

## Plus Series LS100Plus 100 kN Universal Materials Testing Machine

The LS100Plus 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 LS100Plus features a twin column design with a crosshead travel range of 840 mm (33.1 in).

This bench mounted machine is microprocessor controlled and incorporates world proven 32 bit technology for highly accurate load measurement and rapid data acquisition. The LS100Plus 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 LS100Plus 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 servo motor and DC servo system to achieve a wide range of speeds.

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, 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 < 0.03 micron
- Multi-lingual display options
- Multi-unit display options
- Flash upgradeable
- Wide selection of load cells, grips, jigs, extensometers, temperature chambers and other accessories

### Specifications

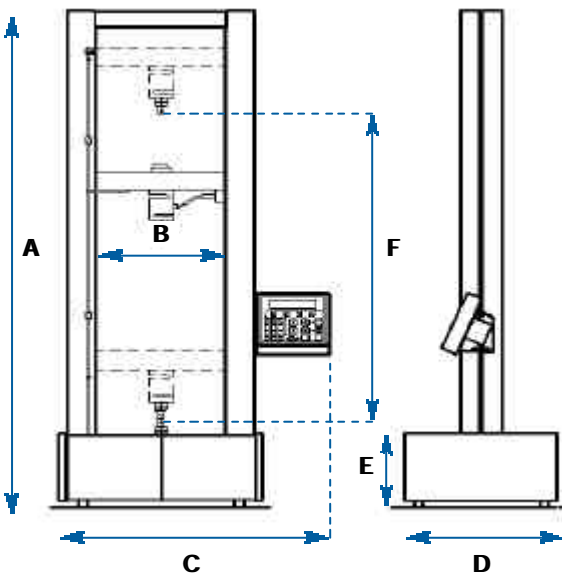
Force Capacity:	100 kN (22481lbf)
Crosshead Speed:	0.001 to 254 mm/min up to 50 kN (0.00004 to 10 in/min up to 11241 lbf) 0.001 to 101.6 mm/min up to 100 kN (0.00004 to 4 in/min up to 22481 lbf)
Speed Accuracy:	< 0.2%
Travel:	840 mm (33.1 in)
Width Between Columns:	404 mm (15.9 in)
Load Resolution:	< 0.005% of load cell used (max.)
Load Cell Accuracy:	± 0.5% of reading
Extension Resolution:	< 0.03 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 (Optional)
Supply Voltage:	115/230V ac ± 10%, 50-60 Hz
Weight:	200 kg (441 lb)
Operating Temperature:	5° to 35° C (40° to 95° F)



## Accessories

Item	Part No	Item	Part No
<b>Load Cells:</b>		<b>Grips &amp; Fixtures:</b>	
5 N (1.12 lbf)	01/2946	A wide range of grips and fixtures are available. For further information see our grip specification sheets.	
10 N (2.25 lbf)	01/2360		
20 N (4.5 lbf)	01/2950		
50 N (11.25 lbf)	01/2361	<b>Extensometers:</b>	
100 N (22.5 lbf)	01/2480	We supply contacting and non-contacting extensometers. For further information see our extensometer specification sheets.	
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	<b>Splinter Shields:</b>	
10 kN (2248 lbf)	01/2365	Splinter shields can be supplied to your specific requirements. Contact Lloyd Instruments for further information.	
20 kN (4496 lbf)	01/2417		
30 kN (6744 lbf)	01/2366	<b>LS100Plus-CC Large Compression Cage Option:</b>	
50 kN (11241 lbf)	01/2367	The LS100Plus machine can be ordered mounted above a floor standing compression cage for larger sample testing. Contact Lloyd Instruments to discuss your specification needs.	
100 kN (22481 lbf)	01/2896		
<b>Application Software:</b>			
NEXYGEN™ MT	40/0658		
NEXYGEN™ MT/Ondio software suite	40/0695		

## Machine Dimensions



	mm	in
A	1567	61.7
B	404	15.9
C	871	34.3
D	596	23.5
E	242	9.5
F	840	33.1



Tensile test



Compression test



Flexure test

## Ordering Information

Model	Part No	Capacity	Description
LS100Plus	01/3174	100 kN (22481 lbf)	LS100Plus Materials Testing Machine with Console

**AMETEK**  
TEST & CALIBRATION INSTRUMENTS



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 general@lloyd-instruments.co.uk  
Web www.lloyd-instruments.co.uk

**USA**  
AMETEK TCI 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.co.uk

**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.co.uk

**France**  
Lloyd Instruments S.A.S.  
3, Avenue des Coudriers  
Zone d'activité de l'observatoire  
78180 Montigny Le Bretonneux

Tel +33 (0)1 30 57 47 74  
Fax +33 (0)1 30 57 50 33  
E-mail general@lloyd-instruments.com  
Web www.lloyd-instruments.fr

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

Tel +49 (0)2159 9136-70  
Fax +49 (0)2159 9136-80  
E-mail info@ametek.de  
Web www.ametek.de