

# LR100k

## Materials Testing Machine

The LR100K twin column materials testing system provides a complete solution for testing applications with capacities up to 100kN (22000 lbf). Tension and compression testing with cycling to load and extension limits are standard features. Load and extension are displayed on a highly legible LCD display, selectable in a variety of units. Multi-lingual instructions are displayed in a sequential menu driven format, allowing set-up and operation to be achieved rapidly and efficiently. A dedicated microprocessor controlled, closed loop servo drive ensures accurate speed, load rate, constant load and strain rate control. A crosshead speed range of 0.01mm/min to 500mm/min is available and is monitored more than 20,000 times per second. A working test space between columns of 620mm (24in) combined with a total crosshead displacement of 1200mm (47in) can accommodate a wide variety of samples and materials for accurate and consistent testing.

The LR100K can be further enhanced with Lloyd Instruments state of the art materials test and data analysis software NEXYGEN™ thanks to a built in RS232 interface, allowing full PC integration. 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
- Rapid data acquisition
- Extension resolution better than 0.1 microns
- Exceeds national and international standards
- Constant load and strain rate control
- Large testing area
- Multi lingual, Multi unit display options
- Full PC integration
- Wide selection of load cells, grips, jigs and accessories

### SPECIFICATIONS

Force Range:	100kN (22000lbf)
Crosshead Speed:	0.01 to 510 mm/min 0.0004 to 20 inches/min
Speed Accuracy:	< 0.1% at steady state
Stroke:	1 to 1200mm 0.05 to 47 inches
Load Resolution:	< 0.005% of load cell used (max)
Extension Resolution:	< 0.1 microns
Sampling Rate:	100Hz
Extensometer Inputs:	+10V dc analogue input Strain gauge input optional
Data Outputs:	Digital - RS232 Analogue - 10Vdc max
Measuring System:	Exceeds the requirements of BS EN ISO 7500: 1999. Class 0.5, ASTM E4, DIN 51221.
Analysis Software:	NEXYGEN™ Data Analysis Software (optional)
Supply Voltage:	115/230Vac ± 10% 50 - 60Hz
Weight:	900Kg (1980lb)
Operating Temp:	5° to 35°C (40°F to 95°F)
Warranty:	1 year



**SPECIFICATION**  
SS-MT-6200-0101  
January 2001

**INTERNET**  
[www.ametek.com](http://www.ametek.com)  
[www.chatillon.com](http://www.chatillon.com)  
[www.lloyd-instruments.co.uk](http://www.lloyd-instruments.co.uk)

AMETEK, CHATILLON and NEXYGEN are registered trademarks of AMETEK, inc.  
LLOYD INSTRUMENTS is a trademark of AMETEK, inc.

Copyright 2000, by AMETEK, inc.

**LLOYD**  
**INSTRUMENTS**  
A trademark of AMETEK, Inc.

## ORDERING INFORMATION

Model	Part No.	Description
LR100K	01/2177	Twin column, Floor mounted Materials Testing System

### LR100K DIMENSIONS

Crosshead Width	620mm	24.0in
Column Depth	216mm	8.5in
Maximum Workspace	1454mm	57.0in
Machine Height	2508mm	98.5in
Base Height	700mm	27.5in
Machine Width	1210mm	48.0in
Machine Depth	733mm	29.0in
Console Width	330mm	13.0in
Console Depth	60mm	2.5in
Console Height	340mm	13.5in



All machines are capable of testing in tension, compression, flexure, friction, tear, peel, and adhesion modes - plus many more.

