

## 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 SGT series and Small Table HT-ST are used.

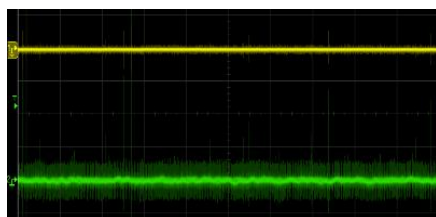
### [Evolution to the Next Series]

Next Series is a generic term for IMADA Force Gauges and Testing Devices with upgraded functions, performances with the essential modifications.

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

-Additional functions can be added by online firmware download.

-Various software/manuals downloads and useful services to increase measurement convenience.



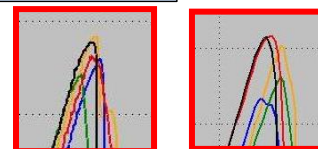
IMADA download site

<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.

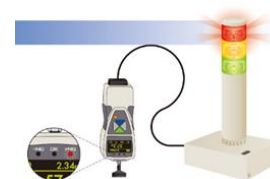
### Clear OLED display with a variety of significant capabilities

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.



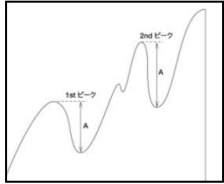


### Handles various samples by a wide range of optional attachments

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 acquirement is available even without PC</p>	<p>-1<sup>st</sup> and 2<sup>nd</sup> 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, 2 VDC 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	
	-	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)	DTXA-0.5N-Z (*1)	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	DTXA-2N-Z	2 N-m (200N-cm)	2.000N-m (200.0N-cm)	0.001N-m (0.1N-cm)
DTXS-5N-Z	DTXA-5N-Z	5 N-m (500N-cm)	5.000N-m (500.0N-cm)	0.001N-m (0.1N-cm)
DTXS-10N-Z	DTXA-10N-Z	10N-m (1000N-cm)	10.00N-m (1000N-cm)	0.01N-m (1N-cm)

\* Standard table and Standard pins are not included in models with [-Z].

\*1 The available unit is only "N-cm".

**[Accessories]**







Data Acquisition Software <b>Force Logger</b>		
	<p><b>Main Functions</b></p> <ul style="list-style-type: none"> <li>-Easy Importing of the Measurement Data</li> <li>-Display Acquired Data Value Statistics: -Maximum / Minimum / Average Values.</li> <li>-Data saved in CSV format</li> <li>-Continuous Data acquisition up to 10 times per second.</li> </ul> <p><b>Operating environment</b></p> <ul style="list-style-type: none"> <li>- OS: 7/8/8.1/10 (32/64bit version is available)</li> <li>- Hardware: CPU Pentium4(1GHz or more), Memory 2GB, Hard disk: 10GB or more recommended</li> <li>- Platform: .NET Framework4.6 or later</li> </ul>	
Standard table and pins (*)		
<p>Standard table</p>	<p>Standard pin</p>	<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>*The table and pins are included in DTXS-2/5/10N and DTXA-2/5/10N.</p>

The following types of pins are also available to suit your samples.

<p>Notch pin</p>	<p>Ideal for fixing slippery samples such as aluminum cans and plastic containers</p> <p>Pin weight: Approx. 69g/pcs Pin material: Stainless-steel</p> <p>*In case of changing to notch pin, add "-TB-01" to the end of the model. (e.g. DTXS-10N-TB-01)</p>	<p>Long clamp pin</p>	<p>Ideal for fixing tall samples such as circuit boards, camera lenses and liquor bottles</p> <p>Pin weight: Approx. 67g/pcs Pin material: Stainless-steel and urethan</p> <p>*In case of changing to long clamp pin, add "-TB-02" to the end of the model. (e.g. DTXS-10N-TB-02)</p>
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\* The table and pins above cannot be used with 0.5N-m range.

**[Related attachments/parts]**

Small table <b>DT-ST</b>	Light weight small table <b>DT-STL</b>	Light weight wide table <b>DT-STLW</b>
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 φ10 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 <b>DT-DC</b>	Sample stage for standard table <b>TB-SP</b>	Replacement battery <b>BP-308</b>
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
		

**[Example of Table and Pin Combination]**

DTXS/DTXA series can be purchased together with your desired tables and pins.

