



# Model S3-LAB

## Automatic Torque Tester

*for Continuous Thread, Child-Resistant and Tamper-Evident Closures*



### Description

The Model S3 Lab benchtop torque tester is designed specifically for the pharmaceutical and food industries and will perform full testing to protocol including release, apply, release and re-apply, tamper-evident break and strip torque tests. All application and reporting torque is accurate and consistent. Data can be captured and down loaded for recall and reference. Servo drive and flexible PLC controls design allow programming possibilities that duplicate how your consumers use the product.

### Features

- Stainless steel finish
- Servo drive control
- Infinite rotation programmability
- Position, speed or torque control
- Faster test cycle time with servo drive
- Self-centering clamps
- Quick-change tooling
- Color touch screen interface
- Chuck Pressure Monitoring
- Quiet operation

### Technical Specifications\*

#### Testing

Torque tests:	Cap release test, Final application, Fatigue, Tamper evident break
Torque range:	0-100 lbf•in (0-10N•m)
Torque transducer:	Strain gauge type
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:	0-60 RPM, CW and CCW, Infinite
Modes:	Position, Speed or 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 Specifications

Control:	PLC-based system
Analog signal:	16 bit, 10ms acquisition
Response time (avg):	<10ms
HMI display:	3.5" 256-Color Touch panel
Communication:	RS-232/RS-485 (Ethernet optional)
Real-time clock:	7 year typical battery backup

\*(subject to change without notice)

#### Utilities Required

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:	2.75" (with base adapter) to 13.75"
Diameter Range:	0.25" to 5.00"

#### Dimensions

Dimensions:	29" x 12" x 20" (HxWxD)
Weight:	65 lbs

#### Materials of Construction

Exterior:	300 Series Stainless Steel Finish
Framework:	Anodized Aluminum
Hardware:	300 Series Stainless Steel
Guides:	Delrin/UHMW
Tooling:	Anodized Aluminum (Rubber molded)






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

### Tooling

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

### Options

<p><b>Data Acquisition</b></p>	<p>DAQ Option #1</p>	<p>Captures peak torque, time and date stamp. Windows based software version 1.10 – 1.12.</p>
	<p>DAQ Option #2</p>	<p>Captures realtime Torque vs. Time or Angle vs. Torque. Windows based software version 3.1.</p>
	<p>DAQ Custom</p>	<p>Consult factory.</p>
<p><b>Serial Printer</b></p>	<p>Serial printer for torque tester (all 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.</p>	
<p><b>Calibration</b></p>	<p>Laboratory Kit</p>	<p>ASTM Calibration kit in protective case with 3 weights and 4 pulleys for 25 points of calibration.</p>
	<p>Portable Kit</p>	<p>ASTM Calibration kit in protective case with 1 weight and 2 pulleys for 3 points of calibration.</p>
	<p>SureCheck™</p>	<p>For daily "Quick Check" of torque setup, 0-20 lbf•in range</p>