

Lab Master[®] Softness Tester



Results correlate to test panel evaluations of softness!

INTRODUCTION

The Lab Master[®] Softness Tester provides precise measurement of bulking thickness and compressibility. Manufacturers and specifiers of tissue, nonwoven and textile products are now able to measure softness to an objective standard. Softness Index correlates to test panel evaluations of softness. Softness is also presented as a curve. Measure force with 0.1 gram resolution and $\pm 0.02\%$ full scale accuracy. Measure and control position with 0.1 μm resolution and 0.2 μm repeatability.

APPLICATIONS

Tissue, nonwovens, and textiles

SPECIFICATIONS

Force

- Range & Resolution 2270 gf \times 0.1 gf
- Measurement Accuracy ± 0.5 gf or 0.5% of reading
- Control Accuracy ± 0.68 gf steady state

Position

- Range & Resolution 160 mm \times 0.1 μm
- Measurement Accuracy ± 1.0 μm , ± 1.0 $\mu\text{m}/60\text{mm}$ (cumulative)

FEATURES

- Display test results as numbers and curves
- Configure for R&D analysis or one-touch automated process control
- RS-232 output
- Includes Windows operating system and touch screen flat panel display in a compact, network ready unit
- Innovative design (patent pending) maintains accuracy over changing loads and frequent use.

CONNECTIONS

- Electrical: Auto-ranging Power Supply
- 100-120 V nominal $\pm 10\%$, 50/60 Hz
 - 220-240 V nominal -5% +10%, 50/60 Hz

ORDERING INFORMATION

Catalog number 49-90

**The TMI Group
of Companies**



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Lab Master[®] Softness Tester

Specifications

Force (tension and compression)

Maximum	±2.3 kg	±5.0 lb	
Resolution	0.1g	0.0002 lb.	
Accuracy	±0.5% of reading	±0.5% of reading	Exceeds the requirements of ISO 7500-1 Class 0.5
	±0.5 g	±0.5 g	
Overload rating	150%	150%	Tension or compression

Travel and Position

Travel (maximum)	160 mm	6.25 inches	Varies, depending on attachment
Position Resolution	0.1 µm	0.00004 inches	
Position Repeatability	0.2 µm	0.00008 inches	
Position Accuracy	±1.0 µm	±0.0004 inches	
Position Accuracy (cumulative)	±1.0 µm/60mm	±0.000017 inches/2.4 inches	

Speed

Range	0.01 to 13 mm/sec	0.01 to 0.5 inches/sec
Accuracy (steady state)	better than 0.05%	better than 0.05%

Throat depth

82 mm	3.3 inches
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Number of repeat cycles

as required	as required
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Data Acquisition rate

2 kHz	2 kHz
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Display

TFT flat panel touch screen	300 mm	12 inch
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Physical Dimensions

Height	880 mm	34.75 inches
Width	490 mm	19.25 inches
Depth	535 mm	21.00 inches
Working surface height	290 mm	11.5 inches
Weight	50 kg	110 pounds

Electrical Characteristics

Supply voltage (universal)	100-240 VAC	100-240 VAC
Current (max.)	10 Amperes	10 Amperes
Frequency	50-60 Hz	50-60 Hz

Environmental Range

Temperature (operating)	5°C to 35°C	40°F to 95°F	
Temperature (storage)	-20°C to 55°C	-4°F to 130°F	
Humidity (operating and storage)	10% to 85%	10% to 85%	Non-condensing

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