

Steel strand/7-wire steel strand tensile testing machine

Model: LW Series



United Test make Universal Testing Machines are known for their long lasting trouble-free performance and highest quality material used in the manufacturing process. This specialized hydraulic tensile testing machine can perform tension test for the steel strand, 7-wire strand for the reinforcement and prestressing of concrete, reinforcing bars, wire rod and wires.

Conform with standard: ISO 15630-1, ISO 6934, ASTM A370, ASTM A416, GB/T 5224.

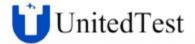
Specialized features at the jaws clamping:

- A. extra thick jaws seat to make the steel strand sample completely hold in the seat body during tension process, ensure the breaking position at the middle portion.
- B. High hardness (HRC68-70) lenthen jaws enhance the clamping length and area. To make the clamping more firm and reliable, no sliding during 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.

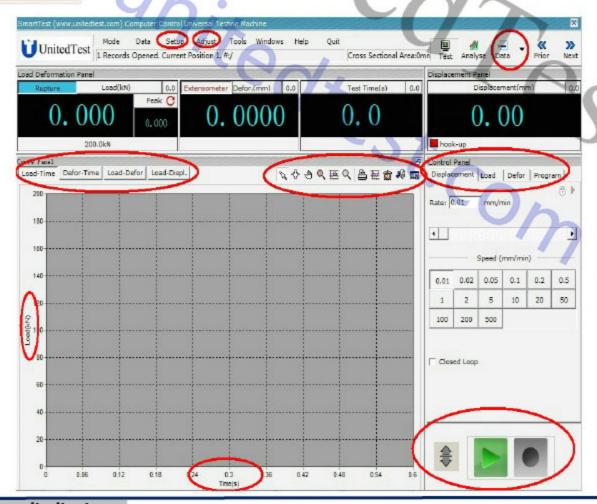
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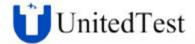
3, Key Features

- Computer controlled hydraulic servo operate loading model, double working space, tensile test at upside of crosshead, compression and bending test between working bench and crosshead;
- 2), It adopts the hydraulic pressure to drive the cylinder, so loading on the specimen to perform the test. Hydraulic station supplies super and stable pressure to the system; the soundproof insulation can reduce the noise level of the power pack to 75 dB (A), with lower noise, tiny energy consuming and lower heat.
- Unique screw gap eliminating structure can guarantee the continuity of the test;
 Total six columns structure, four column and two leading screw to make the machine more stable and life long working.
- 4), Independent hydraulic clamping structure can guarantee the reliability of the system; it will not hurt person for falling specimen and ensure the safety of operator;
- 5), Limitation and electrical protection system can ensure the security of using;
- The load frame adopts oil cylinder bottom type structure, hydraulic load, hydraulic clamping specimen;
- 7), Servo valve can control the speed arbitrarily through the software. It can carry out loading, unloading and oil quick feedback function (i.e. the cylinder come back to its original position after the test);
- 8), Crosshead (the middle beam) movement is by mean of motor, chain at the bottom of loadframe, driven leading screw to make crosshead up and down.

4, Software



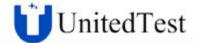
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5, Main technical specification

Model	LW-600	LW-1000
Max. load	600KN	1000KN
Column Number	4 column and 2 leading screw, total 6 columns	
Measuring force	2%~100%	
range	2 % 100 %	
Accuracy of load	±1% of indicated value	
Accuracy of deformation	±0.5%, resolution: 0.01mm	
Constant load,	R	
displacement, deformation control	0.4%~100%FS	
Range		
Deformation rate	Rate<0.05%FS,accuracy ±2.0%	
control accuracy	Rate≥0.05%FS, accuracy ±0.5%	
Deformation measuring	Clip-on extensometer, standard gauge 50mm, extension 5/10/25mm	
Max. tensile space	1000mm (can enlarge)	1000mm (can enlarge)
Test width (effective		
horizontal interval)	520	650
Steel strand clamping range	φ 9.2- φ 12.7mm , φ 12.7- φ 15.24mm	
Flat specimen range	0~30mm	0~40mm
Round specimen range	φ13~φ40mm	φ13~φ60mm
Compression platen dia.	200*200mm	200*200mm
Bending support roller distance	450 mm	5 × 450 mm
Bending roller width	140mm	140mm
Bending roller dia.	30mm	40mm
Piston stroke	250mm	250mm
Max. piston speed	100mm/min	100mm/min
Clamping mode	Hydraulic automatic	
Dim. of frame	910*550*2370mm	960*650*2600mm
Dim. of control box	1100×700×950mm	
Weight	3000kg	4000kg
	Load frame, servo oil source, control box, servo valve, oil Pump;	
Standard Accessories	oil pressure sensor (Load cell is optional) , liner displacement sensor,	
Standard Accessories	tensile test Jaws, compression platen, bending test accessory,	
	PC, printer, Professional software, tools, anchor bolts, operation manual	

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6, Standard

ISO 15630-1, Steel for the reinforcement and prestressing of concrete -- Test methods -- Part 1: Reinforcing bars, wire rod and wire

ISO 6934-4, Steel for the prestressing of concrete -- Part 4: Strand

ASTM A370, Standard Test Methods and Definitions for Mechanical Testing of Steel Products

ASTM A416 / A416M, Standard Specification for Low-Relaxation, Seven-Wire Steel Strand for Prestressed Concrete.



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