

TruForce

EM Dual Column Table Top Testing Machine | TF-TSE-B

TruForce TF-TSE-B Series of testing machine addresses the needs of standardized and routine testing, providing the user high quality at the most affordable price. The dual column testing systems with rugged structure are suited for tension and/or compression applications. They are typically used for quality control and production testing

Typical specimens

Small components, reinforced plastics, metals, wire, composites, elastomers, wood products, textiles, biomaterials, paper products, adhesives, foam, consumer products

New Features

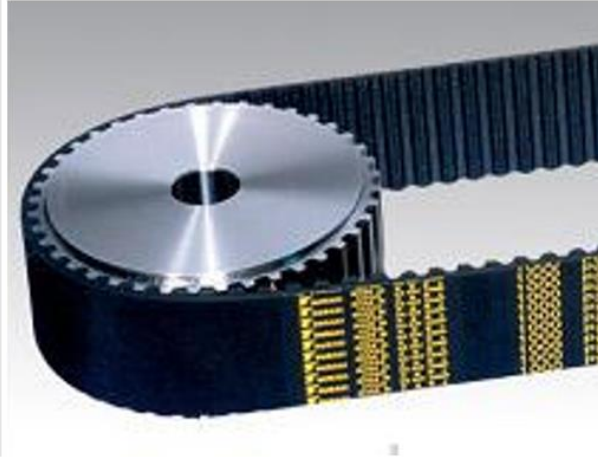
- Non-clutched drives, rated for full speed at maximum force
- Compact design saves lab space
- Wider test width

High Quality at affordable price

- Pre-loaded ball screws and heavy duty bearings assure long life with zero backlash as well as linear low force and through zero performance. The result is accurate and repeatable measurements that truly represent the specimen characteristics rather than load frame deficiencies
- Fully-protected lead screw covers provide longer life and greater operator protection
- Easy-to-clean aluminum column covers with chamfered corners to facilitate access to the test area. T-slots are built in for simple, convenient attachment and positioning of testing accessories
- High-speed, low vibration, world-class, maintenance-free, Japanese made AC servo motor and servo controller
- Photoelectrical encoder built in servo motor system is for position measurement of crosshead
- Built-in bidirectional load cell is assembled in the middle crosshead to prevent any collisions and simple to perform compression or tension tests
- Dual action over-travel limits on all frames provide the highest level of safety and meet all international standards
- Remote control keypad facilitates test operation
- DTC-350 controller provides high speed data acquisition with 8-CH A/D converting
- Full one-year warranty on parts



Driving system



- Japanese YASAKAWA AC servo motor and arc-shape silent synchronous belt features high-speed, low vibration, world-class, and maintenance-free
- Germany NORD gear reducer offers low noise, low heating, and high efficiency
- Photoelectrical encoder built in servo motor system is for position measurement of crosshead

Load cell

- High- precision USA-made Interface load cell offers high stiffness, high stability, and high linearity
- Over-load protection, lateral loading protection
- Bi-direction allows tension and compression test
- Self-recognition (TEDS) function
- Regular self-calibration
- Working temperature: -55°C~90°C

Controller

ACS DTC-500 digital controller offers high speed and closed loop control of load, displacement and extension.

- Imported IC, more reliable
- Up to 1200Hz sampling frequency
- Up to 1200Hz closed loop control frequency
- 20bit resolution
- 16 digital input/output port
- Built-in port for PC communication
- Expandable ports
- Load protection, over-current protection, over-voltage protection, over-speed protect, and over-travel protection.

