

# **Tensile Testing Equipment**

(Brochure)

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EMC&EMI Test System: <u>http://www.pegotester.com/products/EMC\_EMI</u> Integrating Sphere System: <u>http://www.pegotester.com/products/integrating\_sphere</u> Goniophotometer test system: <u>http://www.pegotester.com/products/goniophotometer</u> Electrical Safety Tester: <u>http://www.pegotester.com/products/Safety\_tester</u> Environment Test Chamber: <u>http://www.pegotester.com/products/Test\_chamber</u> AC&DC Power Supply: <u>http://www.pegotester.com/products/power\_supply</u> IEC60061-3 Lamp Gauges: <u>http://www.pegotester.com/products/gauge</u> IEC and UL Probes for vertification: http://www.pegotester.com/products/probe



## 1. Introduction

JY-1000 tensile test equipment adopts microcomputer control power supply and servo motor, it is applied to do the test of stretching, Compression, bend and shear of metal and non-metallic material, it is widely applied to the fields of metallurgy, building, light industry and material. Fully meet the requirements of GB228-2002.

### 2. Specification

- Max test force: 2000KN
- Test range: 40KN-2000KN
- Accuracy: ±1%
- Resolution: 0.01mm
- Deformation testing a) Standard distance: 50mm
  - b) Max deformation: 10mm

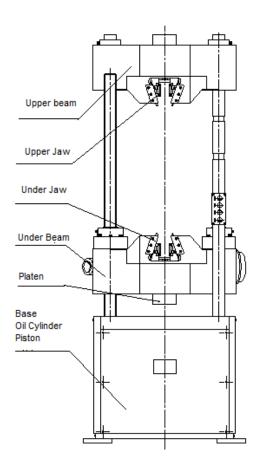


- Deformation accuracy: ±0.5%
- Constant force, constant deformation and constant displacement control range: 0.4%~100% FS
- Constant force, constant deformation and constant displacement control accuracy:
  - a) within  $\pm 1.0\%$  of setting value @ setting value < 10%FS
  - b) Within  $\pm$ 0.5% of setting value @ setting value  $\geq$ 10% FS
- Deformation rate control accuracy:
  - a) within  $\pm$ 2.0% of setting value @ rate<0.05%FS
  - b) Within  $\pm 0.5\%$  of setting value @ rate  $\geq 0.05\%$ FS
- Max moving speed of piston: 60mm/min
- Max stretch test space: 900mm
- Max compassion test space: 700mm
- Thickness of the clamps: 0-600mm and φ15-φ70mm
- Size of platen: 204\*204mm
- Width of roll: 140mm
- Diameter of fulcrum: 50mm
- Travel of piston: 250mm
- Clamping method: hydraulic tightening
- Amplifier: Build in PC, auto zeroing and calibration
- Dimension
  - a) Mainframe: 1400mm\*850mm\*3300 mm
  - b) Oil source: 1140mm\*700mm\*930mm
- Weight: 8500kg



## 3. Structure

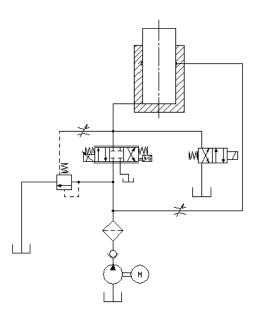
#### 1) Mainframe



#### 2) Drive System

The up-down of beam drives by hydraulic motor, synchronous belt and nut screw, to adjust the stretch and compress.

3) Hydraulic System





#### 4) Control System

Adopts STC300 all digital closed loop measurement and control system with the following features:

- a) Realize the four closed loop controls: test force, sample deformation, piston displacement and test progress.
- b) Data collection system is consisted by 4 channels high accuracy 24 digits A/D shift channels, the max resolution is 1/300000.
- c) Adopts branded components, like BB. AD, Xilinx, all digital design.
- d) Meet the requirement of PCI, microcomputer auto identification and installation.



#### 5) Software

Meet the GB and IEC standards.

- a) With features of high integration level, high stability and easy adjustment. Real-time to collect the test data and draw the curve.
- b) Protection function: software protection and mechanical protection, protect at over load, over current and over voltage.
- c) Real time to monitor the test force, drift, curve and etc.
- d) Freely to print the test result for analysis purpose.
- e) Comparison of result: monitor several curves at one time, and can amplified the result for comparison.
- f) Connector: Equip with all kinds of sensor according to connector and software.
- g) Sampling interval: user can freely select the sampling interval.

## 4. Configuration

- a) Mainframe: oil cylinder underneath type
- b) Servo control oil expenses source: electro-hydraulic servo valve, Nachi high-pressure gear pump
- c) STC300 double channel programmable amplifier with resolution of 1/300000
- d) High accuracy load sensor
- e) Extensometer
- f) Guyed displacement measurement system
- g) Clamps: stretch, compress, bend
- h) Smarttest control software
- I) Lenovo Computer
- j) HP A4 ink-jet printer