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INSTRUCTION MANUAL

Digital Torque Meter

☐ 2KG ☐ 10KG ☐ 20KG ☐ 50KG

☐ 100KG ☐ 300KG ☐ 500KG

Content

No matter how high - quality your electric screwdriver is, if you don't know the correct torque for each task in advance and determine the proper use of torque, you can't make full use of it. With a torque tester, you can set the torque of electric screwdrivers, measure the torque of wrenches, and set the torque for various rotating tools. Moreover, with optional accessories, the measured data can be transmitted to a computer for integration into production management systems. Easy to operate, high in precision, and low in cost, torque testers have been widely used in the production of various electronic products, cameras, watches, and other precision tools, as well as in the automotive and aerospace manufacturing industries.

Applications:

1. For torque testing of electric screwdrivers, various torque tools, and torque wrenches.

2. Performance coefficient detection of various torque tools.

3. Torque testing of other rotating tools (adapters may be required).

Examples of torque test data applications:

- Prepare the hole diameter parameters of reamed screws.
- Find screws according to torque value requirements.

- Distinguish the impact level according to the tightness of nuts.
- Fracture test of small parts.
- Quality control of plastic screw threads and small parts.

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Features:

1. Can calculate the maximum, minimum,d average torque an values.

2. Torque value display automatically resets to zero.

3. The torque tester can set upper and lower limits.

4. LCD digital display for easy reading an interpretation.

5. When setting the tool torque, the peak value is retained until reset to ensure accuracy.

6. Can test tightening and loosening torques in both clockwise and counterclockwise directions.

7. When measuring in the counterclockwise direction, the data is displayed as a negative value.

8. The strain gauge is directly attached to the torque sensor, and the self - contained shock - proof device has a simple design.

9. Can be connected to an external data processing and control system.

10. This tester uses a rechargeable battery. It is small in size and light in weight, convenient for portable use.

11. Comes with built - in output terminals to transmit measurement data to a computer for processing (see page 10 for details).

12. Equipped with an AC power adapter, suitable for 100–240V power supply, and uses an environmentally friendly nickel - metal hydride battery.

Safety Precautions

Please read the following safety precautions to ensure safe and proper use.

Before Use

• Before using this torque tester, read the user manual and the text on the labels affixed to the instrument.

• We are not responsible for any malfunctions caused by modifying, disassembling, or using the torque tester in a manner inconsistent with the manual.

During Use

• Keep the workplace tidy and organized to ensure no foreign objects are drawn in during measurement when using electric screwdrivers or other tools.

• Except when inserting it into the torque tester, do not point the bit of the electric screwdriver in any direction.

• If the torque tester exhibits any abnormality, stop using it immediately and contact the manufacturer or dealer.

• When using electric tools, operators should fasten their sleeves,

button their collars, and zip up their clothes.

• Operators should not wear gloves when using electric tools to avoid affecting the normal engagement of the tools.

Precautions for Using the Electric Screwdriver Torque Tester

• Never exceed the maximum torque specification shown on page 11. Torque exceeding 120% of the measurement rating will damage the internal components of the tester.

• The battery charger must not be used for batteries other than nickel - metal hydride (NiMH) batteries, even those produced by our factory (non - NiMH batteries).

• For the use of the test head, refer to the instructions on pages 8 and 9 regarding the test head.

•Do not disassemble or loosen the screws of this torque tester to avoid inaccurate measurements.

• Refer to the instructions on page 9 regarding battery charging when using the battery charger.

• Use the specified product to connect to the data output port.

• When connecting, tie the data line securely and be careful to avoid damaging the PIN pins of the connector.

• After completing the test, turn off the power switch.

• Do not strike or place heavy objects on the display panel.

• Avoid excessive internal adjustments during calibration or at other times.

• Handle with care and avoid dropping.

• This torque tester is very sensitive to the environment. Avoid using it in the following environments:

1. Places where water, oil, or other liquids may splash.

2. Places with vibration, dirt, or heat flow.

3. Outdoor places or places where electric sparks may occur.

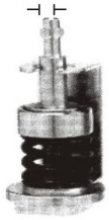
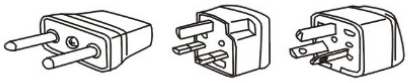
4. High - humidity and high - temperature environments (suitable humidity: 25% – 65%, suitable temperature: 15–35℃).

5. Any other places that may cause damage or malfunction to the tester.

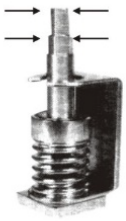
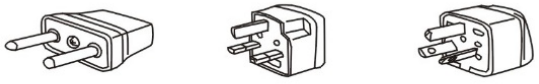
• Do not store the instrument in an environment with high humidity or high temperature to avoid reduced performance.

