

# Computer Servo Tensile Machine

**Introduction:** Computer servo tensile machine is a new type of material machine which combines the electronic technology and mechanical transmission, it can make all kinds of function true, do the data analysis and print the test result by computer controls the operation of machine. Communicate between machine and computer usually adopts serials communication modes of RS232, it communicates through the interface (USB interface) which lies in the back of computer. It has wide accuracy acceleration and test force range, not only measuring and controlling the load and displacement in higher accuracy and sensitively, but also doing the control test by automatically of isokinetic load and displacement. It operates easily and convenient, especially applied in inspect instruments which is used for controlling products of produce line. This series of Servo Tensile Machines is mainly suit for nonmetal and metal test with test load less than 10kN.

These machines have a widely usage range, can test all sorts of materials, such as end products and semi-manufactures dumbbell specimen of plastic (cloth tube plate), rubber (plate tube), metal wire, tape, wheel, textile, acrylic, FRP, EVA, PE and shoes etc, testing their functions which include tensile strength, elongation, tearing, stripping, glue force etc.

## Characteristics:

- ◆ Standards: ASTM D 903、GB/T 16491、GB/T 1040、GB/T 8808、GB 13022、GB/T 2790 etc.
- ◆ Sensor with high accuracy ( transmission mechanism adopts high accuracy ball screw)
- ◆ Sampling frequency of Data: 200 times/s
- ◆ It can storage numerous testing results of reference points, counting the average and grasping the Max which exist on the point of broken by automatically.
- ◆ The setting range of broken proportions: 0~99%, you can set it according to the test demand of different specimen at you will, make the downtime true on different point.
- ◆ Safety set: Overload, urgent downtime set, up and down process limited set.
- ◆ The collection with synchronous puts into practice by true, 24 bites AD transformed, resolution is up to 1/500,000, and it oversteps the same industry level absolutely.
- ◆ It include the voice prompt during the test, and we are the unique
- ◆ Modular+ SQL technology + Crystal reporter + Database technology, it is very convenient for the create user setting reporter or more
- ◆ Thousands of clamps and clamps set for choosing
- ◆ With several sensors supported, it can satisfy with different range demands by assembling several sensors at the same time.

## The Characteristics of software:

- ◆ Support Windows XP/Vista operating system.
- ◆ With nine languages in Simplified Chinese, Traditional Chinese, English, Spanish, Russian, Japanese, French, German, Portuguese, the software interface can be converted at your will, the database field displayed name of test data translated automatically along with chosen words, make the data are easily to scan under the chosen words, and to meet the machine be used all over the world
- ◆ Support three types: SI international standard unit, kg-cm unit, Lb-Inch unit, six common units: N-mm-MPa, kN-mm-MPa, gf-cm-kgf/cm<sup>2</sup>, kgf-cm-kgf/cm<sup>2</sup>, Lb-Inch-ksi, kP-Inch-ksi, the unit is easy to convert. It is used to meet different area using.
- ◆ By using the USB2.0 communicate interface with Photoelectric isolation, it completely get rid of the computer serial interface or Circuit board serial interface damage caused by different earth wire, thus realizing hot-swap between the computers and test machine board.
- ◆ Software adopts permission grading management: tester permission, test management permission, test machine producer permission, both convenience and safety are included.
- ◆ Operator interface attached with Voice, Graph, image: using intuition and convenient, and it will decrease the operation error by voice mentioned, improving the reliability at the same time. It is very convenient for professional user with virtual dial display.
- ◆ MS-ACCESS database technology and SQL technology: it is not only applied for data preservation and processing standardization, but also convenient for connecting to Intranet or Internet; it can also connect Word or Excel etc software easily; the user can read original test data just through standard database.
- ◆ Modular programming: Crystal Reporter system and VBScript or JAVA Script can enlarge the user's reporter and parameters program by automatically calculate; the user can develop by secondary, it can make extruding, compression, bending, tearing, stripping, shearing etc test function true except for software bag. Every kinds of test function can support more than 20 pc of test reporter and parameters program by automatically calculate ( adopt VBScript or JAVA Script)
- ◆ The Curve Function: the main sheet shows real-time curve during the test, besides, there are other sheets which are used for curve deal, it can deal with six kinds of curve display (force-deform, force-time. Stress-strain, stress-time, strain-time, deform-

Time curve), you can calculate elastic modulus, surrender point, hardening start point etc parameters in mouse through curve ( attention: it usually calculates the mentioned parameters accurately by calculate automatically, the mentioned functions are supplement in special situations )

- ◆ Multi-sensor support: It can support the sensor with five forces, sensor with five deform, expanded the test range greatly.



### Main Technical Parameters

Product → Technical Parameters ↓	Computer Servo Tensile Machine ( Single Column )	Computer Servo Tensile Machine ( Double Column )
Power system	Dongyuan servo machine	
Max. range (optional)	5、10、20、25、50、100、200kg	5、10、20、25、50、100、200、500kg
Unit convertible	g, kg, N, LB(supply with three units which include international standard, metric, inch, they can convertible by automatically)	
Measuring range of test force	0.4% ~ 100 FS (full range)	
Display error of test force	≤ ± 0.3%	
Resolution of test force	1/500,000	
Resolution of displacement	0.015mm	
Display error of displacement	≤ 0.2%	
Max. Space of Tension	800mm (clamp is not included)	
Test speed	0.01–500mm/min ( stepless speed regulating )	
Valid test wide	Unlimited	300mm
Overall Size (L×W×H)	450×550×1350cm	600×420×1250mm
Weight	75kg	100 KG
Power supply	220V/50HZ; 15A or designation	
Power	200W	400W
Order information	BGD 573--Computer Servo Tensile Machine	BGD 574--Computer Servo Tensile Machine

### Notice: about the Elongation of Tensile Machine

The tensile machine attached with displacement measuring system is just used for measuring the cross distance of tensile head. If there is a required to the elongation, such as testing elongation of rubber products, thus another requirement is necessary with large-deformation test frame and large-deformation extensometer, if the metal with small elongation, small-deformation extensometer is enough(metal extensometer). Large-deformation and small-deformation is the absolute displacement between two points during the extruding. You can pick up the machine according to your company products' size, the small volume and tensile for choosing: tensile machine (single column). But with big size and tensile, the tensile machine (Double Column) is indeed, the processing of common tensile machine is about 600MM.