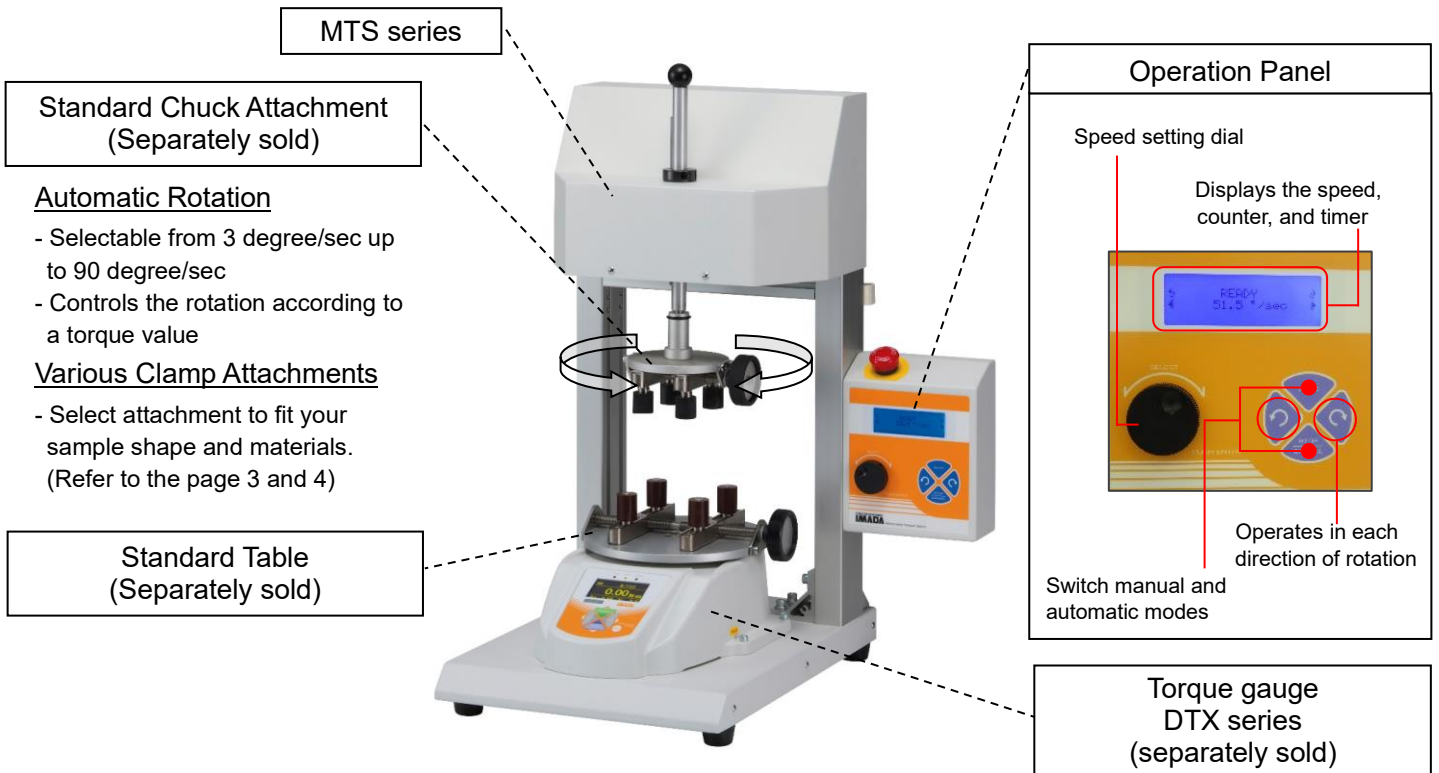


Motorized Torque Stand MTS series

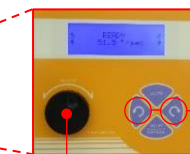
- Achieves highly accurate measurement due to the constant rotation speed
- Various measuring functions such as automatic testing and torque-angle measurements and more
- A wide range of clamps/attachments available to fit your measurement requirement



[MTS Features]

