

Plus Series

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 crosshead travel range of 1150 mm (45.3 in).

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 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. 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, 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 < 0.05 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

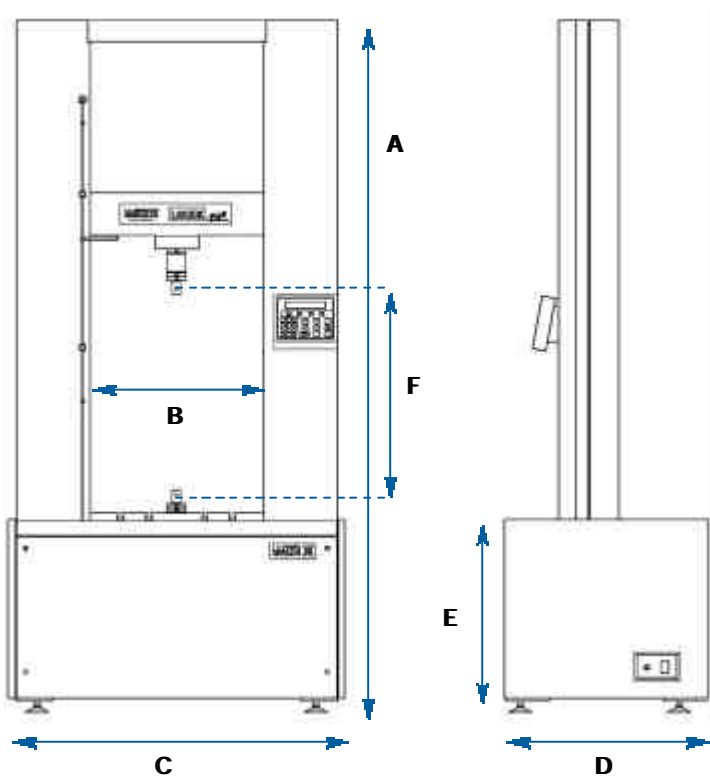
Force Capacity:	100 kN (22481 lbf)
Crosshead Speed:	0.001 to 508 mm/min (0.00004 to 20 in/min)
Speed Accuracy:	< 0.2%
Travel:	1150 mm (45.3 in)
Width Between Columns:	620 mm (24.4 in)
Load Resolution:	< 0.005% of load cell used (max.)
Load Cell Accuracy:	± 0.5% of reading
Extension Resolution:	< 0.05 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:	900 kg (1984 lb)
Operating Temperature:	5° to 35° C (40° to 95° F)



Accessories

Item	Part No	Item
HLC Series Load Cells:		Grips & Fixtures:
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	Extensometers:
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	Temperature Chambers and High Temperature Furnaces:
20 kN (4496 lbf)	01/3215	A range of thermal chambers and furnaces are available. For further information see our specification sheets.
30 kN (6744 lbf)	01/2978	
50 kN (11241 lbf)	01/3101	
100 kN (22481 lbf)	01/2457	
Application Software:		Splinter Shields:
NEXYGEN™ MT	40/0658	Splinter shields can be supplied to your specific requirements. Contact Lloyd Instruments for further information.
NEXYGEN™ MT/Ondio software suite	40/0695	

Machine Dimensions



	mm	in
A	2470	97.2
B	624	24.6
C	1540	60.6
D	729	28.7
E	693	27.3
F	1150	45.3



Tensile test



Compression test



Flexure test



Machine Control Console

Ordering Information

Model	Part No	Capacity	Description
LR100K Plus	01/3302	100 kN (22481 lbf)	LR100K Plus machine with Console

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