



TORQUE TESTER

mini K1

mini K5

mini K20

mini Ke

OPERATOR'S HANDBOOK



1. APPLICATIONS

Recommended for all hand screwdrivers, wrenches, or power tools.

2. FEATURES

1. Torque range:

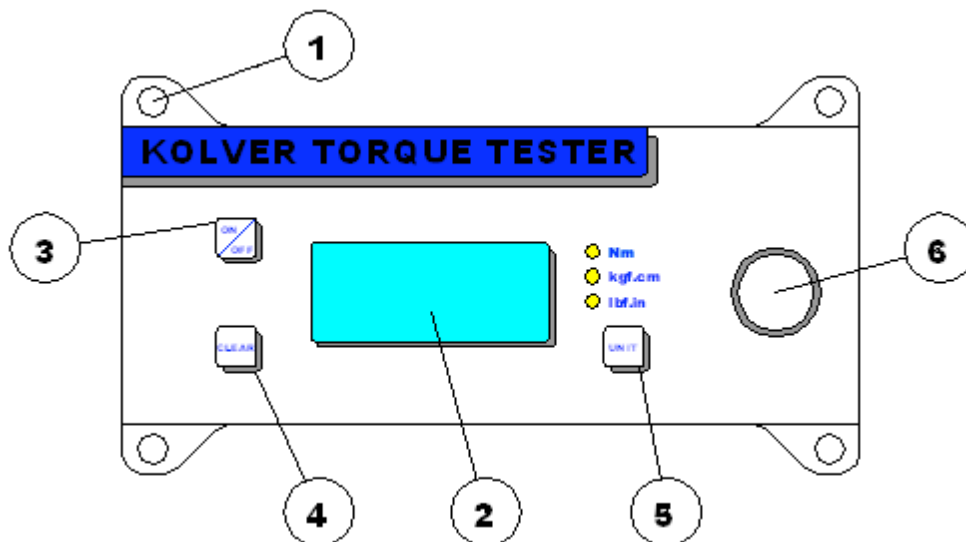
- miniK1: 0,05-1Nm,
- miniK5: 0,3 - 5 Nm,
- miniK20: 0,5 - 20 Nm

2. Accuracy:

- miniK1 = ± 1 cNm ± 1 digit
- miniK5 = ± 2 cNm ± 1 digit
- miniK20 = ± 3 cNm ± 1 digit

- Built-in transducer to measure on joint simulator.
- External transducer (**miniKe**).
- Three units of torque measurements: (Nm, Kgf.cm, lbf.in).
- Manual and auto reset functions to clear displayed values.
- Certificate of calibration.

- Battery powered (9V) or AC adapter cord (option at extra cost). 9V batteries provide 20 hours of continuous operation.
- Automatic shut down.



3. DESCRIPTION

1. Mounting holes
2. Display 4 digit / 8 lines
3. "ON/OFF" key : press for 3 seconds to switch tester on or off
4. "CLEAR" key : press to reset the displayed value
5. "UNIT" key : press to select the unit of torque measurements
6. Internal transducer or port for external transducer

4. MOUNTING

It is strongly recommended securing the tester through slots “1” to a workbench before operating. Immobilizing the tester when checking torque values over 1 Nm is critical for the safety the operator as well as for the accuracy of torque measurements during operation.

5. JOINT SIMULATOR

The Joint Simulator (JS) consists of a screw compressing a series of washers. The way the washers are mounted can simulate soft or hard joint. The screw comes with a ¼” hex male head for proper fit to any ¼” hex female screwdriver drive. Hardened thread components increase accuracy and life. Since a joint simulator cannot duplicate actual joints, the torque values displayed on the miniK may vary from the actual torque that a screwdriver will apply to the actual assembly. When critical applications are involved, we recommend to verify the torque output of the power tool being used on the actual assembly through an external transducer.

NB. we recommend to grease the JS each 1000 cycles.

6. STARTING AND OPERATING THE TESTER

1. Immobilize the tester when checking torque values over 1 Nm. This is critical for the safety the operator as well as for the accuracy of torque measurements during operation.
2. Switch the tester on pushing the ON/OFF key. If the tester does not switch on or the display is not clear enough, please replace the battery. The display will show the main screen:



3. Insert the joint simulator into its 13mm hex seat and make sure the screw is in its upper position (if not run the driver anticlockwise to unscrew it). The tester is ready for a measuring cycle.
4. Run the joint simulator screw all the way down until it stops and read the torque value on the display. Run the screw up to be ready for the next cycle.
5. Press the “ON/ESC” key for 3 seconds to switch the tester off. The Tester features a built-in auto shut off mode function to save power when not in use. If there is no activity for 3 minutes, such as key press or no torque input, the tester will shut down. To restore power press the “ON/ESC” key for 3 seconds

NB. Upon starting, always check and clear the zero (see the menu).

