Data Sheet

32-1154 REV 0119



Digital Cap Torque Testers Series TT01

Page 1 of 2

Series TT01 Cap Torque Testers are designed to measure application and removal torque of bottle caps up to 100 lbFin [11.5 Nm]. Adjustable posts effectively grip a broad range of container shapes and sizes, while optional flat and adjustable jaws are available for unique profiles. A rugged aluminum design, and simple, intuitive operation allow for use in laboratory and production environments.

Class-leading accuracy of $\pm 0.3\%$ and blazingly fast sampling rate of 7,000 Hz ensure reliable and consistent test results, even in quick-action applications.

The TT01 includes a range of sophisticated productivity-enhancing features, including USB, RS-232, Mitutoyo, and analog outputs, automatic data output and zeroing upon cap removal, memory storage for 1,000 readings, pass/fail indicators and outputs, and more.

Password protection is provided to prevent unauthorized changes to settings and calibration.

Series TT01 testers include MESUR[™] Lite data acquisition software. MESUR[™] Lite tabulates continuous or single point data. Data stored in the TT01's memory can also be downloaded in bulk. One-click export to Excel allows for further data manipulation.

MESUR Lite data acquisition software is included with Series TT01 testers

MESUR Lite by Ma				
File Help				
M A F			L	
			5.66	Units Total Readings
	Reading	Load	Time [sec.]	
	1	1.14	0 *	
	2	2.04	0.051	Acquiring Data 🕘
	3	2.94	0.101	
	4	3.8	0.152	
	5	4.64	0.205	START
	6	5.04	0.25	
	7	4,82	0.303	
	8	4,86	0.352	
	9	4,74	0.402	
	10	4.96	0.456	STOP
	11	5.32	0.501	
	12	\$.52	0.554	
	13	5.78	0.602	
	14	5.9	0.651	
	15	5.86	0.701	
	16	5.7	0.752	
	17	5.58	0.807	
	18	5.44	0.851 +	
		Export to Exce		Download Gauge Memory
	_	_	_	

Features

- High-speed 7,000 Hz sampling rate accurately captures peak torque values
- First / second peak detection for slip and breakaway torques in tamper evident closures
- Moveable posts and other available gripping options accommodate a wide range of sample shapes and sizes
- USB, RS-232, Mitutoyo, and analog outputs

- Automatic output, data storage, and zeroing upon bottle cap removal helps automate testing processes
- 1,000-point data memory with statistics and outputs
- Programmable set point indicators and outputs for pass/ fail determination
- Password protection prevents unauthorized changes
- MESUR[™] Lite data collection software included

Controls & Indicators

- Set points
- Current or peak reading
- Set point (pass/fail) indicators
 - Battery indicator
- Memory storage for 1000 readings (auto-save also possible)
- Access the tester's settings menu via an easy-to-use interface
- One-push data output to a PC, printer, or other device (auto-output also possible)





Clockwise/counter-clockwise indicator

Peak readings (CW/CCW or 1st/2nd peaks) peaks)

Measurement mode Unit of measurement

Analog load bar w/set point markers

Zero the reading to begin a new test (auto-zero also possible)

Toggle between real time, peak, and 1st peak/2nd peak display modes

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Specifications subject to change without prior notice

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32-1154 REV 0119

Optional Items





CT001 Flat jaws Set of rubber jaws for gripping square or odd shaped containers.



СТ005 / СТ006 / СТ007 **Extended length post sets** CT005: Four 2.5" (63 mm) posts CT006: Four 4" (101 mm) posts CT007: Kit of four of each length:

1.25" (31 mm), 2.5" (63 mm), and 4" (101 mm)

Specifications



CT002 Carrying case Provides storage space for the TT01 tester, gripping jaws, AC adapter, and accessories.



AC1077 Connector cover kit Helps protect the rear connectors against liquid entry.

Accuracy:	$\pm 0.3\%$ of full scale					
Sampling Rate:	7,000 Hz					
Power:	AC or rechargeable battery. Multi-step low battery indicator is displayed, tester shuts off automatically when power is too low.					
Battery life:	Backlight on: up to 7 hours of continuous use Backlight off: up to 24 hours of continuous use					
Units:	ozFin, IbFin, kgFcm, Nm, Ncm					
Outputs:	USB / RS-232: Configurable up to 115,200 baud. Mitutoyo: Serial BCD suitable for all Mitutoyo SPC-compatible devices. Analog: ±1 VDC, ±0.25% of full scale at capacity. General purpose: Three open drain outputs, one input. Set points: Three open drain lines.					
Safe overload:	150% of full scale (display shows "OVER" at 110% and above)					
Weight:	8.4 lb [3.8 kg]					
Included items:	Set of four 1.25" length posts, universal voltage AC adapter, battery, quick- start guide, USB cable, resource CD (USB driver, MESUR™ Lite software, MESUR™gauge DEMO software, and user's guide), and NIST-traceable cer- tificate of calibration (certificate with data available for an additional charge).					
Environmental requirements:	40 - 100°F, max. 96% humidity, non-condensating					
Warranty:	3 years (see individual statement for further details)					



CT003 Adjustable jaws Rubber-edged arms may be independently repositioned to accommodate unique samples.



AC1036 **Calibration kit**

Complete set of brackets, cable, and hardware for calibration of any Series TT01 torque tester. Weights not available from Mark-10.

FLAT JAWS:

5.9 [149.9] MAX 1.3 [33.0] MIN

4.4 [111.8] MAX

Ø6.0 [151.9] MAX Ø1.3 [33.0] MIN Ø4.4 [111.8] MAX Ø0.25 [6.35] MIN



Dimensions in [mm]



Capacity x Resolution

Model No.	lbFin	ozFin	kgFcm	Ncm	Nm
MTT01-12	12 x 0.005	192 x 0.1	14 x 0.01	135 x 0.1	1.35 x 0.001
MTT01-25	25 x 0.01	400 x 0.2	28 x 0.02	290 x 0.2	2.9 x 0.002
MTT01-50	5 0 x 0.02	800 x 0.5	58 x 0.05	570 x 0.5	5.7 x 0.005
MTT01-100	100 x 0.05	1600 x 1	116 x 0.1	1150 x 0.5	11.5 x 0.005

All models include 110V AC adapters. Add suffix 'E' for euro plug (220V), 'U' for UK plug (220V), or 'A' for Australian plug (220V). Ex: MTT01-12E, MTT01-25U, MTT01-50A



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