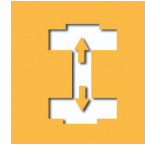
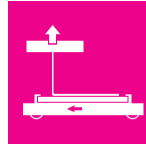


MODEL 5ST ELECTROMECHANICAL TESTING MACHINE



The model 5ST is designed for tension, compression, flexure and shear strength testing on materials and assemblies. 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

- Suitable for tension, compression, flexure, shear and other tests to a maximum force of 5kN / 1,000 lbf
- Single column design allows compact, economical and easy testing
- 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.
- 4 full-length T slots built into machine column to allow accessories to securely mounted to the test frame.
- Built-in pneumatic distribution ports that provide local air supply to pneumatic grips.

OPTIONS AND ACCESSORIES

- Test frame can be extended by up to 254mm / 10 inches to increase test area size. ¹
- Grips and fixtures can be easily mounted securely with a simple locking pin, which also allows simple and rapid changes.
- Full range of precision extensometers and deflectometers are available using video, laser, encoder, strain gauge and/or LVDT technologies
- Tinius Olsen's Horizon software can be connected to the tester by the operator.



Familiar handheld interface which is tethered to the machine. With its larger, tactile, sealed keypad, this interface is ideal for operators whose use gloves to load and unload specimens and prefer a push button keypad. It can be used to operate the basic machine functions and will report basic numerical test data or can be linked with Horizon software.

Wireless handheld interface which is connected to the machine by a Bluetooth link. This 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.



¹Supplied at the time of order

SPECIFICATIONS



5ST Specifications			
Frame	Tension Compression load capability	Yes	
	Frame capacity	kN	5
		kg	500
		lbf	1,000
		Proof tested	50 % over frame capacity
	Floor or table mounting	Table mounting	
	Test zones	1	
	Number of columns	1	
	Column material	Aluminium Extrusion	
	Column finish	Anodized	
	Column colour	Natural	
	Base material	Mild Steel	
	Base finish	Pre primed, top coat powder coat paint	
	Base colour	TO Cool Grey Web # E6 30 27	
	Crosshead material	Mild Steel solid	
	Croshead finish	Pre primed, top powder coat paint	
	Crosshead colour	TO Green Web # 00 4C 45	
	Base cover	ABS recyclable	
	Base cover colour	Cal Black Web # 11 18 20	
	Distance between columns	mm	N/A
		in	N/A
	Max cross head travel	mm	755
		in	30
	Optional crosshead travel	mm	254
		in	10
	Stiffness	kN/mm	7
		klbf/in	39
	Height	mm	1168
		in	46
	Width	mm	511
		in	20
	Depth	mm	467
		in	18
	Weight	kg	46
		kg	101
	Force protection system	Yes digital	
Displacement protection system	Yes mechanical & user programmable		
Accessory fitting interface type	Female diameter		
Ball screw type	High precision low backlash		
Ball screw cover/protection	Yes		
Crosshead drive system	DC servo motor		
Feet material	Impact resistant plastic		
Feet adjustment & levelling	No		
Reference rule to support cross head positioning	Yes mm & Inches		
T slots in columns for accessory mounting	4 * M6/M8		
Noise at full crosshead speed 2m radius	18bd		
Software required for materials tests			

5ST Specifications			
Controller	Max data processing rate	168 MHz	
	Data acquisition rate at PC	1000 sps	
	Number of instrument device connections external	4	
	Number of instrument device connections internal	3	
	Bluetooth enabled	v4.0 with A2DP, LE, EDR	
	External PC connection	USB	
	User interface connectivity	TO HMC, Proterm, Horizon	
Force	Force measuring device - type	Strain gauge based load cell	
	Load cells available	5N, 10N, 25N 50N, 100N, 250N, 500N, 1kN, 2,5kN, 5kN	
	Resolution	1 part in 8388608	
	Accuracy	+/-0.1% of applied force across load cell force range	
	Range	0.2% to 100%	
	Calibration standard	ISO 7500-1 ASTM E4	
	Internal sampling rate	1000sps	
Extension measurement	Resolution	0.1um	
	Accuracy	+/-10um	
	Range	+/- 217m	
	Calibration standard	ISO 9513, ASTM E83	
	Internal sampling rate	2.73ksps	
Position control	Test Speed	mm/min	0.001 to 1000 to 2kN
		mm/min	0.001 to 500 to 5kN
		in/min	0.00004 to 40 to 400lbf
		in/min	0.00004 to 20 to 1000lb
	Resolution	um	0.1
		in	0.000004
	Accuracy	+/- 0.005%	
	Return speed post test	mm/min	0.001 to 1500
		in/min	0.00004 to 60
	Resolution	um	0.1
		in	0.000004
	Accuracy	+/- 0.005%	
	Crosshead positioning speed	mm/min	0.001 to 1000
in/min		0.00004 to 40	
Resolution	um	0.1	
	in	0.000004	
Accuracy	+/- 0.005%		
Return to zero function	Yes		
Power require-ment	Supply voltage options	110/240V	
	Frequency	50/60Hz	
	Power	2000W +/- 10%	
Atmosphere	Operating temperature	10 to 40 degree C	
	Operating humidity	10% to 90% non condensing	
	Storage temperature	10 to 69 degree C	
	Storage humidity	10% to 90% non condensing	