



**MATERIAL TEST AND
FORCE MEASUREMENT**



SYSTEMS

S2 SYSTEMS

COMPATIBLE WITH FMS AND FMD TEST FRAMES

Accurately determine spring constants, spring rate, initial tension, free length and more with our S2 System. This application-specific L2 System is ideal for measuring critical spring characteristics on the production floor or in the lab. Test templates are included for testing compression and extension springs. Tests can be created in seconds. Add the optional L2 Test Builder to create custom spring test methods. S2 Systems operate using a Windows®-based tablet PC. Load, distance, height and time-based results are displayed in a large format for easy interpretation. Graphical representation of each test can be displayed. Data tables display results with tolerance and statistical calculations. Standard reports are included, or export .csv data for use with other applications. S2 Systems utilize FMS and FMD test frames and any Starrett load cell sensor. System communication is USB. Capacities range from 500N (112lbf) to 50kN (11,250lbf).

FEATURES

- Ideal for compression and extension springs
- Single- and two-point load vs height methods
- Precondition using scragging and load set
- Auto-datuming feature for accurate height measurements
- Measure and calculate results:
 - Spring Rate and Spring Constant
 - Free Length
 - Initial Tension
- Options for creating multi-steps tests using L2 Test Builder
- Options for digital I/O and Control Logic
- Options for arithmetic calculations



Intuitive Test setups with easy-to-understand prompts, menus and combo box options. Setups can be performed in seconds by operators with no previous programming experience.



SYSTEMS

L2 SYSTEMS

COMPATIBLE WITH FMS AND FMD TEST FRAMES

Whether your application is high-volume in situ production, incoming inspection and validation, or just basic force measurement, the L2 System is a cost-effective and easy-to-use solution. L2 Systems feature a small footprint, making them ideal for lean manufacturing environments. Create test setups in seconds using templates or create complex multi-stage test setups using the L2 Test Builder. No programming experience required. L2 Systems operate using a Windows®-based tablet PC. Load, distance and time-based results are displayed in a large format for easy interpretation. Graphical representation of each test can be displayed. Data tables display results with tolerance and statistical calculations. Standard reports are included, or export .csv data for use with other applications. L2 Systems utilize FMS and FMD test frames and any Starrett load cell sensor. System communication is USB. System capacities range from 500N (112lbf) to 50kN (11,250lbf).

FEATURES

- Ideal for tension, compression, flexural, cyclic, shear, and friction applications
- Create test setups using internationally accepted testing standards from ASTM, ISO, DIN, TAPPI and more, or create your own custom test methods
- Measure and calculate results:
 - Min/Max/Avg
 - Breaks
- Options for digital I/O and Control Logic
- Options for arithmetic calculation



Our L2 controller is a tablet computer featuring a 10-inch (254mm) color, touchscreen display. The controller is both WiFi® and Bluetooth® compatible with USB 2.0 port(s).



Check out our website for interactive features at starrett.com



SYSTEMS

L2 PLUS SYSTEMS

COMPATIBLE WITH MMS, MMD, FMS AND FMD TEST FRAMES

Designed for advanced force measurement and analysis, L2 Plus Systems are optimized for quality and engineering personnel. Test setup is intuitive, efficient and non-compromising. Measurements and analysis are performed graphically using our Windows®-based, all-in-one computer. Results are displayed on graphs, in data tables or combinations based on load, distance or time. You may include tolerances and display statistical calculations. Standard reports are included, or export .csv data for use with other applications. L2 Plus Systems utilize FMS and FMD test frames and any Starrett load cell sensor. System communication is USB. System capacities range from 500N (112lbf) to 50kN (11,250lbf).

