

Screw Cap Torque Tester DTXS/DTXA series

- Fast sampling for both Peak Values and Continuous Data, achieving high reproducibility
- Clear OLED display with a variety of significant capabilities
- Ideal for opening and closing torque tests of various containers such as bottles
- Handles various samples by simply replacing optional attachments



DTXA-10N



Opening/closing torque test of jar lid



Twist test of screen protective film

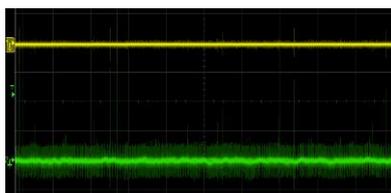
*Rotation Support Jig SDT series and Small Table HT-ST are used.

[Evolution to the Next Series]

Next Series is a generic term for IMADA measurement devices with upgraded functions, performances with the essential modifications. The devices enable to install additional functions from the user support site, IMADA-Connected. On the website, related data such as software and instruction manuals can also be downloaded. New Series: DTXS/DTXA Series Firmware Ver.5 or later.

New Features

-Increased measurement stability achieved from further noise reduction to the measurement circuit.



Analog output comparison
Yellow: Next series/Green: Old Model

-Measurement device program (firmware) online updates available.

-Various software and additional functions downloadable to increase the measurement conveniences.



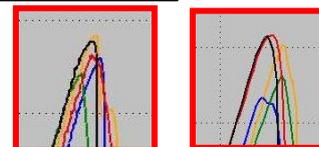
IMADA-Connected

(<https://www.imada-connected.com/>)

[Features]

Fast sampling for both Peak Values and Continuous Data, achieving high reproducibility

High-speed sampling of up to 2000 times/second updates measured values for more accurate peak-value readings.
Double bearing structure of the torque sensor minimizes the influence of bending force to ensure precise testing result.



Destructive test comparison of the same sample by sampling speed: -
-Left Sampling speed 2000Hz
-Right Sampling speed 100Hz
The less variation shown in the left results

*The Test Results vary depending on the sample and measurement conditions.

Clear OLED display with a variety of significant capabilities

The OLED provides excellent contrast and high visibility, which reduces errors in reading measurement results.
In addition, the display screen can be divided into three sections, allowing to customize the display contents for liking, such as calendar, bar graph and Comparator setting values on the top and bottom.
In addition, it has various display capabilities such as a multi-language setting menu and overload warning display.



Measurement benefit increased by external output and practical functions

By providing a wide range of data output options such as USB, wireless, serial communication, and analog output, it can be used in a wide range of situations from data management on a PC to interlocking with various devices.
The system used to control external devices, such as stopping the the machine at a specified load value, or to create an inspection device linked to a work process in order to improve the efficiency of the inspection process.



The warning light and other devices may be used to detect measurement abnormalities.

Allows easy Data acquisition and management with the included software

USB Cable and software *Force Logger* included in the original package to proceed with the data management when purchased.
It also allows to change and save the Measurement device settings from facilitating the management of measurement conditions.

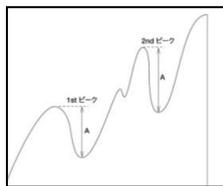


Handles various samples by a wide range of optional attachments

It is easy to mount and replace your desired attachment such as tables and pins to suit for your samples. Moreover, custom-made attachments designed for your samples are also available.



[Original Features of DTXA series]

Angle output function	USB flash-drive for continuous data storage	Original display feature of DTXA
		
<p>-By connecting with test stand MTS or SDT series with angle meter (sold separately), the angle value is shown at the display top -It is also possible to output the angle data to a PC by using a software</p>	<p>-Continuous and Single data (with the button press) can be saved in USB flash-drive (*sold separately). -Data saved in CSV format. -Data acquirment is available even without PC</p>	<p>-1st and 2nd peak value displayed as the above graph -The statistics such as the Max/Min stored in DTXA can also be displayed</p>

[Specifications]

