

IST-07TS3000

SEMI-AUTOMATIC TORQUE WRENCH TEST STAND IST-07TS3000 OPERATION MANUAL



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EN -- Please scan the QR code or visit the website for operation manual.

IT --- Scansiona il codice QR oppure visita il sito web per il manuale d'uso.

CZ -- Pro návod prosím naskenujte QR kód nebo navštivte webovou stránku.

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PT -- Para aceder ao manual de instruções, por favor, faça a leitura do código QR ou visite o nosso site.

MN-IST-07TS3000-E

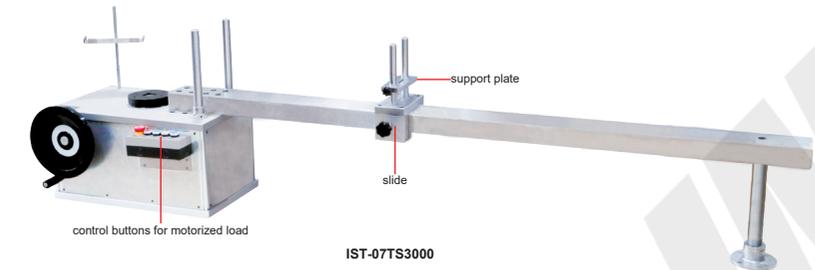
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Description

1 Function features :

- Motorized load (constant speed of applied torque): maximum torque up to 1000N.m for testing torque wrenches and reducing test time
- Manual load (adjustable speed of applied torque): maximum torque up to 3000N.m for testing torque wrenches
- Easy operation due to the gear box
- The slide can be moved to adjust different length of torque wrenches and the support plate can be adjusted to keep the wrench level
- Used with digital torque testers **IST-TT** series (optional)

2 Structure:



application example (digital torque tester connection example)

3 specification :

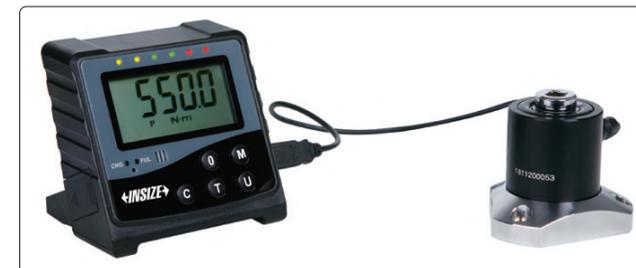
SPECIFICATION

Code	IST-07TS3000
Max. torque value (manual load)	3000N.m
Arm length	420~2050mm
Power supply	220V, 50HZ
Dimension	2400×480×630mm
Weight	135kg

Can be customized according to test requirements

OPTIONAL ACCESSORY

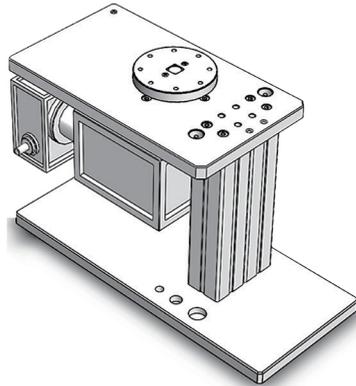
Digital torque tester	IST-TT550, IST-TT1000, IST-TT2200, IST-TT3000
Adaptor	IST-07TS-BLOCK (necessary for IST-TT550, IST-TT1000, IST-TT2200 and IST-TT3000)



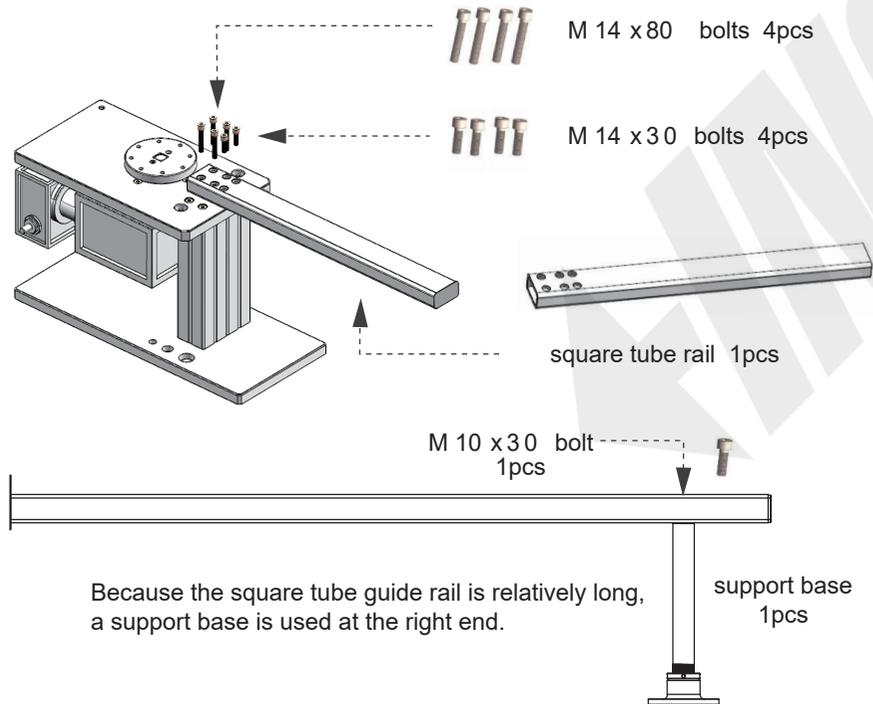
digital torque tester (optional)

