

# LLOYD INSTRUMENTS™

## LR50K Plus Series

### 50kN Materials Testing Machine

The LR50K Plus Series advanced, twin column, materials testing machine incorporates an extensive range of features making it ideal for performing complex testing applications up to 50 kN (11240 lbf) at a highly affordable price.

The machine is microprocessor controlled and incorporates world proven 32 bit technology for highly accurate load measurement and rapid data acquisition. The integral user interface consists of a side mounted control console with large, positive action membrane switches, allowing complex tests to be performed at the touch of a button. A large, back lit Liquid Crystal Display shows the test and set-up information in an extensive 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 setups, or may be connected via its RS232 output to a personal computer running NEXYGEN™ MT software, providing almost unlimited testing and results processing capability.

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 throughout the full load range. A range of highly accurate, interchangeable loadcells are available for tension, compression and cycling through zero force measurements. An extensive range of grips and fixtures are also available to 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
- 2 key press operation
- High accuracy load measurement
- Data sampling rate 8 kHz
- 32 bit micro controller
- Saves 600 test results
- 10 programmable test set-ups
- Extension resolution < 0.01 micron
- Long crosshead travel 855 mm (33.66 in)
- Multi lingual display options
- Multi unit display options
- Full PC integration with NEXYGEN MT software
- Wide selection of loadcells, grips, jigs and accessories
- Flash upgradeable

#### Specifications

|                        |   |
|------------------------|---|
| Force Capacity:        | 50 kN (11240 lbf)   |
| Crosshead Speed:       | 0.001 to 510 mm/min<br>0.00004 to 20.08 in/min  |
| Speed Accuracy:        | < 0.2%  |
| Travel: LR50K Plus     | 855 mm, 33.66 in  |
| LR50K Plus-E           | 1520 mm, 59.84 in   |
| Load Resolution:       | < 0.005% of loadcell used (max)   |
| Extension Resolution:  | < 0.01 micron   |
| Data Sampling Rate:    | 8 kHz   |
| Extensometer Inputs:   | Digital and Analogue Extensometer   |
| Data Outputs:          | Digital - RS232<br>Analogue - 10V dc max (optional)                                     |
| Load Measuring System: | Exceeds the requirements of BS EN<br>ISO 7500-1, ASTM E4, DIN 51221.                    |
| Analysis Software:     | NEXYGEN MT Data Analysis Software and<br>Ondio Applications Builder Software (optional) |
| Supply Voltage:        | 115/230V ac ± 10% 50 - 60Hz   |
| Weight:                | 150Kg (330 lb)  |
| Operating Temp:        | 5°C to 35°C (40°F to 95°F)  |
| Warranty:              | 1 year  |

#### SPECIFICATION

SS-MT-6263-0903  
September 2003

#### INTERNET

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

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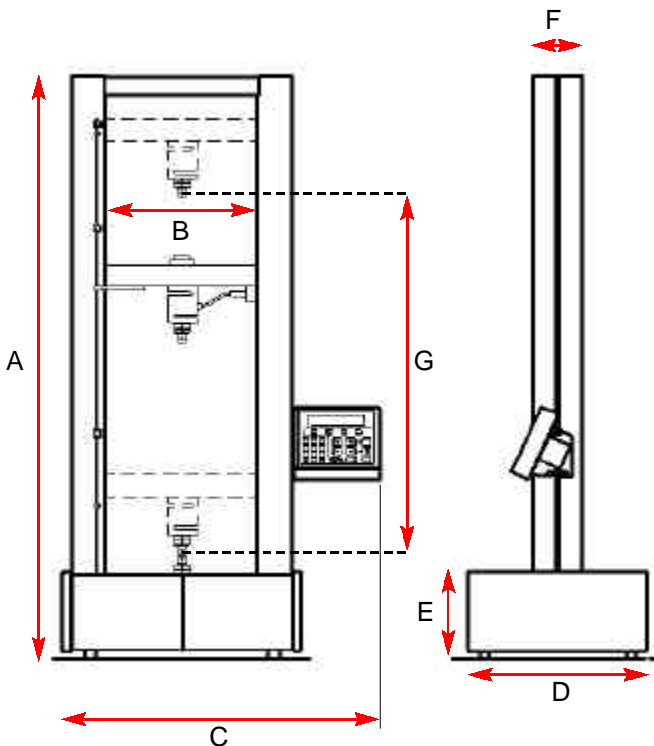
## Ordering Information

