Mikrosize®

MST-2000

Spring Tension and Compression Tester

Video

Contact us

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Features and Applications

Product Features

- Color screen display and beep prompts for key presses.
- Supports tension and compression testing of springs.
- Maximum measurable free length of springs: 200mm.
- Pressure plate diameter: 108mm.
- Three measurement modes: real-time measurement mode, peak measurement mode, auto peak mode.
- Upper and lower limit values can be set; the device buzzer will sound a prolonged alarm when test results exceed the limit values.
- Minimum save value can be set; data below this value cannot be saved.
- Minimum peak value can be set; data below this value will not be displayed.
- Automatic shutdown function, adjustable from 1-99 minutes.
- Equipped with a digital scale to display spring deformation, with two units available: mm and inch.
- Nhigh precision and high resolution, with a minimum resolution of 0.1n.
- Three measurement units, freely switchable: n, kg, lb.
- Gravity acceleration can be set for higher measurement and conversion accuracy.
- Can store up to 99 groups of test data, which can be directly viewed, stored, and deleted on the device.
- Stored measurement data can be printed out, including maximum value, minimum value, and average value.
- Can connect to pc via usb interface for synchronous testing function; the computer synchronously displays the test force curve and force measurement records during the test process.
- Executive standards: jb/t 7796; iso 7500-1:2018.

Features and Applications

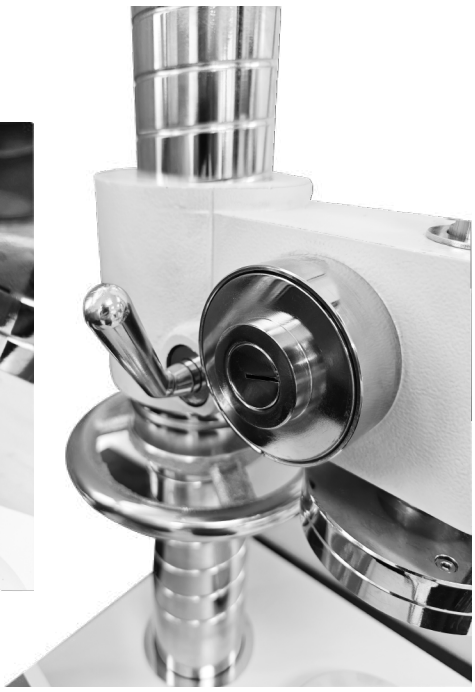
Product Applications

- Testing the fatigue resistance of suspension springs (such as load attenuation under long-term vibration).
- Verifying the compression stiffness and ultimate load of clutch springs to ensure smooth gear shifting.
- Analyzing the fatigue life of engine valve springs under high-frequency vibration to avoid fracture risks.
- Machinery manufacturing and industrial equipment.
- Measuring the load accuracy of compression springs after setting treatment to ensure mold closing accuracy.
- Testing the initial tension and ultimate tensile strength of tension springs to prevent spring detachment during the operation of industrial equipment.
- Analyzing the impact resistance of heavy machinery springs (such as the dynamic load response of mine vibrating screen springs).

Product Details

- The digital scale records the deformation of the spring, and the value can be read directly.
- Two units: mm/inch, which can be freely switchable.
- Equipped with a memory key to lock the value; a zero key, and an absolute key (ABS).
- Uses a button battery as the power source.

- After loosening the locking handle, rotate the adjusting nut to adjust the position of the column. Adjust the height of the column according to the type of experiment (tension or compression).



Product Details

1.Gantry 2.Column 3.Measuring Handle 4.Upper Limit Position Device
5.Rack 6.Locking Handle 7.Digital Scale 8.Lower Limit Position Device
9.Adjusting Nut 10.Display And Key Panel

Product Details

1.Display screen **2.Power switch** **3.Zero key** **4.Battery compartment**

5.Value hold: lock the memory key, an "H" character appears on the value, the value will be locked and no longer change; press again to unlock.

