

Standard Type Motorized Torque Stand MTS series

Achieves more accurate measurement due to the constant rotation speed
Operation control by the torque value and continuous rotating period
A wide range of chucks/attachments available to fit your measurement requirement

MTS series

Manual and Automatic Operation


- Speed range: 3 to 90 degrees/sec
- Controls the rotation according to the torque values and rotating period

Various Chucks

- Select the attachment to fit your sample shape and materials.
(Refer to the page 4)

Standard Chuck MT-TB
(Separately sold)

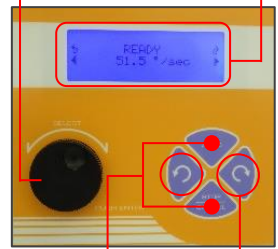
Standard Table
(Separately sold)



Operation Panel

Speed setting dial

Displays the speed, counter, and timer



Operates in each direction of rotation

Switch manual and automatic modes

Screw Cap Torque Tester
DTXS/A series
(Separately sold)

[MTS Features]

1. Constant Rotation Speed

Set the speed and press the start button for highly repeatable measurements at a constant test speed



Manual Measurement Process

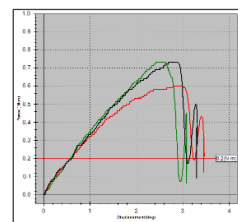


Installed in the Torque Stand MTS series



Speed Setting Dial

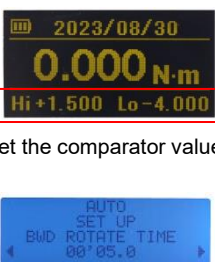
Start Buttons



Accurate and highly repeatable measurements

2. Automatic Operation

The operation is controlled by the torque value and continuous rotating period (Stop and Reverse rotations)

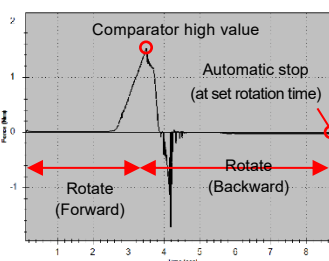


Set the comparator values

Set the rotating period



Start automatic mode testing



e.g., When the set high value of the comparator is reached, the torque stand automatically stops and rotates backward. When the set continuous rotation time (backward rotation) is elapsed, it stops automatically.

3. Efficient Durability Test with Automatic Mode

Repeats the set number of operations Automatically.

Comparator value
Rotation time
Rotation speed
Number of repetitions

The Measurement
Condition Setting



Start automatic measurement →

No.	Value	Unit	Time	Date
1	-1.211	Nm	15:40:21	2023/06/30
2	-1.716	Nm	15:40:28	2023/06/30
3	-1.750	Nm	15:40:51	2023/06/30
4	-1.797	Nm	15:41:17	2023/06/30
5	-1.789	Nm	15:41:22	2023/06/30
6	-1.656	Nm	15:41:37	2023/06/30
7	-1.656	Nm	15:41:50	2023/06/30

The Data Output signal and the Zero-Reset signal can be automatically output to the screw cap torque tester for each measurement cycle. The data is sent to the software or the RS232C printer* automatically.



* Data output from DTXS/DTXA to the RS232C printer available for the firmware Ver. 3.10 or later.

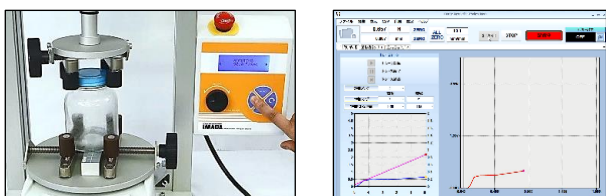
For the Next Series products, Installation of "RS232C Print Function" is required via network.

* For Samples with slippery surface, custom-made attachments are available to meet the measurement requirements at your request.

4. The efficient Graphing System is Available by Interlocking with the Software.

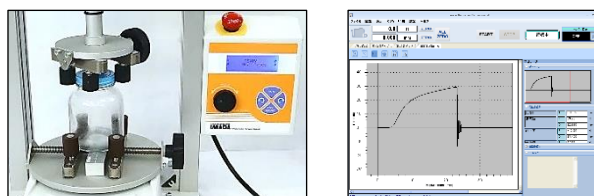
By using the trigger function of the Force Recorder Next series or Force Recorder Next series, the Graphing is possible in conjunction with the measurement.

