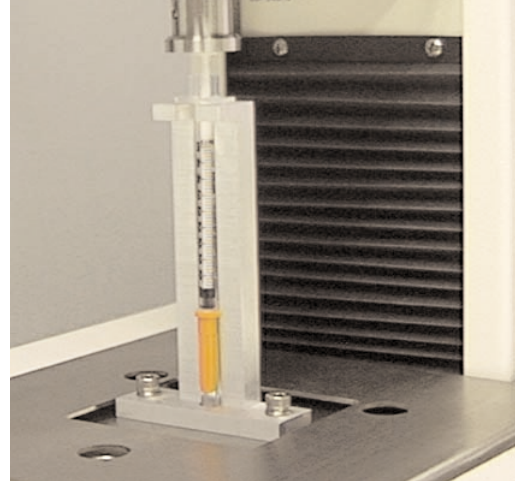


Lab Master[®] Hypodermic Syringe Tester



Measure penetration force with precision!

INTRODUCTION

The Lab Master[®] Hypodermic Syringe Tester provides precise measurement of the force required to move the plunger in either direction. It can also measure the penetration resistance of the tip with 0.01 Lbf resolution. Users can evaluate the properties of a variety of tips for R&D or use the instrument for production testing.

APPLICATIONS

Medical, industrial

SPECIFICATIONS

Force

- Range & Resolution
250 lbf × 0.01 lbf
1,112N × .04N
- Measurement Accuracy
±0.25 lbf or 0.5% of reading
±1.11N or 0.5% of reading
- Control Accuracy
±0.34 lbf steady state
±1.51N steady state

Position

- Range & Resolution
60 mm × 0.1µm
- Measurement Accuracy
±1.0 µm, ±1.0 µm/60mm
(cumulative)

FEATURES

- Includes fixture to support syringe. Other probes and fixtures optional.
- 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 ±10%, 50/60 Hz
 - 220-240 V nominal -5% +10%, 50/60 Hz

ORDERING INFORMATION

Catalog number 49-93

**The TMI Group
of Companies**



www.testingmachines.com

Testing Machines Inc. 2 Fleetwood Court, Ronkonkoma, NY 11779 USA
Tel: 800-678-3221 (USA) or (631) 439-5400, Fax: (631) 439-5420, e-mail: info@testingmachines.com

Messmer Instruments Ltd. Unit F1 Imperial Business Estate, West Mill, Gravesend, Kent DA11 0DL UK
Tel: +44 (0)1474 566488, Fax: +44 (0)1474 560310, e-mail: messmer@testingmachines.com

Büchel BV Fokkerstraat 24, 3905 KV Veenendaal, Netherlands
Tel: +31 (0)318 521500, Fax: +31 (0)318 540358, e-mail: buchel@testingmachines.com

Adamel Lhomargy SAS Z.A. de l'Habitat, Batiment 6, Route d'Ozoir, 77680, Roissy en Brie, France
Tel: +33 (0)1 64409210, Fax: +33 (0)1 64409211, e-mail: adamellhomargy@testingmachines.com

TMI Canada 6 Ronald Drive, Montreal West, Quebec H4X 1M8
Tel: (514) 489-8491, Fax (514) 489-6044, e-mail: canada@testingmachines.com

Lab Master[®] Hypodermic Syringe Tester

Specifications

Force (tension and compression)			
Maximum	±2.3 kg	±5.0 Lb	
Resolution	0.1 g	0.0002 Lb.	
Accuracy	±0.5% of reading	±0.5% of reading	Exceeds the requirements of ISO 7500-1 Class 0.5
Overload rating	±0.5 g	±0.5 g	Tension or compression
	150%	150%	
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	
Number of repeat cycles	as required	as required	
Data Acquisition rate	2 kHz	2 kHz	
Display			
TFT flat panel touch screen	300 mm	12 inch	
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

The TMI Group of Companies



www.testingmachines.com

Testing Machines Inc. 2 Fleetwood Court, Ronkonkoma, NY 11779 USA
Tel: 800-678-3221 (USA) or (631) 439-5400, Fax: (631) 439-5420, e-mail: info@testingmachines.com

Messmer Instruments Ltd. Unit F1 Imperial Business Estate, West Mill, Gravesend, Kent DA11 0DL UK
Tel: +44 (0)1474 566488, Fax: +44 (0)1474 560310, e-mail: messmer@testingmachines.com

Büchel BV Fokkerstraat 24, 3905 KV Veenendaal, Netherlands
Tel: +31 (0)318 521500, Fax: +31 (0)318 540358, e-mail: buchel@testingmachines.com

Adamel Lhomargy SAS Z.A. de l'Habitat, Batiment 6, Route d'Ozoir, 77680, Roissy en Brie, France
Tel: +33 (0)1 64409210, Fax: +33 (0)1 64409211, e-mail: adamellhomargy@testingmachines.com

TMI Canada 6 Ronald Drive, Montreal West, Quebec H4X 1M8
Tel: (514) 489-8491, Fax (514) 489-6044, e-mail: canada@testingmachines.com