

## EZ Series

# EZ20 20 kN Universal Materials Testing Machine

The EZ20 advanced materials testing machine incorporates an extensive range of features making it ideal for performing complex as well as routine testing applications up to 20 kN (4496 lbf). The EZ20 features a twin column design with a standard crosshead travel of 870 mm (34.3 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 EZ20 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 EZ20 can also be connected to a personal computer with optional Lloyd Instruments NEXYGEN*Plus* material test and control software. NEXYGEN*Plus* 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 non-continuous testing use in production, quality control, education and research environments. Where continuous testing is required, we recommend the Lloyd Instruments LR30K*Plus* 30 kN materials testing machine.

### 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 NEXYGEN*Plus* software
- Extension resolution < 0.1 microns
- Multi-lingual display options
- Multi-unit display options
- Flash upgradeable
- Extended column options for testing high extension materials
- Wide selection of load cells, grips, jigs, extensometers, temperature chambers and other accessories

### Specifications

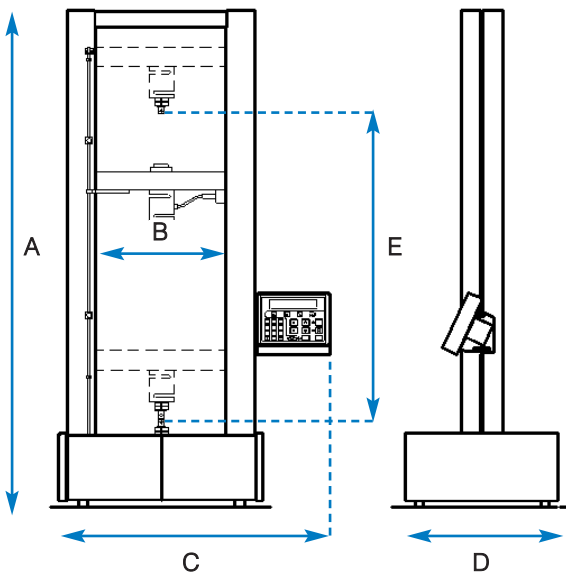
|                          |  |
|--------------------------|--|
| Force Capacity:          |  |
| <b>EZ20 (Standard)</b>   | 20 kN (4496 lbf)   |
| <b>EZ20-E (Extended)</b> | 20 kN (4496 lbf)   |
| Crosshead Speed Range:   | 0.001 to 508 mm/min up to 20 kN<br>(0.00004 to 20 in/min up to 4496 lbf)       |
|                          | 0.01 to 1016 mm/min up to 10 kN<br>(0.0004 to 40 in/min up to 2248 lbf)        |
| Speed Accuracy:          | < 0.2% at steady state   |
| Travel:                  |  |
| <b>EZ20</b>              | 870 mm (34.3 in)   |
| <b>EZ20-E</b>            | 1370 mm (54 in)  |
| Width Between Columns:   | 404 mm (16 in)   |
| Minimum Load Resolution: | 0.0001N (Load cell specific)   |
| Load Cell Accuracy:      | <0.5%  |
| Extension Resolution:    | < 0.1 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:                | NEXYGEN <i>Plus</i> Data Analysis Software (optional)                          |
| Supply Voltage:          | 230Vac ±10%, 50-60 Hz, Fuse T5AH250V,<br>115Vac ±10%, 50-60 Hz, Fuse T10AH250V |
| Weight:                  |  |
| <b>EZ20</b>              | 148 kg (326 lb)  |
| <b>EZ20-E</b>            | 152 kg (335 lb)  |
| Operating Temperature:   | 5° to 35° C (41° to 95° F)   |



## Accessories

| Item   | Part No | Item   |
|--|---------|--|
| <b>XLC Series Load Cells:</b>  |         | <b>Extensometers:</b>  |
| 5 N (1.12 lbf)   | 01/2946 | We supply contacting and non-contacting extensometers.   |
| 10 N (2.25 lbf)  | 01/2360 | For further information see our extensometer specification sheets.   |
| 20 N (4.5 lbf)   | 01/2950 |  |
| 50 N (11.25 lbf)   | 01/2361 |  |
| 100 N (22.5 lbf)   | 01/2480 | <b>Temperature Chambers and High Temperature Furnaces:</b>   |
| 250 N (56.25 lbf)  | 01/3048 | A range of thermal chambers and furnaces are available.  |
| 500 N (112.5 lbf)  | 01/2362 | For further information see our specification sheets.  |
| 1000 N (225 lbf)   | 01/2419 |  |
| 2500 N (562.50 lbf)  | 01/2363 | <b>Splinter Shields:</b>   |
| 5000 N (1124 lbf)  | 01/2364 | Splinter shields can be supplied to your specific requirements.  |
| 10 kN (2248 lbf)   | 01/2365 | Contact Lloyd Instruments for further information.   |
| 20 kN (4496 lbf)   | 01/2417 |  |
| <b>Application Software:</b>   |         | <b>EZ20 Large Compression Cage Option:</b>   |
| NEXYGENPlus  | 40/0771 | The EZ20 machine can be ordered mounted above a floor standing compression cage for larger sample testing. |
| <b>Grips &amp; Fixtures:</b>   |         | Contact Lloyd Instruments to discuss your specification needs.   |
| A wide range of grips and fixtures are available. For further information see our grip specification sheets. |         |  |

## Machine Dimensions



|                             | mm   | in   |
|-----------------------------|------|------|
| A (Standard machine height) | 1567 | 61.7 |
| A (Extended machine height) | 2067 | 81.4 |
| B                           | 404  | 16.0 |
| C                           | 868  | 34.2 |
| D                           | 596  | 23.5 |
| E (Standard machine travel) | 870  | 34.3 |
| E (Extended machine travel) | 1370 | 54.0 |



Tensile test



Compression test



Flexure test

## Ordering Information

| Model  | Part No | Capacity         | Description  |
|--------|---------|------------------|--|
| EZ20   | 01/2889 | 20 kN (4496 lbf) | EZ20 Materials Testing Machine with Console            |
| EZ20-E | 01/3375 | 20 kN (4496 lbf) | EZ20 Materials Testing Machine (Extended) with Console |

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