Start testing



Press the start button to start measurement, and software starts graphing at the same time.

End testing



When measurement ends, graphing stops and data is saved automatically.




[MTS series specification]

Specifications	
Capacity	10N-m
Stroke	See [Dimensions]
Dimension	See [Dimensions]
Weight	Approx.14kg
Speed range	3 to 90 degrees/sec
Function	Manual mode, JOG mode, Automatic mode (CONTINUOUS, ONE WAY) (*1), Overload preventing function (*1), Speed adjustment
Voltage level	AC100V to 240V, 50/60Hz, max 3A (*2)
Ambient Temperature	0 to 40 degrees Celsius
Relative Humidity	Less than 85% (No condensation)
Accessories	Power cable, Torque gauge connecting cable CB-528, Centering stick, Spare fuse, Operating manual, Tools

*1 It is necessary to connect the Screw Cap Torque Tester DTXA/DTXS series with the supplied cable. It does not guarantee the entire prevention of the overload failures of the measuring devices.

*2 The fuse may need to be changed depending on the country, please contact your local distributor or us for more details.

[MTS series]

Model	MTS-10N	MTS-10N-L	MTS-10N-2L
Image *1			
Maximum sample height	50 to 140mm	150 to 240mm	250 to 340mm
Feature	For small samples	For medium size samples	For large samples
Recommended samples *2	Jam bottles, eye drop bottles, drink bottles, etc.	PET bottle (500ml), feeding bottle, etc.	PET bottle (1.5 liter or more)

* We offer custom-made options to meet your requirements. Please contact us for more details.

*1 Standard Chuck sold separately.

*2 You may need an extension shaft to measure smaller samples when using MTS-10N-L and MTS-10N-2L.

Refer to "How to select the extension shaft" below for more details.

[How to select the extension shaft]

For MTS-10N-L

Sample height	Required extension shaft
150 to 240mm	No need
50 to 150mm	MT-EXT (100mm length)

For MTS-10N-2L

Sample height	Required extension shaft
250 to 340mm	No need
150 to 250mm	MT-EXT (100mm length)
50 to 150mm	MT-EXT2 (200mm length)

* Refer to P6 for the dimensions of the shaft.

* MT-EXT and MT-EX2 can be combined, but the connecting part may not be stable during rotation. We offer an integrated shaft without connection. Contact us for more details.


[RS232C Split Cable and RS232C Printer Options]

RS232C Split Cable	
-RS	<ul style="list-style-type: none"> - The RS232C Split Cable CB-528-RS is included instead of the standard cable. - By using the RS232C Split Cable, DTXS/DTXA can be connected simultaneously to the MTS series and the external devices (RS232C communication). * Please add the code to the end of model. Example: MTS-10N-<u>RS</u>
RS232C Printer Package with a Dedicated Cable *1	
-PRT	<ul style="list-style-type: none"> - The RS232C Split Cable CB-528-RS is included instead of the standard cable. - RS232C Printer BL2-58 series (Sanei Electric Inc.) is additionally included. - By using the RS232C Split Cable, DTXS/DTXA can be connected simultaneously to the MTS series and BL2-58 series. * Please add the code to the end of model. Example: MTS-10N-L-<u>PRT</u>

* For details on the RS232C printer and connection cable, please refer to the individual specification sheets.

*1 This product can be sold to customers in Japan and EU markets only. Please contact us if you would like to purchase the product in other regions. Data output from DTXS/DTXA to RS232C printer is supported only for products with firmware Ver. 3.10 or later; For Next Series products, "RS232C Print Function" must be installed via network.





Examples of Product Configuration MTS-10N	
Example	Code: 1M4001A
Functional and advanced low range torque tests for capacity up to 2N-m	
Screw Cap Torque Tester: DTXS-2N-Z	
Motorized Torque Stand: MTS-10N	
Optional attachment: MT-ST	
Optional attachment: DT-STL	
Examples of Product Configuration MTS-10N-2L	
Example	Code: 1M4001B
Functional and advanced tall sample torque tests for capacity up to 10N-m	
Screw Cap Torque Tester: DTXS-10N-TB-02	
Motorized Torque Stand: MTS-10N-2L	
Optional attachment: MT-TB	



MTS-10N
Product Configuration **1M4001A** Image



* When evaluating the relationship between torque and angle, select Torque-Angle Analysis Unit TAA-ACMTS-TB series.
Refer to the TAA series specification sheet for more details.