■ Accessories supplied with the torque tester

□ Scheme A: 50KG, 100KG

Country/ Region	Supplied accessories: Test head with safety frame	Supplied accessories: Threaded shaft	Supplied accessories
Korea Taiwan Hong Kong Singapore Chinese mainland	⌀5 Guide rod  Measuring range 0.15–10 N·m (black spring) 1 pc	Hexagonal guide rod (2-stage shaft)  Upper: opposite side distance 5 mm Lower: opposite side distance 6.35 mm 1 pc ⌀4 Guide rod  1 pc	Damping spring  For measuring lower range: 0.15–2 N·m (yellow spring) 1 pc Exclusive Battery Charger  One special battery charger (suitable for 100–240 V AC power supply) 220V adapter plug  Users in Japan, South Korea, Taiwan, Mexico, the United States and Canada do not need to use it.
Europe America Canada Australia	 Hexagonal guide rod (2-stage shaft) Upper: opposite side distance 5 mm Lower: opposite side distance 6.35 mm Measuring range 0.15–10 N·m (black spring) 1 pc		

2KG 10KG 20KG

Country/ Region	Supplied accessories: Test head with safety frame	Supplied accessories
Korea Taiwan Hong Kong Singapore Chinese mainland	 ⌀4 Guide rod Measuring range: 0.015–2 N·m (yellow spring) 1 pc	Exclusive Battery Charger  One special battery charger (suitable for 100–240 V AC power supply)
Europe America Canada Australia	 1 hexagonal guide rod (2-stage shaft) Upper: opposite side distance 5 mm Lower: opposite side distance 6.35 mm Measuring range: 0.015–2 N·m (yellow spring) 1 pc	220V adapter plug  Users in Japan, South Korea, Taiwan, Mexico, the United States and Canada do not need to use it.

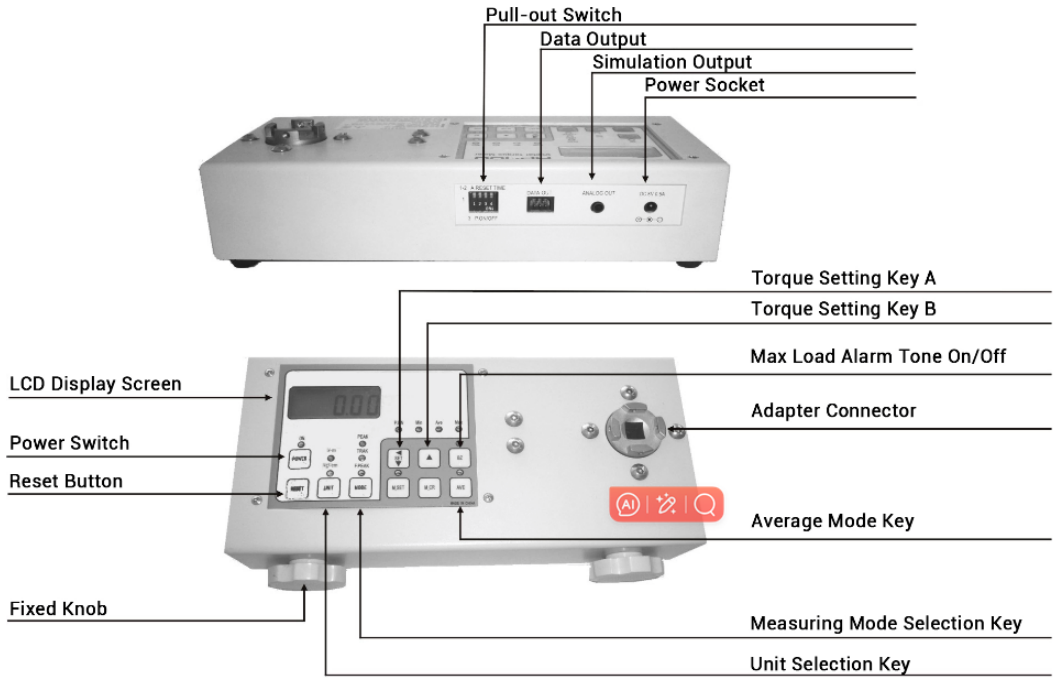
□ Scheme B

Model	Attachment (B)		Exclusive Battery Charger
2kg 10kg 20kg			 Special battery charger 100–240V
50kg 100kg			

*Grease must be applied properly to the test head with safety frame and the electric screwdriver shaft.

● The main unit and accessories are all placed in a special lead tool case.

■ Part Names and Functions of the Torque Tester



Component Name	Function
Power Switch (POWER)	Push - button switch. The LED lights up when the power is turned on. If the tester does not operate (or the torque load value is less than 10) within 10 minutes after being turned on, the power will automatically turn off.
Reset Key (RESET)	Resets the displayed data to zero.
Display Screen	Displays the test unit: - Model: Kgf.cm, N.m - 2KG/10KG: 0.00, 0.000 - 20KG/50KG/100KG:

Component Name	Function
	0.0, 0.00 - 300KG/500: 0.0, 0.00
Unit Selection Key (UNIT)	Select the corresponding measurement unit according to customer needs: N.cm ↔ Inf.in, N.m ↔ N.cm, N.m ↔ kgf.cm
Measurement Mode Selection Key (MODE)	- PEAK (Peak Mode): Locks the display when the torque reaches the peak (canceled by pressing the reset key). - TRACK (Variable Mode): Displays the change of the current torque value. - F. PEAK (Initial Peak Mode): Locks the display when the torque reaches the initial peak.
AC Connector	Used for battery charging.
Analog Data Output (ANALOG OUT)	Analog voltage data output port.
Electronic Data	Outputs measurement data. This function

Component Name	Function
Output (DATA OUT)	enables the measuring instrument to be used in a data management control system.
Toggle Switch	Used to enable automatic restart timing and data output (the LED liquid crystal display shows "P.ON" to indicate setting "On").
Torque Setting Key A (SET)	Sets the buzzer warning sound to activate when the maximum torque load value is reached.
Torque Setting Key B (▲)	Sets the buzzer warning sound to activate when the preset torque level is reached.
Maximum Load Warning Sound On/Off Device (BZ)	When this function is enabled, the LED indicator light turns on.
Average Mode Key (AVE)	When the average mode key is enabled, the LED indicator light turns on and the average torque test value is displayed.