FEATURES

- Ideal for tension, compression, flexural, cyclic, shear, and friction applications
- Create test setups using internationally accepted testing standards from ASTM, ISO, DIN, TAPPI and more, or create your own custom test methods
- Measure and calculate results graphically:
 - Points
 - Slopes and Intercepts
 - Min/Max/Avg
 - Breaks
 - Peaks & Valleys
 - Deltas
 - Rates
 - Work/Energy
- Options for digital and analog I/O and Control Logic
- Options for arithmetic, trigonometric and logarithmic calculations



SYSTEMS

L3 SYSTEMS

COMPATIBLE WITH MMS, MMD, FMS AND FMD TEST FRAMES

Ideal for material testing and characterization and advanced force analysis, L3 Systems represent a new and easier solution for creating a test, performing a test, analyzing your test results, and managing test data. Measurements and analysis are performed graphically using our Windows®-based, all-in-one computer. Results are displayed on graphs, in data tables or combinations based on stress, strain, load, distance or time. Include tolerances and display statistical calculations. Create calculations using arithmetic, trigonometric and logarithmic functions. Standard reports are included, or export .csv data for use with other applications. L3 Systems utilize MMS and MMD test frames and any Starrett load cell sensor. Support for two extensometers is standard. System communication is USB. System capacities range from 500N (112lbf) to 50kN (11,250lbf).

FEATURES

- Determine stress, strain, load, extension, and time results using tension, compression, flexural, cyclic, shear, and friction applications
- Create test setups using internationally accepted testing standards from ASTM, ISO, DIN, TAPPI and more, or create your own custom test methods
- Measure and calculate results graphically:
 - Points
 - Elastic Modulus (Automatic, Chord, Tangent)
 - Offset Yield
 - Min/Max/Avg
 - Breaks
 - Peaks and Valleys
 - Deltas
 - Rates
 - Hysteresis
 - Work/Energy
- Options for digital and analog I/O and Control Logic



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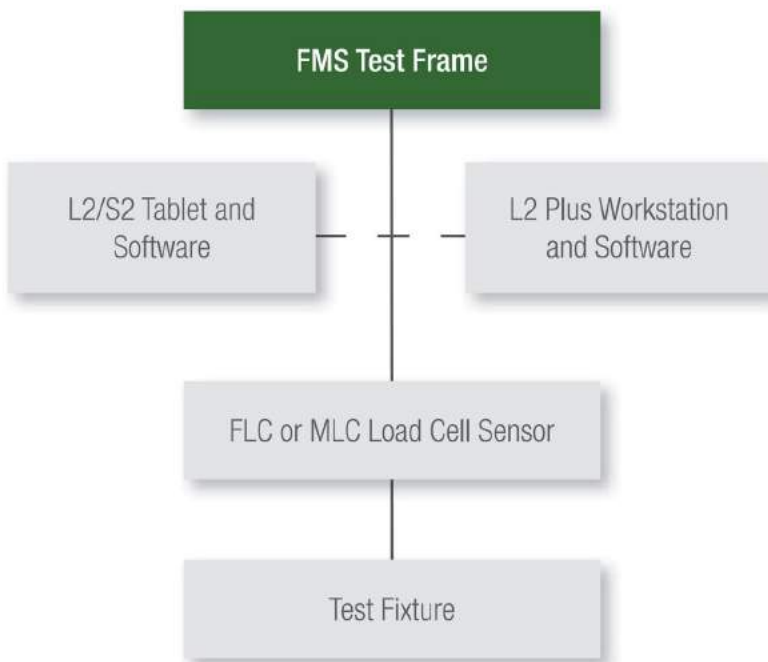
TEST FRAMES

FMS

SINGLE COLUMN

FMS single-column test frames are designed for force measurement and analysis applications. Available in four load capacities, FMS test frames are optimized for repetitive, high-volume testing applications conducted in production or laboratory environments. FMS frames feature a granite base and extruded aluminum column for inherent stiffness. The drive system includes a pre-loaded ball screw matched to a precision linear rail for unprecedented motion control, accuracy and repeatability. Magnetic travel limits protect against over-travel. Push-button controls for crosshead movement, test control and emergency stopping are easily accessible and rugged. Communication is USB. Quick-connect clevis is supplied for securing test fixtures. The FMS features a small footprint, ideal for lean manufacturing applications. Use with L2, S2 and L2 Plus software. Compatible with all Starrett load cell sensors. Options include digital I/O and safety shield with interlocks. CE compliant.

