



Test instruments and universal test machines for bottles
Ranges Anditork, Drivetork and Topload



The product range for bottles

Screwing and unscrewing torque, uncorking force and crush tests

In order to ensure and control the manufacturing process of your bottles, flasks and your closures, it is necessary to perform periodical control of the screwing torque on closures or the crush force on bottles.

This verification can be done by means of torquemeters which enable the measurement of the screwing or opening torque on a bottle after it was screwed by a the screwing machine on the production line or the bottling machine. Force gauges and test machines enable to measure the extraction force of corks, to simulate the break or stacking or to determine the robustness of a bottle.

In order to perform these tests, Andilog has developed four ranges of products:

Screwing and unscrewing torque measurement



Anditork, manual torque measurements on caps



Drivetork, automated torque measurements



Instrumented bottle, in-line control

Force measurement



Topload, for automated crush tests on bottles

Manual torque measurement: Anditork

Manual torquemeters developed for the simple verification of the opening and closing torque on closures



The torquemeters Anditork have been developed for the manual opening and screwing torque measurements on bottles. They are adapted to a wide variety of samples such as bottles (water, syrup, wine, and liquor), flasks (perfume, medical), test tubes, jars or pot for instance.

The Anditork range has four versions of displays with different metrological performances and functions to be personalized according to your needs. **Each version is delivered with a stainless steel plates, 4 grips and a certificate of calibration with the measurement details.**

The instruments are calibrated individually in our laboratory before each delivery.

Advantages of the Anditork systems

Holding tray

The stainless steel tray of the Anditork guarantees the maximal longevity of the tooling and facilitates the cleaning in case of liquid overflow from the bottle or the flasks. The Anditork are equipped with a bottle holder which protect the screw during the positioning of the bottle.

The samples are maintained on the test stand Anditork by means of grips coated with soft rubber. It avoids slipping, deterioration or marking of the samples during the torque measurements.

The adjustment of the clamping diameter - from 10 to 200 mm (0.4 to 7 inches) - is done with a setting wheel for a good positioning of the sample in the center of the plate.



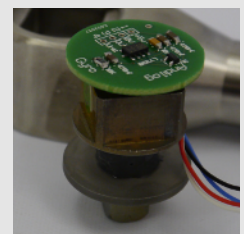
Digital display

The display of the Anditork devices enables the easy reading of the maximum torque for the users and prevents reading errors or misinterpretation often met with analogical torquemeters.

The industrial displays are made to resist to projections and can be easily cleaned. Depending on the product range, the display consists of 1 to 3 lines and can even plot the curve of the test in color.

Strain gauge sensors

The strain gauge sensors of the Anditork guarantee the precision and repeatability of the measurements over a long period of use. Moreover, the onboard electronics checks upon every boot that the sensor isn't damaged or abnormally staggered, avoiding the regular verifications and the mandatory cleaning when using mechanical devices.

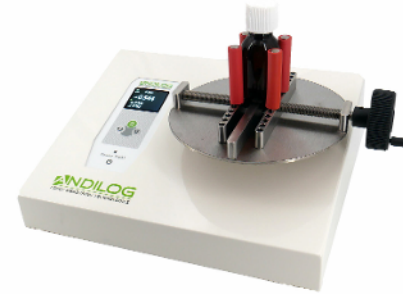


Manual torque measurement: Anditork

Anditork First II– Simple bottle tester for the production line

The torque tester Anditork First II enables test up to 12 Nm clockwise and counter clockwise. Its user interface is reduced to the minimum in order to be handy and **facilitate the measurements**.

The navigation in the menus and function of the device can be done using only 3 keys: change the unit of measurement (N.m, Kg.cm, lb.in, mNm, lbft), tare of the measured value and change of the order of the values displayed on the screen ((instantaneous and maximum value clockwise/anticlockwise).