Example 1: Measurement of small samples	Example 2: Measurement of small torque
<p>For measurement of small motor or eye drop lids etc.</p> <ul style="list-style-type: none"> <li>Select <u>small table</u> (standard pin).</li> </ul> <p><b>Product model: DTXS/A- ( ) N-ST</b></p> <p>* For small tables, the end of model is "-ST"</p>	<p>For measurement of small torque such as small screws etc.</p> <ul style="list-style-type: none"> <li>Select <u>DTX series of 0.5N-m range</u> and <u>light weight small table</u> (standard pin).</li> </ul> <p><b>Product model: DTXS/A-0.5N-Z and DT-STL</b></p> <p>* The standard table id not included for 0.5N-m model so pls also select the table model.</p>

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

**[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

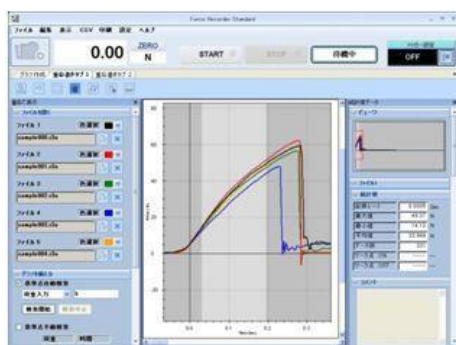


Test image

- 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.

\*4 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.

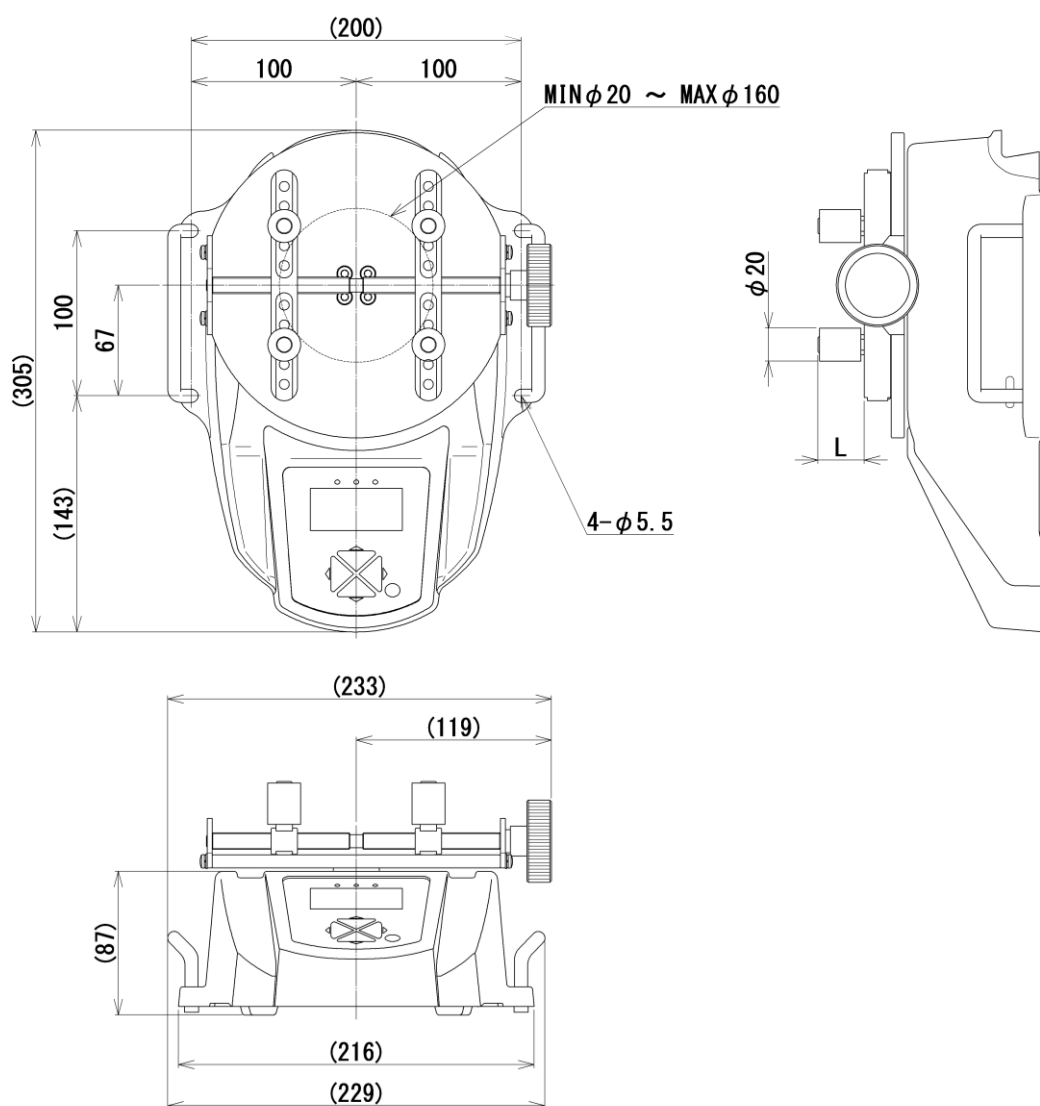
**Notes:**

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