SYSTEM DIAGRAM



FMS-1000 with L2 software and tablet PC for force measurement applications



FMS Force Measurement Frames					
Model Number		FMS-500	FMS-1000	FMS-2500	FMS-5000
Load Capacity	N	500	1000	2500	5000
	kgf	50	100	250	500
	lbf	112	225	562	1124
Minimum Speed	mm/min	0.05	0.05	0.05	0.05
	in/min	.002	.002	.002	.002
Maximum Speed	mm/min	1525	1525	1525	1525
	in/min	60	60	60	60
Position Control Resolution	µm	0.250	0.250	0.250	0.250
	µin	9.8	9.8	9.8	9.8
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 (See Notes)			
Accuracy Position Measurement ²		±.001" (±20 µm)			
Accuracy Crosshead Speed		±0.1% of set speed			
Data Sampling	Hz	5 to 1000			
Digital I/O		8 channels @ 1-5V			
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

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.



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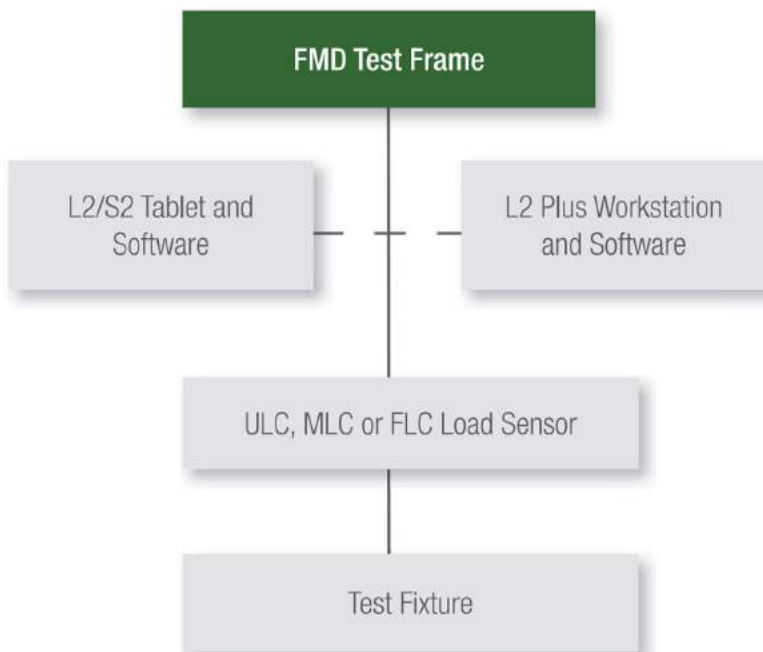
TEST FRAMES

FMD

DUAL COLUMN

FMD dual-column, bench top test frames are designed for force measurement and analysis applications. Available in three load capacities, FMD test frames are optimized for high-volume production and laboratory testing. FMD frames feature a granite base and extruded aluminum columns for inherent stiffness. The drive system includes synchronized pre-loaded ball screws matched to precision linear guides for precise motion control, accuracy and repeatability. Magnetic travel limits protect against over-travel. Push button controls for crosshead movement, test control and emergency stopping are easily accessible and rugged. Communication is USB. Quick-connect clevis is supplied for securing test fixtures. Use with L2, S2 and L2 Plus software. Compatible with all Starrett load cell sensors. Options include digital I/O and safety shield with interlocks. CE compliant.

SYSTEM DIAGRAM



FMD-50K Test Frame
Shown with optional test fixture and load cell sensor



FMD Force Measurement Frames				
Model Number		FMD-10K	FMD-30K	FMD-50K
Load Capacity	kN	10	30	50
	kgf	1000	3000	5000
	lbf	2250	6750	11,250
Minimum Speed	mm/min	0.05	0.05	0.05
	in/min	0.002	0.002	0.002
Maximum Speed	mm/min	1525	1525	752
	in/min	60	60	30
Position Control Resolution	µm	0.05	0.025	0.025
	µin	1.9	0.9	0.9
Frame Axial Stiffness	kN/mm	72	150	161
	lb/in	412,844	855,513	918,367
Vertical Test Space ¹	mm	1270	1245	1220
	in	50	49	48
Column Space	mm	424	424	424
	in	16.7	16.7	16.7
Total Crosshead Travel	mm	1162	1137	1111
	in	45.75	44.75	43.75
Accuracy Load Measurement		Load Cell Sensor Dependent (See Notes)		
Accuracy Position Measurement ²		.001" (±20 µm)		
Accuracy Crosshead Speed		±0.1% of set speed		
Data Sampling	Hz	5 to 2000		
Digital I/O (optional)		12 total channels Channel 1 and 2 for Power (5-24V) Channels 3 thru 10 for either digital inputs or outputs Channels 11 and 12 for Ground		
Analog Inputs (optional)		1 channel @ ±10V		
Analog Outputs (optional)		2 channels @ 0-10V		
Electrical Phase		1	1	1
Power Requirements		100, 120, 220, 230, 240Vac 10%	Single Phase Voltage (Vac) ±10% 220-240V (see Note)	Single Phase Voltage (Vac) ±10% 220-240V (see Note)
Maximum Power (VA)	Watts	900	1250	1250
Frequency	Hz	50/60		
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	1626	1626	1626
	in	64	64	64
Total Width	mm	787	787	787
	in	31	31	31
Total Depth	mm	736	736	736
	in	29	29	29
Weight	kg	136	192	225
	lb	300	425	500