Anditork Easy – More precision and traceability



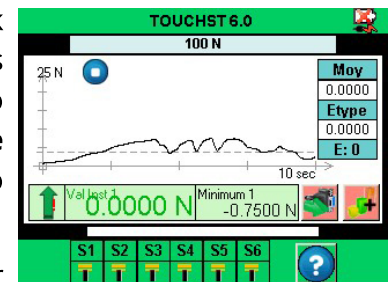
The Anditork Easy enables to perform the same measurements as the Anditork First and offers advanced functions to facilitate the tests, the recording and the data processing. The main additional functions are: **programmable torque set points with audible beep, memory up to 100 results, 2-line display with raw data and computer connection**.

Thanks to its rechargeable batteries the Anditork Easy can be easily transferred between different control areas. The test can be run in the laboratory or directly at the bottling machine, and it provides a quick quality control check of the closure.

Anditork Star – Maximum performance and convenience of use

The torque tester Anditork Star includes the functions of the Anditork Easy with augmented ergonomic and exclusive performances. With its color touch screen, the Anditork Star is user friendly and pleasant to use. Its advanced calculations such as the **break detection of the clamp ring and the display in real time of the curve** enables to perform detailed tests.

As option, it is possible to save the test data or the curve on a USB or in the internal memory up to 2,000 results.



Anditork Dual – Dedicated to safety cap



The Anditork Dual is specially designed to measure the pushing downward force, opening/closing torques for bottle's cap and the break torque of their safety ring. It uses the same display as the Star version and **can read simultaneously a force and a torque sensor**.

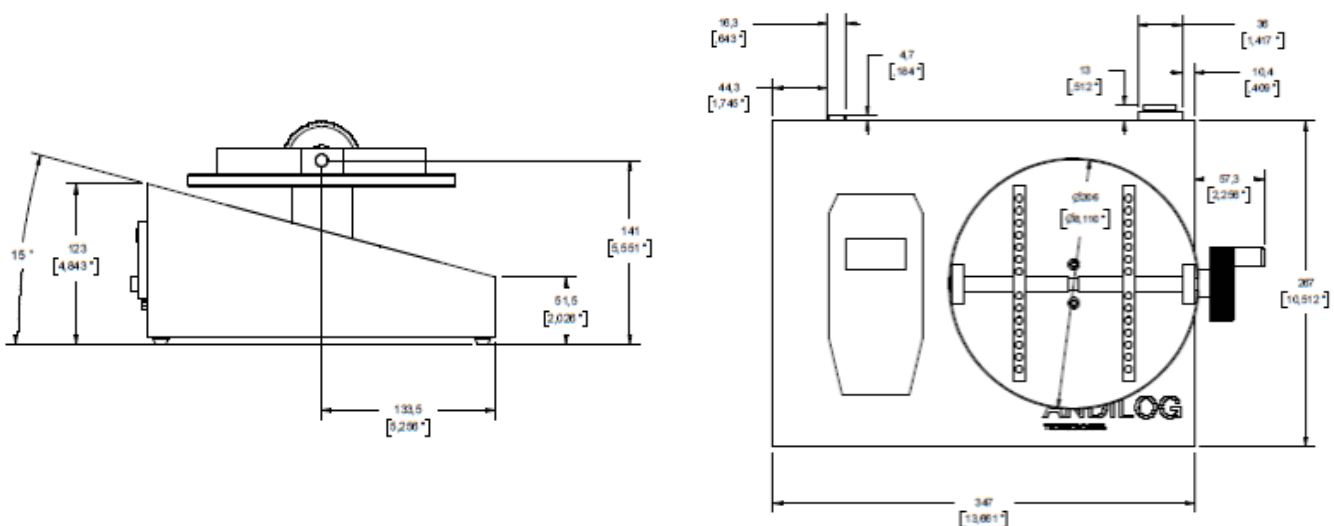
The integrated high end sensor in the Anditork Dual is designed to measure the force and the torque so that the values don't influence each one another. It enables highly precise measurements, repeatable results and a great reliability.

