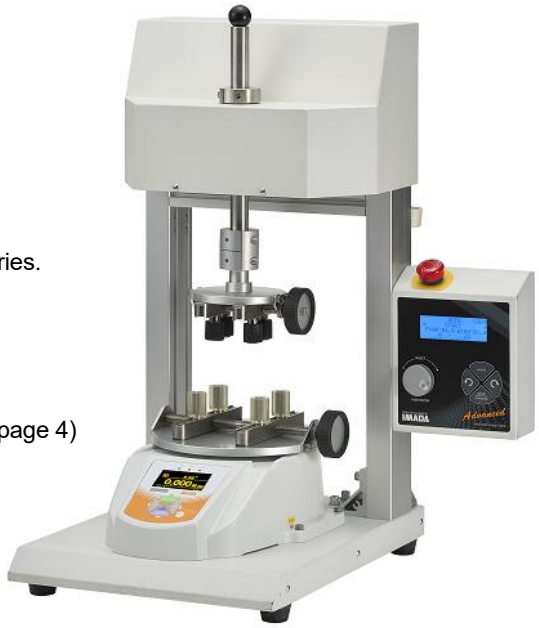
Advanced Type Motorized Torque Stand ACMTS series

- **Accomplished uniform rotational speed for higher accuracy in torque measurement**
- **Possible to control operation by torque value and angle**
- **Performs torque-angle measurement**
- **Speed ranges from 0.6˚ to 240˚/sec allow for a variety of measurement requirements**



[Improved Reproducibility of Torque Measurement]

Uniform rotational speed with improved torque measurement reproducibility

[Accomplished Accurate Angle Control and Torque Angle Measurement Precision]

- Torque-angle measurements are possible when combined with the DTXA series. Precision in measurements is achieved at an angle accuracy of ±0.1˚±1 digit
- The operation is controlled by the torque value and the angle.

[Broad Choices of Jigs and Chucks]

By switching the jigs and chucks, a variety of samples are measured (refer to page 4)

- Standard chuck MT-TB, Screw cap torque meter DTXS/A series and Standard table DT-TB for DTXS/A are sold separately.

[ACMTS series Features]

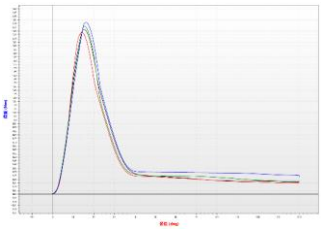
Feature 1: Constant Rotation Speed

Constant rotational speed enables highly reproducible measurements.

Manual Operation

Uneven rotation speed causes unstable measurement values

Installed to the ACMTS Torque Stand



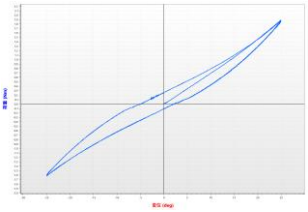
Constant rotational speed for highly reproducible measurements

Feature 2: High Angle Accuracy within ±0.1˚ ±1digit (with the connected DTXA series)

The combination with the DTXA digital torque meter realizes the accurate and precise torque angle measurement.

ACMTS and DTXA connected with The dedicated cable

The Angle data output from the ACMTS is displayed in DTXA



By using graphing software
Torque angles are plotted as graphs.
(Image: Force Recorder Next Professional)

Feature 3: Automatic Operation

The operations are controlled by the torque value and angle: Stop and Reverse rotation.

e.g., Lipstick container turning Torque Test

- Set comparator Value
  Upper Limit : ＋2.000N-m
  Lower Limit : －0.650N-m
- Set Angle
  Forward : 480°
  Reverse : 3600°

Forward : Extend the lipstick to the specified angle

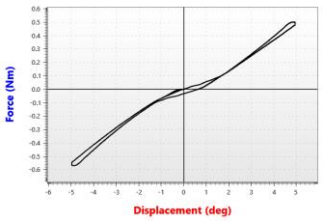
After starting and reaching the set angle (480˚), the operation automatically pauses and starts reverse rotation. Then, it automatically stops when the set torque value (-0.650 N-m) is reached.
The same cycle is repeated 10 times; the torque value changes are analyzed.