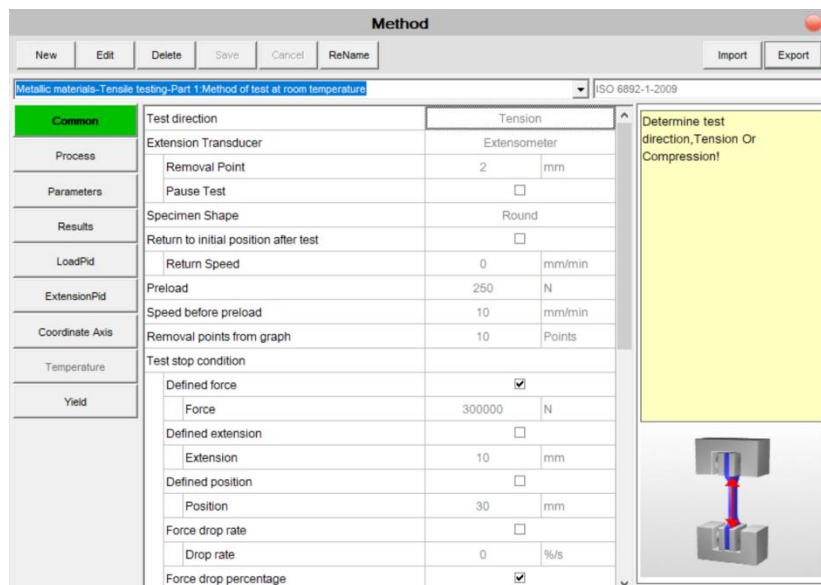
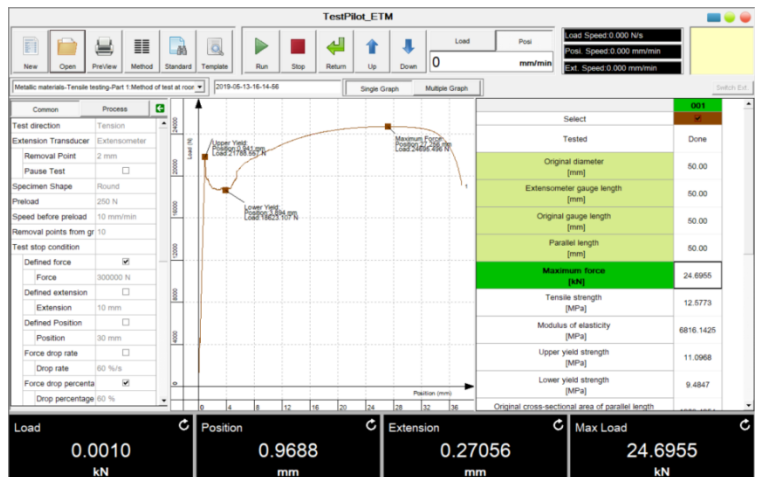
Remote control with display

- Ergonomically-designed and easy to operate
- Fine tuning knob
- Test start and stop operation
- Crosshead moving up, down, jog up, jog down
- Display of measurement channel: force, displacement, extension and etc.
- Test status display
- Specimen protection function



Software

- Multi-language software
- Pre-packaged test methods to help you quickly and efficiently meet the requirements of global test standards such as ASTM, ISO, DIN, EN, BS, and more
- Intuitive expression for easy programming of testing standards and testing process
- Testing report can be customized according to the requirement
- User authorization: The administrator can assign different functions for different level users
- Analysis can give typical test results like Young's modulus, Proof stress, Yield stress, stress, strain, Tensile strength, Elongation at break, compressive strength, bending strength, etc....



Specifications

Model	TF-TSE104B
Capacity (kN)	10kN
Test space	Single test space
Accuracy	Class 0.5
Force measurement range	0.4%-100%FS
Force accuracy	Better than $\pm 0.50\%$ of reading
Data sample frequency	1200Hz
Force resolution	1/500000FS
Extension accuracy	Better than $\pm 0.50\%$ of reading
Force resolution	1/500000FS
Position accuracy	Better than $\pm 0.50\%$ of reading
Position resolution (μm)	0.0375
Crosshead speed (mm/min)	0.001~500
Crosshead speed accuracy	Better than $\pm 0.5\%$ of setting
Crosshead travel (mm)	1000
Test width (mm)	420
Machine dimension Width x Depth x Height	770x535x1520
Power requirement	Single-phase, 220V $\pm 10\%$ VAC, 50/60Hz
Power consumption (kW)	0.4
Weight (kg)	150