7. SELECTING THE UNIT

MEASURING UNIT: Nm, kgf.cm and lbf.in

To change unit: press **Unit** key until the desired unit has been selected. Each unit is indicated by a LED of different colour, red for Nm, green for kgf.cm and yellow for lbf.in .

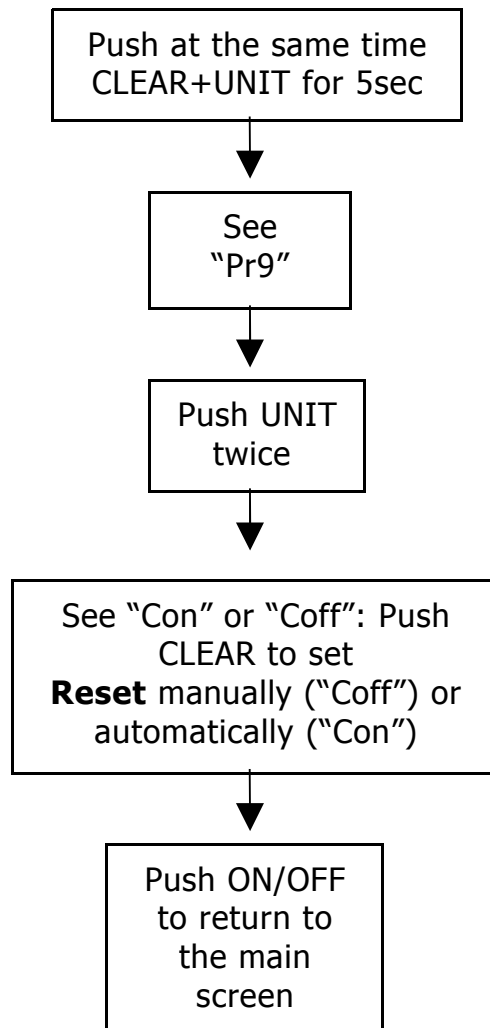
8. SELECTING AUTORESET OR MANUAL RESET

The flow chart below shows how to select Autoreset or Manual Reset on **miniK5** and **miniK20**.

MiniK1 can only work with manual reset.

When you select Autoreset “Con”, any new measure will replace the previous one without resetting the value to zero.

When you select Manual Reset “Coff”, you need to push “CLEAR” to remove readings from the display and reset all values to zero.



9. EXTERNAL TRANSDUCER for miniKe

The miniKe readouts support an external rotary or non rotary transducer. The miniKe can read torque up to 999.9 Nm. The external transducer must be calibrated together with the miniKe here at Kolver before shipment. The following transducers are always available ex stock:

Model	Torque range Nm
RTSX50	0.5 – 5.0
RTSX100	1.0 – 10.0
RTSX250	2.0 – 25.0

Rotary and non rotary transducers for lower or higher torque ranges available on request.