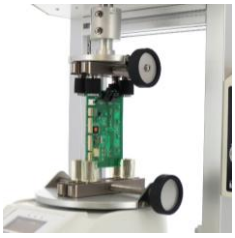
NOTE: For torque-angle measurement, the DTXA series must be connected with the included dedicated cable.

[Measurement Examples: Angle Control]

■ Torsion Endurance Test for Circuit Boards

A repeated endurance test in which the board is twisted alternately left and right to a set angle.
The operation can also be controlled by torque value.





■ Sliding Resistance Test of Camera Lens

Measurement for rotating to the set angle, then returning to the starting position. A torque-angle graph allows for the checking of areas of high sliding resistance.

■ Torsion Endurance Test of Cables

Endurance test that applies torsion up to a set angle.
Angle control up to 3600 degrees can be set.

* Accurate measurement may not be possible with samples that shrink significantly due to torsion. We offer Sample Testing Services for measuring sample specimens with shrinkage issues and concerns. Please contact us for more information.

- The rotation angle can be set to start from the original return position. Please contact us for details.

Feature 4: Efficient Durability Testing with Automatic Mode

The operation automatically repeats up to the set number of times.

Upper/Lower Limits
Angle
Rotation Speed
Number of repetitions

The Measurement Condition Setting

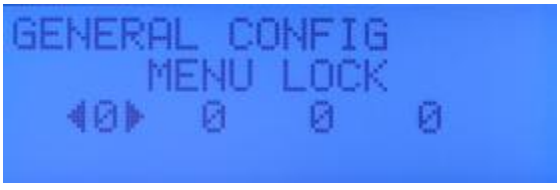
番号	荷重	単位	時刻	日付
1	-1.221	Nm	15:40:21	2023/08/30
2	-1.768	Nm	15:40:36	2023/08/30
3	-1.773	Nm	15:40:51	2023/08/30
4	-1.782	Nm	15:41:07	2023/08/30
5	-1.789	Nm	15:41:22	2023/08/30
6	-1.696	Nm	15:41:37	2023/08/30
7	-1.659	Nm	15:41:52	2023/08/30

Send and zero reset signals are automatically output for each measurement cycle to DTXS/DTXA. The data is automatically sent to software or an RS232C printer (*1).

*1 Data output from DTXS/DTXA to the RS232C printer available only for the firmware Ver. 3.10 or later.
For the Next Series products, Installation of "RS232C Print Function" is required via network.

- For slippery-type sample specimens, we offer customization services for special clamps. Please contact us for details and other options.

Feature 5: Password Lock Function



A password can be set to protect set measurement conditions to prevent accidental or intentional changes

[Specifications: ACMTS series]

Specifications		
Model	**ACMTS-10N**	**ACMTS-10N-2L**
Capacity	10N-m	
Stroke (*1)	58 to 120mm	158 to 320 mm
Dimension	See [Dimensions]	
Weight	Approx. 16.2kg	Approx. 16.7kg
Speed Range	0.6˚ to 240˚/sec	
Stop Angle Range	0.1˚ to 3600.0˚	
Angle Accuracy	Within ±0.1°±1digit (when connected to DTXA series)	
Function	Manual Mode / JOG Move / Automatic Operation (CONTINUOUS/ONE WAY)(*2) Overload Stop (*3) / Speed Adjustment	
Voltage Level	AC100V~240V, 50/60Hz, max3A (*4)	
Ambient Temperature	0 to 40 °C	
Relative Humidity	Less than 85% (No condensation)	
Accessories	Power Cable / Torque gauge connecting cable CB-728 / Centering Stick / Spare Fuse / Operating Manual / Tools	

*1 Stroke is the maximum and minimum sample heights when a standard attachment and a standard table with standard pins are attached. Customized torque stand according to the sample height is available. The measurement sample height can be adjusted with a customized extension shaft for a low-height sample with the ACMTS-10N-2L model. Please contact us for details.
*2 The included dedicated cable connected to the DTXS/DTXA series is required for the torque value operation control.
*3 Connecting to the DTXS/DTXA series with the included connection cable is necessary. This function does not guarantee complete prevention of measurement device failure due to overload.
*4 The fuse must be replaced to use the product at a different voltage. Please contact us for details.