[Upper side Grip Attachments for MTS (Separately sold)]




Standard chuck MT-TB	Small chuck (*1) MT-ST	Pin chuck MT-DC-13 etc.	M10 adapter MT-AD-M10
			
Capacity: 10N-m Sample diameter: φ20 to 90mm	Capacity: 5N-m Sample diameter: φ7 to 50mm	Capacity: 5 to 10N-m Sample diameter: φ0.5 to 13mm	For mounting attachments with M10 female screw

* Refer to the specification sheet "Attachments for ACMTS/MTS series" for further details

[Compatible Screw Cap Torque Testers (Separately sold)]

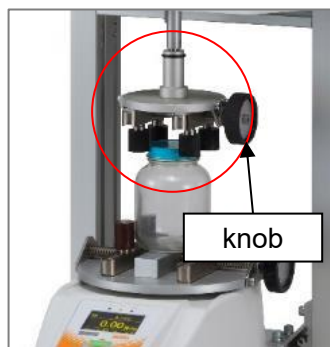
DTXS series	DTXA series
Standard model torque gauge having high measuring performance and high usability	Advanced model torque gauge with various functions such as angle input/output and data saving to USB flash drive
	

[Tables and Attachments (separately sold)] *For DTXS/DTXA series

Standard table (*1) DT-TB	Small table (*1) DT-ST	Pin chuck DT-DC-6.5, etc.
		

[Additional Information]

Tips for Appropriate Measurement



- Fixing the sample with a constant force

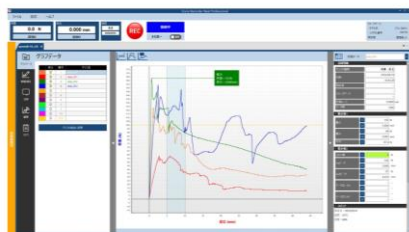
When measuring the opening/closing torque of jar or PET bottles, the force of gripping the sample affects the measured value. Therefore, it is necessary to grip the sample with a constant force.

When fixing the sample with the standard chuck, tighten the M5 hexagon socket head cap bolt, at the knob center with a torque wrench or torque driver with a 4mm bit to tighten. Controlling the tightening force contributes to accurate measurement.

[Related Products]

Downloadable Graphing Software: Force Recorder Next Standard *1

Force Recorder Next Standard is the software for graphing torque-time.



- High sampling rate of max. 2000Hz enables accurate graphing.
- Test condition presets: for effective recording / analysis of measurement results.
- Data editing: overlaying up to 10 graphs, etc., for results editing / analysis.
- Add Images / Comments function: useful for recording measurement data details.
- The Print Command allows images and statistics output in a file form: PDF/Word/Excel.

- If the PC cannot be connected to the Internet, please use the CD version graphing software, Force Recorder Standard. Some specifications differ between the Force Recorder Next Standard and Force Recorder Standard. Please refer to the individual specification sheets for details.

Advanced Type Motorized Torque Stand: ACMTS series



ACMTS series is the torque test stand with angle input/output function.