Component Name	Function
Adapter Connector	Used to connect torque tools when using the test head or other types of adapters.

*SPC (Statistical Process Control) refers to monitoring changes in the production process for quality control using statistical methods.

Test Head (with Safety Frame)

The test head is randomly equipped in the torque tester. It is connected to the socket of the torque tester with a clutch - type electric screwdriver to measure the torque when the clutch disengages. The safety frame is also equipped to achieve a tightening effect similar to self - tapping screws.

Threaded Shaft (Supplied with 100KG Model)

The diameter of the screwdriver bit insertion port of the measured screwdriver is not a standard ϕ5mm port (for port size information, refer to "Replacing the Test Head Shock - Absorbing Spring" on page 7).

Operation Instructions

First, check the battery charging status. When the power is on and the battery power is insufficient, "LOBT" will be displayed. In this case, charge the battery with the battery charger for at least 3 hours but not more than 6 hours.

1. Ensure the torque tester is stable.

2. Select the required measurement unit [UNIT] (N·m ↔ N·cm, N·m ↔ Ibf·in, N·m ↔ kgf·cm).

3. Zero adjustment: Set the mode switch [MODE] to "TRACK" (variable value mode), and press [SET] and [▲] at the same time for less than 2 seconds. This setting can zero the tester. (Note: If the pressing time exceeds 2 seconds, the tester will be set to another mode. In this case, press [RESET] and repeat the zero - setting operation.)

4. Select the mode switch as "PEAK" or "F.PEAK":

- In "PEAK" mode, the display shows the maximum value reached during measurement, so the display will not change. The maximum measurement value of the 100KG model is 10N·m, and the corresponding display value is 15. Please measure within this range.

• In "F.PEAK" mode, the display shows the first maximum value reached during the test. Even if the subsequent measurement value exceeds this value, the display will not change.

5. Press [RESET] to clear the display.

6. When measuring counterclockwise torque, the value is displayed as negative.

7. When using computer monitoring software to output data, please open the 3rd connector on the toggle switch (see page 6). At this time, the P.ON indicator light is on, and the computer software can send instructions to communicate with the torque meter for data collection. To output data correctly, please measure within the peak range according to the technical indicators shown.

8. Please refer to the following for detailed instructions on using the test head to measure the torque of electric screwdrivers.

9. The test head can be replaced to measure other types of tools. (Refer to "Measuring the Torque of Non - Electric Screwdriver Tools with Adapter")

10. After the measurement is completed, ensure the power is turned off and remove the tool from the socket.

How to Measure the Torque of Electric Screwdrivers with the Testad

1. Insert He the test head into the socket of the electronic torque tester, then place the bit of the electric screwdriver be tested into the to test head. The square test head is suitable for bits with a diameter of 5mm. The 100KG test head is also equipped with two threaded shafts, which can be used to test three different diameters of bits. (When replacing the shock - absorbing spring, please refer to page 7 for the port size.)

2. Select reverse rotation of the electric screwdriver (REV) to make the spring of the test head slightly loose. The spring can be rotated gently by hand.

3. Press [RESET] to zero the reading.

4. Select forward rotation (FOR) of the electric screwdriver until it stops automatically. At this time, the spring is tightened.

5. When the screwdriver stops rotating, the display will show the torque value of the screwdriver.

6. Select reverse rotation of the electric screwdriver (REV) to loosen the spring of the test head, then press [RESET] to clear the reading.

7. Repeat the above operations to determine the torque value reading. Refer to the parameter table of the electric screwdriver's torque test to adjust to the appropriate torque value.

Functional Description

DIP Switch: Be sure to turn off the power before changing the DIP switch settings.

• Auto Restart

Position \ Switch		Automatic Restart Time		Data Output On/Off	
		1	2	3	4
Automatic Restart Time	1 second	On	On	--	--
	2 seconds	On	Off	--	--
	3 seconds	Off	On	--	--
	Shut Down	Off	Off	--	--
Data Output	Output On	--	--	On	--
	Output Off	--	--	Off	--

Note:

1. When the auto - restart function is enabled, the reset button will not work.

Data Output

1. Optional computer monitoring software is available. For specific functions, please refer to the ELET Torque Meter Monitoring Software Manual.

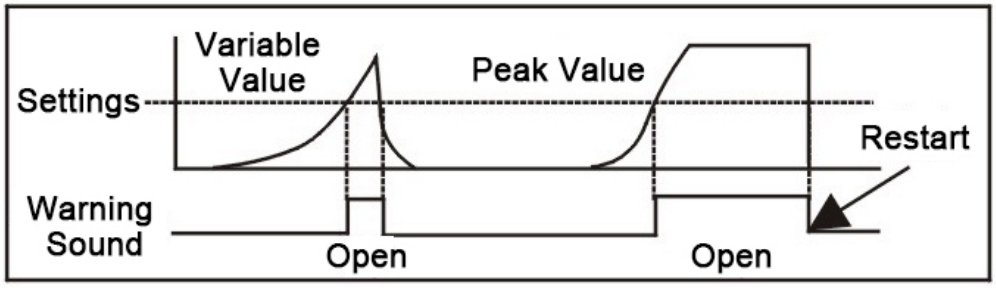
Setting Torque

The electronic tester is equipped with an alarm device that emits a beep warning sound when the maximum torque load is reached.