Manual torque measurement: Anditork

Technical specifications

FUNCTIONS	FIRST II	EASY	STAR	DUAL
Sensor	1.5 (12 lbin), 6 (50 in.lb) or 12Nm (100in.lb)	3, 6 or 12 Nm 27,53 or 106 lb-in	1.5, 3, 6 or 12 Nm 13, 27,53 or 106 lb-in	6 or 12 Nm / 500 N 53 or 106 lb-in / 112 lbs
Units	N.m, Kg.cm, lb.in, mNm, lbft	Nm, mNm, lbin, kgcm	Nm, mNm, lbin, lbft, inoz	
Resolution	1/5,000 FS	1/10,000 FS	1/10,000 FS	
Accuracy	0,5% FS	0,25 % FS	0,25 % FS	
Bauds rate	1,000 Hz	1,000 Hz	5,000 Hz	1,000 Hz each sensor
Autonomy of use	15 hours	8 hours	8 hours	6 hours
Sample diameter	10 up to 200 mm (0,4-7,90 inch)			
Lines displayed	3	2	3	
Set points	No	Yes	Yes	
Transfer of data	Non	100 Hz	1,000 Hz	
Internal memory	No	100 results	2,000 results	
Curve	No	No	Yes	
Break calculation	No	No	Yes	
Save on USB	No	No	Option	Option

Dimensions of the Anditork



Automated torque measurement: Drivetork

Eliminate the influence of the user on your measurements

In order to perform a precise and repetitive measurement it is preferable to use a torque bench with a programmable constant speed.

In this way, **the measurement performed will always be independent from the person who closes or opens the closure.** Thanks to its controlled rotation at constant speed, the motorized test bench Drivetork operates without human influence on the bottles.

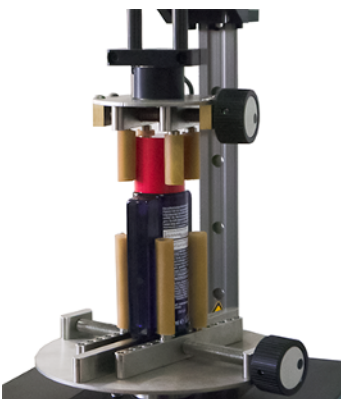
It is best suited for screwing tests: closures, bottles, screws, nuts etc. Its measuring head is equipped with a movable head lock which enables the torque sensor to freely go up and down progressively on the thread during the tests.

The Drivetork can be programmed to perform the following tests on closures:

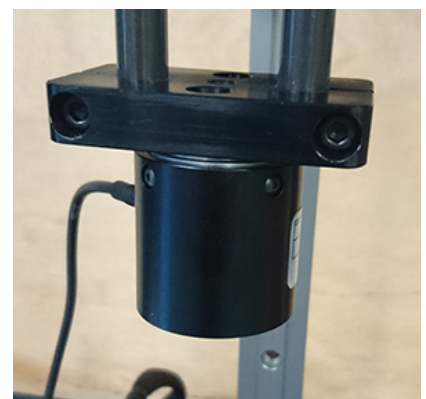
- Complete unscrewing
- Break of the safety ring
- Unscrewing without opening and screwing



One unique solution for multiple samples



The grips and plates enable to test various diameters, forms and sizes of bottles.



Interchangeable torque sensors
0.15 to 12 Nm (1-106 lb-in).

Technical specification

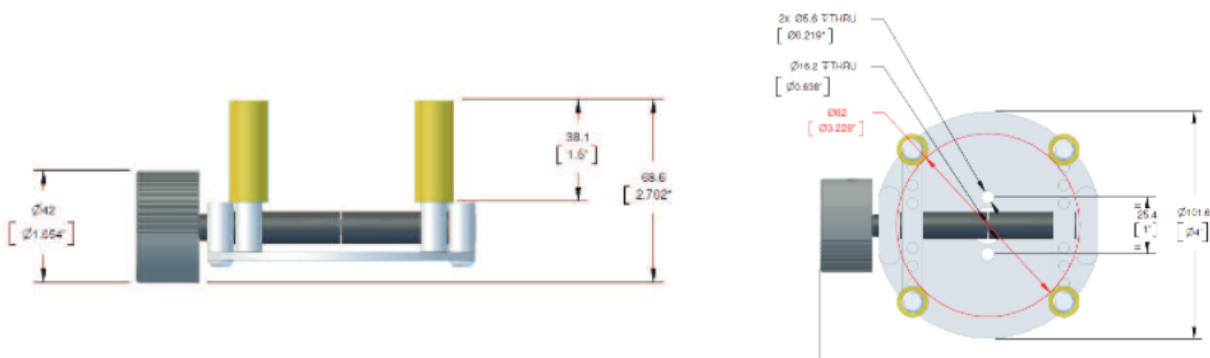
- Torque range: 0 – 12 Nm (1 - 106 in-lb).
- Interchangeable sensors
- Torque precision: 0.25% FS
- Speed rate: 1,000 Hz
- Angle resolution: 0.1°
- Rotating speed: 1-10 rpm (customizable on demand)
- Direction of measurement: screwing/unscrewing
- Sample height: 0-350 mm (0-14 in)
- Max. travel: 75 mm (2,95 in)
- Max. diameter of the bottles: 150 mm (6 in)
- Max. diameter of the closures: 80 mm (3 in)
- PC connection via USB cable and compatible
- USB stick as option
- Clamping accessories customizable on demand