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.



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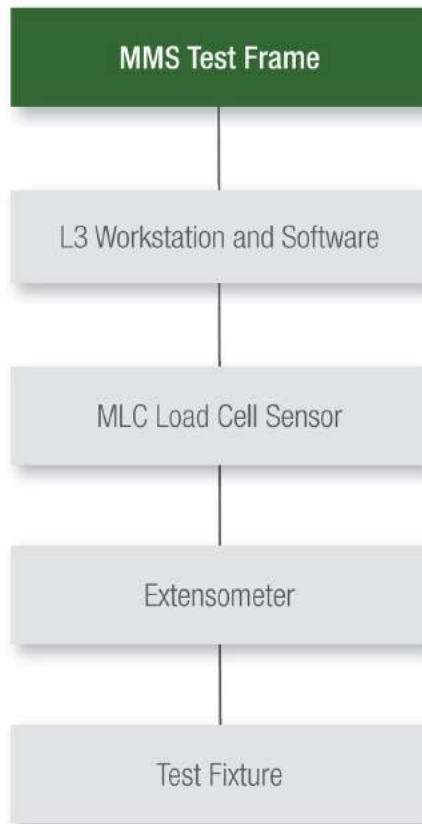
TEST FRAMES

MMS

SINGLE COLUMN

MMS single-column test frames are designed for material testing applications. Available in four load capacities, MMS test frames are optimized for laboratory and research and development testing. MMS frames feature a granite base and extruded aluminum column for inherent stiffness. The drive system includes a pre-loaded ball screw matched to a precision linear guide and high resolution encoder for unprecedented motion control, accuracy and repeatability. Magnetic travel limits protect against over-travel. Push button controls for crosshead movement, test control and emergency stopping are easily accessible and rugged. Communication is USB. Quick-connect clevis is supplied for securing test fixtures. Use with L3 software. Compatible with all Starrett load cell sensors. Connections for two extensometers. Includes digital I/O with optional analog I/O and safety shield with interlocks. CE compliant.

SYSTEM DIAGRAM



MMS-500 shown with optional load cell sensor and platens



MMS 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	.00004	.00004	.00004	.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" (±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.



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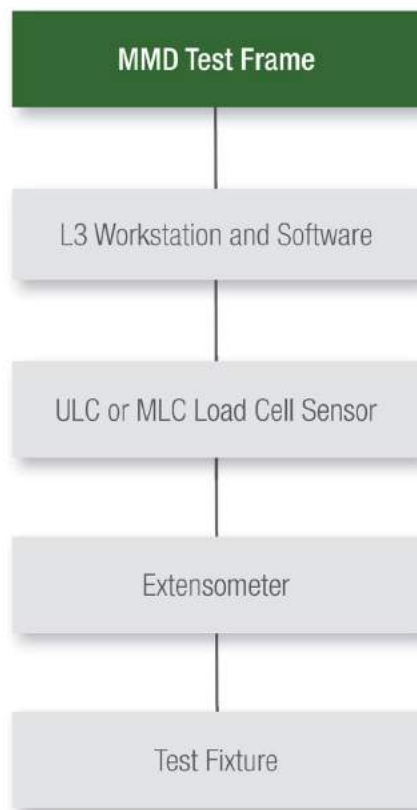
TEST FRAMES

