

LDW-50 Digital Display Electromechanical Universal Testing Machine



Applications:

Electromechanical Testing Machines are designed and manufactured according to ASTM, ISO, DIN, GB etc standards. This series UTM are for tensile, compression, bending and shearing test on various fields of materials. With LCD display, it shows load, displacement, speed etc. The advantage is fast efficiency. It also can be updated to servo control. It is widely used in many fields of such as industry factories, research & development, test institutes and training centers etc.

Applied Standards:

Load meets or exceeds the following standards: ASTM E4, ISO7500-1, EN 10002-2, BS1610, DIN 51221.

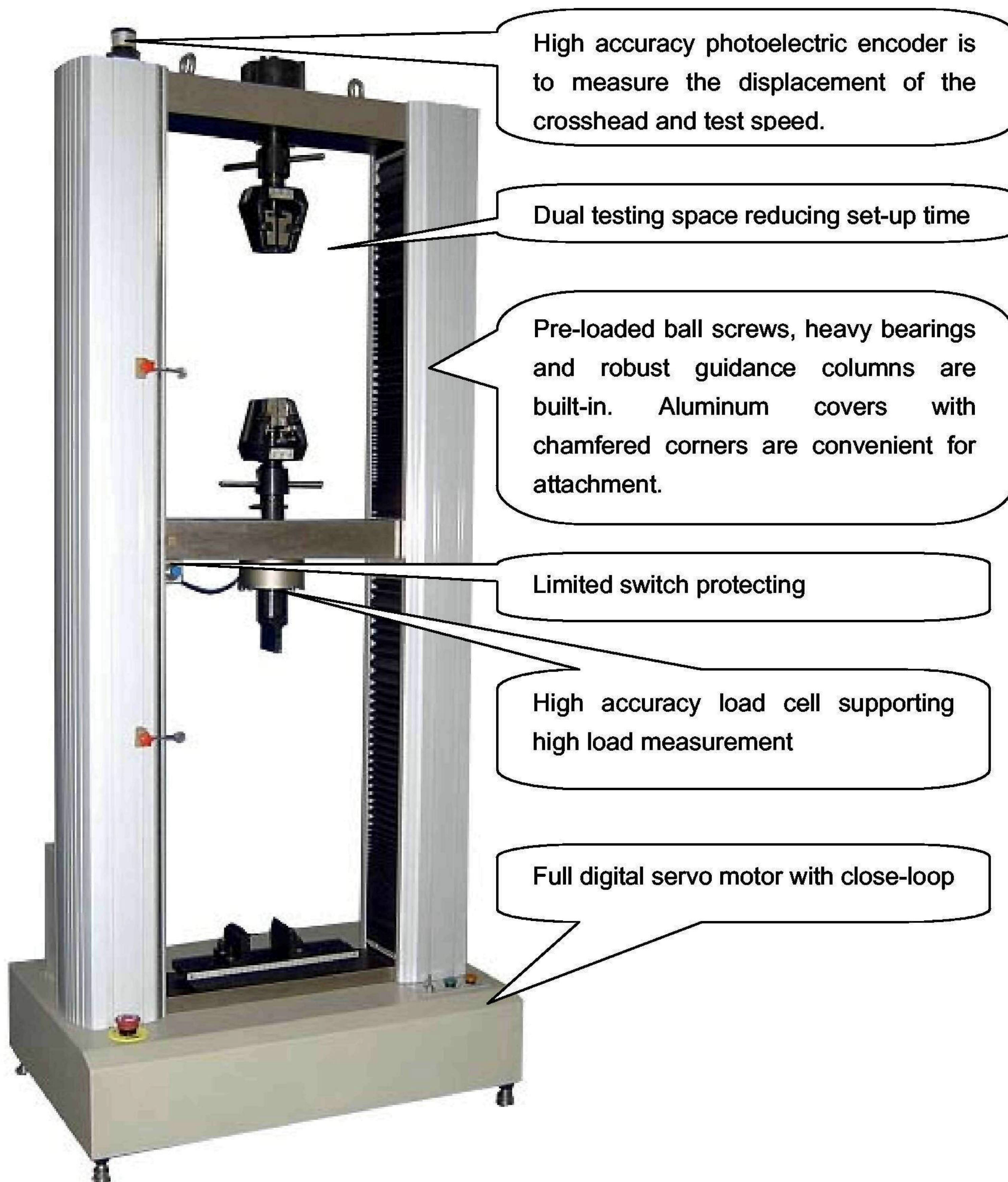
Strain measurement meets or exceeds the following standards: ASTM E83, ISO 9513, EN 3846 and EN 1002-4

Features

- High stiffness load frame.
- The dual columns are with dual testing space. It is convenient with calibration and different testing.
- Pre-loaded ball screws and heavy duty bearings assure long life with zero backlash as well as linear low force and through zero performance. The result is accurate and repeatable measurements that truly represent the specimen characteristics rather than load frame deficiencies.
- Robust guidance columns increase lateral stiffness and ensure linear crosshead travel. This results in accurate crosshead alignment thus reducing variability in measurement data and

producing better overall accuracy.

