

## EZ Series EZ50 50 kN Universal Materials Testing Machine

The EZ50 advanced materials testing machine incorporates an extensive range of features making it ideal for performing complex as well as routine testing applications up to 50 kN (11241 lbf). The standard EZ50 features a twin column design with a crosshead travel range of 855 mm (33.7 in). Extended machine column options (EZ50-E models) for testing high elongation materials are also available.

This bench mounted machine is microprocessor controlled and incorporates world proven 32 bit technology for highly accurate load measurement and rapid data acquisition. The EZ50 features an integral user interface consisting of a side mounted control console with large, positive action membrane keys, allowing complex tests to be performed at the touch of a button. A back lit 4 line LCD display shows the test and set up information in a wide choice of user selectable languages and units.

The stand alone system is capable of storing up to 600 test results from a choice of ten programmable test set ups. Test parameters are entered using the keypad in a sequential menu driven format.

For additional flexibility, the EZ50 can also be connected to a personal computer with optional Lloyd Instruments NEXYGEN*Plus* material test and control software. NEXYGEN software provides almost unlimited testing and results processing capability in a familiar Windows® environment.

The high stiffness frame incorporates a crosshead guidance system to prevent side loading of the sample under test. The crosshead is driven by twin lead screws and a high precision servo motor and DC servo system to achieve a wide range of speeds throughout the full load range.

A series of highly accurate, interchangeable load cells is available for tension, compression and cycling through zero force measurements. Our extensive range of grips and fixtures support virtually any type of test. The system is ideal for non-continuous testing use in production, quality control, education and research environments. Where continuous testing is required, we recommend the Lloyd Instruments LR50K*Plus* 50 kN materials testing machine.

### Features

- Simple to set up, operate and maintain
- High accuracy load measurement
- Constant load holding
- Data sampling rate 8 kHz
- Load rate control
- Saves up to 600 test results
- 10 programmable test set ups
- Pre-loading of samples and cycling to load or extension limits
- Multi-stage testing with NEXYGEN*Plus* software
- Extension resolution < 0.03 microns
- Multi-lingual display options
- Multi-unit display options
- Flash upgradeable
- Extended column options for testing high extension materials
- Wide selection of load cells, grips, jigs, extensometers, temperature chambers and other accessories

#### Force Capacity:

**EZ50 (Standard)** 50 kN (11241 lbf)

**EZ50-E (Extended)** 50 kN (11241 lbf)

Crosshead Speed Range: 0.01 to 254 mm/min  
(0.0004 to 10 in/min) at full load

Speed Accuracy: <0.2% at steady state

Maximum Crosshead Travel:

**EZ50** 855 mm (33.7 in)

**EZ50-E** 1355 mm (53.4 in)

Width Between Columns: 404 mm (16 in)

Minimum Load Resolution: 0.0001N (Load cell specific)

Load Cell Accuracy: <0.5%

Extension Resolution: < 0.03 microns

Data Sampling Rate: 8 kHz

Display: 40 character x 4 line backlit LCD

Extensometer Inputs: Digital and Analogue

Load Measuring System: EN ISO 7500:2004 Class 0.5 ASTM E4

Software: NEXYGEN*Plus* Data Analysis Software (optional)

Supply Voltage: 230Vac ±10%, 50-60 Hz, Fuse T5AH250V,  
115Vac ±10%, 50-60 Hz, Fuse T10AH250V

Weight:

**EZ50** 148 kg (326 lb)

**EZ50-E** 152 kg (335 lb)

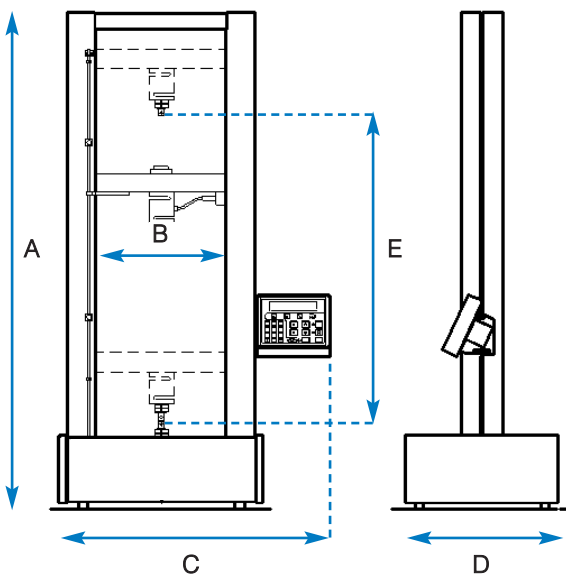
Operating Temperature: 5° to 35° C (41° to 95° F)



## Accessories

Item	Part No	Item
<b>XLC Series Load Cells:</b>		<b>Extensometers:</b>
5 N (1.12 lbf)	01/2946	We supply contacting and non-contacting extensometers.
10 N (2.25 lbf)	01/2360	For further information see our extensometer specification sheets.
20 N (4.5 lbf)	01/2950	
50 N (11.25 lbf)	01/2361	
100 N (22.5 lbf)	01/2480	
250 N (56.25 lbf)	01/3048	<b>Temperature Chambers and High Temperature Furnaces:</b>
500 N (112.5 lbf)	01/2362	A range of thermal chambers and furnaces are available.
1000 N (225 lbf)	01/2419	For further information see our specification sheets.
2500 N (562.50 lbf)	01/2363	
5000 N (1124 lbf)	01/2364	
10 kN (2248 lbf)	01/2365	<b>Splinter Shields:</b>
20 kN (4496 lbf)	01/2417	Splinter shields can be supplied to your specific requirements.
30 kN (6744 lbf)	01/2366	Contact Lloyd Instruments for further information.
50 kN (11241 lbf)	01/2367	
<b>Item</b>		<b>Part No</b>
<b>Application Software:</b>		
NEXYGEN <i>Plus</i>	40/0771	
<b>Grips &amp; Fixtures:</b>		
A wide range of grips and fixtures are available. For further information see our grip specification sheets.		

## Machine Dimensions



	mm	in
A (Standard machine height)	1567	61.7
A (Extended machine height)	2067	81.4
B	404	16.0
C	868	34.2
D	596	23.5
E (Standard machine travel)	855	33.7
E (Extended machine travel)	1355	53.4



Tensile test



Compression test



Flexure test

## Ordering Information

Model	Part No	Capacity	Description
EZ50	01/2830	50 kN (11241 lbf)	EZ50 Materials Testing Machine with Console
EZ50-E	01/3226	50 kN (11241 lbf)	EZ50 Materials Testing Machine (Extended) with Console

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