Model	DTXS	DTXA
Outline	Standard model with various functions	Advanced model with additional functions of DTXS series such as input/output angles and saving to USB flash drive etc.
Accuracy	+/-0.5%F.S. +/-1digit	
Unit of measurement	N-m, N-cm, kgf-m, kgf-cm, lbf-in, ozf-in (switchable) (*1)	
Display	4-digit	
Display update	16 times /sec	
Sampling rate	Maximum 2000 data/ sec (*2)	
Battery	Approx. 6.5 hours (2 hours full charge) (*3)	
Safe overload rating	Approx. 200%	
Operating environment	Temperature: 0 to 40 degrees Celsius Humidity: 20 to 80%RH	
Functions	Customized display (header and footer) / Peak hold (Clockwise and Counterclockwise) Internal memory (1000 data) / Comparator (OK or NG judgment) Reversible display / Sign inversion/ Zero clear timer/ +NG alarm Off timer (Auto power off) / Dumping / Time display / Setting lock	
	-	1st 2nd peak Angle detection at torque peak value (*4) Angle zero reset at selected torque (*4)
Output	USB, RS232C, ±2VDC analog output (D/A), Comparator 3 steps (-NG/OK/+NG), Overload alarm	
	-	Sub comparator 2 steps (output of large or small judgment), USB flash drive, angle (displacement)
Overload warning	Approx.110% F.S. (Warning message and alarm)	
External contact point	SEND (a point of contact holding), Zero reset, Peak ON/OFF setting	
Weight	Approx. 3.0kg (table not included), Approx. 4.5kg (standard table and pins included)	
Dimensions	See [Dimensions]	
Accessory	AC adapter, Inspection certificate, CD driver (data logging software), USB cable, Carrying case, L wrench, Standard Table (only for DTXS/A-2/5/10N), Standard Pins (only for DTXS/A-2/5/10N)	
	-	USB flash drive adapter (*5)
Approved standard	JIS S 0022 (2001) Guidelines for all people including elderly and people with disabilities -- Packaging and receptacles -- Test methods for opening "6.3 Screw top receptacle"	

*1 These are the specifications for international model. Note that this unit is different from Japanese domestic model.

*2 Up to 100 data/sec. is saved in USB memory (selectable among 1, 50, and 100 /sec)

*3 The battery is more consumed when connected to USB flash drive or an angle scale.

*4 Angle (displacement) scale is necessary to valid this function.

*5 USB flash drive is not included.

[DTXS/DTXA series models]

Model		Range	Display	Resolution
DTXS-0.5N-Z (*1) (*2)	DTXA-0.5N-Z (*1) (*2)	0.5 N-m (50N-cm)	50.00N-cm	0.01N-cm
DTXS-2N	DTXA-2N	2 N-m (200N-cm)	2.000N-m (200.0N-cm)	0.001N-m (0.1N-cm)
DTXS-5N	DTXA-5N	5 N-m (500N-cm)	5.000N-m (500.0N-cm)	0.001N-m (0.1N-cm)
DTXS-10N	DTXA-10N	10N-m (1000N-cm)	10.00N-m (1000N-cm)	0.01N-m (1N-cm)
DTXS-2N-Z (*1)	DTXA-2N-Z (*1)	2 N-m (200N-cm)	2.000N-m (200.0N-cm)	0.001N-m (0.1N-cm)
DTXS-5N-Z (*1)	DTXA-5N-Z (*1)	5 N-m (500N-cm)	5.000N-m (500.0N-cm)	0.001N-m (0.1N-cm)
DTXS-10N-Z (*1)	DTXA-10N-Z (*1)	10N-m (1000N-cm)	10.00N-m (1000N-cm)	0.01N-m (1N-cm)

*1 Standard Table and Pins are not included in models with [-Z].

*2 The available unit is only “N-cm”.

