

Dynamic Strain Gauge Extensometer | 2620 Series



The 2620 series dynamic strain gauge extensometers are accurate lightweight units used for accurate direct measurement and closed loop control of strain in a variety of static and high frequency cyclic materials testing applications.

Tensile, compressive, low and high cycle fatigue testing, creep and stress relaxation as well as straight line (ramp) testing may be performed with the 2620 series dynamic strain gauge extensometer to an extensive range of national and international standards.

The 2620 extensometers are designed for use with metals, composites, plastics, wood and other materials exhibiting total strains up to $\pm 50\%$ of the original gauge length. Variations of gauge length and percentage strain levels may be achieved by the addition of gauge length extenders. Integrated mechanical stops limit the amount of over travel in the extensometers, enabling them to survive specimen rupture without damage.

The 2620 extensometers are immersible in a range of fluids (acetone, mineral and silicone oils, alcohol and similar cooling/heating fluids) and can be quickly and easily calibrated.

Features and Benefits

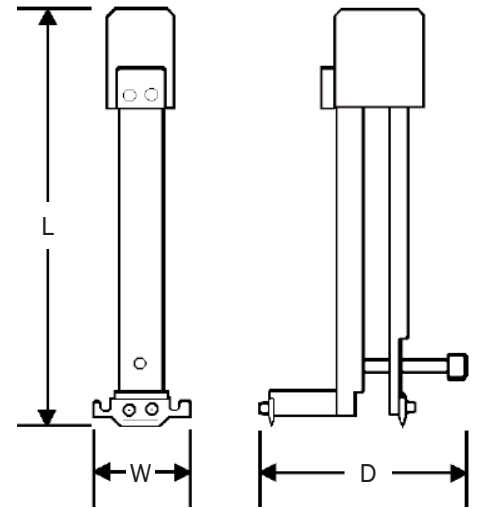
- Simple lightweight design and rugged construction
- Wide operating temperature range, from $-80\text{ }^{\circ}\text{C}$ to $+200\text{ }^{\circ}\text{C}$ ($-112\text{ }^{\circ}\text{F}$ to $+392\text{ }^{\circ}\text{F}$)
- Accurate direct measurement and closed-loop strain control for both cyclic and static testing
- Selection of gauge length extenders
- Accurate linear output with high frequency response
- Designed to meet the requirements of ISO 9513, BS 3846 and ASTM E 83

Principle of Operation

The 2620 extensometers are strain gauge units. The flexural element is a special alloy operating beam, with fatigue certified foil gauges bonded to it. The gauges are arranged in a fully active four-arm Wheatstone bridge circuit. It is mounted in a lightweight frame and accurately follows the strain amplitudes applied to it.

Specifications

Catalog Numbers		2620-601	2620-602	2620-603	2620-604
Length (L)	mm	87	58	40	99
	in	3.4	2.3	1.6	3.9
Width (W)	mm	21	21	21	21
	in	0.8	0.8	0.8	0.8
Depth (D)	mm	63	56	59	69
	in	2.5	2.2	2.3	2.7
Linearity	%	±0.15 Full-Scale Deflection (FSD)			
Repeatability	%	±0.08 FSD			
Hysteresis	%	±0.15 FSD			
Creep (in 3 Mins)	%	±0.15 FSD			
Electrical Calibration Accuracy	%	±0.10 full rated output			
Output Sensitivity	mV/V	2.5 ±20%			
Excitation Voltage	V	5 V(A.C. RMS or D.C.) with 10 V maximum			
Bridge Resistance	Ω	350 nominal			
Balance	%	±2.5 of full-scale			
Overtravel	-	Mechanical stops			
Operating Temperature Range	°C	-80 to +200			
	°F	-112 to +392			
Weight (Less Cable and Connectors)	g	20 average			
	oz	0.7 average			
Attachment	-	Tension springs or special high tear strength rubber bands			



Specimen Sizes

Round	mm	3 to 25 diameter
	in	0.12 in to 1 diameter
Rectangular	mm	3 to 12.5 × 25
	in	0.12 in to 0.5 × 1
Square	mm	3 to 12
	in	0.12 in to 0.5

Model Specifications

Catalog Number	Gauge Length		Maximum Strain	Full-Scale Range		Frequency Range (Typically Flat at 25 mm GL)	Operating Force			
	mm	in	%	mm	in	Hz	g	oz		
2620-601	12.5	0.5	40	±5	±0.2	50	150	5.29		
	With 12.5 mm (0.5 in) Extender		25	1	20				±5	±0.2
	With 37.5 mm (1.5 in) Extender		50	2	10				±5	±0.2
2620-602	12.5	0.5	20	±2.5	±0.1	70	150	5.29		
	With 12.5 mm (0.5 in) Extender		25	1	10				±2.5	±0.1
	With 37.5 mm (1.5 in) Extender		50	2	5				±2.5	±0.1
2620-603	10	0.4	10	±1	±0.04	100	150	5.29		
	With 15 mm (0.6 in) Extender		25	1	4				±1	±0.04
	With 40 mm (1.6 in) Extender		50	2	2				±1	±0.04
2620-604			(not used without extenders)				20	75	2.65	
	With 15 mm (0.6 in) Extender		25	1	50 to 10	12.5 to -2.5				0.5 in to -0.1
	With 40 mm (1.6 in) Extender		50	2	25 to 5	12.5 to -2.5				0.5 in to -0.1

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