A beep warning sound is also emitted when the torque setting is changed.

Torque settings can be adjusted as needed. The beep warning sound indicates that the set torque value has been measured.

Example (Torque Value Set to 100)



Functions of the Torque Setting Keys

Keys Used

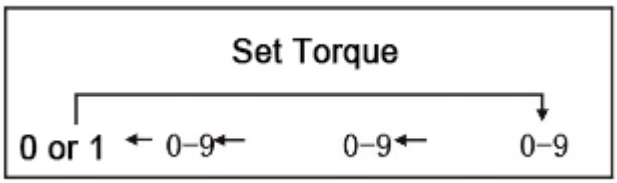
① Set Key (SET) ② Up Key (▲) ③ Reset Key (RESET)

① Set Key (SET)

1. Press this key for 2 seconds to enter the torque setting mode.

Press this key again for 2 seconds to exit the torque setting mode.

2. While the tester is in torque setting mode, the four - digit display can be adjusted one digit at a time.



Use the Set (SET) key to select the digit to adjust. The selected digit flashes. Each time the Set Key (SET) is pressed, the next digit to the left is selected. Alternatively, after pressing the key, the leftmost digit is selected, and the rightmost digit is pending selection.)

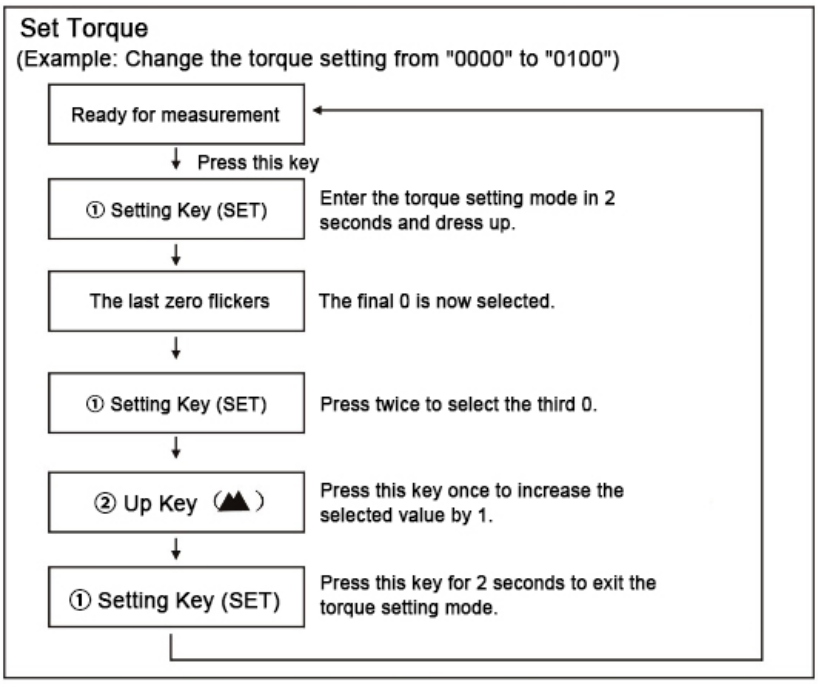
② Up Key (▲)

While the tester is in torque setting mode, pressing this key increases the selected value by 1 each time. Note: The leftmost digit can only be 0 or 1.

③ Reset Key (RESET)

Pressing this key puts the tester into the ready - to - test state. While the tester is in torque setting mode, pressing this key cancels the setting and exits the torque setting state.

Setting Torque (Example: Changing Torque Setting from "0000" to "0100")



Measuring Average Torque

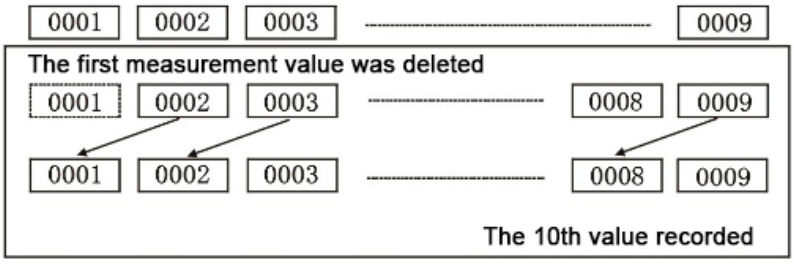
Purpose: To simply manage torque in daily operations

Measurement Process

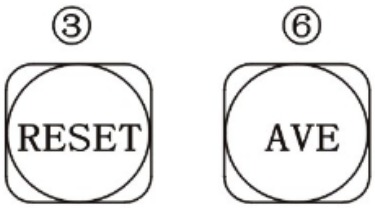
In each set of measurement data, try to include the minimum, average, and maximum values, with each set containing more than 10 measurement values.

1. The measurement results are automatically sorted from 0001 to 0009. Negative values are not recorded. When the tester exits the average mode, the measurement values in the average mode are automatically deleted.