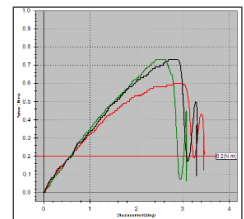
1. Highly repeatable measurement

Simply set the speed and press the start button to start highly repeatable measurements at constant test speed



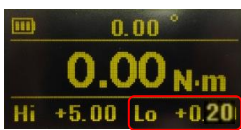
The Start Buttons

Speed Setting Dial



2. Automatic operation

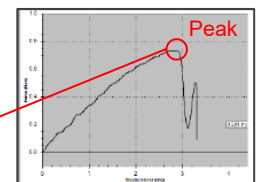
After acquiring the peak value, the measurement automatically stops when torque reaches the low setpoint



Set the **Low setpoint**



Start automatic mode testing



* This test method can be used to comply with corresponding part of JIS C 8280:2011" Edison screw lampholders"

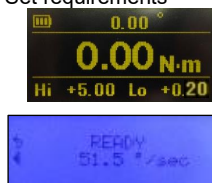
3. Repetition function (available for durability tests)

Set the measurement conditions to apply constant torque force repeatedly



For durability tests for bottle caps or circuit boards

Set requirements



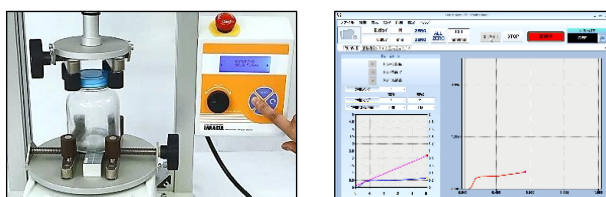
High setpoint
 Low setpoint
 Rotating speed
 Repeat number



4. Efficient measurement using software

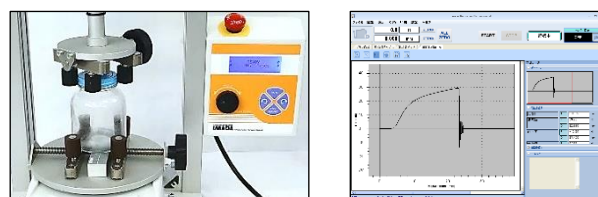
Measuring data can be drawn and saved by the software

Start testing



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

Finish testing



When measurement is done, software stops graphing and saves the data automatically.

[MTS series specification]

Specifications	
Capacity	10N-m
Stroke	See [Dimensions]
Dimension	See [Dimensions]
Weight	Approx. 14kg
Speed range	3 to 90 degree/sec
Function	Manual mode, JOG mode, Automatic mode (CONTINUOUS, ONE WAY) (*1), Overload preventing function (*1), Speed adjustment
Option	Angle meter option (*2) (add the option code -RA after the model name)
Voltage level	AC100V to 240V, 50/60Hz, max 3A (*3)
Available temperature	0 to 40 degree Celsius
Available humidity	Less than 85% (No condensation)
Accessories	Power cable, Torque gauge connecting cable (*4), Centering stick, Spare fuse, Instruction manual, tools, Packing cardboard

*1 It is necessary to connect the torque gauge with supplied cable.

*2 This option enables sending angle data to torque gauge. DTXA torque gauge and Force Recorder Professional are required to record and check the angle. This option is a factory build-in option. It cannot be added afterwards.

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

*4 The supplied cable is different depending on the model. (Standard model: CB-518, -RA option (angle meter option): CB-728)

[MTS series]

Model	MTS-10N	MTS-10N-L	MTS-10N-2L
Image			Printing
Maximum sample height	140mm	240mm	340mm
Feature	For small samples	For medium size samples	For large samples
Recommended samples *1	 Jam bottle, eye drop bottle, energy 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. Contact us for more details

*1 You may need an extension shaft to measure small 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
130 to 240mm	No need
Lower than 130mm	MT-EXT (100mm length)

For MTS-10N-2L

Sample height	Required extension shaft
230 to 340mm	No need
130 to 230mm	MT-EXT (100mm length)
Lower than 130mm	MT-EXT2 (200mm length)

* Refer to P7 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.