### STANDARD ACCESSORIES

LOADCELLS:	ITEM	MODEL
<b>Main loadcell</b> 100 kN (22000 lbf)	HLC-100K-A1	01/2457
<b>Additional loadcells</b> 50 N (11 lbf)	HLC-0050-A1	01/2936
100 N (22 lbf)	HLC-0100-A1	01/2413
1000 N (220 lbf)	HLC-1000-A1	01/2412
5000 N (1100 lbf)	HLC-5000-A1	01/2944
10 kN (2200 lbf)	HLC-10K-A1	01/2411
30 kN (6600 lbf)	HLC-30K-A1	01/2978
<b>EXTENSOMETERS:</b>		
Non contacting extensometer (115V) with stand	LASERSCAN L1	01/2940
Non contacting extensometer (230V) with stand	LASERSCAN LR	01/2932
Extensometer punch (applies 2mm (0.08 inch) targets)	TTOXP/2	01/1159
Extensometer punch (applies 4mm (0.16 inch) targets)	TTOXP/4	01/1156
Long travel extensometer without stand	EXL750 LR	01/2247
Extensometer stand for EXL750	Ext Stand C	01/2261
High resolution Extensometer with stand	EXH750 LR	01/2474

### Strain Gauge Extensometers (NOTE Extensometer kit 01/1966 is NOT required)

Gauge Length 10mm (0.40 in) max elongation 10%	STGA/10/10L	01/2793
Gauge Length 10mm (0.40 in) max elongation 50%	STGA/10/50L	01/2960
Gauge Length 25mm (0.98 in) max elongation 5%	STGA/25/5L	01/2956
Gauge Length 25mm (0.98 in) max elongation 10%	STGA/25/10L	01/2794
Gauge Length 25mm (0.98 in) max elongation 25%	STGA/25/25L	01/2795
Gauge Length 25mm (0.98 in) max elongation 50%	STGA/25/50L	01/2796
Gauge Length 25mm (0.98 in) max elongation 100%	STGA/25/100L	01/2797
Gauge Length 50mm (1.97 in) max elongation 5%	STGA/50/5L	01/2958
Gauge Length 50mm (1.97 in) max elongation 25%	STGA/50/25L	01/2798
Gauge Length 50mm (1.97 in) max elongation 50%	STGA/50/50L	01/2799
Gauge Length 50mm (1.97 in) max elongation 100%	STGA/50/100L	01/2800
Gauge Length 80mm (3.15 in) max elongation 10%	STGA/80/10L	01/2801
Gauge Length 80mm (3.15 in) max elongation 25%	STGA/80/25L	01/2802

### SOFTWARE:

NEXYGEN™ 4.0 Software Package	40/0658
NEXYGEN™ Upgrade to Version 4.0	40/0658/NR
ONDIO Application Builder (Use With NEXYGEN)	40/0683
NEXYGEN/ONDIO Software Suite	40/0695
NEXYGEN/ONDIO Upgrade	40/0695/U

### GRIPS & FIXTURES:

All grips up to a capacity of 100 kN (22000 lbf) can be fitted.



## TEST AND CALIBRATION INSTRUMENTS

**UK**  
Lloyd Instruments Ltd  
Forum House  
12 Barnes Wallis Rd  
Segensworth East, Fareham  
Hampshire, UK  
PO15 5TT  
Tel: +44 (0)1489 486 399  
Fax: +44 (0)1489 885 118

**America**  
AMETEK TCI Division  
8600 Somerset Drive  
Largo  
Florida 33773  
USA  
Tel: +1 (727) 536 7831  
Fax: +1(727) 539 6882

**Far East**  
Lloyd Instruments  
Far East Representative Office  
No7 Sherwood Place  
Alexander Heights  
6064 Perth  
WESTERN AUSTRALIA  
Tel: +61 8 9343 5725  
Fax: +61 8 9343 5723

**France**  
Lloyd Instruments SA  
3 avenue des Coudriers  
Zone d'activite de l'observatoire  
78180 Montigny-Le-Bretonneux  
FRANCE  
Tel: +33 (1) 30 57 47 74  
Fax: +33 (1) 30 57 50 33

**Germany**  
Erichsen Wuppertal  
Ametek Precision Instruments  
Europe GmbH  
Rudolf-Diesel-Straße 16  
D-40670 Meerbusch  
GERMANY  
Tel: +49 (0)2159 9136-70  
Fax: +49 (0)2159 9136-80

email: general@lloyd-instruments.co.uk  
www.lloyd-instruments.co.uk

Information within this document is subject to change without notice.

**ISO 9001  
Manufacturer**