[Accessories]

Data Acquisition Software Force Logger	
	<p>Main Functions</p> <ul style="list-style-type: none"> - Easy Importing of the Measurement Data - Display Acquired Data Value Statistics: -Maximum / Minimum / Average Values. - Data saved in CSV format - Continuous Data acquisition up to 10 times per second.
	<p>Operating environment</p> <ul style="list-style-type: none"> - OS: 8.1/10/11 - Hardware: CPU 1GHz or more recommended Memory 2GB or more recommended Hard disk 10GB (Data storage area) or more - Platform: .NET Framework4.8 or later
Standard table and pins (*)	
	<p>Suitable for fixing PET bottles, cans, etc.,</p> <p>Capacity: 10N-m Sample diameter: 20 to 60mm Standard table weight: Approx.1.3kg Standard table material: Steel and aluminum Standard pin weight: Approx. 28g/pc Standard pin material: Stainless-steel and urethane</p> <p>- Standard Table and Pins are included in DTXS-2/5/10N and DTXA-2/5/10N packages.</p>

[Accessory Attachment Options]

DTXS/DTXA series can be purchased together with your desired Tables and Pins.

Standard Table Standard Pins DTXS/DTXA-2/5/10N	Standard Table Notch Pins (*1) DTXS/DTXA-2/5/10N-TB-01	Standard Table Long Clamp Pins (*1) DTXS/DTXA-2/5/10N-TB-02
		
Suitable for fixing PET bottles, cans, etc. *Included Parts for DTXS-2/5/10N and DTXA-2/5/10N.	Ideal for fixing slippery samples such as aluminum cans and plastic containers.	Ideal for fixing tall samples such as circuit boards, camera lenses and liquor bottles
Capacity: 10N-m Sample diameter: 20 to 60mm Table weight: Approx.1.3kg Table material: Steel and aluminum Pin weight: Approx. 28g/pc Pin material: Stainless-steel and urethane	Capacity: 10N-m Sample diameter: 20 to 60mm Table weight: Approx.1.3kg Table material: Steel and aluminum Pin weight: Approx. 69g/pcs Pin material: Stainless-steel	Capacity: 10N-m Sample diameter: 20 to 60mm Table weight: Approx.1.3kg Table material: Steel and aluminum Pin weight: Approx. 67g/pcs Pin material: Stainless-steel and urethan
Small table Standard Pins DTXS/DTXA-2/5N-ST	Small table Notch Pins (*1) DTXS/DTXA-2/5N-ST-01	Small table Long Clamp Pins (*1) DTXS/DTXA-2/5N-ST-02
		
Suitable for measuring small samples such as eye drop lids.	Ideal for firmly fixing samples such as connectors made of resin.	Ideal for fixing slim samples such as cosmetic containers.
Capacity: 5N-m Allowable Sample Diameter: $\phi 7$ to 50mm Weight: Approx.300g Material: Steel and Aluminum Pin weight: Approx.3g/pcs Pin material: Aluminum and Urethan	Capacity: 5N-m Allowable Sample Diameter: $\phi 7$ to 50mm Weight: Approx.300g Material: Steel and Aluminum Pin weight: Approx.10g/pcs Pin material: Stainless-steel	Capacity: 5N-m Allowable Sample Diameter: $\phi 7$ to 50mm Weight: Approx.300g Material: Steel and Aluminum Pin weight: Approx.8g/pcs Pin material: Aluminum and Urethan
Other combination options		
<p>A Torque Tester without the Table attachment is selected from the chart Page 4 [DTXS/DTXA series models] and the required Attachments selected separately. (*2)</p> <p>Example: For measurement of small torque such as small screws etc.</p> <p>Select <u>DTX series of 0.5N-m range</u> and <u>Light Weight Small Table (Standard Pin)</u>.</p> <p>Product model: <u>DTXS/A-0.5N-Z</u> and <u>DT-STL</u></p>		

*1 Standard Pins shown in the DTX images are for the image reference, and the Pin options for selection are stated individually in the chart.

