

Mitech MDW-TDS Digital Display Series Gantry Landing Type Spring Tension/Compression Testing Machine

Overview

Mitech MDW-S digital display series gantry landing type Spring Tension/Compression Testing Machine, through the single-chip automatic control motor driving screw movement, for a variety of coil springs for tensile and compression test. 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 spring manufacturing, low-voltage electrical appliances, power machinery, institutions of higher learning and scientific research institutes and other fields. It is the necessary professional precision testing equipment for improving production efficiency and saving production costs.

Technical Parameters

Technical Parameters	MDW-TDS				
	MDW-TD 10000S	MDW-TD 20000S	MDW-TD 50000S	MDW-TD 100000S	MDW-TD 200000S
Structural form	Gantry Landing Type				
Maximum testing force	10000N	20000N	50000N	100000N	200000N
Testing machine grade	Level 1				
Operation mode	Measuring and controlling instrument				
Force measuring range	10%-100% of the maximum testing force				
Relative error on indicated values of testing force	Better than $\pm 1\%$ of the indicated value (or $\pm 0.5\%$ for special choice)				
Error on deformation display	$\leq \pm (50 \pm 0.5L)$				
Test force resolution	1N				
Displacement resolution	0.01mm				
Speed governing	0.01-500mm/min				

range	
Stretch effective space	600mm
Compression effective space	600mm
Protection function	Overload protection, limit protection.
Power supply	220V
Dimension	700*580*1720mm
Total Weight	Approximately 450kg

Working Principle

Spring tension/compression testing machine measured by the force generated by the sensor signal amplified by the A / D converter into the digital signal is accepted by the computer system, the digital processing, the computer system to deal with the operation of A / D conversion Signal to the LCD display data.

Features

- Widely used in spring manufacturing, low-voltage electrical appliances, power machinery, institutions of higher learning and scientific research institutes and other fields;
- Modeling novel, strong structure, high reliability, simple operation, high precision measurement;
- The speed of the beam during the test can be pre-set by the program or setting by manual;
- Built-in controller to ensure that the test machine can be specimen deformation, test force and displacement of the closed-loop control;
- All-digital AC servo motor through the no noise synchronous toothed belt, high precision seamless ball screw drive to ensure its smooth load, no gap, high transmission efficiency;
- 5000-line optoelectronic encoder, the relative high accuracy of displacement;
- High precision and high stability of the tire tension and compression strain sensor, coupled with high-precision measurement and amplification system to ensure that the test force of high precision;
- 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;
- 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;
- Test end, test data and test curve automatically saved for later retrieval analysis;
- 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 spring mechanical performance test.

Applications

- Spring manufacturing industry
- Power machinery enterprises
- Experimental teaching experiment in colleges and universities
- Scientific research institutions of material analysis test
- Quality inspection departments quality testing links

Working conditions

- Operating temperature: room temperature ~ 45 °C;
- Relative humidity: 20% to 80%;
- No vibration around, no corrosive media, no strong magnetic field interference;
- Horizontal installation on a solid basis;

Configuration

	No.	Item	Quantity	Note
Standard Configuration	1	Testing machine host	1	
	2	Control system	1	
	3	Power cable	2	
	4	Channel line	1	
	5	Printer	1	
	6	Attached files	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;
- The instrument should be test at least once a year to ensure the accuracy of the test machine;
- 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.