Accessories for Drivetork

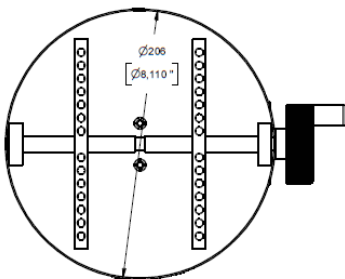
Different plates and accessories for the range Drivetork and Anditork

Various holding accessories for your samples can be mounted on the Drivetork. The choice of these accessories depends on the type of products you wish to test. We can also design and manufacture special clamps and grips on demand based on your test requirements. Please consult us for further information.

Microtork plate (mounted at the bottom or on top of the Drivetork)



Large plate (mounted at the bottom)



Stainless steel plate with large diameter delivered with 4 grips in soft rubber. Length of the grips: 76 mm (3 in).

Best suited for tests on bottles, flasks and canisters.

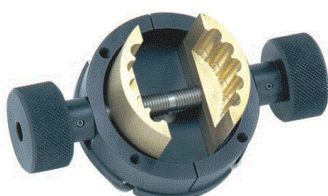
Tailor made holder and mating part



We design and manufacture accessories on demand with the exact shape of your closures. This tailor made accessories have the advantage to limit any slipping and to avoid the clamping of the closure through the finger grips. In this way the closure is always maintained the same way and not constrained during the rotation.

The measurements are more repeatable and precise. Please consult us for more information and a personalized study of your project.

Jaw for champagne cork and sparkling wines



This jaw has been specially design for torque measurements in twist on champagne corks. It ensure the good grip of the cork and deter eventual slippage.

The gripper can be mounted on our portable force gauges of the range Centor Easy TH for measurements on site.

Please consult us for further information.

Inspection of screwing and capping machines

Check the torque directly on your capper machines

To control the quality of tightening of closures in production, most of the time, the loosening torque on the bottles is measured after the closure has been screwed or pushed in by the capping machine. The results obtained are often very difficult to correlate with the torque actually applied during screwing for several reasons:

- The storage conditions of the bottle vary the torque. For example, if the bottle is subjected to heat or cold, the materials will shrink or expand. These variations change the release torque.
- The unscrewing torque, if measured manually, can vary according to the operator, the speed of rotation, the force exerted on the cap...
- With the unscrewing control a maximum torque value is obtained but it is not possible to see what happens during rotation and locking.

To solve all these problems, Andilog has developed a wireless torque sensor that we integrate into bottles to measure torque directly on the screwdriver in production or during development.



Advantage of the wireless bottle:

- Real control of the capper machine in production condition
- Facilitates the control of equipment and the verification of the torques specified in the specifications during the design and acceptance of production lines
- Independent of the operator
- Measurement with production caps

Custom designed and manufactured



Wireless bottles are custom-made from the drawings of your bottles. We integrate a strain gauge torque sensor with a Bluetooth Andilog measurement card inside the bottle. Depending on the torque to be applied, production constraints and dimensions, we manufacture the bottles either in plastic in 3D printing or in stainless steel or aluminium machining.

