Data Sheet

Digital Cap Torque Testers **Series TT01**

32-1154 REV 0825

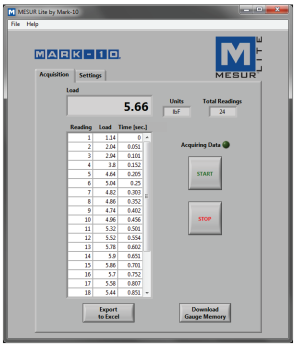


Series TT01 Cap Torque Testers are designed to measure application and removal torque of bottle caps up to 100 lbfin [11.5 Nm]. Adjustable posts effectively grip a broad range of container shapes and sizes, while optional flat and adjustable jaws are available for unique profiles. A rugged aluminum design,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

Class-leading accuracy of ±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

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

Optional Items



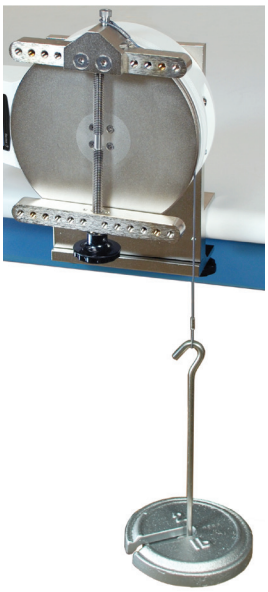
CT001
Flat jaws
Set of rubber jaws for gripping square or odd shaped containers.



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



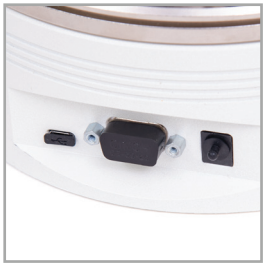
CT003
Adjustable jaws
Rubber-edged arms may be independently repositioned to accommodate unique samples.



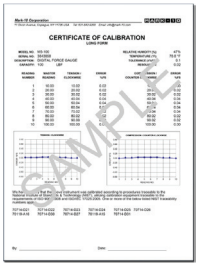
AC1036
Calibration kit
Complete set of brackets, cable, and hardware for calibration of any Series TT01 torque tester. Weights not available from Mark-10.



CT005 / CT006 / CT007
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)



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



CERT
Calibration certificate w/data
Includes 10 data points in each measurement direction (short form certificate without data is included)

Specifications

Accuracy:	±0.3% of full scale
Sampling Rate:	7,000 Hz
Bottle diameter range:	Ø0.5 – 7.5 in [12.7 – 189.4 mm] With CT001 optional jaws: Ø0 – 5.9 in [0 – 149.9 mm] With CT003 optional jaws: Ø0 – 4.6 in [116.8 mm]
Power:	AC adapter: 100-240VAC, 50-60 Hz, 0.3 A Battery: Rechargeable 8.4V NiMH Low battery indicator appears when battery level is low, and gauge powers off automatically when power reaches critical stage.
Battery life:	**Backlight on:** up to 7 hours of continuous use **Backlight off:** up to 24 hours of continuous use
Units:	ozFin, lbFin, 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, 40 VDC max., 100 mA DC max.
Safe overload:	150% of full scale (display shows "OVER" at 110% and above)
Weight:	8.4 lb [3.8 kg]
Environmental requirements:	40 - 100°F, max. 96% humidity, non-condensating
Warranty:	3 years (see individual statement for further details)

In The Box

Series TT01 torque testers are shipped as shown at right, and include the following accessories:

(4) Sample gripping posts

(1) USB cable

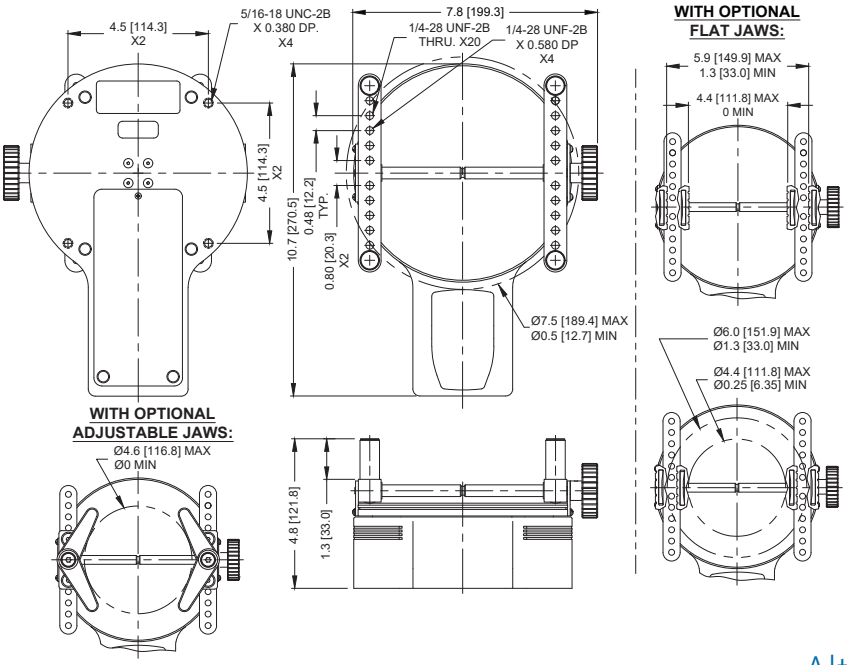
(1) AC adapter

(1) Battery

(1) Certificate of calibration without data (data is optional)



Dimensions in [mm]



Alternative AC Adapter Prongs



AC1120 AC1121 AC1122

All instruments include a 110V AC adapter with US prong style. Select an alternative prong adapter (if required) from the table below.

Model No.	Description
AC1120	Prong for AC adapter, 220V EUR
AC1121	Prong for AC adapter, 220V UK
AC1122	Prong for AC adapter, 220V AUS

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