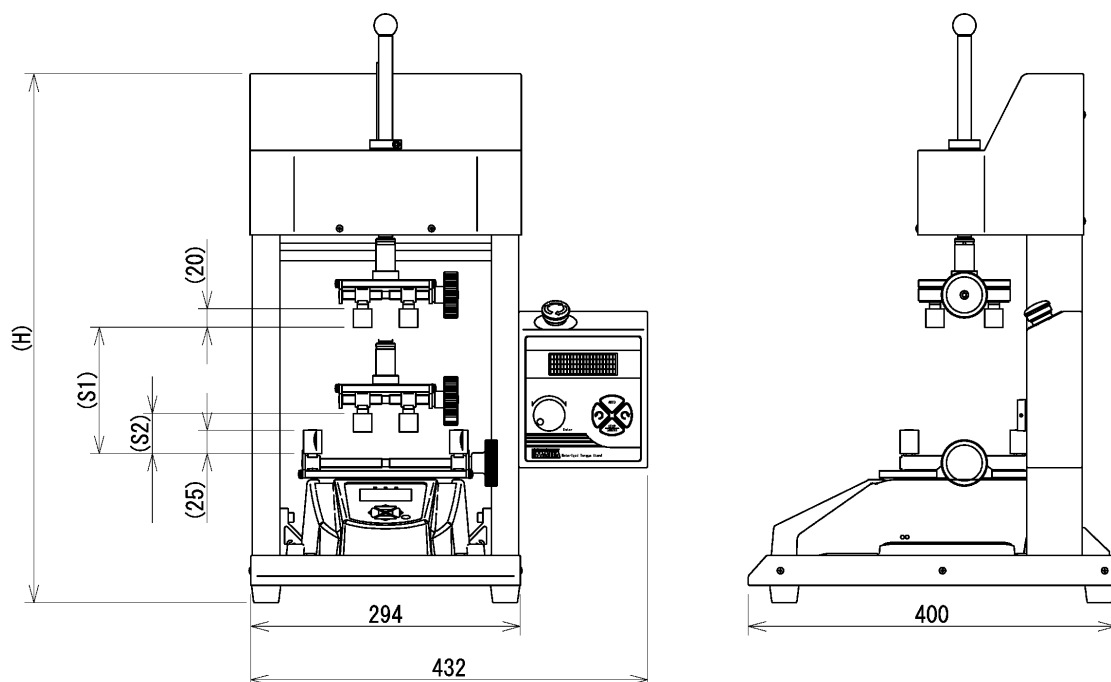
- Operation can be controlled by torque value and angle.
- Connecting with DTXA series, the torque-angle relationships can be measured.
- A wide range of rotational speeds: 0.6° to 240°/sec.
- Menu lock function prevent accidental changes of measurement conditions

- Please refer to each specification sheet for further details

*1 An internet connection is required at all times to use all functions on the IMADA connected. For software online downloads, a purchase of a download card is required with a prior user/product registration on IMADA connected. Product registrations are limited for Next Series products (e.g. DTXA/DTXS Series with firmware version 5.00 or later).

[Dimensions]

MTS series



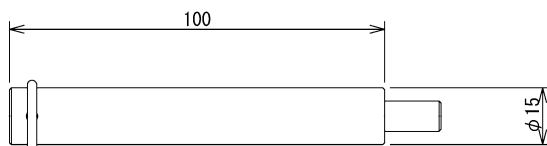
Unit: mm

Model	H	S1	S2
MTS-10N	575mm	140mm	50mm
MTS-10N-L	675mm	240mm	150mm
MTS-10N-2L	775mm	340mm	250mm

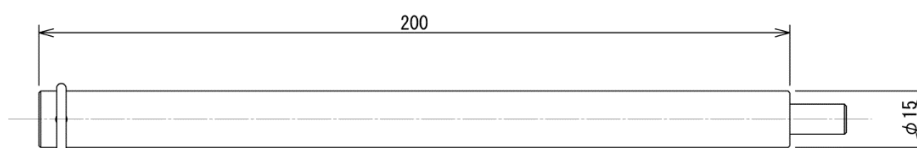
* S1 and S2 are the maximum and minimum sample heights when a standard attachment (sold separately) and a standard table with standard pins are attached.

Optional Extension Shaft

MT-EXT



MT-EXT2



Unit: mm

* We offer longer shaft as custom-made options.

[Cautions]

- Information in this document is subject to change without prior notice.
- This document is product descriptions and handling precautions, and does not guarantee various characteristics or safety.
- This product is designed for force measurement purpose only.
- Do not copy and use this content without authorization.
- A torque gauge (sold separately) is required to use this product.
- Do not apply torque more than its capacity or from incorrect direction to the sensor.
- Do not use this product in environments including fierce temperature changes, high temperature, high humidity, near water, and dusty places.

IMADA CO., LTD

99 Jinnoshinden-cho aza Kanowari Toyohashi

Aichi Japan 441-8077

Tel: +81-(0)532-33-3288

Fax: +81-(0)532-33-3866

E-mail: info@forcegauge.net

Website: <https://www.forcegauge.net/en/>



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