Torque Test Stand Installation Instructions

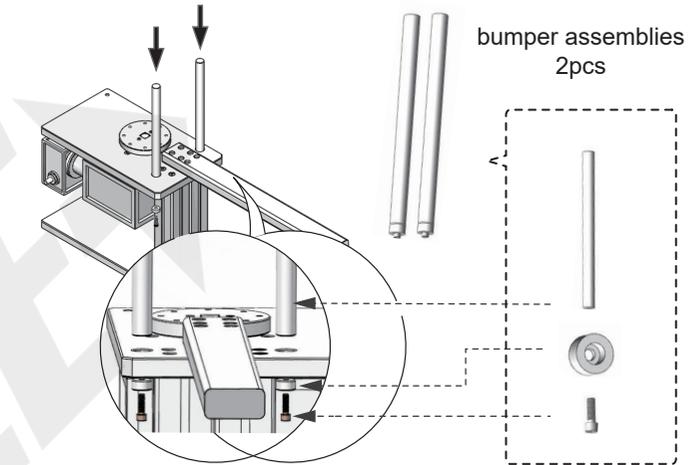
- 1 Place the main body of the test frame on the tabletop.



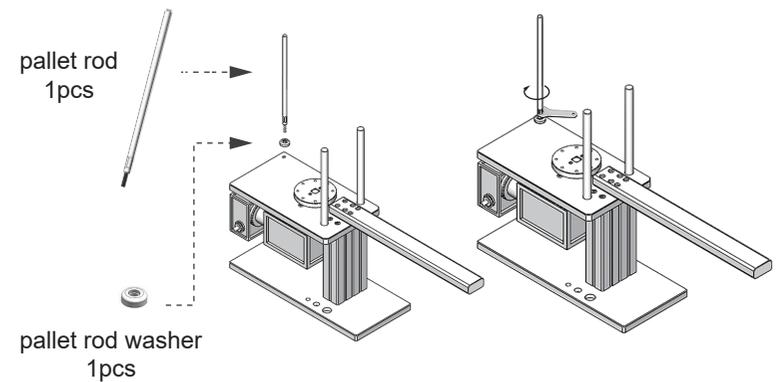
- 2 Install square tube rails: Use a 14 mm hex wrench to tighten the bolts and secure the support base with a 10 mm hex wrench.



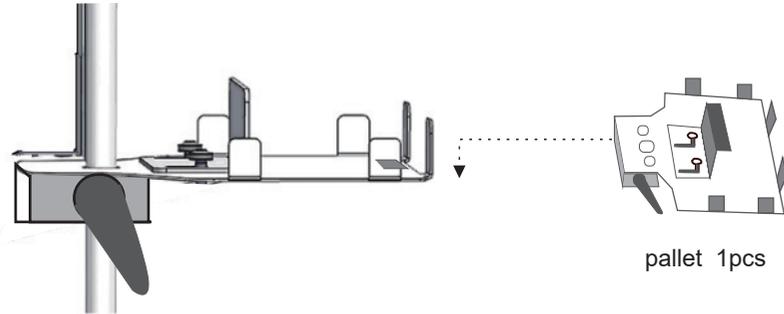
- 3 Install the safety bar: Insert two safety bars and tighten the screws with a 6mm hex wrench.



