

## LR10KPlus 10 kN Universal Materials Testing Machine

The LR10KPlus advanced materials testing machine incorporates an extensive range of features making it ideal for performing complex as well as routine testing applications up to 10 kN (2248 lbf). The standard LR10KPlus features a twin column design with a maximum crosshead travel of 950 mm (37.4 in). Extended machine column options (LR10KPlus-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 LR10KPlus 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 LR10KPlus can also be connected to a personal computer with optional Lloyd Instruments NEXYGENPlus material test and control software. NEXYGENPlus 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 motor 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 use in production, quality control, educational and research environments.

### 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 NEXYGENPlus software
- Extension resolution <0.05 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

### Specifications

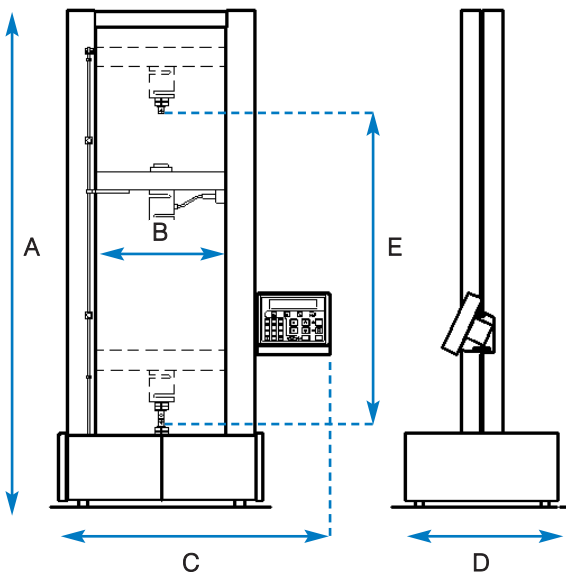
Force Capacity:	
<b>LR10KPlus (Standard)</b>	10 kN (2248 lbf)
<b>LR10KPlus-E (Extended)</b>	10 kN (2248 lbf)
Crosshead Speed Range:	0.01 to 508 mm/min (0.0004 to 20 in/min)
Speed Accuracy:	<0.2% at steady state
Maximum Crosshead Travel:	
<b>LR10KPlus</b>	950 mm (37.4 in)
<b>LR10KPlus-E</b>	1435 mm (56.5 in)
Width Between Columns:	404 mm (16 in)
Minimum Load Resolution:	0.0001 N (load cell specific)
Load Cell Accuracy:	<0.5%
Extension Resolution:	<0.05 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:	NEXYGENPlus Data Analysis Software (optional)
Supply Voltage:	230Vac ±10%, 50-60 Hz, Fuse T3.15AH250V 115Vac ±10%, 50-60 Hz, Fuse T6.3AH250V
Weight:	
<b>LR10KPlus</b>	99 kg (218 lb)
<b>LR10KPlus-E</b>	103 kg (227 lb)
Operating Temperature:	5° to 35°C (41° to 95°F)



## Accessories

<b>Item</b>	<b>Part No</b>	<b>Item</b>
<b>XLC Series Load Cells:</b>		<b>Extensometers:</b>
5 N (1.12 lbf)	01/2946	We supply contacting and non-contacting extensometers. For further information see our extensometer specification sheets.
10 N (2.25 lbf)	01/2360	
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	
500 N (112.5 lbf)	01/2362	<b>Temperature Chambers and High Temperature Furnaces:</b>
1000 N (225 lbf)	01/2419	A range of thermal chambers and furnaces are available. 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>Item</b>	<b>Part No</b>	<b>Splinter Shields:</b>
<b>Application Software:</b>		Splinter shields can be supplied to your specific requirements. Contact Lloyd Instruments for further information.
NEXYGEN <i>Plus</i>	40/0771	
<b>Grips &amp; Fixtures:</b>		<b>LR10K<i>Plus</i>-CC Large Compression Cage Option:</b>
A wide range of grips and fixtures are available. For further information see our grip specification sheets.		The LR10K <i>Plus</i> machine can be ordered mounted above a floor standing compression cage for larger sample testing. Contact Lloyd Instruments to discuss your specification needs.

## Machine Dimensions



	mm	in
A (Standard machine height)	1555	61.2
A (Extended machine height)	2055	80.9
B	404	16.0
C	820	32.3
D	480	18.9
E (Standard machine travel)	950	37.4
E (Extended machine travel)	1435	56.5



Tensile test



Compression test



Flexure test

## Ordering Information

Model	Part No	Capacity	Description
LR10K <i>Plus</i>	01/3052	10 kN (2248 lbf)	LR10K <i>Plus</i> Materials Testing Machine with Console
LR10K <i>Plus</i> -E	01/3078	10 kN (2248 lbf)	LR10K <i>Plus</i> Materials Testing Machine (Extended) with Console

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