

MMS Series

Material Testers - Single Column

The MMS Series are single column, table-top testing systems operated using our L3 Material Test software. These systems are ideal for a variety of applications including plastics, composites, metals, rubber, automotive/ aerospace components, medical devices, adhesives, foams, film and more. Perform tensile, compressive, cyclic, flexural, shear and other types of testing. Four model load capacities are available: 500N, 1kN, 2.5kN and 5kN. Testers feature a granite base with all-metal column and pre-loaded ball screws for excellent extension control and precision measurements. Magnetic travel limits are adjustable to prevent over travel situations. Testers are inherently stiff and we include stiffness compensation correction to eliminate all errors due to mechanical deflection in the entire load string. Communications to the all-in-one touchscreen desktop computer is via USB. Frames feature digital and analog I/O and support for two extensometers. Data sampling is selectable between 1-2000Hz. MMS test frames may use ULC, MLC or FLC load cell sensors. Sensors are IEEE 1451.4 compliant. Frames may be fitted with optional splinter shield.

Features & Specifications

- Ideal for tension, compression, flexural, cyclic and shear testing applications
- Use with Starrett L3 Material Test software on our Windows®-based L3 Workstation
- Excellent load, strain, speed and position accuracies
- · Superior frame stiffness and position control
- ULC, MLC or FLC load cell sensors are IEEE 1451.4 compliant
- Frames feature digital and analog I/O and support for two extensometers
- Data sampling from 1 to 2000 Hz
- USB Communications
- · Wide selection of test fixtures and accessories



MMS-500 Series shown with optional load cell sensor and bottom test fixture



Specifications

Model Number No 500 1000 2500 5000 5000 1000 2500 5000 5000 1000 2500 5000 5000 1000 2500 5000 5000 1000 2500 500	MMS Series Material	Test Frames				
Load Capacity kgf bf lbf 50 lbf 100 lbf 250 sec 500 lbf Minimum Speed mm/min lin/min 0.001 0.001 0.0004 0.00004 0.00004 0.00004 0.00004 0.00004 0.0001 0.0001 0.0001 0.0001 0.0001 0.00004 Maximum Speed mm/min lin/min loo 60 60 60 60 60 60 60 60 60 60 60 60 60 60 60 60 Position Control Resolution μm 0.0625			MMS-500	MMS-1000	MMS-2500	MMS-5000
Minimum Speed in/min 0.00004 0.00004 0.00004 0.00004 0.00004 Maximum Speed mm/min 1525 145 152 1503	Load Capacity	kgf	50	100	250	500
Maximum Speed In/min 60 60 60 60 60 60 60 6	Minimum Speed					
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Throat	Vertical Test Space ¹					
Accuracy Load Measurement Load Cell Sensor Dependent	Total Crosshead Travel					
Load Cell Sensor Dependent Accuracy Position Measurement 2 Position Measurement 2 Carracy Strain Measurement 3 Class 0.5 extensometer ±0.0002 inch (±5 µm) Accuracy Strain Measurement 3 Class 0.5 extensometer +/-0.5% of reading down to 1/50 of full scale with ASTM E83 class B or ISO 9513 class 0.5 extensometer Accuracy Crosshead Speed +/-0.1% of set speed Data Sampling Hz 1 to 2000 Extensometer Connections 2 channels available for 0-10V extensometers Digital I/O 8 channels @ 1-5V Analog Inputs 1 channel @ +/- 10V Analog Outputs 2 channels @ 0-10V Electrical Phase 1 0, 120, 220, 230, 240VAC 10%; 47-63Hz Self-identifying Operating Temperature °F +50° to100°F Storage °C +10° to +38°C Temperature °F +50° to100°F Storage °C -40° to +66°C Temperature °F -40° to 150°F Humidity Humidity +10% to +90%, non-condensing Total Height in 32 50 62 62 Total Width in 15 15 15 15 Total Depth in 20,25 20,25 20,25 20,25 20,25 Weight to 40	Throat					
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Notes:

Load Measurement Accuracy

+/-0.5% of reading down to 1/100 of load cell capacity. Meets or exceeds ASTM E4,

ISO 7500/1 and EN 10002-2.

Strain Measurement Accuracy

 $\pm 0.5\%$ of reading down to 1/50 of full scale with most ASTM E83 class B or ISO 9513 class 0.5 extensometers. Meets or exceeds ASTM E83, ISO 9513, and EN 10002-4.

Operating Environment

Systems are intended for laboratory environments.

Compliance

Starrett test systems conform to all relevant European standards and carry the CE mark.

Specifications are subject to change without notice.

Notes

- 1 Total vertical space is the distance from the top surface of the base plate to the bottom surface of the crosshead, excluding load cell sensor, test fixtures, and clevis adapter.
- 2 Assumes Linear Error Correction and Deflection Compensation has been performed on test frame.

