Mecmesin

Digital torque testers

Sales brochure

PHYSICAL PROPERTIES TESTERS GROUP

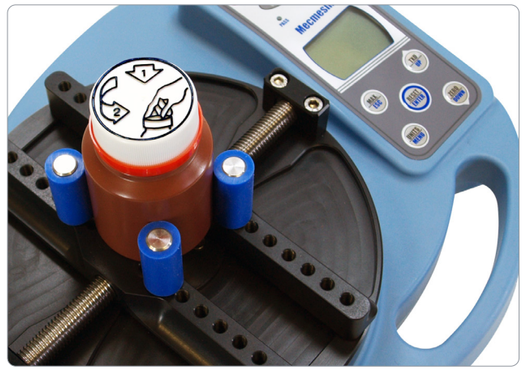
Explore our range of digital torque testers

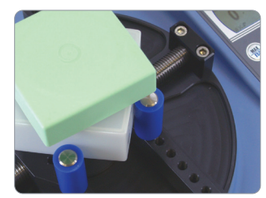
Mecmesin's range of manually operated digital torque testers provide a simple and cost-effective method of measuring low-level torque. These portable 'handheld' instruments require minimal training, making them ideal for product testing in quality control (QC) labs and on the production line.

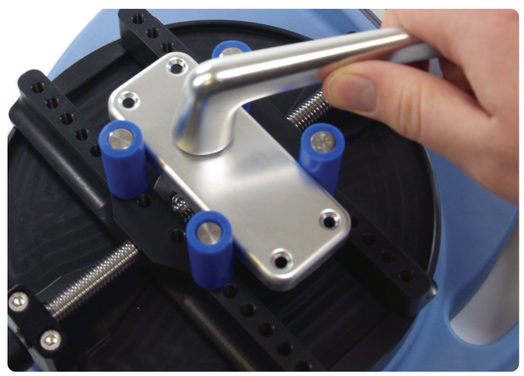
There are a wide variety of objects that require the application of a torque to operate. From simple packaging and toys, to high-tech automotive and aerospace controls or medical devices.

Whatever the level of complexity, torque measurement is commonly a crucial factor in ensuring the delivery of a well designed and reliably manufactured product.

Torque testing can make up a vital component of a manufacturer's quality management system, enabling conformance with relevant national and international standards, as well as in-house specifications.







VTG Tornado

touchscreen digital torque tester

A versatile touchscreen instrument designed to test the applied and release torque of a diverse range of products. An easy-to-use portable torque tester, which features a real-time graph to identify key events such as the bridges breaking on tamper-evident closures. The VTG Tornado hits new heights as a simple, accurate and cost-effective solution for a variety of torque measurement applications.

Discover your next Mecmesin torque tester online - visit mecmesin.com/vtg

Take advantage of Mecmesin's touchscreen technology to accurately capture torque values as large digits and in graphical format. The VTG Tornado features all common units of torque measurement and is equipped with serial data output for recording results. It even has an onboard statistical summary to assist you when batch-testing your products.

	VTG Tornado 1.5	VTG Tornado 3	VTG Tornado 6	VTG Tornado 10
Measurement range	0 - 1.5 N.m	0 - 3 N.m	0 - 6 N.m	0 - 10 N.m
	0 - 15 kgf.cm	0 - 30 kgf.cm	0 - 60 kgf.cm	0 - 100 kgf.cm
	0 - 13 lbf.in	0 - 26 lbf.in	0 - 50 lbf.in	0 - 90 lbf.in
Display resolution	0.0002 N.m	0.0002 N.m	0.0005 N.m	0.001 N.m
	0.002 kgf.cm	0.005 kgf.cm	0.01 kgf.cm	0.01 kgf.cm
	0.001 lbf.in	0.002 lbf.in	0.005 lbf.in	0.01 lbf.in
Container diameter	10 - 78 mm	10 - 78 mm	10 - 190 mm	10 - 190 mm
Load units	mN.m, N.cm, N.m, gf.cm, kgf.cm, kgf.m, ozf.in, lbf.in, lbf.ft			
Sampling rate	5 MHz averaged to 20 - 2000Hz peak capture (user selectable)			
Load accuracy	±0.5% of full scale			
Overload	typically 150% of full scale			
Weight	3 kg	3 kg	3 kg	3 kg
Dimensions (mm)	303 (w) x 278 (d) x 127 (h)			
Part No.	876-123	876-122	876-121	876-120

Vector Pro Lite

Our touchscreen instruments are powered by VectorOS, Mecmesin's technology platform for its latest force and torque test equipment. It delivers intuitive and customisable user interfaces, as well as advanced data acquisition and analysis.

