

C612M Digital Torque Tester

The application torque and removal torque of caps or closures of bottles, spout bags and flexible tube packages are important online and offline production parameters for the manufacturers, they may influence the transportation and consumption of the products. C612M Digital Torque Tester is the first generation of automatic torque tester with manipulator, which is one professional testing instrument that can be used to measure the application torque and removal torque of the caps of bottles, spout bags and flexible tube packages. C612M, featuring great stability and high precision, is an indispensable testing instrument in manufacturing process.

Product Features^{Note1}

Dual Test Modes & Automatic Test with Manipulator

- Dual test modes including application torque test and removal torque test
- Innovative patented manipulator technique supports automatic gripping, opening and fastening, which minimizes the error caused by manual operations and improves the testing accuracy and repeatability
- Gripping force, fastening force and turning speed of the cap can be adjusted freely
- Automatic gripping manipulator with deviation less than 0.01Nm, much better than manual fastening
- Intelligent designs of overload protection, automatic zeroing and error alert for safe test operation
- Manual test or automatic test can be selected



High Testing Accuracy & Low Testing Lower Limit

- Specimens with torque value lower than 0.005Nm is testable. The testing resolution is as high as 0.0001Nm, providing high accuracy and good repeatability.
- The peak value can be maintained automatically, which ensures the recording of the accurate test results
- Automatic judgement of peak value meets the testing requirements for various specimens
- Components and parts are supplied by world well-known manufacturers, which guarantee the stable performance
- Imported pneumatic control system with ultra-long service life and ultra-low failure rate ensures the testing accuracy

New Patented Intelligent Touch Operating System

- Industrial grade touch screen, one-button operation, user-friendly interface, remote upgrade and maintenance
- Chinese and English languages can be selected
- Test curves are displayed in real time. Intelligent data statistics supports quick review of test results.
- Automatic data storage and power failure memory functions
- Historical data can be reviewed and printed easily
- Storage up to 1200 test records
- Test data is expressed in eight international units for reference and comparison
- Multi-level user privilege management, log in with password

- Micro-printer and USB data ports for data exporting and data transfer (optional)
- The instrument conforms to the requirements of GMP (optional)
- Labthink's unique DataShiled™ System for data management and connecting with information system (optional)

Test Standards^{Note1}

GB/T 17876, ASTM D2063, ASTM D3198, ASTM D3474, BB/T 0025, BB/T 0034

Applications^{Note1}

Basic Applications	Bottle Packages	Application and removal torque test of the bottle caps for bottled packages for food, pharmaceuticals, e.g. beverage or tablet bottles
	Flexible Tube Packages	Application and removal torque test of flexible tube packages for food, pharmaceuticals and cosmetics, e.g. eye-drop, hand cream and shoe polish
Extended Applications	Screws	Application and removal torque test of the screws
	Vacuum Flasks and Vacuum Cups	Application and removal torque test of the caps of vacuum flasks and vacuum cups

Technical Specifications^{Note2}

Specifications	C612M
Load Cell Capacity	5 Nm (Standard)
	20 Nm (Optional)
	40 Nm (Optional)
Accuracy	Indicated Value $\pm 0.5\%$ (10%-100% of Load cell capacity)
	$\pm 0.05\%$ FS (0%-10% of Load cell capacity)
Resolution	0.0001 Nm
Body Clamp Range	$\Phi 5$ mm ~ $\Phi 170$ mm
Cap Clamp Range	$\Phi 10$ mm ~ $\Phi 80$ mm
Bottle Height	20 mm ~ 400 mm
Specimen Clamping and Turning Way	Pneumatic
Maximum Auto Removal / Application Torque	2 Nm (customization available for other specs)
Gas Supply	Air (Not in supply scope)
Gas Supply Pressure	0.7 Mpa (101.5psi)
Statistical Analysis Allowance	0 ~ 999
Instrument Dimension	550 mm (L) x 365 mm (W) x 1150 mm (H)

Power Supply	220VAC±10% 50Hz / 120VAC±10% 60Hz
Net Weight	39 kg

Configurations

Standard Configurations	Instrument, Gripping Post (4pcs), Gripping Block (1 pair), Calibration Kit (not include weight), Φ 4mm PU Tubing (2m)
Optional Parts	Micro-printer, Professional Software, Air Compressor, GMP System, DataShield™ <small>Note3</small>
Note	<ol style="list-style-type: none"> 1. The gas supply port of the instrument is Φ4 mm PU Tubing; 2. Customers need to prepare gas supply.

Note 1: The described test standards, applications and product features should be in line with Technical Specifications.

Note 2: The parameters in the table are measured by professional operators in Labthink laboratory under strictly controlled laboratory conditions.

Note 3: DataShield™ provides safe and reliable data application support. Multiple Labthink instruments can share one single DataShield™ system which can be configured as required.

Please Note: Labthink is always dedicated to the innovation and improvement of product performance and function. Therefore, technical specifications are subject to change without further notice. Please visit our website at www.labthink.com for the latest updates. Labthink reserves the rights of final interpretation and revision.