

## Torque Tester for Caps & Closures

## M50 Series

This is an instrument designed to test :

1. Application (Opening) & Removal (Closing) Torque of
  - Regular Screwed Closures.
  - Push-n-Twist (Child Resistant) Closures.
2. Bridge Breaking Strength of Pilfer-proof (ROPP) caps.
3. Hinge-Twist test on Flip Top Caps.



### Technical Specifications :

- Digital Model with Backlit LCD Display
- Optional facility to capture test data on to the PC directly through the software and generate PDF test & calibration reports.
- With Universal Bottle Holder to enable holding of bottle samples of 25 - 125mm OD.  
(Smaller / Larger addon grip options are also available).
- Peak hold facility for registration of maximum closing / opening torque.
- **Auto-Calibration facility for user-friendly calibration.**
- Choice of Measurement units : Kgcm / Lbin / Nm / Ncm  
(User settable from Menu)

**Capacity :** 50 Kgcm (~ 5 Nm)

**Working Range :** 5 - 50 Kgcm (~ 0.5 – 4.9 Nm)

**Least count :** 0.01 Kgcm (0.001 Nm)

**Accuracy :** 0.25 Kgcm (~ 0.025 Nm)

### Included with all models / SKUs :

- 1) Basic Machine with Universal Bottle Holder.
- 2) Calibration Kit with Pan.

### Excludes :

- 1) Calibration weights (0.5 + 0.5 + 1 + 1 Kg = Total 3 Kg)



**Optional Accessories :**

- 1) Addon Fixture for Small Dia bottles (10-25mm)
- 2) Addon Fixture for Large Dia bottles (125-200 mm)
- 3) Squeeze Tube Mandrels / Inserts.

Individual mandrels are required for every specific Inner Diameter

Please specify diameter of the tube while ordering.

Suitable for testing of Laminated / Co-Extruded / Aluminum Collapsible Tubes.

**DQ/IQ/OQ Documentation are supplied with certain models.**

**RS-232 Data Cable with USB-Serial Convertor are supplied with models / SKUs with software.**

**Software Options :**

- 1) No Software
- 2) Regular Software (Not 21-CFR-11 Compliant)
- 3) 21-CFR-11 Compliant Software (*Vantage*).



**Warranty :** 12 Months (Ex-Factory)

**Utilities Required :**

1. Power : 230/110 Volts A.C., 50/60 Hz. Clean power.
2. Calibration weights : 3 Kg (0.5 + 0.5 + 1 + 1 Kg)

**For models with software**

3. Desktop / Laptop PC (Intel Core i3, 4gb RAM, Win10 OS, 1080p Monitor) or higher.

## How to Order ?

Select the Equipment Part Code (SKU) and Optional Test Fixtures and request for a quotation by sending an email to [info@packtest.com](mailto:info@packtest.com)

### Step 1 : Select Part Number / Equipment SKU

<b>Region</b>	<b>Industry</b>	-	<b>Equipment</b>	-	<b>Series</b>	-	<b>Software</b>
D	N		TOR		M50		NS
E	P						RS
							CS

	Options	Description
Type	D	Domestic Model For Sale in India only. Warranty / Support valid only in India
	E	Export Model for Sale outside India only. Comes with a set of emergency spares. International Quality / Warranty / Support.

Industry	N	For Food / Beverage / FMCG Industry. Non-Pharma.
	P	For use in Pharmaceutical Industry. DQ/IQ/OQ documents are provided with machine.

<b>Equipment - Series</b>	TOR-M50	Torque Tester – 50 Kgcm (~200 N) Capacity.
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Software	NS	No Software. No RS-232-Port. No Data Cable.
	RS	Regular software. (Not 21-CFR-11 compliant) RS-232 Data Cable with USB-Serial Convertor is provided.
	CS	21-CFR-11 compliant software. ( <i>Vantage</i> ). RS-232 Data Cable with USB-Serial Convertor is provided.

Write down the part code / SKU you need :

<b>Region</b>	<b>Industry</b>	-	<b>Equipment</b>	-	<b>Series</b>	-	<b>Software</b>
			TOR		M50		

## Examples and comparison of Part Code / SKU

Part Code / SKU	Type		Industry		Port	Software		
	Domestic Model	Export Model	Non-Pharma	Pharma	RS-232 Port with Data Cable RS-232 to USB	No Software	Regular Software	21-CFR-11 Compliant Software (Vantage)
DN-TOR-M50-NS	✓		✓			✓		
DN-TOR-M50-RS	✓		✓		✓		✓	
DP-TOR-M50-NS	✓			✓		✓		
DP-TOR-M50-RS	✓			✓	✓		✓	
DP-TOR-M50-CS	✓			✓	✓			✓
EN-TOR-M50-NS		✓	✓			✓		
EN-TOR-M50-RS		✓	✓		✓		✓	
EP-TOR-M50-NS		✓		✓		✓		
EP-TOR-M50-RS		✓		✓	✓		✓	
EP-TOR-M50-CS		✓		✓	✓			✓

## **Step 2 : Select Test Fixtures**

**Below Fixtures / Accessories are INCLUDED in the machine by default.**

<b>Sr</b>	<b>Item Name</b>	<b>Description</b>
1	Universal Bottle Holder	Universal Holder for Bottles of 25 – 125mm dia.
2	Calibration Kit with Pan.	Used for calibration verification and calibration rectification.