The Bluetooth bottles are equipped with a battery that allows a measurement autonomy of 8 hours continuously allowing long and repeated measurement campaigns. The range of the Bluetooth integrated in the bottle is 20 meters in free field. This range allows to stay connected to the bottle easily during its travel in the capper machine.

Watch the video

Display of the measurements of the instrumented bottle

Centor Touch portable display



The Centor Touch equipped with a Bluetooth module allows to display in real time the measured torque values wirelessly. It has specific functions such as measuring the maximum or plotting the curve directly on its screen.

The optional Dastack module allows you to save the results and curves on a USB key for later use on a computer using the included software.

The Centor Star Touch display is a compact portable solution for field measurements. It makes it very easy to add other wireless or wired force and torque sensors to make it a complete measuring station. It can also be used as a force gauge if it is equipped with an internal sensor (capacity from 10 to 1000N).

Caligraph computer software

Installed on a computer, Caligraph software is a powerful and simple solution for real-time acquisition of Andilog wireless sensors. It offers an acquisition speed of up to 1,000Hz, allowing you to see all the details of the screwing and the forces that the bottles undergo during their journey on the production line.

Caligraph integrates automatic calculations (maximum, minimum, average torque, breakage...) allowing complex studies to be carried out on the production line. It also has statistical functions (mean, standard deviation) to evaluate the repeatability of the screwing means.

All results and curves can be customized and integrated into reports (pdf, Word, Excel...) manually or automatically. Caligraph saves all your measurements and reports to ensure traceability of your screwing equipment during maintenance or commissioning of a new line.

Caligraph is also compatible with all the force gauges and torque gauges in the Andilog range equipped with a connection to a computer.



Range TopLoad - Crushing force

Compression measurements on packaging - Topload tests

The measurement of the crushing or compression force on a packaging enables to verify its shape retention especially during transportation. It consists in performing sampling inspection of the force needed to crush a packaging. It can be for instance a plastic, PET or metal bottles, cardboard or cans.

The measuring principle consists in crushing a sample at constant speed and to measure the stress (the force) needed to distort the packaging. A few measurement techniques exist depending on the type of packaging and the resistance criterion: measurement up to break force, measurement of the force at a given height, measurement of the height at a given crushing position, measurement of the crush at a given force etc.

Main tests:

- **Detection of the break force** with automatic return
- **Measurement of the force at a crushing distance** (example: force needed to crush a bottle up to 10 mm-0.4 in)
- **Measurement of the force at a given height** (example: force when the bottle has a height of 250 mm-10 in)
- **Crush measurement at a given force** (example: how did the bottle crash under a force of 100 N- 22 lbs)



Technical specification

- System ready to use
- Available in version 1 and 2 kN (225 & 450 lbs)
- For all type of bottles or cardboard up to 400 mm/16 in height
- Compression tests at constant speed between 5 and 350 mm/mn (0,2-14 in)
- Interchangeable force sensor from 10 N to 2 kN
- Precision of the force measurement: 0.1% FS
- Data speed: 1,000 Hz
- Holder and compression plate
- Certificate of calibration included
- Results recording on USB or computer connection
- As an option: control software for PC



Your canisters or cardboards are too big for the Topload?

We also offer twin columns machines suitable for bigger samples and capable of measuring force up to 50 kN. (11,200 lbs) In particular cases it is also possible to design or adapt our existing systems of measurement for abnormal packaging.

Please contact us to expose your project and have a feasibility study be done.

Topload range - Detailed features

Technical characteristics of Toploads

Mechanics	TOPLOAD 1000	TOPLOAD 2000
Maximum capacity	1 000 N / 225 lbs	2 000 N / 450 lbs
Stroke	250 mm / 9,84 in	350 / 13,78 in
Max. bottle height	400 mm / 15,75 in	445 mm / 17,52 in
Max. bottle diameter	200 mm / 7,87 in	200 mm / 7,87 in
Minimum speed	5 mm/min / 0,2 in/min	3 mm/min / 0,11 in/min
Maximum speed	700 mm/min / 27,56 in/min	350 mm/min / 13,78 in/min
Weight	30 kg / 66 pounds	40 kg / 88 pounds
Power supply	110V/ 220V	110V/ 220V
Guarantee	2 years	2 years
Included in the package	1 Sensor, 1 support plate 100 mm (3,94 in), 1 compression plate 50 mm (1,98 in)	

