

MICROPROCESSOR CONTROL UNIVERSAL  
TESTING MACHINE

**SDW-50**

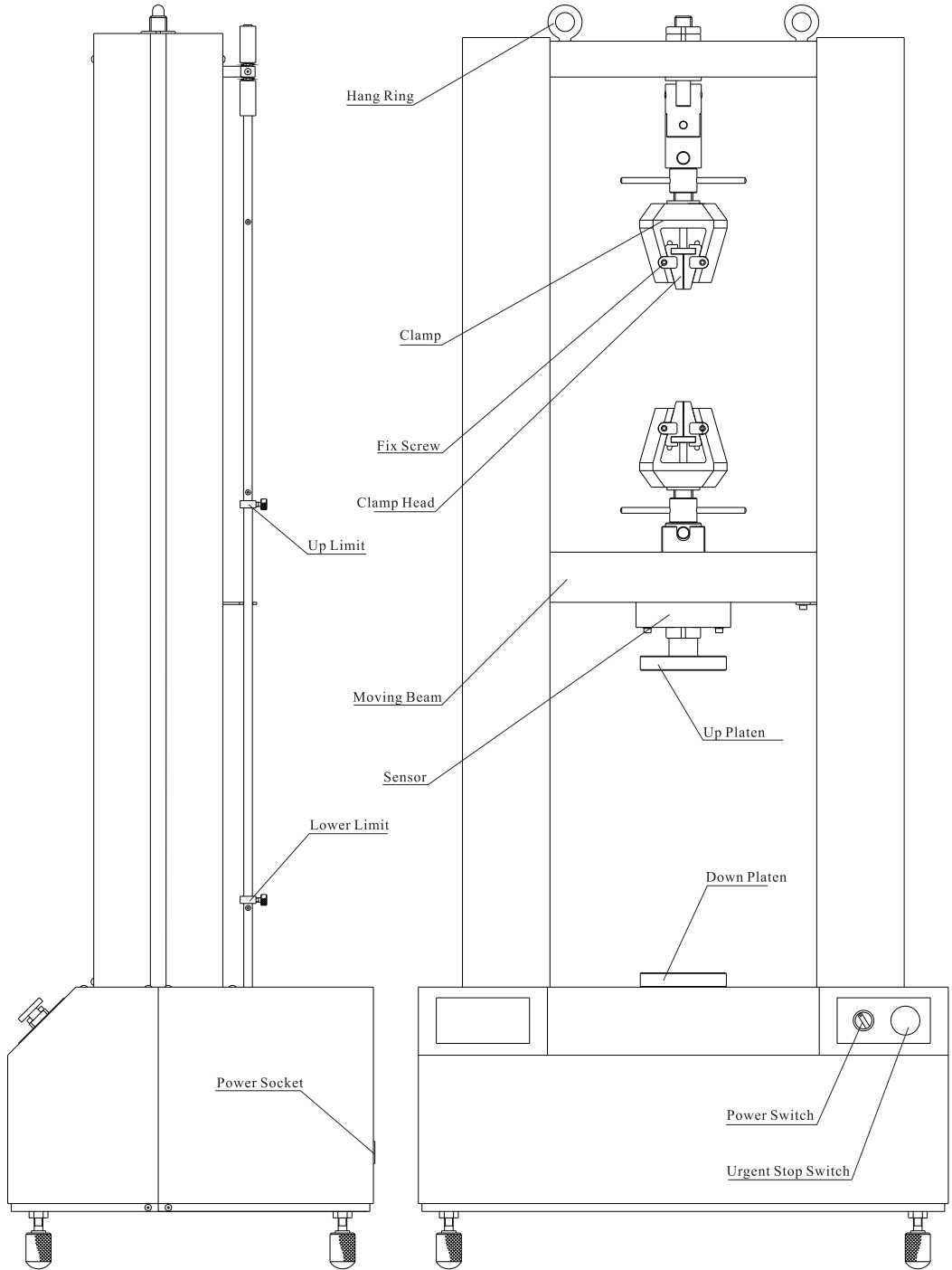
USER'S MANUAL



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# 1. Structure



## 2. Function

The Universal Testing machine is mainly used for testing metal and non-metallic material's physical capability under tension or compression, bend or cut. Assembled with different clamps, it can be also used for tearing, peel-off, or puncture test. With compact structure, easy operation and convenient maintain, the machine is ideal measuring equipment for college, scientific institution and quality control department.

## 3. Working Condition

- (1) With temperature of 10~35°C, relative humidity  $\leq 85\%$ .
- (2) Locating on stable place, levelness should be higher than 0.2mm/1000mm.
- (3) In the environment without shock, corrosive medium and no electromagnetic field interference.
- (4) Ground wire is connected well.
- (5) Keep the environment clean, and leave 0.7m space around the machine.