**Below Fixtures are optional and need to be ordered separately, if required.**

<b>Sr</b>	<b>Item Name</b>	<b>Description</b>
1	Addon fixture for Small-Dia bottles (10-25mm)	If your bottles / tubes are of a diameter between 10 to 25mm, you will need to order this addon fixture.
2	Addon Fixture for Large Dia bottles (125-200 mm)	If your bottles / tubes are of a diameter between 125 to 200mm, you will need to order this addon fixture.
3	Mandrels / Inserts for Squeeze Tubes.	Individual mandrels are required for every specific Inner Diameter  Suitable for testing of Laminated / Co-Extruded / Aluminum Collapsible Tubes.  Please specify the diameter of the tube while ordering.

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Manufactured by :


**PackTest Machines Inc**

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Email : [info@packtest.com](mailto:info@packtest.com)

Marketed by :



Sr No.	Feature	Regular Software (Not 21-CFR-11 Compliant)	Vantage Software (21-CFR-11 Compliant) 
1	User Login	No Login. Any user can access the software.	<p>Unlimited Users with individually configurable privileges</p> <p>Incorrect Logins are logged. If user enters 3 wrong passwords, user is SUSPENDED and cannot login again even with correct password. Event is logged as Critical. Only an admin (or user with appropriate privileges can Un-Suspend the suspended user.</p> <p>Auto - Logout after 15 mins of inactivity. (Timeout period can be defined)</p> <p>Auto - Shutdown (software) on inactivity. (Auto-Logout will also trigger Auto-Shutdown)</p>
2	User Rights / Privileges	Any user can : 1) Perform Test 2) Search Test 3) Calibrate Machine 4) Configure Software	<p>Software Admin or any user (with Modify user privileges) can create unlimited users with any of following privileges.</p> <ol style="list-style-type: none"> <li>1) Perform Test</li> <li>2) Search Test</li> <li>3) Calibrate Machine</li> <li>4) View Audit Trail</li> <li>5) Add / Edit / Delete users (User Management privilege)</li> <li>6) Configure Software</li> <li>7) Review and Approve Test / Calibration reports</li> </ol>
3	User Levels	NA	<p>Unlimited Users with Unlimited variable privileges. User List (summary or detailed) can be printed.</p>
4	Software Configuration Options	1) Change Header	<ol style="list-style-type: none"> <li>1) Change Test Folder</li> <li>2) Change Backup Folder</li> <li>3) Set Auto Backup On/Off</li> <li>4) Set Auto Backup Frequency</li> <li>5) Set Password Expiry On/Off</li> <li>6) Set Password Expiry Time (Days)</li> <li>7) Change Header</li> </ol>
5	User Password Expiry / Change	NA	<p>Upon user first login, user has to change password immediately.</p> <p>User can change his/her own password anytime.</p> <p>Users must change password after expiry date.</p> <p>Password expiry time can be defined in software config.</p>

6	Password Complexity	NA	<p>Password should be</p> <ol style="list-style-type: none"> <li>1) 8-20 characters long</li> <li>2) Has to contain alphabets, numbers and &amp;%#\$@.</li> <li>3) Password should contain atleast 1 uppercase, 1 lower case and 1 special character</li> <li>4) New password cannot be same as previous 3 passwords.</li> </ol>
7	User Addition / Deletion	NA	<p>User can be added or deleted by Software Admin or anyone who has User Management privilege. User cannot delete himself. No one can delete the SUPER USER.</p>
8	User Suspension	NA	<p>User can be suspended/un-suspended by Software Admin or anyone who has User Management privilege. Suspended user cannot login to software. If he tries to login, a Critical Audit Trail entry will be passed.</p>
9	Data Storage	NA	<p>Data is stored in an internal database. PDF reports are generated as and when demanded.</p>
10	User Signature	User must type or select his / her name when the software starts.	<p>User's details captured from the login is posted on the report "analysis done by" section.</p>
11	Reviewer Signature	NA	<p>Reviewer can login with his credentials, review and approve Test and Calibration Data. Once approved, the report will carry his E-Sign.</p>
12	Backup Data	NA	<p>If Autobackup is ON, software will automatically backup all configuration files and test data as per frequency chosen in Software Configuration.</p> <p>Note : Backup Location has to be a local drive or a network location mapped as a Local Drive.</p>
13	Audit Trail Data	NA	<p>Software captures important events and logs them in the audit trail log. A PDF report can be generated as and when required. Critical Events will be flagged separately. Audit Trail Report can be pulled for a date range or user or event.</p>

14	Aborted Tests / Calibrations	NA	Aborted Tests and Calibrations are saved. These events are logged in Audit Trail as "Critical".
15	Ignore a Test Value	NA	<p>No test result can be avoided from being reported. But the user can mark a particular result as abnormal.</p> <p>Abnormal results are not considered in statistical calculations but will still be shown in report.</p> <p>User needs to justify the Abnormal values (if any) in the remarks section.</p> <p>A test report can have 10 normal samples + up to 5 abnormal samples.</p> <p>Only normal tests will be used for statistical calculations.</p>
16	Test / Calibration Report Format	Report Format is fixed in software. Not changeable by user.	
17	Report Header	Text Header with 3 lines of Text.	Image Header with Logo or Text Header with 3 lines of Text.
18	Other Features	NA	<p>Incorrect Shut Downs are logged in Audit Trail.</p> <p>Equipment ID is printed on all Test / Calibration / Audit Trail Reports</p> <p>Automatic Pre-Calibration Diagnostics of communication.</p> <p>Option of Pre-Analysis Diagnostics (10-15 seconds) to prevent communication errors.</p> <p>Enhanced data handling and communication with equipment.</p>