MMD

DUAL COLUMN

MMD dual-column, bench top test frames are designed for high capacity material testing applications. Available in three load capacities, MMD test frames are optimized for laboratory and research and development testing. MMD frames feature a granite base and extruded aluminum columns for inherent stiffness. The drive system includes synchronized pre-loaded ball screws matched to precision linear guides and high resolution encoder for unprecedented motion control, accuracy and repeatability. Magnetic travel limits protect against over-travel. Push button controls for crosshead movement, test control and emergency stopping are easily accessible and rugged. Communication is USB. Quick-connect clevis is supplied for securing test fixtures. Use with L3 software. Compatible with all Starrett load cell sensors. Includes digital I/O with optional analog I/O and safety shield with interlocks. Connections for two extensometers. CE compliant.

SYSTEM DIAGRAM



MMD-50K Test Frame
Shown with optional test fixture and load cell sensor



MMD Material Test Frames				
Model Number		MMD-10K	MMD-30K	MMD-50K
Load Capacity	kN	10	30	50
	kgf	1000	3000	5000
	lbf	2250	6750	11,250
Minimum Speed	mm/min	0.001	0.001	0.001
	in/min	.00004	.00004	.00004
Maximum Speed	mm/min	1525	1525	752
	in/min	60	60	30
Position Control Resolution	µm	0.05	0.025	0.025
	µin	1.9	.9	.9
Frame Axial Stiffness	kN/mm	72	150	161
	lb/in	412,844	855,513	918,367
Vertical Test Space ¹	mm	1270	1245	1220
	in	50	49	48
Column Space	mm	424	424	424
	in	16.7	16.7	16.7
Total Crosshead Travel	mm	1162	1137	1111
	in	45.75	44.75	43.75
Accuracy Load Measurement		Load Cell Sensor Dependent		
Accuracy Position Measurement		±.0002" (±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 for 0-10V extensometers		
Digital I/O		12 total channels		
		Channel 1 and 2 for Power (5-24V)		
		Channels 3 thru 10 for either digital inputs or outputs		
		Channels 11 and 12 for Ground		
Analog Inputs		1 channel @ ±10V		
Analog Outputs		2 channels @ 0-10V		
Electrical Phase		1	1	1
Power Requirements		100, 120, 220, 230, 240Vac 10%	Single Phase Voltage (Vac) ±10% 220-240V (see Note)	Single Phase Voltage (Vac) ±10% 220-240V (see Note)
Maximum Power (VA)	Watts	900	1250	1250
Frequency	Hz	50/60		
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	1626	1626	1626
	in	64	64	64
Total Width	mm	787	787	787
	in	31	31	31
Total Depth	mm	736	736	736
	in	29	29	29
Weight	kg	136	192	225
	lb	300	425	500

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.



Check out our website for interactive features at starrett.com



LOAD CELLS

ULC, MLC AND FLC LOAD CELLS SENSORS

Starrett offers a full range of precision load cell sensors for material testing, force analysis and force measurement applications. Starrett load cells are compliant with IEEE 1451.4 and meet or exceed ASTM E4, BS 1610, ISO 7500-1 and EN 10002-2. Measurement accuracies of $\pm 0.5\%$ of reading down to 1/100 of sensor capacity may be achieved. Sensors are supplied with a NIST-traceable Certificate of Calibration. Sensors may be used on L2, S2, L2 Plus or L3 Systems.

ULC AND MLC LOAD CELL SENSORS

Starrett ULC and MLC load cell sensors are full-bridge, temperature compensated, strain gage instruments designed and optimized for material testing applications. These low profile sensors feature high axial stiffness and minimal deflection at full capacity which leads to improved measurement accuracy.

ULC sensors provide ultimate measurement performance and are supplied with a standard base plate adapter. Available in capacities from 1.5kN to 50kN.

The MLC are general purpose sensors available in capacities from 125N to 50kN.



MLC low-profile load cell sensor
Load measurement accuracy of $\pm 0.5\%$ of reading down to 1/100 of sensor capacity may be achieved.