To enhance your testing power you can connect all Vector instruments to a computer and use Mecmesin's VectorPro Lite software for data plotting and reporting.

Powered by VectorPro® Testing software

Tamper proof
Test Tamper-Evident (TE) closures
Capture both initial 'slip torque' and subsequent 'bridge torque' with ease

Measure cap torque
Captures readings in clockwise and counter-clockwise directions as live and peak values

Portable
Lightweight model with handle - easily carry to test locations. Suitable for use in laboratory and production environments

Splash resistant
IP54
Rugged case made from non-painted polypropylene. IP54 splash resistant - ideal for use on the factory floor.

Visualisation
Powerful data analysis with live graphing and configurable values - pinch or drag to zoom or pan test result graphs

Alarms
Enhanced alarm configurations - including a 'pre-alert' pass and fail warning for operators as torque is applied

Capacities
Four models with capacities of 1.5, 3, 6 and 10 N.m cover testing from delicate to mid-range torque values

Touchscreen
Easy-to-use icons and customisable interfaces – swipe or press and hold to access menus and options

Battery life
Fast-charging lithium-ion battery for more testing and less charging (compared with NiMH batteries)

Connectivity
Easy export of results to a PC, printer or datalogger in RS232 format via integrated output port

Tornado

advanced torque tester

Externally, the Tornado features the same compact, rugged and portable design of the Orbis, and the same intuitive user interface and versatile fixturing. The Tornado's intelligent electronics, however, enable a variety of advanced functions not present in the Orbis, to allow enhanced testing.

	Tornado 1.5	Tornado 3	Tornado 6	Tornado 10
Measurement range	0 - 1.5 N.m	0 - 3 N.m	0 - 6 N.m	0 - 10 N.m
	0 - 15 kgf.cm	0 - 30 kgf.cm	0 - 60 kgf.cm	0 - 100 kgf.cm
	0 - 13 lbf.in	0 - 26 lbf.in	0 - 50 lbf.in	0 - 90 lbf.in
Display resolution	0.0005 N.m	0.001 N.m	0.002 N.m	0.002 N.m
	0.005 kgf.cm	0.01 kgf.cm	0.02 kgf.cm	0.02 kgf.cm
	0.002 lbf.in	0.005 lbf.in	0.01 lbf.in	0.02 lbf.in
Container diameter	10 - 78 mm	10 - 78 mm	10 - 190 mm	10 - 190 mm
Load units	mN.m, N.cm, N.m, gf.cm, kgf.cm, kgf.m, ozf.in, lbf.in, lbf.ft			
Sampling rate	5000 Hz averaged to 80 Hz or 2000 Hz peak capture (user selectable)			
Load accuracy	±0.5% of full scale			
Overload	typically 150% of full scale			
Weight	2.65 kg	2.65 kg	3 kg	3 kg
Dimensions (mm)	303 (w) x 278 (d) x 127 (h)			
Part No.	876-103	876-104	876-102	876-101

Shown with Saddle Plate (to support container) and a printer - both supplied separately

The Tornado digital torque tester is ideally suited for the testing of application and removal torque on caps and closures.

Manually operated, the Tornado range has 4 models with capacities ranging from 1.5 - 10 N.m to cover almost all closures types and sizes.

Its ability to detect initial release torque, bridge breaking torque and strip torque make it the instrument of choice for testing closures with tamper-evident seals.

