

SureTorque Model ST-Lab

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For Continuous-Thread, Child-Resistant and Tamper-Evident Band Closures

The low cost ST-LAB is ideally suited for torque testing and benchtop re-torquing applications in laboratory and most pharmaceutical production environments. Several options are available, including rotary encoder and custom designed software to meet the needs of your application.

Features

- Real-time, automatic display
- Strain gauge transducer
- NIST traceable calibration
- Automatic container clamping and closure gripping – adjustable pressure
- Pneumatic drive control
- 180 degree chuck rotation
- Quick-change tooling
- 128x64 LCD screen
- Coated Aluminum



All SureTorque testers are configurable to test various size and shape containers. Tooling is designed for quick, tool-free changeover. Design specific tooling provides secure 360 degree gripping of cap and container. Adjustable chuck pressure ensures appropriate cap squeezing. Existing SureTorque clamping sets can be used with the clamp adapter set.

Technical Specifications*

Testing	
Torque Tests	Cap release test, Final application, Fatigue, Tamper evident break
Torque Range	0-88 lbf•in (0-10N•m)
Torque Transducer	Strain gauge
Accuracy	+/- 0.5% for static loads over full scale
Resolution	Min 0.1 lbf•in
Maximum Overload	150%
Rotation	CW and CCW, 180 degree
Modes	Torque control
Torque Units	d•Nm, N•m, kg•cm, kg•m, oz•in, lbf•in
Calibration	Certifiable (NIST)
Standards	Meets or exceeds NIST, ASTM, FDA, GMP
Electrical	
Control	PLC-based system
Analog Signal	16bit/12.5ms conversion
Response Time (avg)	<12.5ms
HMI Display	128x64 LCD with membrane keys
Communication	RS-232/RS-485 (USB, Ethernet optional)
Real-Time Clock	7-year typical battery backup
Utilities	
Air Source	80-125 PSI, 5 SCFM
Power Source	100-240VAC, ~2.5A, 50-60 Hz

*subject to change (without notice)

Mesa Labs
12100 W. 6th Avenue
Lakewood, CO 80228 USA



Tel: 303.987.8000
Fax: 303.987.8989
www.mesalabs.com

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Environment	
Temperature Range	32-122°F (0-50°C)
Relative Humidity	10% to 95% (non-condensing)
Mounting	Flat surface or desktop
Container Sizes	
Height Range	1.0" (with base adapter) to 13.75"
Diameter Range	0.25" to 5.0" (with 10" platform)
Dimensions	
Dimensions	24" x 18" x 18" (HxWxD)
Weight	~60 lbs
Materials of Construction	
Exterior	White Powder Coated Steel
Framework	Aluminum
Hardware	Anodized Aluminum and Stainless Steel
Tooling	Anodized Aluminum (Rubber molded)

Tooling and Options



Collets (Standard, Child-Resistant)



Clamps



Bases



Calibration Verification

Collet CT	Standard threaded cap collet
Collet CR	Child resistant cap collet
Angular Gripper	Spray type or odd shaped cap gripper
Spring Loaded	Serrated or non-threaded closures (beer cap)
Standard Clamp Set	Round container clamps (left and right)
Clamp Adapter Set	Adapts existing tooling to new design
"V" Clamp Set	Clamps for square or glass containers
Height Base Adapter	Platform base for short containers
Locating Base Adapter	Locating base for square or round bottom containers

DAQ Option 1	Captures peak torque, time and date stamp. Windows based software, version 1.10 – 1.12.
DAQ Option 2	Captures realtime Torque vs. Time or Angle vs. Torque. Windows based software, version 3.1.
DAQ Custom	Consult factory.
Serial Printer	For all torque tester models. Interface: RS-232. Paper dimensions: 57.5, 69.5, or 76.0 mm (W) x 83.0 mm dia. Reliability: MTBF-180,000 hour.
Laboratory Kit	ASTM Calibration kit in protective case with 3 weights and 4 pulleys for 25 points of calibration.
Portable Kit	ASTM Calibration kit in protective case with 1 weight and 2 pulleys for 3 points of calibration.
SureCheck™	For daily "Quick Check" of calibration, 4-23 lbf•in range.