Measurement	TOPLOAD 1000 and TOPLOAD 2000
Available sensors	10 N, 20 N, 50 N, 100 N, 200 N, 500 N, 1 kN, 2 kN 2,25 lbs, 4,50 lbs, 11,25 lbs, 22,5 lbs, 45 lbs, 110 lbs, 225 lbs, 450 lbs
Force accuracy	0.1% Full scale
Force resolution	1/10 000 Full scale
Accuracy displacement without load	0.01 mm by 300 mm
Travel resolution	0.001 mm
Memory	2,000 results internally or save results and curves on USB stick
Calibration certificate	Load cell with measurement reading Tension/Compression
Option	Califort control and reporting software (page 14)

Acquisition and report software

Caligraph – Visualize your tests in real time



With the acquisition and analysis software Caligraph, you can watch the evolution of the curve of force and torque in real time, save your data, calculate automatically the results and edit customizable test reports.

The measurement starts with a simple click and you follow live with a speed rate of 1.000 Hz (depending on the equipment) the essential information with predefined calculations of your choice.

Caligraph is the indispensable complementary tool to utilize the full potential of the force and torque gauge Centor Star on your computer.

Datastick II - The portable data saving solution for your tests



Thanks to the new DATASTICK II you can now count on a real portable solution to save easily all of your tests.

The software Datastick II and its USB stick help you save automatically or on demand the results (calculations, statistics) and the curves of your tests on an USB stick of your choice.

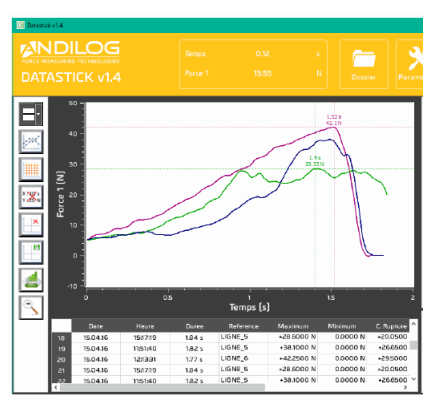
The included software enables you to visualize the curves and measurement data on your computer and benefit from the performance of Caligraph.

You can import the data saved, compare the curves and tests results and finalize your measurements with the editing of PDF or Word reports. You can also export the points of the curves in Excel.

Datastick II is user friendly and plugged in the connector of the housing thanks to its adapter and the setting takes place through the interface of the Centor.

It is a complete solution for tests in the field and it is adapted to the demanding needs for better result traceability.

Compatible with: Drivetork, Topload, Anditork Star, Anditork Dual



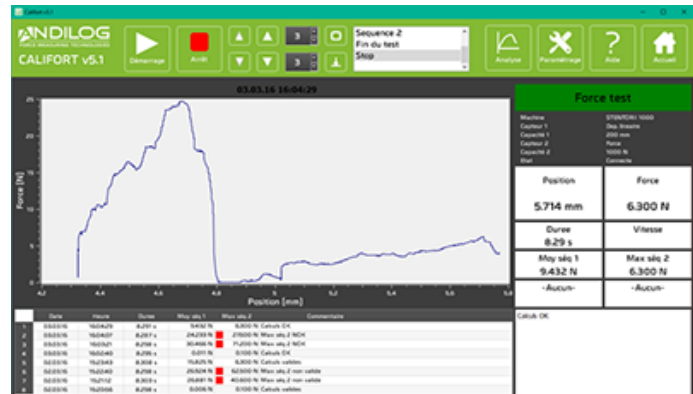
Driving and test software Califort

Califort – Advanced material testing software

The software Califort enables you to perform complex and precise force and torque measurements in all simplicity.

Califort offers you several benefits:

- **Intuitive** and preset for the users
- **Performing and handy** to customize your measurements
- **Customizable** in the editing of your reports and the result analysis



The new designed interface of Califort has been fully optimized to offer a better experience with a clear and well organized interface.