Material Test Load Cell Sensors - Ultra Low Profile

Model	Load Capacity			Full Scale Deflection		Safe Overload %	Height		Width		Thread
	N	kgf	lbf	mm	in		mm	in	mm	in	
ULC-1500	1500	150	337	0.05	.002	150	63.5 ¹	2.51 ¹	104.8	4.13	M16 x 2-4H
ULC-2500	2500	250	562	0.05	.002	150	63.5 ¹	2.51 ¹	104.8	4.13	M16 x 2-4H
ULC-5K	5000	500	1124	0.05	.002	150	63.5 ¹	2.51 ¹	104.8	4.13	M16 x 2-4H
ULC-10K	10,000	1000	2248	0.05	.002	150	63.5 ¹	2.51 ¹	104.8	4.13	M16 x 2-4H
ULC-25K	25,000	2500	5620	0.10	.004	150	63.5 ¹	2.51 ¹	104.8	4.13	M16 x 2-4H
ULC-50K	50,000	5000	11,240	0.10	.004	150	63.5 ¹	2.51 ¹	104.8	4.13	M16 x 2-4H

NOTES

¹ Dimension includes the base adapter. These sensors are supplied with the base adapter standard.

Load measurement accuracy is $\pm 0.5\%$ of reading down to 1/100 of load cell capacity. Display resolution is 10,000:1.

Starrett recommends on-site verification of accuracy during installation. Sensor calibration should be performed at least annually.

Material Test Load Cell Sensors - Standard Low Profile

Model	Load Capacity			Full Scale Deflection		Safe Overload %	Height		Width		Thread
	N	kgf	lbf	mm	in		mm	in	mm	in	
MLC-125	125	12.5	28	0.08	.003	150	38.1	1.5	69.8	2.75	M6 x 1-6H
MLC-250	250	25	56	0.08	.003	150	38.1	1.5	69.8	2.75	M6 x 1-6H
MLC-500	500	50	112	0.08	.003	150	38.1	1.5	69.8	2.75	M6 x 1-6H
MLC-1000	1000	100	225	0.08	.003	150	38.1	1.5	69.8	2.75	M6 x 1-6H
MLC-1500	1500	150	337	0.03	.001	150	63.5 ¹	2.51 ¹	104.8	4.13	M16 x 2-4H
MLC-2500	2500	250	562	0.03	.001	150	63.5 ¹	2.51 ¹	104.8	4.13	M16 x 2-4H
MLC-5K	5000	500	1124	0.03	.001	150	63.5 ¹	2.51 ¹	104.8	4.13	M16 x 2-4H
MLC-10K	10,000	1000	2248	0.03	.001	150	63.5 ¹	2.51 ¹	104.8	4.13	M16 x 2-4H
MLC-25K	25,000	2500	5620	0.05	.002	150	63.5 ¹	2.51 ¹	104.8	4.13	M16 x 2-4H
MLC-50K	50,000	5000	11,240	0.05	.002	150	63.5 ¹	2.51 ¹	104.8	4.13	M16 x 2-4H

NOTES

¹ Dimension includes the base adapter. Starrett recommends including the base adapter on these model sensors to ensure proper alignment.

Load measurement accuracy is $\pm 0.5\%$ of reading down to 1/100 of load cell capacity. Display resolution is 10,000:1.

Starrett recommends on-site verification of accuracy during installation. Sensor calibration should be performed at least annually.



LOAD CELLS

FLC LOAD CELL SENSORS

Three models of s-beam load cell sensors are also available. These are all full-bridge, temperature compensated strain gage instruments, designed for force measurement applications, but suitable for some material testing applications.

PREMIUM MODELS

Ideal for low load applications, these sensors have a safe overload rating of 1000% of the sensor's load capacity.

ECONOMY MODELS

When price is an issue, these general purpose load cell sensors are economical and suitable for most general purpose force measurement applications.

SEALED MODELS

These models are suitable for applications in non-laboratory environments where dirt, oil, dust and debris may be present.



Load measurement accuracy is $\pm 0.1\%$ of load cell capacity.

