

Mitech MDW-S Digital Display Series Single Arm Type Electronic Universal Testing Machine

Overview

Mitech MDW-S digital display series single arm type electronic universal testing machine, through the single-chip automatic control motor driving screw movement, equipped with the corresponding auxiliary for metal, non-metallic and composite materials for pull, pressure, bending and other mechanical properties test. (The tensile test is carried out between the upper beam of the main body and the moving beam, and the compression and bending tests are carried out between the main plate and the moving beam.), it uses a built-in controller, AC servo motor, automatic control and data acquisition system, stable performance, strong structure, high reliability, simple operation, high degree of automation. Widely used in metal and non-metallic processing industry, quality inspection departments quality testing, scientific research and other areas of higher education institutions, is to improve production efficiency and save production costs necessary professional precision testing equipment.

Technical Parameters

Technical Parameters	MDW-S		
	MDW-S01~5A	MDW-S01~5	MDW-S10B
Structural form	Single arm type		
Maximum testing force (KN)	0.1-5KN		10KN
Testing machine grade	Level 1		
Operation mode	Measuring and controlling instrument		
Force measuring range	2%-100% of the maximum testing force		
Relative error on indicated values of testing force	Better than $\pm 1\%$ of the indicated value		
Beam displacement range	0-600 (1000) mm can be customized according to customer needs		
Precision on beam displacement	$\pm 1\%$		
Displacement measurement stroke	600 (1000) mm		
Speed governing range	0.01-500mm/min		
Testing space adjusting mechanism	Stepper motor / servo motor, low noise timing belt drive		
Protection function	Overload protection, limit protection.		

Power supply	220V
Clamp form	Suitable clamps will be configured according to the customer requirements. Special clamps can be customized for the customer.
Dimensions (mm)	450*260*1470mm
Total Weight	Approximately 110kg

Working Principle

The testing machine is a combination of testing machine technology and mechanical transmission technology, sensor technology, automatic control technology. It consists of drive system, control system, measurement system. The control system is mainly used for the movement of the beam of the testing machine. The speed of the beam can be controlled by changing the speed of the motor. The control system is operated by the console control test machine. The state of the test machine and the test parameters can be obtained through the display screen. The measurement system utilizes sensors, signal amplifiers, photoelectric encoders, and data processing systems to perform force measurement, deformation measurement, beam displacement measurement. Drive system, control system, measurement system and other subsystems to coordinate with each other to complete the material pull, pressure, bending and other mechanical performance testing.

Features

- Widely used in metal and non-metallic processing industry, quality inspection departments of quality testing, colleges and universities in scientific research fields;
- The speed of the beam during the test can be pre-set by the program, user-friendly;
- Use of desktop single-arm double-space structure to achieve tension and compression, cross-beam movements can be stepless speed;
- Built-in controller to ensure that the test machine can be specimen deformation, test force and displacement of the closed-loop control;
- Transmission system by the arc synchronous tooth type belt, screw vice composition, smooth operation, high efficiency, low noise, no pollution;
- Automatically according to the size of the load can be switched to the appropriate range to ensure the accuracy of measurement data;
- Zero adjustment, calibration, storage, etc. without any analog adjustment link, the control circuit is highly integrated;
- System can achieve the accuracy of the automatic calibration;
- With a limit protection function, arrived at the limit after the automatic shutdown, to prevent the collision in the middle of the beam caused by overload or even damage to the sensor;
- With overload protection function, when the load exceeds the maximum value of 3-5% of the file, the test machine automatically shut down;
- Can be batch test, the same parameters of the sample only a test set;
- A variety of auxiliary customization, to meet the needs of a variety of materials testing;
- Use of LCD display, menu-type user interface, simple and intuitive, convenient and quick;
- Consistent with GB, ISO, ASTM, DIN and other relevant domestic and foreign standards.

Scope of application

Widely used in metal, non-metallic and composite materials, pull, pressure, bending and other mechanical properties test.

Applications

- Metal processing and manufacturing industry quality control links
- Non-metallic processing industry quality control links
- Experimental teaching experiment in colleges and universities
- Scientific research institutions of material analysis test
- Quality inspection departments quality testing links

Working conditions

- Operation Temperature: Ambient temperature ~ 45 °C ;
- Relative humidity: 20%~80%;
- In an environment free from vibration, corrosive medium and strong magnetic field;
- Installed on a flat basis.
- Power supply voltage fluctuation does not exceed 10% of rated voltage.

Configuration

	No.	Item	Quantity	Note
Standard Configuration	1	Testing machine host	1	Contains sensor, limit
	2	Control system	1	
	3	Random tools	1	
	4	Power cable	2	
	5	Channel line	1	
	6	Stretch aids		A set of fit,Jaws
	7	Compression aids	1	
	8	Attached files	1	
Optional configuration	1	Auxiliary	1	Customized to customer requirements
	2	Printer	1	

Maintenance and care

- Before using this instrument, please read the instruction manual carefully, understand the operation steps and precautions, avoid the damage caused by improper operation or personal safety accident;
- Test machine is a large precision instruments, should pay attention to water, moisture. Exposed workstations, upper and lower beam parts and attached parts should be coated with anti-rust oil to prevent rust;
- If idle for a long time, at least once a week and move the upper and lower beams, so that beam position, silk mother often activities to prevent rust;
- After the experiment should be promptly cleaned up debris and other dirt, to prevent accidental damage to the instrument, to avoid shortening the life of the test machine;
- After the completion of the test, will be attached to a good, to prevent the loss of equipment for the next use;
- Electrical connection cable and equipment should be careful when connected, moderate efforts,

remember not to swipe, hard pull

- Don't disassemble the instrument without authorization, maintenance related matter, please contact MITECH after-sale service department with 4000600280.

