



## **HRT-02N-UD High frequency fretting abrasion testing machine specification**

### **One.Product Description**

HRT-02N-UD high-frequency fretting friction and wear testing machine is a new type of friction and wear testing machine product. It is mainly used to study and evaluate the mechanics, tribological characteristics and actual working conditions of various materials, films/coatings/modified layers/block materials, lubricants and lubricants. It adopts high-frequency vibration exciter to excite vibration to realize high-frequency fretting of the sports table. The equipment has stable and reliable reciprocating stroke adjustment, wide adjustment range, and high friction measurement accuracy. Advantages such as diverse experimental forms.



Reference picture of product appearance



## Two、 Specification Data and Configurations

Specification Data	Configurations
<p>1. Reciprocating frequency: 10-50HZ</p> <p>2. Limit frequency: 200Hz</p> <p>3. Reciprocating stroke: 10 μ m ~ 2mm</p> <p>4. Stroke programmable resolution: ± 0.1 μ m</p> <p>5. Maximum load: 150 N (±0.5% F.S)</p> <p>6. Loading method: weight loading/automatic loading (optional function)</p> <p>7. Relative error of experimental force: ±0.5%</p> <p>8. Friction force measurement range: 0-200 N Frictional relative error: ±1N</p> <p>10. Test temperature: room temperature ~ 120°C heating module</p> <p>11. Temperature measurement method: thermocouple</p> <p>12. Temperature measurement accuracy: ±2°C</p> <p>13. Grinding observation:High-definition electronic observation system display wear mark morphology, size (optional function)</p> <p>14. Data processing:a set of standard computer processing system</p>	<p>1.Host: 1set</p> <p>2.Combined loading system: 1 set</p> <p>3.200N HF Exciter: 1 set</p> <p>4.High frequency acquisition system: 1 set</p> <p>5.Temperature control system: 1 set</p> <p>6.Industrial control system: 1 set</p> <p>7.Acquisition board: 1 set</p> <p>8.Sensors: 1 set</p> <p>9.Cups:1 pcs</p> <p>10.Loading and unloading sample tools:1 set</p> <p>11. Standard Tool Kit: 1 Set</p> <p>12. Adjustment bulbs: 1 piece</p> <p>13.1color printer:1 set</p> <p>15. Product Instruction Manual: 1 Copy</p> <p>16.Product Certificate: 1 copy</p> <p>16.Product Packing List: 1 Copy</p>

## Three. Functions and features:

HRT-02N-UD high frequency fretting friction tester is a precision testing machine. In the test process, the upper specimen (ball) and the lower specimen (piece) contact and press each other through the weight of the external store, and at the same time, the upper specimen is driven to vibrate with small frequency by a



vibration exciter. The testing machine consists of three parts: the upper computer monitoring system, the lower computer controller and the testing machine body.

The testing machine can monitor the friction force, test force, temperature in the friction process in real time, and calculate the friction coefficient, and can analyze and judge the state of friction by judging the changes of parameters: running-in (initial fluctuation) - smooth (smooth fluctuation or fretting) - initial damage (friction, Significant friction coefficient fluctuations) - complete failure (sudden or violent increase in friction, friction coefficient, which may also be accompanied by a sudden increase in temperature).

The testing machine has a high temperature heating function, the system is equipped with a high temperature alarm system, for a long time running system stability monitoring and detection.

The testing machine by the main frame to carry the transmission components, stress components, sensor measurement components, at the same time with a dedicated control system, The control system is mainly composed of electrical components, driving system and executive components. The experimental test system installed on the industrial computer controls the coordinated action of each component. During the experiment, the data is collected, analyzed and saved in real time by the data processing software system.

The accessories of the equipment include the fixtures, special tooling and tools needed to carry out the test, and some vulnerable accessories include pressure heads, briquettes, screws.

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