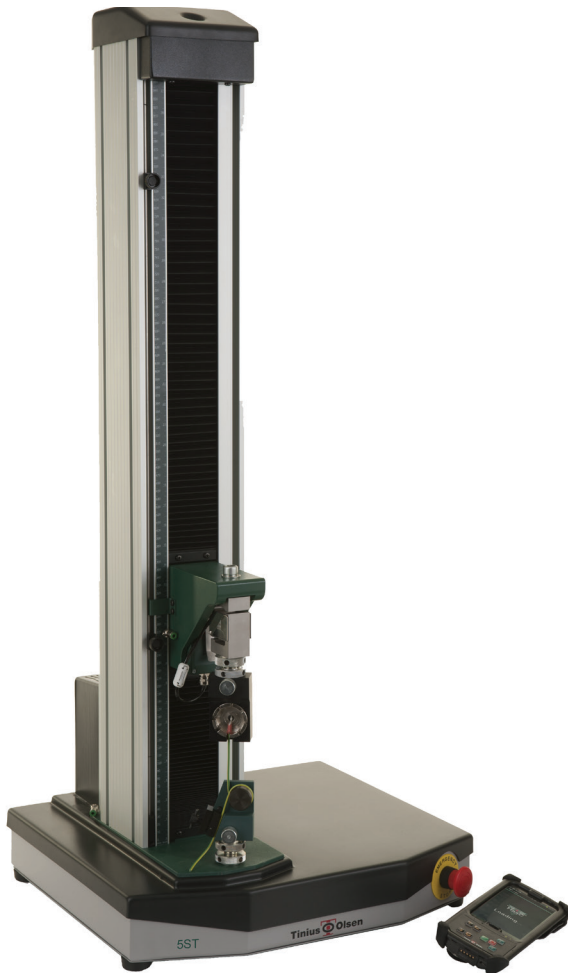


MODEL 5ST

Electromechanical Testing Machine



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.

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



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/1000lbf.
- 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.
- 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.

OPTIONS AND ACCESSORIES

- Test frame can be extended by up to 254mm/10in to increase test area size.¹
- Grips and fixtures can easily be securely mounted 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 gage and/or LVDT technologies.
- Tinius Olsen's Horizon software can be connected to the tester by the operator.

¹ Supplied at the time of order

Specifications



| MODEL 5ST SPECIFICATIONS | | |
|--|--|------|
| FRAME SPECIFICATIONS | | |
| Tension Compression load capability | | Yes |
| Frame capacity | kN | 5 |
| | kg | 500 |
| | lbf | 1000 |
| Proof tested | 50% over frame capacity | |
| Floor or table mounting | Table mounting | |
| Test zones | One | |
| Number of columns | One | |
| Column material | Aluminium extrusion | |
| Column finish | Anodized | |
| Column color | Natural | |
| Base material | Mild Steel | |
| Base finish | Pre-primed, top coat powder coat paint | |
| Base color | TO Cool Grey Web # E6 30 27 | |
| Crosshead material | Mild Steel solid | |
| Crosshead finish | Pre-primed, top powder coat paint | |
| Crosshead color | TO Green Web # 00 4C 45 | |
| Base cover | ABS recyclable | |
| Base cover color | 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 |
| | lb | 101 |
| Force protection system | Yes, digital | |
| Displacement protection system | Yes, mechanical and 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 | Non-adjustable impact resistant plastic | |
| Pneumatic air distribution | 4mm OD hose with pushfit coupling, rated to 100psi maximum | |
| Reference rule to support cross head positioning | Yes, mm and inches | |
| T slots in columns for accessory mounting | Four x M6/M8 | |

| MODEL 5ST SPECIFICATIONS | | |
|---|---|-----------------------|
| Noise at full crosshead speed 2m radius | 18db | |
| NOTE – Software required for materials tests | | |
| 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 HMC, 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 8388608 | |
| Accuracy | +/-0.2% of applied force across load cell force range | |
| Range | 0.2-100% | |
| Calibration standard | +/- 0.5% to ISO 7500-1 ASTM E4 | |
| Internal sampling rate | 1000Hz | |
| EXTENSION MEASUREMENT | | |
| Resolution | 0.1µm | |
| Accuracy | +/-10µm | |
| Range | +/- 217m | |
| Calibration standard | ISO 9513, ASTM E83 | |
| Internal sampling rate | 2.73kHz | |
| POSITION CONTROL | | |
| Test Speed | mm/min | 0.001-1000 to 2kN |
| | mm/min | 0.001-500 to 5kN |
| | in/min | 0.00004-40 to 400lbf |
| | in/min | 0.00004-20 to 1000lbf |
| Resolution | µm | 0.1 |
| | in | 0.000004 |
| Accuracy | +/- 0.005% | |
| Return speed post test | mm/min | 0.001-1500 |
| | in/min | 0.00004-60 |
| Crosshead positioning speed | mm/min | 0.001-1000 |
| | in/min | 0.00004-40 |
| Return to zero function | Yes | |
| POWER REQUIREMENTS | | |
| Supply voltage options | 110/240V | |
| Frequency | 50/60Hz | |
| Power | 530W +/- 10% | |
| ATMOSPHERIC REQUIREMENTS | | |
| Operating temperature | 10-40°C | |
| Operating humidity | 10-90% non-condensing | |
| Storage temperature | 10-69°C | |
| Storage humidity | 10-90% non-condensing | |