*2 Refer to Attachments for DTXS/DTXA series specifications for more details.

[Related attachments/parts]

Small table DT-ST	Light weight small table DT-STL	Light weight wide table DT-STLW
For gripping various small samples by switching the pins	Light weight table, which reduces weight influence, suitable for small force torque measurement	Wide type of HT-STL for gripping samples from $\phi 10$ to 100mm
 <p>*Only for 2/5N-m range</p>	 <p>*Only for 0.5/2N-m range</p>	 <p>*Only for 0.5/2N-m range</p>
Pin Chuck DT-DC	Sample stage for standard table TB-SP	Replacement battery BP-308
The three claws clamp samples such as wire and round-bar samples	Stage for setting samples stably. It is designed for standard table only.	Battery for replacement
		

[Related Products]

Motorized Torque Stand: MTS Series



MTS series



Test image

- This is motorized torque stand for DTXS/DTXA series.
- Regulated rotation speed allows torque measurement with better accuracy.

Analyzing Torque and Angle Relationships

MTS series can be equipped with a rotary encoder to analyze torque and angle relationships. Angle meter and DTXA series (sold separately) are required.

- * Refer to MTS series specifications for more details.
- * Torque-Angle Measurement Unit TAA series is also available. TAA series include all items required to analyze torque and angle relationships.
- * Refer to TAA series specifications for details.

Rotation Support Jig for DTXS/A: SDT Series



SDT-5N-L

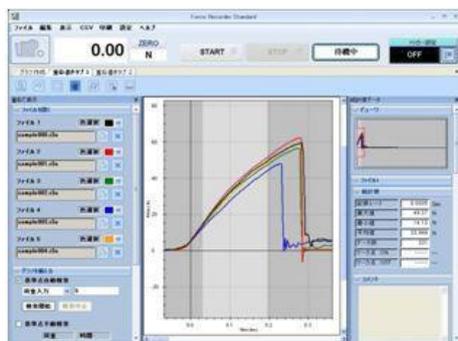


Test image

- SDT series is a rotation support jig for DTXS/DTXA series.
- The sample can be continuously rotated by keeping turning the knob.
- Various torque measurements are possible with attachments suitable for the sample.
- It assists analysis of torque-angle relationships for tactile test of rotating a dial. (DTXA series is required)

* Refer to SDT series specifications for more details.

Data Graphing Software: Force Recorder Series



The Standard Version Image

- High-speed USB communication (up to 2000 times/second or 1000 times/second for Plus version) enables graphing for minimal load changes.
- Up to 5 graphs overlaid for comparison with the Standard and Professional versions. (10 graphs with Plus version)
- Notes added for record keeping of the measurements
- For Data managing and reporting, Graphs pasted as the Image Data.

* Four Software versions available for different requirements, (Force Recorder Light / Standard / Professional and Plus)
Please refer to the individual Manuals for details.

Wireless Data Transmit System: WL01 Series



WL01-USB and
WL01-ADP



WL01-BOX

- Wireless communication allows the Data received from remote locations.
- The Data reception detection and interference prevention functions support stable communication.
- The communication format opened to the public and incorporated into the available facilities possible.