2. If the number of data in this group is less than 9, the display only shows those data (fewer than 9).



Keys Used in Average Measurement Mode



③ Reset Key (RESET):

Press this key in the average measurement mode to enter the measurement state.

⑥ Average Key (AVE):

Press this key for 2 seconds to enter or exit the average measurement mode.

In the average measurement mode, the LED light is on.

The displayed value is the average, and the display cycle is shown.

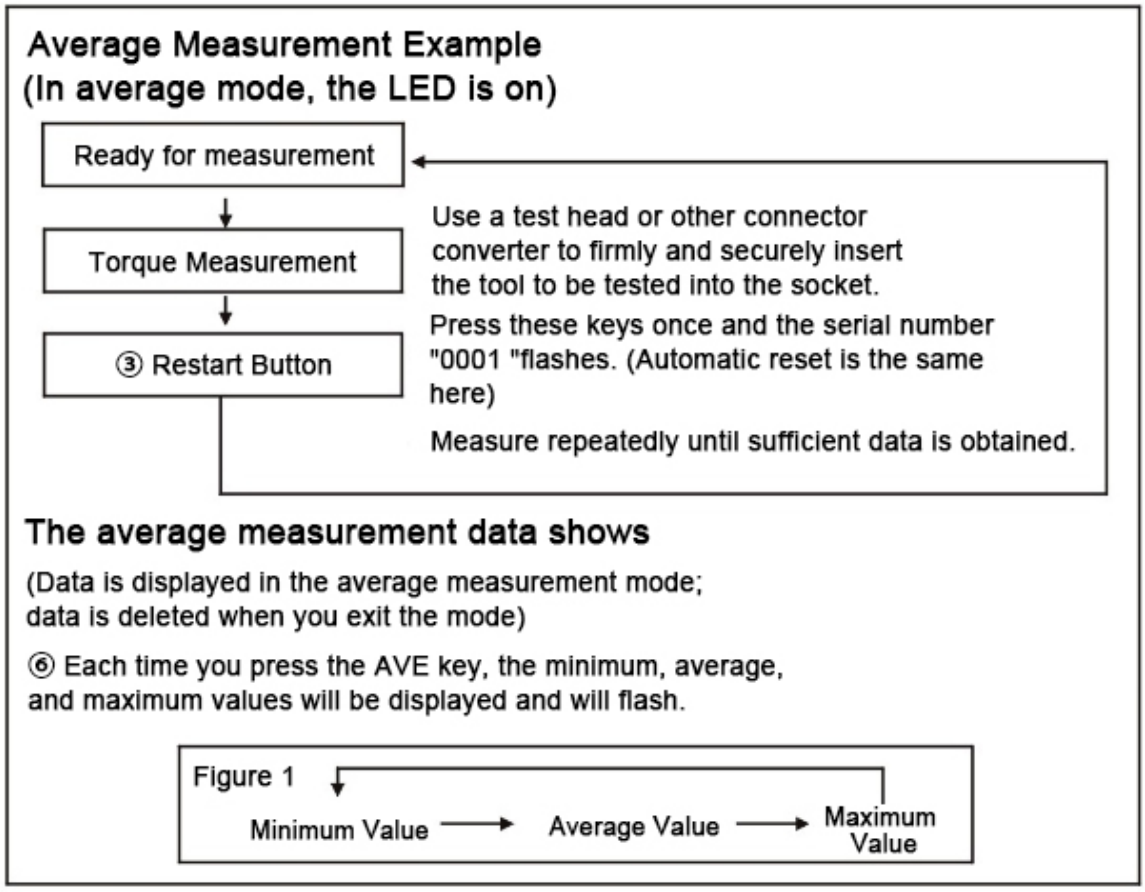
Average Measurement Example (LED is on in average mode)

Step Operation/State

1 Prepare for measurement

2 Torque measurement: Fix the tool to be measured in the socket using the test head or other adapter converters.

3 Press ③ Reset Key once: The sequence number "0001" flashes. (Automatic reset is the same.) Repeat measurements until sufficient data is obtained.



Notes:

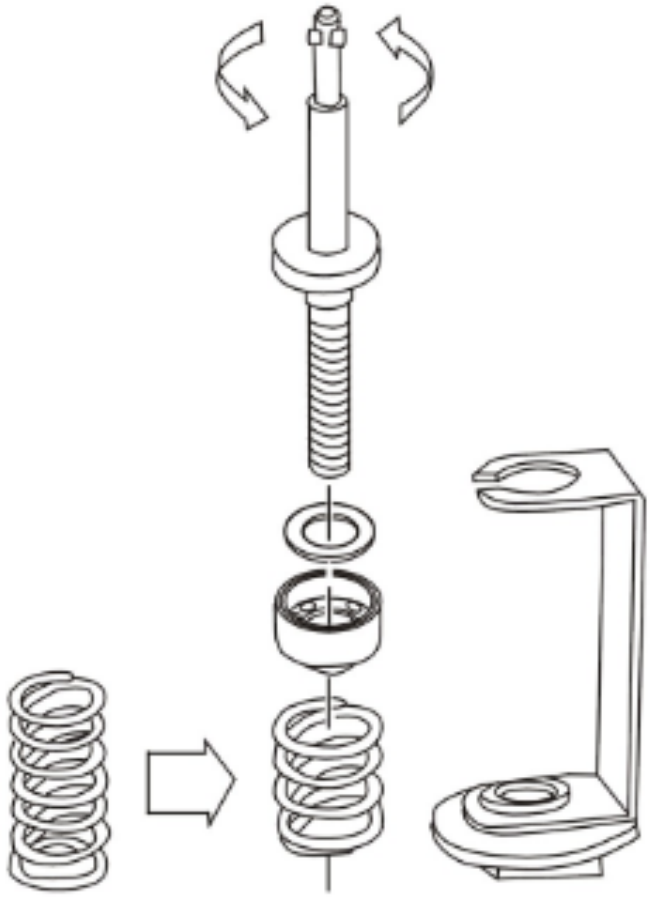
1. Before entering the average measurement mode, ensure that the mode key (MODE) is set to "Peak (PEAK)" or "First Peak (F. PEAK)".

