

2603 Series Long Travel XL Extensometer

Catalog Number 2603-080/ 2603-081/ 2603-084

Features

- Quick release clamps
- Counterbalanced for minimum force on sample
- Variable gauge lengths settings
- Adjustable clamping pressure for a variety of specimen thickness'
- Easily installed on most Instron machines
- Self-identifying for ease-of-calibration
- SI, US and metric calibration units

Description

The Instron® model XL (long travel) extensometer is a precise device for measuring strain in highly extensible materials such as elastomers, semi-rigid plastics and films. Designed for use in electromechanical testing instruments, Instron XL units can be used to measure specimens elongation's up to 10 in or 250 mm. An optional of 15 in or 375 mm travel is also available.

Principle of Operation

The high elongation extensometer is designed to clamp directly onto to a specimen quickly and easily. It will adjust to incremental gauge lengths ranging from 0.5 in to 5 in or 10 mm to 200 mm. The XL will accommodate up to 10 in of clamp displacement and is specifically designed to permit testing the sample through rupture without damaging the extensometer or otherwise disrupting the test routine. The XL extensometer is based on a pair of carefully counter balanced clamp assemblies which drive a potentiometer through connecting cables. Both clamps move freely but any increase in the separation or differential motion will advance the transducer. The upper and lower specimen clamps are separately counterbalanced and guided on a polished and ground shaft with linear bearings so that none of the extensometer's weight is applied to the specimen.

Application Range

- Elastomeric testing
- Plastics testing
- Testing of material having high elongation properties.
- Cellular materials



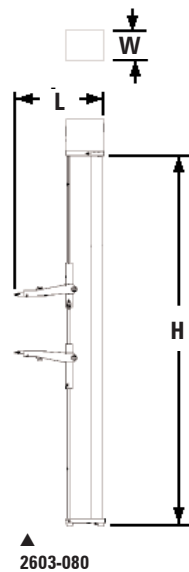
▲
Single column

2603 Series Long travel Extensometer

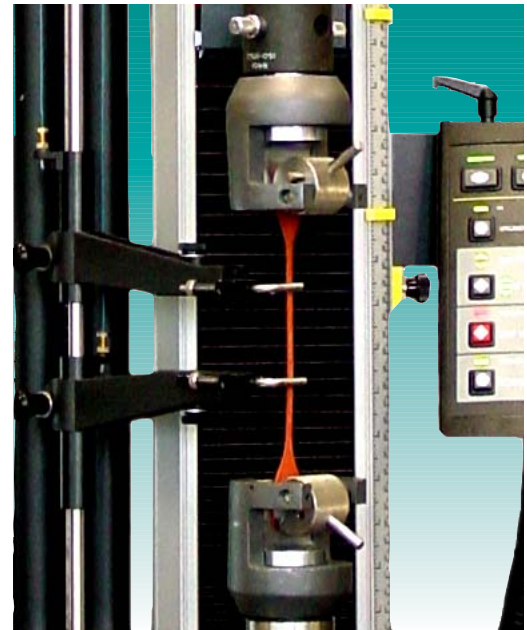
Catalog Number 2603-080/ 2603-081/ 2603-084

Specifications

Catalog Number	2603-080
Full Scale Travel*	250 mm (10 in)*
Extension Resolution	100 μ m (0.004 in)
Extension Accuracy (Extensometer Only)	\pm 200 μ m (\pm 0.008 in) or \pm 0.75% of extension (whichever is the greater)
Gauge Length	Adjustable, 10 mm to 100 mm (0.4 in to 3.9 in)
Gauge Length Setting	Graduated bar with marks at 10 mm, 20 mm, 25 mm, 50 mm, 100 mm and 0.5 in, 1.0 in, 2.0 in to allow setting of GL
Gauge Length Accuracy	\pm 250 μ m (\pm 0.01 in) at 20 °C
Maximum Specimen Width	20 mm (0.75 in)
Maximum Specimen Thickness	12.7 mm (0.5 in)
Specimen Gripping Force	Adjustable, nominally 5 N to 15 N (500 g to 1500 g) for thin specimens, 15 N (1500 g) for thick specimens.
Operating Force	0.15 N (15 g)
Maximum Common-Mode Travel	820 mm (32.25 in)
Overtravel Protection	Mechanical limit stops, rotating clamp rods
Bridge Resistance	350 W (nominal)
Excitation	5 Vrms, 375 Hz to 5000 Hz
FS Sensitivity	2.5 m V/ V \pm 4%
Balance	< \pm 10% of full scale
Temperature Range	Ambient (10 to 38 °C)
Frequency Response	Static applications only
Weight of Extensometer	5.0 kg (11.0 lbs)
Overall Height (H)	1125 mm (44.3 in)
Overall Length (L)	280 mm (11.0 in)
Width (W)	130 mm (5.1 in)
Reach of Arms	Adjustable. 157 mm to 167 mm (6.2 in to 6.6 in) [164 mm (6.5 in) nominal] from center of guide rod



▲ Rubber test on a dual column



▲ Rubber test on a single column



Corporate Headquarters
 100 Royall Street, Canton, Massachusetts 02021-1089, USA
 Tel: +1 800 564 8378 or +1 781 575 5000 Fax: +1 781 575 5751

Instron Industrial Products
 900 Liberty Street, Grove City, PA 16127-9969, USA
 Tel: +1 724 458 9610 Fax: +1 724 478 9614

European Headquarters
 Coronation Road, High Wycombe, Bucks HP12 3SY, United Kingdom
 Tel: +44 1494 456815 Fax: +44 1494 456814

www.instron.com

Instron is a registered trademark of Instron Corporation.
 Copyright © Instron 2004. All rights reserved.
 Instron reserves the right to change specifications without notice.
 Other product and company names listed are trademarks or trade names of their respective companies.