[Optional Function -RA]

Angle meter option	
Code	Features
-RA	The relationship between torque and angle can be analyzed by using with torque gauge DTXA series. *Add the code to the end of model. For example: MTS-10N- <u>RA</u>

* TAA series Torque-Angle Analysis Unit, which includes MTS series (-RA options) and DTXA series torque gauge are also available.
Refer to TAA series specification sheet for more details

Examples of Product Configuration MTS-10N	
Example 1	Code: 1M4001A
Functional and advanced small range torque test for capacity up to 2N-m	
Screw cap torque gauge: DTXS-2N-Z	
Motorized torque stand: MTS-10N	
Optional attachment: MT-ST	
Optional attachment: DT-STL	
Examples of Product Configuration MTS-10N-2L	
Example 1	Code: 1M4001B
Functional and advanced torque test of tall samples for capacity up to 10N-m	
Screw cap torque gauge: DTXS-10N-TB-02	
Motorized torque stand: MTS-10N-2L	
Optional attachment: MT-TB	



MTS-10N
Example 1 Image

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

[Grips for upper side of MTS (Sold separately)] Choose according to the size, shape and material of the sample

Model	Standard chuck MT-TB	Small chuck (*1) MT-ST	Pin chuck MT-DC-13 etc.	M10 adapter MT-AD-M10
Image				
Sample diameter	φ20 to 90mm	φ7 to 50mm	- MT-DC-13: L φ1.2 to 13mm - MT-DC-6.5: M φ0.5 to 6.5mm - MT-DC-6.5SUS: M (Stainless steel) - MT-DC-4: S φ0.5 to 4mm	For mounting attachments with M10 female screw

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

*1 Other types of pins are available to fit your test samples.

[Compatible Torque Gauges (separately sold)]

Model	DTXS series	DTXA series
Feature	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
Image		

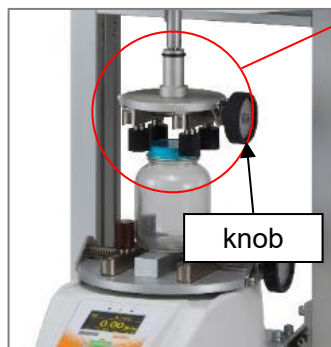
[Tables and Attachments (separately sold)] *For DTX series

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

[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 sample with standard chuck, tighten the hexagon socket head cap bolt (M5) which is attached to the side of the knob. Use a torque wrench or torque driver equipped with a 4mm bit to tighten.

Controlling the tightening force contributes to accurate measurement. The following instruments are recommended.

***Recommended Instruments**

<Torque Driver>

- DID-4 (SUGISAKI METER CO.,LTD)
- Hex bit (φ4mm)

<Torque Wrench>

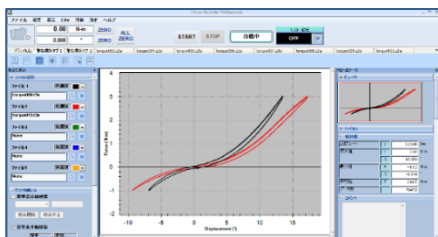
- DIW-15 (SUGISAKI METER CO.,LTD)
- 6.3sq Hex bit socket (φ4mm)

* IMADA torque gauge HTGS/HTGA series (the attachment is separately sold) is also suitable for above procedures.

* Contact us or your local distributor for further detail.

[Related Products]

Graphing Software Force Recorder



- Draws smooth graphs of torque transition at high speed (Max. 2000 data/sec) via USB
- Overlays up to 5 graphs (Standard, Professional edition)
- Comment function for keeping a note of testing conditions such as testing speed
- Available to analyze torque-angle relationship with below combination
 1. MTS series (-RA)
 2. Torque gauge DTXA
 3. Force Recorder Professional