[RS232C Split Cable and RS232C Printer Options]

Code	Split Cable Options: RS232C
-RS	- The split cable **CB-728-RS** is included instead of the standard cable CB-728. - The ACMTS series and the external device (RS232C communication) can simultaneously connect to the DTXS/DTXA. - Please add the Code -RS to the Model number of your order: e.g., ACMTS-10N-RS
Code	**RS232C Printer Package with a Dedicated Cable (*1)**
-PRT	- The split cable **CB-728-RS** is included instead of the standard cable CB-728. - The Sanei Electric BL2-58 series RS232C printer is included in the Package. - The ACMTS series and the RS232C printer can simultaneously connect to the DTXS/DTX. - Please add the Code -PRT to the Model number for your order: e.g., ACMTS-10N-2L-PRT

▪ For details on the RS232C printer and the dedicated connecting cable, please refer to the individual Specifications.

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

[Example of ACMTS Attachments: Upper Side Fixtures (Separately sold)]

Standard Chuck **MT-TB**	Small Chuck **MT-ST**	Drill Chuck **MT-DC Series**	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)]

DTXA series	**DTXS series**
Advanced model torque gauge. Possible to measure torque-angle relationships by connecting with ACMTS series.	Standard model torque gauge having high measuring performance and high usability.
	

- Please contact us for the installment of a DTXS/DTXA in the 0.5Nm (50.00N-cm) range.

[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.

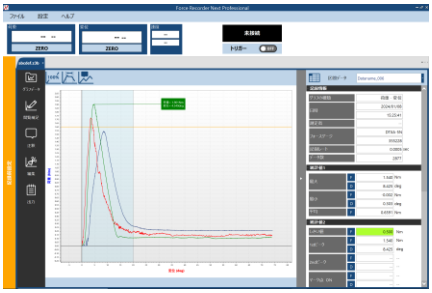
[Related Products]

Torque - Angle Measurement Unit TAA-ACMTS-TB series

A complete unit for the toque-angle measurement

[Items Included in the Unit]
- Screw Cap Torque Tester: DTXA series
- Graphing software: Force Recorder Professional
- Advanced Type Motorized Torque Stand: ACMTS-10N
- Connection Cable: CB-728
- Standard Chuck for ACMTS: MT-TB
- Standard Table for DTXA: DT-TB

Downloadable Graphing Software: Force Recorder Next Professional *1



Force Recorder Next Professional is the software for graphing torque-angle.

- 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 Professional. Some specifications differ between the Force Recorder Next Professional and Force Recorder Professional. Please refer to the individual specification sheets for details.

Standard Type Motorized Torque Stand: MTS series

A Motorized Torque Stand for a maximum force of 10N-m (1000N-cm).
Used in combination with the Screw Cap Torque Tester: DTXS/A series.

- Highly reproducible measurements are achieved by equalizing the rotation speed and direction.
- Operation can be controlled by torque value and continuous rotation time.
- Various sample specimens can be measured by switching the chuck and jig.
- The Torque-angle measurement Unable.

