with Console Desk

TT 6000 X / 032ND
10kN

TT 6000 X / 020ND
20kN

SERVOTEC UNIVERSAL TESTING MACHINE 10kN & 20kN (DIGIMATIC, DOUBLE COLUMN, DESK TOP VERSION)

Standard: BS EN 10002-1, ISO 7500-1, ASTM A370

Tensile & Compression

TT Servotec Universal Testing Machine out tester adopts DC speed regulating servomotor & reduction gears as the power source. Its real time displays test data & test status with LCD module. Professional designed servo control system realizes the PWM pulse width modulation control mode. It really comes up to with test speed closed loop control mode. It is controlled by single chip automatically control.

Main Use & Range

Used for measurement & test of mechanical property & analytical study of metal, non-metal & composite material, such as aviation, petrochemical, machinery manufacture, wire, cable, textile, fibre, plastic, rubber, ceramic, food, medicine packaging, aluminium plastic tube, plastic door & window, geo-textile, film, wood, paper, metal material & manufacture industry & etc.

It can record the max. test force, fracture value, yield value, max. compression value automatically. It can also calculate the fracture extension & all kind of strength value manually. It is an essential equipment for manufacture, construction unit, product quality supervision & inspection bureau & building material test department. It also could be used in the university for teaching purpose.

Features :

Testable Items
General test item (General display value & calculated value)

- Tensile stress
- Tensile strength
- Pulling strength
- Stable tensile stress
- Constant stress force value
- Tear off the elongation
- Constant stress elongation
- Tear strength
- Any point force value.
- Any point elongation
- Extraction
- Computation of adhesion & peak value
- Pressure test
- Bending test
- Adhesive force stripping force test
- Extraction force piercing force test
- Cycle test

Special test items
1. Elastic coefficient is the elastic Young's modulus Definition: The ratio of normal stress components to normal strain in the same phase. In order to determine the coefficient of stiffness of the material, the higher the value, the stronger the material.

2. Proportional Limit: The relationship between load and elongation can be maintained in a certain range, and the maximum stress is the specific limit.

3. Elasticity Limit: Maximum stress for material to withstand pull-out force puncture test without permanent deformation.

4. Elastic Deformation: When the load is removed, the deformation of the material disappears completely.

5. Permanent Deformation: After removing the load, the material remains deformed.

6. Yield point: When a material is stretched, the deformation increases, and the stress remains unchanged. This point is the yield point. The yield point is divided into upper and lower yield points, and the above yield points are generally regarded as yield points. Yield: When the load exceeds the proportional limit, it is no longer proportional to the elongation. The load will drop suddenly. Then, over a period, it will fluctuate up and down, and the elongation will change greatly. This phenomenon is called yield.

7. Yield Strength: The quotient obtained by dividing the permanent elongation to a specified load by the original cross-section area of the parallel part in tension.

8. Spring K Value: Ratio of Force Component in Phase with Deformation to Deformation.

9. Effective Elasticity and Lag Loss: On a tension machine, when the specimen is stretched to a certain elongation or to a specified load at a certain speed, the percentage of the work recovered during shrinkage and the work consumed during stretching is determined as effective elasticity; and the percentage of the work lost during elongation and shrinkage to the work consumed during elongation is determined as hysteresis loss.

Main Technical Parameter :

Model Number	TT 6000 X / 032ND	TT 6000 X / 020ND
Max Test Force	10kN	20kN
Structure Type	Twin Rigid Column with Twin High Precision Ball Screw	
Traveling Space	950 mm (exclude fixtures)	
Width Space	350 mm	
Test Force Accuracy	±0.5%	
Test Speed Range	0.01 - 500 mm/min	
Load Resolution	1/10000	
Displacement Resolution	1/1000	
Displacement Accuracy	≤0.5%	
Resolution of Metal Extenders	1/1000	
Accuracy of Metal Extenders	≤0.5%	
Accuracy of Extenders	±1 mm	
Measuring Range	0.5% - 100% Full Scale	
Load Unit	Gf, kgf, N, kN, Lbf, etc.	
Curve Display	**Selectable Axial Parameters:** **Y-axis** - time, load, displacement, deformation, stress, strain. **X-axis** - time, load, displacement, deformation, stress, strain.	
Data Display	Max. Force, Speed, Specimen Detail, Strength (Kpa, Mpa, N/mm, Nmm)	
Main Drive Unit	Precision Servo Drive & Servo Motor	
Safety Feature	Emergency Stop, Overload Protection, Upper & Lower Limit Switch Load Sensor with Auto Retreat	
Power Source	220 ~ 240 V, 750 W, 10 A, 1 Ph, 50 / 60 Hz	
Product Dimension	660(L) x 450(W) x 1700(H) mm	
Packing Dimension	760(L) x 550(W) x 1800(H) mm	
Approx Weight	220 kg	
Packing Weight	250 kg	

Unit Consists Of 10 kN:

Model Number	Parts Description	Qty
TT LC – 10kNC	10kN High Precision Load Cell (Cell Type)	1 Unit.
TT 6ST – G02	Mechanical Wedge Clamp (0-9mm/20kN)	1 Unit.
TT 6ST – TS1	Touch Screen Controller Unit	1 Unit.

*1 Copy of Manual Instruction

Unit Consists Of 20 kN:

Model Number	Parts Description	Qty
TT LC – 20kNC	20kN High Precision Load Cell (Cell Type)	1 Unit.
TT 6ST – G02	Mechanical Wedge Clamp (0-9mm/20kN)	1 Unit.
TT 6ST – TS1	Touch Screen Controller Unit	1 Unit.

*1 Copy of Manual Instruction

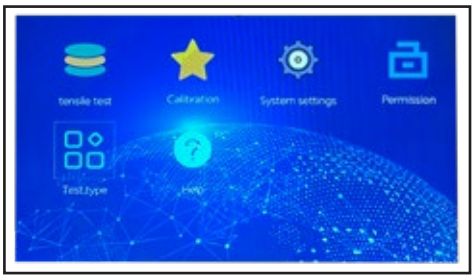
Optional Accessories :

Model Number	Parts Description	Qty
TT CDT1	Console Desk T1	1 Set
TT 6ST – LTX - 2	Long Travel Electronic Extensometer (LTX - 2)	1 No.

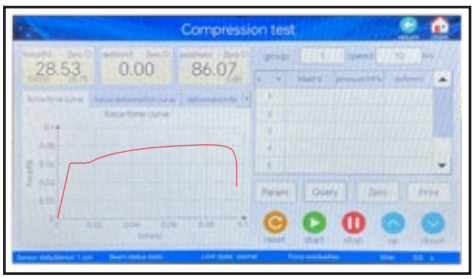
Console Desk T1

Long Travel Electronic Extensometer

OPERATION SOFTWARE



Menu Setting Page



Test Curve Page

System Setting Page