

LEX820 High Resolution Extensometer



The Dia-Stron LEX820 is a high resolution extensometer developed for the measurement of fine fibres failing at low strain values.

General Information

Windows OS.

Principal Features		System Description
•	50mm linear travel	The LEX820 is a high resolution
•	Highly accurate speed control	extensometer developed for fine fibre
•	2.5N & 20N load cells available	applications. At its heart, a DC micrometer
•	DC micrometer drive	drive offers exceptionally smooth travel
•	Low maintenance & robust	combined with high positional
•	Automated sample covers	repeatability. The module is designed for
		fibres which fail at low strain values and
Principal Benefits		provides highly detailed stress/strain
•	Exceptionally smooth travel	data. The LEX820 can be supplied with two
•	High positional repeatability	load cells, either 2.5N or 20N. The LEX820
•	Highly detailed stress/strain data	instrument is supplied as a complete
•	Can operate as a standalone unit or	system comprising of the mechanical
	within an automated system	module, control unit and software for

(ALS1500).

LEX820 Module

Extension	3 – 53mm	
range		
Speed range	0.01 to 2.6mm/sec	
Force range	0 to 2.5N or	
roree range	0 to 20N	
Force	0.05mN (2.5N)	
resolution	0.5mN (20N)	
Displacement	1µm	
resolution		
Displacement	50um	
accuracy	σσμπ	
Load cell	±0.1% full scale	
linearity		

Programmable Features

Methods

Power

Supply

Computer

• Stress/Strain with

break detection

Stress relaxation

Creep

Content

UV1000 Control unit LEX820 Module

USB and Power cords

UvWin software for Windows OS

Requirements

Hysteresis

Specifications

LEX820

The LEX820 module is a self-contained unit, designed for fine fibre applications. A DC micrometer drive provides an exceptionally smooth linear travel combined with a high positional repeatability. The LEX820 is suitable for fibres failing at a low strain and provides highly detailed stress/strain data.

Dedicated software – UvWin

UvWin 3 software controls the LEX820 system. Method parameters can be easily edited within the software. UvWin enables automatic data correction for system compliance.





UvWin also offers a number of integrated data processing tools which includes 1 or 3 phase tensile, hysteresis and stress relaxation analyses. The raw data can also be exported.

New – Optional Immersion Cell The new immersion cell is a critical development for brittle fibre specimens such as carbon or ceramic filaments which shatter into multiple fragments at break. The immersion cell can be filled with a viscous liquid that dissipates fracture energy enabling the recovery of the specimen for

further analysis such as SEM imaging to better understand failure mode, unravelling the nature of the fibre microstructure.



UK office 9 Focus Way | Andover | Hampshire | SP10 5NY | UK t: +44 (0)1264 334700 e: sales@diastron.com

85-265vac

47-63Hz, 100W

Windows OS:

1 x USB port

XP, Vista, 7, 8, 10

US office 9 Trenton Lakewood Road | Clarksburg | NJ 08510 | USA t: +1 (609) 454-6008 w: www.diastron.com