

Electronic Dynamic Testing Machine/Cyclic Testing Equipment

Model: UTDS-5



1, General introduction

Fatigue testing equipment is often used to determine how a material will perform over time and repeated use.

United Test offer the UTDS series Electronic Dynamic Universal Testing Machine/ Cyclic Testing Equipment widely used at material and components, parts dynamic mechanical property test, include tension, compression, low cycling test, match with high-low temperature chamber can execute the temperature test.

2, Application

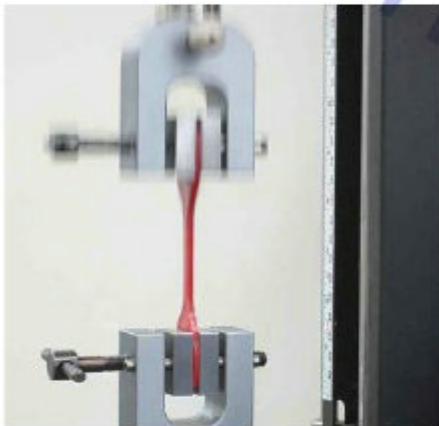
Widely used for industrial application, factory quality control, science and research institute, QC &QA college student training, education institute, testing and inspection center, laboratories, construction company, aerospace, mechanical production, electric appliance fields.

Comply with different standards such as ASTM F2606, ASTM F2516, ASTM F2267, ASTM F384, EN 397 etc.,.

3, Key Features

Load frame and driven type

- 1), Frame is double column frame structure, servo liner actuator installed at upside of frame. Clamper will be installed on the crosshead and top of actuator piston rod;
- 2), Frame crosshead adjustment use leading screw rising and falling, manual clamping, elastic loosen structure, ensure the crosshead is reliable during test. And ensure the crosshead is locked unmoving at non-test condition.
- 3), Column outer surface processed by durionise, enhance the anti-wear ability, improve anti-corrosion ability, and more beautiful appearance.
- 4), With feature of compact structure, high stiffness, high centering, easy clamp test sample; can match various test fixture to extend test function.



Fatigue testing on an elastomer



Cyclic test EN 397 Compression Testing Industrial Safety Helmets

Actuator

- 1), Servo liner actuator is the key part in this testing machine, the test output load through this actuator; with United Test technology self design, the actuator internally install on the top side of frame, consist of actuator, servo motor, servo driving sytem, and load cell.
- 2), Servo liner actuator frequency limitation position have relief area, avoid the damage of out control.
- 3), Liner sensor with USA Schaevitz company LVDT, move smoothly, piston rod made by extra-fine process, surface chrome-plated polishing to Ra0.4u.
- 4), Between load cell and clamper connection, push-pull rod and clamper position have specialized gap elimination device, then improve the dynamic response ability.

Control system, Software

- 1), One control chanel, with load, displacement, deformation three close-loop control, these three control type smoothly switch.
- 2), Max. close-loop data flash frequency is 6Khz;
- 3), Controller A/D, D/A resolution is 16-bit, signal generate frequency is 0.001Hz~ 50HZ;
- 4), Signal generate waveform include sine wave, triangular wave, quare wave, sawtooth wave etc.,;
- 5), Two levels servo valve driving unit used to drive the servo valve, remote hydraulic pump used to remote control the hydraulic pump station.
- 6), controller with limitation parameter setting function, and protect function. Can free setting the load up/ low limitation protection, frequency protection etc.,

4, Main technical specification

Max. static load	±5KN Accuracy ±1%
Max. dynamic load	±1kN
Dynamic fluctuation	Less than ±1%FS
Actuator max. stroke	±100mm
Frequency	0.01~15Hz
Control mode	Load, displacement, deformation
Main test waveform	sine wave, triangular wave, quare wave, sawtooth wave etc.,
Max. test space	550mm (include test fixture)
Test width	430mm
Dimensions	785*620*1650mm
Standard Power	220/110V, 50/60HZ, 1 phase
Working system	MS Win7 / Win10

5, Main accessories

High Stiffness Frame	1 set
Servo liner actuator	1 set
Servo driver	1 set
Loadcell:	1 set
LVDT (liner displacement sensor)	1 set
Test fixture (quote and design according details test sample).	1 set
Fully digital servo controller	1 set
Professional testing software	1 set
Computer	1 set
Printer	1 set
Documents (Manual, packing list, certificate)	