Test standards: ASTM D2063, ISBT and CETIE voluntary guides

Clear, intuitive controls
5 dedicated function keys for ease of operation. Lockable units and 'max display' modes

Visualisation
Large digit display clearly shows live and peak torque values

Alarms
Enhanced alarm configurations - including a 'pre-alert' pass and fail warning for operators as torque is applied

Splash resistant
Rugged and splash-resistant case IP 54 rating, ideal for use on the factory floor. Non-painted polypropylene

Tamper proof
Test Tamper-Evident (TE) closures Capture both initial 'slip torque' and subsequent 'bridge torque' with ease

Measure cap torque
Measure clockwise and counter-clockwise cap torque and the complete behaviour of rotating components

Portable
Lightweight model with handle - easily carry to test locations. Suitable for use in laboratory and production environments

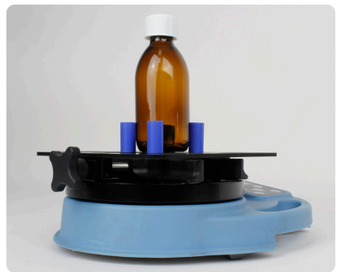
Data output
Easy export of results to a PC, printer or datalogger in RS232 and Digimatic format via integrated output port

Orbis

basic torque tester

Appropriate for use on any small rotary component, this rugged, portable torque tester is available in a single capacity of 6 N.m (90 lbf.in). It is splashproof and ideally suited for use in both laboratories and production environments. The versatile mounting table sits atop an integrated digital torque sensor, and grips the base of your sample, presenting it for application of torque by hand. The digital tester features high sampling-rate electronics to allow accurate peak torque capture, providing a far greater level of accuracy compared to mechanical spring-type testers.

Measurement range	0 - 6 N.m
	0 - 60 kgf.cm
	0 - 50 lbf.in
Display resolution	0.002 N.m
	0.02 kgf.cm
	0.01 lbf.in
Container diameter	10 - 190 mm
Load units	mN.m, N.cm, N.m, gf.cm, kgf.cm, kgf.m, ozf.in, lbf.in, lbf.ft
Sampling rate	5000 Hz averaged to 80 Hz peak capture
Load accuracy	±0.5% of full scale
Overload	typically 150% of full scale
Weight	3 kg
Dimensions (mm)	303 (w) x 278 (d) x 127 (h)
Part No.	876-107



* Shown with Saddle Plate (to support container) - supplied separately

Key Features

- Clockwise and counter-clockwise digital torque capture
- Compact, portable and affordable
- Clear, intuitive controls
- 6 N.m (50 lbf.In) capacity
- Mains or battery powered
- Data output

Test standards: ASTM D2063, ISBT and CETIE voluntary guides

Clear, intuitive controls
5 dedicated function keys for ease of operation. Lockable units and 'max display' modes

Visualisation
Large digit display clearly shows live and peak torque values

Splash resistant
Rugged and splash-resistant case IP 54 rating, ideal for use on the factory floor. Non-painted polypropylene

Measure cap torque
Measure clockwise and counter-clockwise cap torque and the complete behaviour of rotating components

Portable
Lightweight moulded case with handle – easily carry to test locations. Suitable for use in pharmaceutical laboratories

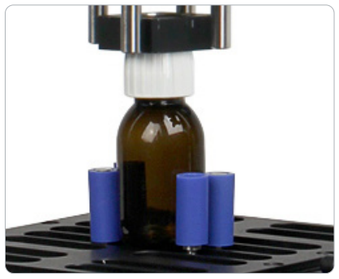
RS232 export results
Easy export of results to a PC, printer or datalogger in RS232 and Digimatic format via integrated output port

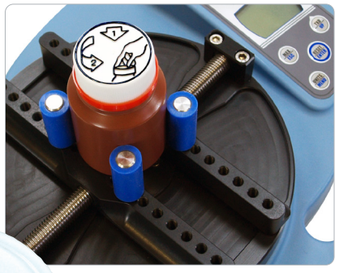
CRC

child-resistant closure tester

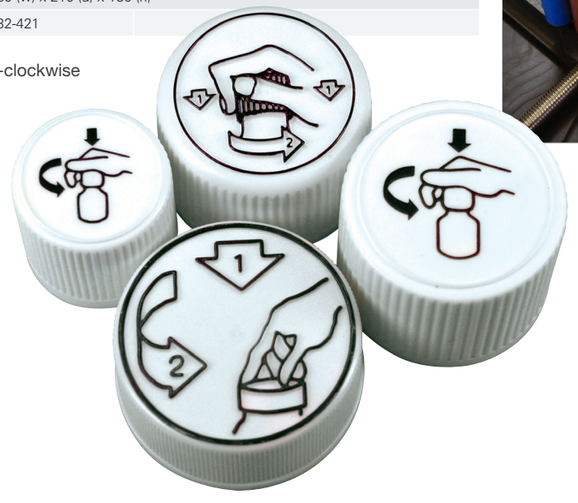
From pharmaceuticals and cosmetics to household and industrial chemicals, Child Resistant Closures (CRC's) are commonly employed throughout an array of industries to avoid children coming into contact with harmful substances. In designing CRCs, however, a fine balance must be struck between security and accessibility. The Mecmesin CRC Tester enables packaging manufacturers to perfect the design of their products and guarantee consistent quality in production, by offering a simple, cost-effective way to manually characterise the force and torque of 'push-and-twist' closures.

