

GENERAL QUOTE



ST-LAB2D/LAB5 FULLY AUTOMATIC CLOSURE TORQUE- TOPLOAD TESTERS

Sure Torque's ST-LAB series has always been the most automatic closure Torque Tester on the market with the ability to handle the most different container and closure types. Now we introduce the newest version of the ST-LAB family, the ST-LAB2D and the LAB5. The key advantages of the new ST-LAB generation compared to the previous models:

- Offers user configurable automatic full **topload control** for Child Resistant closures
- **Application angle** measurement option
- Smaller and lighter (LAB5)
- Portable (in foamed heavy duty case – LAB5)
- Handles the a wide range of container size from the vial to over 3 liter bottle
- Advanced menu system
- **Statistics** on test type/sample type (average, sigma, cpk, in/under/over range)
- SD card
- Customizable language (any language can be added upon customer request)

The difference between the ST-LAB5 and the LAB-PRO2D is just the form and the size. The LAB-2D carries on the usual form of the ST-LAB series and can handle bigger samples. The operating machinery and electronics is the same at the 2 instruments.

After placing a sample into the ST-LAB it will apply all the movements like clamping the container, gripping the cap and releasing/applying the closure with automatic moves. The using of a fully automatic torque tester offers 100% repeatable test circumstances which eliminates the human effects from the measurement procedure. The sample's clamping force, the rotation speed and the applied topload can be set on a wide range. The machine measures not only the **torque** and the **topload**, but the **rotation angle** too.

The ST-LAB uses a customer-friendly intelligent plc control which enables the flexible configuration of many different test methods. Special, custom test methods can be added to the standard ones, even with sending an update in email.

We highlight 2 important useful features of the new ST-LAB:

- The ability to perform release-application test without breaking the seal of the product. By using this test method the tested and retorqued sample can be put back on the production line, instead of putting them in the waste.
- Automatic topload control enables the simple and accurate testing of the Child Resistant closures.

1 - Basic technical details of the ST-LAB2D and the LAB5

Basic configuration:

	LAB2D	LAB5
Display:	Graphical color touch-screen	
Memory:	Internal memory over 100 results with diagrams SD -card holds up to 1 million data.	
Communication:	SD-card, PC and printer connectivity for data export, possibility of automatic real time data acquisition (graph drawing) or direct report printing	
Com accessories:	Data cable, data acquisition and data collector software	
Change parts:	1 set of change parts (container clamp and cap collet)	
Torque range:	-75 - +75 inlb (-8,5 - +8,5 Nm) – can be custom increased	
Accuracy:	+/- 0,2% full scale	
Display resolution:	0,01 inlb	
Measurement units:	inlb, ftlb, Nm, dNm, Ncm, kgfcm (topload: N, Kg, Lb)	
Capable closure types:	all kind of circular (and optionally different shaped) twist caps, child resistant caps and metallic silver caps.	
Container types:	Any container or preform	
Electric supply:	AC 110/240 V	
Air supply:	6 Bar	
Resistance grade:	IP 65 from the operation side (front and top), IP 54 in general	
Languages:	English, German, Hungarian plus any other language can be added easily	
Calibration kit:	<i>not included</i>	Included torque calibration kit for 3 torques (10, 15, 20 LbIn)
<i>Sample sizes:</i>	<i>from Ø8mm x 20mm to Ø200mm x 440 mm</i>	<i>from Ø8mm x 20mm to Ø200mm x 375 mm</i>
Machine body:	Monocoque composite	Anodized aluminum (optional stainless steel platform)
Activation:	Single	Dual activation start buttons
Dimensions:	430x380x580 mm	200x360x480 mm
Weight:	cca 22 kg	14,5 kg (+accessories and transport case)
Shipping weight:	cca 40 kg	cca 26 kg
Shipping dimensions:	65x49x73 cm	56x47x27 cm
Shipping packaging	Wood crate	Foamed heavy duty transport case

Menu system:

The test setup (speed, topload force, rotation, torque range, test methodic) can be set for each different product individually. So the operator can/must not change any setup parameter. The unit has different setup access levels with separate passwords.

All tests can be finished either on torque fallback, or on rotation limit. This can also be configured to each sample type individually.

Basic test options:

- Release test
 - o Range testing – Besides the exact release torque it gives color signals if torque is under or over a preset torque range.
- Application
- Release-apply test. With this test mode it is possible to measure the initial release torque without damaging the temper evident band and the sealing even on carbonated or aseptic products.



- Apply-release test (for finding the connection between the application and the release torque by several cap-container combinations)
- Warranty Ring application and release tests
- Strip test - The strip test mode measures the peak torque value, where threads break/deform in an on-torque/application cycle. This way you are able to measure the maximal amount of torque can be applied on a closure/container, without permanent damage of the closure/container threads.

Topload can be configured by for each test individually. By the combined tests topload can be set different for Application and Release!

Options:

- Advanced topload option with
 - o Topload seek test
Topload will be increase automatically until the closure gets possible to open (force increment and increment dynamic is user configurable)



- Application angle measurement
A release test where after passing the initial release torque the closure will be fully removed, and the original application angle will be measured too.



- Topload calibration kit
Demo video: <http://www.suretorque.eu/userfiles/File/TopLoadSeek.mp4>
- Safety option with safety door (base plate increases to 280x360 mm)
- Narrow paper dot printer for direct report printing
- The sample sizes can be increased both in diameter and in height

2 – Measuring with the ST-LAB

The ST-LAB is a user-friendly one-button operation unit, controlled by a PLC.

- Choose a sample type on the touch screen.
- Choose the desired test method on the PLC by using the PLC's navigation buttons.
- Place the sample (and close the safety door if there is)
- Hit the activation buttons to start a test cycle.
 1. The container clamp closes and holds the container tight during the test cycle
 2. The testing head sinks to the cap level and grabs the cap
 3. The desired test method will be completed
 4. The sample will be released

Both topload and sample the fixing forces can be set on a wide range so that you can choose the forces matching the best to your samples and test requirements.

- You can start a new test by hitting the activation buttons

The speed of the test cycle can be set on a wide range, however the slower a test cycle is, the more accurate it is. The internal memory of the plc stores 100 results with graph and all details which can be imported into a pc. Results can be monitored by on line data collector too.

3 - Briefly about Sure Torque:

Sure Torque was established in 1984 in the USA by Hugarian packaging ingenious. Since than Sure Torque Inc has been developed continuously and became leader in automatised closure torque tester development and production for the packaging industry on the American continent. Sure Torque Europe Ltd was established in 2004, for production, R&D and European sales coordination. We are located in Budapest, Hungary.

There are hundreds of ST torque testers working across the world in different industries. Most of the major cap producers and pharmaceutical companies are using automatised torque testers from Sure Torque:

- Packaging industry: Alcoa CSI, Bericap, Owens-Illinois Plastics, Procap, T-Past, Kerr, Crown Cork, Top-Seal, Blackhawk Molding, Southern Plastics
- Food, beverage industry: Coca Cola, Pepsi Cola, Tropicana, Nestlé, Kraft, Unilever
- Pharmaceutical industry: Bayer, GSK, Pfizer, Novartis, Sandoz, Roché, Teva, Abbott, Merck, Schering, Allergan, etc.
- Cosmetitc and chemical industry: Avon, Procter & Gamble, Unilever, Syngenta
- Biotechnology: Gen-Probe, Celera