10. MAINTENANCE

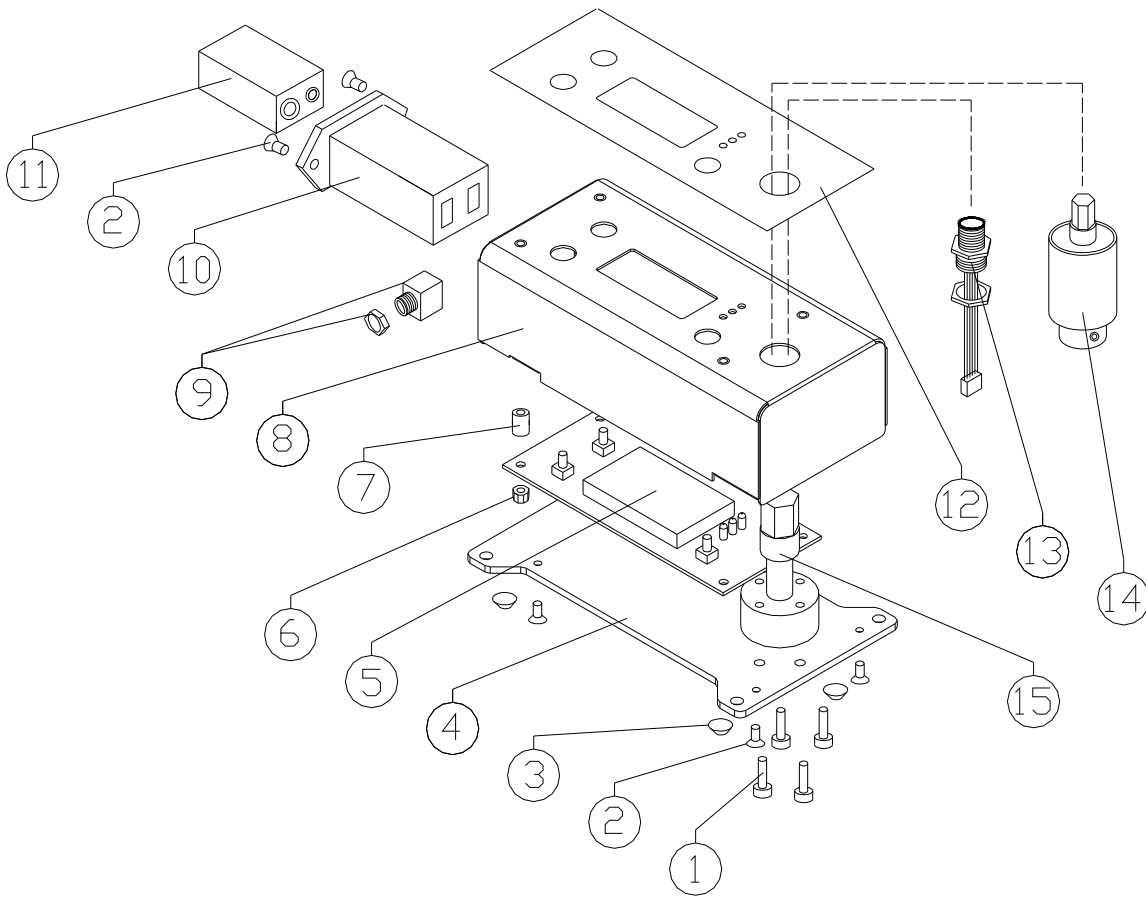
The miniK testers are maintenance free. The electronics and the internal transducers have no wearing parts except the battery once its charge is over. The internal transducer should be calibrated every 12 to 30 months, depending on the frequency of use.

WARNING: The overload protection of the internal transducer is limited to 125% of nominal value. Damages due to overloading will result in inaccurate readings and will not be covered by our warranty.

11. WARRANTY

Every Kolver product is thoroughly checked and tested before shipment. Should defects due to faulty materials and/or workmanship develop within (1) year from the date of sale, the product will be repaired free of charge if returned to Kolver. This warranty is not valid if the product has been misused, tampered with or abused. Any questions pertaining to Warranty Repair or Returns should be directed to our Customer Service department. All incoming freight charges are the responsibility of the customer.

12. EXPLODED VIEW AND PART LIST



Torque tester miniK1	021402
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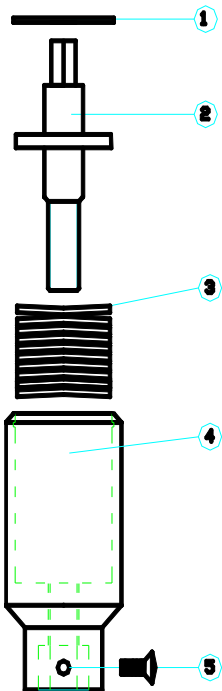
Torque tester miniK5	021403
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Torque tester miniK20	021404
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Torque tester miniKE	021405
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REF	DESCRIPTION	CODE
1	Screw M4x14 (4 pz)	240006
2	Screw M3 x 6 TSP (6 pz)	210068
3	Plastic support (4 pz)	800016
4	Case miniK	241001/F
5	Main board miniK	241002
6	Nut M3	800056
7	Spacer 6,3 mm	241003
8	Cover miniK	241001/C
9	Power supply connector (on request)	241004
10	Battery seat miniK	241005
11	Battery 9V not-rechargeable	240004
12	Membrane miniK	241008
13	Connector external transducer (only miniKE)	241006
14	Joint simulator M6	240600
14	Joint simulator M8	240800
15	Internal transducer 1Nm	240405
15	Internal transducer 5Nm	240503
15	Internal transducer 20Nm	240404
	Bag	240000
	Power supply (on request)	240003

JOINT SIMULATOR



JOINT SIMULATOR M6 5Nm	240600
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JOINT SIMULATOR M8 20Nm	240800
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EXPLODED VIEW			
POS.	DESCRIPTION	COD.M6 5Nm	COD.M8 20Nm
1	SEIGER	240601	240801
2	JOINT SHAFT	240602	240802
3	WASHER SPRING	240603	240803
4	JOINT HOUSING	240604	240804
5	SCREW	240605	240805