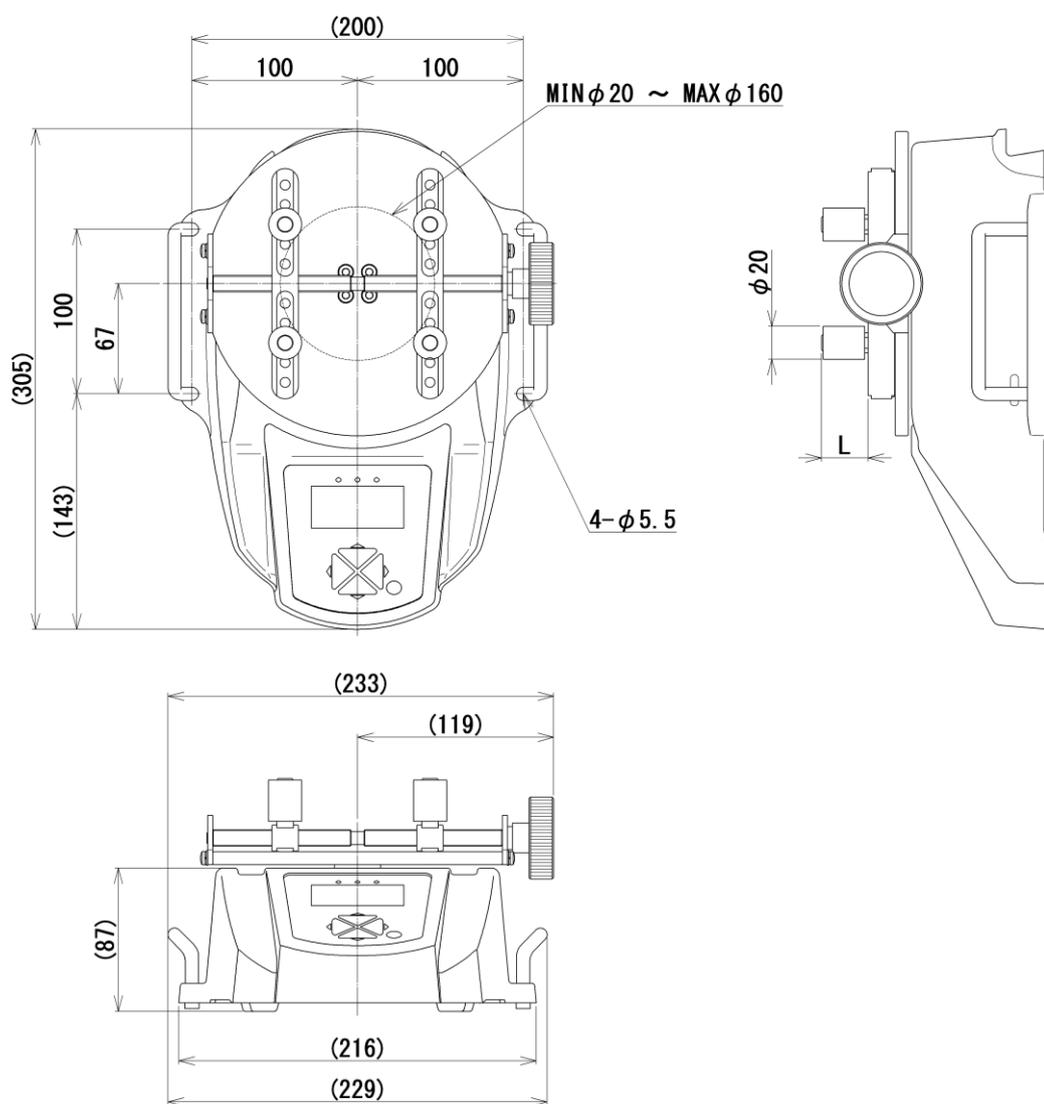
Notes:

- Compatible with firmware Ver3.10 or later.
- Restrictions on the countries and regions for use.
- Please refer to [Wireless System] Specifications for details.

[Optional Cables]

Optional cables		
Analog Cable (3m)	CB-108	To connect to a multi meter, oscilloscope
RS232C Cable (3m)	CB-208	To connect to a PC having its own system
Contact point cable (3m)	CB-808	To connect to external equipment such as PLC
Open end cable (3m)	CB-908	Output cable for loose wire 37 pin (Useful for connection with unique equipment.)
Cable with Terminal Block	CTB-A	To connect to external equipment such as PLC

[Dimensions]



Unit: mm

[Calibration Certificate]

- We offer calibration certificate with extra charge.
- * Please contact us or our distributor in your country for further information.

[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.
- Do not apply force more than its capacity or from incorrect direction to the measuring shaft.
- Some samples may not be suitable to measure with this product.

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