2. In the average measurement mode, the unit key (UNIT) does not work.

Replacing the Test Head Shock Spring (Model 100 KG)

The model 100KG is randomly equipped with 2 springs. The black one is the high - pressure spring, and the yellow one is the low - pressure spring. The test head has a caliber of 5mm. The supplied one is the black spring. Replace it with the yellow spring when measuring small torque.

● Insert the electric screwdriver bit into the test head. Rotate the screwdriver in the opposite direction to loosen the threaded rod, then replace the spring.



Test Head Maintenance

When operating the test head, please carefully read the following points.

● Using the Test Head

1. The load - bearing capacity of the test head must not exceed the specified measurement range.

2. The test head can only measure the tools it is designed to measure.

3. Keep the test head loose. After measurement, remove the test head from the socket.

4. During the measurement process, keep the electric screwdriver and the test head upright.

If the test head is used for small torque, keep the torque on its upper surface within 5 kg or 2 kg.

5. When measuring a set of data, components ①, ②, and ⑤ of the testing head must be lubricated with grease, as shown in the figure on page 8.

6. Note that each measurement cycle must last at least 5 seconds to minimize wear on the components.

7. If not used immediately, do not assemble the testing head. When not in use, please remove the testing head from the torque tool and relieve the pressure on the spring.

8. Always install the testing head on the torque tool correctly.

9. Do not use the testing head if it is bent or deformed. Use the grease supplied with the unit whenever possible. This grease is also available for separate purchase.

● Maintenance and Inspection of the Testing Head

1. Regularly lubricate components ①, ②, and ⑤ shown in the figure below.

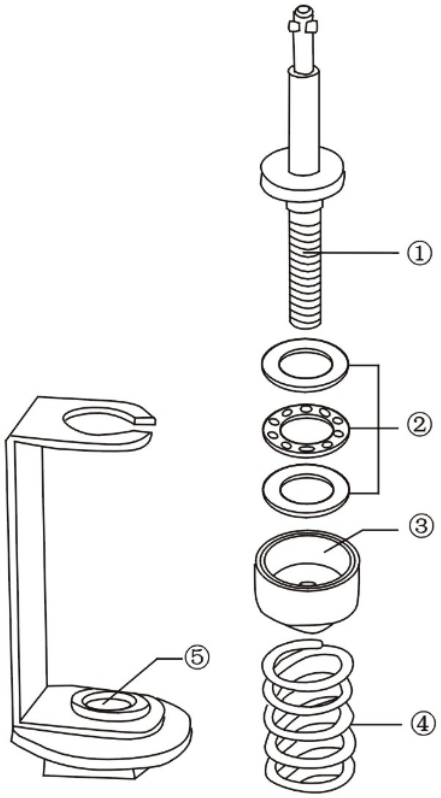
2. Frequently inspect the components of the testing head before use.

(1) Does component ①, ②, or ⑤ have grease?

(2) Is there any wear on the threads of the threaded shaft?

(3) Are there any dust or foreign particles on the threaded shaft?

3.The testing head must eventually be replaced. Inspect it periodically and replace it when necessary.



Testing Head Components

Component Name

① Threaded Shaft

② Bearing Assembly

③ Bearing Housing

④ Spring

⑤ Support

Guidelines for Timely Replacement of Testing Head Components:

①, ②: Threaded shaft and bearing assembly: After 2500 revolutions

① Threaded shaft only: When bent or worn

④ Spring: Replace together with the threaded shaft after 2500 revolutions

⑤ Support: After 5000 revolutions

Caution!

The safety frame prevents thread fracture of the threaded shaft due to wear or metal fatigue. For enhanced safety, operators are advised to follow the above guidelines for component replacement.

Item Name	Electric Screwdriver Shaft	Measurement Range	Notes
Testing Head with Safety Frame	Hexagonal Rod, 6.35 mm across flats	3–9 N·m	Used for measuring electric screwdrivers with a 6.35 mm across-flats drive

100KG Standard Accessories	/	/	Refer to page P4 of the operation manual for standard accessories (without battery charger)

■ Use of Sockets

Except for the testing head or threaded rod, you can also use an adapter to insert tool bits of different sizes into the socket for torque testing. When using an adapter, pay attention to the following points.

Precautions for Using Adapters

Ensure the adapter is firmly inserted into the socket.

Ensure the adapter will not break during testing.

Do not use an adapter when the vertical torque exceeds 10 kg.