	Force	Torque
Measurement range	500 N	0 - 10 N.m
	50 kgf	0 - 100 kgf.cm
	110 lbf	0 - 90 lbf.in
Display resolution	0.1 N	0.002 N.m
	0.01 kgf	0.02 kgf.cm
	0.02 lbf	0.02 lbf.in
Load units	N, kgf, gf, ozf, lbf	mN.m, N.cm, N.m, kgf.cm,
		gf.cm, kgf.m, ozf.in, lbf.ft, lbf.in
Container diameter	10 - 190 mm	
Sampling rate	5000 Hz averaged to 80 Hz or 2000 Hz peak capture (user selectable)	
System accuracy	±1% of full scale	
Overload	120% of full scale	
Weight	5 kg	
Dimensions (mm)	580 (w) x 210 (d) x 180 (h)	
Part No.	432-421	





Clockwise & counter-clockwise



Key Features

- Simultaneous display of top-load and release torque
- Accurate digital force gauge and torque transducer
- 500 N (110 lbf) load capacity
- 10 N.m (90 lbf.In) torque capacity
- Data output for easy recording of results
- Mains and/or battery powered
- Test to international standards, including: ISO 13127 Annex D & E

Clear, intuitive controls
5 dedicated function keys for ease of operation. Lockable units and 'max display' modes.

Visualisation
Large digit display clearly shows live and peak values for force and torque

Alarms
Enhanced alarm configurations with pass and fail warning for operators as axial-load and torque are applied

Measure cap torque
Measure the downward force to engage the security mechanism & the release torque to open the closure

Splash resistant
Rugged and splash-resistant case IP 54 rating, ideal for use on the factory floor. Non-painted polypropylene.

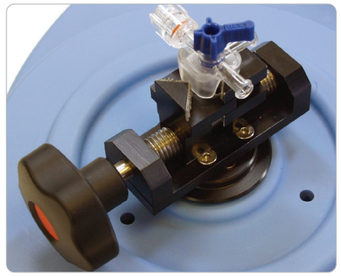
Accessories

Interface Cables

Mecmesin supply an accompanying range of RS232, Digimatic and USB data cables for connection to peripheral devices.

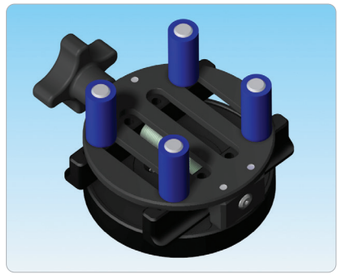
Printer

A simple method of recording torque readings, the digimatic printer issues statistical reports to include min, max, range and standard deviation.



V-Blocks

This precision-engineered mounting block allows smaller samples to be securely held in position, without excessive clamping force.



Saddle plate

To provide a more stable base on which to mount awkardly shaped samples, a saddle plate is available.

Discover Mecmesin accessories online - visit mecmesin.com/accessories

Vortex-i

with software control

The ultimate solution for semi-automated torque testing of threaded closures. The Vortex removes the variability of a manual tester by testing at a constant speed.

Mecmesin's torque testing software automatically captures **slip, bridge-break and reverse/strip torque**. Easily generate test reports with graphs of torque vs angle. The ideal teaster for making sure closures achieve a good seal that can be easily opened.

- Outstanding repeatability and accuracy by testing at constant speed to ASTM D7860
- Eliminates RSI injury risk to operators when batch testing using manual testers
- Sturdy test frame to 90 in.lbf capacity
- Precision plug-and-play torque sensors to capture removal torques
- Software programmable to perform test routines with minimum fuss for operators
- Suitable for bottles of 10 - 190 mm diameter
- Mandrels available to hold caps with minimal deformation

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PPT Group

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