

The first name in materials testing

Model 5ST Reduced Height

Electromechanical Materials Testing Machine









The 5ST reduced model is an Electromechanical Materials Testing Machine. It is a robust design for use in a range of materials testing.









Model 5ST Reduced height

The 5ST reduced model is designed for tension, compression, flexure and shear strength testing on materials and assemblies. The frame has reduced height by 415mm as compared to standard model. The robust design that incorporates quality materials and components ensures that our reputation for superior system performance, ease of use, and longevity is maintained. A variety of loadcells are available at differing capacities that give precise applied load measurements from the smallest test specimen to ones that go to full machine capacity. Test machines become complete, powerful test systems with the addition of grips to hold the specimen, strain measurement instrumentation and Tinius Olsen's Horizon Data Analysis software

FEATURES AND BENEFITS

- Reduced crosshead travel (340mm)
- Bluetooth-enabled handheld interface allows maximum flexibility when paired to a testing machine.
- Suitable for tension, compression, flexure, shear and other tests to a maximum force of 5kN/1.000lbf.
- Different system interface options are available, from a familiar tethered handheld interface, a wireless Bluetooth interface panel running an Android application, or virtual machine controller application running on a PC. All interfaces work with Horizon Data Analysis software.
- Meets or exceeds the requirements of national and international standard for materials testing systems.
- Four full-length T-slots built into the machine column to allow accessories to be securely mounted to the test frame.
- Built-in pneumatic distribution ports provide local air supply to pneumatic grips.

INTERFACE OPTIONS

HMC 3.0
Wireless handheld interface that is connected to the machine by a Bluetooth link.
The interface features an Android-based operating platform and can be used to control the machine by itself or in conjunction with Tinius Olsen's Horizon software.



Proterm

Familiar handheld interface that is tethered to the machine. With its larger, tactile, sealed keypad, this interface is ideal for operators who use gloves to load and unload specimens and prefer a push button keypad. It requires virtual machine control software running on a connected PC to operate the basic machine functions and report basic numerical test data.



APPLICATIONS

Most common materials used in this particular model includes (but not limited to):

- Small electronic component testing e.g. Solenoids, switches, keyboards
- Medical tables/compacts
- Medical components syringes, cannulas, fluid valves, adehsive tapes, sutures











Specifications

Part # 99-991-1005/33 Tension compression load capability Yes Frame capacity kN 5 Frame capacity kg 500 Proof tested 50% over frame capacity 50% over frame capacity Floor or table mounting Table mounting Table mounting Test zones One Number of columns One Column finish Anodized Anodized Column finish Anodized Anotized Golumn finish Pre-primed, top powder coat paint Mild Steel Base material Pre-primed, top powder coat paint Aluminium Base color TO Green Web # 66 30 27 Crosshead (loading slide) material Aluminium Crosshead (loading slide) finish Pre-primed, top powder coat paint Pre-primed, top powder coat paint Crosshead (loading slide) finish Pre-primed, top powder coat paint Aluminium Crosshead (loading slide) finish Pre-primed, top powder coat paint Aluminium Crosshead (loading slide) finish Pre-primed, top powder coat paint Mild Steel Base cover ABS recyclable	Frame spe	cifications		
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	Noise at full crosshead speed 2m radius		18db	

NOTE - Software required for materials tests

Frame specifications				
CONTROLLER SPECIFICATIONS				
Max data processing rate		168MHz		
Data acquisition rate at PC		1000Hz		
Number of instrument device connections – external	Four			
Number of instrument device connections – internal	Three			
Bluetooth enabled	v4.0 with A2DP, LE, EDR			
External PC connection	USB			
User interface connectivity	TO HMC2.0, Proterm, Horizon			
FORCE MEASUREMENT				
Force measuring device type	Strain gage-based load cell			
Load cells available	5N, 10N, 25N, 50N, 100N, 250N, 500N, 1kN, 2.5kN, 5kN			
Resolution	One part in 8,388,608			
Accuracy	0.2% of applied force across load cell force range			
	0.2-100%			
Range	10N load cell - 0.5-100%			
	5N load cell - 1-100%			
Calibration standard	+/- 0.5% to ISO 7500-1, ASTM E4			
Internal sampling rate	1000Hz			
EXTENSIO	ON MEASU	JREMENT		
Resolution		0.1µm		
Accuracy		+/-50μm		
Range	0.1µm to 340mm			
Calibration standard	ISO 9513			
Internal sampling rate	2.73kHz			
POSIT	ION CON	TROL		
	mm/min	0.0001-1,000 to 2.5kN		
Test Speed	mm/min 0.0001-500 to 5kN			
rest speed	in/min	0.000004-40 to 500lbf		
	in/min	0.000004-20 to 1,000lbf		
Resolution	μm	0.1		
	in	0.000004		
Accuracy	mm/min	+/-0.05% of indicated speed		
Return speed post test	in/min	0.0001-1,500		
	mm/min	0.0001-1,000		
Crosshead positioning speed	in/min	0.00004-40		
Return to zero function		Yes		
POWEF	REQUIRE	MENTS		
Supply voltage options		115/230V		
Frequency		50/60Hz		
Power	530W +/- 10%			
ATMOSPHERIC REQUIREMENTS				
Operating temperature	5-40°C (41-104°F)			
Operating humidity	10-80% non-condensing wet bulb method			
Storage temperature	-10-45°C (14-113°F)			
Storage humidity	10-80% non-condensing wet bulb			
	method			





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