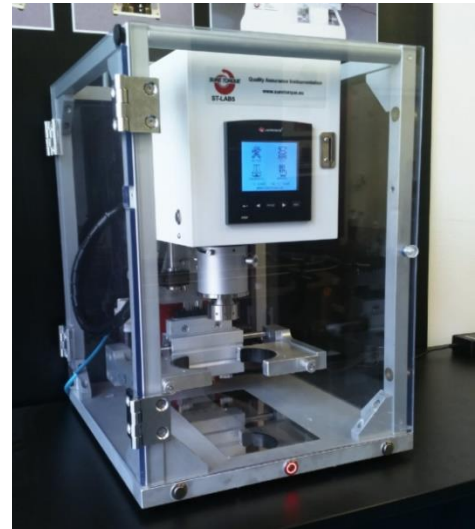


## ST-LAB ADVANTAGES



### KEY ADVANTAGES OF SURE TORQUE'S ST-LAB AUTOMATIC TORQUE TESTERS TO OTHER MOTORIZED TORQUE 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.

Key advantages of the ST-LAB torque testers compared to other manufacturers' automatic or motorized testers:

ST-LAB provides non-destructive release torque testing. This enables to save cost by saving the tested samples to the waste. Yearly cost saving can achieve the range of the equipment price.

Cost saving calculation spreadsheet:

<https://www.suretorque.eu/media/wysiwyg/download/ST-LAB%20saving.xlsx>

Theory of the test:

<https://www.suretorque.eu/media/wysiwyg/download/Undestructive%20release%20test%20theory.pdf>

Coca-Cola approval letter for the test method:

<https://drive.google.com/file/d/1I7Cd5bHKur6xOTBmlzzmTFI39hAAuN8I/view?usp=sharing>

#### Level of automatization

Sure Torque's ST-LAB is automatized on the highest level on the market. Performing the test is not more than placing the sample and on single button press.

Container clamping is fully automatic.

The pneumatic grippers enable a soft but secure grip on a wide range of containers from the regular round shape to the shaped or square ones, and from the rigid glass to the soft plastic as well.



Pneumatic clamp on Sure Torque



Manual crank on competitor's tester

Sure Torque Europe Ltd.

H-1224 Budapest, Dozsa Gy. u. 105/bldg 3., Hungary

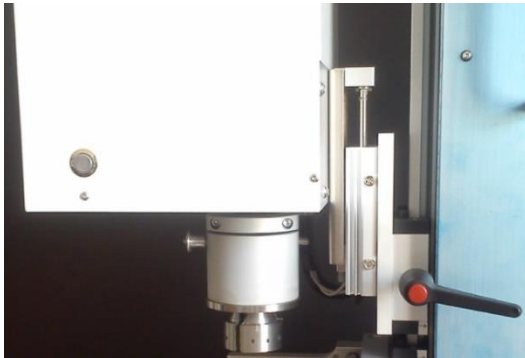
Tel.: +36 1 391 7389

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Test head moving is automatic

Sure Torque uses pneumatic actuator for the head movement too. This enables the accurate speed and force control on the head movement. With using precise pneumatic regulation and actuators, the vertical head force (**top load**) can be regulated and repeated accurate.



Pneumatic actuator on Sure Torque



Manual head moving on competitor's tester

Test head's vertical moving is automatic

Sure Torque uses pneumatic chuck for the automatic cap gripping. This has more advantages compared to the internal ribbed form locking chucks:

- Simulates the human hand grip on the closure and is 100% repeatable
- Can handle closures with different rib number or slightly different diameter in a 1.5 mm diameter range
- **Can grab the closure regardless the position of the ribs!** – In case of using a ribbed chuck the operator must check if the chuck can go proper on the closure's rib



Pneumatic chuck on Sure Torque is capable for universal grab regardless rib position



Ribbed chuck on competitor's tester – chuck and cap ribs must be synchronized

Super quick overchange with using of centering bases

We provide centering bases to make operators life even more easy. Advantage of the disks:

- Samples placed in proper position
- Equalize the height difference of the different samples. No need to adjust head/clamp position when changing to a different sample type



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The higher automation of the Sure Torque ST-LAB results:

1. Quicker testing (up to 4-6 non-destructive release-apply tests / minute!) – please see the video: <https://youtu.be/iOrI5qeAIT8>
2. Simpler testing (testing will require less attention from the operator side)
3. Better test repeatability

Recommended videos:

Non-destructive release-apply test:

[https://www.suretorque.eu/media/wysiwyg/video/ST-LAB\\_Release-Application\\_Test.mp4](https://www.suretorque.eu/media/wysiwyg/video/ST-LAB_Release-Application_Test.mp4)

Format change:

[https://www.suretorque.eu/media/wysiwyg/video/ST-LAB\\_PET\\_format\\_change\\_and\\_Release-Application\\_Test.mp4](https://www.suretorque.eu/media/wysiwyg/video/ST-LAB_PET_format_change_and_Release-Application_Test.mp4)

Application angle test:

[https://www.suretorque.eu/media/wysiwyg/video/ST-LAB\\_Application\\_Angle\\_Test.mp4](https://www.suretorque.eu/media/wysiwyg/video/ST-LAB_Application_Angle_Test.mp4)

Warranty ring release test:

[https://www.suretorque.eu/media/wysiwyg/video/ST-LAB\\_Warranty\\_Ring\\_Release\\_Test.mp4](https://www.suretorque.eu/media/wysiwyg/video/ST-LAB_Warranty_Ring_Release_Test.mp4)

ST-LAB6 – logging:

<https://www.suretorque.eu/media/wysiwyg/download/LAB6/ST-LAB6.mp4>

LAB6 presentation:

<https://www.suretorque.eu/media/wysiwyg/download/LAB6/Sure Torque ST-LAB6-2020.ppt>

#### Additional benefits of the ST-LAB torque testers

- ST-LAB torque testers provide 13 test modes including:
  - Automatic application angle testing
  - Special tests for childproof (push&turn) closures
- Pre-programmable and from menu selectable 10 different test recipes for different product kinds
- Different access level privileges
- Wide range of communication options:
  - Ethernet (server or client)
  - USB
  - RS232
  - Printer
  - Data logger
  - SD card
- Included data logger and data manager for pc
- Full audit logging (CFR 21 part 11 compliant) – only by ST-LAB6
- Bar code scanner connectivity for instant user and batch authentication – only by ST-LAB6
- Wide range of testable formats. Even testing containers with oblique neck is possible

