

Electromagnetic Resonance High Frequency Fatigue Testing Machine



Application

PLG Series Electromagnetic Resonance Fatigue Testing Machine is used for fatigue tests on metallic materials and components under tension, compression or reversal load. Equipped with relevant grips, three-point bending test, four-point bending test, tension and compression of sheet sample test, tension and compression of circle test, gear wheel, bolt, connecting rod, roller chain, crackle expanding tests can be done on this machine. The series of testing machines undergo optimization design, the structure is rational. The automatic controlled system adopts the advanced pulse wide control system and new-type power amplifier to improve the reliability of the electric system.

It has high efficiency, easy to shake, no-stop shake, low energy consummation, high controlling accuracy, small fluctuation. The machine is complied with DIN50100.

Standards:

GB/T 2611-2022 General Technical Requirements for Testing Machines

JB T 5488-2015 High Frequency Fatigue Testing Machine

JJG 556-2011 Verification Procedure for Axial Force Fatigue Testing Machines

GB/T 25917.1-2019 Uniaxial Fatigue Testing Systems - Part 1: Dynamic Force Calibration

GB/T 16825.1-2022 Metallic Materials - Inspection and Calibration of Static Uniaxial Testing Machines-
 Part1:Inspection and Calibration of Force Measurement Systems

ASTM E647 Standard Test Method for Measurement of Fatigue Crack Growth Rates

ISO 4965:1979 Axial load fatigue testing machines—Dynamic force calibration—Strain gauge technique
 ISO 204 Metallic materials—Uniaxial creep testing in tension—Method of test

ASTM E467-2008 Standard Practice for Verification of Constant Amplitude Dynamic Force in an Axial
 Fatigue Testing System

ASTM E1012-2005 Standard Practice for Verification of Test Frame and Specimen Alignment Under Tensile and
 Compressive Axial Force Application

This machine's functions meet, but are not limited to, the relevant clauses of the following standards:

GB/T 3075-2021 Metallic Materials - Fatigue Testing - Method for Controlling Axial Force

GB/T 26076-2010 Metallic Sheets (Strips) - Axial Force Controlled Fatigue Test Method

GB/T 21143-2014 Metallic Materials - Unified Test Method for Quasi-Static Fracture Toughness

GB/T 4161-2007 Metallic Materials - Plane Strain Fracture Toughness K_{IC} Test Method

GB/T 6398-2017 Metallic Materials - Fatigue Testing - Fatigue Crack Propagation Method

HB5287-1996 Axial Loading Fatigue Test Methods for Metallic Materials

Specifications

Model	HST-PLG-20C	HST-PLG-50C	HST-PLG-100C	HST-PLG-200C	HST-PLG-300C	HST-PLG-500C
Load capacity	20kN	50kN	100kN	200kN	300kN	500kN
Load capacity for dynamic (peak value)	±10kN	±25kN	±50kN	±100kN	±150kN	±250kN
Load measuring range	1%-100%FS					
Testing	Static indication accuracy: ±0.5%			Dynamic		

machine accuracy	loading accuracy: $\pm 1\%$					
Frequency	50~250hz					
Relative error of static load	$\leq \pm 1\%$					
Load fluctuation	1%F-S					
Max. distance between grips	500mm	500mm	500mm	700mm	700mm	600mm
Max. distance between columns	450mm	500mm	500mm	600mm	600mm	600mm
Power Supply	AC220V $\pm 10\%$,50HZ					

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