

## LR100KPlus 100 kN Universal Materials Testing Machine

The LR100KPlus advanced materials testing machine incorporates an extensive range of features making it ideal for performing complex as well as routine testing applications up to 100 kN (22481 lbf). The LR100KPlus is a floor standing machine featuring a twin column design with a maximum crosshead travel of 1150 mm (45.3 in). Extended machine column options (LR100KPlus-E models) for testing higher elongation materials are also available.

The machine is microprocessor controlled and incorporates world proven 32 bit technology for highly accurate load measurement and rapid data acquisition. The LR100KPlus 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 LR100KPlus 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. Stiffness compensation on the LR100KPlus machine allows compensation to be made for any deformation, however small, of the load frame, load cell and grips of the instrument itself during compression testing. 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.

A series of highly accurate, interchangeable load cells are also 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
- Wide selection of load cells, grips, jigs, extensometers, temperature chambers and other accessories

### Specifications

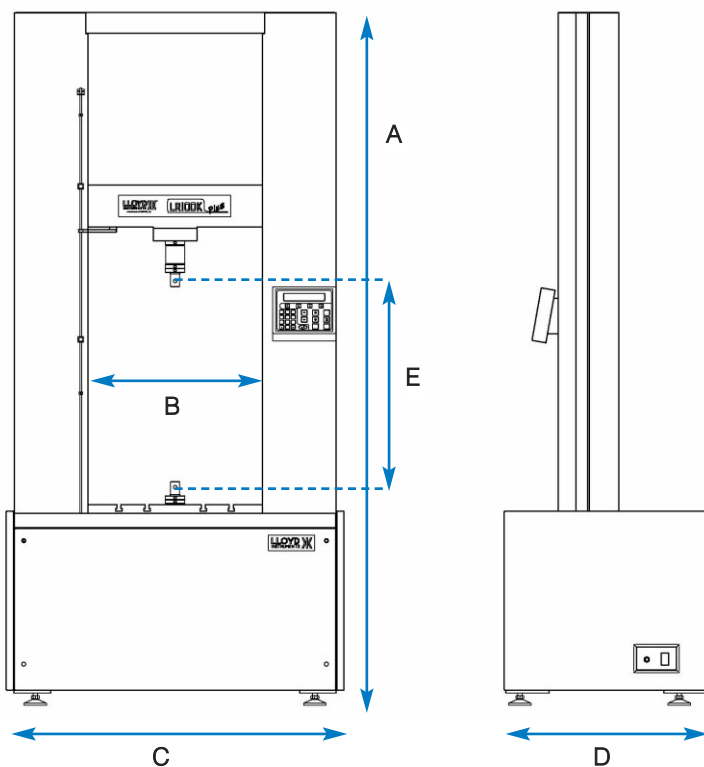
Force Capacity:	
<b>LR100KPlus (Standard)</b>	100 kN (22481 lbf)
<b>LR100KPlus-E (Extended)</b>	100 kN (22481 lbf)
Crosshead Speed Range:	0.001 to 508 mm/min (0.00004 to 20 in/min)
Speed Accuracy:	<0.2% at steady state
Maximum Crosshead Travel:	
<b>LR100KPlus</b>	1150 mm (45.3 in)
<b>LR100KPlus-E</b>	1620 mm (63.8 in)
Width Between Columns:	620 mm (24.4 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 T5AH250V, 115Vac ±10%, 50-60 Hz, Fuse T10AH250V
Weight:	
<b>LR100KPlus</b>	900 kg (1984 lb)
<b>LR100KPlus-E</b>	910 kg (2006 lb)
Operating Temperature:	5° to 35°C (41° to 95°F)



## Accessories

Item	Part No	Item
<b>HLC Series Load Cells:</b>		<b>Grips &amp; Fixtures:</b>
50 N (11.25 lbf)	01/2936	A wide range of grips and fixtures are available. For further information see our grip specification sheets.
100 N (22.5 lbf)	01/2413	
500 N (112.5 lbf)	01/3213	<b>Extensometers:</b>
1000 N (225 lbf)	01/2412	We supply contacting and non-contacting extensometers. For further information see our extensometer specification sheets.
2500 N (562.5 lbf)	01/3214	
5000 N (1124 lbf)	01/2944	
10 kN (2248 lbf)	01/2411	
20 kN (4496 lbf)	01/3215	
30 kN (6744 lbf)	01/2978	
50 kN (11241 lbf)	01/3101	<b>Temperature Chambers and High Temperature Furnaces:</b>
100 kN (22481 lbf)	01/2457	A range of thermal chambers and furnaces are available. For further information see our specification sheets.
Item	Part No	Item
<b>Application Software:</b>		<b>Splinter Shields:</b>
NEXYGEN <i>Plus</i>	40/0771	Splinter shields can be supplied to your specific requirements. Contact Lloyd Instruments for further information.

## Machine Dimensions



		mm	in
A	(Standard machine height)	2471	97.3
A	(Extended machine height)	2970	116.9
B		620	24.4
C		1509	59.4
D		733	29.9
E	(Standard machine travel)	1150	45.3
E	(Extended machine travel)	1620	63.8



Tensile test



Compression test



Flexure test



Machine Control Console

## Ordering Information

Model	Part No	Capacity	Description
LR100K <i>Plus</i>	01/3302	100 kN (22481 lbf)	LR100K <i>Plus</i> Materials Testing Machine with Console
LR100K <i>Plus</i> -E	01/3390	100 kN (22481 lbf)	LR100K <i>Plus</i> Materials Testing Machine (Extended) with Console

**AMETEK®**  
MEASUREMENT & CALIBRATION  
TECHNOLOGIES



www.ametek.com

**UK**  
Lloyd Instruments Ltd  
12 Barnes Wallis Road  
Segensworth East, Fareham  
Hants, PO15 5TT

Tel +44 (0)1489 486 399  
Fax +44 (0)1489 885 118  
E-mail uk-far.general@ametek.co.uk  
Web www.lloyd-instruments.com

**USA**  
AMETEK Measurement & Calibration  
Technologies Division  
8600 Somerset Drive  
Largo, Florida 33773

Tel +1 (727) 536 7831  
Fax +1 (727) 539 6882  
E-mail chatillon.fl-lar@ametek.com  
Web www.lloyd-instruments.com  
www.chatillon.com

**Far East**  
AMETEK Singapore Pte Ltd  
10 Ang Mo Kio Street 65  
#05-12 Techpoint  
SINGAPORE 569059

Tel +65 6484 2388  
Fax +65 6481 6588  
E-mail aspl@ametek.com.sg  
Web www.lloyd-instruments.com

**France**  
AMETEK S.A.S.  
Rond Point de l'Epine des Champs  
Buro Plus - Bât. D  
78990 Elancourt

Tel +33 (0)1 30 68 89 40  
Fax +33 (0)1 30 68 89 49  
E-mail general@lloyd-instruments@  
ametek.fr  
Web www.lloyd-instruments.fr

**Germany**  
AMETEK GmbH  
Rudolf-Diesel-Straße 16  
D-40670 Meerbusch

Tel +49 (0)2159 9136-0  
Fax +49 (0)2159 9136-39  
E-mail info@ametek.de  
Web www.ametek.de