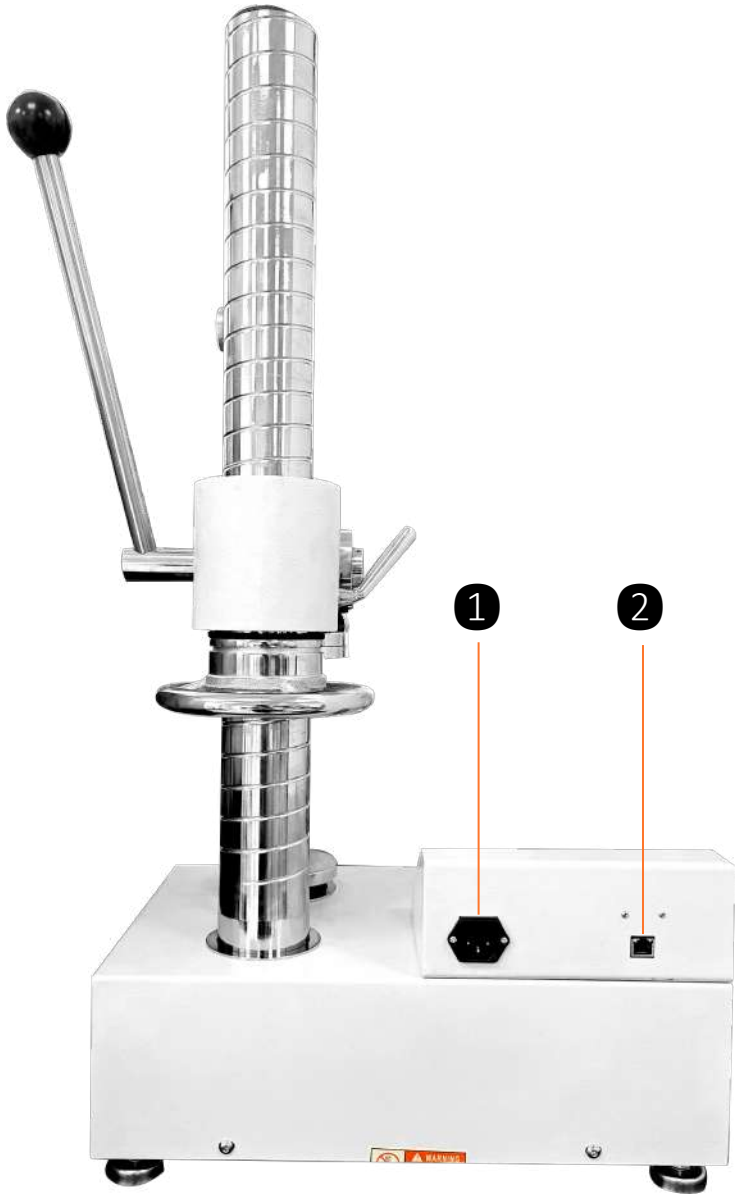
6.Absolute key: press to display zero on the screen with "ABS" appearing, indicating measurement distance starting from here; press again to switch to normal measurement mode.

7.Unit key: press to switch units between mm and inch.

