



SURETORQUE
QUALITY ASSURANCE
INSTRUMENTATION

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Model ST-LAB

Automatic Torque Tester

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



DESCRIPTION

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
- 128 x 64 LCD screen
- Coated Alu

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: +/- 0.2 lbf•in for static loads over scale
 Repeatability: +/- 0.2 lbf•in for one set up
 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: 14bit/100ms or 16bit/12.5ms conversion
 Response time (avg): 100ms or 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: 60-80 PSI, 5 SCFM
 Power Source: 100-240VAC, ~2.5A, 50-60 Hz

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"

Dimensions

Dimensions: 18" x 18" x 24" (HxWxD)
 Weight: ~60 lbs

Materials of Construction

Exterior: Anodized or Teflon coated Aluminum
 Framework: Aluminum
 Hardware: Anodized Alu and Stainless Steel
 Tooling: Anodized Aluminum (Rubber molded)

*(subject to change without notice)







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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.

TOOLING			
Collets	 <p>Standard</p>	Collet CT	Standard threaded cap collet
		Collet CR	Child resistant cap collet
	 <p>Child-Resistant</p>	Angular Gripper	Spray type or odd shaped cap gripper
		Spring Loaded	Serrated or non-threaded closures (beer cap)
Clamps		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
Bases		Height Base Adapter	Platform base for short containers
		Locating Base Adapter	Locating base for square or round bottom containers

OPTIONS			
Data Acquisition (RS232, USB, Ethernet)*		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.
Printer		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.
Calibration Verification		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, 0-20 lbf•in range.