



Ultra Fast Testing Machine

Tinius Olsen's Ultra Fast testing machine demonstrates our continuing commitment to our customers' unique testing requirements. This machine is built on our popular T series design but can operate at speeds up to 2500 mm/min (approx 100 in/min); this machine also has an extending travel totalling 1400 mm (55 in) to pull the most elastic of samples.

The Ultra Fast materials testing machine has frame capacity of 2.5kN (500 lbf) and can be combined with a variety of grips and fixtures, extensometers and application specific software to provide turnkey testing systems that can perform tension, compression, flexure, shear, puncture and peel.

At the heart of each system is the testing machine, so, building on the quality and technology that is built into all Tinius Olsen machines, we have developed this Ultra Fast Tester to talk directly with a standard PC via a high speed RS232 in both ASCII and a proprietary super high speed binary modes.

Robust construction of the loadframes comprising anti backlash precision leadscrews, high precision ball race bearings, high grade material for crossheads and electronics, combined with our years' of experience in machine construction, results in these superior testing machines.

Flexibility and simplicity of use is also built into the design of these machines. Each machine features rapid change Z beam loadcells that allow quick and easy capacity reduction to an appropriate load capability for the test. These loadcells have a measurement accuracy of +/- 0.5% of the applied load, from 2% to 100% of the loadcell capacity. Each machine also features rapid grip change capability; a simple pinning technique means that the gripping fixtures can be changed for different test configurations quickly and is exceptionally simple.

Key Features

- Up to 2500 mm/min (~100 in/min) testing speed.
- Extended travel capability of up to 1400 mm (55 in).
- PC control via high speed RS232 using ASCII mode and super high speed binary mode
- Force accuracy of 0.5% of applied load across the loadcell display range
- T slot table option available
- Machines are proof loaded to 200% of capacity
- Displacement resolution of 0.005mm
- Speed resolution of 0.01 mm/min
- Built-in intelligent active force and displacement alarm system
- 32 bit precision motor controller
- 150% mechanical overload capacity on each loadcell
- 20% digital load tare while maintaining full load cell capacity
- Automatic motor drive alarms that monitor over/under voltage, current and temperature.



Specifications

Capacity	550 lbf / 2.5 kN / 250 kg
Clearance between columns	16 in / 406 mm
Load Cells	Rapid change, low profile Z type load cells with digital encoding for automatic recognition and scaling available - 2kN, 1kN, 500N, 250N, 100N, 50N, 10N, 5N
Maximum Crosshead Travel	Measurement direct from ballscrew - fully auto scaling of single measurement range. 55 in / 1400 mm
Testing Speed Range	0.0002 to 100 in/min / 0.005 to 2500 mm/min
Capacity at Max. Speed	220 lbf / 1 kN
Max. Speed at Capacity	10 in/min / 250 mm/min
Jog Speed	0.0002 to 100 in/min / 0.005 to 2500 mm/min
Return Speed	0.0002 to 100 in/min / 0.005 to 2500 mm/min
Dimensions HxWxD	75 x 26 x 18 in / 1900 x 650 x 450 mm
Weight	308 lb / 140 kg

Specifications:

Load measurement accuracy: +/-0.5% of applied load from 2% to 100% capacity.
 Position measurement accuracy: 0.1% of reading or 0.01mm, whichever is greater
 Speed accuracy: 0.05% of set speed
 Operating temperature range: 32 to 100 degrees F (0 to 38 degrees C)
 Storage temperature range: 14 to 115 degrees F (-10 to 45 degrees C)
 Humidity range: 10% to 90% non-condensing, web bulb method
 Power: Standard optional voltages 110/220VAC, 50-60 Hz, 500W
 Power must be free of spikes and surges exceeding 10% of the nominal voltage.

Notes:

1. Load weighing system meets or exceeds the requirements of the following standards: ASTM E4, EN 10002-2, BS 1610, DIN 51221, ISO 7500-1.
2. Strain measurement system meets or exceeds the requirements of the following standards: ASTM E83, EN 10002-4, BS 3846 and ISO 9513.
3. These models conform to all relevant European CE Health and Safety Directives EN 50081-1, 580081-1, 73/23/EEC, EN 61010-1
4. Specifications are subject to change without notice



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