Product Details

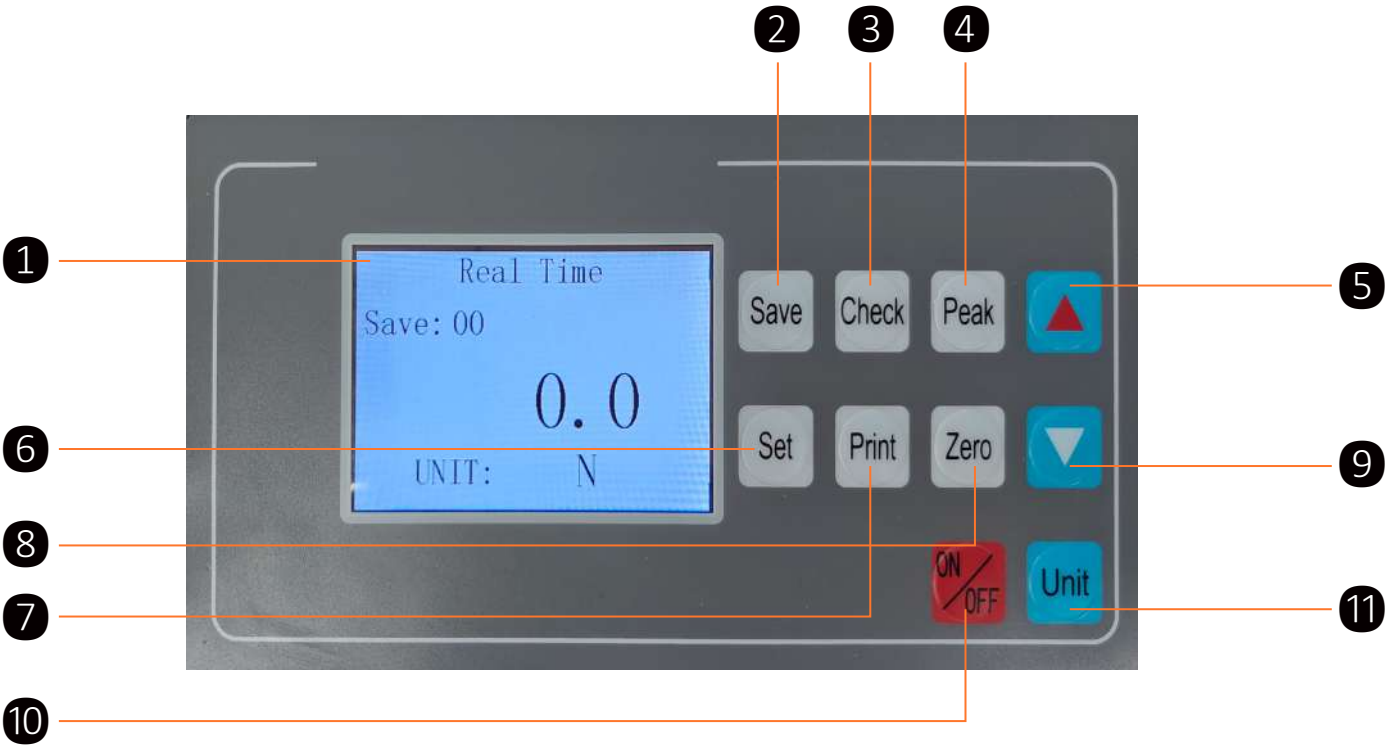
1.Power interface

2.Network interface



1.USB interface

Product Details



1.Display screen

2.Save key: press to save the measured value on the measurement interface; on the menu interface, press to save the setting parameters after modification.

3.Check: press on the measurement interface to view stored measurement data

4.Peak: press to switch measurement modes, including Real Time, Peak, and Auto Peak.

5.Up key

6.Set: press on the measurement interface to enter the setting menu interface.

7.Print

8.Zero: press to correct the zero point in Real Time mode; press to clear the peak value in Peak and Auto Peak modes; long-press to clear all stored measurement values on the viewing interface; press to return to the previous level without saving the set data on the setting interface.

9.Down key

10.ON/OFF: power on/off of the instrument

11.Unit: switch units, N, KG, Lb

Operation Interface

VSetting Menu

- There are 10 settable options in the setting menu, including upper limit value, lower limit value, minimum save value, minimum peak value, auto peak time, auto shutdown time, gravity acceleration, initialize setting, network, and calibration.

Upper and Lower Limit Values

- Setting upper and lower limit values: the upper limit values setting cannot exceed the full range; the instrument will sound a prolonged alarm when it is higher than the upper limit values or lower than the lower limit values during testing.

Minimum Save Value

- Users can set the minimum save value as needed.
- In Real Time and Peak modes, data less than this value cannot be saved.

Operation Interface

Minimum Peak Value

- In Peak and Auto Peak modes, data less than this value cannot be displayed on the screen.

Auto Peak Time

- The automatic save time of the peak value in Auto Peak mode, with a setting range of 1-99s.

Auto Shutdown Time

- Automatic shutdown time in the non-operating state, with a setting range of 1-99min.

Gravity Acceleration

- Users can set the gravity acceleration value according to the location where the instrument is used; the default value of the instrument is 9.794.

Technical Specification

Name		Spring Tension and Compression Tester				
Model		MST-10	MST-20	MST-30	MST-50	
Maximum Test Load	**N**	10	20	30	50	
	Kg	1	2	3	5	
	Lb	2.2	4.5	6.5	11	
Minimum Resolution	**N**	0.001				
	Kg	0.0001				
	Lb	0.0001				
Pressure Plate Diameter		34mm		48mm		
Maximum Length Of The Spring		80mm		150mm		
Displacement Scale Stroke		60mm		90mm		
Dimensions(L*W*H)mm		490*280*300			570*280*300	
Net Weight		14.5kg				
Model		MST-100	MST-150	MST-200	MST-300	MST-500
Maximum Test Load	**N**	100	150	200	300	500
	Kg	10	15	20	30	50
	Lb	22	33	45	65	110
Minimum Resolution	**N**	0.01				
	Kg	0.001				
	Lb	0.001				
Pressure Plate Diameter		48mm				

Technical Specification

Maximum Length Of The Spring		150mm			
Displacement Scale Stroke		90mm			
Dimensions(L*W*H)mm		570*280*300			
Net Weight		18kg			
Model		MST-1000	MST-2000	MST-3000	MST-5000
Maximum Test Load	**N**	1000	2000	3000	5000
	Kg	100	200	300	500
	Lb	220	150	650	1100
Minimum Resolution	**N**	0.1			
	Kg	0.01			
	Lb	0.01			
Pressure Plate Diameter		108mm			
Maximum Length Of The Spring		200mm			
Displacement Scale Stroke		150mm			
Dimensions(L*W*H)mm		790*610*320			
Net Weight		67kg			79kg
Scale Division Value		0.01mm			
Accuracy		±1% (10%-100% of full range)			
Power Supply		AC 220V~50Hz			
Operating Temperature		10°C~30°C			
Storage Temperature		-27°C~70°C			
Relative Humidity		15%~80%RH			

Standard Delivery

Name	Qty	Photo
Machine Mainframe	1	
Gantry	1	
Measuring Handle	1	
Button Battery	1	
Power Cord	1	
Cd	1	
Product Certificate	1	
Instruction Manual	1	