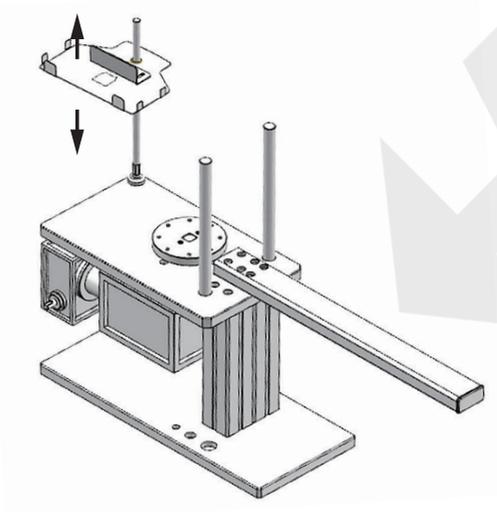
- 4 Install the instrument panel rod: Place the washer under the panel rod and tighten the panel rod with an 11 mm open-end wrench.



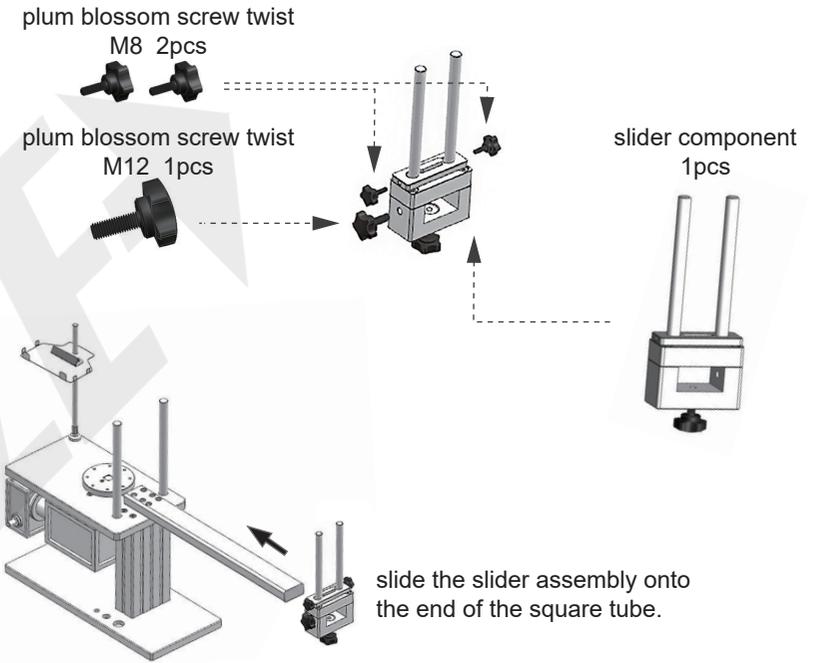
- 5 Pallet loading: Insert the pallet into the pallet bar, tighten the locking handle, and the pallet will remain in place.



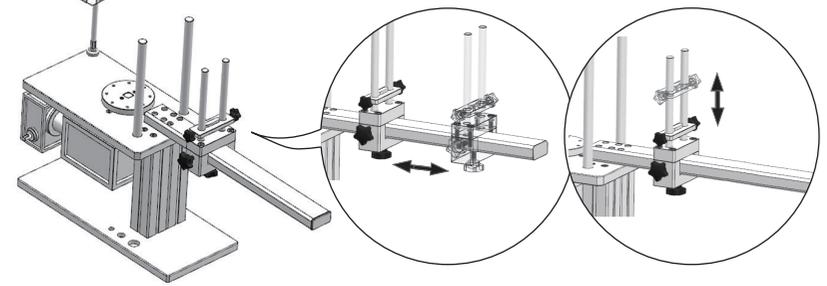
- 6 Adjust the tray height to the appropriate position and lock it in place by tightening the small handle.



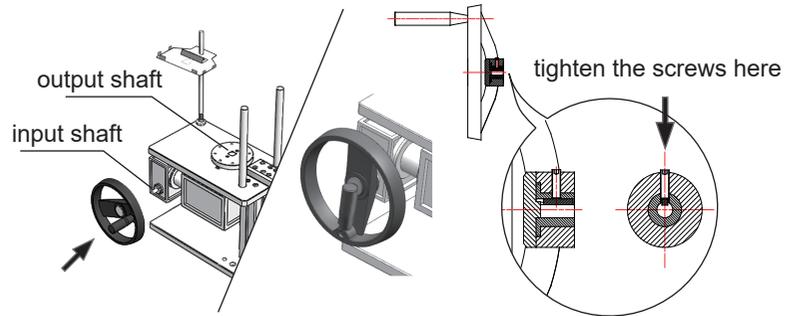
- 7 Install the slider assembly: screw the star-shaped screw knob onto the slider assembly, but do not tighten it.



