

## LR5K Plus 5 kN Universal Materials Testing Machine

The LR5K Plus advanced materials testing machine incorporates an extensive range of features making it ideal for performing complex as well as routine testing applications up to 5 kN (1124 lbf). The standard LR5K Plus features a twin column design with a crosshead travel range of 975 mm (38.4 in). Extended machine column options (LR5K Plus-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 LR5K Plus 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 LR5K Plus can also be connected to a personal computer with optional Lloyd Instruments NEXYGEN™ MT 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 motor to achieve a wide range of speeds throughout the full load range.

A series of highly accurate, interchangeable loadcells 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, education and research environments.

### Features

- Simple to set up, operate and maintain
- High accuracy load measurement (0.5% of reading)
- 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 MT software
- Extension resolution < 0.1 micron
- Multi-lingual display options
- Multi-unit display options
- Flash upgradeable
- Extended column options for testing high extension materials
- Wide selection of loadcells, grips, jigs, extensometers, temperature chambers and other accessories

### Specifications

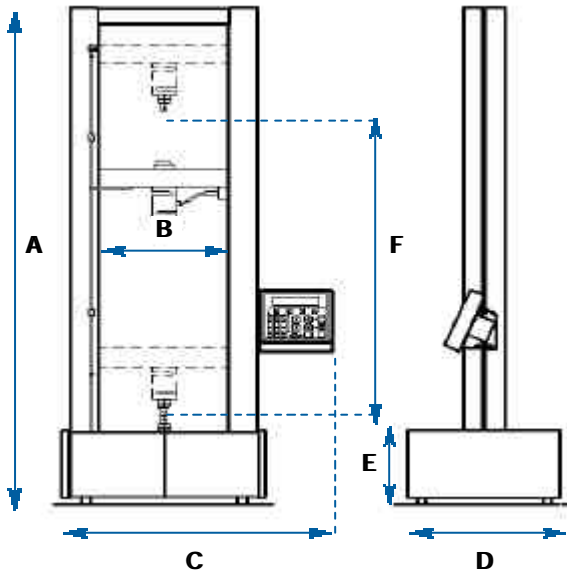
Force Capacity:	
<b>LR5K Plus</b>	5 kN (1124 lbf)
<b>LR5K Plus-E</b>	5 kN (1124 lbf)
Crosshead Speed:	0.01 to 1020 mm/min (0.0004 to 40.16 in/min)
Speed Accuracy:	< 0.2%
Travel:	
<b>LR5K Plus</b>	975 mm (38.4 in)
<b>LR5K Plus-E</b>	1460 mm (57.5 in)
Width Between Columns:	400 mm (15.75 in)
Load Resolution:	< 0.005% of loadcell used (max.)
Loadcell Accuracy:	± 0.5% of reading
Extension Resolution:	< 0.1 micron
Data Sampling Rate:	8 kHz
Display:	40 character x 4 line backlit LCD
Extensometer Inputs:	Digital and Analogue Extensometer
Data Outputs:	Digital - RS232, Analogue 10V dc max (optional)
Load Measuring System:	Exceeds the requirements of BS EN ISO 7500-1, ASTM E4, DIN 51221
Analysis Software:	NEXYGEN MT Data Analysis Software and Ondio Applications Builder Software
Supply Voltage:	115/230V ac ± 10%, 50-60 Hz
Weight:	105 kg (231 lb)
Operating Temperature:	5° to 35° C (40° to 95° F)



## Accessories

Item	Part No	Item	Part No
<b>Loadcells:</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	<b>Temperature Chambers and High Temperature Furnaces:</b>	
20 N (4.5 lbf)	01/2950	A range of thermal chambers and furnaces are available. For further information see our specification sheets.	
50 N (11.25 lbf)	01/2361	<b>Splinter Shields:</b>	
100 N (22.5 lbf)	01/2480	Splinter shields can be supplied to your specific requirements. Contact Lloyd Instruments for further information.	
250 N (56.25 lbf)	01/3048	<b>LR5KPlus-CC Large Compression Cage Option:</b>	
500 N (112.5 lbf)	01/2362	The LR5KPlus machine can be ordered mounted above a floor standing compression cage for larger sample testing. Contact Lloyd Instruments to discuss your specification needs.	
1000 N (225 lbf)	01/2419		
2500 N (562.50 lbf)	01/2363		
5000 N (1124 lbf)	01/2364		
<b>Application Software:</b>			
NEXYGEN™ MT	40/0658		
NEXYGEN™ MT/Ondio software suite	40/0695		
<b>Grips &amp; Fixtures:</b>			
A wide range of grips and fixtures are available. For further information see our grip specification sheets.			

## Machine Dimensions



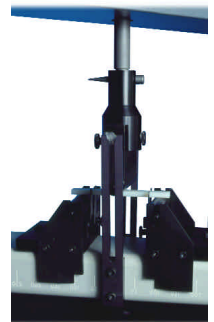
	mm	in
A	1565	61.6
B	404	15.9
C	845	33.3
D	480	18.9
E	230	9.1
F (Standard machine)	950	37.4
F (Extended machine)	1460	57.5



Tensile test



Compression test



Flexure test

## Ordering Information

Model	Part No	Capacity	Description
LR5KPlus	01/3051	5 kN (1124 lbf)	LR5KPlus machine with Console - standard 975 mm (38.4 in) travel
LR5KPlus-E	01/3073	5 kN (1124 lbf)	LR5KPlus machine with Console - extended 1460 mm (57.5 in) travel

**AMETEK**  
TEST & CALIBRATION INSTRUMENTS



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CERTIFICATE No 0202/11/111

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