



BPS INSTRUMENT

TENSILE TESTING MACHINE

1-3kN HSFT Spring Fatigue Testing Machine



HSFT-W

HSFT-S



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Application:

This machine is mainly suitable for axial fatigue life test of various spiral cylindrical springs, gas springs, elastomers, elastic components and other components.

Features:



1. The fuselage is made of high-quality steel plate to ensure that the machine can withstand the effects of long-term load and will not cause deformation;
2. The test area is equipped with a transparent visual protective net to ensure the safety of the test operators;
3. Test loading Select domestic high-quality precision AC motor, the output torque performance is stable, reliable operation, and overcome the impact of unstable torque output on the machine.



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4. Load sensor adopts precision spoke type sensor, which has the advantages of high measurement accuracy, good dynamic response, good lateral force resistance and stable performance.
5. Newly added lubrication and oil guiding system can realize automatic filling, automatic collection and reuse of lubricating oil in the test part, which changes the secondary pollution of the machine caused by overflow of lubricating oil in the past and greatly reduces the manual operation.

Functions:

1. The same applies to the determination of metal, non-metal, alloy materials and their components (such as operating joints, fasteners, spiral moving parts, etc.), fatigue properties, fatigue life, pre-cracking and crack propagation tests of tensile load, compression or tensile and compressing alternating load at room temperature. Widely used in spring production enterprises, spring use enterprises, colleges and universities research institutes, quality inspection departments and other industries.
2. HSFT-W computer controlled spring fatigue testing machine mainly consists of software control system, load displacement acquisition system, motor drive system and eccentric drive system. shutdown of preset test times and the last untested test can be continued;
3. Emergency shutdown protection function.





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Main parameters:

Model	HSFT-1S HSFT-1W	HSFT-2S HSFT-2W	HSFT-3S HSFT-3W
Max. Load(kN)	1	2	3
Test station	Single (Standard) or multiple springs (Optional)		
Vertical maximum space	200mm Can be customized		
Transverse maximum space	150mm Can be customized		
Frequency range (adjustable)	0-5Hz 300 times/minute		
Test frequency	According to actual specimen		
Counting stop accuracy	1		
Test machine amplitude	50mm		
Maximum deformation of specimen	100mm		
Counter capacity	999999999		
Power	AC 22V±10% 50Hz		

Electrical System Functions And Features:

1. The control program adopts self- developed software, which is stable, reliable and easy to customize according to requirements.
2. According to the amplitude and frequency of various springs, elastomers and elastic components can be adjusted.
3. The relevant results can be achieved according to different test conditions: preset test times, deviation from peak value, sample breakage;
4. With perfect protection function : with load, test times protection; electrical system over current, over voltage protection.



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HSFT-W Series Software Control System

1. Operating system runs Windows 7/10 platform, all English operation interface; the interface is clear, the operation is simple, all parameters can be input through the keyboard, the test parameters are all digitally set.
2. The software synchronously displays real-time load, peak load, real-time displacement - test time, real-time deformation, number of trials, and running time;
3. Automatically plot real-time load-test time, load peak-test time, real-time displacement-test time, number of trials-test time, load peak-test number, etc.
4. It can adjust the X axis, Y axis ruler, and can set different colors and styles of the curve.
5. Automatic data acquisition, processing, output display;
6. Curve playback: When the test ends or pauses, the recorded data can be played back.
7. Test status prompt: If the load overload, the number of arrivals, and the lower limit of the are reached, the indicator light will be on and stopped.
8. It has complete file operation function for the storage of test curves and test data.
9. It can print test data, test curve, test report from time to time

Environment and working conditions:

- a) Room temperature in the range of 10°C -35 °C; relative humidity is not more than 80%
- b) No vibrating, non-corrosive medium and clean environment without strong electromagnetic interference
- c) The fluctuation range of the power supply voltage should be within 10% of the rated voltage soil;
- d) Install correctly on a solid foundation





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Main supply scope:

Name	Qty
Main fatigue testing machine	1 set (Including mechanical parts, 1 set of optical axis)
Eccentric wheel loading system	1 set
Belt wheel, triangle belt	1 set
Bearing housing (including bearing)	1 set
Controller	1 set
Sheet metal case and electrical system	1 set
3Phases AC Motor	1 set
Frequency changer	1 set
Elevator	1 set
Reducer	1 set
Lubricating oil pipe	1 pcs
Tools and test tooling	Each 1 set
Technology brochure	1 pcs
Computer and printer HSFT-W Series	1 set
Test Softwar HSFT-W Series	1 set