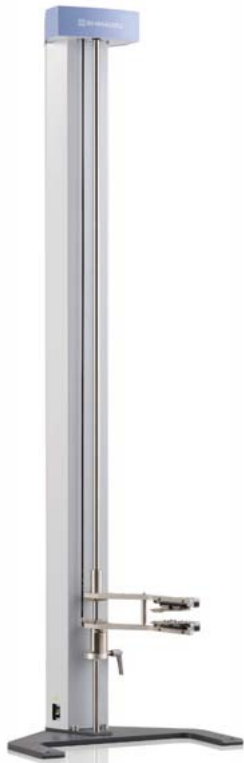


Long-Travel Extensometer for Soft Materials

DSES-1000



Long-Travel Extensometer for Soft Materials

DSES-1000

A Long-Travel Extensometer That Is Now Easier to Use and Even More Precise

The DSES-1000 is a long-travel contact-type extensometer able to measure displacement up to the breakpoint in tensile tests of rubber and other soft materials.

The upper and lower arms are clamped to respective gauge positions using a simple single operation, with each arm tracking sample elongation independently.

DSES-1000 operations are fully integrated with TRAPEZIUM X and TRAPEZIUM LITE X software for operating materials.

It is compatible with the AG-X Plus, AG-X, AGS-X, and EZ-X series Shimadzu materials testing machines.





1000 mm Maximum Movement Distance

The DSES-1000 can measure elongations up to 4000% for gauge lengths of 10 mm, 2000% for gauge lengths of 20 mm, 1600% for gauge lengths of 25 mm, or 1000% for gauge lengths of 40 mm.

A floating arm mechanism (patent pending) ensures tests can be performed reliably without the arms disengaging from samples.

±0.2% Relative Elongation Measurement Precision

Offers ±0.2% precision for displacement measurements between 50 and 1000 mm, allowing measurement of long displacement distances can be measured with high precision.



Quick Clamping

The lateral quick clamping mechanism makes it easy to center the mounted position of extensometer edge with the sample.

The extensometer can also be attached to the sample first, before chucking the sample.

Note: For AG-X plus and AGS-X models, an optional left-retracting mechanism is available.

Compliant with Various Rubber Tensile Testing Standards

JIS K6251:2010

JIS K6272:2003

ISO 37:201

ISO5893:2002

ASTM D412-06a

GB/T528-2009



Compatible with Tensile Testing of Rubbers

Also Support Cycle Testing

JIS K6254

Due to the superior tracking ability when displacement reverses direction, the extensometer is capable of compliance with low elongation recovery tests specified in JIS K6254.

Various soft materials are available for tensile test.



Compatible with Tensile Testing of Film Compatible with Tensile Testing of Plastic

Specifications

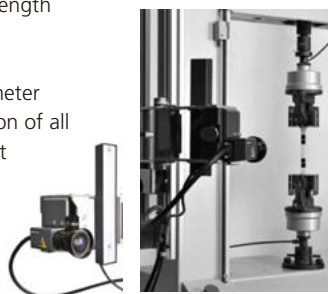
Model	DSES-1000	
Measurement Method	Position count by rotary encoder	
Max. Movement Distance	1000 mm	
Measurement Precision	$\pm 100 \mu\text{m}$ or $\pm 0.2\%$ of displacement, whichever is greater	
Guaranteed Measurement Precision Range	Displacement: 10 to 1000 mm Temperature: +10 to +35°C	
Applicable Samples	Flat plate-shape samples	Width: 1.0 to 30 mm Thickness: 0.5 to 15 mm
	Cylindrical samples	Diameter: 0.5 to 15 mm (for diameters over 3 mm or for the samples such as strand wires which get twisted during the measurement, use the optional V-groove edges)
Gauge Length (GL)	10 to 200 mm	Gauge length setting rods include as standard 10 mm, 20 mm, 25 mm, 40 mm
Gauge Length Precision	$\pm 100 \mu\text{m}$ or $\pm 0.2\%$ of setting value, whichever is greater	
Max. Tracking Speed	3000 mm/min	
Size & Weight	For AG-X, AGS-X series	H1328 × W400 × D306 mm, 14.2 kg
	For EZ-X series	H1440 × W120 × D261 mm, 12.5 kg
Power Requirements	DC 5V, 220 mA (supplied by the material testing machine)	
Applicable Model	AG-X plus series, AG-X series, AGS-X series, EZ-X series * Contact Shimadzu separately regarding connecting the extensometer to models not indicated above.	
Optional Parts	Gauge length setting rods	50 mm, 75 mm, 100 mm, 150 mm, 200 mm, 0.5 inch, 1 inch, 2 inch
	Edges	Arc-type edges V-groove edges (for cylindrical samples)
	Clamping force adjustment springs	Tension springs for low clamping force

Product line of Long-Travel Extensometer

Class0.5

TRViewX Non-Contact Digital Video Extensometer

This high-precision non-contact extensometer measures gauge length elongation by processing images of samples captured by a CCD camera. This extensometer enables measuring the elongation of all kinds of materials, including metal, rubber, plastics, and lumber, with high-precision over a wide measurement range.



Class0.5

SIE Series Automatic

This is a contact-type extensometer for measuring the elongation of hard materials, such as metals, and soft materials, such as plastics, with high precision over a wide measurement range.



Company names, product/service names and logos used in this publication are trademarks and trade names of Shimadzu Corporation and its affiliates, whether or not they are used with trademark symbol "TM" or "®". Third-party trademarks and trade names may be used in this publication to refer to either the entities or their products/services. Shimadzu disclaims any proprietary interest in trademarks and trade names other than its own.

For Research Use Only. Not for use in diagnostic procedures. The contents of this publication are provided to you "as is" without warranty of any kind, and are subject to change without notice. Shimadzu does not assume any responsibility or liability for any damage, whether direct or indirect, relating to the use of this publication.