



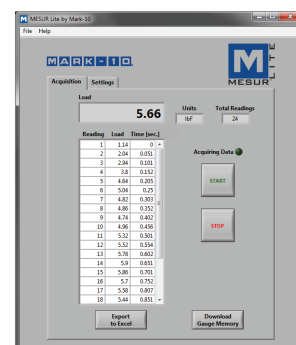
Series TT01 Cap Torque Testers are designed to measure application and removal torque of bottle caps up to 100 lbFin [11.5 Nm]. Adjustable posts effectively grip a broad range of container shapes and sizes, while optional flat and adjustable jaws are available for unique profiles. A rugged aluminum design,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



## 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

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- 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)
  - 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

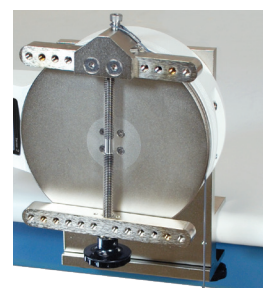
Provides storage space for the TT01 tester, gripping jaws, AC adapter, and accessories.



### 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

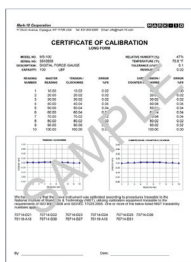
CT005: Four 2.5" (63 mm) posts  
CT006: Four 4" (101 mm) posts  
CT007: Kit of four of each length: 1.25" (31 mm), 2.5" (63 mm), and 4" (101 mm)



### 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:	<b>Backlight on:</b> up to 7 hours of continuous use <b>Backlight off:</b> up to 24 hours of continuous use
Units:	ozFin, lbFin, kgFcm, Nm, Ncm
Outputs:	<b>USB / RS-232:</b> Configurable up to 115,200 baud. <b>Mitutoyo:</b> Serial BCD suitable for all Mitutoyo SPC-compatible devices. <b>Analog:</b> ±1 VDC, ±0.25% of full scale at capacity. <b>General purpose:</b> Three open drain outputs, one input. <b>Set points:</b> Three open drain lines.
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)

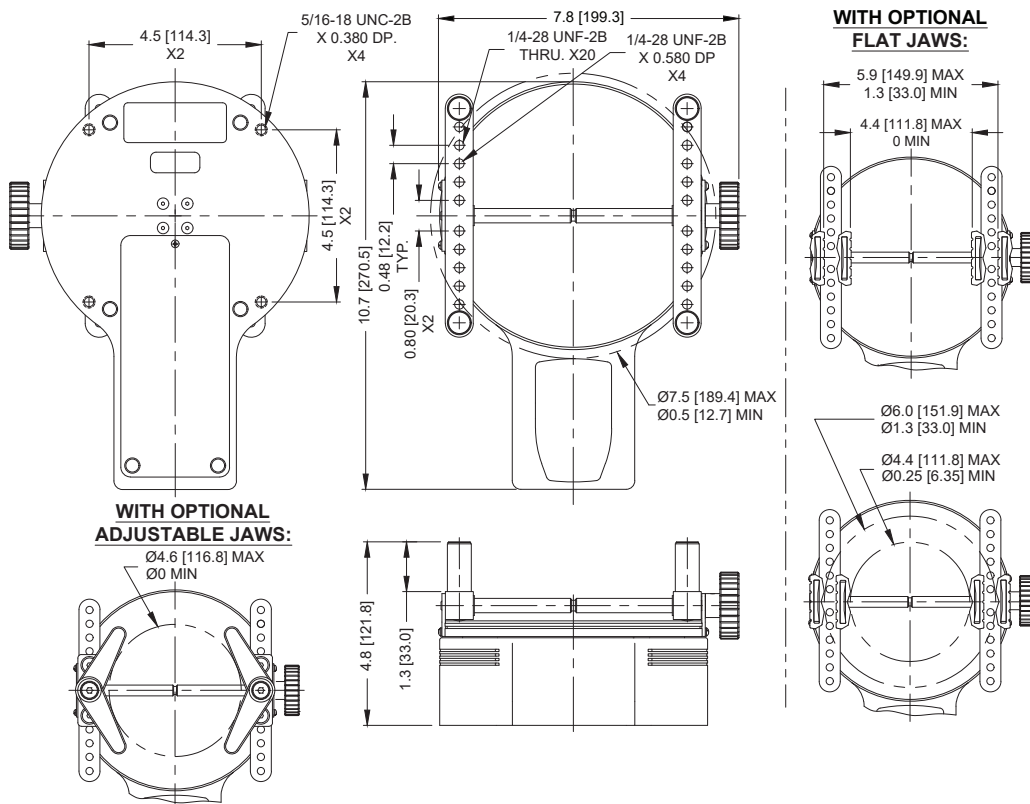
## In The Box

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]



## 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	50 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