



BANBROS ENGINEERING PVT. LTD.

The Precision Measurement People

TOUCHING SCREEN SPRING TESTING MACHINE



➤ **VALUE**

➤ **VERSATILITY**

➤ **PERFORMANCE**

BTDT-50N

**DESCRIPTION:**

The machine's mechanical structure, working principle, design, etc. learn from the advanced experience of foreign manufacturers, the machine structure, Stiffness in strict accordance with the National Ministry of Machinery industry standards and designed for the precision detection of small springs, manufacturing. The machine is particularly suitable for a variety of precision-grade spiral springs, small disc springs, shrapnel and special spring detection, mainly used in spring production enterprises laboratory precision testing, spring use enterprises, quality inspection, metering, various types of institutions mechanics laboratory and other places.

FEATURES:

- Large-screen control interface, simple, intuitive, easy to learn and understand, easy to operate for different age groups;
- Good proportion of structure, beautiful spray sheet metal, beautiful appearance, high-end grade;
- The machine configuration parameterized design, including machine hardware configuration, sensor calibration, motion control, test operation and so on
- can be configured to meet the needs of different users;
- Especially suitable for small precision springs, shrapnel, elastomer detection, laboratory precision testing;
- Preset different types of test methods, eliminating the hassle of setting up before each test;
- Four test methods, two types of test, can be connected to the three-color indicators to light the results;

- In order to ensure accuracy, repeatability under the premise of high-speed acquisition, high degree of automatic detection, one-click finish
- into the whole test process, greatly improve the test efficiency;
- Repeat batch detection can be set for a single type of spring, improving the efficiency of online detection;
- Electronic handwheel fast and slow loading, the minimum can achieve 1 μm (micron) deformation movement;
- The display is industrial-grade 9.7-inch LCD screen (non-commercial), 1024 x 768 resolution,
- It has the advantages of full interface control, precise touch, long life, stable performance, wide viewing angle and small eye damage.
- Test control the whole process can be selected with a stylus, control click accurately, reduce mishandling;
- The main components are selected from foreign brands or domestic high-quality brands;
- Automatic judgment of data results, automatic analysis, real-time display;



TESTING FUNCTION:-

- The main functions of the full-interface touch system introduction (the following features are unique in the spring test industry):
- A set of measurement and control software specially developed for spring pull test machine, which integrates data collection, motion control and data analysis, and has completely independent copyright.
- compared with the previous generation of software, has better human-machine interactivity, higher test accuracy, stronger stability, higher test efficiency;
- full-touch input mode of human-computer interaction, you can use click, double-click, keyboard input three modes, to achieve instructions, parameter entry and other operations, more in line with the current operating habits;
- display sensor conversion data, can refresh the data in real time, can double-click zeroing, keyboard settings and other operations;
- adaptive display test waveform, the data change trend in the whole playback test process, is suitable for both rapid detection and laboratory accurate analysis.
- button control is divided into one-click trigger and long-press trigger according to function, one-click trigger is used for full function control to achieve automatic control, and long-press trigger is used for motion control to improve safety and prevent mishandling;
- has detailed test data for analysis, including measuring points, results, allowable upper limit, judgment, segmented stiffness, average stiffness, average softness, free height;
- four test methods, two types of test, can set backhaul detection, reciprocating detection, etc.
- the whole process of running at a uniform speed, to avoid the machine and deceleration caused interference to the test force, the real reduction of the test process;
- system comes with a sample library, preset 20 kinds of specimens, users can set the corresponding parameters according to the needs, test can be directly accessed, improve test efficiency, reduce the difficulty of operation;
- test data automatically stored, can store 100 sets of data, can view, print, export and other operations;
- motion control sampling full digital sine wave control, smooth operation without impact, faster response;
- based on fast sensor data conversion, high-speed parallel disk, one-click set compression height zero point;
- load units include Newton (N), kN, kgf, pound force (lbf), kip 6 kinds of international common units, users can set their own according to the needs;
- protection measures:
- overcurrent, voltage protection function;
- load sensor two-way overload protection, 01 machine uplink in the process of two hooks touch, the load increases rapidly, when the controller detected more than the protection range, the machine immediately shut down;
- displacement over-limit protection, 01 machine uplink, beyond the protection travel (test space), the machine immediately shut down, 2 machine downlink, over the limit travel (0mm, the machine immediately stopped;

**TECHNICAL SPECIFICATION:-**

Model No.	BTD-50N
Load unit	N、 kN、 gf、 kgf、 lbf、 kip
Load range	50N
Torque resolution	0.001N
Measuring range	1%—100%FS
Indication relative error (%)	±1.0
Repetitive value (%)	±1.0
The minimum reading value of the displacement	0.001
Deformation measurement display error	± (50+0.15l) μm
Electronic handwheel (fine-tuning)	0.001mm/grid (setable)
Tensile/compression space	190mm
Compression platen diameter	30mm
The parallelity of the compression plate	0.05
Test Speed	0.01-500mm/min
The test speed	up to 500mm/min
Reset (parallel) speed	up to 500mm/min
Dimensions	480*380*655mm
Power supply	50Hz, 220V,/ 110V, 60HZ Single phase
Noise sound level	45dB (A)
Weight	60Kg

**STANDARD ACCESSORIES:**

Mainframe	1 set
Precision motors	1 set
Motor governor	1 set
Load cell (50N)	1 set
Displacement Sensor	1 set
Control system	1 set
Industrial touching screen system	1 set
Tensile hook	1 set
Compression plate	1 set
Micro printer	1 set
Power cable	1 set
Documents (Manual, packing list, certificate)	