- Easy-to-clean aluminum column covers with chamfered corners to facilitate access to the test area. T-slots are built in for simple, convenient attachment and positioning of testing accessories.
- Over 1000 kinds of grips to meet different test.
- Automatic return functions after test finished.



Main Specifications:

- Max. Load: 50kN
- Load accuracy: $\leq \pm 0.5\%$
- Deformation accuracy: $\leq \pm 0.5\%$
- Resolution of position of crosshead: 0.001mm

- Speed range: 0.005mm/min~500mm /min
- Effective tensile test space: 570 mm
- Crosshead travel: 1100mm
- Test space width: 570mm
- Effective compression platens: 640mm
- Power Supply: 110V, 1 Phase, 60Hz
- Size of load frame: 900x600x2200 mm
- Weight of load frame: 450kg

Standard Accessories:

1. Tensile test attachment

Grips for flat specimen: 0-7mm, 7-14mm, 14-21mm 1 set each

Grips for round specimen: Φ4-Φ9, Φ9-Φ14mm, Φ14-Φ21mm 1 set each



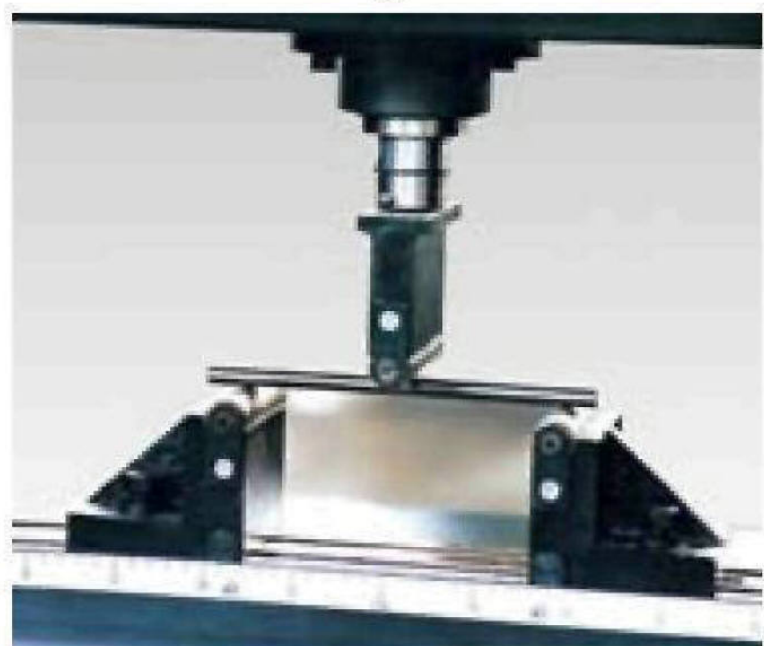
2. Compression plates

1 set



3. Bending test fixture

1 set



4. Photoelectric encoder:

1 pc



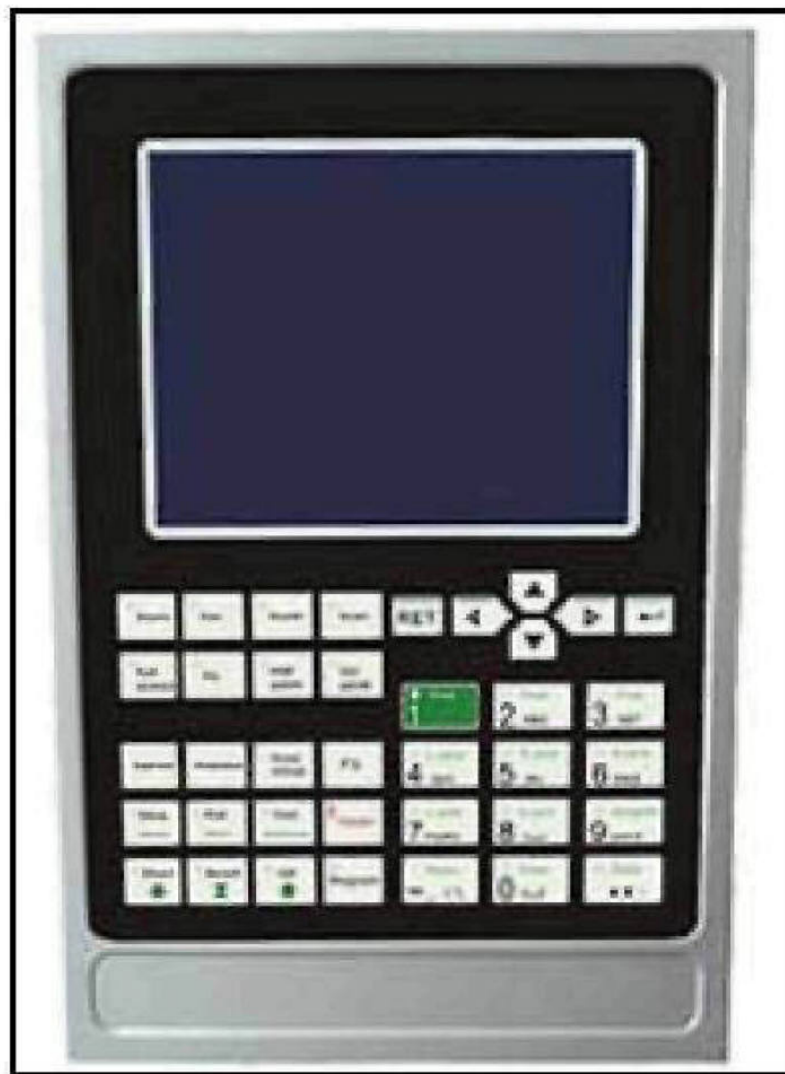
5. Load cell:

1pc



6. Full digital controller

1 set



It offers test load and displacement measurement. The display panel is divided into test load display, displacement display, speed display and operation control.

7. Wireless controller

1 set



Environment of testing machine

Operating temperature: +10°C to +38°C

Storage temperature: -40°C to +66°C

Humidity range: +10% to +90%, non-condensing

Atmosphere: Designed for use under normal laboratory conditions. Protective measures may be required if excessive dust, corrosive fumes, electromagnetic field or hazardous conditions are encountered.

The LCD controller is one exact test control instrumentation especially for the simple tensile and compression testing of metallic materials. It is, as a result of applying of the advanced technology, refined design and elaborate units, is of quite precision of test, accurate identification's capability and convenience of operation.

Functions and Performance