| Model     | Part No. | Description                            |
|-----------|----------|--|
| LR50KPlus | 01/3173  | LR50KPlus with Console                 |
| LR50KPlus | 01/3218  | LR50KPlus Extended Column with Console |
| LR50KPlus | 01/3219  | LR50KPlus Pogo Design* with Console    |

\* Note "Pogo Design" denotes machine configured to perform tests mounted above floor standing compression cage.

## Machine Dimensions

|   |                | mm   | in   |
|---|----------------|------|------|
| A | Machine Height | 1565 | 61.6 |
| B | Working Width  | 404  | 15.9 |
| C | Machine Width  | 893  | 35.2 |
| D | Machine Depth  | 596  | 23.5 |
| E | Base Height    | 240  | 9.5  |
| F | Column Depth   | 150  | 5.9  |
| G | Maximum Travel | 855  | 33.7 |



## LR50KPlus Series Accessories

### LOADCELLS:

5 N (1.12 lbf)  
 10 N (2.25 lbf)  
 20 N (4.5 lbf)  
 50 N (11.25 lbf)  
 100 N (22.5 lbf)  
 250 N (56.25 lbf)  
 500 N (112.5 lbf)  
 1000 N (225 lbf)  
 2500 N (562.5 lbf)  
 5000 N (1124 lbf)  
 10 kN (2248 lbf)  
 20 kN (4496 lbf)  
 30 kN (6744 lbf)  
 50 kN (11240 lbf)

### ITEM

### MODEL

XLC-0005-A1 01/2946  
 XLC-0010-A1 01/2360  
 XLC-0020-A1 01/2950  
 XLC-0050-A1 01/2361  
 XLC-0100-A1 01/2480  
 XLC-0250-A1 01/3048  
 XLC-0500-A1 01/2362  
 XLC-1000-A1 01/2419  
 XLC-2500-A1 01/2363  
 XLC-5000-A1 01/2364  
 XLC-10K-A1 01/2365  
 XLC-20K-A1 01/2417  
 XLC-30K-A1 01/2366  
 XLC-50K-A1 01/2367

### INTERFACE CABLES:

RS232 Cable, 9 Pin  
 RS232 Adapter, 9 Pin to 25 Pin  
 Cable, Control Console (External)

09/0639  
 ADT/0140/00  
 09/0710

### SOFTWARE:

NEXYGEN MT Software Package  
 NEXYGEN MT/ONDIO Software Suite

40/0658  
 40/0695

### MISCELLANEOUS:

#### Standard

Cable, Control Console (External)  
 Operators' Manual  
 Hex Key, 5 mm (0.20 in)  
 Spanner Wrench, 42 mm (1.65 in)  
 Anchor Pin, 5/8 in  
 Anchor Pin, 1.25 in  
 Grip Pin, 1.25 in Eye End  
 Grip Pin, 5/8 in Eye End  
 Loadcell Mounting Adapter M20  
 Loadcell Mounting Adapter M12

09/0710  
 01/3083  
 92/0293  
 SPT/0244/00  
 PIN/0258/00  
 PIN/0257/00  
 PIT/0061/00  
 PIT/0169/00  
 ADT/0151/00  
 ADT/0148/00

#### Optional

Splinter Shield

01/3095

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 TEST AND CALIBRATION INSTRUMENTS

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