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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. The communication between machine and computer usually adopts USB interface. 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 conveniently, 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 wide 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.
- 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.
- User can calculate elastic modulus, yield point, constant residual strength, constant elongation, constant force deformation and maximum strength. There are other special professional calculations, such as the calculation of belt stripping and the elongation at yield point.
- Optional measure and control system of professional test machine, which can realize the closed loop of force value, deformation and position, so that the tensile machine can carry out curve control tests freely, such as low frequency cycle (fatigue) test, step test and force value holding (creep) test.

Measure and Control System→ Function ↓	Standard open-loop control system （standard configuration）	Standard close-loop control system （optional）
Position (displacement speed)	✓	✓
Force（force value speed）	×	✓
Deformation	×	✓
Multiple Control （position, force, deformation control exchange）	×	✓
Cycle control	×	✓

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Software:

◆ Operating interface attached with graph, image: intuitive and convenient to use, and it will decrease the operation error by voice mentioned, improving the reliability at the same time.

◆ 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. User can read original test data just through standard database.

◆ Modular programming VBScript can enlarge the user's reporter and parameter program by automatic calculation. User can develop by secondary, it can realize stretching, compression, bending, tearing, stripping, shearing etc test functions except for software bag.

◆ The curve graph function: through modular programming, real-time curve graphs will be displayed during the test, and parameter types can be selected for the coordinate axis of curve graphs. In theory, there are 169 kinds of graphs, from which parameters can be displayed.

◆ Multi-sensor support: it can support 5 force value sensors, 5 deformation sensors + large deformation + displacement, which expanded the test range greatly.

NOTE: The minimum requirements of PC Windows 7/Windows 8/Windows 10 operating system, USB2.0/ USB3.0 interface, CPU 3.0 GHz, 4 GB of memory, 100 GB of hard disk, wide screen color display the minimum resolution: 1366×768.



BGD 573



Scan for video



BGD 574

Optional Accessories

BGD 570/K---Low temperature tensile test chamber
BGD 1530---Bond strength pulling head （40mm×40mm）
BGD 1531---Bond strength pulling head （50mm×50mm）
BGD 1550/A---Elongation Device（Also call big deformation device, measure breaking elongation, see NOTE)
BGD 1551---Tensile small range sensor（≤ 500KG）
BGD 1552---Tensile big range senso（≥ 500KG）
BGD 1553---Pneumatic Cutting Machine（Used to cut different type samples）
BGD 1554---Cutter for dumb-bell sample（For tensile strength）
BGD 1555---Cutter for right angle tear sample（For tear strength）
BGD 1700----Plane clamp
BGD 1701----Eccentric wheel clamp
BGD 1702----Wedge clamp for metal
BGD 1703----Wedge clamp for hard plastic
BGD 1704----Film clamp

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Main Technical Parameters

Ordering Information → Technical Parameters ↓	BGD 573 Computer Servo Tensile Machine (Single Column)	BGD 574 Computer Servo Tensile Machine (Double Column)
Power system	Fuji servo machine	
Max. range (optional)	50N, 100N, 200N, 500N, 1KN, 2KN	50N, 100N, 200N, 500N, 1KN, 2KN, 5KN
Convertible Units	g, kg, n, lb (supply with three units which include international standard, metric, inch, they can convertible by automatically)	
Measuring Range of Test Force	1% ~ 100 FS (full range)	
Display Error of Test Force	≤ ±1%	
Resolution of Test Force	1/500,000	
Resolution of Displacement	0.015μm	
Displacement Display Error	≤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）	450mm×550mm×1350mm	600mm×420mm×1250mm
Weight	100KG	155KG
Power supply	220V/50Hz；15A or designation	
Power	400W	400W

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.