S-Beam Force Measurement Load Cell Sensors - Premium

Model	Load Capacity			Full Scale Deflection		Safe Overload %	Height		Width		Thread
	N	kgf	lbf	mm	in		mm	in	mm	in	
FLC-5P	5	0.5	1	0.4	.014	1000	63.0	2.48	59.2	2.33	M6 x 1-6H
FLC-10P	10	1	2	0.3	.012	1000	63.0	2.48	59.2	2.33	M6 x 1-6H
FLC-25P	25	2.5	5	0.3	.011	1000	63.0	2.48	59.2	2.33	M6 x 1-6H
FLC-50P	50	5	11	0.2	.009	1000	63.0	2.48	59.2	2.33	M6 x 1-6H
FLC-100P	100	10	22	0.2	.007	1000	63.0	2.48	59.2	2.33	M6 x 1-6H
FLC-250P	250	25	56	0.2	.006	1000	63.0	2.48	59.2	2.33	M6 x 1-6H

Load measurement accuracy is $\pm 0.1\%$ of load cell capacity. Display resolution is 10,000:1. Starrett recommends on-site verification of accuracy during installation. Sensor calibration should be performed at least annually.

S-Beam Force Measurement Load Cell Sensors - Economy

Model	Load Capacity			Full Scale Deflection		Safe Overload %	Height		Width		Thread
	N	kgf	lbf	mm	in		mm	in	mm	in	
FLC-50E	50	5	11	0.08	.003	150	63.5	2.5	50.8	2.0	M6 x 1-6H
FLC-100E	100	10	22	0.08	.003	150	63.5	2.5	50.8	2.0	M6 x 1-6H
FLC-200E	200	20	45	0.08	.003	150	63.5	2.5	50.8	2.0	M6 x 1-6H
FLC-500E	500	50	112	0.10	.004	150	63.5	2.5	50.8	2.0	M6 x 1-6H
FLC-1000E	1000	100	225	0.15	.006	150	63.5	2.5	50.8	2.0	M6 x 1-6H
FLC-2000E	2000	200	450	0.15	.006	150	76.2	3.0	50.8	2.0	M12 x 1.75-5H
FLC-2500E	2500	250	562	0.13	.005	150	76.2	3.0	50.8	2.0	M12 x 1.75-5H
FLC-5000E	10,000	1000	2248	0.13	.005	150	76.2	3.0	50.8	2.0	M12 x 1.75-5H

Load measurement accuracy is $\pm 0.1\%$ of load cell capacity. Display resolution is 10,000:1. Starrett recommends on-site verification of accuracy during installation. Sensor calibration should be performed at least annually.

S-beam Force Measurement Load Cell Sensors - Sealed

Model	Load Capacity			Full Scale Deflection		Safe Overload %	Height		Width		Thread
	N	kgf	lbf	mm	in		mm	in	mm	in	
FLC-500	500	50	112	0.004	.10	150	63.5	2.5	50.8	2.0	M6 x 1-6H
FLC-1000	1000	100	225	0.006	.15	150	63.5	2.5	50.8	2.0	M6 x 1-6H
FLC-2000	1500	150	337	0.005	.13	150	76.2	3.0	50.8	2.0	M12 x 1.75-5H
FLC-2500	2500	250	562	0.005	.13	150	76.2	3.0	50.8	2.0	M12 x 1.75-5H
FLC-5K	5000	500	1124	0.005	.13	150	76.2	3.0	50.8	2.0	M12 x 1.75-5H
FLC-10K	10,000	1000	2248	0.005	.13	150	76.2	3.0	50.8	2.0	M12 x 1.75-5H
FLC-20K	20,000	2000	4500	0.005	.13	150	88.9	3.5	63.5	2.5	M16 x 2-4H

Load measurement accuracy is $\pm 0.1\%$ of load cell capacity. Display resolution is 10,000:1. Starrett recommends on-site verification of accuracy during installation. Sensor calibration should be performed at least annually.



Check out our website for interactive features at starrett.com



TEST FIXTURES

Starrett offers a full range of test fixtures, grips and accessories. Test fixtures are compatible with all Starrett systems and test frames. Starrett can also engineer and supply custom test fixtures to your exact requirements.



Wedge-Action



Vise-Action



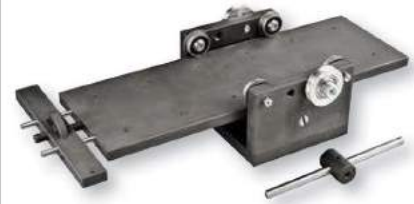
Scissor-Type



Pneumatic



Roller-Type



Peel and Friction



Rope



Terminal



Platens