1. Automated data analysis based on interrelated criterion and auto saves.
2. Could be operated by one single key-press that is similar to the PDA.
3. Complex keyboard is used as shortcut and letters' input that is similar to the PDA or mobile telephone.
4. Portable and cabinet. Supports batteries power supply. Metallic casing box makes it be used in different places becoming possible.
5. LCD screen displays the testing data, testing curve, and operating menus.
6. Intelligently estimation of specimen's broken when testing. Automatically start the next testing, unneeded manual operation.
7. Powerful data processing capability. The data could be amended, deleted, transferred easily.
8. The testing could be reworked, so that the testing accidents could be greatly avoidable.
9. Strict purview administration that ensures the testing data's safe.
10. Have real time display function.
11. The operating program can be downloaded from internet, and be upgraded. New programs would be compatible with the old.
12. Inbuilt VAC, closed loop control of testing instruments.

Main Specifications:

Load Measure: 2%-100% of full scale, 0.5/100 scale sensitivity, $\pm 1/100$ display value precision.

Elongate Measure: allow extensometer, big elongate and encoder measure mode, 0.5/100 scale sensitivity, $\pm 1/100$ display value precision.

Big Elongate Measure: two optical rotary encoders measure mode, 4-multiple frequency.

Displacement Measure: optical rotary encoders measure mode, 4-multiple frequency input, 0.01mm sensitivity or better.

Control: stepless speed change, max control speed 500 mm/min. supports metal tensile control mode and programmed control.

Data analysis: automatically analysis F_m , P_1 , P_2 , ReH , ReL , R_p etc, supports manually records 1 - 9 points' value of the load and elongate.

Data analysis method: based on interrelated criterion, as follows:

Metallic materials-Tensile testing at ambient temperature: ISO6892,

Metallic materials-Compression testing

Printout: inbuilt printer could print out the testing data.

Power supply: external power supply 220V DC, internal power supply 7.5V DC.