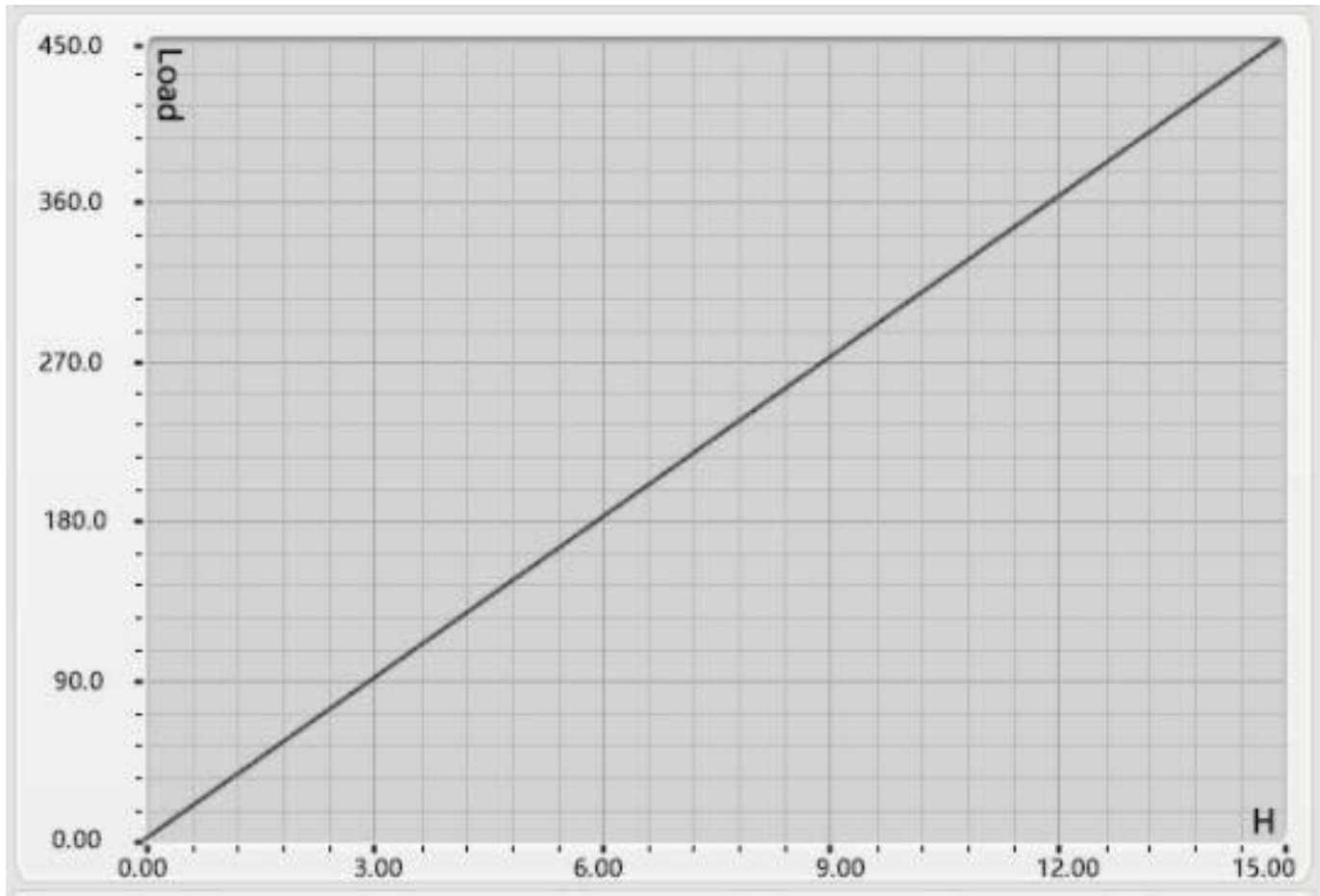
TOUCHING SCREEN SYSTEM:-

1, Man-machine intelligent interactive interface: concise, intuitive, full interface touch operation, fast control speed,
Can directly touch the corresponding function keys, the use efficiency is greatly improved, and the stylus can also be used;





2. High-speed and efficient test, real-time data, real-time curve (adaptive curve) full synchronous display;



he test data results are displayed in real time in real time, fast and comprehensively, and the automatic judgment is made;

	f(mm)	F(N)	Set max(N)	Set min(N)	Judge	F' (N/mm)
1	5.00	150.3	160.0	140.0	Qualified	
2	10.00	301.1	310.0	290.0	Qualified	30.16
3	15.00	449.7	460.0	440.0	Qualified	29.72
4						
5						
6						
7						
8						
9						
10						

Sample 01 H_0 : 97.532 f' : 0.334 F' : 29.94



Sample library (up to 20 types can be set), different test types, test methods, test conditions can be set, and different spring samples can be set up at one time and directly called.

Test parameters

1. Test method:	<input type="text"/>
2. Test type:	<input type="text"/>
3. Test speed:	<input type="text"/> mm/min
4. Return speed:	<input type="text"/> mm/min
5. Auto return:	<input type="text"/>
6. Test points :	<input type="text"/>

Set Points

1			
2			
3			
4			
5			
6			
7			
8			
9			
10			



Free height, average stiffness, average flexibility, etc. can be obtained, and the query interface can store 100 sets of test results;

Test Data

H₀ :

F' :

f' :

Print
Print current data

Clear
Clear all data

	f(mm)	F(N)	Set max(N)	Set min(N)	Judge	F' (N/mm)
1	5.00	150.3	160.0	140.0	Qualified	
2	10.00	301.1	310.0	290.0	Qualified	30.16
3	15.00	449.7	460.0	440.0	Qualified	29.72
4						
5						
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Test Sample Query System F setting