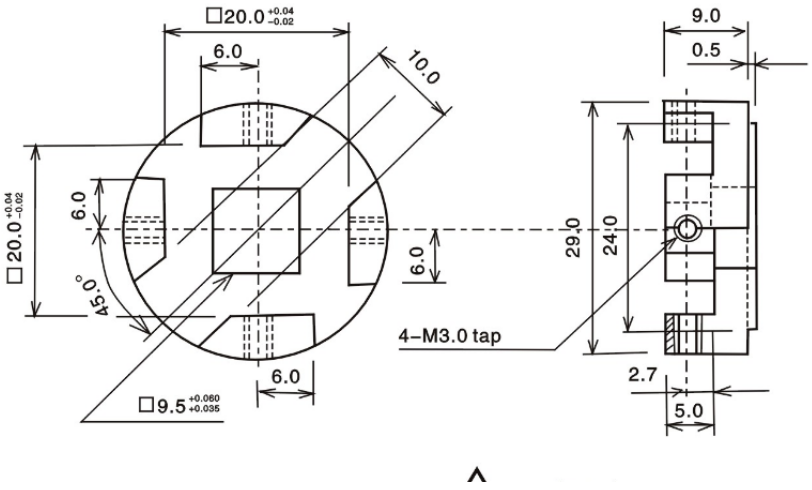
Strictly follow other torque measurement principles.

■ Battery Charger

Please use the dedicated charger of the tester to charge the battery.

Turn off the power when charging. The first charge requires 6 hours to fully charge the battery.

Danger!



The charging time must not exceed 6 hours, so as to avoid overcharging, overheating, damage to the battery, or fire.

■ Precautions

Do not charge for more than 6 hours.

Only use nickel - metal hydride batteries; do not use other types of batteries.

Do not use the tester while charging.

When the display shows “Low Battery (LOBAT)”, stop measuring and charge the battery.

This battery charger is only for charging the battery of this tester.

Do not place objects on the charger's wire box. Do not pull the wire violently or knot the wire.

When connecting or disconnecting the charger, make sure the power is turned off.

Do not disassemble the battery.

■ How to Recharge

Turn off the power of the torque tester and plug the battery charger into the power source.

After charging is completed, unplug the wire, turn on the tester switch, and check the display.

After the battery charger has cooled down, place it in a suitable location.

■ Data Output Types

Use the output data cable tool and computer monitoring software (available from all distributors) to transfer measurement data to a

computer.

■ Analog Data Output Type

The analog data cable must be purchased separately.

■ Customer Service

Repair

1. Repairs will be charged in the following situations:

(1) Malfunctions or damages caused by improper use, or improper re - repair.

(2) Internal lubrication of sockets, switches, or instruments.

(3) Damage to the instrument during transportation, such as drops.

(4) Damages caused by fire, gas explosions, earthquakes, water immersion, abnormal power supply, or other natural disasters.

(5) Services such as calibration, inspection, or replacement of parts like the testing head.

2. Within three months after the completion of inspection or calibration, necessary inspections of the same part will not be charged separately. (Such situations do not fall into items (1) - (4) that require charges.)

3.The transportation and handling costs generated during the repair service shall be borne by the customer. If you have any questions, please contact directly.

■ Precautions

This product is equipped with a rechargeable battery. This battery is an environmentally friendly battery. When the battery reaches the end of its service life, according to the laws of different countries and regions, it is illegal to discard waste batteries into urban landfills. Please consult the local solid waste management officer to inquire about waste battery recycling or disposal.

■ Inspection and Calibration

The unique sensing mechanism adopted by this tester can ensure long - term accuracy. A tool for detecting its accuracy (calibration test bar) is also provided. However, in addition, we recommend sending this torque tester back to the manufacturer for inspection at least once a year. (Please note that this service is chargeable.)

The tester is delivered in compliance with our company's precision standards. Based on different usage conditions of the measuring instrument, years of use will affect the accuracy. Therefore, our

company provides calibration and necessary maintenance services. At the same time, we recommend using the regular calibration documents attached to this measuring instrument.

■ Precautions for Sending the Measuring Instrument Back for Calibration or Repair

1. Place the measuring instrument in the original tool case to avoid damage during transportation.
2. Except for the original items in the tool case, do not place any other items in it. Moreover, do not put self - made installation boards, tools, or spare cutting heads into it. Our company will not be responsible for any consequences caused by this.
3. Please describe the fault in detail.

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■ Troubleshooting

If this torque tester malfunctions, please troubleshoot according to the following table. If the problem persists after troubleshooting, please contact the manufacturer or distributor.