Safety Shield Cover Options: Customized product

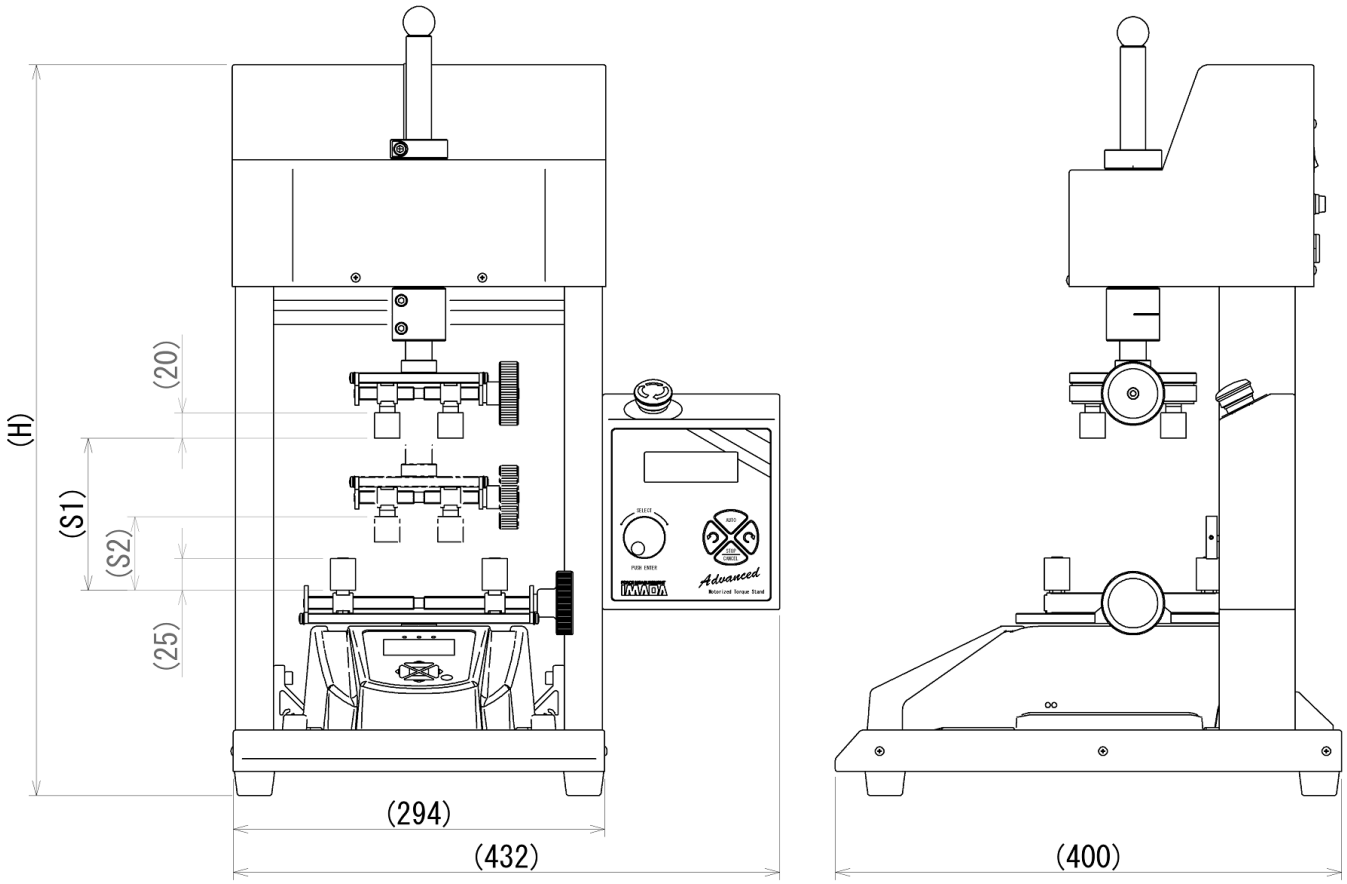
[The Safety Shield Cover for the ACMTS series]
It is designed to protect the operator against the dangers of sample debris during testing and getting caught in the rotating shaft.
Available to be installed on your ACMTS.

For the interlock Shield Option, the modification to the ACMTS is required. Please contact us for 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).

[Dimension]

ACMTS Series



Model	(H)	(S1)	(S2)
ACMTS-10N	577	120	58
ACMTS-10N-2L	777	320	158

- S1 and S2 are the corresponding sample heights (maximum / minimum) with the standard chuck attachment (separately sold) / screw cap torque meter, and the standard table with standard pins installed.

Unit: mm

[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.

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