## 4. Specification

Max Capacity: 50kN.

Beam Speed: 0.001-500mm/min (free set without grade).

A. Speed  $\leq 0.5$ mm/min, inaccuracy of beam speed is within  $\pm 1\%$ ;

B. Speed  $> 0.5$ mm/min, inaccuracy of beam speed is within  $\pm 0.2\%$

Force Accuracy:  $\pm 0.5\%$ .

Measuring Resolution of Beam Displacement:  $> 0.01$ mm.

Push and Pull Space: 570mm.

Test Width: 400mm.

Power: 220V  $\pm 10\%$ , 50HZ.

Dimension: 740  $\times$  510  $\times$  1870 (mm).

Weight: about 350kg.

## 5. Structure & Principle

### (1) Structure

This machine is made up of Up Platen, Down Platen, Column, Beam, Sensor, Clamps, Ball Bearing Leading Screw, Driving System, Servo Motor, Protecting Crust, Limit Protecting Device, and Controlling System, etc.

### (2) Working Principle

The servo controller drives the servo motor to work by parameter setting on the controlling instrument. The motor will put the beam in motion by driving system and ball bearing leading screw. It will produce force on tested material by clamps installing on the moving beam, and reach the testing purpose.

## 6. Preparation Before Test

- (1) Adjust bottom foot to make the machine on the level.
- (2) Insert power wire into AC 220V socket with earth wire. Link each connecting cables to the corresponding position according to the indicating stick.

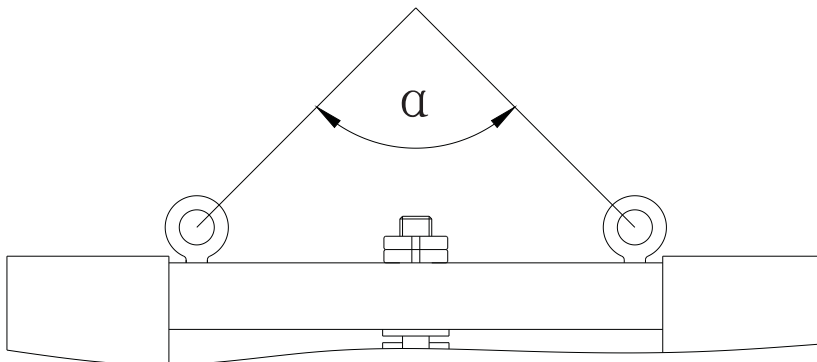
## 7. Operation

- (1) Check all of cables is connected well, and limit device is normal.
- (2) Turn on the power and warm-up for 15 minutes (First turn on main body, then the controller).
- (3) Equip the fit clamp head according to requirements (there are 2 kinds of clamp heads, to test flat shape and stick shape of material; When replacing clamp head, loosen the fix screws, and get out the clamp head, put the required clamp head into it, fix the back splash board and tighten the screws.
- (4) Adjust the limit location according to clamps and specific testing request, and fasten the limit knob.
- (5) Set test project according to testing requirements.
- (6) After clear the load, distortion, displacement to zero, then tests proceed.
- (7) Observe test result, view test data, and print test report according to requirements.
- (8) Finish measurement, turn off power, and clean the test scene.

## 8. Caution

- (1) Before testing, check whether the limit function is normal, limit position is fit, knob is tightened, to avoid accident.
- (2) Do not open the main body box and control box at will.
- (3) Do not plug or draw connector with power.
- (4) Do not use the tester system without better earth wire.
- (5) If the fuse in power socket is broken, there is another prepared inside.
- (6) When the machine is hanged, the angle of rope  $\alpha < 90^\circ$ .

Enclosed Picture:



## 9. Packing List

Product Name: Microprocessor Control Universal Testing Machine

S/N:

Number	Name	Quantity	Remarks
1	Main Body	1	
2	Power Wire	1	
3	Port Line	1	
4	Tension Clamp	1 Series	Two Packs of Clamp Head
5	Compression Clamp	1 Series	
6	Inside Hexagon Spanner	1 Series	
7	Electron Extensometer	1	
8	Software	1 Series	CD
9	Computer	1	
10	Color Ink-jet Printer	1	
11	Qualification Certificate	1	
12	Manual	2	

## CONTINUATION

Dear User,

We're pleased for your patronage to purchase SDW-50 Microprocessor Control Universal Testing Machine. Before operating the machine, please read the manual carefully and keep it well to give you help when you can't learn it or there is something wrong with it.

Description in the manual is based on the newest products. Owing to improvement or other changes, contents of manual may differ from practical situation. Our company will reserve the right of recension at any moment. Please kindly forgive not to notify the revised place one by one.

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