Malfunction Condition	Possible Cause	Solution
Displays "LOBAT"	Low battery power	Charge the battery as instructed on Page 9. If the issue remains, contact the manufacturer or distributor.
No display on the screen	The tester has not been used for a long time or the battery has self - discharged for a long time	Turn off the power switch, charge the battery (for no more than 6 hours), then turn on the power switch and check if the screen displays. If there is still no display, contact the manufacturer or distributor.
Display value does not	Zero - setting was not performed	Perform zero - setting adjustment

Malfunction Condition	Possible Cause	Solution
return to zero		
Display value keeps changing	"TRACK" variable mode is selected	Switch to "PEAK" peak mode
Battery cannot be charged	The connection line of the battery charger may not be fully inserted into the socket; the plug of the circuit is incorrectly connected	Check if the circuit is properly connected; connect the battery charging socket
"LOBAT" reappears after battery charging is completed	The battery life has expired; the battery is not fully charged	Send it to the manufacturer for repair; charge again (for no more than 6 hours)
Screen displays value	May be caused by power - generated	Press the reset key to clear the screen

Malfunction Condition	Possible Cause	Solution
when it should not	noise	

■ Technical Specifications of Torque Tester

Model	2KG	10KG	20KG
Peak Value (N·m)	0.003–0.20	0.015–1.00	0.03–2.00
Peak Value (N·cm)	0.3–20.0	1.5–100.0	3.0–200.0
Peak Value (Lbf·in)	0.03–1.8	0.15–9.0	0.30–18.0
Peak Value (kgf·cm)	0.03–2.00	0.15–10.00	0.30–20.0

Model	50KG	100KG	300KG	500KG
Peak Value (N·m)	0.075–5.00	0.15–10.00	0.45–30.00	0.75–50.00
Peak Value (N·cm)	7.5–500.0	15–1000	45–3000	75–5000
Peak Value (Lbf·in)	0.75–45.0	1.5–90.0	4.5–270.0	7.5–450.0
Peak Value (kgf·cm)	0.75–50.0	1.5–100.0	4.5–300.0	7.5–500.0

Accuracy	±1% of full scale
Power Supply	5 × 1.2V Ni-MH rechargeable batteries (1000mA)
Charging Time	About 6 hours
Continuous Working Time (Fully Charged)	About 8 hours
Battery Life	Approx. 300 charge cycles
Dimensions (mm)	Refer to image
Weight	1.8 kg
Charger	Input: AC 100–240V (50/60Hz); Output: DC 7.3–8V (0.5A)

· Do not measure torque beyond the range of the torque tester.

· Battery life is related to operating conditions; (the company) does not guarantee it.

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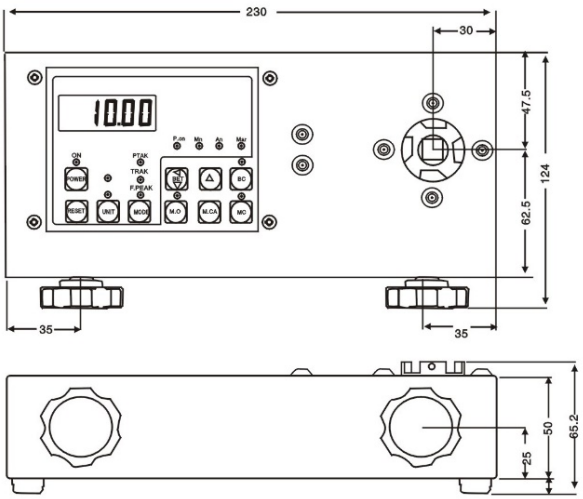
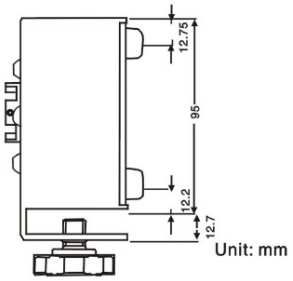
Standard Configuration

2/10/20Kg	50Kg	100Kg	300/500Kg
Aluminum Case + Key	Aluminum Case + Key	Aluminum Case + Key	Aluminum Case + Key
Main Unit	Main Unit	Main Unit	Split Main Unit + Connection Cable
Charger	Charger	Charger	Charger
Two-Prong Plug	Two-Prong Plug	Two-Prong Plug	Two-Prong Plug
Three-Prong Plug (2 holes, black)	Three-Prong Plug (2 holes, black)	Three-Prong Plug (2 holes, black)	Three-Prong Plug (2 holes, black)
Three-Prong Plug (3 holes, white)	Three-Prong Plug (3 holes, white)	Three-Prong Plug (3 holes, white)	Three-Prong Plug (3 holes, white)
Manual	Manual	Manual	Manual
Calibration Report	Calibration Report	Calibration Report	Calibration Report
Torque Transducer:	Torque Transducer:	Torque Transducer:	Torque Transducer:

A Option	B Option	A Option	B Option	A Option	B Option	Specialized Solution
Square mirror clamp	Base	Square mirror clamp	Base (Large)	Square mirror clamp	Base (Large)	Upper Chamber
paintball	Color Spring	Color Spring	Color Spring	Color Spring	Color Spring	Lower Base
ϕ 4guide rod	Φ4 (Small)	Black Spring	Black Spring	Black Spring	Black Spring	Shim
Φ 5 guide rod	Φ5 (Small)	Φ4 Guide Rod	Φ4 (Large)	Φ4 Guide Rod	Φ4 (Large)	Hex socket screw
/	Hex (Small)	Φ5 Guide Rod	Φ5 (Large)	Φ5 Guide Rod	Φ5 (Large)	Hex socket sleeve
/	Screwdriver (Small)	Hex Rod	Hex (Large)	Hex Rod	Hex (Large)	/
/	/	/	Screwdriver (Large)	/	Screwdriver (Large)	/

Appearance Drawing





● All models have the same appearance dimensions.

Please note: Technical specifications and appearance of the torque tester are subject to change without notice.

■ Specifications for simulation and data output

The data shows that 1000 is approximately 1 volt.