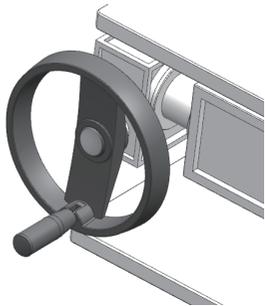
After adjusting the slider up/down or left/right to the appropriate position, lock it in place with the plum blossom screw twist.



- 8 Install the handwheel: Screw the handle into the wheel disc, place the entire handwheel on the input shaft of the main unit, and tighten the screw with a 3 mm hex wrench.



The handle is installed perpendicular to the wheel. When the wheel is turned, the output shaft also rotates, indicating normal operation.



Torque Tester Installation Instructions

Installation of the Torque Testing Device

1. Install the sensor by aligning its mounting holes with those of the transition plate IST-07TS-BLOCK (sold separately), then secure it with bolts.
2. Secure the instrument. Place the instrument on the instrument tray. If necessary, use a clamp to secure the display.
3. Connect the sensor and instrument cables, then power on the instrument.
4. Place the torque wrench on the device, ensuring the torque direction is correct. Verify the torque direction is accurate, then proceed with the test.



Operation

Before testing:

First, plug the machine's power cord into an outlet to connect it to the power supply (220V). Then, insert the wrench drive square tenon to be tested into the sensor's square hole. If the square hole dimensions do not match, use the corresponding conversion square hole adapter to ensure compatibility, and confirm that the direction of the ratchet reversal torque is correct. Move the slider on the square tube guide rail so that the center point of the wrench handle rests against the reaction rod. Adjust the position of the wrench support on the slider to ensure the wrench shaft is in a horizontal position. Then tighten the four hex nuts on the slider.

Testing:

Electric control:

There are five buttons for electric control:

- ① Mushroom head button: Emergency stop
- ② Red button: Stop the appliance
- ③ Green button: Start the appliance
- ④ Yellow button CW: Apply force in a clockwise direction with a wrench
- ⑤ Blue button CCW: Apply force in a counterclockwise direction with a wrench



electric control button



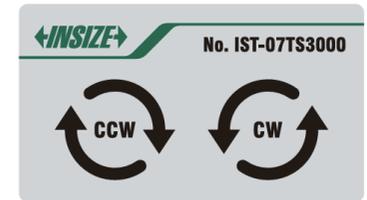
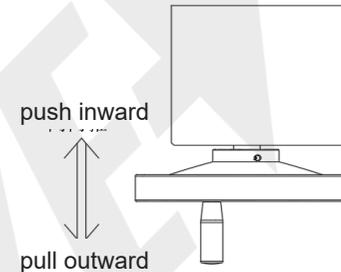
Note:

The electric control applies a constant force at a relatively fast speed. This is mainly to save on empty shaking before measurement. If the measured torque value is less than 1000 N.m, pay close attention to the current torque value and switch to handwheel loading as soon as possible to prevent torque overload.

Handwheel control:

The handwheel has two positions. When the handwheel is pushed inward, the electric control buttons can be operated.

When the handwheel is pulled outward, the electric control buttons CW and CWW are disabled.



handwheel rotation indicator

For example:

When testing the clockwise (CW) direction, first push the handwheel inward, then press the yellow CW button. The motor will apply torque until a certain torque is reached, at which point release the yellow button to stop application. Then pull the handwheel outward and slowly rotate it in the direction indicated by the markings above the handwheel (counterclockwise rotation of handwheel applies clockwise force to the wrench, while clockwise rotation of handwheel applies counterclockwise force to the wrench).

When you hear the mechanical wrench make a "click" sound or observe that the digital torque wrench has reached the torque measurement point, immediately stop applying force, press the blue CWW button to return, until the load is released, then read the data displayed on the instrument.

Note: Before recording readings, the test direction is typically fully loaded three times, then the wrench is pre-set to the lower end, and testing begins at the 20%, 60%, and 100% points, with three data readings taken at each pre-set point (in accordance with the ASME B107.14-2010 standard). The speed of the handwheel rotation is determined based on data displayed on the instrument. Generally, the test data should slow down once it reaches 80% of the test point standard value, and the test should be completed within 0.5 to 4 seconds between 80% and 100% of the range for mechanical wrench.