

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

MMS Series Material Test Frames

Model Number		MMS-500	MMS-1000	MMS-2500	MMS-5000
Load Capacity	N	500	1000	2500	5000
	kgf	50	100	250	500
	lbf	112	225	562	1124
Minimum Speed	mm/min	0.001	0.001	0.001	0.001
	in/min	0.00004	0.00004	0.00004	0.00004
Maximum Speed	mm/min	1525	1525	1525	1525
	in/min	60	60	60	60
Position Control Resolution	µm	0.0625	0.0625	0.0625	0.0625
	µin	2.4	2.4	2.4	2.4
Vertical Test Space ¹	mm	559	953	1257	1257
	in	22	37.5	49.5	49.5
Total Crosshead Travel	mm	381	762	1016	1016
	in	15	30	40	40
Throat	mm	100	100	100	100
	in	4	4	4	4
Accuracy Load Measurement		Load Cell Sensor Dependent			
Accuracy Position Measurement ²		±0.0002 inch (±5 µm)			
Accuracy Strain Measurement		+/-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	1	1	1
Power Requirements		100, 120, 220, 230, 240VAC 10%; 47-63Hz Self-identifying			
Operating Temperature	°C	+10° to +38°C			
	°F	+50° to 100°F			
Storage Temperature	°C	-40° to +66°C			
	°F	-40° to 150°F			
Humidity		+10% to +90%, non-condensing			
Total Height	mm	813	1270	1575	1575
	in	32	50	62	62
Total Width	mm	381	381	381	381
	in	15	15	15	15
Total Depth	mm	514	514	514	514
	in	20.25	20.25	20.25	20.25
Weight	kg	61	77	88	88
	lb	135	170	195	195

Notes

- 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.
- Assumes Linear Error Correction and Deflection Compensation has been performed on test frame.

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

±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.