*Refer to each specification sheet for further details

Rotation Support Jig for DTXS/A: SDT series



SDT-5N-L



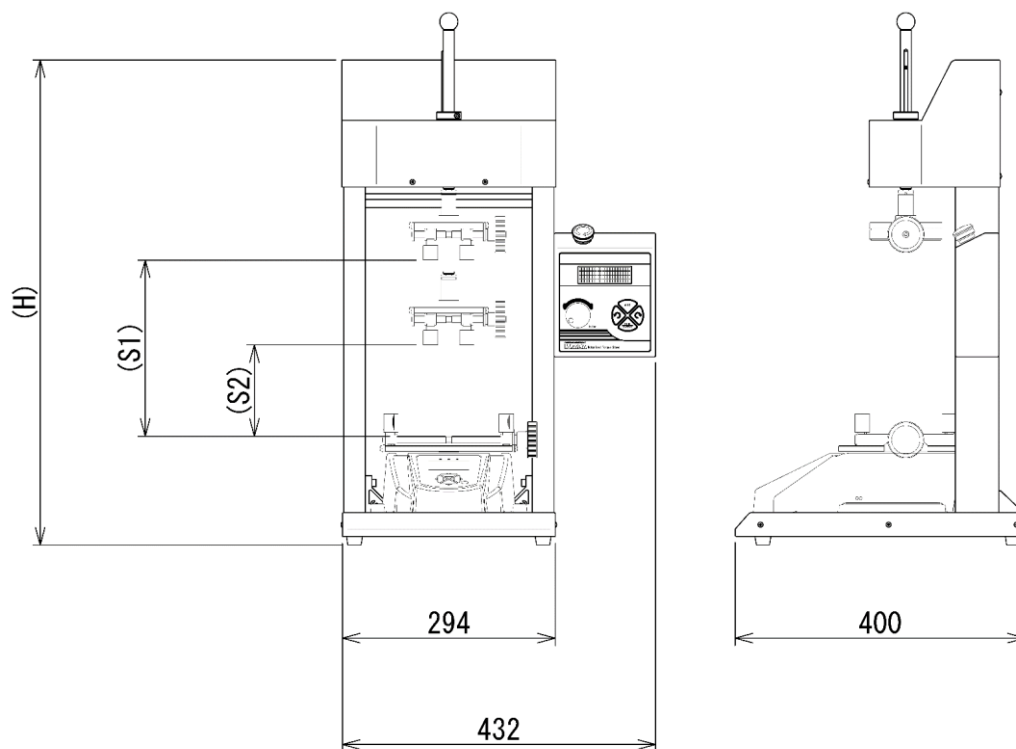
Test image

- Attach to the DTX series as a rotation assist jig
- For rotating samples continuously by turning the knob
- Combine with various attachments that matches the sample to perform various measurement as simple tester
- Combine with DTXA series torque gauge and angle meter to analyze the relationship between torque and angle (e.g. Turning feeling of dial)

*Refer to specification sheet of SDT series for further details

[Dimensions]

MTS series



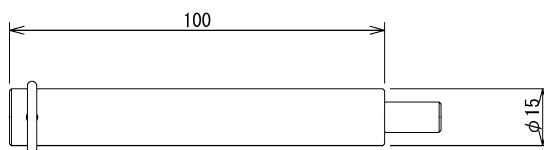
Unit: mm

Model	H	S1	S2
MTS-10N	575mm	140mm	30mm
MTS-10N-RA			
MTS-10N-L	675mm	240mm	130mm
MTS-10N-L-RA			
MTS-10N-2L	775mm	340mm	230mm
MTS-10N-2L-RA			

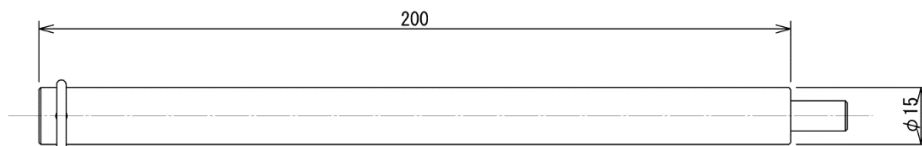
*S1 and S2 are the stroke ranges when a standard attachment (sold separately) and a standard table are attached.

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 do 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 the environments including fierce temperature changes, high temperature, high humidity, near water, dusty place.

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