It facilitates reading and usability of the software for faster and efficient daily use. Califort remains available to use with Microsoft Windows tablets and touch screens thanks to its integrated virtual keyboard and suitable interface.



Infinite number of industrial applications

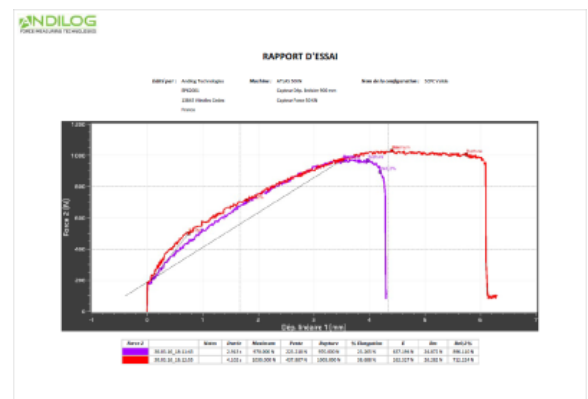
Califort is able to set the most demanding sequenced test protocols and comes with an extensive list of pre-defined calculations, which can be performed automatically during your tensile, compression or torsion test maximum, minimum, average, or break as well as the Young's modulus, the modulus of elasticity etc.

Each sequence can be customized to run up, down, clockwise at different speeds and with a stop condition (i.e. breaking point, force at position, time, travel position etc.). It also offers a cycling feature for repetitive actions.

Customize your results

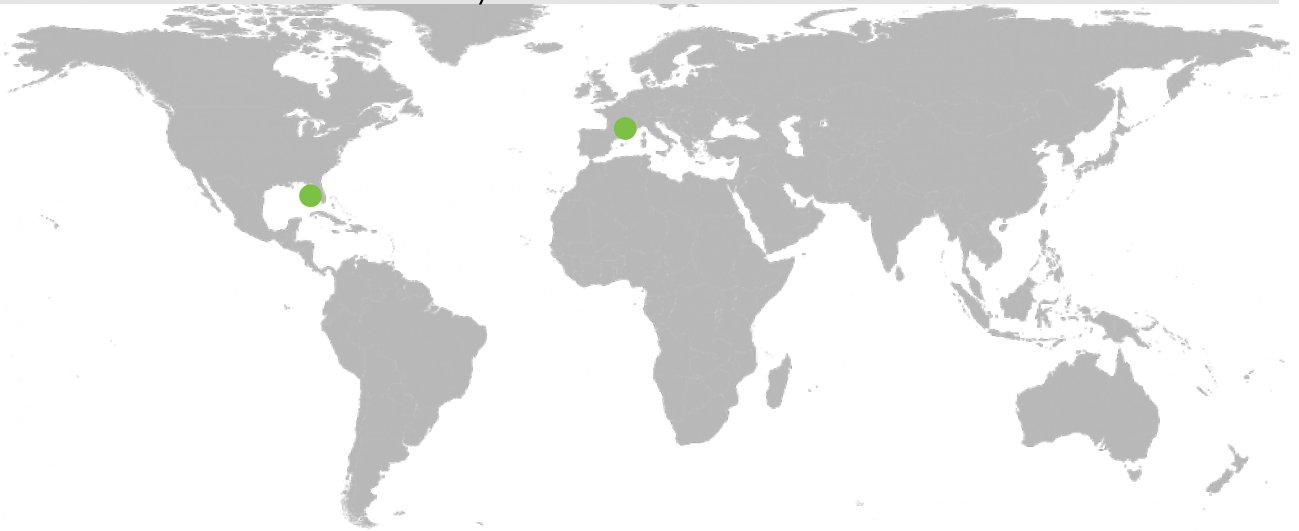
Califort has an advanced editor which enables the data integration into a report: curve, result chart, test configuration and customization of headers and footers on each report for a total personalization.

Califort is the turnkey software to support you in the programming of your tests and insures the optimal traceability of your results.



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Test instruments and universal test machines for bottles

Ranges Anditork, Drivetork and Topload



ISO 9001:2015 Certified

HEADQUARTER

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